City Council Work Session
Crest Hill, IL
February 23, 2026
7:00 PM
Council Chambers
20600 City Center Boulevard, Crest Hill, IL 60403

Agenda

MAYOR

1. OM Lucky Brothers 2 Inc.-Shell Liquor License-251 Caton Farm Road

CLERK

TREASURER

CITY ADMINISTRATOR

1. Ordinance Amendment Assistant City Administrator/HR Director
2. Ordinance Amendment Public Works Department
3. Recruiting Services Proposal
4. Labor & Employment Legal Services Discussion
5. Electric Aggregation Program

ECONOMIC DEVELOPMENT DEPARTMENT

1. Façade Improvement Grant (After-the-Fact Wall Sign) for Sopranos Pizza & Catering (20641 Renwick Rd)
2. Plan Commission Recommendations on Rezoning, Preliminary and Final Planned Unit Development and Plat of Subdivision Approvals for Seasons at Crest Hill Apartment Community Project
3. Plan Commission Recommendations on Preliminary and Final Plat of Subdivision and Variations for QuikTrip Project at 1610 Plainfield Road

ENGINEERING DEPARTMENT

1. A Resolution Approving an Amendment to the Construction Agreement by and between the City of Crest Hill, Will County, Illinois and Fer-Pal Construction, Ltd. for CIPP Water Main Rehabilitation, Phase 1 Improvement.

POLICE DEPARTMENT

PUBLIC WORKS DEPARTMENT

1. Approval of the Purchase of a New Morbark BVR16 Brush Chipper in the Amount of $79,324.70

2. Approval of the Purchase of a New Caterpillar 926-14A Small Wheel Loader in the Amount of $222,000.00

3. Approval of an Ordinance Declaring Certain Personal Property in the City of Crest Hill to be Surplus

PUBLIC COMMENT(Limit 3 minutes per person)

ADJOURNMENT

The Agenda for each regular meeting and special meeting (except a meeting held in the event of a bona fide emergency, rescheduled regular meeting, or any reconvened meeting) shall be posted at the City Hall and at the location where the meeting is to be held at least forty-eight (48) hours in advance of the holding of the meeting. The City Council shall also post on its website the agenda for any regular or special meetings. The City Council may modify its agenda for any regular or special meetings. The City Council may modify its agenda before or at the meeting for which public notice is given, provided that, in no event may the City Council act upon any matters which are not posted on the agenda at least forty-eight (48) hours in advance of the time for the holding of the meeting.

Crest Hill
CITY OF NEIGHBORS

Agenda Memo

Crest Hill, IL

Meeting Date:	February 23, 2026
Submitter:	Raymond R. Soliman, Mayor RS
Department:	Mayor's Office
Agenda Item:	Liquor License-OM Lucky Brothers

Summary: This is to inform you that Mr. Jaswinder Sahi, owner of OM Lucky Brothers, located at 251 Caton Farm Road will be addressing city council at the Monday, February 23, 2026, work session meeting. Mr. Sahi is requesting a package liquor license for the Lucky Brothers gas station. Everything is in order.

Please feel free to contact me with any questions or concerns that you may have.

Recommended Council Action: Approval

Financial Impact:

Funding Source:

Budgeted Amount:

Cost:

Attachments:

Agenda Memo

Crest Hill, IL

Meeting Date:	February 23, 2026
Submitter:	Blaine Wing, City Administrator
Department:	Administration
Agenda Item:	Ordinance Amendment Assistant City Administrator/HR Director

Summary: Per City Council's earlier direction, Attorney Stiff and HR have drafted the updated ordinance amendment for the Assistant City Administrator/HR Director position and the updated job description.

These are needed to be approved prior to the planned appointment on March 2, 2026.

Recommended Council Action: Discussion and request for approval on March 2, 2026.

Financial Impact:

Funding Source: General Fund

Budgeted Amount: Current HR Consultant

Cost: Approximately $26,000 + Benefits for the remainder of FY 2026

Position: Assistant City Administrator/Human Resources Director **Status:** Exempt
Department: Administration **Last Updated:** 02/20/2026

General Purpose:

The Assistant City Administrator/Human Resources Director is responsible for administering the City's human resources programs including policy development and implementation, recruitment and selection, compensation, employee benefits, labor relations, workers' compensation, and employee safety. This position also completes special projects for the City Administrator.

Supervision Received:

The Assistant City Administrator/Human Resources Director works under the immediate supervision of the City Administrator.

Supervision Exercised:

As described in essential duties and responsibilities

Essential Duties & Responsibilities:

- Attend all City Council meetings, Work Sessions, and other meetings as required.
- Supervise and be responsible with two (2) to three (3) department heads for those departments staff, budget, and projects.
- Oversee city communications and community engagement and information technology staff and/or consultants.
- Direct and administer all human resources functions, including recruitment, employee and labor relations, benefits, compensation, training, performance management, and the HR budget.
- Serve as lead administrator for union contracts, grievances, and arbitration, working closely with department heads and legal counsel.
- Direct and oversee labor and employee relations, administer all union contracts, advise management on employee discipline matters and response to grievances, and work with outside legal counsel on grievance arbitration.
- Develop, implement, update, and interpret personnel policies and the Employee Handbook.
- Ensure compliance with federal, state, and local employment laws and regulations.
- Administer employee benefits, wellness programs, worker's compensation, and personnel records.
- Serve as the City delegate to the Intergovernmental Personnel Benefit Cooperative (IPBC), Southwest Agency for Risk Management (SWARM) and other benefit or risk management partners.
- Coordinate City-wide employee training and development.
- Develop, implement, and administer employee performance appraisal system; Advise Department Heads on other employee matters relating to work performance; prepare compensation reports and make recommendations for salary adjustments.
- Conduct policy and personnel studies as needed; compile, analyze, and communicate information pertaining to personnel related matters and special projects.

- Serve as the staff liaison and ex-officio test administer for the Civil Service Commission.
- Direct the recruitment and selection process including posting and advertising vacancies, civil service test administration, initial screening of candidates, and oversight of the interview process; oversee applicant tracking, manage pre-employment screening process and new employee orientation.
- Develop, implement, and maintain employee personnel record system.
- Attend meetings of local, regional, state, and other officials to represent the interests of the City and to keep informed on matters of interest to the City.
- Attend seminars and conferences to enhance knowledge and professional expertise.
- Complete special projects for the City Administrator.
- Serve as Acting City Administrator in the absence of the City Administrator.
- Perform other duties as assigned.

Desired Minimum Qualifications

Education & Experience:

- Bachelor's degree in public administration, human resources management, or a closely related field.
- Master's degree in human resources, public/business administration, or advanced degree preferred.
- Five years' experience in Public Administration or Human Resource Management, or an equivalent combination of training and experience.

Knowledge, Skills, and Abilities:

- Demonstrated ability to apply the principles and practices of personnel administration, position classification, performance evaluation, and compensation administration.
- Skilled in diplomacy with the ability to develop collaborative relationships with community leaders, elected officials, residents, and coworkers; ability to maintain effective working relationships with individuals at all levels of the organization.
- Knowledge of applicable laws and ordinances related to municipal government operations.
- Knowledge of the principles, practices and laws as applied to labor contract negotiations, contract administration, worker's compensation, and arbitration procedures.
- Knowledge of legal recruitment and hiring policies, the Fair Labor Standards Act, Family Medical Leave Act, and other employment laws.
- Knowledge of the principles of management and organizational practices.
- Ability to develop appropriate performance evaluation plans, job evaluation and position classification plans.
- Ability to assemble data, prepare documentation, and present information for arbitration cases, negotiation, and grievance proceedings.
- Demonstrated ability to read and interpret complex laws, regulations, and ordinances.
- Ability to successfully negotiate agreements and resolutions to complex issues.
- Ability to maintain confidentiality.
- Ability to properly maintain and organize office files and records.

- Ability to respond to email requests in a timely manner.
- Ability to read, clearly speak, and legibly write the English language.
- Excellent customer service skills.
- Skilled in the use of Microsoft Word, Excel, Access, and Outlook as well as Adobe Acrobat, and the ability to learn other software as needed.
- Demonstrated ability to communicate effectively both verbally and in writing, using complex sentences, proper punctuation, spelling and grammar.
- Ability to apply common sense understanding to carry out detailed instructions, prioritize multiple tasks, and work independently to meet deadlines.
- Ability to multi-task and cope with numerous interruptions, remain calm in stressful situations, and make objective decisions using sound judgement.
- Ability to perform basic math skills, use decimals to compute ratios and percentages, and tabulate data to create spreadsheets.
- Ability to prepare and operate within the constraints of a budget.
- Ability to enhance relations with the Mayor, City Council, staff, and members of the public.
- Ability to present for informational and instructional purposes at City Council meetings and other venues.
- Ability to gain proficiency in the everyday operation and minor maintenance of required tools and equipment.
- Ability to acquire and apply thorough knowledge of City and Department policies and procedures.

Tools & Equipment, Physical Demands, Working Conditions

Tools and Equipment:

The following list of tools and equipment is a representative and not necessarily all-inclusive inventory of items needed to successfully perform the essential job duties:

Telephone, facsimile, photocopier, printer, document scanner, personal computer, calculator, audio/visual equipment, motorized vehicles and equipment, common hand and power tools, and mobile radio.

Physical Demands:

The physical demands described below are representative of those that must be met by an employee to successfully perform the essential job duties. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential duties.

While preforming the duties of this job, the employee is regularly required to sit for extended periods of time, possess average ordinary visual acuity necessary to prepare or inspect documents or operate office equipment, talk reach with hands and arms, walk, climb and descend stairs, bend, crouch, lift and/or move up to 25 pounds. Frequent and regular movements are required using wrists, hands and fingers to feel, handle, or operate equipment, tools or controls. Effective audio-visual discrimination and perception to quickly and accurately make observations, correctly identify red, yellow, blue and green, distance and peripheral vision, depth perception and the ability to adjust focus is also required. Hearing must be

sufficient for average or normal conversations, to understand verbal direction, and to detect abnormal equipment operation and alarms.

Working Conditions:

Work activities are conducted in a climate controlled open office environment and noise levels are usually quiet. This position routinely uses standard office equipment including computers, phones, photocopiers, filing cabinets, adding machines, and fax machines. There are no hazardous or significantly unpleasant conditions.

The weekly work schedule is 40 hours in duration, Monday through Friday and may be extended in the event of an emergency, disaster, workload, or the need to complete time-sensitive work. Employees working in this position are required to attend evening meetings and work on some Saturdays, Sundays and holidays.

Performance Measurements & Selection Guidelines

- Regularly arrives for work on time prepared to perform the duties of the job.
- Attends Council and regional meetings as necessary.
- Practices and sets an example of ethical conduct.
- Possess a professional manner and appearance.
- Demonstrates leadership.
- Avoids politics and partisanship.
- Sets and achieves City goals and objectives.
- Adheres to City policies and procedures.
- Sets a standard of excellence in customer service and staff support.
- Consistently produces accurate work and meets deadlines.
- Uses available methods to track on-going or semi-regular tasks and project deadlines.
- Completes routine or regular tasks without being directed by others.
- Drafts thorough and complete reports and memoranda reviewing for errors in work product.
- Displays composure, friendliness, and respect in treatment of the public and coworkers.
- Ability to exercise good judgement in analyzing problems.
- Respects the confidential nature of many aspects of the position.
- Adapts to changes in the work environment and manages competing demands.
- Has a thorough knowledge of the City's policies, procedures, rules, regulations, structure and operations and uses it appropriately to resolve problems and crises.

An employee in this position is also evaluated upon the general observations of the ability to perform all of the essential responsibilities and duties.

Selection Guidelines:

Formal application; evaluation of education and experience; oral interview, reference check, background investigation; post-offer medical physical including drug and alcohol screening; job related tests may also be required.

Disclaimer:

The above statements are intended to describe the general nature and level of work being performed by persons assigned to this job. They are not intended to be an exhaustive list of all responsibilities, duties and skills required. The omission of specific statements of duties does not exclude them from the position if the work is similar, related, or a logical assignment to the position.

_____ _____

Department Head Date Assistant City Admin/HR Director Date

_____

City Administrator Date

ORDINANCE NO. _____

AN ORDINANCE AMENDING TITLE 2 (ADMINISTRATION AND PERSONNEL), CHAPTER 2.30 (EMPLOYEE RELATIONS MANAGER/ASSISTANT TO THE FINANCE DIRECTOR) OF THE CREST HILL CITY CODE

WHEREAS, the City Council of the City of Crest Hill has the authority to adopt ordinances and to promulgate rules and regulations that pertain to its government and affairs and protect the public health, safety, and welfare of its citizens; and

WHEREAS, pursuant to Section 3.1-30-5(a) of the Illinois Municipal Code (65 ILCS 5/3.1-30-5(a)), the Mayor is authorized to appoint, subject to the advice and consent of the City Council, any and all officers necessary to carry into effect the powers conferred upon the City by the constitution and laws of the State of Illinois; and

WHEREAS, the Mayor and City Council previously exercised this grant of authority to create the position of Employee Relations Manager/Assistant to the Finance Director, as set forth in Title 2 (Administration and Personnel), Chapter 2.30 (Employee Relations Manager/Assistant to the Finance Director); and

WHEREAS, the Corporate Authorities of the City are empowered to amend its Code of Ordinances from time to time, as necessary to further the best interests of the City of Crest Hill and its residents; and

WHEREAS, the position of Employee Relations Manager/Assistant to the Finance Director has been vacant for more than two years, during which time the City utilized an independent contractor consultant for Human Resources Services; and

WHEREAS, the contract for Human Resources Consulting Services ended on or about January 8, 2026; and

WHEREAS, the City previously had a position of Assistant City Administrator/Human Resources Director; and

WHEREAS, the Corporate Authorities of the City have determined that it is in the best interests of the City and its citizens to repeal Ordinance #1922 which created the position of Employee Relations Manager/Assistant to the Finance Director and to Amend Chapter 2.30 of Title 2 of the Crest Hill City Code as set forth herein.

NOW THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF CREST HILL, WILL COUNTY, ILLINOIS, PURSUANT TO ITS STATUTORY AUTHORITY, AS FOLLOWS:

SECTION 1: The City Council hereby finds that all the recitals contained in the preamble to this Ordinance are true, correct, and complete and are hereby incorporated by reference hereto and made a part hereof.

SECTION 2: Ordinance #1922, which amended Title 2 (Administration and Personnel), Chapter 2.30 (Employee Relations Manager/Assistant to the Finance Director) of the Crest Hill City Code is hereby repealed in its entirety, and shall be replaced with the following:

CHAPTER 2.30: ASSISTANT CITY ADMINSTRATOR/HUMAN RESOURCES DIRECTOR

Section

2.30.010 Creation of office; appointment
2.30.020 Salary
2.30.030 Duties and responsibilities

§ 2.30.010 CREATION OF OFFICE; APPOINTMENT

There is hereby created within the City of Crest Hill the office of Assistant City Administrator/Human Resources Director. The officer shall be appointed by the Mayor with the advice and consent of the City Council.

§ 2.30.020 SALARY

The salary of the Assistant City Administrator/Human Resources Director shall be fixed by the City Council.

§ 2.30.030 DUTIES AND RESPONSIBILITES

The Duties and Responsibilities of the Assistant City Administrator/Human Resources Director shall be pursuant to the current job description approved by the City Council and as amended from time to time.

(Ord. 1922, passed 8-29-22)

SECTION 3: In the event that any provision or provisions, portion or portions, or clause or clauses of this Ordinance shall be declared to be invalid or unenforceable by a Court of competent jurisdiction, such adjudication shall in no way affect or impair the validity or enforceability of any of the remaining provisions, portions, or clauses of this Ordinance that may be given effect without such invalid or unenforceable provision or provisions, portion or portions, or clause or clauses.

SECTION 4: That all ordinances, resolutions, motions, or parts thereof, conflicting with

any of the provisions of this Ordinance, are hereby repealed to the extent of the conflict.

SECTION 5: That the City Clerk is hereby directed to publish this Ordinance in pamphlet form.

SECTION 6: That this Ordinance shall be in full force and effect from and after its passage, approval and publication in pamphlet form as provided by law.

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PASSED THIS 2ND DAY OF MARCH, 2026.

	Aye	Nay	Absent	Abstain
Alderman Scott Dyke	_____	_____	_____	_____
Alderman Angelo Deserio	_____	_____	_____	_____
Alderwoman Claudia Gazal	_____	_____	_____	_____
Alderman Darrell Jefferson	_____	_____	_____	_____
Alderperson Tina Oberlin	_____	_____	_____	_____
Alderman Mark Cipiti	_____	_____	_____	_____
Alderman Nate Albert	_____	_____	_____	_____
Alderman Joe Kubal	_____	_____	_____	_____
Mayor Raymond R. Soliman	_____	_____	_____	_____

_____
Christine Vershay-Hall, City Clerk

APPROVED THIS 2ND DAY OF MARCH, 2026.

_____
Raymond R. Soliman, Mayor

ATTEST:

_____
Christine Vershay-Hall, City Clerk

Agenda Memo

Crest Hill, IL

Meeting Date:	February 23, 2026
Submitter:	Blaine Wing, City Administrator
Department:	Administration
Agenda Item:	Ordinance Amendment Public Works Department

Summary: Per City Council's earlier direction, Attorney Stiff and staff have drafted the updated ordinance amendment for the Public Works Department reorganization and addition of the superintendent positions.

Recommended Council Action: Discussion and request for approval in March 2026.

Financial Impact:

Funding Source: Water, Sewer, and General Fund

Budgeted Amount: Not budgeted

Cost: Not yet estimated

CHAPTER 2.50: PUBLIC WORKS DEPARTMENT

Section

2.50.010 DEPARTMENT OF PUBLIC WORKS CREATED; Organizational Structure.
2.50.020 DIRECTOR OF PUBLIC WORKS; CREATION AND APPOINTMENT.
2.50.030 DIRECTOR OF PUBLIC WORKS; SALARY
2.50.040 DIRECTOR OF PUBLIC WORKS; DUTIES AND RESPONSIBILITIES
2.50.050 ASSISTANT DIRECTOR OF PUBLIC WORKS (RESERVED)
2.50.060 ASSISTANT DIRECTOR OF PUBLIC WORKS; SALARY. RESERVED
2.50.070 SUPERVISION OF PUBLIC WORKS EMPLOYEES.
2.50.080 SUPERINTENDENT OF WATER DIVISION; CREATION OF POSITION.
2.50.090 SUPERINTENDENT OF WATER DIVISION; SALARY.
2.50.100 SUPERINTENDENT OF WATER DIVISION; DUTIES AND RESPONSIBILITIES.
2.50.110 SUPERINTENDENT OF WASTEWATER DIVISION; CREATION OF POSITION.
2.50.120 SUPERINTENDENT OF WASTEWATER DIVISION; SALARY.
2.50.130 SUPERINTENDENT OF WASTEWATER DIVISION; DUTIES AND RESPONSIBILITIES.
2.50.140 SUPERINTENDENT OF OPERATIONS; CREATION OF POSITION.
2.50.150 SUPERINTENDENT OF OPERATIONS; SALARY.
2.50.160 SUPERINTENDENT OF OPERATIONS; DUTIES AND RESPONSIBILITIES.
2.50.170 ADMINISTRATIVE ASSISTANT (PUBLIC WORKS); CREATION OF POSITION.
2.50.180 ADMINISTRATIVE ASSISTANT (PUBLIC WORKS); SALARY.
2.50.190 ADMINISTRATIVE ASSISTANT (PUBLIC WORKS); DUTIES AND RESPONSIBILITIES.
CHAPTER 2.52: (Repealed) Street Department
CHAPTER 2.54: (Repealed) Water & Wastewater Department

§ 2.50.010 DEPARTMENT OF PUBLIC WORKS CREATED; Organizational Structure.

The Department of Public Works is hereby created and established and shall have such functions and responsibilities as provided generally by this Code. The Department of Public Works shall consist of the Director of Public Works and all secretarial and administrative staff positions authorized by the City Council. The following divisions shall constitute subordinate divisions within the Department of Public Works:

(A) Administration;
(B) Water Division;
(C) Wastewater Division;
(D) Fleet Division;
(E) Streets Division
(F) Building & Grounds Division.

The Fleet, Streets, and Buildings & Grounds Divisions shall together be considered the Operations Division.
(Ord. 1637, passed 8-5-13; Am. Ord. 1677, passed 12-1-14; am. Ord. 1702, passed 12-21-15)

§ 2.50.020 DIRECTOR OF PUBLIC WORKS; CREATION AND APPOINTMENT.

The Office of Director of Public Works is hereby created. The Director of Public Works shall be appointed by the Mayor with the advice and consent of the City Council.

§ 2.50.030 DIRECTOR OF PUBLIC WORKS; SALARY

The Salary of the Director of Public Works shall be fixed by the City Council.

§ 2.50.040 DIRECTOR OF PUBLIC WORKS; DUTIES AND RESPONSIBILITIES

The Director of Public Works shall have duties and responsibilities prescribed by law and as described in the current job description approved by the City Council and as amended from time to time.

_____

For statutory provisions authorizing the appointment of a Director of Public Works, see ILCS Ch. 65, Act 5, § 3.1-30-5 et seq.
(Ord. 1637, passed 8-5-13)

§ 2.50.050 ASSISTANT DIRECTOR OF PUBLIC WORKS (RESERVED)

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(Ord. 1637, passed 8-5-13; Am. Ord. 1677, passed 12-1-14; Am. Ord. 1874, passed 97-21)

§ 2.50.060 ASSISTANT DIRECTOR OF PUBLIC WORKS; SALARY. RESERVED

(Ord. 1637, passed 8-5-13; Am. Ord. 1677, passed 12-1-14; am. Ord. 1874, passed 9-7-21)

§ 2.50.070 SUPERVISION OF PUBLIC WORKS EMPLOYEES.

(A) The Director of Public Works through the authority of the Mayor and City Council shall have the responsibility to oversee and direct all Public Works employees and equipment to carry out the projects and job assignments as these projects and assignments are scheduled.

(B) The following employees shall also report to the Director of Public Works: Administrative Assistant (Public Works), Superintendent of Water Division, Superintendent of Wastewater Division, and Superintendent of Operations)
(Ord. 1637, passed 8-5-13; Am. Ord. 1677, passed 12-1-14; Am. Ord. 1702, passed 12-21-15)

§ 2.50.080 SUPERINTENDENT OF WATER DIVISION; CREATION OF POSITION.

The position of Superintendent of Water Division is hereby created. The Superintendent of Water Division shall be hired by the Director of Public Works. The Position of Superintendent of Water Division shall be an exempt, non-union position which reports to and is directly supervised by the Director of Public Works.
(Ord. 1677, passed 12-1-14)

§ 2.50.090 SUPERINTENDENT OF WATER DIVISION; SALARY.

The salary of the Superintendent of Water Division shall be determined by the City Council.
(Ord. 1677, passed 12-1-14; Am. Ord. 1702, passed 12-21-15; Am. Ord. 2003, passed 11-4-24)

§ 2.50.100 SUPERINTENDENT OF WATER DIVISION; DUTIES AND RESPONSIBILITIES.

The Superintendent of Water Division shall have the duties and responsibilities as described in the current job description approved by the City Council and as amended from time to time.

§ 2.50.110 SUPERINTENDENT OF WASTEWATER DIVISION; CREATION OF POSITION.

The position of Superintendent of Wastewater Division is hereby created. The Superintendent of Wastewater Division shall be hired by the Director of Public Works. The Position of Superintendent of Wastewater Division shall be an exempt, non-union position which reports to and is directly supervised by the Director of Public Works.
(Ord. 1677, passed 12-1-14)

§ 2.50.120 SUPERINTENDENT OF WASTEWATER DIVISION; SALARY.

The salary of the Superintendent of Wastewater Division shall be determined by the City Council
(Ord. 1677, passed 12-1-14)

§ 2.50.130 SUPERINTENDENT OF WASTEWATER DIVISION; DUTIES AND RESPONSIBILITIES.

The Superintendent of Wastewater Division shall have the duties and responsibilities as described in the current job description approved by the City Council and as amended from time to time.

§ 2.50.140 SUPERINTENDENT OF OPERATIONS; CREATION OF POSITION.

The position of Superintendent of Operations is hereby created. The Superintendent of Operations shall be hired by the Director of Public Works. The Position of Superintendent of Operations shall be an exempt, non-union position which reports to and is directly supervised by the Director of Public Works.

§ 2.50.150 SUPERINTENDENT OF OPERATIONS; SALARY.

The salary of the Superintendent of Water Division shall be determined by the City Council.

§ 2.50.160 SUPERINTENDENT OF OPERATIONS; DUTIES AND RESPONSIBILITIES.

The Superintendent of Operations shall directly oversee and supervise the Public Works Employees in the Fleet Division, Streets Division, and Buildings & Grounds Division and shall have the duties and responsibilities as described in the current job description approved by the City Council and as amended from time to time.

§ 2.50.170 ADMINISTRATIVE ASSISTANT (PUBLIC WORKS); CREATION OF POSITION.

The position of Administrative Assistant (Public Works) is hereby created. The Administrative Assistant (Public Works shall be hired by the Director of Public Works. The Position of Administrative Assistant (Public Works) shall be an exempt, non-union position which reports to and is directly supervised by the Director of Public Works.

§ 2.50.180 ADMINISTRATIVE ASSISTANT (PUBLIC WORKS); SALARY.

The salary of the Administrative Assistant (Public Works) shall be determined by the City Council.

§ 2.50.190 ADMINISTRATIVE ASSISTANT (PUBLIC WORKS); DUTIES AND RESPONSIBILITIES.

The Administrative Assistant (Public Works) shall directly oversee and supervise the Administrative Clerk and any other administrative Public Works employees and shall have the duties and responsibilities as described in the current job description approved by the City Council and as amended from time to time.

CHAPTER 2.52: (Repealed)

('78 Code, § 2.52.060) (Ord. 70, passed - -62; Am. Ord. 1637, passed 8-5-13)

CHAPTER 2.54: (Repealed)

(Ord. 1637, passed 8-5-13)

Agenda Memo

Crest Hill, IL

Meeting Date:	February 23, 2026
Submitter:	Blaine Wing, City Administrator
Department:	Administration
Agenda Item:	Recruiting Services Proposal

Summary: To quickly fill the Public Works superintendent positions, staff are recommending using a staffing/recruiting firm. Attached is a proposal from LocalGov Staffing Solutions for a total cost of $27,450. Typically, a single position recruitment would cost approximately $19,000; however, LocalGov Staffing Solutions has proposed a package search/recruitment and is still honoring the 10% discount.

Recommended Council Action: Discussion and request for approval in March 2026.

Financial Impact:

Funding Source: Water, Sewer, and General Fund

Budgeted Amount: Not budgeted

Cost: $27,450

Crest Hill
CITY OF NEIGHBORS

Recruitment Services Proposal

Public Works Superintendents

February 19, 2026

LocalGov
STAFFING SOLUTIONS

Laurie Pederson
President
LP@LocalGovStaffing.com
847.805.7180

LocalGov STAFFING SOLUTIONS

Executive Summary

LocalGov Staffing Solutions (LGSS) is a recruitment firm dedicated exclusively to serving local government organizations. We partner with municipalities, counties, and special districts to identify and secure high-caliber professionals who demonstrate leadership, integrity, and a strong commitment to public service. With nearly two decades of experience in government recruitment, LGSS understands the unique demands of hiring within local government.

Our objective is to deliver qualified, carefully vetted candidates while reducing the administrative burden on internal leadership teams. Each engagement is structured to ensure a thorough search process and a confident hiring decision.

Recruitment Process Overview

LGSS conducts comprehensive recruitment efforts designed to identify and engage qualified public sector professionals. Each recruitment begins with a consultation to define position requirements, organizational priorities, and desired qualifications to ensure alignment from the outset.

We utilize targeted advertising combined with direct outreach to both active and passive candidates. All applicants are screened through live interviews and qualification verification prior to presentation to the client. Only candidates who meet the established criteria are advanced for consideration.

Throughout the engagement, LGSS maintains consistent communication, provides defined timelines, and coordinates all aspects of the interview process. Our approach is organized, efficient, and designed to support a thorough search and a confident hiring decision.

Innovative Approach

At LocalGov Staffing Solutions, innovation drives our recruitment strategy. We leverage the latest sourcing technology, data-informed outreach methods, and industry best practices to stay ahead of workforce trends. By combining modern tools with deep knowledge of municipal operations, we're able to reach both active and passive candidates — giving our clients a competitive edge in attracting top-tier talent while reducing time to hire and improving retention.

LocalGov STAFFING SOLUTIONS

Scope of Services

LGSS will provide comprehensive recruitment services for each position, including the following:

1. Position Consultation & Recruitment Planning

- Meet with designated leadership to confirm position expectations, qualifications, and compensation parameters
- Review organizational priorities and desired experience
- Confirm advertising strategy and outreach approach

2. Advertising & Targeted Outreach

- Prepare and post position announcements on relevant online job boards
- Conduct targeted outreach to qualified professionals within relevant networks
- Engage both active and passive candidates to expand the applicant pool

3. Application Review & Candidate Screening

- Review all submitted applications and resumes
- Conduct live video interviews with qualified candidates
- Verify credentials, experience, and overall alignment with position requirements

4. Candidate Presentation

- Present qualified candidates to the client for review
- Provide screening summaries and relevant supporting materials
- Assist in identifying candidates to advance to interviews

5. Interview Coordination

- Coordinate scheduling of interviews
- Assist with development of interview questions
- Support communication with candidates throughout the interview process

6. Reference, Background & Public Record Review

- Conduct professional reference checks for the finalist candidate
- Coordinate comprehensive background screening of the finalist candidate
- Conduct public record and online presence review

7. Offer & Placement Support

- Assist with offer preparation and negotiations
- Coordinate communication with selected candidate
- Support transition through start date confirmation

LocalGov STAFFING SOLUTIONS

Pricing Summary

Recruitment:	Original Fee	10% Repeat Client Discount
Superintendent #1:	$19,000	$17,100
Superintendent #2:	$11,000	$6,300
Superintendent #3:	$4,500	$4,050
Total 3 positions:	$30,500	$27,450*

*A non-refundable retainer fee of $2,500 per position is due upon contract execution. The remaining fee for each search will be invoiced on the hired candidate's first day of work. Final invoices will be issued in the order that positions are successfully filled.

Non-Refundable Retainer & Payment Terms

Recruitment:	***Non-Refundable Retainer**	**Invoiced on candidate's first day of employment**
Public Works Superintendent #1:	$2,500	$14,600
Public Works Superintendent #2:	$2,500	$3,800
Public Works Superintendent #3:	$2,500	$1,550
Total:	$7,500	$19,950

Payment Terms: Payment is due within 30 days of invoice receipt.

Investing in Long-Term Partnerships

A 10% Repeat Client Discount will apply to all services contracted with LGSS from the date of contract execution through 12/31/2026.

Candidate Guarantee

If the selected candidate voluntarily leaves employment or is terminated for cause within sixty (60) days of the start date, LGSS will conduct one additional search for the same position at no additional professional fee. Any direct recruitment or advertising expenses associated with the new search will be the responsibility of the client.

This guarantee applies if the new search is initiated within three (3) months of the position becoming vacant and assumes no material changes to the position scope.

LocalGov STAFFING SOLUTIONS

Additional Details

- Advertising sources will be selected by LGSS at no additional cost to the City.
- The recruitment process will be conducted virtually by LGSS. The client may choose to conduct in-person interviews, which will be scheduled by LGSS.
- Background screening cost is included for the final candidate for each position. If additional screenings occur, the client will be charged for each additional, not-to-exceed $500 per candidate.

Estimated Timeline

Most searches are completed within six (6) to eight (8) weeks from advertisement to accepted offer. The timeline may vary based on applicant response and interview scheduling.

- Weeks 1 & 2: Position posting and targeted outreach
- Weeks 2 & 4: Application review and candidate screening
- Weeks 4 & 6: Presentation of qualified candidates and client interviews
- Weeks 6 & 8: Reference checks, background screening, and offer coordination

LGSS remains engaged throughout the recruitment process and continues the search until the position is successfully filled.

The LGSS Difference

LocalGov Staffing Solutions is built exclusively to serve local government organizations. Our focused experience in municipal and county recruitment allows us to understand the operational, regulatory, and leadership dynamics unique to the public sector.

What distinguishes LGSS:

- Exclusive focus on local government recruitment
- Use of advanced sourcing tools and recruitment technology to identify qualified professionals beyond traditional applicant pools
- Direct outreach to qualified public sector professionals, including passive candidates
- Structured, accountable search process with defined milestones
- Clear pricing and defined candidate guarantee
- Commitment to compliance with public sector transparency requirements
- Reduced administrative burden for internal leadership teams
- Consistent communication with both clients and candidates throughout the recruitment process

LGSS approaches each recruitment as a partnership, not a transaction. Our goal is to support long-term organizational stability by identifying candidates who align with both the technical requirements of the position and the culture of the organization.

LocalGov STAFFING SOLUTIONS

Conclusion

LocalGov Staffing Solutions appreciates the opportunity to support your recruitment needs. We understand that hiring within local government carries significant operational and community impact, and we approach each search with that responsibility in mind.

Our team is committed to conducting a thorough, organized, and proactive recruitment process while maintaining consistent communication and accountability at every stage. We remain engaged until the position is successfully filled and are prepared to begin the search upon your authorization.

We look forward to the opportunity to partner with your organization.

Agenda Memo

Crest Hill, IL

Meeting Date:	February 23, 2026
Submitter:	Blaine Wing, City Administrator
Department:	Administration
Agenda Item:	Labor & Employment Legal Services

Summary: Staff interviewed seven (7) law firms. Following those interviews, staff provided a recommendation to City Council to interview but have not heard back from most City Council members on how to proceed. Staff recommend interviewing in executive session either the top two (2) firms on March 2, 2026, shortly after 5:30pm or interviewing the top five (5) firms on another night.

Staff are seeking directions on how City Council wishes to proceed.

Recommended Council Action: Discussion and request to proceed.

Financial Impact:

Funding Source: General Fund

Budgeted Amount: N/A

Cost: N/A

Agenda Memo

Crest Hill, IL

Meeting Date:	February 23, 2026
Submitter:	Blaine Wing, City Administrator
Department:	Administration
Agenda Item:	Electric Aggregation Program

Summary: Adam Hoover from NIMEC has sent the OPT OUT and DROP letters for the City's review, comments, and adjustments. MC2 would like to send these letters out on March 17th to about 500 residents, but Adam doesn't yet have the exact number.

Unfortunately, Adam is not available on Monday, February 23rd, but he will be present on March 2nd. That said, I wanted to get this topic and the letters in front of City Council as soon as possible and to get any comments, questions, and/or adjustments to the attached letters, so I can talk with Adam and get responses.

Recommended Council Action: Discussion and request to place on March 2nd agenda.

Financial Impact:

Funding Source: N/A

Budgeted Amount: N/A

Cost: N/A

Notice of Electric Aggregation Program Options, Not a Bill.

March 13, 2026

Customer Mailing Information

RE: City of Crest Hill Electric Aggregation Program
ComEd Service Address: Customer premise address

ELECTRIC AGGREGATION PROGRAM NOTICE

Dear Resident or Small Business Owner:

The City of Crest Hill (City) is pleased to offer an Electric Aggregation Program that allows eligible residents and small businesses to receive an electric supply price equal to the ComEd monthly published supply rate. Chicago-based, MC Squared Energy Services, LLC (mc^2) was selected to administer the program for the remaining sixty-three (63) months of the program, through August 2031. Additionally, this program enables the City to receive a civic contribution for community initiatives at zero added cost.

No Action Required to Participate:
You **do not** need to take any action to participate in the City's Electric Aggregation Program. Enrollment with mc^2 is automatic, and you will continue paying the same rate as ComEd's monthly published supply rate. There are no enrollment or early termination fees**.**

Opting Out Option:
If you prefer not to participate, you have **21 days from the date of this notice** to opt out. You may do so through any of the following methods:

- Call: 1-888-232-6351, Monday through Friday, 8 a.m. to 5 p.m.
- Online: Visit www.mc2energyservices.com/municipal-aggregation/optout
- Mail: Return the enclosed card by **April 3, 2026**
- QR Code: Scan the QR coded on the enclosed card to opt out via your mobile device

You may cancel your participation in this Electric Aggregation Program at any time without penalties or early termination fees. If you do not Opt-Out of the City's Electric Aggregation program, you will be deemed to have authorized and agreed to your enrollment in the City's Electric Aggregation program, and to have your electricity supply service with mc^2 under the "Terms and Conditions" and "Uniform Disclosure Statement" enclosed.

Billing & Service:
Your billing process will remain unchanged. You will continue to receive a single bill from ComEd and retain access to all ComEd payment options, including e-bill, automatic payments, and budget billing. ComEd will continue to manage power delivery, maintain infrastructure (wires and poles), and address emergencies such as outage restoration.

Additional Information:
If you currently participate in a community solar savings program—or plan to in the future—your participation in this Electric Aggregation Program will not affect your community solar benefits. The community solar generation credits provided by ComEd are independent of this program.

For details on ComEd's tariff rates, visit plugin.illinois.gov, the Illinois Commerce Commission's consumer information website. You also have the option to purchase electricity from other suppliers or ComEd. A complete list of suppliers i available at plugin.illinois.gov, and the Illinois Power Agency provides a free supplier list at ipa.illinois.gov.

For more information about the City's Electric Aggregation Program, please email CrestHill@mc2energyservices.com or call 1-888-232-6351 (Monday – Friday, 8 a.m. to 5 p.m.). We encourage residents to contact mc^2 first with any inquiries before reaching out to City. Please be aware that solicitors offering to switch your electricity provider are NOT affiliated with City mc^2, or ComEd.

Sincerely,

City of Crest Hill

Enclosures

Notice of Electric Aggregation Program Options, Not a Bill.

City of CREST HILL Illinois

Customer Mailing Information March 13, 2026

RE: City of Crest Hill Electric Aggregation Program
ComEd Service Address: (Customer premise address)

INFORMATIONAL NOTICE – NO ACTION REQUIRED
YOUR ACCOUNT WILL RETURN TO COMED ELECTRIC SUPPLY SERVICE

Dear Resident or Small Business Owner:

You currently participate in the City of Crest Hill (City) Electric Aggregation Program, with MC Squared Energy Services (mc^2), a Chicago-based company, being your energy supplier. Because the energy market is constantly changing, some accounts currently enrolled in the program will be transitioned back to ComEd's supply service to maintain the program's viability.

What does this mean for you?
Your electricity account will return to ComEd's basic tariff-based supply service starting with your May 2026 meter reading cycle. You don't need to take any action. Importantly, there's no difference in pricing or reliability between the Electric Aggregation Program and ComEd's basic tariff-based supply service.

Why is this happening?
Some costs of electricity supply services changed recently which impacts the cost for mc^2 to supply accounts with certain usage patterns. When this happens, accounts with certain usage patterns are moved back to ComEd's supply services, with no interruption to pricing nor service reliability.

Additional Information:
For details on ComEd's tariff rates, visit plugin.illinois.gov, the Illinois Commerce Commission's consumer information website. You also have the option to purchase electricity from other suppliers or ComEd. A complete list of suppliers is available at plugin.illinois.gov, and the Illinois Power Agency provides a free supplier list at ipa.illinois.gov.

For more information about the City's Electric Aggregation Program, please email CrestHill@mc2energyservices.com or call 1-888-232-6351 (Monday – Friday, 8 a.m. to 5 p.m.). We encourage residents to contact mc^2 first with any inquiries before reaching out to the City. Please be aware that solicitors offering to switch your electricity provider are NOT affiliated with the City, mc^2, or ComEd.

Sincerely,

City of Crest Hill

ILLUSTRATIVE LETTER FROM UTILITY – ELECTRIC SUPPLY SERVICE RETURNED TO COMED

Confirmation of Drop
Date

Customer Name
Customer Street Address
City or Town, State Zip code

Account Number:
Service Address:
City, State, Zip:

Confirmation of Change in Electric Supplier

Dear Customer:

We are writing to confirm your request to have ComEd supply your electric service going forward. As a result, you will no longer receive electric supply service [effective date], [supplier].

If you would like to choose an electric supplier other than ComEd, please visit ComEd.cm/CustomerChoice for a list of eligible Retail Electric Suppliers that are able to serve you in our service area. Be mindful that you will not be able to return to [supplier] for the next 6 billing periods.

We will continue to safely and reliably deliver energy to your home or business as well as restore your service if a power outage occurs.

Should you have questions about your account, please visit us at ComEd.com, or mobile app, or contact us Monday – Friday 7am – 7pm at 1-800-334-7661 if you are a residential customer or 1-877-426-6331 if you are a business customer.

We support your choice to select a retail electric supplier. To learn more about customer choice, you can visit ComEd.com/CustomerChoice or PlugIIIllinois.org.

Thank you for being a valued ComEd customer.

Sincerely,

Our ComEd Customer Operations Team

City Council Work Session Memo

Crest Hill, IL

Meeting Date:	February 23, 2026
Submitter:	Daniel Ritter, Community & Economic Development Director
Department:	Community & Economic Development
Agenda Item:	Sopranos Pizza & Catering, 20641 Renwick Road - Façade Improvement Grant for Signage (After-the-Fact)

Summary:

The Façade Improvement Grant Program has been in place and funded for several years, but has only been utilized once in the last 6 years. The one approval for The Feathered Fork's wall sign (approved October 2025) is not expected to be funded or completed per the grant requirements due to the owner temporarily closing and rebranding the restaurant. The overall goal of the grant is to stimulate high-quality exterior building improvements on existing commercial buildings that improve the community's appearance while also supporting businesses. The grant reimburses applicants (property owner or tenant with owner approval) up to 50% of eligible project costs, not to exceed $10,000 per property.

Soprano's Pizza and Catering is a new business that has reoccupied a commercial space that most recently operated as Burger City. Soprano's remodeled and opened the restaurant space at 20631 Renwick Road in October 2025. The business primarily serves to-go pizzas but has a large variety of food options, including salads, burgers, and beef. This is the second Soprano's location, with the first location in Lockport.

The grant request is for work that has already completed, which includes a new signage for the business. Per the Façade Improvement Grant Program document, after-the-fact grants are discouraged since it does not allow for prior council review of the proposal or bids. However, it does leave approval of after-the-fact proposals to the discretion of the City Council. The owner had noted they were not aware of the program until after their work had started and when The Feathered Fork had applied for their grant for a wall sign in the same Plaza. The work was completed by US Sign and Electric. All work has been completed, inspected, and fully paid for. To the right, there is a breakdown of the sign work costs.

Improvement	Cost
Sign Eligible Costs	$2,197.81
Total Grant Request (50% of total)	**$1,098.91**

City Council Work Session
February 23, 2026
Soprano's Pizza Façade/Sign Grant

While the grant can be used for many things, including signage, the original intent of the grant was to accomplish larger facade improvement, and not necessarily for just tenant signage changes. However, the only grant that has been previously approved in many years was for The Feathered Fork in the same Plaza. That grant was approved but is not expected to meet the conditions of reimbursement for the grant. With no other interest, this project can start to pave a path forward for other businesses and property owners to utilize it. Additionally, this specific space has had a revolving door of restaurants, and a little bit of support up front can assist in its success. If the program becomes more competitive in future budget years, the council's project preferences will become more relevant. Staff is working to bring changes and clarifications to the City Council for the Façade Improvement Grant in 2026 as well as target specific commercial properties that are highly visible and benefit from façade improvements.

Financial/Budget Info	
Budgeted FY26	$12,750.00
Currently Obligated* FY26	$2,631.90*
Requested Grant	$1,098.91
Remaining Budget FY26	$9,019.19
*Grant conditions are not expected to be fulfilled for previously approved grant.	

Recommended Council Action:

Discuss the proposed after-the-fact Façade Improvement Grant application for signage improvements at Soprano's Pizza & Catering, 20641 Renwick Rd, in an amount not to exceed $1,098.91, and move the item to the March 2, 2026, Regular Meeting Agenda for final consideration.

Attachments

A. Completed Wall Sign Photo
B. Proposal and Façade Improvement Grant Application – Soprano's
C. Contractor Letter of Completion and Payment – US Sign & Electric

Exhibit 1 – Existing Wall Sign Photo



ESTIMATE

US SIGN & ELECTRIC LLC
317 McDonough St
Joliet, IL 60436-2235

ussignelectric@gmail.com
+1 (815) 774-9621

Bill to
Sopranos Pizzeria & Catering
1527 S State St
Lockport, IL 60441 USA

Ship to
Sopranos Pizzeria & Catering
1527 S State St
Lockport, IL 60441 USA

Estimate details
Estimate no.: 1813
Estimate date: 08/14/2025

#	Date	Product or service	Description	Qty	Rate	Amount
1.		**Additional information**	Location : 20641 W Renwick Rd Crest Hill IL 60403	1	$0.00	$0.00
2.		**MATERIAL**	#1 CUSTOM CABINET SIGN	1	$1,997.81	$1,997.81
3.		**MATERIAL**	#2 SIGN PANEL	2	$100.00	$200.00
4.		**Labor**	REMOVE EXISITNG SIGN. INSTALL NEW SIGN AND CONNECT TO POWER.	1	$1,000.00	$1,000.00
5.		**Product Warranty**	#3 YEARS LED WARRENTY	1	$0.00	$0.00
6.		**City Sign Permit Fee**	CUSTOMER PAYS CITY PERMIT FEES	1	$0.00	$0.00
7.		**PAYMENT TERMS**	50% TO START JOB OTHER 50% WHEN JOB IS COMPLETE	1	$0.00	$0.00

Total **$3,197.81**

Accepted date

Accepted by

CATON
PROPERTY
MANAGEMENT

October 30, 2025

SD Base Corp ll LLC
1296 Rickert Dr. Suite 200
Naperville, IL 60540

To Whom It May Concern:

This letter serves as confirmation that Sopranos Pizza, located at 20641 Renwick Road, Crest Hill, IL 60403, has permission from the property owner, SD Base Corp II LLC, to apply for and obtain a grant related to improvements or operations for their leased unit.

SD Base Corp II LLC fully authorizes Sopranos Pizza to pursue any applicable local, state, or federal grant opportunities associated with their business at this location.

If additional documentation or verification is required, please feel free to contact our office.

Sincerely,
Roger Chavez
Roger Chavez
Property Manager
SD Base Corp II LLC
c/o Caton Property Management

roger@catoncommercial.com

Crest Hill
CITY OF NEIGHBORS

FAÇADE IMPROVEMENT GRANT APPLICATION

ARCHITECT/DESIGNER INFORMATION:		
NAME	COMPANY	CITY, STATE, ZIP
Serrer Construction Group Inc		Minooka IL 60407
PHONE NUMBER	EMAIL	OTHER (CELL, ETC.)
815-545-2096		
BUSINESS LOCATION		
Minooka IL		

APPLICATION INFORMATION: Sopranos Pizzeria		DATE OF APPLICATION:
PRIMARY CONTACT	MAILING ADDRESS	CITY, STATE, ZIP
Manny Serra	sopranoscresthill@gmail.	Crest Hill, IL 60403
PHONE NUMBER	EMAIL	OTHER (CELL, ETC.)
815-545-5741	20641 W Renwick Rd.	
BUSINESS LOCATION		

Have these improvements already been completed? X Yes _____ No

Please check planned improvements:

_____ Canopy/Awning _____ Entrance _____ Painting _____ Tuck Pointing

_____ Windows _____ Lighting _____ Landscaping X Signage

X Other, please specify plumbing / electrical / outdoor sign

Description of Business

Sopranos Pizzeria and Caterers is a family Italian Restaurant / carry out - delivery

Description of proposed project:

Convert current space into a Pizza Restaurant

REQUIRED FOR GRANT CONSIDERATION

- [x] Projected Budget for scope of work to be performed, including two competitive proposals from licensed and bonded contractors
- [x] Elevations and or plans, if applicable
- [x] Photos of building exterior/facade
- [x] Samples of proposed materials
- [x] Written consent from property owner to conduct improvements
- [x] Verification the property/business is in good financial standing with the City

ACKNOWLEDGEMENT & SIGNATURE

Execution of this application constitutes a grant agreement and creates specific obligations on the part of the Applicants, and I hereby affirm that I have reviewed and understand the Administrative Rules governing the Grant Program. I hereby affirm that I have full legal capacity to authorize the filing of this application and that to the best of my knowledge and belief, the information stated in this application and in all supporting documentation is true and accurate. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil or administrative penalties. I hereby agree that I personally guarantee any refund required pursuant to failure to strictly adhere to the Administrative Rules and the Grant Program parameters. I permit City representatives to make all reasonable inspections and investigations of the property during the process period of this application. As the business owner of this business, I hereby certify that this application and the use of any provided Grant proceeds shall be in accordance with all applicable ordinances, codes, and the Grant Program Administrative Rules.

Hector Sena 11-3-25

SIGNATURE OF APPLICANT DATE

US SIGN & ELECTRIC LLC 317 McDonough St.

Joliet, IL 60436

P: 815.774.9621

F: 815.744.9629

Date: January 19, 2026

Dear Dan,

This letter serves as official confirmation regarding the signage project recently completed for Sopranos Pizzeria & Catering.

We hereby certify the following:

• Work Completed: All work regarding the building front sign and the road sign panel has been completed in full.

• Costs Paid: All costs associated with the sign, including the Crest Hill sign permit fees, have been paid in full by the client.

• No Liens or Disputes: There are no liens or other disputes of any kind associated with the work happening at this location.

As requested, we will contact the Building Department to schedule and finalize the sign inspection to ensure the permit is closed.

Please use this letter to fulfill the requirements for the façade/sign grant request for the total amount of $1,093.60. If you require any additional information, please contact our office directly.

Sincerely,

Peter Garcia Electrician / Project Lead

US Sign & Electric LLC

City Council Work Session Agenda Memo

Crest Hill, IL

Meeting Date: February 23, 2026

Submitter: Daniel Ritter, Community and Economic Development Director
Ron Mentzer, Community and Economic Development Consultant

Department: Community Development

Agenda Item: Plan Commission Recommendation on Fiduciary Real Estate Development's Preliminary and Final Planned Unit Development (PUD) Special Use, Rezoning, and Preliminary and Final Plat of Subdivision Application – Crest Hill Plan Commission Case # PUD-26-1-2-1

Project Summary

Fiduciary Real Estate Development (FRED) is proposing to develop the approximately 16-acre vacant, B-3 Business Service District zoned property located southeast of the Weber Road/Renwick Road intersection and north of Ryan Drive (the "Site") with a new luxury apartment home community (the "Seasons at Crest Hill").

Site Location Map



PUD Site Plan



As proposed, Seasons at Crest Hill includes 260 Class A apartment homes in 14, 18 to 20 unit, two-story apartment buildings, situated around a 5,400 sq. ft.+/- clubhouse/pool complex, 120 enclosed garage parking spaces, and 432 surface parking spaces. Vehicle access is provided via six access driveways that connect to the existing network of public and private streets that encircle the Site and then to Renwick Road and Weber Road. No new public streets are proposed in the project.

Buildings will be constructed with high-quality and durable building materials, including fiber cement board siding and trim, a significant amount of brick/masonry, standing seam metal roof accents, and generous amounts of energy-efficient windows and sliding glass patio doors. Each unit will have access to a balcony or a patio. Upgraded interior unit features include designer cabinetry, upgraded stainless steel appliances, in-unit laundry, 9-foot ceilings, quartz countertops, and kitchen islands.

The Project includes 120 one-bedroom, 120 two-bedroom, and 20 three-bedroom units. Projected rental rates for these units range from $1,500 to $2,700 per month.

Requested Approvals

FRED has requested the following special zoning and subdivision-related approvals for the Project:

1. **Zoning Map Amendment (Rezoning):** Rezoning the entire site from B-3 Business Service District to R-3 Multiple Family Residence District.
2. **A Combined Preliminary and Final Planned Unit Development (PUD) Special Use**
3. **PUD Waivers from various standard City of Crest Hill Zoning Ordinance Requirements:** The requested PUD waivers are summarized in detail in February 12, 2026, Plan Commission Staff Report for this project.
4. **Preliminary/Final Plat of Subdivision:** The proposed Final Plat of Subdivision would consolidate the eight existing lots that comprise the Site, vacate existing unnecessary utility easements, and dedicate required new utility easements.

A digital copy of the FRED's complete application package can be reviewed on the City's website at the following link: https://mccmeetings.blob.core.usgovcloudapi.net/cresthill-pubu/MEET-Packet-ef16f406ea634bd7bfdc28e94422e96b.pdf. Paper copies of specific components of these application materials will be provided by the Community Development Department upon request.

February 23. 2026, Plan Commission Public Hearing and Recommendation

The Plan Commission conducted a formal public hearing on this application/project at its February 23, 2026, meeting. Approximately 30 individuals were in the audience at this meeting. The seven public attendees who provided testimony during the public hearing raised concerns regarding the following potential negative impacts the project could have on the community: increased traffic, damage to nearby private streets, number and type of people that would live in the project, unwanted new pedestrian traffic in the adjacent Remington Lakes neighborhood, ability for the City's water system to effectively absorb the additional demands this project would generate, affected school districts ability to handle the additional students the project would generate, and the potential detrimental impact the project would have on the quiet character of the nearby neighborhood.

The Plan Commission ultimately recommended unanimous (7-0) but conditional approval of all the requested special approvals for the Season at Crest Hill Project based on the findings and subject to the conditions outlined in the draft Plan Commission Findings and Decision document attached for review and reference as Exhibit A. The video recording of this meeting can be reviewed at the following link: https://www.youtube.com/watch?v=SOjqJJ6ExIk

Richland School District 88A Outreach

On Tuesday, February 17, 2026, the Superintendent of the Richland School District 88a, Dr. Phil Robb, notified City representatives that he did not receive the public hearing notice for this project until after the Plan Commission conducted the public hearing. Mayor Soliman and Community Development Department staff are scheduled to meet with Superintendent Robb on Friday, February 20, 2026, to review the scope of the project, tax revenue, and student population projections provided by the developer, and the applicability of the City's Builder Site Contribution impact fees to the project.

Council Action Requested: Direction to include the draft approval Ordinance for the Seasons at Crest Hill project on March 2, 2026, Regular City Council Agenda for final consideration.

Attachment:

- Exhibit A: Draft Plan Commission Findings and Decision for the Seasons at Crest Hill project, Case No. PUD-26-1-2-1.

EXHIBIT A

FINDINGS AND DECISION OF THE PLAN COMMISSION AS TO REZONING, PRELIMINARY AND FINAL PLAT OF SUBDIVISION, AND CASE NO. PUD-26-1-2-1 THE APPLICATION OF FIDUCIARY REAL ESTATE DEVELOPMENT, INC. FOR REZONING, PRELIMINARY AND FINAL PUD SPECIAL USE, PUD WAIVERS, AND FINAL PLAT OF SUBDIVISION FOR SEASONS AT CREST HILL MULTI-FAMILY APARTMENT HOME COMMUNITY WITH RESPECT TO CERTAIN REAL PROPERTY LOCATED ALONG THE NORTH SIDE OF RYAN DRIVE, APPROXIMATELY 280 FEET EAST OF WEBER ROAD, AND 210 FEET SOUTH OF RENWICK ROAD IN THE CITY OF CREST HILL, IL.

THIS APPLICATION, coming before the Plan Commission for hearing and decision, and the Plan Commission having heard the evidence in support and opposition to the application at a regularly scheduled meeting held on February 12, 2026, being fully advised on the premises, THE COMMISSION DOES MAKE THE FOLLOWING FINDINGS:

A. That the applicant, Fiduciary Real Estate Development, Inc., entered into a real estate contract to purchase the real property in the City of Crest Hill, Illinois, bearing PINs 11-04-20-105-065-0000, 11-04-20-105-066-0000, 11-04-20-105-067-0000, 11-04-20-105-068-0000, 11-04-20-105-069-0000;

B. That the application seeks to rezone the Property from B-3 Business Service District to R-3 Multiple Family Residence District, a Special Use for a combined Preliminary/Final Planned Unit Development (PUD) project, various PUD waivers, and Preliminary and Final Plat of Subdivision; that would allow the development of a new 14 building, 260 unit luxury, market-rate multifamily apartment home community, with a clubhouse, pool amenity, and garage parking on the approximately 16-acre vacant development site located along the north side of Ryan Drive, approximately 280 feet east of Weber Road, and 210 feet south of Renwick Road in the City of Crest Hil and legally described in Exhibit A-1, attached hereto and incorporated herein by reference (the "Property");

C. That the Property is zoned B-3;

D. That all requested PUD waivers are listed in the attached Exhibit A-2 and involve reduction in minimum lot area requirement; increase in maximum lot coverage; reduction in minimum front, side, and rear yard building setbacks; reduction in minimum floor area for one-bedroom apartment units; reduction in minimum parking setbacks; reduction in minimum number of required parking spaces; reduction in minimum width of parking lot access aisles; reduction in masonry requirement for exterior façade; reduction in minimum width of walking/jogging paths; and any other Zoning Ordinance or City Code requirements the Community and Economic Development Director deems necessary to construct the project as reflected on the application materials referenced in the February 12, 2026, Community and Economic Development Staff Report;

E. That the application for rezoning, PUD Special Use, various PUD waivers, and Preliminary and Final Plat of Subdivision was properly submitted and notice of the application and the public hearing were properly made;

F. That no interested parties filed their appearances herein;

G. That the public hearing was opened and called to order on February 12, 2026, and the applicant presented evidence and arguments in support of its application on February 12, 2026;

H. That the rules adopted by the Plan Commission for the conduct of Public Hearings by the Plan Commission were duly followed and observed;

I. That the proposed rezoning, PUD Special Use, various PUD waivers, and Preliminary and Final Plat of Subdivision, as considered under Section 10.6, Section 12.6, Section 12.7, Section 12.8-5, of the Zoning Ordinance, meet the thirteen (13) standards for Zoning Map Amendment (Rezoning) under Section 12.8-5, seven (7) standards for Planned Unit Development under Section 10.6,and the eight (8) standards for Special Use under section 12.7-6;

THEREFORE, IT IS THE DECISION OF THE PLAN COMMISSION OF THE CITY OF CREST HILL, ILLINOIS, BASED UPON THE EVIDENCE HEARD BY SAME AND ARGUMENTS AND SUGGESTIONS HEARD AT THE PUBLIC HEARING, AND HAVING DULY CONSIDERED THE MANDATES AND STANDARDS AS SET FORTH IN THE CITY OF CREST HILL, ILLINOIS ZONING ORDINANCE FOR THE GRANTING OF REZONING, PUD SPECIAL USE, VARIOUS PUD WAIVERS, AND PRELIMINARY AND FINAL PLAT OF SUBDIVISION, AS FOLLOWS:

1. That the approval of the application of Fiduciary Real Estate Development, Inc. for rezoning, PUD Special Use, various PUD waivers, and Preliminary and Final Plat of Subdivision as listed in attached Exhibit A-2 for property located along the north side of Ryan Drive, approximately 280 feet east of Weber Road, and 210 feet south of Renwick Road in Crest Hill, Illinois with PINs 11-04-20-105-065-0000, 11-04-20-105-066-0000, 11-04-20-105-067-0000, 11-04-20-105-068-0000, 11-04-20-105-069-0000, 11-04-20-105-071-0000, 11-04-20-105-072-0000, and 11-04-20-105-073-0000 is supported by the evidence adduced;

2. It is therefore the recommendation of the City of Crest Hill Plan Commission that the application for the rezoning, PUD Special Use, various PUD waivers, and Preliminary and Final Plat of Subdivision be granted subject to the project being implemented in substantial conformance with the following seven (7) conditions for approval and application documents referenced in the February 12, 2026, Community Development Staff Report for this request, as follows:

1. The final Plat of Subdivision shall satisfy all applicable City Ordinance, staff, and City Attorney requirements and shall include all easement provisions required by the City's Director of Engineering.
2. All final engineering plans, related supporting information, and development security for the Project shall be submitted for the Director of Engineering's final approval prior to or in conjunction with the formal building permit application submitted for the Project. Said plans shall be substantially consistent with the application documents submitted for Plan Commission Case #PUD- 26-1-2-1.

3. All final architectural, signage, and landscape plans for the Project shall be submitted for Community Development Department staff final approval prior to or in conjunction with the formal building permit application submitted for the Project. Said plans shall be substantially consistent with the application documents submitted for Plan Commission Case #PUD-26-1-2-1.
4. The two private drives that connect the Project to Renwick Rood shall be included in scope of private streets FRED will mill and resurface. Unless otherwise approved by the City Engineer, all private street resurfacing work shall be completed prior to occupancy of the first building in the Project.
5. Unless otherwise approved as a Major PUD Change by the City Council, the ownership and management of the entire Project shall each be under a single entity. This condition is not intended to prevent the Project owner from engaging the services of an independent qualified property management company to manage day-to-day operations, maintenance activities, and rehabilitation projects in it.
6. A fire hydrant must be located within 100 ft of each building's fire department connection.
7. Unless otherwise approved by the Director of Community and Economic Development as a result of Gas Company feedback, the Applicant shall prepare and submit proper paperwork to Nicor for approval of a sidewalk or multi-use path as shown on the plans prior to issuance of the first structure's building permit. Pathway/sidewalk shall be installed before issuance of the last building's certificate of occupancy. The pathway/sidewalk may require minor changes to the approved plan based upon final Nicor and City permit reviews. Notwithstanding anything to the contrary, the Applicant's required construction of the pathway/sidewalk is predicated on the Applicant or the City obtaining approval from Nicor for its construction and said approval shall not require the Applicant to relocate any existing gas lines.

Adopted by the Plan Commission of the City of Crest Hill, Illinois, this 12TH Day of February 2026 upon the following voice vote:

	Aye	Nay	Absent	Abstain
Commissioner Bill Thomas	___X___	_____	_____	_____
Commissioner Ken Carroll	___X___	_____	_____	_____
Commissioner Cheryl Slabozeski	___X___	_____	_____	_____
Commissioner Gordon Butler	___X___	_____	_____	_____
Commissioner Marty Flynn	___X___	_____	_____	_____
Commissioner Jeff Peterson	___X___	_____	_____	_____
Commissioner John Stanton	___X___	_____	_____	_____

Approved:

_____
Bill Thomas, Chairman

Attest:

_____
Christine Vershay-Hall, City Clerk

EXHIBIT A-1

LEGAL DESCRIPTION

PROPERTY ADDRESS: 16-ACRE VACANT DEVELOPMENT SITE LOCATED ALONG THE NORTH SIDE OF RYAN DRIVE, APPROXIMATELY 280 FEET EAST OF WEBER ROAD, AND 210 FEET SOUTH OF RENWICK ROAD IN THE CITY OF CREST HILL, IL, 60403

PERMANENT INDEX NOS: 11-04-20-105-065-0000, 11-04-20-105-066-0000, 11-04-20-105-067-0000, 11-04-20-105-068-0000, 11-04-20-105-069-0000, 11-04-20-105-071-0000, 11-04-20-105-072-0000, and 11-04-20-105-073-0000

LEGAL DESCRIPTION:

LOT 1 IN EQUIMAX BUSINESS CENTER, BEING A RESUBDVISION OF LOT 8 IN CREST HILL BUSINESS CENTER, BEING A SUBDIVISION OF PART OF THE NORTHWEST QUARTER OF SECTION 20, TOWNSHIP 36 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED AS DOCUMENT R2007117350, IN WILL COUNTY, ILLINOIS, AND LOTS 2, 3, 4, 5, 6, 7 AND 8 IN EQUIMAX BUSINESS CENTER, A RESUBDIVISION OF PART OF THE NORTHWEST QUARTER OF SECTION 20, TOWNSHIP 36 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED AUGUST 2, 2007 AS DOCUMENT NUMBER R2007-117350, IN WILL COUNTY, ILLINOIS.

EXHIBIT A-2

LIST OF REQUESTED APPROVALS

1. **Zoning Map Amendment (Rezoning):** Rezoning the entire site from B-3 Business Service District to R-3 Multiple Family Residence District.

2. **A Combined Preliminary and Final Planned Unit Development (PUD) Special Use**

3. **PUD Waivers from the following Zoning Ordinance Requirements**

    a. Table 1: Zoning District Standards for Residential Districts
        i. Reduce the minimum lot area requirement from 5,000 sq. ft. per unit to 2,648 sq. ft. per unit.
        ii. Increase the amount of allowed lot coverage from 50% to approximately 70%.
        iii. Reduce the 30 ft. minimum required front/corner side yard and 40 ft. minimum rear yard building setbacks throughout the Project to accommodate the building locations reflected on the application materials referenced in the February 12, 2026, Community Development Department Staff Report.
        iv. Reduce the minimum floor area requirement for one-bedroom apartment units from 800 sq. ft. to an average of approximately 700 sq. ft.

    b. Reduce the 30 ft. required front yard parking setback required by Section 11.5-1 and the parking setbacks required adjacent to a residential district by Section 11.5-3 throughout the Project to accommodate the parking locations reflected on the application materials referenced in the February 12, 2026, Community Development Department Staff Report.

    c. Reduce parking requirements of Section 11.8-1 c. from 3.5 parking spaces per unit to 2.12 parking spaces per unit.

    d. Reduce the minimum width of parking lot access aisle required between adjacent parking stalls by Section 11.4-1 from 26 ft. to 24 ft.

    e. Reduce the percentage of masonry required on individual multi-family residential buildings by Section 8.7-2 as follows:

	% Masonry Required	***% Masonry Provided on 18-Unit Building***	***% Masonry Provided on 20-Unit Building***
Min. % masonry on one façade per building	80%	35% - front facade	33.5% - front facade
Min. % masonry on any wall facing a public or private street	10%	9.5% - garage door facade	7.2%- garage door facade

    f. Reduce the minimum width of walking/jogging paths required by Section 10.0-4.7, from 8 feet to 5 feet.

g. Adjust any other Zoning Ordinance or City Code requirements the Community and Economic Development Director deems necessary to construct the project as reflected on the application materials referenced in the February 12, 2026, Community Development Department Staff Report.

4. **Preliminary/Final Plat of Subdivision:** The proposed Final Plat of Seasons at Crest Hill Subdivision consolidates the eight existing lots that comprise the Site, vacates existing unnecessary utility easements, and dedicates the new utility easements necessary to accommodate the new infrastructure that will be constructed as part of the Project.

EXHIBIT A-3

February 12, 2026, Community Development Department Staff Report

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MINUTES OF THE
CREST HILL PLAN COMMISSION

The February 12, 2026, Plan Commission meeting was called to order by Chairman Bill Thomas, at 7:00 p.m. in the Council Chambers of the City Center, 20600 City Center Boulevard, Crest Hill, Will County, Illinois.

The Pledge of Allegiance was recited in unison.

Roll call indicated the following present: Chairman Bill Thomas, Commissioner Ken Carroll, Commissioner Cheryl Slabozeski, Commissioner Gordon Butler, Commissioner Jeff Peterson, Commissioner Marty Flynn, Commissioner John Stanton.

Also present were: City Attorney Mike Stiff, City Engineer Ron Wiedeman, Community & Economic Development Consultant Ron Mentzer, City Planner Atefa Ghaznawi, City Clerk Christine Vershay-Hall, and Executive Secretary Linda Riha.

APPROVAL OF MINUTES: Chairman Thomas asked for a motion to approve the minutes from the Plan Commission meeting held on January 8, 2026, for Commission approval.

(#1) Motion by Commissioner Peterson seconded by Commissioner Slabozeski, to approve the minutes from the Plan Commission meeting held on January 8, 2026.
On roll call, the vote was:
AYES: Commissioners Peterson, Slabozeski, Butler, Flynn, Stanton, Chairman Thomas.
NAYES: None.
ABSTAIN: Commissioner Carroll.
ABSENT: None.
There being six (6) affirmative votes, the MOTION CARRIED.

PUBLIC HEARING:

2. Public Hearing and Consideration of petition PUD-26-1-2-1, a request of Fiduciary Real Estate Development, Inc.

Chairman Bill Thomas presented the petition PUD-26-1-2-1, a request of Fiduciary Real Estate Development, Inc. to (i) rezone the Development Site from B-3 Business Service District to R-3 Multiple Family Residence District; (ii) Preliminary and Final Plat of Subdivision; (iii) Preliminary and Final Planned Unit Development Special Use; and (iv) Planned Unit Development waivers from the Crest Hill Zoning Ordinance, for a new 14 building, 260 unit luxury, market-rate multifamily apartment home community, with a clubhouse, pool amenity, and garage parking on the approximately 16-acre, B-3 Business Service District zoned vacant Development Site located along the north side of Ryan Drive, approximately 280 feet east of Weber Road, and 210 feet south of Renwick Road in the City of Crest Hill, Illinois.

Chairman Thomas asked if the paperwork was in order. City Planner Atefa Ghaznawi confirmed the necessary paperwork was in order.

Chairman Thomas asked for a Motion to Open the Public Hearing.

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(#2) Motion by Commissioner Carroll seconded by Commissioner Peterson, to open a public hearing case number PUD-26-1-2-1.
On roll call, the vote was:
AYES: Commissioners Carroll, Peterson, Flynn, Slabozeski, Stanton, Butler, Chairman Thomas.
NAYES: None.
ABSENT: None.
There being seven (7) affirmative votes, the MOTION CARRIED.

Chairman Thomas asked the Community & Economic Development Consultant Ron Mentzer to present the specifics on this case.

Community & Economic Development Consultant Ron Mentzer presented the case to the Commission, explaining that this case is pertaining to the sixteen acres of vacant property located just southeast of the Weber Road, Renwick Road intersection. He explained this property has been zoned B-3, business service district zoning classification, for a couple of decades with no serious private sector interest to develop the property in a manner that made sense to the City. Fiduciary Real Estate Development, Inc. became aware of and became interested in this property after developing The Bluffs multifamily residential project in Romeoville as they liked the area. Fiduciary contacted the City last spring/summer to explore the opportunity to develop a similar multifamily, class-A development on this Crest Hill property. This meeting will allow the developer to present its development Plan Commission and the public with the goal of obtaining approval to move this plan forward to City Council for approval.

Chairman Thomas swore in the members of the developer's team who would be providing testimony at the public hearing.

Tony DeRosa, Vice President and Chief Development Officer for Fiduciary Real Estate Development, gave an overview of the details of the project, the benefits the project has from a market perspective and to the community. Mr. DeRosa stated that his company, Fiduciary, is also responsible for developing the Bluffs in Romeoville and Seasons at Plainfield luxury apartment projects. Those developments "have achieved strong occupancy, top-of-market rents and have attracted high-quality residents. The success of those projects highlights the strength of our development approach and demonstrates the pent-up demand for modern, amenity-rich rental housing in this part of Will County." Mr. DeRosa went on to say that Crest Hill hasn't seen new apartment development in decades leaving residents with few options for high-quality, luxury rental living options.

Mr. DeRosa acknowledged the team that was present with him. There were two other individuals from Fiduciary, their design partner AG Architecture, their engineering partner Manhard Consulting and a traffic engineer from KLOA.

Mr. DeRosa went over the history of Fiduciary and the many beneficial attributes associated with the proposed Seasons of Crest Hill project. He noted that there will be 260 apartment homes: 120 1-bedroom units, 120 2-bedroom units and 20 3-bedroom units. There will be three access points for the development, a centrally located club house and pool and other amenity options, such as garages, patios, etc. The architectural design of the units, inside and outside, was explained, as

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well as the storm water management, the projected impact on schools and proposed market rents that range from $1500 per month for a one-bedroom unit to $2700 per month for a three-bedroom unit.

Commissioner Cheryl Slabozeski commented that these units were beautiful and wanted to know why they are rentals and not owner occupied. This question gets asked a lot per Mr. DeRosa. Mr. DeRosa stated that the market for condominiums today is quite different than it was twenty years ago. The mindset of the demographic today is concerned more with flexibility. The housing market has become so expensive, with the twenty percent down payment to own a home.

Commissioner Jeff Peterson asked how long a lease is for the units. Mr. DeRosa answered, "12-month minimum. Many times, we're leasing them between fifteen to twenty-four months, actually."

Commissioner Ken Carroll asked if there would be any problem with emergency vehicles getting into or out of the planned project. Mr. DeRosa stated that from a design standpoint this project has to comply with all of the City requirements that allow emergency vehicles to get in and out of the property. City Engineer Ron Wiedeman explained the review process of the Fire District, and they have no concerns with access to and through the project at this time.

Area residents were then sworn in and brought up several issues. There are concerns about more people and traffic coming into the area, especially during peak times. Also, these residents raised concern about impacts to the private streets in their neighborhood, buffering, and protection of the investments they have made into their homes. One resident expressed concern about water pressure issues that already exist in the area and wondered how this development will affect that. She also stated that she has a special needs son and came to this area because it was quiet and was concerned that this project would have a negative impact on the quiet nature of the area..

Resident Nadine Jens stated that her neighborhood owns two private streets and asked who will help them repair those private streets with additional traffic from school buses, garbage trucks, extra traffic and police cars.

Chairman Bill Thomas stated that there were many studies done prior to the introduction of this development, regarding impact on traffic and schools. Crest Hill has looked into things that were brought up by the residents, stating that the traffic impacts from this project will be less than a retail development put in the same area.

Mr. Tony DeRosa stated that the impact of the extra cars from this development will be minimal. Mr. DeRosa said people will go to work at 8:00AM and they will go here and there, but the reality is not that there will be one hundred cars lining up on the streets at the same time. A Principal traffic engineer Principal from KLOA stated that the standards from the City of Crest Hill and the Will County Highway Department were used in the traffic study that was done, looking at the existing and future operation of the intersections surrounding the site, as well as the intersection of Weber and Renwick, during different times of the day. Both the City and the County agreed that this project will not significantly impact the roadway network in the area. He also stated that the traffic signal at the intersection of Ryan Dr and Weber Rd will remain due to the Will County

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Highway Department. City Engineer Ron Wiedeman added that the traffic study that was done was adequate and stated that there will be some improvements recommended to the Council to area roads in the future.

Mr. Tony DeRosa addressed the item of property management when a resident spoke of her HOA and questioned who will be taking care of property management issues that will arise in the new development. Mr. DeRosa stated that there will be on-site management, not an outside company, taking care of things on-site. Mr. DeRosa also stated that the property manager will use a very extensive screening process to vey the individuals who apply for residency in the Seasons, including a look at income and assets, as well as a criminal background check. He noted that this screening process is significantly more thorough than the screening process someone would need to go through to purchase a house in the adjacent neighborhoods.

Another resident asked if the new development would work with a handful of area residents to bridge the gap between current residents (who may be angry) and the new development in the effort to come together for the sake of a cohesive Crest Hill for all.

Commissioner Jeff Peterson and Chairman Bill Thomas both said they visited the Bluffs in Romeoville and found it quiet and well-maintained. Chairman Thomas added that he felt that the Seasons at Crest Hill project would be an asset for the City of Crest Hill.

Chairman Thomas asked for a motion to close the public hearing.

(#3) Motion by Commissioner Peterson seconded by Commissioner Slabozeski, to close the public hearing.
On roll call, the vote was:
AYES: Commissioners Peterson, Slabozeski, Stanton, Flynn, Carroll, Butler, Chairman Thomas.
NAYES: None.
ABSENT: None.
There being seven (7) affirmative votes, the MOTION CARRIED.

The Public Hearing was closed at 8:23 p.m.

Chairman Thomas asked the applicant if he agreed to the seven (7) conditions. The applicant stated he agreed with the modification to #7, which was known by Chairman Thomas dealing with the walkways.

Chairman Bill Thomas asked for a motion to approve the request of Fiduciary Real Estate Development, Inc. seeking approvals for the construction of a multifamily apartment home community near the southeast corner of Renwick and Weber Roads as stated in the February 12, 2026, City of Crest Hill staff report.

(#4) Motion by Commissioner Peterson seconded by Commissioner Flynn, to recommend to the City Council the conditional approval of the Public Hearing and Consideration of petition PUD-26-1-2-1, a request of Fiduciary Real Estate Development, Inc. to (i) rezone the Development Site from B-3 Business Service District to R-3 Multiple Family Residence District; (ii) Preliminary and Final Plat of Subdivision; (iii) Preliminary and Final Planned Unit Development Special Use; and (iv)

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Planned Unit Development waivers from the Crest Hill Zoning Ordinance, for a new 14 building, 260 unit luxury, market-rate multifamily apartment home community, with a clubhouse, pool amenity, and garage parking on the approximately 16-acre, B-3 Business Service District zoned vacant Development Site located along the north side of Ryan Drive, approximately 280 feet east of Weber Road, and 210 feet south of Renwick Road in the City of Crest Hill, Illinois.
On roll call, the vote was:
AYES: Commissioners Peterson, Flynn, Carroll, Slabozeski, Stanton, Butler, Chairman Thomas.
NAYES: None.
ABSENT: None.
There being seven (7) affirmative votes, the MOTION CARRIED.

Chairman Thomas announced that this will be forwarded to the City Council and to keep in mind that the Plan Commission is a recommendation body only. The City Council will hear about this case on February 23, 2026, at the Work Session Meeting and then again on March 2, 2026, City Council meeting for formal vote.

3. Public Hearing and Consideration of petitions Plat of Subdivision, and V-26-2-2-1, a request of QuikTrip Corporation

Chairman Bill Thomas presented the Public Hearing and Consideration of petitions Plat of Subdivision, and V-26-2-2-1, a request of QuikTrip Corporation seeking special approvals from the City of Crest Hill Subdivision, Zoning Ordinance, and City Code for Preliminary and Final Plat of Subdivision and Variations from Section 11.6-7.2 Commercial Districts General Requirements of the Crest Hill Zoning Ordinance to permit a new 47-foot wide full access driveway and a new 95-foot wide right-in/right-out driveway onto Plainfield Road/U.S. Route 30 and a new 81-foot wide full access driveway onto Knapp Drive; and Variations from Section 15.12.080 of the Crest Hill Code of Ordinances-Sign Code to allow a multi-tenant off-premises freestanding sign, increased sign area for a multi-tenant freestanding sign, increased number of commercial wall signs, and adjustments to the permitted locations for commercial wall signs for a proposed new QuikTrip convenience store/gas station and a separate vacant commercial lot located on the 4.9 acre, B-3 Business Service District zoned property located at 1610 Plainfield Road (U.S. Highway Route No. 30), in the City of Crest Hill, Illinois.

Chairman Thomas asked if the paperwork was in order. City Planner Atefa Ghaznawi confirmed the necessary paperwork was in order.

Chairman Thomas asked for a Motion to Open the Public Hearing.

(#5) Motion by Commissioner Butler seconded by Commissioner Carroll, to open a public hearing case number V-26-2-2-1.
On roll call, the vote was:
AYES: Commissioners Butler, Carroll, Peterson, Flynn, Stanton, Slabozeski, Chairman Thomas.
NAYES: None.
ABSENT: None.
There being seven (7) affirmative votes, the MOTION CARRIED.

The Public Hearing was opened at 8:35PM.

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Ron Mentzer, Community and Economic Development Consultant, explained that this case involves the former City Hall property at 1618 Plainfield Road, which the city put up for sale several years ago. In summer 2024, the city entered into a contract with QuikTrip to sell the property, contingent on QuikTrip receiving necessary approvals.

The property is already properly zoned for the proposed use, but QuikTrip is seeking:

- Variations for increased driveway widths on Plainfield Road and Knapp Drive
- Sign code variations for an off-premises sign with increased sign area and an increased number of wall signs
- Approval of a preliminary and final plat of subdivision that would divide the 4.9-acre site into three separate lots

Chairman Thomas swore in the QuikTrip representative who would be providing testimony at the public hearing.

Ali Bukhres, Real Estate Project Manager with QuikTrip Corporation, presented their development plan, which includes:

- A convenience store with gas canopy
- A vacant lot for future commercial/quick serve restaurant development
- A detention pond at the back of the property
- Extensive landscaping throughout the site
- High-quality brick signage
- Modern store design with a full kitchen and individual bathrooms
- No commercial vehicle fueling (unlike their Romeoville location)

Chairman Thomas stated that he recently went to the Romeoville location of QuikTrip to check it out in the evening. He was impressed with the ambient lighting that wasn't overly bright, like a baseball stadium. Chairman Thomas also stated that he was pleased that this project will have the same lighting, so it won't disrupt the surrounding residents. He also spoke positively about the convenience this project would provide to the neighborhood in that it will provide another opportunity for area residents to go inside and buy groceries and get something hot to eat.

Area residents were then sworn in and brought up several issues. Multiple residents from the nearby Willow Falls senior community expressed concerns about increased traffic on Knapp Road, which already has cut-through traffic issues, safety concerns related to large vehicles that would be delivering products to the proposed new QuikTrip, and the potential light pollution the project could have on neighboring properties.

City Engineer Ron Wiedeman provided details about the City's plans to address traffic concerns on Knapp Road, including:

- Making the Willow Falls South intersection a four-way stop
- Building a barrier median on Theodore to restrict eastbound traffic from turning left onto Knapp
- Restricting left turns from Knapp onto Theodore during peak hours (3:30-7:00 PM)
- Evaluating the effectiveness of these measures one year after installation, and again one year after QuikTrip opens

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- Potentially adding speed tables at the north intersection if needed, similar to the ones in downtown Plainfield

Engineer Wiedeman emphasized that these traffic calming measures were recently endorsed by the City Council in response to residents' concerns about cut-through traffic, which the City's study showed accounts for 70% of traffic on Knapp Road.

Chairman Thomas asked for a motion to close the public hearing.

(#6) Motion by Commissioner Peterson seconded by Commissioner Flynn, to close the public hearing.
On roll call, the vote was:
AYES: Commissioners Peterson, Flynn, Slabozeski, Butler, Carroll, Stanton, Chairman Thomas.
NAYES: None.
ABSENT: None.
There being seven (7) affirmative votes, the MOTION CARRIED.

The Public Hearing was closed at 9:18 pm.

Chairman Thomas asked the applicant if he agreed to the five (5) conditions. The applicant stated he agreed.

Chairman Thomas stated that the City of Crest Hill really likes having Willow Falls in Crest Hill. This was made apparent by the comments of City Engineer Ron Wiedeman and Community & Economic Development Consultant Ron Mentzer regarding the City Councils ongoing commitment to evaluate Knapp Road traffic and potential additional future traffic calming improvements on the street. Based on the amount of analysis and discussion the City performed and engaged in regarding Knapp Drive traffic concerns, he suggested the residents should not feel forgotten. He thanked the residents for their attendance at the meeting.

Chairman Bill Thomas asked for a motion to approve the request of QuikTrip Corporation as stated in the February 12, 2026, City of Crest Hill staff report.

(#7) Motion by Commissioner Peterson seconded by Commissioner Carroll.
On roll call, the vote was:
AYES: Commissioners Peterson, Carroll, Stanton, Flynn, Butler, Slabozeski, Chairman Thomas.
NAYES: None.
ABSENT: None.
There being seven (7) affirmative votes, the MOTION CARRIED.

Chairman Thomas announced that this recommendation will be forwarded to the City Council and to keep in mind that the Plan Commission is a recommendation body only. The City Council will hear about this case on February 23, 2026, at the Work Session Meeting and then again on March 2, 2026, City Council meeting for formal vote.

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OTHER BUSINESS:
There was no other business.

PUBLIC COMMENTS:
There were no public comments.

There being no further business before the Commission, a motion for adjournment was in order.

(#8) Motion by Commissioner Carroll seconded by Commissioner Peterson, to adjourn the February 12, 2026, Plan Commission meeting.
On roll call, the vote was:
AYES: Commissioners Carroll, Peterson, Flynn, Slabozeski, Stanton, Butler, Chairman Thomas.
NAYES: None.
ABSENT: None.
There being seven (7) affirmative votes, the MOTION CARRIED

The meeting was adjourned at 9:23 p.m.

As approved this_____day of_____, 2026.
As presented_____
As amended_____

_____
BILL THOMAS, COMMISSION CHAIRMAN

DRAFT

To: Plan Commission

From: Daniel Ritter, AICP, Community and Economic Development Director
Ronald Mentzer, Community and Economic Development Consultant

Date: February 12, 2026
(**with 2/12/2026 Revised Exhibit B**)

Re: Proposed Seasons at Crest Hill Luxury Multi-Family Apartment Community Planned Unit Development, Subdivision, and Rezoning Application – Plan Commission Case # PUD-26-1-2-1

Project Details

Project:	Seasons at Crest Hill Luxury Multi-Family Apartment Home Community
Applicant:	Fiduciary Real Estate Development, Inc.
Requests:	Rezoning to R-3 Multiple Family, a special use for a combined preliminary/final planned unit development (PUD) project, various PUD waivers, and a preliminary and final plat of subdivision.
Location:	The approximately 16-acre vacant development site is located along the north side of Ryan Drive, approximately 280 feet east of Weber Road and 201 feet south of Renwick Road.

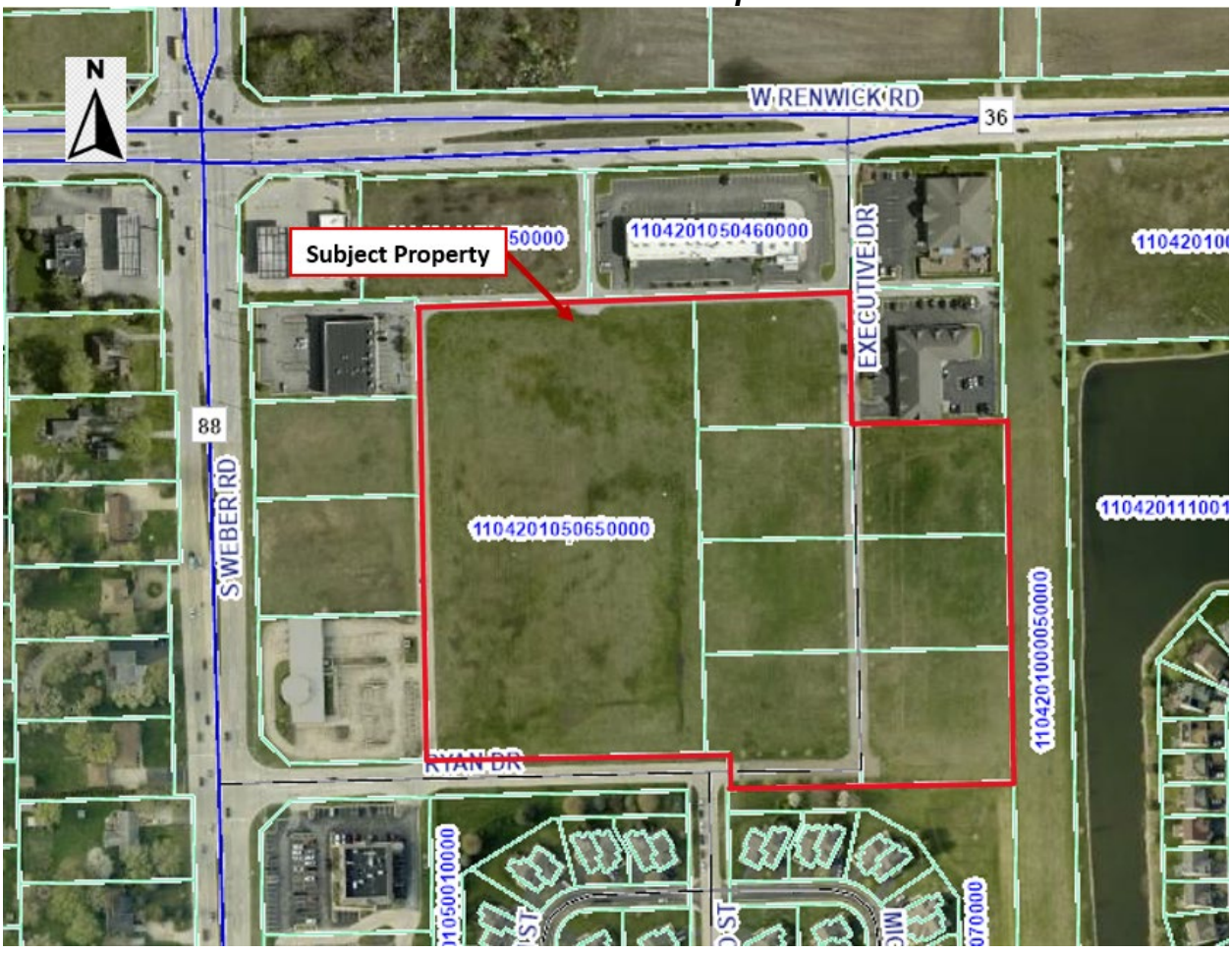
Site Details

Lot Size:	15.81 acres in total
Existing Zoning:	B-3, Business Service District
Proposed Zoning:	R-3, Multiple Family Residence District
Existing Improvements:	Private streets and vacant open-space

Surrounding Zoning and Land Use Summary

	Land Use	Comp Plan	Zoning
Subject Parcel	Vacant commercial lots and private streets	Local Commercial	B-3
North	Vacant commercial lot and a multi-tenant commercial bld.	Local Commercial	B-3
South	Remmington Lakes Duplexes	Single Family Attached.	R-3
East	Open-space/underground gas pipeline	Uninc. Will Co.	A-1
West	Bank, multi-tenant commercial bldg. and vacant commercial lots	Local Commercial	B-3

Site Location Map



PUD Site Plan



APPLICATION MATERIALS

The application materials submitted for this project/case and reviewed by City staff/consultants are listed on attached Exhibit A and have been distributed with this report.

APPLICATION BACKGROUND

For the past year, Community Development Department staff have been in communication with Fiduciary Real Estate Development, Inc. (FRED) representatives regarding its interest in the purchase and development of the approximately 16-acre vacant, B-3 Business Service District zoned property located southeast of the Weber Road/Renwick Road intersection and north of Ryan Drive (the "Site") with a new luxury apartment home community. FRED has been a respected and award-winning developer of high-quality multifamily and mixed-use projects in the Midwest market since 1985. FRED has successfully delivered six similar projects in Illinois, including the Seasons at Romeoville (now marketed as The Bluffs) and Seasons at Plainfield. Collectively, these six projects contain 1,776 units.

In August of 2025, FRED executed purchase agreements with the owners of the Site. In mid-October, FRED submitted a formal application for the City Council's review of the conceptual development plans for a potential 260-unit apartment home community (Seasons at Crest

Hill) on the Site. The City Council reviewed the conceptual plans for this project at its November 17, 2025, regular meeting where the Council expressed unanimous support for the project to move forward through the City's formal approval process.

PROJECT SUMMARY

The Seasons at Crest Hill (the "Project") includes 260 Class A apartment homes in 14, 18-20 unit, two-story apartment buildings, situated around a 5,400 sq. ft.+/- clubhouse/pool complex, 120 enclosed garage parking spaces, and 432 surface parking spaces. Vehicle access to the Project is provided via six access driveways that connect to the existing network of public and private streets that encircle the Site and then to Renwick Road and Weber Road. No new public streets are proposed in the Project.

Buildings will be constructed with high-quality and durable building materials, including fiber cement board siding and trim, a significant amount of brick/masonry, standing seam metal roof accents, and generous amounts of energy-efficient windows and sliding glass patio doors. Each unit will have access to a balcony or a patio. Upgraded interior unit features include designer cabinetry, upgraded stainless steel appliances, in-unit laundry, 9-foot ceilings, quartz countertops, and kitchen islands.

The Project includes 120 one-bedroom, 120 two-bedroom, and 20 three-bedroom units. Projected rental rates for these units range from $1,500 to $2,700 per month.

REQUESTED APPROVALS

FRED has requested the following special zoning and subdivision-related approvals for the Project:

1. **Zoning Map Amendment (Rezoning):** Rezoning the entire site from B-3 Business Service District to R-3 Multiple Family Residence District.
2. **A Combined Preliminary and Final Planned Unit Development (PUD) Special Use**
3. **PUD Waivers from the following Zoning Ordinance Requirements:**
    a. Table 1: Zoning District Standards for Residential Districts
        i. Reduce the minimum lot area requirement from 5,000 sq. ft. per unit to 2,648 sq. ft. per unit.
        ii. Increase the amount of allowed lot coverage from 50% to approximately 70%.
        iii. Reduce the 30 ft. minimum required front/corner side yard and 40 ft. minimum rear yard building setbacks throughout the Project to accommodate the building locations reflected on the application materials listed on Exhibit A.
        iv. Reduce the minimum floor area requirement for one-bedroom apartment units from 800 sq. ft. to an average of approximately 700 sq. ft.
    b. Reduce the 30 ft. required front yard parking setback required by Section 11.5-1 and the parking setbacks required adjacent to a residential district by Section 11.5-3 throughout the Project to accommodate the parking locations reflected on the application materials listed on Exhibit A.

c. Reduce parking requirements of Section 11.8-1 c. from 3.5 parking spaces per unit to 2.12 parking spaces per unit.

d. Reduce the minimum width of parking lot access aisle required between adjacent parking stalls by Section 11.4-1 from 26 ft. to 24 ft.

e. Reduce the percentage of masonry required on individual multi-family residential buildings by Section 8.7-2 as follows:

	% Masonry Required	***% Masonry Provided on 18-Unit Building***	***% Masonry Provided on 20-Unit Building***
Min. % masonry on one façade per building	80%	35% - front facade	33.5% - front facade
Min. % masonry on any wall facing a public or private street	10%	9.5% - garage door facade	7.2%- garage door facade

f. Reduce the minimum width of walking/jogging paths required by Section 10.0-4.7, from 8 feet to 5 feet.

g. Adjust any other Zoning Ordinance or City Code requirements the Community and Economic Development Director deems necessary to construct the project as reflected on the application materials listed on Exhibit A**.**

4. **Preliminary/Final Plat of Subdivision:** The proposed Final Plat of Seasons at Crest Hill Subdivision consolidates the eight existing lots that comprise the Site, vacates existing unnecessary utility easements, and dedicates the new utility easements necessary to accommodate the new infrastructure that will be constructed as part of the Project.

STAFF ANALYSIS AND INPUT ON SPECIFIC PROJECT COMPONENTS

Planned Unit Development Special Use Request

According to Section 10.0-1 of the Zoning Ordinance, *"The purpose of Planned Unit Development regulations is to encourage and allow more creative and imaginative design of land developments than is possible under district zoning regulations. Planned Unit Developments are intended to allow substantial flexibility in planning and designing a proposal. This flexibility often accrues in the form of relief from compliance with conventional zoning ordinance site and design requirements. Ideally, this flexibility results in a development that is better planned, that contains more amenities, and ultimately a development that is more desirable to live in than one produced in accordance with typical zoning ordinance and subdivision controls."*

Overall, staff believes FRED's PUD application documents represent a project design that is more creative and desirable than what is required or allowed under the City's standard Zoning Ordinance requirements and is an excellent representation of a project that satisfies the stated Purpose for PUD special uses.

Section 10.6 of the Zoning Ordinance states “The Plan Commission shall, after the public hearing, set forth to the City Council the reasons for the recommendation, and said recommendation shall set forth with particularity what respects the proposal would be in the public interest, including but not limited to the findings of fact outlined in PUD Section 10.6 and Special Use 12.7-6 of the Zoning Ordinance.

Staff’s recommended draft findings for each of these sections of the Zoning Ordinance are reflected in bold italic font in attached Exhibits B and C. The draft findings can be modified or changed as the Plan Commission deems fit and based on the specific testimony provided at the public hearing.

Based on the draft findings outlined in these Exhibits, staff supports the approval of the requested Preliminary and Final Planned Unit Development for this project.

PUD Waiver Request

The overall design of the Project is rooted in current market demand expectations rather than rigid zoning requirements established decades ago. The requested waivers are necessary to allow the Project to respond to these market realities in a manner that is aesthetically attractive and economically and environmentally responsible. As such, staff supports the approval of all requested PUD waivers. Additional staff input on key waiver requests includes:

Increased Density/Reduced Lot Area per Dwelling Unit: The standard residential density restrictions contained in the City’s Zoning Ordinance do not accommodate the type of high-quality, highly amenitized, modern multifamily developments that continue to be constructed in the communities that surround Crest Hill. Staff strongly supports the approval of waivers from the City’s standard density restrictions to encourage the development of high-quality multi-family projects like the Seasons at Crest Hill.

Reduced Minimum Parking Requirements: Staff believes the City’s current apartment parking requirements are excessive and inconsistent with actual parking needs in modern-day suburban multi-family residential developments. Imposing these antiquated requirements on new projects results in large areas of valuable land being unnecessarily paved over. The additional pavement leads to undesirable environmental impacts and reduces the economic value this type of project produces for the community. Based on staff’s professional experience and research, the proposed parking ratios for this project are reasonable, appropriate, and consistent with the parking demands of similar positioned modern-day, class A, suburban multi-family projects.

Reduced Masonry Requirements on Specific Building Facades: The City’s standard masonry code requirements are somewhat rigid and do not by themselves guarantee a high-quality or attractive building design. While the concept building elevations proposed for the Seasons at Crest Hill project do not meet every aspect of the City’s standard masonry code requirements, they do satisfy the City’s requirement that at least 20% of the total exterior wall area on a building be clad with masonry materials. Furthermore, staff believe the proposed mix of high-quality and durable building façade materials is aesthetically attractive and will age/weather well and look great for decades.

Rezoning Request

Section 12.8-5 of the Zoning Ordinance states the Plan Commission shall make written findings of fact on rezoning proposals and shall submit these findings together with a recommended course of action to the City Council. In its findings, the Plan Commission shall consider the various standards reflected in Exhibit D.

Staff recommends the draft findings identified in bold italic font on Exhibit D. The draft findings can be modified or changed as the Plan Commission deems fit and based on the specific testimony provided at the public hearing. Based on the findings reflected in Exhibit D, staff supports the requested rezoning of the Site from B-3 Business Service District to R-3 Multiple Family Residence District.

Preliminary and Final Plat of Subdivision

Staff supports the approval of the proposed Final Plat of Seasons at Crest Hill Subdivision as it will consolidate numerous existing lots into a single lot designed to support the unified development, ownership, and management of the proposed Seasons at Crest Hill apartment home project. A condition of approval has been added to ensure that it is a requirement of the zoning and PUD that the property remain under a single unified ownership.

Traffic and Vehicular Circulation

FRED prepared and submitted a detailed traffic impact study for the proposed Project. The City's Director of Engineering has reviewed the study and concurs with the following key study conclusions:

1. The existing roadway system that will serve the Project has sufficient reserve capacity to accommodate the traffic that will be generated by the Project.
2. The proposed vehicle access configuration for the Project to connect to the existing right-in/right-out and full access on Weber Road and the existing signalized intersection of Ryan Drive and Weber Road is appropriate and acceptable.
3. Traffic volumes on Ontario Drive will not change as a result of this project, provided the existing traffic signal at Ryan Drive and Weber Road remains in place
4. The future traffic generated by this Project will help satisfy the traffic warrants that justify keeping the Ryan Drive and Weber Road traffic signal in place.

The private streets that surround the Site are currently owned and maintained by the adjacent property owners. In the past, the City Council has expressed concern over the deteriorating conditions and lack of proactive maintenance of these streets. These existing conditions and ongoing City concerns have been discussed with FRED. In the engineering design drawings for the project (Sheet 2), FRED documents its commitment to grind and resurface streets surrounding the Site.

Stormwater Management

The City's Director of Engineering has confirmed that the existing stormwater detention pond network in the Remington Lakes Subdivision was designed and constructed to accept and manage the stormwater runoff volume the Project will generate. As such, no new stormwater detention facilities are proposed or required as part of this Project. This is identical to how stormwater runoff from the new self-storage facility under construction at the southwest corner of Borio and Renwick Road will be handled.

Lockport Township Fire Protection District Input
The Lockport Fire Protection District has reviewed the application documents for the Project and has no objections or requested revisions at this time.

STAFF RECOMMENDATION
Based on the draft findings reflected in this staff report, Staff recommends the Plan Commission provide the following motion to the City Council. This motion may be amended by any Plan Commission member making the motion based upon the findings of the public hearing. Staff recommends that any motion be made in the positive form to correspond with the applicant's request and avoid confusion on the recommendation.

The Plan Commission recommends that the City Council approve the Rezoning, Preliminary and Final PUD Special Use, PUD Waivers, and Final Plat of Subdivision for the Seasons at Crest Hill project as outlined in the February 12, 2026, Plan Commission staff report for Case # PUD-26-1-2-1 and subject to the following conditions and requirements:

1. ***The final plat of subdivision shall satisfy all applicable City ordinance, staff, and City Attorney requirements and shall include all easement provisions required by the City's Director of Engineering.***
2. ***All final engineering plans, related supporting information, and development security for the Project shall be submitted for the Director of Engineering's final approval prior to or in conjunction with the formal building permit application submitted for the Project. Said plans shall be substantially consistent with the application documents submitted for Plan Commission Case #PUD- 26-1-2-1.***
3. ***All final architectural, signage, and landscape plans for the Project shall be submitted for Community Development Department staff final approval prior to or in conjunction with the formal building permit application submitted for the Project. Said plans shall be substantially consistent with the application documents submitted for Plan Commission Case #PUD-26-1-2-1.***
4. ***The two private drives that connect the Project to Renwick Rood shall be included in scope of private streets FRED will mill and resurface. Unless otherwise approved by the City Engineer, all private street resurfacing work shall be completed prior to occupancy of the first building in the Project.***
5. ***Unless otherwise approved as a Major PUD Change by the City Council, the ownership and management of the entire Project shall each be under a single entity. This condition is not intended to prevent the Project owner from engaging the services of a independent qualified property management company to manage day-to-day operations, maintenance activities, and rehabilitation projects in it.***
6. ***A fire hydrant must be located within 100 ft of each building's fire department connection.***
7. ***Unless otherwise approved by the Director of Community and Economic Development as a result of Gas Company feedback, the Applicant shall prepare and submit proper paperwork to Nicor for approval of a sidewalk or multi-use path as shown on the plans prior to issuance of the first structure's building permit. Pathway/sidewalk shall be installed before issuance of the last building's certificate of occupancy. The pathway/sidewalk may require***

minor changes to the approved plan based upon final Nicor and City permit reviews. Notwithstanding anything to the contrary, the Applicant's required construction of the pathway/sidewalk is predicated on the Applicant or the City obtaining approval from Nicor for its construction and said approval shall not require applicant to relocate any existing gas lines.

Exhibit A
Seasons at Crest Hill Apartments Application Materials

Misc. Application Materials

- 1/9/2026 Application for Development/Rezoning, Plat of Subdivision, PUD, and Waivers (Maureen Brown)
- 1/9/2026 Application for Development/Rezoning, Plat of Subdivision, PUD, and Waivers (SAI Bolingbrook, LLC Series D)
- 1/15/2026 Transmittal Letter
- 1/15/2026 Planned Unit Development Project Description
- Undated Community Benefit Statement
- Undated Response to Planned Unit Development Objectives
- Undated Zoning Ordinance Rezoning Approval Criteria Response Letter

Architectural Plans

- 1/14/2026 Site Plan, Floor Plans, Elevations, and 3D Renderings

Engineering/Site Plans

- 10/13/2025 Surrounding Zoning Exhibit
- 1/14/2026 Plat of Vacation
- 1/14/2026 Plat of Subdivision
- 1-22-2026 Traffic Study
- 1/14/2026 Engineer's Opinion of Probable Cost - Letter of Credit
- 1/14/2026 Stormwater Memo
- 1/14/2026 Stormwater Pollution Prevention Plan
- 1/14/2026 Fire Hydrant Coverage Exhibit
- 1/14/2026 Fire Truck Access Exhibit
- 1/14/2026 Title, Civil Plans Sheet 1
- 1/14/2026 Existing Condition and Demolition Plan, Civil Plans Sheet 2
- 1/14/2026 Soil Erosion and Sediment Control Plan, Civil Plans Sheet 3
- 1/14/2026 Soil Erosion and Sediment Control Details, Civil Plans Sheet 4-5
- 1/14/2026 Site Dimensional and Paving Plan – Overall, Civil Plans Sheet 6
- 1/14/2026 Site Dimensional and Paving Plan – NW, NE, West, East, SW, and SE, Civil Plans Sheets 7-12
- 1/14/2026 Grading Plan – Overall, Civil Plans Sheet 13
- 1/14/2026 Grading Plan – NW, NE, West, East, SW, and SE, Civil Plans Sheets 14-19
- 1/14/2026 Typical Building Grading Details (18-Units), Civil Plans Sheet 20
- 1/14/2026 Typical Building Grading Details (20-Units), Civil Plans Sheet 21
- 1/14/2026 Overall Utility Plan, Civil Plans Sheet 22
- 1/14/2026 Utility Plan - NW, NE, West, East, SW, and SE, Civil Plans Sheets 23-28
- 1/14/2026 Sanitary Profiles 1-15, Civil Plans Sheets 29-37
- 1/14/2026 Construction Details, Civil Plans Sheets 38-43
- 1/14/2026 Construction Specifications, Civil Plans Sheet 44

Lighting

- 1/13/2026 Photometric Plan

Landscaping

- 10/9/2025 Existing Vegetation Exhibit Sheet 1
- 1/14/2026 Landscaping Plans Sheets L1-L8

Exhibit B

Seasons at Crest Hill Zoning Ordinance Section 10.6 PUD Findings

(Rev. 2/9/2026)

1. In what respects the proposed plan is consistent with the stated purpose of the Planned Unit Development regulations and with the Objectives stated in Section 10.0-2 herein.
   FRED's PUD application documents represent a project design that is more creative and desirable than what is required or allowed under the City's standard Zoning Ordinance requirements. The specific type of housing proposed and the architectural and site plan design documents for the proposed project clearly represent a project that satisfies the stated Purpose for PUD special uses and the eleven PUD objectives outlined in Section 10.0-2 of the Zoning Ordinance.

2. Unit Development regulations as set forth in Section 10.0-3 herein. The extent to which the proposed plan meets the standards of the Planned
   The application materials and proposed plans for the Seasons at Crest Hill project fully satisfy each of the six PUD standards set forth in Section 10.0-3 of the Zoning Ordinance.

3. The extent to which the proposed plan departs from the zoning and other city regulations otherwise applicable to the subject property, including but not limited to density, dimension, area, bulk, and use, and the reasons why such departures are deemed to be in the public interest.
   The requested PUD waivers to miscellaneous Zoning Ordinance bulk, density, dimensional, and architectural regulations allow the project to advance public interest by integrating attractively designed apartment home buildings, community amenities, and open spaces in a cohesive, pedestrian-friendly layout that diversifies the City's housing stock and promotes efficient use of land and infrastructure in the community. Overall, these waivers allow the Project to effectively respond to current housing preferences and market demand in an economically feasible way.

4. The method by which the proposed plan makes adequate provision for public services, provides adequate control over vehicular traffic, provides for and protects designated common open space, and furthers the amenities of light and air, recreation and visual enjoyment.
   The Project is designed to utilize the existing nearby stormwater management detention ponds that were originally constructed to accommodate the stormwater runoff from the project site. The Project takes full advantage of the existing, well developed, City and County street network surrounding the site and effectively manages the traffic it will generate by interconnecting to that network at multiple, appropriately designed locations. Existing City sanitary sewer and water mains located adjacent to the project site have the capacity to effectively serve the project. Generous landscape areas, walking paths, and outdoor community gathering spaces are distributed throughout the site. Central amenities, including a clubhouse, fitness center, and pool, provide

accessible recreation opportunities for residents while preserving a suburban sense of openness.

5. The relationship and compatibility of the proposed plan to the adjacent properties and neighborhood.
   Planned building materials and architectural details reflect the character of the surrounding community and reinforce a sense of place. Building heights and setbacks have been designed to provide a desirable transition between adjacent single-family neighborhoods and commercial uses. Landscape buffers and carefully thought through building orientation enhance privacy and soften the visual interface between the project and the surrounding neighborhood.

6. The desirability of the proposed plan as regards physical development, tax base and economic well-being of the City.
   The Project will add high quality multifamily residential housing on a relatively large, long-time vacant and unproductive commercially zoned property in the middle of an established mixed-use neighborhood. The Project will provide quality housing options for the growing employment base in Crest Hill and the surrounding area. The Project will generate an estimated $875,00 in new property tax revenue annually. Consumer spending from the future residents in the Project will generate an estimated $24,440,000 in economic to the area.

7. The conformity with City objectives.
   The proposed plan materially advances the goals and objectives outlined in the City's Comprehensive Plan.

Exhibit C

Seasons at Crest Hill Apartments Zoning Ordinance

Section 12.7-6 Special Use Findings

1. That the establishment, maintenance, or operation of the special use will not be detrimental to or endanger the public health, safety, or general welfare.
   The establishment, maintenance, and operation of the proposed special use will not be detrimental to, nor endanger, the public health, safety, or general welfare. The proposed 260-unit community will not be detrimental to or endanger public health, safety, or general welfare. It has been designed using a contemporary suburban approach that incorporates high-quality architecture, sustainable materials, and a well-organized site plan. The project will adhere to all applicable building, fire, and stormwater regulations.

2. That the special use will not be injurious to the use and enjoyment of other property in the immediate vicinity for the purposes already permitted, nor substantially diminish and impair property values within the neighborhood.
   The surrounding area contains a mix of commercial and residential uses, and the proposed development is designed to function as an appropriate transition between heavier commercial uses and adjacent single-family neighborhoods.

   Building heights, setbacks, and orientation provide compatibility with surrounding development, while landscape buffers and native plantings soften visual impacts and enhance privacy. The high-quality residential character of the project represents a less intensive and more compatible use than what is permitted under existing commercial zoning and is expected to support, rather than detract from, surrounding property values.

3. That the establishment of the special use will not impede the normal and orderly development and improvement of surrounding property for uses permitted in the district.
   The Site is well suited for multifamily development due to its proximity to major transportation routes, employment centers, and existing suburban infrastructure.

   The project responds to demonstrated demand for modern multifamily housing and aligns with established development patterns in the area. Its design and land use compatibility support coordinated growth and appropriate transitions between existing neighborhoods and commercial corridors.

4. That adequate utilities, access roads, drainage, and/or other necessary facilities have been or are being provided.
   The Site is currently served by municipal water and sanitary sewer systems, and existing City utility plans can support the proposed development. No new roads public road improvements are necessary to support the Project. The existing network of stormwater detention facilities in the Remington

Lakes project are sized and constructed to manage the stormwater that will be generated by the project.

5. That adequate measures have been or will be taken to provide ingress and egress so designed as to minimize traffic congestion in the public streets.
   The internal circulation system provides safe and efficient vehicular movement while prioritizing pedestrian connectivity through internal walkways linking buildings, amenities, and open spaces. Shared parking areas and a pedestrian-friendly layout reduce reliance on individual vehicle trips and support orderly traffic flow both within the site and along adjacent roadways.

6. That special use shall in all other respects conform to the applicable regulations of this Ordinance and other applicable City regulations, except as such regulations may in each instance be modified by the City Council pursuant to the recommendation of the Plan Commission.
   Except as noted in this report and reflected in FRED's application materials, the project will conform with all applicable regulations of the City.

Exhibit D

Seasons at Crest Hill Apartments Zoning Ordinance

Section 12.8-5 Rezoning Findings

1. Whether the uses permitted by the proposed amendment would be appropriate in the area concerned.
   The R-3 District permits multifamily residential uses that are appropriate for the Site and compatible with surrounding land uses. The proposed zoning provides a reasonable transition from existing commercial uses while supporting the City's housing needs.

2. Whether adequate public school facilities and other public services exist or can be created to serve the needs of any additional dwelling units likely to be constructed as a result of such change.
   Adequate public services, including police, fire protection, emergency services, and public works, are available to serve the Site. Existing public school facilities and municipal services have sufficient capacity, and no extraordinary service demands are anticipated.

3. Whether the proposed change is in accord with any existing or proposed plans for providing public water supply and sanitary sewers in the vicinity.
   The City's existing plans for public water and sanitary sewer service in the Community can support the proposed project. The Site is currently served by municipal utilities, which can effectively serve the proposed project.

4. Whether the proposed amendment is likely to result in an increase or decrease in the total zoned residential capacity of the City and the probable effect of such change on the cost of providing public services.

   The amendment will increase the City's residential capacity; however, the development represents an efficient use of land and infrastructure. The anticipated impact on public service costs will be offset by increased tax base and utility revenues the project generates.

5. The amount of vacant land which is currently zoned for similar development in the City or in contiguous areas, and particularly in the vicinity of the area included in the proposed amendment, and any special circumstances which may make part of such vacant land unavailable for development.
   There is very little vacant land in the community zoned for similar development and much of that land is constrained by size, location, infrastructure limitations, or other development restrictions. The Site is well-suited for multifamily use due to its size, access, and availability of utilities.

6. The recent rate at which land is being developed in the proposed district of the City, and particularly in the vicinity of the area included in the proposed amendment.

There has been very limited new development in this general area of the City over the past decade. Recent development trends in Crest Hill and the surrounding area demonstrate continued demand for residential and multifamily housing. The proposed amendment responds to this pattern of growth and demand for modern day multi-family housing.

7. The effect of the proposed amendment upon the growth of existing neighborhoods as envisaged by the Crest Hill Comprehensive Plan.
   The proposed rezoning supports the goals of the Crest Hill Comprehensive Plan by encouraging orderly growth, efficient use of infrastructure, and appropriate transitions between land uses and the adjacent neighborhood.

8. Whether other areas designated for similar development are likely to be so developed if the proposed amendment is adopted, and whether the designation for such future development should be withdrawn from such areas by further amendment of this Ordinance.
   Approval of the proposed amendment is not expected to impede similar development in other areas designated for similar uses, nor does it necessitate changes to existing land use designations elsewhere in the City.

9. If the proposed amendment involves a change from a residential to a nonresidential designation, whether more non-residential land is needed in the proposed location to provide commercial services or employment for the residents of the City.
   The request does not involve a change from residential to non-residential zoning. Sufficient commercially planned and zoned land remains available within the City to accommodate new commercial and employment-generating uses.

10. Existing uses and zoning within the general area of the property in question.
    The surrounding area contains a mix of commercial and residential uses. The proposed R-3 zoning is compatible with existing development patterns and land uses and will act as an effective and desirable transition between the heavier commercial uses along Renwick Road and Weber Road and the Remington Lakes neighborhood.

11. The extent to which property values are diminished by particular zoning restrictions.
    The current B-3 zoning accommodates a wide variety of and potentially intensive commercial uses, which can produce traffic, noise, and other negative impacts to the surrounding area. The proposed rezoning accommodates a high-quality residential project, which upgrades and maintains the existing surrounding private street network. This type of project at this location will not negatively impact surrounding property values and supports the economic viability of existing and future commercial, retail, and restaurant uses near the Site.

12. The extent to which the restriction of property values of the petitioner promotes the health, safety, morals, or general welfare of the public.
The proposed rezoning promotes public health, safety, and general welfare by diversifying housing opportunities in the community and encouraging efficient use of the limited amount of land available for development in the city.

13. Whether the proposed amendment is the minimum adjustment necessary to allow the reasonable use of the property.
Despite being zoned for commercial development for approximately two decades, the Site remains vacant. Over that time, the commercial real estate market has evolved to the point where the site is not attractive for the type of coordinated commercial/retail development the City of Crest Hill is seeking to promote in the Weber Road Corridor. The Site's considerable setback from Weber Road and Renwick Road, its adjacency to the established single-family residential neighborhood to the south, and its proximity to the Prairie Bluff Forest Preserve make it an excellent location for a high-quality apartment home community. The proposed rezoning to R-3 represents the minimum adjustment necessary to accommodate the proposed project, which is deemed a reasonable and desirable use of the Site.

Application for Development

For Office Use Only: **Case Number:** PUD-26-1-2-1

Project Name: Seasons at Crest Hill

Owner: Maureen Brown
Street address: [redacted]
City, St., Zip: [redacted]
Phone: _____
Email: [redacted]

Correspondence To: FRED-Crest Hill HC, LLC
Street address: 789 N Water street, Suite 500
City, St., Zip: Milwaukee, WI 53202
Phone: [redacted]
Email: [redacted]

Property Address:
Street address: SE Corner of Renwick Rd and Weber Rd
City, St., Zip: Crest Hill, IL 60403
PIN: 11-04-20-105-065-0000

Property Information:
Lot Width: _____
Lot Depth: _____
Total Area: Approximately 8 acres

*Submit an electronic version of the legal description only in a Word document to: buildingdepartment@cityofcresthill.com

Existing Zoning: B-3
Existing Land Use: Agriculture / Undeveloped
Requested Zoning: R-3 with PUD
Proposed Land Use: Multi-family Residential

Adjoining Properties Zoning and Uses:
North of Property: Zoning: B-3 Land Use: Retail / Service
South of Property: Zoning: R-3 Land Use: Single Family Attached
East of Property: Zoning: B-3 Land Use: Agriculture / Undeveloped
West of Property: Zoning: B-3 Land Use: Retail / Service

Purpose Statement (intended use and approval sought): Rezoning, Special Use and PUD

Development Request: Please check all that apply and describe:

[X] Rezoning: Rezoning from B-3 Business Service District to R-3 Multiple-Family Residence District

[X] Special Use: _____

[ ] Variance: _____

[X] Planned Unit Development: Preliminary and Final

[ ] Annexation: _____

[X] Plat: Preliminary and Final

[X] Other: Miscellaneous PUD waivers as shown on the plans.

Contact Information – If not yet known, please indicate as TBD. Check those parties in which copies of all correspondences should be forwarded.

[X] Civil Engineer: Jared Placek Phone: [redacted]

Company: Manhard Consulting Email: [redacted]

[ ] Contractor: TBD Phone: _____

Company: _____ Email: _____

[X] Architect: Justin Koeppler Phone: [redacted]

Company: AG Architecture Email: [redacted]

[X] Builder: Tony DeRosa Phone: [redacted]

Company: Fiduciary Real Estate Development, Inc. Email: [redacted]

I agree to be present (in person or by counsel) when the Plan Commission and City Council hear this development request.

Signature of the Applicant — Date: 1/12/26

If you (the applicant) are not the owner of record, please provide the owner's signature.

Maureen Brown — Date: 1/9/2026

Signature of the Owner

Application for Development

For Office Use Only: **Case Number:** PUD-26-1-2-1

Project Name: Seasons at Crest Hill

Owner: SAI Bolingbrook, LLC Series D
Attn: Dipa Patel
Street address: [redacted]
City, St., Zip: [redacted]
Phone:
Email: [redacted]

Correspondence To: FRED-Crest Hill HC, LLC
Street address: 789 N Water St, Suite 500
City, St., Zip: Milwaukee, WI 53202
Phone: [redacted]
Email: [redacted]

Property Address:
Street address: SE Corner of Renwick Rd and Weber Rd
City, St., Zip: Crest Hill, IL 60403
PIN: 11-04-20-105-071-0000, 11-04-20-105-072-0000 11-04-20-105-073-0000, 11-04-20-105-066-0000, 11-04-20-105-067-0000, 11-04-20-105-068-0000,11-04-20-105-069-0000

Property Information:
Lot Width:
Lot Depth:
Total Area: Approximately 8 acres

*Submit an electronic version of the legal description only in a Word document to: buildingdepartment@cityofcresthill.com

Existing Zoning: B-3
Existing Land Use: Agriculture / Undeveloped
Requested Zoning: R-3 with PUD
Proposed Land Use: Multi-family Residential

Adjoining Properties Zoning and Uses:
North of Property: Zoning: B-3 Land Use: Retail / Service
South of Property: Zoning: R-3 Land Use: Single Family Attached
East of Property: Zoning: R-3 Land Use: Parks and Open Space
West of Property: Zoning: B-3 Land Use: Retail / Service

Purpose Statement (intended use and approval sought): Rezoning, Special Use and PUD

Development Request: Please check all that apply and describe:

[X] Rezoning: Rezoning from B-3 Business Service District to R-3 Multiple-Family Residence District

[X] Special Use: _____

[ ] Variance: _____

[X] Planned Unit Development: Preliminay and Final

[ ] Annexation: _____

[X] Plat: Preliminary and Final

[X] Other: Miscellaneous PUD waivers as shown on the plans.

Contact Information – If not yet known, please indicate as TBD. Check those parties in which copies of all correspondences should be forwarded.

[X] Civil Engineer: Jared Placek Phone: [redacted]

Company: Manhard Consulting Email: [redacted]

[ ] Contractor: TBD Phone: _____

Company: _____ Email: _____

[X] Architect: Justin Koeppler Phone: [redacted]

Company: AG Architecture Email: [redacted]

[X] Builder: Tony DeRosa Phone: [redacted]

Company: Fiduciary Real Estate Development, Inc. Email: [redacted]

I agree to be present (in person or by counsel) when the Plan Commission and City Council hear this development request.

Signature of the Applicant — Date: 1/12/26

If you (the applicant) are not the owner of record, please provide the owner's signature.

Dipa S. Patel by James Brandt attg in fact — Date: 01/09/2026

Signature of the Owner

FIDUCIARY
REAL ESTATE DEVELOPMENT, INC
789 N. Water Street, Suite 500, Milwaukee, Wisconsin 53202
Phone 414.226.4535 ● Fax 414.226.4523 ● www.fred-inc.com

January 15, 2026

Mr. Dan Ritter
City of Crest Hill
Community and Economic Development Director
20600 City Center Boulevard
Crest Hill, IL 60403

RE: Seasons at Crest Hill – Rezoning, Special Use, and Plan Unit Development Submittal

Dear Mr. Dan Ritter:

We are respectfully requesting to be placed on the February 12, 2026, Plan Commission meeting agenda for rezoning, special use, and planned unit development for the following properties located on the southeast corner of Renwick Road and Weber Road:

- Parcel #11-04-20-105-065-0000, #11-04-20-105-066-0000, #11-04-20-105-067-0000, #11-04-20-105-068-0000, #11-04-20-105-069-0000, #11-04-20-105-071-0000, #11-04-20-105-072-0000, #11-04-20-105-073-0000

Enclosed with this letter please find the following items relating to the above referenced submittal requirements:

1. Two Applications for Development
2. Payment of Fees
    a. Rezoning, Plan Unit Development and Landscaping Plan Review Fee of $8,000
    b. 4.5% of Engineer's Opinion of Probable Cost Letter of $95,839.05
3. Plan Unit Development Submittal – Project Description
4. Written Responses to the City of Crest Hill's Application Requirement and Comment Letter Dated December 2, 2025
5. Community Benefit Letter Addressing 10.0-3
6. Planned Unit Development Objectives Letter Addressing 10.0-2
7. Photometric Plan
8. Engineering Drawings including the following documents:
    a. Civil Engineering Plan Set
    b. Engineer's Opinion of Probable Cost Letter
    c. Landscaping Plans
    d. Plat of Subdivision
    e. Plat of Vacation
    f. Stormwater Memo
    g. Stormwater Pollution Prevention Plan
    h. Existing Vegetation Exhibit
    i. Fire Truck Access Exhibit
    j. Fire Truck/Hydrant Coverage Exhibit
    k. Surrounding Zoning Exhibit
9. Architectural Plans including Renderings

This letter shall serve as our formal request to be placed on the February 12, 2026, Plan Commission meeting agenda for rezoning, special use, and planned unit development.

Should you have any comments or questions, I can be reached at (262) 366-4376. I appreciate your assistance and look forward to speaking with you soon.

Regards,

Fiduciary Real Estate Development, Inc.



Anthony DeRosa

FIDUCIARY
REAL ESTATE DEVELOPMENT, INC

PLAN UNIT DEVELOPMENT SUBMITTAL

Seasons
AT CREST HILL

JANUARY 15, 2026



OUR COMMITMENT TO CREST HILL'S FUTURE

On behalf of Fiduciary Real Estate Development, Inc. (FRED), we are pleased to submit our final design for a new luxury multifamily residential community in Crest Hill. FRED has successfully delivered similar communities in nearby suburbs including Seasons at Romeoville (now known as The Bluffs) and Seasons at Plainfield, both of which have achieved strong occupancy, top-of-market rents, and attracted high-quality residents. **The success of those projects highlights the strength of our development approach and demonstrates the pent-up demand for modern, amenity-rich rental housing in this part of Will County.**

Unlike Romeoville and Plainfield, Crest Hill has not seen new apartment development in decades, leaving residents with few options for high-quality rental living. The limited supply of modern multifamily housing, combined with ongoing population and job growth in the region, has created a significant need for housing of this type. By bringing forward 260 thoughtfully designed apartment homes, **this project will fill a critical gap in the market and ensure Crest Hill can compete with surrounding communities in attracting new residents and investment.**

Our two-story buildings, designed with 18–20 apartment homes each, deliver a human-scaled neighborhood feel while offering the amenities and finishes today's renters expect from direct-access garages and private entries to a resort-style pool, clubhouse, and fitness center. The community will serve as a natural fit within the Weber Road corridor, offering residents walkable access to services, easy interstate connectivity, and proximity to major employers.

FRED is committed to building best in class communities, ensuring they remain vibrant for years to come. We view this proposal not only as an investment in housing but as an investment in Crest Hill's continued vitality, competitiveness, and quality of life.

Tony DeRosa

VP of Development
Fiduciary Real Estate Development

A TEAM OF TRUSTED
DEVELOPMENT LEADERS



TONY DEROSA, VP OF DEVELOPMENT

Tony is a Vice President and project principal with Fiduciary. Tony is responsible for leading the company's growing development team including all aspects of the firm's development activities, from sourcing opportunities to working closely with lenders, architects and contractors. Over the course of his career, Tony has been involved in more than $1B of real estate development transactions.



DAVID FERRELL, DIRECTOR OF DEVELOPMENT

David is the Director of Development as well as a project principal at Fiduciary. David is responsible for ensuring the team's new development projects are a success through managing all aspects of the development process including municipal approvals, design, financing and project execution.



ASHLEY HEIDORN, DEVELOPMENT COORDINATOR

Ashley is a Development Coordinator with Fiduciary. Ashley is responsible for working with architects, engineers, contractors, and municipalities to develop efficient and well thought out developments while considering local code requirements.

AG ARCHITECTURE
Bright Vision. Bold Communities.

Manhard CONSULTING

OUR COMPANY

FIDUCIARY REAL ESTATE DEVELOPMENT, INC

Since 1985, FRED has been a leader in the multifamily market.

250+	3	35+
EMPLOYEES	STATES	COMMUNITIES

- Fiduciary Real Estate Development, Inc. (FRED) is an experienced developer and investor in commercial real estate focusing on multifamily and mixed use projects.
- Founded in 1985, FRED's proven track record of successful investment management has grown the business into one of Wisconsin's largest real estate companies. The company owns and manages more than 9,000 market rate apartments, with an owned portfolio conservatively valued at over $2.1 billion.

AWARD WINNING EXCELLENCE

20X WINNER OF "PROPERTY OF THE YEAR"

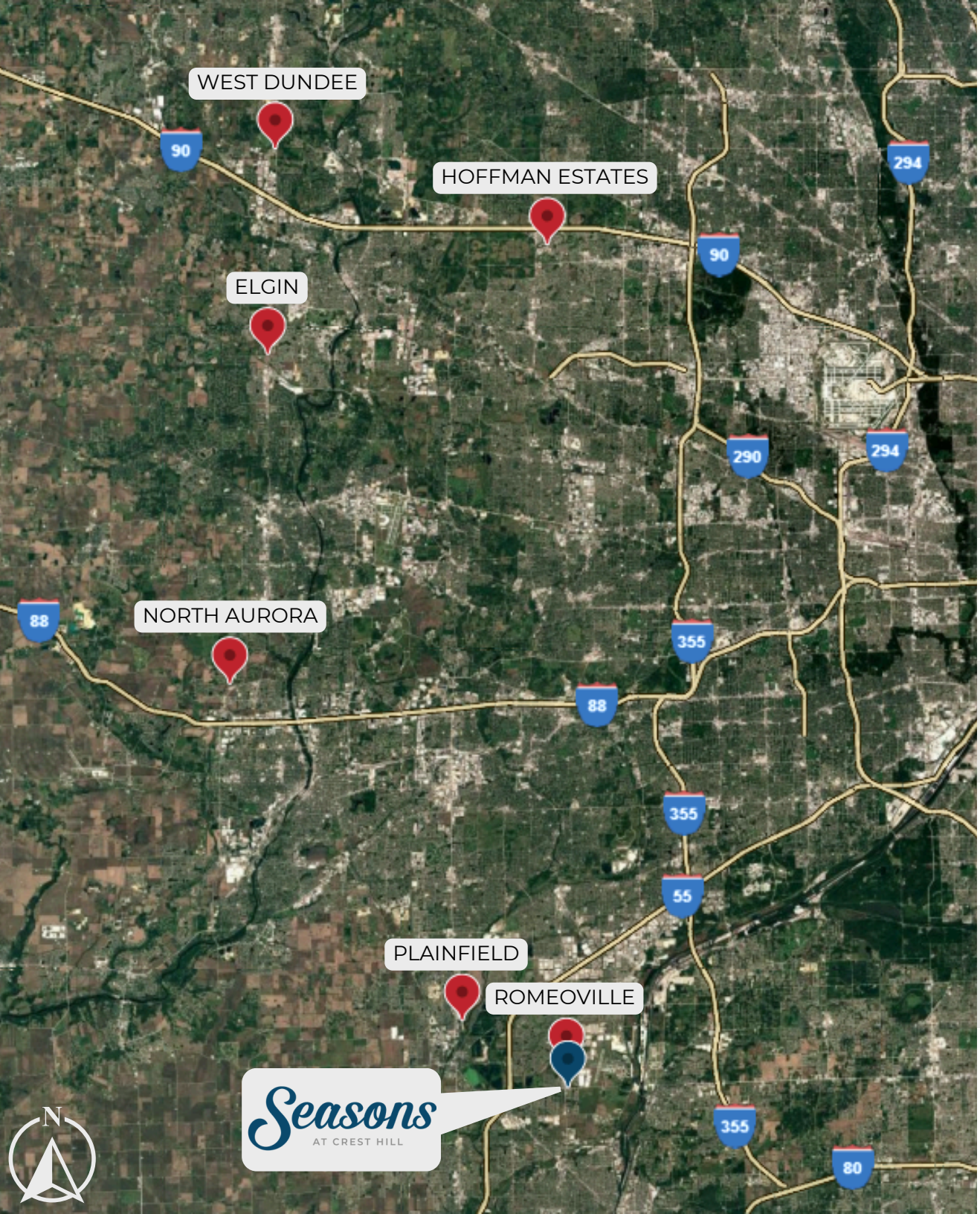
8X WINNER OF "NEW CONSTRUCTION OF THE YEAR"

6X WINNER OF "REGIONAL / MANAGER OF THE YEAR"









ILLINOIS MARKET OVERVIEW

WEST DUNDEE	380 Units
HOFFMAN ESTATES	296 Units
ELGIN	280 Units
NORTH AURORA	260 Units
PLAINFIELD	320 Units
ROMEOVILLE	240 Units
TOTAL 1,776 UNITS	

DEVELOPMENT HIGHLIGHTS

Delivering a vibrant, upscale residential community tailored to modern living

STRATEGIC SITE POSITIONING

- Future Land Use: While The Crest Hill Comprehensive Plan designates this site for future commercial and is zoned for B-3 Business Service District, the significant decline in commercial demand, accelerated by the rise of e-commerce and of remote work, has diminished the viability of new commercial development at this location.
- Strategic Fit: **Multifamily development aligns with city goals to intensify key corridors and leverage existing infrastructure rather than promote sprawl.**
- Walkability & Green Space: Site plan emphasizes pedestrian connectivity, open space, and neighborhood-style design.
- Addresses Housing Gaps: Provides modern rental options not currently available in Crest Hill, where **no new apartments have been built in decades.**
- Buffering Land Uses: Serves as a transition between commercial/industrial areas and single-family neighborhoods, improving corridor compatibility.
- Supports Local Economy: **Attracts and houses employees from Crest Hill's growing employment base while generating new tax revenue and consumer spending.**



LUXURY MARKET RATE MULTIFAMILY LIVING

- Luxury multifamily housing with a Class A amenity package
- Condo quality construction and level of finishes
- Significant pent-up demand for this type of luxury multifamily housing
- Two-story buildings with 18-20 apartment homes per building
- Private entries with direct access garages (for select apartment homes), as well as detached garages available

DESIGNED FOR WELLNESS
BUILT FOR CREST HILL'S FUTURE

Our team is committed to delivering a community that aligns with the City of Crest Hill's long-term goals for sustainability, resilience, and responsible growth. The Comprehensive Plan emphasizes efficient use of infrastructure, thoughtful land use, and preservation of community character, principles that guide our approach. The proposed Planned Unit Development is intentionally designed to minimize the need for new public infrastructure, thereby limiting long-term maintenance and replacement obligations for the City. The project will largely utilize existing roadway, utility, and municipal service networks, with only minimal, targeted improvements required to support the development. As a result, the development will generate new property and sales tax revenue for the City while imposing minimal future demand on General Fund resources, representing a fiscally responsible and sustainable land use outcome compared to conventional zoning alternatives.

HIGH-EFFICIENCY BUILDING SYSTEMS

- Energy Star rated appliances standard in every unit
- Energy efficient HVAC equipment and programmable thermostats
- Low-flow plumbing fixtures throughout
- LED lighting throughout interior and exterior spaces
- High-performance windows and tight building envelope to reduce energy loss
- Durable cladding across exterior to ensure longevity and reduced maintenance

SUSTAINABLE SITE DESIGN

- Native landscaping to minimize irrigation demand
- Stormwater management best practices
- Select EV charging stations to support the growing adoption of electric vehicles

RESIDENT HEALTH & WELL-BEING

- Smoke free community
- Low-VOC paints
- Maximized natural daylighting in common areas
- Design emphasis on walkability and open space to foster community wellness



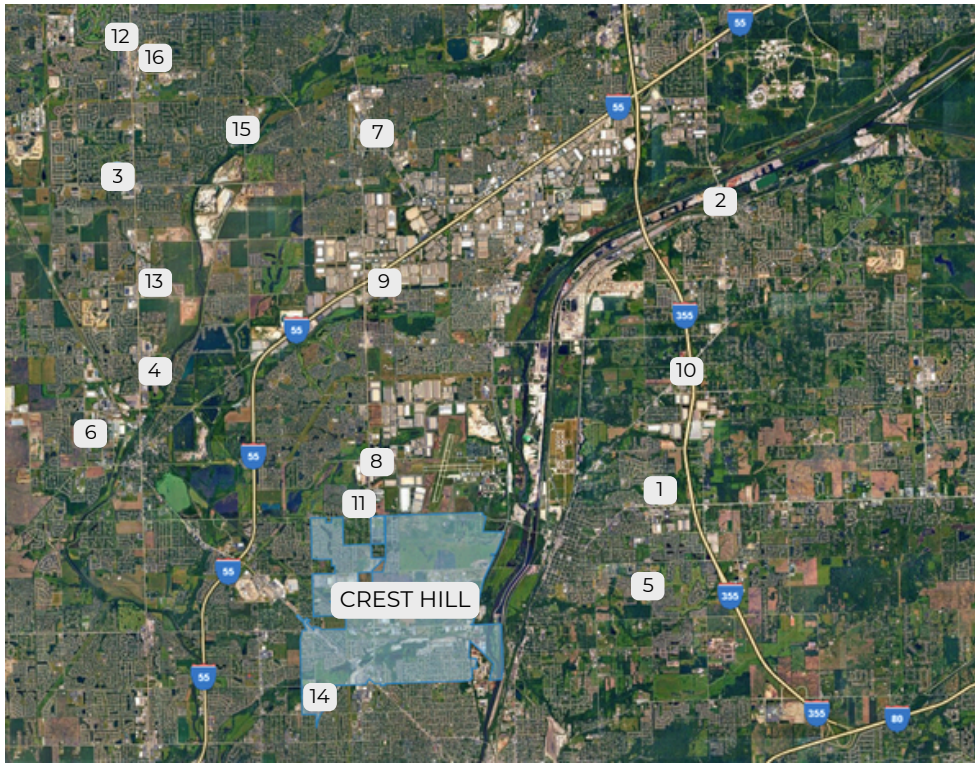
CREST HILL
AN UNDERSERVED MARKET

LIMITED HOUSING DIVERSITY AND NEW SUPPLY

- Current housing stock is predominantly single-family
- Lack of direct entry townhome and stacked-flat style rentals
- Aging Rental Stock: The majority of Crest Hill's apartments date back to the **1970s–1980s**, with no modern Class A properties available

STRONG MARKET DEMAND

- Crest Hill's population increased roughly 48% since 2000, indicating periods of strong growth historically, however over the last decade has declined by approximately 5.2%.
  - Without new modern multifamily supply, prospective renters will likely seek options in surrounding suburbs with newer product
- **A balanced multifamily market is often defined around 94% occupancy; in the broader surrounding market area, occupancy rates range from 96–98%, reflecting tight conditions (i.e. supply constraints)**
  - Supply Gap: With population and employment growth outpacing new housing construction, supply is not keeping up with demand, creating an opportunity for this 260-unit community
- **This proposed development will elevate Crest Hill's rental offerings with top-tier design, finishes, and amenities, helping retain demand and strengthen the local housing market**
- **New multifamily housing in Crest Hill is essential to sustaining commercial enterprise because it expands the local customer base and drives demand for retail, dining, and service businesses**



	COMMUNITY	UNIT COUNT	YEAR BUILT	OCCUPANCY
1	Springs at Lockport *(Lockport)*	320	2024	Pre-Lease
2	Marbella *(Lemont)*	78	2024	96.2%
3	The Belvedere *(Naperville)*	212	2024	95.3%
4	Seasons at Plainfield *(Plainfield)*	320	2023	98.1%
5	Redwood Townhomes *(Lockport)*	112	2022	98.2%
6	Sixteen30 *(Plainfield)*	284	2021	97.9%
7	Springs at Lily Cache Creek *(Bolingbrook)*	320	2021	97.2%
8	The Bluffs *(Romeoville)*	240	2021	95.0%
9	Village Place *(Romeoville)*	216	2020	97.7%
10	Highland Ridge *(Lockport)*	240	2019	99.2%
11	Springs at Weber Road (Romeoville)	292	2017	96.6%
12	Tapestry *(Naperville)*	298	2014	97.3%
13	Enclave at 127th *(Plainfield)*	340	2013	97.4%
14	**Sutton Place *(Crest Hill)***	**183**	**2003**	**99.5%**
15	River Run *(Naperville)*	206	2003	96.1%
16	Glenmuir *(Naperville)*	321	2000	97.5%
	Total (Excluding Pre-Lease)	**3,662**	**2016**	**97.3%**

Communities shown in **BOLD** lie within the City of Crest Hill's municipal boundaries.

MARKET DEMAND

- Pent up demand for a unique type of new, Class A apartment homes
- Growing demand for alternatives to single family homes
- Multifamily housing options in the local submarket are older communities with dated finishes and amenities

TARGET DEMOGRAPHICS

- Demographic looking for modern suburban communities to call home
- Empty nesters/baby boomers, young professionals and many of those that are “choosing” to rent
- Typical resident employment: healthcare, finance, retail, insurance, real estate, technology, police/fire, management, government, education, service industries, retirees
- Area employers

UNIQUE COMMUNITY

- Development will cater to those not looking to live in the typical 3 or 4 story building with common corridors
- Private, direct entries creating more of a condo or townhome type feel
- Retail access and recreational amenities make this location along the Weber Road corridor a very attractive option for a Class A development



PROPOSED DEVELOPMENT
CREST HILL-LUXURY MULTIFAMILY DEVELOPMENT



15.81
TOTAL ACRES

260
APARTMENT HOMES

3
PROPOSED
ACCESS POINTS



SITE STATISTICS

MULTIFAMILY

TWO STORY WALKUP BUILDINGS WITH 18 UNIT AND 20 UNIT CONFIGURATIONS ALONG WITH A CLUBHOUSE AND POOL

UNIT MIX

ONE BEDROOM	120
TWO BEDROOM	120
THREE BEDROOM	20
TOTAL UNIT COUNT	260

BUILDING AREAS

20 UNIT:	24,147 SQFT
18 UNIT:	21,274 SQFT
CLUBHOUSE:	5,384 SQFT
GARAGE:	2,100 SQFT
MAINTENANCE:	550 SQFT

RESIDENTIAL MASONRY PERCENTAGE

20 UNIT:	26%
18 UNIT:	20%
AVERAGE MASONRY PROVIDED	23%

TOTAL RESIDENTIAL SITE AREA:	15.814 ACRES
UNITS / ACRE:	16.44

PARKING

SITE STALLS:	401 (1.54 STALLS/UNIT)
ENCLOSED STALLS:	120 (0.46 STALLS/UNIT)
CLUBHOUSE STALLS:	15
PARALLEL STALLS:	16
TOTAL STALLS	552 (2. 12 STALLS/UNIT)

SITE AREA	688,857.84 SQFT
GREENSPACE	207,766.0 SQFT
EXISTING IMPERVIOUS ROADS	46868.2 SQFT
TOTAL IMPERVIOUS AREA	481,091.84 SQFT
FAR	.46
LOT COVERAGE	4.35%

0 10 40' 120' 200'

15.81
TOTAL ACRES

260
APARTMENT HOMES

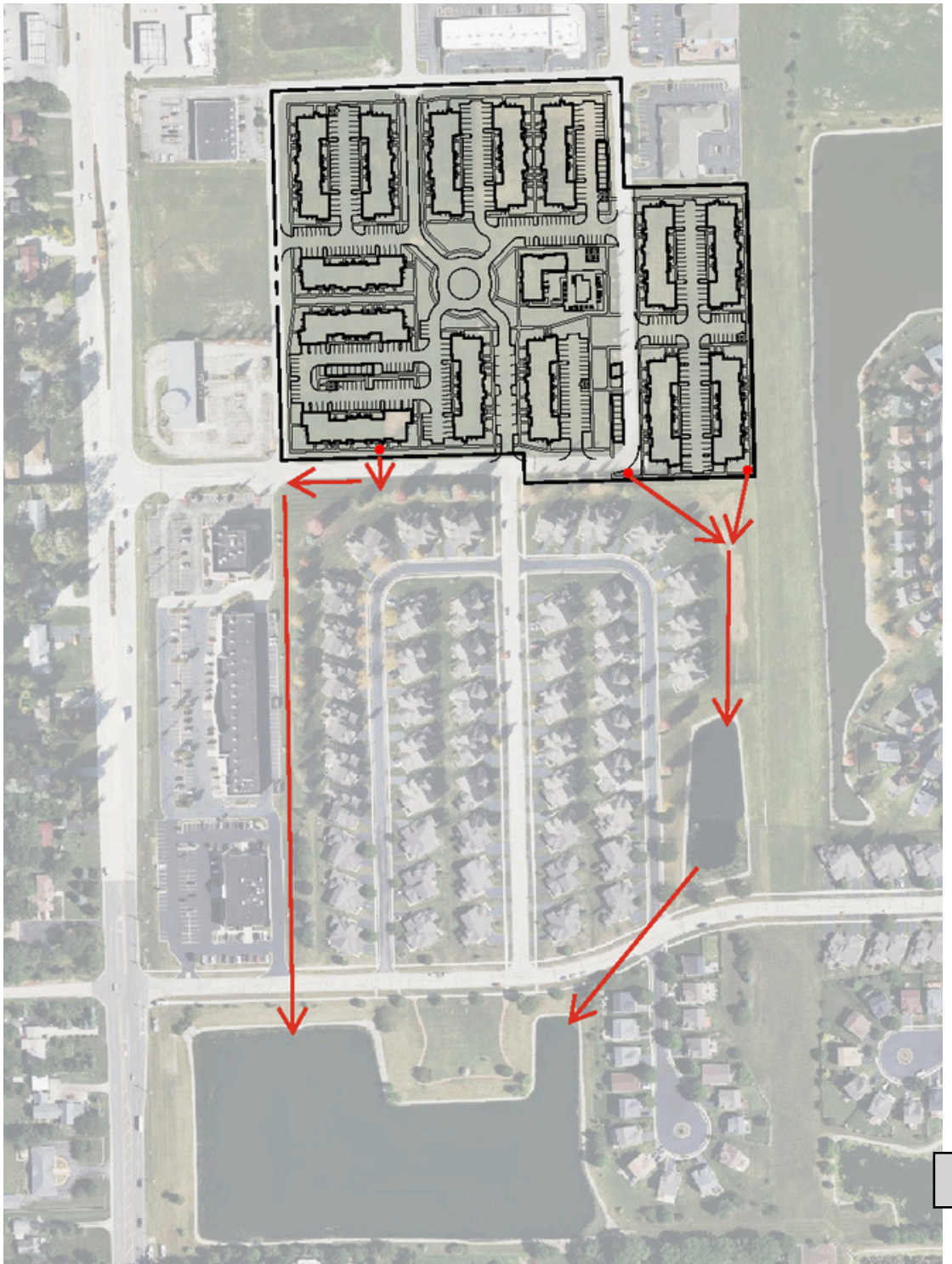
3
PROPOSED ACCESS POINTS

Average Unit Sizes

1 Bedroom - 704 Square Feet
2 Bedroom - 1,199 Square Fe
3 Bedroom - 1,548 Square Fe

STORMWATER MANAGEMENT

- The subject property was originally incorporated into the regional stormwater master plan, which was developed several years ago to guide long-term infrastructure and drainage strategies across the area. This arrangement not only aligns with the original design intent but also ensures compliance with regional stormwater management standards and helps streamline development on the site.
  - This detention is provided in the Remington Lakes development stormwater detention system through existing infrastructure provided by the Preliminary Plat prepared by Cemcon, LTD as part of Stormwater Easement, Management, Operation and Maintenance Declaration document No. R2002147634
  - No additional offsite stormwater improvements are required to implement the proposed development plan.
- **The proposed development plan has less total impervious area than the original preliminary plan put together as part of the Crest Hill Business Center Plan.**
- Included is a depiction of the route that the stormwater will flow upon collection from the on-site stormwater system into the existing Remington Lakes stormwater management system.



CREST HILL BUSINESS CENTER ROAD MAINTENANCE

- The subject property is governed by the Crest Hill Business Center (CHBC) Maintenance Agreement recorded as document No. R2005144740
- The subject property is also governed by the Equimax Plat of Subdivision (Equimax) recorded as document No. R2007117350
  - Each lot owner identified below of CHBC is responsible for their prorata share of the costs of maintaining the roadway shaded in red
  - Each lot owner identified below of Equimax is responsible for their prorata share of the costs of maintaining the roadway shaded in yellow
  - The roadway area shaded in blue is dedicated public ROW that is maintained by the City of Crest Hill
- The administration of these maintenance agreements is currently being run by Margaret Stoch of Advanced Wellness and Therapy Center located at 16009 Executive Drive (Within Lot 9 of Equimax)



LUXURY
CLUBHOUSE



CLUBHOUSE
POOL



ARCHITECTURAL EXCELLENCE

MATERIAL QUALITY AND DURABILITY

- The design utilizes high-quality fiber cement siding and panels (James Hardie), which are a significant upgrade over vinyl siding. Fiber cement is recognized for its durability, fire resistance, and low maintenance, outperforming vinyl in longevity and aesthetic appeal.
- Brick Accents: While the masonry percentage is below the code minimum, brick is still used strategically on the most visible portions, providing a premium look and reinforcing the sense of permanence.
- Metal Roof Accents: Standing seam metal roofs are incorporated, adding strong visual interest.
- This project not only meets but exceeds the intent of the zoning code by delivering a visually compelling, durable, and high-value community asset.

ARCHITECTURAL ARTICULATION AND DESIGN FEATURES

- Varied Rooflines and Gables: The buildings feature multiple gables and roof pitches, breaking up massing and creating a visually dynamic streetscape.
- Decorative Brackets: Decorative brackets add architectural detail and richness, elevating the design above typical multifamily standards.
- Board and Batten Treatments: Vertical fiber cement panels with battens at 16" O.C. provide texture and shadow, enhancing the facade's depth and interest.
- Color Palette: The use of contrasting color palettes (Arctic White, Iron Grey) and fiber cement trims creates a sophisticated, modern aesthetic.



ARCHITECTURAL EXCELLENCE

ENHANCED CURB APPEAL AND NEIGHBORHOOD VALUE

- Artist Renderings: The provided renderings demonstrate a cohesive, attractive community with strong curb appeal, landscaping, and pedestrian-friendly site planning.
- Community Identity: Monument signage, clubhouse, and outdoor amenity designs reinforce a sense of place and community, contributing to Crest Hill's long-term vision.

CODE INTENT AND PRECEDENT

- Vinyl Siding is Permitted: The zoning code allows vinyl siding, which is a lower-tier material. By using fiber cement, the project exceeds the minimum standard for exterior cladding.
- Design Integrity: The overall design integrity, articulation, and material selection fulfill the spirit of the code, ensuring lasting value, aesthetic quality, and neighborhood compatibility.

SUSTAINABILITY AND MAINTENANCE

- Low Maintenance: Fiber cement and metal roofing require less maintenance and have longer lifespans than vinyl or even some masonry products.
- Energy Efficiency: The design supports energy efficiency through high-performance materials and thoughtful detailing.



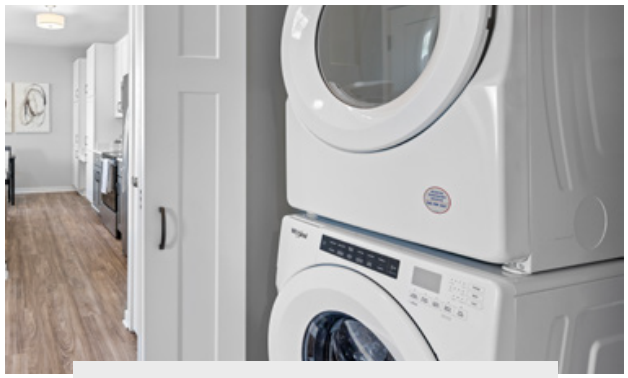
IN-DEMAND SINGLE FAMILY FEATURES

- Direct-Access Garages Available
- Patios/Balconies for all Apartment Homes
- Private Entrances
- Primary Suites w/ Walk-In Closets
- Stainless Steel Appliances





SPACIOUS LIVING ROOMS



IN-UNIT FULL SIZE WASHER/DRYER



UPGRADED KITCHENS

INSPIRING INTERIORS

- Upgraded stainless steel appliances
- Designer cabinetry
- Large windows
- Open concept floor plans
- In-unit full size washer / dryer
- Walk-in closets for primary bedrooms
- Balconies & patios
- 9’ ceilings
- Designer plank flooring in kitchens, living rooms & bathrooms
- Quartz countertops & islands



DEVELOPMENT **DETAILS**

Current Zoning	B-3 Business Service District
Proposed Zoning	• R-3 Multiple-Family Residence District • Special Use for a Planned Unit Development (PUD)
Expected School Age Residents	We would expect to see a range of 10-14 school age residents per 100 units within the development. (based upon averages across 2,000 similar style units within Fiduciary Real Estate Development's portfolio) • Some of the expected school age residents will likely be already within the school district • Typically more school aged residents live in 3 bedroom units which the proposed plan incorporates only 20 total 3 bedroom units (approximately 7% of the total units)
Residential Parking	Parking will be provided through a mix of building-attached garages containing eight attached garages per building, detached garages, along with surface parking. Code Required Parking Ratio: Minimum 3 spaces per apartment home including 1 guest space per 2 apartment homes Code required spaces: 780 spaces for the apartment homes plus 130 guest spaces Proposed Project Parking Plan: • Parking Ratio: 2.12 spaces per apartment home • 552 total spaces • 120 enclosed garages • Garage Ratio: .46 garage spaces per apartment home The proposed parking ratio, both enclosed and surface, is consistent with the demands across our portfolio of approximately 2,000 similar units and building types. Our typical property parking ratio is between 1.75 - 2.25 parking spaces per apartment home.
Proposed Connection to Prairie Bluff Preserve	Pedestrian walkways that flow throughout the development and a proposed sidewalk connection (subject to Nicor easement approval) to Renwick Road to provide connection to Prairie Bluff Preserve providing residents with access to a significant recreational amenity.
Proposed Market Rate Rents	Ranging from $1,500 - $2,700
Significant Increment in Assessed Property Value	• Current Property Assessed Value: $445,598 • 2024 Property Taxes: $35,598 • Significant property tax increment of approximately $875,000
Economic Benefit from Additional Consumer Spending	Estimated $24,440,000 economic benefit from additional consumer spending from residents over ten years • Economic Benefit = ($94,000 Median Household Income) * (10% New Consumer Spending) * (260 Units) * (10 Yea
Estimated Impact Fee Revenue	Approximately $2,100,000 in water and sewer connection fees



FIDUCIARY
REAL ESTATE DEVELOPMENT, INC

APPENDIX A

ESTIMATED PROPERTY ASSESMENT & TAX DETAIL

Assesment / Unit	$43,000
Units	260
Total Assesed Value	$11,180,000

TAXING BODY	2024 MILL RATE	AMOUNT
FOREST PRESERVE	0.0874	$9,771
COMM MENTAL HLTH BRD	0.0263	$2,940
LOCKPT TWP TOWN FUNDS	0.0993	$11,102
LOCKPT TWP ROAD FUNDS	0.0527	$5,892
LOCKPORT FIRE DIST	1.0753	$120,219
SCHOOL DISTRICT 88-A	2.9656	$331,554
HIGH SCHOOL DIST 205	1.788	$199,898
COMM COLLEGE DIST 525	0.2687	$30,041
CITY OF CREST HILL	0.5208	$58,225
CITY CREST HILL RD BR	0.0452	$5,053
LOCKPORT PARK DIST	0.3849	$43,032
WHITE OAK LIBRARY DIS	0.2435	$27,223
WILL COUNTY	0.5145	$57,521
TOTAL	8.0722	$902,472

APPENDIX B

ESTIMATED ADDITIONAL SCHOOL-AGE RESIDENTS

	DISTRICT 88A	DISTRICT 205
1 Bedroom	1	0
2 Bedroom	11	5
3 Bedroom	6	4
TOTAL	18	9

ESTIMATED COST OF ADDITIONAL STUDENT ENROLLMENT

	DISTRICT 88A	DISTRICT 205
Cost Per Additional Student	$18,335	$19,395
Estimated Additional School-Age Residents	18	9
TOTAL	$330,030	$174,555

ESTIMATED SURPLUS

	DISTRICT 88A	DISTRICT 205
Estimated Property Tax Revenue	$331,554	$199,898
Estimated Cost of Additional Student Enrollment	$330,030	$174,555
TOTAL	$1,524	$25,343

APPENDIX C

Construction Schedule		
Building	**Start Date**	**Completion Date**
Site Work	6/18/2026	
Clubhouse		4/1/2027
Building 1		5/1/2027
Building 2		6/1/2027
Building 3		7/1/2027
Building 4		8/1/2027
Building 5		9/1/2027
Building 6		10/1/2027
Building 7		11/1/2027
Building 8		12/1/2027
Building 9		1/1/2028
Building 10		2/1/2028
Building 11		3/1/2028
Building 12		4/1/2028
Building 13		5/1/2028
Building 14		6/1/2028

APPENDIX D

TRACY CROSS & ASSOCIATES, INC.
REAL ESTATE MARKET ANALYSIS

EXECUTIVE MEMORANDUM: RENTAL APARTMENT DEMAND SUMMARY
--- SEASONS AT CREST HILL ---
CREST HILL, ILLINOIS

TO: Mr. Tony DeRosa / Fiduciary Real Estate Development, Inc.

FROM: Ms. HollyAnn Eageny / Tracy Cross & Associates, Inc.

DATE: January 13, 2026

At the request of Fiduciary Real Estate Development, Tracy Cross & Associates, Inc. was retained to assess the market potential for residential development in Crest Hill, Illinois addressing a 15.8-acre assemblage aligning Ryan Drive immediately east of Weber Road and south of Renwick Road. This memorandum summarizes market demand for lifestyle market rate apartment development within the subject property based upon pertinent demographic, residential construction economic and competitive market characteristics and their likely influence upon future apartment development within the subject site.

GEOGRAPHIC DELINEATION: THE RYAN DRIVE PROPERTY
-- CREST HILL, ILLINOIS --



Source: Fiduciary Real Estate Development and Google Maps

1375 E. WOODFIELD ROAD, SUITE 520
SCHAUMBURG, IL 60173
847.925.5400 / info@tcrossinc.com
www.tcrossinc.com

THE SUBJECT PROPERTY

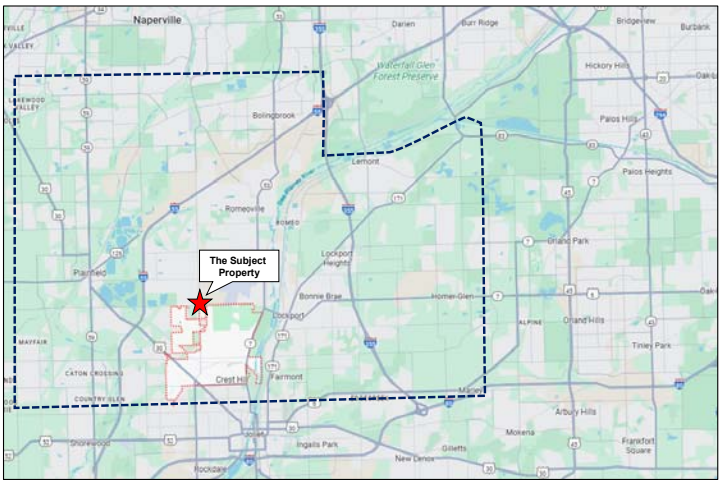
The subject property consists of a 15.8-acre assemblage aligning Ryan Drive, immediately east of Weber Road and south of Renwick Road in the far northwest quadrant of the city of Crest Hill. Representing an infill parcel within mixed-use commercial area, the property is relatively flat with limited vegetation. The immediate Weber/Renwick Road area represents a principal commercial and employment corridor of the city, host to numerous grocery/pharmacy, banking facilities, national and regional retailers and casual and fast-food eateries within the many retail centers aligning Weber Road such as Walmart Supercenter, Aldi, Blaine's Farm & Fleet, Petco, TJ Maxx which are all within one mile of the subject site. The subject site is also within a five-mile drive of the many business parks/logistics centers oriented along the Interstate 55/Interstate 80 highway system.

MARKET SUPPORT

Seasons at Crest Hill is viewed as a excellent development opportunity for Fiduciary Real Estate Development based upon the overall strength of the region's apartment sector and the property's location proximate to significant concentrations of employment, healthcare, and in-place ancillary shopping and services, along with convenient access to regional transportation systems. This conclusion also considers the expectation of *measured* regional economic growth during the 2025-2030 forecast period, along with sustaining demand for rental apartment construction in the marketplace through the forecast period and beyond. Market fundamentals supporting this conclusion are summarized in the following paragraphs:

- For purposes of this analysis, the *Crest Hill Market Area* is defined as the townships of DuPage, Homer, Lemont, Lockport, Plainfield and Wheatland in southwest suburban Cook and northern Will counties, Illinois. *Generally* extending south from 95th Street to Black Road and west from Will-Cook Road to County Line Road, this market area forms a homogeneous component of the southwest suburban region defined by its dependence upon like sources of employment, commuting patterns established along the I-55/355, I-80, US 6, US30, US 45, US 52, and IL 53/59/83/171 highway systems; socio-economic similarities in demographic and household composition; and the alignment of newer apartment developments which will serve as a source of competitive influence.

GEOGRAPHIC DELINEATION: THE CREST HILL MARKET AREA



Source: Google Maps & Tracy Cross & Associates, Inc.

- The property is also within a 30.0-minute commuting distance of some 1.11 million private sector jobs in suburban Cook, DuPage and Will counties, accounting for roughly 47.0 percent of all *suburban* private sector jobs in the six-county metro region. These include, of course, the I-80/57 Corridor extending east to the Indiana State line as well as the I-55/355 Corridor; extending north/northeast through the I-88 Technology and Research Corridor and to Chicago Midway Airport, the I-294/US 45 Corridor; and IL 59 53, and 83 corridors serving southwest suburban Cook,

DuPage and northern Will counties. The property is also within a 20.0 minute drive of several regional medical campuses and associated diagnostic and outpatient facilities. These medical campuses, together with school district and public administrations also represent significant sources of local employment. Hence, our favorable conclusion considers the expectation of tangible yet reserved regional recovery through 2030 in concert with anticipated introduction of Seasons at Crest Hill beginning in 2027 or later.

- Steady employment will continue to foster measured rates of household growth through the 2030 forecast period. For example, 2020 Census estimates of household growth carried forward to 2025 reveal that the Crest Hill Market Area supports a 2025 household base of 128,882, reflecting the addition of 772 households yearly since 2010. Market Area household additions are expected to maintain momentum during the 2025-2030 forecast period cast at an annual average of 666 households. Reflecting its mature, generally built-out character, the city of Crest Hill experienced household additions averaging 32 yearly during the 2010-2025 period, accounting for a modest 4.2 percent of total market area household growth. While statistics must be viewed in context, Census estimates suggest that household formations during the 2025-2030 forecast period will modestly accelerate to an annual average of 44 yearly, increasing the city's capture share to 6.6 percent *before factoring the potential impact of redevelopment of under-utilized properties* such as the subject site. Notably, Census statistics also indicate that roughly 15.3 percent or 19,658 resident market area households are identified as *renters,* lending support to introduction of the proposed development during the 2026-2027 period.

POPULATION AND HOUSEHOLD TRENDS:
-- THE CREST HILL MARKET AREA[1] --

Area	2010	2020	2025 (Est.)	2030 (Proj.)	Average Annual Change 2010 - 2020	Average Annual Change 2020 - 2025	Average Annual Change 2025 - 2030
Population							
The Crest Hill Market Area	369,723	380,721	384,543	392,047	+1,100	+764	+1,501
City of Crest Hill	20,427	20,459	20,928	21,482	+3	+94	+111
Percent of Market Area	5.5	5.4	5.4	5.5	---	---	---
Households							
The Crest Hill Market Area	117,304	126,288	128,882	132,211	+898	+519	+666
City of Crest Hill	7,057	7,440	7,543	7,765	+38	+21	+44
Percent of Market Area	6.0	5.9	5.9	5.9	---	---	---

[1] Defined as DuPage, Homer, Lemont, Lockport, Plainfield and Wheatland townships in southwestern Cook and Will counties, IL.

Source: U.S. Bureau of the Census Bureau: Census 2010 and 2020; Environics Analytics; and Tracy Cross & Associates, Inc.

- The proposed development is also consistent with demographic profiles and socio-economic characteristics of market area residents. Estimates of household composition reveal that at least two-thirds of resident market area households, and three-quarters of those in the city of Crest Hill, represent households without children under the age of 18, primarily consisting of persons living alone or in two-person arrangements, with the balance representing family households, consistent with the unit types proposed for the Seasons at Crest Hill Apartments. Importantly, not only is there a sizeable base of existing households across all profile renter/lifestyle age categories of 25 to 74 years of age, but these profile age cohorts are expected to continue to advance proportionately over the forecast period.

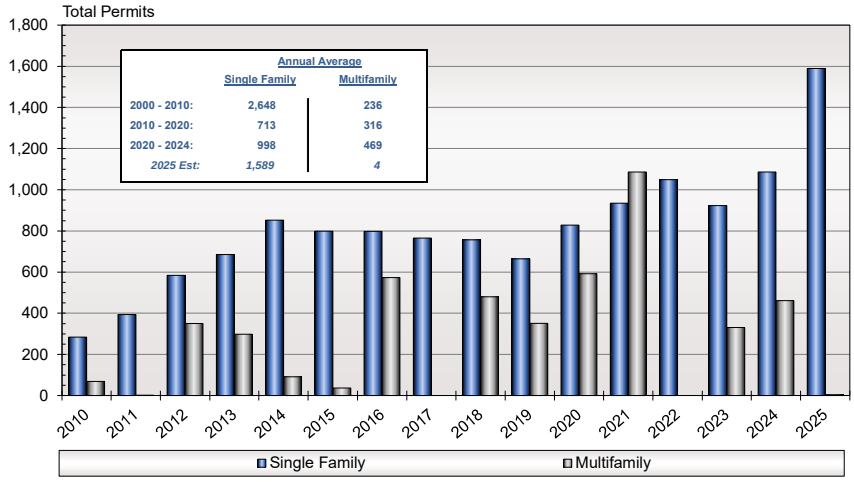
HOUSEHOLD GROWTH PROJECTIONS BY AGE GROUP
-- THE CREST HILL MARKET AREA --

	Crest Hill Market Area		City of Crest Hill	
Age Range	2025	2030	2025	2030
Under 35	16,252	17,194	1,185	1,130
35-44	24,109	21,746	1,207	1,193
45-54	28,766	27,195	1,203	1,173
55-64	26,791	27,256	1,282	1,309
65-74	19,339	22,275	1,302	1,385
75 and over	13,625	16,545	1,364	1,575
Total	***128,882***	***132,211***	***7,543***	***7,765***

Source: Environics Analytics and Tracy Cross & Associates, Inc.

- Lending support to apartment development within the Ryan Drive property, until recently there had been only limited market rate apartment construction in the Crest Hill Market Area over the last three-plus decades. Rather, new suburban multifamily development remained concentrated in the many established first- and second-ring rail line municipalities situated at least 15.0 to 20+ miles northeast/northwest of Crest Hill, largely reflecting accelerated condominium development along with a modicum of senior housing forms within the many near suburban rail-line municipalities and/or aligning the west suburban I-88 Corridor. As graphically depicted and detailed on **Exhibit** 1, the market area as a whole has accounted for *less than 10.0 percent of total suburban multifamily construction over the last 24 years*. Between 2010 and 2020, for example, multifamily rental development in the market area averaged 316 units yearly, advancing to an annual average of 469 units during the more recent 2020-2024 timeframe with development concentrated in the municipalities of Lockport, Romeoville and Plainfield. In fact, there has been no meaningful market rate multifamily construction in Crest Hill in more than two decades, with the city averaging a mere 22 units annually since 2000, suggesting strong localized measures of market constraint and pent-up demand for quality market rate rental alternatives which can appeal across multiple consumer segments and *enable local employers to*

RESIDENTIAL PERMIT TRENDS: THE CREST HILL MARKET AREA
2010 – AUGUST 2025



Source: U.S. Department of Commerce, Bureau of the Census: *C-40 Construction Reports*

attract and retain a skilled workforce. This factor *alone* lends support to development of Seasons at Crest Hill beginning in 2027 or later.

- Support for the Seasons at Crest Hill is also based upon the overall strength of Chicago's suburban apartment sector. For example, during the 2010-2024 timeframe, suburban net absorption among Class A developments (i.e., market rate developments built in 2000 or later) averaged 2,200 units annually, with absorption over the last four years accelerating to an annual pace of 3,493. Notably, the 4,382 Class A units absorbed in 2021 represented *the highest annual net level recorded in the suburban region* since our firm began trending in 1995. Net absorption in the Southwestern Corridor (which includes the Crest Hill Market Area) averaged 229 units yearly during the 2010-2024 timeframe, accounting for 10.4 percent of annual net suburban absorption. More to the point, since 2020, net absorption levels in the Southwestern Corridor accelerated to an annual average of 472 units, establishing a peak volume of 518 units in 2023. Absorption levels are largely attributed to increased occupancies among established developments, coupled with a modicum of construction of late. Momentum continued through the 3rd Quarter 2025 period, with net year-over-year absorption of 319 units in this more localized suburban area (again) suggesting continued measures of pent-up demand.

ABSORPTION TRENDS: UNITS BUILT IN 2000 OR LATER
-- SOUTHWESTERN CORRIDOR --

Time Period	Annual Average (In Units)
2010 - 2024:	**229**
2010 - 2020:	**132**
2020 - 2024:	**472**
YTD 3rd Quarter 2025:	**319**

Source: Tracy Cross & Associates, Inc.

- Also lending support to development of Seasons at Crest Hill, estimates suggest that a similar pattern among *stabilized* Class A developments throughout the overall suburban region. For example, vacancies among stabilized suburban developments stood at a generally tight 4.1 percent at the close of the 3rd Quarter 2025, levels below the average 4.5 percent stabilized vacancy rate noted at the close of 2023.

MULTIFAMILY VACANCY SUMMARY
STABILIZED APARTMENT COMMUNITIES: SUBURBAN CHICAGO REGION
-- 3RD QUARTER 2025 --

Market Area	Vacancy Rate (Percent of Stabilized Units)
Suburban Vacancy Rate	***4.1***
Northern Corridor	4.8
Northwestern Corridor	3.1
Western Corridor	4.0
Southern Corridor	3.9
Southwestern Corridor	***3.6***

Source: Tracy Cross & Associates, Inc.

- Market factors point to steady market rate rental construction requirements during the 2025-2030 forecast period. Specifically, the defined Crest Hill Market Area could support construction of 390 market rate rental units annually (or 1,950 units through 2030) without creating market weakness. This new construction requirement balances Census estimates of household growth over the five-year forecast period with anticipated phased implementation of mixed-use and/or infill redevelopment initiatives, construction trends over the past two-plus decades, a vacancy allowance to allow for market filtering, along with a measure of replacement demand. This derived new construction requirement is sufficient to support development of the proposed Seasons at Crest Hill Apartments over the five-year forecast period.

ANNUAL MARKET RATE RENTAL CONSTRUCTION REQUIREMENT: 2025 - 2030
-- THE CREST HILL MARKET AREA --

Attribute	Number
Expected Annual Household Growth	666
Expected Annual Renter Household Growth @ 48.0 Percent of Total[1]	320
Annual Vacancy Requirement to Maintain Balance in the Market[2]	25
Annual Replacement Demand @ 0.18 Percent of 2025 Rental Inventory	45
Derived Annual Market Rate Construction Requirement	***390***
(Derived Potential Market Rate Rental Construction Requirement through 2030) [3]	*1,950*

(1) Determined by applying the expected percentage of new renter households to the expected number of new household additions from 2025 through 2030.
(2) A balanced marketplace generally requires vacancies in the range of 5.0 to 6.0 percent; represents annualized estimate applied to total market area renter households over the five-year forecast period.
(3) Excludes designated student, senior and low income/public housing forms.

Source: Tracy Cross & Associates, Inc.

- Moreover, new market rate rental construction requirements *could potentially double* during any given year if supply were made available and competitive rents are maintained (again) on the basis of supply constraints and levels of pent-up demand. It is unlikely, however, that market rate rental construction requirements will be met as, in the whole of the Southwestern Corridor, only two (2) rental projects and a potential collective 810 units have been approved. These include Cullinan Properties' *View at Rock Run Collection* (570 units) in far southwest Joliet where an initial phase of 264 units is now under construction in anticipation of lease reservations commencing in late-Spring 2026; together with the 240-unit *The Hamptons at Shorewood Town Center* in Shorewood which has been approved since 2023 but no timeline for construction has been announced.

GENERAL LIMITING CONDITIONS

Tracy Cross & Associates, Inc. has made extensive efforts to confirm the accuracy and timeliness of the information contained in this study. Such information was compiled from a variety of sources, including interviews with developers and their agents, government officials, and other third parties. Although Tracy Cross & Associates, Inc. believes all information in this study is correct, it does not warrant the accuracy of such information and assumes no responsibility for inaccuracies in the information provided by third parties.

Conclusions and recommendations established in this analysis represent a professional opinion and are based upon forecasts into the future which could be significantly altered by outside occurrences. These include, among others, the possible interplay of unforeseen social, economic, physical/environmental, and governmental actions. In this regard, Tracy Cross & Associates, Inc., its owners, and its employees shall be held harmless of changes in conditions that may materially result from these occurrences.

Community Benefit Statement

The PUD process enables a cohesive architectural vision across the entire development. Requested waivers related to masonry percentages, building setbacks, parking setbacks, and reduced parking counts allow buildings to be designed with appropriate massing, articulation, and materials while maintaining visual interest and durability.

These waivers do not diminish project quality; rather, they allow design flexibility that results in better building orientation, improved pedestrian experience, and more efficient land use. The reduction in parking requirements reflects contemporary parking demand and reduces excessive pavement, thereby increasing landscaped areas and improving stormwater performance.

Response to Crest Hill10.0-3 REVIEW STANDARDS FOR PLANNED UNIT DEVELOPMENTS The Planned Unit Development must meet the following standards:

1. COMPREHENSIVE PLAN A Planned Unit Development must conform with the objectives of the Comprehensive Plan of Crest Hill.

> FRED Response: The proposed PUD is consistent with the goals and objectives of the City of Crest Hill Comprehensive Plan, which encourages well-planned growth, efficient use of land and infrastructure, and high-quality residential development. The project advances these goals by concentrating residential density in a thoughtfully designed layout, reducing land consumption, and promoting a cohesive development pattern. By using the PUD process, the development can better respond to site-specific conditions and Comprehensive Plan policies than a rigid, lot-by-lot zoning approach.

2. SIZE AND OWNERSHIP The site of the Planned Unit Development must be under single ownership and/or unified control.

> FRED Response: The site is under single ownership and unified control, enabling comprehensive planning and long-term management of the property. This unified control ensures consistent architectural standards, coordinated infrastructure, and high-quality maintenance of buildings, parking areas, and common open spaces. In contrast, conventional zoning could allow piecemeal development with less predictability and fewer assurances regarding long-term quality and compatibility.

3. COMPATIBILITY AND USES The uses permitted in a Planned Unit Development must be of a type and so located as to exercise no undue detrimental influence upon surrounding properties. Planned Unit Developments shall provide for a variety of types of housing to ensure residential stability within the community.

FRED Response: The PUD has been designed to be compatible with surrounding land uses through careful building placement, massing, setbacks, and buffering. While the development seeks waivers for increased residential density and the maximum number of units per building, the overall site design mitigates potential impacts through internal orientation, enhanced landscaping, and coordinated circulation.

The residential program supports a variety of housing opportunities that contribute to residential stability within the community. By allowing flexibility in unit mix and modest reductions in minimum one-bedroom unit size, the PUD responds to market demand while still delivering high-quality, functional living spaces. This flexibility would not be achievable under conventional zoning without sacrificing design quality or site efficiency.

4. NEED The Planned Unit Development must be of a character and contain such uses that are needed in the area of the proposed project.

FRED Response: The proposed PUD addresses a demonstrated need for well-designed, modern residential housing in Crest Hill. The project offers new housing opportunities that support the local workforce, diversify the City's housing stock, and strengthen the local tax base. The increased density permitted through the PUD allows the site to meet this need efficiently while still maintaining appropriate scale and compatibility with surrounding development.

5. PRESERVATION The plans shall protect and preserve natural vegetation, respect natural topographic and geologic conditions, and refrain from adversely affecting flooding, soil, drainage, and other natural conditions.

FRED Response: A key benefit of the PUD approach is its ability to respect and preserve natural site features. The site plan has been designed to work with existing topography and drainage patterns, minimizing unnecessary grading and reducing impacts to soil and natural systems. Natural vegetation is preserved where feasible,

and new landscaping is incorporated to enhance environmental performance and visual character.

By allowing flexibility in setbacks and building placement, the PUD avoids environmentally disruptive layouts that could result from strict conventional zoning requirements. The result is a development that better protects natural conditions, manages stormwater responsibly, and reduces long-term environmental impacts.

6. OPEN SPACE The Planned Unit Developments that include a residential component, must provide adequate common open space.

FRED Response: The PUD provides meaningful common open space that is centrally located, accessible, and usable by residents. Rather than relying on fragmented or leftover open areas that may result from conventional zoning, the development intentionally organizes open space as a community amenity.

While a waiver is requested to allow reduced path widths within common open space areas, these paths are designed to function safely and comfortably for residents while preserving more green space overall. This design approach prioritizes landscape, usability, and environmental quality over strictly dimensional standards, resulting in a more attractive and functional open space network.

In summary, the proposed Planned Unit Development satisfies each of the standards set forth in Section 10.0-3 and provides clear benefits that exceed those achievable through conventional zoning. The PUD enables efficient land use, preservation of natural features, meaningful common open space, housing diversity, and cohesive architectural design, all of which serve the long-term interests of the City of Crest Hill and its residents.

Response to Crest Hill Zoning Ordinance 10.0-2 Planned Unit Development Objectives

Below is our statement of how the Seasons at Crest Hill complies with the objectives for Planned Unit Developments as stated in Section 10.0-2:

1. To allow for the design of developments that are architecturally and environmentally innovative, and that achieve better utilization of land than is possible through strict application of standard zoning and subdivision controls.

    Response: The proposed 260-unit community utilizes a contemporary suburban design approach that combines high-quality architecture, sustainable materials, and a thoughtfully organized site plan. Building massing, orientation, and exterior detailing create visual interest and reflect a modern interpretation of traditional neighborhood character.

2. To encourage land development that, to the greatest extent possible, preserves natural vegetation, respects natural topographic and geologic conditions, and refrains from adversely affecting flooding, soil, drainage, and other natural ecological conditions.

    Response: Site planning has been informed by the property's natural contours and drainage patterns and minimizing grading. Landscape design incorporates native plantings while maintaining an attractive suburban setting.

3. To combine and coordinate architectural styles, building forms, and structural/visual relationships within an environment that allows mixing of different land uses in an innovative and functionally efficient manner.

    Response: The development integrates residential buildings, community amenities, and open spaces in a cohesive, pedestrian-friendly layout. Internal walkways connect residents to shared amenities and adjacent neighborhoods, supporting both convenience and a sense of community.

4. To provide for abundant, accessible, and properly located public open and recreation space, private open and recreation space, schools, and other public and private facilities.

    Response: Generous landscaped areas, walking paths, and outdoor gathering spaces are distributed throughout the site. Central amenities such as a clubhouse, fitness center and pool, provide accessible recreation opportunities for residents while preserving a suburban sense of openness.

5. To promote the efficient use of land resulting in networks of utilities, streets, and other infrastructure features that maximize the allocation of fiscal and natural resources

    Response: The project's density and compact building arrangement promote efficient use of suburban land and infrastructure. The layout supports cost-effective utility and roadway

extensions, while shared parking areas and pedestrian connections reduce reliance on individual vehicle trips.

6. To enable land developments to be completely compatible and congruous with adjacent and nearby land developments.

Response: Building heights and setbacks have been designed to provide an appropriate transition to nearby single-family neighborhoods and commercial uses. Landscape buffers and carefully thought through building orientation enhance privacy and soften the visual interface between differing land uses.

7. To ensure that development occurs at proper locations, away from environmentally sensitive areas, and on land physically suited to construction.

Response: The site is well suited for multifamily development given its proximity to major transportation routes, employment centers, and existing suburban infrastructure. The project avoids environmentally sensitive areas and is located on land physically appropriate for construction.

8. To allow unique and unusual land uses to be planned for and located in a manner that ensures harmony with the surrounding community.

Response: This community adds a multifamily residential component to a mixed-use suburban context in a manner that complements surrounding land uses. The design introduces a variety of housing options while maintaining the area's established suburban character.

9. To create a method for the permanent preservation of historic buildings and/or landmarks.

Response: No historic structures are present on the site. However, the project incorporates contextual materials and architectural details that reflect the character of the surrounding community, reinforcing a sense of place.

10. To provide for a variety of housing types.

Response: The development offers a new modern, high-end type of housing within the community with a range of unit sizes, from one bedroom to three bedroom residences, to accommodate diverse household types ranging from young professionals to empty-nesters within a single, well-planned community.

11. To provide a development that does not endanger the public health, welfare, or safety.

Response: The project prioritizes resident safety and comfort through compliant access design, clear pedestrian circulation, adequate lighting, and adherence to all applicable building, fire, and stormwater regulations. Walkable connections and access to open space further support active and healthy living.

FIDUCIARY
REAL ESTATE DEVELOPMENT, INC
789 North Water Street, Suite 500, Milwaukee, WI 53202

Zoning Ordinance Rezoning Approval Criteria Response Letter

1. Whether the uses permitted by the proposed amendment would be appropriate in the area concerned.

The R-3 District permits multifamily residential uses that are appropriate for the subject property and compatible with surrounding land uses. The proposed zoning provides a reasonable transition from existing commercial uses while supporting the City's housing needs.

2. Whether adequate public school facilities and other public services exist or can be created to serve the needs of any additional dwelling units likely to be constructed as a result of such change.

Adequate public services, including police, fire protection, emergency services, and public works, are available to serve the proposed development. Existing public school facilities and municipal services have sufficient capacity, and no extraordinary service demands are anticipated.

3. Whether the proposed change is in accord with any existing or proposed plans for providing public water supply and sanitary sewers in the vicinity.

The proposed amendment is consistent with existing plans for public water and sanitary sewer service. The site is currently served by municipal utilities, which can adequately accommodate the proposed development.

4. Whether the proposed amendment is likely to result in an increase or decrease in the total zoned residential capacity of the City and the probable effect of such change on the cost of providing public services.

The amendment may increase the City's residential capacity; however, the development represents an efficient use of land and infrastructure. The anticipated impact on public service costs is reasonable and offset by increased tax base and utility revenues.

5. The amount of vacant land which is currently zoned for similar development in the City or in contiguous areas, and particularly in the vicinity of the area included in the proposed amendment, and any special circumstances which may make part of such vacant land unavailable for development.

While other land may be zoned for similar development, much of it is constrained by location, infrastructure limitations, or other development restrictions. The subject property is well-suited for multifamily use due to its size, access, and availability of utilities.

6. The recent rate at which land is being developed in the proposed district of the City, and particularly in the vicinity of the area included in the proposed amendment.

Recent development trends in Crest Hill and the surrounding area demonstrate continued demand for residential and multifamily housing. The proposed amendment is consistent with this pattern of growth.

7. The effect of the proposed amendment upon the growth of existing neighborhoods as envisaged by the Crest Hill Comprehensive Plan.

The proposed rezoning supports the goals of the Crest Hill Comprehensive Plan by encouraging orderly growth, efficient use of infrastructure, and appropriate transitions between land uses.

8. Whether other areas designated for similar development are likely to be so developed if the proposed amendment is adopted, and whether the designation for such future development should be withdrawn from such areas by further amendment of this Ordinance.

Approval of the proposed amendment is not expected to impede development in other areas designated for similar uses, nor does it necessitate changes to existing land use designations elsewhere in the City.

9. If the proposed amendment involves a change from a residential to a nonresidential designation, whether more non-residential land is needed in the proposed location to provide commercial services or employment for the residents of the City.

The request does not involve a change from residential to non-residential zoning. Sufficient land remains available within the City to accommodate commercial and employment-generating uses.

10. Existing uses and zoning within the general area of the property in question.

The surrounding area contains a mix of commercial and residential uses. The proposed R-3 zoning is compatible with existing development patterns and land uses.

11. The extent to which property values are diminished by particular zoning restrictions.

The current B-3 zoning limits the reasonable use of the property and may negatively affect its value. The proposed amendment allows development consistent with market conditions and surrounding uses.

12. The extent to which the restriction of property values of the petitioner promotes the health, safety, morals, or general welfare of the public.

The proposed rezoning promotes the public health, safety, and general welfare by enabling appropriate residential development, supporting housing needs, and encouraging efficient land use.

13. Whether the proposed amendment is the minimum adjustment necessary to allow the reasonable use of the property.

The proposed rezoning to R-3 represents the minimum adjustment necessary to allow reasonable use of the property while maintaining compatibility with the surrounding area and City plans.

SEASONS AT CREST HILL

Crest Hill, Illinois

DEVELOPER

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P: 847-634-5550

PUD SUBMISSION

P 252101
JANUARY 14, 2026
REV. FEBRUARY 2ND,2026

AG ARCHITECTURE
Bright Vision. Bold Communities.



SITE STATISTICS

MULTIFAMILY

TWO STORY WALKUP BUILDINGS WITH 18 UNIT AND 20 UNIT CONFIGURATIONS ALONG WITH A CLUBHOUSE AND POOL

UNIT MIX	
ONE BEDROOM	120
TWO BEDROOM	120
THREE BEDROOM	20
TOTAL UNIT COUNT	260

BUILDING AREAS	
20 UNIT:	24,147 SQFT
18 UNIT:	21,274 SQFT
CLUBHOUSE:	5,384 SQFT
GARAGE:	2,100 SQFT
MAINTENANCE:	550 SQFT

RESIDENTIAL MASONRY PERCENTAGE	
20 UNIT:	21.2%
18 UNIT:	20.05%

TOTAL RESIDENTIAL SITE AREA:	15.814 ACRES
UNITS / ACRE:	16.44

PARKING	
SITE STALLS:	401 (1.54 STALLS/UNIT)
ENCLOSED STALLS:	120 (0.46 STALLS/UNIT)
CLUBHOUSE STALLS:	15
PARALLEL STALLS:	16
TOTAL STALLS	552 (2. 12 STALLS/UNIT)

ONSITE TRIBUTARY AREA	
DRAINAGE AREA	15.81 ACRES
IMPERVIOUS AREA	11 ACRES
PERVIOUS AREA	4.81 ACRES
FAR	.46
LOT COVERAGE	70%

0 10 40' 120' 200'

Crest Hill, Illinois

SEASONS AT CREST HILL | COLORED SITE PLAN



GREY COLOR PALETTE

IRON GREY

WHITE COLOR PALETTE

ARCTIC WHITE

0 10 40' 120' 200'

Crest Hill, Illinois

SEASONS AT CREST HILL | COLORED SITE PLAN



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SEASONS AT CREST HILL | LANDSCAPE CIRCLE

FIDUCIARY REAL ESTATE DEVELOPMENT, INC

ARCHITECTURE



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SEASONS AT CREST HILL | POOL AMENITIES

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SEASONS AT CREST HILL | 18 - UNIT BUILDING WHITE COLOR PALETTE

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SEASONS AT CREST HILL | 18 - UNIT BUILDING WHITE COLOR PALETTE GARAGES

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SEASONS AT CREST HILL | 18 - UNIT BUILDING GRAY COLOR PALETTE

FIDUCIARY REAL ESTATE DEVELOPMENT, INC

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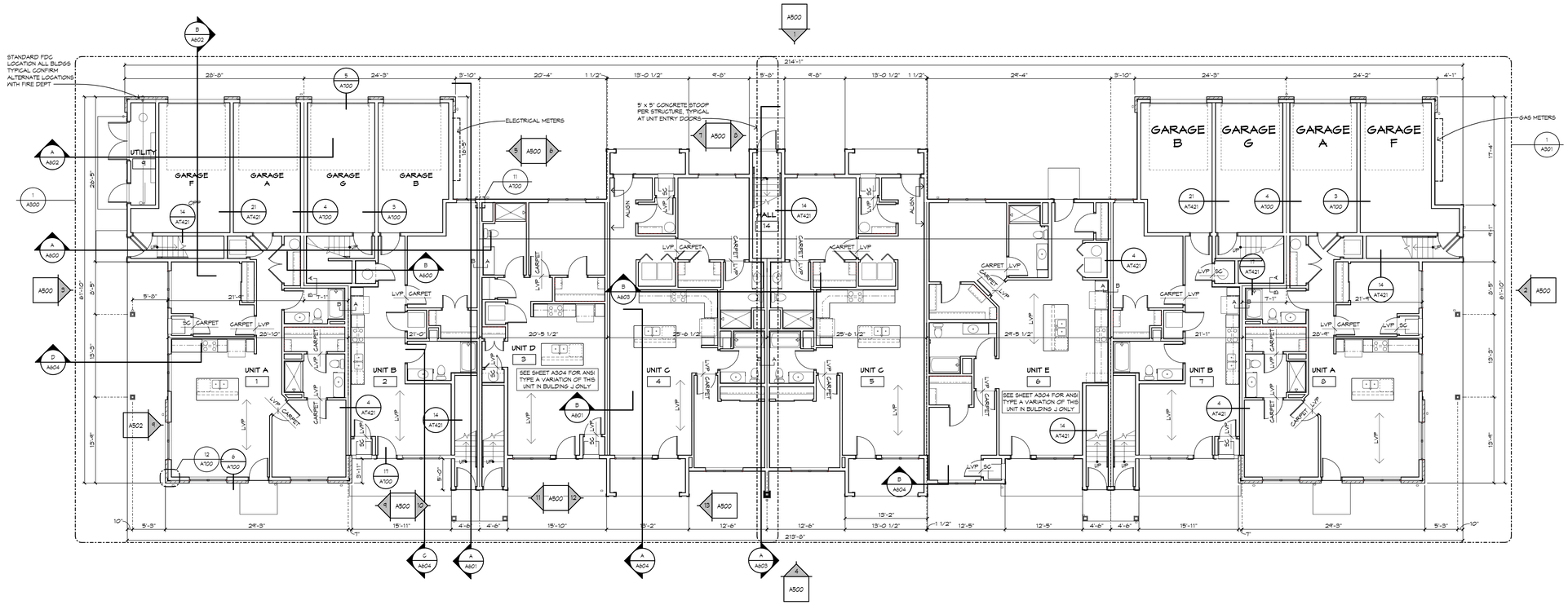
SEASONS AT CREST HILL | 20 - UNIT BUILDING GRAY COLOR PALETTE

FIDUCIARY REAL ESTATE DEVELOPMENT, INC

ARCHITECTURE



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SEASONS AT CREST HILL | 18 - UNIT BUILDING FIRST FLOOR PLAN

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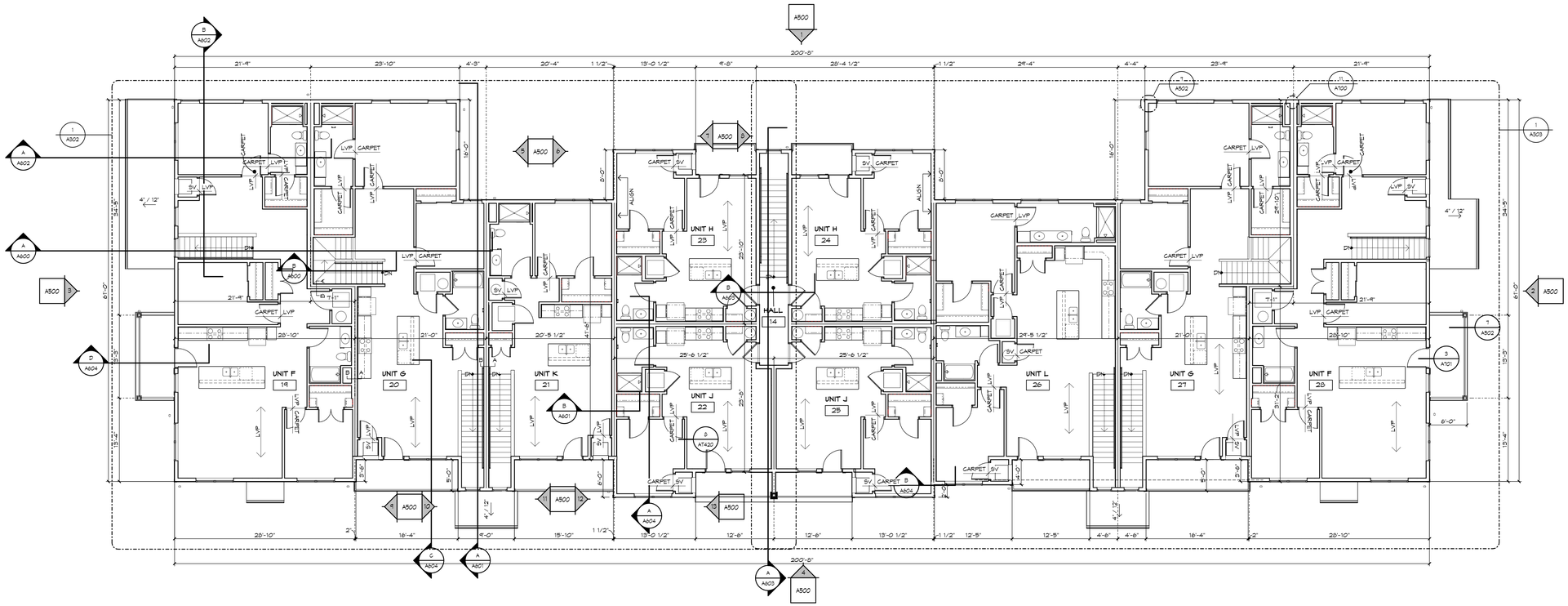
ARCHITECTURE



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REVISIONS
NO. DATE DESCRIPTION

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SEASONS AT CREST HILL | 18 - UNIT BUILDING SECOND FLOOR PLAN

FIDUCIARY REAL ESTATE DEVELOPMENT, INC

AG ARCHITECTURE

MATERIAL LEGEND

A - ASPHALT SHINGLE
B - BRICK - GLEN GERY - ANTIQUE WHITE - MODULAR
FC1 - FIBER CEMENT SIDING - IRON GREY - LAP SIDING 6" EXPOSURE
FC2 - FIBER CEMENT SIDING - IRON GREY - LAP SIDING 4" EXPOSURE
FC3 - FIBER CEMENT SIDING - ARCTIC WHITE - LAP SIDING 6" EXPOSURE
FC4 - FIBER CEMENT SIDING - ARCTIC WHITE - LAP SIDING 4" EXPOSURE
FP1 - FIBER CEMENT PANEL - ARCTIC WHITE - BOARD AND BATTEN 16" O.C.
FP2 - FIBER CEMENT PANEL - ARCTIC WHITE - SMOOTH
FP3 - FIBER CEMENT PANEL - IRON GREY - BOARD AND BATTEN 16" O.C.
M - METAL ROOF - STANDING SEAM

COLOR LEGEND:

GREY COLOR PALETTE:
BUILDINGS C, D, E, G, H, M, N
FC1 - IRON GREY
FC2 - IRON GREY
FC3 - IRON GREY - BATTENS TO MATCH
FP1 - ARCTIC WHITE - BATTENS TO MATCH
FP2 - ARCTIC WHITE

FIBER CEMENT TRIM - ARCTIC WHITE
FIBER CEMENT COLUMN TRIM AND PANEL TO BE ARCTIC WHITE

WHITE COLOR PALETTE:
BUILDINGS A, B, F, I, J, K, L
FC1 - ARCTIC WHITE
FC2 - ARCTIC WHITE
FP1 - ARCTIC WHITE - BATTENS TO MATCH
FP2 - ARCTIC WHITE

FIBER CEMENT TRIM - MIDNIGHT BLACK
FIBER CEMENT COLUMN TRIM AND PANEL TO BE ARCTIC WHITE

MASONRY CALCULATIONS:

	BRICK AREA/OVERALL FACADE*
FRONT ELEVATION	878 sqft / 2519 sqft = 35%
GARAGE ELEVATION	265 sqft / 2776 sqft = 9.5%
SIDE 1	214 sqft / 839 sqft = 25.5%
SIDE 2	140 sqft / 926 sqft = 15%
AVERAGE	1,497 sqft /7,060 sqft = 21.2%

*OVERALL FACADE CALCULATION EXCLUDES WINDOWS AND DOORS

HIGH QUALITY MATERIAL
B
GLEN GERY - ANTIQUE WHITE

PRIMARY COLOR 1
FP1, FP2
JAMES HARDIE ARCTIC WHITE

PRIMARY COLOR 2
FC1, FC2
JAMES HARDIE IRON GREY



FRONT ELEVATION — Scale: 1/8"=1' — 4 / A500



SIDE ELEVATION — Scale: 1/8"=1' — 3 / A500



SIDE ELEVATION — Scale: 1/8"=1' — 2 / A500

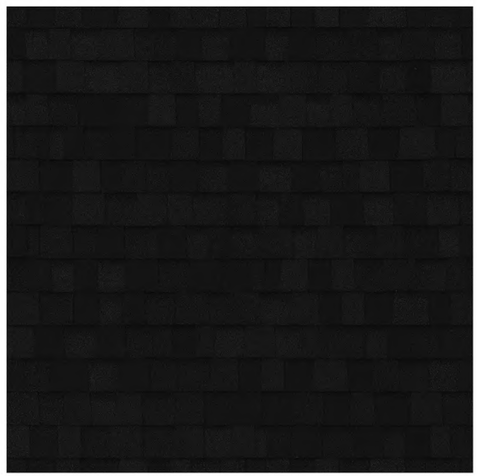


BACK ELEVATION — Scale: 1/8"=1' — 1 / A500

SEASONS AT CREST HILL | 18 UNIT BUILDING - DARK
EXTERIOR MATERIAL PALETTE

CREST HILL | **ILLINOIS**

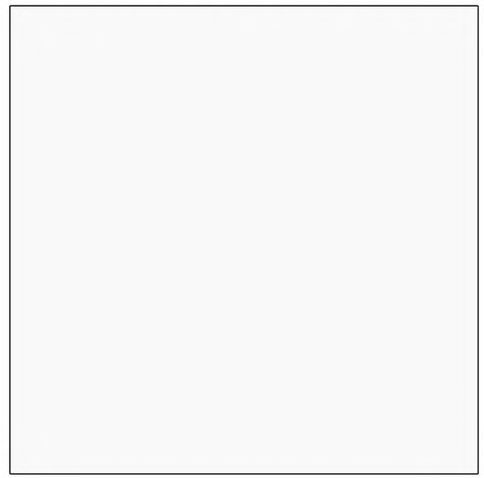
SHINGLES
ASPHALT | **CHARCOAL - A**



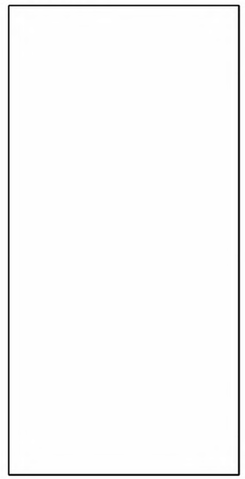
FIBER CEMENT LAP SIDING
CEDARMILL | **IRON GRAY - FC1, FC2**



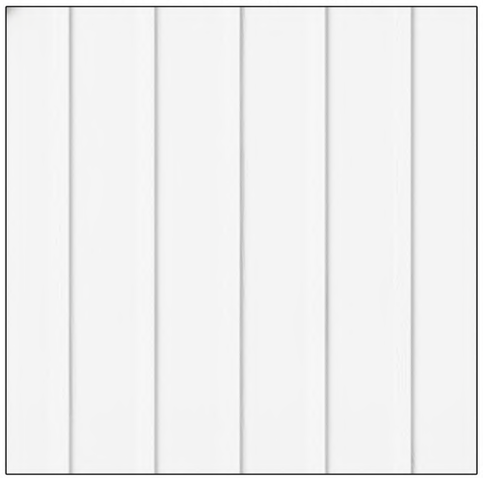
FIBER CEMENT TRIM
SMOOTH | **ARCTIC WHITE - FP2**



WINDOWS
WHITE



FIBER CEMENT BOARD & BATTEN
SMOOTH | **ARCTIC WHITE - FP1**



BRICK
GLEN GERY ANTIQUE WHITE - B



DOORS
COLOR MATCHED | **IRON GRAY**



CAST STONE - TBDTBDTBD
LIMESTONE



FIDUCIARY
REAL ESTATE DEVELOPMENT, INC

MATERIAL LEGEND

A - ASPHALT SHINGLE
B - BRICK - GLEN GERY - ANTIQUE WHITE - MODULAR
FC1 - FIBER CEMENT SIDING - IRON GREY - LAP SIDING 6" EXPOSURE
FC2 - FIBER CEMENT SIDING - IRON GREY - LAP SIDING 4" EXPOSURE
FC3 - FIBER CEMENT SIDING - ARCTIC WHITE - LAP SIDING 6" EXPOSURE
FC4 - FIBER CEMENT SIDING - ARCTIC WHITE - LAP SIDING 4" EXPOSURE
FP1 - FIBER CEMENT PANEL - ARCTIC WHITE - BOARD AND BATTEN 16" O.C.
FP2 - FIBER CEMENT PANEL - ARCTIC WHITE - SMOOTH
FP3 - FIBER CEMENT PANEL - IRON GREY - BOARD AND BATTEN 16" O.C.
M - METAL ROOF - STANDING SEAM

COLOR LEGEND:

GREY COLOR PALETTE:
BUILDINGS C, D, E, G, H, M, N
FC1 - IRON GREY
FC2 - IRON GREY
FC3 - IRON GREY - BATTENS TO MATCH
FP1 - ARCTIC WHITE - BATTENS TO MATCH
FP2 - ARCTIC WHITE

FIBER CEMENT TRIM - ARCTIC WHITE
FIBER CEMENT COLUMN TRIM AND PANEL TO BE ARCTIC WHITE

WHITE COLOR PALETTE:
BUILDINGS A, B, F, I, J, K, L
FC1 - ARCTIC WHITE
FC2 - ARCTIC WHITE
FP1 - ARCTIC WHITE - BATTENS TO MATCH
FP2 - ARCTIC WHITE

FIBER CEMENT TRIM - MIDNIGHT BLACK
FIBER CEMENT COLUMN TRIM AND PANEL TO BE ARCTIC WHITE

MASONRY CALCULATIONS:

	BRICK AREA / OVERALL FACADE*
FRONT ELEVATION	878 sqft / 2519 sqft = 35%
GARAGE ELEVATION	265 sqft / 2776 sqft = 9.5%
SIDE 1	214 sqft / 839 sqft = 25.5%
SIDE 2	140 sqft / 926 sqft = 15%
AVERAGE	1,497 sqft / 7,060 sqft = 21.2%

*OVERALL FACADE CALCULATION EXCLUDES WINDOWS AND DOORS

HIGH QUALITY MATERIAL
B
GLEN GERY - ANTIQUE WHITE

PRIMARY COLOR 1
FP1, FP2
JAMES HARDIE ARCTIC WHITE

PRIMARY COLOR 2
FC3, FC4
JAMES HARDIE ARCTIC WHITE



FRONT ELEVATION
Scale: 1/8"=1'
4 / A500



SIDE ELEVATION
Scale: 1/8"=1'
3 / A500



SIDE ELEVATION
Scale: 1/8"=1'
2 / A500

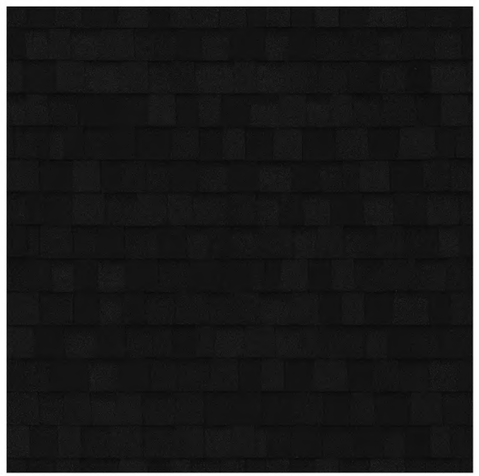


BACK ELEVATION
Scale: 1/8"=1'
1 / A500

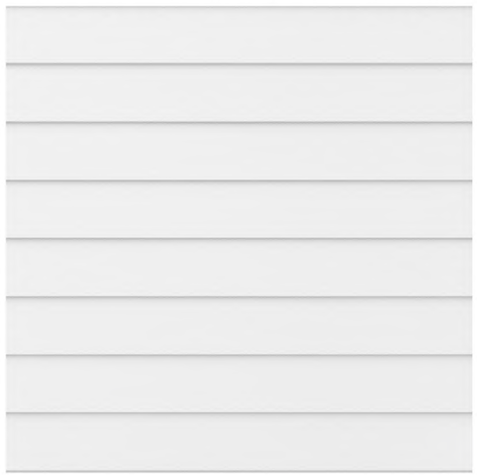
SEASONS AT CREST HILL | 18 UNIT BUILDING - LIGHT
EXTERIOR MATERIAL PALETTE

CREST HILL | **ILLINOIS**

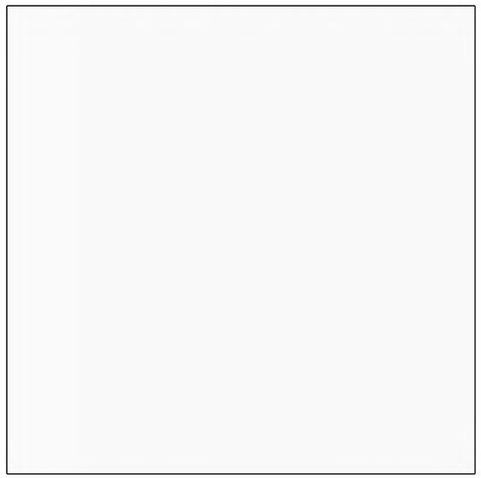
SHINGLES
ASPHALT | **CHARCOAL - A**



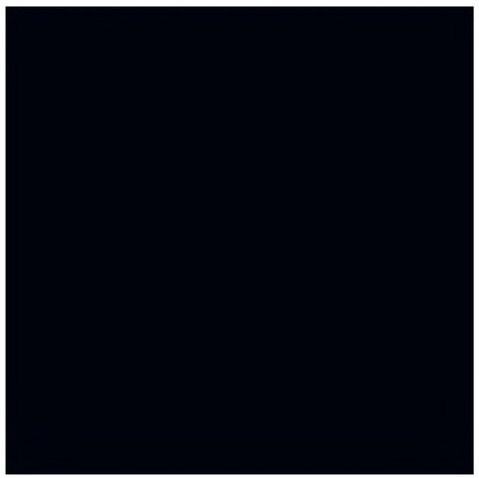
FIBER CEMENT LAP SIDING
CEDARMILL | **ARCTIC WHITE - FC3, FC4**



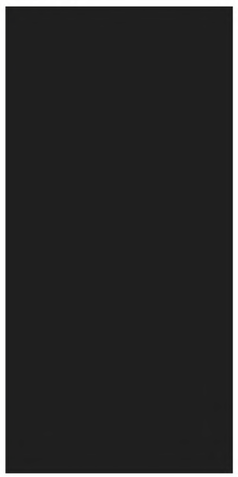
FIBER CEMENT TRIM
SMOOTH | **ARCTIC WHITE - FP2**



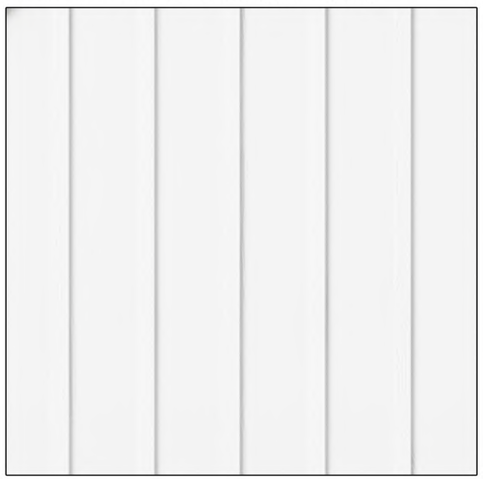
FIBER CEMENT TRIM
SMOOTH | **MIDNIGHT BLACK**



WINDOWS
BLACK



FIBER CEMENT BOARD & BATTEN
SMOOTH | **ARCTIC WHITE - FP1**



BRICK
GLEN GERY ANTIQUE WHITE - B

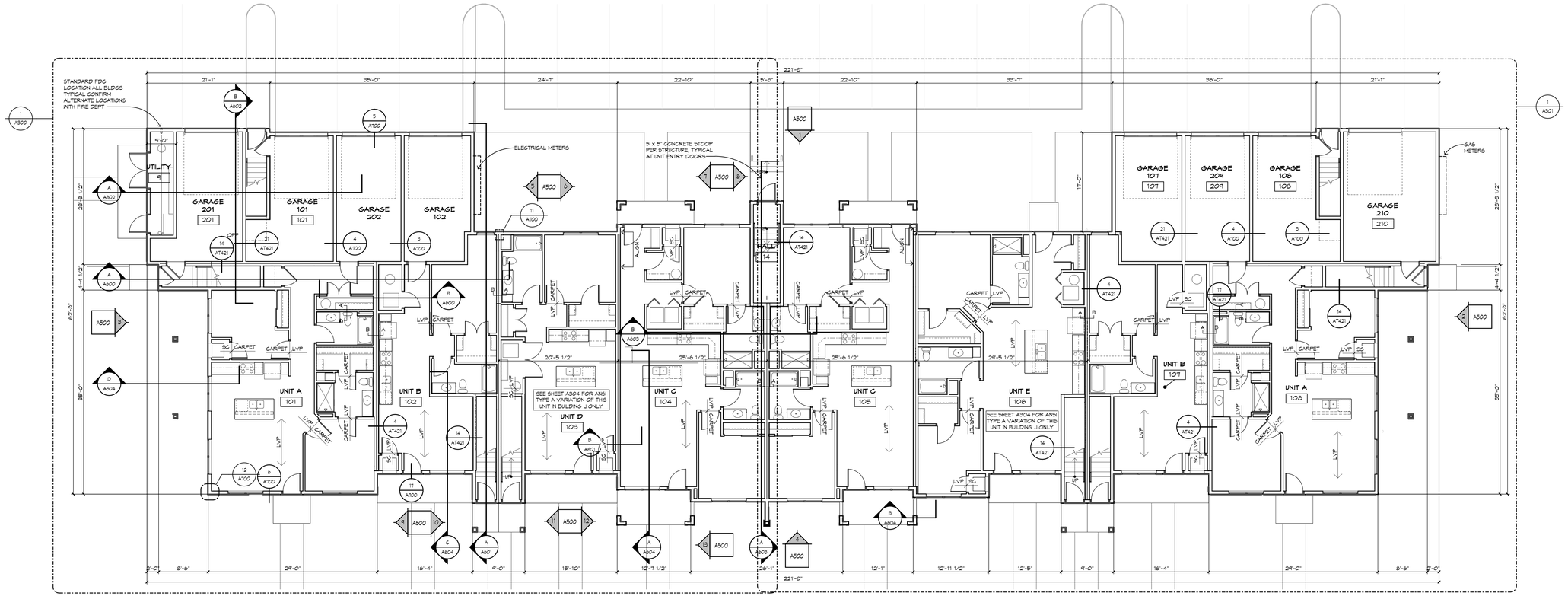


DOORS
COLOR MATCHED | **IRON GRAY**



CAST STONE - TBDTBDTBD
LIMESTONE





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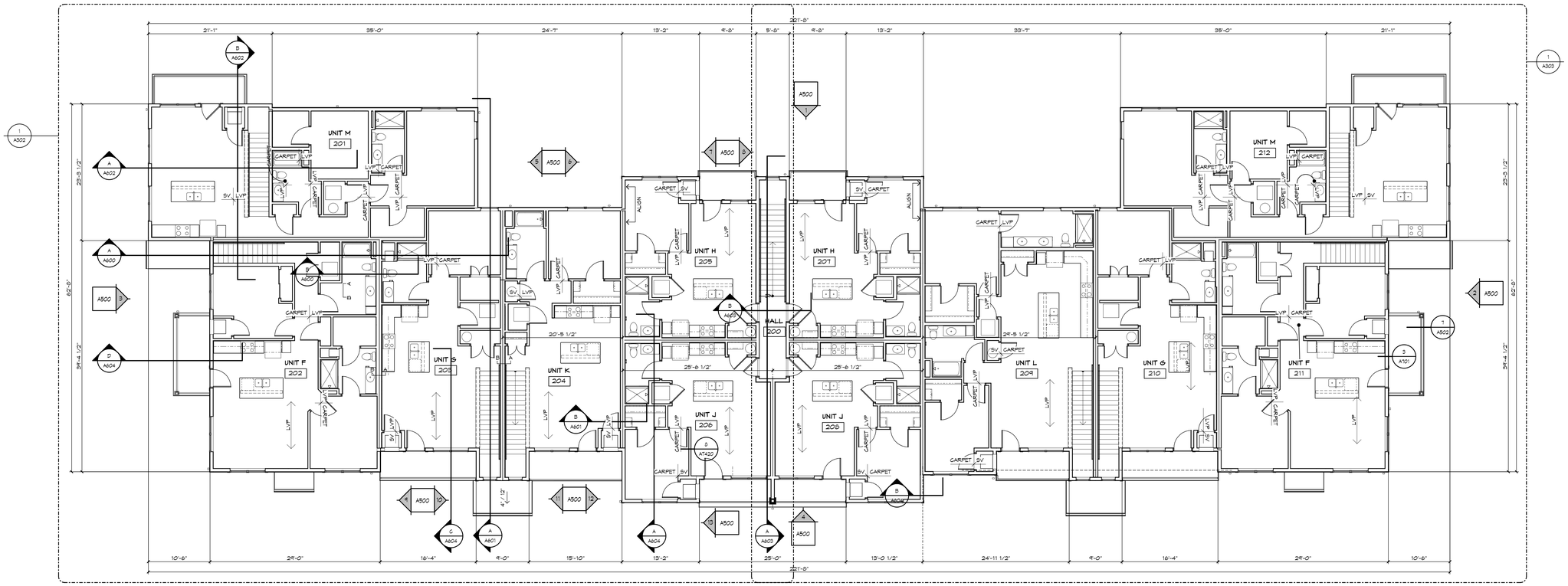
Crest Hill, Illinois | RENDERINGS ARE ARTISTS REPRESENTATIONS SHOWN FOR ILLUSTRATION PURPOSES ONLY

SEASONS AT CREST HILL | 20 - UNIT BUILDING FIRST FLOOR PLAN

FIDUCIARY REAL ESTATE DEVELOPMENT, INC

ARCHITECTURE



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MATERIAL LEGEND

A - ASPHALT SHINGLE
B - BRICK - GLEN GERY - ANTIQUE WHITE - MODULAR
FC1 - FIBER CEMENT SIDING - IRON GREY - LAP SIDING 6" EXPOSURE
FC2 - FIBER CEMENT SIDING - IRON GREY - LAP SIDING 4" EXPOSURE
FC3 - FIBER CEMENT SIDING - ARCTIC WHITE - LAP SIDING 6" EXPOSURE
FC4 - FIBER CEMENT SIDING - ARCTIC WHITE - LAP SIDING 4" EXPOSURE
FP1 - FIBER CEMENT PANEL - ARCTIC WHITE - BOARD AND BATTEN 16" O.C.
FP2 - FIBER CEMENT PANEL - ARCTIC WHITE - SMOOTH
FP3 - FIBER CEMENT PANEL - IRON GREY - BOARD AND BATTEN 16" O.C.
M - METAL ROOF - STANDING SEAM

COLOR LEGEND:

GREY COLOR PALETTE:
BUILDINGS C, D, E, G, H, M, N
FC1 - IRON GREY
FC2 - IRON GREY
FC3 - IRON GREY - BATTENS TO MATCH
FP1 - ARCTIC WHITE - BATTENS TO MATCH
FP2 - ARCTIC WHITE

FIBER CEMENT TRIM - ARCTIC WHITE
FIBER CEMENT COLUMN TRIM AND PANEL TO BE ARCTIC WHITE

WHITE COLOR PALETTE:
BUILDINGS A, B, F, I, J, K, L
FC1 - ARCTIC WHITE
FC2 - ARCTIC WHITE
FP1 - ARCTIC WHITE - BATTENS TO MATCH
FP2 - ARCTIC WHITE

FIBER CEMENT TRIM - MIDNIGHT BLACK
FIBER CEMENT COLUMN TRIM AND PANEL TO BE ARCTIC WHITE

MASONRY CALCULATIONS:

	BRICK AREA / OVERALL FACADE*
FRONT ELEVATION	856 sqft / 2446 sqft = 33.5%
GARAGE ELEVATION	225 sqft / 3029 sqft = 7.2%
SIDE 1	178 sqft / 852 sqft = 20.3%
SIDE 2	178 sqft / 852 sqft = 20.3%
AVERAGE	1,437 sqft / 7,179 sqft = 20.0%

*OVERALL FACADE CALCULATION EXCLUDES WINDOWS AND DOORS

HIGH QUALITY MATERIAL



B
GLEN GERY - ANTIQUE WHITE

PRIMARY COLOR 1



FP1, FP2
JAMES HARDIE ARCTIC WHITE

PRIMARY COLOR 2



FC1, FC2,
JAMES HARDIE IRON GREY



FRONT ELEVATION — Scale: 1/8"=1' — 4 / A500

SIDE ELEVATION — Scale: 1/8"=1' — 3 / A500

SIDE ELEVATION — Scale: 1/8"=1' — 2 / A500

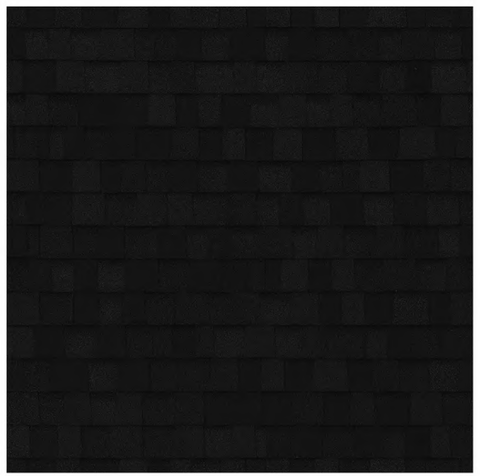
BACK ELEVATION — Scale: 1/8"=1' — 1 / A500

SEASONS AT CREST HILL | 20 UNIT BUILDING

EXTERIOR MATERIAL PALETTE

CREST HILL | **ILLINOIS**

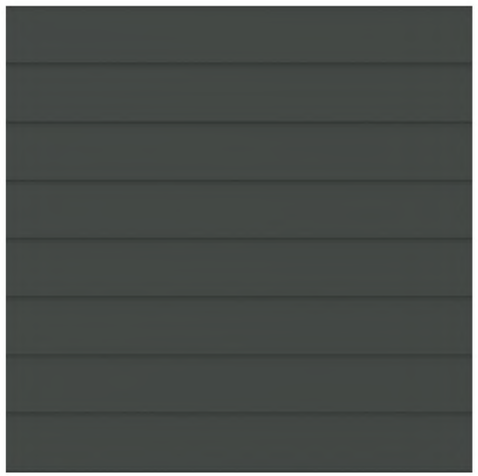
SHINGLES
ASPHALT | **CHARCOAL - A**



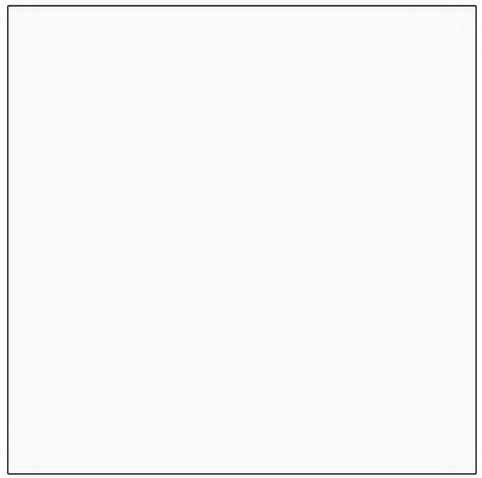
FIBER CEMENT BOARD & BATTEN
SMOOTH | **IRON GRAY - FP3**



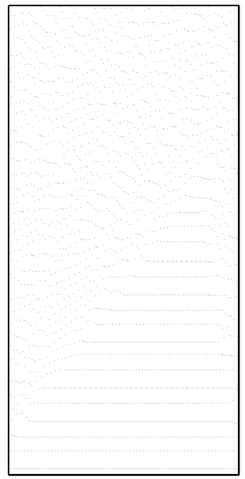
FIBER CEMENT LAP SIDING
CEDARMILL | **IRON GRAY - FC1, FC2**



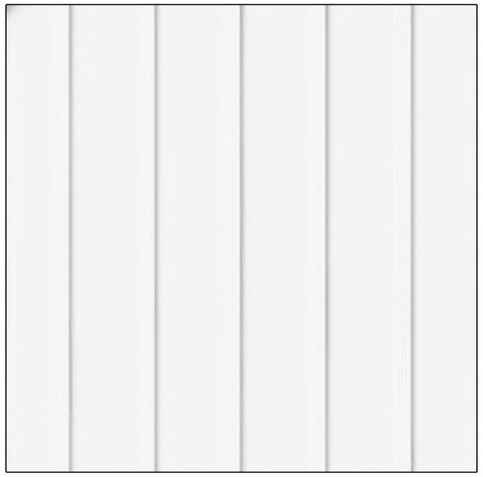
FIBER CEMENT TRIM
SMOOTH | **ARCTIC WHITE - FP2**



WINDOWS
WHITE



FIBER CEMENT BOARD & BATTEN
SMOOTH | **ARCTIC WHITE - FP1**



BRICK
GLEN GERY ANTIQUE WHITE - B

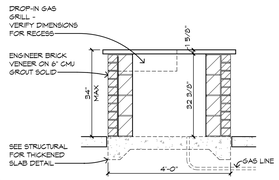


DOORS
COLOR MATCHED | **IRON GRAY**

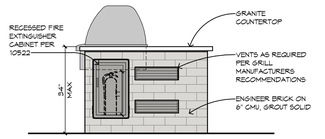


CAST STONE - TBDTBDTBD
LIMESTONE

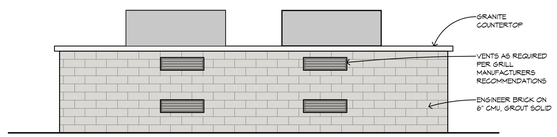




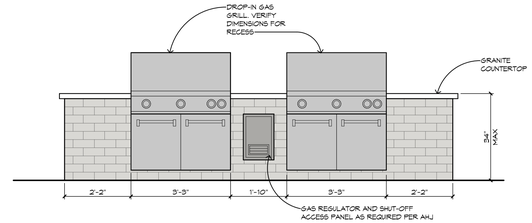
6 A230 GRILL STATION SECTION



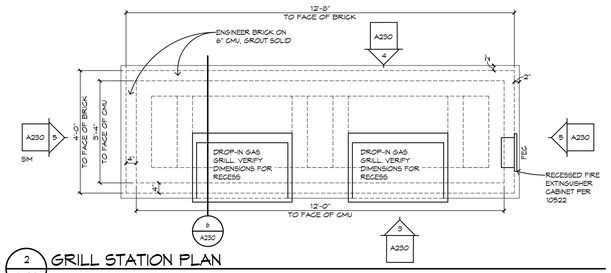
5 A230 GRILL STATION ELEVATION



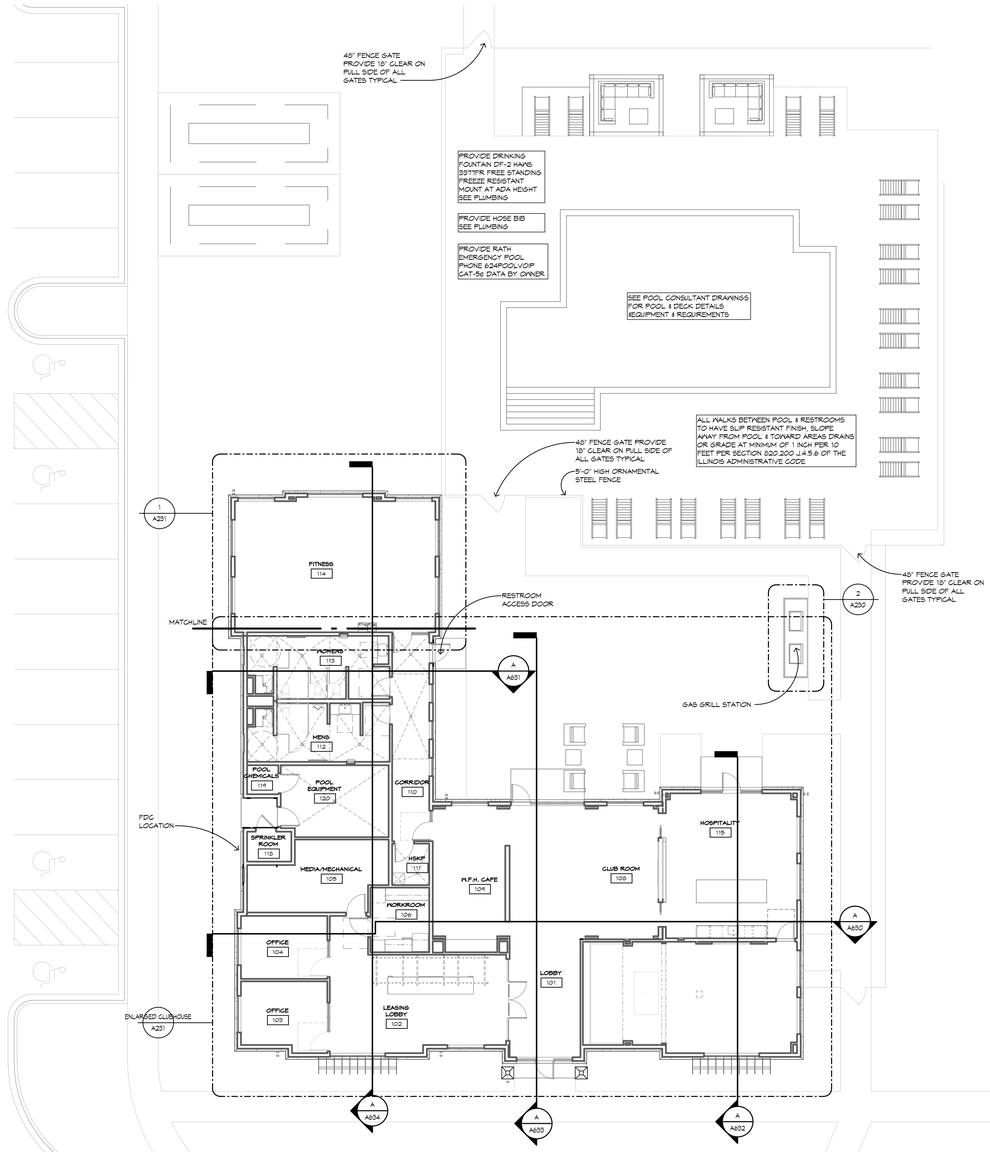
4 A230 GRILL STATION ELEVATION



3 A230 GRILL STATION ELEVATION



2 A230 GRILL STATION PLAN



Seasons at Crest Hill

CLUBHOUSE

Crest Hill IL 60403

AG ARCHITECTURE
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REVISIONS

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DATE
14 JANUARY 2026

PROJECT
252101

SHEET NO.
A230
CLUBHOUSE

1" = 10'-0" OVERALL SITE AND FLOOR PLAN

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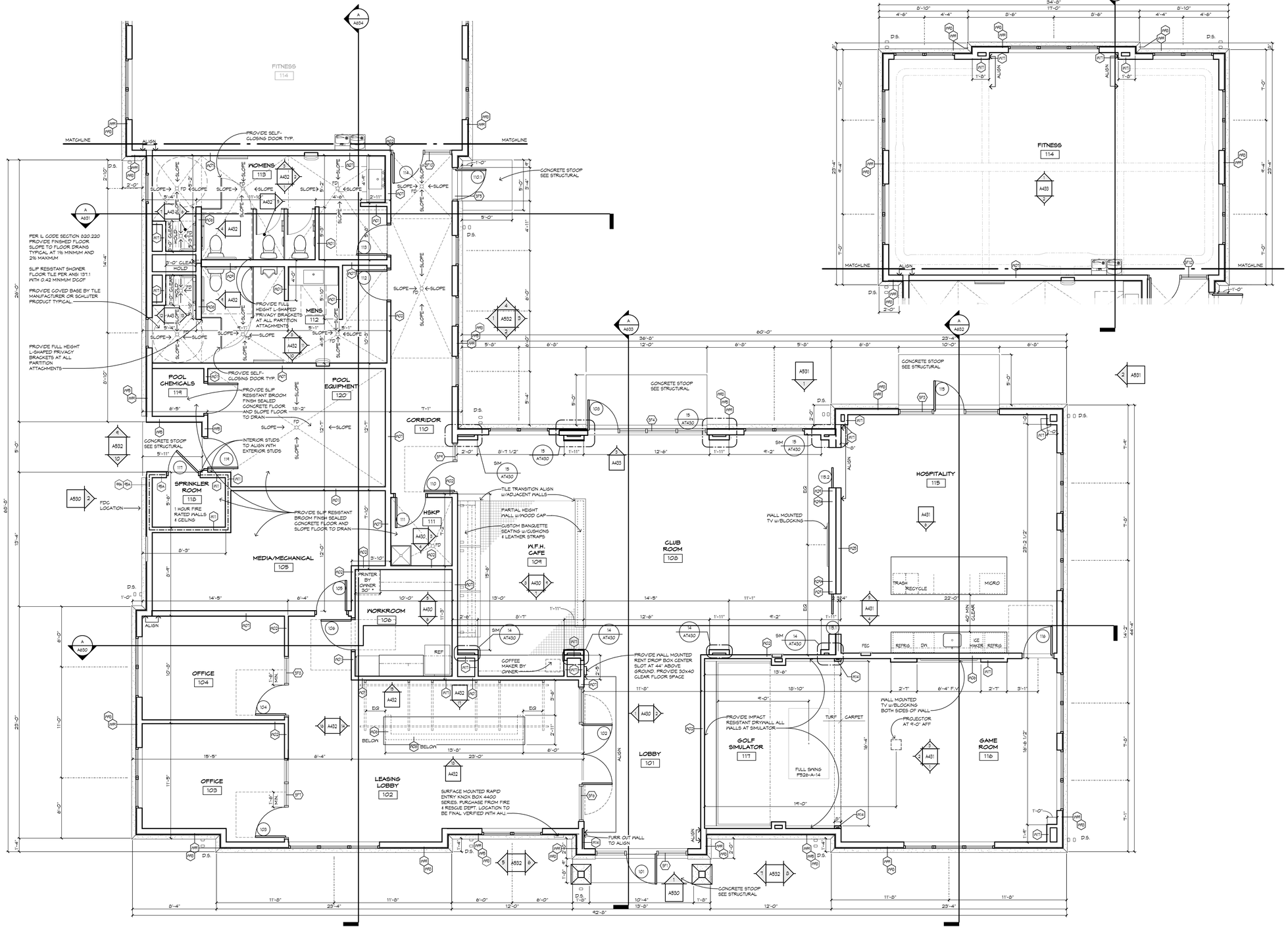

FLOOR PLAN GENERAL NOTES

DIMENSIONS AT EXTERIOR WALLS ARE TO FACE OF BRICK OR SHEATHING. ALIGN WITH FOUNDATION WALL BELOW.

ALL OTHER DIMENSIONS ARE TO FACE OF STUD.

VERIFY ALL ROUGH AND MASONRY OPENINGS (M.O.) WITH APPROVED SHOP DRAWINGS.

FIELD VERIFY ALL TOPS, MIRRORS AND CABINETRY DIMENSIONS.

VERIFY WALL CONSTRUCTION WITH WALL TYPES.

COORDINATE WALL AND FLOOR CERAMIC TILE PATTERN WITH OWNER.

COORDINATE LOCATION OF KNOX BOX & RENT DROP BOX W/OWNER / AHJ / FIRE DEPARTMENT AS REQUIRED. INSTALL AT ACCESSIBLE HEIGHTS PER SHEET AT431.

PROVIDE FINISHED FLOOR SLOPE TO FLOOR DRAINS TYPICAL 1% MINIMUM AND 2% MAXIMUM

6'-6" * — DIMENSIONS SHOWN AS ROUGH OPENINGS FOR SPECIFIC PRODUCTS BASED ON CURRENT INFORMATION AVAILABLE AT TIME OF DRAWING PREPARATION. CONTRACTOR TO VERIFY AS APPROPRIATE.

6'-6" ** — PLUS OR MINUS - FOR REFERENCE ONLY.

WALL TYPES — SHEET AT330

DOOR SCHEDULE — SHEET AT130

WINDOW & STOREFRONT SCHEDULE — SHEET A830

INTERIOR FINISH & MOUNTING HEIGHT SCHEDULE — SHEET AT431 & SPEC

FEC FIRE EXTINGUISHER WITH RECESSED CABINET PER SECTION 10522 SEE DETAIL 15/AT430

AED AUTOMATED EXTERNAL DEFIBRILLATOR AND CABINET WITH AUDIBLE ALARM
PHILIPS HEARTSTART ONSITE AED
SEMI-RECESSED AED CABINET WITH AUDIBLE ALARM
1809R3-1 aeduniverse.com
SEE DETAIL 15/AT430 SIM

FURNITURE LAYOUT IS FOR GENERAL REFERENCE ONLY. OWNER TO SELECT FURNITURE.

Seasons at Crest Hill
CLUBHOUSE
Crest Hill IL 60403

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PROJECT
252101

SHEET NO.

1/4" FLOOR PLAN A231
CLUBHOUSE

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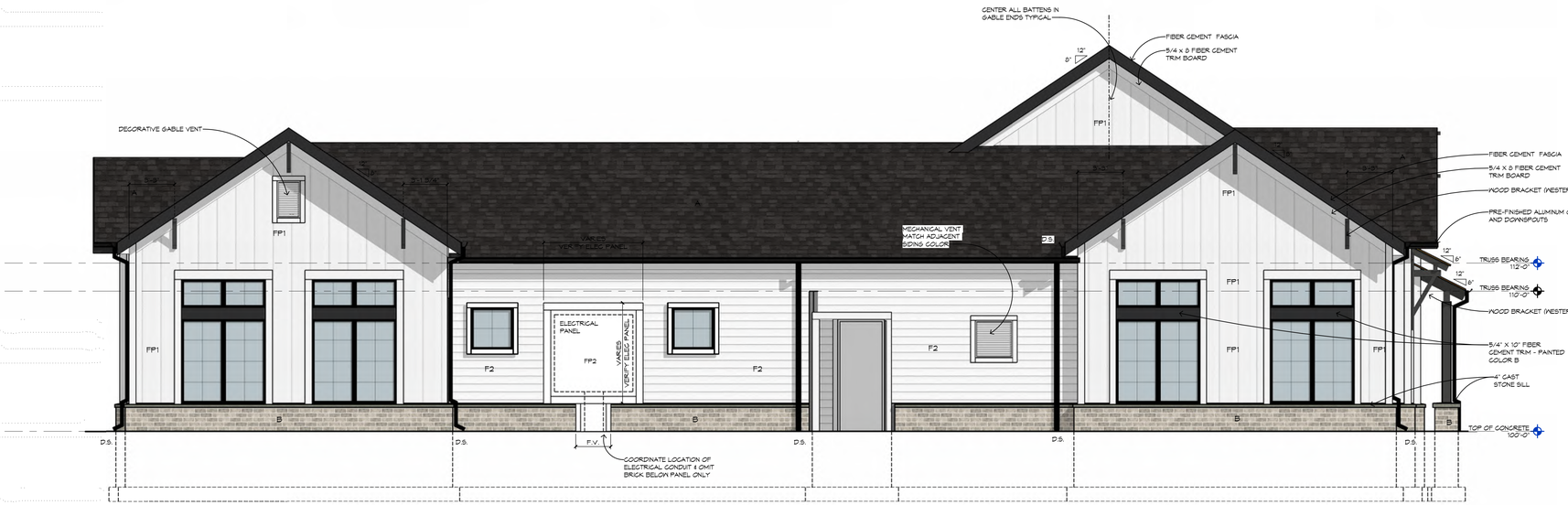
Item 2.

Seasons at Crest Hill

CLUBHOUSE

Crest Hill IL 60403



2 A530 NORTH ELEVATION

EXTERIOR ELEVATION GENERAL NOTES

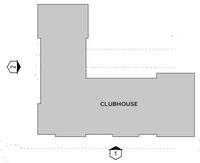
1. PROVIDE CONCRETE SPLASH BLOCKS AT ALL DOWNSPOUTS WHICH SPILL ONTO GRADE
2. ALL CONDUIT, METERS, VENTS, ETC. TO BE PAINTED TO MATCH ADJACENT SURFACE.
3. GUTTERS AND DOWNSPOUTS ARE PREFINISHED ALUMINUM - BLACK FINISH
4. SEE SHEET A532 FOR WINDOW AND STOREFRONT SCHEDULE - BLACK FINISH
5. ALL FIELD PAINTED FASCIAS TO BE COLOR B - TRICORN BLACK SW 6258
6. FIBER CEMENT TRIM TO BE COLOR A - ARCTIC WHITE UNLESS NOTED OTHERWISE

EXTERIOR ELEVATION KEY NOTES:

MR	STANDING SEAM METAL ROOF - COLOR BLACK
A	THREE DIMENSIONAL ASPHALT SHINGLES - COLOR GAF CHARCOAL
B	BRICK - COLOR GLEN GEHRY ANTIQUE WHITE
F2	FIBER CEMENT LAP SIDING WITH 6" EXPOSURE - COLOR A - ARCTIC WHITE
FP1	VERTICAL FIBER CEMENT PANEL & BATTENS AT 16" O.C. - COLOR A - ARCTIC WHITE
FP2	SMOOTH FIBER CEMENT PANEL - COLOR A - ARCTIC WHITE
FP3	SMOOTH FIBER CEMENT PANEL - COLOR B - TRICORN BLACK SW 6258



1 A530 EAST ELEVATION



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DATE
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PROJECT
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SHEET NO.
A530
CLUBHOUSE

1/4" EXTERIOR ELEVATIONS

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EXTERIOR ELEVATION GENERAL NOTES

1. PROVIDE CONCRETE SPLASH BLOCKS AT ALL DOWNSPOUTS WHICH SPILL ONTO GRADE
2. ALL CONDUIT, METERS, VENTS, ETC. TO BE PAINTED TO MATCH ADJACENT SURFACE.
3. GUTTERS AND DOWNSPOUTS ARE PREFINISHED ALUMNUM - BLACK FINISH
4. SEE SHEET A532 FOR WINDOW AND STOREFRONT SCHEDULE - BLACK FINISH
5. ALL FIELD PAINTED FASCIAS TO BE COLOR B - TRIGORN BLACK SW 6258
6. FIBER CEMENT TRIM TO BE COLOR A - ARCTIC WHITE UNLESS NOTED OTHERWISE

EXTERIOR ELEVATION KEY NOTES:

MR	STANDING SEAM METAL ROOF - COLOR BLACK
A	THREE DIMENSIONAL ASPHALT SHINGLES - COLOR GAF CHARCOAL
B	BRICK - COLOR GLEN GERRY ANTIQUE WHITE
F2	FIBER CEMENT LAP SIDING WITH 6" EXPOSURE - COLOR A - ARCTIC WHITE
FP1	VERTICAL FIBER CEMENT PANEL & BATTENS AT 16" O.C. - COLOR A - ARCTIC WHITE
FP2	SMOOTH FIBER CEMENT PANEL - COLOR A - ARCTIC WHITE
FP3	SMOOTH FIBER CEMENT PANEL - COLOR B - TRIGORN BLACK SW 6258



2 A531 SOUTH ELEVATION



1 A531 WEST ELEVATION

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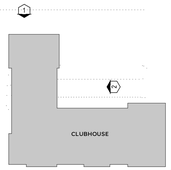
Seasons at Crest Hill
CLUBHOUSE
Crest Hill IL 60403

AG ARCHITECTURE
Bright Vision. Bold Communities.

REVISIONS

NO.	DATE	DESCRIPTION



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DATE
14 JANUARY 2026
PROJECT
252101
SHEET NO.

1/4" EXTERIOR ELEVATIONS A531 CLUBHOUSE

EXTERIOR ELEVATION GENERAL NOTES

EXTERIOR ELEVATION KEY NOTES:

A	THREE DIMENSIONAL ASPHALT SHINGLES - GAF; COLOR - CHARCOAL
B	BRICK - COLOR GLEN GERRY ANTIQUE WHITE
F2	FIBER CEMENT SIDING WITH 6" EXPOSURE - IRON GREY
FP1	VERTICAL FIBER CEMENT PANEL BATTENS AT 16" O.C. - ARCTIC WHITE

COLOR LEGEND
FIBER CEMENT TRIM TO BE ARCTIC WHITE UNLESS NOTED OTHERWISE
FIBER CEMENT COLUMN TRIM AND PANEL TO BE ARCTIC WHITE

GENERAL NOTES

DIMENSIONS AT EXTERIOR WALLS ARE TO FACE OF BRICK OR SHEATHING. ALIGN WITH FOUNDATION WALL BELOW.

PROVIDE CONCRETE SPLASH AT ALL DOWNSPOUTS THAT ARE NOT CONNECTED TO STORM SEWER.

ALL CONDUIT, METERS, VENTS ECT. TO BE PAINTED TO MATCH ADJACENT SURFACE.

SEE DOOR SCHEDULE SHEET AT120

SEE WALL TYPE SHEET AT300

GUTTERS AND DOWNSPOUTS TO BE PREFINISHED ALUMINUM.

ICE AND WATER SHIELD TO EXTEND HORIZONTALLY 24" MIN. INSIDE THE INTERIOR FACE OF THE EXTERIOR WALL TYP.

R.V. - RIDGE VENT

D.S. - DOWNSPOUT

INDICATES ICE AND WATER SHIELD

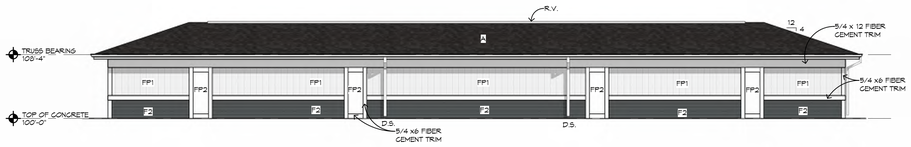
6'-6" * DIMENSIONS SHOWN AS ROUGH OPENINGS FOR SPECIFIC PRODUCTS BASED ON CURRENT INFORMATION AVAILABLE AT TIME OF DRAWING PREPARATION. CONTRACTOR TO VERIFY AS APPROPRIATE.

6'-6" ** PLUS OR MINUS - FOR REFERENCE ONLY.

DOOR NOTES

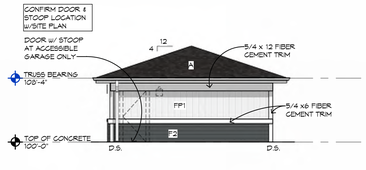
G.1 G.2 U UA C

G.1 9'-0 x 7'-0 INSULATED SECTIONAL OVERHEAD GARAGE DOOR
U UA 3'-0 x 6'-8 INSULATED FIBERGLASS ENTRY DOOR AND FRAME
C 3'-0 x 6'-8 WOOD DOOR AND FRAME



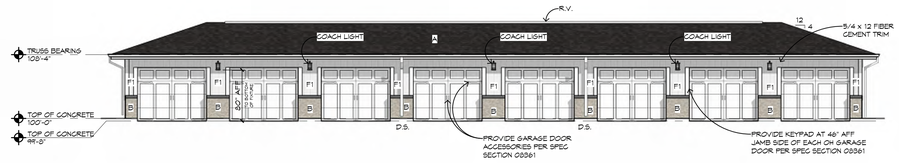
9 / 6230 — 1/8" = 1'-0" TYPICAL

8 CAR GARAGE REAR ELEVATION



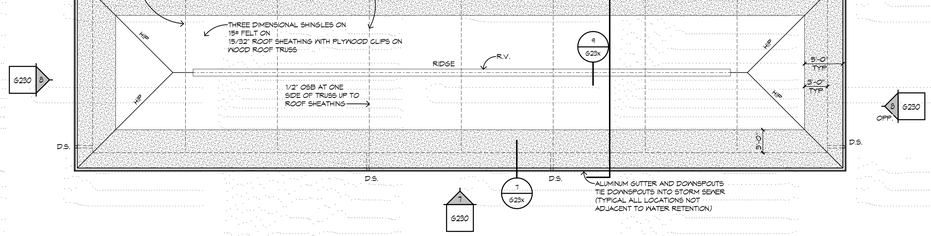
8 / 6230 — 1/8" = 1'-0" TYPICAL

8 CAR GARAGE SIDE ELEVATION



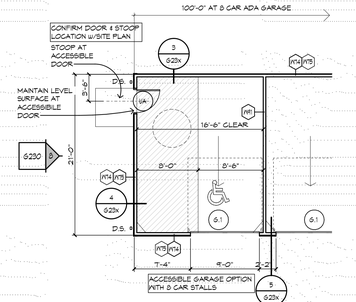
7 / 6230 — 1/8" = 1'-0" TYPICAL

8 CAR GARAGE FRONT ELEVATION



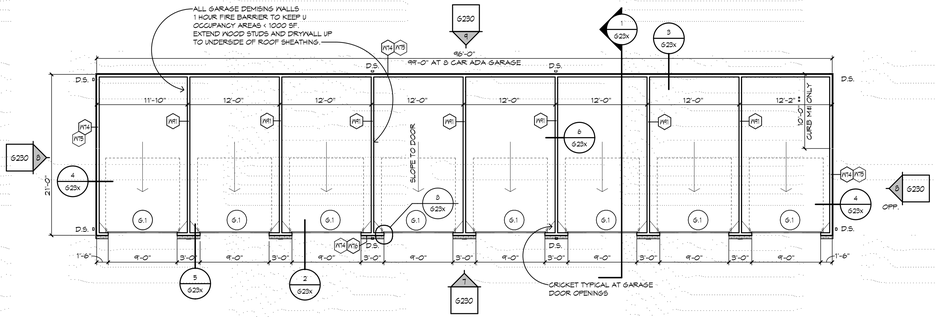
5 / 6230 — 1/8" = 1'-0" TYPICAL

8 CAR GARAGE ROOF PLAN



2 / 6230 — 1/8" = 1'-0" ACCESSIBLE

8 CAR GARAGE PARTIAL FLOOR PLAN



1 / 6230 — 1/8" = 1'-0" TYPICAL

8 CAR GARAGE FLOOR PLAN

Seasons at Crest Hill

SITE STRUCTURES
CREST HILL, ILLINOIS

AG ARCHITECTURE
Bright Vision. Bold Communities.

REVISIONS

NO.	DATE	DESCRIPTION

THIS DRAWING, ITS DESIGN CONCEPT AND ITS DETAIL ARE THE SOLE PROPERTY OF AG ARCHITECTURE, INC AND SHALL NOT BE COPIED IN ANY FORM OR MANNER WITHOUT WRITTEN AUTHORIZATION OF ITS DESIGNER/CREATOR

DATE
04 JUNE 2025

PROJECT
252101

SHEET NO.
G230

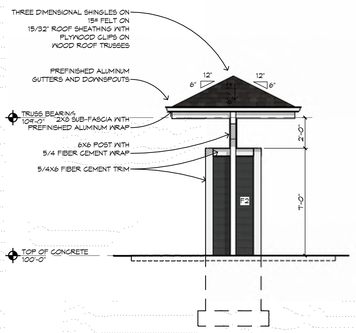
SHEET TITLE
SITE DETAILS

SHEET PRINTED ON:
ISSUED FOR:
FILE PATH:
Autodesk Docs://252101 FRED Crest Hill/252101 FRED Crest Hill Arch SW Structural_R25.rvt

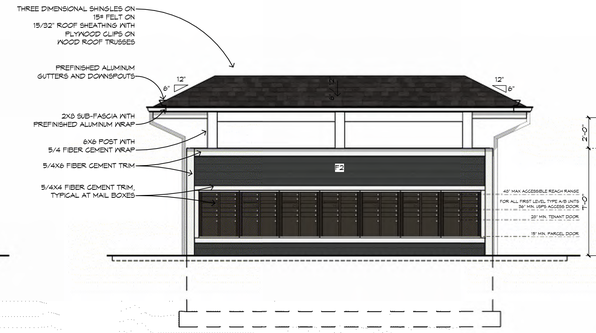
Seasons at Crest Hill

SITE STRUCTURES

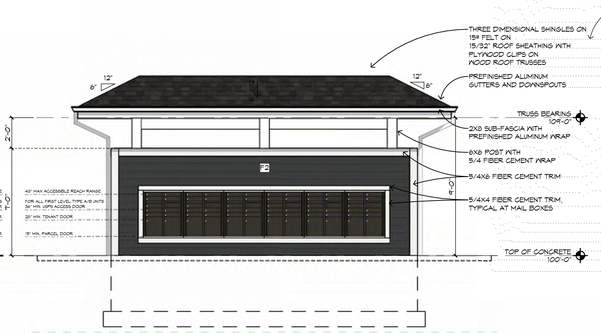
CREST HILL, ILLINOIS



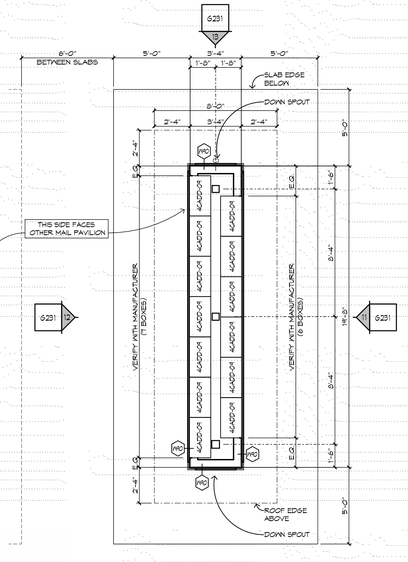
13 / G231 MAIL ELEVATION
1/4" = 1'-0"



12 / G231 MAIL PAVILION ELEVATION
1/4" = 1'-0"



11 / G231 MAIL PAVILION ELEVATION
1/4" = 1'-0"



10 / 6231 MAIL PAVILION PLAN

TRASH ENCLOSURE GENERAL NOTES:

DIMENSIONS AT EXTERIOR WALLS ARE TO FACE OF BRICK OR SHEATHING. ALIGN WITH FOUNDATION WALL BELOW.

VERIFY ALL ROUGH AND MASONRY OPENINGS (M.O.) WITH APPROVED SHOP DRAWINGS.

SEE SHEET G230 FOR EXTERIOR ELEVATION GENERAL NOTES & COLOR KEY.

6'-6" * DIMENSIONS SHOWN AS ROUGH OPENINGS FOR SPECIFIC PRODUCTS BASED ON CURRENT INFORMATION AVAILABLE AT TIME OF DRAWING PREPARATION. CONTRACTOR TO VERIFY AS APPROPRIATE.

6'-6" ** PLUS OR MINUS - FOR REFERENCE ONLY.

EXTERIOR ELEVATION GENERAL NOTES

EXTERIOR ELEVATION KEY NOTES:

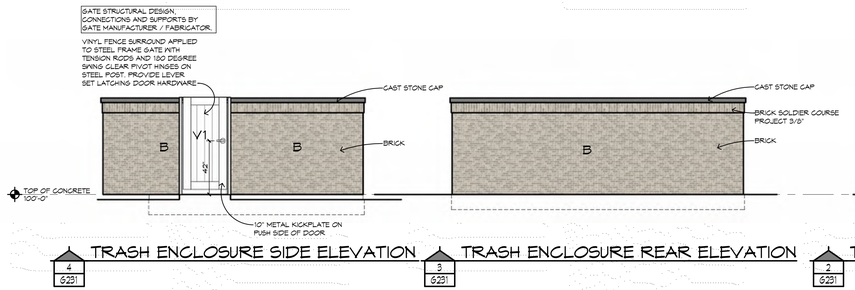
A THREE DIMENSIONAL ASPHALT SHINGLES - GAF; COLOR - CHARCOAL

B BRICK - COLOR GLEN GERRY ANTIQUE WHITE

F2 FIBER CEMENT SIDING WITH 6" EXPOSURE - IRON GREY

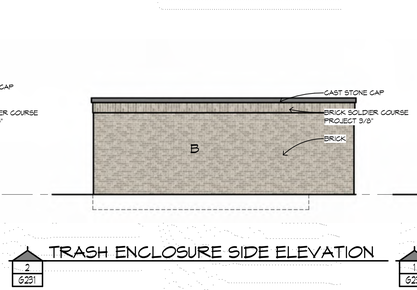
FP1 VERTICAL FIBER CEMENT PANEL BATTENS AT 16" O.C. - ARCTIC WHITE

COLOR LEGEND
FIBER CEMENT TRIM TO BE ARCTIC WHITE UNLESS NOTED OTHERWISE
FIBER CEMENT COLUMN TRIM AND PANEL TO BE ARCTIC WHITE

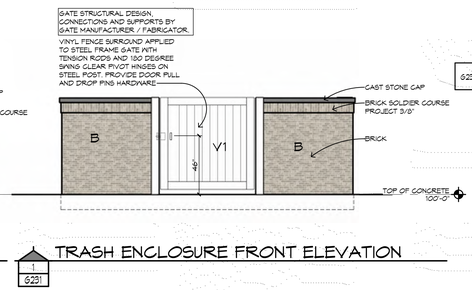


4 / G231 TRASH ENCLOSURE SIDE ELEVATION

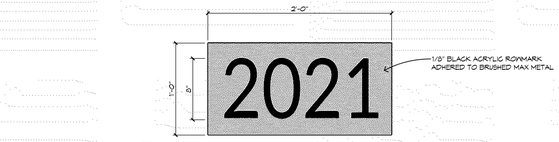
3 / G231 TRASH ENCLOSURE REAR ELEVATION



2 / G231 TRASH ENCLOSURE SIDE ELEVATION



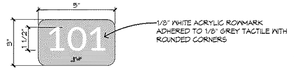
1 / G231 TRASH ENCLOSURE FRONT ELEVATION



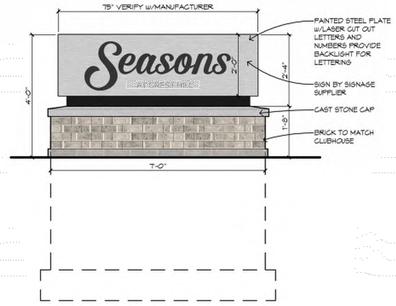
9 / G231 BUILDING ID/ADDRESS SIGNAGE
1 1/2" = 1'-0"



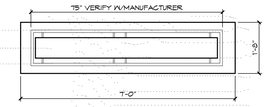
8 / G231 GARAGE ID SIGNAGE
1 1/2" = 1'-0"



7 / G231 DOOR ID SIGNAGE
3" = 1'-0"

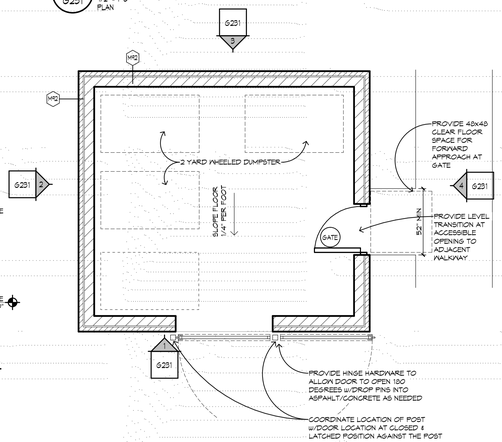


6 / G231 MONUMENT SIGN - B
1/2" = 1'-0"
ELEVATION



MONUMENT SIGN B

5 / G231 MONUMENT SIGN - A AND B
1/2" = 1'-0"
PLAN



AG ARCHITECTURE
Bright Vision. Bold Communities.

REVISIONS
NO. DATE DESCRIPTION

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DATE
10 October 2025
PROJECT
252101
SHEET NO.

SHEET PRINTED ON:
10/10/2025 10:08:34 AM
FILE PATH:
Architek Docs\252101 FRED Crest Hill\252101 FRED Crest Hill Arch Site Structures_R25.rvt

SITE DETAILS G231

Seasons at Crest Hill

SITE STRUCTURES
CREST HILL, ILLINOIS

AG ARCHITECTURE
Bright Vision. Bold Communities.

REVISIONS
NO. DATE DESCRIPTION

EXTERIOR ELEVATION GENERAL NOTES

EXTERIOR ELEVATION KEY NOTES:

A THREE DIMENSIONAL ASPHALT SHINGLES - GAF: COLOR - CHARCOAL

B BRICK - COLOR GLEN GERRY ANTIQUE WHITE

F2 FIBER CEMENT SIDING WITH 8" EXPOSURE - IRON GREY

FP1 VERTICAL FIBER CEMENT PANEL BATTENS AT 16" O.C. - ARCTIC WHITE

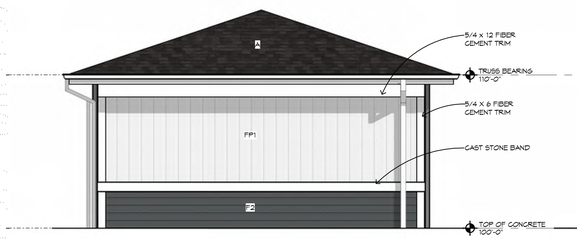
COLOR LEGEND:
FIBER CEMENT TRIM TO BE ARCTIC WHITE UNLESS NOTED OTHERWISE
FIBER CEMENT COLUMN TRIM AND PANEL TO BE ARCTIC WHITE

MAINTENANCE GARAGE SIDE ELEVATION

5 / 6232 — 1/4" = 1'-0" SEE SHEET G230 FOR MATERIAL LEGEND AND COLORS

MAINTENANCE GARAGE BACK ELEVATION

4 / 6232 — 1/4" = 1'-0" SEE SHEET G230 FOR MATERIAL LEGEND AND COLORS



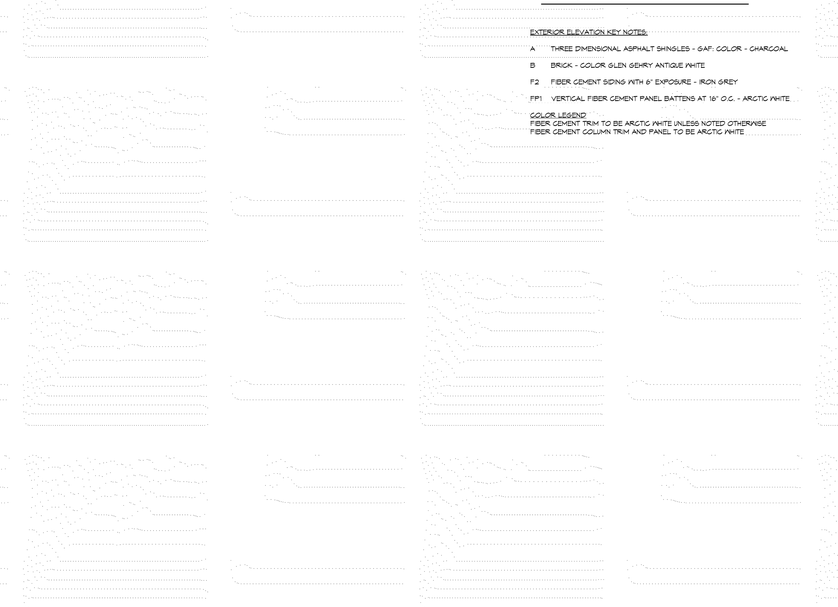
MAINTENANCE GARAGE SIDE ELEVATION

3 / 6232 — 1/4" = 1'-0" SEE SHEET G230 FOR MATERIAL LEGEND AND COLORS



MAINTENANCE GARAGE FRONT ELEVATION

2 / 6232 — 1/4" = 1'-0" SEE SHEET G230 FOR MATERIAL LEGEND AND COLORS



MAINTENANCE GARAGE FLOOR PLAN

1 / 6232 — 1/4" = 1'-0"

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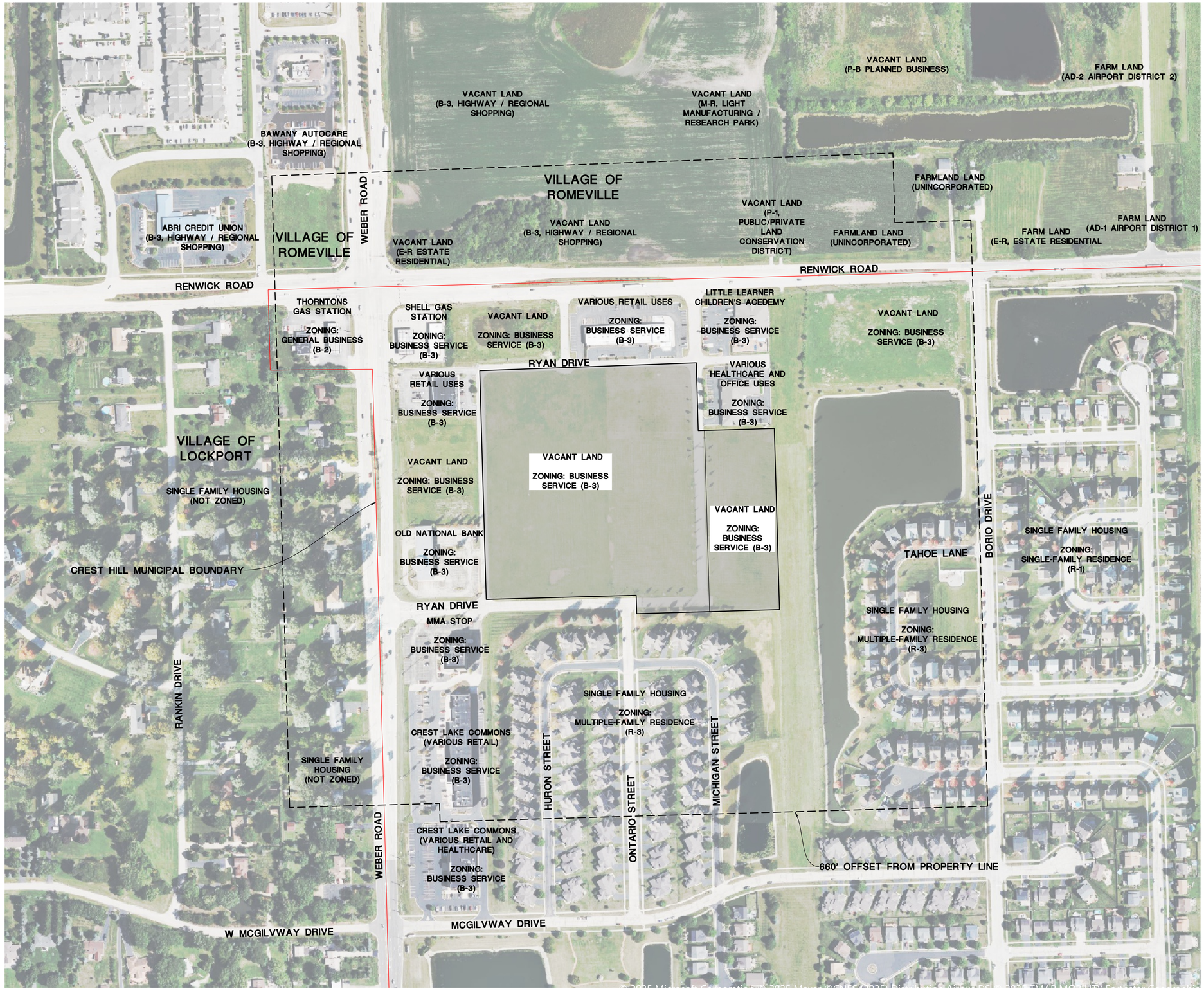
DATE
04 JUNE 2025

PROJECT
252101

SHEET NO.

SITE DETAILS G232
SITE

SHEET PRINTED ON:
6/5/2025 11:39:11 AM
FILE PATH:
Autodesk Docs://252101 FRED Crest Hill/252101 FRED Crest Hill Arch Shr Structural_R24.rvt



DRAWN BY	REVISIONS	DATE
####	###	###

Manhard CONSULTING
One Parkview Plaza, Suite 7800, Lisle/Wheaton, IL 60532 ph 630.724.3000 fax 630.724.3001
Civil Engineers • Structural Engineers • Water Resource Engineers • Transportation Engineers
Construction Managers • Environmental Scientists • Landscape Architects • Planners

SEASONS AT CREST HILL
CITY OF CREST HILL
SURROUNDING ZONING EXHIBIT

PROJ. MGR.:	JSE
PROJ. ASSOC.:	MSL
DRAWN BY:	CAW
DATE:	10-13-25
SCALE:	1"=150'

SHEET
EXB.
FRD.GUIL01

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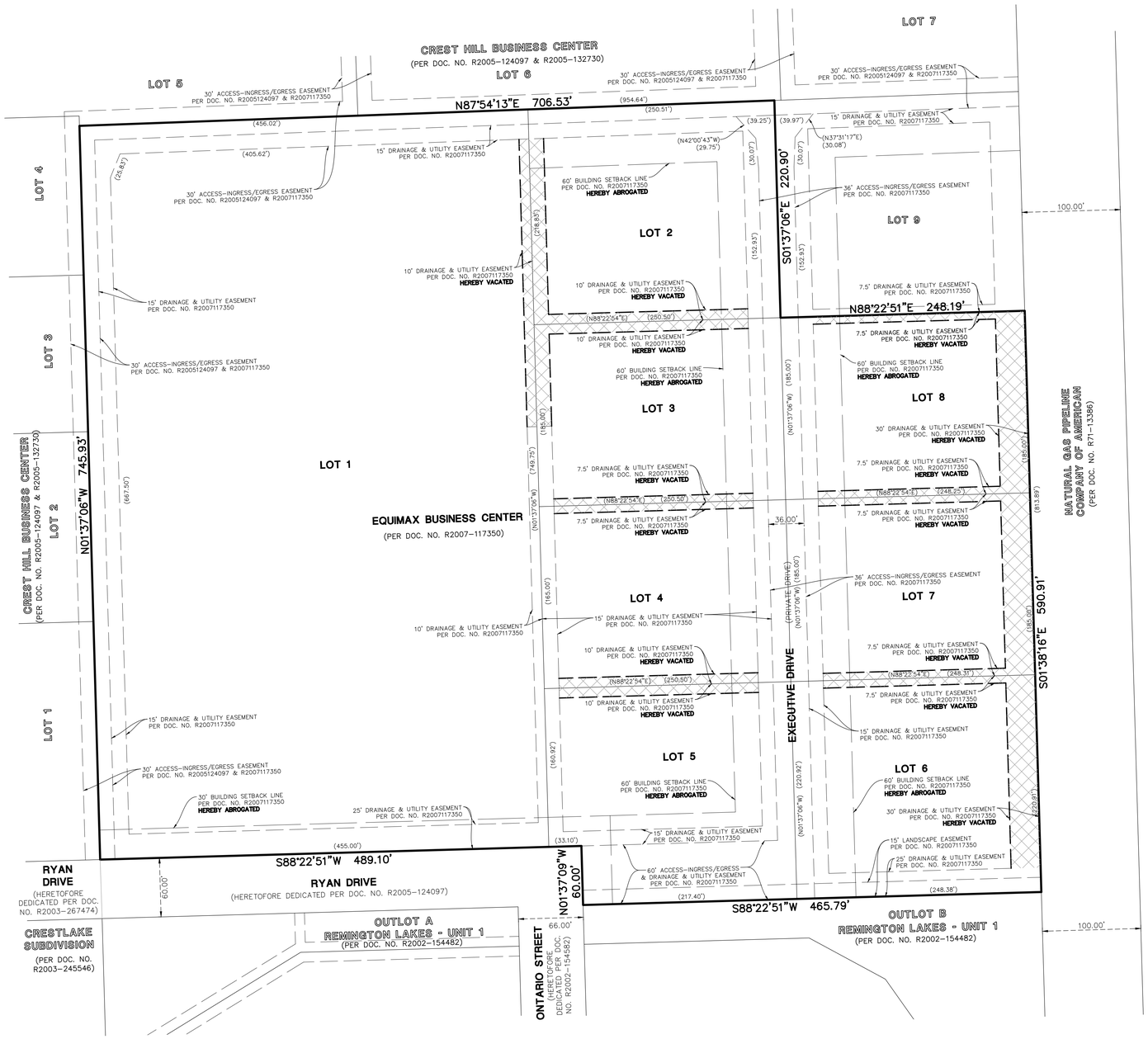
October 13, 2025 - 13:33 Dwg Name: P:\Projects\01\Eng\Permitting\Exhibits Eng\SURROUNDING ZONING Exhibit.dwg, Updated By: jhastilowski

PLAT OF VACATION

BEING A SUBDIVISION OF PART OF THE NORTHWEST QUARTER OF SECTION 20, TOWNSHIP 36 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN WILL COUNTY, ILLINOIS



OWNER'S CERTIFICATE (LOT 1)

THIS IS TO CERTIFY THAT _____ IS THE LEGAL OWNER OF THE LAND DESCRIBED ON THE ATTACHED PLAT, AND HAS CAUSED SAID PROPERTY TO BE SURVEYED AND PLATTED FOR THE PURPOSE OF VACATING CERTAIN EASEMENTS AND DEDICATIONS AS SHOWN HEREON.

DATED THIS _____ DAY OF _____, A.D., 20__.

BY: _____

_____ OWNER'S NAME AND ADDRESS

PRINTED NAME AND TITLE _____

_____

_____

ATTEST: _____

_____

PRINTED NAME AND TITLE

NOTARY PUBLIC (LOT 1)

STATE OF ILLINOIS)
)S.S.
COUNTY OF _____)

I, _____,
A NOTARY PUBLIC IN AND FOR THE COUNTY AND STATE AFORESAID, DO HEREBY CERTIFY THAT

_____AND _____
WHO IS PERSONALLY KNOWN TO ME TO BE THE SAME WHOSE NAME IS SUBSCRIBED TO THE FOREGOING CERTIFICATE, APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT THEY DID SIGN AND DELIVER THIS ANNEXED PLAT AS A FREE AND VOLUNTARY ACT FOR THE PURPOSES THEREIN SET FORTH.

GIVEN UNDER MY HAND AND NOTORIAL SEAL THIS _____ DAY OF _____, A.D., 20__.

_____
NOTARY PUBLIC

OWNER'S CERTIFICATE (LOT 2-8)

THIS IS TO CERTIFY THAT _____ IS THE LEGAL OWNER OF THE LAND DESCRIBED ON THE ATTACHED PLAT, AND HAS CAUSED SAID PROPERTY TO BE SURVEYED AND PLATTED FOR THE PURPOSE OF VACATING CERTAIN EASEMENTS AND DEDICATIONS AS SHOWN HEREON.

DATED THIS _____ DAY OF _____, A.D., 20__.

BY: _____

_____ OWNER'S NAME AND ADDRESS

PRINTED NAME AND TITLE _____

_____

_____

ATTEST: _____

_____

PRINTED NAME AND TITLE

NOTARY PUBLIC (LOT 2-8)

STATE OF ILLINOIS)
)S.S.
COUNTY OF _____)

I, _____,
A NOTARY PUBLIC IN AND FOR THE COUNTY AND STATE AFORESAID, DO HEREBY CERTIFY THAT

_____AND _____
WHO IS PERSONALLY KNOWN TO ME TO BE THE SAME WHOSE NAME IS SUBSCRIBED TO THE FOREGOING CERTIFICATE, APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT THEY DID SIGN AND DELIVER THIS ANNEXED PLAT AS A FREE AND VOLUNTARY ACT FOR THE PURPOSES THEREIN SET FORTH.

GIVEN UNDER MY HAND AND NOTORIAL SEAL THIS _____ DAY OF _____, A.D., 20__.

_____
NOTARY PUBLIC

VACATION OF EASEMENT APPROVED AND ACCEPTED THE APPROVING

AUTHORITIES ON SIGNING THIS DOCUMENT HEREBY RELEASE AND CONSENT TO THE RELEASE, VACATION AND ABROGATION OF THE EASEMENTS AS GRANTED BY DOCUMENT R2007117350. (SHOWN HEREON)

ACCEPTED: _____ DATE: _____
NORTHERN ILLINOIS GAS COMPANY

_____
PRINTED NAME AND TITLE

ACCEPTED: _____ DATE: _____
AT&T (SBC, AMERITECH, ILLINOIS BELL)

_____
PRINTED NAME AND TITLE

ACCEPTED: _____ DATE: _____
COMCAST CABLE COMPANY

_____
PRINTED NAME AND TITLE

ACCEPTED: _____ DATE: _____
COMMONWEALTH EDISON

_____
PRINTED NAME AND TITLE

ACCEPTED: _____ DATE: _____
CITY OF CREST HILL

_____
PRINTED NAME AND TITLE

RECORDER'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF WILL)

THIS INSTRUMENT FILED FOR RECORDER'S OFFICE OF WILL COUNTY, ILLINOIS,

ON THIS _____ DAY OF _____, 20___, A.D., AT _____ O'CLOCK _____.

AND RECORDED AS DOCUMENT NUMBER _____

_____
WILL COUNTY RECORDER

CREST HILL CITY CLERK

STATE OF ILLINOIS)
) SS
COUNTY OF WILL)

APPROVED BY THE CITY OF CREST HILL, WILL COUNTY, ILLINOIS AT

MEETING HELD _____ DAY OF _____, 20___, A.D.

_____
CITY CLERK

GRAPHIC SCALE

60 0 30 60 120 240

(IN FEET)
1 inch = 60 ft.

BASIS OF BEARINGS

COORDINATES AND BEARINGS ARE BASED UPON THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE (NAD 83), ADJUSTED TO GROUND VALUES, AS ESTABLISHED BY A REAL-TIME KINEMATIC (RTK) GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS) UTILIZING THE TRIMBLE VRS NOW NETWORK.

GRANTOR'S LEGAL DESCRIPTION

LOT 1 IN EQUIMAX BUSINESS CENTER, BEING A RESUBDIVISION OF LOT 8 IN CREST HILL BUSINESS CENTER, BEING A SUBDIVISION OF PART OF THE NORTHWEST QUARTER OF SECTION 20, TOWNSHIP 36 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED AS DOCUMENT R2007117350, IN WILL COUNTY, ILLINOIS;

ALSO,

LOTS 2, 3, 4, 5, 6, 7 AND 8 IN EQUIMAX BUSINESS CENTER, BEING A RESUBDIVISION OF PART OF THE NORTHWEST QUARTER OF SECTION 20, TOWNSHIP 36 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED AS DOCUMENT R2007117350, IN WILL COUNTY, ILLINOIS.

SURVEY PREPARED FOR

FIDUCIARY REAL ESTATE DEVELOPMENT, INC.
789 NORTH WATER STREET, SUITE 500
MILWAUKEE, WISCONSIN 53202

SUBMITTED BY/RETURN TO:

FRED-CREST HILL HC, LLC
789 NORTH WATER STREET, SUITE 500
MILWAUKEE, WISCONSIN 53202

CURRENT P.I.N.

11-04-20-105-065-0000 (LOT 1)
11-04-20-105-066-0000 (LOT 2)
11-04-20-105-067-0000 (LOT 3)
11-04-20-105-068-0000 (LOT 4)
11-04-20-105-069-0000 (LOT 5)
11-04-20-105-073-0000 (LOT 6)
11-04-20-105-072-0000 (LOT 7)
11-04-20-105-071-0000 (LOT 8)

PROPERTY ADDRESS

VACANT RYAN DRIVE, CREST HILL, IL 60403
VACANT EXECUTIVE DRIVE, CREST HILL, IL 60403

PROPERTY AREA

LOT AREA = 688,840 SQUARE FEET (15.814 ACRES)

TOTAL AREA = 688,840 SQUARE FEET (15.814 ACRES)

SURVEYOR'S NOTES

1. DISTANCES ARE MARKED IN FEET AND DECIMAL PLACES THEREOF. NO DIMENSION SHALL BE ASSUMED BY SCALE MEASUREMENT HEREON. DISTANCES AND/OR BEARINGS SHOWN IN PARENTHESIS (456.67') ARE RECORD OR DEED VALUES, NOT FIELD MEASURED.
2. THE PROPERTY SHOWN HEREON MAY BE SUBJECT TO MATTERS OF TITLE, WHICH MAY BE REVEALED BY A CURRENT TITLE REPORT. EASEMENTS, SETBACKS AND OTHER RESTRICTIONS WHICH MAY BE FOUND IN A CURRENT TITLE REPORT, LOCAL ORDINANCES, DEEDS OR OTHER INSTRUMENTS OF RECORD MAY NOT BE SHOWN.
3. THIS SURVEY WAS PREPARED FOR FIDUCIARY REAL ESTATE DEVELOPMENT, INC. AND IS BASED ON A FIELD WORK COMPLETED ON SEPTEMBER 23, 2025.
4. MANHARD CONSULTING, LTD. IS A PROFESSIONAL DESIGN FIRM, REGISTRATION NUMBER 184003350, EXPIRES APRIL 30, 2025.

SURVEYOR'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF DUPAGE)

THIS IS TO CERTIFY THAT WE, MANHARD CONSULTING LTD., HAVE SURVEYED THE ABOVE DESCRIBED PROPERTY AND THIS PLAT WAS PREPARED FOR THE PURPOSE OF VACATING A CERTAIN ROAD DEDICATION SHOWN HEREON, AND THAT THE PLAT DRAWN HEREON IS A TRUE AND CORRECT REPRESENTATION OF SAID PROPERTY.

GIVEN UNDER MY HAND AND SEAL THIS 15TH DAY OF JANUARY, A.D., 2025.

FOR REVIEW ONLY

ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 4017
LICENSE EXPIRES: NOVEMBER 30, 2026

DESIGN FIRM PROFESSIONAL REGISTRATION NO. 184003350
EXPIRES APRIL 30, 2027

PROFESSIONAL LAND SURVEYOR
CHRISTOPHER J. SALAZAR
035-004017
LOMBARD
IL
STATE OF ILLINOIS

DRAWN BY	REVISIONS	DATE
NAL	REVISED PER CLIENT COMMENTS	01/15/26

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Civil Engineers • Water Resource Engineers • Structural Engineers • Mechanical Engineers
Construction Managers • Environmental Scientists • Landscape Architects • Planners

SEASONS AT CREST HILL
CITY OF CREST HILL, ILLINOIS
PLAT OF VACATION

PROJ. MGR.:	CJS
PROJ. ASSOC.:	CJS
DRAWN BY:	NAL
DATE:	09/23/25
SCALE:	1" = 60'

SHEET 1 OF 1

FRDCRIL01

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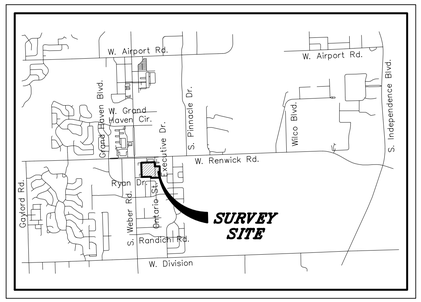
January 15, 2026 - 15:49 Dwg Name: \\mcl-fs-nas\Projects-VeVFrdcr001\dwg\Surv\Final Drawings\Plat of Vacation\FRDCRIL01-PV.dwg Updated By: NJachowicz

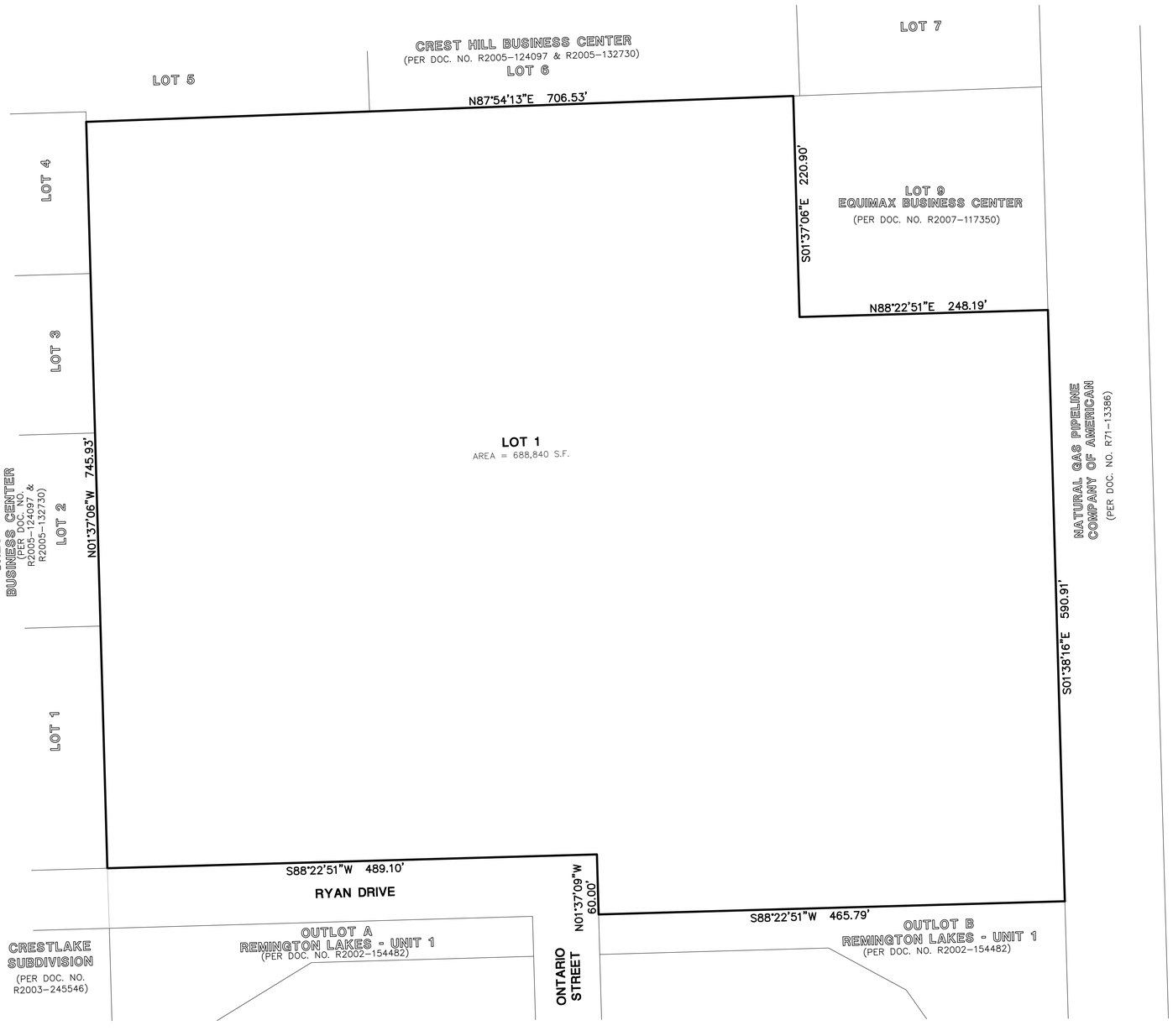
FINAL PLAT
OF
SEASONS AT CREST HILL SUBDIVISION

BEING A SUBDIVISION OF PART OF THE NORTHWEST QUARTER OF SECTION 20, TOWNSHIP 36 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN WILL COUNTY, ILLINOIS



LOCATION MAP

NOT TO SCALE



GRAPHIC SCALE

60 0 30 60 120 240

(IN FEET)

1 inch = 60 ft.

BASIS OF BEARINGS

COORDINATES AND BEARINGS ARE BASED UPON THE ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE (NAD 83), ADJUSTED TO GROUND VALUES, AS ESTABLISHED BY A REAL-TIME KINEMATIC (RTK) GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS) UTILIZING THE TRIMBLE VRS NOW NETWORK.

SURVEY PREPARED FOR

FIDUCIARY REAL ESTATE DEVELOPMENT, INC.
789 NORTH WATER STREET, SUITE 500
MILWAUKEE, WISCONSIN 53202

SUBMITTED BY/RETURN TO:

FRED-CREST HILL HC, LLC
789 NORTH WATER STREET, SUITE 500
MILWAUKEE, WISCONSIN 53202

CURRENT P.I.N.

11-04-20-105-065-0000 (LOT 1)
11-04-20-105-066-0000 (LOT 2)
11-04-20-105-067-0000 (LOT 3)
11-04-20-105-068-0000 (LOT 4)
11-04-20-105-069-0000 (LOT 5)
11-04-20-105-073-0000 (LOT 6)
11-04-20-105-072-0000 (LOT 7)
11-04-20-105-071-0000 (LOT 8)

PROPERTY ADDRESS

VACANT RYAN DRIVE, CREST HILL, IL 60403
VACANT EXECUTIVE DRIVE, CREST HILL, IL 60403

PROPERTY AREA

LOT AREA = 688,840 SQUARE FEET (15.814 ACRES)

TOTAL AREA = 688,840 SQUARE FEET (15.814 ACRES)

SURVEYOR'S NOTES

1. DISTANCES ARE MARKED IN FEET AND DECIMAL PLACES THEREOF. NO DIMENSION SHALL BE ASSUMED BY SCALE MEASUREMENT HEREON. DISTANCES AND/OR BEARINGS SHOWN IN PARENTHESIS (456.67') ARE RECORD OR DEED VALUES.)
2. THIS SUBDIVISION MAY BE SUBJECT TO MATTERS OF TITLE, WHICH MAY BE REVEALED BY A CURRENT TITLE REPORT. PRE-EXISTING EASEMENTS, SETBACKS AND OTHER RESTRICTIONS WHICH MAY BE FOUND IN A CURRENT TITLE REPORT, LOCAL ORDINANCES, DEEDS OR OTHER INSTRUMENTS OF RECORD MAY NOT BE SHOWN.
3. MONUMENTS SHALL BE SET AT ALL PROPERTY CORNERS AND POINTS OF GEOMETRIC CHANGE IN ACCORDANCE WITH 765 ILCS 205/1 UPON THE RECORDATION OF THE FINAL PLAT OF SUBDIVISION. UNLESS OTHERWISE NOTED, MONUMENTS SET ARE 5/8" DIAMETER BY 24" LONG REBARS.
4. THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A SUBDIVISION SURVEY. MANHARD CONSULTING, LTD. IS A PROFESSIONAL DESIGN FIRM, REGISTRATION NUMBER 184003350, EXPIRES APRIL 30, 2027.

SHEET INDEX

SHEET 1	COVER PAGE, SURVEYOR NOTES, LOCATION MAP AND PROPERTY AREA TABLE
SHEET 2	EXISTING BOUNDARY AND EASEMENT INFORMATION
SHEET 3	PROPOSED LOT & EASEMENT GEOMETRY
SHEET 4	CERTIFICATES

DATE	REVISIONS	DRAWN BY
01/15/26	REVISED PER CLIENT COMMENTS	NAL

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Construction Managers • Environmental Scientists • Landscape Architects • Planners

SEASONS AT CREST HILL
CITY OF CREST HILL, ILLINOIS
FINAL PLAT OF SUBDIVISION

PROJ. MGR.:	CJS
PROJ. ASSOC.:	CJS
DRAWN BY:	NAL
DATE:	09/23/25
SCALE:	1" = 60'

SHEET 1 OF 4

FRDCRIL01

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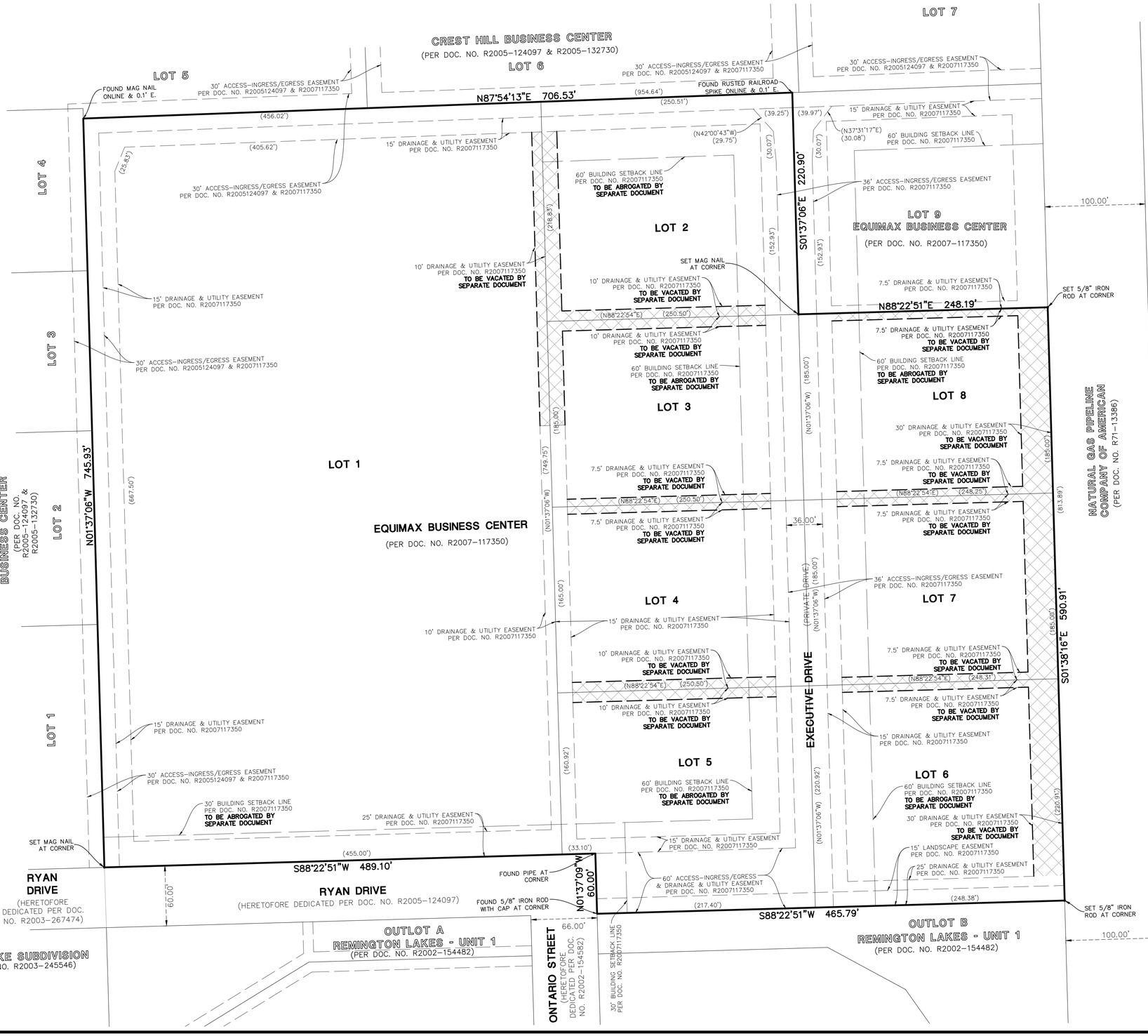
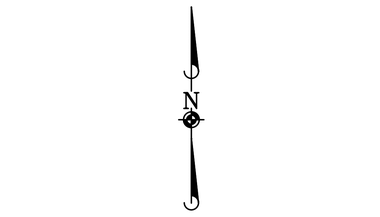
January 15, 2026 - 15:40 Dwg Name: \\mcl-do-cas\Projects-Vol\frdcr001\dwg\Surv\Final Drawings\Plat of Subdivision\Final Plat\01-FRDCRIL01 PS.dwg Updated By: NLechowicz

FINAL PLAT
OF
SEASONS AT CREST HILL SUBDIVISION

BEING A SUBDIVISION OF PART OF THE NORTHWEST QUARTER OF SECTION 20, TOWNSHIP 36 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN WILL COUNTY, ILLINOIS





DATE	REVISIONS	DRAWN BY
01/15/26	REVISED PER CLIENT COMMENTS	NAL

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SEASONS AT CREST HILL
CITY OF CREST HILL, ILLINOIS
FINAL PLAT OF SUBDIVISION

PROJ. MGR.:	CJS
PROJ. ASSOC.:	CJS
DRAWN BY:	NAL
DATE:	09/23/25
SCALE:	1" = 50'

SHEET 2 OF 4
FRDCRIL01

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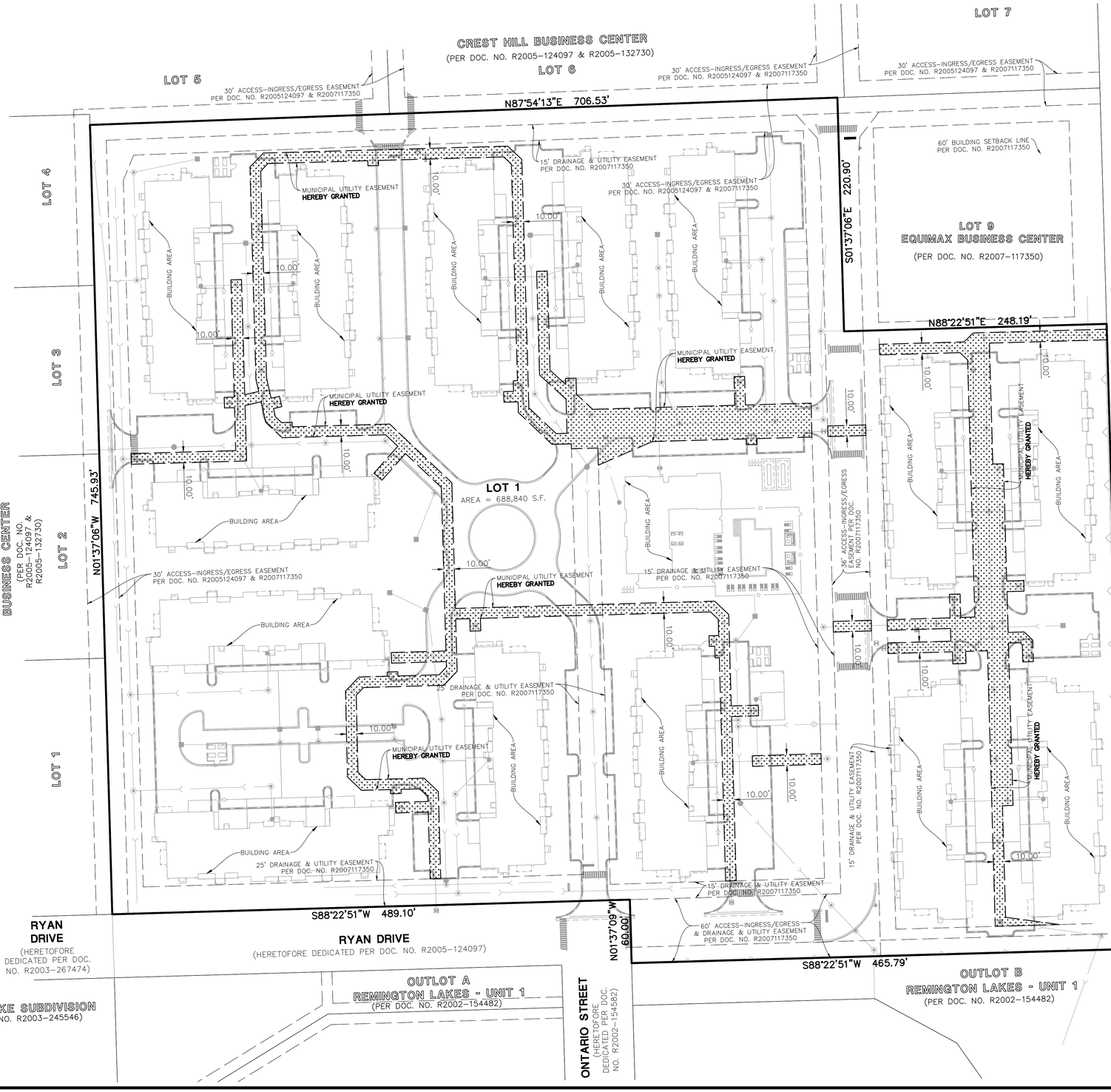
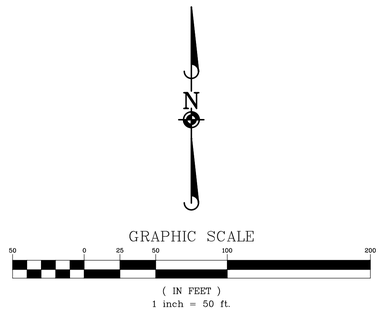
January 15, 2026 - 14:48 Dwg Name: \\mchb-nas\Projects-VeW\Frdcril01\dwg\Surv\Final Drawings\Plat of Subdivision\Final Plat\02-FRDCRIL01-PS.dwg Updated By: Nlachowicz

FINAL PLAT
OF
SEASONS AT CREST HILL SUBDIVISION

BEING A SUBDIVISION OF PART OF THE NORTHWEST QUARTER OF SECTION 20, TOWNSHIP 36 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN WILL COUNTY, ILLINOIS





PROPOSED EASEMENTS

A PUBLIC UTILITY EASEMENT IS HEREBY GRANTED OVER ALL OF LOT 1 EXCEPT WITH BUILDING AREAS.

DATE	REVISIONS	DRAWN BY
01/15/26	REVISED PER CLIENT COMMENTS	NAL

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SEASONS AT CREST HILL
CITY OF CREST HILL, ILLINOIS
FINAL PLAT OF SUBDIVISION

PROJ. MGR.:	CJS
PROJ. ASSOC.:	CJS
DRAWN BY:	NAL
DATE:	09/23/25
SCALE:	1" = 50'

SHEET 3 OF 4
FRDCRIL01

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January 15, 2026 - 15:14 Dwg Name: \\ncd-fs-as1\Projects-VH\Fred\01\dwg\Surv\Final Drawings\Plat of Subdivision\Final Plat\03-FRDCRIL01-PS.dwg Updated By: Nzechowicz

FINAL PLAT
OF
SEASONS AT CREST HILL SUBDIVISION

BEING A SUBDIVISION OF PART OF THE NORTHWEST QUARTER OF SECTION 20, TOWNSHIP 36 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN WILL COUNTY, ILLINOIS

OWNER'S CERTIFICATE (LOT 1)

THIS IS TO CERTIFY THAT ________________________ IS THE LEGAL OWNER OF THE LAND DESCRIBED ON THE ATTACHED PLAT, AND HAS CAUSED SAID PROPERTY TO BE SURVEYED AND PLATTED FOR THE PURPOSE OF VACATING CERTAIN EASEMENTS AND DEDICATIONS AS SHOWN HEREON.

DATED THIS _____ DAY OF _____________________, A.D., 20__.

BY: ____

OWNER'S NAME AND ADDRESS
____
____
____

____
PRINTED NAME AND TITLE

ATTEST: _____________________________________

____
PRINTED NAME AND TITLE

NOTARY PUBLIC (LOT 1)

STATE OF ILLINOIS)
)S.S.
COUNTY OF ______)

I, ____,
A NOTARY PUBLIC IN AND FOR THE COUNTY AND STATE AFORESAID, DO HEREBY CERTIFY THAT

______________________________AND _____________________________
WHO IS PERSONALLY KNOWN TO ME TO BE THE SAME WHOSE NAME IS SUBSCRIBED TO THE FOREGOING CERTIFICATE, APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT THEY DID SIGN AND DELIVER THIS ANNEXED PLAT AS A FREE AND VOLUNTARY ACT FOR THE PURPOSES THEREIN SET FORTH.

GIVEN UNDER MY HAND AND NOTORIAL SEAL THIS ____ DAY OF ___________, A.D., 20__.

____
NOTARY PUBLIC

OWNER'S CERTIFICATE (LOT 2-8)

THIS IS TO CERTIFY THAT ________________________ IS THE LEGAL OWNER OF THE LAND DESCRIBED ON THE ATTACHED PLAT, AND HAS CAUSED SAID PROPERTY TO BE SURVEYED AND PLATTED FOR THE PURPOSE OF VACATING CERTAIN EASEMENTS AND DEDICATIONS AS SHOWN HEREON.

DATED THIS _____ DAY OF _____________________, A.D., 20__.

BY: ____

OWNER'S NAME AND ADDRESS
____
____
____

____
PRINTED NAME AND TITLE

ATTEST: _____________________________________

____
PRINTED NAME AND TITLE

NOTARY PUBLIC (LOT 2-8)

STATE OF ILLINOIS)
)S.S.
COUNTY OF ______)

I, ____,
A NOTARY PUBLIC IN AND FOR THE COUNTY AND STATE AFORESAID, DO HEREBY CERTIFY THAT

______________________________AND _____________________________
WHO IS PERSONALLY KNOWN TO ME TO BE THE SAME WHOSE NAME IS SUBSCRIBED TO THE FOREGOING CERTIFICATE, APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT THEY DID SIGN AND DELIVER THIS ANNEXED PLAT AS A FREE AND VOLUNTARY ACT FOR THE PURPOSES THEREIN SET FORTH.

GIVEN UNDER MY HAND AND NOTORIAL SEAL THIS ____ DAY OF ___________, A.D., 20__.

____
NOTARY PUBLIC

CREST HILL PLAN COMMISSION

STATE OF ILLINOIS)
) SS
COUNTY OF WILL)

APPROVED BY THE CREST HILL PLAN COMMISSION AT A MEETING HELD ON

THE ____ DAY OF ____________, 20___, A.D.

____
CHAIRMAN

____
SECRETARY

CREST HILL CITY COUNCIL

STATE OF ILLINOIS)
) SS
COUNTY OF WILL)

APPROVED BY THE CREST HILL CITY COUNCIL AT A MEETING HELD ON

THE ____ DAY OF ____________, 20___, A.D.

____
MAYOR

____
CLERK

SURFACE WATER STATEMENT

STATE OF ILLINOIS)
) SS
COUNTY OF DuPAGE)

TO THE BEST OF OUR KNOWLEDGE AND BELIEF THE DRAINAGE OF SURFACE WATERS WILL NOT BE CHANGED BY THE CONSTRUCTION OF SUCH SUBDIVISION OR ANY PART THEREOF, OR, THAT IF SUCH SURFACE WATER DRAINAGE WILL BE CHANGED, REASONABLE PROVISION HAS BEEN MADE FOR COLLECTION AND DIVERSION OF SUCH SURFACE WATERS INTO PUBLIC AREAS, OR DRAINS WHICH THE SUBDIVIDER HAS A RIGHT TO USE, AND THAT SUCH SURFACE WATERS WILL BE PLANNED FOR IN ACCORDANCE WITH GENERALLY ACCEPTED ENGINEERING PRACTICES SO AS TO REDUCE THE LIKELIHOOD OF DAMAGE TO THE ADJOINING PROPERTY BECAUSE OF THE CONSTRUCTION OF THE SUBDIVISION.

DATED THIS ____ DAY OF ______, _____.

____
ILLINOIS LICENSED PROFESSIONAL ENGINEER NO. _____________
LICENSE EXPIRES: _______________

____
OWNER OR ATTORNEY

MUNICIPAL UTILITY EASEMENT (MUE):

MUNICIPAL UTILITY EASEMENT (MUE): AN EASEMENT FOR SERVING THE SUBDIVISION AND OTHER PROPERTY WITH DOMESTIC WATER, SANITARY SEWER AND STORM WATER DRAINAGE IS HEREBY RESERVED FOR AND GRANTED TO THE CITY OF CREST HILL, ILLINOIS, THEIR SUCCESSORS AND ASSIGNS, TO INSTALL, OPERATE, MAINTAIN, RELOCATE, RENEW AND REMOVE FACILITIES USED IN CONNECTION WITH SEWER AND WATER MAINS, IN, UNDER, ACROSS, ALONG, AND UPON THE SURFACE OF THE PROPERTY SHOWN ON THE PLAT WITHIN THE AREAS MARKED AS "MUNICIPAL UTILITY EASEMENT" (M.U.E.) AND THOSE PARTS DESIGNATED ON THE PLAT AS DEDICATED FOR PUBLIC STREET, TOGETHER WITH THE RIGHT TO CUT, TRIM, OR REMOVE TREES, BUSHES, AND ROOTS AS MAY BE REASONABLY REQUIRED INCIDENT TO THE RIGHTS HEREIN GIVEN, AND THE RIGHT TO ENTER UPON THE PROPERTY FOR ALL SUCH PURPOSES.

EACH INDIVIDUAL ENTITY OR OTHER PARTY ACCEPTING TITLE TO ALL OR ANY PART OF THE MUNICIPAL UTILITY EASEMENT (MUE) SHALL CONCLUSIVELY BE DEEMED TO HAVE COVENANTED AND AGREED, JOINTLY AND SEVERALLY, TO MAINTAIN THE SURFACE OF THE PORTION OF THE MUNICIPAL UTILITY EASEMENT WHICH IS LOCATED ON SUCH PARTY'S PROPERTY SO THAT IT IS IN GOOD CONDITION FOR ITS INTENDED PURPOSE AS A MUNICIPAL UTILITY EASEMENT (WHICH MAINTENANCE SHALL INCLUDE, BUT SHALL NOT BE LIMITED TO, THE REGULAR SEEDING, WATERING AND MOWING OF ALL LAWNS). NO TITLEHOLDER OF ANY PART OR PORTION OF THE MUNICIPAL UTILITY EASEMENT(OR ANY PARTY ACTING ON BEHALF OF THE TITLEHOLDER) SHALL:

i. INSTALL, CONSTRUCT, ERECT, PLACE OR PLANT ANY BUILDING, STRUCTURES, IMPROVEMENTS OR VEGETATION (OTHER THAN GRASS OR APPROVED PLANTINGS) UPON THE MUNICIPAL UTILITY EASEMENT, INCLUDING, BUT NOT LIMITED TO FENCES, WALLS, PATIOS, SHEDS, POSTS, TREES, PLANTS OR SHRUBBERY, EXCEPT AS SHOWN ON THE APPROVED LANDSCAPE PLAN, OR

ii. ALTER, MODIFY OR CHANGE IN ANY WAY THE TOPOGRAPHY OR ELEVATIONS OF THE MUNICIPAL UTILITY EASEMENT.

SAID EASEMENTS MAY BE USED FOR DRIVEWAYS AND PARKING. HOWEVER, THE GRADE OF THE SUBDIVIDED PROPERTY SHALL NOT BE ALTERED IN ANY MANNER SO AS TO INTERFERE WITH THE PROPER OPERATION AND MAINTENANCE THEREOF, OR WITH THE SURFACE DRAINAGE THEREON. THE PROPERTY OWNER AND OR THE PROPERTY OWNER ASSOCIATION ARE COMPLETELY RESPONSIBLE FOR LANDSCAPE AND/OR PAVING RESTORATION, SHOULD MAINTENANCE OF THE UTILITY BE REQUIRED.

THE CITY OF CREST HILL IS RESPONSIBLE FOR REPAIRING WATER SERVICES BETWEEN THE WATER MAIN, TO AND INCLUDING THE BUFFALO BOX. THE PROPERTY OWNER AND/OR THE PROPERTY OWNER'S ASSOCIATION ARE RESPONSIBLE FOR THE RESTORATION OF THE SURFACE AFTER ANY SUCH WATER SERVICE REPAIR. ONLY PERPENDICULAR CROSSINGS OF THE M.U.E. ARE PERMITTED BY PUBLIC UTILITIES. THE M.U.E.'S ARE EXCLUSIVE OF THE BLANKET EASEMENT.

RECORDER'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF WILL)

THIS INSTRUMENT FILED FOR RECORDER'S OFFICE OF WILL COUNTY, ILLINOIS,

ON THIS ____ DAY OF ____________, 20___, A.D., AT ______ O'CLOCK _____.

AND RECORDED AS DOCUMENT NUMBER ______________________________

____
WILL COUNTY RECORDER

COUNTY CLERK'S CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF WILL)

I, ____, COUNTY CLERK IN WILL COUNTY, ILLINOIS DO HEREBY CERTIFY THAT THERE ARE NO DELINQUENT GENERAL TAXES, NO UNPAID CURRENT GENERAL TAXES, NO UNPAID FORFEITED TAXES, AND NO REDEEMABLE TAX AGAINST ANY OF THE LAND INCLUDED IN THE ANNEXED PLAT.

I FURTHER CERTIFY THAT I HAVE RECEIVED ALL STATUTORY FEES IN CONNECTION WITH THE ANNEXED PLAT.

GIVEN UNDER MY HAND AND SEAL OF THE COUNTY AT __________, ILLINOIS,

THIS ___ DAY OF ___________, A.D. 20__.

____
WILL COUNTY CLERK

TAX MAPPING CERTIFICATE

STATE OF ILLINOIS)
) SS
COUNTY OF WILL)

I, ____, DIRECTOR OF THE TAX MAPPING AND PLATTING OFFICE, DO HEREBY CERTIFY THAT I HAVE CHECKED THE PROPERTY DESCRIPTION ON THIS PLAT AGAINST AVAILABLE COUNTY RECORDS AND FIND SAID DESCRIPTION TO BE TRUE AND CORRECT.

THE PROPERTY HEREIN DESCRIBED IS LOCATED ON TAX MAP _______________ AND IDENTIFIED AS PERMANENT REAL ESTATE TAX INDEX NUMBER(S);

____

DATED THIS ___ DAY OF ___________, A.D. 20__.

____
DIRECTOR

PERMISSION TO RECORD

STATE OF ILLINOIS)
)SS
COUNTY OF WILL)

I, CHRISTOPHER J SALAZAR, AN ILLINOIS PROFESSIONAL LAND SURVEYOR, HEREBY GRANT PERMISSION A REPRESENTATIVE OF THE CITY OF CREST HILL TO RECORD THIS PLAT ON OR BEFORE MAY 31, 2026. THE REPRESENTATIVE SHALL PROVIDE THIS SURVEYOR WITH A RECORDED COPY OF THIS PLAT.

DATED THIS ____ DAY OF ________________, A.D. 20____.

____
ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 035-004017
LICENSE EXPIRES NOVEMBER 30, 2026

PROFESSIONAL LAND SURVEYOR
CHRISTOPHER J. SALAZAR
035-004017
LOMBARD
IL
STATE OF ILLINOIS

SURVEYORS CERTIFICATE

STATE OF ILLINOIS)
)SS
COUNTY OF DUPAGE)

THIS IS TO DECLARE THAT THE PROPERTY DESCRIBED HEREON WAS SURVEYED AND SUBDIVIDED BY MANHARD CONSULTING, LTD., UNDER THE SUPERVISION OF AN ILLINOIS PROFESSIONAL LAND SURVEYOR AND THAT THE PLAT HEREON DRAWN IS A CORRECT REPRESENTATION OF SAID SURVEY AND SUBDIVISION:

LOT 1 IN EQUIMAX BUSINESS CENTER, BEING A RESUBDIVISION OF LOT 8 IN CREST HILL BUSINESS CENTER, BEING A SUBDIVISION OF PART OF THE NORTHWEST QUARTER OF SECTION 20, TOWNSHIP 36 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED AS DOCUMENT R2007117350, IN WILL COUNTY, ILLINOIS;

ALSO,

LOTS 2, 3, 4, 5, 6, 7 AND 8 IN EQUIMAX BUSINESS CENTER, BEING A RESUBDIVISION OF PART OF THE NORTHWEST QUARTER OF SECTION 20, TOWNSHIP 36 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED AS DOCUMENT R2007117350, IN WILL COUNTY, ILLINOIS.

SUBDIVIDED PROPERTY CONTAINS 15.814 ACRES, MORE OR LESS AND ALL DISTANCES ARE SHOWN IN FEET AND DECIMAL PARTS THEREOF.

THIS IS ALSO TO DECLARE THAT THE PROPERTY AS DESCRIBED ON THE ANNEXED PLAT LIES WITHIN THE CORPORATE LIMITS OF CREST HILL, WILL COUNTY, ILLINOIS WHICH HAS ADOPTED A CITY PLAN AND IS EXERCISING THE SPECIAL POWER AUTHORIZED BY 65 ILCS 5, SECTION 11-12-6.

5/8" DIAMETER BY 24" LONG IRON RODS WILL BE SET AT ALL SUBDIVISION CORNERS, LOT CORNERS, POINTS OF CURVATURE AND POINTS OF TANGENCY IN COMPLIANCE WITH ILLINOIS STATUTES AND APPLICABLE ORDINANCES, UNLESS OTHERWISE NOTED.

THIS IS ALSO TO DECLARE THAT THE FEDERAL EMERGENCY MANAGEMENT AGENCY FIRM COMMUNITY PANEL NUMBERS 17197C0153G & 17197C0155G WITH AN EFFECTIVE DATE OF FEBRUARY 15, 2019 INDICATES THAT THE ABOVE DESCRIBED PROPERTY LIES WITHIN AREAS DESIGNATED AS ZONE "X". ZONE "X" IS DEFINED AS AREAS OF MINIMAL FLOOD HAZARD PER THE FLOOD INSURANCE RATE MAPS. THIS MAP DOES NOT NECESSARILY SHOW ALL AREAS SUBJECT TO FLOODING IN THE COMMUNITY OR ALL PLANIMETRIC FEATURES OUTSIDE SPECIAL FLOOD HAZARD AREAS. THIS DOES NOT GUARANTEE THAT THE SURVEYED PROPERTY WILL OR WILL NOT FLOOD. APPROXIMATE LOCATIONS OF FLOOD ZONES HAVE BEEN SHOWN HEREON BASED ON THE CURRENT FLOOD INSURANCE RATE MAPS.

GIVEN UNDER MY HAND AND SEAL THIS 15TH DAY OF JANUARY, A.D. 2026.

FOR REVIEW ONLY
ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 035-004017
LICENSE EXPIRES NOVEMBER 30, 2026

DESIGN FIRM PROFESSIONAL REGISTRATION
NO. 184003350-EXPIRES APRIL 30, 2027

THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.

DATE OF FIELD SURVEY: SEPTEMBER 23, 2025

PROFESSIONAL LAND SURVEYOR
CHRISTOPHER J. SALAZAR
035-004017
LOMBARD
IL
STATE OF ILLINOIS

DATE	REVISIONS	DRAWN BY
01/15/26	REVISED PER CLIENT COMMENTS	NAL

Manhard CONSULTING
333 East Butterfield Road, Suite 600, Lombard, IL 60148 ph:630.691.8500 fx:630.691.8585 manhard.com
Civil Engineers • Surveyors • Water Resource Engineers • Water & Wastewater Engineers
Construction Managers • Environmental Scientists • Landscape Architects • Planners

SEASONS AT CREST HILL
CITY OF CREST HILL, ILLINOIS
FINAL PLAT OF SUBDIVISION

PROJ. MGR.: CJS
PROJ. ASSOC.: CJS
DRAWN BY: NAL
DATE: 09/23/25
SCALE: N.T.S.

SHEET 4 OF 4
FRDCRIL01

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January 15, 2026 - 15:14 Dwg Name: \\mcl-lo-nas\Projects-VH\Frdcril01\dwg\Surv\Final Drawings\Plat of Subdivision\Final Plat\04-FRDCRIL01-PS.dwg Updated By: NLechowicz

Traffic Impact Study
Proposed Residential Development

Crest Hill, Illinois



Prepared For:

FIDUCIARY
REAL ESTATE DEVELOPMENT, INC

KLOA
Kenig, Lindgren, O'Hara, Aboona, Inc.

January 22, 2026

1. Introduction

This report summarizes the methodologies, results, and findings of a traffic impact study conducted by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) for a proposed residential development to be located in Crest Hill, Illinois. The site is located in the southeast quadrant of the intersection of Weber Road and Renwick Road and is proposed to contain apartment buildings with 260 residential units. Vehicle parking will be accommodated via 439 surface parking spaces and 120 enclosed parking spaces. Access to the residential development will be provided via six access drives that will connect to the internal private roads serving the site area that connect to the surrounding street network through the following existing access roads: (1) a right-in/right-out (RIRO) access drive off Renwick Road, (2) a full-movement access drive off Renwick Road, and (3) a full-movement signalized access drive off Weber Road.

The purpose of this study was to examine existing traffic conditions to establish a base condition, assess the impact that the proposed development would have on traffic conditions in the area, and determine if any roadway and/or traffic control improvements are needed to accommodate the traffic generated by the proposed residential development. **Figure 1** shows the location of the site in relation to the area roadway system. **Figure 2** shows an aerial view of the site.

The sections of this report present the following:

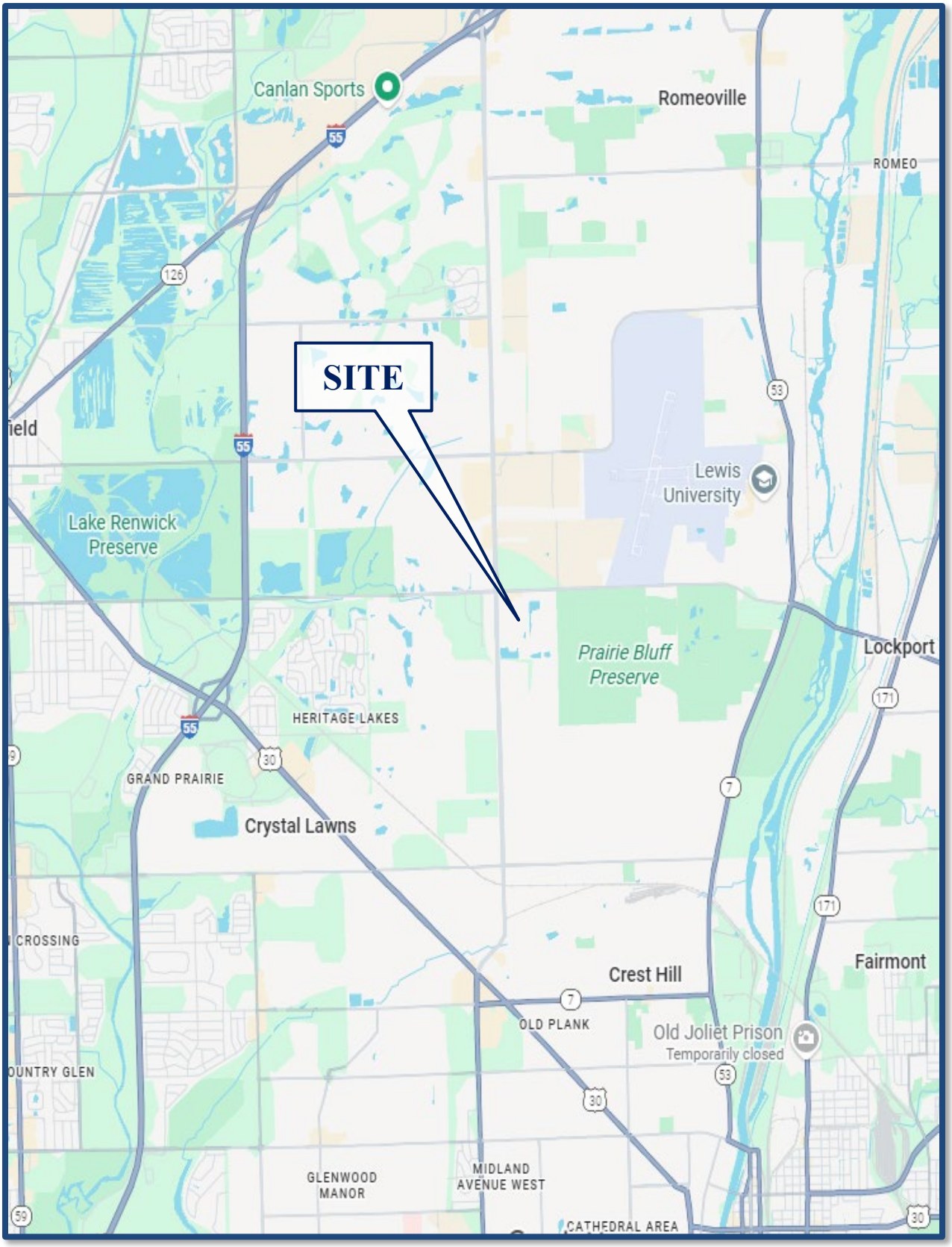
- Existing roadway conditions
- A description of the proposed development
- Directional distribution of development-generated traffic
- Vehicle trip generation for the proposed development
- Future traffic conditions, including access to the development
- Traffic analyses for the weekday morning and weekday evening peak hours
- Signal warrant evaluation for the intersection of Weber Road with Ryan Drive
- Recommendations with respect to adequacy of the site access and adjacent roadway system

Traffic capacity analyses were conducted for the weekday morning and weekday evening peak hours for the following conditions:

1. Existing Conditions – Analyzes the capacity of the existing roadway system using existing peak hour traffic volumes in the surrounding area.

2. Year 2032 No-Build Conditions – Analyzes the capacity of the existing roadway system using the existing peak hour traffic volumes increased by an ambient area growth factor not attributable to any particular development.

3. Year 2032 Total Projected Conditions – Analyzes the capacity of the future roadway system using the projected traffic volumes that include the existing traffic volumes, ambient area growth not attributable to any particular development, and the traffic estimated to be generated by the full buildout of the proposed development.



Site Location **Figure 1**



Aerial View of Site **Figure 2**

2. Existing Conditions

The following provides a description of the geographical location of the site, physical characteristics of the area roadway system including lane usage and traffic control devices, and existing peak hour traffic volumes.

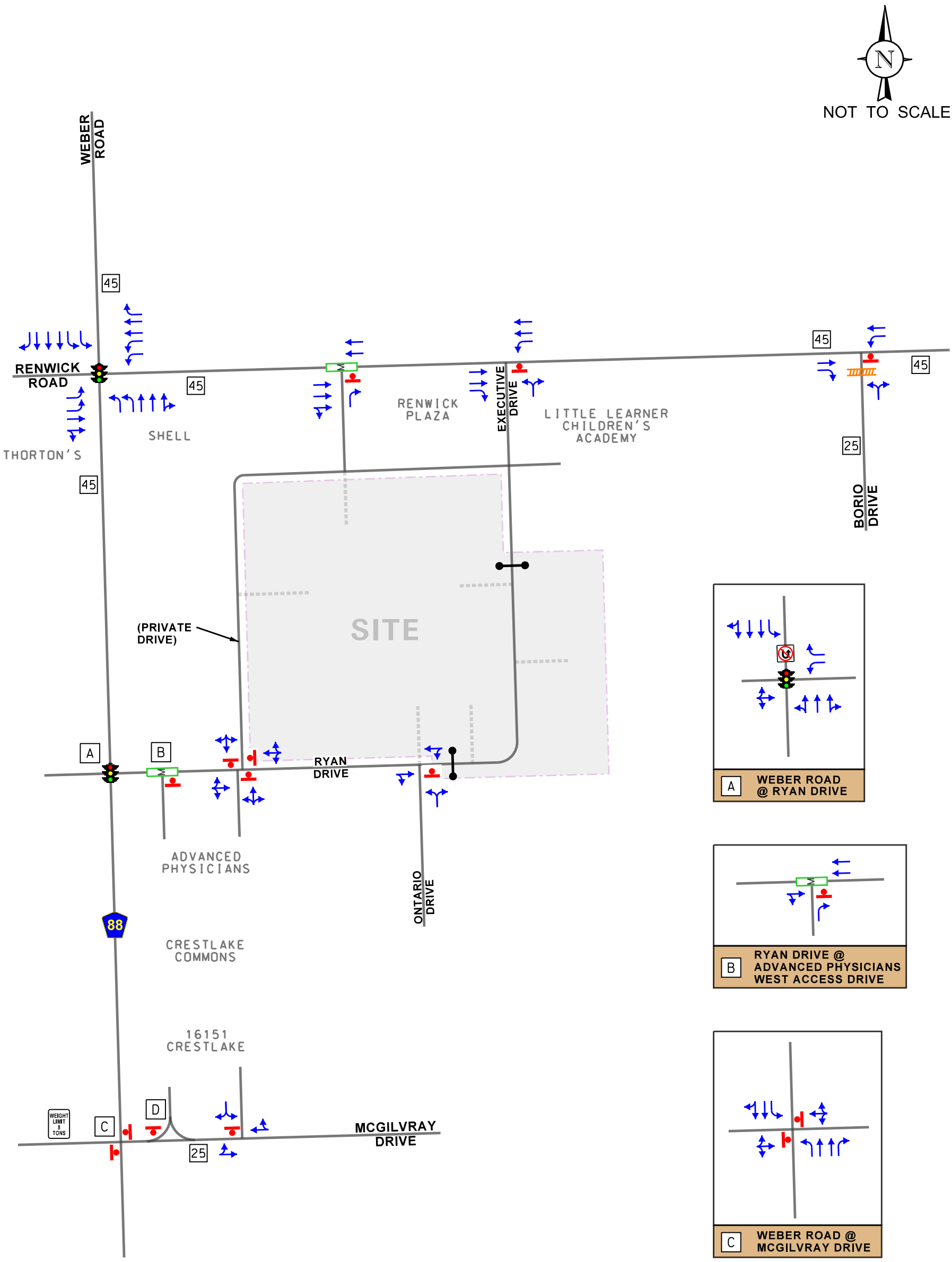
Site Location

The site is located in the southeast quadrant of the intersection of Renwick Road with Weber Road in Crest Hill, Illinois. The site is bound by commercials and vacant out lots on the west and north, Ryan Drive on the south and a water detention pond on the easter of the site. Land uses in the vicinity of the site consists of a mix of single-family detached, single-family attached and retail/commercial.

Existing Roadway System Characteristics

The characteristics of the existing roadways near the development are described below and illustrated in **Figure 3**.

Weber Road is a north-south other principal arterial roadway that provides three travel lanes in each direction just north of McGilvray Drive and two travel lanes in each direction just south of Ryan Drive. At its signalized intersection with Renwick Road, Weber Road provides two left-turn lanes, two through lanes and a shared through/right-turn lane on the northbound approach and two left-turn lanes, three through lanes and an exclusive right-turn lane on the southbound approach. At its signalized intersection with Ryan Drive, Weber Road provides a shared left-turn/through lane, a through lane, and shared through/right-turn lane on the northbound approach and an exclusive left-turn lane, two through lanes and a shared through/right turn lane on the southbound approach. Furthermore, southbound U-turns are not permitted at this intersection. At its unsignalized intersection with McGilvray Drive, Weber Road provides an exclusive left-turn lane, two through lanes, and an exclusive right-turn lane on the northbound approach and an exclusive left-turn lane, a through lane and a shared through/right-turn lane on the southbound approach. Weber Road is under the jurisdiction of Will County Division of Transportation (WCDOT), is classified by IDOT as a Strategic Regional Arterial (SRA), has a posted speed limit of 45 miles per hour, carries an Annual Average Daily Traffic (AADT) volume of 33,900 vehicles (IDOT 2023) north of Renwick Road and an AADT volume of 24,500 vehicles (IDOT 2023) south of Renwick Road.



RESIDENTIAL DEVELOPMENT
CREST HILL, ILLINOIS

EXISTING ROADWAY CHARACTERISTICS

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Job No: 25-380 Figure: 3

Renwick Road is an east-west other principal arterial roadway that generally provides two travel lanes in each direction. Exceptions include the eastbound segment between Weber Road and Executive Drive, which provides three travel lanes, and a segment approximately 350 feet east of Executive Drive, which provides one travel lane in each direction. At its signalized intersection with Weber Road, Renwick Road provides two left-turn lanes, a through lane and a shared through/right-turn lane on the eastbound approach and two left-turn lanes, two through lanes and an exclusive right-turn lane on the westbound approach. At its unsignalized intersection with Executive Drive, Renwick Road provides two through lanes and an exclusive right-turn lane on the eastbound approach and an exclusive left-turn lane and two through lanes on the westbound approach. At its unsignalized intersection with Borio Drive, Renwick Road provides a through lane and an exclusive right-turn lane on the eastbound approach and an exclusive left-turn lane and a through lane on the westbound approach. Renwick Road is under the jurisdiction of WCDOT, has a posted speed limit of 45 miles per hour, carries an Annual Average Daily Traffic (AADT) volume of 17,900 vehicles (IDOT 2023) west of Weber Road and an AADT volume of 13,800 vehicles (IDOT 2023) east of Weber Road.

Ryan Drive is an east-west local roadway that provides one travel lane in each direction. At its signalized intersection with Weber Road, Ryan Drive provides a shared left-turn/through/right-turn lane on the eastbound approach and an exclusive left-turn lane and an exclusive right-turn lane on the westbound approach. At its unsignalized intersection with Ontario Street, Ryan Drive provides a shared through/right-turn lane on the eastbound approach and a shared left-turn/through lane on the westbound approach. It is important to note that Ryan Drive east of Ontario Street is currently blocked with concrete barricades that will be eliminated with the proposed development.

Borio Drive is a north-south is a minor collector roadway that provides one travel lane in each direction. At its unsignalized intersection with Renwick Road, Borio Drive provides a shared left-turn/right-turn lane on the northbound approach that operates under stop sign control. Borio Drive provides a high visibility crosswalk on the south leg of this intersection. Borio Drive is under the jurisdiction of the City of Crest Hill, carries an AADT volume of 1,150 vehicles (IDOT 2023), and has a posted speed limit of 25 miles per hour.

McGilvray Drive is an east-west local roadway that provides one travel lane in each direction. At its unsignalized intersection with Weber Road, McGilvray Drive provides a shared left-turn/through/right-turn lane on both approaches that operate under stop sign control. McGilvray Drive is under the jurisdiction of the City of Crest Hill and has a posted speed limit of 25 miles per hour east of Weber Road.

Executive Drive is a north-south local roadway that provides one travel lane in each direction. At its unsignalized intersection with Renwick Road, Executive Drive provides a shared left-turn/right-turn lane on the northbound approach that operates under stop sign control. Executive Drive is under the jurisdiction of the City of Crest Hill.

Ontario Street is a north-south local roadway that provides one travel lane in each direction. At its unsignalized intersection with Ryan Drive, Ontario Street provides a shared left-turn/right-turn lane on the northbound approach that operates under stop sign control. Ontario Street is under the jurisdiction of the City of Crest Hill.

Existing Traffic Volumes

In order to determine current traffic conditions in the vicinity of the site, KLOA, Inc. conducted peak period traffic counts using Miovision Scout Video Collection Units during the morning (7:00 A.M. to 9:00 A.M.) and evening (4:00 P.M. to 6:00 P.M.) peak periods at the following intersections:

- Renwick Road with Weber Road (Tuesday, January 6, 2026)
- Renwick Road with N-S Access Road (Tuesday, January 6, 2026)
- Renwick Road with Executive Drive (Wednesday, January 7, 2026)
- Weber Road with Ryan Drive (Tuesday, January 6, 2026)
- Ryan Drive with Advanced Physicians Access Drive (west) (Tuesday, January 6, 2026)
- Ryan Drive with Advanced Physicians Access Drive (east) (Tuesday, January 6, 2026)
- Ryan Drive with Ontario Street (Tuesday, January 6, 2026)
- Renwick Road with Borio Drive (Tuesday, January 6, 2026)
- McGilvray Drive with Weber Road (Tuesday, January 6, 2026)
- McGilvray Drive with Crest Lake Access Drive (west) (Tuesday, January 6, 2026)
- McGilvray Drive with Crest Lake Access Drive (east) (Tuesday, January 6, 2026)

The results of the traffic counts show that the peak hours of traffic generally occurred between 7:15 A.M. and 8:15 A.M. during the weekday morning peak period and between 4:00 P.M and 5:00 P.M. during the weekday evening peak period. The existing peak hour vehicle traffic volumes are shown in **Figure 4**. Copies of the traffic count summary sheets are included in the Appendix.

NOT TO SCALE

WEBER ROAD

RENWICK ROAD

112 (369)
677 (1042)
140 (166)

92 (136)
252 (484)
69 (156)

257 (259)
399 (272)
50 (68)

52 (134)
815 (790)
77 (61)

615 (485)
1 (14)

413 (776)

4 (9)

603 (478)
16 (16)

403 (759)
13 (15)

EXECUTIVE DRIVE

10 (17)
9 (13)

599 (459)
13 (32)

398 (754)
14 (46)

18 (20)
46 (22)

BORIO DRIVE

SITE

(PRIVATE DRIVE)

A

B

4 (32)
2 (9)
1 (5)

7 (4)
10 (5)
0 (0)

RYAN DRIVE

14 (20)
2 (9)
4 (6)

1 (47)
1 (1)
0 (1)

3 (15)

17 (9)

ONTARIO DRIVE

ADVANCED PHYSICIANS

0 (0)
783 (1209)
13 (57)

9 (49)
0 (0)
6 (35)

0 (0)
0 (0)
0 (0)

0 (0)
935 (936)
16 (25)

A WEBER ROAD @ RYAN DRIVE

15 (84)

20 (28)
9 (54)

0 (7)

B RYAN DRIVE @ ADVANCED PHYSICIANS WEST ACCESS DRIVE

CRESTLAKE

C

D

0 (7)
0 (7)

1 (4)
32 (33)

MCGILVRAY DRIVE

17 (27)
19 (61)

88

2 (9)
769 (1192)
18 (43)

23 (36)
0 (0)
16 (29)

1 (2)
0 (0)
7 (7)

3 (10)
927 (923)
18 (45)

C WEBER ROAD @ MCGILVRAY DRIVE

7 (25)

0 (0)
32 (40)

36 (88)

D MCGILVRAY DRIVE @ CRESTLAKE EAST ACCESS

LEGEND

00 - AM PEAK HOUR (7:15-8:15 AM)

(00) - PM PEAK HOUR (4:00-5:00 PM)

RESIDENTIAL DEVELOPMENT
CREST HILL, ILLINOIS

EXISTING TRAFFIC VOLUMES

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Job No: 25-380 Figure: 4

Crash Data Summary

KLOA, Inc. obtained crash data[1] from IDOT for the most recent past five years available (2020 to 2024) for the intersections within the study area. **Tables 1** through **5** show the summary of the crash data at the intersections within the study area. Furthermore, no fatalities were reported at the intersections during the reviewed period.

Table 1
RENWICK ROAD WITH WEBER ROAD – CRASH SUMMARY

Year	Type of Crash								Severity		
	A	HO	O	RE	S	T	Other	Total	PD	I	F
2020	0	0	0	3	0	3	0	6	3	4	0
2021	1	0	0	12	3	2	0	18	15	3	0
2022	2	0	0	6	1	6	0	15	9	8	0
2023	3	0	1	7	1	6	0	18	15	4	0
2024	1	0	0	5	0	5	0	11	9	2	0
Total	**7**	**0**	**1**	**33**	**5**	**22**	**0**	**68**	**51**	**21**	**0**
Avg	**1.4**	**0**	**<1.0**	**6.6**	**1**	**4.4**	**0**	**13.6**	**10.2**	**4.2**	**0**

A – Angle; HO – Head On; O – Object; RE – Rear End; S – Sideswipe; T – Turning
PD – Property Damage; I – Injury; F - Fatal

[1] IDOT DISCLAIMER: The motor vehicle crash data referenced herein was provided by the Illinois Department of Transportation. Any conclusions drawn from analysis of the aforementioned data are the sole responsibility of the data recipient(s).

Table 2
WEBER ROAD WITH RYAN DRIVE – CRASH SUMMARY

Year	Type of Crash								Severity		
	A	HO	O	RE	S	T	Other	Total	PD	I	F
2020	0	0	0	1	0	0	0	1	0	2	0
2021	0	0	0	0	0	0	0	0	0	0	0
2022	0	0	0	1	0	1	0	2	1	1	0
2023	0	0	0	0	0	0	0	0	0	0	0
2024	0	0	0	1	0	1	0	2	2	0	0
Total	**0**	**0**	**0**	**3**	**0**	**2**	**0**	**5**	**3**	**3**	**0**
Avg	**0**	**0**	**0**	**<1.0**	**0**	**<1.0**	**0**	**1**	**<1.0**	**<1.0**	**0**

A – Angle; HO – Head On; O – Object; RE – Rear End; S – Sideswipe; T – Turning
PD – Property Damage; I – Injury; F - Fatal

Table 3
RENWICK ROAD WITH EXECUTIVE DRIVE – CRASH SUMMARY

Year	Type of Crash								Severity		
	A	HO	O	RE	S	T	Other	Total	PD	I	F
2020	0	0	0	0	0	0	0	0	0	0	0
2021	0	0	0	0	0	1	0	1	1	0	0
2022	0	0	0	0	0	0	0	0	0	0	0
2023	0	0	0	0	0	0	0	0	0	0	0
2024	0	0	0	0	0	0	0	0	0	0	0
Total	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**1**	**1**	**0**	**0**
Avg	**0**	**0**	**0**	**0**	**0**	**<1.0**	**0**	**<1.0**	**<1.0**	**0**	**0**

A – Angle; HO – Head On; O – Object; RE – Rear End; S – Sideswipe; T – Turning
PD – Property Damage; I – Injury; F - Fatal

Table 4
RENWICK ROAD WITH BORIO DRIVE – CRASH SUMMARY

Year	Type of Crash								Severity		
	A	HO	O	RE	S	T	Other	Total	PD	I	F
2020	0	0	0	0	0	1	0	1	1	0	0
2021	0	0	0	1	0	1	0	2	1	1	0
2022	0	0	0	1	0	0	0	1	0	1	0
2023	0	0	0	0	0	1	0	1	0	1	0
2024	0	0	1	0	0	0	0	1	1	0	0
Total	**0**	**0**	**1**	**2**	**0**	**3**	**0**	**6**	**3**	**3**	**0**
Avg	**0**	**0**	**<1.0**	**<1.0**	**0**	**<1.0**	**0**	**1.2**	**<1.0**	**<1.0**	**0**

A – Angle; HO – Head On; O – Object; RE – Rear End; S – Sideswipe; T – Turning
PD – Property Damage; I – Injury; F - Fatal

Table 5
WEBER ROAD WITH MCGILVRAY DRIVE – CRASH SUMMARY

Year	Type of Crash								Severity		
	A	HO	O	RE	S	T	Other	Total	PD	I	F
2020	0	0	0	0	0	0	0	0	0	0	0
2021	0	0	1	0	0	1	0	2	2	0	0
2022	0	0	0	0	0	1	0	1	1	0	0
2023	1	0	0	0	1	2	0	4	2	3	0
2024	0	0	0	0	0	1	0	1	1	0	0
Total	**1**	**0**	**1**	**0**	**1**	**5**	**0**	**8**	**6**	**3**	**0**
Avg	**<1.0**	**0**	**<1.0**	**0**	**<1.0**	**1**	**0**	**1.6**	**1.2**	**<1.0**	**0**

A – Angle; HO – Head On; O – Object; RE – Rear End; S – Sideswipe; T – Turning
PD – Property Damage; I – Injury; F - Fatal

3. Traffic Characteristics of the Proposed Development

To properly evaluate future traffic conditions, it was necessary to determine the traffic characteristics of the proposed development, including the directional distribution and volumes of traffic that it will generate.

Proposed Site and Development Plan

As proposed, the development will contain 260 residential units, 439 surface parking spaces and 120 enclosed parking spaces. Access to the residential development will be provided via six access drives that will connect to the internal private roads and subsequently connect to the surrounding street network through the following existing access roads:

- An existing RIRO access road that is located on the south side of Renwick Road approximately 635 feet east of Weber Road. This access road provides one inbound lane and one outbound lane with outbound movements under stop sign control.
- An existing full-movement access road located on the south side of Renwick Road approximately 930 feet west of Borio Drive. This access road provides one inbound lane and one outbound lane with outbound movements under stop sign control.
- An existing signalized full-movement access road located on the east side of Weber Road approximately 1,060 feet south of Renwick Road. This access road provides one inbound lane and two outbound lanes.

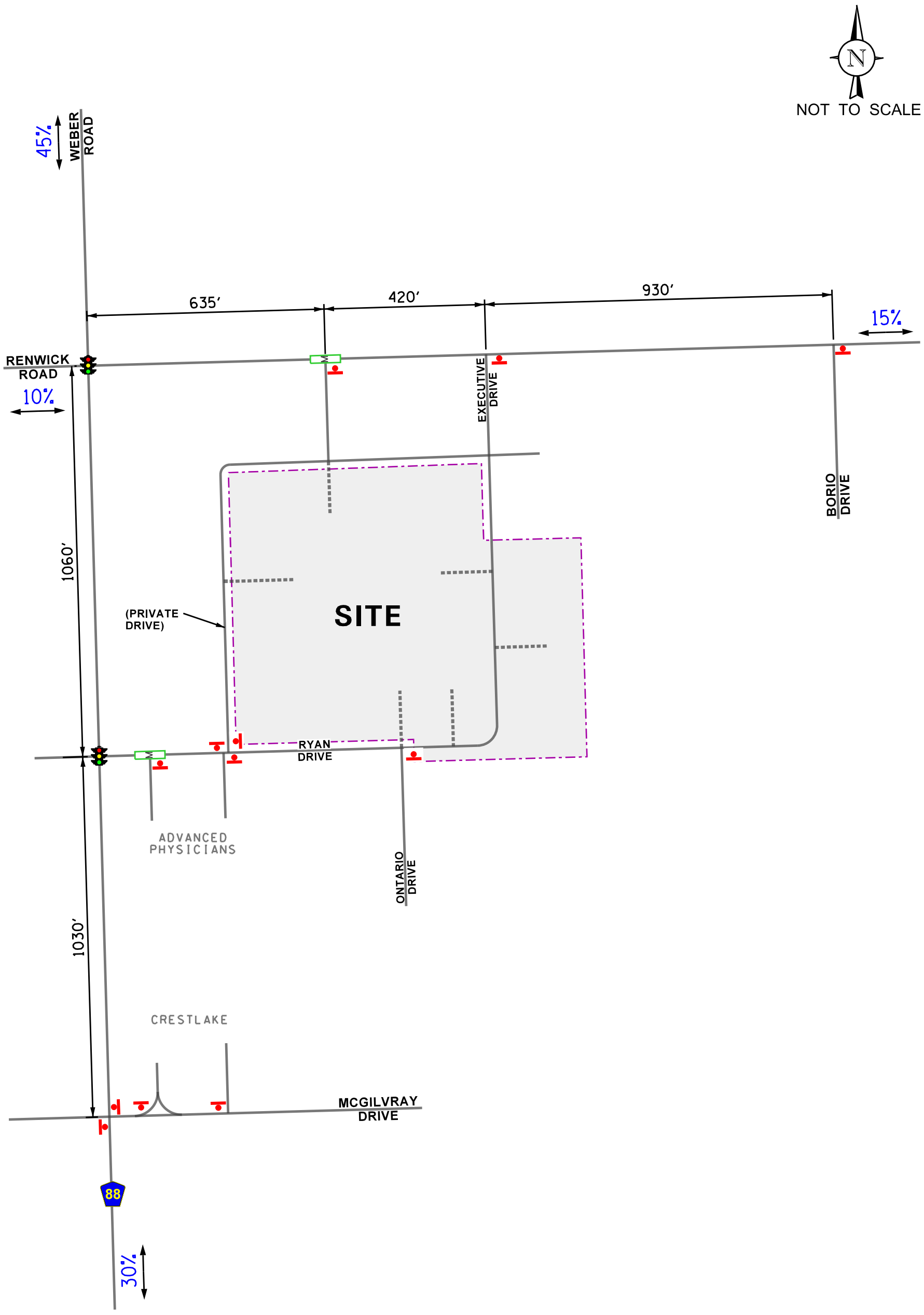
As part of the proposed plan, internal pedestrian sidewalks and high-visibility crosswalks will be provided at key intersections within the development to enhance pedestrian safety when accessing the pool, clubhouse area, and surrounding outlot commercial developments.

Additionally, it is important to note that there are two locations with concrete barricades with one located approximately 50 feet east of Ontario Street and another one located approximately 545 feet south of Renwick Road. These barricades will be removed to provide full access between the development and the internal access roads that connect to the street network.

A copy of the proposed site plan and geometrics plan is included in the Appendix.

Directional Distribution

The directions from which residents of the residential development will approach and depart the site were estimated based on existing travel patterns, as determined from the traffic counts. **Figure 5** illustrates the directional distribution of the development-generated traffic.



LEGEND

00% - PERCENT DISTRIBUTION

00' - DISTANCE IN FEET

RESIDENTIAL DEVELOPMENT
CREST HILL, ILLINOIS

DIRECTIONAL DISTRIBUTION

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Job No: 25-380 Figure: 5

Peak Hour Traffic Volumes

The number of peak hour trips estimated to be generated by the proposed development was based on vehicle trip generation rates contained in *Trip Generation Manual*, 12th Edition, published by the Institute of Transportation Engineers (ITE). The "Multifamily Housing (Low-Rise)" (Land-Use Code 220) rate was used for the proposed development. **Table 6** shows the estimated vehicle trip generation for the weekday morning and weekday evening peak hours as well as daily traffic.

Table 6
SITE-GENERATED TRIP ESTIMATES

ITE Land-Use Code	Type/Size	Weekday Morning Peak Hour			Weekday Evening Peak Hour			Daily Trips		
		In	Out	Total	In	Out	Total	In	Out	Total
220	Multifamily Housing - Low-Rise (260 units)	25	79	104	82	50	132	792	792	1,584

4. Projected Traffic Conditions

The total projected traffic volumes include the existing traffic volumes, increase in background traffic due to growth, and the traffic estimated to be generated by the proposed development.

Development Traffic Assignment

The estimated weekday morning and weekday evening peak hour traffic volumes that will be generated by the proposed development were assigned to the roadway system in accordance with the previously described directional distribution (Figure 5). **Figure 6** illustrates the development traffic assignments.

Background (No-Build) Traffic Conditions

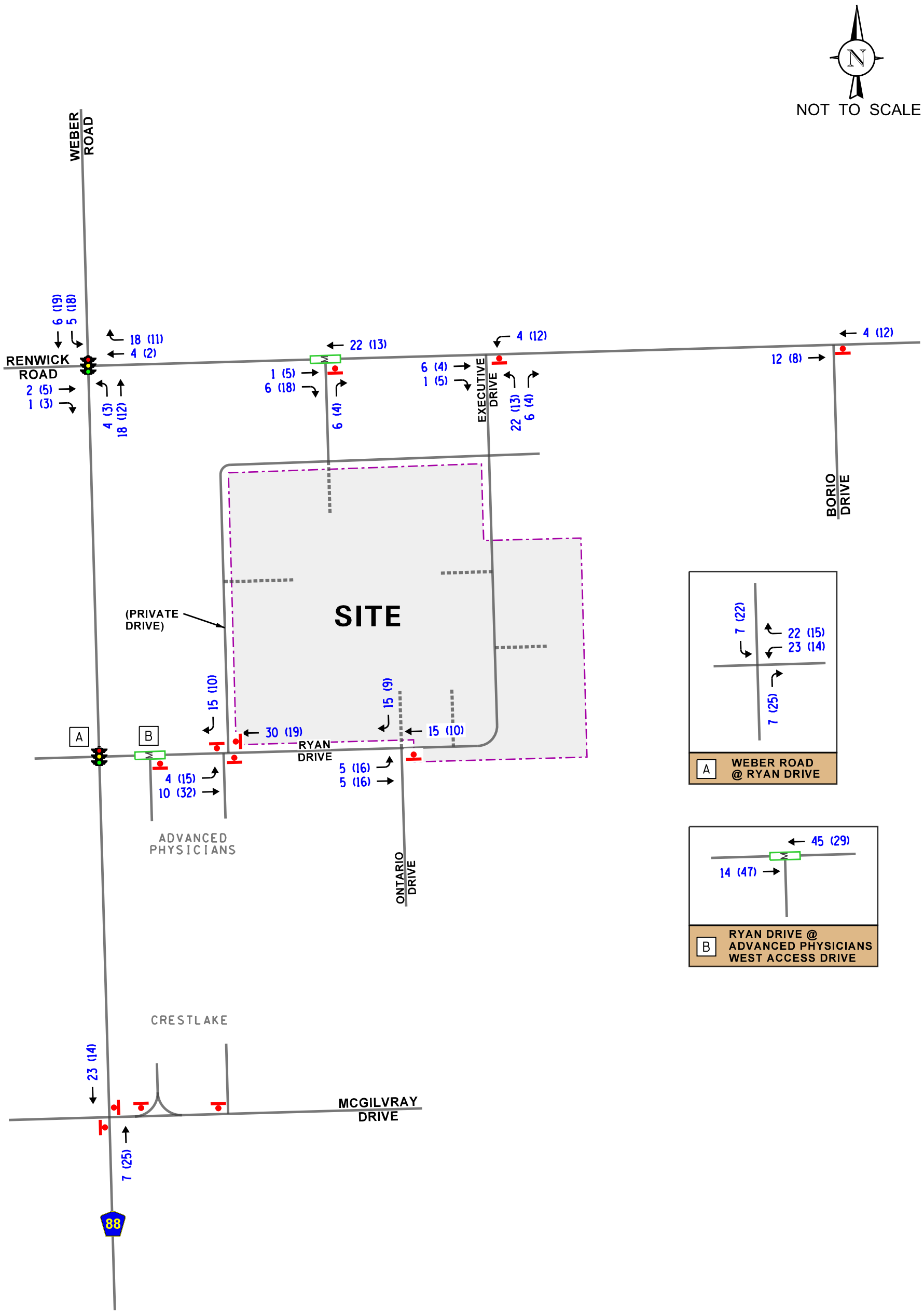
The existing traffic volumes (Figure 4) were increased by a regional growth factor to account for the increase in existing traffic related to regional growth in the area (i.e., not attributable to any particular planned development). Based on 2050 Average Daily Traffic (ADT) projections provided by the Chicago Metropolitan Agency for Planning (CMAP), the existing traffic volumes were increased by an annually compounded growth rate of .66 percent for six years (i.e. one-year buildout plus five years) totaling approximately four percent to represent Year 2032 no-build conditions. The Year 2032 no-build traffic volumes are illustrated in **Figure 7**.

Other Area Developments

To account for the traffic to be generated by the other future developments in the area, the traffic impact study also included development of the two vacant commercial outlot parcels adjacent to the site. Vehicle trips were estimated for two outlot totaling 3.97 acres were estimated using ITE trip rates and added to the street network.

Year 2032 Total Projected Traffic Volumes

The new development-generated traffic (Figure 6) was added to the Year 2032 no-build traffic volumes (Figure 7) to determine the Year 2032 total projected traffic volumes, as illustrated in **Figure 8.**



LEGEND

00 - AM PEAK HOUR (7:15-8:15 AM)

(00) - PM PEAK HOUR (4:00-5:00 PM)

RESIDENTIAL DEVELOPMENT
CREST HILL, ILLINOIS

SITE-GENERATED TRAFFIC VOLUMES

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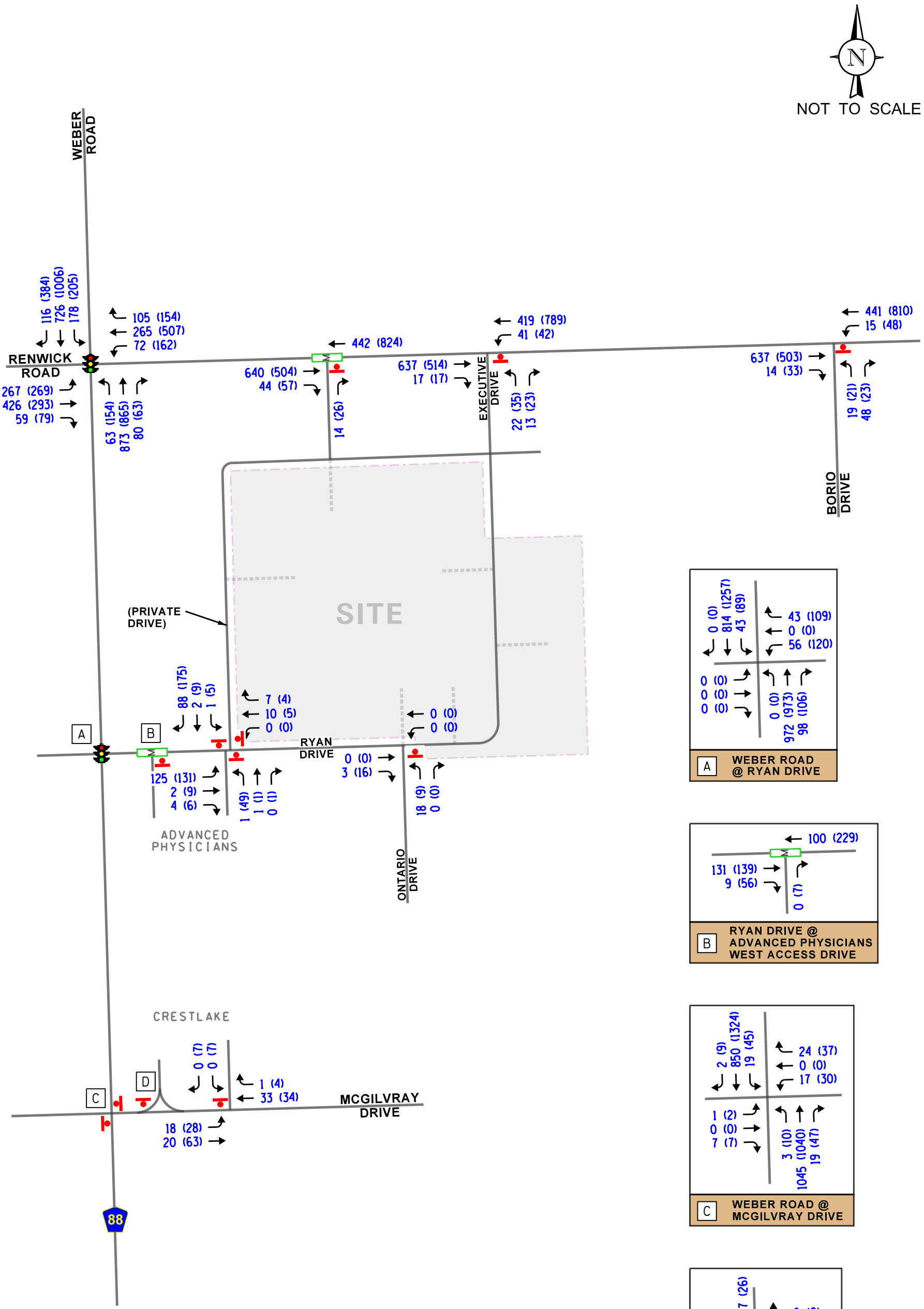
Job No: 25-380 Figure: 6



LEGEND

00 - AM PEAK HOUR (7:15-8:15 AM)

(00) - PM PEAK HOUR (4:00-5:00 PM)

RESIDENTIAL DEVELOPMENT
CREST HILL, ILLINOIS

YEAR 2032 NO-BUILD TRAFFIC VOLUMES

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Job No: 25-380 Figure: 7

NOT TO SCALE

WEBER ROAD

RENWICK ROAD

EXECUTIVE DRIVE

BORIO DRIVE

SITE

(PRIVATE DRIVE)

RYAN DRIVE

ONTARIO DRIVE

ADVANCED PHYSICIANS

CRESTLAKE

MCGILVRAY DRIVE

88

A

B

C

D

116 (384)
732 (1125)
183 (223)
123 (165)
269 (509)
72 (162)
267 (269)
428 (298)
60 (82)
67 (157)
891 (877)
80 (63)
464 (837)
641 (509)
50 (75)
20 (30)
419 (789)
45 (54)
643 (518)
18 (22)
44 (48)
19 (27)
445 (822)
15 (48)
649 (511)
14 (33)
19 (21)
48 (23)
103 (185)
2 (9)
1 (5)
7 (4)
40 (24)
0 (0)
129 (146)
12 (41)
4 (6)
1 (49)
1 (1)
0 (1)
15 (9)
0 (0)
0 (0)
0 (0)
15 (10)
0 (0)
5 (16)
5 (16)
3 (16)
18 (9)
0 (0)
0 (0)
0 (0)
0 (0)
814 (1257)
50 (111)
65 (124)
0 (0)
79 (134)
0 (0)
0 (0)
0 (0)
0 (0)
972 (973)
105 (131)
145 (258)
145 (186)
9 (56)
0 (7)
2 (9)
873 (1338)
19 (45)
24 (37)
0 (0)
17 (30)
1 (2)
0 (0)
7 (7)
3 (10)
1052 (1065)
19 (47)
0 (0)
0 (0)
7 (26)
0 (0)
33 (42)
37 (92)
1 (4)
33 (34)
18 (28)
20 (63)

A WEBER ROAD @ RYAN DRIVE

B RYAN DRIVE @ ADVANCED PHYSICIANS WEST ACCESS DRIVE

C WEBER ROAD @ MCGILVRAY DRIVE

D MCGILVRAY DRIVE @ CRESTLAKE EAST ACCESS

LEGEND

00 - AM PEAK HOUR (7:15-8:15 AM)

(00) - PM PEAK HOUR (4:00-5:00 PM)

RESIDENTIAL DEVELOPMENT
CREST HILL, ILLINOIS

YEAR 2032 TOTAL TRAFFIC VOLUMES

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Job No: 25-380 Figure: 8

5. Traffic Signal Warrant Analysis

A traffic signal warrant analysis was performed for the intersection of Weber Road with Ryan Drive based on the Federal Highway Administration's *Manual on Uniform Traffic Control Devices for Streets and Highways* (MUTCD), 2009. The traffic signal requires that one or more of the nine signal warrants outlined in the *Manual on Uniform Traffic Control Devices* (MUTCD 2009) are met. However, as shown in **Figure 9**, Weber Road is classified as an SRA route and as such, SRA traffic signal warrant requirements established by the Illinois Department of Transportation (IDOT) were utilized. This criterion only takes into consideration traffic volume Warrant 1 (Eight-Hour Vehicular Volume).

Warrant 1, Eight-Hour Vehicular Volume states that the Minimum Vehicular Volume, Condition A, is intended for application at locations where a large volume of intersecting traffic is the principal reason to consider installing a traffic control signal. The Interruption of Continuous Traffic, Condition B, is intended for application at locations where Condition A is not satisfied and where the traffic volumes on a major street are so heavy that traffic on the minor intersecting street suffers excessive delay or conflict in entering or crossing the major street.

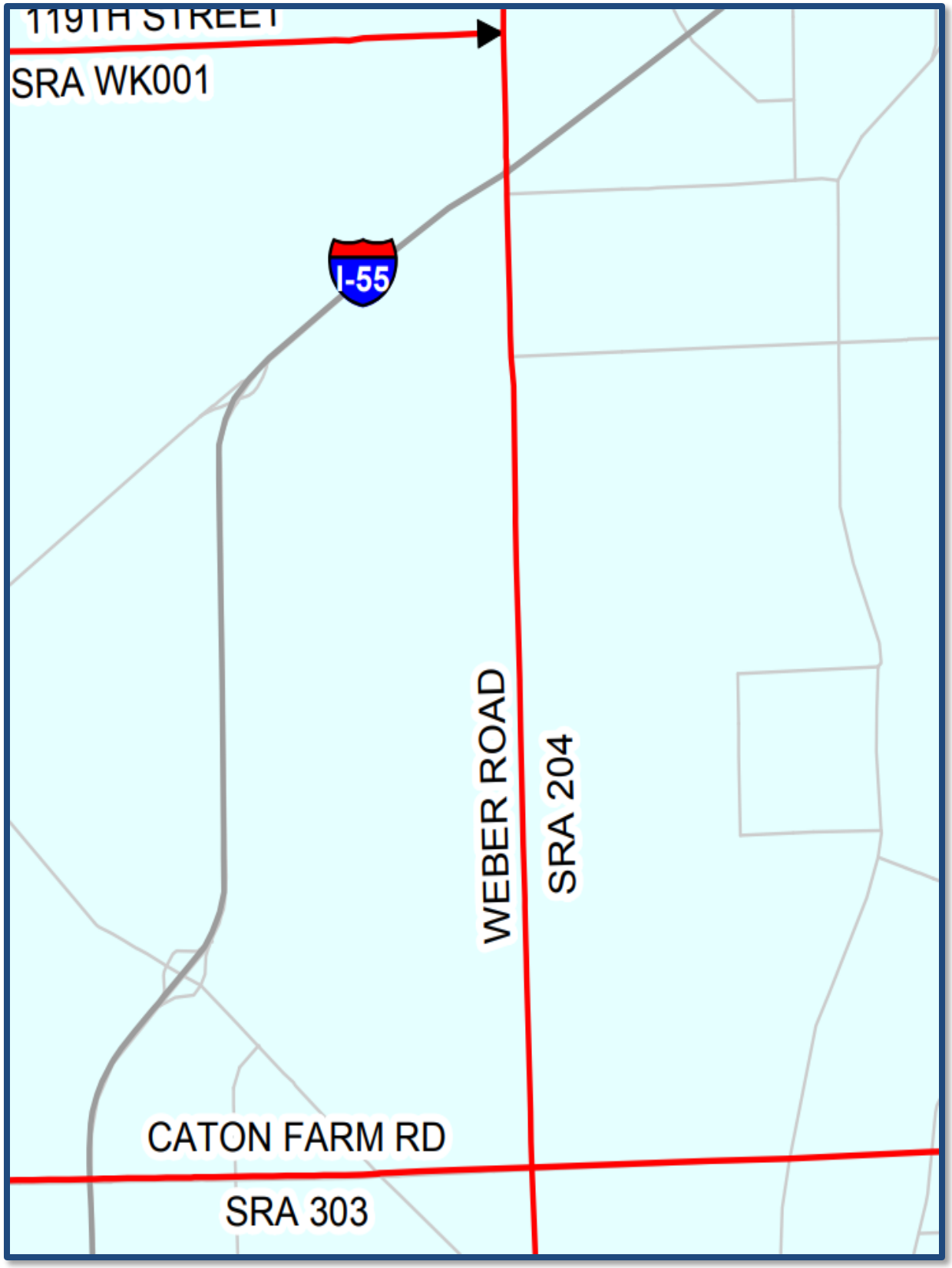
Given that Weber Road provides three lane approaches at this intersection, the required vehicles per hour on the major street is 600 (total of both approaches) and the required vehicles per hour on the minor street (one direction only) is 200 for Condition A. For Condition B, the required number of vehicles per hour on the major street is 900 (total of both approaches) and the required number of vehicles per hour on the minor street (one direction only) is 100.

However, for SRA routes, the requirements on the minor street for Condition B shall be increased from 100 vehicles per hour to 150 for a two-lane minor approach. Furthermore, based on IDOT's guidelines, the right-turn volume from the minor approach will be reduced between 70 - 75 percent.

To determine if a traffic signal will be warranted under Year 2032 total projected conditions at the intersection of Weber Road with Ryan Drive, the following was taken into consideration:

- 13-hour traffic counts conducted at the intersection of Weber Road with Ryan Drive
- Hourly traffic volumes projected to be generated by the subject development.
- The anticipated regional background growth
- Hourly traffic volumes projected to be generated by the two vacant commercial outlot parcels adjacent to the site

Table 7 summarizes the 13-hour traffic counts for the intersection of Weber Road with Ryan Drive to reflect IDOT's required right-turn reduction for total projected traffic conditions.



Strategic Regional Arterial Map **Figure 9**

Table 7
WEBER ROAD WITH RYAN DRIVE – PROJECTED
13-HOUR TRAFFIC VOLUMES – WITH IDOT SRA CRITERIA

Time	Weber Road		Ryan Drive (Westbound)			Major Approach Total	Minor Approach Volume	Minimums Met?	
	NB Total	SB Total	L	R	Adj. Right			Condition A	Condition B
6:00 AM	914	506	16	23	6	1420	22	NO	NO
7:00 AM	1076	863	79	65	20	1939	99	NO	NO
8:00 AM	751	873	48	36	9	1624	57	NO	NO
9:00 AM	715	707	55	53	13	1422	68	NO	NO
10:00 AM	721	673	74	79	20	1394	94	NO	NO
11:00 AM	861	753	109	95	24	1614	133	NO	NO
12:00 PM	906	879	120	100	25	1785	145	NO	NO
1:00 PM	1003	1024	110	101	30	2027	140	NO	NO
2:00 PM	1030	1158	112	100	30	2188	142	NO	NO
3:00 PM	1137	1244	112	101	30	2381	142	NO	NO
4:00 PM	1103	1366	133	122	37	2469	170	NO	YES
5:00 PM	1108	1118	133	126	38	2226	171	NO	YES
6:00 PM	791	956	113	113	38	1747	141	NO	NO

Warrant 1A requires a major approach volume of 600 vehicles and a minor approach volume of 200 vehicles.
Warrant 1B requires a major approach volume of 900 vehicles and a minor approach volume of 150 vehicles (increased per IDOT requirements for SRA Routes).
L – Left, T – Through, R – Right, NB – Northbound, SB – Southbound

As can be seen from Table 7, when the conservative IDOT SRA traffic signal warrant criteria is applied to the traffic volumes at the intersection of Weber Road with Ryan Drive, a traffic signal will not be warranted at the intersection, when only two hours are met under total projected conditions, whereas eight hours are required to meet the warrant. However, as can be seen from Table 8, six other hours are within approximately 10 percent (17 vehicles or less) of warranting the six additional hours needed to meet the conservatively high IDOT SRA warrant criteria.

However, when the requirements for the minor street for Condition B are not increased from 100 vehicles per hour and as can be seen from Table 7, a traffic signal will be warranted for eight hours based on Condition B as can be seen in Table 8.

It should be noted that when taking into consideration that the speed on Weber Road is 45 miles per hour and by applying the MUTCD 70 percent criteria for a non-SRA route, the minor approach volume to warrant the traffic signal is 70 vehicles. The projected traffic volumes for the eight previously identified hours are approximately double this minimum volume threshold.

Additionally, it is important to note that the projected traffic volumes include the existing bank located in the northeast quadrant of the intersection of Weber Road and Ryan Drive that currently operates as a 24-hour ATM-only facility. A redevelopment of this parcel could result in the provision of a more traffic intensive land use, pushing the projected traffic volumes over the SRA minimum thresholds which are already close to being met.

Overall, maintaining a signal at this intersection, is imperative to ensure safe/protected full access to the proposed development via Weber Road, limiting the impact of the development on the area roadway network, as well as to accommodate existing land uses, the subject development, and redevelopment opportunities for the commercial outlot parcels.

Table 8
WEBER ROAD WITH RYAN DRIVE – PROJECTED
13-HOUR TRAFFIC VOLUMES – WITHOUT IDOT SRA CRITERIA

Time	Weber Road		Ryan Drive (Westbound)			Major Approach Total	Highest Minor Approach Volume	Minimums Met?	
	NB Total	SB Total	L	R	Adj. Right			Condition A	Condition B
6:00 AM	914	506	16	23	6	1420	22	NO	NO
7:00 AM	1076	863	79	65	20	1939	99	NO	NO
8:00 AM	751	873	48	36	9	1624	57	NO	NO
9:00 AM	715	707	55	53	13	1422	68	NO	NO
10:00 AM	721	673	74	79	20	1394	94	NO	NO
11:00 AM	861	753	109	95	24	1614	133	NO	YES
12:00 PM	906	879	120	100	25	1785	145	NO	YES
1:00 PM	1003	1024	110	101	30	2027	140	NO	YES
2:00 PM	1030	1158	112	100	30	2188	142	NO	YES
3:00 PM	1137	1244	112	101	30	2381	142	NO	YES
4:00 PM	1103	1366	133	122	37	2469	170	NO	YES
5:00 PM	1108	1118	133	126	38	2226	171	NO	YES
6:00 PM	791	956	113	113	38	1747	141	NO	YES

Warrant 1A requires a major approach volume of 600 vehicles and a minor approach volume of 200 vehicles.
Warrant 1B requires a major approach volume of 900 vehicles and a minor approach volume of 100 vehicles
L – Left, T – Through, R – Right, NB – Northbound, SB – Southbound

6. Traffic Analysis and Recommendations

The following provides an evaluation conducted for the weekday morning and weekday evening peak hours. The analysis includes conducting capacity analyses to determine how well the roadway system and access roads are projected to operate and whether any roadway improvements or modifications are required.

Traffic Analyses

Capacity analyses were performed for the included intersections in the study area for the weekday morning and weekday evening peak hours for the existing, Year 2032 no-build, and Year 2032 total projected conditions.

The traffic analyses were performed using the methodologies outlined in the Transportation Research Board's *Highway Capacity Manual* (HCM), 7th Edition and using Synchro/SimTraffic 12 analysis software. The analysis for the traffic-signal controlled intersections were accomplished using actual cycle lengths and phasings to determine the average overall vehicle delay and levels of services.

The analyses for the unsignalized intersections determine the average control delay to vehicles at an intersection. Control delay is the elapsed time from a vehicle joining the queue at a stop sign (including the time required to decelerate to a stop) until its departure from the stop sign and resumption of free-flow speed. The methodology analyzes each intersection approach controlled by a stop sign and considers traffic volumes on all approaches and lane characteristics.

The ability of an intersection to accommodate traffic flow is expressed in terms of level of service, which is assigned a letter from A to F based on the average control delay experienced by vehicles passing through the intersection. The *Highway Capacity Manual* definitions for levels of service and the corresponding control delay for signalized intersections and unsignalized intersections are included in the Appendix of this report.

A summary of the traffic analysis results showing the level of service and delay (measured in seconds) for the intersections under the existing, 2032 no-build conditions, and Year 2032 total projected conditions are shown in **Tables 9** through **13**. Copies of the capacity analysis summary sheets are included in the Appendix. A discussion of each of the intersections follows.

Table 9
CAPACITY ANALYSIS RESULTS – RENWICK ROAD WITH WEBER ROAD – SIGNALIZED

	Peak Hour	Eastbound		Westbound			Northbound		Southbound			Overall
		L	T/R	L	T/R		L	T/R	L	T	R	
Existing Conditions	Weekday Morning	E 56.7	D 43.2	E 60.6	D 48.8	B 12.6	E 59.3	C 26.0	E 60.9	C 21.2	A 2.1	C 33.8
		D – 48.1		D – 42.7			C – 27.8		C – 24.9			
	Weekday Evening	E 57.1	D 38.1	E 61.1	D 47.9	B 13.3	E 62.2	C 28.5	E 63.3	C 29.5	B 12.6	D 35.7
		D – 46.3		D – 44.5			C – 33.1		C – 29.1			
No-Build Conditions	Weekday Morning	E 56.5	D 43.5	E 60.6	D 48.8	B 14.6	E 59.5	C 27.5	E 6..7	C 22.1	A 2.2	C 34.9
		D – 48.1		D – 42.5			C – 29.5		C – 27.1			
	Weekday Evening	E 58.1	D 38.7	E 61.2	D 47.9	B 17.0	E 64.5	C 29.6	E 67.7	C 30.4	B 13.9	D 37.0
		D – 46.8		D – 44.7			C – 34.6		C – 31.1			
Projected Conditions	Weekday Morning	E 57.2	D 43.4	E 60.6	D 48.3	B 16.7	E 59.6	C 27.7	E 64.6	C 22.3	A 2.3	D 35.0
		D – 48.3		D – 41.9			C – 29.7		C – 27.6			
	Weekday Evening	E 58.8	D 39.1	E 61.8	D 47.9	B 17.9	E 64.8	C 29.8	E 68.8	C 30.3	B 13.9	D 37.3
		D – 47.2		D – 44.7			C – 34.8		C – 31.6			

Letter denotes Level of Service L – Left Turn R – Right Turn
Delay is measured in seconds. T – Through

Table 10
CAPACITY ANALYSIS RESULTS – WEBER ROAD WITH RYAN DRIVE – SIGNALIZED

	Peak Hour	Eastbound	Westbound		Northbound	Southbound		Overall
		L/T/R	L	R	L/T/R	L	T/R	
Existing Conditions	**Weekday Morning**	--	E 71.2	A 0.8	A – 1.7	A 0.8	A 0.7	A 1.5
			C – 27.2			A – 0.7		
	Weekday Evening	--	E 77.3	A 6.3	A – 3.7	A 1.8	A 1.8	A 3.8
			D – 36.0			A – 1.8		
No-Build Conditions	**Weekday Morning**	--	E 79.5	A 2.8	A – 4.2	A 2.1	A 1.9	A 5.3
			D – 46.2			A – 1.9		
	Weekday Evening	--	F 86.8	B 15.6	A – 6.4	A 3.7	A 3.5	A 8.9
			D – 52.9			A – 3.5		
Projected Conditions	**Weekday Morning**	--	F 80.6	A 9.1	A – 5.1	A 2.6	A 2.5	A 7.0
			D – 48.4			A – 2.5		
	Weekday Evening	--	F 84.3	B 14.5	A – 7.1	A 4.7	A 3.9	A 9.7
			D – 50.8			A – 4.0		

Letter denotes Level of Service L – Left Turn R – Right Turn
Delay is measured in seconds. T – Through

Table 11
CAPACITY ANALYSIS RESULTS – EXISTING CONDITIONS – UNSIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Renwick Road with N-S Access Road[2]				
• Northbound Approach	B	11.9	B	11.1
Renwick with Executive Drive[2]				
• Northbound Approach	B	12.7	B	12.8
• Westbound Left Turn	A	8.9	A	8.5
Renwick Road with Borio Drive[2]				
• Northbound Approach	B	14.7	C	15.7
• Westbound Left Turn	A	8.9	A	8.6
Ryan Drive with Advanced Physicians Access Drive (West)[2]				
• Northbound Approach	--	--	A	8.7
Ryan Drive with Advanced Physicians Access Drive (East)/N-S Private Road [1]				
• ICU	A	17.8%	A	24.7%
Ryan Drive with Ontario Street[2]				
• Northbound Approach	A	8.7	A	8.7
• Westbound Left Turn	--	--	--	--
Weber Road with McGilvray Drive[2]				
• Eastbound Approach	B	12.4	C	19.2
• Westbound Approach	C	18.1	C	24.1
• Northbound Left Turn	A	9.4	B	11.7
• Southbound Left Turn	B	10.5	B	10.8
McGilvray Drive with Crest Lake Access Drive (West)[2]				
• Southbound Approach	A	8.5	A	8.6
McGilvray Drive with Crest Lake Access Drive (East)[2]				
• Southbound Approach	--	--	A	9.1
• Eastbound Left Turn	A	7.3	A	7.3

LOS = Level of Service
Delay is measured in seconds.
1 – Intersection Capacity Utilization (ICU)
2 – Two-way stop control

Table 12
CAPACITY ANALYSIS RESULTS – NO-BUILD CONDITIONS – UNSIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Renwick Road with N-S Access Road[2]				
• Northbound Approach	B	12.5	B	11.6
Renwick with Executive Drive[2]				
• Northbound Approach	B	14.1	B	14.3
• Westbound Left Turn	A	9.2	A	8.8
Renwick Road with Borio Drive[2]				
• Northbound Approach	C	15.5	C	16.8
• Westbound Left Turn	A	9.0	A	8.8
Ryan Drive with Advanced Physicians Access Drive (West)[2]				
• Northbound Approach	--	--	A	9.4
Ryan Drive with Advanced Physicians Access Drive (East)/N-S Private Road [1]				
• ICU	A	26.2%		
Ryan Drive with Ontario Street[2]				
• Northbound Approach	A	8.7	A	8.7
• Westbound Left Turn	--	--	--	--
Weber Road with McGilvray Drive[2]				
• Eastbound Approach	B	13.0	C	21.9
• Westbound Approach	C	20.7	D	29.2
• Northbound Left Turn	A	9.7	B	12.6
• Southbound Left Turn	B	11.2	B	11.5
McGilvray Drive with Crest Lake Access Drive (West)[2]				
• Southbound Approach	A	8.5	A	8.6
McGilvray Drive with Crest Lake Access Drive (East)[2]				
• Southbound Approach	--	--	A	9.1
• Eastbound Left Turn	A	7.3	A	7.3

LOS = Level of Service
Delay is measured in seconds.
1 – Intersection Capacity Utilization (ICU)
2 – Two-way stop control

Table 13
CAPACITY ANALYSIS RESULTS – PROJECTED CONDITIONS – UNSIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
Renwick Road with N-S Access Road[2]				
• Northbound Approach	B	12.6	B	11.8
Renwick with Executive Drive[2]				
• Northbound Approach	C	15.2	C	15.3
• Westbound Left Turn	A	9.2	A	8.9
Renwick Road with Borio Drive[2]				
• Northbound Approach	C	15.7	C	17.0
• Westbound Left Turn	A	9.1	A	8.8
Ryan Drive with Advanced Physicians Access Drive (West)[2]				
• Northbound Approach	--	--	A	9.8
Ryan Drive with Advanced Physicians Access Drive (East)/N-S Private Road [1]				
• ICU	A	27.9%	A	42.8%
Ryan Drive with Ontario Street[2]				
• Northbound Approach	A	9.0	A	9.2
• Southbound Approach	A	8.5	A	8.4
• Eastbound Left Turn	A	7.3	A	7.3
• Westbound Left Turn	--	--	--	--
Weber Road with McGilvray Drive[2]				
• Eastbound Approach	B	13.2	C	22.3
• Westbound Approach	C	20.9	D	30.3
• Northbound Left Turn	A	9.8	B	12.7
• Southbound Left Turn	B	11.2	B	11.7
McGilvray Drive with Crest Lake Access Drive (West)[2]				
• Southbound Approach	A	8.5	A	8.6

LOS = Level of Service
Delay is measured in seconds.
1 – Intersection Capacity Utilization (ICU)
2 – Two-way stop control

Table 13 (continued)
CAPACITY ANALYSIS RESULTS – PROJECTED CONDITIONS – UNSIGNALIZED

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour	
	LOS	Delay	LOS	Delay
McGilvray Drive with Crest Lake Access Drive (East)[2]				
• Southbound Approach	--	--	A	9.1
• Eastbound Left Turn	A	7.3	A	7.3

LOS = Level of Service
Delay is measured in seconds.

1 – Intersection Capacity Utilization (ICU)
2 – Two-way stop control

Discussion and Recommendations

The following summarizes how the intersections are projected to operate and identifies any roadway and traffic control improvements necessary to accommodate the development-generated traffic.

Renwick Road with Weber Road

The results of the capacity analysis indicate that overall, this intersection currently operates at an overall Level of Service (LOS) C during the weekday morning peak hour and LOS D during weekday evening peak hour. All approaches and critical movements currently operate at LOS E or better during the peak hours. Under Year 2032 no-build and total projected conditions this intersection is projected to operate as follows:

- Under Year 2032 no-build conditions this intersection overall, approaches and critical movements are projected to continue to operate at the same LOS as existing conditions.
- Under Year 2032 total projected conditions, this intersection is projected to operate at an overall LOS D during the weekday morning and weekday evening peak hours.
- Under Year 2032 total projected conditions, all approaches and critical movements are projected to continue to operate at the same LOS as existing and no-build conditions.
- It is important to note that traffic estimated to be generated by the proposed development only results in less than two percent increase in the traffic traversing the intersection.

As such, this intersection has adequate reserve capacity to accommodate the traffic estimated to be generated by the proposed development and no roadway improvements or traffic control adjustments will be required.

Weber Road with Ryan Drive

The results of the capacity analysis indicate that overall, this intersection currently operates at an overall LOS A during the weekday morning and weekday evening peak hours. All approaches and critical movements currently operate at LOS E or better during the peak hours. Under Year 2032 no-build and total projected conditions this intersection is projected to operate as follows:

- Under Year 2032 no-build and total projected conditions, this intersection is projected to continue to operate at the same overall LOS as existing conditions.
- Under Year 2032 no-build and total projected conditions, all approaches are projected to continue to operate at the same LOS as existing conditions, except for the westbound approach during the weekday morning peak hour which is projected to operate at LOS D. It is important to note that this increase in delay is partially due to the future retail background developments.

- Under Year 2032 no-build and total projected conditions, the westbound left turn movement is projected to operate at LOS F, and the westbound right turn movement is projected to operate at LOS B during the weekday evening peak hour. It is important to note that the volume to capacity (v/c) ratio for the westbound left turning movement will be less than one with a maximum 95th percentile queue length of approximately 270 feet which will extend to but not beyond the N-S private road.

- Under Year 2032 total projected conditions, the maximum 95th percentile queue length for the southbound left turn movement will be approximately 26 feet which can be accommodated by the provided storage length of 310 feet.

- It is important to note that traffic estimated to be generated by the proposed development only results in less than three percent increase in the traffic traversing the intersection.

As such, this intersection has adequate reserve capacity to accommodate the traffic estimated to be generated by the proposed development and no roadway improvements will be required.

Renwick Road with N-S Access Road

The results of the capacity analysis indicate that the northbound approach at this RIRO access road currently operates at LOS B during the weekday morning and weekday evening peak hours. Under Year 2032 no-build and total projected conditions this intersection is projected to continue to operate at the same LOS as existing conditions. As such, this intersection has adequate reserve capacity to accommodate the traffic estimated to be generated by the proposed development and no roadway improvements or traffic control adjustments will be required.

Renwick Road with Executive Drive

The results of the capacity analysis indicate that the northbound approach currently operates at LOS B during the weekday morning and weekday evening peak hours. Furthermore, the westbound left turn movement onto Executive Drive currently operates at LOS A during both peak hours. Under Year 2032 no-build and total projected conditions the northbound approach and the westbound left turn movement are projected to continue to operate at the same LOS as existing conditions. Furthermore, the maximum 95th percentile queue for the westbound left turn movement will be one to two vehicles with a v/c ratio of less than one, which can be accommodated by the existing 280 feet of storage. As such, this intersection has adequate reserve capacity to accommodate the traffic estimated to be generated by the proposed development and no roadway improvements or traffic control adjustments will be required.

Renwick Road with Borio Drive

The results of the capacity analysis indicate that the northbound approach currently operates at LOS B during the weekday morning peak hour and LOS C during the weekday evening peak hour. Furthermore, the westbound left turn movement onto Borio Drive currently operates at LOS A during both peak hours. Under Year 2032 no-build and total projected conditions the northbound approach is projected to operate at LOS C during both peak hour and the westbound left turn movement is projected to continue to operate at the same LOS as existing conditions. As such, this intersection has adequate reserve capacity to accommodate the traffic estimated to be generated by the proposed development and no roadway improvements or traffic control adjustments will be required.

Ryan Drive with Advanced Physicians Access Drive (west)

The results of the capacity analysis indicate that the northbound approach at this RIRO access drive currently operates at LOS A during the weekday morning and weekday evening peak hours. Under Year 2032 no-build and total projected conditions this intersection is projected to continue to operate at the same LOS as existing conditions. As such, this intersection has adequate reserve capacity to accommodate the traffic estimated to be generated by the proposed development and no roadway improvements or traffic control adjustments will be required.

Ryan Drive with Advanced Physicians Access Drive(east)/N-S Private Road

As this intersection is atypical with the eastbound approach uncontrolled and the southbound, northbound and westbound approaches being under stop sign control, the intersection was evaluated using the Intersection Capacity Utilization (ICU) method. The results of the capacity analysis indicate that the intersection currently operates at ICU A with minimal queues during the weekday morning and weekday evening peak hours. Under Year 2032 no-build and total projected conditions this intersection is projected to continue to operate at ICU A during the peak hours. As such, this intersection has adequate reserve capacity to accommodate the traffic estimated to be generated by the proposed development and no roadway improvements or traffic control adjustments will be required.

Ryan Drive with Ontario Street

As mentioned previously the east leg of this intersection is blocked by concrete barricades located approximately 50 feet east of Ontario Street. Therefore, the results of the capacity analysis indicate that the northbound approach currently operates at LOS A during the weekday morning and weekday evening peak hours. Under Year 2032 no-build this intersection and without the removal of the concrete barricades the northbound approach is projected to continue to operate at the same LOS as existing conditions.

As part of the proposed plan the development will create the north leg (access drive) at this intersection and the concrete barricades will be removed to provide full access between the development and the internal access roads that connect to the street network.

Under Year 2032 total projected conditions and the removal of the concrete barricades from east leg of the intersection, the northbound and southbound approaches are projected to operate at LOS A during both peak hours. Furthermore, the westbound and eastbound left turn movements are projected to operate at LOS A during both peak hours. As such, this intersection has adequate reserve capacity to accommodate the traffic estimated to be generated by the proposed development and no roadway improvements or traffic control adjustments will be required.

McGilvray Drive with Crest Lake Access Drive (west)

The results of the capacity analysis indicate that the southbound approach at this RIRO access drive currently operates at LOS A during the weekday morning and weekday evening peak hours. Under Year 2032 no-build and total projected conditions this intersection is projected to continue to operate at the same LOS as existing conditions. As such, this intersection has adequate reserve capacity to accommodate the traffic estimated to be generated by the proposed development and no roadway improvements or traffic control adjustments will be required.

McGilvray Drive with Crest Lake Access Drive (east)

The results of the capacity analysis indicate that the southbound approach and the eastbound left turn movement currently operate at LOS A during the weekday morning and weekday evening peak hours. Under Year 2032 no-build and total projected conditions this intersection is projected to continue to operate at the same LOS as existing conditions. As such, this intersection has adequate reserve capacity to accommodate the traffic estimated to be generated by the proposed development and no roadway improvements or traffic control adjustments will be required.

7. Conclusion

Based on the preceding analyses and recommendations, the following conclusions have been made:

- The results of the capacity analysis indicate that the existing roadway system will have sufficient reserve capacity to accommodate the traffic that will be generated by the proposed residential development.

- Access to the residential development will be provided via six access drives that will connect to the internal private roads and subsequently connect to the surrounding street network through the following existing access roads:

    - An existing RIRO access road that is located on the south side of Renwick Road approximately 635 feet east of Weber Road. This access road provides one inbound lane and one outbound lane with outbound movements under stop sign control.

    - An existing full-movement access road located on the south side of Renwick Road approximately 930 feet west of Borio Drive. This access road provides one inbound lane and one outbound lane with outbound movements under stop sign control.

    - An existing signalized full-movement access road located on the east side of Weber Road approximately 1,060 feet south of Renwick Road. This access road provides one inbound lane and two outbound lanes.

- While the conservative IDOT SRA criteria are not fully met, traffic volumes are close to warranting a signal and meet MUTCD Warrant 1 criteria, with projected volumes and potential future redevelopment further supporting a signal.

- Without applying the SRA criteria, the projected traffic volumes will warrant a traffic signal per Warrant 1, Condition B.

- Maintaining the traffic signal is necessary to provide safe, full-access operations for the proposed development and surrounding land uses while minimizing impacts to the roadway network.

Appendix

Traffic Count Summary Sheets
Site Plan
Level of Service Table
Capacity Analysis Summary Sheets

Traffic Count Summary Sheets

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 mmendoza@kloainc.com

Count Name: McGilvary Dr and Access Dr TMC
Site Code:
Start Date: 01/06/2026
Page No: 1

Turning Movement Data

Start Time	McGilvery Dr Eastbound					McGilvery Dr Westbound					Access Dr Southbound					
	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Right	Peds	App. Total	Int. Total
7:00 AM	0	1	5	0	6	0	9	0	1	9	0	0	0	0	0	15
7:15 AM	0	0	5	0	5	0	4	0	0	4	0	0	0	0	0	9
7:30 AM	0	3	4	0	7	0	8	1	1	9	0	0	0	0	0	16
7:45 AM	0	0	4	0	4	0	10	0	0	10	0	0	0	0	0	14
Hourly Total	0	4	18	0	22	0	31	1	2	32	0	0	0	0	0	54
8:00 AM	0	4	6	0	10	0	10	0	0	10	0	0	0	0	0	20
8:15 AM	0	3	5	0	8	0	8	0	0	8	0	0	0	0	0	16
8:30 AM	0	5	4	0	9	0	8	0	0	8	0	0	1	0	1	18
8:45 AM	0	2	3	0	5	0	7	1	0	8	0	0	1	0	1	14
Hourly Total	0	14	18	0	32	0	33	1	0	34	0	0	2	0	2	68
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	0	13	0	13	0	10	2	0	12	0	1	1	0	2	27
4:15 PM	0	2	16	0	18	0	7	0	0	7	0	1	2	1	3	28
4:30 PM	0	2	15	0	17	0	9	2	0	11	0	2	1	0	3	31
4:45 PM	0	3	18	0	21	0	6	0	0	6	0	2	3	0	5	32
Hourly Total	0	7	62	0	69	0	32	4	0	36	0	6	7	1	13	118
5:00 PM	0	0	8	0	8	1	1	0	0	2	0	1	2	0	3	13
5:15 PM	0	1	12	0	13	0	2	0	0	2	0	1	1	0	2	17
5:30 PM	0	0	22	0	22	0	11	3	0	14	0	0	2	0	2	38
5:45 PM	0	1	15	0	16	0	10	3	0	13	0	2	1	0	3	32
Hourly Total	0	2	57	0	59	1	24	6	0	31	0	4	6	0	10	100
Grand Total	0	27	155	0	182	1	120	12	2	133	0	10	15	1	25	340
Approach %	0.0	14.8	85.2	-	-	0.8	90.2	9.0	-	-	0.0	40.0	60.0	-	-	-
Total %	0.0	7.9	45.6	-	53.5	0.3	35.3	3.5	-	39.1	0.0	2.9	4.4	-	7.4	-
Lights	0	26	149	-	175	1	115	12	-	128	0	10	14	-	24	327
% Lights	-	96.3	96.1	-	96.2	100.0	95.8	100.0	-	96.2	-	100.0	93.3	-	96.0	96.2
Buses	0	0	3	-	3	0	2	0	-	2	0	0	0	-	0	5
% Buses	-	0.0	1.9	-	1.6	0.0	1.7	0.0	-	1.5	-	0.0	0.0	-	0.0	1.5
Single-Unit Trucks	0	1	3	-	4	0	3	0	-	3	0	0	1	-	1	8
% Single-Unit Trucks	-	3.7	1.9	-	2.2	0.0	2.5	0.0	-	2.3	-	0.0	6.7	-	4.0	2.4
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	2	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	-	-	-	100.0	-	-	-	-	100.0	-	-

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9575 W. Higgins Rd., Suite 400

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(847)518-9990 mmendoza@kloainc.com

Count Name: McGilvary Dr and Access Dr TMC
Site Code:
Start Date: 01/06/2026

Turning Movement Peak Hour Data (7:15 AM)

Start Time	McGilvery Dr Eastbound					McGilvery Dr Westbound					Access Dr Southbound					
	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Right	Peds	App. Total	Int. Total
7:15 AM	0	0	5	0	5	0	4	0	0	4	0	0	0	0	0	9
7:30 AM	0	3	4	0	7	0	8	1	1	9	0	0	0	0	0	16
7:45 AM	0	0	4	0	4	0	10	0	0	10	0	0	0	0	0	14
8:00 AM	0	4	6	0	10	0	10	0	0	10	0	0	0	0	0	20
Total	0	7	19	0	26	0	32	1	1	33	0	0	0	0	0	59
Approach %	0.0	26.9	73.1	-	-	0.0	97.0	3.0	-	-	0.0	0.0	0.0	-	-	-
Total %	0.0	11.9	32.2	-	44.1	0.0	54.2	1.7	-	55.9	0.0	0.0	0.0	-	0.0	-
PHF	0.000	0.438	0.792	-	0.650	0.000	0.800	0.250	-	0.825	0.000	0.000	0.000	-	0.000	0.738
Lights	0	7	16	-	23	0	30	1	-	31	0	0	0	-	0	54
% Lights	-	100.0	84.2	-	88.5	-	93.8	100.0	-	93.9	-	-	-	-	-	91.5
Buses	0	0	2	-	2	0	2	0	-	2	0	0	0	-	0	4
% Buses	-	0.0	10.5	-	7.7	-	6.3	0.0	-	6.1	-	-	-	-	-	6.8
Single-Unit Trucks	0	0	1	-	1	0	0	0	-	0	0	0	0	-	0	1
% Single-Unit Trucks	-	0.0	5.3	-	3.8	-	0.0	0.0	-	0.0	-	-	-	-	-	1.7
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	-	-	-	-	0.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	-	-	-	-	0.0
Pedestrians	-	-	-	0	-	-	-	-	1	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-

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9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
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Count Name: McGilvary Dr and Access Dr TMC
Site Code:
Start Date: 01/06/2026

Turning Movement Peak Hour Data (4:00 PM)

Start Time	McGilvery Dr Eastbound					McGilvery Dr Westbound					Access Dr Southbound					
	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Right	Peds	App. Total	Int. Total
4:00 PM	0	0	13	0	13	0	10	2	0	12	0	1	1	0	2	27
4:15 PM	0	2	16	0	18	0	7	0	0	7	0	1	2	1	3	28
4:30 PM	0	2	15	0	17	0	9	2	0	11	0	2	1	0	3	31
4:45 PM	0	3	18	0	21	0	6	0	0	6	0	2	3	0	5	32
Total	0	7	62	0	69	0	32	4	0	36	0	6	7	1	13	118
Approach %	0.0	10.1	89.9	-	-	0.0	88.9	11.1	-	-	0.0	46.2	53.8	-	-	-
Total %	0.0	5.9	52.5	-	58.5	0.0	27.1	3.4	-	30.5	0.0	5.1	5.9	-	11.0	-
PHF	0.000	0.583	0.861	-	0.821	0.000	0.800	0.500	-	0.750	0.000	0.750	0.583	-	0.650	0.922
Lights	0	7	60	-	67	0	31	4	-	35	0	6	6	-	12	114
% Lights	-	100.0	96.8	-	97.1	-	96.9	100.0	-	97.2	-	100.0	85.7	-	92.3	96.6
Buses	0	0	1	-	1	0	0	0	-	0	0	0	0	-	0	1
% Buses	-	0.0	1.6	-	1.4	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.8
Single-Unit Trucks	0	0	1	-	1	0	1	0	-	1	0	0	1	-	1	3
% Single-Unit Trucks	-	0.0	1.6	-	1.4	-	3.1	0.0	-	2.8	-	0.0	14.3	-	7.7	2.5
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

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Rosemont, Illinois, United States 60018
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Count Name: McGlivray Dr and Access western drive TMC
Site Code:
Start Date: 01/06/2026

Turning Movement Data

Start Time	McGilvary Dr Eastbound					McGilvary Dr Westbound					Retail Access Dr (west) Southbound					
	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Right	Peds	App. Total	Int. Total
7:00 AM	0	2	5	0	7	0	9	0	0	9	0	0	0	0	0	16
7:15 AM	0	1	6	0	7	0	4	0	0	4	0	0	0	0	0	11
7:30 AM	0	3	6	0	9	0	9	0	0	9	0	0	2	0	2	20
7:45 AM	0	5	4	0	9	0	9	0	0	9	0	0	2	0	2	20
Hourly Total	0	11	21	0	32	0	31	0	0	31	0	0	4	0	4	67
8:00 AM	0	1	9	0	10	1	9	0	0	10	0	0	3	0	3	23
8:15 AM	0	2	10	0	12	0	9	0	0	9	0	0	0	0	0	21
8:30 AM	0	0	7	0	7	0	8	0	0	8	0	0	1	0	1	16
8:45 AM	0	4	5	0	9	0	8	0	0	8	0	0	7	0	7	24
Hourly Total	0	7	31	0	38	1	34	0	0	35	0	0	11	0	11	84
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	5	12	0	17	0	12	0	0	12	0	1	7	0	8	37
4:15 PM	0	6	16	0	22	0	8	0	0	8	0	0	3	0	3	33
4:30 PM	0	2	18	0	20	0	10	0	0	10	0	0	8	0	8	38
4:45 PM	0	7	18	0	25	0	10	0	0	10	0	0	7	0	7	42
Hourly Total	0	20	64	0	84	0	40	0	0	40	0	1	25	0	26	150
5:00 PM	0	3	10	0	13	0	2	0	0	2	0	0	8	0	8	23
5:15 PM	0	6	11	0	17	0	3	0	0	3	0	0	3	0	3	23
5:30 PM	0	5	23	0	28	0	13	1	0	14	0	0	5	0	5	47
5:45 PM	0	4	14	1	18	0	11	0	0	11	0	1	5	0	6	35
Hourly Total	0	18	58	1	76	0	29	1	0	30	0	1	21	0	22	128
Grand Total	0	56	174	1	230	1	134	1	0	136	0	2	61	0	63	429
Approach %	0.0	24.3	75.7	-	-	0.7	98.5	0.7	-	-	0.0	3.2	96.8	-	-	-
Total %	0.0	13.1	40.6	-	53.6	0.2	31.2	0.2	-	31.7	0.0	0.5	14.2	-	14.7	-
Lights	0	55	167	-	222	1	128	1	-	130	0	2	60	-	62	414
% Lights	-	98.2	96.0	-	96.5	100.0	95.5	100.0	-	95.6	-	100.0	98.4	-	98.4	96.5
Buses	0	0	3	-	3	0	2	0	-	2	0	0	0	-	0	5
% Buses	-	0.0	1.7	-	1.3	0.0	1.5	0.0	-	1.5	-	0.0	0.0	-	0.0	1.2
Single-Unit Trucks	0	1	4	-	5	0	4	0	-	4	0	0	1	-	1	10
% Single-Unit Trucks	-	1.8	2.3	-	2.2	0.0	3.0	0.0	-	2.9	-	0.0	1.6	-	1.6	2.3
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	1	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-

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9575 W. Higgins Rd., Suite 400

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Count Name: McGlivray Dr and Access western drive TMC
Site Code:
Start Date: 01/06/2026

Turning Movement Peak Hour Data (7:15 AM)

Start Time	McGilvary Dr Eastbound					McGilvary Dr Westbound					Retail Access Dr (west) Southbound					
	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Right	Peds	App. Total	Int. Total
7:15 AM	0	1	6	0	7	0	4	0	0	4	0	0	0	0	0	11
7:30 AM	0	3	6	0	9	0	9	0	0	9	0	0	2	0	2	20
7:45 AM	0	5	4	0	9	0	9	0	0	9	0	0	2	0	2	20
8:00 AM	0	1	9	0	10	1	9	0	0	10	0	0	3	0	3	23
Total	0	10	25	0	35	1	31	0	0	32	0	0	7	0	7	74
Approach %	0.0	28.6	71.4	-	-	3.1	96.9	0.0	-	-	0.0	0.0	100.0	-	-	-
Total %	0.0	13.5	33.8	-	47.3	1.4	41.9	0.0	-	43.2	0.0	0.0	9.5	-	9.5	-
PHF	0.000	0.500	0.694	-	0.875	0.250	0.861	0.000	-	0.800	0.000	0.000	0.583	-	0.583	0.804
Lights	0	10	22	-	32	1	29	0	-	30	0	0	7	-	7	69
% Lights	-	100.0	88.0	-	91.4	100.0	93.5	-	-	93.8	-	-	100.0	-	100.0	93.2
Buses	0	0	2	-	2	0	2	0	-	2	0	0	0	-	0	4
% Buses	-	0.0	8.0	-	5.7	0.0	6.5	-	-	6.3	-	-	0.0	-	0.0	5.4
Single-Unit Trucks	0	0	1	-	1	0	0	0	-	0	0	0	0	-	0	1
% Single-Unit Trucks	-	0.0	4.0	-	2.9	0.0	0.0	-	-	0.0	-	-	0.0	-	0.0	1.4
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	-	0.0	0.0	0.0	-	-	0.0	-	-	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	0.0	0.0	-	-	0.0	-	-	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: McGlivray Dr and Access western drive TMC
Site Code:
Start Date: 01/06/2026

Turning Movement Peak Hour Data (4:00 PM)

Start Time	McGilvary Dr Eastbound					McGilvary Dr Westbound					Retail Access Dr (west) Southbound					
	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Right	Peds	App. Total	Int. Total
4:00 PM	0	5	12	0	17	0	12	0	0	12	0	1	7	0	8	37
4:15 PM	0	6	16	0	22	0	8	0	0	8	0	0	3	0	3	33
4:30 PM	0	2	18	0	20	0	10	0	0	10	0	0	8	0	8	38
4:45 PM	0	7	18	0	25	0	10	0	0	10	0	0	7	0	7	42
Total	0	20	64	0	84	0	40	0	0	40	0	1	25	0	26	150
Approach %	0.0	23.8	76.2	-	-	0.0	100.0	0.0	-	-	0.0	3.8	96.2	-	-	-
Total %	0.0	13.3	42.7	-	56.0	0.0	26.7	0.0	-	26.7	0.0	0.7	16.7	-	17.3	-
PHF	0.000	0.714	0.889	-	0.840	0.000	0.833	0.000	-	0.833	0.000	0.250	0.781	-	0.813	0.893
Lights	0	19	62	-	81	0	38	0	-	38	0	1	25	-	26	145
% Lights	-	95.0	96.9	-	96.4	-	95.0	-	-	95.0	-	100.0	100.0	-	100.0	96.7
Buses	0	0	1	-	1	0	0	0	-	0	0	0	0	-	0	1
% Buses	-	0.0	1.6	-	1.2	-	0.0	-	-	0.0	-	0.0	0.0	-	0.0	0.7
Single-Unit Trucks	0	1	1	-	2	0	2	0	-	2	0	0	0	-	0	4
% Single-Unit Trucks	-	5.0	1.6	-	2.4	-	5.0	-	-	5.0	-	0.0	0.0	-	0.0	2.7
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	-	0.0	-	0.0	-	-	0.0	-	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	-	0.0	-	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
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Rosemont, Illinois, United States 60018
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Count Name: Renwick Rd and Access Rd TMC
Site Code:
Start Date: 01/06/2026
Page No: 1

Turning Movement Data

Start Time	Renwick Rd Eastbound					Renwick Rd Westbound					Retail Access Drive Northbound					
	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Left	Right	Peds	App. Total	Int. Total
7:00 AM	0	127	0	0	127	0	0	71	0	71	0	0	1	0	1	199
7:15 AM	0	152	0	0	152	0	0	93	0	93	0	0	0	0	0	245
7:30 AM	0	178	0	0	178	0	0	77	0	77	0	0	3	0	3	258
7:45 AM	0	135	0	0	135	0	0	102	0	102	0	0	0	0	0	237
Hourly Total	0	592	0	0	592	0	0	343	0	343	0	0	4	0	4	939
8:00 AM	0	133	1	0	134	0	0	101	0	101	0	0	1	0	1	236
8:15 AM	0	123	0	0	123	0	0	94	0	94	0	0	0	0	0	217
8:30 AM	0	99	0	0	99	0	0	91	0	91	0	0	0	0	0	190
8:45 AM	0	97	1	0	98	0	0	101	0	101	0	0	1	0	1	200
Hourly Total	0	452	2	0	454	0	0	387	0	387	0	0	2	0	2	843
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	136	3	0	139	0	0	169	0	169	0	0	1	0	1	309
4:15 PM	0	101	3	0	104	0	0	170	0	170	0	0	1	0	1	275
4:30 PM	0	101	4	0	105	0	0	197	0	197	0	0	5	0	5	307
4:45 PM	0	87	4	0	91	0	0	162	0	162	0	0	2	0	2	255
Hourly Total	0	425	14	0	439	0	0	698	0	698	0	0	9	0	9	1146
5:00 PM	0	90	5	0	95	0	0	155	0	155	0	0	4	0	4	254
5:15 PM	0	101	3	0	104	0	0	177	0	177	0	0	2	0	2	283
5:30 PM	0	110	3	0	113	0	0	155	0	155	0	0	3	0	3	271
5:45 PM	0	83	5	0	88	0	0	150	0	150	0	0	1	0	1	239
Hourly Total	0	384	16	0	400	0	0	637	0	637	0	0	10	0	10	1047
Grand Total	0	1853	32	0	1885	0	0	2065	0	2065	0	0	25	0	25	3975
Approach %	0.0	98.3	1.7	-	-	0.0	0.0	100.0	-	-	0.0	0.0	100.0	-	-	-
Total %	0.0	46.6	0.8	-	47.4	0.0	0.0	51.9	-	51.9	0.0	0.0	0.6	-	0.6	-
Lights	0	1709	31	-	1740	0	0	1923	-	1923	0	0	23	-	23	3686
% Lights	-	92.2	96.9	-	92.3	-	-	93.1	-	93.1	-	-	92.0	-	92.0	92.7
Buses	0	22	0	-	22	0	0	10	-	10	0	0	1	-	1	33
% Buses	-	1.2	0.0	-	1.2	-	-	0.5	-	0.5	-	-	4.0	-	4.0	0.8
Single-Unit Trucks	0	44	1	-	45	0	0	39	-	39	0	0	1	-	1	85
% Single-Unit Trucks	-	2.4	3.1	-	2.4	-	-	1.9	-	1.9	-	-	4.0	-	4.0	2.1
Articulated Trucks	0	78	0	-	78	0	0	93	-	93	0	0	0	-	0	171
% Articulated Trucks	-	4.2	0.0	-	4.1	-	-	4.5	-	4.5	-	-	0.0	-	0.0	4.3
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	-	-	0.0	-	0.0	-	-	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Renwick Rd and Access Rd TMC
Site Code:
Start Date: 01/06/2026

Turning Movement Peak Hour Data (7:15 AM)

Start Time	Renwick Rd Eastbound					Renwick Rd Westbound					Retail Access Drive Northbound					
	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Left	Right	Peds	App. Total	Int. Total
7:15 AM	0	152	0	0	152	0	0	93	0	93	0	0	0	0	0	245
7:30 AM	0	178	0	0	178	0	0	77	0	77	0	0	3	0	3	258
7:45 AM	0	135	0	0	135	0	0	102	0	102	0	0	0	0	0	237
8:00 AM	0	133	1	0	134	0	0	101	0	101	0	0	1	0	1	236
Total	0	598	1	0	599	0	0	373	0	373	0	0	4	0	4	976
Approach %	0.0	99.8	0.2	-	-	0.0	0.0	100.0	-	-	0.0	0.0	100.0	-	-	-
Total %	0.0	61.3	0.1	-	61.4	0.0	0.0	38.2	-	38.2	0.0	0.0	0.4	-	0.4	-
PHF	0.000	0.840	0.250	-	0.841	0.000	0.000	0.914	-	0.914	0.000	0.000	0.333	-	0.333	0.946
Lights	0	555	1	-	556	0	0	332	-	332	0	0	3	-	3	891
% Lights	-	92.8	100.0	-	92.8	-	-	89.0	-	89.0	-	-	75.0	-	75.0	91.3
Buses	0	10	0	-	10	0	0	6	-	6	0	0	1	-	1	17
% Buses	-	1.7	0.0	-	1.7	-	-	1.6	-	1.6	-	-	25.0	-	25.0	1.7
Single-Unit Trucks	0	11	0	-	11	0	0	12	-	12	0	0	0	-	0	23
% Single-Unit Trucks	-	1.8	0.0	-	1.8	-	-	3.2	-	3.2	-	-	0.0	-	0.0	2.4
Articulated Trucks	0	22	0	-	22	0	0	23	-	23	0	0	0	-	0	45
% Articulated Trucks	-	3.7	0.0	-	3.7	-	-	6.2	-	6.2	-	-	0.0	-	0.0	4.6
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	-	-	0.0	-	0.0	-	-	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Renwick Rd and Access Rd TMC
Site Code:
Start Date: 01/06/2026

Turning Movement Peak Hour Data (4:00 PM)

Start Time	Renwick Rd Eastbound					Renwick Rd Westbound					Retail Access Drive Northbound					
	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Left	Right	Peds	App. Total	Int. Total
4:00 PM	0	136	3	0	139	0	0	169	0	169	0	0	1	0	1	309
4:15 PM	0	101	3	0	104	0	0	170	0	170	0	0	1	0	1	275
4:30 PM	0	101	4	0	105	0	0	197	0	197	0	0	5	0	5	307
4:45 PM	0	87	4	0	91	0	0	162	0	162	0	0	2	0	2	255
Total	0	425	14	0	439	0	0	698	0	698	0	0	9	0	9	1146
Approach %	0.0	96.8	3.2	-	-	0.0	0.0	100.0	-	-	0.0	0.0	100.0	-	-	-
Total %	0.0	37.1	1.2	-	38.3	0.0	0.0	60.9	-	60.9	0.0	0.0	0.8	-	0.8	-
PHF	0.000	0.781	0.875	-	0.790	0.000	0.000	0.886	-	0.886	0.000	0.000	0.450	-	0.450	0.927
Lights	0	389	13	-	402	0	0	659	-	659	0	0	8	-	8	1069
% Lights	-	91.5	92.9	-	91.6	-	-	94.4	-	94.4	-	-	88.9	-	88.9	93.3
Buses	0	6	0	-	6	0	0	3	-	3	0	0	0	-	0	9
% Buses	-	1.4	0.0	-	1.4	-	-	0.4	-	0.4	-	-	0.0	-	0.0	0.8
Single-Unit Trucks	0	10	1	-	11	0	0	9	-	9	0	0	1	-	1	21
% Single-Unit Trucks	-	2.4	7.1	-	2.5	-	-	1.3	-	1.3	-	-	11.1	-	11.1	1.8
Articulated Trucks	0	20	0	-	20	0	0	27	-	27	0	0	0	-	0	47
% Articulated Trucks	-	4.7	0.0	-	4.6	-	-	3.9	-	3.9	-	-	0.0	-	0.0	4.1
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	-	-	0.0	-	0.0	-	-	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Renwick Rd and Borio Dr TMC
Site Code:
Start Date: 01/06/2026
Page No: 1

Turning Movement Data

Start Time	Renwick Rd Eastbound					Renwick Rd Westbound					Borio Dr Northbound					
	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Left	Right	Peds	App. Total	Int. Total
7:00 AM	0	127	2	0	129	0	3	71	0	74	0	6	18	0	24	227
7:15 AM	0	146	5	0	151	0	3	86	0	89	0	5	9	0	14	254
7:30 AM	0	184	1	0	185	0	5	91	0	96	0	2	10	0	12	293
7:45 AM	0	148	2	0	150	0	1	107	0	108	0	4	16	0	20	278
Hourly Total	0	605	10	0	615	0	12	355	0	367	0	17	53	0	70	1052
8:00 AM	0	121	5	0	126	0	5	113	0	118	0	7	11	0	18	262
8:15 AM	0	127	1	0	128	0	2	95	0	97	0	9	11	0	20	245
8:30 AM	0	102	0	0	102	0	0	98	0	98	0	8	5	0	13	213
8:45 AM	0	93	5	0	98	0	3	111	0	114	0	7	1	0	8	220
Hourly Total	0	443	11	0	454	0	10	417	0	427	0	31	28	0	59	940
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	120	8	0	128	0	11	176	0	187	0	6	2	0	8	323
4:15 PM	0	102	7	0	109	0	14	174	0	188	0	2	4	0	6	303
4:30 PM	0	103	8	0	111	0	9	196	0	205	0	6	10	0	16	332
4:45 PM	0	76	9	0	85	0	12	168	0	180	0	6	6	0	12	277
Hourly Total	0	401	32	0	433	0	46	714	0	760	0	20	22	0	42	1235
5:00 PM	0	106	8	0	114	0	17	165	0	182	0	9	6	0	15	311
5:15 PM	0	82	9	0	91	0	13	188	0	201	0	7	5	0	12	304
5:30 PM	0	124	9	0	133	0	9	166	0	175	0	6	3	1	9	317
5:45 PM	0	96	3	0	99	0	8	155	0	163	0	4	3	0	7	269
Hourly Total	0	408	29	0	437	0	47	674	0	721	0	26	17	1	43	1201
Grand Total	0	1857	82	0	1939	0	115	2160	0	2275	0	94	120	1	214	4428
Approach %	0.0	95.8	4.2	-	-	0.0	5.1	94.9	-	-	0.0	43.9	56.1	-	-	-
Total %	0.0	41.9	1.9	-	43.8	0.0	2.6	48.8	-	51.4	0.0	2.1	2.7	-	4.8	-
Lights	0	1705	81	-	1786	0	114	1997	-	2111	0	93	116	-	209	4106
% Lights	-	91.8	98.8	-	92.1	-	99.1	92.5	-	92.8	-	98.9	96.7	-	97.7	92.7
Buses	0	21	1	-	22	0	0	16	-	16	0	0	3	-	3	41
% Buses	-	1.1	1.2	-	1.1	-	0.0	0.7	-	0.7	-	0.0	2.5	-	1.4	0.9
Single-Unit Trucks	0	54	0	-	54	0	1	46	-	47	0	1	0	-	1	102
% Single-Unit Trucks	-	2.9	0.0	-	2.8	-	0.9	2.1	-	2.1	-	1.1	0.0	-	0.5	2.3
Articulated Trucks	0	77	0	-	77	0	0	101	-	101	0	0	0	-	0	178
% Articulated Trucks	-	4.1	0.0	-	4.0	-	0.0	4.7	-	4.4	-	0.0	0.0	-	0.0	4.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	1	-	1	1
% Bicycles on Road	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.8	-	0.5	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

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9575 W. Higgins Rd., Suite 400

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Count Name: Renwick Rd and Borio Dr TMC
Site Code:
Start Date: 01/06/2026

Turning Movement Peak Hour Data (7:15 AM)

Start Time	Renwick Rd Eastbound					Renwick Rd Westbound					Borio Dr Northbound					
	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Left	Right	Peds	App. Total	Int. Total
7:15 AM	0	146	5	0	151	0	3	86	0	89	0	5	9	0	14	254
7:30 AM	0	184	1	0	185	0	5	91	0	96	0	2	10	0	12	293
7:45 AM	0	148	2	0	150	0	1	107	0	108	0	4	16	0	20	278
8:00 AM	0	121	5	0	126	0	5	113	0	118	0	7	11	0	18	262
Total	0	599	13	0	612	0	14	397	0	411	0	18	46	0	64	1087
Approach %	0.0	97.9	2.1	-	-	0.0	3.4	96.6	-	-	0.0	28.1	71.9	-	-	-
Total %	0.0	55.1	1.2	-	56.3	0.0	1.3	36.5	-	37.8	0.0	1.7	4.2	-	5.9	-
PHF	0.000	0.814	0.650	-	0.827	0.000	0.700	0.878	-	0.871	0.000	0.643	0.719	-	0.800	0.927
Lights	0	555	13	-	568	0	14	348	-	362	0	18	46	-	64	994
% Lights	-	92.7	100.0	-	92.8	-	100.0	87.7	-	88.1	-	100.0	100.0	-	100.0	91.4
Buses	0	11	0	-	11	0	0	13	-	13	0	0	0	-	0	24
% Buses	-	1.8	0.0	-	1.8	-	0.0	3.3	-	3.2	-	0.0	0.0	-	0.0	2.2
Single-Unit Trucks	0	10	0	-	10	0	0	12	-	12	0	0	0	-	0	22
% Single-Unit Trucks	-	1.7	0.0	-	1.6	-	0.0	3.0	-	2.9	-	0.0	0.0	-	0.0	2.0
Articulated Trucks	0	23	0	-	23	0	0	24	-	24	0	0	0	-	0	47
% Articulated Trucks	-	3.8	0.0	-	3.8	-	0.0	6.0	-	5.8	-	0.0	0.0	-	0.0	4.3
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Renwick Rd and Borio Dr TMC
Site Code:
Start Date: 01/06/2026

Turning Movement Peak Hour Data (4:00 PM)

Start Time	Renwick Rd Eastbound					Renwick Rd Westbound					Borio Dr Northbound					
	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Left	Right	Peds	App. Total	Int. Total
4:00 PM	0	120	8	0	128	0	11	176	0	187	0	6	2	0	8	323
4:15 PM	0	102	7	0	109	0	14	174	0	188	0	2	4	0	6	303
4:30 PM	0	103	8	0	111	0	9	196	0	205	0	6	10	0	16	332
4:45 PM	0	76	9	0	85	0	12	168	0	180	0	6	6	0	12	277
Total	0	401	32	0	433	0	46	714	0	760	0	20	22	0	42	1235
Approach %	0.0	92.6	7.4	-	-	0.0	6.1	93.9	-	-	0.0	47.6	52.4	-	-	-
Total %	0.0	32.5	2.6	-	35.1	0.0	3.7	57.8	-	61.5	0.0	1.6	1.8	-	3.4	-
PHF	0.000	0.835	0.889	-	0.846	0.000	0.821	0.911	-	0.927	0.000	0.833	0.550	-	0.656	0.930
Lights	0	364	32	-	396	0	46	676	-	722	0	20	22	-	42	1160
% Lights	-	90.8	100.0	-	91.5	-	100.0	94.7	-	95.0	-	100.0	100.0	-	100.0	93.9
Buses	0	5	0	-	5	0	0	3	-	3	0	0	0	-	0	8
% Buses	-	1.2	0.0	-	1.2	-	0.0	0.4	-	0.4	-	0.0	0.0	-	0.0	0.6
Single-Unit Trucks	0	13	0	-	13	0	0	8	-	8	0	0	0	-	0	21
% Single-Unit Trucks	-	3.2	0.0	-	3.0	-	0.0	1.1	-	1.1	-	0.0	0.0	-	0.0	1.7
Articulated Trucks	0	19	0	-	19	0	0	27	-	27	0	0	0	-	0	46
% Articulated Trucks	-	4.7	0.0	-	4.4	-	0.0	3.8	-	3.6	-	0.0	0.0	-	0.0	3.7
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Renwick Rd and Executive Dr
TMC
Site Code:
Start Date: 01/07/2026

Turning Movement Data

Start Time	Renwick Rd Eastbound					Renwick Rd Westbound					Executive Dr Northbound					
	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Left	Right	Peds	App. Total	Int. Total
7:00 AM	0	105	1	0	106	0	1	75	0	76	0	0	1	0	1	183
7:15 AM	0	106	2	0	108	0	3	93	0	96	0	1	1	0	2	206
7:30 AM	0	157	0	0	157	0	3	106	0	109	0	1	2	0	3	269
7:45 AM	1	144	4	0	149	0	5	102	0	107	0	4	3	0	7	263
Hourly Total	1	512	7	0	520	0	12	376	0	388	0	6	7	0	13	921
8:00 AM	0	142	10	0	152	0	2	102	0	104	0	4	3	0	7	263
8:15 AM	0	136	3	0	139	0	4	83	0	87	0	3	3	0	6	232
8:30 AM	0	111	5	0	116	0	1	89	0	90	0	3	2	0	5	211
8:45 AM	2	131	6	0	139	0	4	102	0	106	0	4	1	0	5	250
Hourly Total	2	520	24	0	546	0	11	376	0	387	0	14	9	0	23	956
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	112	4	0	116	0	2	181	0	183	0	4	2	0	6	305
4:15 PM	1	114	2	0	117	0	3	192	0	195	0	2	4	0	6	318
4:30 PM	1	130	5	0	136	0	3	211	0	214	0	4	4	0	8	358
4:45 PM	0	122	5	0	127	0	7	175	0	182	0	7	3	0	10	319
Hourly Total	2	478	16	0	496	0	15	759	0	774	0	17	13	0	30	1300
5:00 PM	0	119	2	0	121	0	5	178	0	183	0	11	2	0	13	317
5:15 PM	0	103	2	0	105	0	5	176	0	181	0	6	2	0	8	294
5:30 PM	0	131	0	0	131	0	2	150	0	152	0	1	1	0	2	285
5:45 PM	0	96	2	0	98	0	5	173	0	178	0	5	1	0	6	282
Hourly Total	0	449	6	0	455	0	17	677	0	694	0	23	6	0	29	1178
Grand Total	5	1959	53	0	2017	0	55	2188	0	2243	0	60	35	0	95	4355
Approach %	0.2	97.1	2.6	-	-	0.0	2.5	97.5	-	-	0.0	63.2	36.8	-	-	-
Total %	0.1	45.0	1.2	-	46.3	0.0	1.3	50.2	-	51.5	0.0	1.4	0.8	-	2.2	-
Lights	5	1829	53	-	1887	0	55	2037	-	2092	0	60	34	-	94	4073
% Lights	100.0	93.4	100.0	-	93.6	-	100.0	93.1	-	93.3	-	100.0	97.1	-	98.9	93.5
Buses	0	24	0	-	24	0	0	18	-	18	0	0	1	-	1	43
% Buses	0.0	1.2	0.0	-	1.2	-	0.0	0.8	-	0.8	-	0.0	2.9	-	1.1	1.0
Single-Unit Trucks	0	33	0	-	33	0	0	35	-	35	0	0	0	-	0	68
% Single-Unit Trucks	0.0	1.7	0.0	-	1.6	-	0.0	1.6	-	1.6	-	0.0	0.0	-	0.0	1.6
Articulated Trucks	0	73	0	-	73	0	0	98	-	98	0	0	0	-	0	171
% Articulated Trucks	0.0	3.7	0.0	-	3.6	-	0.0	4.5	-	4.4	-	0.0	0.0	-	0.0	3.9
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
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Count Name: Renwick Rd and Executive Dr
TMC
Site Code:
Start Date: 01/07/2026

Turning Movement Peak Hour Data (7:15 AM)

Start Time	Renwick Rd Eastbound					Renwick Rd Westbound					Executive Dr Northbound					
	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Left	Right	Peds	App. Total	Int. Total
7:15 AM	0	106	2	0	108	0	3	93	0	96	0	1	1	0	2	206
7:30 AM	0	157	0	0	157	0	3	106	0	109	0	1	2	0	3	269
7:45 AM	1	144	4	0	149	0	5	102	0	107	0	4	3	0	7	263
8:00 AM	0	142	10	0	152	0	2	102	0	104	0	4	3	0	7	263
Total	1	549	16	0	566	0	13	403	0	416	0	10	9	0	19	1001
Approach %	0.2	97.0	2.8	-	-	0.0	3.1	96.9	-	-	0.0	52.6	47.4	-	-	-
Total %	0.1	54.8	1.6	-	56.5	0.0	1.3	40.3	-	41.6	0.0	1.0	0.9	-	1.9	-
PHF	0.250	0.874	0.400	-	0.901	0.000	0.650	0.950	-	0.954	0.000	0.625	0.750	-	0.679	0.930
Lights	1	511	16	-	528	0	13	361	-	374	0	10	8	-	18	920
% Lights	100.0	93.1	100.0	-	93.3	-	100.0	89.6	-	89.9	-	100.0	88.9	-	94.7	91.9
Buses	0	12	0	-	12	0	0	10	-	10	0	0	1	-	1	23
% Buses	0.0	2.2	0.0	-	2.1	-	0.0	2.5	-	2.4	-	0.0	11.1	-	5.3	2.3
Single-Unit Trucks	0	8	0	-	8	0	0	11	-	11	0	0	0	-	0	19
% Single-Unit Trucks	0.0	1.5	0.0	-	1.4	-	0.0	2.7	-	2.6	-	0.0	0.0	-	0.0	1.9
Articulated Trucks	0	18	0	-	18	0	0	21	-	21	0	0	0	-	0	39
% Articulated Trucks	0.0	3.3	0.0	-	3.2	-	0.0	5.2	-	5.0	-	0.0	0.0	-	0.0	3.9
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Renwick Rd and Executive Dr
TMC
Site Code:
Start Date: 01/07/2026

Turning Movement Peak Hour Data (4:00 PM)

Start Time	Renwick Rd Eastbound					Renwick Rd Westbound					Executive Dr Northbound					
	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Left	Right	Peds	App. Total	Int. Total
4:00 PM	0	112	4	0	116	0	2	181	0	183	0	4	2	0	6	305
4:15 PM	1	114	2	0	117	0	3	192	0	195	0	2	4	0	6	318
4:30 PM	1	130	5	0	136	0	3	211	0	214	0	4	4	0	8	358
4:45 PM	0	122	5	0	127	0	7	175	0	182	0	7	3	0	10	319
Total	2	478	16	0	496	0	15	759	0	774	0	17	13	0	30	1300
Approach %	0.4	96.4	3.2	-	-	0.0	1.9	98.1	-	-	0.0	56.7	43.3	-	-	-
Total %	0.2	36.8	1.2	-	38.2	0.0	1.2	58.4	-	59.5	0.0	1.3	1.0	-	2.3	-
PHF	0.500	0.919	0.800	-	0.912	0.000	0.536	0.899	-	0.904	0.000	0.607	0.813	-	0.750	0.908
Lights	2	453	16	-	471	0	15	725	-	740	0	17	13	-	30	1241
% Lights	100.0	94.8	100.0	-	95.0	-	100.0	95.5	-	95.6	-	100.0	100.0	-	100.0	95.5
Buses	0	6	0	-	6	0	0	1	-	1	0	0	0	-	0	7
% Buses	0.0	1.3	0.0	-	1.2	-	0.0	0.1	-	0.1	-	0.0	0.0	-	0.0	0.5
Single-Unit Trucks	0	8	0	-	8	0	0	4	-	4	0	0	0	-	0	12
% Single-Unit Trucks	0.0	1.7	0.0	-	1.6	-	0.0	0.5	-	0.5	-	0.0	0.0	-	0.0	0.9
Articulated Trucks	0	11	0	-	11	0	0	29	-	29	0	0	0	-	0	40
% Articulated Trucks	0.0	2.3	0.0	-	2.2	-	0.0	3.8	-	3.7	-	0.0	0.0	-	0.0	3.1
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Renwick Rd and Weber Rd TMC
Site Code:
Start Date: 01/06/2026
Page No: 1

Turning Movement Data

Start Time	Renwick Rd Eastbound						Renwick Rd Westbound						Weber Rd Northbound						Weber Rd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:00 AM	1	60	87	6	0	154	0	17	42	15	0	74	0	5	183	18	0	206	0	23	113	26	0	162	596
7:15 AM	0	67	98	12	0	177	0	15	55	18	0	88	0	10	229	12	0	251	0	40	153	27	0	220	736
7:30 AM	0	77	117	6	0	200	1	20	52	16	0	89	0	15	221	20	0	256	0	43	160	21	0	224	769
7:45 AM	0	68	94	22	0	184	0	18	70	26	0	114	1	16	219	23	0	259	0	30	173	29	0	232	789
Hourly Total	1	272	396	46	0	715	1	70	219	75	0	365	1	46	852	73	0	972	0	136	599	103	0	838	2890
8:00 AM	0	45	68	10	0	123	0	16	61	32	0	109	0	11	146	22	0	179	0	27	170	35	0	232	643
8:15 AM	0	47	90	9	0	146	0	20	52	32	0	104	1	12	116	8	0	137	0	31	183	19	0	233	620
8:30 AM	0	44	74	13	0	131	0	22	54	26	0	102	1	17	123	11	0	152	0	15	177	41	0	233	618
8:45 AM	0	36	53	11	0	100	0	13	67	29	0	109	0	17	122	16	0	155	0	20	168	42	0	230	594
Hourly Total	0	172	285	43	0	500	0	71	234	119	0	424	2	57	507	57	0	623	0	93	698	137	0	928	2475
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	69	94	17	0	180	0	36	117	32	0	185	1	24	182	14	0	221	0	34	230	92	0	356	942
4:15 PM	1	63	53	16	0	133	1	25	120	34	0	180	0	25	184	16	0	225	0	36	268	105	0	409	947
4:30 PM	0	67	48	13	0	128	1	50	113	31	0	195	3	42	189	12	0	246	0	46	250	89	0	385	954
4:45 PM	2	60	48	22	0	132	0	37	108	32	0	177	0	33	179	12	0	224	0	32	260	83	0	375	908
Hourly Total	3	259	243	68	0	573	2	148	458	129	0	737	4	124	734	54	0	916	0	148	1008	369	0	1525	3751
5:00 PM	1	50	51	11	0	113	0	21	103	41	0	165	0	29	202	9	0	240	0	32	254	88	0	374	892
5:15 PM	0	55	45	11	0	111	1	32	119	37	0	189	0	13	224	22	0	259	0	34	223	105	0	362	921
5:30 PM	1	58	65	10	0	134	0	22	114	23	0	159	0	23	183	16	0	222	0	42	229	83	0	354	869
5:45 PM	3	41	53	11	0	108	0	26	87	34	0	147	1	21	200	23	0	245	0	24	213	61	0	298	798
Hourly Total	5	204	214	43	0	466	1	101	423	135	0	660	1	86	809	70	0	966	0	132	919	337	0	1388	3480
Grand Total	9	907	1138	200	0	2254	4	390	1334	458	0	2186	8	313	2902	254	0	3477	0	509	3224	946	0	4679	12596
Approach %	0.4	40.2	50.5	8.9	-	-	0.2	17.8	61.0	21.0	-	-	0.2	9.0	83.5	7.3	-	-	0.0	10.9	68.9	20.2	-	-	-
Total %	0.1	7.2	9.0	1.6	-	17.9	0.0	3.1	10.6	3.6	-	17.4	0.1	2.5	23.0	2.0	-	27.6	0.0	4.0	25.6	7.5	-	37.1	-
Lights	9	890	1076	184	-	2159	4	320	1282	416	-	2022	8	299	2765	200	-	3272	0	478	3069	924	-	4471	11924
% Lights	100.0	98.1	94.6	92.0	-	95.8	100.0	82.1	96.1	90.8	-	92.5	100.0	95.5	95.3	78.7	-	94.1	-	93.9	95.2	97.7	-	95.6	94.7
Buses	0	1	10	8	-	19	0	4	8	5	-	17	0	3	8	3	-	14	0	7	40	4	-	51	101
% Buses	0.0	0.1	0.9	4.0	-	0.8	0.0	1.0	0.6	1.1	-	0.8	0.0	1.0	0.3	1.2	-	0.4	-	1.4	1.2	0.4	-	1.1	0.8
Single-Unit Trucks	0	11	20	3	-	34	0	17	15	12	-	44	0	7	59	17	-	83	0	10	46	11	-	67	228
% Single-Unit Trucks	0.0	1.2	1.8	1.5	-	1.5	0.0	4.4	1.1	2.6	-	2.0	0.0	2.2	2.0	6.7	-	2.4	-	2.0	1.4	1.2	-	1.4	1.8
Articulated Trucks	0	5	32	5	-	42	0	49	29	25	-	103	0	4	70	34	-	108	0	14	69	7	-	90	343
% Articulated Trucks	0.0	0.6	2.8	2.5	-	1.9	0.0	12.6	2.2	5.5	-	4.7	0.0	1.3	2.4	13.4	-	3.1	-	2.8	2.1	0.7	-	1.9	2.7
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0

% Bicycles on Road	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Renwick Rd and Weber Rd TMC
Site Code:
Start Date: 01/06/2026

Turning Movement Peak Hour Data (7:15 AM)

Start Time	Renwick Rd Eastbound						Renwick Rd Westbound						Weber Rd Northbound						Weber Rd Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:15 AM	0	67	98	12	0	177	0	15	55	18	0	88	0	10	229	12	0	251	0	40	153	27	0	220	736
7:30 AM	0	77	117	6	0	200	1	20	52	16	0	89	0	15	221	20	0	256	0	43	160	21	0	224	769
7:45 AM	0	68	94	22	0	184	0	18	70	26	0	114	1	16	219	23	0	259	0	30	173	29	0	232	789
8:00 AM	0	45	68	10	0	123	0	16	61	32	0	109	0	11	146	22	0	179	0	27	170	35	0	232	643
Total	0	257	377	50	0	684	1	69	238	92	0	400	1	52	815	77	0	945	0	140	656	112	0	908	2937
Approach %	0.0	37.6	55.1	7.3	-	-	0.3	17.3	59.5	23.0	-	-	0.1	5.5	86.2	8.1	-	-	0.0	15.4	72.2	12.3	-	-	-
Total %	0.0	8.8	12.8	1.7	-	23.3	0.0	2.3	8.1	3.1	-	13.6	0.0	1.8	27.7	2.6	-	32.2	0.0	4.8	22.3	3.8	-	30.9	-
PHF	0.000	0.834	0.806	0.568	-	0.855	0.250	0.863	0.850	0.719	-	0.877	0.250	0.813	0.890	0.837	-	0.912	0.000	0.814	0.948	0.800	-	0.978	0.931
Lights	0	251	356	48	-	655	1	54	220	75	-	350	1	49	767	66	-	883	0	129	631	105	-	865	2753
% Lights	-	97.7	94.4	96.0	-	95.8	100.0	78.3	92.4	81.5	-	87.5	100.0	94.2	94.1	85.7	-	93.4	-	92.1	96.2	93.8	-	95.3	93.7
Buses	0	1	6	0	-	7	0	2	6	5	-	13	0	1	2	0	-	3	0	4	4	2	-	10	33
% Buses	-	0.4	1.6	0.0	-	1.0	0.0	2.9	2.5	5.4	-	3.3	0.0	1.9	0.2	0.0	-	0.3	-	2.9	0.6	1.8	-	1.1	1.1
Single-Unit Trucks	0	3	4	2	-	9	0	4	5	2	-	11	0	1	22	2	-	25	0	3	12	3	-	18	63
% Single-Unit Trucks	-	1.2	1.1	4.0	-	1.3	0.0	5.8	2.1	2.2	-	2.8	0.0	1.9	2.7	2.6	-	2.6	-	2.1	1.8	2.7	-	2.0	2.1
Articulated Trucks	0	2	11	0	-	13	0	9	7	10	-	26	0	1	24	9	-	34	0	4	9	2	-	15	88
% Articulated Trucks	-	0.8	2.9	0.0	-	1.9	0.0	13.0	2.9	10.9	-	6.5	0.0	1.9	2.9	11.7	-	3.6	-	2.9	1.4	1.8	-	1.7	3.0
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Renwick Rd and Weber Rd TMC
Site Code:
Start Date: 01/06/2026

Turning Movement Peak Hour Data (4:00 PM)

Start Time	Renwick Rd Eastbound						Renwick Rd Westbound						Weber Rd Northbound						Weber Rd Southbound						
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
4:00 PM	0	69	94	17	0	180	0	36	117	32	0	185	1	24	182	14	0	221	0	34	230	92	0	356	942
4:15 PM	1	63	53	16	0	133	1	25	120	34	0	180	0	25	184	16	0	225	0	36	268	105	0	409	947
4:30 PM	0	67	48	13	0	128	1	50	113	31	0	195	3	42	189	12	0	246	0	46	250	89	0	385	954
4:45 PM	2	60	48	22	0	132	0	37	108	32	0	177	0	33	179	12	0	224	0	32	260	83	0	375	908
Total	3	259	243	68	0	573	2	148	458	129	0	737	4	124	734	54	0	916	0	148	1008	369	0	1525	3751
Approach %	0.5	45.2	42.4	11.9	-	-	0.3	20.1	62.1	17.5	-	-	0.4	13.5	80.1	5.9	-	-	0.0	9.7	66.1	24.2	-	-	-
Total %	0.1	6.9	6.5	1.8	-	15.3	0.1	3.9	12.2	3.4	-	19.6	0.1	3.3	19.6	1.4	-	24.4	0.0	3.9	26.9	9.8	-	40.7	-
PHF	0.375	0.938	0.646	0.773	-	0.796	0.500	0.740	0.954	0.949	-	0.945	0.333	0.738	0.971	0.844	-	0.931	0.000	0.804	0.940	0.879	-	0.932	0.983
Lights	3	254	227	58	-	542	2	124	450	123	-	699	4	119	711	39	-	873	0	143	949	364	-	1456	3570
% Lights	100.0	98.1	93.4	85.3	-	94.6	100.0	83.8	98.3	95.3	-	94.8	100.0	96.0	96.9	72.2	-	95.3	-	96.6	94.1	98.6	-	95.5	95.2
Buses	0	0	2	8	-	10	0	2	1	0	-	3	0	0	2	3	-	5	0	0	29	1	-	30	48
% Buses	0.0	0.0	0.8	11.8	-	1.7	0.0	1.4	0.2	0.0	-	0.4	0.0	0.0	0.3	5.6	-	0.5	-	0.0	2.9	0.3	-	2.0	1.3
Single-Unit Trucks	0	3	5	0	-	8	0	5	0	3	-	8	0	4	11	5	-	20	0	1	7	1	-	9	45
% Single-Unit Trucks	0.0	1.2	2.1	0.0	-	1.4	0.0	3.4	0.0	2.3	-	1.1	0.0	3.2	1.5	9.3	-	2.2	-	0.7	0.7	0.3	-	0.6	1.2
Articulated Trucks	0	2	9	2	-	13	0	17	7	3	-	27	0	1	10	7	-	18	0	4	23	3	-	30	88
% Articulated Trucks	0.0	0.8	3.7	2.9	-	2.3	0.0	11.5	1.5	2.3	-	3.7	0.0	0.8	1.4	13.0	-	2.0	-	2.7	2.3	0.8	-	2.0	2.3
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 mmendoza@kloainc.com

Count Name: Ryan and Weber Rd TMC
Site Code:
Start Date: 01/06/2026
Page No: 1

Turning Movement Data

Start Time	Ryan Dr Westbound					Weber Rd Northbound					Weber Rd Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	Int. Total
7:00 AM	0	0	1	0	1	0	191	0	0	191	0	0	143	0	143	335
7:15 AM	0	0	2	0	2	0	269	1	0	270	0	5	181	0	186	458
7:30 AM	0	1	3	0	4	0	230	3	0	233	0	3	188	0	191	428
7:45 AM	0	2	3	0	5	0	228	8	0	236	0	3	208	0	211	452
Hourly Total	0	3	9	0	12	0	918	12	0	930	0	11	720	0	731	1673
8:00 AM	0	3	1	0	4	0	187	4	0	191	1	2	194	0	197	392
8:15 AM	0	4	2	0	6	0	153	3	0	156	0	3	208	0	211	373
8:30 AM	0	2	3	0	5	0	160	5	0	165	0	5	208	0	213	383
8:45 AM	0	5	3	0	8	0	169	2	0	171	1	10	186	0	197	376
Hourly Total	0	14	9	0	23	0	669	14	0	683	2	20	796	0	818	1524
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	7	15	0	22	0	200	6	0	206	0	9	298	0	307	535
4:15 PM	0	8	9	0	17	0	232	4	0	236	1	12	292	0	305	558
4:30 PM	0	9	15	0	24	0	272	3	0	275	0	16	312	0	328	627
4:45 PM	0	7	10	0	17	0	232	10	0	242	1	20	307	0	328	587
Hourly Total	0	31	49	0	80	0	936	23	0	959	2	57	1209	0	1268	2307
5:00 PM	0	17	16	0	33	0	242	9	0	251	0	8	264	0	272	556
5:15 PM	0	8	11	0	19	0	236	8	0	244	0	10	249	0	259	522
5:30 PM	0	4	8	0	12	0	222	4	0	226	0	13	255	0	268	506
5:45 PM	0	2	14	0	16	0	226	13	0	239	0	14	209	0	223	478
Hourly Total	0	31	49	0	80	0	926	34	0	960	0	45	977	0	1022	2062
Grand Total	0	79	116	0	195	0	3449	83	0	3532	4	133	3702	0	3839	7566
Approach %	0.0	40.5	59.5	-	-	0.0	97.7	2.3	-	-	0.1	3.5	96.4	-	-	-
Total %	0.0	1.0	1.5	-	2.6	0.0	45.6	1.1	-	46.7	0.1	1.8	48.9	-	50.7	-
Lights	0	79	115	-	194	0	3228	83	-	3311	4	132	3453	-	3589	7094
% Lights	-	100.0	99.1	-	99.5	-	93.6	100.0	-	93.7	100.0	99.2	93.3	-	93.5	93.8
Buses	0	0	0	-	0	0	14	0	-	14	0	0	52	-	52	66
% Buses	-	0.0	0.0	-	0.0	-	0.4	0.0	-	0.4	0.0	0.0	1.4	-	1.4	0.9
Single-Unit Trucks	0	0	1	-	1	0	99	0	-	99	0	0	75	-	75	175
% Single-Unit Trucks	-	0.0	0.9	-	0.5	-	2.9	0.0	-	2.8	0.0	0.0	2.0	-	2.0	2.3
Articulated Trucks	0	0	0	-	0	0	108	0	-	108	0	1	122	-	123	231
% Articulated Trucks	-	0.0	0.0	-	0.0	-	3.1	0.0	-	3.1	0.0	0.8	3.3	-	3.2	3.1
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Ryan and Weber Rd TMC
Site Code:
Start Date: 01/06/2026

Turning Movement Peak Hour Data (7:15 AM)

Start Time	Ryan Dr Westbound					Weber Rd Northbound					Weber Rd Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	Int. Total
7:15 AM	0	0	2	0	2	0	269	1	0	270	0	5	181	0	186	458
7:30 AM	0	1	3	0	4	0	230	3	0	233	0	3	188	0	191	428
7:45 AM	0	2	3	0	5	0	228	8	0	236	0	3	208	0	211	452
8:00 AM	0	3	1	0	4	0	187	4	0	191	1	2	194	0	197	392
Total	0	6	9	0	15	0	914	16	0	930	1	13	771	0	785	1730
Approach %	0.0	40.0	60.0	-	-	0.0	98.3	1.7	-	-	0.1	1.7	98.2	-	-	-
Total %	0.0	0.3	0.5	-	0.9	0.0	52.8	0.9	-	53.8	0.1	0.8	44.6	-	45.4	-
PHF	0.000	0.500	0.750	-	0.750	0.000	0.849	0.500	-	0.861	0.250	0.650	0.927	-	0.930	0.944
Lights	0	6	9	-	15	0	847	16	-	863	1	13	730	-	744	1622
% Lights	-	100.0	100.0	-	100.0	-	92.7	100.0	-	92.8	100.0	100.0	94.7	-	94.8	93.8
Buses	0	0	0	-	0	0	3	0	-	3	0	0	5	-	5	8
% Buses	-	0.0	0.0	-	0.0	-	0.3	0.0	-	0.3	0.0	0.0	0.6	-	0.6	0.5
Single-Unit Trucks	0	0	0	-	0	0	32	0	-	32	0	0	19	-	19	51
% Single-Unit Trucks	-	0.0	0.0	-	0.0	-	3.5	0.0	-	3.4	0.0	0.0	2.5	-	2.4	2.9
Articulated Trucks	0	0	0	-	0	0	32	0	-	32	0	0	17	-	17	49
% Articulated Trucks	-	0.0	0.0	-	0.0	-	3.5	0.0	-	3.4	0.0	0.0	2.2	-	2.2	2.8
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Ryan and Weber Rd TMC
Site Code:
Start Date: 01/06/2026

Turning Movement Peak Hour Data (4:00 PM)

Start Time	Ryan Dr Westbound					Weber Rd Northbound					Weber Rd Southbound					
	U-Turn	Left	Right	Peds	App. Total	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	Int. Total
4:00 PM	0	7	15	0	22	0	200	6	0	206	0	9	298	0	307	535
4:15 PM	0	8	9	0	17	0	232	4	0	236	1	12	292	0	305	558
4:30 PM	0	9	15	0	24	0	272	3	0	275	0	16	312	0	328	627
4:45 PM	0	7	10	0	17	0	232	10	0	242	1	20	307	0	328	587
Total	0	31	49	0	80	0	936	23	0	959	2	57	1209	0	1268	2307
Approach %	0.0	38.8	61.3	-	-	0.0	97.6	2.4	-	-	0.2	4.5	95.3	-	-	-
Total %	0.0	1.3	2.1	-	3.5	0.0	40.6	1.0	-	41.6	0.1	2.5	52.4	-	55.0	-
PHF	0.000	0.861	0.817	-	0.833	0.000	0.860	0.575	-	0.872	0.500	0.713	0.969	-	0.966	0.920
Lights	0	31	48	-	79	0	892	23	-	915	2	57	1112	-	1171	2165
% Lights	-	100.0	98.0	-	98.8	-	95.3	100.0	-	95.4	100.0	100.0	92.0	-	92.4	93.8
Buses	0	0	0	-	0	0	5	0	-	5	0	0	39	-	39	44
% Buses	-	0.0	0.0	-	0.0	-	0.5	0.0	-	0.5	0.0	0.0	3.2	-	3.1	1.9
Single-Unit Trucks	0	0	1	-	1	0	20	0	-	20	0	0	14	-	14	35
% Single-Unit Trucks	-	0.0	2.0	-	1.3	-	2.1	0.0	-	2.1	0.0	0.0	1.2	-	1.1	1.5
Articulated Trucks	0	0	0	-	0	0	19	0	-	19	0	0	44	-	44	63
% Articulated Trucks	-	0.0	0.0	-	0.0	-	2.0	0.0	-	2.0	0.0	0.0	3.6	-	3.5	2.7
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Ryan Rd and Ontario St TMC
Site Code:
Start Date: 01/06/2026
Page No: 1

Turning Movement Data

Start Time	Ryan dr Eastbound					Ryan dr Westbound					Ontario St Northbound					
	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Left	Right	Peds	App. Total	Int. Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2
7:15 AM	0	0	1	0	1	0	0	0	0	0	0	2	0	0	2	3
7:30 AM	0	0	1	0	1	0	0	0	0	0	0	8	0	0	8	9
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	6
Hourly Total	0	0	2	0	2	0	0	0	0	0	0	18	0	0	18	20
8:00 AM	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	2
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3
8:45 AM	0	0	2	0	2	0	0	0	0	0	0	5	0	0	5	7
Hourly Total	0	0	3	0	3	0	0	0	0	0	0	12	0	0	12	15
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	0	5	0	5	0	0	0	0	0	0	2	0	0	2	7
4:15 PM	0	0	4	0	4	0	0	0	0	0	0	2	0	0	2	6
4:30 PM	0	0	6	0	6	0	0	0	0	0	0	2	0	0	2	8
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3
Hourly Total	0	0	15	0	15	0	0	0	0	0	0	9	0	0	9	24
5:00 PM	0	0	4	0	4	0	0	0	0	0	0	7	0	0	7	11
5:15 PM	0	0	1	0	1	0	0	0	0	0	0	2	0	0	2	3
5:30 PM	0	0	6	0	6	0	0	0	0	0	0	2	0	0	2	8
5:45 PM	0	0	8	0	8	0	0	0	0	0	0	3	0	0	3	11
Hourly Total	0	0	19	0	19	0	0	0	0	0	0	14	0	0	14	33
Grand Total	0	0	39	0	39	0	0	0	0	0	0	53	0	0	53	92
Approach %	0.0	0.0	100.0	-	-	0.0	0.0	0.0	-	-	0.0	100.0	0.0	-	-	-
Total %	0.0	0.0	42.4	-	42.4	0.0	0.0	0.0	-	0.0	0.0	57.6	0.0	-	57.6	-
Lights	0	0	39	-	39	0	0	0	-	0	0	51	0	-	51	90
% Lights	-	-	100.0	-	100.0	-	-	-	-	-	-	96.2	-	-	96.2	97.8
Buses	0	0	0	-	0	0	0	0	-	0	0	1	0	-	1	1
% Buses	-	-	0.0	-	0.0	-	-	-	-	-	-	1.9	-	-	1.9	1.1
Single-Unit Trucks	0	0	0	-	0	0	0	0	-	0	0	1	0	-	1	1
% Single-Unit Trucks	-	-	0.0	-	0.0	-	-	-	-	-	-	1.9	-	-	1.9	1.1
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	-	0.0	-	0.0	-	-	-	-	-	-	0.0	-	-	0.0	0.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	-	0.0	-	0.0	-	-	-	-	-	-	0.0	-	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Ryan Rd and Ontario St TMC
Site Code:
Start Date: 01/06/2026

Turning Movement Peak Hour Data (7:15 AM)

Start Time	Ryan dr Eastbound					Ryan dr Westbound					Ontario St Northbound					
	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Left	Right	Peds	App. Total	Int. Total
7:15 AM	0	0	1	0	1	0	0	0	0	0	0	2	0	0	2	3
7:30 AM	0	0	1	0	1	0	0	0	0	0	0	8	0	0	8	9
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	6	0	0	6	6
8:00 AM	0	0	1	0	1	0	0	0	0	0	0	1	0	0	1	2
Total	0	0	3	0	3	0	0	0	0	0	0	17	0	0	17	20
Approach %	0.0	0.0	100.0	-	-	0.0	0.0	0.0	-	-	0.0	100.0	0.0	-	-	-
Total %	0.0	0.0	15.0	-	15.0	0.0	0.0	0.0	-	0.0	0.0	85.0	0.0	-	85.0	-
PHF	0.000	0.000	0.750	-	0.750	0.000	0.000	0.000	-	0.000	0.000	0.531	0.000	-	0.531	0.556
Lights	0	0	3	-	3	0	0	0	-	0	0	16	0	-	16	19
% Lights	-	-	100.0	-	100.0	-	-	-	-	-	-	94.1	-	-	94.1	95.0
Buses	0	0	0	-	0	0	0	0	-	0	0	1	0	-	1	1
% Buses	-	-	0.0	-	0.0	-	-	-	-	-	-	5.9	-	-	5.9	5.0
Single-Unit Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Single-Unit Trucks	-	-	0.0	-	0.0	-	-	-	-	-	-	0.0	-	-	0.0	0.0
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	-	0.0	-	0.0	-	-	-	-	-	-	0.0	-	-	0.0	0.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	-	0.0	-	0.0	-	-	-	-	-	-	0.0	-	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Ryan Rd and Ontario St TMC
Site Code:
Start Date: 01/06/2026

Turning Movement Peak Hour Data (4:00 PM)

Start Time	Ryan dr Eastbound					Ryan dr Westbound					Ontario St Northbound					
	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Left	Right	Peds	App. Total	Int. Total
4:00 PM	0	0	5	0	5	0	0	0	0	0	0	2	0	0	2	7
4:15 PM	0	0	4	0	4	0	0	0	0	0	0	2	0	0	2	6
4:30 PM	0	0	6	0	6	0	0	0	0	0	0	2	0	0	2	8
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3	3
Total	0	0	15	0	15	0	0	0	0	0	0	9	0	0	9	24
Approach %	0.0	0.0	100.0	-	-	0.0	0.0	0.0	-	-	0.0	100.0	0.0	-	-	-
Total %	0.0	0.0	62.5	-	62.5	0.0	0.0	0.0	-	0.0	0.0	37.5	0.0	-	37.5	-
PHF	0.000	0.000	0.625	-	0.625	0.000	0.000	0.000	-	0.000	0.000	0.750	0.000	-	0.750	0.750
Lights	0	0	15	-	15	0	0	0	-	0	0	8	0	-	8	23
% Lights	-	-	100.0	-	100.0	-	-	-	-	-	-	88.9	-	-	88.9	95.8
Buses	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Buses	-	-	0.0	-	0.0	-	-	-	-	-	-	0.0	-	-	0.0	0.0
Single-Unit Trucks	0	0	0	-	0	0	0	0	-	0	0	1	0	-	1	1
% Single-Unit Trucks	-	-	0.0	-	0.0	-	-	-	-	-	-	11.1	-	-	11.1	4.2
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	-	0.0	-	0.0	-	-	-	-	-	-	0.0	-	-	0.0	0.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	-	0.0	-	0.0	-	-	-	-	-	-	0.0	-	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 mmendoza@kloainc.com

Count Name: Ryan Rd and Retail Access Dr (east) TMC
Site Code:
Start Date: 01/06/2026
Page No: 1

Turning Movement Data

Start Time	Ryan Rd Eastbound						Ryan Rd Westbound						Retail Access Rd (east) Northbound						Access Road Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:00 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
7:15 AM	0	2	1	1	0	4	0	0	1	1	0	2	0	1	0	0	0	1	0	0	0	0	0	0	7
7:30 AM	0	2	1	1	0	4	0	0	5	3	0	8	0	0	0	0	1	0	0	0	0	0	0	0	12
7:45 AM	0	6	0	2	0	8	0	0	3	3	0	6	0	0	0	0	1	0	0	0	2	2	0	4	18
Hourly Total	0	10	2	4	0	16	0	0	9	9	0	18	0	1	0	0	2	1	0	0	2	2	0	4	39
8:00 AM	0	4	0	0	0	4	0	0	1	0	0	1	0	0	1	0	0	1	0	1	0	2	0	3	9
8:15 AM	0	3	0	2	0	5	0	0	2	1	0	3	0	0	0	0	0	0	0	0	0	4	0	4	12
8:30 AM	1	5	0	2	0	8	0	0	2	0	0	2	0	0	0	0	0	0	0	0	2	2	0	4	14
8:45 AM	0	2	1	4	0	7	0	0	4	0	0	4	0	1	0	0	0	1	0	1	2	2	0	5	17
Hourly Total	1	14	1	8	0	24	0	0	9	1	0	10	0	1	1	0	0	2	0	2	4	10	0	16	52
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	2	2	4	2	0	10	0	0	1	1	0	2	0	7	0	0	0	7	0	1	0	10	0	11	30
4:15 PM	1	3	3	0	0	7	0	0	1	0	0	1	0	12	2	0	0	14	0	1	2	4	0	7	29
4:30 PM	4	3	2	1	0	10	0	0	2	1	0	3	0	13	2	1	0	16	0	3	3	7	0	13	42
4:45 PM	3	4	0	3	0	10	0	0	1	1	0	2	0	12	0	0	0	12	0	0	4	8	0	12	36
Hourly Total	10	12	9	6	0	37	0	0	5	3	0	8	0	44	4	1	0	49	0	5	9	29	0	43	137
5:00 PM	1	5	2	0	0	8	0	0	4	2	0	6	0	11	3	0	0	14	0	1	2	13	0	16	44
5:15 PM	1	3	2	1	0	7	0	0	2	1	0	3	0	7	0	0	0	7	0	0	3	10	0	13	30
5:30 PM	1	2	5	1	0	9	0	0	1	0	0	1	0	8	3	0	0	11	0	1	2	1	0	4	25
5:45 PM	0	0	3	0	0	3	0	0	4	0	0	4	0	10	1	0	0	11	0	3	3	3	0	9	27
Hourly Total	3	10	12	2	0	27	0	0	11	3	0	14	0	36	7	0	0	43	0	5	10	27	0	42	126
Grand Total	14	46	24	20	0	104	0	0	34	16	0	50	0	82	12	1	2	95	0	12	25	68	0	105	354
Approach %	13.5	44.2	23.1	19.2	-	-	0.0	0.0	68.0	32.0	-	-	0.0	86.3	12.6	1.1	-	-	0.0	11.4	23.8	64.8	-	-	-
Total %	4.0	13.0	6.8	5.6	-	29.4	0.0	0.0	9.6	4.5	-	14.1	0.0	23.2	3.4	0.3	-	26.8	0.0	3.4	7.1	19.2	-	29.7	-
Lights	14	46	24	19	-	103	0	0	33	15	-	48	0	82	12	1	-	95	0	12	25	68	-	105	351
% Lights	100.0	100.0	100.0	95.0	-	99.0	-	-	97.1	93.8	-	96.0	-	100.0	100.0	100.0	-	100.0	-	100.0	100.0	100.0	-	100.0	99.2
Buses	0	0	0	0	-	0	0	0	0	1	-	1	0	0	0	0	-	0	0	0	0	0	-	0	1
% Buses	0.0	0.0	0.0	0.0	-	0.0	-	-	0.0	6.3	-	2.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.3
Single-Unit Trucks	0	0	0	0	-	0	0	0	1	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	1
% Single-Unit Trucks	0.0	0.0	0.0	0.0	-	0.0	-	-	2.9	0.0	-	2.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.3
Articulated Trucks	0	0	0	1	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1
% Articulated Trucks	0.0	0.0	0.0	5.0	-	1.0	-	-	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.3
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0

% Bicycles on Road	0.0	0.0	0.0	0.0	-	0.0	-	-	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-

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9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 mmendoza@kloainc.com

Count Name: Ryan Rd and Retail Access Dr (east) TMC
Site Code:
Start Date: 01/06/2026

Turning Movement Peak Hour Data (7:15 AM)

Start Time	Ryan Rd Eastbound						Ryan Rd Westbound						Retail Access Rd (east) Northbound						Access Road Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:15 AM	0	2	1	1	0	4	0	0	1	1	0	2	0	1	0	0	0	1	0	0	0	0	0	0	7
7:30 AM	0	2	1	1	0	4	0	0	5	3	0	8	0	0	0	0	1	0	0	0	0	0	0	0	12
7:45 AM	0	6	0	2	0	8	0	0	3	3	0	6	0	0	0	0	1	0	0	0	2	2	0	4	18
8:00 AM	0	4	0	0	0	4	0	0	1	0	0	1	0	0	1	0	0	1	0	1	0	2	0	3	9
Total	0	14	2	4	0	20	0	0	10	7	0	17	0	1	1	0	2	2	0	1	2	4	0	7	46
Approach %	0.0	70.0	10.0	20.0	-	-	0.0	0.0	58.8	41.2	-	-	0.0	50.0	50.0	0.0	-	-	0.0	14.3	28.6	57.1	-	-	-
Total %	0.0	30.4	4.3	8.7	-	43.5	0.0	0.0	21.7	15.2	-	37.0	0.0	2.2	2.2	0.0	-	4.3	0.0	2.2	4.3	8.7	-	15.2	-
PHF	0.000	0.583	0.500	0.500	-	0.625	0.000	0.000	0.500	0.583	-	0.531	0.000	0.250	0.250	0.000	-	0.500	0.000	0.250	0.250	0.500	-	0.438	0.639
Lights	0	14	2	4	-	20	0	0	10	6	-	16	0	1	1	0	-	2	0	1	2	4	-	7	45
% Lights	-	100.0	100.0	100.0	-	100.0	-	-	100.0	85.7	-	94.1	-	100.0	100.0	-	-	100.0	-	100.0	100.0	100.0	-	100.0	97.8
Buses	0	0	0	0	-	0	0	0	0	1	-	1	0	0	0	0	-	0	0	0	0	0	-	0	1
% Buses	-	0.0	0.0	0.0	-	0.0	-	-	0.0	14.3	-	5.9	-	0.0	0.0	-	-	0.0	-	0.0	0.0	0.0	-	0.0	2.2
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Single-Unit Trucks	-	0.0	0.0	0.0	-	0.0	-	-	0.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	0.0	-	0.0	-	-	0.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	-	0.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 mmendoza@kloainc.com

Count Name: Ryan Rd and Retail Access Dr (east) TMC
Site Code:
Start Date: 01/06/2026

Turning Movement Peak Hour Data (4:00 PM)

Start Time	Ryan Rd Eastbound						Ryan Rd Westbound						Retail Access Rd (east) Northbound						Access Road Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
4:00 PM	2	2	4	2	0	10	0	0	1	1	0	2	0	7	0	0	0	7	0	1	0	10	0	11	30
4:15 PM	1	3	3	0	0	7	0	0	1	0	0	1	0	12	2	0	0	14	0	1	2	4	0	7	29
4:30 PM	4	3	2	1	0	10	0	0	2	1	0	3	0	13	2	1	0	16	0	3	3	7	0	13	42
4:45 PM	3	4	0	3	0	10	0	0	1	1	0	2	0	12	0	0	0	12	0	0	4	8	0	12	36
Total	10	12	9	6	0	37	0	0	5	3	0	8	0	44	4	1	0	49	0	5	9	29	0	43	137
Approach %	27.0	32.4	24.3	16.2	-	-	0.0	0.0	62.5	37.5	-	-	0.0	89.8	8.2	2.0	-	-	0.0	11.6	20.9	67.4	-	-	-
Total %	7.3	8.8	6.6	4.4	-	27.0	0.0	0.0	3.6	2.2	-	5.8	0.0	32.1	2.9	0.7	-	35.8	0.0	3.6	6.6	21.2	-	31.4	-
PHF	0.625	0.750	0.563	0.500	-	0.925	0.000	0.000	0.625	0.750	-	0.667	0.000	0.846	0.500	0.250	-	0.766	0.000	0.417	0.563	0.725	-	0.827	0.815
Lights	10	12	9	6	-	37	0	0	4	3	-	7	0	44	4	1	-	49	0	5	9	29	-	43	136
% Lights	100.0	100.0	100.0	100.0	-	100.0	-	-	80.0	100.0	-	87.5	-	100.0	100.0	100.0	-	100.0	-	100.0	100.0	100.0	-	100.0	99.3
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Buses	0.0	0.0	0.0	0.0	-	0.0	-	-	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	0	0	-	0	0	0	1	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	1
% Single-Unit Trucks	0.0	0.0	0.0	0.0	-	0.0	-	-	20.0	0.0	-	12.5	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.7
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	0.0	0.0	0.0	0.0	-	0.0	-	-	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	0.0	0.0	0.0	0.0	-	0.0	-	-	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Ryan Rd and Retail Access Drive (west) TMC
Site Code:
Start Date: 01/06/2026
Page No: 1

Turning Movement Data

Start Time	Ryan Rd Eastbound					Ryan Rd Westbound					Access Dr Northbound					
	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Left	Right	Peds	App. Total	Int. Total
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	4	2	0	6	0	0	1	0	1	0	0	0	0	0	7
7:30 AM	0	4	2	0	6	0	0	4	0	4	0	0	0	0	0	10
7:45 AM	0	8	3	0	11	0	0	5	0	5	0	0	0	0	0	16
Hourly Total	0	16	7	0	23	0	0	10	0	10	0	0	0	0	0	33
8:00 AM	0	4	2	0	6	0	0	4	1	4	0	0	0	0	0	10
8:15 AM	0	5	1	0	6	0	0	6	0	6	0	0	0	0	0	12
8:30 AM	0	8	2	0	10	0	0	5	0	5	0	0	0	0	0	15
8:45 AM	0	7	5	0	12	0	0	7	0	7	0	0	0	0	0	19
Hourly Total	0	24	10	0	34	0	0	22	1	22	0	0	0	0	0	56
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	8	4	0	12	0	0	20	0	20	0	0	1	0	1	33
4:15 PM	0	8	9	0	17	0	0	17	0	17	0	0	0	0	0	34
4:30 PM	0	6	14	0	20	0	0	26	0	26	0	0	3	0	3	49
4:45 PM	0	6	27	0	33	0	0	21	0	21	0	0	3	0	3	57
Hourly Total	0	28	54	0	82	0	0	84	0	84	0	0	7	0	7	173
5:00 PM	0	8	9	0	17	0	0	31	0	31	0	0	0	0	0	48
5:15 PM	0	8	10	0	18	0	0	20	0	20	0	0	0	0	0	38
5:30 PM	0	6	11	0	17	0	0	11	0	11	0	0	3	0	3	31
5:45 PM	0	3	26	0	29	0	0	17	0	17	0	0	0	1	0	46
Hourly Total	0	25	56	0	81	0	0	79	0	79	0	0	3	1	3	163
Grand Total	0	93	127	0	220	0	0	195	1	195	0	0	10	1	10	425
Approach %	0.0	42.3	57.7	-	-	0.0	0.0	100.0	-	-	0.0	0.0	100.0	-	-	-
Total %	0.0	21.9	29.9	-	51.8	0.0	0.0	45.9	-	45.9	0.0	0.0	2.4	-	2.4	-
Lights	0	92	127	-	219	0	0	194	-	194	0	0	10	-	10	423
% Lights	-	98.9	100.0	-	99.5	-	-	99.5	-	99.5	-	-	100.0	-	100.0	99.5
Buses	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Buses	-	0.0	0.0	-	0.0	-	-	0.0	-	0.0	-	-	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	0	-	0	0	0	1	-	1	0	0	0	-	0	1
% Single-Unit Trucks	-	0.0	0.0	-	0.0	-	-	0.5	-	0.5	-	-	0.0	-	0.0	0.2
Articulated Trucks	0	1	0	-	1	0	0	0	-	0	0	0	0	-	0	1
% Articulated Trucks	-	1.1	0.0	-	0.5	-	-	0.0	-	0.0	-	-	0.0	-	0.0	0.2
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	-	-	0.0	-	0.0	-	-	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	1	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	-	-	-	100.0	-	-	-	-	100.0	-	-

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Count Name: Ryan Rd and Retail Access Drive (west) TMC
Site Code:
Start Date: 01/06/2026

Turning Movement Peak Hour Data (7:15 AM)

Start Time	Ryan Rd Eastbound					Ryan Rd Westbound					Access Dr Northbound					
	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Left	Right	Peds	App. Total	Int. Total
7:15 AM	0	4	2	0	6	0	0	1	0	1	0	0	0	0	0	7
7:30 AM	0	4	2	0	6	0	0	4	0	4	0	0	0	0	0	10
7:45 AM	0	8	3	0	11	0	0	5	0	5	0	0	0	0	0	16
8:00 AM	0	4	2	0	6	0	0	4	1	4	0	0	0	0	0	10
Total	0	20	9	0	29	0	0	14	1	14	0	0	0	0	0	43
Approach %	0.0	69.0	31.0	-	-	0.0	0.0	100.0	-	-	0.0	0.0	0.0	-	-	-
Total %	0.0	46.5	20.9	-	67.4	0.0	0.0	32.6	-	32.6	0.0	0.0	0.0	-	0.0	-
PHF	0.000	0.625	0.750	-	0.659	0.000	0.000	0.700	-	0.700	0.000	0.000	0.000	-	0.000	0.672
Lights	0	20	9	-	29	0	0	14	-	14	0	0	0	-	0	43
% Lights	-	100.0	100.0	-	100.0	-	-	100.0	-	100.0	-	-	-	-	-	100.0
Buses	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Buses	-	0.0	0.0	-	0.0	-	-	0.0	-	0.0	-	-	-	-	-	0.0
Single-Unit Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Single-Unit Trucks	-	0.0	0.0	-	0.0	-	-	0.0	-	0.0	-	-	-	-	-	0.0
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	-	0.0	-	-	0.0	-	0.0	-	-	-	-	-	0.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	-	-	0.0	-	0.0	-	-	-	-	-	0.0
Pedestrians	-	-	-	0	-	-	-	-	1	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 mmendoza@kloainc.com

Count Name: Ryan Rd and Retail Access Drive (west) TMC
Site Code:
Start Date: 01/06/2026

Turning Movement Peak Hour Data (4:00 PM)

Start Time	Ryan Rd Eastbound					Ryan Rd Westbound					Access Dr Northbound					
	U-Turn	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Peds	App. Total	U-Turn	Left	Right	Peds	App. Total	Int. Total
4:00 PM	0	8	4	0	12	0	0	20	0	20	0	0	1	0	1	33
4:15 PM	0	8	9	0	17	0	0	17	0	17	0	0	0	0	0	34
4:30 PM	0	6	14	0	20	0	0	26	0	26	0	0	3	0	3	49
4:45 PM	0	6	27	0	33	0	0	21	0	21	0	0	3	0	3	57
Total	0	28	54	0	82	0	0	84	0	84	0	0	7	0	7	173
Approach %	0.0	34.1	65.9	-	-	0.0	0.0	100.0	-	-	0.0	0.0	100.0	-	-	-
Total %	0.0	16.2	31.2	-	47.4	0.0	0.0	48.6	-	48.6	0.0	0.0	4.0	-	4.0	-
PHF	0.000	0.875	0.500	-	0.621	0.000	0.000	0.808	-	0.808	0.000	0.000	0.583	-	0.583	0.759
Lights	0	28	54	-	82	0	0	83	-	83	0	0	7	-	7	172
% Lights	-	100.0	100.0	-	100.0	-	-	98.8	-	98.8	-	-	100.0	-	100.0	99.4
Buses	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Buses	-	0.0	0.0	-	0.0	-	-	0.0	-	0.0	-	-	0.0	-	0.0	0.0
Single-Unit Trucks	0	0	0	-	0	0	0	1	-	1	0	0	0	-	0	1
% Single-Unit Trucks	-	0.0	0.0	-	0.0	-	-	1.2	-	1.2	-	-	0.0	-	0.0	0.6
Articulated Trucks	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Articulated Trucks	-	0.0	0.0	-	0.0	-	-	0.0	-	0.0	-	-	0.0	-	0.0	0.0
Bicycles on Road	0	0	0	-	0	0	0	0	-	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	-	0.0	-	-	0.0	-	0.0	-	-	0.0	-	0.0	0.0
Pedestrians	-	-	-	0	-	-	-	-	0	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 mmendoza@kloainc.com

Count Name: Weber Rd and McGilvray Dr TMC
Site Code:
Start Date: 01/06/2026

Turning Movement Data

Start Time	McGilvray Dr Eastbound						McGilvray Dr Westbound						Weber Rd Northbound						Weber Rd Southbound						
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
7:00 AM	0	0	0	2	0	2	0	3	0	5	0	8	0	3	190	4	0	197	0	2	130	1	0	133	340
7:15 AM	0	0	0	1	0	1	0	0	0	4	0	4	0	1	255	2	0	258	0	7	186	0	0	193	456
7:30 AM	0	1	0	3	0	4	0	4	0	7	0	11	0	1	237	5	0	243	0	2	176	1	0	179	437
7:45 AM	0	0	0	1	0	1	0	5	0	7	0	12	0	1	221	6	0	228	0	3	203	1	0	207	448
Hourly Total	0	1	0	7	0	8	0	12	0	23	0	35	0	6	903	17	0	926	0	14	695	3	0	712	1681
8:00 AM	0	0	0	2	0	2	0	7	0	5	0	12	0	0	184	4	0	188	0	6	204	0	0	210	412
8:15 AM	0	0	0	1	0	1	0	5	0	3	0	8	0	1	150	8	0	159	0	5	206	3	0	214	382
8:30 AM	0	1	0	0	0	1	0	5	2	3	0	10	0	0	160	2	0	162	0	4	209	1	0	214	387
8:45 AM	0	0	0	3	0	3	0	8	0	6	0	14	0	0	163	3	0	166	0	6	190	1	0	197	380
Hourly Total	0	1	0	6	0	7	0	25	2	17	0	44	0	1	657	17	0	675	0	21	809	5	0	835	1561
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	0	0	3	0	3	0	10	0	10	0	20	0	3	200	9	0	212	0	6	281	1	0	288	523
4:15 PM	0	0	0	1	0	1	0	3	0	7	0	10	0	2	235	13	0	250	0	10	291	5	0	306	567
4:30 PM	0	2	0	2	0	4	0	7	0	11	0	18	0	4	253	11	0	268	0	13	292	2	0	307	597
4:45 PM	0	0	0	1	0	1	0	9	0	7	0	16	0	1	235	8	0	244	0	14	286	1	0	301	562
Hourly Total	0	2	0	7	0	9	0	29	0	35	0	64	0	10	923	41	0	974	0	43	1150	9	0	1202	2249
5:00 PM	0	0	0	0	0	0	0	5	0	5	0	10	0	2	246	10	0	258	0	4	258	1	0	263	531
5:15 PM	0	0	0	2	0	2	0	4	0	3	0	7	0	4	240	15	0	259	0	3	261	2	0	266	534
5:30 PM	0	0	2	2	0	4	0	8	0	9	0	17	0	0	214	11	0	225	0	13	273	1	0	287	533
5:45 PM	0	0	1	0	0	1	0	11	0	5	1	16	0	3	220	9	0	232	0	8	203	0	0	211	460
Hourly Total	0	0	3	4	0	7	0	28	0	22	1	50	0	9	920	45	0	974	0	28	995	4	0	1027	2058
Grand Total	0	4	3	24	0	31	0	94	2	97	1	193	0	26	3403	120	0	3549	0	106	3649	21	0	3776	7549
Approach %	0.0	12.9	9.7	77.4	-	-	0.0	48.7	1.0	50.3	-	-	0.0	0.7	95.9	3.4	-	-	0.0	2.8	96.6	0.6	-	-	-
Total %	0.0	0.1	0.0	0.3	-	0.4	0.0	1.2	0.0	1.3	-	2.6	0.0	0.3	45.1	1.6	-	47.0	0.0	1.4	48.3	0.3	-	50.0	-
Lights	0	4	3	23	-	30	0	91	2	94	-	187	0	25	3192	114	-	3331	0	103	3411	18	-	3532	7080
% Lights	-	100.0	100.0	95.8	-	96.8	-	96.8	100.0	96.9	-	96.9	-	96.2	93.8	95.0	-	93.9	-	97.2	93.5	85.7	-	93.5	93.8
Buses	0	0	0	0	-	0	0	0	0	2	-	2	0	0	12	2	-	14	0	1	47	1	-	49	65
% Buses	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	2.1	-	1.0	-	0.0	0.4	1.7	-	0.4	-	0.9	1.3	4.8	-	1.3	0.9
Single-Unit Trucks	0	0	0	1	-	1	0	3	0	1	-	4	0	1	94	4	-	99	0	2	71	2	-	75	179
% Single-Unit Trucks	-	0.0	0.0	4.2	-	3.2	-	3.2	0.0	1.0	-	2.1	-	3.8	2.8	3.3	-	2.8	-	1.9	1.9	9.5	-	2.0	2.4
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	105	0	-	105	0	0	120	0	-	120	225
% Articulated Trucks	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	3.1	0.0	-	3.0	-	0.0	3.3	0.0	-	3.2	3.0
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0

% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 mmendoza@kloainc.com

Count Name: Weber Rd and McGilvray Dr TMC
Site Code:
Start Date: 01/06/2026

Turning Movement Peak Hour Data (7:15 AM)

Start Time	McGilvray Dr Eastbound						McGilvray Dr Westbound						Weber Rd Northbound						Weber Rd Southbound						
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
7:15 AM	0	0	0	1	0	1	0	0	0	4	0	4	0	1	255	2	0	258	0	7	186	0	0	193	456
7:30 AM	0	1	0	3	0	4	0	4	0	7	0	11	0	1	237	5	0	243	0	2	176	1	0	179	437
7:45 AM	0	0	0	1	0	1	0	5	0	7	0	12	0	1	221	6	0	228	0	3	203	1	0	207	448
8:00 AM	0	0	0	2	0	2	0	7	0	5	0	12	0	0	184	4	0	188	0	6	204	0	0	210	412
Total	0	1	0	7	0	8	0	16	0	23	0	39	0	3	897	17	0	917	0	18	769	2	0	789	1753
Approach %	0.0	12.5	0.0	87.5	-	-	0.0	41.0	0.0	59.0	-	-	0.0	0.3	97.8	1.9	-	-	0.0	2.3	97.5	0.3	-	-	-
Total %	0.0	0.1	0.0	0.4	-	0.5	0.0	0.9	0.0	1.3	-	2.2	0.0	0.2	51.2	1.0	-	52.3	0.0	1.0	43.9	0.1	-	45.0	-
PHF	0.000	0.250	0.000	0.583	-	0.500	0.000	0.571	0.000	0.821	-	0.813	0.000	0.750	0.879	0.708	-	0.889	0.000	0.643	0.942	0.500	-	0.939	0.961
Lights	0	1	0	7	-	8	0	16	0	21	-	37	0	3	834	15	-	852	0	17	728	2	-	747	1644
% Lights	-	100.0	-	100.0	-	100.0	-	100.0	-	91.3	-	94.9	-	100.0	93.0	88.2	-	92.9	-	94.4	94.7	100.0	-	94.7	93.8
Buses	0	0	0	0	-	0	0	0	0	2	-	2	0	0	1	2	-	3	0	0	6	0	-	6	11
% Buses	-	0.0	-	0.0	-	0.0	-	0.0	-	8.7	-	5.1	-	0.0	0.1	11.8	-	0.3	-	0.0	0.8	0.0	-	0.8	0.6
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	28	0	-	28	0	1	17	0	-	18	46
% Single-Unit Trucks	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	3.1	0.0	-	3.1	-	5.6	2.2	0.0	-	2.3	2.6
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	34	0	-	34	0	0	18	0	-	18	52
% Articulated Trucks	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	3.8	0.0	-	3.7	-	0.0	2.3	0.0	-	2.3	3.0
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 mmendoza@kloainc.com

Count Name: Weber Rd and McGilvray Dr TMC
Site Code:
Start Date: 01/06/2026

Turning Movement Peak Hour Data (4:00 PM)

Start Time	McGilvray Dr Eastbound						McGilvray Dr Westbound						Weber Rd Northbound						Weber Rd Southbound						
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
4:00 PM	0	0	0	3	0	3	0	10	0	10	0	20	0	3	200	9	0	212	0	6	281	1	0	288	523
4:15 PM	0	0	0	1	0	1	0	3	0	7	0	10	0	2	235	13	0	250	0	10	291	5	0	306	567
4:30 PM	0	2	0	2	0	4	0	7	0	11	0	18	0	4	253	11	0	268	0	13	292	2	0	307	597
4:45 PM	0	0	0	1	0	1	0	9	0	7	0	16	0	1	235	8	0	244	0	14	286	1	0	301	562
Total	0	2	0	7	0	9	0	29	0	35	0	64	0	10	923	41	0	974	0	43	1150	9	0	1202	2249
Approach %	0.0	22.2	0.0	77.8	-	-	0.0	45.3	0.0	54.7	-	-	0.0	1.0	94.8	4.2	-	-	0.0	3.6	95.7	0.7	-	-	-
Total %	0.0	0.1	0.0	0.3	-	0.4	0.0	1.3	0.0	1.6	-	2.8	0.0	0.4	41.0	1.8	-	43.3	0.0	1.9	51.1	0.4	-	53.4	-
PHF	0.000	0.250	0.000	0.583	-	0.563	0.000	0.725	0.000	0.795	-	0.800	0.000	0.625	0.912	0.788	-	0.909	0.000	0.768	0.985	0.450	-	0.979	0.942
Lights	0	2	0	7	-	9	0	29	0	34	-	63	0	10	883	38	-	931	0	42	1057	9	-	1108	2111
% Lights	-	100.0	-	100.0	-	100.0	-	100.0	-	97.1	-	98.4	-	100.0	95.7	92.7	-	95.6	-	97.7	91.9	100.0	-	92.2	93.9
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	5	0	-	5	0	1	37	0	-	38	43
% Buses	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.5	0.0	-	0.5	-	2.3	3.2	0.0	-	3.2	1.9
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	1	-	1	0	0	18	3	-	21	0	0	16	0	-	16	38
% Single-Unit Trucks	-	0.0	-	0.0	-	0.0	-	0.0	-	2.9	-	1.6	-	0.0	2.0	7.3	-	2.2	-	0.0	1.4	0.0	-	1.3	1.7
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	17	0	-	17	0	0	40	0	-	40	57
% Articulated Trucks	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	1.8	0.0	-	1.7	-	0.0	3.5	0.0	-	3.3	2.5
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Site Plan

RYAN DRIVE

BUILDING A

BUILDING B

BUILDING C

BUILDING D

BUILDING E

GARAGE

BUILDING F

BUILDING G

BUILDING H

BUILDING I

BUILDING J

CLUBHOUSE

POOL

BUILDING K

BUILDING L

BUILDING M

BUILDING N

EXECUTIVE DRIVE (PRIVATE DRIVE)

RYAN DRIVE
(HERETOFORE DEDICATED PER DOC. NO. R2005-124097)

15' DRAINAGE & UTILITY EASEMENT

30' ACCESS-INGRESS/EGRESS EASEMENT

60' BUILDING SETBACK LINE

10' DRAINAGE & UTILITY EASEMENT

7.5' DRAINAGE & UTILITY EASEMENT

30' ACCESS-INGRESS /EGRESS EASEMENT

60' BUILDING SETBACK LINE PER DOC. NO. R2007117350

30' DRAINAGE & UTILITY EASEMENT

36' ACCESS-INGRESS /EGRESS EASEMENT

25' DRAINAGE & UTILITY EASEMENT

BUILDING SETBACK LINE

60' ACCESS-INGRESS/EGRESS & DRAINAGE & UTILITY EASEMENT

30' BUILDING SETBACK LINE PER DOC. NO. R2007117350

15' LANDSCAPE EASEMENT

100.00'

N

0 20 40 80

SCALE: 1"=40'

SITE DATA TABLE

A. DESCRIPTION OF PROPERTY: TWO STORY WALK UP BUILDINGS WITH 18 UNIT AND 20 UNIT CONFIGURATIONS ALONG WITH A CLUBHOUSE AND POOL
B. TOTAL SITE AREA: 15.814 ACRES
C. TOTAL NUMBER OF UNITS: 260 UNITS
D. LAND USE: ALL LAND USE WILL BE MULTI-FAMILY RESIDENTIAL
E. DENSITY: 17.71 UNITS / ACRE:
F. REQUIRED PARKING: 3.5 PER UNIT, 910 STALLS
PROPOSED PARKING: 559 TOTAL STALLS 2.15 PER UNIT
439 SITE STALLS
120 ENCLOSED STALLS

DRAWN BY | REVISIONS | DATE

Manhard CONSULTING
One Parkview Plaza, Suite 2600, Lincoln Trail, IL 62269 Phone: (618)467-2284 Fax: (618)467-2285
Civil Engineers • Surveyors • Water Resource Engineers • Structural Engineers • Traffic Engineers
Construction Managers • Environmental Scientists • Landscape Architects • Planners

SEASONS AT CREST HILL

CITY OF CREST HILL, ILLINOIS

CONCEPT SITE PLAN EXHIBIT

PROJ. MGR.: JSE
PROJ. ASSOC.: MSL
DRAWN BY: GAW
DATE: 10-10-25
SCALE: 1" = 40'

SHEET
EXH
FRD.CRIL01

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December 19, 2025 - 10:24 Dwg Name: P:\Projects\01 Dwg\Eng\Preliminary\Exhibits Eng\City of Crest Hill Concept Plan.dwg Updated By: jwaslelewski

Level of Service Criteria

LEVEL OF SERVICE CRITERIA

Signalized Intersections		
Level of Service	Interpretation	Average Control Delay (seconds per vehicle)
A	Favorable progression. Most vehicles arrive during the green indication and travel through the intersection without stopping.	≤10
B	Good progression, with more vehicles stopping than for Level of Service A.	>10 - 20
C	Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear. Number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.	>20 - 35
D	The volume-to-capacity ratio is high and either progression is ineffective or the cycle length is too long. Many vehicles stop and individual cycle failures are noticeable.	>35 - 55
E	Progression is unfavorable. The volume-to-capacity ratio is high and the cycle length is long. Individual cycle failures are frequent.	>55 - 80
F	The volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.	>80.0

Unsignalized Intersections	
Level of Service	Average Total Delay (SEC/VEH)
A	0 - 10
B	> 10 - 15
C	> 15 - 25
D	> 25 - 35
E	> 35 - 50
F	> 50

Source: *Highway Capacity Manual*, 6th Edition.

Capacity Analysis Summary Sheets

Existing Weekday Morning Peak Hour

Intersection Capacity Utilization
7: Retail Access Drive (east)/N-S Access Road & Ryan Drive 01/13/2026

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Volume (vph)	14	2	4	0	10	7	1	1	0	1	2	4
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right			No			No			No			No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	20	0	0	17	0	0	2	0	0	7	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.94	0.85	0.95	0.94	0.85	0.95	0.98	0.85	0.95	0.91	0.85
Saturated Flow (vph)	0	1778	0	0	1783	0	0	1853	0	0	1725	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)		0.00			0.00			0.00			0.00	
Protected Option Allowed		No			No			No			No	
Reference Time (s)			0.0			0.0			0.0			0.0
Adj Reference Time (s)			0.0			0.0			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	0	154		0	1783		0	702		0	1693	
Reference Time A (s)	0.0	15.6		0.0	1.1		0.0	0.3		0.0	0.5	
Adj Saturation B (vph	0	0		0	1783		0	0		0	0	
Reference Time B (s)	8.9	9.3		0.0	1.1		8.1	8.1		8.1	8.5	
Reference Time (s)		9.3			1.1			0.3			0.5	
Adj Reference Time (s)		13.3			8.0			8.0			8.0	
Split Option												
Ref Time Combined (s)	0.0	1.3		0.0	1.1		0.0	0.1		0.0	0.5	
Ref Time Seperate (s)	0.9	0.1		0.0	0.7		0.1	0.1		0.1	0.1	
Reference Time (s)	1.3	1.3		1.1	1.1		0.1	0.1		0.5	0.5	
Adj Reference Time (s)	8.0	8.0		8.0	8.0		8.0	8.0		8.0	8.0	

Summary	EB WB	NB SB	Combined
Protected Option (s)	NA	NA	
Permitted Option (s)	13.3	8.0	
Split Option (s)	16.0	16.0	
Minimum (s)	13.3	8.0	21.3

Right Turns
Adj Reference Time (s)
Cross Thru Ref Time (s)
Oncoming Left Ref Time (s)
Combined (s)

Intersection Summary			
Intersection Capacity Utilization	17.8%	ICU Level of Service	A

Reference Times and Phasing Options do not represent an optimized timing plan.

Lanes, Volumes, Timings
1: Renwick Road & Weber Road 01/13/2026

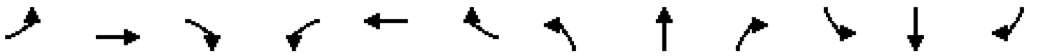
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	257	399	50	69	252	92	52	815	77	140	677	112
Future Volume (vph)	257	399	50	69	252	92	52	815	77	140	677	112
Ideal Flow (vphpl)	1900	1900	1900	1900	2000	1900	1900	1900	1900	1900	2000	1900
Storage Length (ft)	255		0	250		385	244		0	255		260
Storage Lanes	2		0	2		1	2		0	2		1
Taper Length (ft)	260			260			260			255		
Lane Util. Factor	0.97	0.95	0.95	0.97	0.95	1.00	0.97	0.91	0.91	0.97	0.91	1.00
Frt		0.983				0.850		0.987				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	3355	0	2870	3519	1357	3303	4798	0	3242	5250	1524
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	3355	0	2870	3519	1357	3303	4798	0	3242	5250	1524
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		10				65		16				120
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		1732			655			1043			1170	
Travel Time (s)		26.2			9.9			15.8			17.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	2%	6%	4%	22%	8%	19%	6%	6%	14%	8%	4%	6%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	276	483	0	74	271	99	56	959	0	151	728	120
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases						8						6
Detector Phase	7	4		3	8	1	5	2		1	6	7
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0	3.0	3.0	15.0		3.0	15.0	3.0
Minimum Split (s)	9.5	22.5		9.5	22.5	9.5	9.5	22.5		9.5	22.5	9.5
Total Split (s)	15.0	35.0		15.0	35.0	15.0	15.0	60.0		15.0	60.0	15.0
Total Split (%)	12.0%	28.0%		12.0%	28.0%	12.0%	12.0%	48.0%		12.0%	48.0%	12.0%
Yellow Time (s)	3.5	4.5		3.5	4.5	3.5	3.5	4.5		3.5	4.5	3.5
All-Red Time (s)	1.0	1.5		1.0	1.5	1.0	1.0	1.5		1.0	1.5	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0		4.5	6.0	4.5	4.5	6.0		4.5	6.0	4.5
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Min		None	C-Min	None
Act Effct Green (s)	16.7	31.0		8.6	20.8	37.9	7.5	55.5		11.0	61.0	83.7
Actuated g/C Ratio	0.13	0.25		0.07	0.17	0.30	0.06	0.44		0.09	0.49	0.67
v/c Ratio	0.60	0.57		0.38	0.46	0.22	0.28	0.45		0.53	0.28	0.11
Control Delay (s/veh)	56.7	43.2		60.6	48.8	12.6	59.3	26.0		60.9	21.2	2.1
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	56.7	43.2		60.6	48.8	12.6	59.3	26.0		60.9	21.2	2.1
LOS	E	D		E	D	B	E	C		E	C	A
Approach Delay (s/veh)		48.1			42.7			27.8			24.9	
Approach LOS		D			D			C			C	
Queue Length 50th (ft)	109	182		29	105	20	22	189		61	128	0
Queue Length 95th (ft)	153	222		54	139	55	44	274		94	189	25

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		1652			575			963			1090	
Turn Bay Length (ft)	255			250		385	244			255		260
Base Capacity (vph)	458	858		244	816	463	277	2249		303	2616	1060
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.60	0.56		0.30	0.33	0.21	0.20	0.43		0.50	0.28	0.11

Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 125			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.60			
Intersection Signal Delay (s/veh): 33.8		Intersection LOS: C	
Intersection Capacity Utilization 58.8%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: Renwick Road & Weber Road



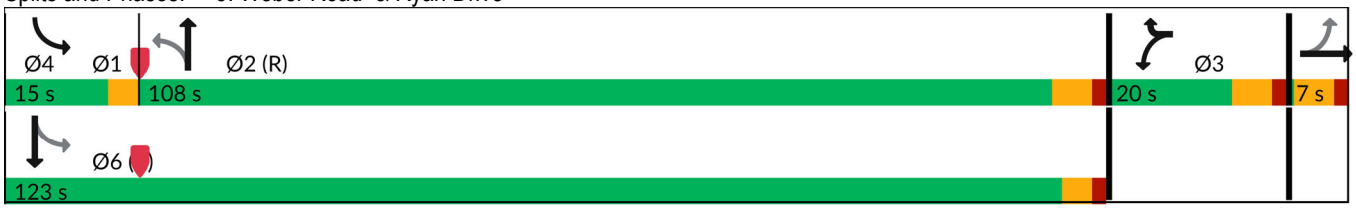


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	6	0	9	0	935	16	13	783	0
Future Volume (vph)	0	0	0	6	0	9	0	935	16	13	783	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	315		0
Storage Lanes	0		0	1		1	0		0	1		0
Taper Length (ft)	25			25			25			125		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	1.00	0.91	0.91
Frt						0.850		0.997				
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	1900	0	1805	0	1615	0	4838	0	1805	4940	0
Flt Permitted				0.950						0.264		
Satd. Flow (perm)	0	1900	0	1805	0	1615	0	4838	0	502	4940	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						91		4				
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		487			155			1028			1043	
Travel Time (s)		11.1			3.5			15.6			15.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	7%	0%	0%	5%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	6	0	10	0	1012	0	14	833	0
Turn Type				Prot		Prot		NA		pm+pt	NA	
Protected Phases		4		3		3		2		1	6	
Permitted Phases	4						2			6		
Detector Phase	4	4		3		3	2	2		1	6	
Switch Phase												
Minimum Initial (s)	1.0	1.0		5.0		5.0	15.0	15.0		3.0	15.0	
Minimum Split (s)	7.0	7.0		11.0		11.0	24.0	24.0		11.5	23.0	
Total Split (s)	7.0	7.0		20.0		20.0	108.0	108.0		15.0	123.0	
Total Split (%)	4.7%	4.7%		13.3%		13.3%	72.0%	72.0%		10.0%	82.0%	
Yellow Time (s)	4.5	4.5		4.5		4.5	4.5	4.5		3.5	3.5	
All-Red Time (s)	1.5	1.5		1.5		1.5	1.5	1.5		0.0	1.5	
Lost Time Adjust (s)		0.0		0.0		0.0		0.0		0.0	0.0	
Total Lost Time (s)		6.0		6.0		6.0		6.0		3.5	5.0	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Recall Mode	None	None		None		None	C-Min	C-Min		None	C-Min	
Act Effct Green (s)				6.1		6.1		138.8		141.4	142.9	
Actuated g/C Ratio				0.04		0.04		0.93		0.94	0.95	
v/c Ratio				0.08		0.07		0.23		0.03	0.18	
Control Delay (s/veh)				71.2		0.8		1.7		0.8	0.7	
Queue Delay				0.0		0.0		0.0		0.0	0.0	
Total Delay (s/veh)				71.2		0.8		1.7		0.8	0.7	
LOS				E		A		A		A	A	
Approach Delay (s/veh)					27.2			1.7			0.7	
Approach LOS					C			A			A	
Queue Length 50th (ft)				6		0		0		0	0	
Queue Length 95th (ft)				22		0		85		3	36	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		407			75			948			963	
Turn Bay Length (ft)										315		
Base Capacity (vph)				168		233		4476		573	4705	
Starvation Cap Reductn				0		0		0		0	0	
Spillback Cap Reductn				0		0		0		0	0	
Storage Cap Reductn				0		0		0		0	0	
Reduced v/c Ratio				0.04		0.04		0.23		0.02	0.18	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.23			
Intersection Signal Delay (s/veh): 1.5		Intersection LOS: A	
Intersection Capacity Utilization 32.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 5: Weber Road & Ryan Drive



Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	615	1	0	413	0	4
Future Vol, veh/h	615	1	0	413	0	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	7	0	0	11	0	25
Mvmt Flow	647	1	0	435	0	4

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	324
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.6
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	4.15
Pot Cap-1 Maneuver	-	-	0	-	0	524
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	524
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	11.92
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	524	-	-	-
HCM Lane V/C Ratio	0.008	-	-	-
HCM Ctrl Dly (s/v)	11.9	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	603	16	13	403	10	9
Future Vol, veh/h	603	16	13	403	10	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	285	-	0	25
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	7	0	0	10	0	11
Mvmt Flow	648	17	14	433	11	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	666	0	893	324
Stage 1	-	-	-	-	648	-
Stage 2	-	-	-	-	245	-
Critical Hdwy	-	-	4.1	-	6.8	7.12
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.41
Pot Cap-1 Maneuver	-	-	933	-	285	646
Stage 1	-	-	-	-	488	-
Stage 2	-	-	-	-	779	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	933	-	281	646
Mov Cap-2 Maneuver	-	-	-	-	389	-
Stage 1	-	-	-	-	488	-
Stage 2	-	-	-	-	768	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.28	12.69
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	389	646	-	-	933	-
HCM Lane V/C Ratio	0.028	0.015	-	-	0.015	-
HCM Ctrl Dly (s/v)	14.5	10.7	-	-	8.9	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-

Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	599	13	14	398	18	46
Future Vol, veh/h	599	13	14	398	18	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	240	120	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	7	0	0	12	0	0
Mvmt Flow	644	14	15	428	19	49

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	658	0	1102	644
Stage 1	-	-	-	-	644	-
Stage 2	-	-	-	-	458	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	939	-	236	476
Stage 1	-	-	-	-	527	-
Stage 2	-	-	-	-	641	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	939	-	232	476
Mov Cap-2 Maneuver	-	-	-	-	367	-
Stage 1	-	-	-	-	527	-
Stage 2	-	-	-	-	631	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.3	14.71
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	439	-	-	939	-
HCM Lane V/C Ratio	0.157	-	-	0.016	-
HCM Ctrl Dly (s/v)	14.7	-	-	8.9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.6	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	20	9	0	15	0	0
Future Vol, veh/h	20	9	0	15	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	67	67	67	67	67	67
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	30	13	0	22	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	37
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	-	-	0	-	0	1042
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	1042
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Ctrl Dly (s/v)	0	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	-	-	-	-

Intersection	
Int Delay, s/veh	7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	3	0	0	17	0
Future Vol, veh/h	0	3	0	0	17	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	56	56	56	56	56	56
Heavy Vehicles, %	0	0	0	0	6	0
Mvmt Flow	0	5	0	0	30	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	5	0	4	3
Stage 1	-	-	-	-	3	-
Stage 2	-	-	-	-	2	-
Critical Hdwy	-	-	4.1	-	6.46	6.2
Critical Hdwy Stg 1	-	-	-	-	5.46	-
Critical Hdwy Stg 2	-	-	-	-	5.46	-
Follow-up Hdwy	-	-	2.2	-	3.554	3.3
Pot Cap-1 Maneuver	-	-	1629	-	1007	1087
Stage 1	-	-	-	-	1010	-
Stage 2	-	-	-	-	1011	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1629	-	1007	1087
Mov Cap-2 Maneuver	-	-	-	-	1007	-
Stage 1	-	-	-	-	1010	-
Stage 2	-	-	-	-	1011	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	8.69
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1007	-	-	1629	-
HCM Lane V/C Ratio	0.03	-	-	-	-
HCM Ctrl Dly (s/v)	8.7	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	0	7	16	0	23	3	927	18	18	769	2
Future Vol, veh/h	1	0	7	16	0	23	3	927	18	18	769	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	125	-	85	130	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	0	9	0	7	12	6	5	0
Mvmt Flow	1	0	7	17	0	24	3	966	19	19	801	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1329	1830	402	1410	1813	483	803	0	0	984	0	0
Stage 1	840	840	-	972	972	-	-	-	-	-	-	-
Stage 2	489	991	-	438	841	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	7.08	4.1	-	-	4.22	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.39	2.2	-	-	2.26	-	-
Pot Cap-1 Maneuver	115	77	604	100	79	511	830	-	-	674	-	-
Stage 1	330	384	-	275	333	-	-	-	-	-	-	-
Stage 2	534	327	-	573	383	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	106	75	604	96	77	511	830	-	-	674	-	-
Mov Cap-2 Maneuver	223	187	-	204	195	-	-	-	-	-	-	-
Stage 1	321	373	-	274	332	-	-	-	-	-	-	-
Stage 2	507	326	-	550	373	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	12.36	18.06	0.03	0.24
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	830	-	-	497	316	674	-	-
HCM Lane V/C Ratio	0.004	-	-	0.017	0.129	0.028	-	-
HCM Ctrl Dly (s/v)	9.4	-	-	12.4	18.1	10.5	-	-
HCM Lane LOS	A	-	-	B	C	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.4	0.1	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	36	32	0	0	7
Future Vol, veh/h	0	36	32	0	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	0	12	7	0	0	0
Mvmt Flow	0	45	40	0	0	9

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	40
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	-	0	1037
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	1037
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	8.5
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	1037
HCM Lane V/C Ratio	-	-	-	0.008
HCM Ctrl Dly (s/v)	-	-	-	8.5
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	17	19	32	1	0	0
Future Vol, veh/h	17	19	32	1	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	74	74	74	74	74	74
Heavy Vehicles, %	0	16	6	0	0	0
Mvmt Flow	23	26	43	1	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	45	0	-	0	116	44
Stage 1	-	-	-	-	44	-
Stage 2	-	-	-	-	72	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1577	-	-	-	886	1032
Stage 1	-	-	-	-	984	-
Stage 2	-	-	-	-	956	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1577	-	-	-	872	1032
Mov Cap-2 Maneuver	-	-	-	-	872	-
Stage 1	-	-	-	-	969	-
Stage 2	-	-	-	-	956	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	3.46	0	0
HCM LOS			A

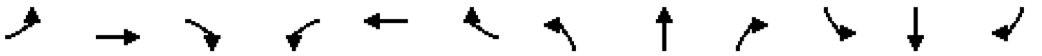
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	850	-	-	-	-
HCM Lane V/C Ratio	0.015	-	-	-	-
HCM Ctrl Dly (s/v)	7.3	0	-	-	0
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Capacity Analysis Summary Sheets

Existing Weekday Evening Peak Hour

Intersection Capacity Utilization
7: Retail Access Drive (east)/N-S Access Road & Ryan Drive

01/13/2026



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	9	6	0	5	4	47	1	1	5	9	32
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right			No			No			No			No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	35	0	0	9	0	0	49	0	0	46	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.95	0.85	0.95	0.93	0.85	0.95	0.95	0.85	0.95	0.89	0.85
Saturated Flow (vph)	0	1798	0	0	1773	0	0	1803	0	0	1692	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)		0.00			0.00			0.00			0.00	
Protected Option Allowed		No			No			No			No	
Reference Time (s)			0.0			0.0			0.0			0.0
Adj Reference Time (s)			0.0			0.0			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	0	183		0	1773		0	328		0	1772	
Reference Time A (s)	0.0	22.9		0.0	0.6		0.0	18.0		0.0	3.1	
Adj Saturation B (vph	0	0		0	1773		0	0		0	0	
Reference Time B (s)	9.3	10.3		0.0	0.6		11.1	11.3		8.3	11.3	
Reference Time (s)		10.3			0.6			11.3			3.1	
Adj Reference Time (s)		14.3			8.0			15.3			8.0	
Split Option												
Ref Time Combined (s)	0.0	2.3		0.0	0.6		0.0	3.3		0.0	3.3	
Ref Time Seperate (s)	1.3	0.6		0.0	0.3		3.1	0.1		0.3	0.6	
Reference Time (s)	2.3	2.3		0.6	0.6		3.3	3.3		3.3	3.3	
Adj Reference Time (s)	8.0	8.0		8.0	8.0		8.0	8.0		8.0	8.0	

Summary	EB WB	NB SB	Combined
Protected Option (s)	NA	NA	
Permitted Option (s)	14.3	15.3	
Split Option (s)	16.0	16.0	
Minimum (s)	14.3	15.3	29.6

Right Turns
Adj Reference Time (s)
Cross Thru Ref Time (s)
Oncoming Left Ref Time (s)
Combined (s)

Intersection Summary			
Intersection Capacity Utilization	24.7%	ICU Level of Service	A

Reference Times and Phasing Options do not represent an optimized timing plan.

Lanes, Volumes, Timings
1: Renwick Road & Weber Road 01/13/2026

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	259	272	68	156	484	136	134	790	61	166	1042	369
Future Volume (vph)	259	272	68	156	484	136	134	790	61	166	1042	369
Ideal Flow (vphpl)	1900	1900	1900	1900	2000	1900	1900	1900	1900	1900	2000	1900
Storage Length (ft)	255		0	250		385	244		0	255		260
Storage Lanes	2		0	2		1	2		0	2		1
Taper Length (ft)	260			260			260			255		
Lane Util. Factor	0.97	0.95	0.95	0.97	0.95	1.00	0.97	0.91	0.91	0.97	0.91	1.00
Frt		0.970				0.850		0.989				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	3225	0	3019	3725	1538	3367	4896	0	3400	5151	1599
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	3225	0	3019	3725	1538	3367	4896	0	3400	5151	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		23				79		12				80
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		1732			655			1043			1170	
Travel Time (s)		26.2			9.9			15.8			17.7	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	2%	7%	15%	16%	2%	5%	4%	3%	28%	3%	6%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	264	347	0	159	494	139	137	868	0	169	1063	377
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases						8						6
Detector Phase	7	4		3	8	1	5	2		1	6	7
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0	3.0	3.0	15.0		3.0	15.0	3.0
Minimum Split (s)	9.5	22.5		9.5	22.5	9.5	9.5	22.5		9.5	22.5	9.5
Total Split (s)	15.0	35.0		15.0	35.0	15.0	15.0	60.0		15.0	60.0	15.0
Total Split (%)	12.0%	28.0%		12.0%	28.0%	12.0%	12.0%	48.0%		12.0%	48.0%	12.0%
Yellow Time (s)	3.5	4.5		3.5	4.5	3.5	3.5	4.5		3.5	4.5	3.5
All-Red Time (s)	1.0	1.5		1.0	1.5	1.0	1.0	1.5		1.0	1.5	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0		4.5	6.0	4.5	4.5	6.0		4.5	6.0	4.5
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Min		None	C-Min	None
Act Effct Green (s)	16.0	30.9		11.9	26.7	43.4	9.9	50.5		10.7	51.4	73.4
Actuated g/C Ratio	0.13	0.25		0.10	0.21	0.35	0.08	0.40		0.09	0.41	0.59
v/c Ratio	0.60	0.43		0.56	0.62	0.24	0.52	0.44		0.58	0.50	0.39
Control Delay (s/veh)	57.1	38.1		61.1	47.9	13.3	62.2	28.5		63.3	29.5	12.6
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	57.1	38.1		61.1	47.9	13.3	62.2	28.5		63.3	29.5	12.6
LOS	E	D		E	D	B	E	C		E	C	B
Approach Delay (s/veh)		46.3			44.5			33.1			29.1	
Approach LOS		D			D			C			C	
Queue Length 50th (ft)	105	115		64	190	32	55	186		68	235	123
Queue Length 95th (ft)	145	158		97	245	80	89	239		107	301	196

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		1652			575			963			1090	
Turn Bay Length (ft)	255			250		385	244			255		260
Base Capacity (vph)	440	833		297	875	592	289	2185		304	2307	971
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.60	0.42		0.54	0.56	0.23	0.47	0.40		0.56	0.46	0.39

Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 125			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay (s/veh): 35.7		Intersection LOS: D	
Intersection Capacity Utilization 60.5%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: Renwick Road & Weber Road

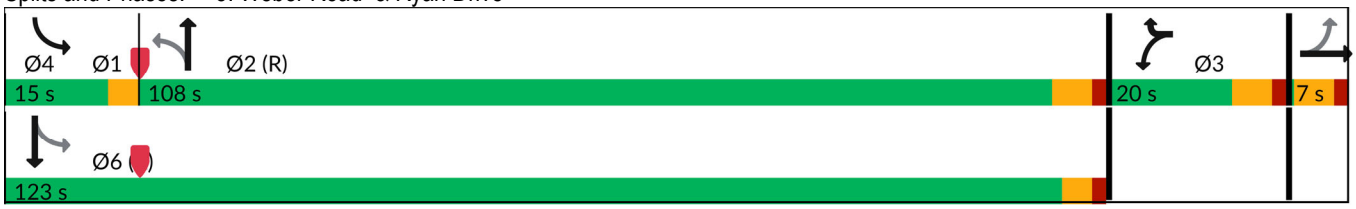


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	35	0	49	0	936	25	57	1209	0
Future Volume (vph)	0	0	0	35	0	49	0	936	25	57	1209	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	315		0
Storage Lanes	0		0	1		1	0		0	1		0
Taper Length (ft)	25			25			25			125		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	1.00	0.91	0.91
Frt						0.850		0.996				
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	1900	0	1805	0	1583	0	4926	0	1805	4803	0
Flt Permitted				0.950						0.252		
Satd. Flow (perm)	0	1900	0	1805	0	1583	0	4926	0	479	4803	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						91		6				
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		487			155			1028			1043	
Travel Time (s)		11.1			3.5			15.6			15.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%	0%	5%	0%	0%	8%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	38	0	53	0	1044	0	62	1314	0
Turn Type				Prot		Prot		NA		pm+pt	NA	
Protected Phases		4		3		3		2		1	6	
Permitted Phases	4						2			6		
Detector Phase	4	4		3		3	2	2		1	6	
Switch Phase												
Minimum Initial (s)	1.0	1.0		5.0		5.0	15.0	15.0		3.0	15.0	
Minimum Split (s)	7.0	7.0		11.0		11.0	24.0	24.0		11.5	23.0	
Total Split (s)	7.0	7.0		20.0		20.0	108.0	108.0		15.0	123.0	
Total Split (%)	4.7%	4.7%		13.3%		13.3%	72.0%	72.0%		10.0%	82.0%	
Yellow Time (s)	4.5	4.5		4.5		4.5	4.5	4.5		3.5	3.5	
All-Red Time (s)	1.5	1.5		1.5		1.5	1.5	1.5		0.0	1.5	
Lost Time Adjust (s)		0.0		0.0		0.0		0.0		0.0	0.0	
Total Lost Time (s)		6.0		6.0		6.0		6.0		3.5	5.0	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Recall Mode	None	None		None		None	C-Min	C-Min		None	C-Min	
Act Effct Green (s)				8.6		8.6		125.1		134.2	133.7	
Actuated g/C Ratio				0.06		0.06		0.83		0.89	0.89	
v/c Ratio				0.37		0.30		0.25		0.13	0.31	
Control Delay (s/veh)				77.3		6.3		3.7		1.8	1.8	
Queue Delay				0.0		0.0		0.0		0.0	0.0	
Total Delay (s/veh)				77.3		6.3		3.7		1.8	1.8	
LOS				E		A		A		A	A	
Approach Delay (s/veh)					36.0			3.7			1.8	
Approach LOS					D			A			A	
Queue Length 50th (ft)				37		0		80		5	62	
Queue Length 95th (ft)				76		9		108		13	87	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		407			75			948			963	
Turn Bay Length (ft)										315		
Base Capacity (vph)				168		230		4109		530	4282	
Starvation Cap Reductn				0		0		0		0	0	
Spillback Cap Reductn				0		0		0		0	0	
Storage Cap Reductn				0		0		0		0	0	
Reduced v/c Ratio				0.23		0.23		0.25		0.12	0.31	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.37			
Intersection Signal Delay (s/veh): 3.8		Intersection LOS: A	
Intersection Capacity Utilization 57.8%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 5: Weber Road & Ryan Drive



Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	485	14	0	776	0	9
Future Vol, veh/h	485	14	0	776	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	8	7	0	6	0	11
Mvmt Flow	522	15	0	834	0	10

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	268
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.32
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	4.01
Pot Cap-1 Maneuver	-	-	0	-	0	602
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	602
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	11.08
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	602	-	-	-
HCM Lane V/C Ratio	0.016	-	-	-
HCM Ctrl Dly (s/v)	11.1	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	478	16	15	759	17	13
Future Vol, veh/h	478	16	15	759	17	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	285	-	0	25
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	5	0	0	4	0	0
Mvmt Flow	525	18	16	834	19	14

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	543	0	975	263
Stage 1	-	-	-	-	525	-
Stage 2	-	-	-	-	450	-
Critical Hdwy	-	-	4.1	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1036	-	252	742
Stage 1	-	-	-	-	563	-
Stage 2	-	-	-	-	615	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1036	-	248	742
Mov Cap-2 Maneuver	-	-	-	-	379	-
Stage 1	-	-	-	-	563	-
Stage 2	-	-	-	-	605	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.17	12.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	379	742	-	-	1036	-
HCM Lane V/C Ratio	0.049	0.019	-	-	0.016	-
HCM Ctrl Dly (s/v)	15	9.9	-	-	8.5	-
HCM Lane LOS	B	A	-	-	A	-
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	459	32	46	754	20	22
Future Vol, veh/h	459	32	46	754	20	22
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	240	120	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	9	0	0	5	0	0
Mvmt Flow	494	34	49	811	22	24

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	528	0	1403	494
Stage 1	-	-	-	-	494	-
Stage 2	-	-	-	-	910	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1049	-	156	580
Stage 1	-	-	-	-	618	-
Stage 2	-	-	-	-	396	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1049	-	148	580
Mov Cap-2 Maneuver	-	-	-	-	276	-
Stage 1	-	-	-	-	618	-
Stage 2	-	-	-	-	377	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.49	15.74
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	380	-	-	1049	-
HCM Lane V/C Ratio	0.119	-	-	0.047	-
HCM Ctrl Dly (s/v)	15.7	-	-	8.6	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.4	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	28	54	0	84	0	7
Future Vol, veh/h	28	54	0	84	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	2	0	0	1	0	0
Mvmt Flow	37	71	0	111	0	9

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	72
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	-	-	0	-	0	995
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	995
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	8.65
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	995	-	-	-
HCM Lane V/C Ratio	0.009	-	-	-
HCM Ctrl Dly (s/v)	8.7	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

Intersection	
Int Delay, s/veh	3.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	15	0	0	9	0
Future Vol, veh/h	0	15	0	0	9	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	0	0	0	0	11	0
Mvmt Flow	0	20	0	0	12	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	20	0	11	10
Stage 1	-	-	-	-	10	-
Stage 2	-	-	-	-	1	-
Critical Hdwy	-	-	4.1	-	6.51	6.2
Critical Hdwy Stg 1	-	-	-	-	5.51	-
Critical Hdwy Stg 2	-	-	-	-	5.51	-
Follow-up Hdwy	-	-	2.2	-	3.599	3.3
Pot Cap-1 Maneuver	-	-	1609	-	986	1077
Stage 1	-	-	-	-	990	-
Stage 2	-	-	-	-	999	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1609	-	986	1077
Mov Cap-2 Maneuver	-	-	-	-	986	-
Stage 1	-	-	-	-	990	-
Stage 2	-	-	-	-	999	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	986	-	-	1609	-
HCM Lane V/C Ratio	0.012	-	-	-	-
HCM Ctrl Dly (s/v)	8.7	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	0	7	29	0	36	10	923	45	43	1192	9
Future Vol, veh/h	2	0	7	29	0	36	10	923	45	43	1192	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	125	-	85	130	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	3	0	4	7	2	8	0
Mvmt Flow	2	0	7	31	0	38	11	982	48	46	1268	10

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1877	2415	639	1729	2372	491	1278	0	0	1030	0	0
Stage 1	1364	1364	-	1003	1003	-	-	-	-	-	-	-
Stage 2	512	1051	-	726	1369	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.96	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.33	2.2	-	-	2.22	-	-
Pot Cap-1 Maneuver	45	33	424	58	35	521	550	-	-	670	-	-
Stage 1	158	217	-	263	322	-	-	-	-	-	-	-
Stage 2	518	306	-	387	216	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	38	30	424	52	32	521	550	-	-	670	-	-
Mov Cap-2 Maneuver	112	117	-	158	122	-	-	-	-	-	-	-
Stage 1	147	203	-	258	316	-	-	-	-	-	-	-
Stage 2	471	300	-	354	202	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	19.24	24.1	0.12	0.37
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	550	-	-	262	257	670	-	-
HCM Lane V/C Ratio	0.019	-	-	0.036	0.269	0.068	-	-
HCM Ctrl Dly (s/v)	11.7	-	-	19.2	24.1	10.8	-	-
HCM Lane LOS	B	-	-	C	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	1.1	0.2	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	88	40	0	0	25
Future Vol, veh/h	0	88	40	0	0	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	5	8	5	0	0	0
Mvmt Flow	0	99	45	0	0	28

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	45
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	-	0	1031
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	1031
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	8.59
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	1031
HCM Lane V/C Ratio	-	-	-	0.027
HCM Ctrl Dly (s/v)	-	-	-	8.6
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0.1

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	27	61	33	4	7	7
Future Vol, veh/h	27	61	33	4	7	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	3	3	0	0	14
Mvmt Flow	29	66	36	4	8	8

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	40	0	-	0	163	38
Stage 1	-	-	-	-	38	-
Stage 2	-	-	-	-	125	-
Critical Hdwy	4.1	-	-	-	6.4	6.34
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.426
Pot Cap-1 Maneuver	1582	-	-	-	832	1001
Stage 1	-	-	-	-	990	-
Stage 2	-	-	-	-	906	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1582	-	-	-	816	1001
Mov Cap-2 Maneuver	-	-	-	-	816	-
Stage 1	-	-	-	-	971	-
Stage 2	-	-	-	-	906	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	2.25	0	9.07
HCM LOS			A

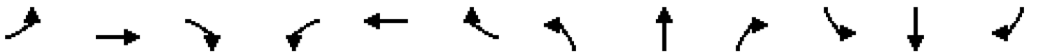
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	552	-	-	-	899
HCM Lane V/C Ratio	0.019	-	-	-	0.017
HCM Ctrl Dly (s/v)	7.3	0	-	-	9.1
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

Capacity Analysis Summary Sheets

Year 2032 No-Build Weekday Morning Peak Hour

Intersection Capacity Utilization
7: Retail Access Drive (east)/N-S Access Road & Ryan Drive

01/13/2026



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	125	2	4	0	10	7	1	1	0	1	2	88
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right			No			No			No			No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	131	0	0	17	0	0	2	0	0	91	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.95	0.85	0.95	0.94	0.85	0.95	0.98	0.85	0.95	0.85	0.85
Saturated Flow (vph)	0	1801	0	0	1783	0	0	1853	0	0	1624	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)		0.00			0.00			0.00			0.00	
Protected Option Allowed		No			No			No			No	
Reference Time (s)			0.0			0.0			0.0			0.0
Adj Reference Time (s)			0.0			0.0			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	0	124		0	1783		0	255		0	1624	
Reference Time A (s)	0.0	127.0		0.0	1.1		0.0	0.9		0.0	6.7	
Adj Saturation B (vph	0	0		0	1783		0	0		0	0	
Reference Time B (s)	16.3	16.7		0.0	1.1		8.1	8.1		8.1	14.7	
Reference Time (s)		16.7			1.1			0.9			6.7	
Adj Reference Time (s)		20.7			8.0			8.0			10.7	
Split Option												
Ref Time Combined (s)	0.0	8.7		0.0	1.1		0.0	0.1		0.0	6.7	
Ref Time Seperate (s)	8.3	0.1		0.0	0.7		0.1	0.1		0.1	0.1	
Reference Time (s)	8.7	8.7		1.1	1.1		0.1	0.1		6.7	6.7	
Adj Reference Time (s)	12.7	12.7		8.0	8.0		8.0	8.0		10.7	10.7	

Summary	EB WB	NB SB	Combined
Protected Option (s)	NA	NA	
Permitted Option (s)	20.7	10.7	
Split Option (s)	20.7	18.7	
Minimum (s)	20.7	10.7	31.5

Right Turns
Adj Reference Time (s)
Cross Thru Ref Time (s)
Oncoming Left Ref Time (s)
Combined (s)

Intersection Summary			
Intersection Capacity Utilization	26.2%	ICU Level of Service	A

Reference Times and Phasing Options do not represent an optimized timing plan.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	267	426	59	72	265	105	63	873	80	178	726	116
Future Volume (vph)	267	426	59	72	265	105	63	873	80	178	726	116
Ideal Flow (vphpl)	1900	1900	1900	1900	2000	1900	1900	1900	1900	1900	2000	1900
Storage Length (ft)	255		0	250		385	244		0	255		260
Storage Lanes	2		0	2		1	2		0	2		1
Taper Length (ft)	260			260			260			255		
Lane Util. Factor	0.97	0.95	0.95	0.97	0.95	1.00	0.97	0.91	0.91	0.97	0.91	1.00
Frt		0.982				0.850		0.987				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	3352	0	2870	3519	1357	3303	4799	0	3242	5250	1524
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	3352	0	2870	3519	1357	3303	4799	0	3242	5250	1524
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11				65		15				125
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		1732			655			1043			1170	
Travel Time (s)		26.2			9.9			15.8			17.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	2%	6%	4%	22%	8%	19%	6%	6%	14%	8%	4%	6%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	287	521	0	77	285	113	68	1025	0	191	781	125
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases						8						6
Detector Phase	7	4		3	8	1	5	2		1	6	7
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0	3.0	3.0	15.0		3.0	15.0	3.0
Minimum Split (s)	9.5	22.5		9.5	22.5	9.5	9.5	22.5		9.5	22.5	9.5
Total Split (s)	15.0	35.0		15.0	35.0	15.0	15.0	60.0		15.0	60.0	15.0
Total Split (%)	12.0%	28.0%		12.0%	28.0%	12.0%	12.0%	48.0%		12.0%	48.0%	12.0%
Yellow Time (s)	3.5	4.5		3.5	4.5	3.5	3.5	4.5		3.5	4.5	3.5
All-Red Time (s)	1.0	1.5		1.0	1.5	1.0	1.0	1.5		1.0	1.5	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0		4.5	6.0	4.5	4.5	6.0		4.5	6.0	4.5
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Min		None	C-Min	None
Act Effct Green (s)	17.2	31.9		8.7	21.2	39.1	8.0	53.7		11.8	59.6	82.9
Actuated g/C Ratio	0.14	0.26		0.07	0.17	0.31	0.06	0.43		0.09	0.48	0.66
v/c Ratio	0.61	0.60		0.39	0.48	0.24	0.32	0.50		0.62	0.31	0.12
Control Delay (s/veh)	56.5	43.5		60.6	48.8	14.6	59.5	27.5		63.7	22.1	2.2
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	56.5	43.5		60.6	48.8	14.6	59.5	27.5		63.7	22.1	2.2
LOS	E	D		E	D	B	E	C		E	C	A
Approach Delay (s/veh)		48.1			42.5			29.5			27.1	
Approach LOS		D			D			C			C	
Queue Length 50th (ft)	113	196		31	111	27	27	217		77	144	0
Queue Length 95th (ft)	160	245		56	146	69	51	283		118	202	26

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		1652			575			963			1090	
Turn Bay Length (ft)	255			250		385	244			255		260
Base Capacity (vph)	473	873		245	816	471	277	2189		313	2564	1052
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.61	0.60		0.31	0.35	0.24	0.25	0.47		0.61	0.30	0.12

Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 125			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.62			
Intersection Signal Delay (s/veh): 34.9		Intersection LOS: C	
Intersection Capacity Utilization 61.3%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: Renwick Road & Weber Road

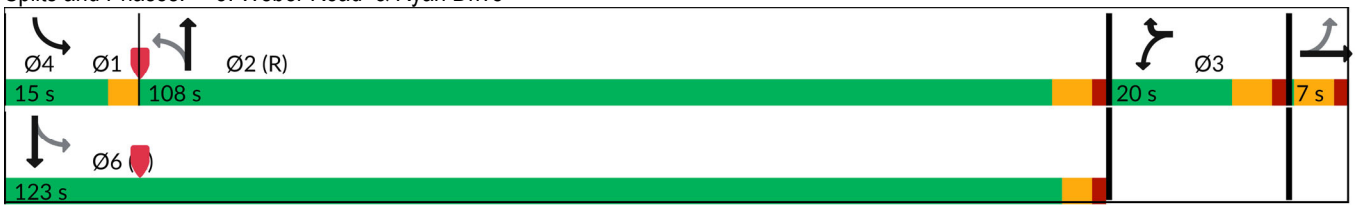


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	56	0	43	0	972	98	43	814	0
Future Volume (vph)	0	0	0	56	0	43	0	972	98	43	814	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	315		0
Storage Lanes	0		0	1		1	0		0	1		0
Taper Length (ft)	25			25			25			125		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	1.00	0.91	0.91
Frt						0.850		0.986				
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	1900	0	1805	0	1615	0	4809	0	1805	4940	0
Flt Permitted				0.950						0.225		
Satd. Flow (perm)	0	1900	0	1805	0	1615	0	4809	0	428	4940	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						91		25				
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		487			155			1028			1043	
Travel Time (s)		11.1			3.5			15.6			15.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	7%	0%	0%	5%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	60	0	46	0	1138	0	46	866	0
Turn Type				Prot		Prot		NA		pm+pt	NA	
Protected Phases		4		3		3		2		1	6	
Permitted Phases	4						2			6		
Detector Phase	4	4		3		3	2	2		1	6	
Switch Phase												
Minimum Initial (s)	1.0	1.0		5.0		5.0	15.0	15.0		3.0	15.0	
Minimum Split (s)	7.0	7.0		11.0		11.0	24.0	24.0		11.5	23.0	
Total Split (s)	7.0	7.0		20.0		20.0	108.0	108.0		15.0	123.0	
Total Split (%)	4.7%	4.7%		13.3%		13.3%	72.0%	72.0%		10.0%	82.0%	
Yellow Time (s)	4.5	4.5		4.5		4.5	4.5	4.5		3.5	3.5	
All-Red Time (s)	1.5	1.5		1.5		1.5	1.5	1.5		0.0	1.5	
Lost Time Adjust (s)		0.0		0.0		0.0		0.0		0.0	0.0	
Total Lost Time (s)		6.0		6.0		6.0		6.0		3.5	5.0	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Recall Mode	None	None		None		None	C-Min	C-Min		None	C-Min	
Act Effct Green (s)				10.3		10.3		123.6		132.6	132.1	
Actuated g/C Ratio				0.07		0.07		0.82		0.88	0.88	
v/c Ratio				0.48		0.24		0.29		0.11	0.20	
Control Delay (s/veh)				79.5		2.8		4.2		2.1	1.9	
Queue Delay				0.0		0.0		0.0		0.0	0.0	
Total Delay (s/veh)				79.5		2.8		4.2		2.1	1.9	
LOS				E		A		A		A	A	
Approach Delay (s/veh)					46.2			4.2			1.9	
Approach LOS					D			A			A	
Queue Length 50th (ft)				58		0		95		5	41	
Queue Length 95th (ft)				106		0		130		12	61	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		407			75			948			963	
Turn Bay Length (ft)										315		
Base Capacity (vph)				169		234		3967		484	4351	
Starvation Cap Reductn				0		0		0		0	0	
Spillback Cap Reductn				0		0		0		0	0	
Storage Cap Reductn				0		0		0		0	0	
Reduced v/c Ratio				0.36		0.20		0.29		0.10	0.20	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.48			
Intersection Signal Delay (s/veh): 5.3		Intersection LOS: A	
Intersection Capacity Utilization 46.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 5: Weber Road & Ryan Drive



Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	640	44	0	442	0	14
Future Vol, veh/h	640	44	0	442	0	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	7	0	0	11	0	25
Mvmt Flow	674	46	0	465	0	15

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	360
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.6
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	4.15
Pot Cap-1 Maneuver	-	-	0	-	0	496
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	496
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	12.49
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	496	-	-	-
HCM Lane V/C Ratio	0.03	-	-	-
HCM Ctrl Dly (s/v)	12.5	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	637	17	41	419	22	13
Future Vol, veh/h	637	17	41	419	22	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	285	-	0	25
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	7	0	0	10	0	11
Mvmt Flow	685	18	44	451	24	14

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	703	0	998	342
Stage 1	-	-	-	-	685	-
Stage 2	-	-	-	-	313	-
Critical Hdwy	-	-	4.1	-	6.8	7.12
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.41
Pot Cap-1 Maneuver	-	-	904	-	244	628
Stage 1	-	-	-	-	467	-
Stage 2	-	-	-	-	720	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	904	-	232	628
Mov Cap-2 Maneuver	-	-	-	-	353	-
Stage 1	-	-	-	-	467	-
Stage 2	-	-	-	-	685	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.82	14.05
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	353	628	-	-	904	-
HCM Lane V/C Ratio	0.067	0.022	-	-	0.049	-
HCM Ctrl Dly (s/v)	15.9	10.9	-	-	9.2	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0.2	-

Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	637	14	15	441	19	48
Future Vol, veh/h	637	14	15	441	19	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	240	120	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	7	0	0	12	0	0
Mvmt Flow	685	15	16	474	20	52

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	700	0	1191	685
Stage 1	-	-	-	-	685	-
Stage 2	-	-	-	-	506	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	906	-	209	452
Stage 1	-	-	-	-	504	-
Stage 2	-	-	-	-	609	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	906	-	205	452
Mov Cap-2 Maneuver	-	-	-	-	342	-
Stage 1	-	-	-	-	504	-
Stage 2	-	-	-	-	598	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.3	15.52
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	414	-	-	906	-
HCM Lane V/C Ratio	0.174	-	-	0.018	-
HCM Ctrl Dly (s/v)	15.5	-	-	9	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.6	-	-	0.1	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	131	9	0	100	0	0
Future Vol, veh/h	131	9	0	100	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	67	67	67	67	67	67
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	196	13	0	149	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	202
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	-	-	0	-	0	844
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	844
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Ctrl Dly (s/v)	0	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	-	-	-	-

Intersection	
Int Delay, s/veh	7.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	3	0	0	18	0
Future Vol, veh/h	0	3	0	0	18	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	56	56	56	56	56	56
Heavy Vehicles, %	0	0	0	0	6	0
Mvmt Flow	0	5	0	0	32	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	5	0	4	3
Stage 1	-	-	-	-	3	-
Stage 2	-	-	-	-	2	-
Critical Hdwy	-	-	4.1	-	6.46	6.2
Critical Hdwy Stg 1	-	-	-	-	5.46	-
Critical Hdwy Stg 2	-	-	-	-	5.46	-
Follow-up Hdwy	-	-	2.2	-	3.554	3.3
Pot Cap-1 Maneuver	-	-	1629	-	1007	1087
Stage 1	-	-	-	-	1010	-
Stage 2	-	-	-	-	1011	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1629	-	1007	1087
Mov Cap-2 Maneuver	-	-	-	-	1007	-
Stage 1	-	-	-	-	1010	-
Stage 2	-	-	-	-	1011	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	8.69
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1007	-	-	1629	-
HCM Lane V/C Ratio	0.032	-	-	-	-
HCM Ctrl Dly (s/v)	8.7	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	0	7	17	0	24	3	1045	19	19	850	2
Future Vol, veh/h	1	0	7	17	0	24	3	1045	19	19	850	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	125	-	85	130	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	0	9	0	7	12	6	5	0
Mvmt Flow	1	0	7	18	0	25	3	1089	20	20	885	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1477	2041	444	1577	2022	544	888	0	0	1108	0	0
Stage 1	926	926	-	1095	1095	-	-	-	-	-	-	-
Stage 2	551	1115	-	482	927	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	7.08	4.1	-	-	4.22	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.39	2.2	-	-	2.26	-	-
Pot Cap-1 Maneuver	89	57	567	75	59	465	772	-	-	603	-	-
Stage 1	293	350	-	232	292	-	-	-	-	-	-	-
Stage 2	492	286	-	539	350	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	81	55	567	72	57	465	772	-	-	603	-	-
Mov Cap-2 Maneuver	193	160	-	172	168	-	-	-	-	-	-	-
Stage 1	283	339	-	231	291	-	-	-	-	-	-	-
Stage 2	463	285	-	515	338	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	13.04	20.65	0.03	0.24
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	772	-	-	456	273	603	-	-
HCM Lane V/C Ratio	0.004	-	-	0.018	0.157	0.033	-	-
HCM Ctrl Dly (s/v)	9.7	-	-	13	20.6	11.2	-	-
HCM Lane LOS	A	-	-	B	C	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.5	0.1	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	37	33	0	0	7
Future Vol, veh/h	0	37	33	0	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	0	12	7	0	0	0
Mvmt Flow	0	46	41	0	0	9

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	41
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	-	0	1035
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	1035
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	8.51
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	1035
HCM Lane V/C Ratio	-	-	-	0.008
HCM Ctrl Dly (s/v)	-	-	-	8.5
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	18	20	33	1	0	0
Future Vol, veh/h	18	20	33	1	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	74	74	74	74	74	74
Heavy Vehicles, %	0	16	6	0	0	0
Mvmt Flow	24	27	45	1	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	46	0	-	0	121	45
Stage 1	-	-	-	-	45	-
Stage 2	-	-	-	-	76	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1575	-	-	-	879	1030
Stage 1	-	-	-	-	982	-
Stage 2	-	-	-	-	952	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1575	-	-	-	866	1030
Mov Cap-2 Maneuver	-	-	-	-	866	-
Stage 1	-	-	-	-	967	-
Stage 2	-	-	-	-	952	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	3.47	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	853	-	-	-	-
HCM Lane V/C Ratio	0.015	-	-	-	-
HCM Ctrl Dly (s/v)	7.3	0	-	-	0
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Capacity Analysis Summary Sheets

Year 2032 No-Build Weekday Evening Peak Hour

Intersection Capacity Utilization
7: Retail Access Drive (east)/N-S Access Road & Ryan Drive 01/13/2026

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Volume (vph)	131	9	6	0	5	4	49	1	1	5	9	175
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right			No			No			No			No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	146	0	0	9	0	0	51	0	0	189	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.95	0.85	0.95	0.93	0.85	0.95	0.95	0.85	0.95	0.86	0.85
Saturated Flow (vph)	0	1804	0	0	1773	0	0	1803	0	0	1634	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)		0.00			0.00			0.00			0.00	
Protected Option Allowed		No			No			No			No	
Reference Time (s)			0.0			0.0			0.0			0.0
Adj Reference Time (s)			0.0			0.0			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	0	129		0	1773		0	173		0	1655	
Reference Time A (s)	0.0	135.5		0.0	0.6		0.0	35.3		0.0	13.7	
Adj Saturation B (vph	0	0		0	1773		NA	NA		0	0	
Reference Time B (s)	16.7	17.7		0.0	0.6		NA	NA		8.3	21.9	
Reference Time (s)		17.7			0.6			35.3			13.7	
Adj Reference Time (s)		21.7			8.0			39.3			17.7	
Split Option												
Ref Time Combined (s)	0.0	9.7		0.0	0.6		0.0	3.4		0.0	13.9	
Ref Time Seperate (s)	8.7	0.6		0.0	0.3		3.3	0.1		0.3	0.7	
Reference Time (s)	9.7	9.7		0.6	0.6		3.4	3.4		13.9	13.9	
Adj Reference Time (s)	13.7	13.7		8.0	8.0		8.0	8.0		17.9	17.9	

Summary	EB WB	NB SB	Combined
Protected Option (s)	NA	NA	
Permitted Option (s)	21.7	39.3	
Split Option (s)	21.7	25.9	
Minimum (s)	21.7	25.9	47.6

Right Turns
Adj Reference Time (s)
Cross Thru Ref Time (s)
Oncoming Left Ref Time (s)
Combined (s)

Intersection Summary			
Intersection Capacity Utilization	39.7%	ICU Level of Service	A

Reference Times and Phasing Options do not represent an optimized timing plan.

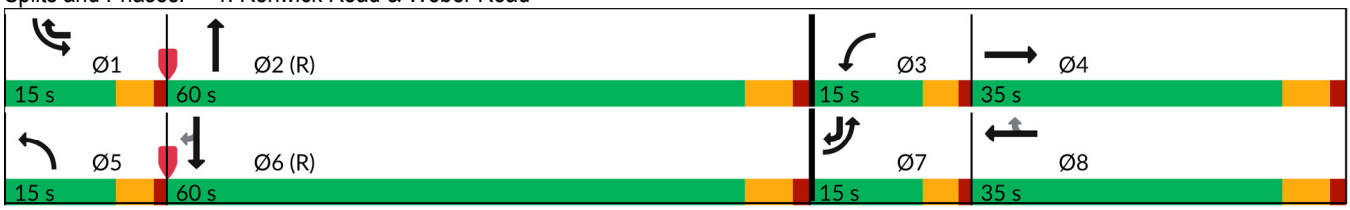
Lanes, Volumes, Timings
1: Renwick Road & Weber Road 01/13/2026

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	269	293	79	162	507	154	154	865	63	205	1106	384
Future Volume (vph)	269	293	79	162	507	154	154	865	63	205	1106	384
Ideal Flow (vphpl)	1900	1900	1900	1900	2000	1900	1900	1900	1900	1900	2000	1900
Storage Length (ft)	255		0	250		385	244		0	255		260
Storage Lanes	2		0	2		1	2		0	2		1
Taper Length (ft)	260			260			260			255		
Lane Util. Factor	0.97	0.95	0.95	0.97	0.95	1.00	0.97	0.91	0.91	0.97	0.91	1.00
Frt		0.968				0.850		0.990				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	3215	0	3019	3725	1538	3367	4905	0	3400	5151	1599
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	3215	0	3019	3725	1538	3367	4905	0	3400	5151	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		26				65		11				65
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		1732			655			1043			1170	
Travel Time (s)		26.2			9.9			15.8			17.7	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	2%	7%	15%	16%	2%	5%	4%	3%	28%	3%	6%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	274	380	0	165	517	157	157	947	0	209	1129	392
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases						8						6
Detector Phase	7	4		3	8	1	5	2		1	6	7
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0	3.0	3.0	15.0		3.0	15.0	3.0
Minimum Split (s)	9.5	22.5		9.5	22.5	9.5	9.5	22.5		9.5	22.5	9.5
Total Split (s)	15.0	35.0		15.0	35.0	15.0	15.0	60.0		15.0	60.0	15.0
Total Split (%)	12.0%	28.0%		12.0%	28.0%	12.0%	12.0%	48.0%		12.0%	48.0%	12.0%
Yellow Time (s)	3.5	4.5		3.5	4.5	3.5	3.5	4.5		3.5	4.5	3.5
All-Red Time (s)	1.0	1.5		1.0	1.5	1.0	1.0	1.5		1.0	1.5	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0		4.5	6.0	4.5	4.5	6.0		4.5	6.0	4.5
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Min		None	C-Min	None
Act Effct Green (s)	16.1	31.3		12.1	27.3	44.5	10.0	49.5		11.1	50.6	72.7
Actuated g/C Ratio	0.13	0.25		0.10	0.22	0.36	0.08	0.40		0.09	0.40	0.58
v/c Ratio	0.62	0.46		0.57	0.64	0.27	0.58	0.49		0.69	0.54	0.41
Control Delay (s/veh)	58.1	38.7		61.2	47.9	17.0	64.5	29.6		67.7	30.4	13.9
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	58.1	38.7		61.2	47.9	17.0	64.5	29.6		67.7	30.4	13.9
LOS	E	D		E	D	B	E	C		E	C	B
Approach Delay (s/veh)		46.8			44.7			34.6			31.1	
Approach LOS		D			D			C			C	
Queue Length 50th (ft)	108	125		67	198	48	63	217		84	263	142
Queue Length 95th (ft)	157	182		101	257	103	101	249		#138	305	216

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		1652			575			963			1090	
Turn Bay Length (ft)	255			250		385	244			255		260
Base Capacity (vph)	441	836		301	880	591	286	2166		307	2281	956
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.62	0.45		0.55	0.59	0.27	0.55	0.44		0.68	0.49	0.41

Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 125			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay (s/veh): 37.0		Intersection LOS: D	
Intersection Capacity Utilization 63.2%		ICU Level of Service B	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 1: Renwick Road & Weber Road

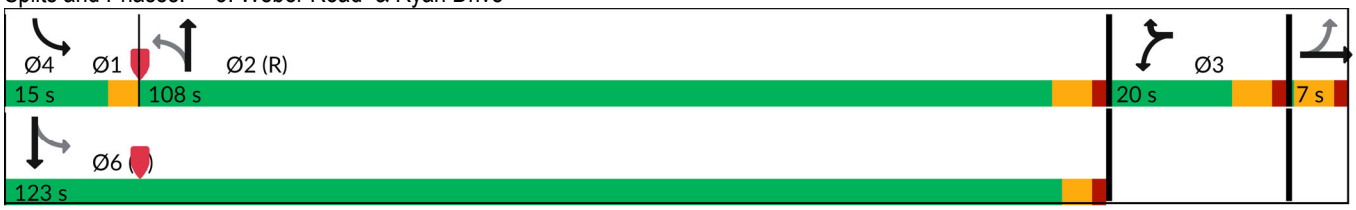


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	120	0	109	0	973	106	89	1257	0
Future Volume (vph)	0	0	0	120	0	109	0	973	106	89	1257	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	315		0
Storage Lanes	0		0	1		1	0		0	1		0
Taper Length (ft)	25			25			25			125		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	1.00	0.91	0.91
Frt						0.850		0.985				
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	1900	0	1805	0	1583	0	4889	0	1805	4803	0
Flt Permitted				0.950						0.211		
Satd. Flow (perm)	0	1900	0	1805	0	1583	0	4889	0	401	4803	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						118		27				
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		487			155			1028			1043	
Travel Time (s)		11.1			3.5			15.6			15.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%	0%	5%	0%	0%	8%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	130	0	118	0	1173	0	97	1366	0
Turn Type				Prot		Prot		NA		pm+pt	NA	
Protected Phases		4		3		3		2		1	6	
Permitted Phases	4						2			6		
Detector Phase	4	4		3		3	2	2		1	6	
Switch Phase												
Minimum Initial (s)	1.0	1.0		5.0		5.0	15.0	15.0		3.0	15.0	
Minimum Split (s)	7.0	7.0		11.0		11.0	24.0	24.0		11.5	23.0	
Total Split (s)	7.0	7.0		20.0		20.0	108.0	108.0		15.0	123.0	
Total Split (%)	4.7%	4.7%		13.3%		13.3%	72.0%	72.0%		10.0%	82.0%	
Yellow Time (s)	4.5	4.5		4.5		4.5	4.5	4.5		3.5	3.5	
All-Red Time (s)	1.5	1.5		1.5		1.5	1.5	1.5		0.0	1.5	
Lost Time Adjust (s)		0.0		0.0		0.0		0.0		0.0	0.0	
Total Lost Time (s)		6.0		6.0		6.0		6.0		3.5	5.0	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Recall Mode	None	None		None		None	C-Min	C-Min		None	C-Min	
Act Effct Green (s)				15.0		15.0		112.6		125.5	124.0	
Actuated g/C Ratio				0.10		0.10		0.75		0.84	0.83	
v/c Ratio				0.72		0.45		0.32		0.24	0.34	
Control Delay (s/veh)				86.8		15.6		6.4		3.7	3.5	
Queue Delay				0.0		0.0		0.0		0.0	0.0	
Total Delay (s/veh)				86.8		15.6		6.4		3.7	3.5	
LOS				F		B		A		A	A	
Approach Delay (s/veh)					52.9			6.4			3.5	
Approach LOS					D			A			A	
Queue Length 50th (ft)				124		0		126		14	105	
Queue Length 95th (ft)				#235		63		137		21	105	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		407			75			948			963	
Turn Bay Length (ft)										315		
Base Capacity (vph)				188		270		3676		443	3969	
Starvation Cap Reductn				0		0		0		0	0	
Spillback Cap Reductn				0		0		0		0	0	
Storage Cap Reductn				0		0		0		0	0	
Reduced v/c Ratio				0.69		0.44		0.32		0.22	0.34	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay (s/veh): 8.9		Intersection LOS: A	
Intersection Capacity Utilization 64.6%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 5: Weber Road & Ryan Drive



Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	504	57	0	824	0	26
Future Vol, veh/h	504	57	0	824	0	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	8	7	0	6	0	11
Mvmt Flow	542	61	0	886	0	28

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	302
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.32
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	4.01
Pot Cap-1 Maneuver	-	-	0	-	0	572
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	572
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	11.61
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	572	-	-	-
HCM Lane V/C Ratio	0.049	-	-	-
HCM Ctrl Dly (s/v)	11.6	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	514	17	42	789	35	23
Future Vol, veh/h	514	17	42	789	35	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	285	-	0	25
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	5	0	0	4	0	0
Mvmt Flow	565	19	46	867	38	25

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	584	0	1091	282
Stage 1	-	-	-	-	565	-
Stage 2	-	-	-	-	526	-
Critical Hdwy	-	-	4.1	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1001	-	213	721
Stage 1	-	-	-	-	538	-
Stage 2	-	-	-	-	563	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1001	-	203	721
Mov Cap-2 Maneuver	-	-	-	-	338	-
Stage 1	-	-	-	-	538	-
Stage 2	-	-	-	-	537	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.44	14.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	338	721	-	-	1001	-
HCM Lane V/C Ratio	0.114	0.035	-	-	0.046	-
HCM Ctrl Dly (s/v)	17	10.2	-	-	8.8	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.4	0.1	-	-	0.1	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	503	33	48	810	21	23
Future Vol, veh/h	503	33	48	810	21	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	240	120	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	9	0	0	5	0	0
Mvmt Flow	541	35	52	871	23	25

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	576	0	1515	541
Stage 1	-	-	-	-	541	-
Stage 2	-	-	-	-	974	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1007	-	133	545
Stage 1	-	-	-	-	588	-
Stage 2	-	-	-	-	369	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1007	-	126	545
Mov Cap-2 Maneuver	-	-	-	-	253	-
Stage 1	-	-	-	-	588	-
Stage 2	-	-	-	-	350	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.49	16.84
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	351	-	-	1007	-
HCM Lane V/C Ratio	0.135	-	-	0.051	-
HCM Ctrl Dly (s/v)	16.8	-	-	8.8	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.5	-	-	0.2	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	139	56	0	229	0	7
Future Vol, veh/h	139	56	0	229	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	2	0	0	1	0	0
Mvmt Flow	183	74	0	301	0	9

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	220
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	-	-	0	-	0	825
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	825
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	9.41
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	825	-	-	-
HCM Lane V/C Ratio	0.011	-	-	-
HCM Ctrl Dly (s/v)	9.4	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

Intersection	
Int Delay, s/veh	3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	0	16	0	0	9	0
Future Vol, veh/h	0	16	0	0	9	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	0	0	0	0	11	0
Mvmt Flow	0	21	0	0	12	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	21	0	12	11
Stage 1	-	-	-	-	11	-
Stage 2	-	-	-	-	1	-
Critical Hdwy	-	-	4.1	-	6.51	6.2
Critical Hdwy Stg 1	-	-	-	-	5.51	-
Critical Hdwy Stg 2	-	-	-	-	5.51	-
Follow-up Hdwy	-	-	2.2	-	3.599	3.3
Pot Cap-1 Maneuver	-	-	1608	-	985	1076
Stage 1	-	-	-	-	989	-
Stage 2	-	-	-	-	999	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1608	-	985	1076
Mov Cap-2 Maneuver	-	-	-	-	985	-
Stage 1	-	-	-	-	989	-
Stage 2	-	-	-	-	999	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	985	-	-	1608	-
HCM Lane V/C Ratio	0.012	-	-	-	-
HCM Ctrl Dly (s/v)	8.7	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	0	7	30	0	37	10	1040	47	45	1324	9
Future Vol, veh/h	2	0	7	30	0	37	10	1040	47	45	1324	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	125	-	85	130	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	3	0	4	7	2	8	0
Mvmt Flow	2	0	7	32	0	39	11	1106	50	48	1409	10

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2084	2687	709	1928	2641	553	1418	0	0	1156	0	0
Stage 1	1509	1509	-	1128	1128	-	-	-	-	-	-	-
Stage 2	574	1178	-	800	1514	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.96	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.33	2.2	-	-	2.22	-	-
Pot Cap-1 Maneuver	31	22	381	41	24	474	487	-	-	600	-	-
Stage 1	129	185	-	221	282	-	-	-	-	-	-	-
Stage 2	476	267	-	349	184	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	26	20	381	36	21	474	487	-	-	600	-	-
Mov Cap-2 Maneuver	90	95	-	131	101	-	-	-	-	-	-	-
Stage 1	118	170	-	216	276	-	-	-	-	-	-	-
Stage 2	427	261	-	315	169	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	21.92	29.23	0.11	0.38
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	487	-	-	222	219	600	-	-
HCM Lane V/C Ratio	0.022	-	-	0.043	0.326	0.08	-	-
HCM Ctrl Dly (s/v)	12.6	-	-	21.9	29.2	11.5	-	-
HCM Lane LOS	B	-	-	C	D	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	1.4	0.3	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	92	42	0	0	26
Future Vol, veh/h	0	92	42	0	0	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	5	8	5	0	0	0
Mvmt Flow	0	103	47	0	0	29

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	47
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	-	0	1028
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	1028
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	8.61
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	1028
HCM Lane V/C Ratio	-	-	-	0.028
HCM Ctrl Dly (s/v)	-	-	-	8.6
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0.1

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	28	63	34	4	7	7
Future Vol, veh/h	28	63	34	4	7	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	3	3	0	0	14
Mvmt Flow	30	68	37	4	8	8

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	41	0	-	0	168	39
Stage 1	-	-	-	-	39	-
Stage 2	-	-	-	-	129	-
Critical Hdwy	4.1	-	-	-	6.4	6.34
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.426
Pot Cap-1 Maneuver	1581	-	-	-	826	999
Stage 1	-	-	-	-	989	-
Stage 2	-	-	-	-	902	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1581	-	-	-	810	999
Mov Cap-2 Maneuver	-	-	-	-	810	-
Stage 1	-	-	-	-	969	-
Stage 2	-	-	-	-	902	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	2.25	0	9.09
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	554	-	-	-	895
HCM Lane V/C Ratio	0.019	-	-	-	0.017
HCM Ctrl Dly (s/v)	7.3	0	-	-	9.1
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

Capacity Analysis Summary Sheets

Year 2032 Total Projected Weekday Morning Peak Hour

Intersection Capacity Utilization
7: Retail Access Drive (east)/N-S Access Road & Ryan Drive

01/13/2026

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Volume (vph)	129	12	4	0	40	7	1	1	0	1	2	103
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right			No			No			No			No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	145	0	0	47	0	0	2	0	0	106	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.95	0.85	0.95	0.98	0.85	0.95	0.98	0.85	0.95	0.85	0.85
Saturated Flow (vph)	0	1808	0	0	1858	0	0	1853	0	0	1622	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)		0.00			0.00			0.00			0.00	
Protected Option Allowed		No			No			No			No	
Reference Time (s)			0.0			0.0			0.0			0.0
Adj Reference Time (s)			0.0			0.0			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	0	130		0	1858		0	249		0	1623	
Reference Time A (s)	0.0	133.5		0.0	3.0		0.0	1.0		0.0	7.8	
Adj Saturation B (vph	0	0		0	1858		0	0		0	0	
Reference Time B (s)	16.6	17.6		0.0	3.0		8.1	8.1		8.1	15.8	
Reference Time (s)		17.6			3.0			1.0			7.8	
Adj Reference Time (s)		21.6			8.0			8.0			11.8	
Split Option												
Ref Time Combined (s)	0.0	9.6		0.0	3.0		0.0	0.1		0.0	7.8	
Ref Time Seperate (s)	8.6	0.8		0.0	2.6		0.1	0.1		0.1	0.1	
Reference Time (s)	9.6	9.6		3.0	3.0		0.1	0.1		7.8	7.8	
Adj Reference Time (s)	13.6	13.6		8.0	8.0		8.0	8.0		11.8	11.8	

Summary	EB WB	NB SB	Combined
Protected Option (s)	NA	NA	
Permitted Option (s)	21.6	11.8	
Split Option (s)	21.6	19.8	
Minimum (s)	21.6	11.8	33.5

Right Turns
Adj Reference Time (s)
Cross Thru Ref Time (s)
Oncoming Left Ref Time (s)
Combined (s)

Intersection Summary			
Intersection Capacity Utilization	27.9%	ICU Level of Service	A

Reference Times and Phasing Options do not represent an optimized timing plan.

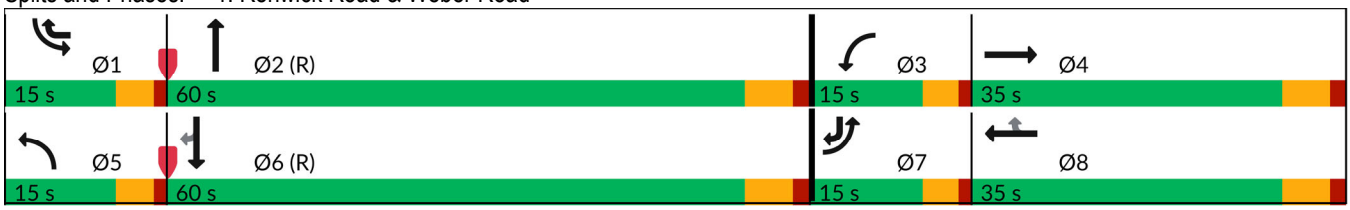
Lanes, Volumes, Timings
1: Renwick Road & Weber Road 01/13/2026

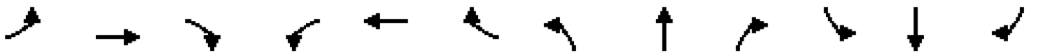
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	267	428	60	72	269	123	67	891	80	183	732	116
Future Volume (vph)	267	428	60	72	269	123	67	891	80	183	732	116
Ideal Flow (vphpl)	1900	1900	1900	1900	2000	1900	1900	1900	1900	1900	2000	1900
Storage Length (ft)	255		0	250		385	244		0	255		260
Storage Lanes	2		0	2		1	2		0	2		1
Taper Length (ft)	260			260			260			255		
Lane Util. Factor	0.97	0.95	0.95	0.97	0.95	1.00	0.97	0.91	0.91	0.97	0.91	1.00
Frt		0.981				0.850		0.988				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	3349	0	2870	3519	1357	3303	4805	0	3242	5250	1524
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	3349	0	2870	3519	1357	3303	4805	0	3242	5250	1524
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12				65		15				125
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		1732			655			1043			1170	
Travel Time (s)		26.2			9.9			15.8			17.7	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	2%	6%	4%	22%	8%	19%	6%	6%	14%	8%	4%	6%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	287	525	0	77	289	132	72	1044	0	197	787	125
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases						8						6
Detector Phase	7	4		3	8	1	5	2		1	6	7
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0	3.0	3.0	15.0		3.0	15.0	3.0
Minimum Split (s)	9.5	22.5		9.5	22.5	9.5	9.5	22.5		9.5	22.5	9.5
Total Split (s)	15.0	35.0		15.0	35.0	15.0	15.0	60.0		15.0	60.0	15.0
Total Split (%)	12.0%	28.0%		12.0%	28.0%	12.0%	12.0%	48.0%		12.0%	48.0%	12.0%
Yellow Time (s)	3.5	4.5		3.5	4.5	3.5	3.5	4.5		3.5	4.5	3.5
All-Red Time (s)	1.0	1.5		1.0	1.5	1.0	1.0	1.5		1.0	1.5	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0		4.5	6.0	4.5	4.5	6.0		4.5	6.0	4.5
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Min		None	C-Min	None
Act Effct Green (s)	17.0	32.0		8.7	21.6	39.5	8.1	53.6		11.8	59.4	82.4
Actuated g/C Ratio	0.14	0.26		0.07	0.17	0.32	0.06	0.43		0.09	0.48	0.66
v/c Ratio	0.62	0.61		0.39	0.48	0.28	0.34	0.50		0.64	0.32	0.12
Control Delay (s/veh)	57.2	43.4		60.6	48.3	16.7	59.6	27.7		64.6	22.3	2.3
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	57.2	43.4		60.6	48.3	16.7	59.6	27.7		64.6	22.3	2.3
LOS	E	D		E	D	B	E	C		E	C	A
Approach Delay (s/veh)		48.3			41.9			29.7			27.6	
Approach LOS		D			D			C			C	
Queue Length 50th (ft)	113	197		31	112	38	29	223		79	145	0
Queue Length 95th (ft)	162	246		56	146	84	53	284		#132	204	27

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		1652			575			963			1090	
Turn Bay Length (ft)	255			250		385	244			255		260
Base Capacity (vph)	465	875		245	816	475	277	2187		312	2560	1046
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.62	0.60		0.31	0.35	0.28	0.26	0.48		0.63	0.31	0.12

Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 125			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 70			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.64			
Intersection Signal Delay (s/veh): 35.0		Intersection LOS: D	
Intersection Capacity Utilization 61.8%		ICU Level of Service B	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 1: Renwick Road & Weber Road



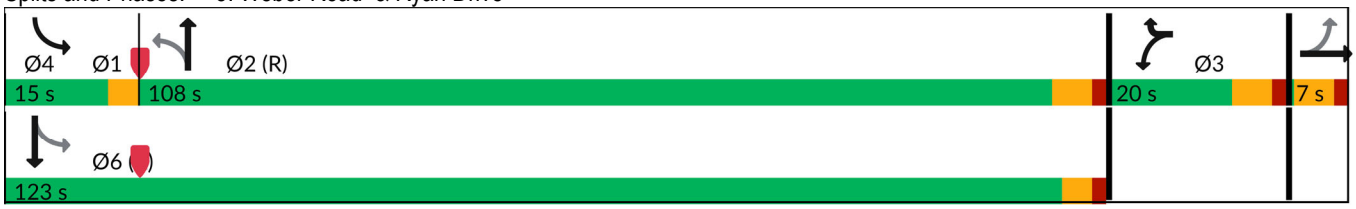


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	79	0	65	0	972	105	50	814	0
Future Volume (vph)	0	0	0	79	0	65	0	972	105	50	814	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	315		0
Storage Lanes	0		0	1		1	0		0	1		0
Taper Length (ft)	25			25			25			125		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	1.00	0.91	0.91
Frt						0.850		0.985				
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	1900	0	1805	0	1615	0	4806	0	1805	4940	0
Flt Permitted				0.950						0.221		
Satd. Flow (perm)	0	1900	0	1805	0	1615	0	4806	0	420	4940	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						91		27				
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		487			155			1028			1043	
Travel Time (s)		11.1			3.5			15.6			15.8	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	7%	0%	0%	5%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	84	0	69	0	1146	0	53	866	0
Turn Type				Prot		Prot		NA		pm+pt	NA	
Protected Phases		4		3		3		2		1	6	
Permitted Phases	4						2			6		
Detector Phase	4	4		3		3	2	2		1	6	
Switch Phase												
Minimum Initial (s)	1.0	1.0		5.0		5.0	15.0	15.0		3.0	15.0	
Minimum Split (s)	7.0	7.0		11.0		11.0	24.0	24.0		11.5	23.0	
Total Split (s)	7.0	7.0		20.0		20.0	108.0	108.0		15.0	123.0	
Total Split (%)	4.7%	4.7%		13.3%		13.3%	72.0%	72.0%		10.0%	82.0%	
Yellow Time (s)	4.5	4.5		4.5		4.5	4.5	4.5		3.5	3.5	
All-Red Time (s)	1.5	1.5		1.5		1.5	1.5	1.5		0.0	1.5	
Lost Time Adjust (s)		0.0		0.0		0.0		0.0		0.0	0.0	
Total Lost Time (s)		6.0		6.0		6.0		6.0		3.5	5.0	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Recall Mode	None	None		None		None	C-Min	C-Min		None	C-Min	
Act Effct Green (s)				12.3		12.3		117.9		128.2	126.7	
Actuated g/C Ratio				0.08		0.08		0.79		0.85	0.84	
v/c Ratio				0.57		0.32		0.30		0.13	0.21	
Control Delay (s/veh)				80.6		9.1		5.1		2.6	2.5	
Queue Delay				0.0		0.0		0.0		0.0	0.0	
Total Delay (s/veh)				80.6		9.1		5.1		2.6	2.5	
LOS				F		A		A		A	A	
Approach Delay (s/veh)					48.4			5.1			2.5	
Approach LOS					D			A			A	
Queue Length 50th (ft)				81		0		104		6	46	
Queue Length 95th (ft)				136		28		144		15	69	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		407			75			948			963	
Turn Bay Length (ft)										315		
Base Capacity (vph)				176		239		3781		465	4173	
Starvation Cap Reductn				0		0		0		0	0	
Spillback Cap Reductn				0		0		0		0	0	
Storage Cap Reductn				0		0		0		0	0	
Reduced v/c Ratio				0.48		0.29		0.30		0.11	0.21	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.57			
Intersection Signal Delay (s/veh): 7.0		Intersection LOS: A	
Intersection Capacity Utilization 53.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 5: Weber Road & Ryan Drive



Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	641	50	0	464	0	20
Future Vol, veh/h	641	50	0	464	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	7	0	0	11	0	25
Mvmt Flow	675	53	0	488	0	21

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	364
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.6
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	4.15
Pot Cap-1 Maneuver	-	-	0	-	0	493
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	493
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	12.63
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	493	-	-	-
HCM Lane V/C Ratio	0.043	-	-	-
HCM Ctrl Dly (s/v)	12.6	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	643	18	45	419	44	19
Future Vol, veh/h	643	18	45	419	44	19
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	285	-	0	25
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	7	0	0	10	0	11
Mvmt Flow	691	19	48	451	47	20

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	711	0	1013	346
Stage 1	-	-	-	-	691	-
Stage 2	-	-	-	-	322	-
Critical Hdwy	-	-	4.1	-	6.8	7.12
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.41
Pot Cap-1 Maneuver	-	-	898	-	238	625
Stage 1	-	-	-	-	464	-
Stage 2	-	-	-	-	713	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	898	-	226	625
Mov Cap-2 Maneuver	-	-	-	-	348	-
Stage 1	-	-	-	-	464	-
Stage 2	-	-	-	-	675	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.9	15.15
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	348	625	-	-	898	-
HCM Lane V/C Ratio	0.136	0.033	-	-	0.054	-
HCM Ctrl Dly (s/v)	17	11	-	-	9.2	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.5	0.1	-	-	0.2	-

Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	649	14	15	445	19	48
Future Vol, veh/h	649	14	15	445	19	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	240	120	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	7	0	0	12	0	0
Mvmt Flow	698	15	16	478	20	52

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	713	0	1209	698
Stage 1	-	-	-	-	698	-
Stage 2	-	-	-	-	511	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	896	-	204	444
Stage 1	-	-	-	-	497	-
Stage 2	-	-	-	-	607	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	896	-	200	444
Mov Cap-2 Maneuver	-	-	-	-	338	-
Stage 1	-	-	-	-	497	-
Stage 2	-	-	-	-	596	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.3	15.72
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	408	-	-	896	-
HCM Lane V/C Ratio	0.177	-	-	0.018	-
HCM Ctrl Dly (s/v)	15.7	-	-	9.1	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.6	-	-	0.1	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	145	9	0	145	0	0
Future Vol, veh/h	145	9	0	145	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	67	67	67	67	67	67
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	216	13	0	216	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	223
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	-	-	0	-	0	821
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	821
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Ctrl Dly (s/v)	0	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	-	-	-	-

Intersection	
Int Delay, s/veh	4.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	5	3	0	15	0	18	0	0	0	0	15
Future Vol, veh/h	5	5	3	0	15	0	18	0	0	0	0	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	56	56	56	56	92	56	92	56	92	92	92
Heavy Vehicles, %	2	0	0	0	0	2	6	2	0	2	2	2
Mvmt Flow	5	9	5	0	27	0	32	0	0	0	0	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	27	0	0	14	0	0	49	49	12	47	52	27
Stage 1	-	-	-	-	-	-	22	22	-	27	27	-
Stage 2	-	-	-	-	-	-	27	27	-	20	25	-
Critical Hdwy	4.12	-	-	4.1	-	-	7.16	6.52	6.2	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.16	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.16	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.2	-	-	3.554	4.018	3.3	3.518	4.018	3.318
Pot Cap-1 Maneuver	1587	-	-	1617	-	-	941	842	1075	955	839	1049
Stage 1	-	-	-	-	-	-	986	877	-	991	873	-
Stage 2	-	-	-	-	-	-	980	873	-	999	874	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1587	-	-	1617	-	-	923	839	1075	951	836	1049
Mov Cap-2 Maneuver	-	-	-	-	-	-	923	839	-	951	836	-
Stage 1	-	-	-	-	-	-	982	873	-	991	873	-
Stage 2	-	-	-	-	-	-	965	873	-	996	871	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	2.01	0	9.04	8.49
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	923	461	-	-	1617	-	-	1049
HCM Lane V/C Ratio	0.035	0.003	-	-	-	-	-	0.016
HCM Ctrl Dly (s/v)	9	7.3	0	-	0	-	-	8.5
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	0	7	17	0	24	3	1052	19	19	873	2
Future Vol, veh/h	1	0	7	17	0	24	3	1052	19	19	873	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	125	-	85	130	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	0	0	0	0	0	9	0	7	12	6	5	0
Mvmt Flow	1	0	7	18	0	25	3	1096	20	20	909	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1504	2072	456	1596	2053	548	911	0	0	1116	0	0
Stage 1	950	950	-	1102	1102	-	-	-	-	-	-	-
Stage 2	554	1122	-	494	951	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	7.08	4.1	-	-	4.22	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.39	2.2	-	-	2.26	-	-
Pot Cap-1 Maneuver	85	55	557	73	56	463	756	-	-	599	-	-
Stage 1	283	341	-	229	290	-	-	-	-	-	-	-
Stage 2	489	284	-	531	341	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	78	53	557	69	54	463	756	-	-	599	-	-
Mov Cap-2 Maneuver	187	157	-	169	164	-	-	-	-	-	-	-
Stage 1	274	330	-	228	289	-	-	-	-	-	-	-
Stage 2	461	282	-	506	330	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	13.21	20.87	0.03	0.24
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	756	-	-	447	269	599	-	-
HCM Lane V/C Ratio	0.004	-	-	0.019	0.159	0.033	-	-
HCM Ctrl Dly (s/v)	9.8	-	-	13.2	20.9	11.2	-	-
HCM Lane LOS	A	-	-	B	C	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.6	0.1	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	37	33	0	0	7
Future Vol, veh/h	0	37	33	0	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	80	80	80	80	80	80
Heavy Vehicles, %	0	12	7	0	0	0
Mvmt Flow	0	46	41	0	0	9

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	41
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	-	0	1035
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	1035
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	8.51
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	1035
HCM Lane V/C Ratio	-	-	-	0.008
HCM Ctrl Dly (s/v)	-	-	-	8.5
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	18	20	33	1	0	0
Future Vol, veh/h	18	20	33	1	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	74	74	74	74	74	74
Heavy Vehicles, %	0	16	6	0	0	0
Mvmt Flow	24	27	45	1	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	46	0	-	0	121	45
Stage 1	-	-	-	-	45	-
Stage 2	-	-	-	-	76	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1575	-	-	-	879	1030
Stage 1	-	-	-	-	982	-
Stage 2	-	-	-	-	952	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1575	-	-	-	866	1030
Mov Cap-2 Maneuver	-	-	-	-	866	-
Stage 1	-	-	-	-	967	-
Stage 2	-	-	-	-	952	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	3.47	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	853	-	-	-	-
HCM Lane V/C Ratio	0.015	-	-	-	-
HCM Ctrl Dly (s/v)	7.3	0	-	-	0
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0	-	-	-	-

Capacity Analysis Summary Sheets

Year 2032 Total Projected Weekday Evening Peak Hour

Intersection Capacity Utilization
7: Retail Access Drive (east)/N-S Access Road & Ryan Drive

01/13/2026

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✣			✣			✣			✣	
Volume (vph)	146	41	6	0	24	4	49	1	1	5	9	185
Pedestrians												
Ped Button												
Pedestrian Timing (s)												
Free Right			No			No			No			No
Ideal Flow	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Green (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Refr Cycle Length (s)	120	120	120	120	120	120	120	120	120	120	120	120
Volume Combined (vph)	0	193	0	0	28	0	0	51	0	0	199	0
Lane Utilization Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Factor (vph)	0.95	0.96	0.85	0.95	0.98	0.85	0.95	0.95	0.85	0.95	0.86	0.85
Saturated Flow (vph)	0	1820	0	0	1859	0	0	1803	0	0	1633	0
Ped Intf Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Pedestrian Frequency (%)		0.00			0.00			0.00			0.00	
Protected Option Allowed		No			No			No			No	
Reference Time (s)			0.0			0.0			0.0			0.0
Adj Reference Time (s)			0.0			0.0			0.0			0.0
Permitted Option												
Adj Saturation A (vph)	0	148		0	1859		0	171		0	1653	
Reference Time A (s)	0.0	156.6		0.0	1.8		0.0	35.9		0.0	14.4	
Adj Saturation B (vph	0	0		0	1859		NA	NA		0	0	
Reference Time B (s)	17.7	20.7		0.0	1.8		NA	NA		8.3	22.6	
Reference Time (s)		20.7			1.8			35.9			14.4	
Adj Reference Time (s)		24.7			8.0			39.9			18.4	
Split Option												
Ref Time Combined (s)	0.0	12.7		0.0	1.8		0.0	3.4		0.0	14.6	
Ref Time Seperate (s)	9.7	2.6		0.0	1.5		3.3	0.1		0.3	0.7	
Reference Time (s)	12.7	12.7		1.8	1.8		3.4	3.4		14.6	14.6	
Adj Reference Time (s)	16.7	16.7		8.0	8.0		8.0	8.0		18.6	18.6	

Summary	EB WB	NB SB	Combined
Protected Option (s)	NA	NA	
Permitted Option (s)	24.7	39.9	
Split Option (s)	24.7	26.6	
Minimum (s)	24.7	26.6	51.4

Right Turns
Adj Reference Time (s)
Cross Thru Ref Time (s)
Oncoming Left Ref Time (s)
Combined (s)

Intersection Summary			
Intersection Capacity Utilization	42.8%	ICU Level of Service	A

Reference Times and Phasing Options do not represent an optimized timing plan.

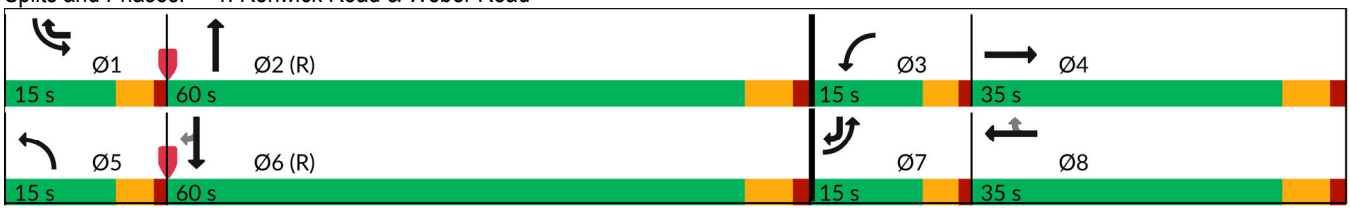
Lanes, Volumes, Timings
1: Renwick Road & Weber Road 01/13/2026

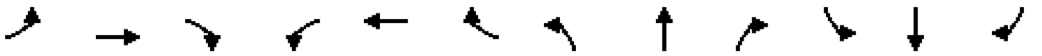
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	269	298	82	162	509	165	157	877	63	223	1125	384
Future Volume (vph)	269	298	82	162	509	165	157	877	63	223	1125	384
Ideal Flow (vphpl)	1900	1900	1900	1900	2000	1900	1900	1900	1900	1900	2000	1900
Storage Length (ft)	255		0	250		385	244		0	255		260
Storage Lanes	2		0	2		1	2		0	2		1
Taper Length (ft)	260			260			260			255		
Lane Util. Factor	0.97	0.95	0.95	0.97	0.95	1.00	0.97	0.91	0.91	0.97	0.91	1.00
Frt		0.968				0.850		0.990				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3433	3214	0	3019	3725	1538	3367	4906	0	3400	5151	1599
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	3433	3214	0	3019	3725	1538	3367	4906	0	3400	5151	1599
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		26				65		11				65
Link Speed (mph)		45			45			45			45	
Link Distance (ft)		1732			655			1043			1170	
Travel Time (s)		26.2			9.9			15.8			17.7	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	2%	7%	15%	16%	2%	5%	4%	3%	28%	3%	6%	1%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	274	388	0	165	519	168	160	959	0	228	1148	392
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases						8						6
Detector Phase	7	4		3	8	1	5	2		1	6	7
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0	3.0	3.0	15.0		3.0	15.0	3.0
Minimum Split (s)	9.5	22.5		9.5	22.5	9.5	9.5	22.5		9.5	22.5	9.5
Total Split (s)	15.0	35.0		15.0	35.0	15.0	15.0	60.0		15.0	60.0	15.0
Total Split (%)	12.0%	28.0%		12.0%	28.0%	12.0%	12.0%	48.0%		12.0%	48.0%	12.0%
Yellow Time (s)	3.5	4.5		3.5	4.5	3.5	3.5	4.5		3.5	4.5	3.5
All-Red Time (s)	1.0	1.5		1.0	1.5	1.0	1.0	1.5		1.0	1.5	1.0
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0		4.5	6.0	4.5	4.5	6.0		4.5	6.0	4.5
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Recall Mode	None	None		None	None	None	None	C-Min		None	C-Min	None
Act Effct Green (s)	15.8	31.2		11.9	27.3	44.9	10.1	49.2		11.6	50.8	72.6
Actuated g/C Ratio	0.13	0.25		0.10	0.22	0.36	0.08	0.39		0.09	0.41	0.58
v/c Ratio	0.63	0.47		0.57	0.64	0.28	0.59	0.49		0.72	0.55	0.41
Control Delay (s/veh)	58.8	39.1		61.8	47.9	17.9	64.8	29.8		68.8	30.3	13.9
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay (s/veh)	58.8	39.1		61.8	47.9	17.9	64.8	29.8		68.8	30.3	13.9
LOS	E	D		E	D	B	E	C		E	C	B
Approach Delay (s/veh)		47.2			44.7			34.8			31.6	
Approach LOS		D			D			C			C	
Queue Length 50th (ft)	108	128		67	199	54	64	223		91	269	143
Queue Length 95th (ft)	158	186		102	258	112	102	249		#157	306	216

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		1652			575			963			1090	
Turn Bay Length (ft)	255			250		385	244			255		260
Base Capacity (vph)	435	834		297	879	595	286	2160		317	2280	956
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	0
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	0
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	0
Reduced v/c Ratio	0.63	0.47		0.56	0.59	0.28	0.56	0.44		0.72	0.50	0.41

Intersection Summary			
Area Type:	Other		
Cycle Length: 125			
Actuated Cycle Length: 125			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Green			
Natural Cycle: 65			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.72			
Intersection Signal Delay (s/veh): 37.3		Intersection LOS: D	
Intersection Capacity Utilization 63.7%		ICU Level of Service B	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 1: Renwick Road & Weber Road



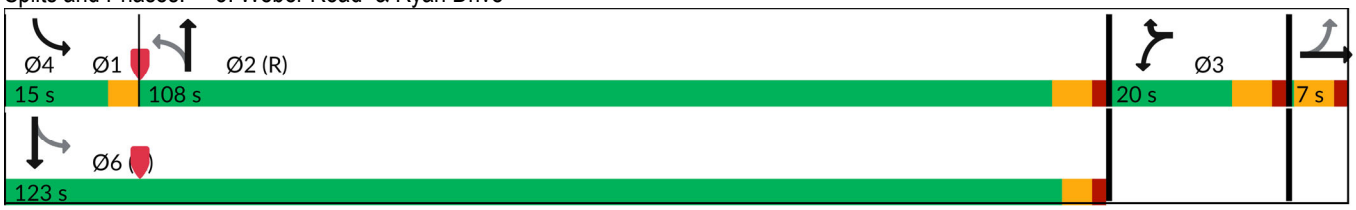


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	134	0	124	0	973	131	111	1257	0
Future Volume (vph)	0	0	0	134	0	124	0	973	131	111	1257	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	0		0	315		0
Storage Lanes	0		0	1		1	0		0	1		0
Taper Length (ft)	25			25			25			125		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	0.91	1.00	0.91	0.91
Frt						0.850		0.982				
Flt Protected				0.950						0.950		
Satd. Flow (prot)	0	1900	0	1805	0	1583	0	4879	0	1805	4803	0
Flt Permitted				0.950						0.203		
Satd. Flow (perm)	0	1900	0	1805	0	1583	0	4879	0	386	4803	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						135		36				
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		487			155			1028			1043	
Travel Time (s)		11.1			3.5			15.6			15.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	0%	0%	0%	2%	0%	5%	0%	0%	8%	0%
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	146	0	135	0	1200	0	121	1366	0
Turn Type				Prot		Prot		NA		pm+pt	NA	
Protected Phases		4		3		3		2		1	6	
Permitted Phases	4						2			6		
Detector Phase	4	4		3		3	2	2		1	6	
Switch Phase												
Minimum Initial (s)	1.0	1.0		5.0		5.0	15.0	15.0		3.0	15.0	
Minimum Split (s)	7.0	7.0		11.0		11.0	24.0	24.0		11.5	23.0	
Total Split (s)	7.0	7.0		20.0		20.0	108.0	108.0		15.0	123.0	
Total Split (%)	4.7%	4.7%		13.3%		13.3%	72.0%	72.0%		10.0%	82.0%	
Yellow Time (s)	4.5	4.5		4.5		4.5	4.5	4.5		3.5	3.5	
All-Red Time (s)	1.5	1.5		1.5		1.5	1.5	1.5		0.0	1.5	
Lost Time Adjust (s)		0.0		0.0		0.0		0.0		0.0	0.0	
Total Lost Time (s)		6.0		6.0		6.0		6.0		3.5	5.0	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Recall Mode	None	None		None		None	C-Min	C-Min		None	C-Min	
Act Effct Green (s)				16.7		16.7		110.4		123.8	122.3	
Actuated g/C Ratio				0.11		0.11		0.74		0.83	0.82	
v/c Ratio				0.73		0.46		0.33		0.31	0.35	
Control Delay (s/veh)				84.3		14.5		7.1		4.7	3.9	
Queue Delay				0.0		0.0		0.0		0.0	0.0	
Total Delay (s/veh)				84.3		14.5		7.1		4.7	3.9	
LOS				F		B		A		A	A	
Approach Delay (s/veh)					50.8			7.1			4.0	
Approach LOS					D			A			A	
Queue Length 50th (ft)				138		0		141		20	116	
Queue Length 95th (ft)				#273		67		142		26	105	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Internal Link Dist (ft)		407			75			948			963	
Turn Bay Length (ft)										315		
Base Capacity (vph)				203		298		3601		427	3916	
Starvation Cap Reductn				0		0		0		0	0	
Spillback Cap Reductn				0		0		0		0	0	
Storage Cap Reductn				0		0		0		0	0	
Reduced v/c Ratio				0.72		0.45		0.33		0.28	0.35	

Intersection Summary			
Area Type:	Other		
Cycle Length: 150			
Actuated Cycle Length: 150			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 55			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.73			
Intersection Signal Delay (s/veh): 9.7		Intersection LOS: A	
Intersection Capacity Utilization 65.9%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 5: Weber Road & Ryan Drive



Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	509	75	0	837	0	30
Future Vol, veh/h	509	75	0	837	0	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	8	7	0	6	0	11
Mvmt Flow	547	81	0	900	0	32

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	314
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	7.32
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	4.01
Pot Cap-1 Maneuver	-	-	0	-	0	562
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	562
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	11.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	562	-	-	-
HCM Lane V/C Ratio	0.057	-	-	-
HCM Ctrl Dly (s/v)	11.8	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	518	22	54	789	48	27
Future Vol, veh/h	518	22	54	789	48	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	285	-	0	25
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	5	0	0	4	0	0
Mvmt Flow	569	24	59	867	53	30

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	593	0	1121	285
Stage 1	-	-	-	-	569	-
Stage 2	-	-	-	-	552	-
Critical Hdwy	-	-	4.1	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	993	-	203	718
Stage 1	-	-	-	-	535	-
Stage 2	-	-	-	-	546	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	993	-	191	718
Mov Cap-2 Maneuver	-	-	-	-	326	-
Stage 1	-	-	-	-	535	-
Stage 2	-	-	-	-	513	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.57	15.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	326	718	-	-	993	-
HCM Lane V/C Ratio	0.162	0.041	-	-	0.06	-
HCM Ctrl Dly (s/v)	18.1	10.2	-	-	8.9	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	0.6	0.1	-	-	0.2	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	511	33	48	822	21	23
Future Vol, veh/h	511	33	48	822	21	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	240	120	-	0	-
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	9	0	0	5	0	0
Mvmt Flow	549	35	52	884	23	25

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	585	0	1537	549
Stage 1	-	-	-	-	549	-
Stage 2	-	-	-	-	987	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1000	-	129	539
Stage 1	-	-	-	-	582	-
Stage 2	-	-	-	-	364	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1000	-	122	539
Mov Cap-2 Maneuver	-	-	-	-	249	-
Stage 1	-	-	-	-	582	-
Stage 2	-	-	-	-	345	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0.49	17.04
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	346	-	-	1000	-
HCM Lane V/C Ratio	0.137	-	-	0.052	-
HCM Ctrl Dly (s/v)	17	-	-	8.8	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.5	-	-	0.2	-

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	186	56	0	258	0	7
Future Vol, veh/h	186	56	0	258	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	76	76	76	76	76	76
Heavy Vehicles, %	2	0	0	1	0	0
Mvmt Flow	245	74	0	339	0	9

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	282
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	-	-	0	-	0	762
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	762
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Ctrl Dly, s/v	0	0	9.78
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	762	-	-	-
HCM Lane V/C Ratio	0.012	-	-	-
HCM Ctrl Dly (s/v)	9.8	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	0	-	-	-

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	16	16	16	0	10	0	9	0	0	0	0	9
Future Vol, veh/h	16	16	16	0	10	0	9	0	0	0	0	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	75	75	75	75	92	75	92	75	92	92	92
Heavy Vehicles, %	2	0	0	0	0	2	11	2	0	2	2	2
Mvmt Flow	17	21	21	0	13	0	12	0	0	0	0	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	13	0	0	43	0	0	80	80	32	69	91	13
Stage 1	-	-	-	-	-	-	67	67	-	13	13	-
Stage 2	-	-	-	-	-	-	13	13	-	56	77	-
Critical Hdwy	4.12	-	-	4.1	-	-	7.21	6.52	6.2	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.21	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.21	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.2	-	-	3.599	4.018	3.3	3.518	4.018	3.318
Pot Cap-1 Maneuver	1605	-	-	1579	-	-	887	810	1048	923	799	1067
Stage 1	-	-	-	-	-	-	922	839	-	1007	884	-
Stage 2	-	-	-	-	-	-	984	884	-	956	831	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1605	-	-	1579	-	-	869	801	1048	912	790	1067
Mov Cap-2 Maneuver	-	-	-	-	-	-	869	801	-	912	790	-
Stage 1	-	-	-	-	-	-	911	830	-	1007	884	-
Stage 2	-	-	-	-	-	-	975	884	-	945	821	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	2.1	0	9.2	8.41
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	869	474	-	-	1579	-	-	1067
HCM Lane V/C Ratio	0.014	0.011	-	-	-	-	-	0.009
HCM Ctrl Dly (s/v)	9.2	7.3	0	-	0	-	-	8.4
HCM Lane LOS	A	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	0	7	30	0	37	10	1065	47	45	1338	9
Future Vol, veh/h	2	0	7	30	0	37	10	1065	47	45	1338	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	125	-	85	130	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	3	0	4	7	2	8	0
Mvmt Flow	2	0	7	32	0	39	11	1133	50	48	1423	10

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	2112	2728	716	1962	2683	566	1433	0	0	1183	0	0
Stage 1	1524	1524	-	1154	1154	-	-	-	-	-	-	-
Stage 2	588	1204	-	807	1529	-	-	-	-	-	-	-
Critical Hdwy	7.5	6.5	6.9	7.5	6.5	6.96	4.1	-	-	4.14	-	-
Critical Hdwy Stg 1	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.5	5.5	-	6.5	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.33	2.2	-	-	2.22	-	-
Pot Cap-1 Maneuver	30	21	377	39	22	465	480	-	-	586	-	-
Stage 1	126	182	-	213	274	-	-	-	-	-	-	-
Stage 2	467	259	-	346	181	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	24	19	377	34	20	465	480	-	-	586	-	-
Mov Cap-2 Maneuver	88	93	-	127	98	-	-	-	-	-	-	-
Stage 1	116	167	-	208	268	-	-	-	-	-	-	-
Stage 2	418	254	-	311	166	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Ctrl Dly, s/v	22.26	30.28	0.11	0.38
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	480	-	-	218	212	586	-	-
HCM Lane V/C Ratio	0.022	-	-	0.044	0.336	0.082	-	-
HCM Ctrl Dly (s/v)	12.7	-	-	22.3	30.3	11.7	-	-
HCM Lane LOS	B	-	-	C	D	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	1.4	0.3	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	0	92	42	0	0	26
Future Vol, veh/h	0	92	42	0	0	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	5	8	5	0	0	0
Mvmt Flow	0	103	47	0	0	29

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	-	47
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	-	0	1028
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	-	-	-	-	-	1028
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	0	0	8.61
HCM LOS			A

Minor Lane/Major Mvmt	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	-	-	-	1028
HCM Lane V/C Ratio	-	-	-	0.028
HCM Ctrl Dly (s/v)	-	-	-	8.6
HCM Lane LOS	-	-	-	A
HCM 95th %tile Q(veh)	-	-	-	0.1

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	28	63	34	4	7	7
Future Vol, veh/h	28	63	34	4	7	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	3	3	0	0	14
Mvmt Flow	30	68	37	4	8	8

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	41	0	-	0	168	39
Stage 1	-	-	-	-	39	-
Stage 2	-	-	-	-	129	-
Critical Hdwy	4.1	-	-	-	6.4	6.34
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.426
Pot Cap-1 Maneuver	1581	-	-	-	826	999
Stage 1	-	-	-	-	989	-
Stage 2	-	-	-	-	902	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1581	-	-	-	810	999
Mov Cap-2 Maneuver	-	-	-	-	810	-
Stage 1	-	-	-	-	969	-
Stage 2	-	-	-	-	902	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	2.25	0	9.09
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	554	-	-	-	895
HCM Lane V/C Ratio	0.019	-	-	-	0.017
HCM Ctrl Dly (s/v)	7.3	0	-	-	9.1
HCM Lane LOS	A	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1

ENGINEER'S OPINION OF PROBABLE COST - LETTER OF CREDIT
SEASONS AT CREST HILL
CREST HILL, ILLINOIS
BASED ON THE PLAN SET DATED JANUARY 14, 2026
DATE: JANUARY 14, 2026

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	EXTENSION
SCHEDULE I - EROSION CONTROL					
1	Erosion Control Maintenance	1	LUMP SUM	$10,000.00	$10,000.00
2	Grading	1	LUMP SUM	$300,000.00	$300,000.00
2	Silt Fence (Non-Wire Back)	6,000	LF	$2.75	$16,500.00
3	Concrete Washout	2	EACH	$4,500.00	$9,000.00
4	Construction Entrance	2	LUMP SUM	$5,000.00	$10,000.00
5	Sodding	23,280	SY	$5.00	$116,401.19
6	Inlet Filter	69	EACH	$350.00	$24,150.00
TOTAL SCHEDULE I - EROSION CONTROL					**$486,051.19**
SCHEDULE II - UNDERGROUND IMPROVEMENTS					
A.	**SANITARY SEWER IMPROVEMENTS**				
1	8" PVC Sanitary Sewer - 12'-16' Depth	1,700	LF	$40.00	$68,000.00
2	4' Diameter Manhole - 12'-16'	15	EACH	$4,600.00	$69,000.00
3	4' Diameter Doghouse Manhole - 12'-16'	7	EACH	$4,600.00	$32,200.00
4	Trench Backfill - Mains 12'-16' Depth	1,700	LF	$70.00	$119,000.00
5	Televise Sanitary Sewer - Public	1,700	LF	$3.00	$5,100.00
SUBTOTAL A - SANITARY SEWER IMPROVEMENTS					**$293,300.00**
B.	**WATER MAIN IMPROVEMENTS**				
1	8" DI Water Main	2,934	LF	$50.00	$146,700.00
2	8" Valve & Vault, STD 4' Dia. w/FR & Lid	6	EACH	$3,750.00	$22,500.00
3	6" Valve Box, STD 1' Dia. w/FR & Lid	12	EACH	$1,500.00	$18,000.00
4	Fire Hydrant with Auxiliary Valve	8	EACH	$4,000.00	$32,000.00
5	Trench Backfill - Mains	2,664	LF	$30.00	$79,920.00
6	Pressure Connection with Valve Vault	6	EACH	$8,500.00	$51,000.00
7	Water Pressure Test and Chlorination	1	LS	$20,000.00	$20,000.00
SUBTOTAL B - WATER MAIN IMPROVEMENTS					**$370,120.00**
C.	**STORM SEWER IMPROVEMENTS**				
1	6" Perforated Pipe Underdrain	400	LF	$45.00	$18,000.00
2	12" RCP Storm Sewer Pipe	1,220	LF	$70.00	$85,400.00
3	15" RCP Storm Sewer Pipe	810	LF	$75.00	$60,750.00
4	18" RCP Storm Sewer Pipe	380	LF	$80.00	$30,400.00
5	24" RCP Storm Sewer Pipe	880	LF	$85.00	$74,800.00
6	30" RCP Storm Sewer Pipe	200	LF	$90.00	$18,000.00
7	36" RCP Storm Sewer Pipe	380	EACH	$95.00	$36,100.00
8	4'-0" Diameter Manhole	45	EACH	$3,000.00	$135,000.00
9	Connection to Existing Structure	4	EACH	$3,000.00	$12,000.00
10	Storm Sewer to be Removed	1285	LF	$60.00	$77,100.00
11	Manhole to be Removed	9	EACH	$550.00	$4,950.00
12	Trench Backfill	3,870	LF	$30.00	$116,100.00
13	Televise Storm Sewer Line	4,270	LF	$3.00	$12,810.00
SUBTOTAL C - STORM SEWER IMPROVEMENTS					**$681,410.00**
TOTAL SCHEDULE II - UNDERGROUND IMPROVEMENTS (A-C)					**$1,344,830.00**
SCHEDULE III - ROADWAY IMPROVEMENTS					
1	2" Asphalt Mill and Overlay	8,787	SY	$10.50	$92,261.17
TOTAL SCHEDULE III - ON-SITE ROADWAY IMPROVEMENTS					**$92,261.17**

ENGINEER'S OPINION OF PROBABLE COST - LETTER OF CREDIT
SEASONS AT CREST HILL
CREST HILL, ILLINOIS
BASED ON THE PLAN SET DATED JANUARY 14, 2026
DATE: JANUARY 14, 2026

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	EXTENSION
SCHEDULE IV - MISCELLANEOUS					
1	Record Drawings	1	LS	$10,000.00	$10,000.00
2	Benchmark	1	LS	$3,000.00	$3,000.00
TOTAL SCHEDULE IV - MISCELLANEOUS					**$13,000.00**
SUBTOTAL SCHEDULES I-IV					**$1,936,142.36**
CONTINGENCY @10%					$193,614.24
TOTAL ON-SITE BOND AMOUNT					**$2,129,756.60**

Prepared By: Manhard Consulting, Ltd.
One Overlook Point, Suite 290
Lincolnshire, Illinois 60069

NOTE: This Engineer's Opinion of Probable Cost is made on the basis of Engineer's experience and qualifications using plan quantities and represents Engineer's best judgment as an experienced and qualified professional engineer generally familiar with the construction industry. However, since the Engineer has no control over the cost of labor, materials, equipment or services furnished by others, or over the Contractor's methods of determining prices, or over competitive bidding or market conditions, or over quantities of work actually performed, Engineer cannot and does not guarantee that proposals, bids or actual Construction Cost will not vary from Opinions of Probable Cost prepared by Engineer. This Opinion of Probable Construction Cost is limited to those items stated herein and does not include permit fees, recapture costs, consultant fees landscaping, dewatering, maintenance, bonds or the like.

ATWELL

January 14, 2026

Ronald J. Wiedeman, P.E.
City Engineer
City of Crest Hill, Illinois

RE: Seasons at Crest Hill
Stormwater Memo
Atwell Project Number: MHFRD.CRIL01

This memo presents documentation for the design of the proposed Seasons of Crest Hill in Crest Hill, Illinois. The purpose of this stormwater memo is to provide appropriate information showing that the stormwater design meets or exceeds the requirements of the City of Crest Hill, the Will County Stormwater Technical Guidance Manual and generally accepted engineering practices. The project site is located at the southeast corner of Renwick Road and Weber Road, Crest Hill, Will County, Illinois, and is located within Section 20, Township 36 North, and Range 10 East of the Third Principal Meridian. The objective of this memo is to prove that the proposed development provides less impervious area than the original design which would produce less runoff and thus no detention basin improvements would be required. Also, that the existing storm sewer that the proposed development is connecting to is adequately sized to convey the runoff from the proposed development to the existing basins.

The project will consist of the construction of 14 2-story apartment buildings, a clubhouse with a pool, and associated parking. The project site is not located within a Regulated Floodplain, a Special Flood Hazard Area, or a flood prone area. The project site does not contain any wetlands within or adjacent to the site boundary. Modifications to flood prone channels are not proposed as a part of the project.

The total ownership parcel consists of 15.81 acres (688,840 square feet) of previously developed land as a part of the Remington Lakes Subdivision. There are currently five existing detention basins that were developed per the design presented in the Remington Lakes Final Stormwater Management Plan dated January 16, 2002. The proposed Seasons of Crest Hill development is proposed to be tributary to existing Basin 2A and Basin 4 that drains to them via storm sewer. Part of the proposed development is located in the original design drainage area of SA 4A (Tributary to Basin 4), and another part of the proposed development is located in the original design drainage area of SA 2A (Tributary to Basin 2A). The original drainage area SA 4A has an area of 17.6 acres with a curve number of 93.3. The original drainage area SA 2A has an area of 10.1 acres with a curve number of 93.0. The curve number of the proposed development will be compared to the original design curve number to ensure that the new runoff produced is less than what was originally designed for. Refer to attached original design drainage area exhibits and curve number calculations for reference.

The Seasons at Crest Hill development will be disturbing the entirety of the 15.81 acres apart from small existing roadway sections that are remaining. The development will convey stormwater runoff via storm sewer and connect to the existing storm sewer along the southern and western sides of the property. The western half of the site will drain toward Basin 4 and the eastern half will drain toward Basin 2A. The ultimate outfall, however, is at the south end of Basin 4 so the entire drainage area is still tributary to a single outfall point.

The original design area within the property limits is 9.73 acres for drainage area SA 4A and 6.08 acres for drainage area SA 2A. The drainage areas to each basin have been slightly modified as a part of the proposed development which is revised to 10.50 acres for drainage area SA 4A and 5.31 acres for drainage area SA 2A. Utilizing the SCS runoff curve number method to calculate runoff volume, the runoff volume from the proposed development will be reduced for the area within the property boundary from the original design runoff volume for both of the onsite tributary areas. Refer to the attached drainage area exhibits and drainage area summary tables for reference.

Following the Will County Stormwater Technical Guidance Manual, proposed storm sewers and grate capacities are designed to attain 10-year storm events utilizing Bulletin 70 rainfall data. The existing downstream storm sewer that the proposed development connects to is also analyzed to confirm the existing sewer provides enough capacity to convey the 10-year storm event. The 100-year storm event will also be conveyed through storm sewer within the proposed development, however emergency overland flow routes are still designed with appropriate freeboard to the adjacent buildings. 100-year storm event overflow design for the existing downstream storm sewer will be maintained from the original design. Refer to attached tributary area exhibits and storm sewer tables and profiles for reference.

In summary, we believe the stormwater management design for the proposed development complies with the appropriate provisions of the Will County Stormwater Technical Guidance Manual. If you have any questions, comments or concerns regarding the content of this report, please do not hesitate to email me at jeverard@atwell.com or call at (847) 634-5550.

Respectfully,

ATWELL, LLC

Lincolnshire, Illinois

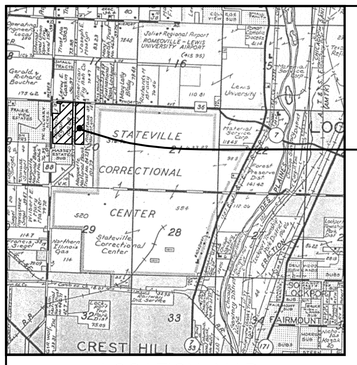
John S. Everard, P.E.
Project Manger

PROPOSED DRAINAGE EXHIBIT

FOR

REMINGTON LAKES

WILL COUNTY, ILLINOIS



LOCATION MAP

LEGAL DESCRIPTION

BEING A PART OF THE NORTHWEST QUARTER OF SECTION 20, TOWNSHIP 36 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN WILL COUNTY, ILLINOIS.

N

100 50 0 100

SCALE: 1" = 100'

S.A. 2B = 4.2 AC.

S.A. 2C = 3.4 AC.

FUTURE COMMERCIAL DEVELOPMENT

S.A. 2A = 10.1 AC.
FUTURE COMMERCIAL DEVELOPMENT

S.A. 4A = 17.6 AC.
FUTURE COMMERCIAL DEVELOPMENT

S.A. 1 = 24.9 AC.

S.A. 3 = 9.7 AC.

S.A. 4B = 38.1 AC.

RENWICK ROAD

McGILVRAY DRIVE

BORIO DRIVE

OUTLOT A

OUTLOT B
STORMWATER MANAGEMENT FACILITY NO. 2
N.W.L. 639.0
H.W.L. 645.0

OUTLOT C
STORMWATER MANAGEMENT FACILITY NO. 4
N.W.L. 627.5
H.W.L. 634.7

OUTLOT D

OUTLOT E

OUTLOT I
STORMWATER MANAGEMENT FACILITY NO. 1
N.W.L. 634.0
H.W.L. 640.3

OUTLOT J

OUTLOT K
STORMWATER MANAGEMENT FACILITY NO. 3
N.W.L. 629.0
H.W.L. 634.7

FUTURE COMMERCIAL

FUTURE COMMERCIAL DEVELOPMENT

LEGEND

EXISTING	PROPOSED	DESCRIPTION
		MANHOLE
		CATCH BASIN
		INLET
		CLEANOUT
		HEADWALL
		END SECTION
		STORM SEWER
		SANITARY SEWER
		WATERMAIN
		VALVE & BOX
		WATER VALVE (UNLESS OTHERWISE NOTED)
		WATER VALVE IN VAULT
		FIRE HYDRANT
		CONTOURS
(ELEV)	ELEV	ELEVATIONS
		STREET LIGHTS
		WATERMAIN PROTECTION
		STRAW BALE SEDIMENT TRAP
		TEMPORARY STRAW BALE DITCH CHECK
		OVERFLOW ROUTE

PREPARED FOR:

INLAND REAL ESTATE DEVELOPMENT CORP.
2901 BUTTERFIELD RD.
OAK BROOK, ILLINOIS 60521
PH: (630) 218-8000, FAX:(630) 954-5673

PREPARED BY:

CEMCON, Ltd.
Consulting Engineers, Land Surveyors & Planners
1N131 COUNTY FARM ROAD
WINFIELD, ILLINOIS 60190
(630) 653-1030
Ph: (630) 653-1030 Fax: (630) 653-0652
E-Mail: Cadd@Cemcon.Com

DISC NO. : 588007 FILE NAME : DRAINAGE_EXH
DRAWN BY : ESM FLD. BK. / PG. NO. : N/A
COMPLETION DATE : DEC. 2001 JOB NO. : 588.007
PROJECT MANAGER : TDW XREF: OVERALL

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Worksheet 2: Runoff Curve Number and Runoff

Project Location: Remington Lakes--S.A. 2A; Will County, Illinois
By: ESM
Checked:
Date: 10/1/01
Date:

Circle one: Present (Developed)

1. Runoff curve number (CN)

Soil Name and Hydrologic Group	Cover Description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN 1/ Table 2-2	CN 1/ Fig. 2-3	CN 1/ Fig. 2-4	Area X acres __mi2 __%	Product of CN x Area
B	Commercial Development	92			4.70	432.4
B	Paved Parking Lot	98			4.80	470.4
B	Open Space, good condition	61			0.60	36.6
1/ Use only one CN source per line.			Totals =		10.10	939.400

CN (weighted) = Total Product / Total Area = 939.400 / 10.100 = 93.010

Use CN = 93.0

2. Runoff

		Storm #1	Storm #2	Storm #3
Frequency	yr			
Rainfall	in			
Runoff, Q	in			

(Use P and CN with table 2-1, fig. 2-1, or eqs. 2-3 and 2-4.)

Worksheet 2: Runoff Curve Number and Runoff

Project Location: Remington Lakes–S.A. 4A; Will County, Illinois
By: ESM
Checked:
Date: 9/13/01
Date:

Circle one: Present (Developed)

1. Runoff curve number (CN)

Soil Name and Hydrologic Group	Cover Description (cover type, treatment, and hydrologic condition; percent impervious; unconnected/connected impervious area ratio)	CN 1/ Table 2-2	CN 1/ Fig. 2-3	CN 1/ Fig. 2-4	Area X acres __mi2 __%	Product of CN x Area
B	Commercial Development	92			2.60	239.2
B	Paved Parking Lot	98			13.20	1293.6
B	Open Space, good condition	61			1.80	109.8
			Totals =		17.60	1642.600

1/ Use only one CN source per line.

CN (weighted) = Total Product / Total Area = 1642.600 / 17.600 = 93.330

Use CN = 93.3

2. Runoff

		Storm #1	Storm #2	Storm #3
Frequency	yr			
Rainfall	in			
Runoff, Q	in			

(Use P and CN with table 2-1, fig. 2-1, or eqs. 2-3 and 2-4.)

DRAINAGE AREA
SA 4A

DRAINAGE AREA
SA 2A

EXECUTIVE DRIVE

RYAN DRIVE

N

0 20 40 80
SCALE: 1"=40'

06-01-16

LEGEND

	ONSITE TRIBUTARY AREA:	
	DRAINAGE AREA SA 4A	10.50 ACRES
	DRAINAGE AREA SA 2A	5.31 ACRES
	IMPERVIOUS AREA	
	DRAINAGE AREA SA 4A	7.32 ACRES
	DRAINAGE AREA SA 2A	3.68 ACRES
	PERVIOUS AREA	
	DRAINAGE AREA SA 4A	3.18 ACRES
	DRAINAGE AREA SA 2A	1.63 ACRES

DRAWN BY
REVISIONS
DATE

Manhard CONSULTING
One Overlook Point, Suite 250, Lincolnshire, IL 60069 ph 847.634.5500 fx 847.634.0066 manhard.com
Civil Engineers • Water Resource Engineers • Water & Wastewater Engineers • Surveyors
Construction Managers • Environmental Scientists • Landscape Architects • Planners

SEASONS AT CREST HILL
CITY OF CREST HILL, ILLINOIS
IMPERVIOUS AREA EXHIBIT

PROJ. MGR.: JSE
PROJ. ASSOC.: MSL
DRAWN BY: MSL
DATE: 01-14-26
SCALE: 1"=40'

SHEET
EXH
FRD.CRIL01

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January 15, 2026 - 15:13 Dwg Name: P:\Frd\r01\dwg\ASStorm\Water\Exhibits\Impervious Area exhibit.dwg Updated By: MLeBrau

Manhard CONSULTING

COMPOSITE RUNOFF CURVE NUMBER (*CN*)

PROJECT: Seasons at Crest Hill **CALCULATED BY:** MSL

SUBBASIN: Drainage Area SA 4A **DATE:** 1/14/2026

CONDITION (SELECT WITH DROP-DOWN)

___ PROPOSED CONDITION ___ EXISTING CONDITION

RUNOFF CURVE NUMBER

Surface Description	Hydrologic Soil Group (HSG)	CN	Area (acres)	Product (CN)(Area)
Impervious		98	7.32	717.36
Pervious	B	61	3.18	193.98
TOTALS:			10.50	911.34

COMPOSITE RUNOFF CURVE NUMBER

$$\text{Composite CN} = \frac{\text{Total Product}}{\text{Total Area}} = \frac{911.34}{10.50} \rightarrow \textbf{Composite CN} = \textbf{86.8}$$

Manhard CONSULTING

COMPOSITE RUNOFF CURVE NUMBER (*CN*)

PROJECT: Seasons at Crest Hill **CALCULATED BY:** MSL

SUBBASIN: Drainage Area SA 2A **DATE:** 1/14/2026

CONDITION (SELECT WITH DROP-DOWN)

___ PROPOSED CONDITION ___ EXISTING CONDITION

RUNOFF CURVE NUMBER

Surface Description	Hydrologic Soil Group (HSG)	CN	Area (acres)	Product (CN)(Area)
Impervious		98	3.68	360.64
Pervious	B	61	1.63	99.43
TOTALS:			5.31	460.07

COMPOSITE RUNOFF CURVE NUMBER

$$\text{Composite CN} = \frac{\text{Total Product}}{\text{Total Area}} = \frac{460.07}{5.31} \rightarrow \textbf{Composite CN} = \textbf{86.6}$$

Manhard CONSULTING LTD

Total Runoff Change Summary

Seasons at Crest Hill
1/12/2026
Drainage Area SA 4A

					2-YEAR		100-YEAR	
	Impervious Area	Pervious Area	Composite CN	Total Area	Pe	Runoff Volume	Pe	Runoff Volume
EXISTING	8.49	1.24	93.3	9.73	2.09	1.69	5.71	4.63

					2-YEAR		100-YEAR	
	Impervious Area	Pervious Area	Composite CN	Total Area	Pe	Runoff Volume	Pe	Runoff Volume
PROPOSED	7.32	3.18	86.8	10.50	1.55	1.36	4.97	4.35

			2-YEAR		100-YEAR	
			Pe	Runoff Volume	Pe	Runoff Volume
NET INCREASE				-0.34		-0.28

$$P_e = \frac{(P-0.2(1000/CN-10))^2}{P+0.8(1000/CN-10)}$$

$CN_{impervious}$= 98
$CN_{pervious}$= 61

P = Peak Rainfall Depth (2-year/24hour) = 2.80 inches — Bulletin 70
P = Peak Rainfall Depth (100-year/24hour) = 6.50 Inches — Bulletin 70
P = Peak Rainfall Depth (2-year/24hour) = 3.34 inches — Bulletin 75
P = Peak Rainfall Depth (100-year/24hour) = 8.57 inches — Bulletin 75

Manhard CONSULTING LTD

Total Runoff Change Summary

Seasons at Crest Hill
1/12/2026
Drainage Area SA 2A

					2-YEAR		100-YEAR	
	Impervious Area	Pervious Area	Composite CN	Total Area	Pe	Runoff Volume	Pe	Runoff Volume
EXISTING	5.26	0.82	93.0	6.08	2.06	1.05	5.68	2.88

					2-YEAR		100-YEAR	
	Impervious Area	Pervious Area	Composite CN	Total Area	Pe	Runoff Volume	Pe	Runoff Volume
PROPOSED	3.68	1.63	86.6	5.31	1.54	0.68	4.96	2.19

					2-YEAR		100-YEAR	
					Pe	Runoff Volume	Pe	Runoff Volume
NET INCREASE						-0.36		-0.68

$CN_{impervious}$= 98
$CN_{pervious}$= 61

$$P_e = \frac{(P-0.2(1000/CN-10))^2}{P+0.8(1000/CN-10)}$$

P = Peak Rainfall Depth (2-year/24hour) = 2.80 inches — Bulletin 70
P = Peak Rainfall Depth (100-year/24hour) = 6.50 Inches — Bulletin 70
P = Peak Rainfall Depth (2-year/24hour) = 3.34 inches — Bulletin 75
P = Peak Rainfall Depth (100-year/24hour) = 8.57 inches — Bulletin 75

EX. INL-8
0.30 AC

IN-1
0.03 AC

EX. INL-1
0.11 AC

MH-1
0.11 AC

IN-2
0.44 AC

BUILDING A
F.F.=649.15
G.F=648.65

BUILDING B
F.F.=649.15
G.F=648.65

MH-8
0.12 AC

IN-3
0.11 AC

MH-7
0.18 AC

IN-12
0.46 AC

BUILDING C
F.F.=649.15
G.F=648.65

MH-26
0.15 AC

EX. INL-7
0.58 AC

IN-14
0.05 AC

IN-13
0.07 AC

MH-29
0.07 AC

BUILDING D
F.F.=649.15
G.F=648.65

BUILDING E
F.F.=648.80
G.F=648.30

MH-31
0.25 AC

MH-28
0.06 AC

MH-30
0.14 AC

GARAGE

EXECUTIVE DRIVE

EX. MH-1
0.02 AC

MH-45
0.02 AC

MH-3
0.22 AC

MH-9
0.15 AC

IN-4
0.16 AC

MH-25
0.12 AC

MH-27
0.12 AC

MH-24
0.34 AC

MH-21
0.27 AC

MH-22
0.24 AC

MH-23
0.03 AC

MH-6
0.13 AC

CB-1
0.13 AC

MH-5
0.13 AC

MH-10
0.22 AC

MH-4
0.35 AC

BUILDING F
F.F.=648.70
G.F=648.20

IN-5
0.10 AC

CB-3
0.36 AC

CLUBHOUSE
F.F.=648.80
G.F=648.30

POOL

BUILDING K
F.F.=647.75
G.F=647.25

BUILDING L
F.F.=647.75
G.F=647.25

MH-44
0.23 AC

MH-43
0.35 AC

WEBER ROAD

EX. INL-2
0.49 AC

IN-7
0.24 AC

IN-6
0.24 AC

MH-20
0.45 AC

MH-37
0.16 AC

BUILDING G
F.F.=648.70
G.F=648.20

EX. INL-6
0.76 AC

IN-16
0.16 AC

MH-42
0.20 AC

IN-17
0.21 AC

IN-10
0.31 AC

IN-9
0.06 AC

IN-8
0.08 AC

MH-36
0.26 AC

MH-41
0.07 AC

MH-14
0.20 AC

MH-19
0.26 AC

IN-11
0.18 AC

MH-16
0.06 AC

MH-15
0.08 AC

BUILDING I
F.F.=648.00
G.F=647.50

BUILDING J
F.F.=648.00
G.F=647.50

MH-17
0.29 AC

MH-18
0.32 AC

MH-40
0.28 AC

BUILDING M
F.F.=647.25
G.F=646.75

BUILDING N
F.F.=647.25
G.F=646.75

EX. INL-3
0.31 AC

MH-12
0.26 AC

BUILDING H
F.F.=648.70
G.F=648.20

CB-4
0.17 AC

MH-34
0.57 AC

MH-33
0.33 AC

CB-2
0.08 AC

MH-39
0.25 AC

MH-11
0.07 AC

CB-5
0.07 AC

MH-38
0.08 AC

EX. INL-4
0.31 AC

EX. INL-5
0.29 AC

N

0 20 40 80
SCALE: 1"=40'

DRAWN BY
REVISIONS
DATE

Manhard CONSULTING
One Parkview Plaza, Suite 2800, Lisle/Wheaton, IL 60563 ph 630.724.3000 fax 630.724.3095
Civil Engineers • Surveyors • Water Resource Engineers • Structural Engineers
Construction Managers • Environmental Scientists • Landscape Architects • Planners

SEASONS AT CREST HILL
CITY OF CREST HILL, ILLINOIS
PROPOSED STORM SEWER CATCHMENT EXHIBIT

PROJ. MGR.:	JSE
PROJ. ASSOC.:	MSL
DRAWN BY:	GAW
DATE:	01-14-26
SCALE:	1" = 40'

SHEET
EXH
FRD.GUIL01

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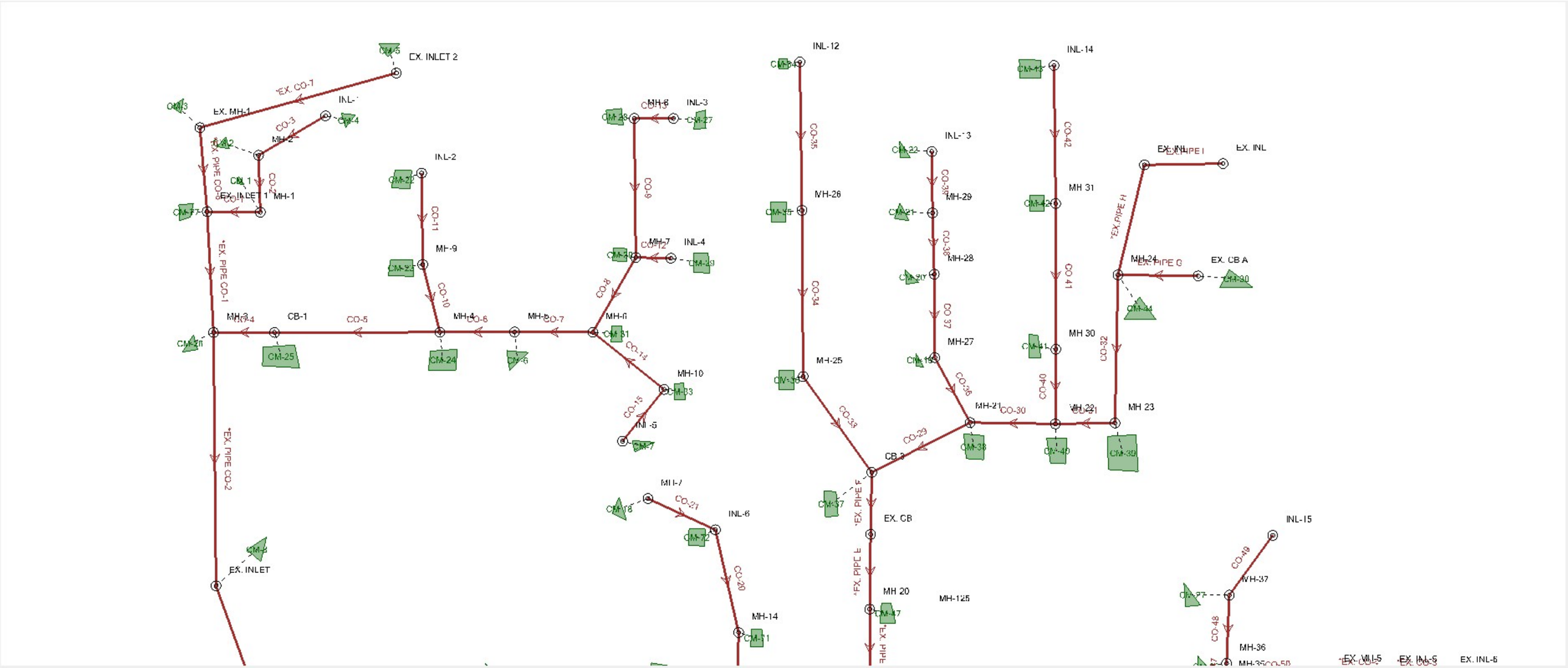
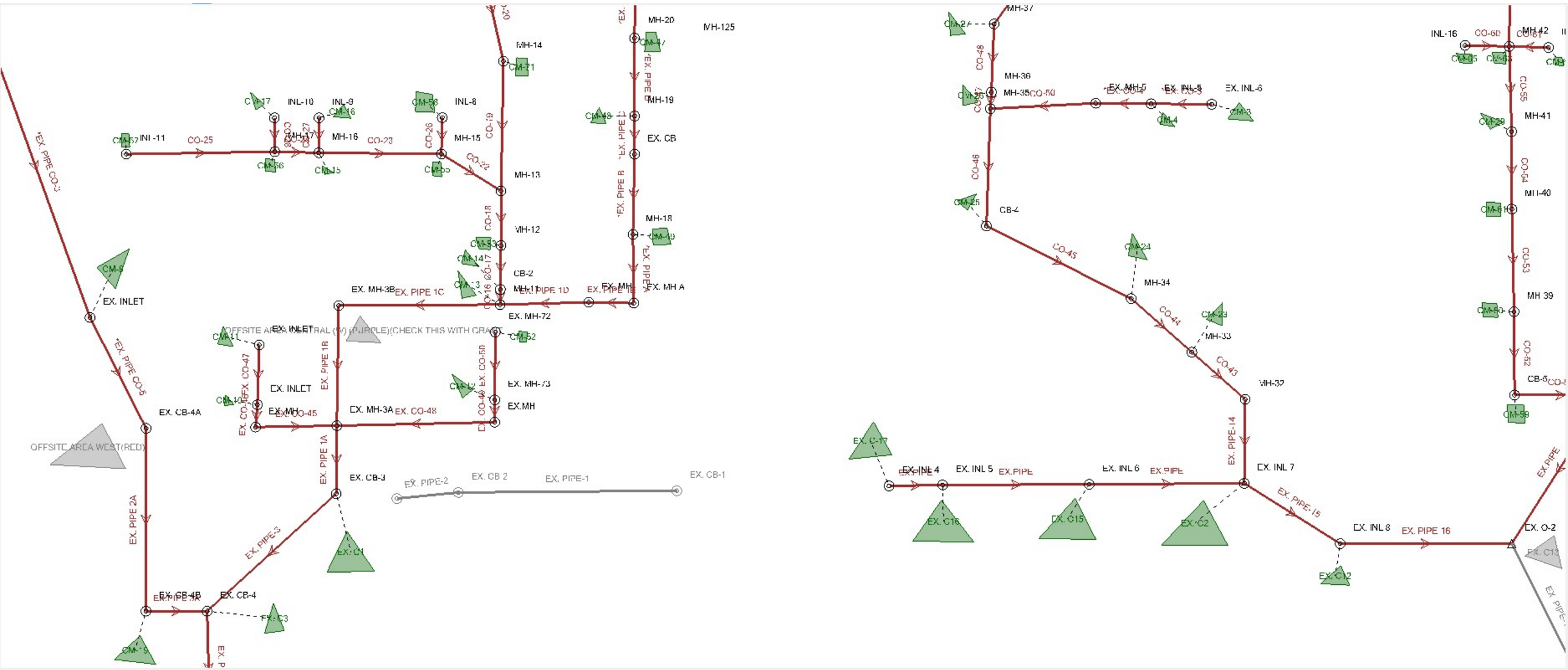
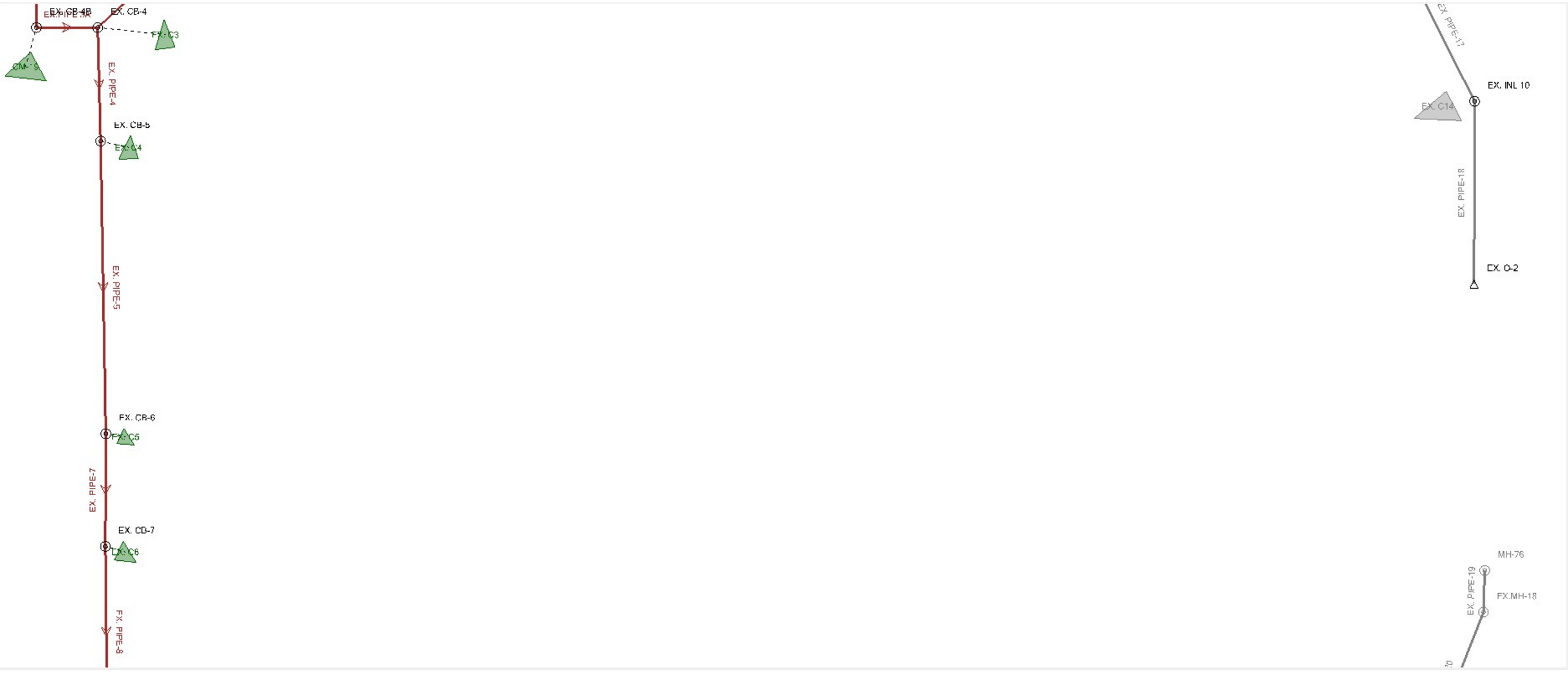
January 14, 2026 - 11:45 Dwg Name=P:\Frdrn01\Dwg\StormWater\Exhibits\Proposed Storm Sewer Catchment Area Exhibit.dwg Updated By gwaskowski


EX. INLET 2
EX. MH-1
EX. INLET 1
MH-1
MH-2
INL-2
MH-9
MH-3
CB-1
MH-4
MH-5
MH-6
MH-10
INL-3
INL-4
INL-5
MH-7
INL-6
MH-14
EX. INLET
INL-12
MH-26
MH-25
CB-3
EX. CB
MH 20
MH-125
INL-13
MH-29
MH-28
MH-27
MH-21
INL-14
MH 31
MH 30
MH 23
EX. INL
EX. CB A
INL-15
MH-37
MH-36
EX. INL-5
EX. INL-6


MH-20
MH-125
MH-14
MH-19
EX. CB
INL-10
INL-9
INL-8
INL-11
CO-25
MH-16
CO-23
MH-15
MH-13
MH-12
MH-18
CB-2
EX. MH-3B
EX. PIPE 1C
EX. PIPE 1D
EX. MH-72
EX. MH A
EX. INLET
EX. PIPE CO-3
EX. PIPE CO-5
EX. CB-4A
OFFSITE AREA WEST(RED)
EX. PIPE 2A
EX. CB-4B
EX. CB-4
EX. PIPE-3
EX. PIPE 1A
EX. CB-3
EX. PIPE-2
EX. CB 2
EX. PIPE-1
EX. CB-1
EX. MH-3A
EX. CO-48
EX. MH-73
EX.MH
EX. PIPE 1B
MH-37
MH-36
MH-35
EX. INL-6
CB-4
CO-45
MH-34
CO-44
MH-33
CO-43
MH-32
EX. PIPE-14
EX. INL 4
EX. INL 5
EX. INL 6
EX. INL 7
EX. PIPE-15
EX. INL 8
EX. PIPE 16
EX. O-2
INL-16
MH-42
MH-41
MH-40
MH 39
CB-5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EX. PIPE-7
EX. CB-7
EX. C6
EX. PIPE-8
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EX. O-2
MH-76
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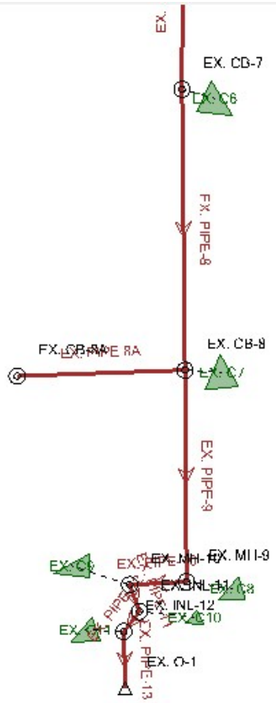
FX.MH-18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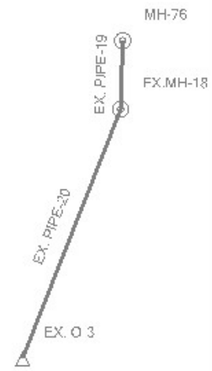
EX. INL-12
EX. C10
EX. O-1
PIPE-13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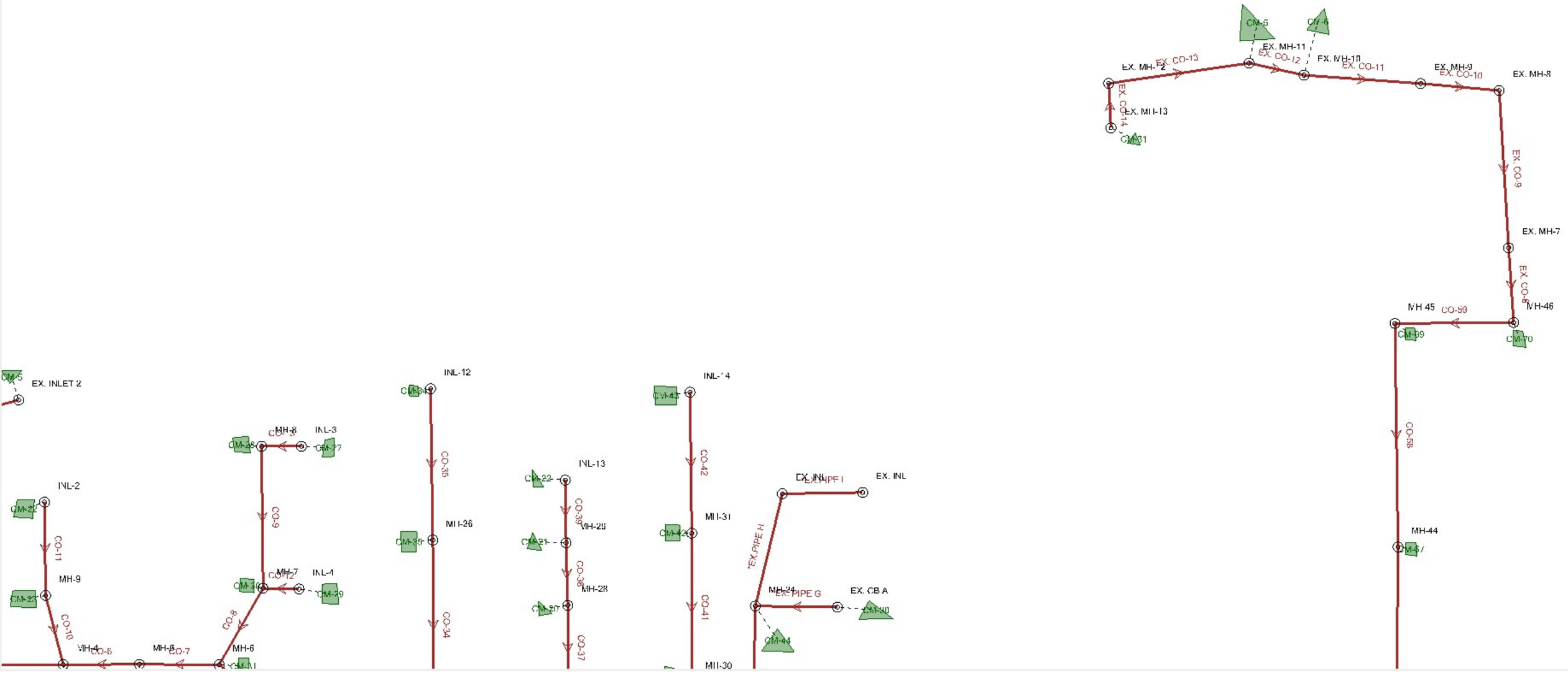
EX. PIPE-20
EX. O 3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EX. CO-12
EX. MH-10
EX. CO-11
EX. MH-9
EX. CO-10
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EX. CO-13
EX. CO-14
EX. MH-13
CM-31
EX. CO-9
EX. MH-7
EX. CO-8
MH 45
CO-59
MH-46
CM-69
CM-70
CO-58
MH-44
EX. INLET 2
INL-2
CM-25
CO-11
MH-9
CM-27
CO-10
MH-4
CO-6
MH-5
CO-7
MH-6
CM-28
MH-8
CO-8
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CM-27
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MH-7
CO-12
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MH-28
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CO-37
INL-14
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CO-42
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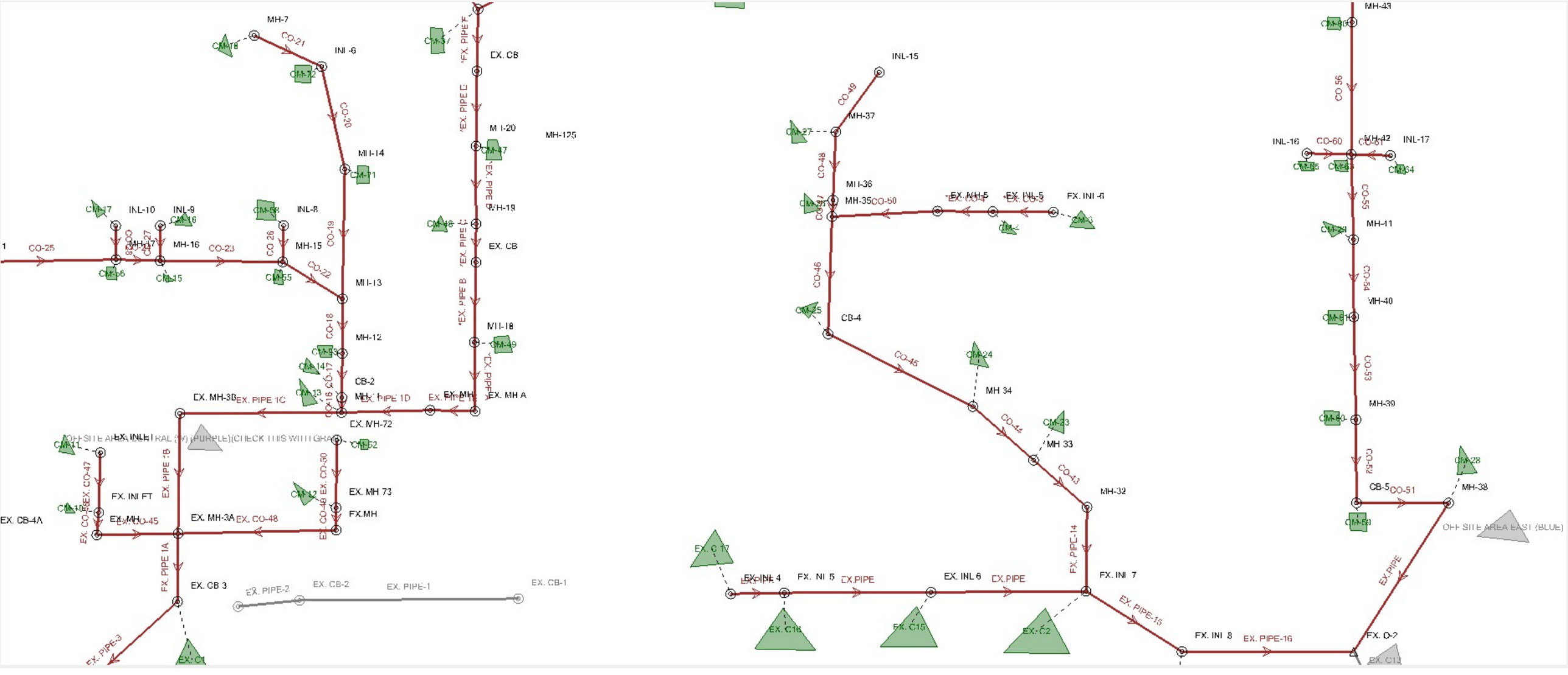
EX. PIPE H
MH-24
EX. PIPE G
EX. CB A
CM-10
CM-44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MH-16
MH-15
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CO-23
CO-22
CO-19
MH-13
CO-18
MH-12
CB-2
EX. MH-3B
EX. PIPE 1C
EX. PIPE 1D
EX. MH-72
EX. MH A
EX. CB
MH-20
MH-125
MH-19
EX. CB
MH-18
EX. INL-1
FX. INL FT
EX. PIPE 1B
EX. MH 73
FX.MH
EX. CB-4A
EX. MH-3A
EX. CO-48
EX. CO-45
FX. PIPE 1A
EX. CB 3
EX. PIPE-2
EX. CB-2
EX. PIPE-1
EX. CB-1
EX. PIPE-3
EX. C1
INL-15
CO-49
MH-37
CO-48
MH-36
MH-35
CO-50
FX. INL-6
CO-46
CB-4
CO-45
MH 34
CO-44
MH 33
CO-43
MH-32
FX. PIPE-14
FX. INL 7
EX. C 17
EX. INL 4
FX. INL 5
EX.PIPE
EX. INL 6
EX.PIPE
EX. C16
EX. C15
EX. C2
EX. PIPE-15
FX. INL 8
EX. PIPE-16
FX. O-2
EX. C13
MH-43
CO 56
INL-16
CO-60
MH-42
INL-17
CO-55
MH-11
CO-54
MH-40
CO-53
MH-39
CO-52
CB-5
CO-51
MH-38
OFF SITE AREA EAST (BLUE)
EX.PIPE

SEASONS AT CREST HILL
CITY OF CREST HILL, ILLINOIS
STORM SEWER DESIGN CALCULATIONS
10-YR STORM EVENT - BULLETIN 70 RAINFALL DATA
1/14/2026

Location		Ground		Hydraulic Grade Line		Crown		Invert		Length	Slope	Diameter	Manning's n	Velocity	Flow	Capacity (Full Flow)	Flow / Capacity (Design)
Upstream Structure	Downstream Structure	Upstream	Downstream	Upstream	Downstream	Upstream	Downstream	Upstream	Downstream	(ft)	(%)	(in)		(ft/s)	(cfs)	(cfs)	(%)
EX. INL-12	EX. O-1	636.04	630.65	644.47	631.65	632.99	631.65	628.99	627.65	73	1.84	48	0.013	47.92	602.23	194.66	309.40
EX. INL 11	EX. INL-12	635.91	636.04	636.13	636.04	633.81	632.99	629.81	628.99	31	2.67	48	0.013	6.07	76.29	234.52	32.50
EX. INL 11	EX. MH-10	635.91	637.46	635.97	635.91	633.81	632.46	629.81	628.46	25	5.50	48	0.013	5.74	72.09	336.76	21.40
EX. MH-9	EX. MH-10	637.39	637.46	636.11	635.97	634.99	632.46	630.99	628.46	53	4.75	48	0.013	5.74	72.09	313.14	23.00
EX. CB-8	EX. MH-9	640.20	637.39	636.41	636.11	636.16	634.99	632.16	630.99	137	0.86	48	0.013	5.40	67.83	132.83	51.10
EX. CB-8	EX. CB-8A	640.20	639.65	636.41	636.41	633.21	634.98	632.21	633.98	62	-2.85	12	0.013	0.00	0.00	6.01	0.00
EX. CB-7	EX. CB-8	641.19	640.20	637.10	636.41	637.59	636.16	633.59	632.16	372	0.38	48	0.013	7.77	66.69	89.03	74.90
EX. CB-6	EX. CB-7	642.87	641.19	637.27	637.10	638.16	637.59	634.16	633.59	148	0.39	48	0.013	7.66	61.41	89.26	68.80
EX. CB-5	EX. CB-6	643.64	642.87	637.77	637.27	638.84	638.23	634.84	634.23	284	0.21	48	0.013	5.94	56.58	66.52	85.10
EX. CB-4	EX. CB-5	643.76	643.64	637.94	637.77	639.00	638.91	635.00	634.91	99	0.09	48	0.013	3.87	48.60	43.31	112.20
EX. CB-3	EX. CB-4	644.36	643.76	638.06	637.94	638.75	638.53	635.25	635.03	169	0.13	42	0.013	4.17	28.29	36.30	77.90
EX. MH-3A	EX. CB-3	645.50	644.36	638.10	638.06	639.04	638.91	635.54	635.41	52	0.25	42	0.013	5.32	27.06	50.23	53.90
EX. MH-3A	EX. MH-3B	645.50	645.70	638.13	638.10	639.04	639.25	635.54	635.75	73	-0.29	42	0.013	5.48	24.40	54.14	45.10
MH-11	EX. MH-3B	646.60	645.70	638.39	638.13	638.86	638.25	636.36	635.75	116	0.53	30	0.013	6.77	24.40	29.81	81.90
EX. MH	MH-11	646.57	646.60	638.43	638.39	639.38	638.86	636.88	636.36	100	0.53	30	0.013	6.08	15.13	29.73	50.90
EX. MH A	EX. MH	647.23	646.57	638.52	638.43	639.71	639.38	637.21	636.88	45	0.74	30	0.013	6.92	15.13	35.32	42.80
MH-18	EX. MH A	646.25	647.23	638.91	638.39	640.10	639.71	637.60	637.21	59	0.66	30	0.013	6.62	15.13	33.26	45.50
EX. CB	MH-18	646.14	646.25	639.37	638.91	640.62	640.10	638.12	637.60	81	0.65	30	0.013	6.41	13.75	32.96	41.70
MH-19	EX. CB	646.25	646.14	639.62	639.46	640.22	640.12	638.22	638.12	20	0.51	24	0.013	5.79	13.75	16.20	84.90
MH-20	MH-19	646.35	646.25	639.99	639.62	640.70	640.22	638.70	638.22	86	0.56	24	0.013	5.91	12.63	16.92	74.70
EX. CB	MH-20	646.49	646.35	640.32	639.99	641.15	640.7	639.15	638.7	83	0.55	24	0.013	5.64	10.69	16.71	64
CB-3	EX. CB	646.7	646.49	640.69	640.32	641.43	641.15	639.43	639.15	65	0.43	24	0.013	5.13	10.69	14.8	72.2
MH-21	CB-3	646.4	646.7	641.13	640.74	642.02	641.87	640.02	639.87	96	0.16	24	0.013	3.06	5.99	8.96	66.9
MH-27	MH-21	647.99	646.4	642.41	642.18	642.81	642.68	641.81	641.68	43	0.31	12	0.013	2.71	1.38	1.97	70.1
MH-28	MH-27	648.52	647.99	642.56	642.41	643.06	642.81	642.06	641.81	82	0.3	12	0.013	2.48	0.95	1.97	48.2
MH-29	MH-28	648.46	648.52	642.59	642.56	643.14	643.06	642.14	642.06	26	0.3	12	0.013	2.2	0.6	1.96	30.8
INL-13	MH-29	648.47	648.46	642.6	642.59	643.23	643.14	642.23	642.14	32	0.29	12	0.013	1.77	0.3	1.9	15.9
MH-22	MH-21	646.43	646.4	641.18	641.13	642.16	642.02	640.16	640.02	90	0.16	24	0.013	2.66	3.45	8.92	38.7
MH-23	MH-22	646.65	646.43	641.21	641.18	642.33	642.24	640.83	640.74	46	0.2	18	0.013	1.74	0.52	4.66	11.1
MH-24	MH-23	646.72	646.65	641.29	641.21	642.5	642.33	641	640.83	84	0.2	18	0.013	1.56	0.34	4.74	7.3
EX. CB A	MH-24	647.39	646.72	641.68	641.29	642.82	642.35	641.57	641.1		0.96	15	0.013	1.81	0.09	6.32	1.4
EX. INL	MH-24	645.63	646.72	641.7	641.29	643.2	642.6	641.7	641.1	82	0.73	18	0.013	0	0	8.97	0
EX. INL	EX. INL	645.63	645.54	642.79	642.79	643.79	642.7	642.79	641.7	29	3.76	12	0.013	0	0	6.91	0
MH-30	MH-22	646.9	646.43	642.74	642.32	643.3	643.02	642.05	641.77	113	0.25	15	0.013	2.72	1.9	3.21	59.1
MH-31	MH-30	646.9	646.9	642.84	642.74	643.5	643.3	642.25	642.05	79	0.25	15	0.013	2.5	1.29	3.26	39.7
INL-14	MH-31	646.95	646.9	643	642.84	643.78	643.52	642.78	642.52	76	0.34	12	0.013	1.71	0.22	2.08	10.4
MH-25	CB-3	647.3	646.7	642.94	642.51	643.31	643.05	642.06	641.8	83	0.31	15	0.013	3.32	3.15	3.62	86.9
MH-26	MH-25	647.25	647.3	643.1	642.94	643.53	643.31	642.28	642.06	71	0.31	15	0.013	3.19	2.63	3.59	73.3
INL-12	MH-26	647.25	647.25	643.85	643.42	644.08	643.82	643.08	642.82	79	0.33	12	0.013	2.97	1.98	2.05	96.8
CB-2	MH-11	646.23	646.6	638.4	638.39	639.32	639.31	636.82	636.81	7	0.15	30	0.013	3.36	8.97	16.05	55.9
MH-12	CB-2	646.1	646.23	640.26	639.87	640.94	640.82	638.94	638.82	71	0.17	24	0.013	3.36	8.62	9.31	92.6
MH-13	MH-12	646.7	646.1	641.18	640.91	642.01	641.94	640.01	639.94	39	0.18	24	0.013	3.36	7.5	9.54	78.6
MH-15	MH-13	646.54	646.7	642.37	642.06	642.84	642.74	641.34	641.24	49	0.2	18	0.013	3.06	4.57	4.74	96.4
MH-16	MH-15	646.54	646.54	642.85	642.41	643.04	642.86	641.79	641.61	72	0.25	15	0.013	3.16	3.88	3.23	120.1
MH-17	MH-16	646.35	646.54	642.95	642.85	643.13	643.04	641.88	641.79	36	0.25	15	0.013	2.99	3.36	3.23	104.1
INL-10	MH-17	646.4	646.35	642.96	642.95	643.23	643.16	642.23	642.16	17	0.41	12	0.013	3.02	1.34	2.29	58.5
INL-11	MH-17	646.65	646.35	643	642.95	643.48	643.15	642.48	642.15	96	0.35	12	0.013	2.47	0.78	2.09	37.1
INL-9	MH-16	646.45	646.54	642.85	642.85	643.29	643.21	642.29	642.21	17	0.47	12	0.013	2.02	0.26	2.44	10.6
INL-8	MH-15	646.45	646.54	642.54	642.45	643.28	643.21	642.28	642.21	17	0.41	12	0.013	2.1	0.34	2.29	15.1
MH-14	MH-13	646.1	646.7	642.51	642.25	642.91	642.81	641.66	641.56	39	0.25	15	0.013	3	2.93	3.26	90
INL-6	MH-14	646.65	646.1	642.68	642.51	643.17	642.91	641.92	641.66	103	0.25	15	0.013	2.8	2.07	3.24	63.8

SEASONS AT CREST HILL
CITY OF CREST HILL, ILLINOIS
STORM SEWER DESIGN CALCULATIONS
10-YR STORM EVENT - BULLETIN 70 RAINFALL DATA
1/14/2026

Location		Ground		Hydraulic Grade Line		Crown		Invert		Length	Slope	Diameter	Manning's n	Velocity	Flow	Capacity (Full Flow)	Flow / Capacity (Design)
Upstream Structure	Downstream Structure	Upstream	Downstream	Upstream	Downstream	Upstream	Downstream	Upstream	Downstream	(ft)	(%)	(in)		(ft/s)	(cfs)	(cfs)	(%)
MH-7	INL-6	647.02	646.65	642.82	642.68	643.33	643.19	642.33	642.19	40	0.35	12	0.013	2.67	1.03	2.11	49.1
EX. MH-3A	EX. MH	645.5	645.08	640.46	640.02	640.52	640.92	639.52	639.92	86	-0.47	12	0.013	3.2	1.38	2.44	56.6
EX. MH	EX. INLET	645.08	643.3	640.75	640.42	641.05	641.25	640.05	640.25	8	-2.39	12	0.013	5.83	1.38	5.51	25.1
EX. INLET	EX. INLET	643.3	643.17	641.01	640.75	641.25	641.56	640.25	640.56	30	-1.04	12	0.013	4.08	1.12	3.63	30.8
EX. MH-3A	EX.MH	645.5	645.4	640.83	639.98	640.52	641.35	639.52	640.35	123	-0.67	12	0.013	3.6	1.28	2.93	43.8
EX.MH	EX. MH-73	645.4	643.65	640.83	640.83	641.09	641.35	640.09	640.35	8	-3.25	12	0.013	6.38	1.28	6.42	19.9
EX. MH-73	EX. MH-72	643.65	643.86	641.06	640.9	641.5	641.09	640.5	640.09	29	1.41	12	0.013	1.15	0.91	4.24	21.4
EX. CB-4B	EX. CB-4	643.17	643.76	637.97	637.94	638.67	638.67	635.17	635.17	61	0	42	0.013	2	19.2	1.01	1,908.60
EX. CB-4A	EX. CB-4B	644.18	643.17	637.99	637.97	638.81	638.67	635.31	635.17	135	0.1	42	0.013	3.26	14.28	32.43	44
EX. INLET	EX. CB-4A	643.76	644.18	640.02	637.99	641.25	637.81	638.75	635.31	62	5.51	30	0.013	14.06	14.28	96.27	14.8
EX. INLET	EX. INLET	645.94	643.76	641.49	640.02	642.76	641.25	640.26	638.75	241	0.63	30	0.013	6.28	13.29	32.44	41
MH-3	EX. INLET	646.74	645.94	642.43	641.49	643.8	642.76	641.3	640.26	193	0.54	30	0.013	5.72	11.43	30.14	37.9
EX. INLET 1	MH-3	649.1	646.74	642.44	642.43	644.16	643.8	641.66	641.3	159	0.23	30	0.013	2.13	1.08	19.51	5.5
EX. INLET 1	MH-1	649.1	649	642.45	642.44	642.66	642.77	641.66	641.77	28	-0.39	12	0.013	2.46	0.65	2.23	29
MH-1	MH-2	649	649.01	643.8	643.37	644.13	644.54	643.13	643.54	102	-0.4	12	0.013	2.08	0.34	2.26	15.3
MH-2	INL-1	649.01	648.92	645.01	644.77	645.54	645.75	644.54	644.75	61	-0.34	12	0.013	1.89	0.3	2.08	14.5
EX. INLET 1	EX. MH-1	649.1	648.68	642.58	642.44	644.16	644.94	641.66	642.44	147	-0.53	30	0.013	1.66	0.17	29.83	0.6
EX. MH-1	EX. INLET 2	648.68	647.17	643.27	642.58	644.44	645.15	642.44	643.15	260	-0.27	24	0.013	1.1	0.09	11.82	0.7
CB-1	MH-3	646.9	646.74	642.79	642.43	643.39	643.3	641.39	641.3	59	0.15	24	0.013	3.05	9.58	8.86	108.1
MH-4	CB-1	646.8	646.9	642.97	642.79	643.5	643.39	641.5	641.39	73	0.15	24	0.013	3.18	9.02	8.77	102.9
MH-5	MH-4	646.95	646.8	643.19	642.97	643.53	643.4	642.03	641.9	70	0.19	18	0.013	2.81	4.97	4.53	109.7
MH-6	MH-5	646.95	646.95	643.31	643.19	643.63	643.53	642.13	642.03	56	0.18	18	0.013	2.85	4.41	4.42	99.7
MH-10	MH-6	646.85	646.95	643.42	643.31	643.66	643.53	642.66	642.53	67	0.2	12	0.013	2.26	1.39	1.57	88.2
MH-10	INL-5	646.85	646.61	643.76	643.42	643.56	643.81	643.06	643.31	50	-0.5	6	0.013	2.24	0.44	0.4	110.3
MH-7	MH-6	647.35	646.95	643.49	643.31	643.88	643.64	642.63	642.39	97	0.25	15	0.013	2.88	2.46	3.21	76.5
INL-4	MH-7	647.35	647.35	643.57	643.49	644.18	644.1	643.18	643.1	22	0.36	12	0.013	2.43	0.69	2.15	32.1
MH-8	MH-7	647.5	647.35	643.74	643.49	644.26	643.9	643.26	642.9	104	0.35	12	0.013	2.64	0.99	2.1	47.2
INL-3	MH-8	647.5	647.5	643.76	643.74	644.33	644.26	643.33	643.26	22	0.32	12	0.013	2.09	0.47	2.01	23.6
MH-9	MH-4	647.25	646.8	643.35	642.97	643.78	643.5	642.53	642.25	112	0.25	15	0.013	2.92	2.54	3.23	78.7
INL-2	MH-9	647.25	647.25	643.81	643.4	644.08	643.81	643.08	642.81	79	0.34	12	0.013	3.01	1.9	2.09	90.9
MH-38	EX. O-2	643.54	635.68	638.64	632.48	639.16	633.68	637.16	631.68	109	5.01	24	0.013	14.48	16.81	50.61	33.2
CB-5	MH-38	645.4	643.54	638.93	638.64	640.24	640.16	637.24	637.16	96	0.08	36	0.013	3.06	16.47	19.23	85.6
MH-39	CB-5	645.35	645.4	639.07	638.93	640.3	640.24	637.3	637.24	75	0.08	36	0.013	2.99	16.17	18.82	85.9
MH-40	MH-39	645.35	645.35	639.17	639.07	640.36	640.3	637.36	637.3	79	0.08	36	0.013	2.91	15.09	18.42	81.9
MH-41	MH-40	645.63	645.35	639.23	639.17	640.41	640.36	637.41	637.36	65	0.08	36	0.013	2.87	13.88	18.46	75.2
MH-42	MH-41	645.4	645.63	639.28	639.23	640.46	640.41	637.46	637.41	59	0.08	36	0.013	2.97	13.58	19.44	69.9
INL-17	MH-42	645.65	645.4	640.91	640.59	641.48	641.19	640.48	640.19	67	0.43	12	0.013	2.79	0.91	2.34	38.6
INL-16	MH-42	645.51	645.4	640.71	640.38	641.34	641.03	640.34	640.03	71	0.44	12	0.013	2.6	0.69	2.35	29.3
MH-43	MH-42	645.85	645.4	639.51	639.28	640.47	640.36	637.97	637.86	110	0.1	30	0.013	2.97	11.12	12.98	85.7
MH-44	MH-43	645.85	645.85	639.6	639.51	640.55	640.47	638.05	637.97	79	0.1	30	0.013	2.91	9.61	13.08	73.5
MH-45	MH-44	646.99	645.85	639.93	639.6	640.6	640.45	638.6	638.45	85	0.18	24	0.013	3.43	8.62	9.5	90.8
MH-46	MH-45	644.26	646.99	640.16	639.93	640.78	640.6	638.78	638.6	99	0.18	24	0.013	3.46	8.36	9.67	86.5
MH-46	EX. MH-7	644.26	643.45	640.2	640.16	640.78	640.92	638.78	638.92	36	-0.39	24	0.013	4.62	7.98	14.06	56.7
EX. MH-7	EX. MH-8	643.45	640.03	640.57	640.2	640.92	637.83	638.92	635.83	192	1.61	24	0.013	2.54	7.98	28.73	27.8
EX. MH-8	EX. MH-9	640.03	641.36	640.25	640.03	637.58	637.91	635.83	636.16	87	-0.38	21	0.013	3.32	7.98	9.77	81.6
EX. MH-9	EX. MH-10	641.36	646.81	641.72	640.25	637.91	642.42	636.16	640.67	165	-2.74	21	0.013	9.57	7.98	26.23	30.4
EX. MH-10	EX. MH-11	646.81	646.56	642.07	641.72	642.42	642.96	640.67	641.21	42	-1.3	21	0.013	6.6	5.52	18.07	30.5
EX. MH-11	EX. MH-12	646.56	645.62	642.51	642.07	642.01	642.28	641.01	641.28	147	-0.18	12	0.013	2.47	1.94	1.53	127.2
EX. MH-12	EX. MH-13	645.62	645.63	642.58	642.51	642.28	642.99	641.28	641.99	25	-2.86	12	0.013	6.84	1.94	6.03	32.2
EX. INL 8	EX. O-2	644.47	635.68	634.12	632.77	634.79	633.68	632.79	631.68	102	1.09	24	0.013	7.78	13.57	23.61	57.5
EX. INL 7	EX. INL 8	642.03	644.47	636.65	635.76	637.38	636.65	635.38	634.65	85	0.86	24	0.013	6.97	12.53	20.96	59.8

SEASONS AT CREST HILL
CITY OF CREST HILL, ILLINOIS
STORM SEWER DESIGN CALCULATIONS
10-YR STORM EVENT - BULLETIN 70 RAINFALL DATA
1/14/2026

Location		Ground		Hydraulic Grade Line		Crown		Invert		Length	Slope	Diameter	Manning's n	Velocity	Flow	Capacity (Full Flow)	Flow / Capacity (Design)
Upstream Structure	Downstream Structure	Upstream	Downstream	Upstream	Downstream	Upstream	Downstream	Upstream	Downstream	(ft)	(%)	(in)		(ft/s)	(cfs)	(cfs)	(%)
EX. INL 7	EX. INL 6	642.03	643.98	641.55	636.65	636.38	641.93	635.38	640.93	107	-5.17	12	0.013	8.68	2.11	8.1	26.1
EX. INL 6	EX. INL 5	643.98	646	642.83	641.55	641.93	643.3	640.93	642.3	138	-0.99	12	0.013	4.39	1.59	3.55	44.7
EX. INL 5	EX. INL 4	646	646.08	643.15	642.83	643.3	643.78	642.3	642.78	31	-1.57	12	0.013	4.27	0.78	4.46	17.4
MH-32	EX. INL 7	645.23	642.03	636.73	636.65	637.66	637.38	635.66	635.38	48	0.59	24	0.013	5.58	9.05	17.33	52.2
MH-33	MH-32	643.7	645.23	639.34	639.14	640.17	640.07	638.17	638.07	27	0.36	24	0.013	4.65	9.05	13.66	66.3
MH-34	MH-33	643.75	643.7	639.4	639.34	640.27	640.17	638.27	638.17	28	0.35	24	0.013	4.41	7.63	13.41	56.9
CB-4	MH-34	646.1	643.75	639.65	639.4	640.73	640.27	638.73	638.27	131	0.35	24	0.013	4.11	5.78	13.43	43
MH-35	CB-4	646.19	646.1	640.27	639.96	641.42	641.17	639.42	639.17	73	0.34	24	0.013	3.94	5.04	13.27	38
EX. MH-5	MH-35	645.77	646.19	640.45	640.27	641.05	640.92	639.55	639.42	72	0.18	18	0.013	2.76	3.23	4.47	72.3
EX. INL-5	EX. MH-5	644.86	645.77	640.68	640.45	641.5	641.05	640	639.55	24	1.87	18	0.013	6.56	3.23	14.37	22.5
EX. INL-6	EX. INL-5	644.85	644.86	640.7	640.68	641.63	641.5	640.13	640	30	0.44	18	0.013	3.17	1.55	6.95	22.3
MH-36	MH-35	646.1	646.19	640.28	640.27	641.43	641.42	639.43	639.42	6	0.16	24	0.013	2.27	1.81	9.17	19.8
MH-37	MH-36	646.2	646.1	642.12	641.78	642.75	642.43	641.75	641.43	73	0.44	12	0.013	2.61	0.69	2.36	29.2
INL-15	MH-37	647.8	646.2	642.81	642.5	643.31	643	642.81	642.5	31	1	6	0.013	0	0	0.56	0

SEASONS AT CREST HILL
CITY OF CREST HILL, ILLINOIS
STORM SEWER DESIGN CALCULATIONS
10-YR STORM EVENT - BULLETIN 70 RAINFALL DATA
1/14/2026

Drainage Area	Outflow Element	Area (Acres)	Runoff Coefficient	Tc (min)	Intensity (in/hr)	Flow (cfs)
EX. C1	EX. CB-3	0.29	0.66	5	6.48	1.23
EX. C2	EX. INL 7	0.32	0.66	5	6.48	1.36
EX. C3	EX. CB-4	0.26	0.66	5	6.48	1.11
EX. C4	EX. CB-5	1.85	0.66	5	6.48	7.98
EX. C5	EX. CB-6	1.12	0.66	5	6.48	4.83
EX. C6	EX. CB-7	1.22	0.66	5	6.48	5.28
EX. C7	EX. CB-8	0.26	0.66	5	6.48	1.14
EX. C8	EX. MH-9	0.99	0.66	5	6.48	4.26
EX. C9	EX. MH-10	0.00	0.66	5	6.48	0.00
EX. C10	EX. INL 11	0.97	0.66	5	6.48	4.20
EX. C11	EX. INL-12	122.00	0.66	5	6.48	525.94
EX. C12	EX. INL 8	0.24	0.66	5	6.48	1.04
EX. C15	EX. INL 6	0.12	0.66	5	6.48	0.53
EX. C16	EX. INL 5	0.19	0.66	5	6.48	0.81
EX. C-17	EX. INL 4	0.18	0.66	5	6.48	0.78
CM-19	EX. CB-4B	1.14	0.66	5	6.48	4.92
CM-22	INL-2	0.44	0.66	5	6.48	1.9
CM-23	MH-9	0.15	0.66	5	6.48	0.65
CM-24	MH-4	0.35	0.66	5	6.48	1.51
CM-25	CB-1	0.13	0.66	5	6.48	0.56
CM-26	MH-3	0.18	0.66	5	6.48	0.78
CM-27	INL-3	0.11	0.66	5	6.48	0.47
CM-28	MH-8	0.12	0.66	5	6.48	0.52
CM-29	INL-4	0.16	0.66	5	6.48	0.69
CM-30	MH-7	0.18	0.66	5	6.48	0.78
CM-31	MH-6	0.13	0.66	5	6.48	0.56
CM-33	MH-10	0.22	0.66	5	6.48	0.95
CM-34	INL-12	0.46	0.66	5	6.48	1.98
CM-35	MH-26	0.15	0.66	5	6.48	0.65
CM-36	MH-25	0.12	0.66	5	6.48	0.52
CM-37	CB-3	0.36	0.66	5	6.48	1.55
CM-38	MH-21	0.27	0.66	5	6.48	1.16
CM-39	MH-23	0.04	0.66	5	6.48	0.17
CM-40	MH-22	0.24	0.66	5	6.48	1.03
CM-41	MH-30	0.14	0.66	5	6.48	0.6
CM-42	MH-31	0.25	0.66	5	6.48	1.08
CM-43	INL-14	0.05	0.66	5	6.48	0.22
CM-44	MH-24	0.06	0.66	5	6.48	0.26
CM-47	MH-20	0.45	0.66	5	6.48	1.94
CM-48	MH-19	0.26	0.66	5	6.48	1.12
CM-49	MH-18	0.32	0.66	5	6.48	1.38

SEASONS AT CREST HILL
CITY OF CREST HILL, ILLINOIS
STORM SEWER DESIGN CALCULATIONS
10-YR STORM EVENT - BULLETIN 70 RAINFALL DATA
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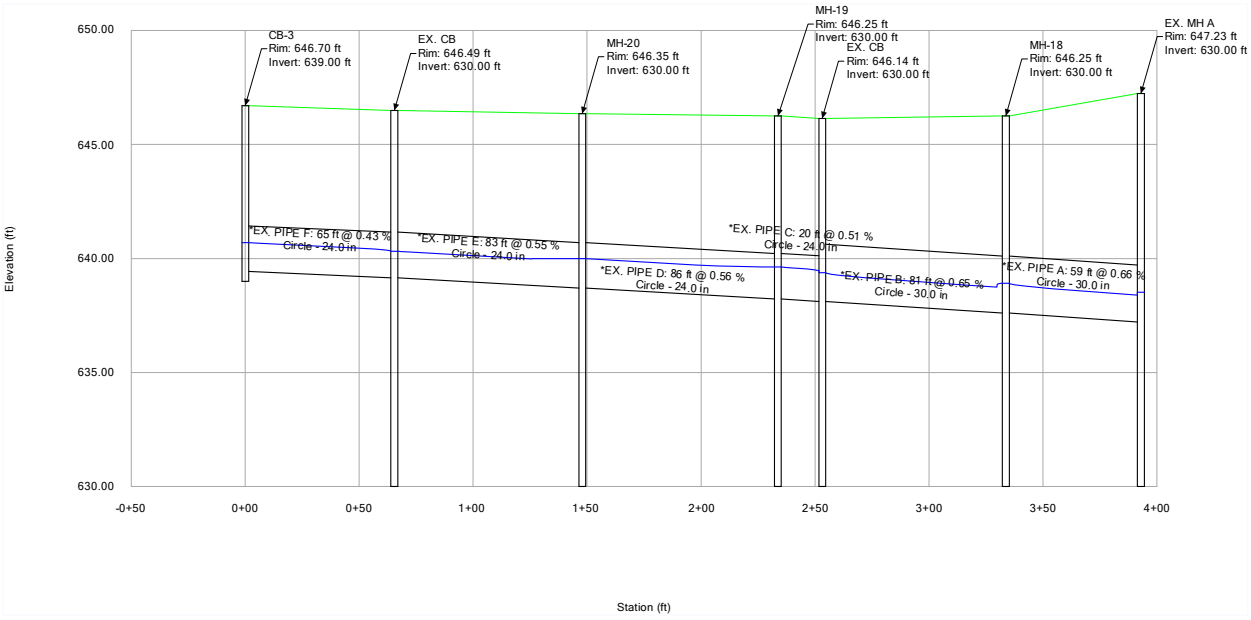
Drainage Area	Outflow Element	Area (Acres)	Runoff Coefficient	Tc (min)	Intensity (in/hr)	Flow (cfs)
CM-52	EX. MH-72	0.21	0.66	5	6.48	0.91
CM-53	MH-12	0.26	0.66	5	6.48	1.12
CM-55	MH-15	0.08	0.66	5	6.48	0.34
CM-56	MH-17	0.29	0.66	5	6.48	1.25
CM-57	INL-11	0.18	0.66	5	6.48	0.78
CM-58	INL-8	0.08	0.66	5	6.48	0.34
CM-59	CB-5	0.07	0.66	5	6.48	0.3
CM-60	MH-39	0.25	0.66	5	6.48	1.08
CM-61	MH-40	0.28	0.66	5	6.48	1.21
CM-63	MH-42	0.2	0.66	5	6.48	0.86
CM-64	INL-17	0.21	0.66	5	6.48	0.91
CM-65	INL-16	0.16	0.66	5	6.48	0.69
CM-66	MH-43	0.35	0.66	5	6.48	1.51
CM-67	MH-44	0.23	0.66	5	6.48	0.99
CM-69	MH-45	0.06	0.66	5	6.48	0.26
CM-70	MH-46	0.09	0.66	5	6.48	0.39
CM-71	MH-14	0.2	0.66	5	6.48	0.86
CM-72	INL-6	0.24	0.66	5	6.48	1.03
CM-77	EX. INLET 1	0.06	0.66	5	6.48	0.26
CM-1	MH-1	0.07	0.66	5	6.48	0.3
CM-2	MH-2	0.01	0.66	5	6.48	0.04
CM-3	EX. MH-1	0.02	0.66	5	6.48	0.09
CM-4	INL-1	0.07	0.66	5	6.48	0.3
CM-5	EX. INLET 2	0.02	0.66	5	6.48	0.09
CM-6	MH-5	0.13	0.66	5	6.48	0.56
CM-7	INL-5	0.1	0.66	5	6.48	0.44
CM-8	EX. INLET	0.43	0.66	5	6.48	1.85
CM-9	EX. INLET	0.23	0.66	5	6.48	0.99
CM-10	EX. INLET	0.06	0.66	5	6.48	0.26
CM-11	EX. INLET	0.26	0.66	5	6.48	1.12
CM-12	EX. MH-73	0.09	0.66	5	6.48	0.38
CM-13	MH-11	0.07	0.66	5	6.48	0.3
CM-14	CB-2	0.08	0.66	5	6.48	0.34
CM-15	MH-16	0.06	0.66	5	6.48	0.26
CM-16	INL-9	0.06	0.66	5	6.48	0.26
CM-17	INL-10	0.31	0.66	5	6.48	1.34
CM-18	MH-7	0.24	0.66	5	6.48	1.03
CM-19	MH-27	0.1	0.66	5	6.48	0.43
CM-20	MH-28	0.08	0.66	5	6.48	0.34
CM-21	MH-29	0.07	0.66	5	6.48	0.3
CM-22	INL-13	0.07	0.66	5	6.48	0.3

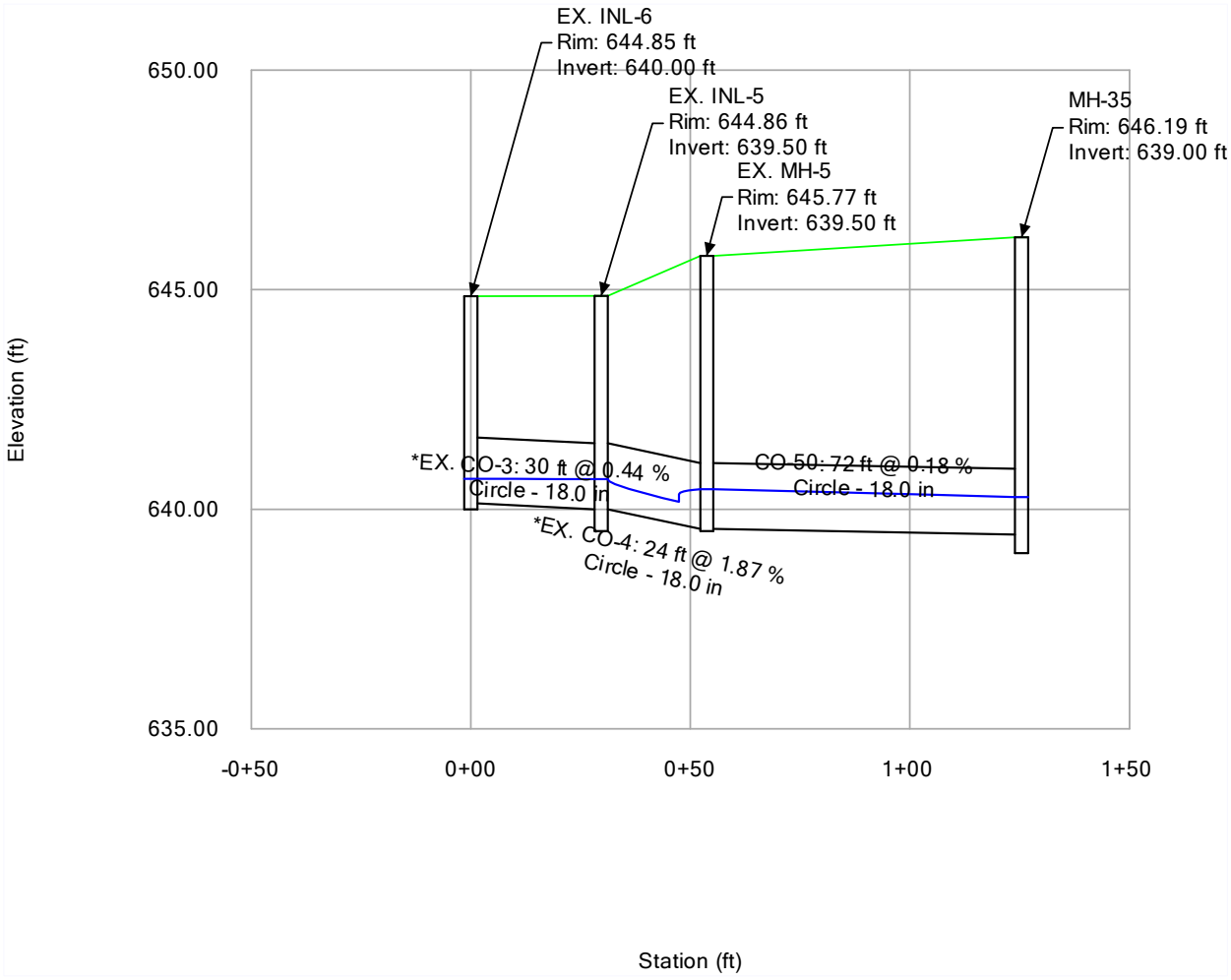
SEASONS AT CREST HILL
CITY OF CREST HILL, ILLINOIS
STORM SEWER DESIGN CALCULATIONS
10-YR STORM EVENT - BULLETIN 70 RAINFALL DATA
1/14/2026

Drainage Area	Outflow Element	Area (Acres)	Runoff Coefficient	Tc (min)	Intensity (in/hr)	Flow (cfs)
CM-23	MH-33	0.33	0.66	5	6.48	1.42
CM-24	MH-34	0.43	0.66	5	6.48	1.85
CM-25	CB-4	0.17	0.66	5	6.48	0.73
CM-26	MH-36	0.26	0.66	5	6.48	1.12
CM-27	MH-37	0.16	0.66	5	6.48	0.69
CM-28	MH-38	0.08	0.66	5	6.48	0.34
CM-29	MH-41	0.07	0.66	5	6.48	0.3
CM-30	EX. CB A	0.02	0.66	5	6.48	0.09
CM-31	EX. MH-13	0.45	0.66	5	6.48	1.94
CM-3	EX. INL-6	0.36	0.66	5	6.48	1.55
CM-4	EX. INL-5	0.39	0.66	5	6.48	1.68
CM-5	EX. MH-11	0.83	0.66	5	6.48	3.58
CM-6	EX. MH-10	0.57	0.66	5	6.48	2.46

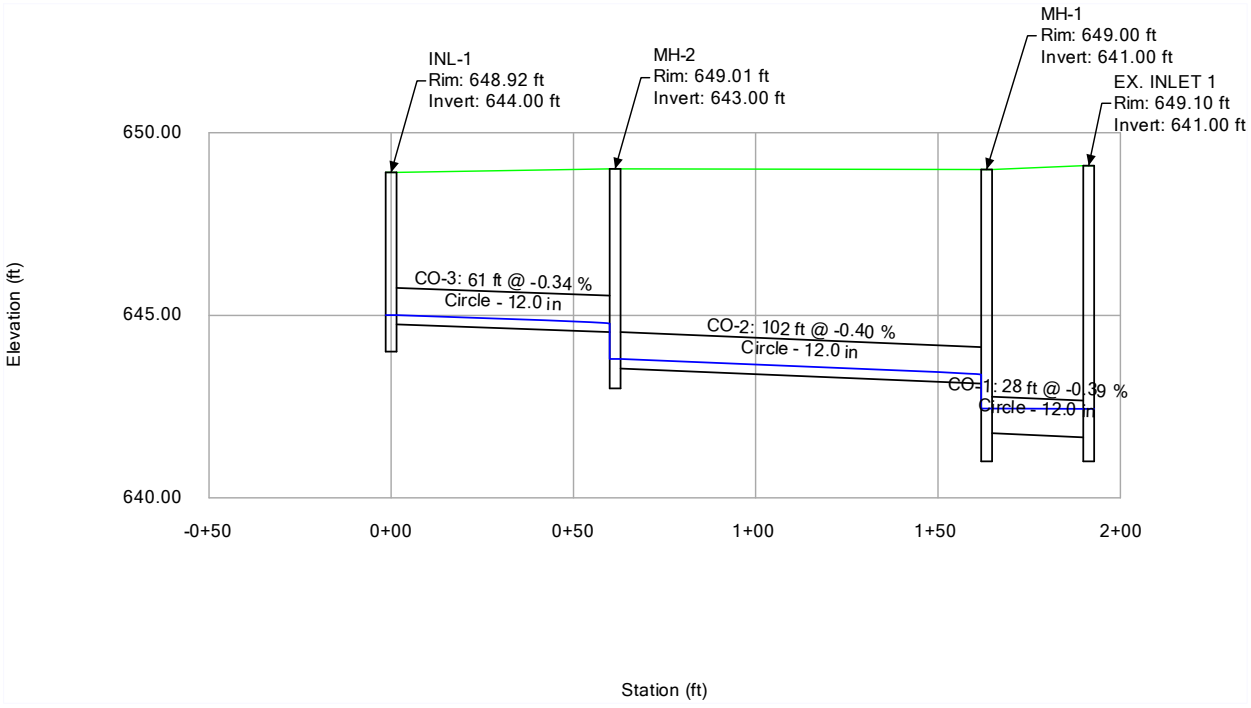
Profile Report
Engineering Profile - CB-3 TO EX. MH-A (FRDCR_repaired_FINAL.stsw)



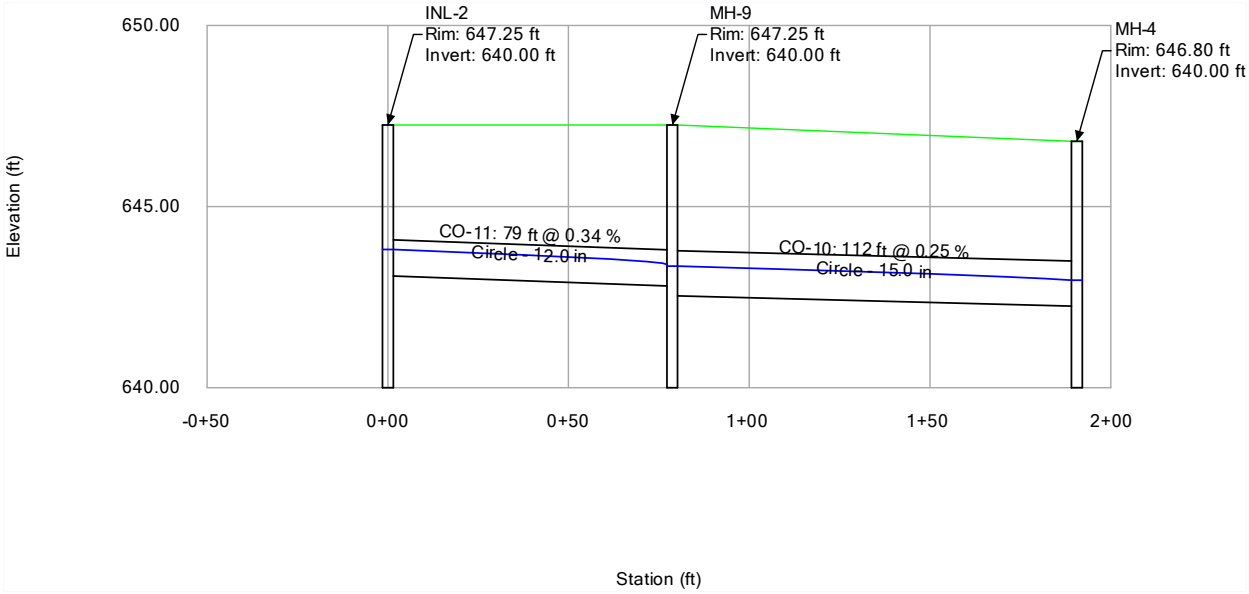
Profile Report
Engineering Profile - EX. INL-6 TO MH-36 (FRDCR_repaired_FINAL.stsw)



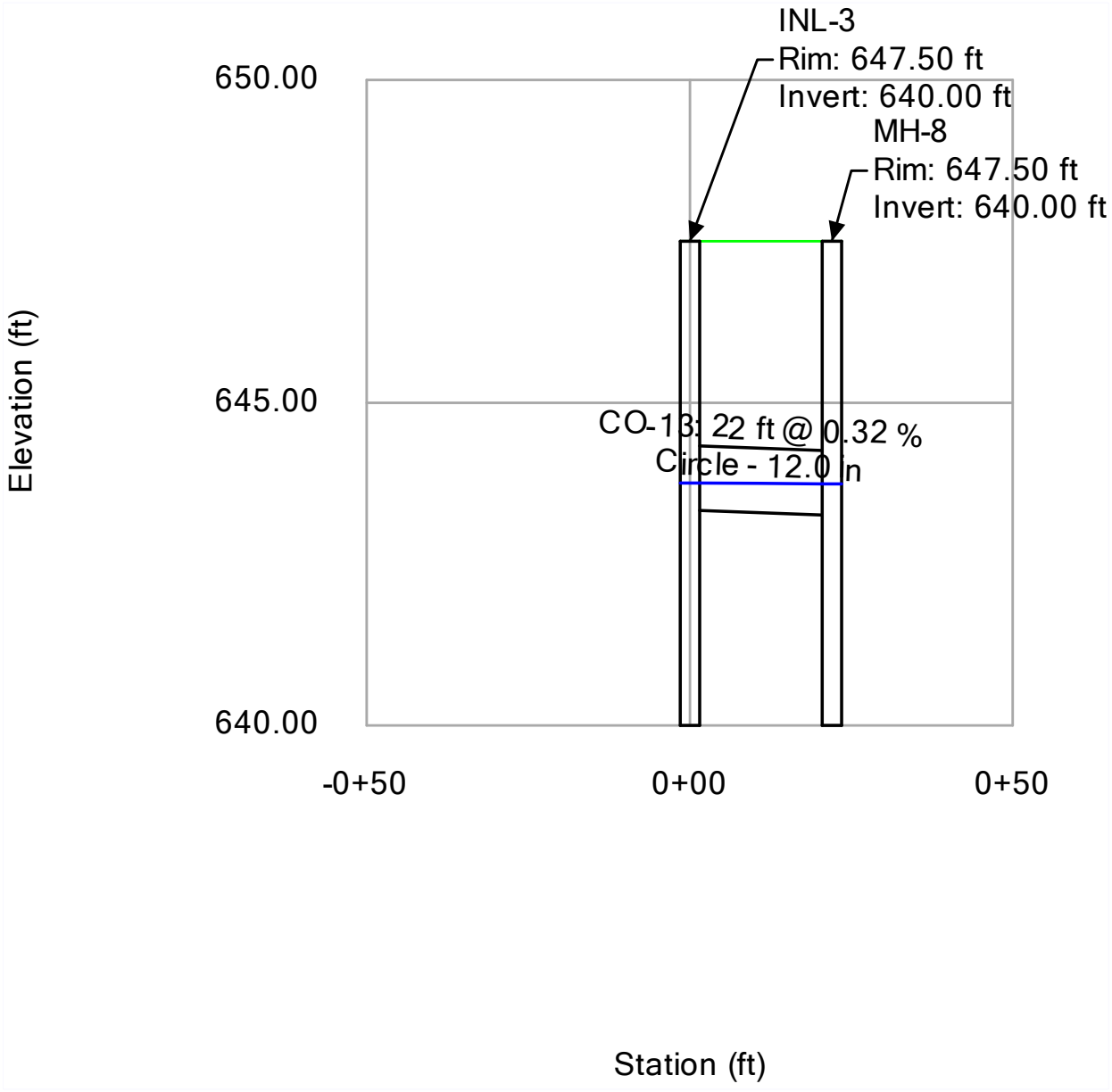
Profile Report
Engineering Profile - INL-1 TO EX. INL-1 (FRDCR_repaired_FINAL.stsw)



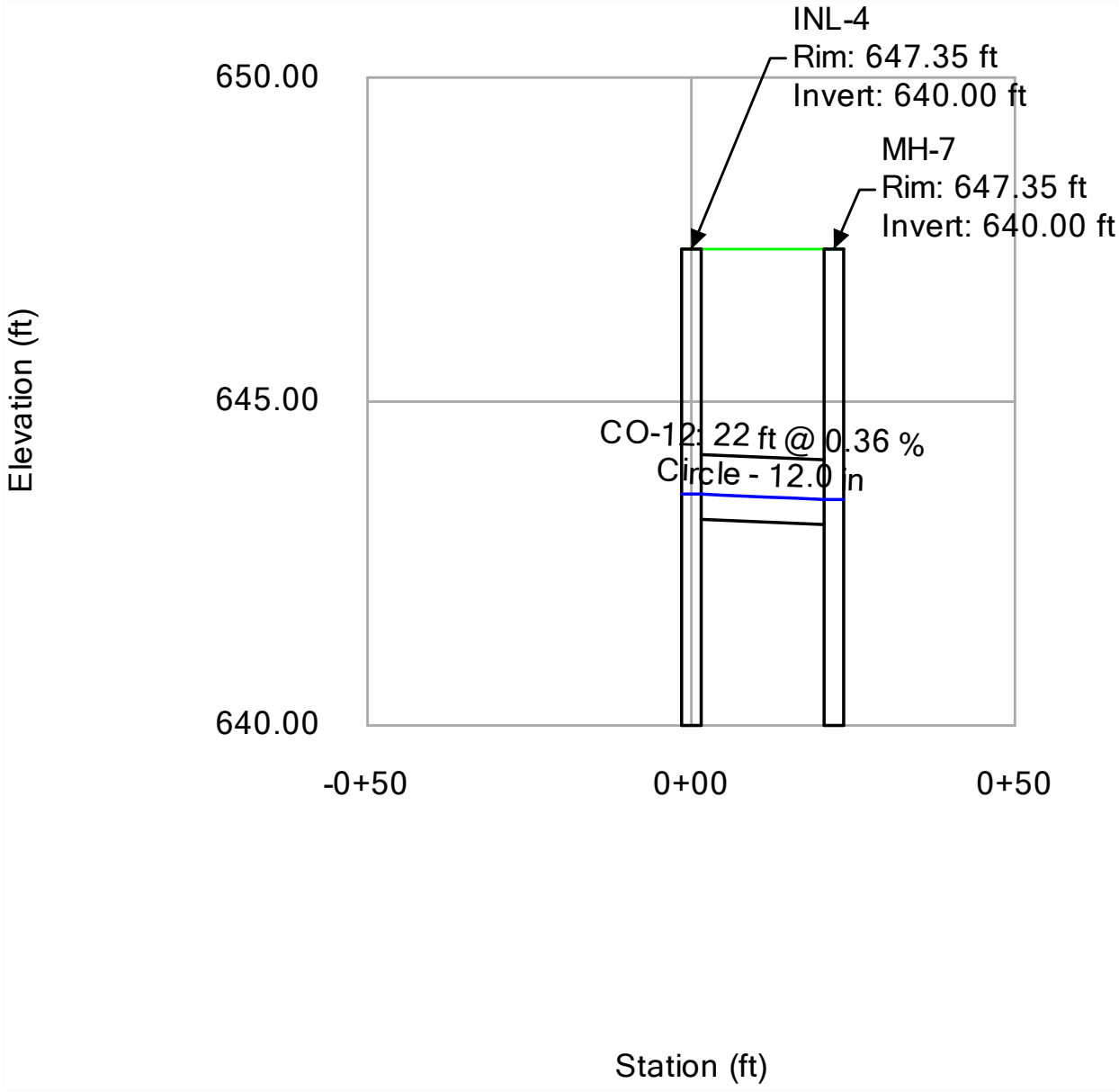
Profile Report
Engineering Profile - INL-2 TO MH-4 (FRDCR_repaired_FINAL.stsw)



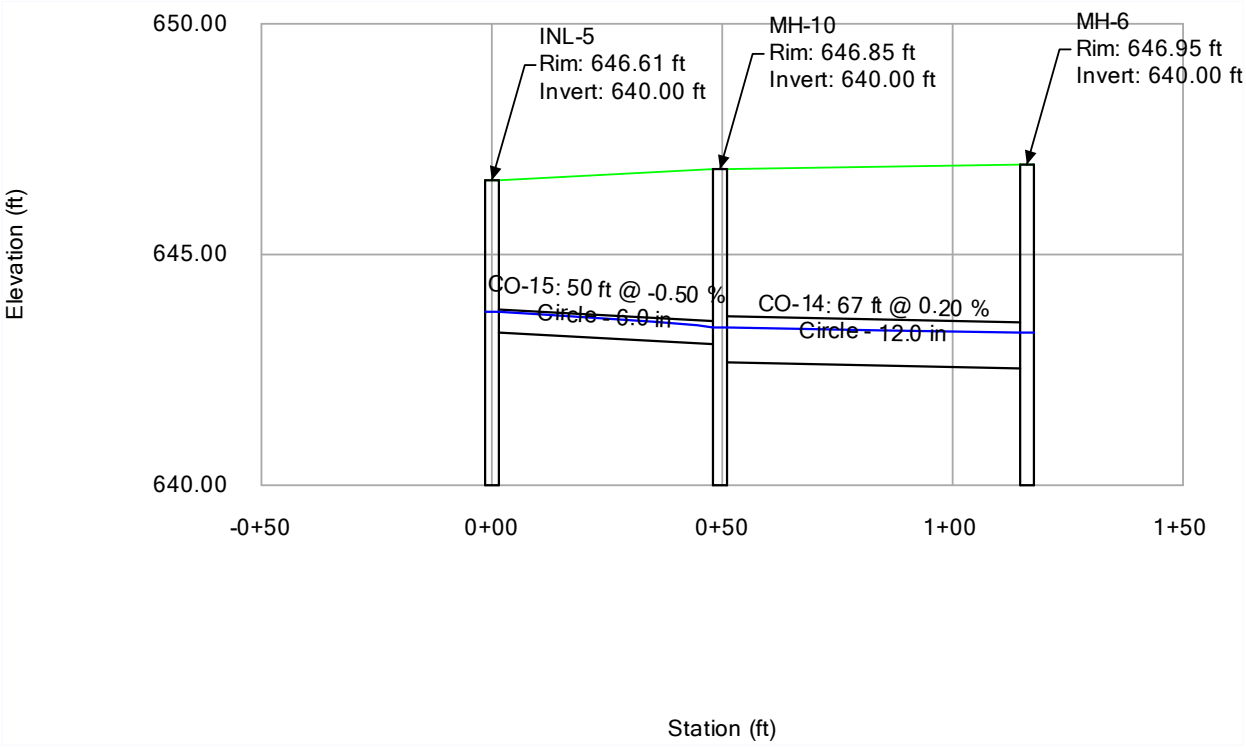
Profile Report
Engineering Profile - INL-3 TO MH-8 (FRDCR_repaired_FINAL.stsw)



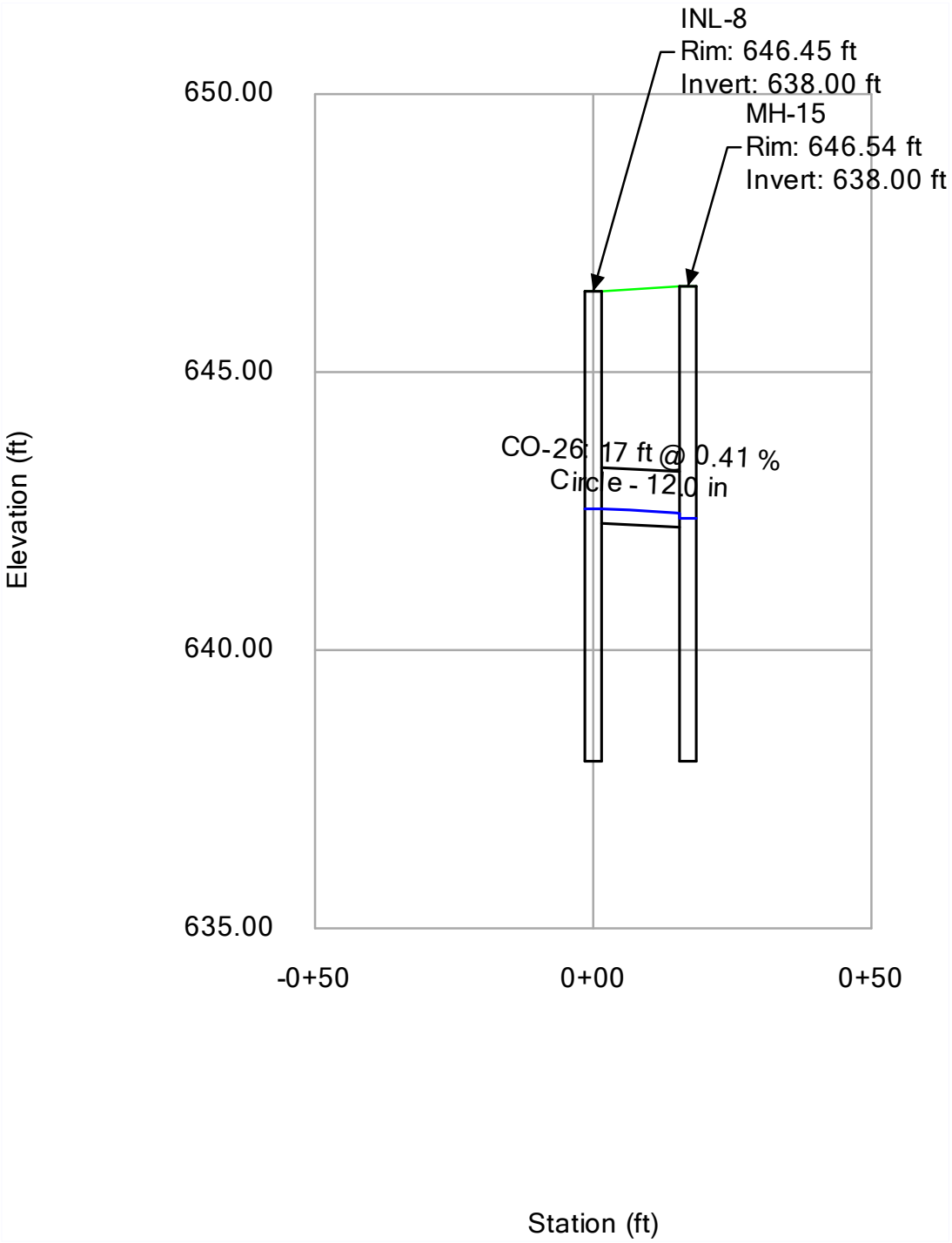
Profile Report
Engineering Profile - INL-4 TO MH-7 (FRDCR_repaired_FINAL.stsw)



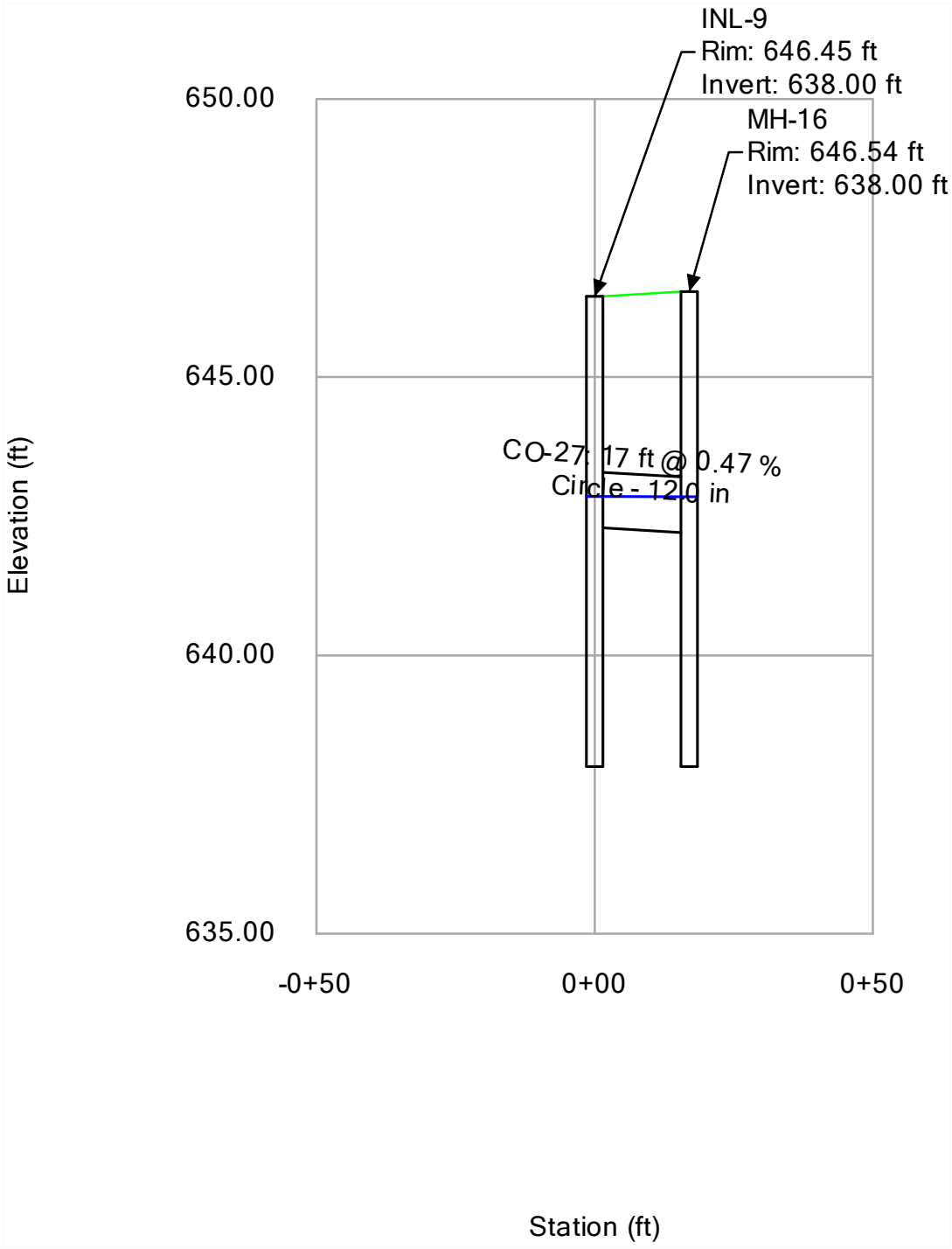
Profile Report
Engineering Profile - INL-5 TO MH-6 (FRDCR_repaired_FINAL.stsw)



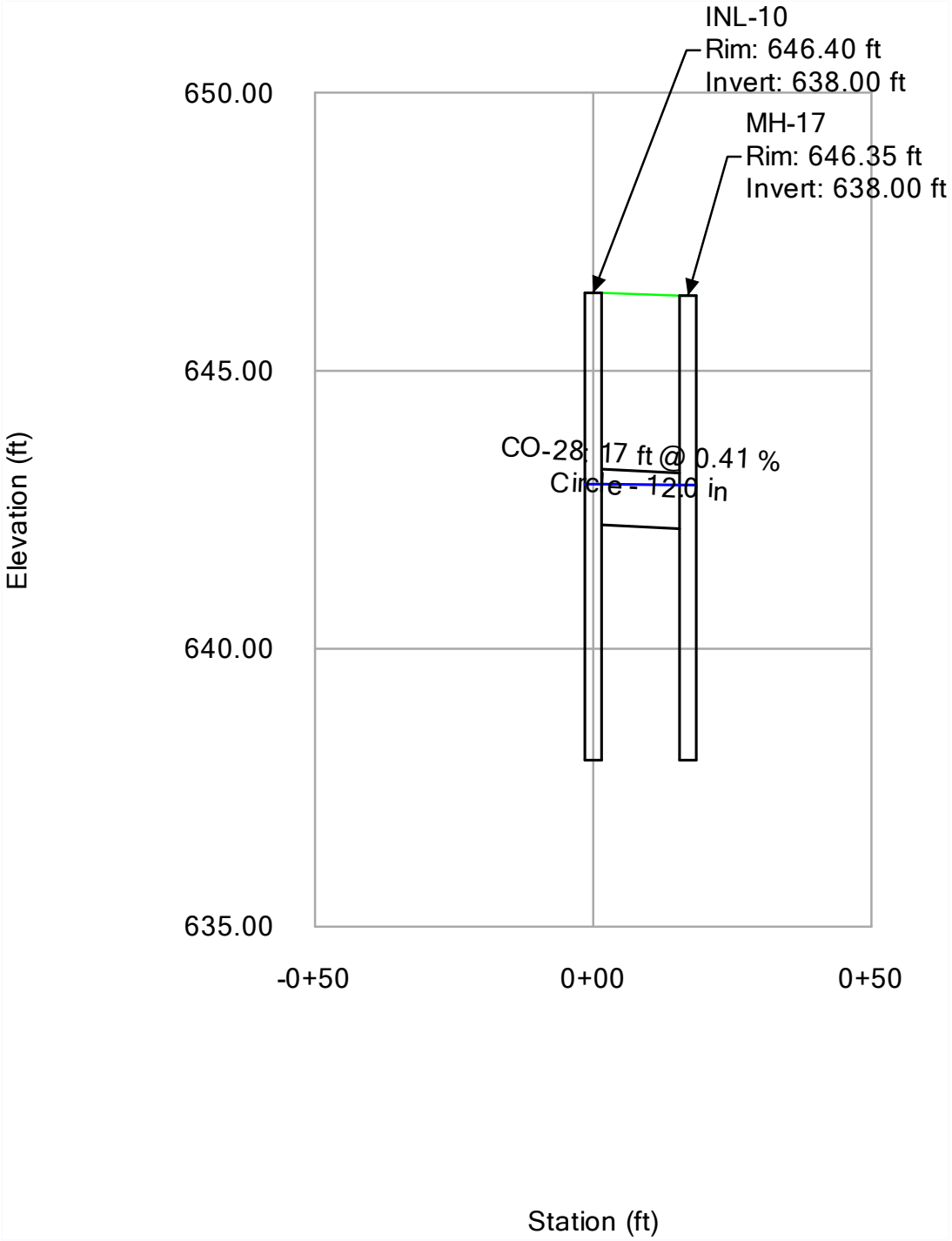
Profile Report
Engineering Profile - INL-8 TO MH-15 (FRDCR_repaired_FINAL.stsw)



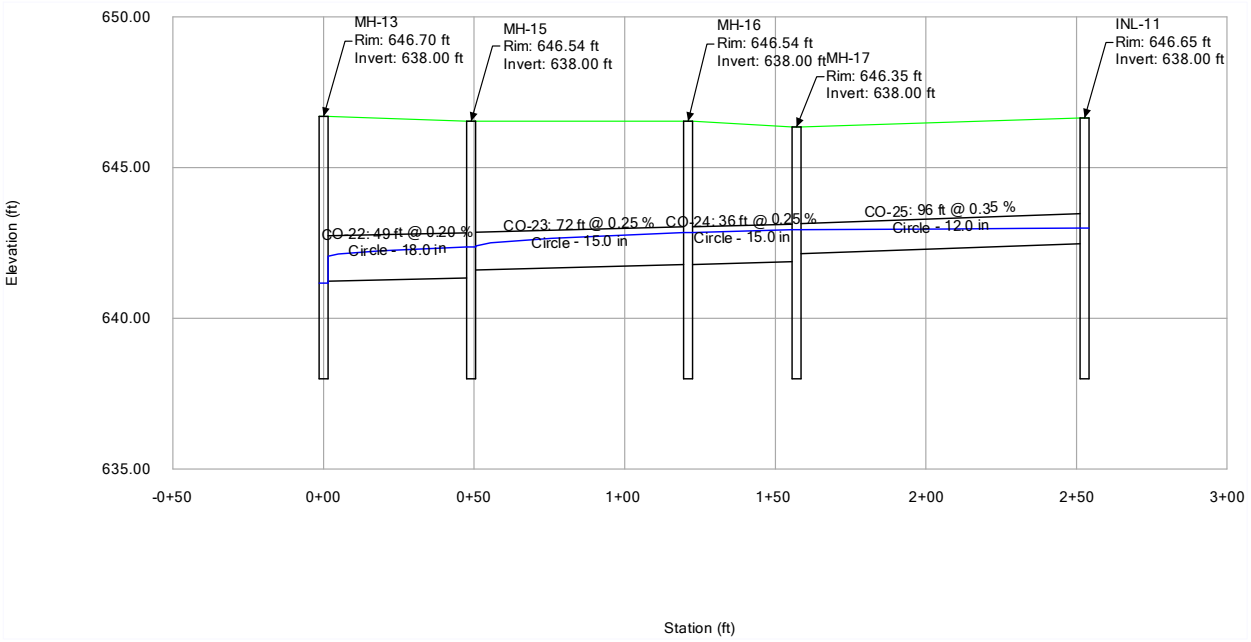
Profile Report
Engineering Profile - INL-9 TO MH-16 (FRDCR_repaired_FINAL.stsw)



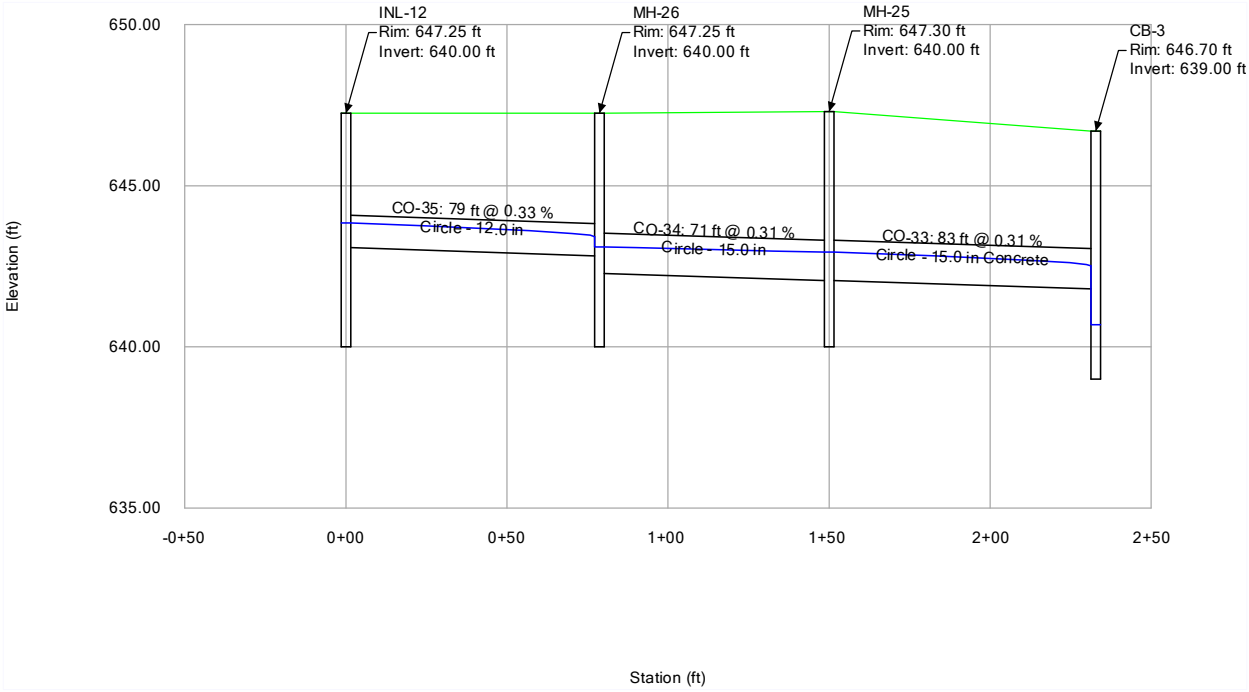
Profile Report
Engineering Profile - INL-10 TO MH-17 (FRDCR_repaired_FINAL.stsw)



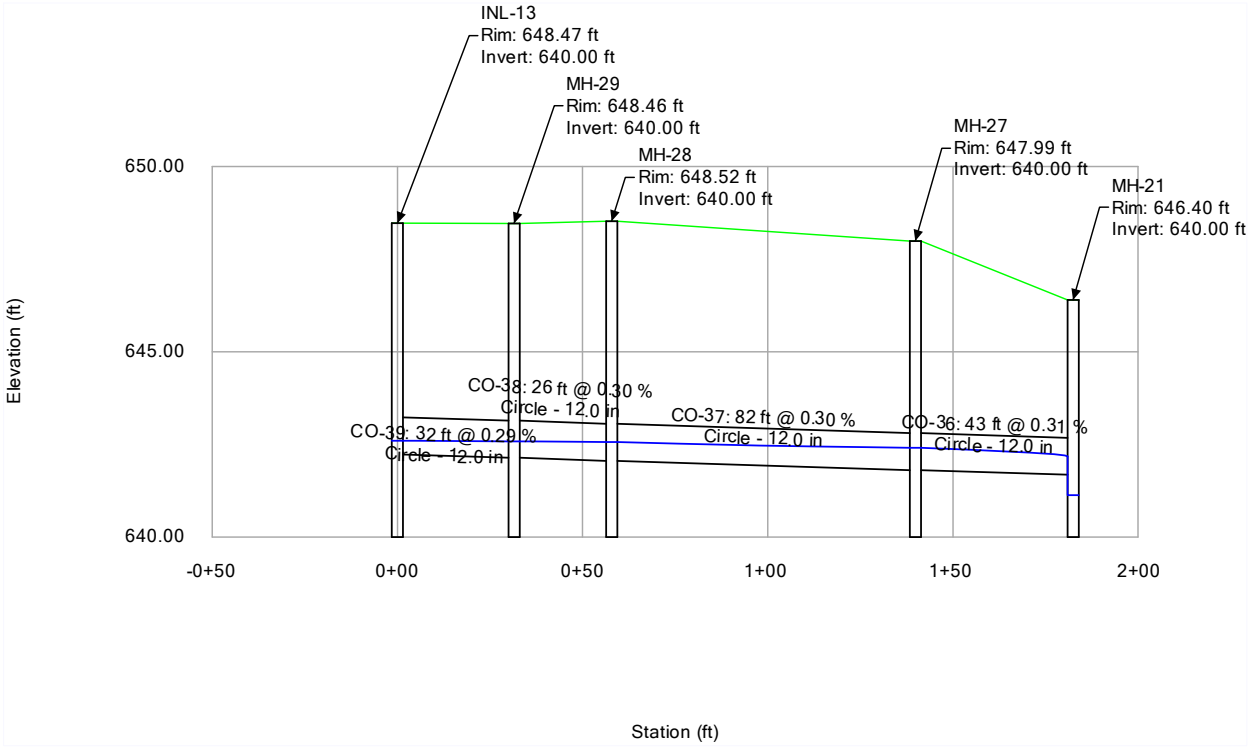
Profile Report
Engineering Profile - INL-11 TO MH-13 (FRDCR_repaired_FINAL.stsw)



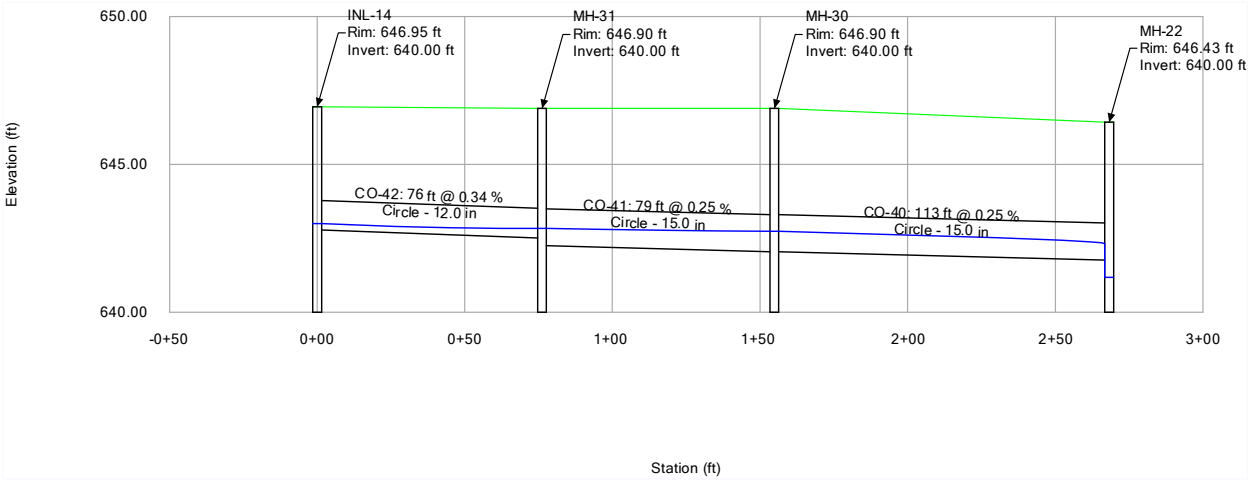
Profile Report
Engineering Profile - INL-12 TO CB-3 (FRDCR_repaired_FINAL.stsw)



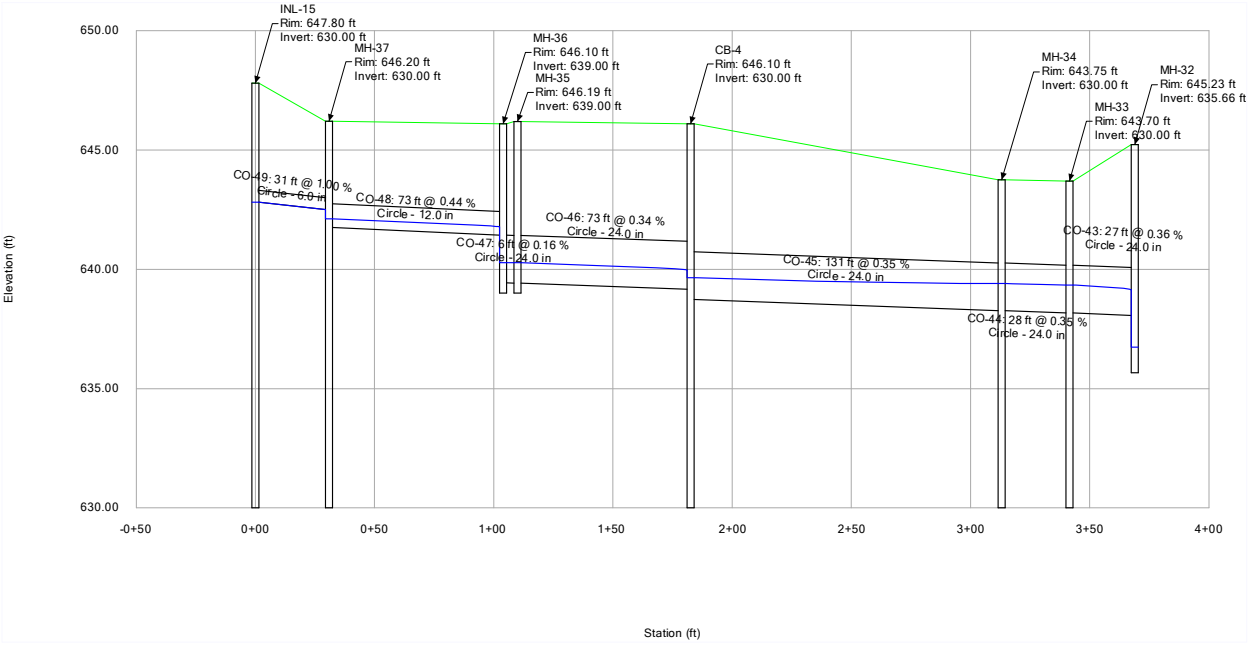
Profile Report
Engineering Profile - INL-13 TO MH-21 (FRDCR_repaired_FINAL.stsw)



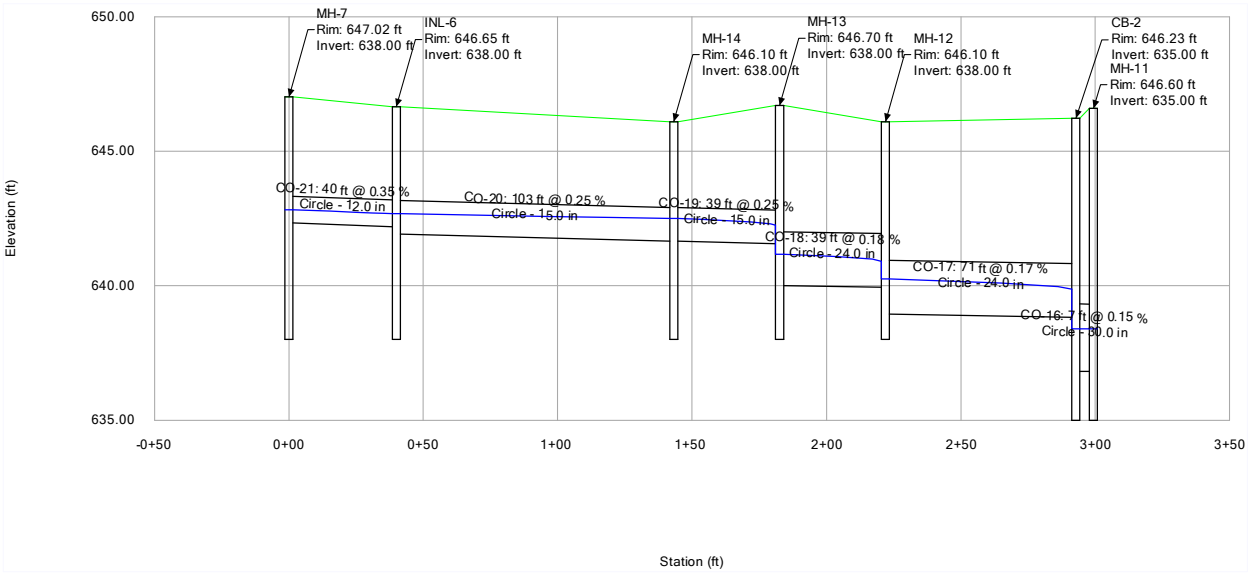
Profile Report
Engineering Profile - INL-14 TO MH-22 (FRDCR_repaired_FINAL.stsw)



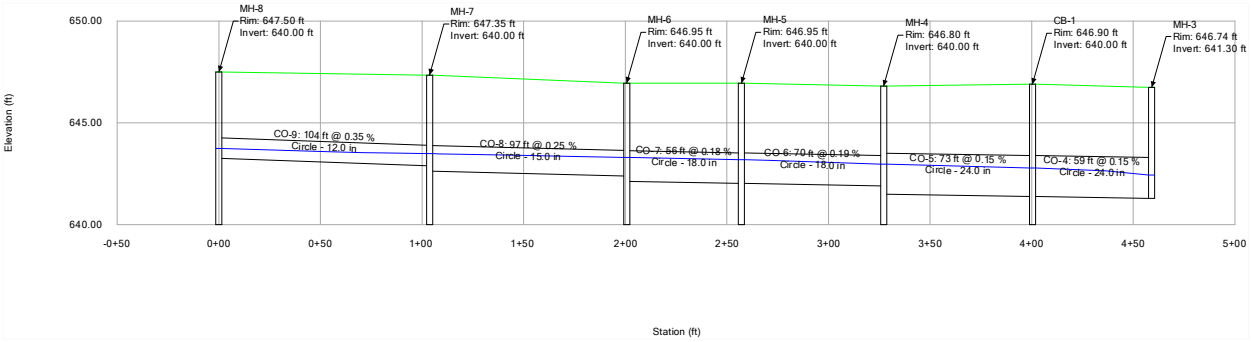
Profile Report
Engineering Profile - INL-15 TO MH-32 (FRDCR_repaired_FINAL.stsw)



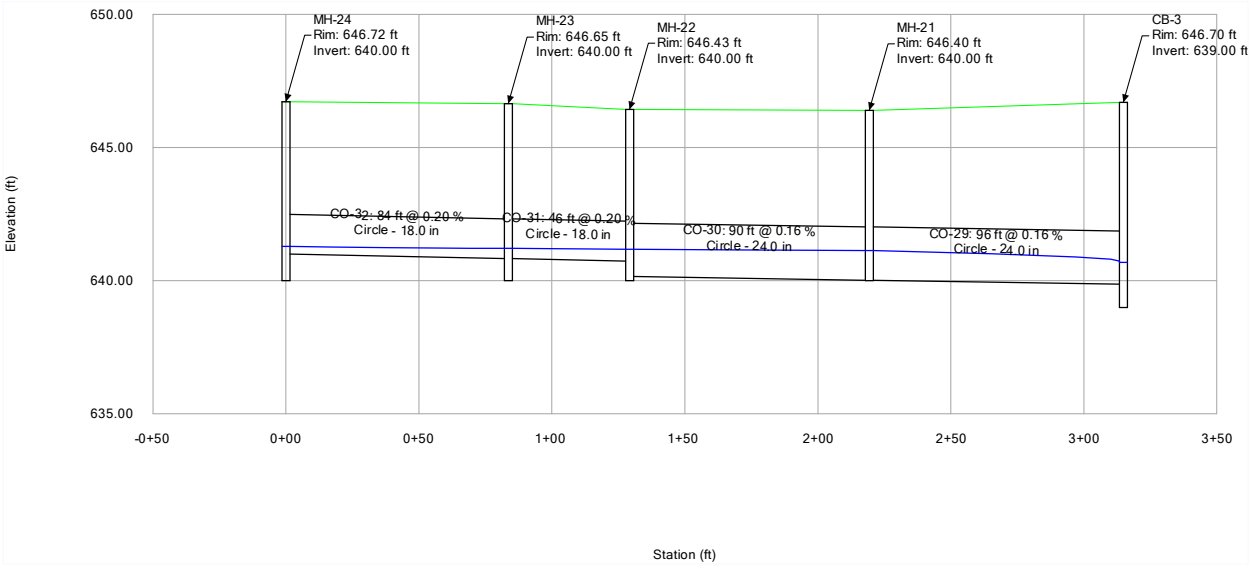
Profile Report
Engineering Profile - MH-7 TO MH-11 (FRDCR_repaired_FINAL.stsw)



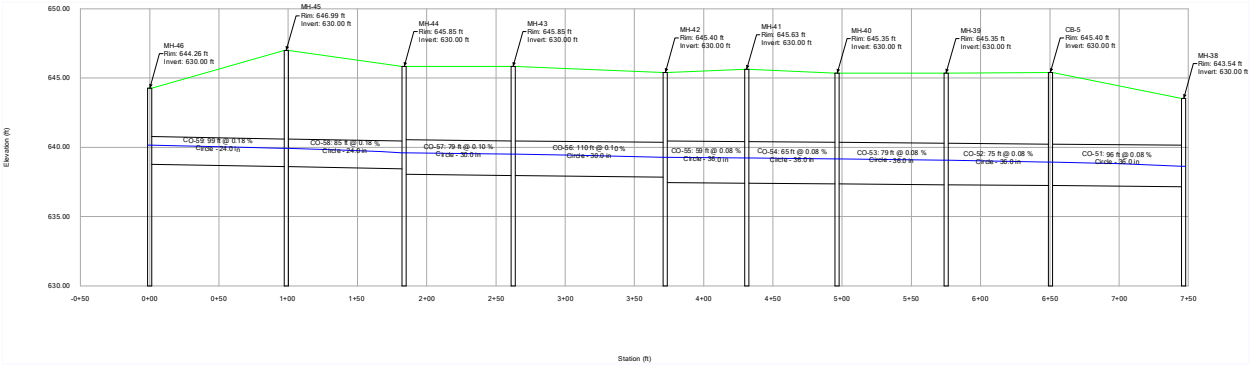
Profile Report
Engineering Profile - MH-8 TO EX. INL-3 (FRDCR_repaired_FINAL.stsw)



Profile Report
Engineering Profile - MH-24 TO CB-3 (FRDCR_repaired_FINAL.stsw)



Profile Report
Engineering Profile - MH-46 TO EX. MH-38
(FRDCR_repaired_FINAL.stsw)



SEASONS AT CREST HILL
CITY OF CREST HILL, ILLINOIS
STORM SEWER DESIGN CALCULATIONS
100-YR STORM EVENT - BULLETIN 70 RAINFALL DATA
1/14/2026

Location		Ground		Hydraulic Grade Line		Crown		Invert		Length	Slope	Diameter	Manning's n	Velocity	Flow	Capacity (Full Flow)	Flow / Capacity (Design)
Upstream Structure	Downstream Structure	Upstream	Downstream	Upstream	Downstream	Upstream	Downstream	Upstream	Downstream	(ft)	(%)	(in)		(ft/s)	(cfs)	(cfs)	(%)
EX. INL-12	EX. O-1	636.04	630.65	668.07	631.65	632.99	631.65	628.99	627.65	73	1.84	48	0.013	80.76	1014.87	194.66	521.40
EX. INL 11	EX. INL-12	635.91	636.04	636.29	636.04	633.81	632.99	629.81	628.99	31	2.67	48	0.013	10.23	128.56	234.52	54.80
EX. INL 11	EX. MH-10	635.91	637.46	636.09	635.91	633.81	632.46	629.81	628.46	25	5.50	48	0.013	9.67	121.48	336.76	36.10
EX. MH-9	EX. MH-10	637.39	637.46	636.47	636.09	634.99	632.46	630.99	628.46	53	4.75	48	0.013	9.67	121.48	313.14	38.80
EX. CB-8	EX. MH-9	640.20	637.39	637.33	636.47	636.16	634.99	632.16	630.99	137	0.86	48	0.013	9.10	114.30	132.83	86.00
EX. CB-8	EX. CB-8A	640.20	639.65	637.33	637.33	633.21	634.98	632.21	633.98	62	-2.85	12	0.013	0.00	0.00	6.01	0.00
EX. CB-7	EX. CB-8	641.19	640.20	639.61	637.33	637.59	636.16	633.59	632.16	372	0.38	48	0.013	8.94	112.38	89.03	126.20
EX. CB-6	EX. CB-7	642.87	641.19	640.38	639.61	638.16	637.59	634.16	633.59	148	0.39	48	0.013	8.24	103.49	89.26	115.90
EX. CB-5	EX. CB-6	643.64	642.87	641.63	640.38	638.84	638.23	634.84	634.23	284	0.21	48	0.013	7.59	95.35	66.52	143.30
EX. CB-4	EX. CB-5	643.76	643.64	641.95	641.63	639.00	638.91	635.00	634.91	99	0.09	48	0.013	6.52	81.90	43.31	189.10
EX. CB-3	EX. CB-4	644.36	643.76	642.33	641.95	638.75	638.53	635.25	635.03	169	0.13	42	0.013	4.96	47.68	36.30	131.40
EX. MH-3A	EX. CB-3	645.50	644.36	642.44	642.33	639.04	638.91	635.54	635.41	52	0.25	42	0.013	4.74	45.60	50.23	90.80
EX. MH-3A	EX. MH-3B	645.50	645.70	642.56	642.44	639.04	639.25	635.54	635.75	73	-0.29	42	0.013	4.27	41.12	54.14	75.90
MH-11	EX. MH-3B	646.60	645.70	643.72	642.56	638.86	638.25	636.36	635.75	116	0.53	30	0.013	8.38	41.12	29.81	138.00
EX. MH	MH-11	646.57	646.60	644.11	643.72	639.38	638.86	636.88	636.36	100	0.53	30	0.013	5.19	25.50	29.73	85.80
EX. MH A	EX. MH	647.23	646.57	644.28	644.11	639.71	639.38	637.21	636.88	45	0.74	30	0.013	5.19	25.50	35.32	72.20
MH-18	EX. MH A	646.25	647.23	644.51	644.28	640.10	639.71	637.60	637.21	59	0.66	30	0.013	5.19	25.50	33.26	76.70
EX. CB	MH-18	646.14	646.25	644.77	644.51	640.62	640.10	638.12	637.60	81	0.65	30	0.013	4.72	23.17	32.96	70.30
MH-19	EX. CB	646.25	646.14	644.97	644.77	640.22	640.12	638.22	638.12	20	0.51	24	0.013	7.38	23.17	16.20	143.10
MH-20	MH-19	646.35	646.25	645.73	644.97	640.70	640.22	638.70	638.22	86	0.56	24	0.013	6.78	21.29	16.92	125.80
EX. CB	MH-20	646.49	646.35	646.25	645.73	641.15	640.7	639.15	638.7	83	0.55	24	0.013	5.73	18.02	16.71	107.8
CB-3	EX. CB	646.7	646.49	646.67	646.25	641.43	641.15	639.43	639.15	65	0.43	24	0.013	5.73	18.02	14.8	121.7
MH-21	CB-3	646.4	646.7	646.86	646.67	642.02	641.87	640.02	639.87	96	0.16	24	0.013	3.21	10.1	8.96	112.7
MH-27	MH-21	647.99	646.4	646.58	646.4	642.81	642.68	641.81	641.68	43	0.31	12	0.013	2.96	2.32	1.97	118.2
MH-28	MH-27	648.52	647.99	646.75	646.58	643.06	642.81	642.06	641.81	82	0.3	12	0.013	2.03	1.6	1.97	81.2
MH-29	MH-28	648.46	648.52	646.77	646.75	643.14	643.06	642.14	642.06	26	0.3	12	0.013	1.29	1.02	1.96	51.8
INL-13	MH-29	648.47	648.46	646.77	646.77	643.23	643.14	642.23	642.14	32	0.29	12	0.013	0.65	0.51	1.9	26.7
MH-22	MH-21	646.43	646.4	646.46	646.4	642.16	642.02	640.16	640.02	90	0.16	24	0.013	1.85	5.81	8.92	65.2
MH-23	MH-22	646.65	646.43	646.43	646.43	642.33	642.24	640.83	640.74	46	0.2	18	0.013	0.49	0.87	4.66	18.7
MH-24	MH-23	646.72	646.65	646.44	646.43	642.5	642.33	641	640.83	84	0.2	18	0.013	0.33	0.58	4.74	12.3
EX. CB A	MH-24	647.39	646.72	646.44	646.44	642.82	642.35	641.57	641.1		0.96	15	0.013	0.12	0.15	6.32	2.3
EX. INL	MH-24	645.63	646.72	646.44	646.44	643.2	642.6	641.7	641.1	82	0.73	18	0.013	0	0	8.97	0
EX. INL	EX. INL	645.63	645.54	645.63	645.63	643.79	642.7	642.79	641.7	29	3.76	12	0.013	0	0	6.91	0
MH-30	MH-22	646.9	646.43	646.71	646.43	643.3	643.02	642.05	641.77	113	0.25	15	0.013	2.6	3.2	3.21	99.6
MH-31	MH-30	646.9	646.9	646.8	646.71	643.5	643.3	642.25	642.05	79	0.25	15	0.013	1.78	2.18	3.26	66.9
INL-14	MH-31	646.95	646.9	646.81	646.8	643.78	643.52	642.78	642.52	76	0.34	12	0.013	0.46	0.36	2.08	17.4
MH-25	CB-3	647.3	646.7	647.23	646.67	643.31	643.05	642.06	641.8	83	0.31	15	0.013	4.32	5.3	3.62	146.4
MH-26	MH-25	647.25	647.3	647.56	647.23	643.53	643.31	642.28	642.06	71	0.31	15	0.013	3.61	4.43	3.59	123.6
INL-12	MH-26	647.25	647.25	647.94	647.25	644.08	643.82	643.08	642.82	79	0.33	12	0.013	4.25	3.34	2.05	163.2
CB-2	MH-11	646.23	646.6	643.73	643.72	639.32	639.31	636.82	636.81	7	0.15	30	0.013	3.08	15.11	16.05	94.1
MH-12	CB-2	646.1	646.23	644.02	643.73	640.94	640.82	638.94	638.82	71	0.17	24	0.013	4.62	14.53	9.31	156.1
MH-13	MH-12	646.7	646.1	644.15	644.02	642.01	641.94	640.01	639.94	39	0.18	24	0.013	4.02	12.64	9.54	132.5
MH-15	MH-13	646.54	646.7	644.41	644.15	642.84	642.74	641.34	641.24	49	0.2	18	0.013	4.36	7.7	4.74	162.4
MH-16	MH-15	646.54	646.54	645.15	644.41	643.04	642.86	641.79	641.61	72	0.25	15	0.013	5.33	6.54	3.23	202.4
MH-17	MH-16	646.35	646.54	645.42	645.15	643.13	643.04	641.88	641.79	36	0.25	15	0.013	4.62	5.67	3.23	175.5
INL-10	MH-17	646.4	646.35	645.49	645.42	643.23	643.16	642.23	642.16	17	0.41	12	0.013	2.87	2.25	2.29	98.5
INL-11	MH-17	646.65	646.35	645.55	645.42	643.48	643.15	642.48	642.15	96	0.35	12	0.013	1.66	1.31	2.09	62.5
INL-9	MH-16	646.45	646.54	645.15	645.15	643.29	643.21	642.29	642.21	17	0.47	12	0.013	0.55	0.44	2.44	17.8
INL-8	MH-15	646.45	646.54	644.41	644.41	643.28	643.21	642.28	642.21	17	0.41	12	0.013	0.74	0.58	2.29	25.4
MH-14	MH-13	646.1	646.7	644.38	644.15	642.91	642.81	641.66	641.56	39	0.25	15	0.013	4.03	4.94	3.26	151.7
INL-6	MH-14	646.65	646.1	644.68	644.38	643.17	642.91	641.92	641.66	103	0.25	15	0.013	2.84	3.49	3.24	107.6

SEASONS AT CREST HILL
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STORM SEWER DESIGN CALCULATIONS
100-YR STORM EVENT - BULLETIN 70 RAINFALL DATA
1/14/2026

Location		Ground		Hydraulic Grade Line		Crown		Invert		Length	Slope	Diameter	Manning's n	Velocity	Flow	Capacity (Full Flow)	Flow / Capacity (Design)
Upstream Structure	Downstream Structure	Upstream	Downstream	Upstream	Downstream	Upstream	Downstream	Upstream	Downstream	(ft)	(%)	(in)		(ft/s)	(cfs)	(cfs)	(%)
MH-7	INL-6	647.02	646.65	644.77	644.68	643.33	643.19	642.33	642.19	40	0.35	12	0.013	2.22	1.74	2.11	82.7
EX. MH-3A	EX. MH	645.5	645.08	642.8	642.44	640.52	640.92	639.52	639.92	86	-0.47	12	0.013	2.96	2.32	2.44	95.4
EX. MH	EX. INLET	645.08	643.3	642.84	642.8	641.05	641.25	640.05	640.25	8	-2.39	12	0.013	2.96	2.32	5.51	42.2
EX. INLET	EX. INLET	643.3	643.17	642.92	642.84	641.25	641.56	640.25	640.56	30	-1.04	12	0.013	2.4	1.89	3.63	52
EX. MH-3A	EX.MH	645.5	645.4	642.89	642.44	640.52	641.35	639.52	640.35	123	-0.67	12	0.013	2.75	2.16	2.93	73.7
EX.MH	EX. MH-73	645.4	643.65	642.92	642.89	641.09	641.35	640.09	640.35	8	-3.25	12	0.013	2.75	2.16	6.42	33.6
EX. MH-73	EX. MH-72	643.65	643.86	642.97	642.92	641.5	641.09	640.5	640.09	29	1.41	12	0.013	1.94	1.53	4.24	36
EX. CB-4B	EX. CB-4	643.17	643.76	642.02	641.95	638.67	638.67	635.17	635.17	61	0	42	0.013	3.36	32.36	1.01	3,216.30
EX. CB-4A	EX. CB-4B	644.18	643.17	642.09	642.02	638.81	638.67	635.31	635.17	135	0.1	42	0.013	2.5	24.06	32.43	74.2
EX. INLET	EX. CB-4A	643.76	644.18	642.31	642.09	641.25	637.81	638.75	635.31	62	5.51	30	0.013	4.9	24.06	96.27	25
EX. INLET	EX. INLET	645.94	643.76	643.03	642.31	642.76	641.25	640.26	638.75	241	0.63	30	0.013	4.56	22.39	32.44	69
MH-3	EX. INLET	646.74	645.94	643.37	643.03	643.8	642.76	641.3	640.26	193	0.54	30	0.013	6.51	19.27	30.14	63.9
EX. INLET 1	MH-3	649.1	646.74	643.37	643.37	644.16	643.8	641.66	641.3	159	0.23	30	0.013	2.49	1.82	19.51	9.3
EX. INLET 1	MH-1	649.1	649	643.4	643.37	642.66	642.77	641.66	641.77	28	-0.39	12	0.013	1.39	1.09	2.23	48.8
MH-1	MH-2	649	649.01	643.89	643.45	644.13	644.54	643.13	643.54	102	-0.4	12	0.013	2.41	0.58	2.26	25.7
MH-2	INL-1	649.01	648.92	645.09	644.84	645.54	645.75	644.54	644.75	61	-0.34	12	0.013	2.19	0.51	2.08	24.4
EX. INLET 1	EX. MH-1	649.1	648.68	643.37	643.37	644.16	644.94	641.66	642.44	147	-0.53	30	0.013	1.94	0.29	29.83	1
EX. MH-1	EX. INLET 2	648.68	647.17	643.38	643.37	644.44	645.15	642.44	643.15	260	-0.27	24	0.013	1.29	0.15	11.82	1.2
CB-1	MH-3	646.9	646.74	643.67	643.37	643.39	643.3	641.39	641.3	59	0.15	24	0.013	5.14	16.14	8.86	182.2
MH-4	CB-1	646.8	646.9	644	643.67	643.5	643.39	641.5	641.39	73	0.15	24	0.013	4.84	15.2	8.77	173.3
MH-5	MH-4	646.95	646.8	644.44	644	643.53	643.4	642.03	641.9	70	0.19	18	0.013	4.74	8.37	4.53	184.9
MH-6	MH-5	646.95	646.95	644.72	644.44	643.63	643.53	642.13	642.03	56	0.18	18	0.013	4.2	7.42	4.42	168
MH-10	MH-6	646.85	646.95	645.01	644.72	643.66	643.53	642.66	642.53	67	0.2	12	0.013	2.98	2.34	1.57	148.6
MH-10	INL-5	646.85	646.61	645.87	645.01	643.56	643.81	643.06	643.31	50	-0.5	6	0.013	3.77	0.74	0.4	185.9
MH-7	MH-6	647.35	646.95	645.12	644.72	643.88	643.64	642.63	642.39	97	0.25	15	0.013	3.37	4.14	3.21	128.9
INL-4	MH-7	647.35	647.35	645.15	645.12	644.18	644.1	643.18	643.1	22	0.36	12	0.013	1.48	1.16	2.15	54.1
MH-8	MH-7	647.5	647.35	645.35	645.12	644.26	643.9	643.26	642.9	104	0.35	12	0.013	2.13	1.67	2.1	79.6
INL-3	MH-8	647.5	647.5	645.36	645.35	644.33	644.26	643.33	643.26	22	0.32	12	0.013	1.02	0.8	2.01	39.7
MH-9	MH-4	647.25	646.8	644.49	644	643.78	643.5	642.53	642.25	112	0.25	15	0.013	3.49	4.29	3.23	132.7
INL-2	MH-9	647.25	647.25	645.12	644.49	644.08	643.81	643.08	642.81	79	0.34	12	0.013	4.07	3.2	2.09	153.2
MH-38	EX. O-2	643.54	635.68	638.99	632.79	639.16	633.68	637.16	631.68	109	5.01	24	0.013	16.57	28.33	50.61	56
CB-5	MH-38	645.4	643.54	639.45	638.99	640.24	640.16	637.24	637.16	96	0.08	36	0.013	3.93	27.75	19.23	144.3
MH-39	CB-5	645.35	645.4	639.64	639.45	640.3	640.24	637.3	637.24	75	0.08	36	0.013	3.85	27.24	18.82	144.8
MH-40	MH-39	645.35	645.35	639.78	639.64	640.36	640.3	637.36	637.3	79	0.08	36	0.013	3.6	25.43	18.42	138
MH-41	MH-40	645.63	645.35	639.87	639.78	640.41	640.36	637.41	637.36	65	0.08	36	0.013	3.31	23.39	18.46	126.7
MH-42	MH-41	645.4	645.63	639.94	639.87	640.46	640.41	637.46	637.41	59	0.08	36	0.013	3.24	22.88	19.44	117.7
INL-17	MH-42	645.65	645.4	641.07	640.71	641.48	641.19	640.48	640.19	67	0.43	12	0.013	3.18	1.53	2.34	65.1
INL-16	MH-42	645.51	645.4	640.84	640.48	641.34	641.03	640.34	640.03	71	0.44	12	0.013	2.99	1.16	2.35	49.4
MH-43	MH-42	645.85	645.4	640.18	639.94	640.47	640.36	637.97	637.86	110	0.1	30	0.013	3.82	18.74	12.98	144.5
MH-44	MH-43	645.85	645.85	640.3	640.18	640.55	640.47	638.05	637.97	79	0.1	30	0.013	3.3	16.2	13.08	123.9
MH-45	MH-44	646.99	645.85	640.64	640.3	640.6	640.45	638.6	638.45	85	0.18	24	0.013	4.62	14.53	9.5	153
MH-46	MH-45	644.26	646.99	641.02	640.64	640.78	640.6	638.78	638.6	99	0.18	24	0.013	4.49	14.09	9.67	145.8
MH-46	EX. MH-7	644.26	643.45	641.15	641.02	640.78	640.92	638.78	638.92	36	-0.39	24	0.013	4.28	13.44	14.06	95.6
EX. MH-7	EX. MH-8	643.45	640.03	641.83	641.15	640.92	637.83	638.92	635.83	192	1.61	24	0.013	4.28	13.44	28.73	46.8
EX. MH-8	EX. MH-9	640.03	641.36	640.65	640.03	637.58	637.91	635.83	636.16	87	-0.38	21	0.013	5.59	13.44	9.77	137.6
EX. MH-9	EX. MH-10	641.36	646.81	642.03	640.65	637.91	642.42	636.16	640.67	165	-2.74	21	0.013	10.97	13.44	26.23	51.2
EX. MH-10	EX. MH-11	646.81	646.56	642.34	642.03	642.42	642.96	640.67	641.21	42	-1.3	21	0.013	7.57	9.3	18.07	51.5
EX. MH-11	EX. MH-12	646.56	645.62	643.58	642.34	642.01	642.28	641.01	641.28	147	-0.18	12	0.013	4.16	3.27	1.53	214.3
EX. MH-12	EX. MH-13	645.62	645.63	643.79	643.58	642.28	642.99	641.28	641.99	25	-2.86	12	0.013	4.16	3.27	6.03	54.2
EX. INL 8	EX. O-2	644.47	635.68	634.49	633.27	634.79	633.68	632.79	631.68	102	1.09	24	0.013	8.56	22.87	23.61	96.9
EX. INL 7	EX. INL 8	642.03	644.47	637.03	636.3	637.38	636.65	635.38	634.65	85	0.86	24	0.013	7.6	21.12	20.96	100.8

SEASONS AT CREST HILL
CITY OF CREST HILL, ILLINOIS
STORM SEWER DESIGN CALCULATIONS
100-YR STORM EVENT - BULLETIN 70 RAINFALL DATA
1/14/2026

Location		Ground		Hydraulic Grade Line		Crown		Invert		Length	Slope	Diameter	Manning's n	Velocity	Flow	Capacity (Full Flow)	Flow / Capacity (Design)
Upstream Structure	Downstream Structure	Upstream	Downstream	Upstream	Downstream	Upstream	Downstream	Upstream	Downstream	(ft)	(%)	(in)		(ft/s)	(cfs)	(cfs)	(%)
EX. INL 7	EX. INL 6	642.03	643.98	641.74	637.03	636.38	641.93	635.38	640.93	107	-5.17	12	0.013	9.99	3.56	8.1	43.9
EX. INL 6	EX. INL 5	643.98	646	643	641.74	641.93	643.3	640.93	642.3	138	-0.99	12	0.013	4.96	2.67	3.55	75.3
EX. INL 5	EX. INL 4	646	646.08	643.26	643	643.3	643.78	642.3	642.78	31	-1.57	12	0.013	4.94	1.31	4.46	29.3
MH-32	EX. INL 7	645.23	642.03	637.19	637.03	637.66	637.38	635.66	635.38	48	0.59	24	0.013	6.23	15.26	17.33	88
MH-33	MH-32	643.7	645.23	639.77	639.48	640.17	640.07	638.17	638.07	27	0.36	24	0.013	4.86	15.26	13.66	111.7
MH-34	MH-33	643.75	643.7	639.87	639.77	640.27	640.17	638.27	638.17	28	0.35	24	0.013	4.86	12.86	13.41	95.9
CB-4	MH-34	646.1	643.75	640.1	639.87	640.73	640.27	638.73	638.27	131	0.35	24	0.013	4.66	9.73	13.43	72.5
MH-35	CB-4	646.19	646.1	640.58	640.21	641.42	641.17	639.42	639.17	73	0.34	24	0.013	4.48	8.5	13.27	64
EX. MH-5	MH-35	645.77	646.19	640.81	640.58	641.05	640.92	639.55	639.42	72	0.18	18	0.013	3.08	5.45	4.47	121.8
EX. INL-5	EX. MH-5	644.86	645.77	640.9	640.81	641.5	641.05	640	639.55	24	1.87	18	0.013	7.57	5.45	14.37	37.9
EX. INL-6	EX. INL-5	644.85	644.86	640.92	640.9	641.63	641.5	640.13	640	30	0.44	18	0.013	3.65	2.62	6.95	37.6
MH-36	MH-35	646.1	646.19	640.58	640.58	641.43	641.42	639.43	639.42	6	0.16	24	0.013	2.62	3.05	9.17	33.3
MH-37	MH-36	646.2	646.1	642.25	641.88	642.75	642.43	641.75	641.43	73	0.44	12	0.013	2.99	1.16	2.36	49.3
INL-15	MH-37	647.8	646.2	642.81	642.5	643.31	643	642.81	642.5	31	1	6	0.013	0	0	0.56	0

SEASONS AT CREST HILL
CITY OF CREST HILL, ILLINOIS
STORM SEWER DESIGN CALCULATIONS
100-YR STORM EVENT - BULLETIN 70 RAINFALL DATA
1/14/2026

Drainage Area	Outflow Element	Area (Acres)	Runoff Coefficient	Tc (min)	Intensity (in/hr)	Flow (cfs)
EX. C1	EX. CB-3	0.29	0.66	5	10.92	2.08
EX. C2	EX. INL 7	0.32	0.66	5	10.92	2.30
EX. C3	EX. CB-4	0.26	0.66	5	10.92	1.87
EX. C4	EX. CB-5	1.85	0.66	5	10.92	13.45
EX. C5	EX. CB-6	1.12	0.66	5	10.92	8.14
EX. C6	EX. CB-7	1.22	0.66	5	10.92	8.89
EX. C7	EX. CB-8	0.26	0.66	5	10.92	1.92
EX. C8	EX. MH-9	0.99	0.66	5	10.92	7.18
EX. C9	EX. MH-10	0.00	0.66	5	10.92	0.00
EX. C10	EX. INL 11	0.97	0.66	5	10.92	7.08
EX. C11	EX. INL-12	122.00	0.66	5	10.92	886.31
EX. C12	EX. INL 8	0.24	0.66	5	10.92	1.75
EX. C15	EX. INL 6	0.12	0.66	5	10.92	0.89
EX. C16	EX. INL 5	0.19	0.66	5	10.92	1.37
EX. C-17	EX. INL 4	0.18	0.66	5	10.92	1.31
CM-19	EX. CB-4B	1.14	0.66	5	10.92	8.30
CM-22	INL-2	0.44	0.66	5	10.92	3.20
CM-23	MH-9	0.15	0.66	5	10.92	1.09
CM-24	MH-4	0.35	0.66	5	10.92	2.54
CM-25	CB-1	0.13	0.66	5	10.92	0.94
CM-26	MH-3	0.18	0.66	5	10.92	1.31
CM-27	INL-3	0.11	0.66	5	10.92	0.8
CM-28	MH-8	0.12	0.66	5	10.92	0.87
CM-29	INL-4	0.16	0.66	5	10.92	1.16
CM-30	MH-7	0.18	0.66	5	10.92	1.31
CM-31	MH-6	0.13	0.66	5	10.92	0.94
CM-33	MH-10	0.22	0.66	5	10.92	1.6
CM-34	INL-12	0.46	0.66	5	10.92	3.34
CM-35	MH-26	0.15	0.66	5	10.92	1.09
CM-36	MH-25	0.12	0.66	5	10.92	0.87
CM-37	CB-3	0.36	0.66	5	10.92	2.62
CM-38	MH-21	0.27	0.66	5	10.92	1.96
CM-39	MH-23	0.04	0.66	5	10.92	0.29
CM-40	MH-22	0.24	0.66	5	10.92	1.74
CM-41	MH-30	0.14	0.66	5	10.92	1.02
CM-42	MH-31	0.25	0.66	5	10.92	1.82
CM-43	INL-14	0.05	0.66	5	10.92	0.36
CM-44	MH-24	0.06	0.66	5	10.92	0.44
CM-47	MH-20	0.45	0.66	5	10.92	3.27
CM-48	MH-19	0.26	0.66	5	10.92	1.89
CM-49	MH-18	0.32	0.66	5	10.92	2.32

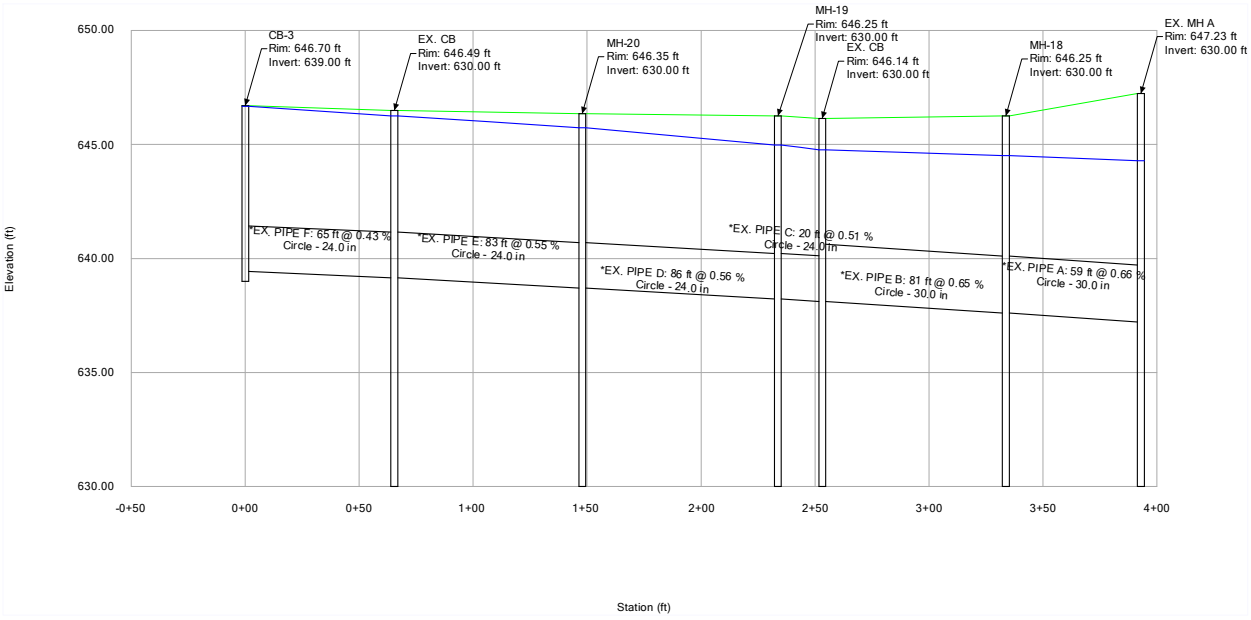
SEASONS AT CREST HILL
CITY OF CREST HILL, ILLINOIS
STORM SEWER DESIGN CALCULATIONS
100-YR STORM EVENT - BULLETIN 70 RAINFALL DATA
1/14/2026

Drainage Area	Outflow Element	Area (Acres)	Runoff Coefficient	Tc (min)	Intensity (in/hr)	Flow (cfs)
CM-52	EX. MH-72	0.21	0.66	5	10.92	1.53
CM-53	MH-12	0.26	0.66	5	10.92	1.89
CM-55	MH-15	0.08	0.66	5	10.92	0.58
CM-56	MH-17	0.29	0.66	5	10.92	2.11
CM-57	INL-11	0.18	0.66	5	10.92	1.31
CM-58	INL-8	0.08	0.66	5	10.92	0.58
CM-59	CB-5	0.07	0.66	5	10.92	0.51
CM-60	MH-39	0.25	0.66	5	10.92	1.82
CM-61	MH-40	0.28	0.66	5	10.92	2.03
CM-63	MH-42	0.2	0.66	5	10.92	1.45
CM-64	INL-17	0.21	0.66	5	10.92	1.53
CM-65	INL-16	0.16	0.66	5	10.92	1.16
CM-66	MH-43	0.35	0.66	5	10.92	2.54
CM-67	MH-44	0.23	0.66	5	10.92	1.67
CM-69	MH-45	0.06	0.66	5	10.92	0.44
CM-70	MH-46	0.09	0.66	5	10.92	0.65
CM-71	MH-14	0.2	0.66	5	10.92	1.45
CM-72	INL-6	0.24	0.66	5	10.92	1.74
CM-77	EX. INLET 1	0.06	0.66	5	10.92	0.44
CM-1	MH-1	0.07	0.66	5	10.92	0.51
CM-2	MH-2	0.01	0.66	5	10.92	0.07
CM-3	EX. MH-1	0.02	0.66	5	10.92	0.15
CM-4	INL-1	0.07	0.66	5	10.92	0.51
CM-5	EX. INLET 2	0.02	0.66	5	10.92	0.15
CM-6	MH-5	0.13	0.66	5	10.92	0.94
CM-7	INL-5	0.1	0.66	5	10.92	0.74
CM-8	EX. INLET	0.43	0.66	5	10.92	3.12
CM-9	EX. INLET	0.23	0.66	5	10.92	1.67
CM-10	EX. INLET	0.06	0.66	5	10.92	0.44
CM-11	EX. INLET	0.26	0.66	5	10.92	1.89
CM-12	EX. MH-73	0.09	0.66	5	10.92	0.63
CM-13	MH-11	0.07	0.66	5	10.92	0.51
CM-14	CB-2	0.08	0.66	5	10.92	0.58
CM-15	MH-16	0.06	0.66	5	10.92	0.44
CM-16	INL-9	0.06	0.66	5	10.92	0.44
CM-17	INL-10	0.31	0.66	5	10.92	2.25
CM-18	MH-7	0.24	0.66	5	10.92	1.74
CM-19	MH-27	0.1	0.66	5	10.92	0.73
CM-20	MH-28	0.08	0.66	5	10.92	0.58
CM-21	MH-29	0.07	0.66	5	10.92	0.51
CM-22	INL-13	0.07	0.66	5	10.92	0.51

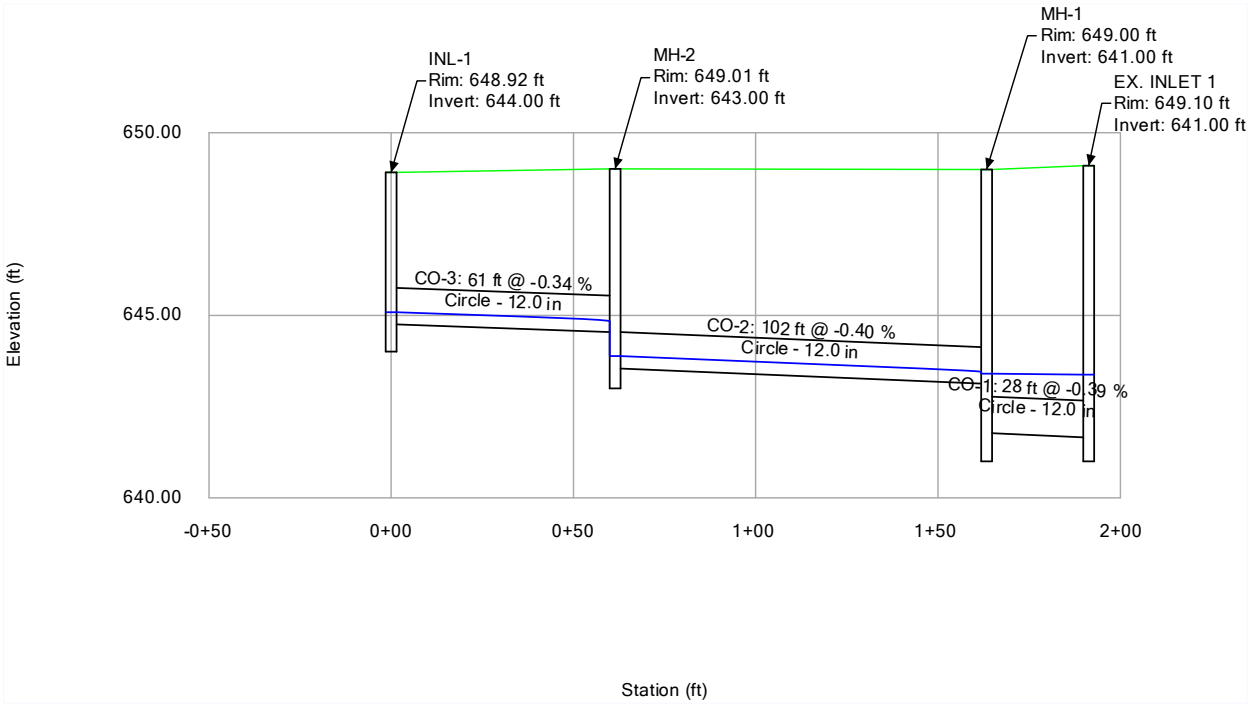
SEASONS AT CREST HILL
CITY OF CREST HILL, ILLINOIS
STORM SEWER DESIGN CALCULATIONS
100-YR STORM EVENT - BULLETIN 70 RAINFALL DATA
1/14/2026

Drainage Area	Outflow Element	Area (Acres)	Runoff Coefficient	Tc (min)	Intensity (in/hr)	Flow (cfs)
CM-23	MH-33	0.33	0.66	5	10.92	2.4
CM-24	MH-34	0.43	0.66	5	10.92	3.12
CM-25	CB-4	0.17	0.66	5	10.92	1.24
CM-26	MH-36	0.26	0.66	5	10.92	1.89
CM-27	MH-37	0.16	0.66	5	10.92	1.16
CM-28	MH-38	0.08	0.66	5	10.92	0.58
CM-29	MH-41	0.07	0.66	5	10.92	0.51
CM-30	EX. CB A	0.02	0.66	5	10.92	0.15
CM-31	EX. MH-13	0.45	0.66	5	10.92	3.27
CM-3	EX. INL-6	0.36	0.66	5	10.92	2.62
CM-4	EX. INL-5	0.39	0.66	5	10.92	2.83
CM-5	EX. MH-11	0.83	0.66	5	10.92	6.03
CM-6	EX. MH-10	0.57	0.66	5	10.92	4.14

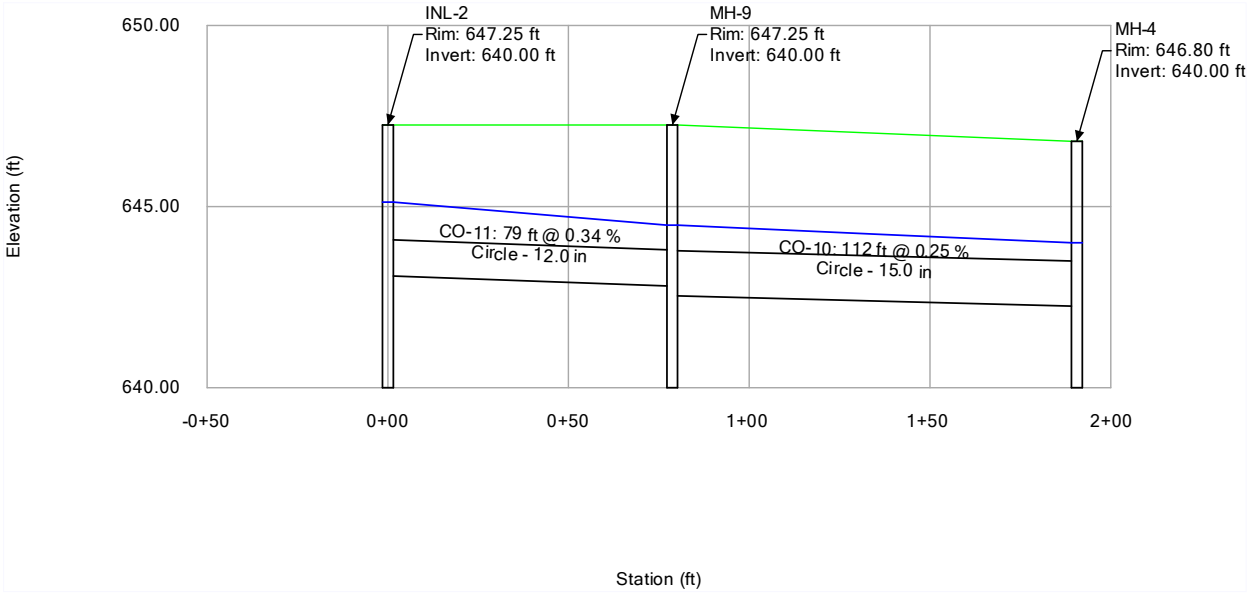
Profile Report
Engineering Profile - CB-3 TO EX. MH-A (FRDCR_repaired_FINAL.stsw)



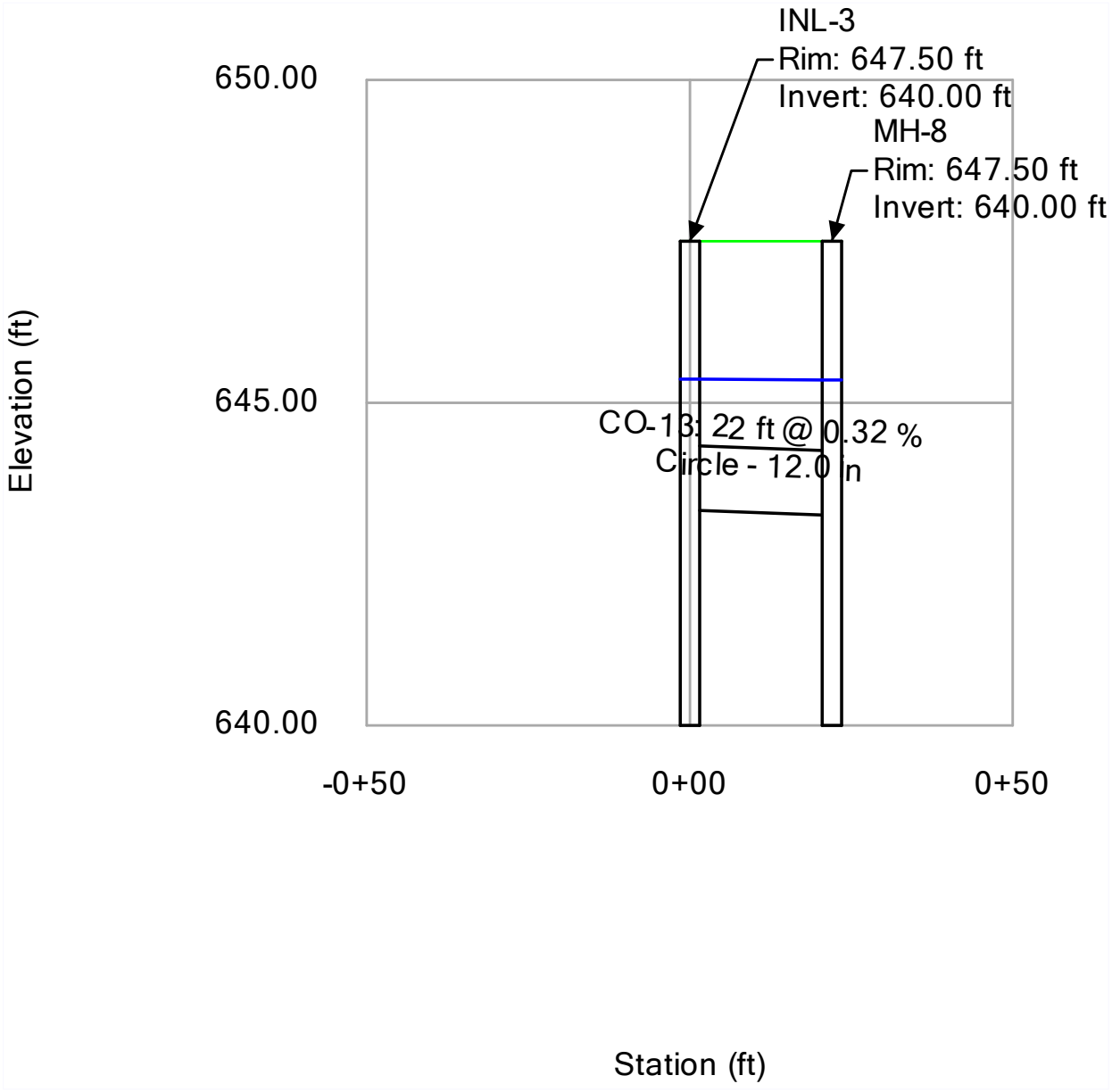
Profile Report
Engineering Profile - INL-1 TO EX. INL-1 (FRDCR_repaired_FINAL.stsw)



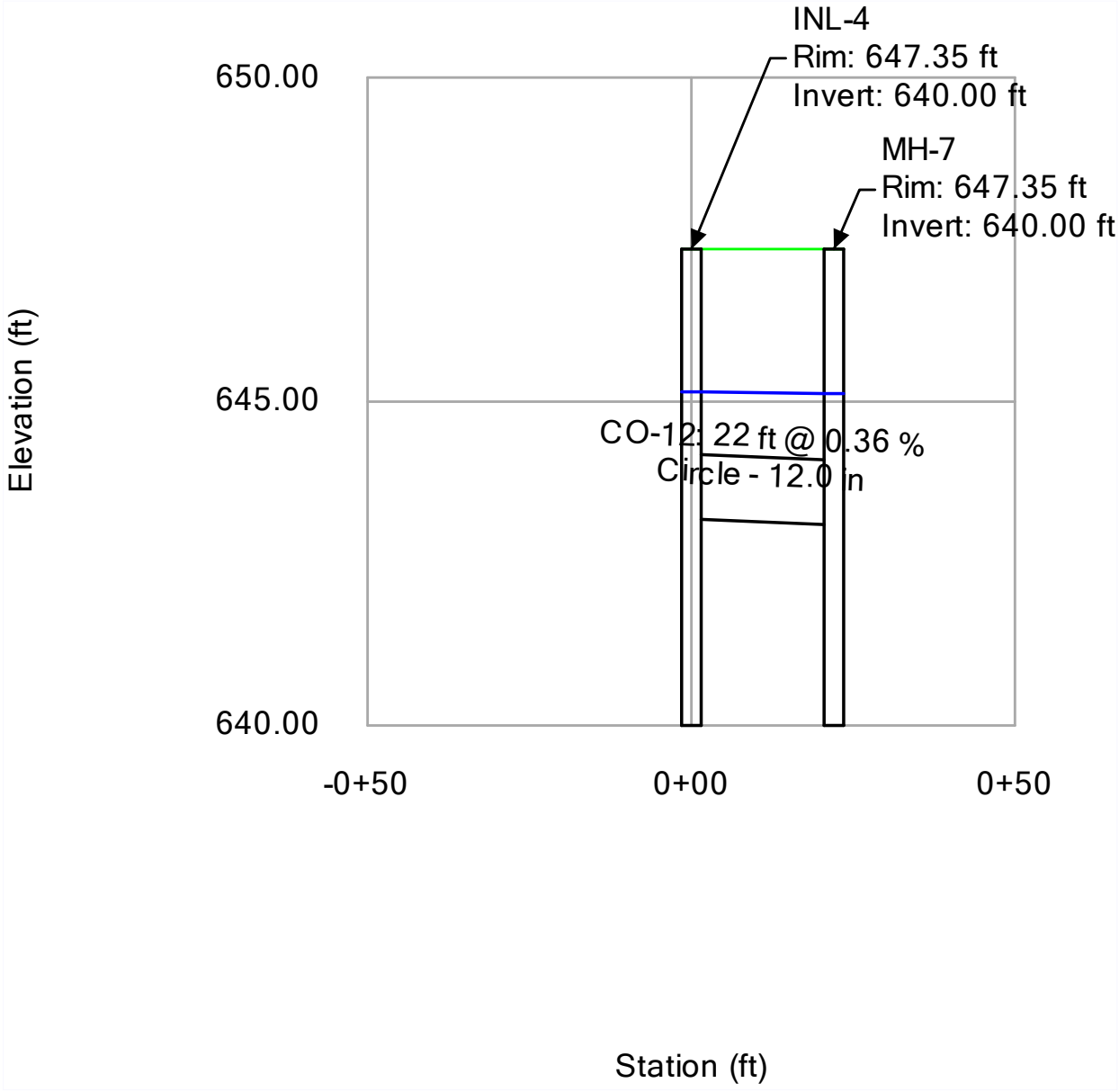
Profile Report
Engineering Profile - INL-2 TO MH-4 (FRDCR_repaired_FINAL.stsw)



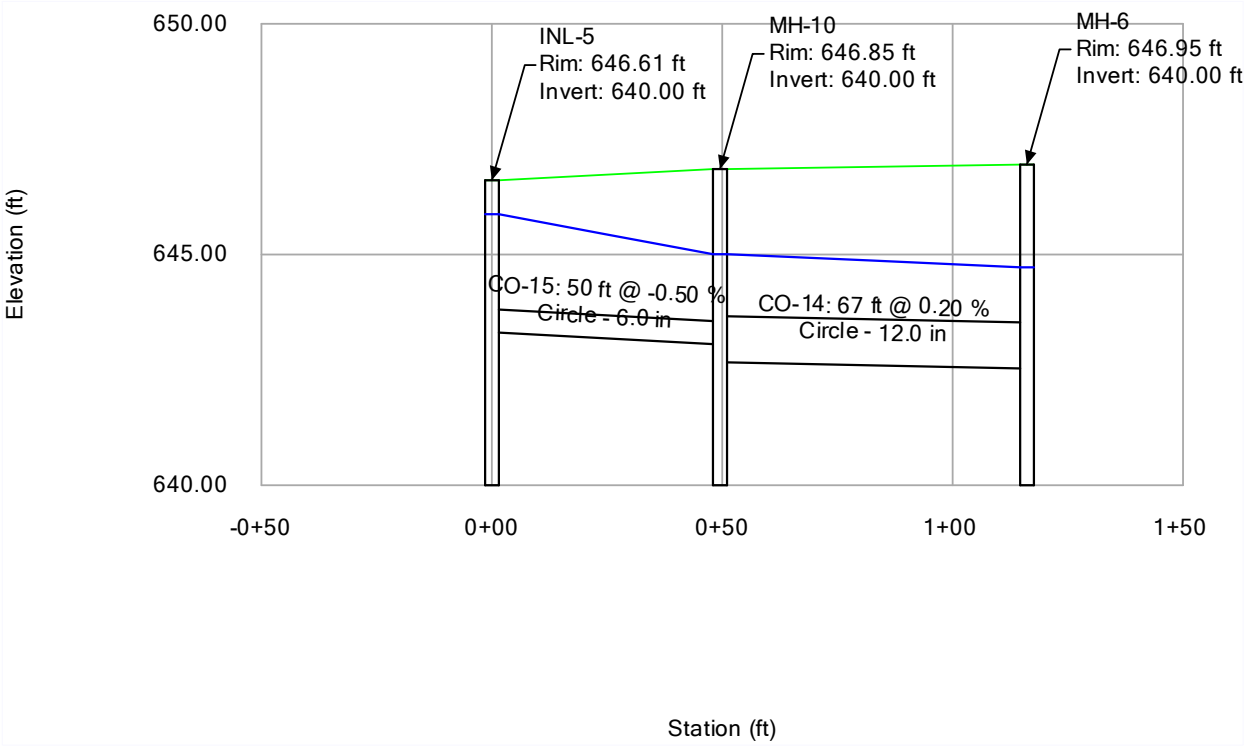
Profile Report
Engineering Profile - INL-3 TO MH-8 (FRDCR_repaired_FINAL.stsw)



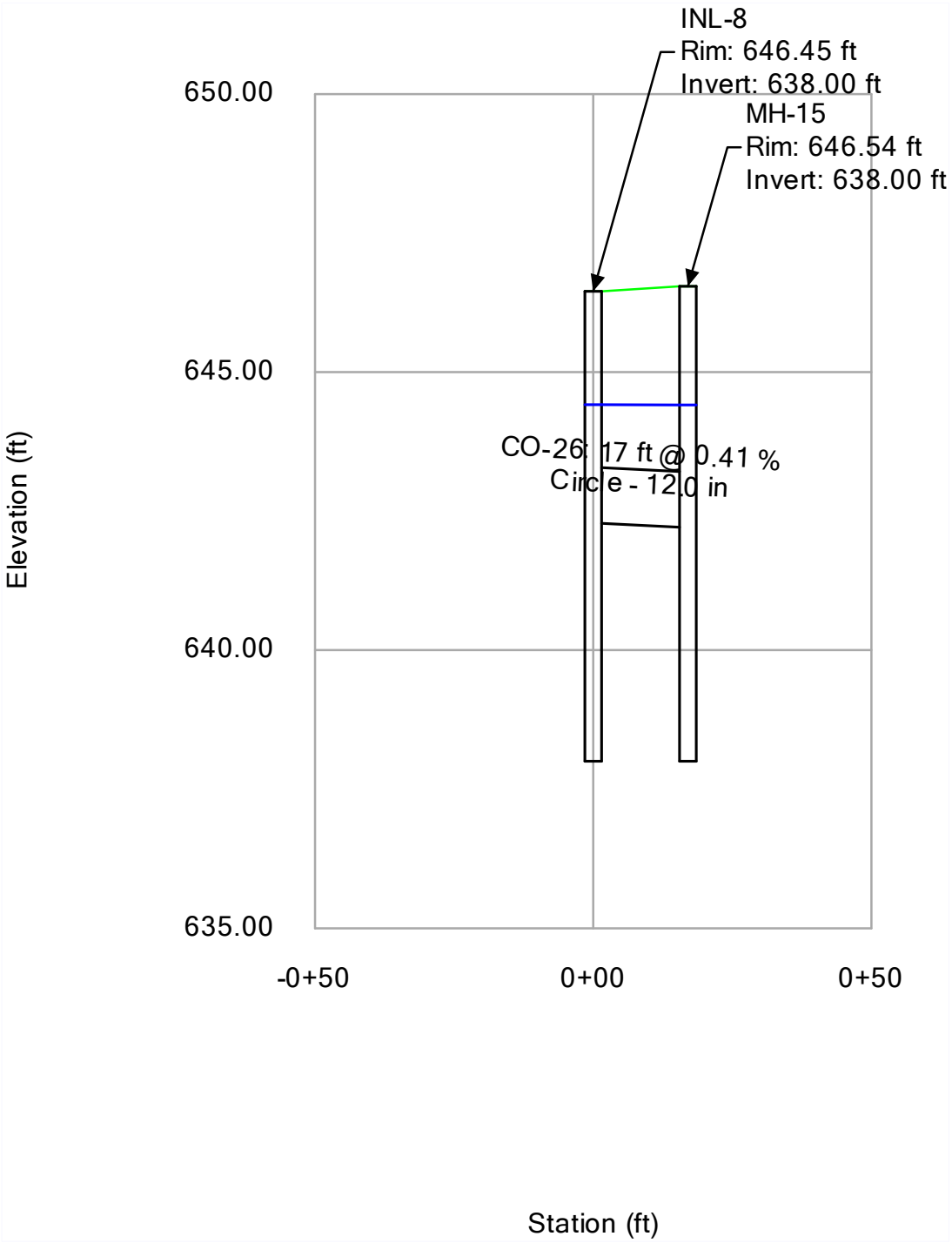
Profile Report
Engineering Profile - INL-4 TO MH-7 (FRDCR_repaired_FINAL.stsw)



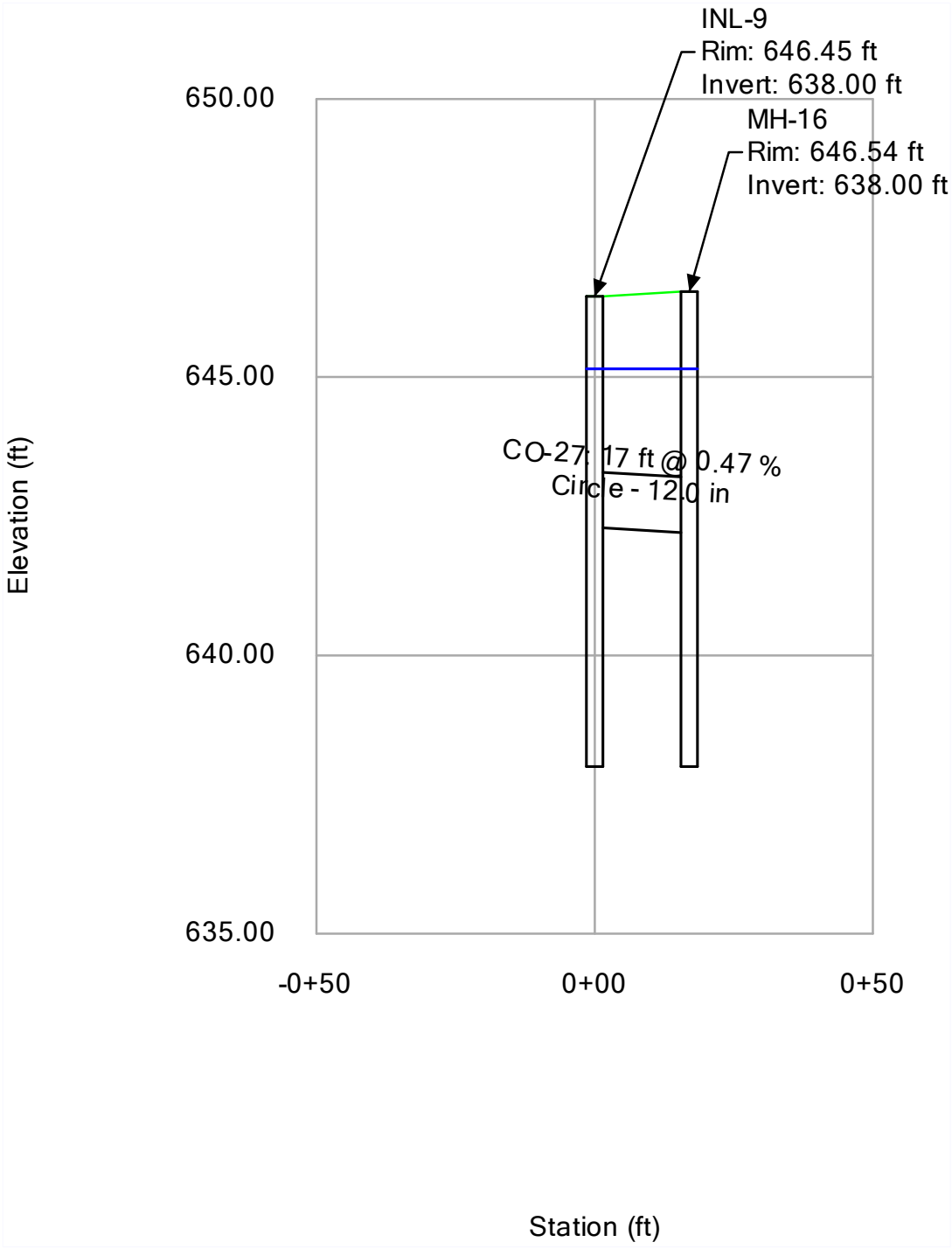
Profile Report
Engineering Profile - INL-5 TO MH-6 (FRDCR_repaired_FINAL.stsw)



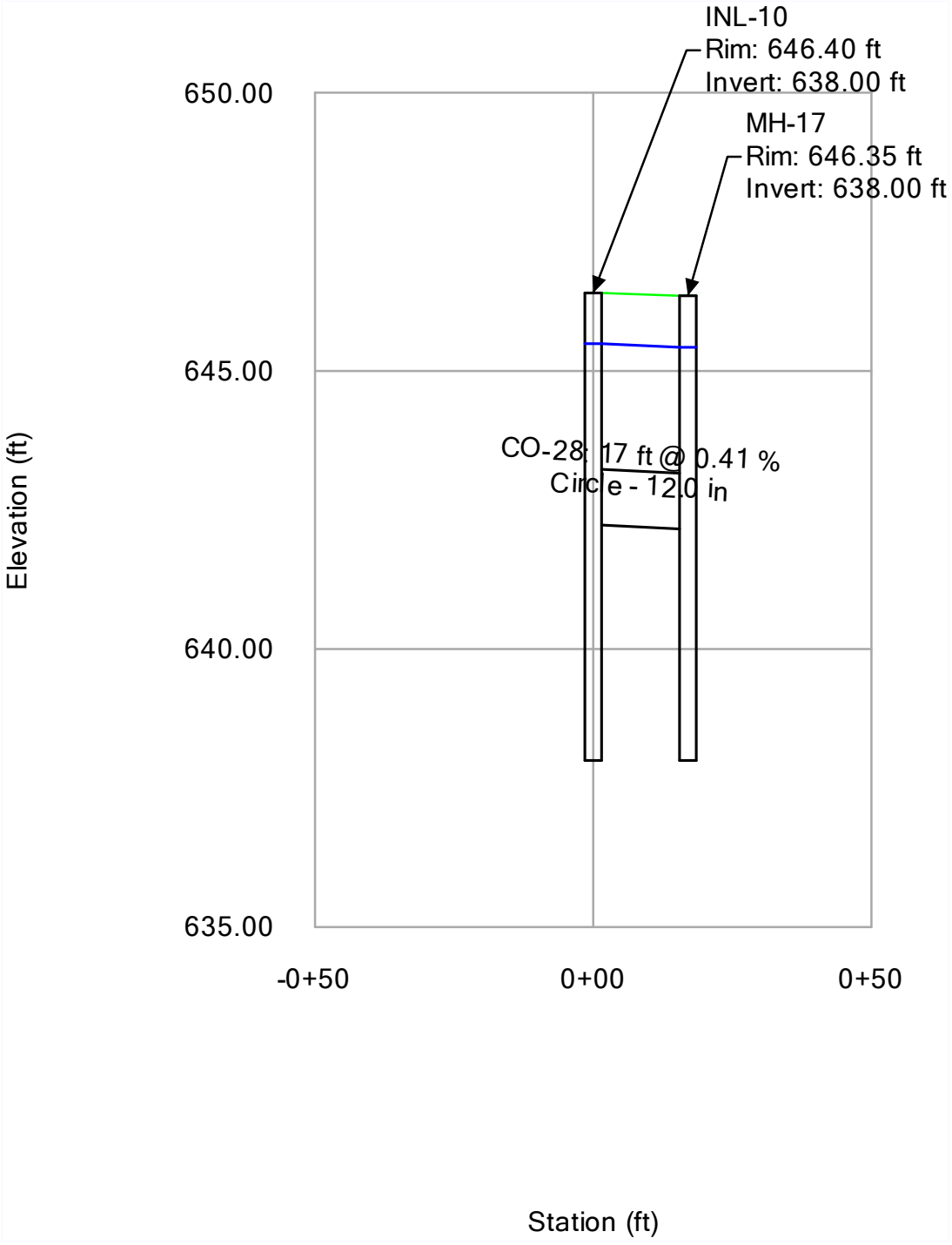
Profile Report
Engineering Profile - INL-8 TO MH-15 (FRDCR_repaired_FINAL.stsw)



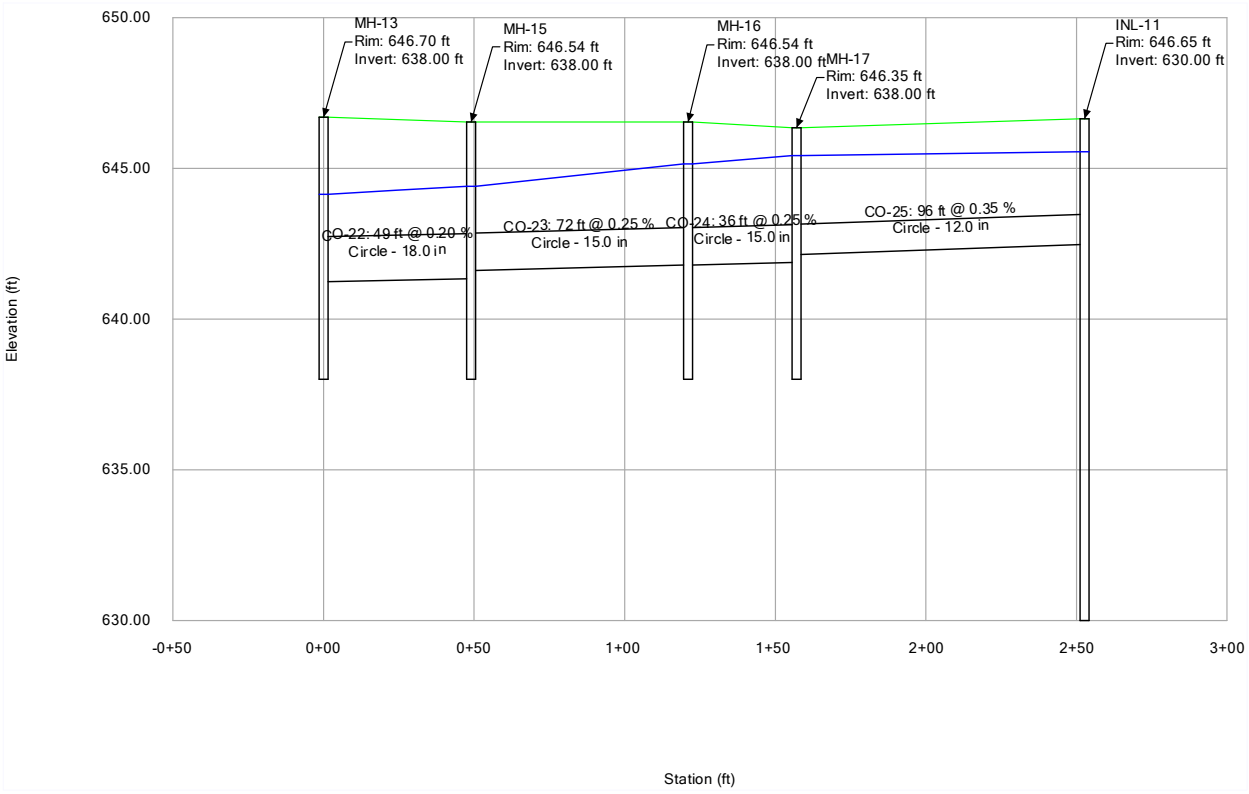
Profile Report
Engineering Profile - INL-9 TO MH-16 (FRDCR_repaired_FINAL.stsw)



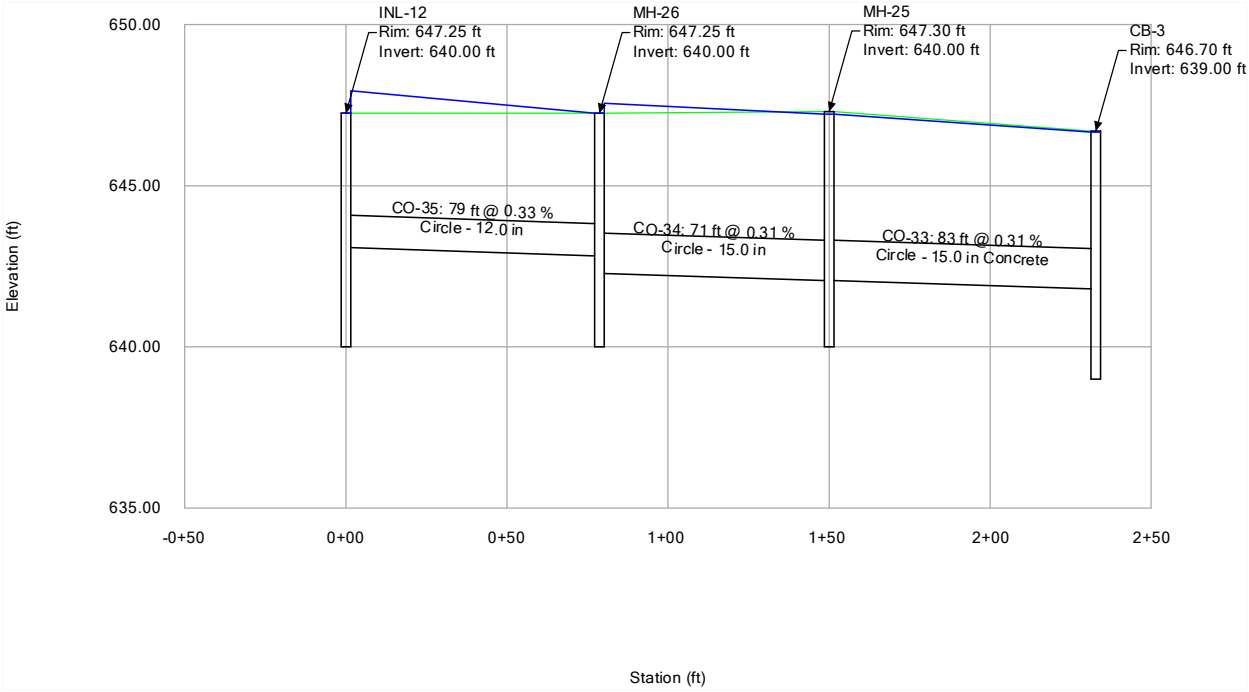
Profile Report
Engineering Profile - INL-10 TO MH-17 (FRDCR_repaired_FINAL.stsw)



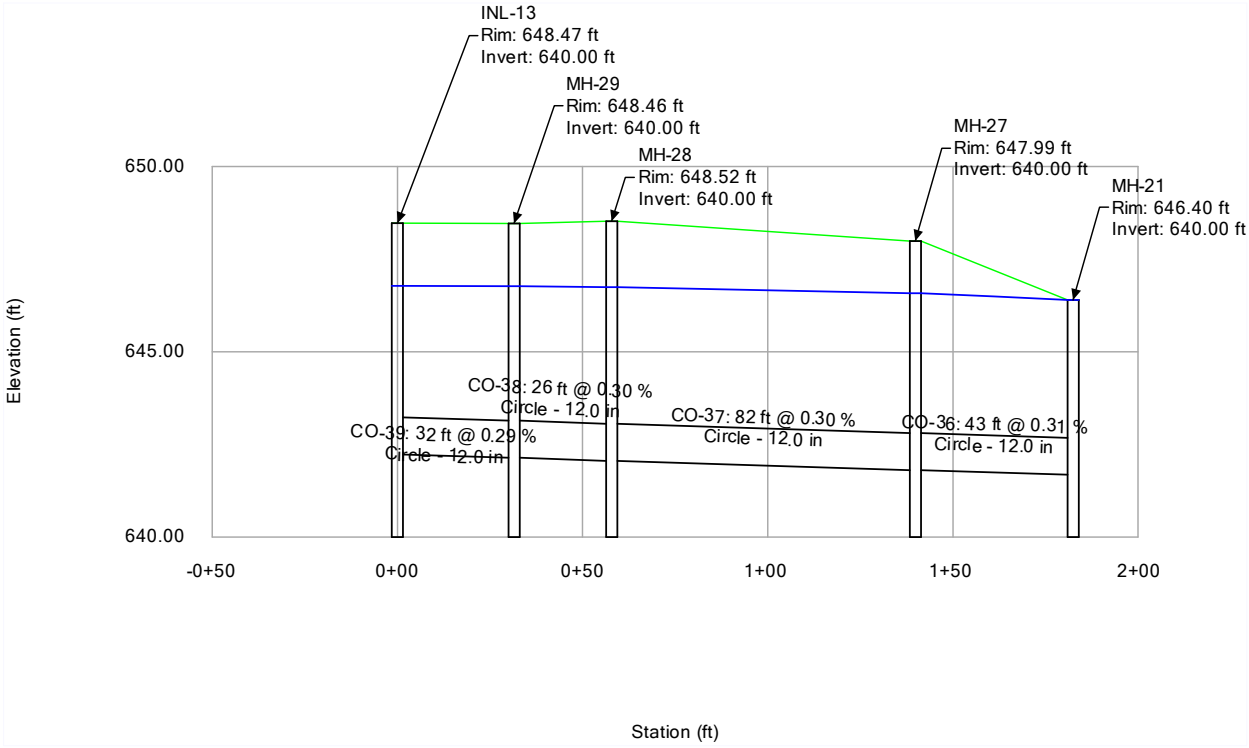
Profile Report
Engineering Profile - INL-11 TO MH-13 (FRDCR_repaired_FINAL.stsw)



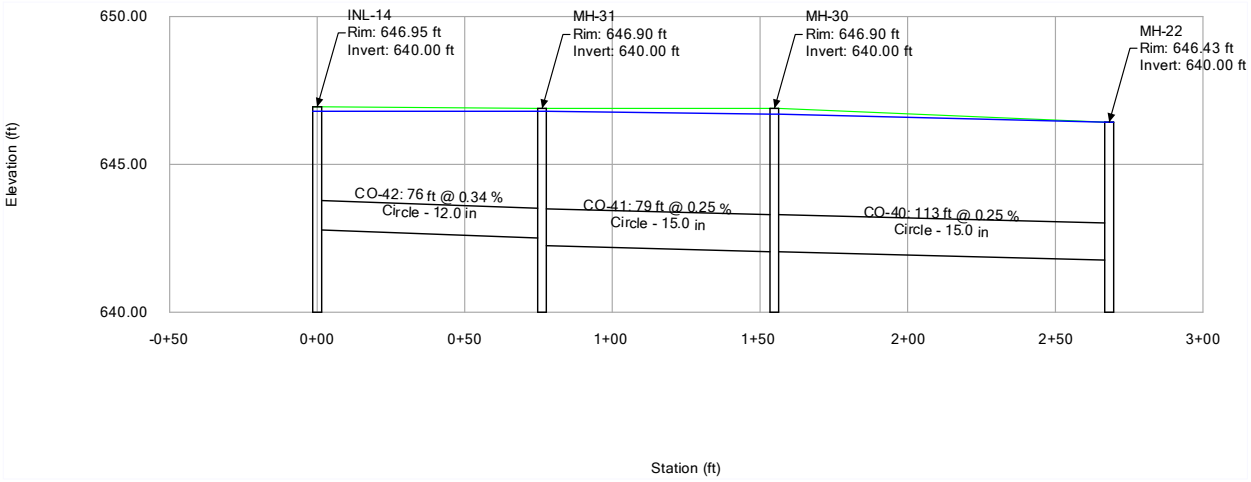
Profile Report
Engineering Profile - INL-12 TO CB-3 (FRDCR_repaired_FINAL.stsw)



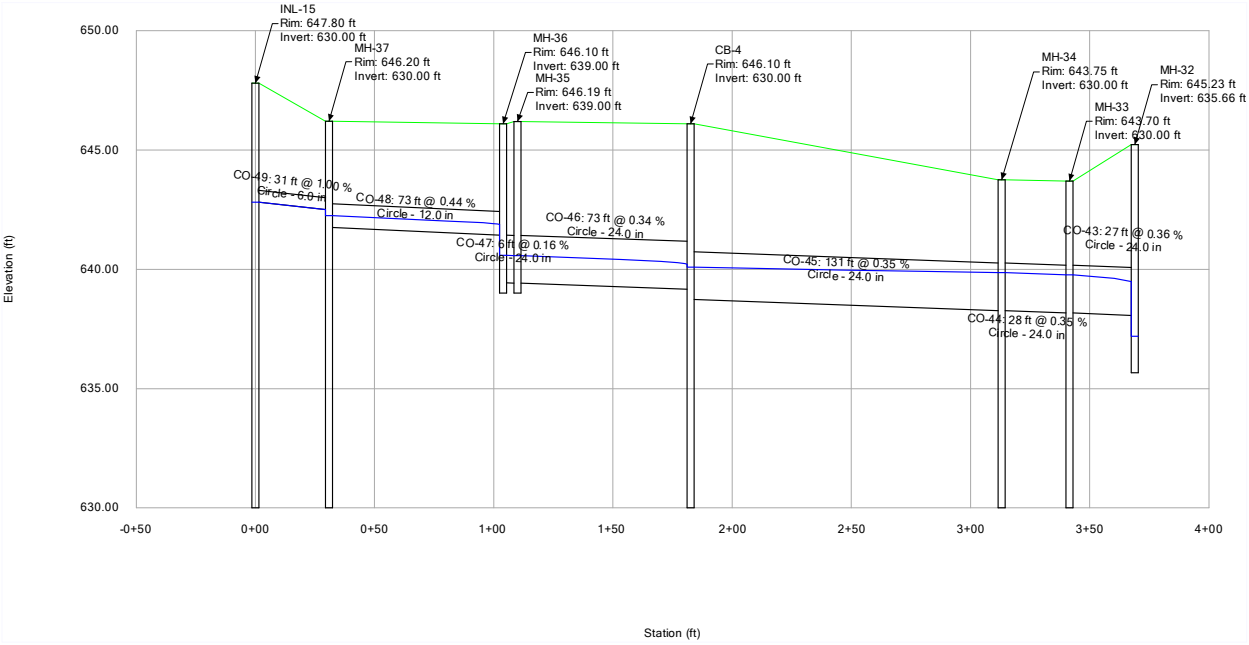
Profile Report
Engineering Profile - INL-13 TO MH-21 (FRDCR_repaired_FINAL.stsw)



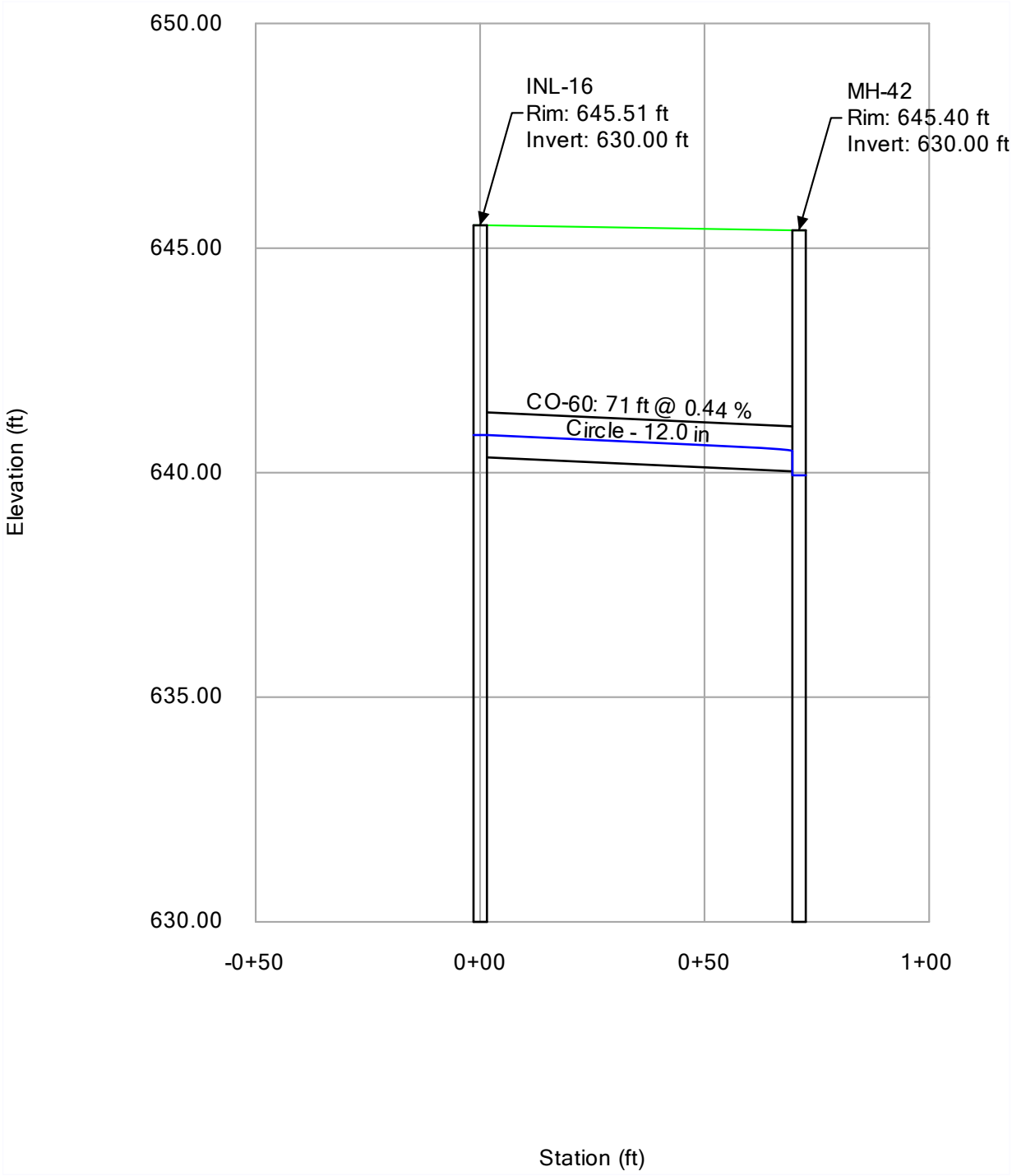
Profile Report
Engineering Profile - INL-14 TO MH-22 (FRDCR_repaired_FINAL.stsw)



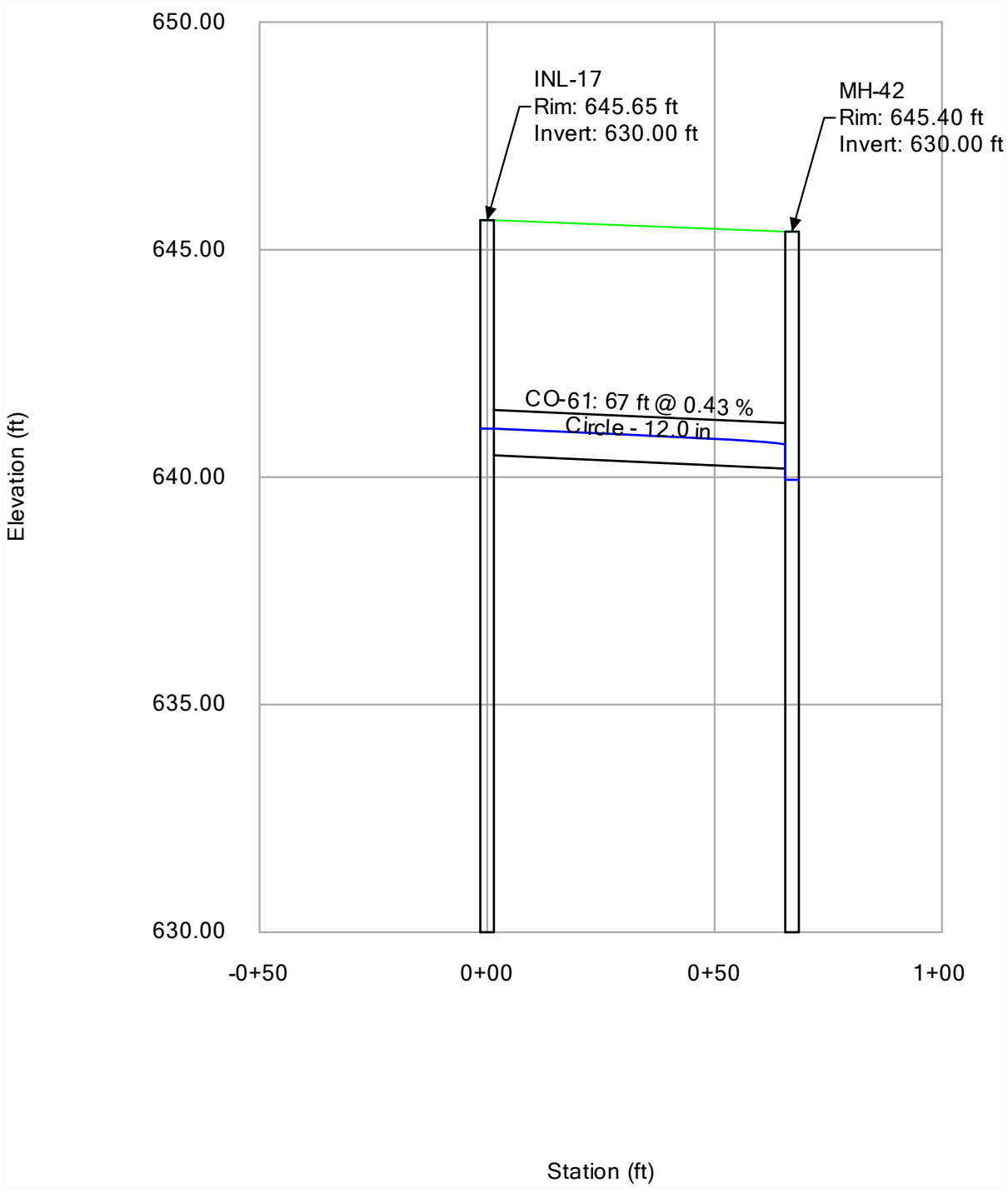
Profile Report
Engineering Profile - INL-15 TO MH-32 (FRDCR_repaired_FINAL.stsw)



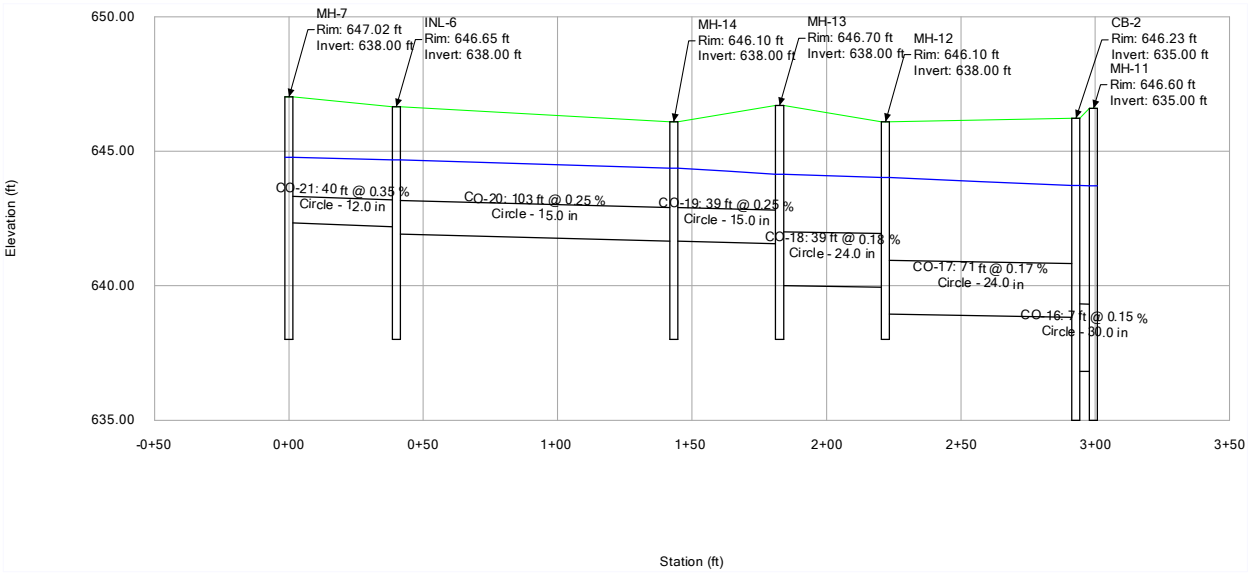
Profile Report
Engineering Profile - INL-16 TO MH-42 (FRDCR_repaired_FINAL.stsw)



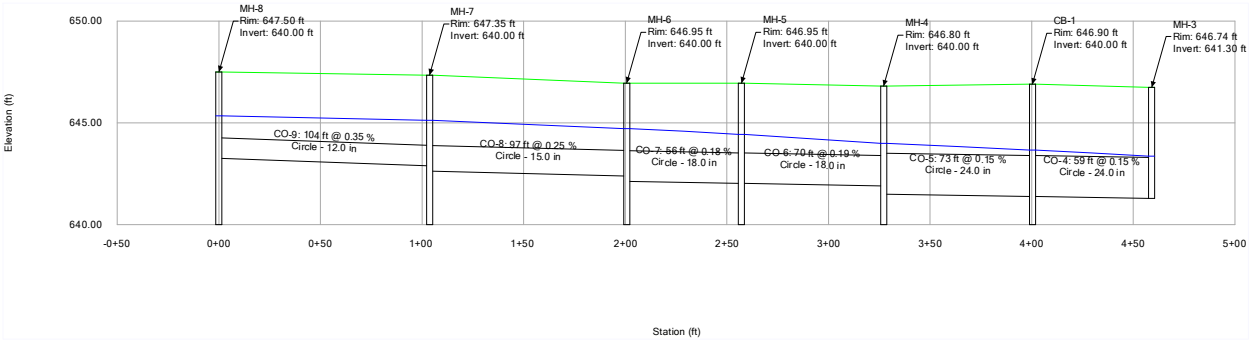
Profile Report
Engineering Profile - INL-17 TO MH-42 (FRDCR_repaired_FINAL.stsw)



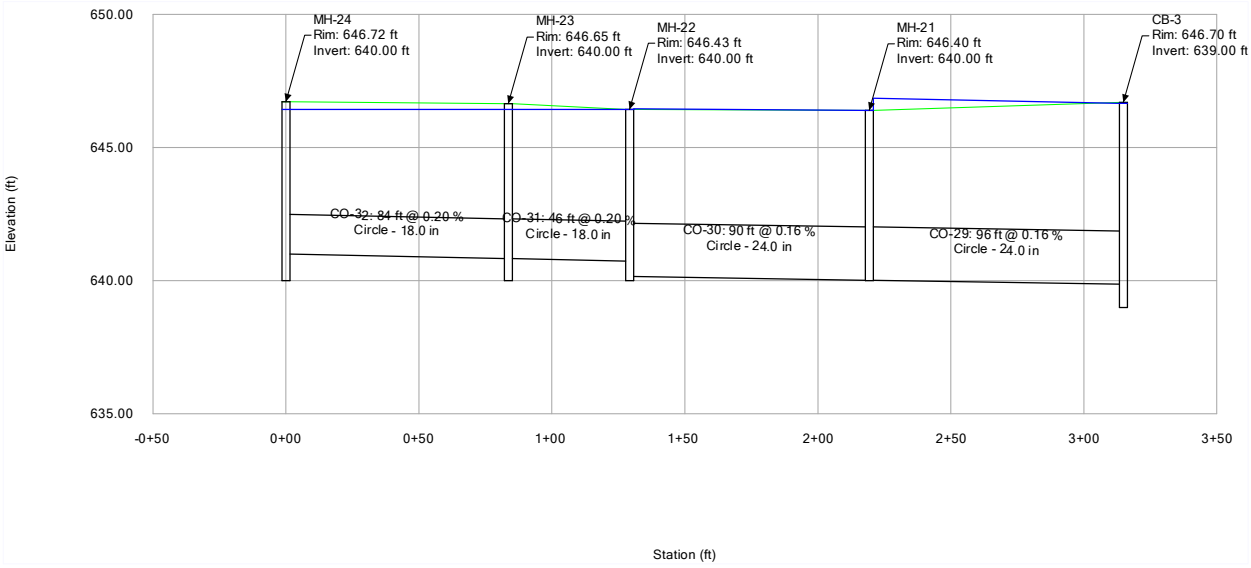
Profile Report
Engineering Profile - MH-7 TO MH-11 (FRDCR_repaired_FINAL.stsw)



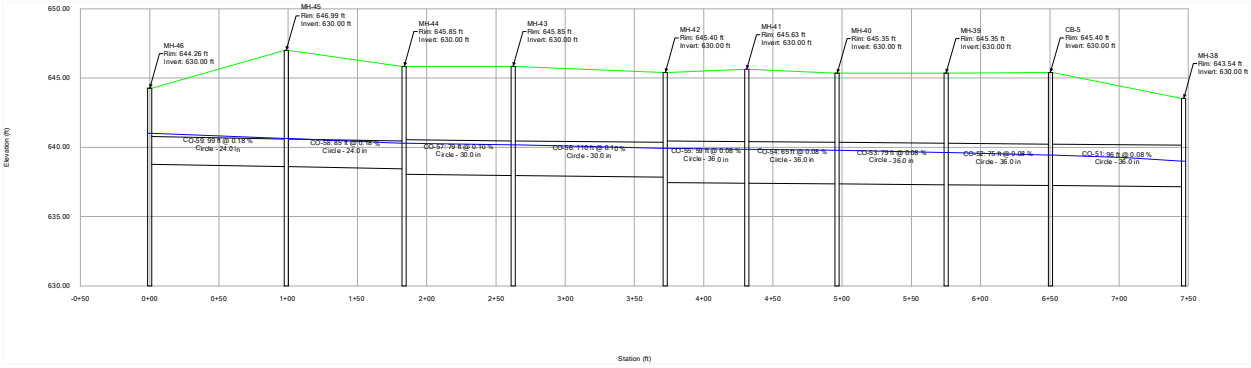
Profile Report
Engineering Profile - MH-8 TO EX. INL-3 (FRDCR_repaired_FINAL.stsw)



Profile Report
Engineering Profile - MH-24 TO CB-3 (FRDCR_repaired_FINAL.stsw)



Profile Report
Engineering Profile - MH-46 TO EX. MH-38
(FRDCR_repaired_FINAL.stsw)



Stormwater Pollution Prevention Plan

For Construction Activities At:

Seasons at Crest Hill
Southeast corner of Renwick and Weber Road.
Crest Hill, Illinois 60435

SWPPP Prepared For:

FRED-Crest Hill HC, LLC
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SWPPP Prepared By:

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Contractor:

TBD

SWPPP Preparation Date:

01/ 14 / 2026

Estimated Project Dates:

Project Start Date: 08/01/26
Project Completion Date: 11/01/27

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SECTION 1: SITE EVALUATION, ASSESSMENT, AND PLANNING

1.1 Project/Site Information

Project/Site Name: Seasons at Crest Hill
Project Street/Location: Southeast corner of Renwick and Weber Road.

City: Crest Hill State: IL ZIP Code: 60435
County or Similar Subdivision: Will County

Latitude/Longitude (Use **one** of three possible formats, and specify method)

Latitude:	Longitude:
41°35'36" (degrees, minutes, seconds)	-88°07'12" (degrees, minutes, seconds)

Method for determining latitude/longitude:
☐ USGS topographic map (specify scale: _____) ☐ EPA Web site ☐ GPS
☒ Other (please specify): Google Maps

Is the project located in Indian country? ☐ Yes ☒ No
If yes, name of Reservation, or if not part of a Reservation, indicate "not applicable."
Not Applicable

Is this project considered a federal facility? ☐ Yes ☒ No

NPDES project or permit tracking number*:N/A
**(This is the unique identifying number assigned to your project by your permitting authority after you have applied for coverage under the appropriate National Pollutant Discharge Elimination System (NPDES) construction general permit.)*

1.2 Contact Information/Responsable Parties

Owner:
FRED-Crest Hill HC, LLC
Tony DeRosa
789 North Water Street, Suite 200
Milwaukee, Wisconsin 53202
262-366-4376
tderosa@fred-inc.com

Contractor:
TBD

SWPPP Contact(s):
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Subcontractor(s):
T.B.D.

Subcontractor(s):
T.B.D.

Subcontractor(s):
T.B.D.

Emergency 24-Hour Contact:
T.B.D.

1.3 Nature and Sequence of Construction Activity

The scope of work for this project includes the construction of ten (10) 18-unit multi-family buildings, four (4) 20-unit buildings, a clubhouse, and associated parking and utilities. The site is located at the southeast corner of Renwick and Weber Road in the Village of Cresthill, McHenry County, Illinois. The construction site will disturb approximately 15.81 acres of the 15.81-acre site and 1.27 acres off-site. The site is currently vacant with minimal vegetation. The site is surrounded by various existing retail businesses such as a bank and a gas station. To the northeast is Lewis University Airport. To the south is an existing residential neighborhood. The site construction activities will consist of topsoil stripping, clay excavation, clay fill, grading activities, installation of erosion and sedimentation controls, utility excavation, parking lot paving, and building construction.

What is the function of the construction activity?

☒ Residential ☐ Commercial ☐ Industrial ☐ Road Construction ☐ Linear Utility

☐ Other (please specify):

Estimated Project Start Date: 11/01/26

Estimated Project Completion Date: 8/01/28

1.4 Soils, Slopes, Vegetation, and Current Drainage Patterns

Soil type(s):

According to the USDA Natural Resources Conservation Service the site consists of six types of soil classified as: Ashkum silty clay loam and Symerton silt loam.

Slopes:

The existing landscape regions have slopes varying from 0 to 5 percent. The proposed conditions will have slopes from 1 to 5 percent in the parking lot and 2 to 25 percent in the landscape regions.

Drainage Patterns:

In the existing conditions the majority of the site slopes towards the south. In the proposed conditions, this drainage pattern will route water to storm sewer structures after which it will then be carried to a system of existing retention ponds to the south of the existing residential neighborhood. Inlets and manholes will collect the storm water and convey runoff into retention ponds.

Vegetation:

The existing site is covered in Kentucky Blue Grass. The proposed landscaping will consist of trees, shrubs, perennials, and grasses. Disturbed areas to be vegetated will receive topsoil and seeding or sod for final stabilization.

1.5 Construction Site Estimates

The following are estimates of the construction site.

Total project area:	15.81 acres
Construction site area to be disturbed:	15.81 acres
Percentage impervious area before construction:	0.0 %
Runoff coefficient before construction:	0.45
Percentage impervious area after construction:	30.4 %
Runoff coefficient after construction	0.66

1.6 Receiving Waters

Description of receiving waters:

The ultimate receiving water for the pre- and post-construction runoff is the Desplaines River. The proposed storm water will enter a series of inlets and manholes onsite and flow to the detention basins.

Description of impaired waters or waters subject to TMDLs:

According to the Illinois Integrated Water Quality Report and the Section 303(d) List (2022) as published by the Illinois EPA, the section of the Desplaines River that receives runoff from this site was analyzed by the IEPA. The Desplaines was analyzed for fish consumption and aquatic life. The potential causes of impairment include aldrin, arsenic, cause unknown, chromium, lindane, methoxychlor, phosphorus, mercury, polychlorinated biphenyls (PCBS), and fecal coliform. The IEPA has indicated that this portion of the river is of Medium priority.

1.7 Site Features and Sensitive Areas to be Protected

There is no flood plains or wetlands on site. Silt fence will be installed at the boundary of the site anywhere water would flow off. The contractor shall restrict all construction to the proposed construction limits and ensure that all stormwater runoff is treated prior to leaving the site.

1.8 Potential Sources of Pollution

Potential sources of sediment to stormwater runoff:

- Clearing and grubbing operations
- Grading and site excavation operations
- Vehicle tracking

- Topsoil stripping and stockpiling
- Landscaping operations

Potential pollutants and sources, other than sediment, to stormwater runoff:

- Combined Staging Areas – small fueling activities, minor equipment maintenance, sanitary facilities, and hazardous waste storage.
- Material Storage Area – general building materials, solvents, adhesives, paving materials, paints, aggregates, trash, etc.
- Construction Activity - paving, curb/gutter installation, concrete pouring/mortar/stucco, and building construction/demolition.
- Concrete washout area.

Trade Name Material	Stormwater Pollutants	Location
Fertilizer	Nitrogen, Phosphorous	Newly seeded areas
Asphalt	Oil, Petroleum distillates	Streets and Parking lot
Concrete	Limestone, sand, PH, Chromium	Curb & Gutter, Building construction
Paints	Metal oxides, Stoddard solvent, talc, Calcium carbonate, arsenic	Building Construction
Curing Compounds	Naphtha	Curb & Gutter
Wood preservatives	Stoddard solvent, Petroleum distillates, arsenic, copper, chromium	Timber pads & building construction
Hydraulic oil/fluids	Mineral Oil	Leaks or broken hoses from equipment
Diesel Fuel	Petroleum distillates, oil & grease, Naphthalene, xylenes	Secondary containment/staging area
Sanitary Toilets	Bacteria, parasites, and viruses	Staging Area

1.9 Endangered Species Certification

Are endangered or threatened species and critical habitats on or near the project area?

☐ Yes ☒ No

Describe how this determination was made:

The Illinois Department of Natural Resources Consultation Agency Action Review, attached in Appendix K, dated September 03, 2025, states that the Illinois Natural Heritage Database contains no record of State-listed threatened or endangered species, Illinois Natural Area

Inventory sites, dedicated Illinois Nature Preserves, or registered Land and Water Reserves in the vicinity of the project location.

1.10 Historic Preservation

Are there any historic sites on or near the construction site?

☐ Yes ☒ No

Describe how this determination was made:

The Illinois Historic Preservation Agency Letter, attached in Appendix K, dated September 29, 2025 states that no historic, architectural, or archaeological sites exist within the project area.

1.11 Applicable Federal, Tribal, State or Local Programs

The Illinois General Permit requires that an Incidence of Non-Compliance (ION) be filed to report any violation of the SWPPP observed during an inspection conducted, including those not required by the Plan. The IEPA must be notified within 24 hours of any violation via email at epa.swnoncomp@illinois.gov, telephone or fax. The ION form attached in Appendix E, must be submitted to the IEPA within five days of a violation.

1.12 Maps

Please refer to Sheets 3-4 (“Soil Erosion and Sedimentation Control Plan and Details”), of the plan set titled “SEASONS AT CREST HILL” by Manhard Consulting, Ltd.

SECTION 2: EROSION AND SEDIMENT CONTROL BMPS

2.1 Minimize Disturbed Area and Protect Natural Features and Soil

The construction will occur according to the construction sequence shown in Section 2.2. Approximately 15.81 acres will be disturbed on site, and approximately 1.27 acres will be disturbed off site. Silt fence is proposed along the perimeter of the area of disturbance at areas of downstream flow to prevent sediment-laden runoff from leaving the site. Soil excavation and fill operations will take place to meet proposed grades. Topsoil will be separated and stockpiled prior to re-spread. All soil stockpiles will be surrounded with silt fence.

2.2 Phase Construction Activity

CONSTRUCTION SEQUENCE:

1. INSTALL SILT FENCE AT LOCATIONS AS INDICATED ON THE PLANS.
2. PROVIDE STABILIZED CONSTRUCTION ENTRANCE.
3. CONSTRUCT TEMPORARY SEDIMENT TRAPS AND/OR BASINS.
4. STRIP EXISTING TOPSOIL FROM PROPOSED STORMWATER MANAGEMENT AREAS AND STOCKPILE WHERE SHOWN ON PLANS.
5. PROVIDE SILT FENCE AROUND THE BASE OF THE STOCKPILES.
6. CONSTRUCT STORMWATER MANAGEMENT (DETENTION) FACILITIES TO SUB-GRADE AND INSTALL OUTLET PIPES.
7. COMPLETE TOPSOIL PLACEMENT AND PERMANENT SEEDING AND SODDING OF STORMWATER MANAGEMENT FACILITIES.
8. CUT AND FILL SITE TO PLAN SUB-GRADE.
9. CONSTRUCT UNDERGROUND IMPROVEMENTS, i.e. SANITARY SEWER WATERMAIN AND STORM SEWER**, ETC.
10. CONSTRUCT PAVEMENT IMPROVEMENTS PER PLAN.
11. COMPLETE CONSTRUCTION OF SITE WITH PERMANENT STABILIZATION.
12. REMOVE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES.

** INSTALL INLET PROTECTION AROUND DRAINAGE STRUCTURES AS CONSTRUCTED.

2.3 Stabilize Soils

Temporary Stabilization

BMP Description: Temporary stabilization will be required over any region that will remain inactive for a period of fourteen (14) days or more unless stabilization is precluded by snow cover from when activities ceased. The temporary stabilization will help reduce runoff and erosion until permanent vegetation is established.	
☐ ***Permanent***	☒ ***Temporary***
Installation Schedule:	Temporary seed mixture shall be applied in accordance with the Soil Protection Chart, on portions of the site that will require temporary stabilization, no more than one (1) day after the construction activity has ceased when earth disturbing activities will cease for more than 14 days. In order for an area or stockpile to be temporarily stabilized, seed must germinate, grow, and provide a minimum of 70% vegetative density.
Maintenance and Inspection:	Inspections must occur at least once every seven (7) calendar days and after every ½" or greater rainfall event. Areas must be watered, fertilized, and reseeded as needed to maintain a minimum of 70% vegetative density.
Responsible Staff:	TBD

Permanent Stabilization

BMP Description: Permanent stabilization using seed mixes and sod will be provided immediately after the completion of all other construction events, and shall be completed as soon as possible.	
☒ ***Permanent***	☐ ***Temporary***
Installation Schedule:	Disturbed areas shall be stabilized with seeding or sod within fourteen (14) days of completion of disturbance and grass sown as necessary to re-establish vegetation for control of siltation and soil erosion.
Maintenance and Inspection:	Inspections must occur at least once every seven (7) calendar days and after every ½" or greater rainfall event during construction. Maintenance includes watering, fertilizing, and reseeding as needed to maintain a minimum of 70% vegetative density. Once construction is complete, the permanent stabilization will be monitored until final stabilization is reached. Final stabilization is reached when 70% of the ground cover is permanently stabilized.
Responsible Staff:	TBD

2.4 Protect Slopes

Erosion Control Blanket

BMP Description: Erosion control blankets will be applied to protect exposed soil surfaces against erosion due to rainfall or flowing water. Erosion control blankets are proposed at slopes greater than 4:1 and also in areas of highly concentrated flows. Erosion control blankets are to be installed per manufacturers specifications and per the Illinois Urban Manual Standards.

☒ *Permanent*	☐ *Temporary*
Installation Schedule:	Erosion control blankets are to be installed while construction activities are occurring and/or after construction activities have been completed.
Maintenance and Inspection:	Inspections must occur at least one every seven (7) calendar days and after every ½" or greater rainfall event during construction to check for tears or holes in blankets, and to ensure that water flowing over the blanket is not causing erosion. Any areas where the blanket is damaged or is not in close contact with the ground will be repaired or replaced.
Responsible Staff:	TBD

2.5 Protect Storm Drain Inlets

Inlet protection

BMP Description: Inlet protection is required at all proposed structures as they are constructed and any existing structures that will be receiving flow within the construction limits. The inlet protection will consist of a filter basket or filter fabric placed beneath the rim and should be installed to prevent any tears or damage during construction.

☐ *Permanent*	☒ *Temporary*
Installation Schedule:	Inlet protection for all existing structures will be installed before any construction activities begin on site. For each proposed structure, the inlet protection will be installed immediately after the installation of the structure.
Maintenance and Inspection:	The inlet protection is to be inspected once every seven (7) calendar days and after every ½" or greater rainfall event to check sediment load and identify tears in the filter. Maintenance will include removing any sediment, and repairing and replacing when necessary.
Responsible Staff:	TBD

Culvert Inlet Protection

BMP Description: Culvert Inlet protection is required at the proposed flared end section (FES) that is to be constructed. The culvert inlet protection will consist of a silt fence filter fabric placed around the opening and should be installed to prevent any tears or damage during construction.

☐ *Permanent*	☒ *Temporary*
Installation Schedule:	Inlet protection for the proposed FES will be installed immediately after completion of the structure.
Maintenance and Inspection:	The culvert inlet protection is to be inspected once every seven (7) calendar days and after every ½" or greater rainfall event to check sediment load and identify tears in the filter. Maintenance will include removing any sediment, and repairing and replacing when necessary.
Responsible Staff:	TBD

2.6 Establish Perimeter Controls and Sediment Barriers

Silt Fence

BMP Description: Silt fence will be installed around the temporary topsoil stockpile to prevent runoff from the stockpile onto the construction area. The silt fence consists of filter fabric stretched across and attached to posts that will intercept sediment from small tributary areas.

☐ *Permanent*	☒ *Temporary*
Installation Schedule:	The silt fence is to be installed as soon as the stockpile areas are established. The maximum drainage per overland flow to a silt fence shall not exceed ½ acre per 100 feet of fence.
Maintenance and Inspection:	The silt fence is to be inspected once every seven (7) calendar days and after every ½" or greater rainfall event. Inspection will include ensuring the silt fence is installed properly so that water flows through the structure. Maintenance will include repairing or replacing if damaged, and the removal of sediment when the sediment reaches half the height of the silt fence.
Responsible Staff:	TBD

2.7 Establish Stabilized Construction Exits

Wheel Wash

BMP Description: A temporary wheel wash will be provided at the designated construction exit at the northwest side of the site. The wheel wash will be located on the existing pavement where the tires of vehicles can be cleaned of sediment to prevent track-out from the site. All wash water must be contained on site and filtered prior to being directed towards the existing storm drains.	
☐ ***Permanent***	☒ ***Temporary***
Installation Schedule:	The temporary wheel wash is to be installed prior to the beginning of construction activities.
Maintenance and Inspection:	The wheel wash shall be maintained, adjusted, or relocated as necessary to prevent sediment from being tracked onto public roadways. Any sediment reaching a public road shall be removed by shoveling or street cleaning before the end of each working day.
Responsible Staff:	TBD

HOUSEKEEPING BMPS

3.1 Material Handling and Waste Management

Waste Materials

BMP Description: All waste materials on site are to be disposed in refuse containers. The containers are to be emptied when necessary by a trash disposal service and taken off site. No waste materials are to be discharged from the site with storm water. Containers must have watertight lids and meet all federal, state and municipal regulations.	
Installation Schedule:	Trash containers are to be placed on site once construction has begun. Contractor to place containers in an appropriate location as needed for construction.
Maintenance and Inspection:	Trash containers are to be emptied weekly or more frequently if the container capacity is exceeded. Trash containers shall be inspected after any storm event of ½" or more.
Responsible Staff:	TBD

Hazardous Waste Materials

BMP Description: All hazardous waste materials brought onto site are to be properly stored, handled, dispensed and disposed of according to all applicable label directions. The storage and handling of any flammable and combustible liquids must meet the requirements according

to 29 CFR 1926.152. No hazardous waste materials are to be disposed of in the containers stored on site for waste materials.

Installation Schedule:	Storage containers for all hazardous waste materials are to be placed on site, in a separate location from the waste material containers, once construction has begun. Contractor to place containers in an appropriate location as needed for construction.
Maintenance and Inspection:	Hazardous waste containers shall be inspected weekly and after any storm event of ½" or more. Material Safety Data Sheets (MSDS) will be kept on site for any applicable materials.
Responsible Staff:	TBD

Sanitary Waste

BMP Description: Temporary sanitary facilities (portable toilets) will be provided at the site throughout the construction phase. The toilets will be placed in a location appropriate to the phase of construction. The portable toilets will be located away from a concentrated flow paths and traffic flow and may have collection pans underneath as secondary containment

Installation Schedule:	The portable toilets will be brought to the site once the staging area has been established and will be placed in a location that is appropriate to the phase of construction.
Maintenance and Inspection:	All sanitary waste will be collected from the portable facilities as recommended by the service provider. The portable toilets will be inspected weekly for evidence of leaking holding tanks. Toilets with leaking holding tanks will be removed from the site and replaced with new portable toilets.
Responsible Staff:	TBD

3.2 Establish Proper Building Material Staging Areas

Materials Storage

BMP Description: All construction equipment and materials will be stored on site at a location deemed appropriate by the General Contractor and owner's representative. The General Contractor is to identify the location in the pre-construction meeting.

Installation Schedule:	A material storage area will be identified on site before any construction activities begin.
Maintenance and Inspection:	The storage area will be inspected weekly and within 24 hours after every ½" or greater rainfall event. The area is to be inspected for evidence of, or the potential for, pollutants entering the drainage system. Based on the results of the inspection, the description of potential pollutant sources identified in the plan and pollution prevention measures identified in the plan shall be revised as appropriate as soon as practicable after such inspection. Such modifications shall

	provide for timely implementation of any changes to the plan within seven (7) calendar days following the inspection.
Responsible Staff:	TBD

3.3 Designate Washout Areas

Concrete Washout Facility

BMP Description: A concrete washout facility is to be located on site to provide a location to contain concrete and liquids to rinse out machines using concrete after delivery. The washout facility will allow for easier disposal of the concrete and liquids. The washout facility will also prevent runoff of the liquids, which could contaminate the groundwater or clog storm drains and pipes.	
Installation Schedule:	A concrete washout facility is to be installed before any concrete materials are used on site. The contractor is to place the facility in an appropriate location as needed for construction. The concrete washout facility is not to be located within 50 feet of storm drains, open ditches, or waterbodies.
Maintenance and Inspection:	Materials are to be removed if the facility has been filled to 75 percent capacity. The facilities should be inspected daily to ensure the container is not leaking or nearing capacity. The liquids shall be removed, or the facilities covered, before predicted rainstorms to prevent overflows.
Responsible Staff:	TBD

3.4 Establish Proper Equipment/Vehicle Fueling and Maintenance Practices

Equipment / Vehicle Fueling and Maintenance

BMP Description: All equipment / vehicle fueling and maintenance will be performed off site. If minor vehicle maintenance or fueling is needed on site, all equipment fluids are to be disposed of into designated containers stored with the other hazardous materials.	
Installation Schedule:	Containers to handle and dispose of hazardous materials are to be located on site as designated by the General Contractor if it becomes necessary to perform minor maintenance to equipment or vehicles on site.
Maintenance and Inspection:	All vehicles and equipment are to be inspected each day prior to use. Cleanup materials are to be kept on site if immediate cleanup becomes necessary.
Responsible Staff:	TBD

3.5 Control Equipment/Vehicle Washing

All equipment and vehicle washing shall be done off site. All water used for equipment and vehicle washing performed on site shall be filtered prior to discharge.

3.6 Spill Prevention and Control Plan

Spill Prevention and Control Plan

BMP Description: All spills are to be cleaned up immediately and are to be reported to the Owner. If a spill containing any hazardous materials or petroleum products has occurred on site in excess of Reportable Quantities as defined by the EPA, the spill must be immediately reported to the EPA National Response Center (1-800-424-8802) and the Illinois Emergency Management Agency (IEMA) (1-800-782-7860). The reportable quantity for all hazardous materials can be found in 40 CFR 302. The reportable quantity for all petroleum products for the state of Illinois is 25 gallons or less if the spill is contained.	
Installation Schedule:	The spill prevention and control procedures will be put in place immediately upon the start of construction. Spill kits are to remain on site at all times in case of a spill.
Maintenance and Inspection:	The pre-construction meeting given by the General Contractor will review all procedures for spill prevention and control. Notices are to be available on site indicating the spill prevention and control plan.
Responsible Staff:	TBD

3.7 Any Additional BMPs

No additional BMP's above and beyond those previously mentioned in this document and shown on the engineering plans referenced herein are proposed at this time.

3.8 Allowable Non-Stormwater Discharge Management

The General NPDES Permit for Illinois prohibits most non-storm water discharges during construction. The following are allowable non-storm water discharges that are covered by the General Permit during construction activities:

1. Discharges from fire fighting activities;
2. Fire hydrant flushings;
3. Waters used to wash vehicles where detergents are not used;

4. Waters used to control dust;
5. Potable water sources including uncontaminated waterline flushings;
6. Landscape irrigation drainages;
7. Routine external building washdown which does not use detergents;
8. Pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled material has been removed) and where detergents are not used;
9. Uncontaminated air conditioning condensate;
10. Springs;
11. Uncontaminated ground water;
12. Foundation or footing drains where flows are not contaminated with process materials such as solvents.

SECTION 4: SELECTING POST-CONSTRUCTION BMPs

There will be no post-construction BMP's to control pollutants in stormwater discharges after construction operations have been completed.

SECTION 5: INSPECTIONS

5.1 Inspections

1. Inspection Personnel:

Inspections shall be performed by a person knowledgeable in the principles and practices of erosion and sediment control measures, such as a licensed Professional Engineer (P.E.), a Certified Professional in Erosion and Sediment Control (CPESC), a Certified Erosion Sediment and Storm Water Inspector (CESSWI) or other knowledgeable person who possesses the skills to assess conditions at the construction site that could impact storm water quality and to assess the effectiveness of any sediment and erosion control measures selected to control the quality of storm water discharge from the construction activities.

The qualified Inspection Personnel are to be identified at a later date by the General Contractor.

2. Inspection Schedule and Procedures:

Qualified personnel (provided by the Owner or General Contractor) shall inspect disturbed areas of the construction site that have not been finally stabilized, structural control measures, and locations where vehicles enter or exit the site at least once every seven calendar days and within 24 hours of the end of a storm that is 0.5 inches or greater or equivalent snowfall. It should be noted that inspections may be reduced to once per month when construction activities have ceased due to frozen conditions. Weekly inspections shall recommence when construction activities are conducted, or if there is 0.5” or greater rain event, or discharge due to snowmelt occurs.

Qualified personnel means a person knowledgeable in the principles and practices of erosion and sediment controls measures, such as a licensed Professional Engineer (P.E.), a Certified Professional in Erosion and Sediment Control (CPESC), a Certified Erosion Sediment and Stormwater Inspector (CWSSWI) or other knowledgeable person who possesses the skills to assess conditions at the construction site that could impact storm water quality and to assess the effectiveness of any sediment and erosion control measures selected to control the quality of storm water discharges from the construction activities.

a. Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. Erosion and sediment control measures identified in the plan shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of off site sediment tracking.

b. Based on the results of the inspection, the description of potential pollutant sources identified in the plan in accordance with Part IV.D.1 (Site Description) of the Illinois General NPDES Permit and pollution prevention measures identified in the plan in accordance with Part IV.D.2 (Controls) of the Illinois General NPDES permit shall be revised as appropriate as soon as practicable after such inspection. Such modifications shall provide for timely implementation of any changes to the plan within 7 calendar days following the inspection.

c. A report summarizing the scope of the inspection, name and qualifications of personnel making the inspection, the date(s) of the inspection, major observations relating to the implementation of the storm water pollution prevention plan, and actions taken in accordance with paragraph b above shall be made and retained as part of the storm water pollution prevention plan for at least three years from the date that the permit coverage expires or is terminated. All inspection reports shall be retained at the construction site. The report shall be signed in accordance with Part VI.G (Signatory Requirements) of the Illinois General NPDES Permit.

d. The Owner or General Contractor shall notify the appropriate Illinois Environmental Protection Agency Field Operations Section office by email at: epa.swnoncomp@illinois.gov, telephone or fax within 24 hours of any incidence of non-compliance for any violation of the storm water pollution prevention plan during any inspection conducted, or for violations of any condition of the Illinois General NPDES permit. The Owner or General Contractor shall complete and submit within 5 days an "incidence of non-compliance" (ION) report for any violation of the storm water pollution prevention plan observed during any inspection conducted, or for violations of any condition of the Illinois General NPDES permit. Submission shall be on forms provided by the Illinois Environmental Protection Agency and include specific information on the cause of non-compliance, actions which were taken to prevent any further causes of non-compliance, and a statement detailing any environmental impact, which may have resulted from the non-compliance.

e. All reports of non-compliance shall be signed by a responsible authority as defined in Part VI.G (Signatory Requirements of the Illinois General NPDES Permit).

f. After the initial contact has been made with the appropriate Agency Field Operations Section Office, all reports of non-compliance shall be mailed to the Agency at the following address:

Illinois Environmental Protection Agency
Division of Water Pollution Control
Compliance Assurance Section
2520 W Iles Avenue
Post Office Box 19276
Springfield, Illinois 62794-9276

5.2 Delegation of Authority

Please refer to Appendix J for Delegation of Authority.

5.3 Corrective Action Log

Actions taken to correct a violation, repairs to damaged materials or replacement of BMPs shall be noted in the Corrective Action Log in Appendix F.

SECTION 6: RECORDKEEPING AND TRAINING

6.1 Recordkeeping

Records will be retained for a minimum period of at least 3 years after the permit is terminated.

Date(s) when major grading activities occur:
See Appendix I Grading and Stabilization Activities Log
Date(s) when construction activities temporarily or permanently cease on a portion of the site:
See Appendix I Grading and Stabilization Activities Log
Date(s) when an area is either temporarily or permanently stabilized:
See Appendix I Grading and Stabilization Activities Log

6.2 Log of Changes to the SWPPP

Log of changes and updates to the SWPPP
Changes to the design, location of BMPs, sequence of construction, operation, maintenance or material substitutions shall be amended on the plans and appropriately logged in Appendix G.

SECTION 7: FINAL STABILIZATION

Permanent Seeding and Sodding

BMP Description: Permanent stabilization will be provided immediately after the completion of all other construction events, no more than seven (7) days after the construction in a portion of the site has permanently ceased. Refer to the landscape plan for final stabilization proposed.

☒ ***Permanent***	☐ ***Temporary***
Installation Schedule:	Seed shall be planted or sod laid immediately on any portion of the site that has permanently finished all other construction activities, but no later than seven (7) days after the completion of construction.
Maintenance and Inspection:	Inspections must occur at least once every seven (7) calendar days and after every ½" or greater rainfall event during construction. Maintenance includes watering, fertilizing, and reseeding as needed to maintain adequate vegetative density. Once construction is complete, the permanent stabilization will be monitored until final stabilization is reached. Final stabilization is reached when 70% of the ground cover is permanently stabilized.
Responsible Staff:	TBD

SECTION 8: CERTIFICATION AND NOTIFICATION

NPDES OWNER CERTIFICATION

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

_____ Name	_____ Company
_____ Title	_____ Address
_____ Signature	_____ Telephone
_____ Date	

NPDES CONTRACTOR CERTIFICATION

Certification Statement. All contractors and subcontractors identified to implement or maintain a stormwater pollution prevention measure shall sign a copy of the following Certification Statement before conducting any service at SEASONS AT ELGIN – SOUTHWEST CORNER OF HOPPS ROAD AND RANDALL ROAD, ELGIN, IL:

"I certify under penalty of law that I understand the terms and conditions of the general National Pollutant Discharge Elimination System (NPDES) permit (ILR10) that authorizes the storm water discharges associated with industrial activity from the construction site identified as part of this certification."

_____ Name	_____ Company
_____ Title	_____ Address
_____ Signature	_____ Telephone
_____ Date	

SWPPP APPENDICES

Attach the following documentation to the SWPPP:

Appendix A – General Location Map

Appendix B – Site Maps

Appendix C – Construction General Permit

Appendix D – NOI and Acknowledgement Letter from EPA/State

Appendix E – Inspection Reports

Appendix F – Corrective Action Log

Appendix G – SWPPP Amendment Log

Appendix H – Subcontractor Certifications/Agreements

Appendix I – Grading and Stabilization Activities Log

Appendix J – Delegation of Authority

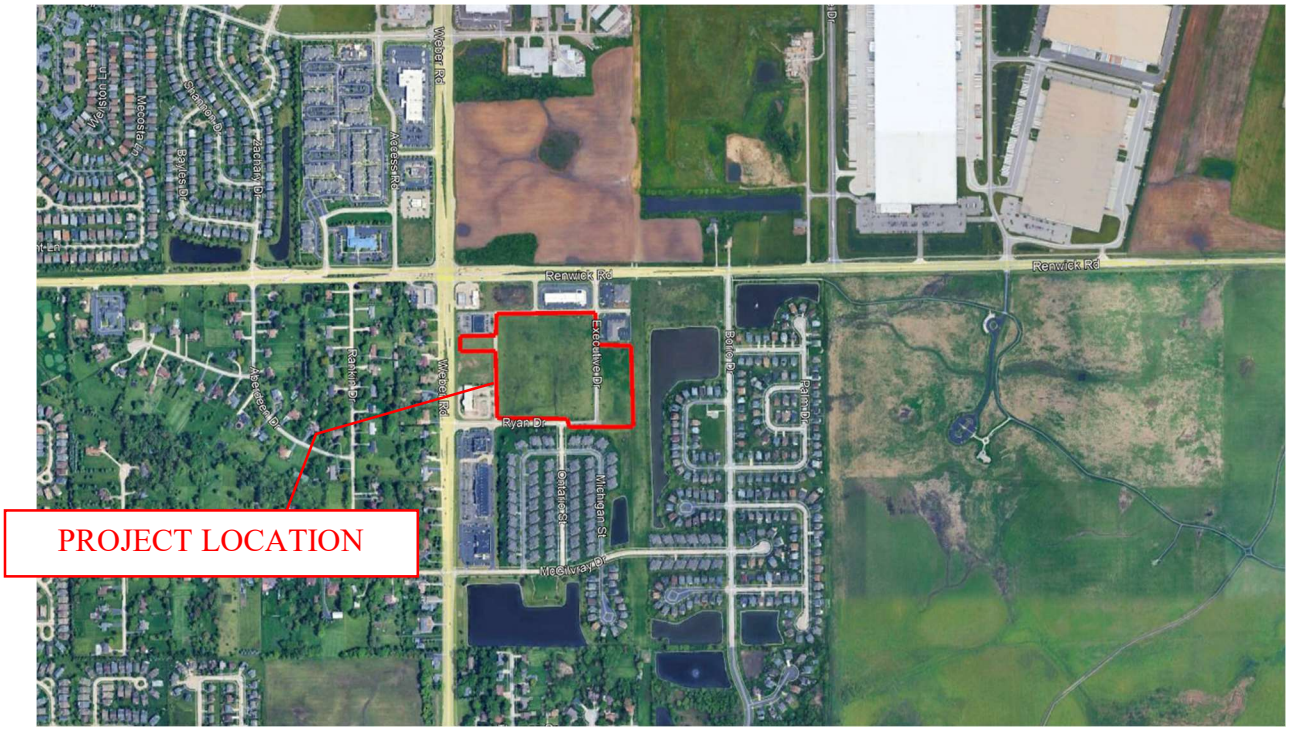
Appendix K – Site Specific Permits

APPENDIX A

GENERAL LOCATION MAP

Appendix A

Site Location Map



APPENDIX B

SITE MAPS

Please refer to Sheet 3-4 (“Soil Erosion and Sediment Control Plan and Details”) of the plan set titled “SEASONS AT CREST HILL” by Manhard Consulting, Ltd.

APPENDIX C

CONSTRUCTION GENERAL PERMIT

APPENDIX D

NOTICE OF INTENT (NOI)

NOTICE OF TERMINATION (NOT)

The Notice of Termination will be completed, certified and submitted once the construction site has been stabilized upon project completion.

APPENDIX E

INSPECTION REPORTS

INCIDENCE OF NON-COMPLIANCE (ION) FORM

APPENDIX F

CORRECTIVE ACTION LOG

Appendix F – Corrective Action Log

Project Name:
SWPPP Contact:

Inspection Date	Inspector Name(s)	Description of BMP Deficiency	Corrective Action Needed (including planned date/responsible person)	Date Action Taken/Responsible person

APPENDIX G

SWPPP AMENDMENT LOG

Appendix G – SWPPP Amendment Log

Project Name:
SWPPP Contact:

Amendment No.	Description of the Amendment	Date of Amendment	Amendment Prepared by [Name(s) and Title]

APPENDIX H

SUBCONTRACTOR CERTIFICATION / AGREEMENTS

Appendix H –Subcontractor Certifications/Agreements

SUBCONTRACTOR CERTIFICATION
STORMWATER POLLUTION PREVENTION PLAN

Project Number: _____

Project Title: _____

Operator(s): _____

As a subcontractor, you are required to comply with the Stormwater Pollution Prevention Plan (SWPPP) for any work that you perform on-site. Any person or group who violates any condition of the SWPPP may be subject to substantial penalties or loss of contract. You are encouraged to advise each of your employees working on this project of the requirements of the SWPPP. A copy of the SWPPP is available for your review at the office trailer.

Each subcontractor engaged in activities at the construction site that could impact stormwater must be identified and sign the following certification statement:

I certify under the penalty of law that I have read and understand the terms and conditions of the SWPPP for the above designated project and agree to follow the BMPs and practices described in the SWPPP.

This certification is hereby signed in reference to the above named project:

Company: _____

Address: _____

Telephone Number: _____

Type of construction service to be provided: _____

_____

_____

Signature: _____

Title: _____

Date: _____

APPENDIX I

GRADING AND STABILIZATION ACTIVITIES LOG

Appendix I – Grading and Stabilization Activities Log

Project Name:
SWPPP Contact:

Date Grading Activity Initiated	Description of Grading Activity	Date Grading Activity Ceased (Indicate Temporary or Permanent)	Date When Stabilization Measures are Initiated	Description of Stabilization Measure and Location

APPENDIX J

DELEGATION OF AUTHORITY

Appendix J1 –Delegation of Authority Form – General Contactor Only

Note: This form is for use by the Contractor whether or not Manhard is providing compliance observation and reporting onsite. Manhard Employees should NOT sign this form. If Manhard is providing compliance observation and reporting, Manhard Employees should be listed in Appendix K2 and sign it.

I, _____ (name), hereby designate the person or specifically described position below to be a duly authorized representative for the purpose of overseeing compliance with the environmental requirements outlined in the Construction General Permit ILR-10, at the SEASONS AT ELGIN construction site. The designee is authorized to sign any reports, stormwater pollution prevention plans and all other documents required by the permit.

_____ (name of person or position)
_____ (company)
_____ (address)
_____ (city, state, zip)
_____ (phone)

By signing this authorization, I confirm that I meet the requirements to make such a designation as set forth in Part VI.G.2 of the Illinois EPA General NPDES Permit, and that the designee above meets the definition of a "duly authorized representative" as set forth in Part VI.G.2.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: _____

Company: _____

Title: _____

Signature: _____

Date: _____

Appendix J2 –Delegation of Authority Form – Compliance Observation and Compliance Reporting

Note: This form is for use when Manhard is providing compliance observation and reporting onsite. It is for signature by Manhard Employees, as it is specific to the services that Manhard Consulting provides. The highlighted paragraph below can be removed if the client is sensitive to the wording. Manhard employees should NOT sign Appendix K1, as it is intended for situations where the contractor is responsible for its own inspections and includes implementation and installation of compliance measures.

I, _____ (name), hereby designate the person or specifically described position below to be a duly authorized representative for the purpose of overseeing weekly compliance observations and compliance reporting per the environmental requirements outlined in the Construction General Permit ILR-10, at the SEASONS AT ELGIN construction site. The designee is authorized to sign any reports, stormwater pollution prevention plans and all other documents required by the permit in regards to compliance observations and reporting.

_____ (name of person or position)
_____ (company)
_____ (address)
_____ (city, state, zip)
_____ (phone)

It should be noted that this Authority includes responsibility for compliance monitoring and compliance reporting of erosion and sediment control measures only. The designated person or position is not responsible for any violations of The Construction General Permit ILR-10.

By signing this authorization, I confirm that I meet the requirements to make such a designation as set forth in Part VI.G.2 of the Illinios EPA General NPDES Permit, and that the designee above meets the definition of a "duly authorized representative" as set forth in Part VI.G.2.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name: _____

Company: _____

Title: _____

Signature: _____

Date:

APPENDIX K

SITE SPECIFIC PERMITS
ILLINOIS HISTORIC PRESERVATION AGENCY (IHPA)
ILLINOIS DEPARTMENT OF NATURAL RESOURCES (IDNR)

Illinois Department of Natural Resources
JB Pritzker, Governor • Natalie Phelps Finnie, Director
One Natural Resources Way • Springfield, Illinois 62702-1271
www.dnr.illinois.gov

Will County
Crest Hill
SE of Renwick Rd. and Weber Rd.
Section:20-Township:36N-Range:10E
IEPA
New Construction, Multi-Family Residential Development

PLEASE REFER TO: SHPO LOG #010090425

September 29, 2025

Grant Wasielewski
Manhard Consulting, Ltd.
One E. Wacker Dr., Suite 2700
Chicago, IL 60601

The Illinois State Historic Preservation Office is required by the Illinois State Agency Historic Resources Preservation Act (20 ILCS 3420, as amended, 17 IAC 4180) to review all state funded, permitted, or licensed undertakings for their effect on cultural resources. Pursuant to this, we have received information regarding the referenced project for our comment.

Our staff has reviewed the specifications under the state law and assessed the impact of the project as submitted by your office. We have determined, based on the available information, that no significant historic, architectural, or archaeological resources will be affected within the proposed project area.

According to the information you have provided there is no federal involvement in your project. Be aware that the state law is less restrictive than the federal cultural resource laws concerning archaeology. If your project will use federal loans or grants, need federal agency permits (including non-reporting), use federal property, or involve assistance from a federal agency then your project must be reviewed under the National Historic Preservation Act of 1966, as amended. Please notify us immediately if such is the case.

This approval remains in effect for two (2) years from date of issuance. It does not pertain to any discovery during construction, nor is it a clearance for purposes of the Illinois Human Remains Protection Act (20 ILCS 3440).

Please retain this letter in your files as evidence of compliance with the Illinois State Agency Historic Resources Preservation Act.

If further assistance is needed, please contact Jeff Kruchten, Principal Archaeologist, at 217/785-1279 or jeff.kruchten@illinois.gov.

Sincerely,

Carey L. Mayer

Carey L. Mayer, AIA
Deputy State Historic Preservation Officer

EcoCAT
Ecological Compliance Assessment Tool

ILLINOIS DEPARTMENT OF NATURAL RESOURCES

Applicant: Manhard Consulting
Contact: Grant Wasielewski
Address: 1 E. Wacker Drive Suite 2700
Floor 27
Chicago, IL 60601

IDNR Project Number: 2604696
Date: 09/03/2025

Project: Seasosn at Crest Hill
Address: SEC of Renwick Rd and Weber Rd, Crest Hill

Description: The project consists of construction of a 14.89 multifamily development and a 1.01 acre future commercial outlot, along with needed utilties and parking infrastructure.

Natural Resource Review Results

Consultation for Endangered Species Protection and Natural Areas Preservation (Part 1075)

The Illinois Natural Heritage Database contains no record of State-listed threatened or endangered species, Illinois Natural Area Inventory sites, dedicated Illinois Nature Preserves, or registered Land and Water Reserves in the vicinity of the project location.

Consultation is terminated. This consultation is valid for two years unless new information becomes available that was not previously considered; the proposed action is modified; or additional species, essential habitat, or Natural Areas are identified in the vicinity. If the project has not been implemented within two years of the date of this letter, or any of the above listed conditions develop, a new consultation is necessary. Termination does not imply IDNR's authorization or endorsement.

Location

The applicant is responsible for the accuracy of the location submitted for the project.

County: Will

Township, Range, Section:
36N, 10E, 20



IL Department of Natural Resources Contact
Isabella Newingham
217-785-5500
Division of Ecosystems & Environment

Government Jurisdiction
IL Environmental Protection Agency
Permit Section
2520 W Iles Ave,
Springfield, Illinois 62794 -9276

Disclaimer

The Illinois Natural Heritage Database cannot provide a conclusive statement on the presence, absence, or condition of natural resources in Illinois. This review reflects the information existing in the Database at the time of this inquiry, and should not be regarded as a final statement on the site being considered, nor should it be a substitute for detailed site surveys or field surveys required for environmental assessments. If additional protected resources are encountered during the project's implementation, compliance with applicable statutes and regulations is required.

Terms of Use

By using this website, you acknowledge that you have read and agree to these terms. These terms may be revised by IDNR as necessary. If you continue to use the EcoCAT application after we post changes to these terms, it will mean that you accept such changes. If at any time you do not accept the Terms of Use, you may not continue to use the website.

1. The IDNR EcoCAT website was developed so that units of local government, state agencies and the public could request information or begin natural resource consultations on-line for the Illinois Endangered Species Protection Act, Illinois Natural Areas Preservation Act, and Illinois Interagency Wetland Policy Act. EcoCAT uses databases, Geographic Information System mapping, and a set of programmed decision rules to determine if proposed actions are in the vicinity of protected natural resources. By indicating your agreement to the Terms of Use for this application, you warrant that you will not use this web site for any other purpose.

2. Unauthorized attempts to upload, download, or change information on this website are strictly prohibited and may be punishable under the Computer Fraud and Abuse Act of 1986 and/or the National Information Infrastructure Protection Act.

3. IDNR reserves the right to enhance, modify, alter, or suspend the website at any time without notice, or to terminate or restrict access.

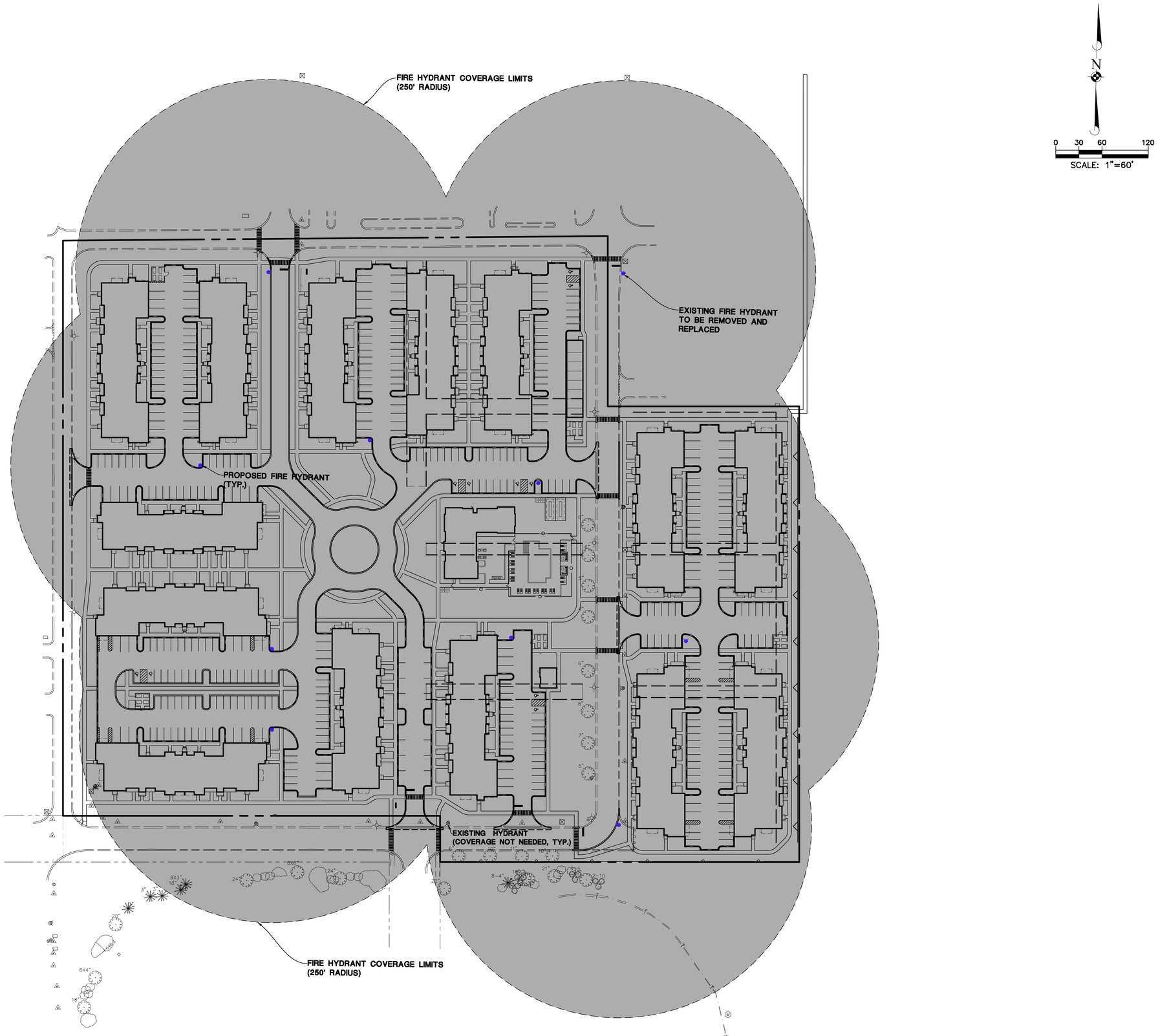
Security

EcoCAT operates on a state of Illinois computer system. We may use software to monitor traffic and to identify unauthorized attempts to upload, download, or change information, to cause harm or otherwise to damage this site. Unauthorized attempts to upload, download, or change information on this server is strictly prohibited by law.

Unauthorized use, tampering with or modification of this system, including supporting hardware or software, may subject the violator to criminal and civil penalties. In the event of unauthorized intrusion, all relevant information regarding possible violation of law may be provided to law enforcement officials.

Privacy

EcoCAT generates a public record subject to disclosure under the Freedom of Information Act. Otherwise, IDNR uses the information submitted to EcoCAT solely for internal tracking purposes.



DATE	REVISIONS	DRAWN BY
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Manhard CONSULTING
One Overlook Point, Suite 290, Lincolnshire, IL 60069 ph:847.634.5550 fx:847.634.0085 manhard.com
Civil Engineers • Surveyors • Water Resource Engineers • Water & Wastewater Engineers
Construction Managers • Environmental Scientists • Landscape Architects • Planners

SEASONS AT CREST HILL

CITY OF CREST HILL

FIRE HYDRANT COVERAGE EXHIBIT

PROJ. MGR.: JSE
PROJ. ASSOC.: MSL
DRAWN BY: GAW
DATE: 01-13-26
SCALE: 1"=60'

SHEET
EXB.
FRDCRIL01

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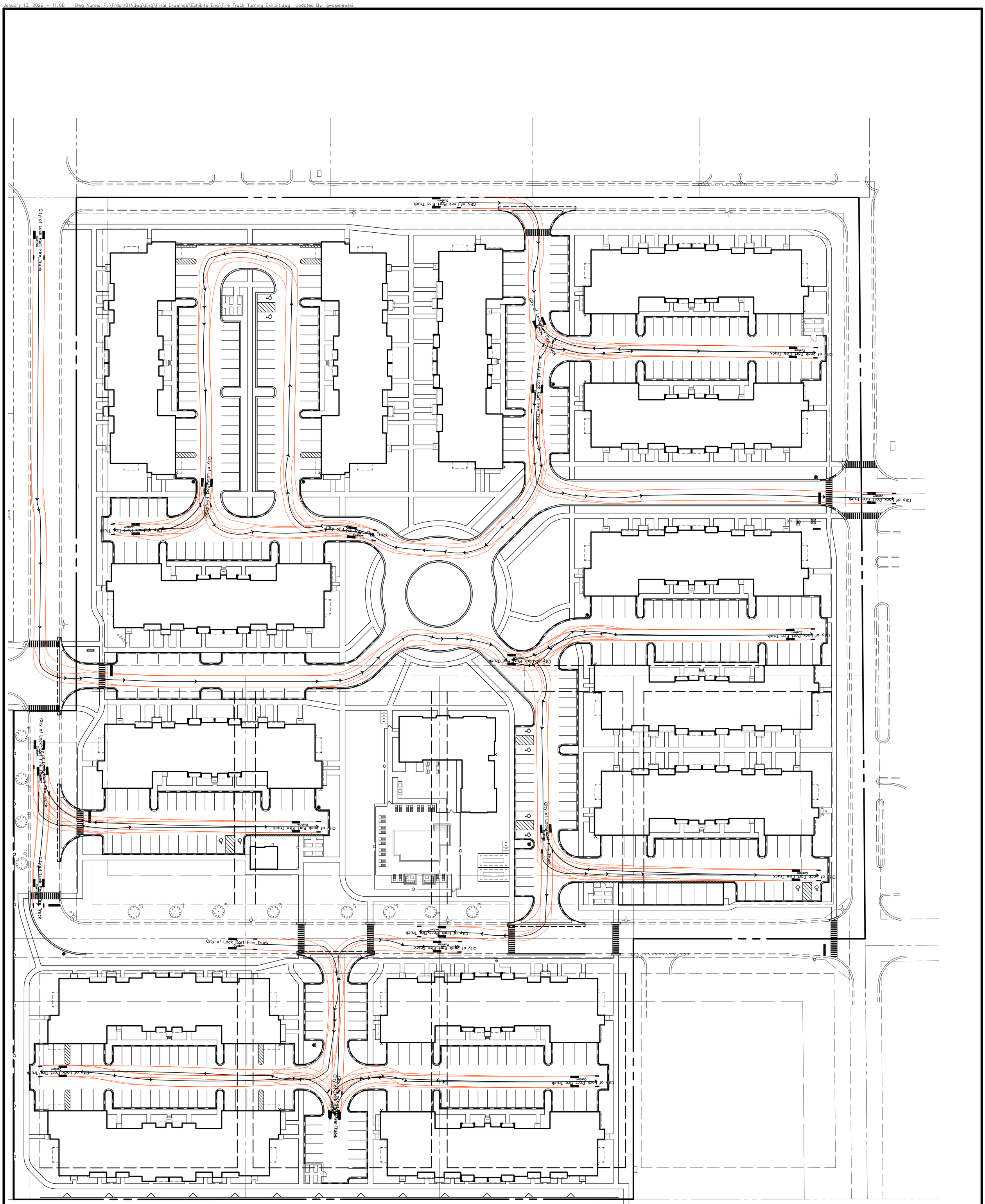
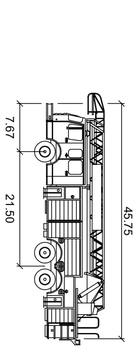
January 15, 2026 - 14:19 Dwg Name: P:\Frdcril01\dwg\Eng\Final Drawings\Exhibits Eng\Fire Hydrant Coverage Exhibit.dwg Updated By: gwasielewski



City of Lock Port Fire Truck

	feet
Width	9.88
Track	10.76
Lock to Lock Time	6.0
Steering Angle	40.0



FIRE TRUCK ACCESS EXHIBIT

CITY OF CREST HILL

SEASONS AT CREST HILL

SHEET **EXB.**

FRDCRIL01

PROJ. MGR.: JSE
PROJ. ASSOC.: MSL
DRAWN BY: GAW
DATE: 1/14/26
SCALE: 1"=40'

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Manhard CONSULTING LTD
900 Woodlands Parkway, Vernon Hills, IL 60061 tel: (847) 634 5550 fax: (847) 634 0095 www.manhard.com
Civil Engineers · Surveyors · Water Resources Engineers · Water & Wastewater Engineers
Construction Managers · Environmental Scientists · Landscape Architects · Planners

DATE	REVISIONS	DRAWN BY

Call Before You Dig
JULIE ILLINOIS ONE-CALL SYSTEM
Simply Call 811

UTILITY CONTACTS	
ELECTRIC: COMMONWEALTH EDISON CO. 1910 S. BRIDGE RD. JOLIET, IL 60433 (800) 595-6237 CONTACT:	WATER: VILLAGE OF CRESTHILL 2090 OAKLAND AVE, CREST HILL, ILLINOIS 60403 (815)-741-5100 CONTACT: JULIUS HANSEN
GAS: NICOR 1844 FERRY RD NAPERVILLE, IL 60563 (309) 557-8501 CONTACT: LARRY BLACKBURN	TELEPHONE: AT&T 297 S. WEBER RD. ROMEOVILLE, IL 60446 (630) 573-5653 CONTACT: KEITH HEMLICH
SEWER: VILLAGE OF CREST HILL 2090 OAKLAND AVE, CREST HILL ILLINOIS 60403 (815-741-5108) CONTACT: JULIUS HANSEN	

Proposed Improvements for SEASONS AT CREST HILL

SOUTHEAST CORNER OF RENWICK AND WEBER ROAD
CITY OF CREST HILL, IL

STANDARD SYMBOLS

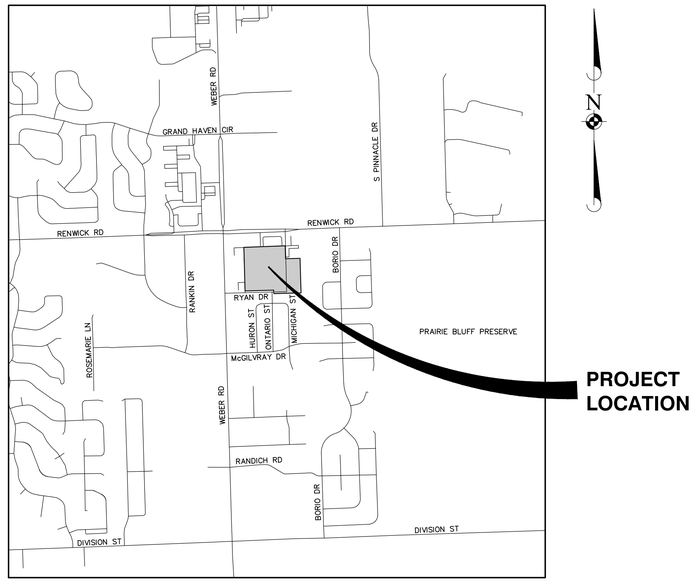
08-01-16

EXISTING		PROPOSED
	STORM SEWER	
	SANITARY SEWER	
	COMBINED SEWER	
FM	FORCEMAIN	FM
	DRAINTILE	
W	WATER MAIN	W
E	ELECTRIC	E
G	GAS	G
T	TELEPHONE	T
OH	OVERHEAD WIRES	OH
	SANITARY MANHOLE	
	STORM MANHOLE	
	CATCH BASIN	
	STORM INLET	
	CLEANOUT	
	HAY BALES	
	RIP RAP	
	VALVE IN VAULT	
	VALVE IN BOX	
	FIRE HYDRANT	
	BUFFALO BOX	
	FLARED END SECTION	
	STREET LIGHT	
	SUMMIT / LOW POINT	S/L
795.20 / 790.25	RIM ELEVATION / INVERT ELEVATION	795.25 / 790.20
	DITCH OR SWALE	
	DIRECTION OF FLOW	
	OVERFLOW RELIEF SWALE	
764	1 FOOT CONTOURS	764
	CURB AND GUTTER	
	DEPRESSED CURB AND GUTTER	
	REVERSE CURB AND GUTTER	
	SIDEWALK	
	DETECTABLE WARNINGS	
	PROPERTY LINE	
	EASEMENT LINE	
	SETBACK LINE	
	MAIL BOX	
	SIGN	
	TRAFFIC SIGNAL	
	POWER POLE	
	GUY WIRE	
	GAS VALVE	
	HANDHOLE	
E	ELECTRICAL EQUIPMENT	
T	TELEPHONE EQUIPMENT	
	CHAIN-LINK FENCE	
792.8	SPOT ELEVATION	792.8
	BRUSH/TREE LINE	
16"	DECIDUOUS TREE WITH TRUNK DIA. IN INCHES (TBR)	16"
25'	CONIFEROUS TREE WITH HEIGHT IN FEET (TBR)	25'
S	SILT FENCE	S
	RETAINING WALL	
	WETLAND	

ABBREVIATIONS

08-01-16

ADJ	ADJUST	F/L	FLOW LINE	R.O.W.	RIGHT-OF-WAY
AGG.	AGGREGATE	FM	FORCE MAIN	RCP	REINFORCED CONCRETE PIPE
ARCH	ARCHITECT	G	GROUND	REM	REMOVAL
B.A.M.	BITUMINOUS AGGREGATE MIXTURE	G/F	GRADE AT FOUNDATION	REV	REVERSE
B-B	BACK TO BACK	GW	GUY WIRE	RR	RAILROAD
B/C	BACK OF CURB	HDWL	HEADWALL	RT	RIGHT
B/P	BOTTOM OF PIPE	HH	HANDHOLE	SAN	SANITARY
B/W	BACK OF WALK	HWL	HIGH WATER LEVEL	SF	SQUARE FOOT
B-BOX	BUFFALO BOX	HYD	HYDRANT	SHLD.	SHOULDER
BIT.	BITUMINOUS	INL	INLET	SL	STREET LIGHT
BM	BENCHMARK	INV	INVERT	SMH	SANITARY MANHOLE
B.O.	BY OTHERS	IP	IRON PIPE	ST	STORM
C.E.	COMMERCIAL ENTRANCE	LT	LEFT	STA.	STATION
CB	CATCH BASIN	MAX.	MAXIMUM	STD	STANDARD
℄	CENTERLINE	MB	MAILBOX	SW	SIDEWALK
CMP	CORRUGATED METAL PIPE	M/E	MEET EXISTING	SY	SQUARE YARDS
CNTRL	CONTROL	MH	MANHOLE	TBR	TO BE REMOVED
CO	CLEANOUT	MIN.	MINIMUM	T	TELEPHONE
CONC.	CONCRETE	NWL	NORMAL WATER LEVEL	T-A	TYPE A
CY	CUBIC YARD	P.E.	PRIVATE ENTRANCE	T/C	TOP OF CURB
D	DITCH	PC	POINT OF CURVATURE	T/F	TOP OF FOUNDATION
DIA.	DIAMETER	PCC	POINT OF COMPOUND CURVE	T/P	TOP OF PIPE
DIP	DUCTILE IRON PIPE	PGL	PROFILE GRADE LINE	T/W	TOP OF WALK
DWM	DUCTILE IRON WATER MAIN	PI	POINT OF INTERSECTION	T/WALL	TOP OF WALL
DS	DOWNSPOUT	P℄	PROPERTY LINE	TEMP	TEMPORARY
DT	DRAIN TILE	PP	POWER POLE	TRANS	TRANSFORMER
E	ELECTRIC	PROP.	PROPOSED	V.B.	VALVE BOX
E-E	EDGE TO EDGE	PT	POINT OF TANGENCY	VCP	VITRIFIED CLAY PIPE
ELEV.	ELEVATION	PVC	POLYVINYL CHLORIDE PIPE	V.V.	VALVE VAULT
E/P	EDGE OF PAVEMENT	PVC	POINT OF VERTICAL CURVATURE	WL	WATER LEVEL
EX.	EXISTING	PVI	POINT OF VERTICAL INTERSECTION	WM	WATER MAIN
F.O.	FIELD ENTRANCE	PVT	POINT OF VERTICAL TANGENCY		
F-F	FACE TO FACE	P.	PAVEMENT		
F.F.	FINISHED FLOOR	P.U.D.E.	PUBLIC UTILITY & DRAINAGE EASEMENT		
FES	FLARED END SECTION	R	RADIUS		



LOCATION MAP

N.T.S.

DEVELOPER:
FRED-CREST HILL HC, LLC
789 NORTH WATER STREET, SUITE 500
MILWAUKEE, WISCONSIN 53202
(414) 246-8402

NOTE:

THE BOUNDARY LINES AND TOPOGRAPHY FOR THIS PROJECT ARE BASED ON A FIELD SURVEY COMPLETED BY MANHARD CONSULTING ON SEPTEMBER 23, 2025. THE CONTRACTOR SHALL VERIFY THE EXISTING CONDITIONS PRIOR TO CONSTRUCTION AND SHALL IMMEDIATELY NOTIFY MANHARD CONSULTING AND THE CLIENT IN WRITING OF ANY DIFFERING CONDITIONS.

Manhard™ CONSULTING
One Overlook Point, Suite 260, Lincolnshire, IL 60069 ph:847.934.5550 fx:847.934.0995 manhard.com
Civil Engineers • Surveyors • Water Resources Engineers • Water & Wastewater Engineers
Construction Managers • Environmental Scientists • Landscape Architects • Planners

MANHARD CONSULTING IS NOT RESPONSIBLE FOR THE SAFETY OF ANY PARTY AT OR ON THE CONSTRUCTION SITE. SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND ANY OTHER PERSON OR ENTITY PERFORMING WORK OR SERVICES. NEITHER THE OWNER NOR ENGINEER ASSUMES ANY RESPONSIBILITY FOR THE JOB SITE SAFETY OF PERSONS ENGAGED IN THE WORK OR THE MEANS OR METHODS OF CONSTRUCTION.

INDEX OF SHEETS

SHEET NUMBER	SHEET TITLE
1	TITLE SHEET
2	EXISTING CONDITIONS AND DEMOLITION PLAN
3	SOIL EROSION AND SEDIMENT CONTROL PLAN
4	SOIL EROSION AND SEDIMENT CONTROL DETAILS
5	SOIL EROSION AND SEDIMENT CONTROL DETAILS
6	SITE DIMENSIONAL AND PAVING PLAN - OVERALL
7	SITE DIMENSIONAL AND PAVING PLAN - NW
8	SITE DIMENSIONAL AND PAVING PLAN - NE
9	SITE DIMENSIONAL AND PAVING PLAN - WEST
10	SITE DIMENSIONAL AND PAVING PLAN - EAST
11	SITE DIMENSIONAL AND PAVING PLAN - SW
12	SITE DIMENSIONAL AND PAVING PLAN - SE
13	GRADING PLAN - OVERALL
14	GRADING PLAN - NW
15	GRADING PLAN - NE
16	GRADING PLAN - WEST
17	GRADING PLAN - EAST
18	GRADING PLAN - SW
19	GRADING PLAN - SE
20	TYPICAL BUILDING GRADING DETAILS (18-UNIT)
21	TYPICAL BUILDING GRADING DETAILS (20-UNIT)
22	OVERALL UTILITY PLAN
23	UTILITY PLAN - NW
24	UTILITY PLAN - NE
25	UTILITY PLAN- WEST
26	UTILITY PLAN - EAST
27	UTILITY PLAN- SW
28	UTILITY PLAN - SE
29	SANITARY PROFILES 1&2
30	SANITARY PROFILES 3&4
31	SANITARY PROFILES 5&6
32	SANITARY PROFILES 7
33	SANITARY PROFILES 8
34	SANITARY PROFILES 9
35	SANITARY PROFILES 10&11
36	SANITARY PROFILES 12&13
37	SANITARY PROFILES 14&15
38	CONSTRUCTION DETAILS
39	CONSTRUCTION DETAILS
40	CONSTRUCTION DETAILS
41	CONSTRUCTION DETAILS
42	CONSTRUCTION DETAILS
43	CONSTRUCTION DETAILS
44	CONSTRUCTION SPECIFICATIONS

BENCHMARKS:

REFERENCE BENCHMARK:
ELEVATIONS AND SITE BENCHMARKS SHOWN HEREON WERE ESTABLISHED UTILIZING A TRIMBLE REAL-TIME KINETIC (RTK) GLOBAL NAVIGATION SATELLITE SYSTEM (GNSS) AND THE TRIMBLE VRS NOW NETWORK. THE OBSERVED ELEVATIONS ARE THE BASIS FOR ALL ELEVATIONS SHOWN HEREON AND THIS INFORMATION HAS NOT BEEN DIRECTLY (COMPARED TO ANY OTHER KNOWN OR FIXED BENCHMARK.

SITE BENCHMARK #1:
SOUTHEAST "ARROW" BOLT OF FIRST FIRE HYDRANT (TAG #3-054) WEST OF THE CENTERLINE OF ONTARIO STREET AND NORTH SIDE OF RYAN DRIVE. LOCATED APPROXIMATELY 19 FEET NORTH OF CENTERLINE OF RYAN DRIVE AND 208 FEET WEST OF CENTERLINE OF ONTARIO STREET.

ELEVATION = 647.21

SITE BENCHMARK #2:
NORTHWEST BOLT OF FIRST FIRE HYDRANT (TAG #3-067) WEST OF EXECUTIVE DRIVE ON SOUTH SIDE OF "PRIVATE DRIVE" AT EXISTING ENTRANCE ON NORTH SIDE OF SITE. LOCATED APPROXIMATELY 718 FEET NORTH OF CENTERLINE OF RYAN DRIVE AND 145 FEET WEST OF CENTERLINE OF ONTARIO STREET EXTENDED NORTH.

ELEVATION = 649.73

SITE BENCHMARK #3:
SOUTHWEST "ARROW" BOLT OF THIRD FIRE HYDRANT (TAG #3-057) SOUTH OF WEBER ROAD ON EAST SIDE OF EXECUTIVE DRIVE.
LOCATED APPROXIMATELY 431 FEET NORTH OF CENTERLINE OF RYAN DRIVE AND 19 FEET EAST OF CENTERLINE OF EXECUTIVE DRIVE.

ELEVATION = 649.16

SEAL

DRAWN BY | REVISIONS | DATE

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SEASONS AT CREST HILL
CITY OF CREST HILL
TITLE SHEET

PROJ. MGR.: JSE
PROJ. ASSOC.: MSL
DRAWN BY: MH
DATE: 01-14-26
SCALE: NTS

SHEET 1 OF 44
FRD.CRIL01

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January 14, 2026 - 16:26 Dwg Name: P:\Fred\001\Mech\Engr\Plan\Drawings\Plan Set\TITLE SHEET.dwg Updated By: dwesterwelt

NOTE: PIPE TO NORTH OFFSET TOO MUCH, INACCESSIBLE

0 20 40 80

SCALE: 1"=40'

DEMOLITION LEGEND

- 2" MAXIMUM MILL
- SAWCUT LINE
- FENCE, RETAINING WALL, RAILROAD TIES, POLES, CURB AND GUTTER, ETC. TO BE REMOVED
- UTILITY STRUCTURE TO BE REMOVED
- UTILITY LINE REMOVAL, FILL OR ABANDONMENT (REFER TO SPECIFICATIONS)
- TREE TO BE REMOVED
- (TBR) TO BE REMOVED
- (TR) TO REMAIN

06-01-16

EXISTING CONDITIONS AND DEMOLITION NOTES:

1. EXISTING CONDITIONS AND DEMOLITION PLAN REPRESENT SITE CONDITIONS AS OF SEPTEMBER 23, 2025. CONTRACTOR SHALL INSPECT SITE PRIOR TO BIDDING WORK TO VERIFY ACTUAL FIELD CONDITIONS AS PORTIONS OF THE DEMOLITION WORK MAY HAVE SINCE BEEN COMPLETED. CONTRACTOR SHALL BE RESPONSIBLE TO COMPLETE ALL DEMOLITION WORK AS PER PLANS TO PREPARE THE SITE FOR CONSTRUCTION OF PROPOSED IMPROVEMENTS.
2. THE UNDERGROUND UTILITY INFORMATION AS SHOWN HEREON IS BASED, IN PART, UPON INFORMATION FURNISHED BY UTILITY COMPANIES AND THE LOCAL MUNICIPALITY. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, ITS ACCURACY AND COMPLETENESS CANNOT BE GUARANTEED NOR CERTIFIED TO.
3. THE CONTRACTOR IS RESPONSIBLE FOR DEMOLITION, REMOVAL AND DISPOSAL (IN A LOCATION APPROVED BY ALL JURISDICTIONAL GOVERNING ENTITIES) OF ALL STRUCTURES, PADS, WALLS, FLUMES, FOUNDATIONS, ROAD, PARKING LOTS, DRIVES, DRAINAGE STRUCTURES, UTILITIES, ETC., SUCH THAT THE IMPROVEMENTS SHOWN ON THESE PLANS CAN BE CONSTRUCTED. ALL DEMOLITION WORK SHALL BE IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL REQUIREMENTS. ALL FACILITIES TO BE REMOVED SHALL BE UNDERCUT TO SUITABLE MATERIAL AND BROUGHT TO GRADE WITH SUITABLE COMPACTED FILL MATERIAL PER THE SPECIFICATIONS.
4. REFER TO SPECIFICATIONS SHEET FOR DEMOLITION NOTES.

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SEASONS AT CREST HILL
CITY OF CREST HILL
EXISTING CONDITIONS AND DEMOLITION PLAN

PROJ. MGR.: JSE
PROJ. ASSOC.: MSL
DRAWN BY: GAW
DATE: 01-14-26
SCALE: 1"=40'

SHEET 2 OF 44
FRD.CRIL01

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SILT FENCE AROUND RECEIVING PIT

CONCRETE WASHOUT

INLET PROTECTION (TYP.)

CONSTRUCTION ENTRANCE

BUILDING A
F.F.=649.15
G.F=648.65

BUILDING B
F.F.=649.15
G.F=648.65

BUILDING C
F.F.=649.15
G.F=648.65

BUILDING D
F.F.=649.15
G.F=648.65

BUILDING E
F.F.=648.80
G.F=648.30

GARAGE

EXECUTIVE DRIVE

SILT FENCE (TYP.)

LIMITS OF DISTURBANCE (TYP.)

CLOSED LID

RETAINING WALL (BY OTHERS)

BUILDING F
F.F.=648.70
G.F=648.20

CLUBHOUSE
F.F.=648.80
G.F=648.30

POOL

BUILDING K
F.F.=647.75
G.F=647.25

BUILDING L
F.F.=647.75
G.F=647.25

INSTALL TREE PROTECTION FENCING AROUND DRIPLINE (TYP.)

BUILDING G
F.F.=648.70
G.F=648.20

INLET PROTECTION (TYP.)

BUILDING I
F.F.=648.00
G.F=647.50

BUILDING J
F.F.=648.00
G.F=647.50

BUILDING H
F.F.=648.70
G.F=648.20

CONCRETE WASHOUT

CONSTRUCTION ENTRANCE

BUILDING M
F.F.=647.25
G.F=646.75

BUILDING N
F.F.=647.25
G.F=646.75

INLET PROTECTION (TYP.)

SILT FENCE (TYP.)

RETAINING WALL (BY OTHERS)

RYAN DRIVE

SILT FENCE (TYP.)

LIMITS OF DISTURBANCE (TYP.)

SILT FENCE AROUND RECEIVING PIT

APPROXIMATE LOCATION OF TOPSOIL STOCKPILE. FINAL LOCATION TO BE DETERMINED BY CONTRACTOR

N

0 20 40 80

SCALE: 1"=40'

SEE SHEET 4 FOR EROSION CONTROL NOTES

SOIL PROTECTION CHART

STABILIZATION CHART	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
PERMANENT SEEDINGS			A						*			
DORMANT SEEDINGS	B										B	
TEMPORARY SEEDINGS					C							
TEMPORARY SEEDINGS	D											
SODDING				E**								
MULCHING	F											

A – KENTUCKY BLUEGRASS 90 LBS./AC. MIXED WITH PERENNIAL RYEGRASS 30 LBS./AC.

B – KENTUCKY BLUEGRASS 135 LBS./AC. MIXED WITH PERENNIAL RYEGRASS 45 LBS./AC. 2 TONS STRAW MULCH PER ACRE

C – SPRING OATS

D – WHEAT OR CEREAL RYE

E – SOD (NURSERY GROWN KENTUCKY BLUEGRASS)

F – STRAW MULCH 2 TONS PER ACRE

* IRRIGATION NEEDED DURING JUNE, JULY AND SEPTEMBER

** IRRIGATION NEEDED FOR 2–3 WEEKS AFTER SODDING

NOTE: THIS CHART IS A GUIDE TO ASSISTS THE CONTRACTOR IN UNDERSTANDING OPTIONS FOR SOIL STABILIZATION. THE LANDSCAPE PLAN SHALL TAKE PRECEDENCE OVER THIS CHART. ANY CONFLICT SHALL BE DISCUSSED WITH THE LANDSCAPE ARCHITECT PRIOR TO THE START OF CONSTRUCTION.

01-01-16

LEGEND

- S — S — TEMPORARY SILT FENCE (PERIMETER EROSION BARRIER)
- SD — SD — TEMPORARY SILT DIKE
- TEMPORARY GRAVEL CONSTRUCTION ENTRANCE
- TEMPORARY STORM STRUCTURE PROTECTION
- TEMPORARY PERFORATED RISER
- PAVEMENT DRAINAGE FLOW
- SWALE DRAINAGE FLOW
- LIMITS OF DISTURBANCE/CONSTRUCTION

01-01-16

CONSTRUCTION SEQUENCE:

1. INSTALL SILT FENCE AT LOCATIONS AS INDICATED ON THE PLANS.
2. PROVIDE STABILIZED CONSTRUCTION ENTRANCE.
3. CONSTRUCT TEMPORARY DITCHES, SWALES, SEDIMENT TRAPS AND/OR BASINS.
4. STRIP EXISTING TOPSOIL FROM PROPOSED LIMITS OF DISTURBANCE AND STOCKPILE WHERE SHOWN ON PLANS.
5. PROVIDE SILT FENCE AROUND THE BASE OF THE STOCKPILES.
6. CONSTRUCT STORMWATER MANAGEMENT (DETENTION) FACILITIES TO SUB–GRADE AND INSTALL OUTLET PIPES.
7. COMPLETE TOPSOIL PLACEMENT AND PERMANENT SEEDING AND SODDING OF STORMWATER MANAGEMENT FACILITIES.
8. CUT AND FILL SITE TO PLAN SUB–GRADE.
9. CONSTRUCT UNDERGROUND IMPROVEMENTS, i.e. SANITARY SEWER WATERMAIN AND STORM SEWER**, ETC.
10. CONSTRUCT PAVEMENT IMPROVEMENTS PER PLAN.
11. COMPLETE CONSTRUCTION OF SITE WITH PERMANENT STABILIZATION.
12. REMOVE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES.

** INSTALL INLET PROTECTION AROUND DRAINAGE STRUCTURES AS CONSTRUCTED.

"THESE EROSION CONTROL PLANS ARE A PORTION OF THE ILLINOIS ENVIRONMENTAL PROTECTION AGENCY (IEPA) TOTAL REQUIREMENTS FOR A COMPLETE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AS REQUIRED BY THE GENERAL NPDES PERMIT NO. ILR10. CLIENT AND/OR CONTRACTOR WILL BE RESPONSIBLE FOR COMPLIANCE WITH ALL REQUIREMENTS OF THE GENERAL NPDES PERMIT AND COMPILATION OF THE COMPLETE SWPPP."

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SEASONS AT CREST HILL
CITY OF CREST HILL
SOIL EROSION AND SEDIMENT CONTROL PLAN

PROJ. MGR.:	JSE
PROJ. ASSOC.:	MSL
DRAWN BY:	GAW
DATE:	01-14-26
SCALE:	1"=40'

SHEET 3 OF 44

FRD.CRIL01

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January 14, 2026 - 12:59 Dwg Name: P:\Projects\01\dwg\Eng\Plan Drawings\Plan Set\Soil Erosion and Sediment Control Plan.dwg Updated By: gaw(defreek)

Street and Parking Lot Sweeping

Purpose: To reduce the amount of pollutants that get washed into the storm drain and ultimately transported and deposited in waterbodies.

Application:
1. Sweeping at points of egress where sediment is tracked from project site onto public or private streets and roads.

Limitations:
1. Sweeping may be ineffective if soil is wet or heavy accumulation of mud.
2. May require repeat Cleanings

Maintenance:
1. Inspect potential sediment tracking ingress and egress points locations daily, and after rain events.
2. Visible sediment observed outside the construction limits shall be swept and removed daily.
3. Use only brooms or sweeper attachments. These tend to spread the dirt rather than remove it.
4. If not mixed with debris or trash, consider incorporating the removed sediment back into the project.
5. Be careful not to sweep up any unknown substance or any object that may be CONTAMINATED.
6. Adjust brooms frequently; maximize efficiency of sweeping operations.
7. After sweeping is finished, properly dispose of sweeper wastes at an approved dumpsite.

Topsoil Salvage & Utilization

Purpose: To provide a method of preserving topsoil for use in establishing vegetation to achieve final site stabilization.

Specifications:

Material

Typically the darker, friable, loamy surface lay of soil found immediately below vegetation

Storage Area
1. Free of stumps, rock, and construction debris.
2. Stockpile covered with vegetation or a tarp.
3. Surrounded by a sediment barrier or sediment filter.
4. Stockpile outside rooting zone of trees to be protected.

Application:

Salvaging and Stockpiling Topsoil
1. Determine depth and suitability of topsoil at site.
2. Prior to stripping topsoil, install any site-specific down slope measures needed to control storm water and sedimentation
3. Remove soil material no deeper than the "Surface Soil".
4. Stockpile outside rooting zone of trees to be protected.

Spreading topsoil
1. Prior to applying topsoil, grade the subsoil and roughen the top three to four inches by disking.
2. Apply topsoil evenly to a depth of a minimum of four inches, then compact slightly to improve contract with the subsoil.
3. Do not apply topsoil when the site is wet, muddy, or frozen.
4. After spreading the topsoil, grade and stabilize the site.

Maintenance:
1. Inspect Daily
2. Check for damage to perimeter barrier; repair immediately.
3. Check for erosion or damage to newly spread topsoil; repair immediately and re-vegetate.

EROSION CONTROL GENERAL NOTES

SELF-MONITORING PROGRAM

A SELF-MONITORING PROGRAM THAT INCLUDES THE FOLLOWING MUST BE IMPLEMENTED AT ALL PERMITTED PROJECT SITES:

1. A TRAINED INDIVIDUAL SHALL PERFORM A WRITTEN EVALUATION OF THE PROJECT SITE A MINIMUM OF ONE (1) TIME PER WEEK AND BY THE END OF THE NEXT BUSINESS DAY FOLLOWING EACH MEASURABLE STORM EVENT.
2. THE EVALUATION MUST ADDRESS THE MAINTENANCE OF EXISTING STORM WATER QUALITY MEASURES, TO ENSURE THEY ARE FUNCTIONING PROPERLY AND IDENTIFY ADDITIONAL MEASURES NECESSARY TO REMAIN IN COMPLIANCE WITH ALL APPLICABLE STATUTES AND RULES.
3. WRITTEN EVALUATION REPORTS MUST INCLUDE:
   A. THE NAME OF INDIVIDUAL PERFORMING THE EVALUATION;
   B. THE DATE OF EVALUATION;
   C. PROBLEMS IDENTIFIED AT THE PROJECT SITE; AND
   D. DETAILS OF CORRECTIVE ACTIONS RECOMMENDED AND COMPLETED.
4. ALL EVALUATION REPORTS FOR THE PROJECT SITE MUST BE MADE AVAILABLE TO THE **CM** OR OTHER DESIGNATED ENTITY WITHIN FORTY-EIGHT (48) HOURS OF A REQUEST.
5. EVALUATION REPORTS MUST BE MAINTAINED FOR A PERIOD OF TWO (2) YEARS FROM DATE OF NOT.
6. ALL EVALUATION REPORTS WILL BE SUBMITTED TO THE OWNER WHEN REQUESTED.

SELF MONITORING PROGRAM

Site:
Date:
Inspected by:
Type of Inspection: ☐ Routine Weekly ☐ Rain Event (≥ 0.5" or more)

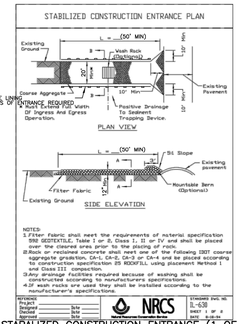
CONSTRUCTION SITE INSPECTION AND MAINTENANCE LOG
(To be completed by Trained Individual Project Manager)

All approved stormwater pollution prevention practices shall be inspected and maintained as needed to ensure continued performance of their intended function during construction and shall continue until the entire site has been stabilized and all BMPs are removed. Inspections shall be by the end of the next business day following each measurable storm event (0.5" or greater). If there are no measurable storm events within a given week, the site should be monitored at least once in that week. Maintenance and repair shall be conducted in accordance with the approved stormwater pollution prevention (SWPPP) plan. This log shall be kept as a permanent record and must be made available to town stormwater inspectors within forty-eight (48) hours upon request.

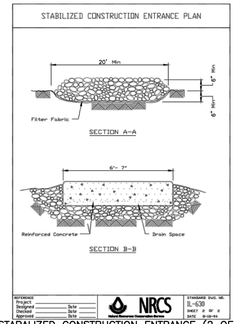
Row	Yes	No	N/A	BMP	Description
1				Rock Entrance	Rock Entrance intact/clean? Is Concrete Washout properly placed?
2				Perimeter Control	Silt Fence, Inlet Protection, Curb Inlet protect, Inlet Filter, Check Dam, Berm, Log, Mulch, Soil Roll, Erosion Blanket, Mulch, and Wood?
3				Topsoil Protection	Temporary Vegetation Established/Seeding maintained?
4				Silt Fence	Silt fence (or equivalent) installed properly and being maintained?
5				Inlet Protection	Inlet protection devices installed and being maintained?
6				Inlet Protection	Inlet protection devices installed and being maintained?
7				Temporary Seeding	All areas at least 50ft from inlets have 70% or more site covered?
8				Erosion Blanket	Erosion blanket installed on slopes greater than 3:1 or greater than 20 feet in length? Are all slopes and disturbed areas stabilized with temporary or permanent vegetation?
9				Dewatering Bags	Dewatering structures functioning properly?
10				Dewatering Bags	Dewatering bags placed on stable surface? Are adequate discharges including sediments?
11				Check Dam	Check dams are installed properly and being maintained?
12				Staging Area	Construction staging and parking areas are being utilized as indicated on the plans?
13				Soil Stockpiles	Soil stockpiles have been temporarily seeded and have perimeter silt fence?
14				Concrete Waste	Sediment traps have been installed in the proper location and are being maintained?
15				Sanitary Area	Sanitary facilities are in good working order and placed in appropriate locations?
16				Trashing Areas	Bulk trashing areas have proper containment, spill kits and a log of leaks, if used?
17				Spill Response	Spill response equipment, emergency contact info, are accessible for all?
18				Fueling	Fueling and maintenance of equipment occurring according to the approved SWPPP?
19				Containment	Solid waste is properly contained?
20				Hazmat Controls	Hazardous materials, waste or otherwise are properly handled and stored?
21				Corrective Actions	Previously recommended corrective actions have been implemented?
22				Other	
23				Other	

"If not answered, list" to any of the above questions describe any corrective action which must be taken to remedy the problem and when the corrective actions are to be completed" ---

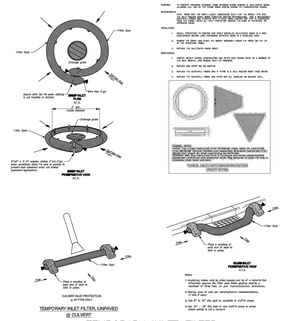
SELF MONITORING PROGRAM

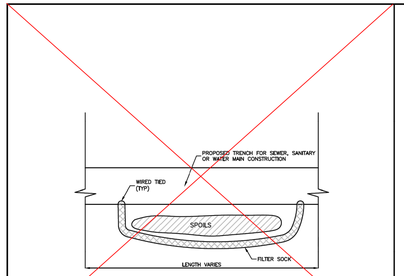


STABILIZED CONSTRUCTION ENTRANCE (1 OF 2)

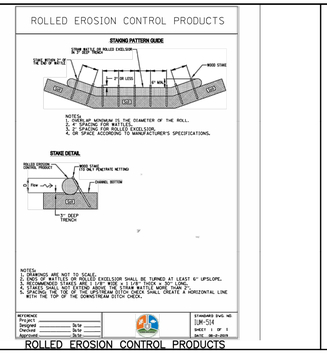


STABILIZED CONSTRUCTION ENTRANCE (2 OF 2)

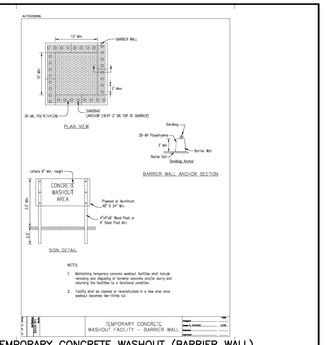

TEMPORARY INLET FILTER (UNPAVED AREA)
Filter Sock
Stake with 2x 4in wood stakes or 1in metal T-posts
Filter Sock Flow
Flow
Filter Sock
ASPHALT PAVEMENT
Filter Sock
TEMPORARY INLET FILTER, UNPAVED @ CA-6/IDOT
TEMPORARY INLET FILTER (PAVED AREA)
NOTES:
1. FILTER SOCK TO BE PLACED AT THE INLET OPENING AND SECURED WITH A MINIMUM OF TWO STAKES PER 4 FT OF SOCK LENGTH. STAKES SHALL BE PLACED ON THE DOWNSTREAM SIDE OF THE SOCK AT A SPACING NOT TO EXCEED 4 FT.
2. FILTER SOCK SHALL BE PLACED SO THAT THE ENDS OVERLAP A MINIMUM OF 12 INCHES.
3. WHERE FILTER SOCK CONFORMS TO GRADE ON THREE SIDES OF A GRATE OR INLET, ALL THREE SIDES SHALL BE PROTECTED.
4. WHERE FILTER SOCK IS USED IN SUMP LOCATIONS, THE SOCK SHALL BE PLACED AT LEAST 10 FEET FROM THE INLET.
5. WHERE FILTER SOCK IS USED IN SUMP LOCATIONS, THE SOCK SHALL BE PLACED AT LEAST 10 FEET FROM THE INLET.
TYPICAL INSTALLATION ON NON-PAVED SURFACE (NOT TO SCALE)
Filter Sock
Flow
Filter Sock
Flow
Filter Sock
Flow



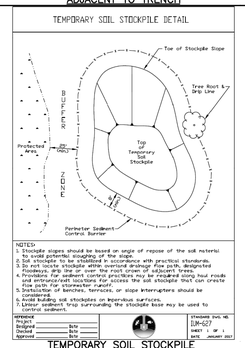
TYPICAL SPOILS PROTECTION ADJACENT TO TRENCH



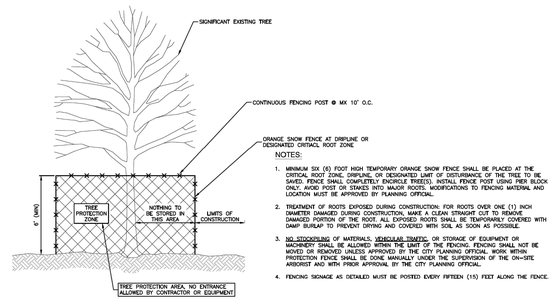
ROLLED EROSION CONTROL PRODUCTS



TEMPORARY CONCRETE WASHOUT (BARRIER WALL)



TEMPORARY SOIL STOCKPILE



TREE TRUNK PROTECTION

CLIENT:
City of CREST HILL Illinois
CITY OF CREST HILL
1610 PLAINFIELD ROAD
CREST HILL, IL 60403

NO.	DATE	NATURE OF REVISION	CHKD.

FILE NAME: W:\CRESTHILL\2022\PLOVI\Ref\detailsdgn

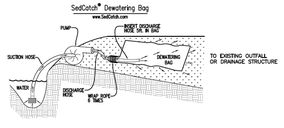
DSGN.
DWN.
CHKD.
SCALE:
PLOT DATE: 11/10/2021
CAD USER: jspearmon
MODEL: Default

TITLE:
CITY OF CREST HILL
EROSION CONTROL DETAILS

PROJ. NO.
DATE: 11/10/2021
SHEET 18 OF 38
DRAWING NO.
ERO-3

THE PURPOSE OF A DEWATERING BAG/TUBE IS TO COLLECT SEDIMENT CONTAINED IN THE DISCHARGED WATER, TO PREVENT THE SCOUR AND EROSION FROM WATER EXITING A PIPE AT HIGH VELOCITY, TO DIFFUSE THE WATER OVER A WIDER AREA TO MINIMIZE EROSION AS THE WATER DRAINS AWAY, AND TO RETAIN OIL CONTAINED WITHIN EFFLUENT.

A SEDCATCH® DEWATERING BAG/TUBE OR APPROVED EQUAL SHOULD BE USED ANYTIME WATER IS PUMPED ON THE SITE.



INSTALLATION AND USE:

1. PLACE SEDCATCH® DEWATERING BAG/TUBE ON THE GROUND OR ON A TRAILER OVER A RELATIVELY LEVEL, STABILIZED AREA.
2. INSERT DISCHARGE PIPE A MINIMUM OF 5FT. INSIDE SEDCATCH® DEWATERING BAG/TUBE AND SECURE WITH A ROPE (INCLUDED) WRAPPED 6 TIMES AROUND THE SNOUT OVER A 6 INCH WIDTH OF THE BAG. TO CLOSE OPEN END OF THE DEWATERING TUBE : OVERLAP THE TUBE 2 FT. FROM THE END, GATHER THE CENTER OF THE DOUBLED-UP PORTION FORMING A BOW TIE. SECURE WITH A ROPE WRAPPED MULTIPLE TIMES.
3. REPLACE SEDCATCH® DEWATERING BAG WHEN HALF FULL OF SEDIMENT OR WHEN THE SEDIMENT HAS REDUCED THE FLOW RATE OF THE PUMP DISCHARGE TO AN IMPRACTICAL AMOUNT, OR, EMPTY SEDCATCH® SEDIMENT TUBE WHEN HALF FULL OF SEDIMENT OR WHEN THE SEDIMENT HAS REDUCED THE FLOW RATE OF THE PUMP DISCHARGE TO AN IMPRACTICAL RATE.

MAINTENANCE AND DISPOSAL:

1. REMOVE AND DISPOSE OF ACCUMULATED SEDIMENT AWAY FROM WATERWAYS OR ENVIRONMENTALLY SENSITIVE AREAS. SLIT OPEN DEWATERING BAG AND REMOVE ACCUMULATED SEDIMENT. DISPOSE OF BAG AT AN APPROPRIATE RECYCLING OR SOLID WASTE FACILITY, OR: OPEN BOTH ENDS OF THE SEDCATCH® DEWATERING TUBE , PICK IT UP IN THE CENTER AND DUMP ACCUMULATED SEDIMENT OUT OF BOTH ENDS. ALLOW TO DRY AND STORE FOR RE-USE, OR, AS DIRECTED BY ENGINEER OR INSPECTOR.

DEWATERING BAG/TUBE

CLIENT:
City of CREST HILL Illinois
CITY OF CREST HILL
1610 PLAINFIELD ROAD
CREST HILL, IL 60403

NO.	DATE	NATURE OF REVISION	CHKD.

FILE NAME: W:\CRESTHILL\2022\PLOVI\Ref\detailsdgn

DSGN.
DWN.
CHKD.
SCALE:
PLOT DATE: 11/10/2021
CAD USER: jspearmon
MODEL: Default

TITLE:
CITY OF CREST HILL
EROSION CONTROL DETAILS

PROJ. NO.
DATE: 11/10/2021
SHEET 19 OF 38
DRAWING NO.
ERO-4

DRAWN BY | REVISIONS | DATE

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Civil Engineers • Surveyors • Water Resource Engineers
Construction Managers • Environmental Scientists • Landscape Architects • Planners

SEASONS AT CREST HILL
CITY OF CREST HILL
SOIL EROSION AND SEDIMENT CONTROL DETAILS

PROJ. MGR.: JSE
PROJ. ASSOC.: MSL
DRAWN BY: OTHERS
DATE: 01-14-26
SCALE: 1"=40'

SHEET
5 OF **44**
FRD.CRIL01

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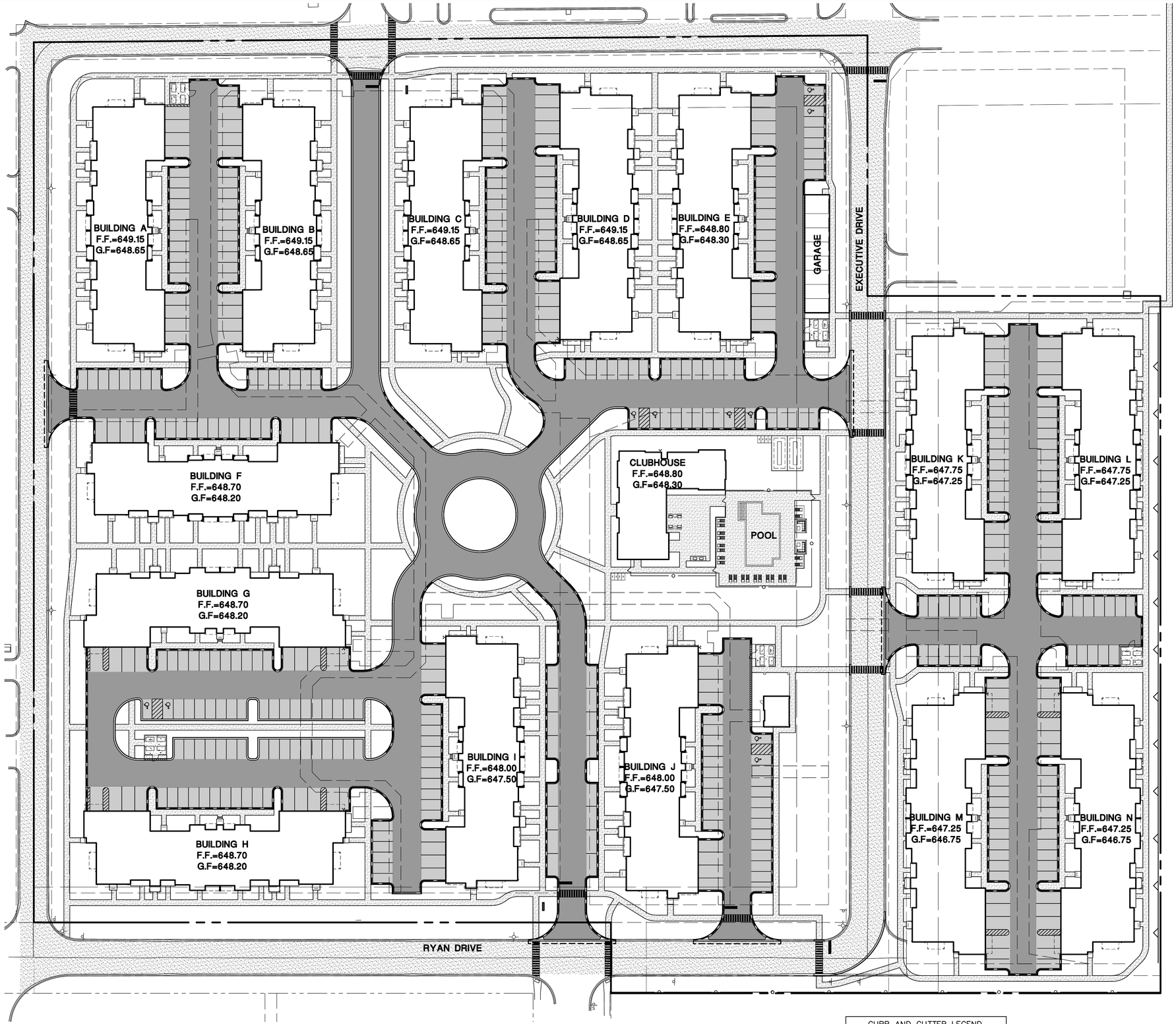
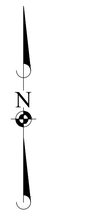
January 14, 2026 - 18:01 Data Name: P:\Projects\Civil Projects\Plan Set\Soil Erosion and Sediment Control Details.dwg Updated By: dwesterweld





0 20 40 80

SCALE: 1"=40'

SITE DATA	
SITE AREA	15.81 ACRES
DEVELOPMENT AREA	15.81 ACRES
OPEN SPACE AREA	4.81 ACRES
IMPERVIOUS AREA	11.00 ACRES
STANDARD PARKING PROVIDED	401 SPACES
HANDICAP PROVIDED	11 SPACES
VAN PARKING PROVIDED	1 SPACE
GARAGE PARKING PROVIDED	120 SPACES
TOTAL PARKING PROVIDED	552 SPACES
PARKING RATIO	2.12 SPACES/UNIT

PAVEMENT MARKING LEGEND

- (A) 6" SOLID WHITE
- (B) LETTERS AND SYMBOLS
- (C) 4" YELLOW DIAGONAL AT 45° SPACED 2' O.C. W/ 4" YELLOW BORDER
- (D) 4" YELLOW LINE

SIGN LEGEND

- (1) R1-1 STOP SIGN
- (2) R7-8 HANDICAP PARKING SIGN
- (3) R7-8AP VAN PARKING ONLY

06-01-16

PAVEMENT LEGEND

STANDARD DUTY PAVEMENT
1 1/2" BITUMINOUS SURFACE COURSE, HOT-MIX ASPHALT, MIX D, N50
2 1/4" BITUMINOUS BINDER COURSE, HOT-MIX ASPHALT, IL-19, N50
8" AGGREGATE BASE COURSE, TYPE B

HEAVY DUTY PAVEMENT
1 1/2" BITUMINOUS SURFACE COURSE, HOT-MIX ASPHALT, MIX D, N50
3" BITUMINOUS BINDER COURSE, HOT-MIX ASPHALT, IL-19, N50
12" AGGREGATE BASE COURSE, TYPE B

CONCRETE PAVEMENT
8" PORTLAND CEMENT CONCRETE PAVEMENT W/ 6 X 6 W1.4 WWF
4" COMPACTED AGGREGATE BASE, TYPE B

CONCRETE SIDEWALK
5" PORTLAND CEMENT CONCRETE
4" COMPACTED AGGREGATE BASE COURSE, TYPE B

OVERLAY BITUMINOUS PAVEMENT
2" MAXIMUM BITUMINOUS SURFACE COURSE

06-01-16

SITE DIMENSIONAL AND PAVING NOTES:

1. ALL DIMENSIONS ARE FACE OF CURB TO FACE OF CURB OR BUILDING FOUNDATION UNLESS NOTED OTHERWISE.
2. ALL PROPOSED CURB AND GUTTER SHALL BE B6.12 UNLESS OTHERWISE NOTED.
3. ALL CURB RADII SHALL BE 3' MEASURED TO FACE OF CURB UNLESS NOTED OTHERWISE.
4. TIE ALL PROPOSED CURB AND GUTTER TO EXISTING CURB AND GUTTER WITH 2-#6 BARS x 18" LONG DOWELED INTO EXISTING CURB.
5. BUILDING DIMENSIONS AND ADJACENT PARKING HAVE BEEN PREPARED BASED UPON ARCHITECTURAL INFORMATION CURRENT AT THE DATE OF THIS DRAWING. SUBSEQUENT ARCHITECTURAL CHANGES MAY EXIST. THEREFORE CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR PRECISE BUILDING DIMENSIONS AND NOTIFY THE ARCHITECT AND ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. BUILDING DIMENSIONS SHOWN SHOULD NOT BE USED FOR CONSTRUCTION LAYOUT OF BUILDING.
6. IMPROVEMENTS ADJACENT TO BUILDING, IF SHOWN, SUCH AS TRUCK DOCK, RETAINING WALLS, SIDEWALKS, CURBING, FENCES, CANOPIES, RAMPS, HANDICAP ACCESS, PLANTERS, DUMPSTERS, AND TRANSFORMERS ETC. HAVE BEEN SHOWN FOR APPROXIMATE LOCATION ONLY. REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS, SPECIFICATIONS AND DETAILS.
7. LOCATION OF PRIVATE SIDEWALKS SHALL BE COORDINATED WITH PROPOSED DOORWAY. CONTRACTOR TO VERIFY ACTUAL BUILDING PLAN LOCATIONS WITH ARCHITECT/DEVELOPER PRIOR TO CONSTRUCTING THE SIDEWALKS.
8. ALL ROADWAY AND PARKING LOT SIGNAGE, STRIPING, SYMBOLS, ETC. SHALL BE IN ACCORDANCE WITH LATEST JURISDICTIONAL GOVERNMENTAL ENTITY DETAILS.
9. SOME EXISTING ITEMS TO BE REMOVED HAVE BEEN DELETED FROM THIS PLAN FOR CLARITY. SEE DEMOLITION PLAN FOR ITEMS DELETED.
10. PROVIDE DEPRESSED CURB AND RAMP AT ALL HANDICAP ACCESSIBLE SIDEWALK AND PATH LOCATIONS PER FEDERAL AND STATE STANDARDS.
11. THE CONTRACTOR SHALL CONTACT J.U.L.I.E. (1-800-892-0123) PRIOR TO ANY WORK TO LOCATE UTILITIES AND SHALL CONTACT THE OWNER SHOULD UTILITIES APPEAR TO BE IN CONFLICT WITH THE PROPOSED IMPROVEMENT.

DEVELOPER: FRED-GURNEE HC, LLC
ADDRESS: 789 NORTH WATER STREET, SUITE 500
MILWAUKEE, WISCONSIN 53202
PHONE: (414) 246-8402

CURB AND GUTTER LEGEND

- CURB AND GUTTER
- DEPRESSED CURB AND GUTTER
- REVERSE CURB AND GUTTER

CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION OF SIDEWALKS, SIDEWALK SCORING, BENCHES, BIKE RACKS, FLAG POLES, ETC., DIMENSIONS OF VESTIBULE, RAMPS AND TRUCK DOCKS, PRECISE BUILDING DIMENSIONS AND EXACT UTILITY ENTRANCE LOCATIONS

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DRAWN BY | REVISIONS | DATE

SEASONS AT CREST HILL
CITY OF CREST HILL
SITE DIMENSIONAL AND PAVING PLAN - OVERALL

PROJ. MGR.: JSE
PROJ. ASSOC.: MSL
DRAWN BY: PA
DATE: 01-14-26
SCALE: 1"=40'

SHEET 6 OF 44

FRD.CRIL01

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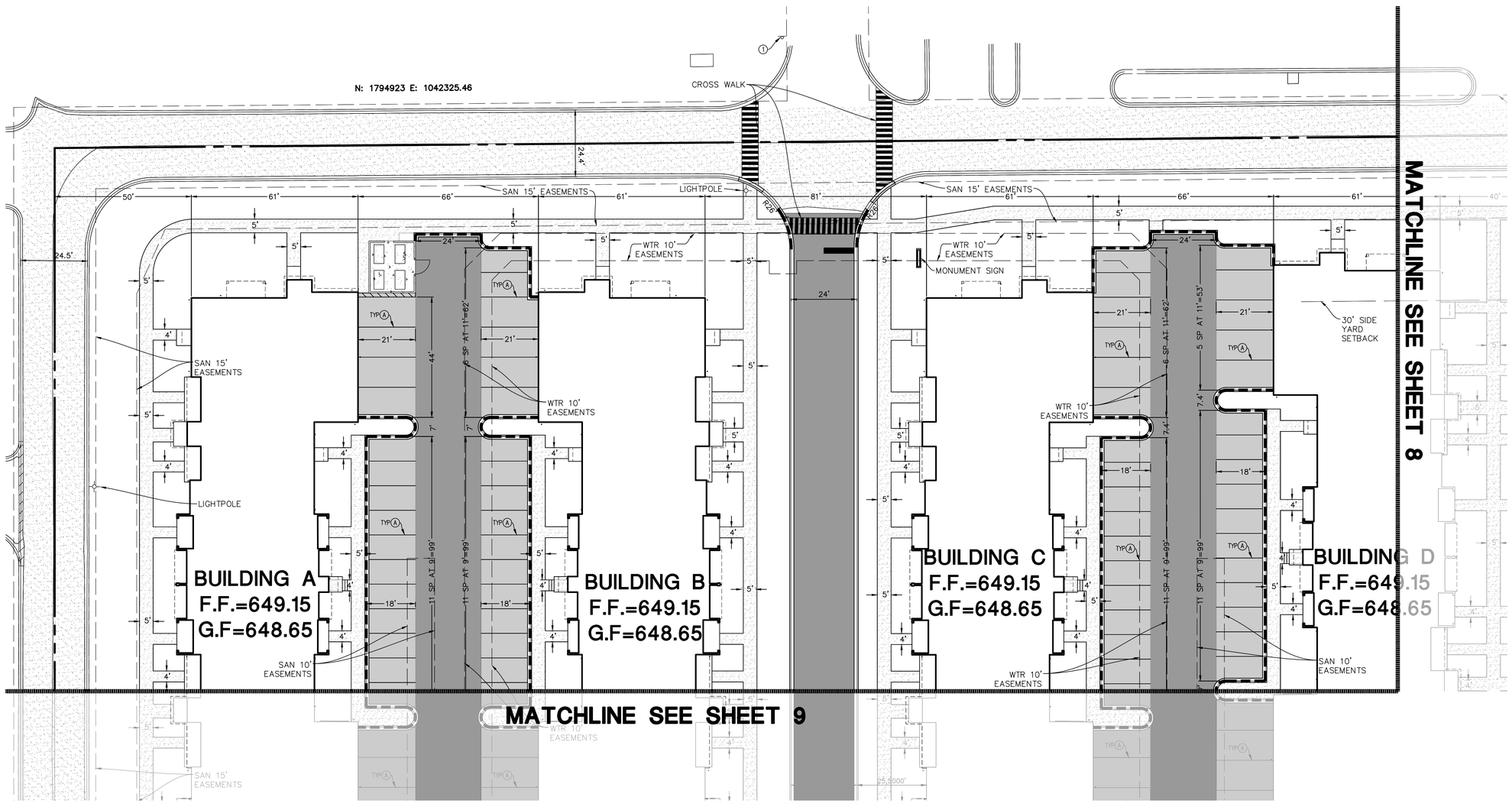

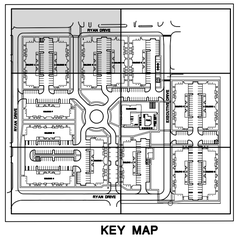

SHEET SHEET 6 FOR SITE NOTES AND LEGENDS

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SEASONS AT CREST HILL

CITY OF CREST HILL

SITE DIMENSIONAL AND PAVING PLAN - NW

PROJ. MGR.: JSE
PROJ. ASSOC.: MSL
DRAWN BY: PA
DATE: 01-14-26
SCALE: 1"=20'

SHEET 7 OF 44

FRD.CRIL01

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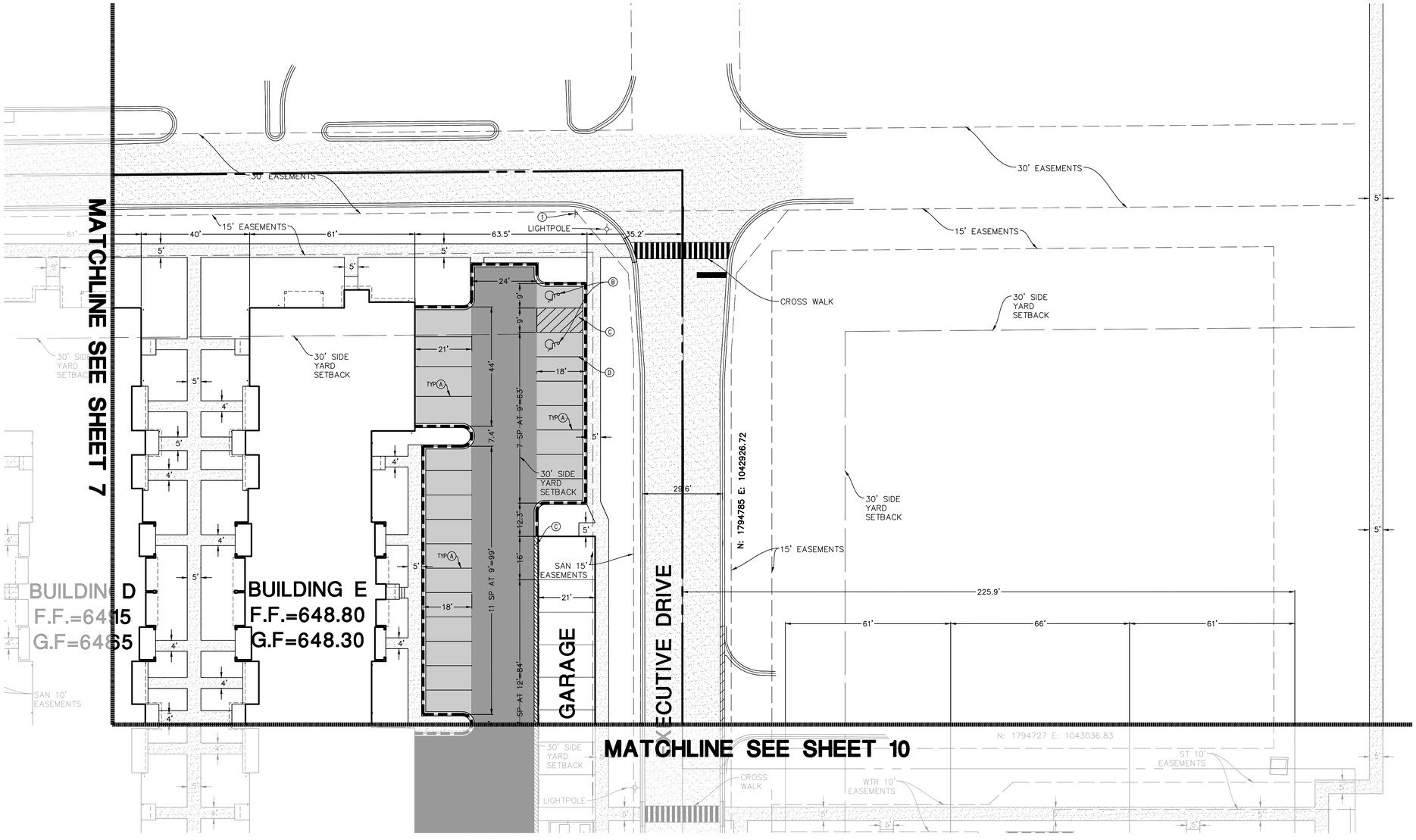

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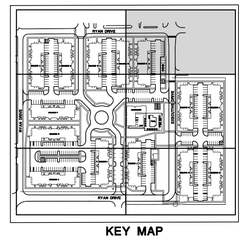

KEY MAP

SHEET SHEET 6 FOR SITE NOTES AND LEGENDS

DRAWN BY:
REVISIONS
DATE:

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SEASONS AT CREST HILL
CITY OF CREST HILL
SITE DIMENSIONAL AND PAVING PLAN - NE

PROJ. MGR.: JSE
PROJ. ASSOC.: MSL
DRAWN BY: PA
DATE: 01-14-26
SCALE: 1"=20'

SHEET
8 OF 44
FRD.CRIL01

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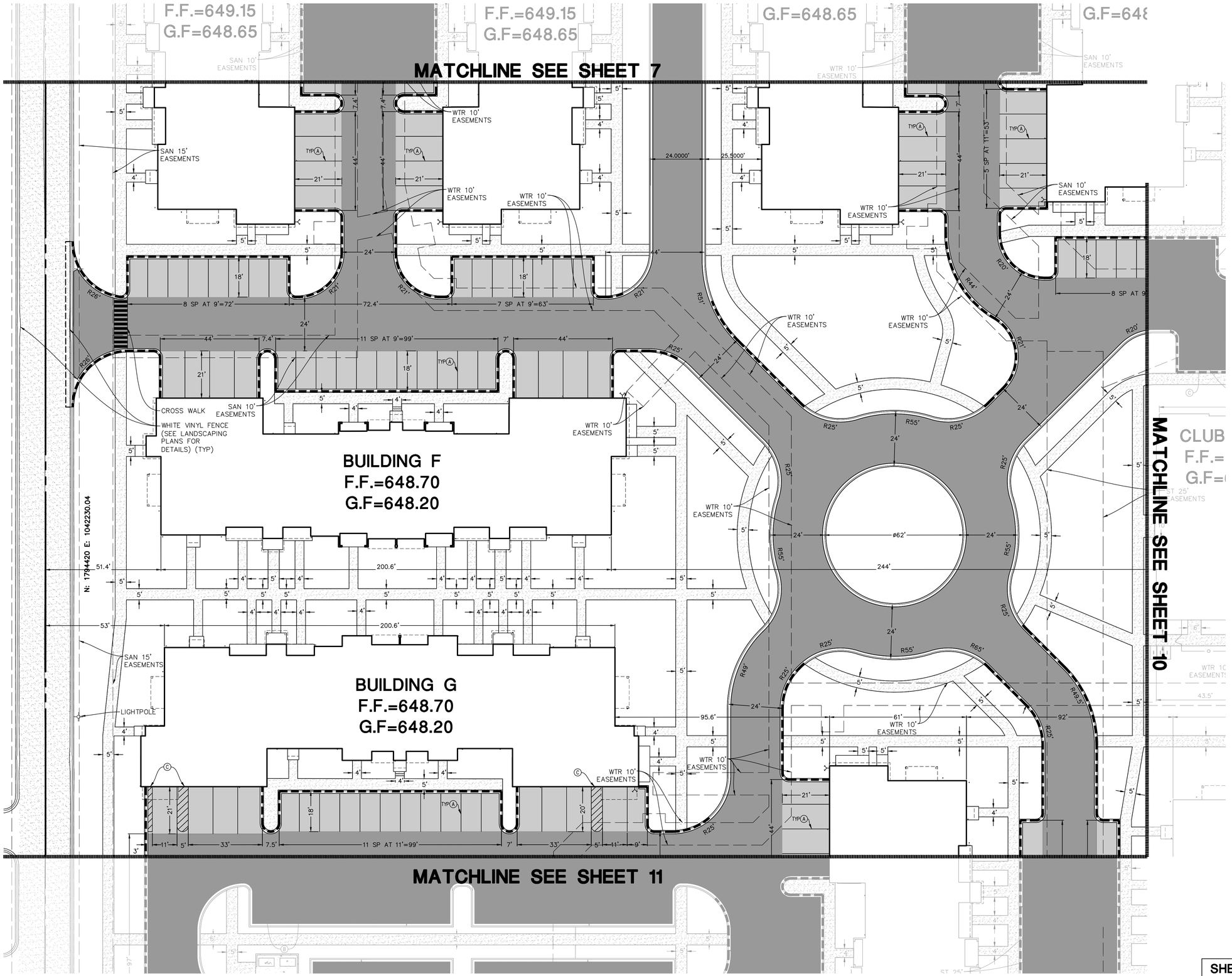

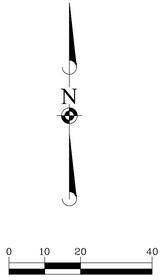

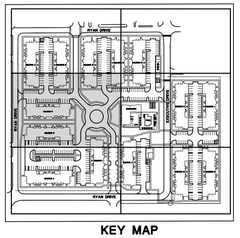
KEY MAP

SHEET SHEET 6 FOR SITE NOTES AND LEGENDS

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SEASONS AT CREST HILL

CITY OF CREST HILL

SITE DIMENSIONAL AND PAVING PLAN - WEST

PROJ. MGR.:	JSE
PROJ. ASSOC.:	MSL
DRAWN BY:	PA
DATE:	01-14-26
SCALE:	1"=20'

SHEET 9 OF 44

FRD.CRIL01

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Item 2.

441

MATCHLINE SEE SHEET 8

MATCHLINE SEE SHEET 9

MATCHLINE SEE SHEET 12

N: 1794727 E: 1043036.83

N: 1794402 E: 1043185.95

CLUBHOUSE
F.F.=648.80
G.F=648.30

POOL

BUILDING K
F.F.=647.75
G.F=647.25

BUILDING L
F.F.=647.75
G.F=647.25

G.F=648.30

GARAGE

EXECUTIVE

RETAINING WALL

30' SIDE YARD SETBACK

LIGHTPOLE

CROSS WALK

WTR 10' EASEMENTS

ST 10' EASEMENTS

WTR 15' EASEMENTS

WTR/ST 21' EASEMENTS

WTR 18' EASEMENTS

WTR/SAN/ST 31' EASEMENTS

SAN/ST 10' EASEMENTS

SAN/ST/WTR 32' EASEMENTS

ST 25' EASEMENTS

BIKE RACKS

MAILBOXES

SAN 15' EASEMENTS

SAN 10' EASEMENTS

WTR 12.4' EASEMENTS

SAN/ST 20' EASEMENTS

8 SP AT 9'=72'

5 SP AT 9'=45'

11 SP AT 9'=99'

6 SP AT 9'=54'

7 SP AT 9'=63'

6 SP AT 9'=54'

5 SP AT 9'=45'

SCALE: 1"=20'

KEY MAP

SHEET SHEET 6 FOR SITE NOTES AND LEGENDS

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REVISIONS

DATE

SEASONS AT CREST HILL
CITY OF CREST HILL
SITE DIMENSIONAL AND PAVING PLAN - EAST

PROJ. MGR.: JSE
PROJ. ASSOC.: MSL
DRAWN BY: PA
DATE: 01-14-26
SCALE: 1"=20'

SHEET
10 OF 44
FRD.CRIL01

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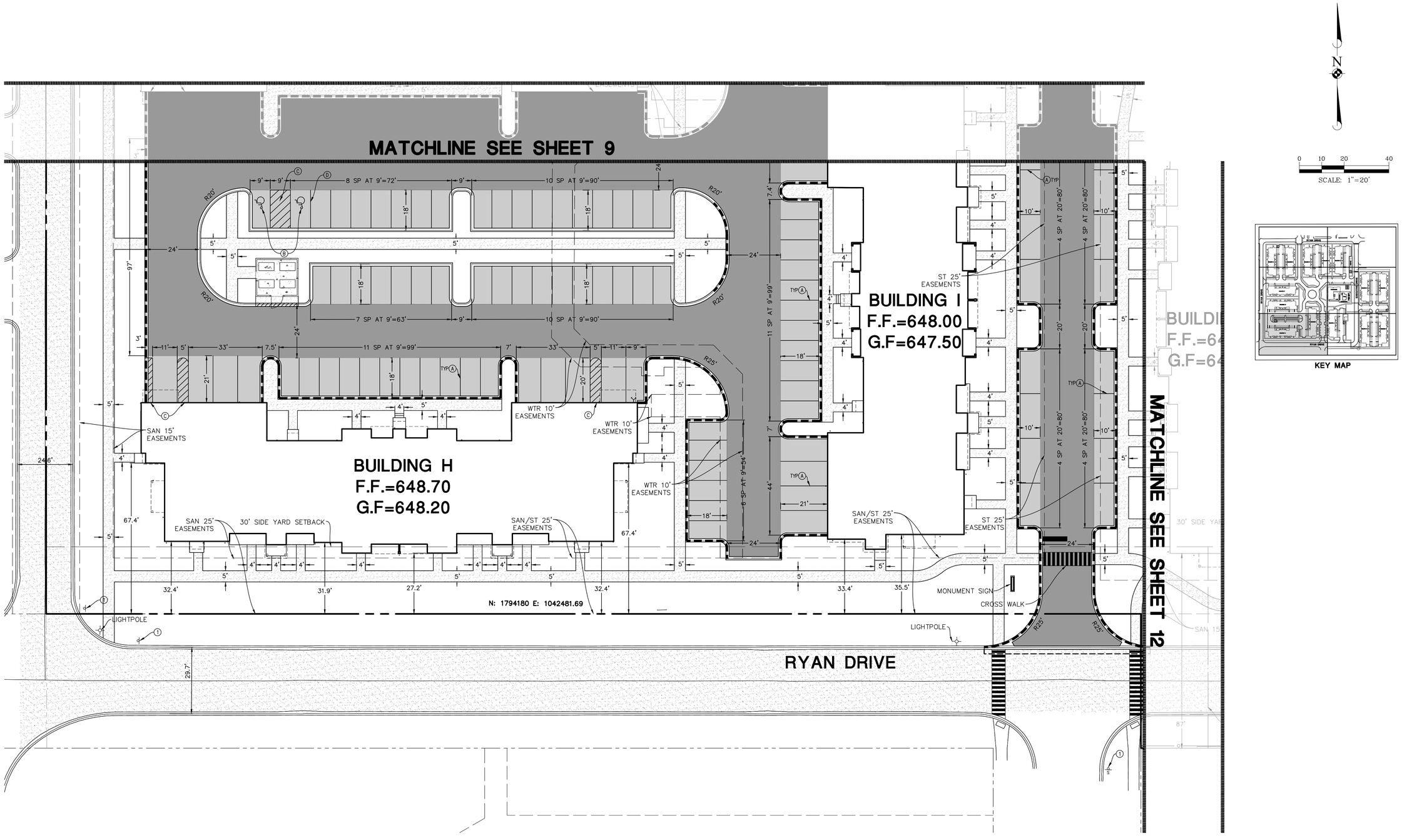

SHEET SHEET 6 FOR SITE NOTES AND LEGENDS

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SEASONS AT CREST HILL

CITY OF CREST HILL

SITE DIMENSIONAL AND PAVING PLAN - SW

PROJ. MGR.: JSE
PROJ. ASSOC.: MSL
DRAWN BY: PA
DATE: 01-14-26
SCALE: 1"=20'

SHEET 11 OF 44

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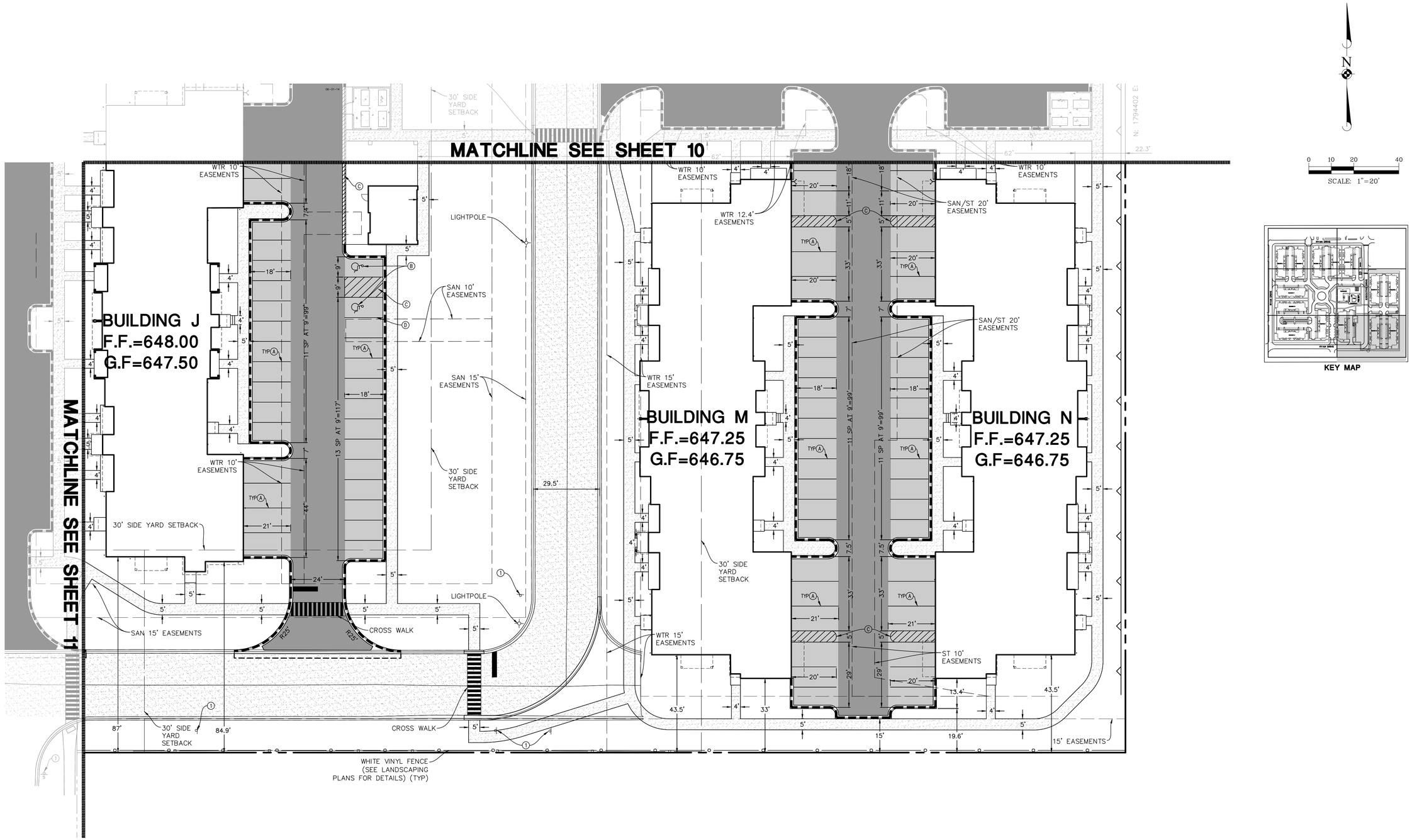

SHEET SHEET 6 FOR SITE NOTES AND LEGENDS

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SEASONS AT CREST HILL

CITY OF CREST HILL

SITE DIMENSIONAL AND PAVING PLAN - SE

PROJ. MGR.: JSE
PROJ. ASSOC.: MSL
DRAWN BY: PA
DATE: 01-14-26
SCALE: 1"=20'

SHEET 12 OF 44

FRD.CRIL01

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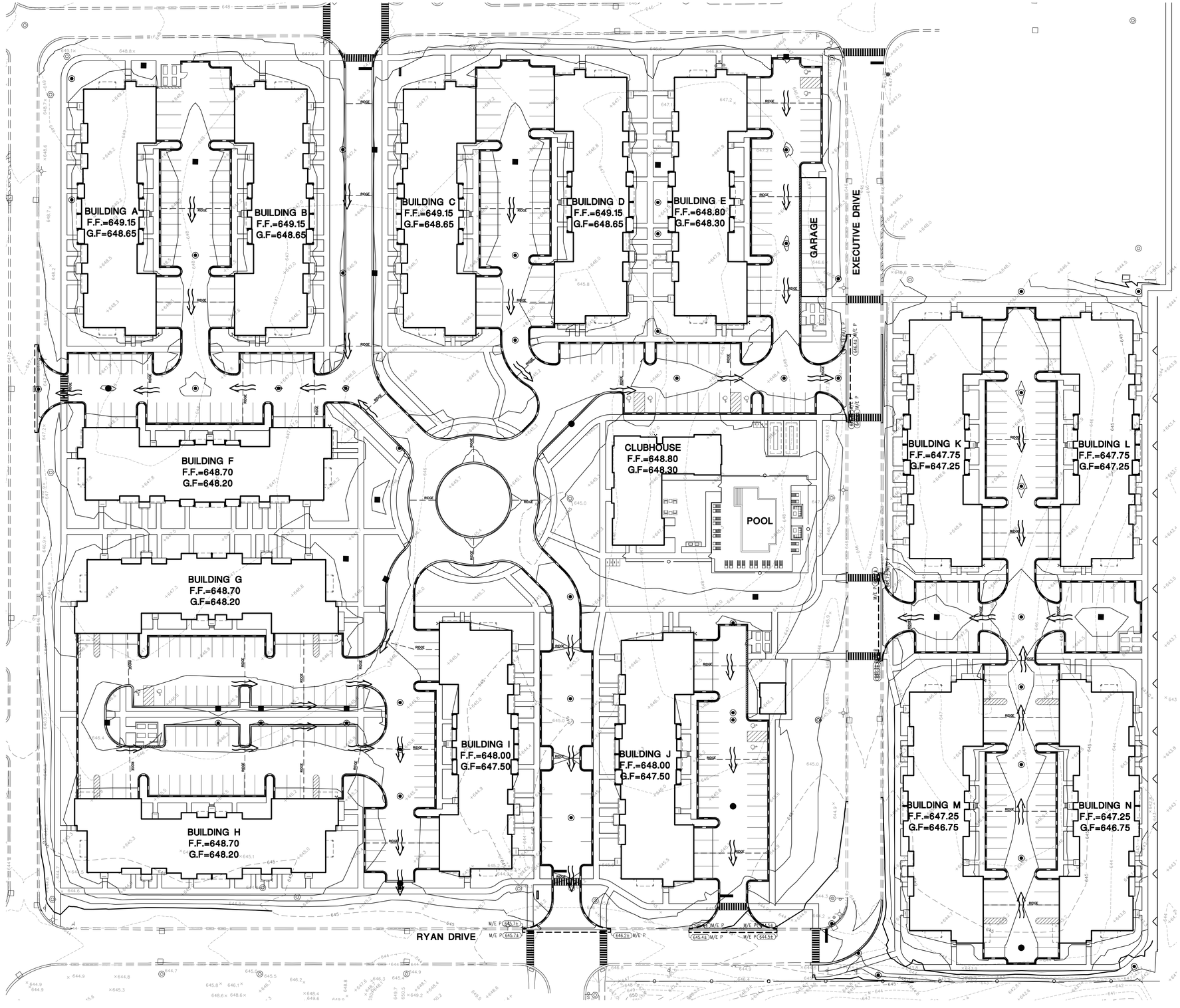
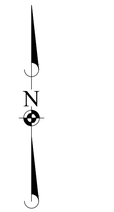
Item 2.

444





01-01-16

GRADING PLAN LEGEND

764	PROPOSED 1 FOOT CONTOURS
792.8 G	PROPOSED SPOT ELEVATION
P	PROPOSED PAVEMENT ELEVATION
T/C	PROPOSED TOP OF CURB
T/W	PROPOSED TOP OF WALK
M/E	MEET EXISTING
G	PROPOSED GROUND GRADE OR GROUND AT BASE OF RETAINING WALL
→	PROPOSED DIRECTION OF FLOW
⇉	OVERFLOW RELIEF SWALE

01-01-16

GRADING NOTES:

1. PAVEMENT SLOPES THROUGH HANDICAP ACCESSIBLE PARKING AREAS SHALL BE 2.00% MAXIMUM IN ANY DIRECTION.
2. ALL HANDICAP RAMPS SHALL BE CONSTRUCTED WITH A MAXIMUM CROSS SLOPE OF 2.00% OR LESS.
3. MEET EXISTING GRADE AT PROPERTY LIMITS UNLESS NOTED OTHERWISE.
4. CONTRACTOR SHALL REFER TO THE SOIL EROSION AND SEDIMENT CONTROL PLAN AND DETAILS FOR CONSTRUCTION SCHEDULING AND EROSION CONTROL MEASURES TO BE INSTALLED PRIOR TO BEGINNING GRADING OPERATIONS.
5. THE CONTRACTOR SHALL CONTACT J.U.L.I.E. (1-800-892-0123) PRIOR TO ANY WORK TO LOCATE UTILITIES AND SHALL CONTACT THE OWNER SHOULD UTILITIES APPEAR TO BE IN CONFLICT WITH THE PROPOSED IMPROVEMENT.
6. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES, AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
7. IF ANY EXISTING STRUCTURES TO REMAIN ARE DAMAGED DURING CONSTRUCTION IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO REPAIR AND/OR REPLACE THE EXISTING STRUCTURE AS NECESSARY TO RETURN IT TO EXISTING CONDITION OR BETTER.
8. ALL UNPAVED AREAS DISTURBED BY GRADING OPERATIONS SHALL RECEIVE 6 INCHES OF TOPSOIL. CONTRACTOR SHALL APPLY STABILIZATION FABRIC TO ALL SLOPES 3H:1V OR STEEPER. CONTRACTOR SHALL STABILIZE DISTURBED AREAS IN ACCORDANCE WITH GOVERNING SPECIFICATIONS UNTIL A HEALTHY STAND OF VEGETATION IS OBTAINED.
9. EXISTING TOPOGRAPHY SHOWN REPRESENTS SITE CONDITIONS AS PREPARED BY MANHARD CONSULTING ON SEPTEMBER 23, 2025. CONTRACTOR SHALL FIELD CHECK EXISTING ELEVATIONS AND CONDITIONS PRIOR TO CONSTRUCTION AND NOTIFY ARCHITECT AND ENGINEER OF ANY DISCREPANCIES PRIOR TO STARTING CONSTRUCTION. IF THE CONTRACTOR DOES NOT ACCEPT EXISTING TOPOGRAPHY AS SHOWN ON THE PLANS, WITHOUT EXCEPTION, THEN THE CONTRACTOR SHALL SUPPLY, AT THEIR EXPENSE, A TOPOGRAPHIC SURVEY BY A REGISTERED LAND SURVEYOR TO THE OWNER FOR REVIEW.
10. TRANSITIONS FROM DEPRESSED CURB TO FULL HEIGHT CURB SHALL BE TAPERED AT 2H:1V UNLESS OTHERWISE NOTED.
11. EXCAVATION, GRADING, AND COMPACTION TO BE COMPLETED IN ACCORDANCE WITH RECOMMENDATIONS OF GEOTECHNICAL REPORT.
12. ELEVATIONS GIVEN FOR STORM SEWER STRUCTURES LOCATED IN CURB LINE ARE PAVEMENT ELEVATIONS.

DRAWN BY | REVISIONS | DATE

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SEASONS AT CREST HILL
CITY OF CREST HILL
GRADING PLAN - OVERALL

PROJ. MGR.:	JSE
PROJ. ASSOC.:	MSL
DRAWN BY:	PA
DATE:	01-14-26
SCALE:	1"=40'

SHEET
13 OF 44
FRD.CRIL01

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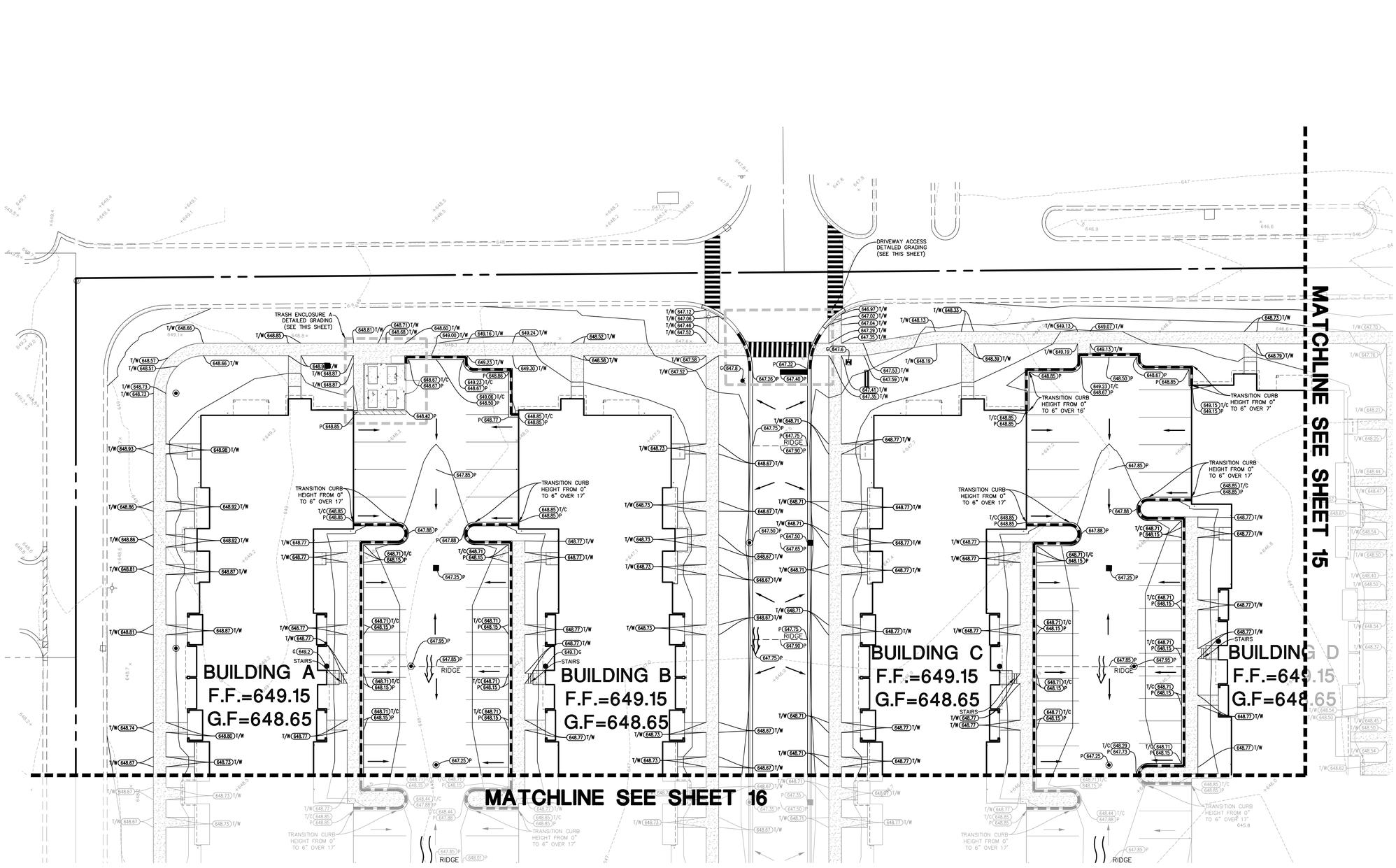
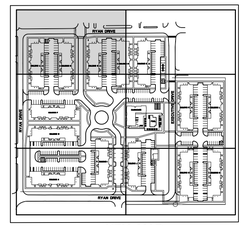
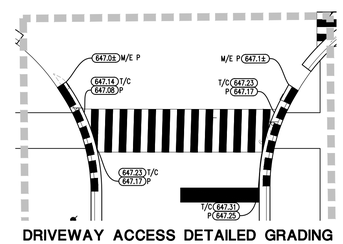






KEY MAP



DRIVEWAY ACCESS DETAILED GRADING
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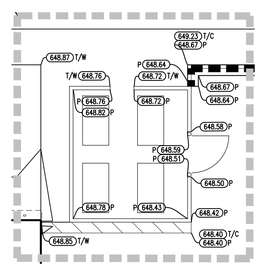

TRASH ENCLOSURE A DETAILED GRADING
SCALE: 1" = 10'

SHEET SHEET 13 FOR GRADING NOTES AND LEGENDS

Item 2.

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SEASONS AT CREST HILL
CITY OF CREST HILL
GRADING PLAN - NW

PROJ. MGR.: JSE
PROJ. ASSOC.: MSL
DRAWN BY: PA
DATE: 01-14-26
SCALE: 1"=20'

SHEET 14 OF 44

FRD.CRIL01

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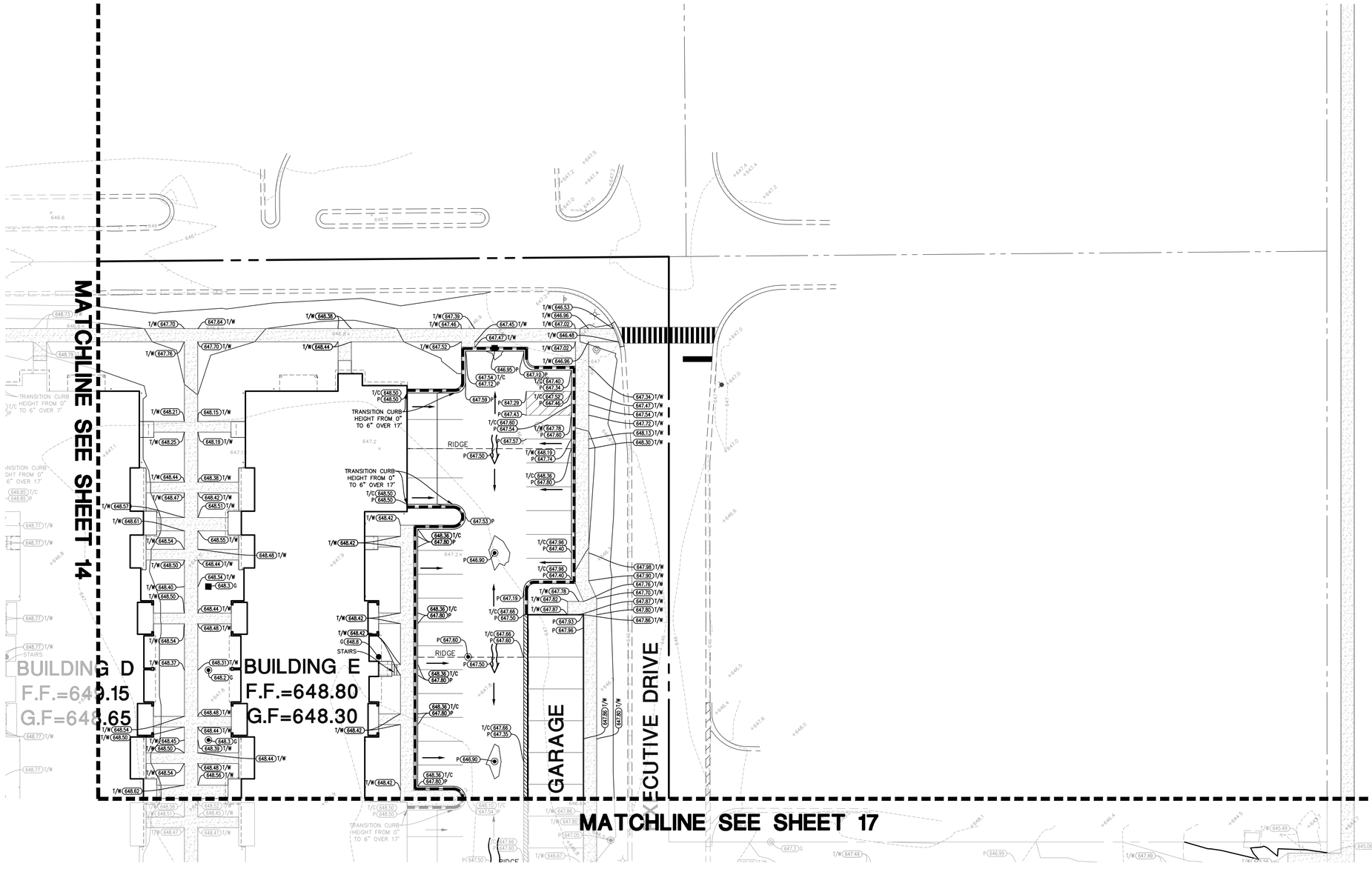



0 10 20 40

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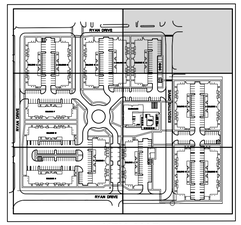

KEY MAP

DRAWN BY	REVISIONS	DATE

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SEASONS AT CREST HILL
CITY OF CREST HILL
GRADING PLAN - NE

PROJ. MGR.:	JSE
PROJ. ASSOC.:	MSL
DRAWN BY:	PA
DATE:	01-14-26
SCALE:	1"=20'

SHEET
15 OF 44
FRD.CRIL01

SHEET SHEET 13 FOR GRADING NOTES AND LEGENDS

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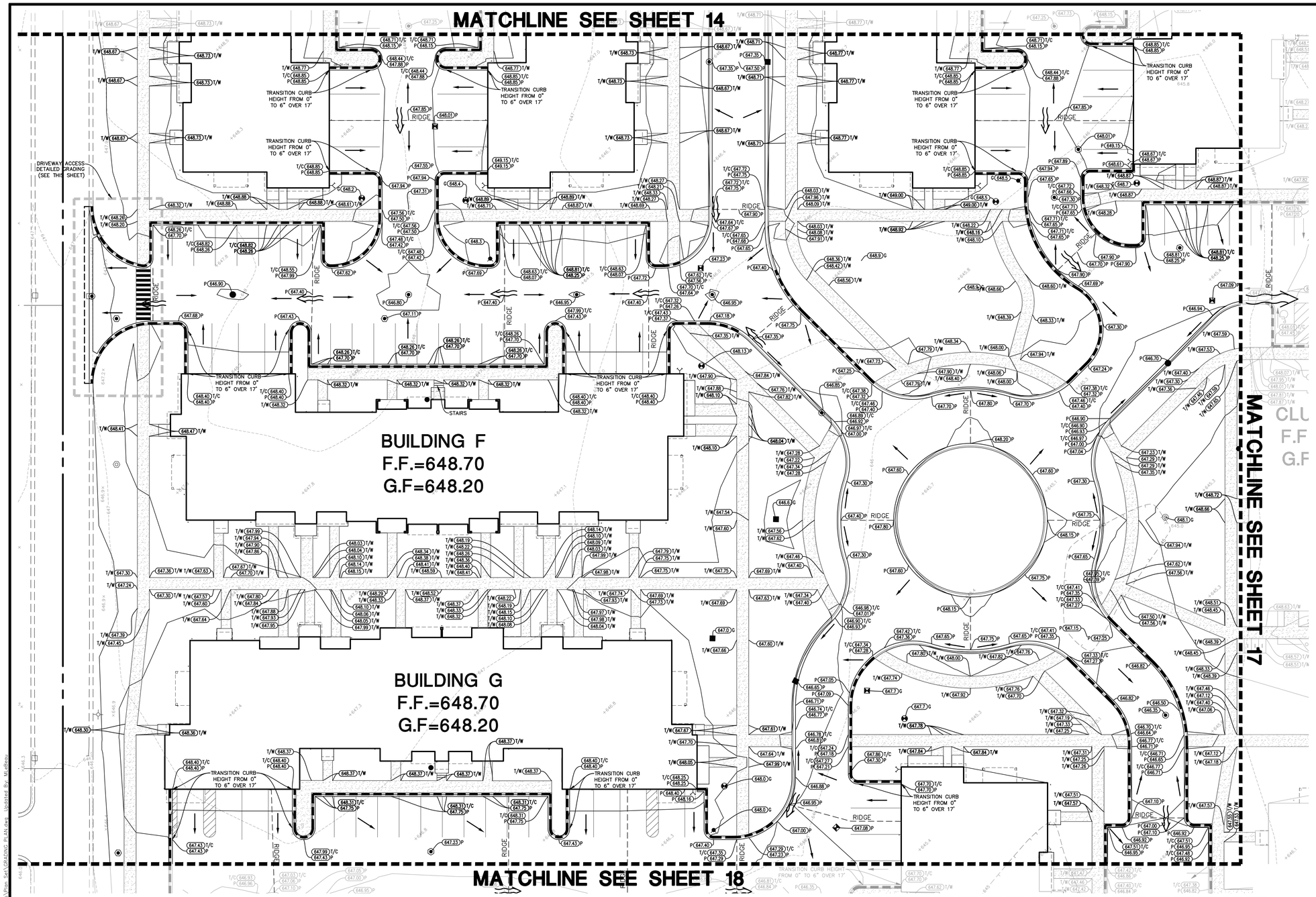
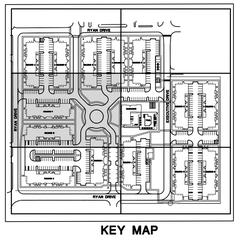
January 15, 2026 – 13:55 Dwg Name: P:\Projects\Data\Eng\Final Drawings\Plan Set\GRADING PLAN.dwg Updated By: MJeffreu





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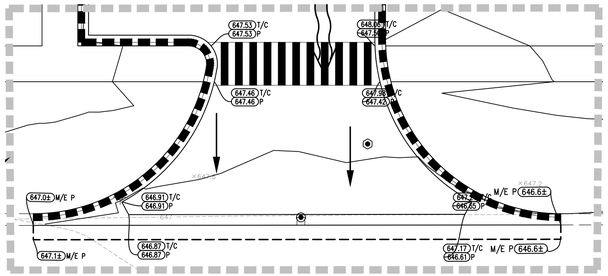

DRIVEWAY ACCESS DETAILED GRADING
SCALE: 1" = 10'

SHEET SHEET 13 FOR GRADING NOTES AND LEGENDS

Item 2.

DRAWN BY

REVISIONS

DATE

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SEASONS AT CREST HILL

CITY OF CREST HILL

GRADING PLAN - WEST

PROJ. MGR.: JSE
PROJ. ASSOC.: MSL
DRAWN BY: PA
DATE: 01-14-26
SCALE: 1"=20'

SHEET
16 OF 44
FRD.CRIL01

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MATCHLINE SEE SHEET 15

MATCHLINE SEE SHEET 16

MATCHLINE SEE SHEET 19

CLUBHOUSE
F.F.=648.80
G.F=648.30

POOL

BUILDING K
F.F.=647.75
G.F=647.25

BUILDING L
F.F.=647.75
G.F=647.25

TRANSITION CURB HEIGHT FROM 0" TO 6" OVER 17"

DRIVEWAY ACCESS DETAILED GRADING (SEE THIS SHEET)

TRASH ENCLOSURE B DETAILED GRADING (SEE THIS SHEET)

TRASH ENCLOSURE C DETAILED GRADING (SEE THIS SHEET)

TRASH ENCLOSURE D DETAILED GRADING (SEE THIS SHEET)

SEGMENTED BLOCK RETAINING WALL (DESIGN BY OTHERS)

RIDGE

STAIRS

EX

0 10 20 40
SCALE: 1"=20'

KEY MAP

TRASH ENCLOSURE B DETAILED GRADING
SCALE: 1" = 10'

TRASH ENCLOSURE C DETAILED GRADING
SCALE: 1" = 10'

TRASH ENCLOSURE D DETAILED GRADING
SCALE: 1" = 10'

DRIVEWAY ACCESS DETAILED GRADING
SCALE: 1" = 10'

DRIVEWAY ACCESS DETAILED GRADING
SCALE: 1" = 10'

SHEET SHEET 13 FOR GRADING NOTES AND LEGENDS

DRAWN BY
REVISIONS
DATE

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SEASONS AT CREST HILL
CITY OF CREST HILL
GRADING PLAN - EAST

PROJ. MGR.:	JSE
PROJ. ASSOC.:	MSL
DRAWN BY:	PA
DATE:	01-14-26
SCALE:	1"=20'

SHEET
17 OF 44
FRD.CRIL01

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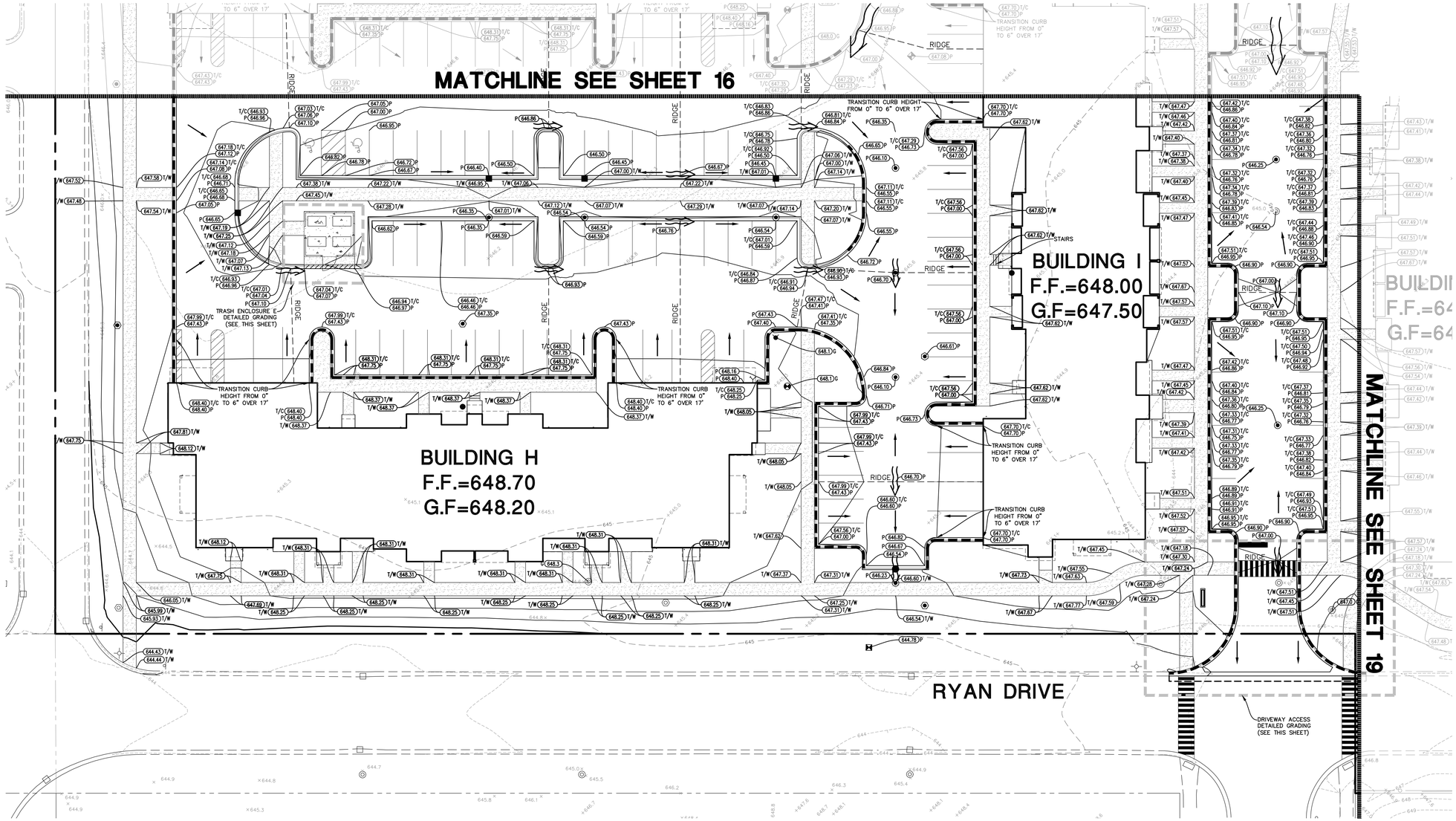

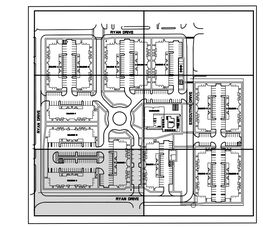
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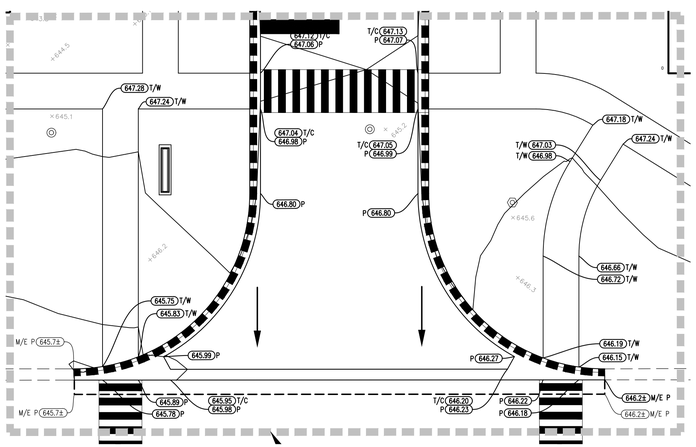
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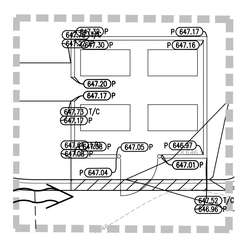
TRASH ENCLOSURE E DETAILED GRADING
SCALE: 1" = 10'

SHEET SHEET 13 FOR GRADING NOTES AND LEGENDS

Item 2.

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SEASONS AT CREST HILL

CITY OF CREST HILL

GRADING PLAN - SW

PROJ. MGR.: JSE
PROJ. ASSOC.: MSL
DRAWN BY: GAW
DATE: 01-14-26
SCALE: 1"=20'

SHEET
18 OF 44
FRD.CRIL01

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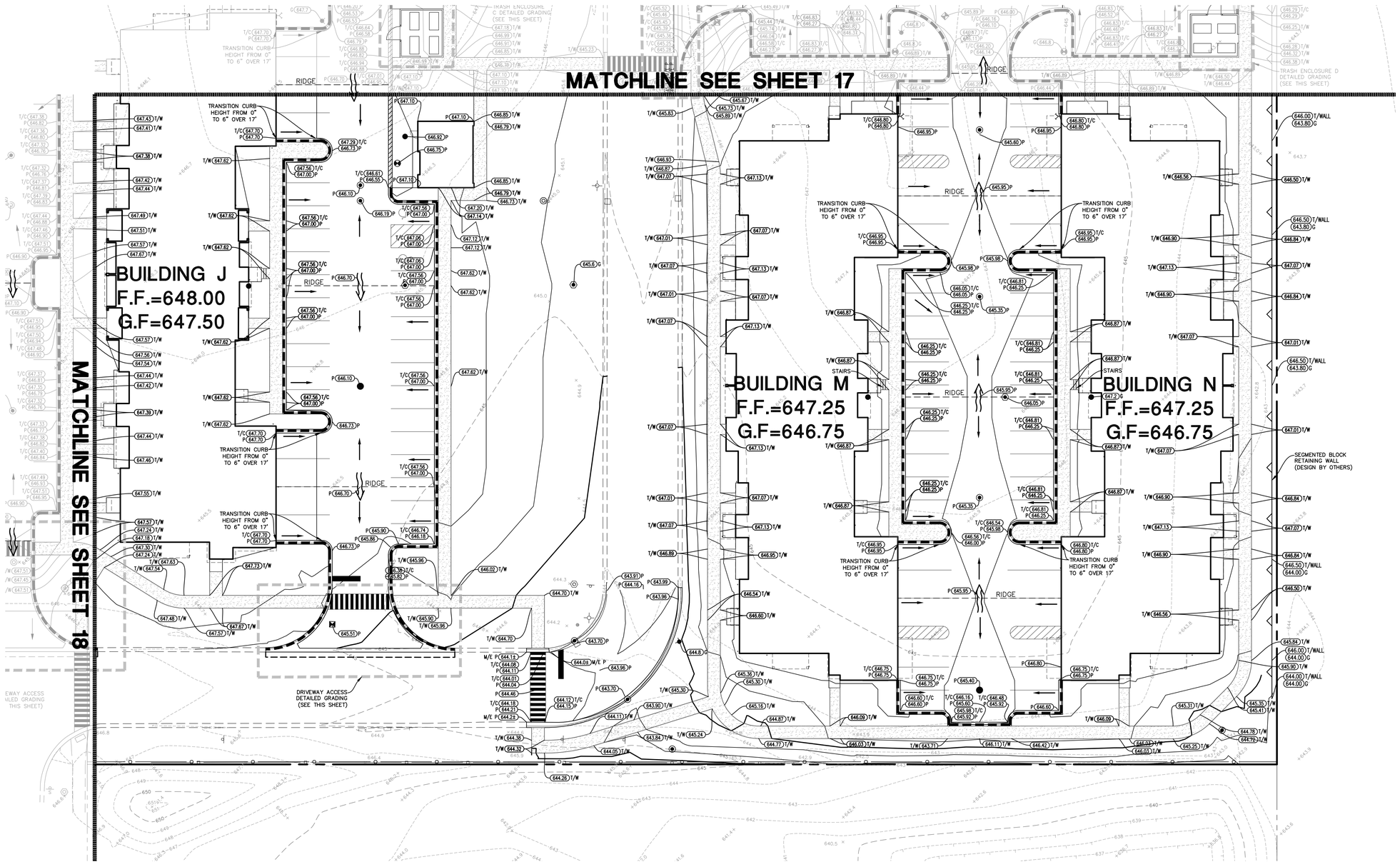
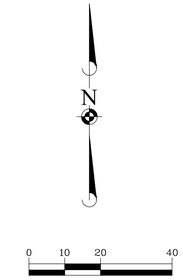
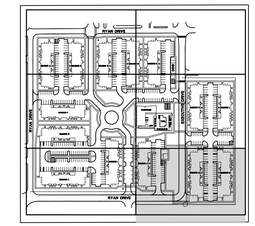
450



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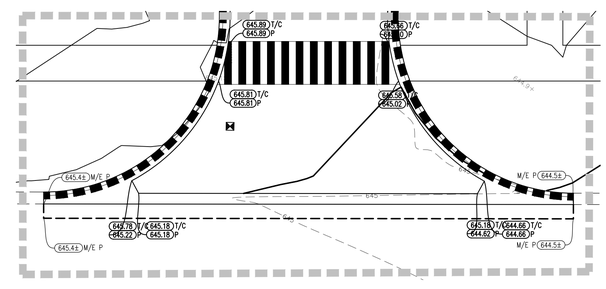
DRIVEWAY ACCESS DETAILED GRADING
SCALE: 1" = 10'

SHEET SHEET 13 FOR GRADING NOTES AND LEGENDS

DATE	REVISIONS	DRAWN BY

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SEASONS AT CREST HILL
CITY OF CREST HILL
GRADING PLAN - SE

PROJ. MGR.: JSE
PROJ. ASSOC.: MSL
DRAWN BY: GAW
DATE: 01-14-26
SCALE: 1"=20'

SHEET 19 OF 44
FRD.CRIL01

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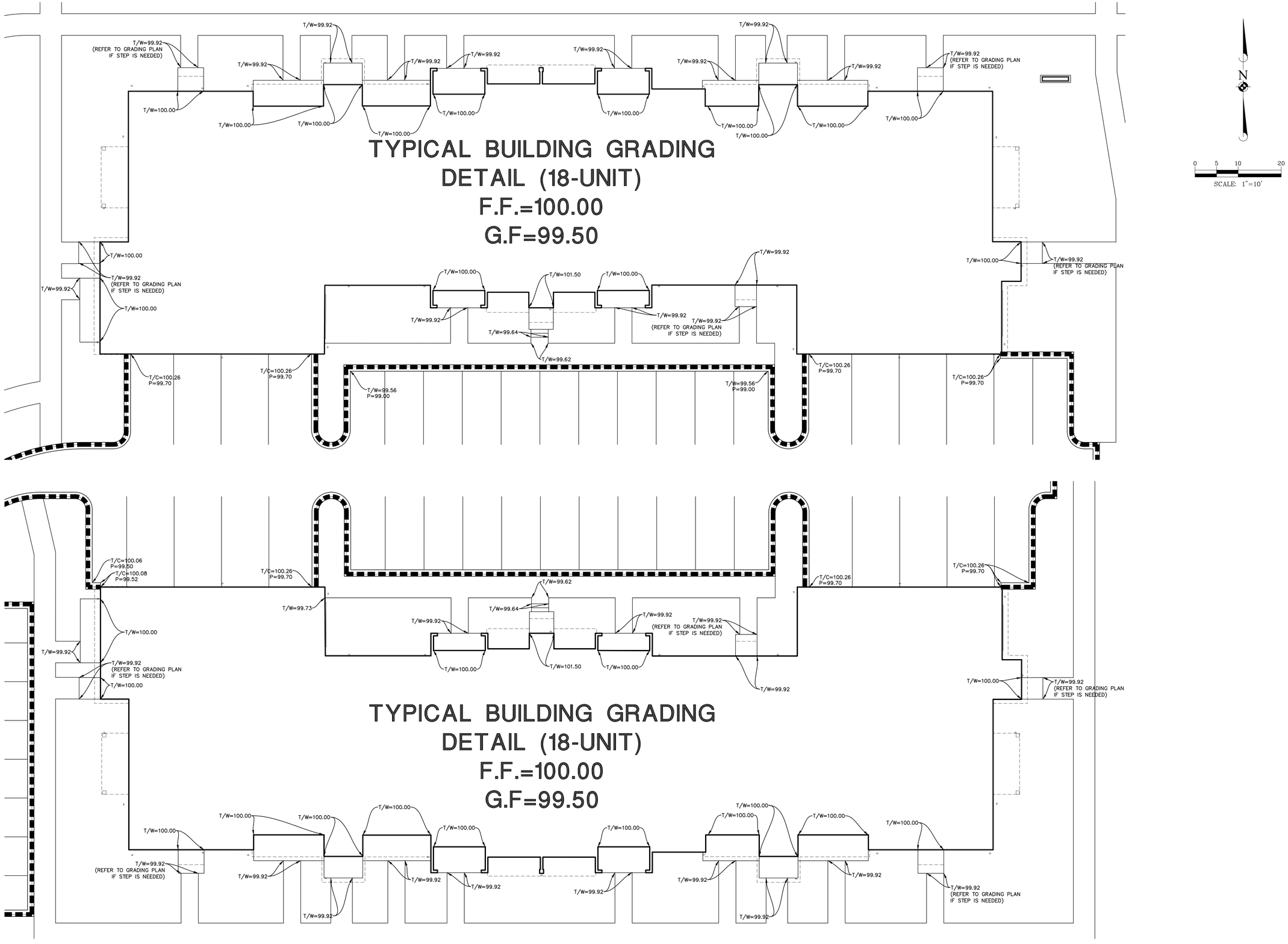

TYPICAL BUILDING GRADING
DETAIL (18-UNIT)
F.F.=100.00
G.F=99.50

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SEASONS AT CREST HILL

CITY OF CREST HILL

TYPICAL BUILDING GRADING DETAILS (18-UNIT)

PROJ. MGR.:	JSE
PROJ. ASSOC.:	MSL
DRAWN BY:	GC
DATE:	01-14-26
SCALE:	1"=20'

SHEET 20 OF 44

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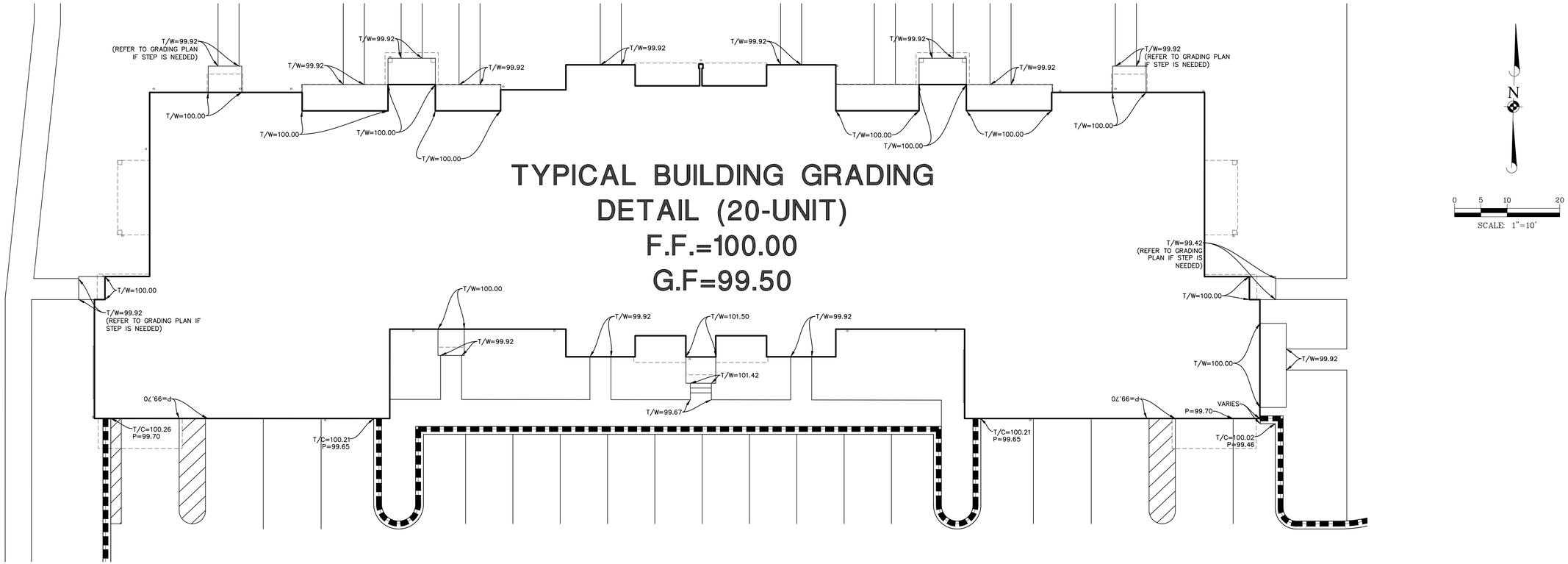

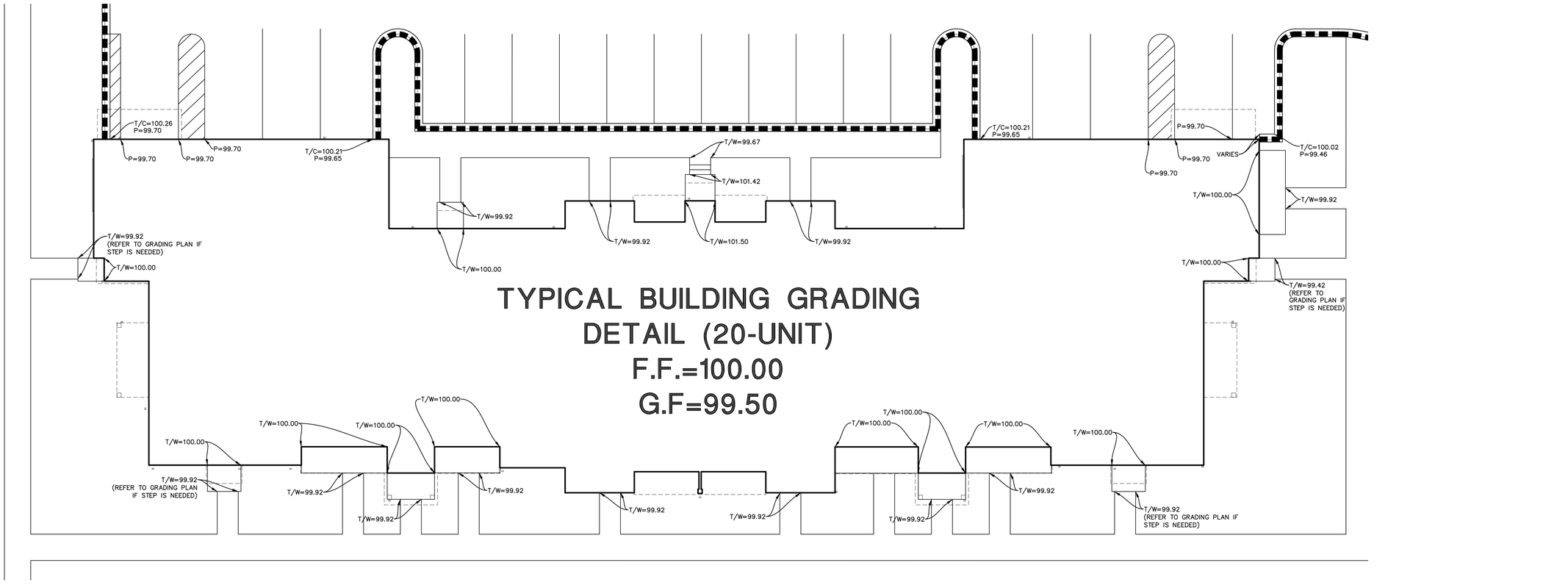

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SEASONS AT CREST HILL

CITY OF CREST HILL

TYPICAL BUILDING GRADING DETAILS (20-UNIT)

PROJ. MGR.:	JSE
PROJ. ASSOC.:	MSL
DRAWN BY:	GC
DATE:	01-14-26
SCALE:	1"=20'

SHEET 21 OF 44

FRD.CRIL01

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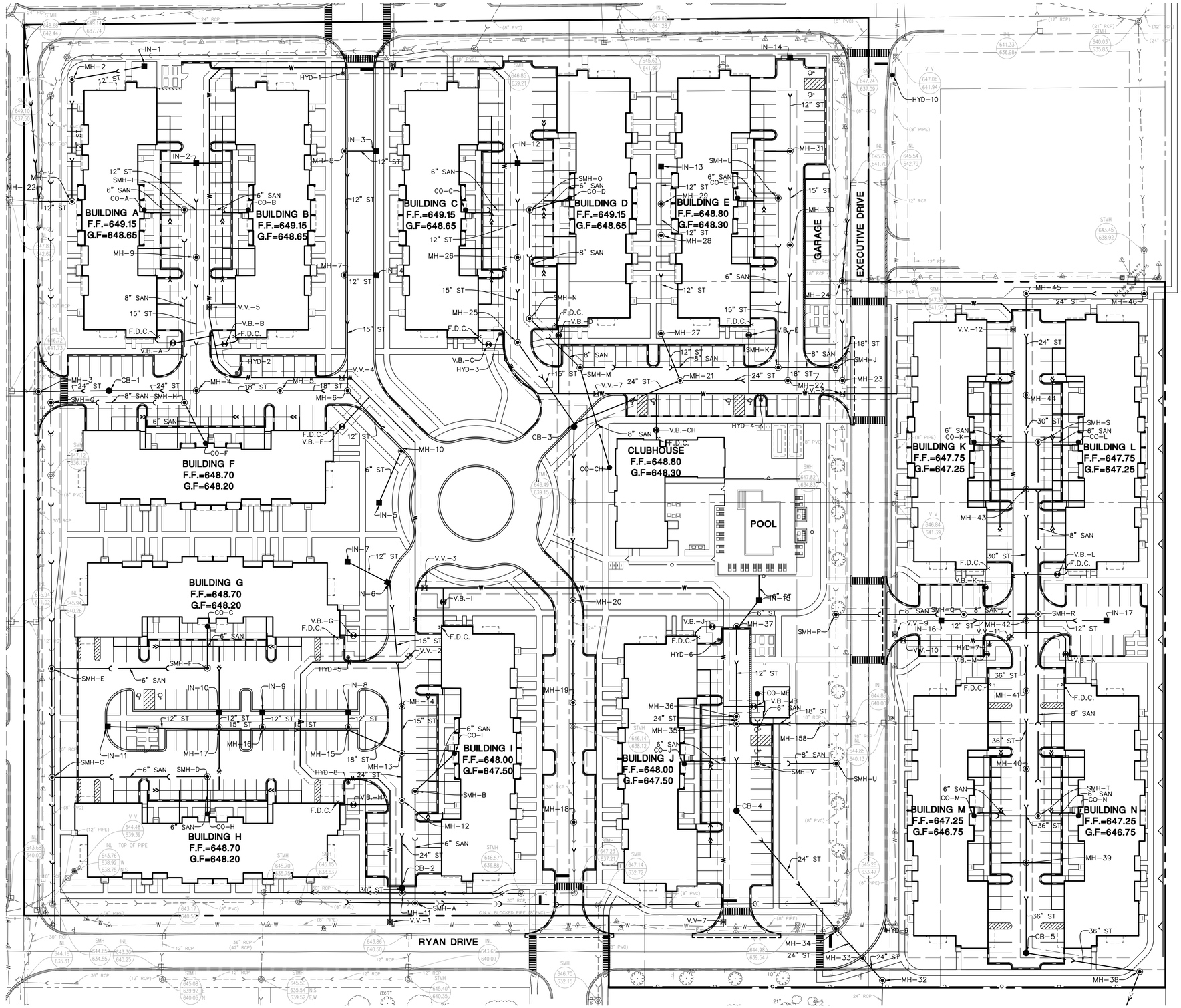

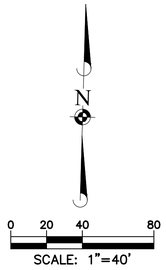

06-01-22

UTILITY NOTES:

1. ALL UTILITY DIMENSIONS ARE TO CENTER OF PIPE OR CENTER OF STRUCTURE UNLESS OTHERWISE NOTED.
2. BUILDING DIMENSIONS AND ADJACENT UTILITY LAYOUT HAVE BEEN PREPARED BASED UPON ARCHITECTURAL INFORMATION CURRENT AT THE DATE OF THIS DRAWING. SUBSEQUENT ARCHITECTURAL CHANGES MAY EXIST. THEREFORE CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR PRECISE BUILDING DIMENSIONS AND EXACT UTILITY ENTRANCE LOCATIONS AND NOTIFY THE ARCHITECT AND ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
3. THE CONTRACTOR SHALL CONTACT J.U.L.I.E. (1-800-892-0123) PRIOR TO ANY WORK TO LOCATE UTILITIES AND SHALL CONTACT THE OWNER SHOULD UTILITIES APPEAR TO BE IN CONFLICT WITH THE PROPOSED IMPROVEMENT.
4. ROUTING OF GAS, ELECTRIC AND TELEPHONE SERVICES IF SHOWN ARE APPROXIMATE ONLY AND SUBJECT TO CHANGE BASED UPON FINAL REVIEW AND APPROVAL BY RESPECTIVE UTILITY COMPANIES AND OWNER. CONTRACTOR SHALL CONTACT EACH UTILITY COMPANY AND COORDINATE FINAL LOCATIONS FOR ALL UTILITY SERVICES PRIOR TO START OF CONSTRUCTION.
5. CONTRACTOR SHALL EXCAVATE AND VERIFY ALL EXISTING SEWER, WATER MAIN AND DRY UTILITY LOCATIONS, SIZES, CONDITIONS & ELEVATIONS AT PROPOSED POINTS OF CONNECTION AND CROSSINGS PRIOR TO ANY UNDERGROUND CONSTRUCTION AND NOTIFY THE OWNER OF ANY DISCREPANCIES OR CONFLICTS.
6. LIGHTING AND UNDERGROUND CABLE IF SHOWN ON PLANS ARE FOR APPROXIMATE LOCATION ONLY. REFER TO ARCHITECTURAL PLANS FOR SPECIFICATIONS AND DETAILS.
7. THE CONTRACTOR SHALL ADJUST RIM ELEVATIONS OF ALL EXISTING STRUCTURES TO PROPOSED FINISH GRADES.
8. CONTRACTOR TO VERIFY LOCATION, SIZES, AND ELEVATION OF ALL BUILDING SERVICE LOCATIONS WITH ARCHITECTURAL PLANS.
9. AT LOCATIONS WHERE WATER MAIN CROSSES BENEATH OR LESS THAN 18" ABOVE A SEWER, PROVIDE WATER MAIN PROTECTION PER STANDARD SPECIFICATIONS FOR SEWER AND WATER MAIN CONSTRUCTION IN ILLINOIS, LATEST EDITION.
10. ELEVATIONS GIVEN FOR STORM SEWER STRUCTURES LOCATED IN CURB LINE ARE PAVEMENT ELEVATIONS.
11. ALL WATER MAIN SHALL BE 5'-6" BELOW FINISHED GRADE TO TOP OF MAINS UNLESS NOTED OTHERWISE.
12. ALL EXISTING UTILITIES SHOWN ARE NOT TO BE INTERPRETED AS THE EXACT ELEVATION OR LOCATION, OR AS THE ONLY OBSTACLES THAT MAY OCCUR ON THE SITE. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS AND PROCEED WITH CAUTION AROUND ANY ANTICIPATED FEATURES.
13. THE UNDERGROUND UTILITY INFORMATION AS SHOWN HERE ON IS BASED, IN PART, UPON INFORMATION FURNISHED BY UTILITY COMPANIES AND THE LOCAL MUNICIPALITY. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, ITS ACCURACY AND COMPLETENESS CANNOT BE GUARANTEED NOR CERTIFIED.
14. ALL SANITARY AND STORM SEWER LENGTHS SHOWN ARE CENTER OF MANHOLE TO CENTER OF MANHOLE OR STORM MANHOLE TO FES.
15. PROVIDE CONCRETE COLLAR FOR ALL DRAINAGE STRUCTURES IN PAVEMENT, NOT ADJACENT TO CURB. SEE CONCRETE COLLAR DETAIL ON DETAIL SHEET.
16. CONTRACTOR SHALL CORE AND BOOT ALL PIPE ENTRANCES TO EXISTING SANITARY MANHOLES.
17. EXTERNAL CHIMNEY SEALS ARE REQUIRED ON PROPOSED AND ADJUSTED EXISTING SANITARY MANHOLES.
18. SOME EXISTING ITEMS TO BE REMOVED HAVE BEEN DELETED FROM THIS PLAN FOR CLARITY. SEE DEMOLITION PLAN FOR ITEMS DELETED.
19. ALL D.I. WATERMAIN PIPE AND D.I. WATERMAIN FITTINGS SHALL BE WRAPPED.

.

DRAWN BY
REVISIONS
DATE

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SEASONS AT CREST HILL
CITY OF CREST HILL
OVERALL UTILITY PLAN

PROJ. MGR.: JSE
PROJ. ASSOC.: MSL
DRAWN BY: JG
DATE: 01-14-26
SCALE: 1"=40'

SHEET
22 OF 44
FRD.CRIL01

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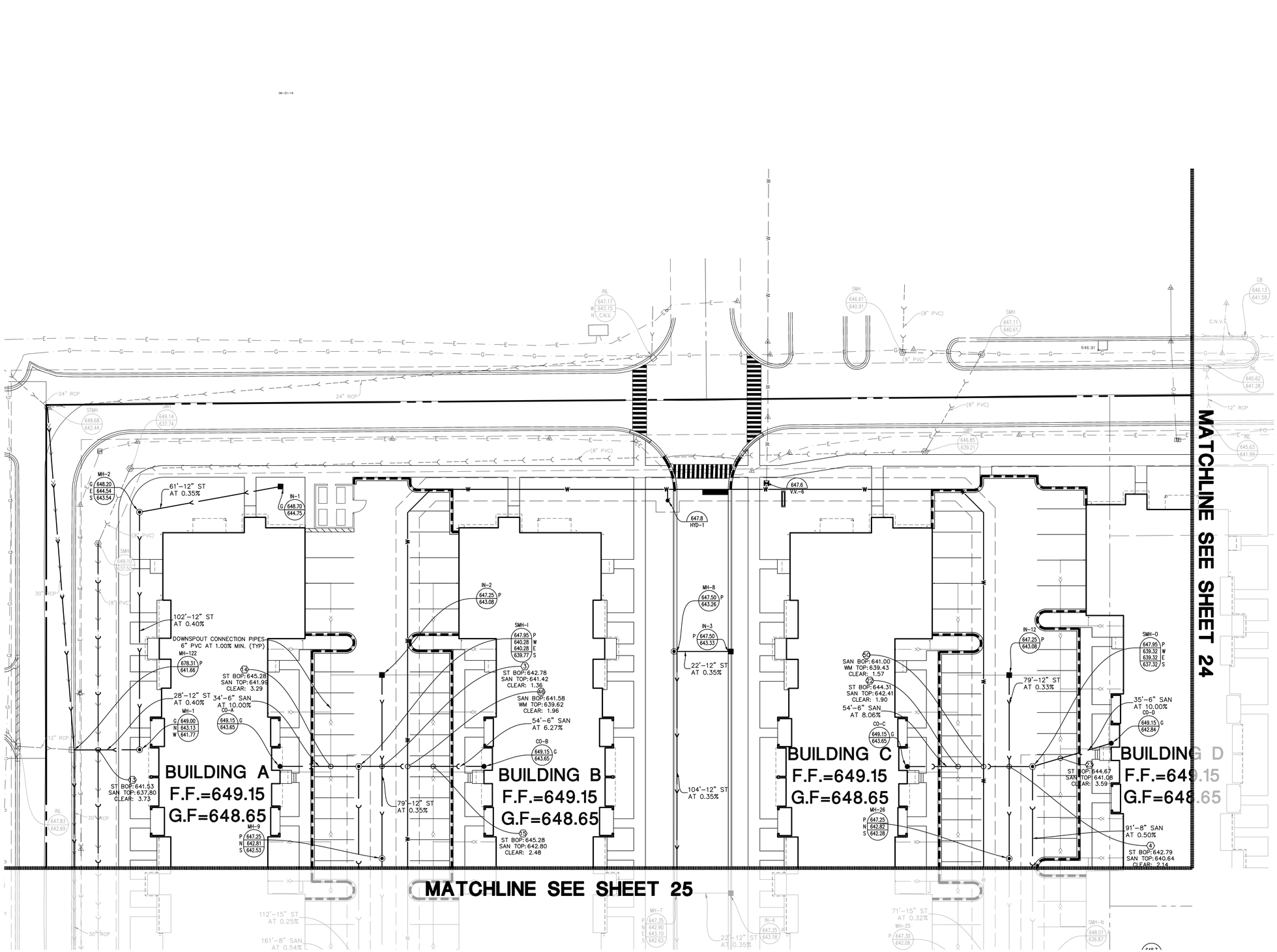

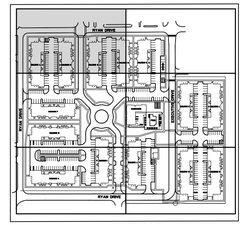

KEY MAP

SHEET SHEET 22 FOR UTILITY NOTES

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SEASONS AT CREST HILL

CITY OF CREST HILL

UTILITY PLAN - NW

PROJ. MGR.:	JSE
PROJ. ASSOC.:	MSL
DRAWN BY:	JG
DATE:	01-14-26
SCALE:	1"=20'

SHEET 23 OF 44

FRD.CRIL01

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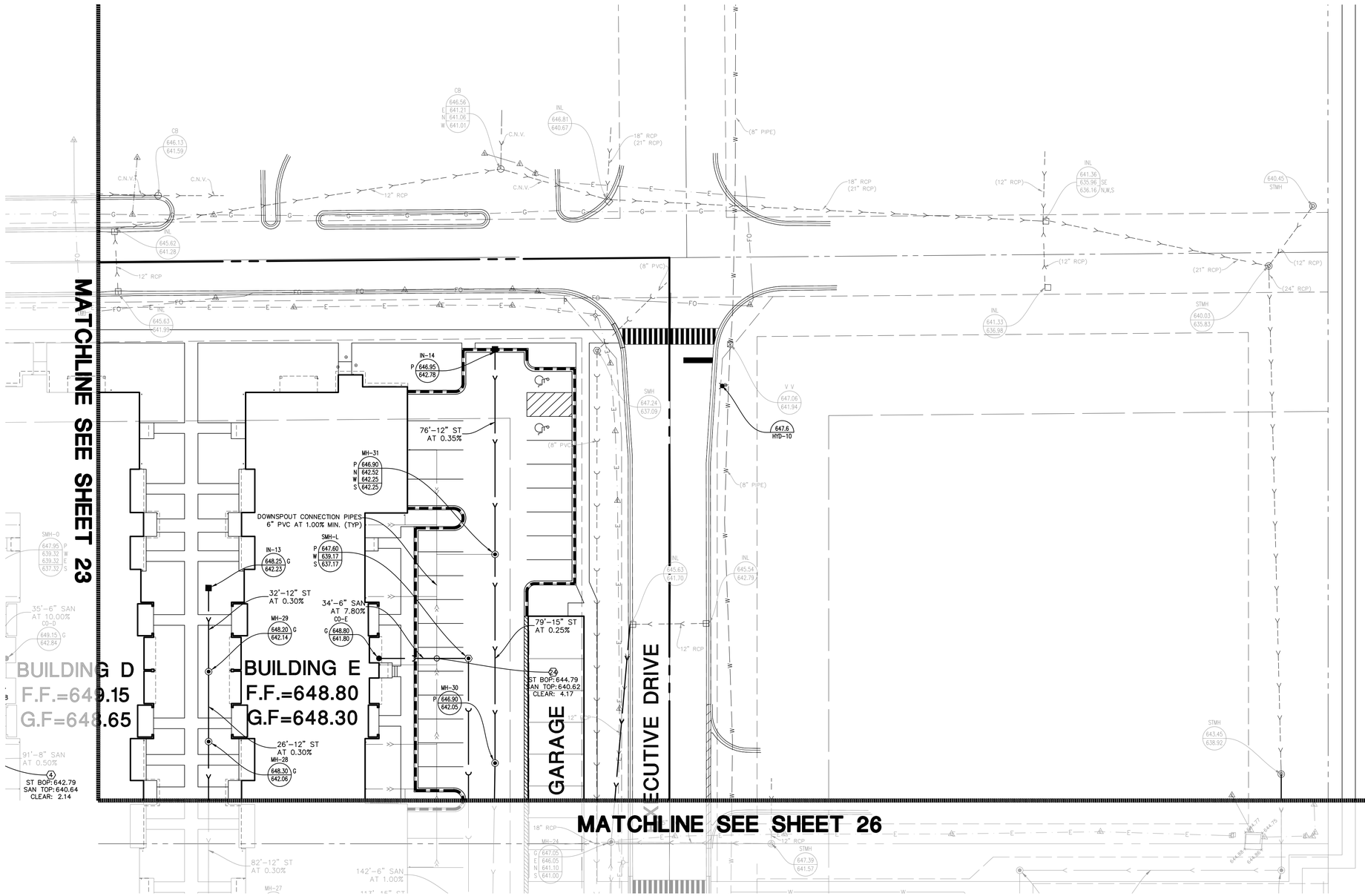

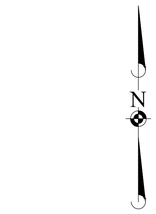

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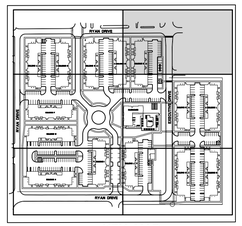
SCALE: 1"=20'



KEY MAP

SHEET SHEET 22 FOR UTILITY NOTES

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DRAWN BY | REVISIONS | DATE

SEASONS AT CREST HILL
CITY OF CREST HILL
UTILITY PLAN - NE

PROJ. MGR.: JSE
PROJ. ASSOC.: MSL
DRAWN BY: JG
DATE: 01-14-26
SCALE: 1"=20'

SHEET
24 OF 44
FRD.CRIL01

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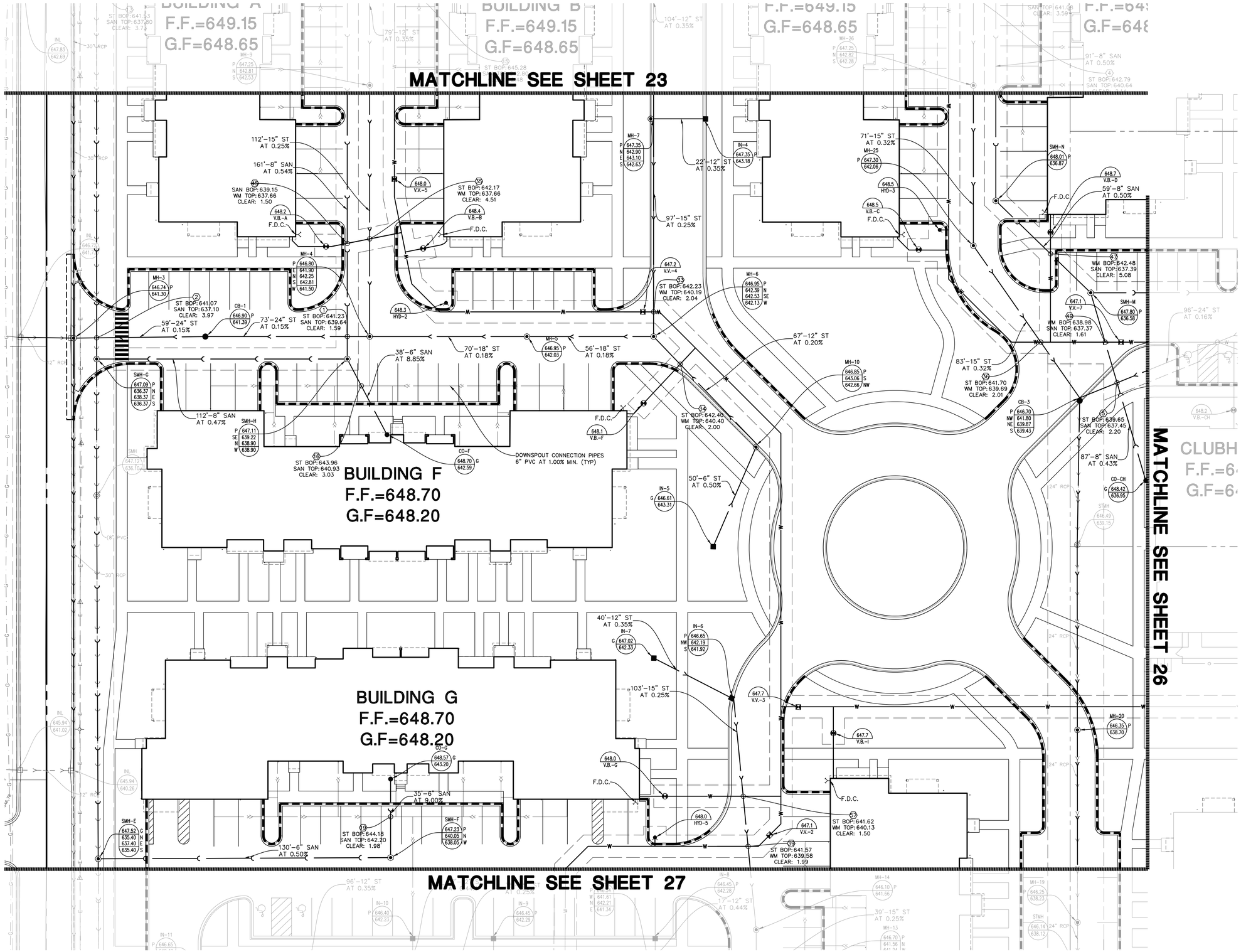
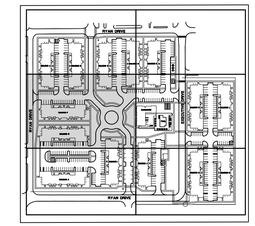
January 15, 2026 - 14:48 Dwg Name: P:\Projects\Vlad\Final\Final Drawings\Plan Set\VID\VID01AL UTILITY.dwg Updated By: dpastalewski





KEY MAP

SHEET SHEET 22 FOR UTILITY NOTES

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SEASONS AT CREST HILL

CITY OF CREST HILL

UTILITY PLAN- WEST

PROJ. MGR.: JSE
PROJ. ASSOC.: MSL
DRAWN BY: JG
DATE: 01-14-26
SCALE: 1"=20'

SHEET 25 OF 44

FRD.CRIL01

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Item 2.

457

MATCHLINE SEE SHEET 24

MATCHLINE SEE SHEET 25

MATCHLINE SEE SHEET 28

CLUBHOUSE
F.F.=648.80
G.F=648.30

POOL

BUILDING K
F.F.=647.75
G.F=647.25

BUILDING L
F.F.=647.75
G.F=647.25

EXECUTIVE GARAGE

82'-12" ST AT 0.30%
142'-6" SAN AT 1.00%
113'-15" ST AT 0.25%
43'-12" ST AT 0.30%
84'-18" ST AT 0.20%
48'-8" SAN AT 0.50%
96'-24" ST AT 0.16%
166'-8" SAN AT 0.50%
90'-24" ST AT 0.16%
46'-18" ST AT 0.20%
99'-24" ST AT 0.18%
85'-24" ST AT 0.18%
79'-30" ST AT 0.10%
54'-6" SAN AT 1.00%
34'-6" SAN AT 8.90%
110'-30" ST AT 0.10%
144'-8" SAN AT 0.50%
62'-8" SAN AT 0.50%
71'-12" ST AT 0.44%
67'-12" ST AT 0.44%
107'-8" SAN AT 0.50%
73'-12" ST AT 0.44%
21'-6" ST AT 1.79%
31'-6" ST AT 1.00%
72'-18" ST AT 0.18%
6'-24" ST AT 0.16%
59'-36" ST AT 0.08%
169'-8" SAN AT 0.50%

DOWNSPOUT CONNECTION PIPES 6" PVC AT 1.00% MIN. (TYP)

MH-24 G 647.05 E 646.05 N 641.10 S 641.00
MH-27 G 647.99 641.81
MH-21 P 646.40 E 640.02 641.68 NW 640.02 SW
MH-22 P 646.43 E 640.74 N 641.77 W 640.16
MH-23 P 646.65 640.83
MH-37 P 646.20 NE 642.50 641.75 S
MH-43 P 645.85 N 637.97 E 639.22 W 639.22 S 637.97
MH-44 P 645.85 N 638.45 S 638.05
MH-45 G 647.34 638.60
MH-46 G 645.57 638.78
MH-42 P 645.40 N 637.86 W 640.03 E 640.19 S 637.46
SMH-J 646.72 P 635.51
SMH-K P 646.65 635.75
SMH-M 647.80 P 636.58
SMH-P G 646.31 634.45
SMH-Q P 645.96 634.96
SMH-R 645.67 P 636.02 N 635.78 S 635.28 W
SMH-S 646.55 P 642.06 W 638.40 E 636.74 S
IN-15 647.80 G 642.81
IN-16 P 645.51 640.34
IN-17 645.65 P 640.48
CO-K G 647.75 642.60
CO-L 647.75 G 641.40
CO-MB 646.92 P 639.10
MH-35 P 646.19 639.42
MH-36 P 646.10 N 641.43 W 641.43 S 639.43
MH-41 P 645.63 637.41
MH-158 G 646.05 639.55
STMH 643.45 638.92
STMH 647.39 641.57
STMH 646.49 639.15

F.D.C.
V.B.-E 648.4
V.B.-CH 648.2
V.B.-J 647.2
V.B.-K 647.1
V.B.-L 647.2
V.B.-M 646.8
V.B.-N 646.8
V.V.-7 647.1
V.V.-8 646.8
V.V.-9 645.5
V.V.-10 646.1
V.V.-11 645.9
V.V.-12 646.9
HYD-6 647.7
HYD-7 646.8

ST BOP: 641.55 SAN TOP: 636.87 CLEAR: 4.68
WM BOP: 640.70 SAN TOP: 636.56 CLEAR: 4.13
ST BOP: 639.86 WM TOP: 638.36 CLEAR: 1.50
ST BOP: 641.61 SAN TOP: 636.40 CLEAR: 5.21
ST BOP: 639.72 WM TOP: 638.19 CLEAR: 1.53
ST BOP: 640.61 SAN TOP: 636.14 CLEAR: 4.48
SAN BOP: 642.26 WM TOP: 640.81 CLEAR: 1.45
SAN BOP: 642.37 ST TOP: 640.97 CLEAR: 1.40
SAN BOP: 642.15 ST TOP: 640.80 CLEAR: 1.34
ST BOP: 641.46 SAN TOP: 639.98 CLEAR: 1.48
ST BOP: 639.57 SAN TOP: 637.33 CLEAR: 2.34
ST BOP: 637.61 WM TOP: 634.67 CLEAR: 2.94
SAN BOP: 636.16 WM TOP: 634.67 CLEAR: 1.50
ST BOP: 637.57 SAN TOP: 635.93 CLEAR: 1.64
WM BOP: 638.48 SAN TOP: 635.76 CLEAR: 2.72
WM BOP: 638.20 SAN TOP: 635.88 CLEAR: 2.32
WM BOP: 641.39 SAN TOP: 635.39 CLEAR: 6.00
ST BOP: 640.01 WM TOP: 639.02 CLEAR: 1.00
ST BOP: 639.91 WM TOP: 638.91 CLEAR: 1.00
ST BOP: 640.06 SAN TOP: 636.50 CLEAR: 3.57
SAN BOP: 635.83 WM TOP: 634.34 CLEAR: 1.50
ST BOP: 637.12 WM TOP: 634.34 CLEAR: 2.78
ST BOP: 639.56 SAN TOP: 634.77

SHEET SHEET 22 FOR UTILITY NOTES

N

0 10 20 40
SCALE: 1"=20'

KEY MAP

DRAWN BY
REVISIONS
DATE

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SEASONS AT CREST HILL
CITY OF CREST HILL
UTILITY PLAN - EAST

PROJ. MGR.: JSE
PROJ. ASSOC.: MSL
DRAWN BY: JC
DATE: 01-14-26
SCALE: 1"=20'

SHEET
26 OF 44
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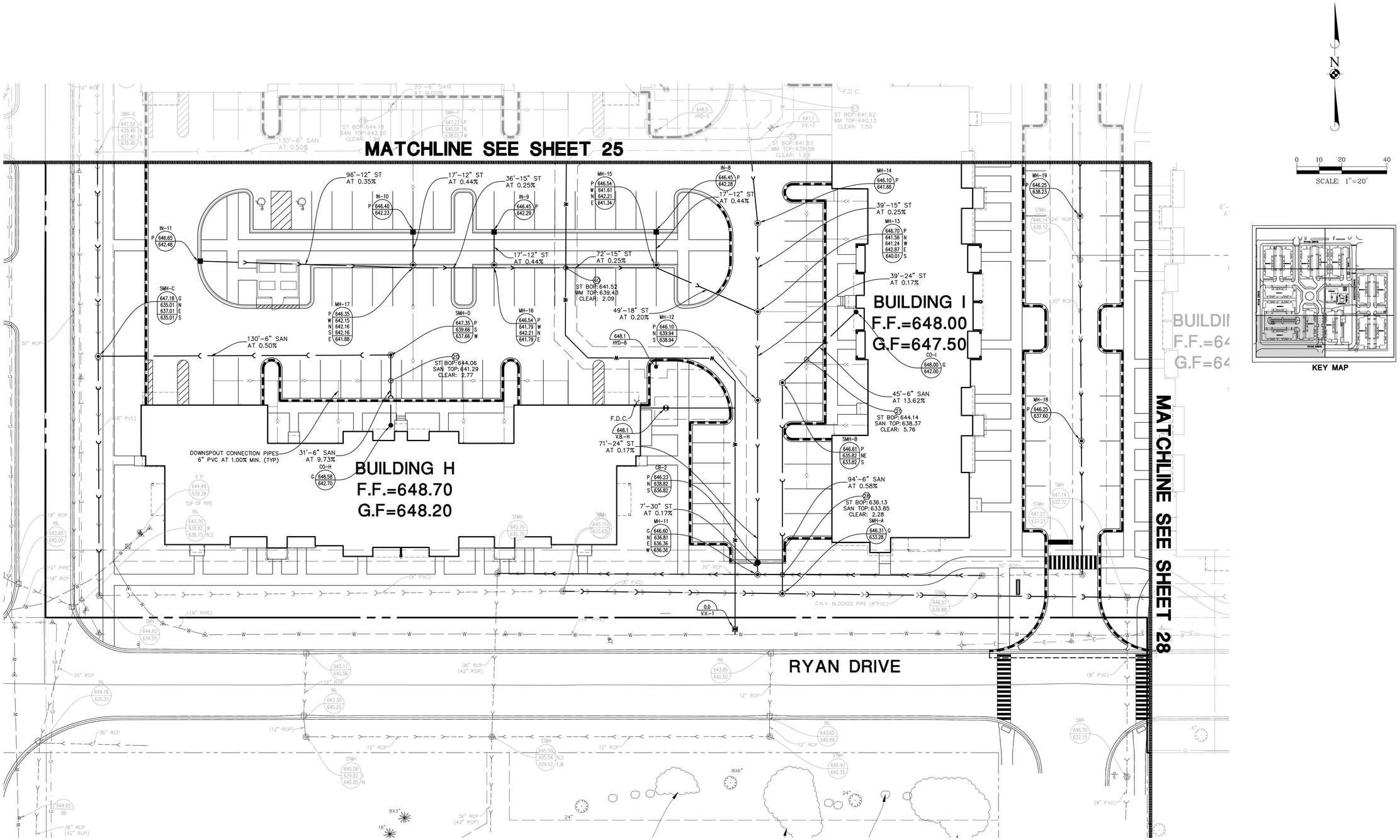

SHEET SHEET 22 FOR UTILITY NOTES

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SEASONS AT CREST HILL

CITY OF CREST HILL

UTILITY PLAN- SW

PROJ. MGR.: JSE
PROJ. ASSOC.: MSL
DRAWN BY: JG
DATE: 01-14-26
SCALE: 1"=20'

SHEET 27 OF 44

FRD.CRIL01

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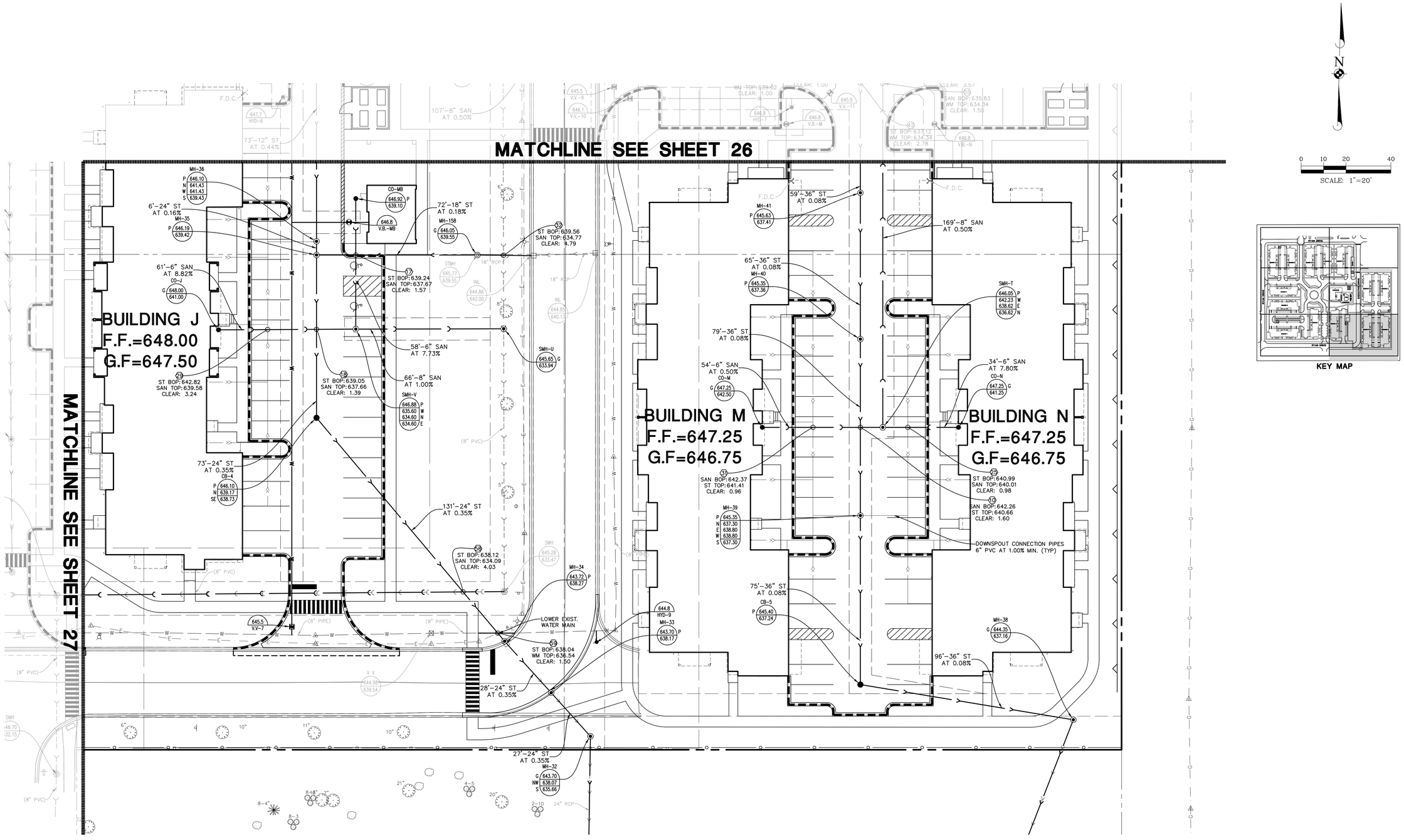

SHEET SHEET 22 FOR UTILITY NOTES

Item 2.

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SEASONS AT CREST HILL

CITY OF CREST HILL

UTILITY PLAN - SE

PROJ. MGR.: JSE
PROJ. ASSOC.: MSL
DRAWN BY: JG
DATE: 01-14-26
SCALE: 1"=20'

SHEET 28 OF 44

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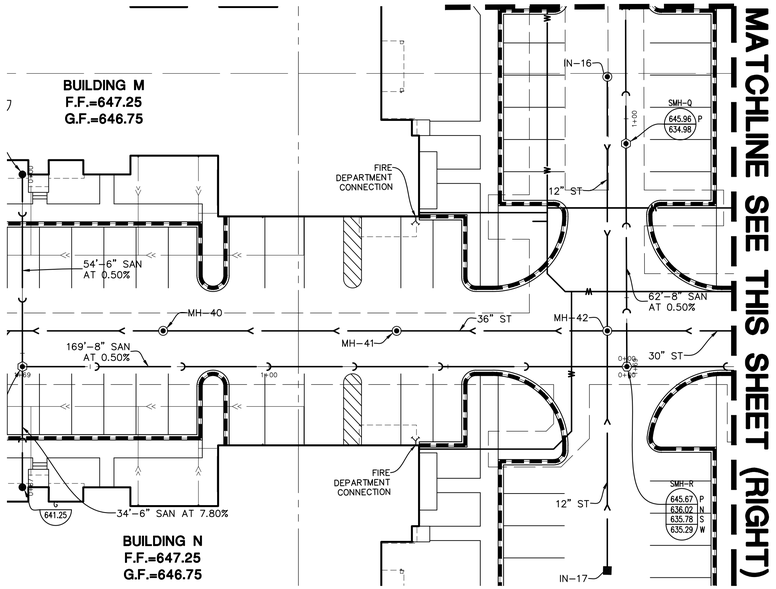
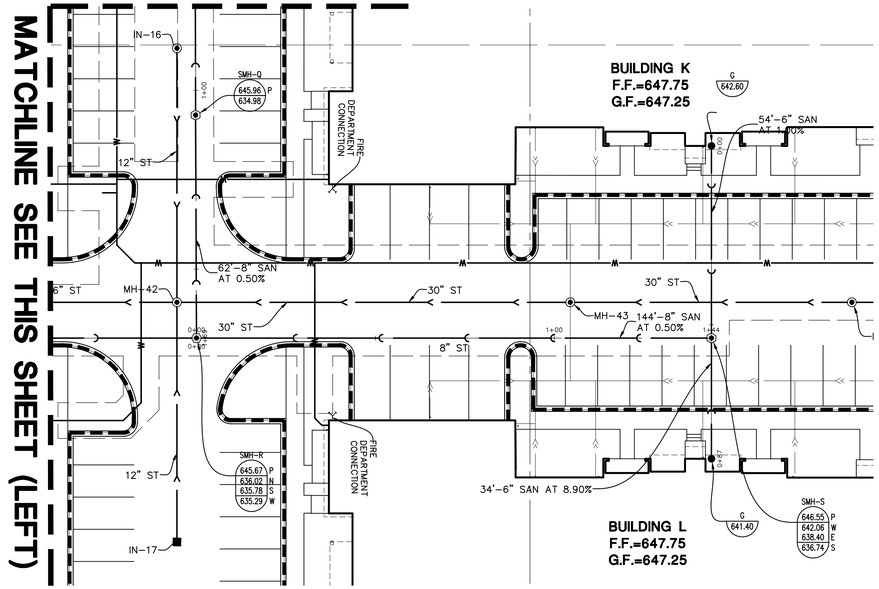
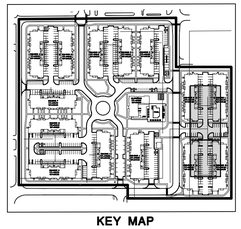
460









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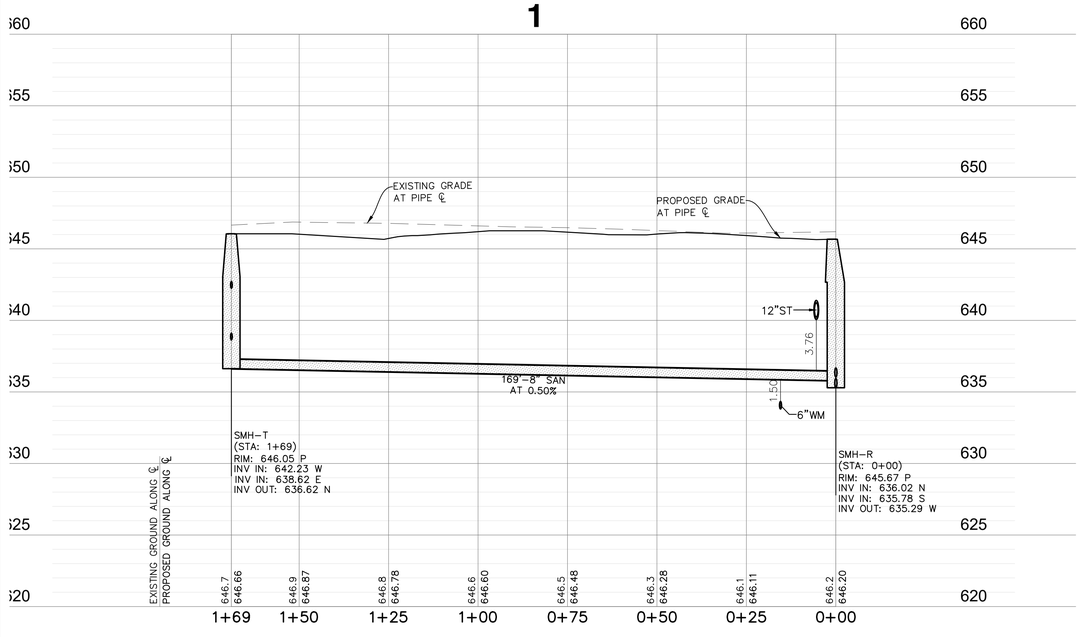

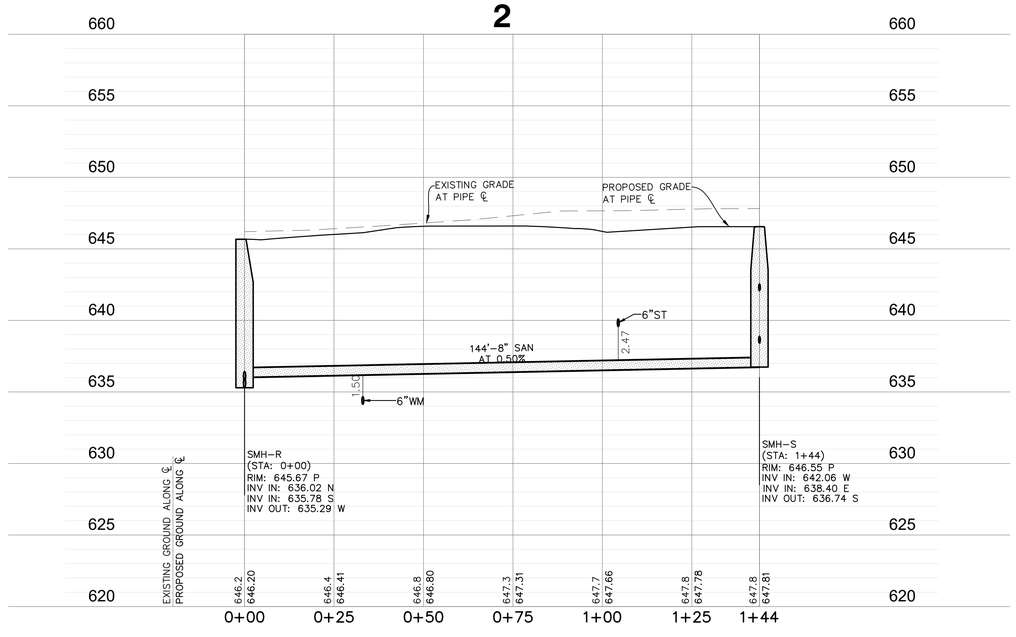

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SEASONS AT CREST HILL

CITY OF CREST HILL

SANITARY PROFILES 1&2

PROJ. MGR.: JSE
PROJ. ASSOC.: MSL
DRAWN BY: GAW
DATE: 01-14-26
SCALE: H:1"=20' V:1"=5'

SHEET 29 OF 44

FRD.CRIL01

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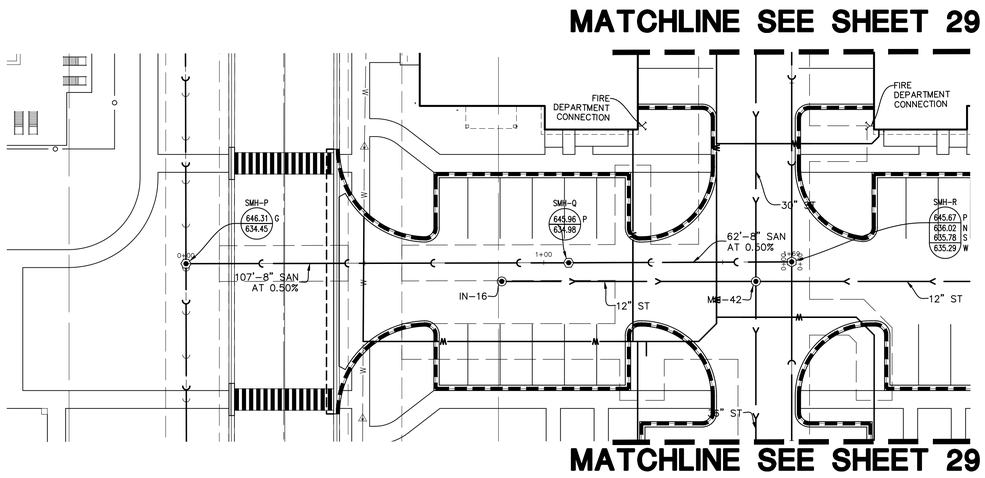

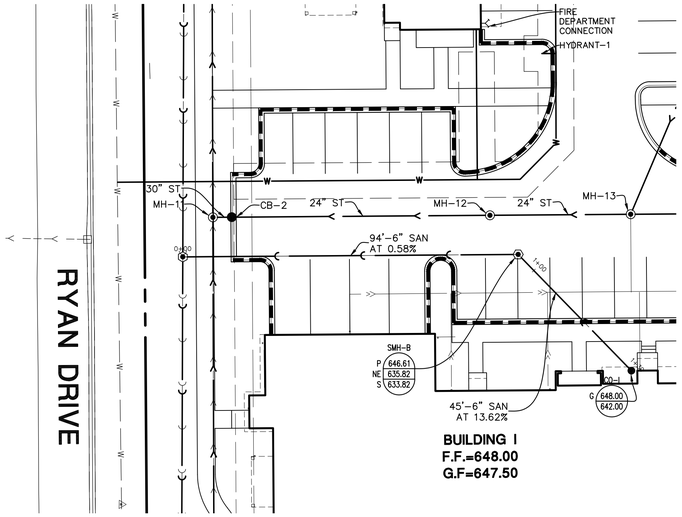

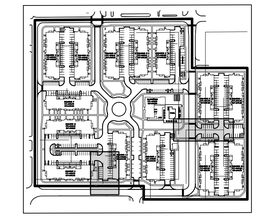
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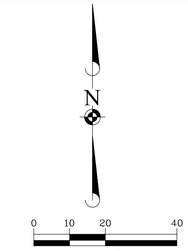

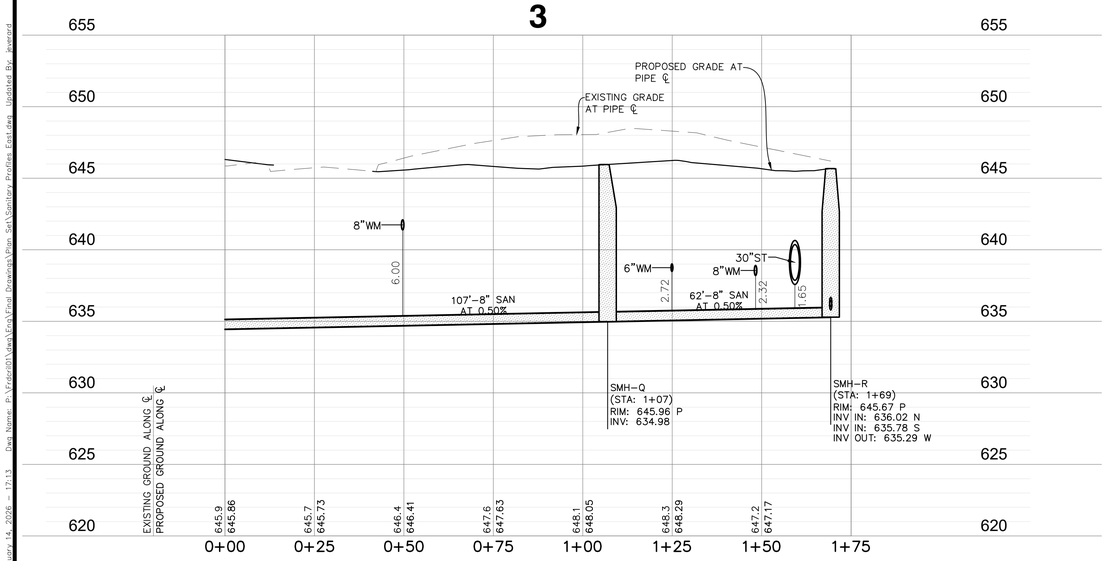

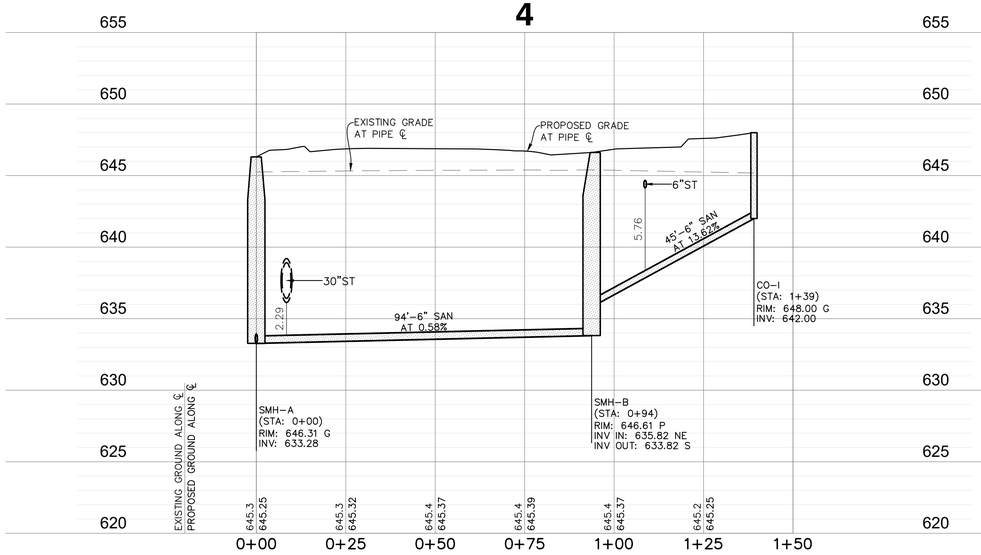

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SEASONS AT CREST HILL

CITY OF CREST HILL

SANITARY PROFILES 3&4

PROJ. MGR.:	JSE
PROJ. ASSOC.:	MSL
DRAWN BY:	GAW
DATE:	01-14-26
SCALE:	H:1"=20' V:1"=5'

SHEET 30 OF 44

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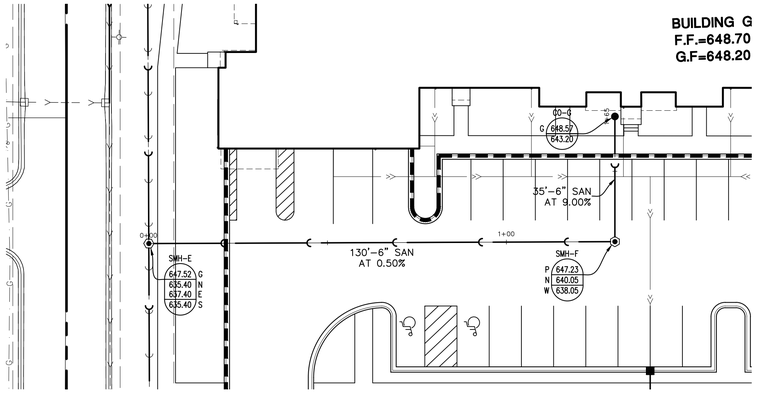

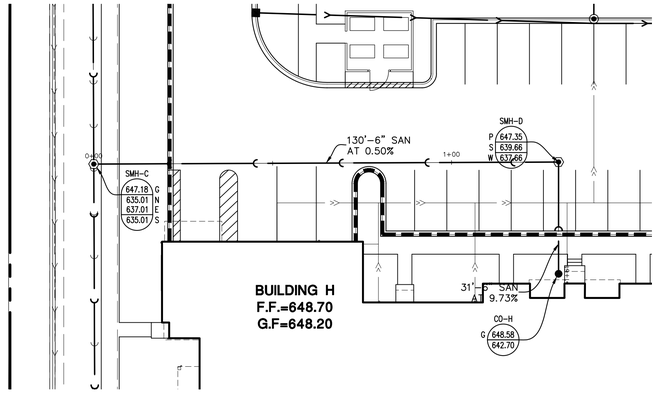

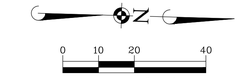

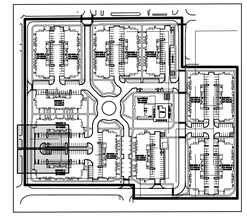

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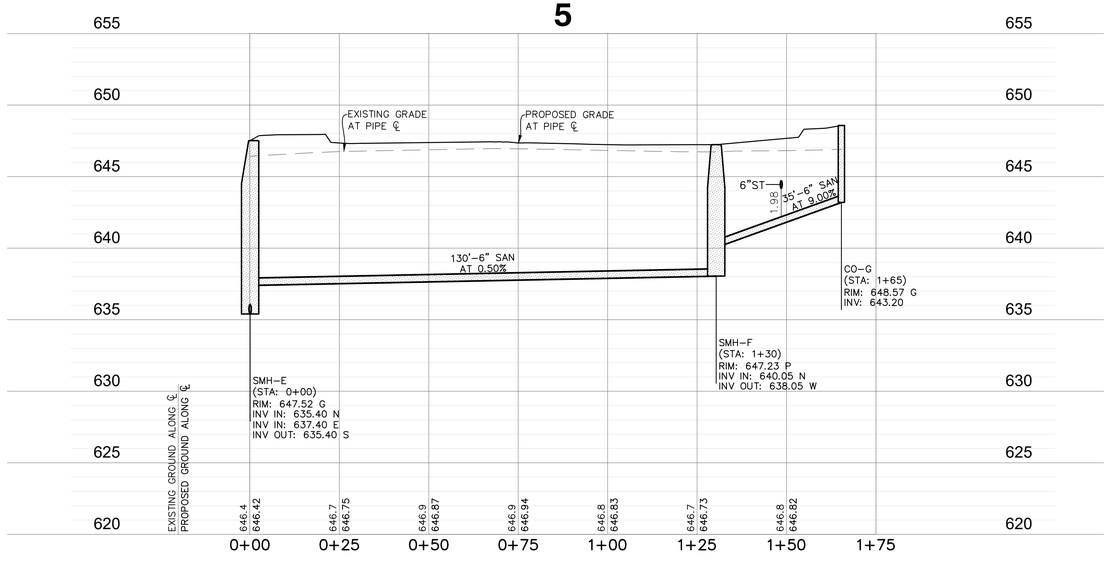

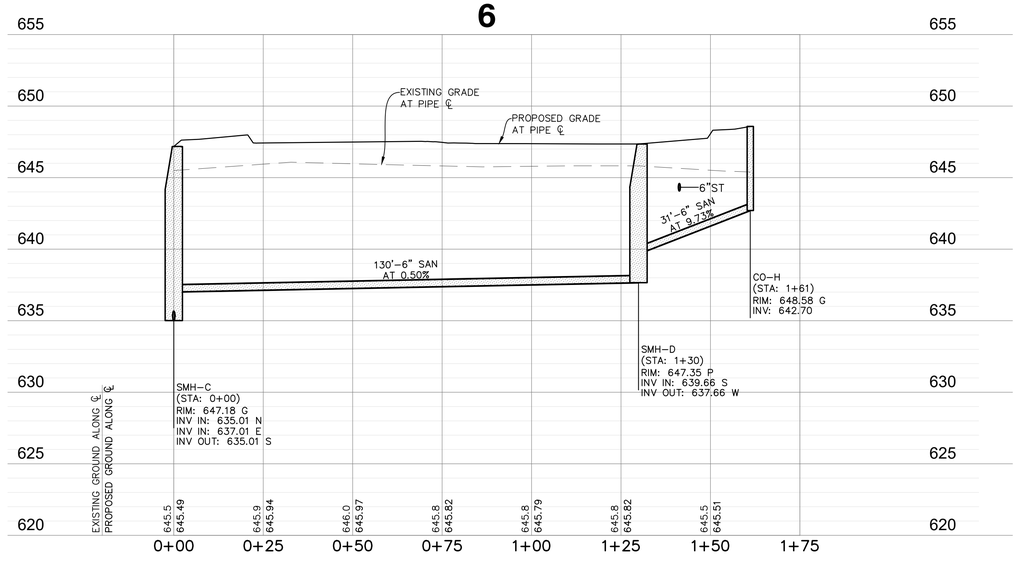

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SEASONS AT CREST HILL

CITY OF CREST HILL

SANITARY PROFILES 5&6

PROJ. MGR.: JSE
PROJ. ASSOC.: MSL
DRAWN BY: GAW
DATE: 01-14-26
SCALE: H:1"=20' V:1"=5'

SHEET
31 OF 44
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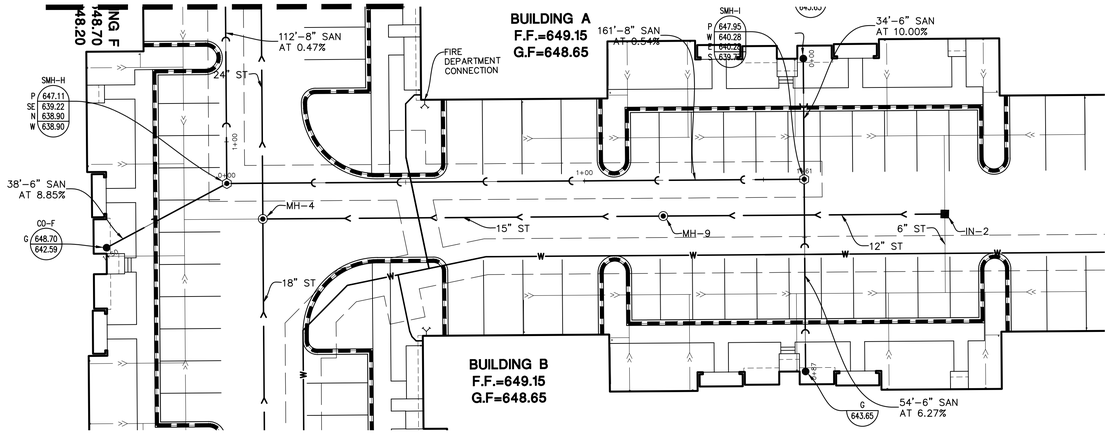

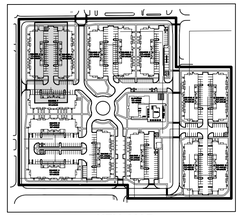
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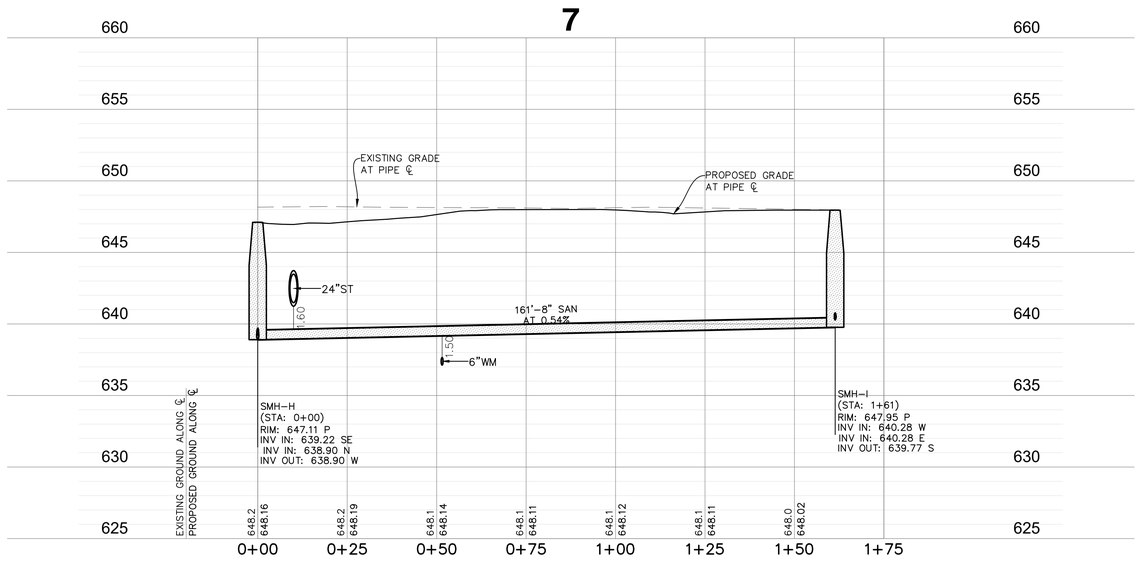

0 10 20 40
SCALE: 1"=20'

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SEASONS AT CREST HILL
CITY OF CREST HILL
SANITARY PROFILES 7

PROJ. MGR.: JSE
PROJ. ASSOC.: MSL
DRAWN BY: GAW
DATE: 01-14-26
SCALE: H:1"=20' V:1"=5'

SHEET
32 OF 44
FRD.CRIL01

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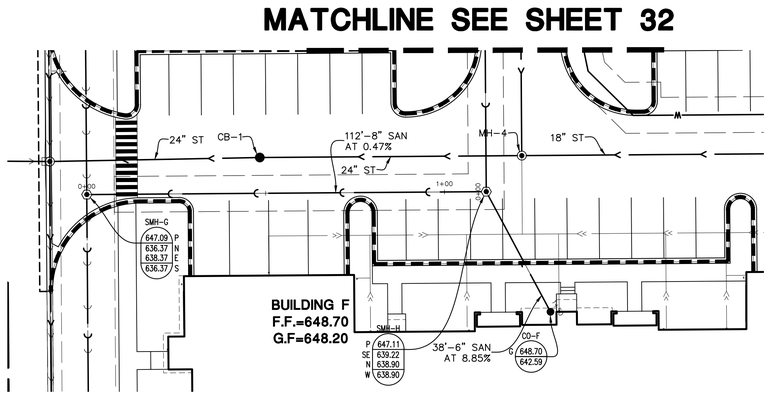
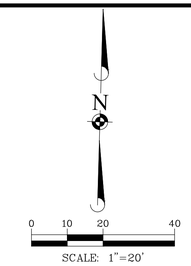
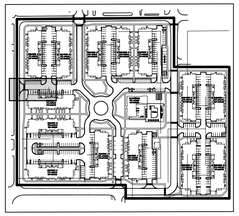
January 14, 2026 - 17:13 Dwg Name: P:\Frdcrl01\dwg\Eng\Final Drawings\Plan Set\Sanitary Profiles East.dwg Updated By: jeverard



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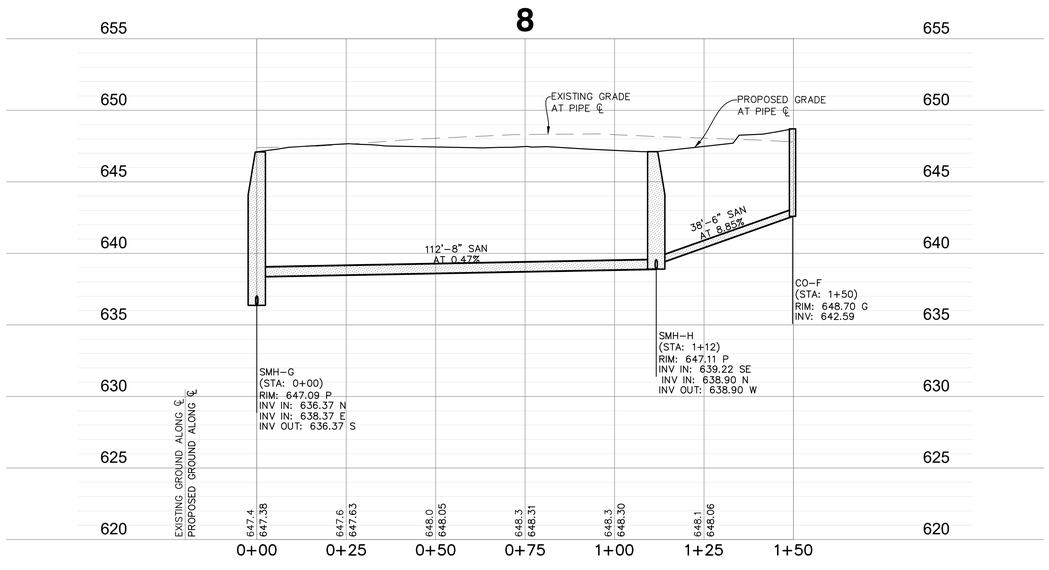

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SEASONS AT CREST HILL

CITY OF CREST HILL

SANITARY PROFILES 8

PROJ. MGR.: JSE
PROJ. ASSOC.: MSL
DRAWN BY: GAW
DATE: 01-14-26
SCALE: H:1"=20' V:1"=5'

SHEET
33 OF 44
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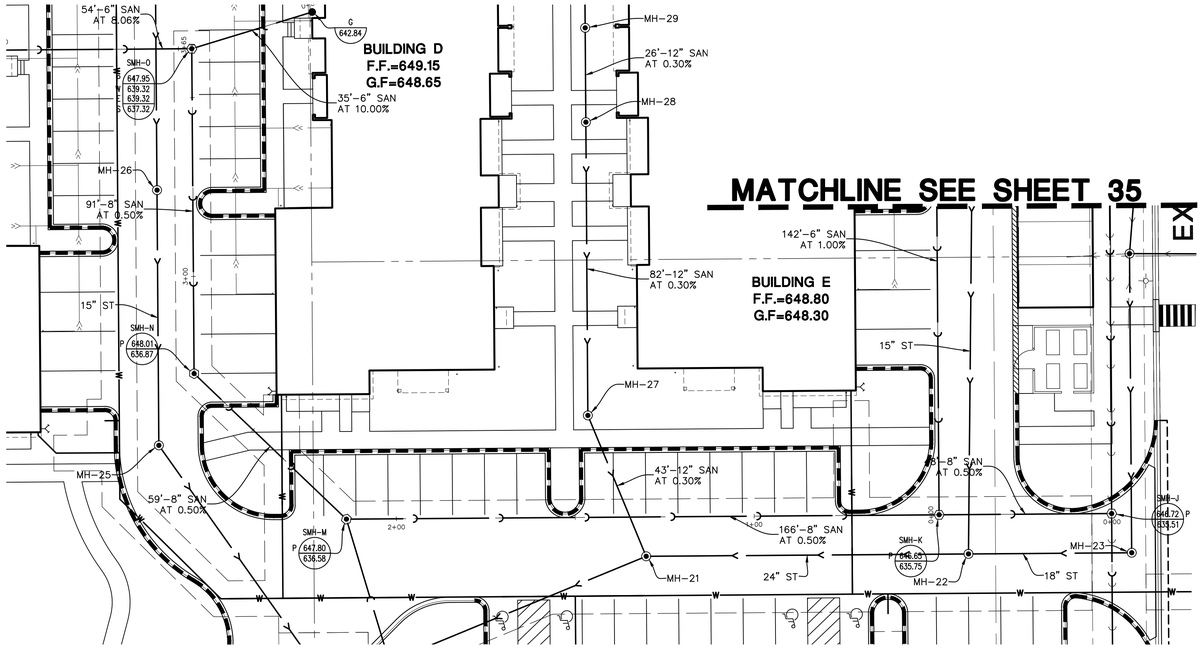

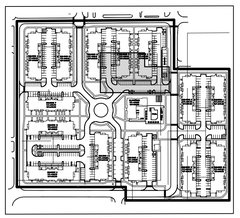
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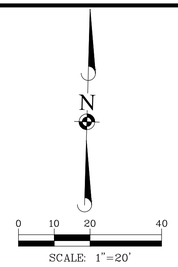

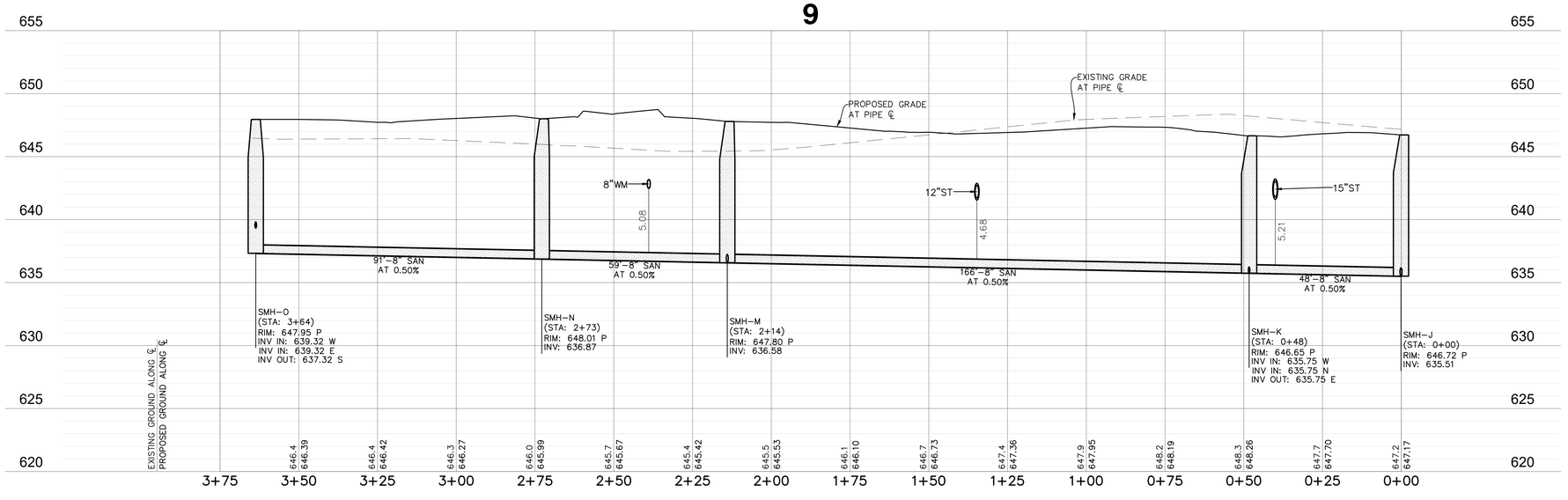

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SEASONS AT CREST HILL

CITY OF CREST HILL

SANITARY PROFILES 9

PROJ. MGR.: JSE
PROJ. ASSOC.: MSL
DRAWN BY: GAW
DATE: 01-14-26
SCALE: H:1"=20' V:1"=5'

SHEET 34 OF 44

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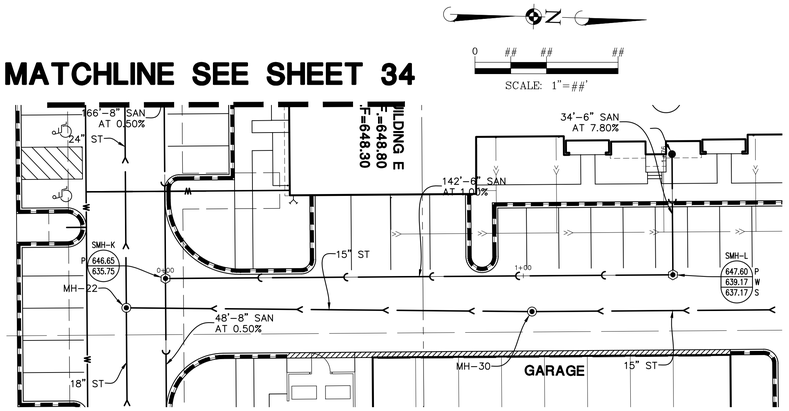
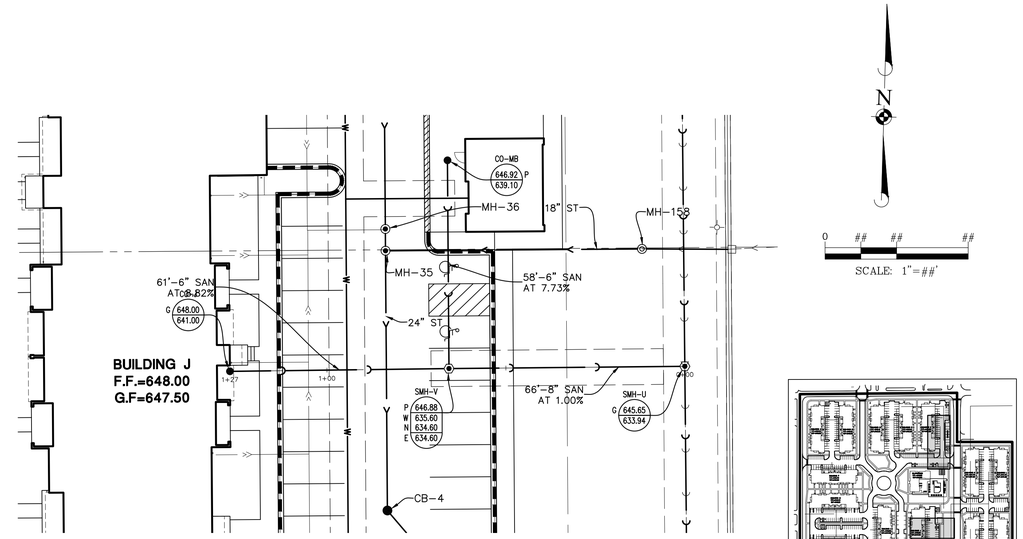
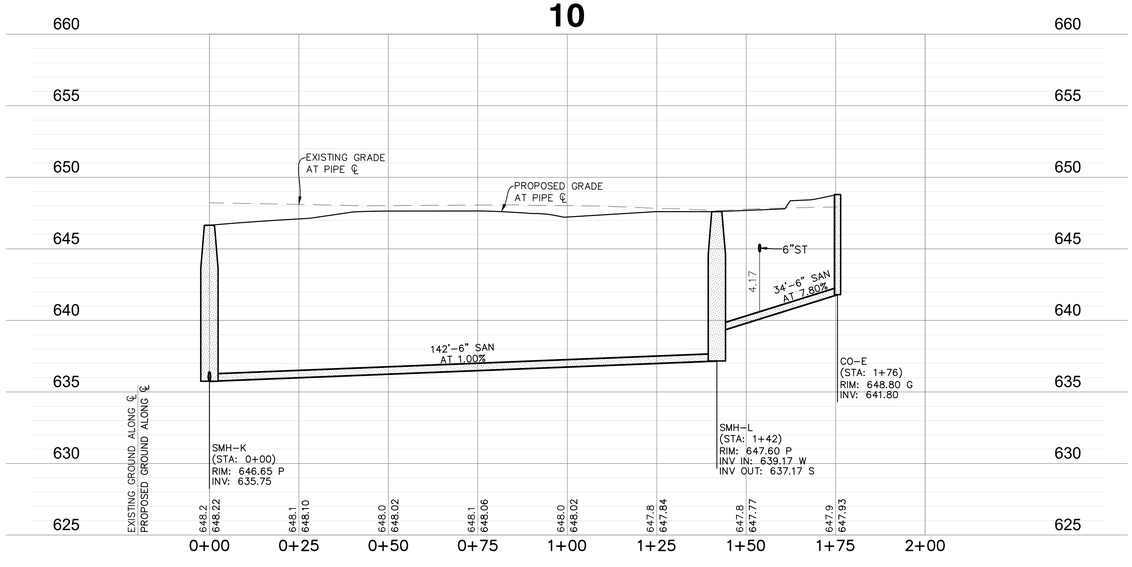
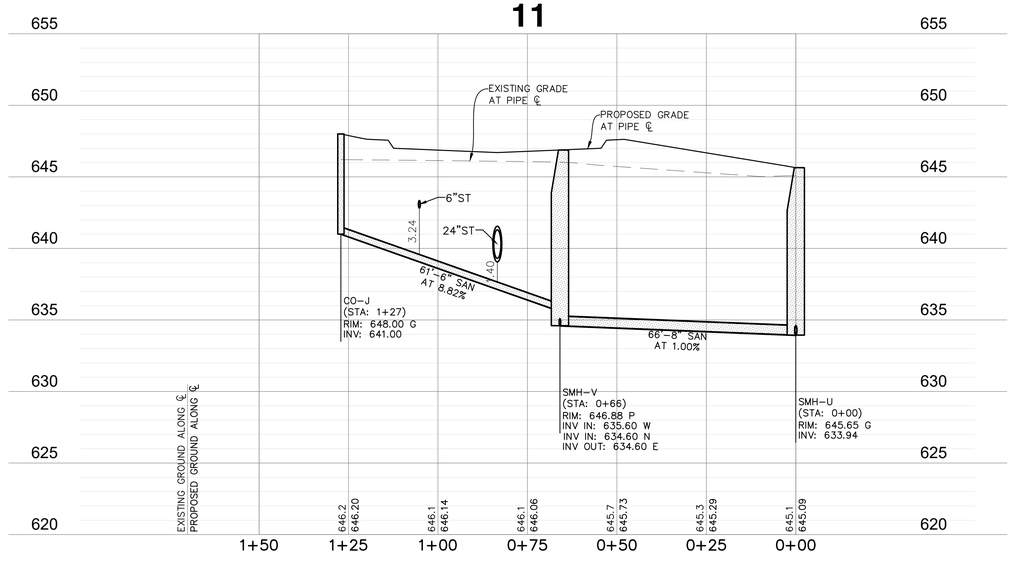
January 14, 2026 - 17:13 Dwg Name: P:\FrdCril01\dwg\Eng\Final Drawings\Plan Set\Sanitary Profiles East.dwg Updated By: jeverard









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SEASONS AT CREST HILL

CITY OF CREST HILL

SANITARY PROFILES 10&11

PROJ. MGR.: JSE
PROJ. ASSOC.: MSL
DRAWN BY: GAW
DATE: 01-14-26
SCALE: H:1"=20' V:1"=5'

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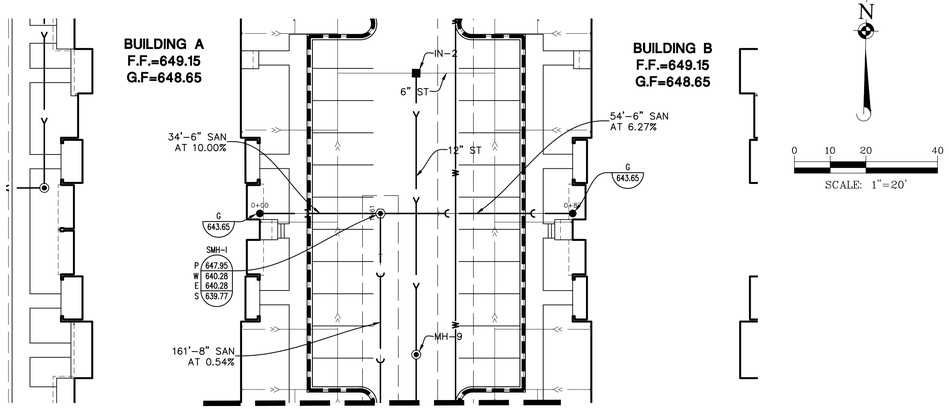

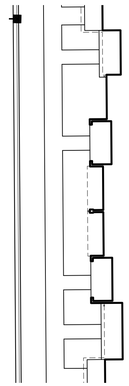

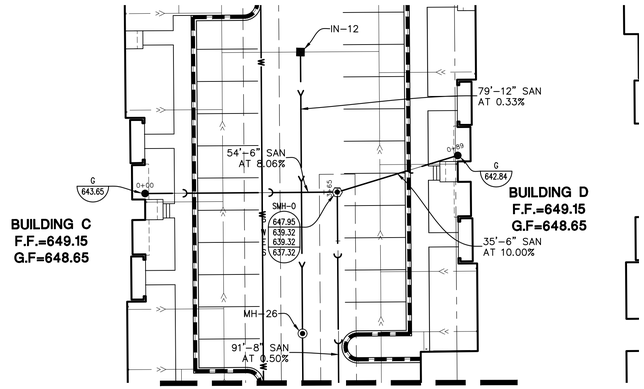

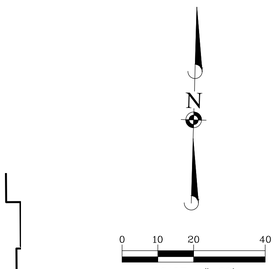

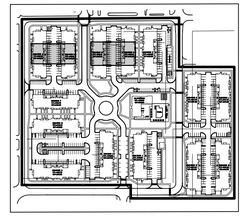

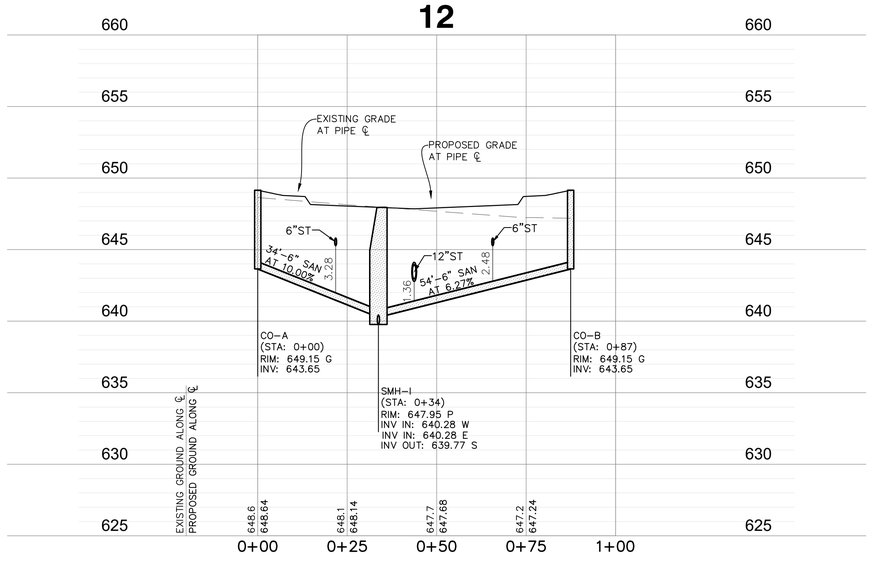

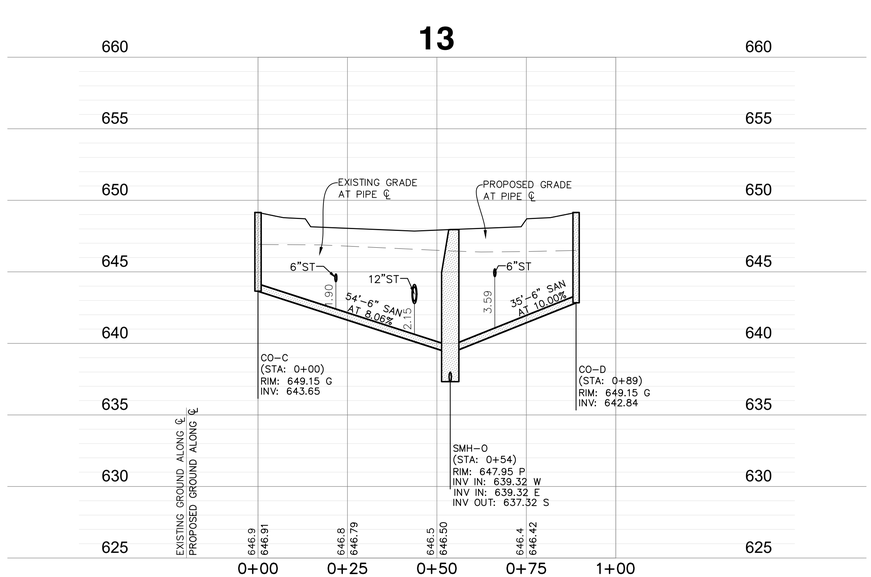

Manhard CONSULTING
One Overlook Point, Suite 250, Lincolnshire, IL 60069 p847.634.5500 f847.634.0066 manhard.com
Civil Engineers • Surveyors • Water Resource Engineers • Water & Wastewater Engineers
Construction Managers • Environmental Scientists • Landscape Architects • Planners

DRAWN BY:
REVISIONS
DATE

SEASONS AT CREST HILL
CITY OF CREST HILL
SANITARY PROFILES 12&13

PROJ. MGR.: JSE
PROJ. ASSOC.: MSL
DRAWN BY: GAW
DATE: 01-14-26
SCALE: H:1"=20' V:1"=5'

SHEET
36 OF 44
FRD.CRIL01

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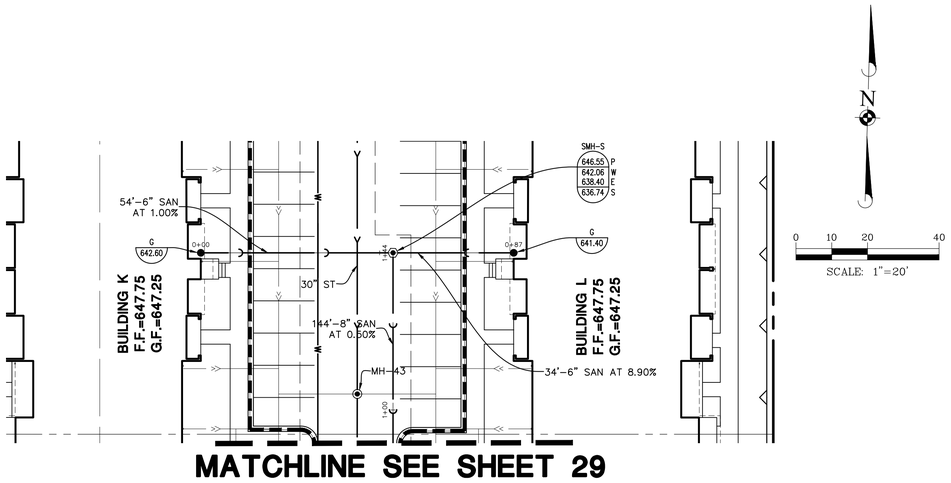
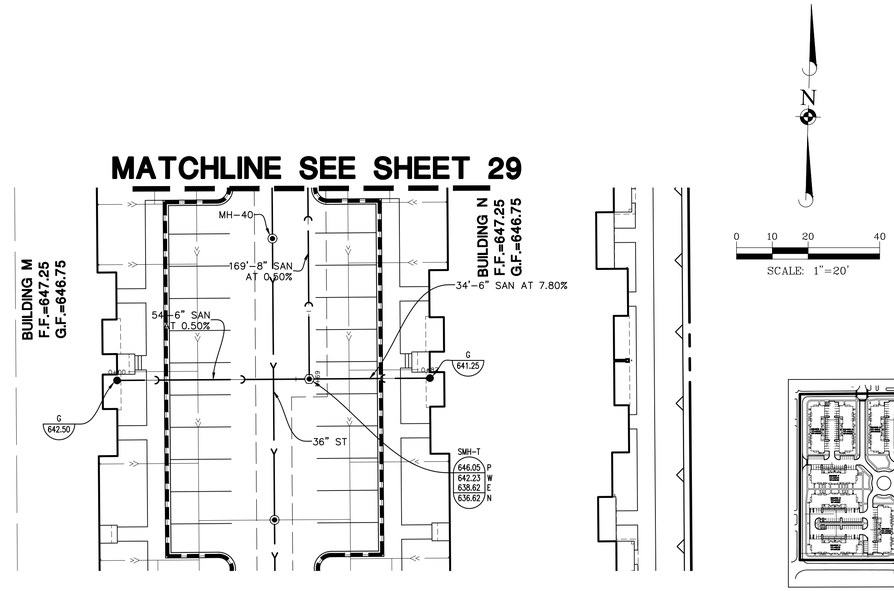
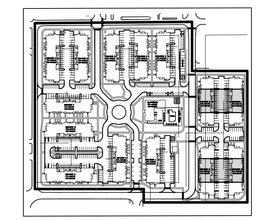
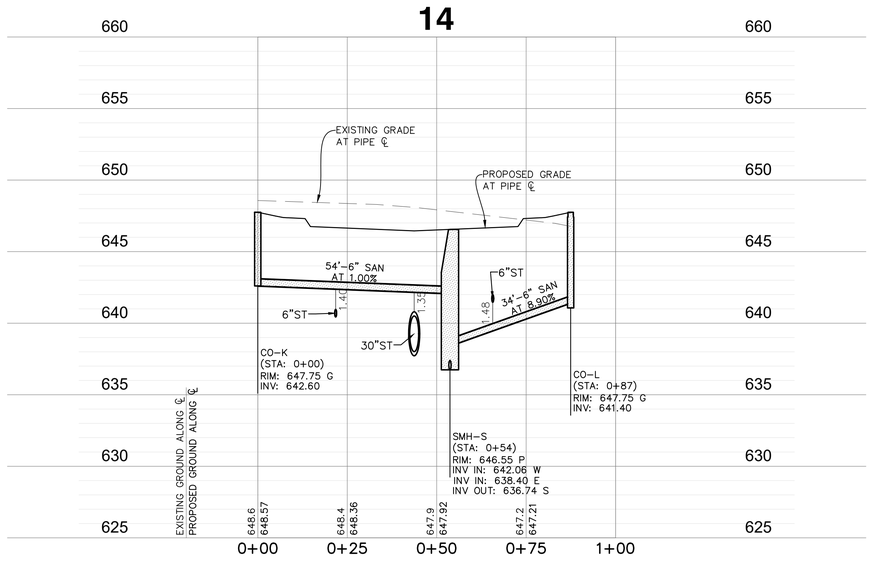
January 14, 2026 - 12:13 Dwg Name: P:\Projects\Data\Final Drawings\Plan Set\Sanitary Profiles, Erosion Control Details\Sanitary Profiles 12&13.dwg Updated By: jeverard

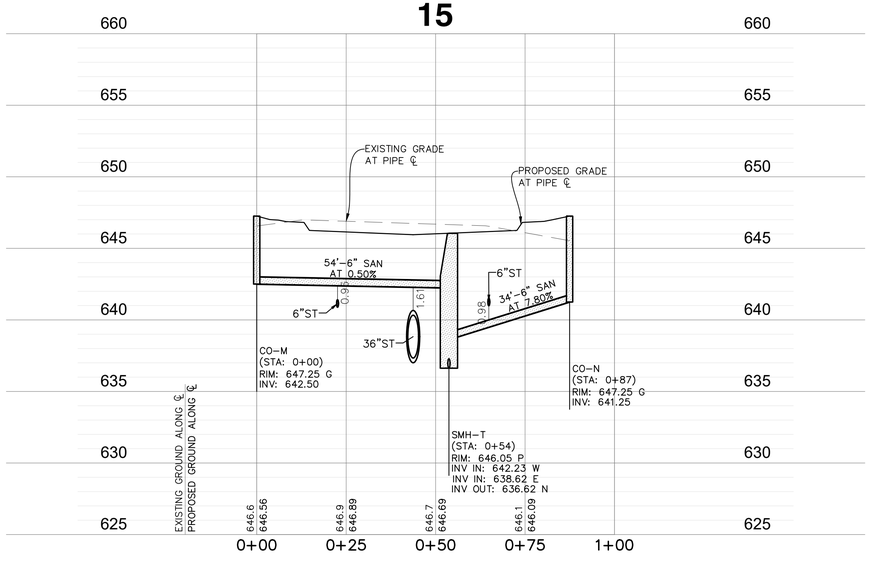






KEY MAP





Item 2.

DRAWN BY

REVISIONS

DATE

Manhard CONSULTING

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Civil Engineers • Surveyors • Water Resource Engineers • Water & Wastewater Engineers
Construction Managers • Environmental Scientists • Landscape Architects • Planners

SEASONS AT CREST HILL

CITY OF CREST HILL

SANITARY PROFILES 14&15

PROJ. MGR.: JSE
PROJ. ASSOC.: MSL
DRAWN BY: GAW
DATE: 01-14-26
SCALE: H:1"=20' V:1"=5'

SHEET 37 OF 44

FRD.CRIL01

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January 14, 2026 - 17:13 Dwg Name: P:\Frdcril01\dwg\Eng\Final Drawings\Plan Set\Sanitary Profiles East.dwg Updated By: jeverard

Miscellaneous Water Standards/Notes

1. Water mains shall be a minimum of 8" in diameter, shall include installation of shutoff valves and fire hydrants, and shall be free from dead-end mains, unless authorized by the City.
2. For any water service line repairs, the homeowner is responsible from the lil-box to the house. The City will make repairs from the lil-box to the trunk line.
3. Water mains and fittings shall be ductile cast iron, cement lined, with push on joints class 52 conforming to latest ANSI/ AWWA C151/ A21.51-96, C111, and C104.
4. Fire hydrant leads shall be 6" diameter.
5. All ductile iron water main shall include installation of polyethylene encasement conforming to ANSI/ AWWA C105/ A21.5 and ASTM A674 standards.
6. A building permit is required for all water main/service installations.
7. Any dwelling with a private well providing drinking water that converts to City water must remove any and all well piping that connects to the building drinking water supply. The well may be kept active for purposes of outside irrigation, only if the well meets current Illinois Department of Health guidelines, all well piping is removed from the building, and after inspection and with written permission of the Public Works Department.

Water Main Testing Specifications

Pressure and Leakage Test

1. Testing Procedures
   a. All pressure leakage testing shall be tested against installed pipe, fittings, valves, joints, and fire hydrants up to nozzles.
2. Valve Operations
   a. City of Crest Hill Water Division personnel are the only individuals authorized to operate any water valves for pressurizing or flushing the system.
3. Taps for Testing
   a. Contractor/developer is required to provide a minimum one (1)-inch service taps or size required for adequate flushing in manholes for test gauges, flushing needs, and for disinfection at each end of the pipe test section.
   b. Service tap shall be a direct tap.
   c. Contractor shall schedule an appointment with the City of Crest Hill Water Division for the witnessing/inspection of all taps. A 24-hour notice is required.
   d. Contractor shall remove copper tube with stop assembly from manholes upon completion of testing and chlorination procedures. Corporation stop must be removed and replaced with a stainless steel full circle repair clamp.
4. Air Removal
   a. Before applying the specified test pressure, air shall be expelled completely from the section of piping under test. Air removal will be done in conjunction with the flushing procedures of the water main (see Flushing Requirements.)
5. Allowable Leakage
   a. Testing allowance shall be defined as the maximum quantity of makeup water that is added into a pipeline undergoing the pressure pressure testing, or any valves section thereof, in order to maintain pressure within ±5 psi of the specified test pressure. Any visible leaks are to be repaired, regardless of the rate or has been expelled", No pipeline installation will be accepted if the quantity of makeup water is greater than determined by the following formula:
   b. All visible leaks are to be repaired regardless of the amount of leakage.
   c. Dye or any other form of colorizing the water will not be introduced into the water main for the purpose of locating leaks.

In inch-pound units,

$$L = \frac{SD\sqrt{P}}{148{,}000}$$

Where:

L= testing allowance (makeup water), in gallons per hour
S= length of pipe tested, in feet
D= nominal diameter of the pipe, in inches
P= average test pressure during the hydrostatic test, in pounds per square in (gauge)

These formulas are based on a testing allowance of 10.45 gal/d/in. of nominal diameter of a pressure of 110 psi. Values of testing allowance at various pressures are shown in the table below. When testing against closed metal-seated valves, an additional testing allowance per closed value of 0.0078 gal/hr/in. of nominal value size shall be allowed. When hydrants are in the test section, the test shall be made against the main valve in the hydrant.

ALLOWABLE LEAKAGE PER 1,000 FT OF PIPELINE

Avg Test Pressure (psi)	Allowance (gal/hr/in. dia.)	Allowance Per 1,000 ft of Pipeline (gal/hr)															
		4"	6"	8"	10"	12"	14"	16"	18"	20"	24"	30"	36"	42"	48"	54"	60"
300	0.46	1.84	2.76	3.68	4.60	5.52	6.44	7.36	8.28	9.20	11.04	13.80	16.56	19.32	22.08	24.84	27.60
250	0.42	1.68	2.52	3.36	4.20	5.04	5.88	6.72	7.56	8.40	10.08	12.60	15.12	17.64	20.16	22.68	25.20
200	0.38	1.52	2.28	3.04	3.80	4.56	5.32	6.08	6.84	7.60	9.12	11.40	13.68	15.96	18.24	20.52	22.80
150	0.33	1.32	1.98	2.64	3.30	3.96	4.62	5.28	5.94	6.60	7.92	9.90	11.88	13.86	15.84	17.82	19.80
100	0.27	1.08	1.62	2.16	2.70	3.24	3.78	4.32	4.86	5.40	6.48	8.10	9.72	11.34	12.96	14.58	16.20
50	0.19	0.76	1.14	1.52	1.90	2.28	2.66	3.04	3.42	3.80	4.56	5.70	6.84	7.98	9.12	10.26	11.40

Testing allowance (makeup water) may be measured by a positive displacement meter or a water meter of a type approved by the water utility manager. Meters shall be subject to the accuracy requirements prescribed by AWWA Standard for Meters (C703).

6. Acceptance of Installation
   a. Acceptance shall be determined as the basis of allowable leakage or the satisfactory witnessing performed by the City of Crest Hill Public Works Department. If any test of and pipe discloses leakage greater than the specified, repairs or replacements shall be accomplished in accordance with the Specifications.

Disinfection of Water Mains

1. Flushing Water Main
   a. Sections of pipe to be disinfected shall first be flushed to remove any solids or contaminated material that may have become lodged in the pipe. Fire hydrants in these sections will be flushed using either the two and a half (2 ½)-inches nozzle or the pumper nozzle to develop a velocity of at least 2.5 feet Tries in the main.
   b. All fire hydrants will be flushed and operated in the section of water main to be tested and disinfected.
   c. City of Crest Hill Water Division personnel are the only individuals authorized to operate any water valves.
   d. All valves that are closed will have a tap with copper tube and shp assembly installed in the vault for the purpose of flushing, and disinfecting the water main to the furthest and point of each sections being tested.
2. Requirement of Chlorine

   Before being placed into service, all new mains and repaired portion of, or extensions to existing mains shall be chlorinated so that the initial chlorine residual is not less than 50 mg/l and that a chlorine residual of not less than 25 mg/l remains in the water after standing 24 hours in the pipe. Mains must be flushed of chlorinated water within 24 hours of disinfection.

   Continuous flushing method using sodium hypershlorite Aonre 15@ 12%/12.5 must be used.
3. Point of Application

   The preferred point of application of the chlorinating agent is at the beginning of the pipeline extension or any valved section of it, and through a corporation stop inserted in the pipe.
   a. The contractor will install corporation cocks with a copper tube gooseneck assembly for the purpose of disinfecting and as sample collection point at 1320' intervals, and at each change in direction that has a closed valve. Fire hydrants will be disinfected as part of this procedure.
   b. At a point not to exceed two (2)-feet downstream from the beginning of the new main the water entering the new main will receive a dose of chlorine fed at a constant rate such that the water will have not less than 25 mg/l free chlorine.
   c. Water from the existing distribution system shall be made to flow at a constant rate into the new main.
   d. The City of Crest Hill Water Division personnel must witness the disinfection process. An appointment with 24-hour prior notice must be scheduled with City of Crest Hill Water Division.
   e. In the process of chlorinating newly laid pipe, all valves, fire hydrants, or other appurtenances shall be operated while the pipe line is filled with the chlorinating agent and under normal operating pressures.

Disinfection of Water Services (Larger Than Two (2)-Inches)

For the purpose of clarifying this section, water service in this section refers to one (1) or more of the following installations that terminate inside of a building under construction.

- The service line being installed is for the purpose of a combination domestic and fire protection use.
- The service line being installed is for the purpose of branching into multiple domestic services inside of a meter room.
- The service line is the section of main being tested from the City of Crest Hill right-of-way valve to a location inside of the building.
- There are no fire hydrants installed on the service line.

1. Meter Rooms/Building Installations
   a. The service line will be disinfected to the inside valve of the meter room prior to any branch service being connected.
   b. The meter room will have a permanent heating system installed and in working condition prior to the disinfection.
   c. One (1) sample point will be provided at the source and one (1) sample point will be provided at the inside valve provided the length of pipe does not exceed 1,000-feet.
   d. The contractor will supply a copper tube gooseneck assembly at each of the sample points and provide methods to divert the flushing water.
   e. The City of Crest Hill in Water Division personnel must witness the disinfection process. An appointment with 24 hours prior notice must be scheduled with City of Crest Hill Water Division.
2. Domestic/Fire Service Mains/Meter Room
   a. The service line will be disinfected up to the inside valve on both the fire branch and the domestic branch.
   b. The Fire Service Main Branch will have a valve of equal size to the riser section installed prior to chlorination.
   c. The building, meter room, or location of the incoming service line will have a permanent heating system installed and in working condition prior to the disinfection.
   d. One (1) sample point will be provided at the source and one (1) sample point will be provided at the inside valve provided the length of pipe does not exceed 1,000-feet and provide a method to divert the flushing water.
   e. The contractor will supply a copper tube goose neck assembly at each of the sample points.
   f. The City of Crest Hill Water Division personnel must witness the disinfection process. An appointment with 24 hours prior notice must be scheduled with City of Crest Hill Water Division.

De-chlorination Requirements

Following chlorination, all treated water shall be thoroughly flushed from the newly laid pipe using the first hydrant(s) and/or all the copper gooseneck assemblies. The flushing shall replace the highly chlorinated water with water that has a chlorine residual of less than 1mg/l or equal to the residual from the supply service.

- The discharging of chlorinated water must be expelled to the surrounding ground surface.
- The contractor/developer must comply with all of the I.E.P.A. Rules, Regulations, and Standards for de-chlorinating water as part of the discharging.
- The contractor/developer is responsible for the equipment and materials to de-chlorinate the water at each point it is discharging.
- The City of Crest Hill Water Division personnel are the only individuals authorized to operate the valves.
- The City of Crest Hill Water Division personnel must witness the de-chlorination procedures when flushing the water mains. An appointment with 24-hour prior notice must be scheduled with City of Crest Hill Water Division.

Sampling and Testing

Sample collection for bacterial testing will start immediately after flushing the disinfection water from the system and prior to any portion of the water main being placed into service. Samples will be collected at all sample points designated by the City of Crest Hill Water Superintendent. Sampling procedures must follow the I.E.P.A. Standards for construction of new water mains.

1. Locations and Spacing
   a. Samples will be collected from the service, along the water main, as required, and at the end of the line.
   b. Samples will be collected from fire hydrants at points not to exceed 1,000-feet of linear water main, or as directed by the City of Crest Hill.
   c. A sample will be collected from the copper goose-neck assembly point that is located no further than five (5)-feet downstream from the beginning of the new water main.
2. Collection Requirements
   a. The contractor is required to collect all samples at the location(s) designated by the City of Crest Hill Water Superintendent.
   b. City of Crest Hill Water Division personnel are the only individuals authorized to operate any water valves and must witness all samples at time of collection. 24-hour prior notice must be scheduled with the City of Crest Hill Water Division.
   c. A chain of custody form will be used to identify sample location, chlorine residual, time of collection, etc. All collection samples will be sealed with a tamper proof label.
   d. The contractor is required to take the collected samples to a certified laboratory approved by the City of Crest Hill Water Superintendent.
   e. The City of Crest Hill Water Division has the right to collect quality control samples at the same time contractor collects samples. The charges for the quality control samples will be charged to the contractor.
   f. Samples must be collected on two consecutive days with at least 24-hours of separation between the collection times.
   g. Each sample collected will be tested for quality and must show the absence of coliform organisms.
3. Satisfactory Sample Results

   If all the samples tested meet the Bacteriological Quality Standards and are certified as satisfactory by the testing lab:
   a. The contractor may have the lab email the results directly to the City of Crest Hill Water Division;
   b. The contractor must provide original copies of the certified results to the City of Crest Hill Water Superintendent within seven (7) business days of the date on the test results; and
   c. The contractor must contact the City of Crest Hill Water Division to schedule an appointment to have the water main placed into service within 72 hours of the satisfactory test results being certified and only as approved by the Water Superintendent. All original chain of custody forms must be returned before activation.
4. Unsatisfactory Sample Results

   If any one of the samples tested fails to meet the Bacteriological Quality Standards and is deemed unsatisfactory, then all the samples collected on the same date for the tested section of pipe, will be considered unsatisfactory.
   d. Unsatisfactory samples from the first day of collection will be discarded. A new first day collection must be collected with a new second day to be collected consecutively.
   e. Unsatisfactory samples from the second day of collection will be discarded. First day samples will also be discarded and the contractor must schedule new first and second day samples.

   The contractor will have up to three (3) chances of first day and two (2) chances of second day bacterial testing to obtain satisfactory results on all the samples collected and tested.
   f. Should the contractor fail to obtain satisfactory results after the allotted attempts, the watermain section being tested is to have the original disinfection procedures repeated until satisfactory results are obtained.

Flow Test

After completion of all water mains and installation of all fire hydrants within a subdivision, a flow test shall be performed at the point in the subdivisions farthest away from the existing City water main. The flow test shall provide information regarding static pressure, residual pressure and flow rate, and the information shall be supplied to the City.

CLIENT:	CITY OF CREST HILL	TITLE:	PROJ. NO.
City of CREST HILL Illinois	1610 PLAINFIELD ROAD CREST HILL, IL 60403	CITY OF CREST HILL GENERAL NOTES	DATE: 11/10/2021 SHEET 3 OF 38 DRAWING NO. NOT-2

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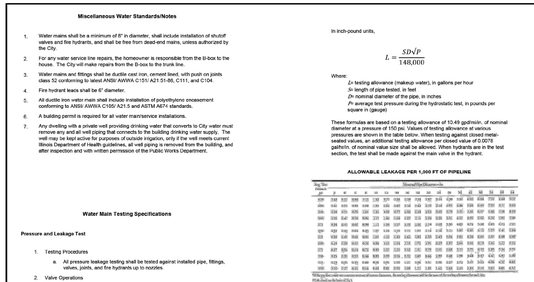

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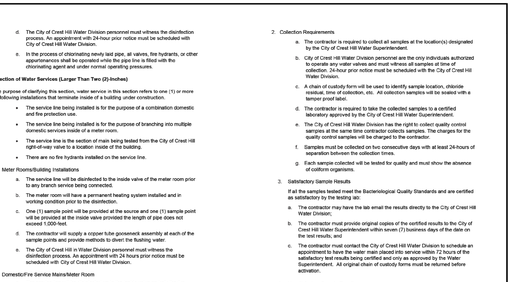

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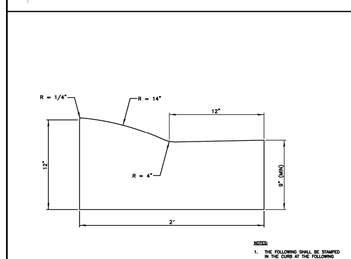

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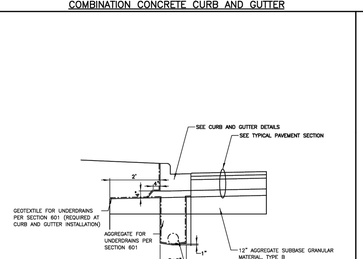
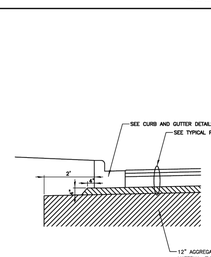


CONCRETE CURB AND GUTTER SECTION FOR HMA PAVEMENT WITH UNDERDRAIN FOR ALL MAJOR AND MINOR ARTERIALS



CONCRETE CURB AND GUTTER SECTION FOR HMA PAVEMENT WITHOUT UNDERDRAIN

CLIENT:	CITY OF CREST HILL	TITLE:	PROJ. NO.
City of CREST HILL Illinois	1610 PLAINFIELD ROAD CREST HILL, IL 60403	CITY OF CREST HILL PAVEMENT, CURB AND GUTTER, AND SIDEWALK STANDARD DETAILS	DATE: 11/10/2021 SHEET 5 OF 38 DRAWING NO. PVT-2

NO.	DATE	NATURE OF REVISION	DSGN.	DWN.	CHKD.	SCALE:	PLOT DATE: 11/10/2021	CAD USER: jspeakman	CHKD.	MODEL:	DetPlot
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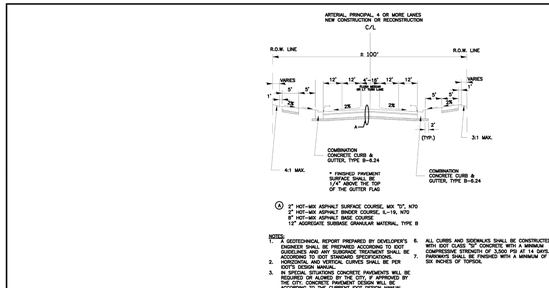

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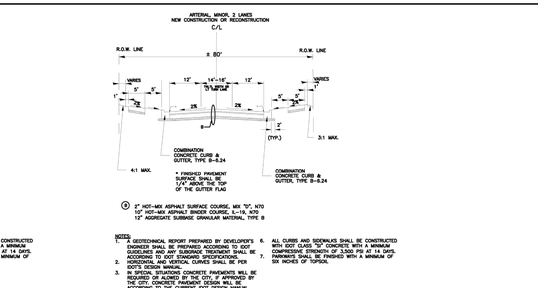

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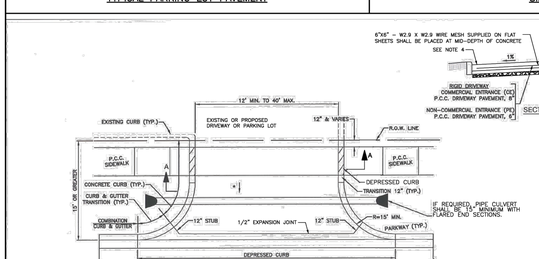

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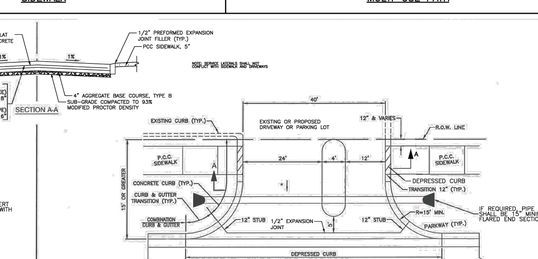


TYPICAL PAVEMENT SECTION (RESIDENTIAL)

TYPICAL PAVEMENT SECTION (RESIDENTIAL, BUILDING ON R.O.W.)

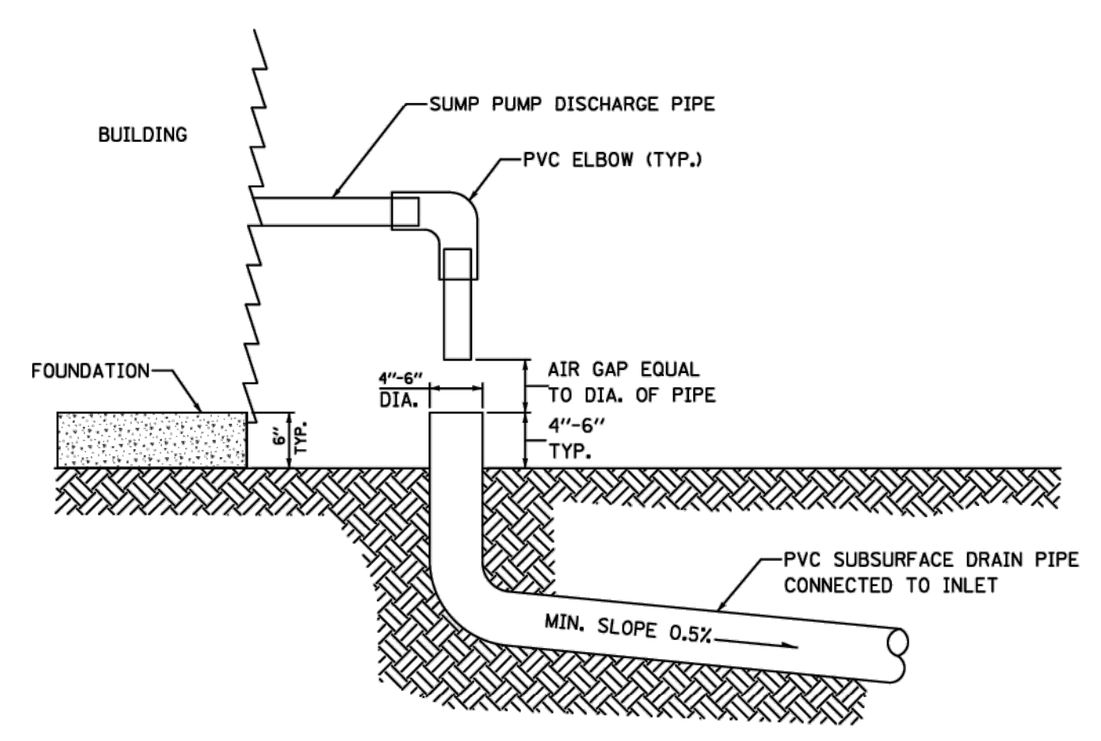
TYPICAL PARKING LOT PAVEMENT

SIDEWALK

MULTI-USE PATH

6"X6" – W2.9 X W2.9 WIRE MESH SUPPLIED ON FLAT SHEETS SHALL BE PLACED AT MID-DEPTH OF CONCRETE
SEE NOTE 4
1'
1'
1/2" PREFORMED EXPANSION JOINT FILLER (TYP.)
PCC SIDEWALK, 5"
NON-SPIKE MEDIAN'S SUB-BOT. FOR 24" MEDIANS
RIGID DRIVEWAY COMMERCIAL ENTRANCE (CE) P.C.C. DRIVEWAY PAVEMENT, 8"
NON-COMMERCIAL ENTRANCE (RE) P.C.C. DRIVEWAY PAVEMENT, 6"
4" AGGREGATE BASE COURSE, TYPE B
SUB-GRADE COMPACTED TO 93% MODIFIED PROCTOR DENSITY
SECTION AA
12' MIN. TO 40' MAX.
EXISTING CURB (TYP.)
EXISTING OR PROPOSED DRIVEWAY OR PARKING LOT
12" & VARIES
R.O.W. LINE
P.C.C. SIDEWALK
A
A
CONCRETE CURB (TYP.)
CURB & GUTTER TRANSITION (TYP.)
DEPRESSED CURB TRANSITION 12"

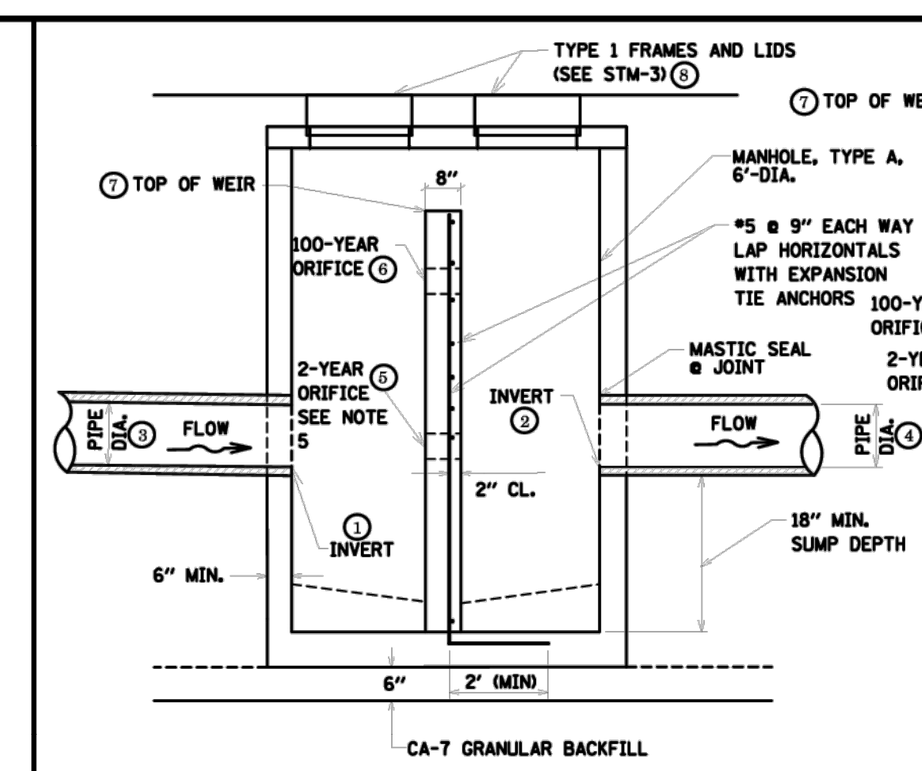
Item 2.

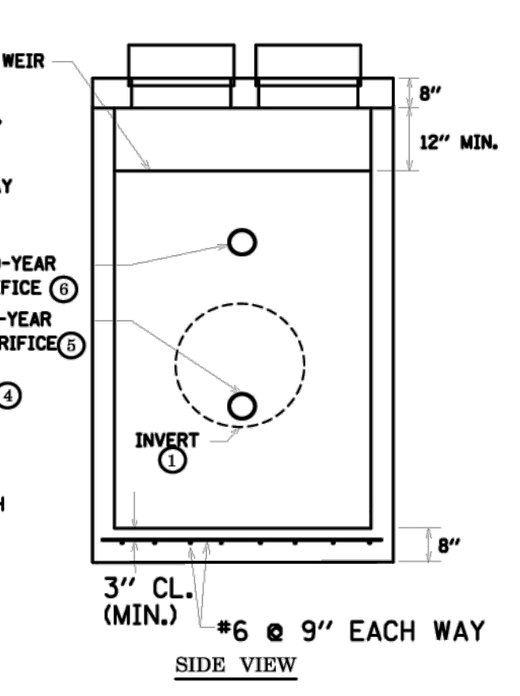


NOTES:

1. SUMP PUMP CONNECTIONS TO OUTLET AT GRADE OR FOR RESIDENTIAL DEVELOPMENTS WITH AN ON-SITE STORMWATER CONTROL FACILITY, THE SUMP PUMP MAY BE CONNECTED INTO THE STORM SEWER SYSTEM LOCATED OUTSIDE THE PUBLIC RIGHT-OF-WAY, AT A STRUCTURE.
2. SUMP PUMP DISCHARGE SHALL BE DIRECTED AWAY FROM ADJACENT PROPERTIES, AND OUTLET SHALL BE LOCATED A MINIMUM OF 10 FEET FROM PROPERTY LINES. INSTALLATION OF "POP-UPS" ARE NOT RECOMMENDED. THE CITY SHALL ASSUME NO RESPONSIBILITY FOR ANY ISSUES RESULTING FROM THEIR INSTALLATION.
3. INSTALLER/OWNER ASSUMES FULL RESPONSIBILITY AND LIABILITY FOR ANY AND ALL DAMAGE TO UTILITIES OR ADJOINING PROPERTIES.
4. INSTALLATION OF SUMP PUMP DISCHARGE LINES MUST BE INSPECTED BY THE CITY PUBLIC WORKS DEPARTMENT.

SUMP PUMP CONNECTION



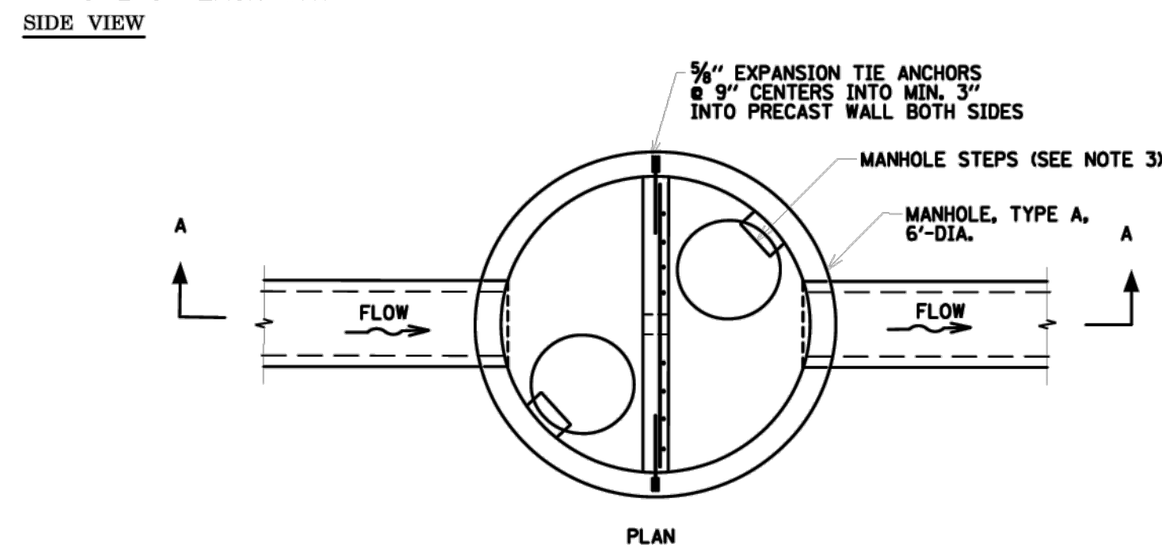


NOTES:

1. RESTRICTOR ORIFICES SHALL BE CAST INTO THE CONCRETE WEIR WALL
2. WATERTIGHT CONNECTIONS REQUIRED BETWEEN STRUCTURE AND PIPE AND STRUCTURE WALLS/BASE AND WEIR WALL CONFORMING TO ASTM C-923
3. COATED CAST IRON MANHOLE STEPS SHALL BE PROVIDED IN EACH CHAMBER AT 16" ON CENTER
4. EXTERIOR JOINTS SHALL BE WRAPPED WITH MACWRAP OR APPROVED EQUAL
5. MINIMUM ORIFICE SIZE IS 2.5"

TABLE TO BE COMPLETED BY DESIGNER AND INCLUDED IN PLANS FOR EACH PROJECT

	#	RS#1	RS#2	RS#3	RS#4
UPSTREAM INVERT ELEV	1				
DOWNSTREAM INVERT ELEV	2				
UPSTREAM PIPE DIAMETER (IN)	3				
DOWNSTREAM PIPE DIAMETER (IN)	4				
2-YEAR ORIFICE SIZE (IN)	5				
2-YEAR ORIFICE ELEV					
100-YEAR ORIFICE SIZE (IN)	6				
100-YEAR ORIFICE ELEV					
TOP OF WEIR ELEV	7				
STRUCTURE RIM ELEV	8				



DETENTION POND RESTRICTOR STRUCTURE

CLIENT: City of CREST HILL Illinois

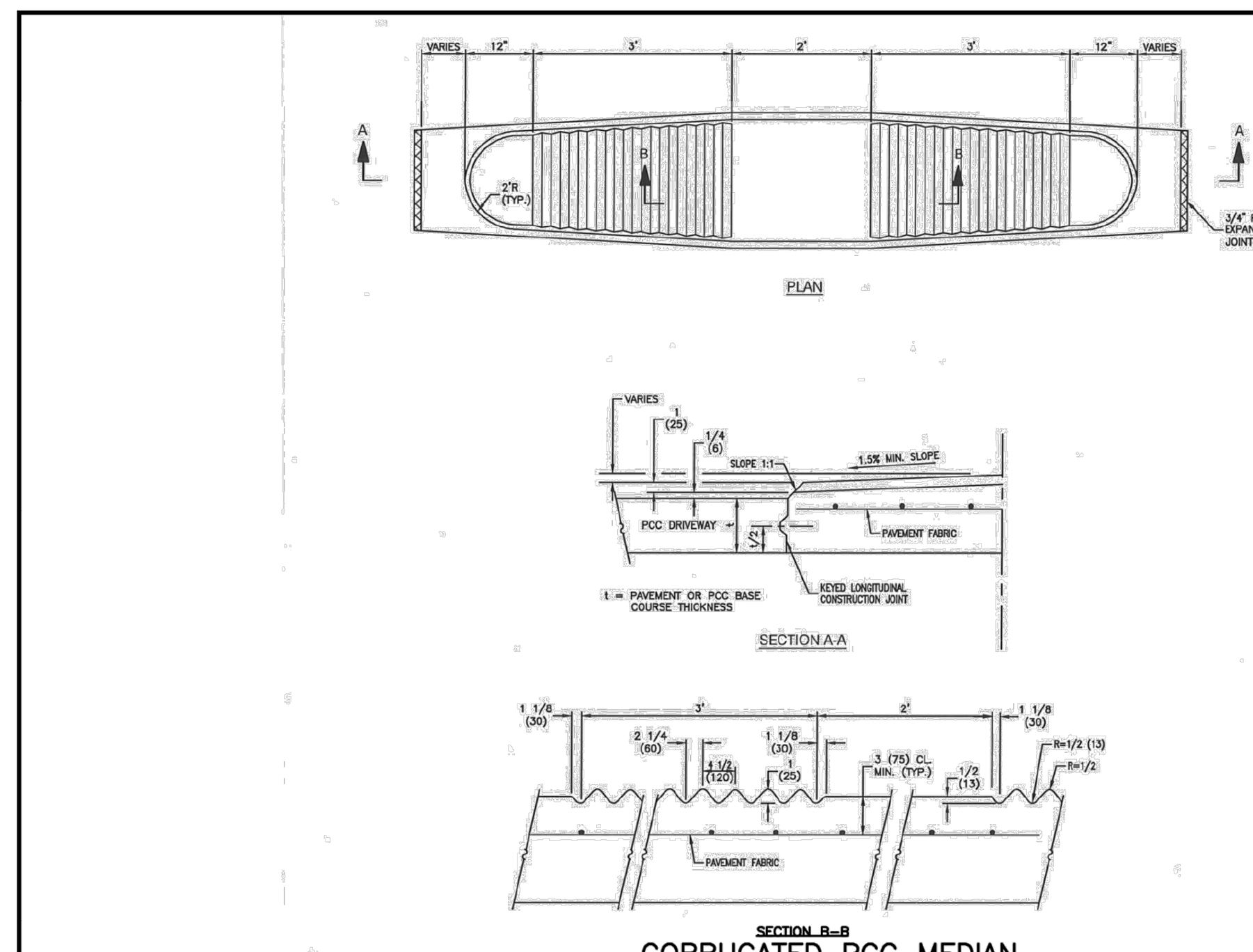
CITY OF CREST HILL
1610 PLAINFIELD ROAD
CREST HILL, IL 60403

NO.	DATE	NATURE OF REVISION	CHKD.	
FILE NAME	N:\CRESTHILL\210328\Civil\Ref\details.dgn			

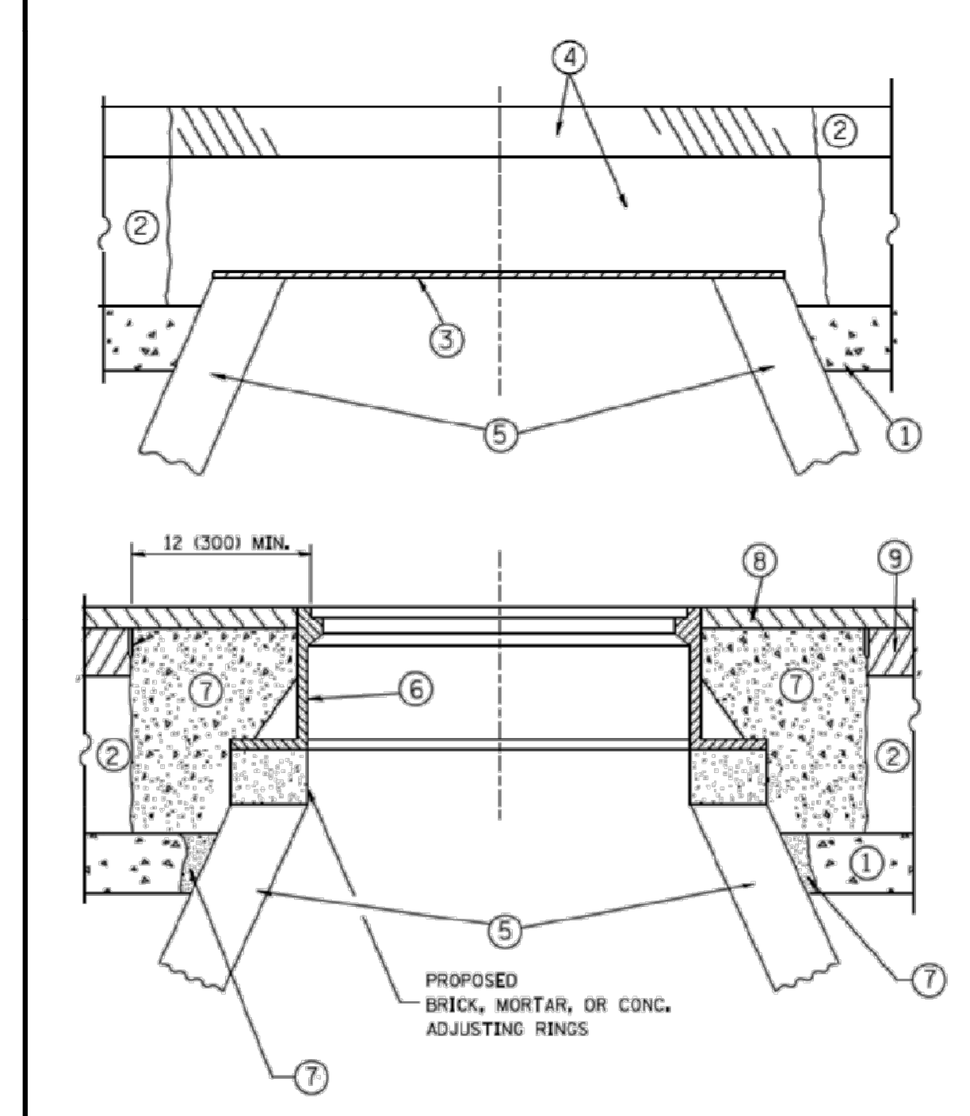
DSGN. / DWN. / CHKD. / SCALE: / PLOT DATE: 11/10/2021 / CAD USER: Jspeelman / MODEL: Default

TITLE: **CITY OF CREST HILL STORM SEWER SYSTEM DETAILS**

PROJ. NO. / DATE: 11/10/2021 / SHEET 24 OF 38 / DRAWING NO. STM-5



CORRUGATED PCC MEDIAN



STAGE 1 (BEFORE PAVEMENT MILLING)
A) REMOVE A MINIMUM OF 12" OF THE PAVEMENT FROM AROUND THE STRUCTURE.
B) REMOVE THE EXISTING FRAME AND LID FROM THE STRUCTURE
C) COVER THE STRUCTURE OPENING WITH A 36" DIAMETER METAL PLATE.
D) BACKFILL WITH CRUSHED STONE AND A MINIMUM 1 1/2" THICK HMA SURFACE MIX APPROVED BY THE ENGINEER.

STAGE 2 (AFTER PAVEMENT MILLING)
A) REMOVE THE HMA SURFACE MIX AND CRUSHED STONE.
B) INSTALL THE FRAME AND LID; ADJUST THE FRAME TO ITS FINAL SURFACE ELEVATION.
C) THE SURROUNDING SPACE SHALL BE FILLED WITH CLASS PP-1 CONCRETE TO THE ELEVATION OF THE SURFACE OF THE EXISTING BASE COURSE OR THE BINDER COURSE.

*UNLESS OTHERWISE SPECIFIED IN THE PLANS.

THE PROCEDURE EXPLAINED ABOVE SHALL CONFORM TO THE APPLICABLE PORTIONS OF SECTIONS 353, 406, 602, AND 603 OF THE STANDARD SPECIFICATIONS EXCEPT THAT "THE CONTRACTOR SHALL ADJUST THE STRUCTURES TO THE FINISHED PAVEMENT ELEVATION NO MORE THAN 5 CALENDAR DAYS PRIOR TO PLACEMENT OF THE FINAL LIFT OF SURFACE UNLESS APPROVED BY THE ENGINEER."

NOTES:

EXISTING BROKEN FRAMES AND LIDS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AND SHALL BE REPLACED AS DIRECTED BY THE ENGINEER. REPLACEMENT FRAMES AND LIDS WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS UNLESS A SEPARATE PAY ITEM HAS BEEN PROVIDED.

IF THE EXISTING LIDS ARE OPEN, THE FRAME WILL BE ADJUSTED TO THE ELEVATION OF THE MILLED PAVEMENT SURFACE PRIOR TO THE MILLING OPERATION. THE FRAME WILL BE REMOVED AND COVERED BY THE METAL PLATE.

THE METAL PLATE USED TO COVER THE STRUCTURE SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.

WHEN STRUCTURES ARE TO BE ADJUSTED OR RECONSTRUCTED, THE LOWERING AND RAISING OF THE FRAMES AND LIDS WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE COST OF THE CORRESPONDING PAY ITEM.

LOCATION OF STRUCTURES:

THE CONTRACTOR WILL BE REQUIRED TO KEEP A RECORD OF THE LOCATIONS OF THE BURIED STRUCTURES ACCORDING TO THE STATION AND DISTANCE LEFT OR RIGHT OF THE CENTERLINE OF PAVEMENT. UPON COMPLETION OF THE WORK, THE CONTRACTOR WILL DELIVER THE RECORD TO THE ENGINEER .

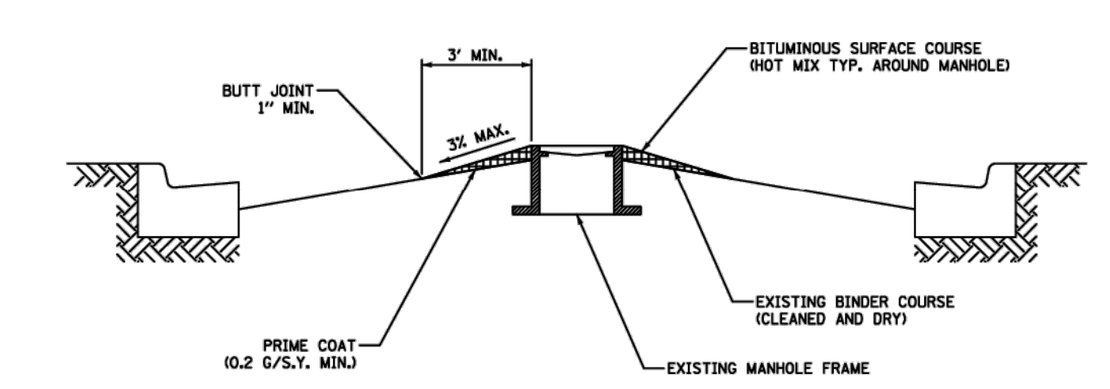
BASIS OF PAYMENT:

REMOVING FRAMES AND LIDS ON DRAINAGE AND UTILITY STRUCTURES IN THE PAVEMENT PRIOR TO MILLING, AND ADJUSTING TO FINAL GRADE PRIOR TO PLACING THE SURFACE COURSE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR "FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)."

THIS WORK WILL NOT BE PAID FOR WHEN DRAINAGE AND UTILITY STRUCTURES ARE SPECIFIED FOR PAYMENT AS STRUCTURE RECONSTRUCTION.

NEW FRAMES AND LIDS, WHEN SPECIFIED, WILL BE PAID FOR SEPARATELY.

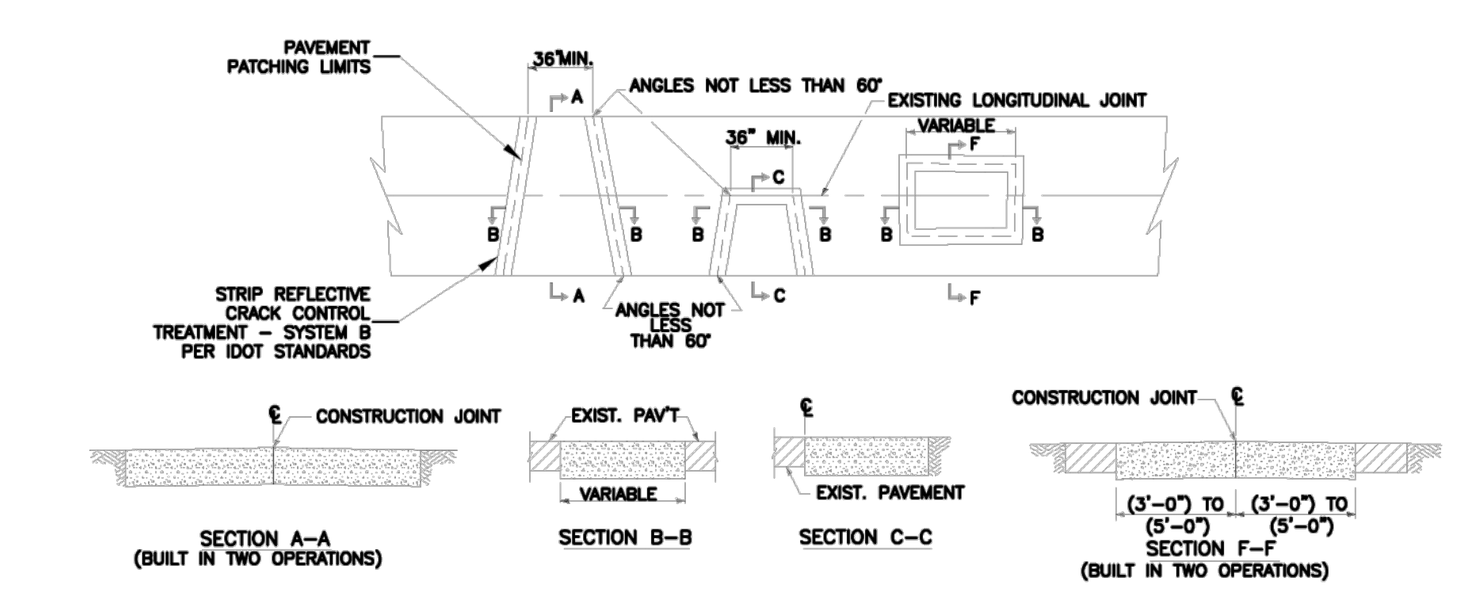
FRAME ADJUSTMENT WHEN MILLING



NOTES:

1. TO BE USED WHEN PLATING PROCEDURE OF FRAME ADJUSTMENT AND MILLING IS NOT POSSIBLE.
2. RAMP TO BE MAINTAINED THROUGHOUT THE WINTER BY DEVELOPER.
3. RAMP MATERIAL TO BE REMOVED BY MILLING OR OTHERWISE REMOVED BEFORE PLACEMENT OF FINAL SURFACE COURSE.

MANHOLE RAMPING DETAIL



GENERAL NOTES:

1. EXISTING TIE BARS SHALL BE EITHER CUT OR REMOVED. MARGINAL BARS SHALL BE CUT.
2. IN LOCATIONS WHERE BITUMINOUS PATCHES WILL BE OVERLAYED WITH BITUMINOUS SURFACE COURSE, STRIP REFLECTIVE CRACK CONTROL TREATMENT SHALL BE APPLIED TO ALL PAVEMENT JOINTS AND CENTERED ALONG THE RESPECTIVE JOINTS.
3. IN LOCATIONS WHERE THE PAVEMENT PATCH WILL NOT BE OVERLAYED, TWO (2) INCHES OF BITUMINOUS SURFACE COURSE SHALL BE LAID IN THE FINAL LIFT OF THE PATCH.
4. THE DEPTH OF THE BITUMINOUS PAVEMENT PATCH SHALL MATCH THE FULL DEPTH OF THE EXISTING PAVEMENT, BUT SHALL NOT BE LESS THAN THE CITY STANDARD FOR THE RESPECTIVE PAVEMENT SECTION.

HOT-MIX ASPHALT PAVEMENT PATCHING

CLIENT: City of CREST HILL Illinois

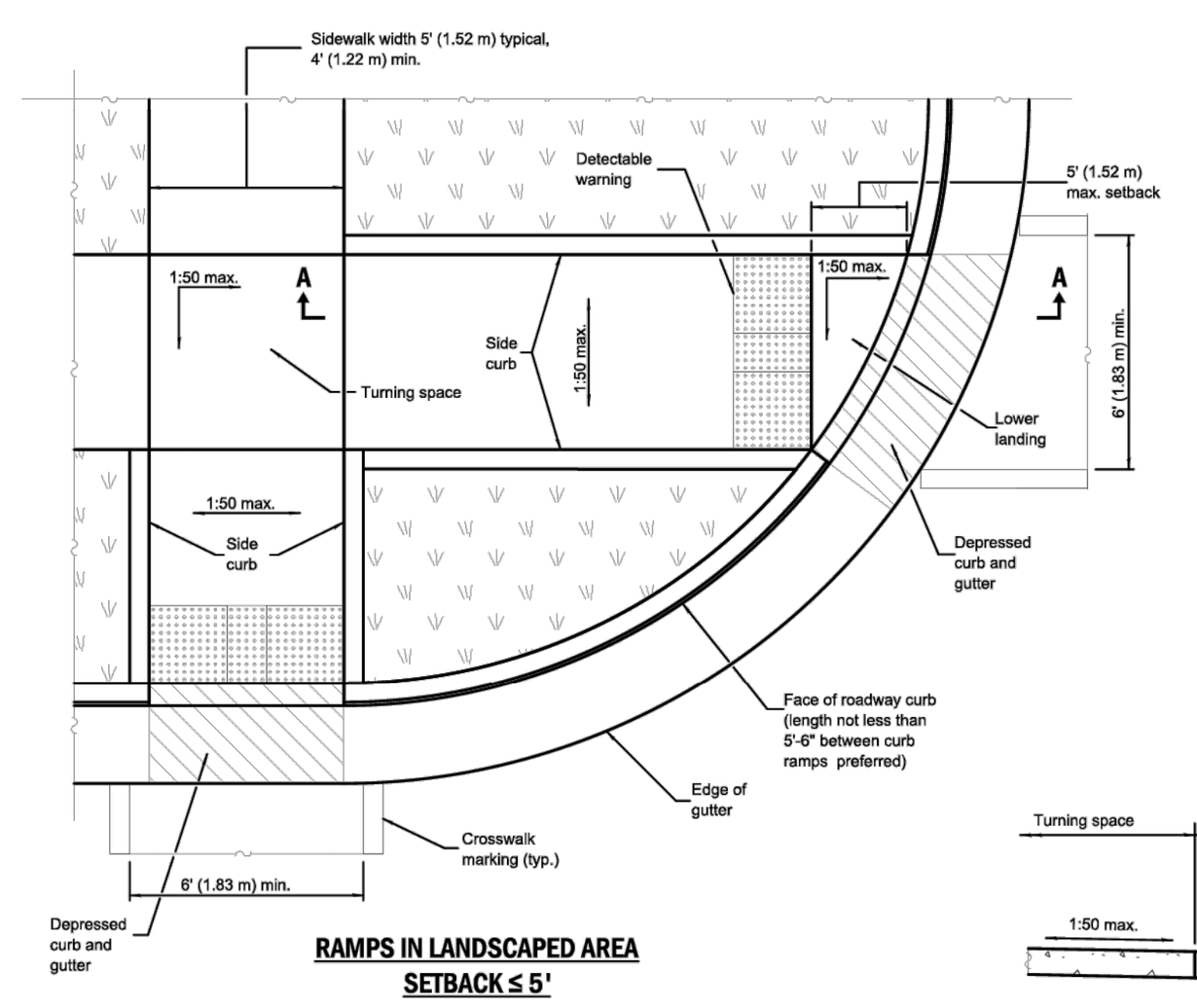
CITY OF CREST HILL
1610 PLAINFIELD ROAD
CREST HILL, IL 60403

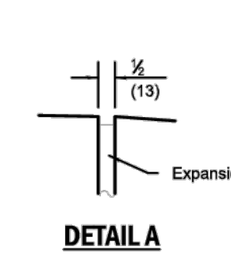
NO.	DATE	NATURE OF REVISION	CHKD.	
FILE NAME	N:\CRESTHILL\210328\Civil\Ref\details.dgn			

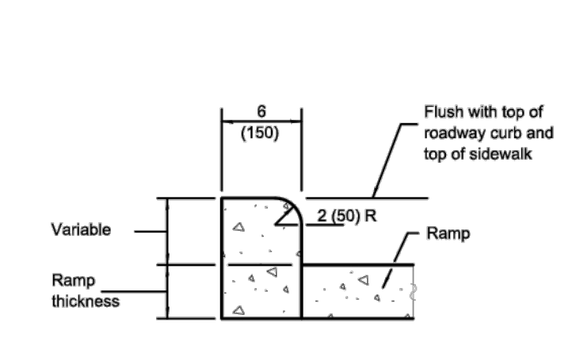
DSGN. / DWN. / CHKD. / SCALE: / PLOT DATE: 11/10/2021 / CAD USER: Jspeelman / MODEL: Default

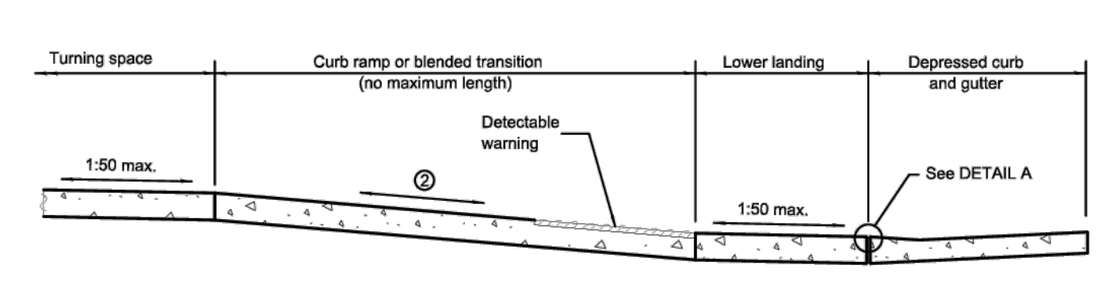
TITLE: **CITY OF CREST HILL PAVEMENT, CURB AND GUTTER, AND SIDEWALK STANDARD DETAILS**

PROJ. NO. / DATE: 11/10/2021 / SHEET 13 OF 38 / DRAWING NO. PVT-10









② The running slope of a curb ramp shall be 1:20 min. and 1:12 max. The running slope of a blended transition shall be 1:20 max.

GENERAL NOTES

See ADA notes on page NOT-1.

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

Where the turning space is constrained on a side opposite a ramp, the minimum length of the turning space in the direction of the ramp-run shall be 5' (1.52 m).

Where 1:50 maximum slope is shown, 1:64 is preferred.

Detectable warnings are shown in their ideal locations but the following placement tolerances are allowed.

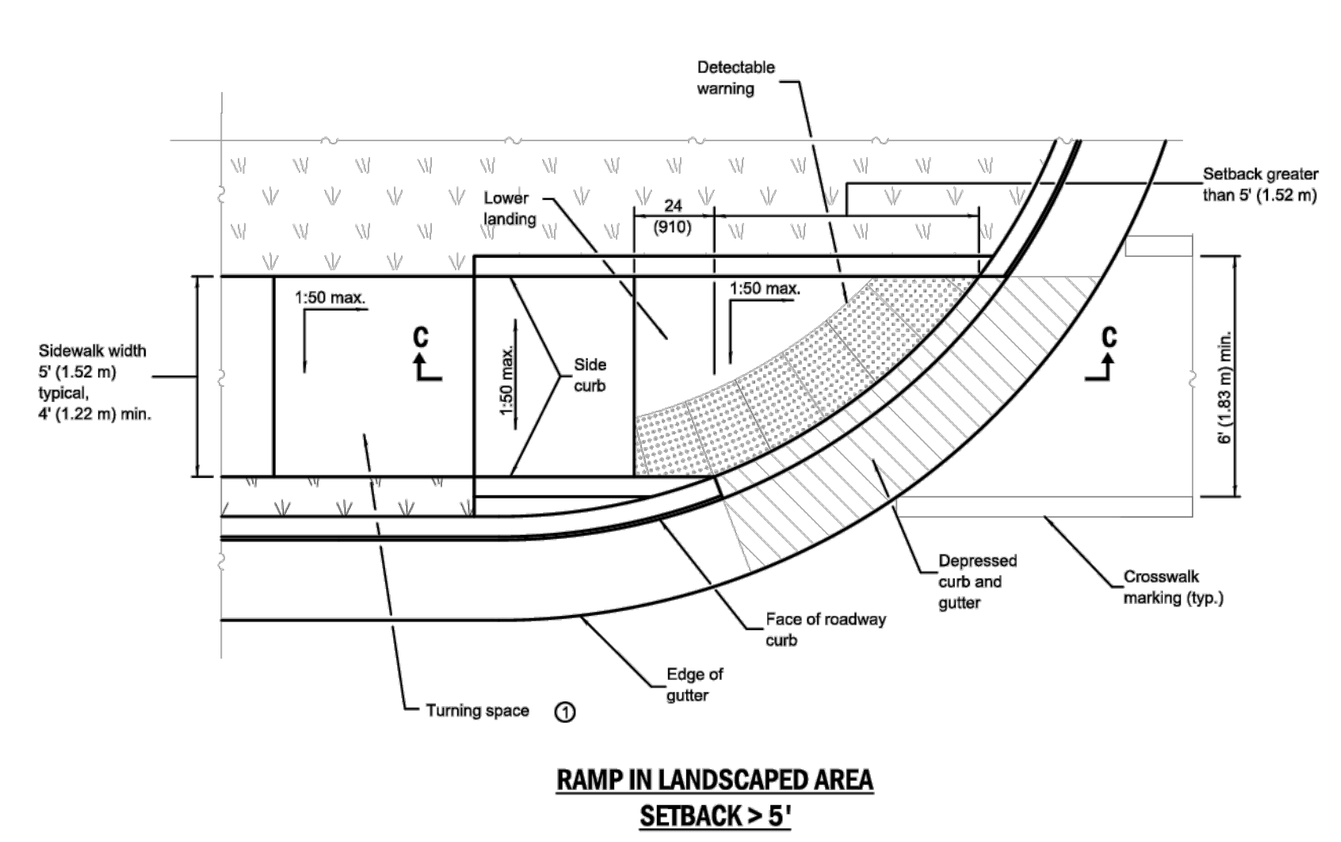
Side Border - Detectable warnings should extend the full width of the walking surface (excluding flared sides) but a border along each side up to 2 in. (50 mm) in width is allowed.

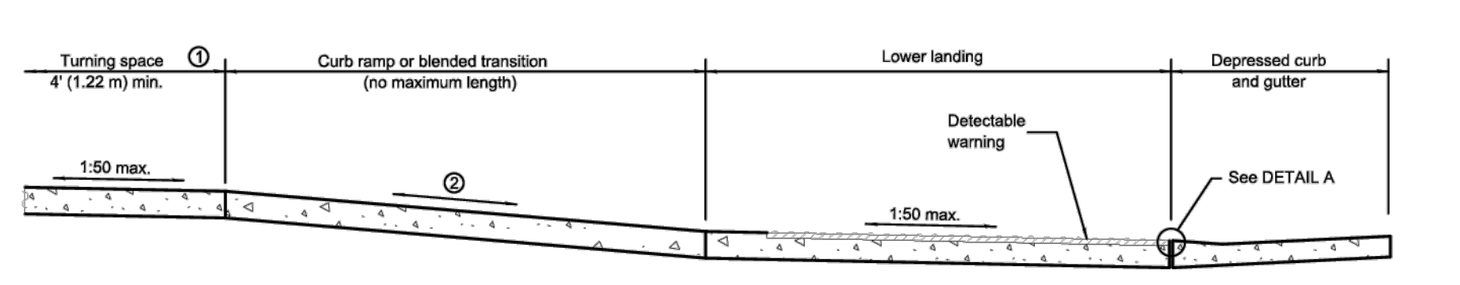
Curb Set-Back - Detectable warnings located at the back of curb should closely align with the curb but a gap up to 6 in. (150 mm) behind the curb is allowed.

See Standard 606001-XX for details of depressed curb adjacent to curb ramp.

All dimensions are in inches (millimeters) unless otherwise shown.

XX - Use current IDOT standard.



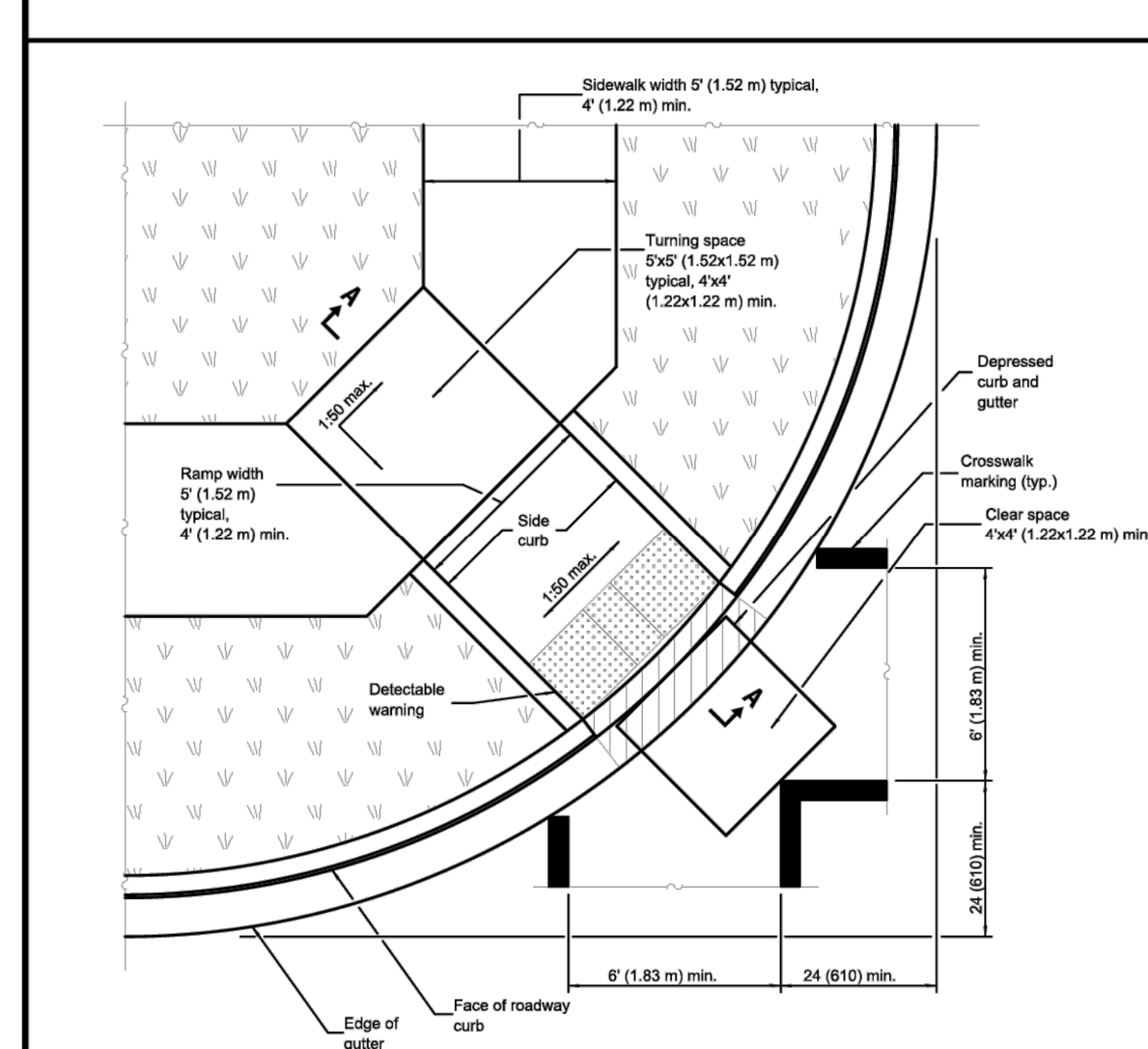


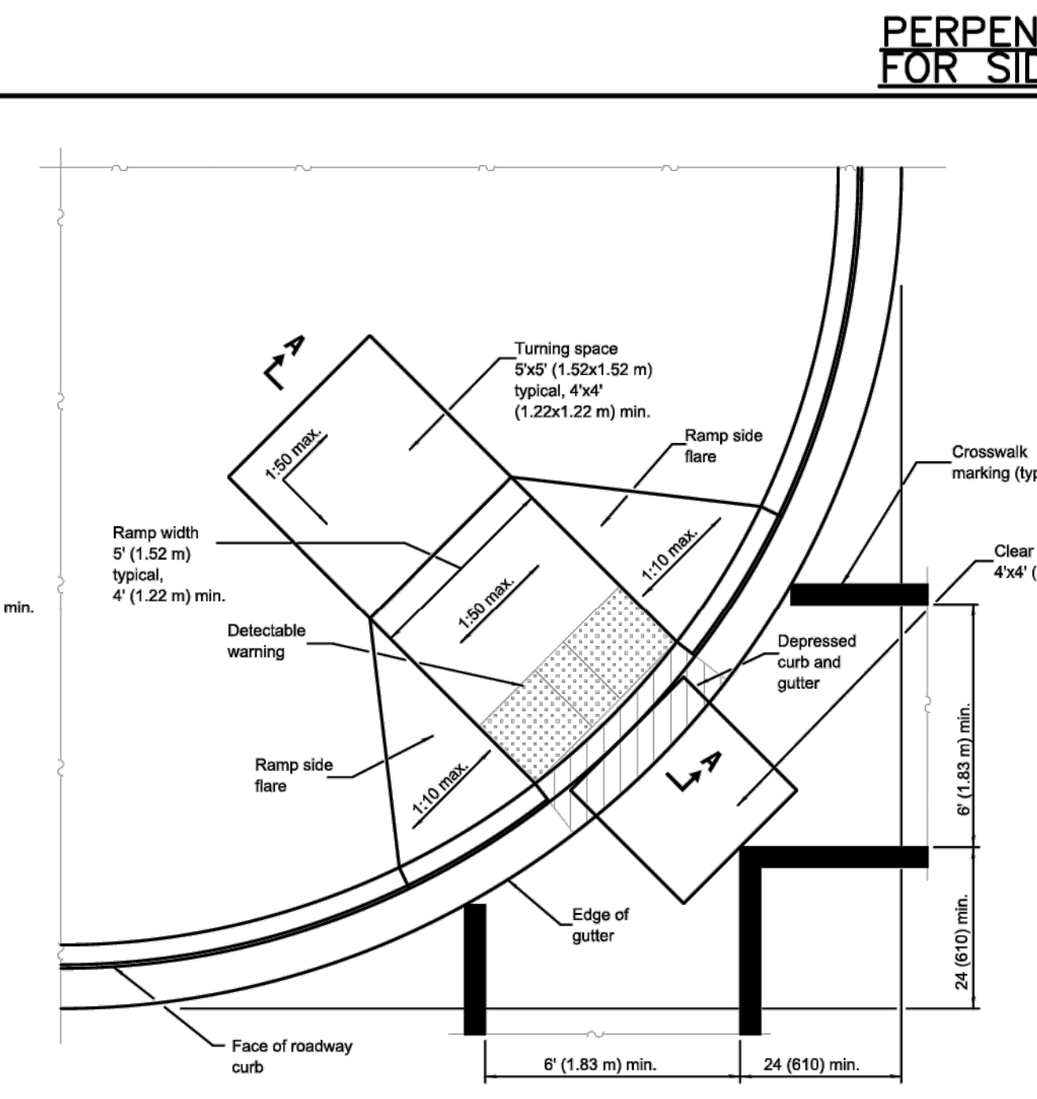
SECTION C-C

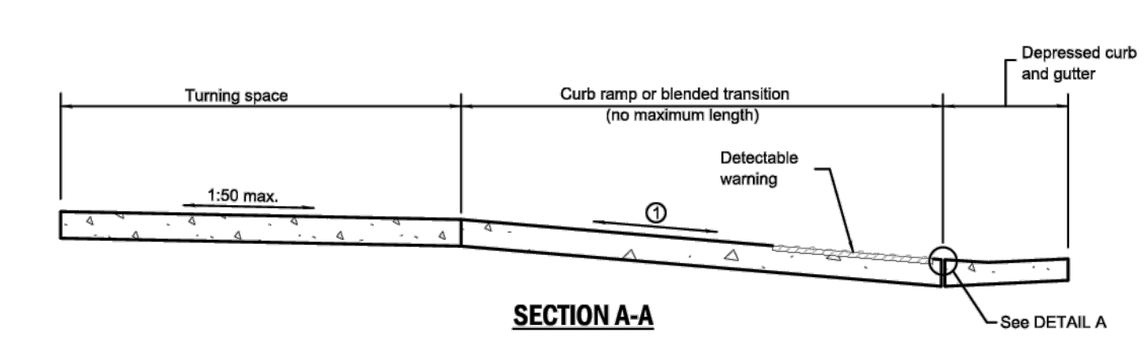
① This turning space not required for blended transitions.

② The running slope of a curb ramp shall be 1:20 min. and 1:12 max. The running slope of a blended transition shall be 1:20 max.

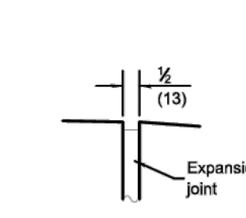
PERPENDICULAR CURB RAMPS FOR SIDEWALKS (424001-XX)

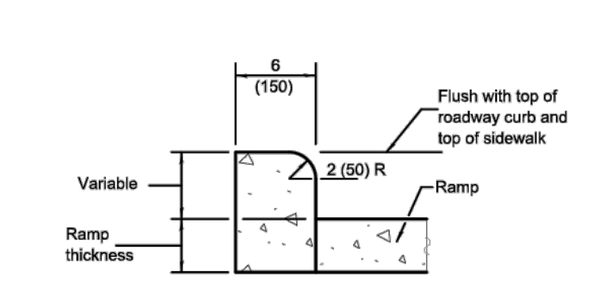






① The running slope of a curb ramp shall be 1:20 min. and 1:12 max. The running slope of a blended transition shall be 1:20 max.





GENERAL NOTES

See ADA notes on page NOT-1

This Standard shall only be used for curb radii of 20 ft. (6.1 m) or greater.

Where the turning space is constrained on a side opposite a ramp, the minimum length of the turning space in the direction of the ramp-run shall be 5' (1.52 m).

Where 1:50 maximum slope is shown, 1:64 is preferred.

Detectable warnings are shown in their ideal locations but the following placement tolerances are allowed.

Side Border - Detectable warnings should extend the full width of the walking surface (excluding flared sides) but a border along each side up to 2 in. (50 mm) in width is allowed.

Curb Set-Back - Detectable warnings located at the back of curb should closely align with the curb but a gap up to 6 in. (150 mm) behind the curb is allowed.

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

See Standard 606001-XX for details of depressed curb adjacent to curb ramp.

All dimensions are in inches (millimeters) unless otherwise shown.

XX - Use current IDOT standard.

DIAGONAL CURB RAMPS FOR SIDEWALKS (424006-XX)

CLIENT: City of CREST HILL Illinois

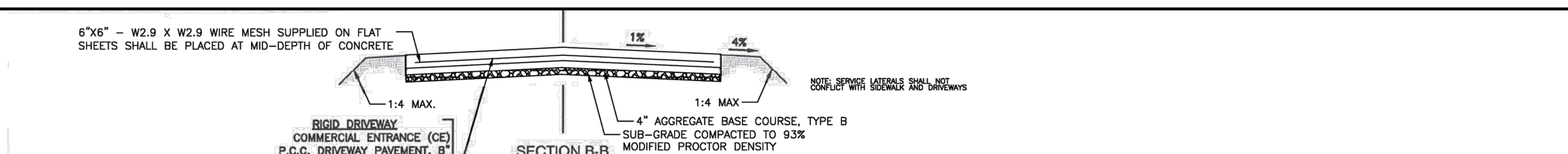
CITY OF CREST HILL
1610 PLAINFIELD ROAD
CREST HILL, IL 60403

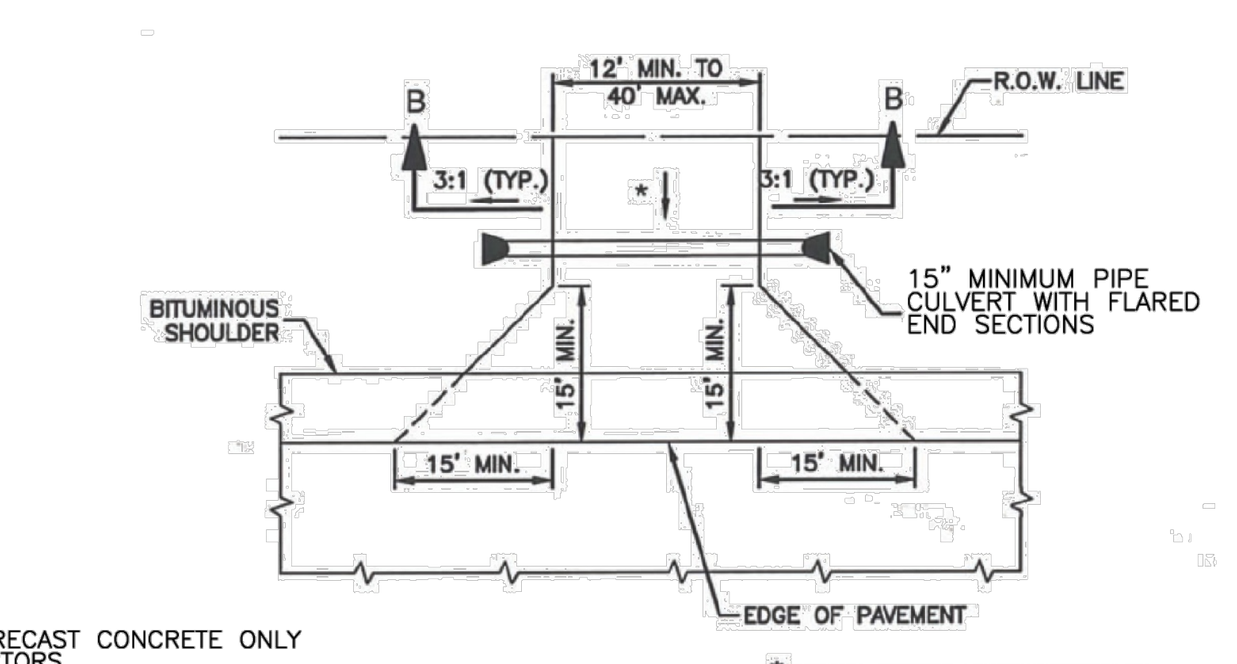
NO.	DATE	NATURE OF REVISION	CHKD.	
FILE NAME	N:\CRESTHILL\210328\Civil\Ref\details.dgn			

DSGN. / DWN. / CHKD. / SCALE: / PLOT DATE: 11/10/2021 / CAD USER: Jspeelman / MODEL: Default

TITLE: **CITY OF CREST HILL PAVEMENT, CURB AND GUTTER, AND SIDEWALK STANDARD DETAILS**

PROJ. NO. / DATE: 11/10/2021 / SHEET 9 OF 38 / DRAWING NO. PVT-6

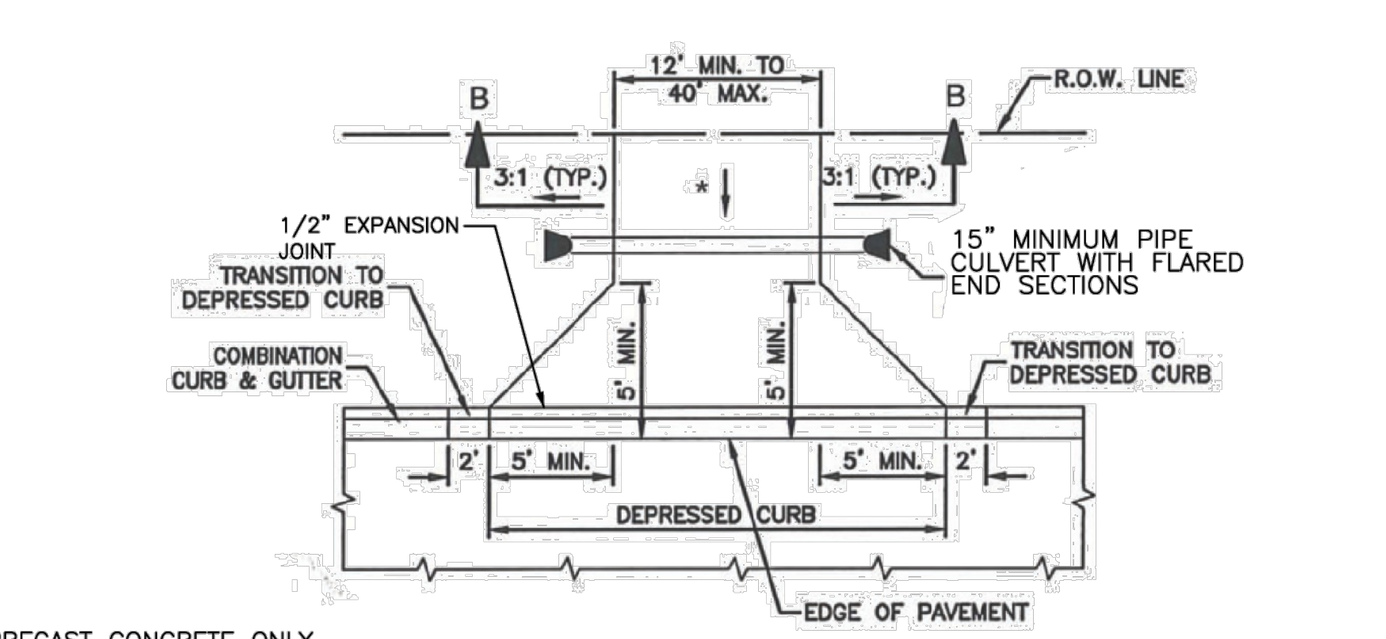




NOTES:

1. PIPE CULVERTS CAN BE PRECAST CONCRETE ONLY ON ARTERIALS AND COLLECTORS.
2. DRIVEWAYS SHALL BE IN ACCORDANCE WITH SECTION 423 OF THE IDOT STANDARD SPECIFICATIONS
3. SERVICE LATERALS SHALL NOT CONFLICT WITH SIDEWALK AND DRIVEWAYS

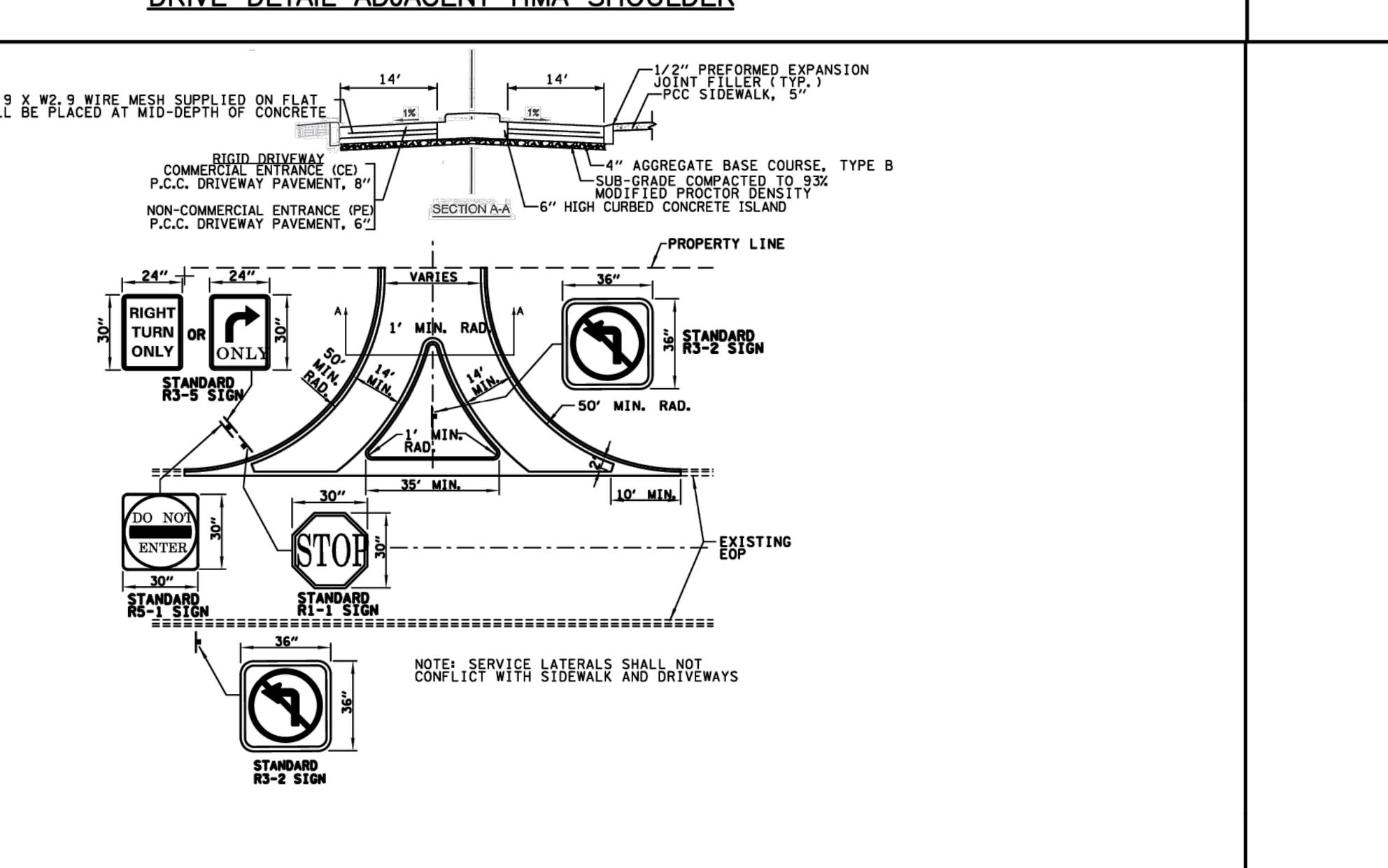
DRIVE DETAIL ADJACENT HMA SHOULDER



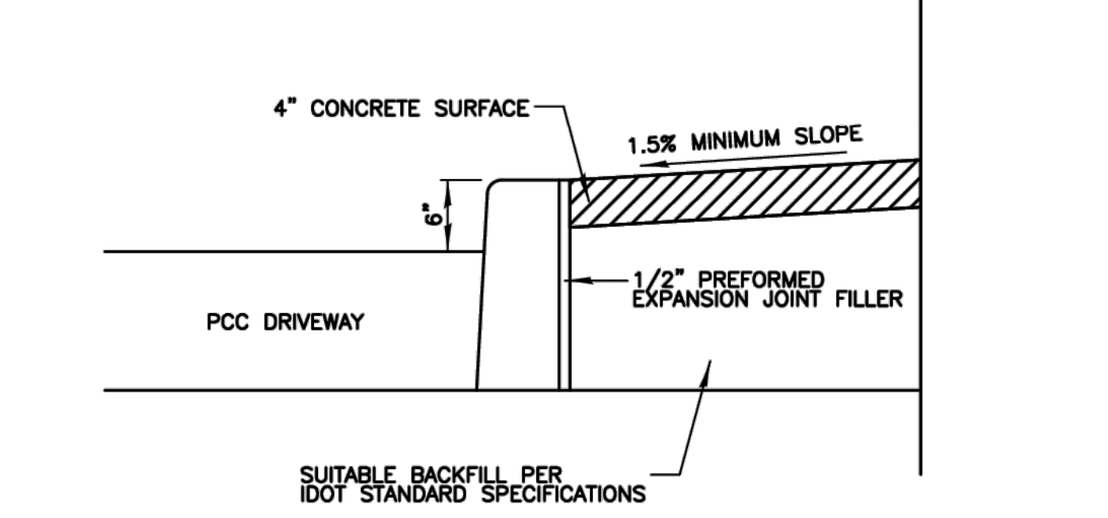
NOTES:

1. PIPE CULVERTS CAN BE PRECAST CONCRETE ONLY ON ARTERIALS AND COLLECTORS.
2. DRIVEWAYS SHALL BE IN ACCORDANCE WITH SECTION 423 OF THE IDOT STANDARD SPECIFICATIONS
3. SERVICE LATERALS SHALL NOT CONFLICT WITH SIDEWALK AND DRIVEWAYS

DRIVE DETAIL ADJACENT CURB & GUTTER



RIGHT-IN RIGHT-OUT DRIVEWAY ENTRANCE



BARRIER MEDIAN FOR COMMERCIAL DRIVES

CLIENT: City of CREST HILL Illinois

CITY OF CREST HILL
1610 PLAINFIELD ROAD
CREST HILL, IL 60403

NO.	DATE	NATURE OF REVISION	CHKD.	
FILE NAME	N:\CRESTHILL\210328\Civil\Ref\details.dgn			

DSGN. / DWN. / CHKD. / SCALE: / PLOT DATE: 11/10/2021 / CAD USER: Jspeelman / MODEL: Default

TITLE: **CITY OF CREST HILL PAVEMENT, CURB AND GUTTER, AND SIDEWALK STANDARD DETAILS**

PROJ. NO. / DATE: 11/10/2021 / SHEET 7 OF 38 / DRAWING NO. PVT-4

DATE	REVISIONS	DRAWN BY

Manhard CONSULTING™
One Overlook Point, Suite 290, Lincolnshire, IL 60069 ph:847.634.5550 fx:847.634.0095 manhard.com
Civil Engineers • Surveyors • Water Resource Engineers • Water & Wastewater Engineers
Construction Managers • Environmental Scientists • Landscape Architects • Planners

SEASONS AT CREST HILL
CITY OF CREST HILL
CONSTRUCTION DETAILS

PROJ. MGR.: JSE
PROJ. ASSOC.: MSL
DRAWN BY: OTHERS
DATE: 01-14-26
SCALE: N/A

SHEET **39 OF 44**

FRD.CRIL01

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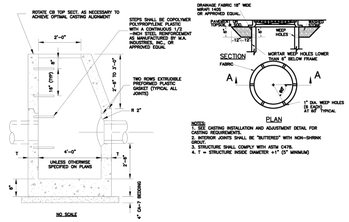
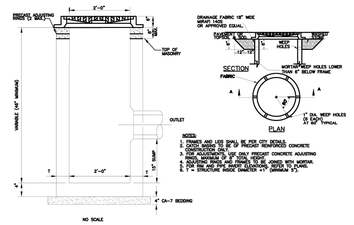
January 14, 2026 – 14:07 Dwg Name: P:\Frdcril01\dwg\Eng\Final Drawings\Plan Set\DETAILS.dwg Updated By: jeverard



CATCH BASIN, TYPE A



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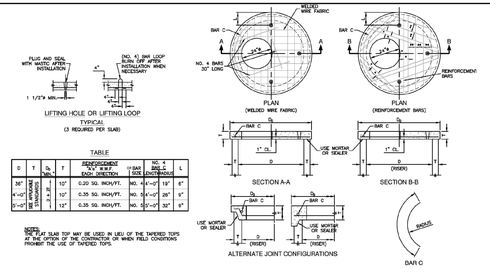
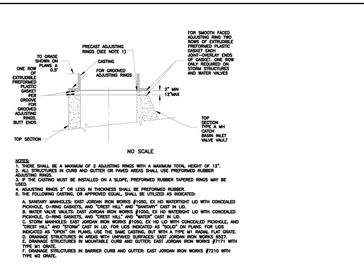


PRECAST REINFORCED FLAT SLAB TOP



CASTING INSTALLATION AND ADJUSTING

CLIENT: City of CREST HILL Illinois — CITY OF CREST HILL, 1610 PLAINFIELD ROAD, CREST HILL, IL 60403				DSGN.			TITLE: CITY OF CREST HILL STORM SEWER SYSTEM DETAILS
				DWN.			
				CHKD.			PROJ. NO.
				SCALE:			DATE: 11/10/2021
				PLOT DATE:	11/10/2021		SHEET 21 OF 38
				CAD USER:	jspearmon		DRAWING NO. STM-2
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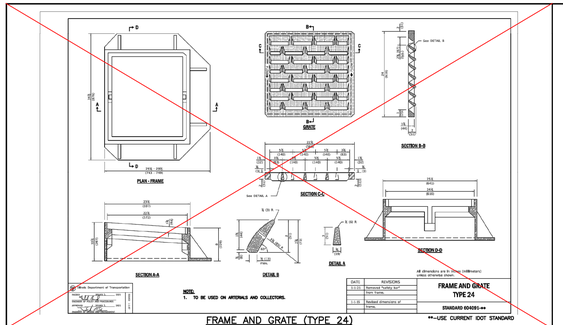
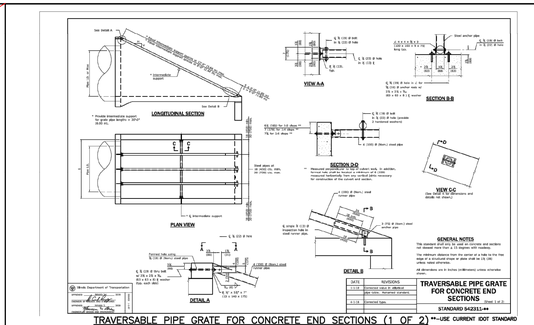
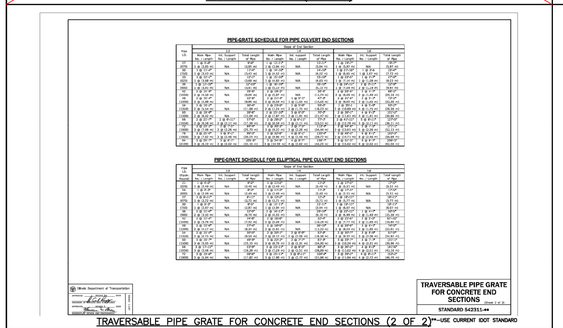


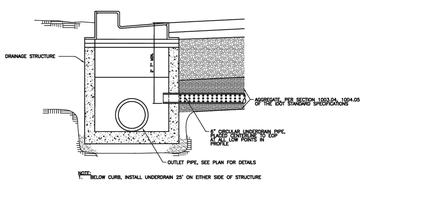
FRAME AND GRATE (TYPE 24)



TRAVERSABLE PIPE GRATE FOR CONCRETE END SECTIONS (1 OF 2)**-USE CURRENT IDOT STANDARD



TRAVERSABLE PIPE GRATE FOR CONCRETE END SECTIONS (2 OF 2)**-USE CURRENT IDOT STANDARD



UNDERDRAIN CONNECTION TO STRUCTURE AT LOW POINTS FOR ALL COLLECTOR AND RESIDENTIAL STREETS

CLIENT: City of CREST HILL Illinois — CITY OF CREST HILL, 1610 PLAINFIELD ROAD, CREST HILL, IL 60403				DSGN.			TITLE: CITY OF CREST HILL STORM SEWER SYSTEM DETAILS
				DWN.			
				CHKD.			PROJ. NO.
				SCALE:			DATE: 11/10/2021
				PLOT DATE:	11/10/2021		SHEET 23 OF 38
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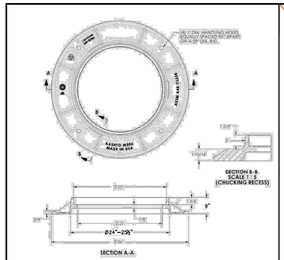

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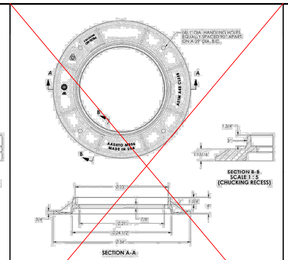
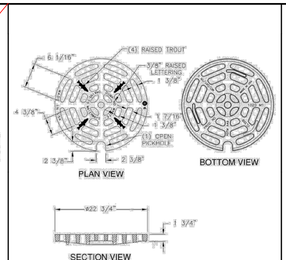
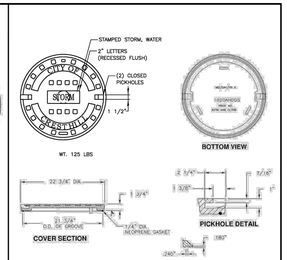


TYPE 1 FRAME (ALTERNATE)



TYPE 1 LID-OPEN LID



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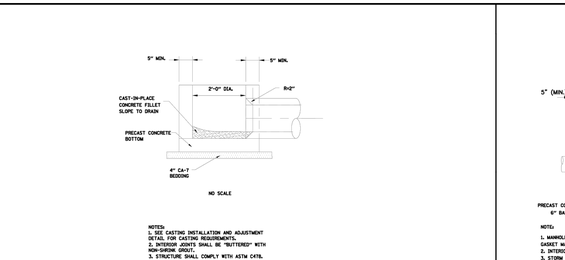
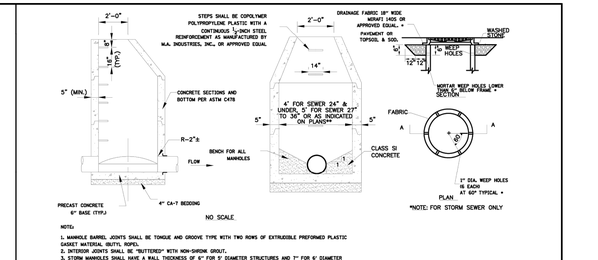
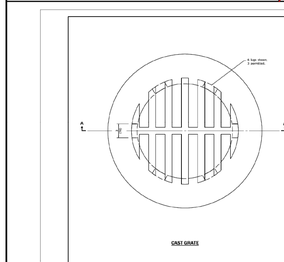


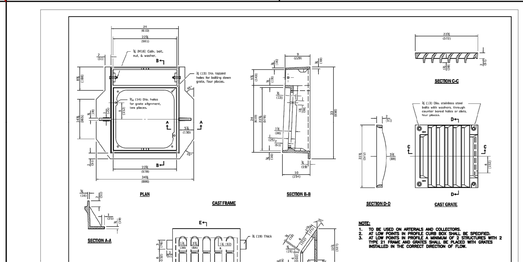
INLET



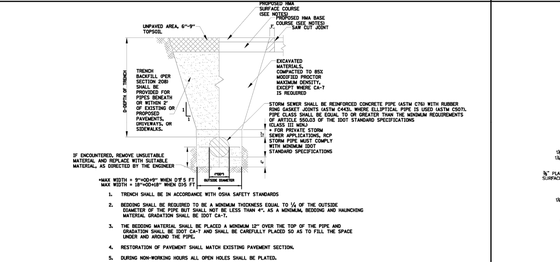
STORM MANHOLE, TYPE A



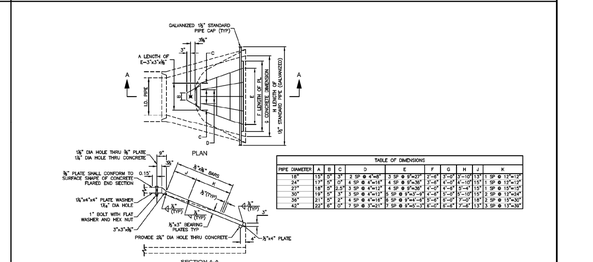
GRATE (TYPE 8)



FRAME AND GRATE (TYPE 21)

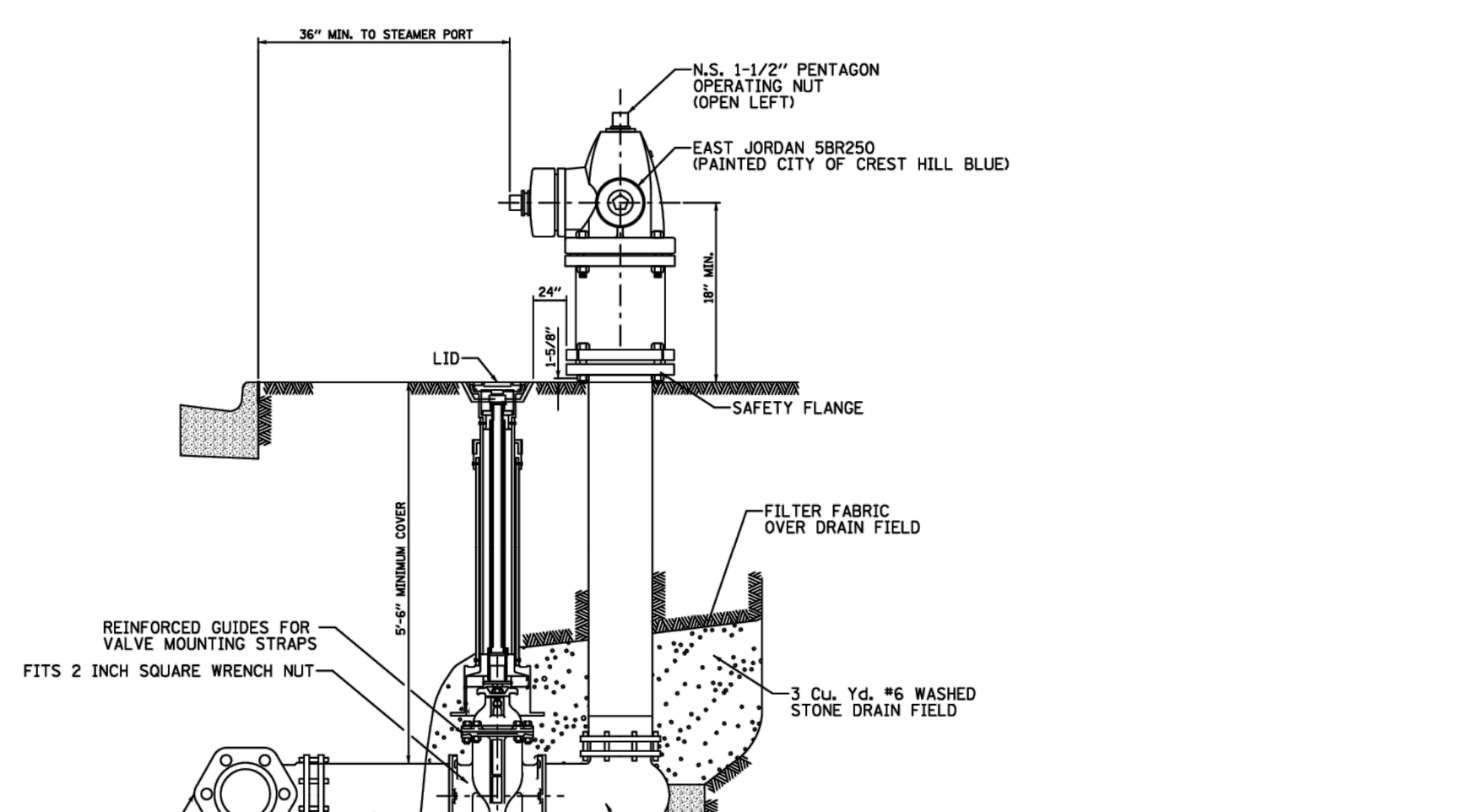


TRENCH BACKFILL FOR STORM SEWER



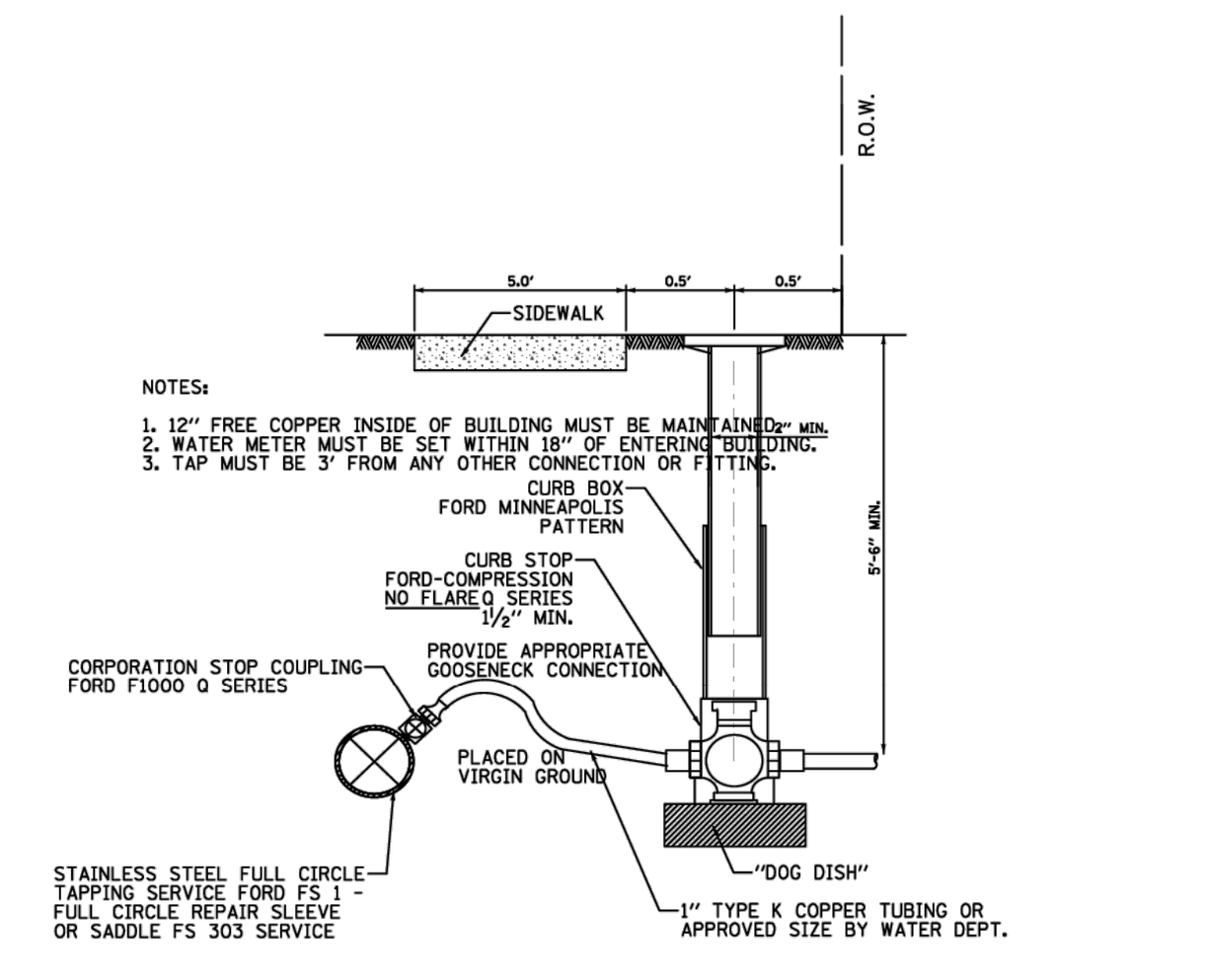
GRATING DETAIL

| | | | | | | |



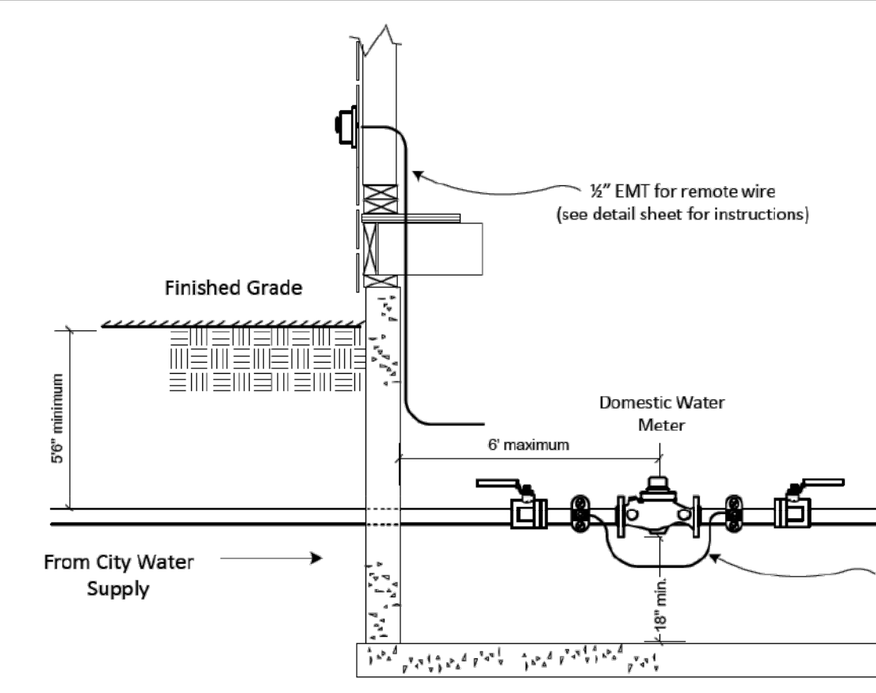
1. ALL MECHANICAL JOINT FITTINGS TO BE ASSEMBLED WITH STAINLESS STEEL TEFLON COATED NUTS AND BOLTS.
2. MECHANICAL JOINT RESTRAINT SHALL BE SERIES 2000PV.

TYPICAL FIRE HYDRANT



NOTES:
1. NO COUPLINGS PERMITTED BETWEEN CORPORATION AND CURB STOP.
2. NO COUPLINGS PERMITTED BETWEEN CURB STOP AND BUILDING.
3. BACKFILL MATERIAL SHALL BE CA-6.
4. B-BOXES MUST BE LOCATED IN A GRASSY NON-PAVED AREA.
5. SERVICES OF 1 1/2" DIAMETER SHALL USE A 2" I.D. UPPER SLEEVE CURB BOX.

WATER SERVICE CONNECTION



1. The water connection property owner is responsible for all labor, equipment, material, tools and transportation to complete the work..

2. The water customer, at their expense, must provide all suitable pipe connections. For water meters up to 2", two (2) full port ball valves, one immediately on the inlet side and one on the outlet side for the means of isolated the water meter is required.

3. The meter setting must have an electrical bonding jumper connected on the inlet and outlet sides of the piping. (See NEC requirements for proper cable size)

4. Minimum service size is 1" Type "K" copper tubing.

5. The meter setting must be accessible with a minimum clearances of 18" on all sides and 36" directly in front to allow servicing the meter.

Meter Information

¾" iPERL meter length - 9", meter spread – 14 ½"
1" iPERL meter length – 10 ¾". Meter spread 16 ¾"

WATER METER

Standards for Water Meter Remote Wiring and Conduit Installation

1. This standard covers the work to be undertaken for water meter remote wire and conduit installation. The property owner is responsible for providing all labor, equipment, material, tools and transportation to complete the work as described in this document.

2. All indoor conduit and all associated bends and fittings shall have a minimum inside trade size diameter of ½" and shall be electrical metallic tubing (EMT) type conduit.

3. The remote wire conduit shall be installed from a point, in the same room as the water meter, within 3 feet of the water meter, to a point on the outside wall of the building at a distance between 24" and 42" above finished grade.

4 .Where the conduit terminates at the outside wall of the building, the conduit shall extend through the wall and terminate flush with the finished surface of the outside wall. The outside reader will be installed over the conduit end and sealed against the weather.

5. The conduit shall be installed to a point on the front wall of the building, or within 6 feet of the front wall of the building if placed on the side wall of the building.

6. The point on the outside wall of the building where the conduit terminates shall be accessible at all times. The remote reader location will be determined and approved by the Water Operations Division. The location must be accessible to a meter reader year-round, must not be located within a fenced-in area, must not be located in an area that creates a hazard for the meter reader due to situations including, but not limited to;

Dogs or other potentially dangerous animals
Bushes or other obstructions
Ice or snow accumulations

7. All conduit installations must comply with the NEC requirements.

8. Where the conduit terminates at the outside wall of the building, a clear space of a minimum of 16" x 16" shall be provided on the surface of the wall suitable for mounting the remote readout device or transmitter.

9. The route the conduit takes from the water meter to the termination point on the outside wall must be the shortest, most direct route.

10. Only the remote meter wire shall be permitted to be installed inside the conduit.

11. All wire installed on the exterior of any building or structure, including wire exiting any water meter vault, shall be protected with a galvanized rigid metal electrical conduit specifically designed for exterior use and the path of the raceway approved by the City.

12. The City shall supply the remote meter wire. The owner shall provide a pull string (Greenlee 430 Poly Fishing Line or equivalent) within the conduit leaving an excess of at least 3 feet of string at both ends. Both ends of the fishing line must be clearly tagged with the words "Water Meter". The fishing line must be a continuous single piece without splices.

WATER METER WIRING AND CONDUIT INSTALLATION

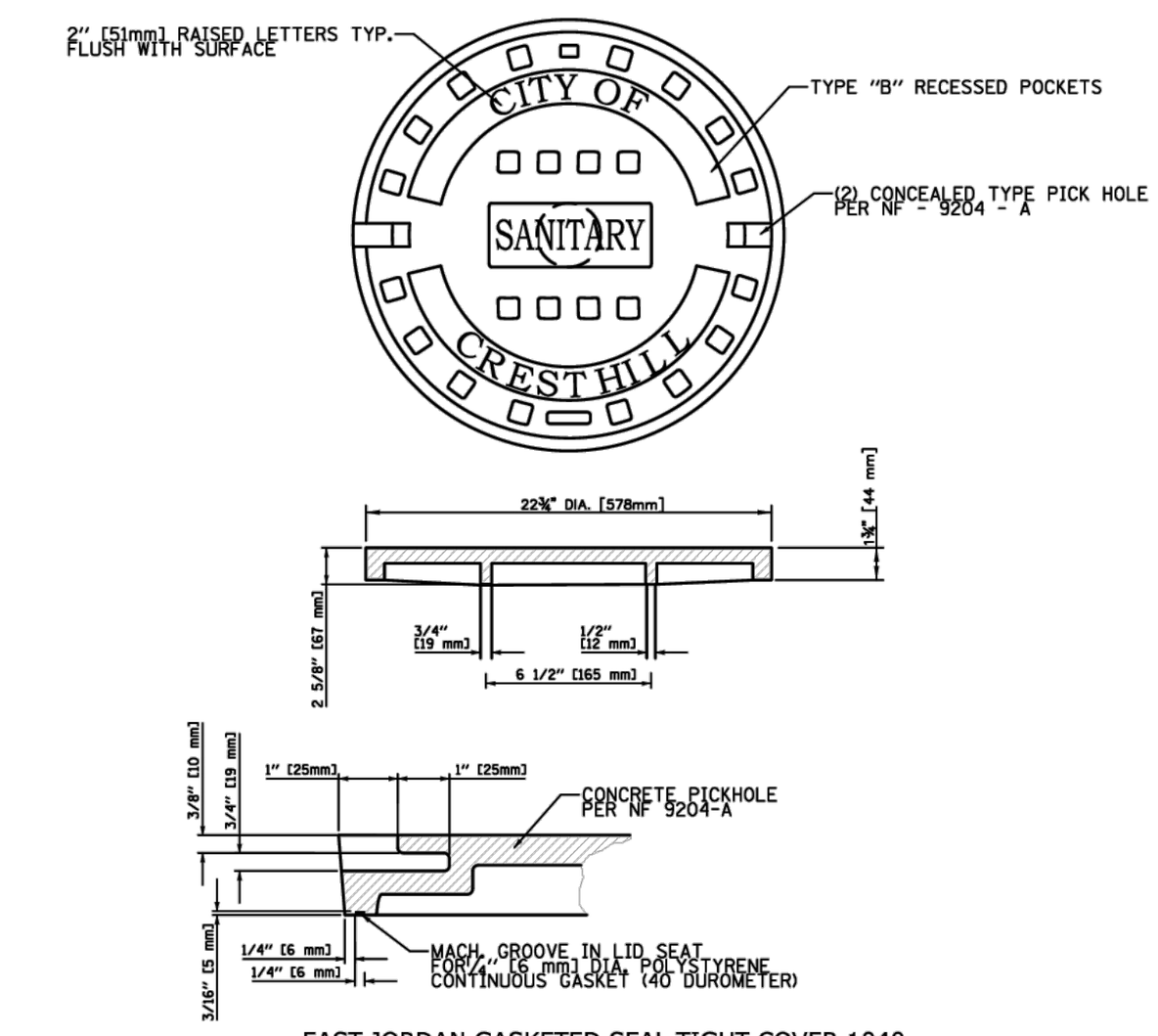
CLIENT: City of CREST HILL Illinois — CITY OF CREST HILL, 1610 PLAINFIELD ROAD, CREST HILL, IL 60403

NO.	DATE	NATURE OF REVISION	CHKD.
FILE NAME	N:\CRESTHILL\210328\Civil\Ref\details.dgn		

DSGN. / DWN. / CHKD. / SCALE: / PLOT DATE: 11/10/2021 / CAD USER: jspeelman / MODEL: Default

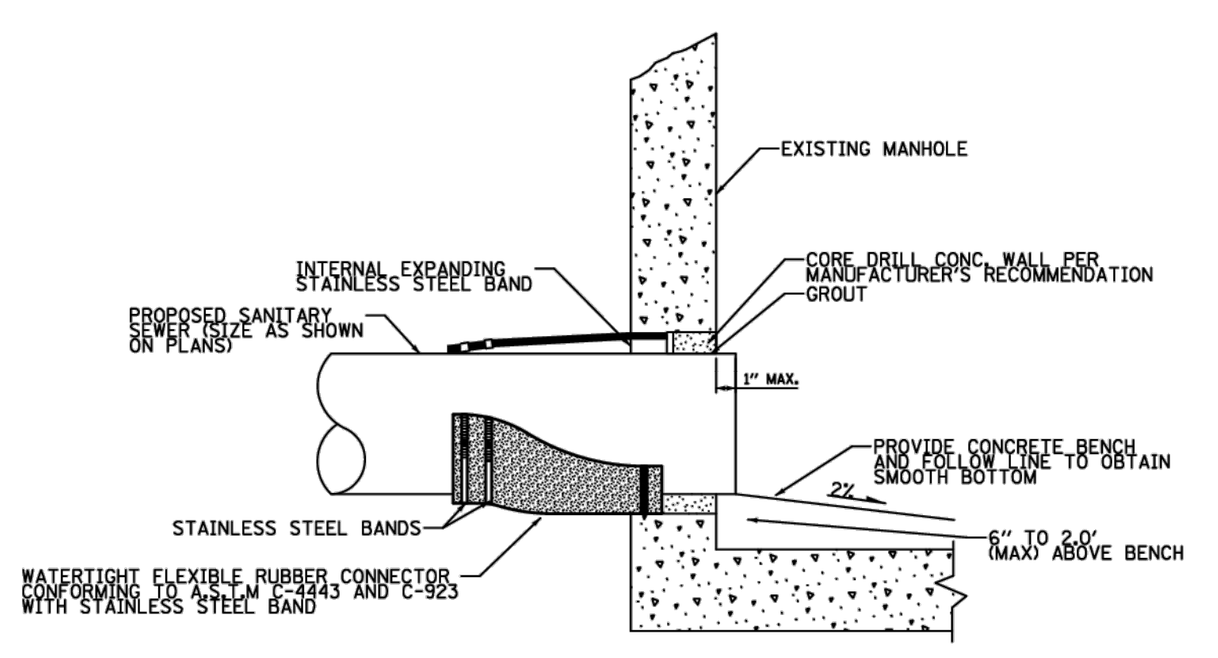
TITLE: CITY OF CREST HILL WATER DISTRIBUTION SYSTEM DETAILS

PROJ. NO. / DATE: 11/10/2021 / SHEET 26 OF 38 / DRAWING NO. WTR-2

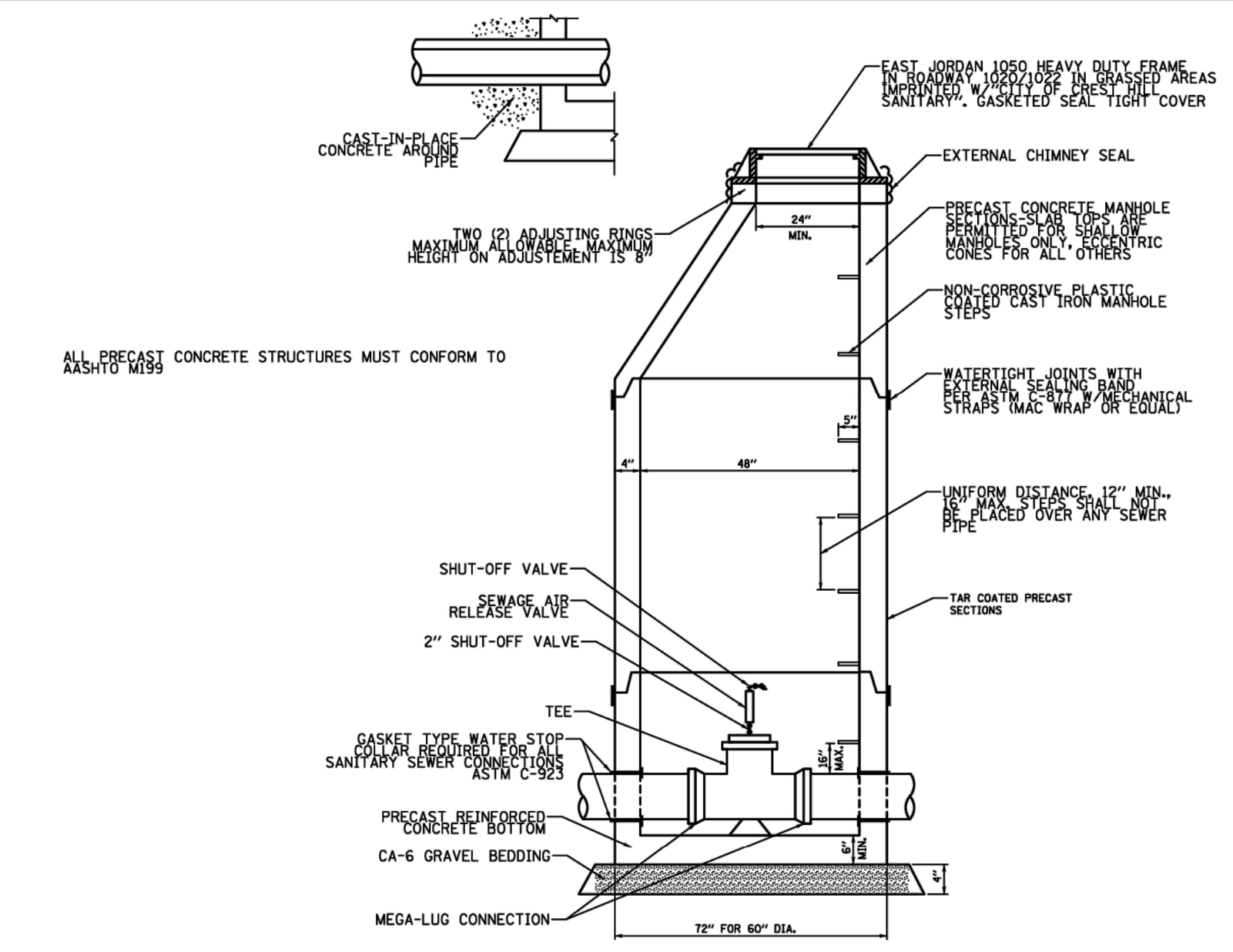


EAST JORDAN GASKETED SEAL TIGHT COVER 1040

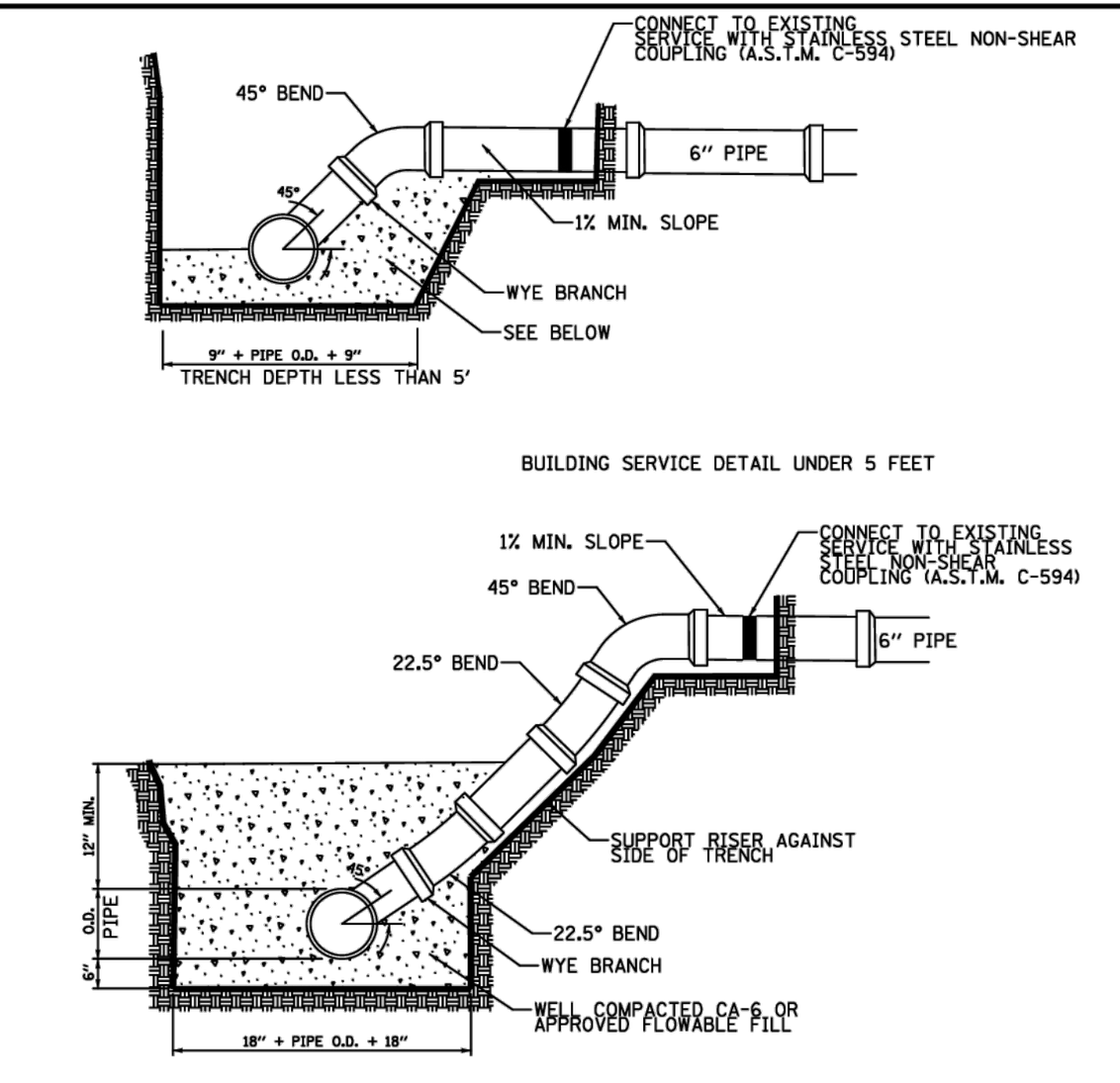
SANITARY MANHOLE SELF–SEALING LID



EXTERNAL SANITARY MANHOLE PIPE ENTRY



SANITARY SEWER AIR RELEASE MANHOLE



TRENCH DEPTH 5' AND GREATER

NOTES:
1. DEPTHS, 10' SDR 26 PVC SEWER PIPE PER ASTM D-3034 CELL CLASS 12454B
2. NEW SERVICES TO BE PVC OR CAST IRON ONLY CLAY NOT PERMITTED 4. SEE SAN-8 FOR BEDDING AND BACKFILL
3. SEE SAN-6 FOR BEDDING AND BACKFILL
4. WATER MAIN QUALITY PVC C909 PIPE IF OVER EXISTING UTILITY

BUILDING SERVICE RISER

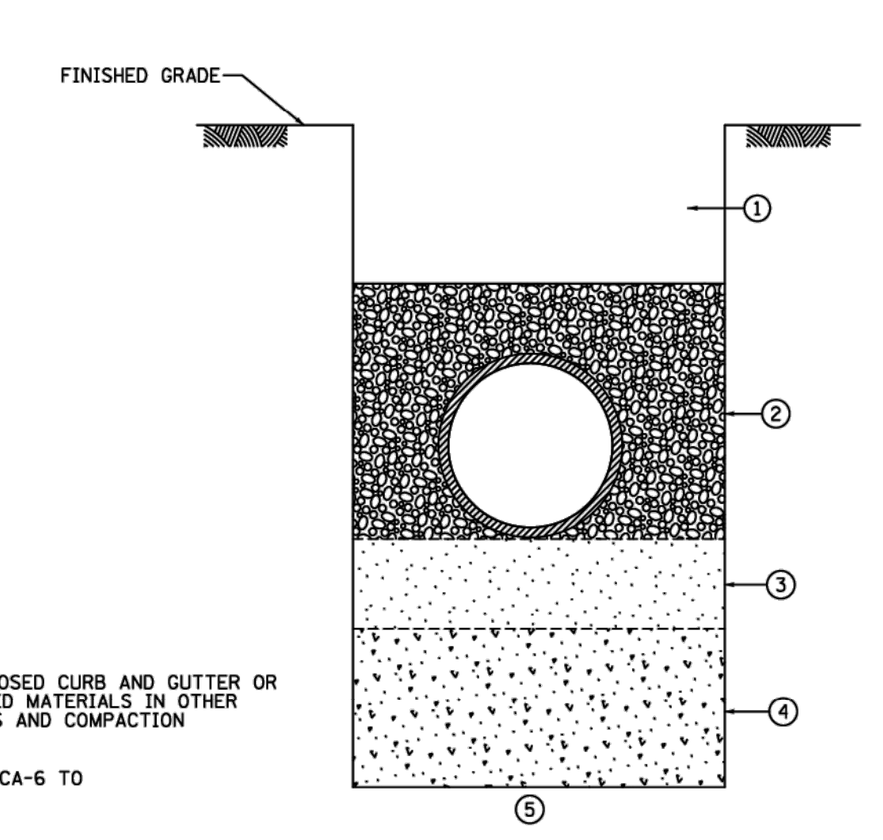
CLIENT: City of CREST HILL Illinois — CITY OF CREST HILL, 1610 PLAINFIELD ROAD, CREST HILL, IL 60403

NO.	DATE	NATURE OF REVISION	CHKD.
FILE NAME	N:\CRESTHILL\210328\Civil\Ref\details.dgn		

DSGN. / DWN. / CHKD. / SCALE: / PLOT DATE: 11/10/2021 / CAD USER: jspeelman / MODEL: Default

TITLE: CITY OF CREST HILL SANITARY SEWER SYSTEM DETAILS

PROJ. NO. / DATE: 11/10/2021 / SHEET 29 OF 38 / DRAWING NO. SAN-2



(1) TRENCH BACKFILL UNDER PAVEMENT, CURB AND GUTTER AS INDICATED IN ROAD SUBGRADES AND WITHIN 2' OF ANY PROPOSED CURB AND GUTTER OR SIDEWALK. MECHANICALLY COMPACTED BACKFILL OF EXCAVATED MATERIALS IN OTHER LOCATIONS IF APPROVED BY THE PROVISIONS FOR MATERIALS AND COMPACTION REQUIREMENTS.

(2) FOR SANITARY SEWER PVC: COMPACTED GRANULAR MATERIAL CA-6 TO 12" ABOVE TOP PIPE. (ALSO SEE NOTE #1 BELOW)

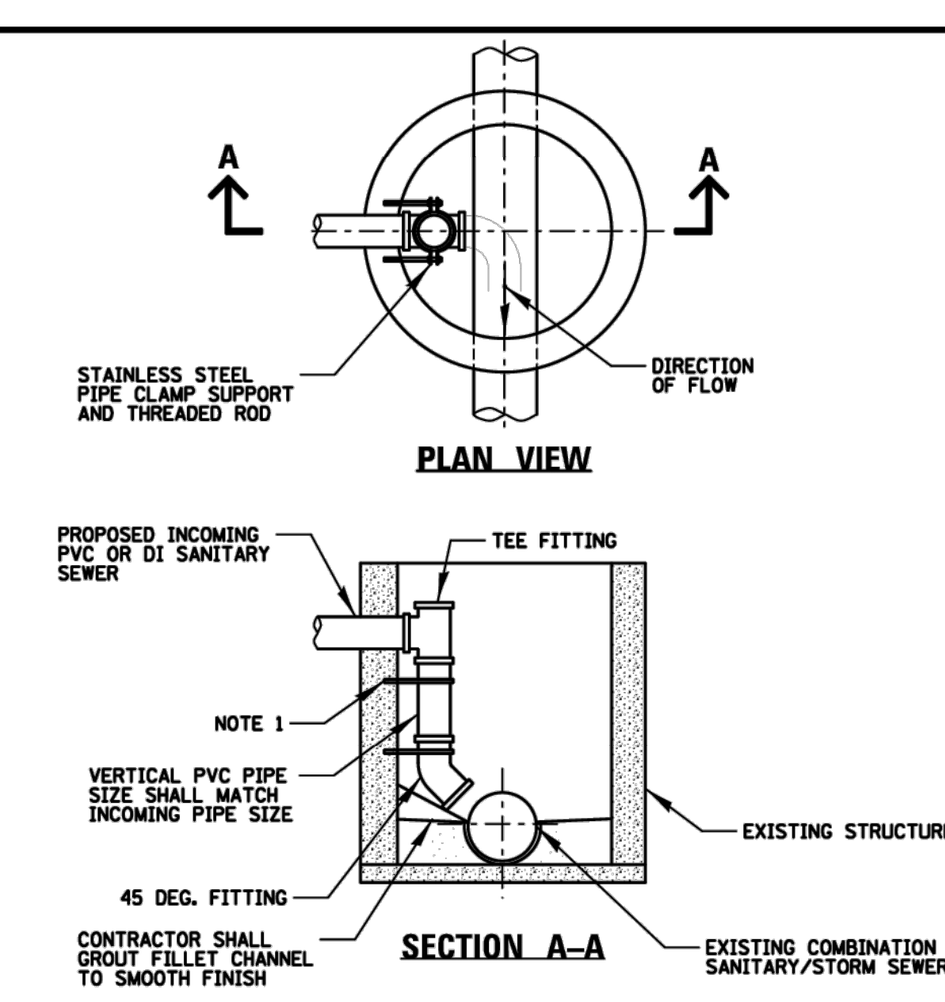
(3) 6" COMPACTED BEDDING, CA-6 GRADATION

(4) UNSUITABLE MATERIAL TO BE REMOVED WHERE DIRECTED BY THE ENGINEER AND REPLACED WITH SUITABLE AND COMPACTED MATERIAL

(5) TRENCH WIDTH - PIPE O.D. + 12" MINIMUM PIPE O.D. + 18" MAXIMUM

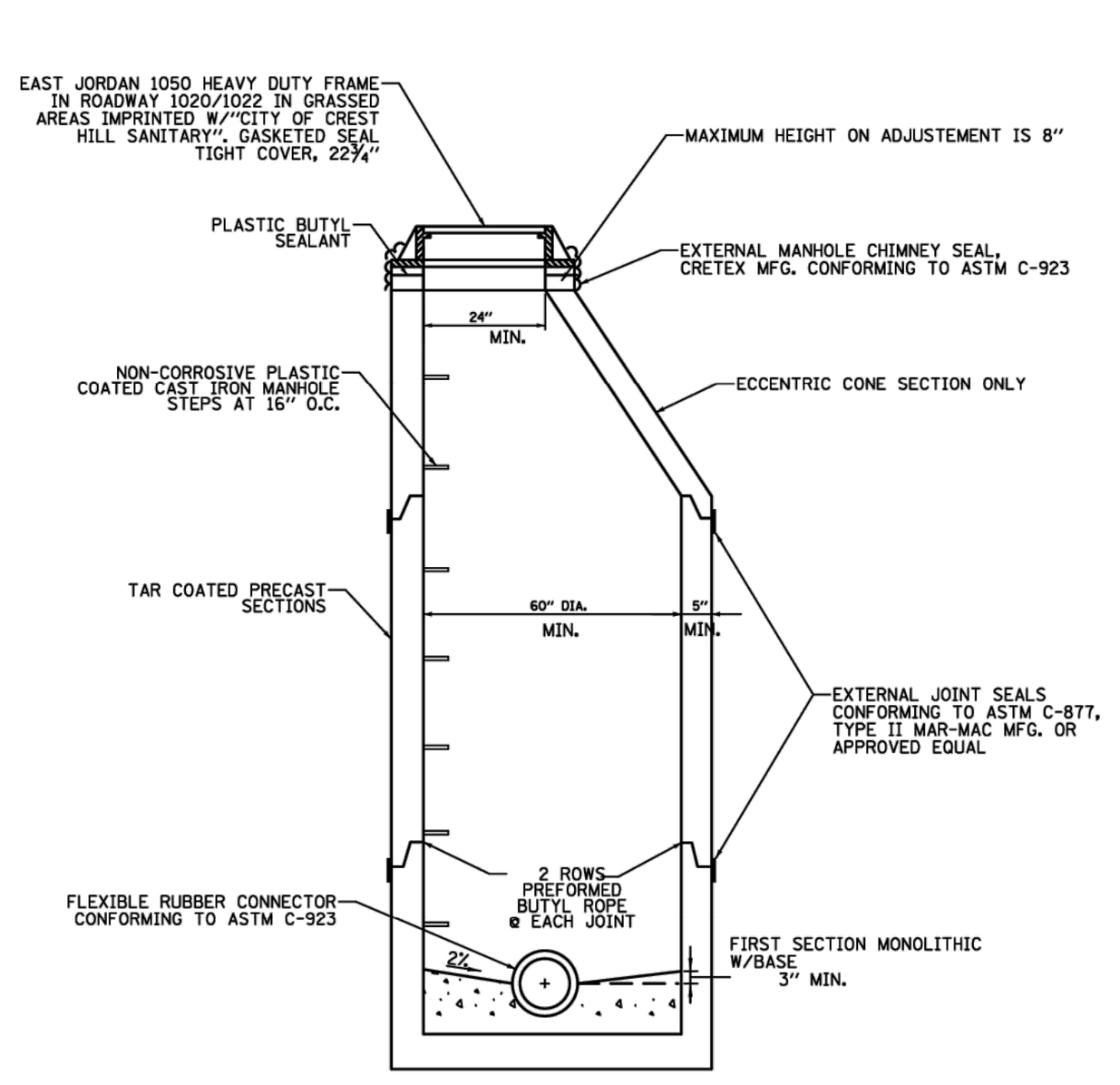
NOTES:
1. PVC PIPE CONFORMING TO THE SDR SPECIFIED IN THE PLANS SHALL BE INSTALLED TO THE LATEST REVISED SPECIFICATION REQUIREMENTS OF ASTM D2321 USING EITHER COMPACTED CLASS I OR CLASS II GRANULAR MATERIALS FOR BEDDING, HAUNCHING AND INITIAL BACKFILL OF 12" OVER THE TOP OF PIPE TO PROVIDE THE NECESSARY SUPPORT FOR THE PIPE SO THAT THE MAXIMUM DEFLECTION DOES NOT EXCEED 5% OF THE PIPE'S ORIGINAL INTERNAL DIAMETER.
2. ALL CA-6 MATERIAL TO BE IDOT APPROVED

TYPICAL SANITARY SEWER TRENCH

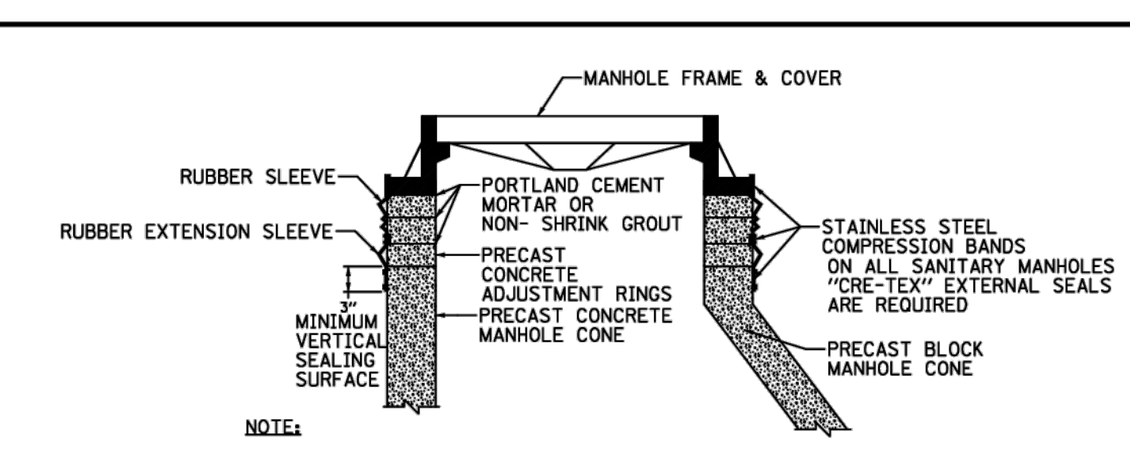


NOTES:
1. CONTRACTOR SHALL SUPPORT VERTICAL PIPE WITH STAINLESS STEEL PIPE CLAMP FASTENED TO STRUCTURE WITH ½" STAINLESS STEEL THREADED RODS (EMBEDDED A MIN. OF 3") AND HILTI-RE 500 EPOXY ADHESIVE. PIPE CLAMPS SHALL BE SPACED A MAXIMUM OF 3 FT APART.
2. THE VERTICAL PIPE INCLUDING THE TEE, PIPE FITTINGS, AND STAINLESS STEEL PIPE CLAMP SUPPORT SHALL BE CONSIDERED AS PART OF THE INSIDE DROP CONNECTION AND IS PAID FOR ACCORDINGLY.

INTERNAL DROP MANHOLE



SANITARY MANHOLE TYPE I



NOTE:
MANHOLE FRAME - CHIMNEY SEAL SHALL BE INSTALLED ON SANITARY MANHOLES. THE SEAL AND SEAL EXTENSIONS SHALL BE AS MANUFACTURED BY CRETEX SPECIALTY PRODUCTS. THE SLEEVES AND EXTENSIONS SHALL HAVE A MINIMUM THICKNESS OF 3/16 INCHES AND SHALL BE EXTRUDED OR MOLDED FROM A HIGH-GRADE RUBBER COMPOUND CONFORMING TO THE APPLICABLE REQUIREMENTS OF ASTM C923, WITH A MINIMUM 1500 PSI TENSILE STRENGTH, MAXIMUM 18% COMPRESSION SET AND A HARDNESS (DUROMETER) OF 48±5. THE BANDS USED FOR COMPRESSING THE SLEEVE AND EXTENSION AGAINST THE MANHOLE SHALL BE FABRICATED FROM 16 GAUGE STAINLESS STEEL CONFORMING TO ASTM C-923 TYPE 304. ANY SCREW BOLTS OR NUTS USED ON THIS BAND SHALL BE STAINLESS STEEL CONFORMING TO ASTM F593 AND 594, TYPE 304. DETAILED INSTALLATION PROCEDURES SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. ALL COSTS FOR THE FURNISHING AND INSTALLATION OF THE INTERNAL RUBBER SEAL AND EXTENSION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR SANITARY MANHOLES. NO INTERNAL CHIMNEY SEALS PERMITTED.

PRECAST MANHOLE WITH EXTERNAL SEAL

1) THE RUBBER SLEEVE IS AVAILABLE IN A 9" HEIGHT (STANDARD).

2) SEE THE CHIMNEY HEIGHT TABLE BELOW FOR SEAL AND EXTENSION COMBINATIONS NEEDED TO SPAN FROM THE FRAME TO THE TOP OF THE CONE ON MANHOLES WITH VARIOUS CHIMNEY HEIGHTS. FRAME OFFSETS OR DIAMETER DIFFERENCES WILL REDUCE THESE SPAN HEIGHTS.

3) THE TOP OF THE CONE SHALL HAVE A MINIMUM OF 3" HIGH VERTICAL SEALING SURFACE THAT IS SMOOTH AND FREE OF ANY FORM OFFSETS OR EXCESSIVE HONEYCOMB.

CHIMNEY HEIGHT TABLE

COMBINATIONS OF SEALS AND EXTENSIONS	TO SPAN HEIGHTS OF:
STANDARD 9" ONLY	OVER 3" - 6.5"
STANDARD SEAL + EXTENSION	OVER 6.5" - 13.5"
STANDARD SEAL + MULTI EXTENSIONSOVER 13.5"	
ADD 7" OF COVERAGE FOR EACH ADDITIONAL EXTENSION.	

SANITARY SEWER EXTERNAL CHIMNEY SEAL

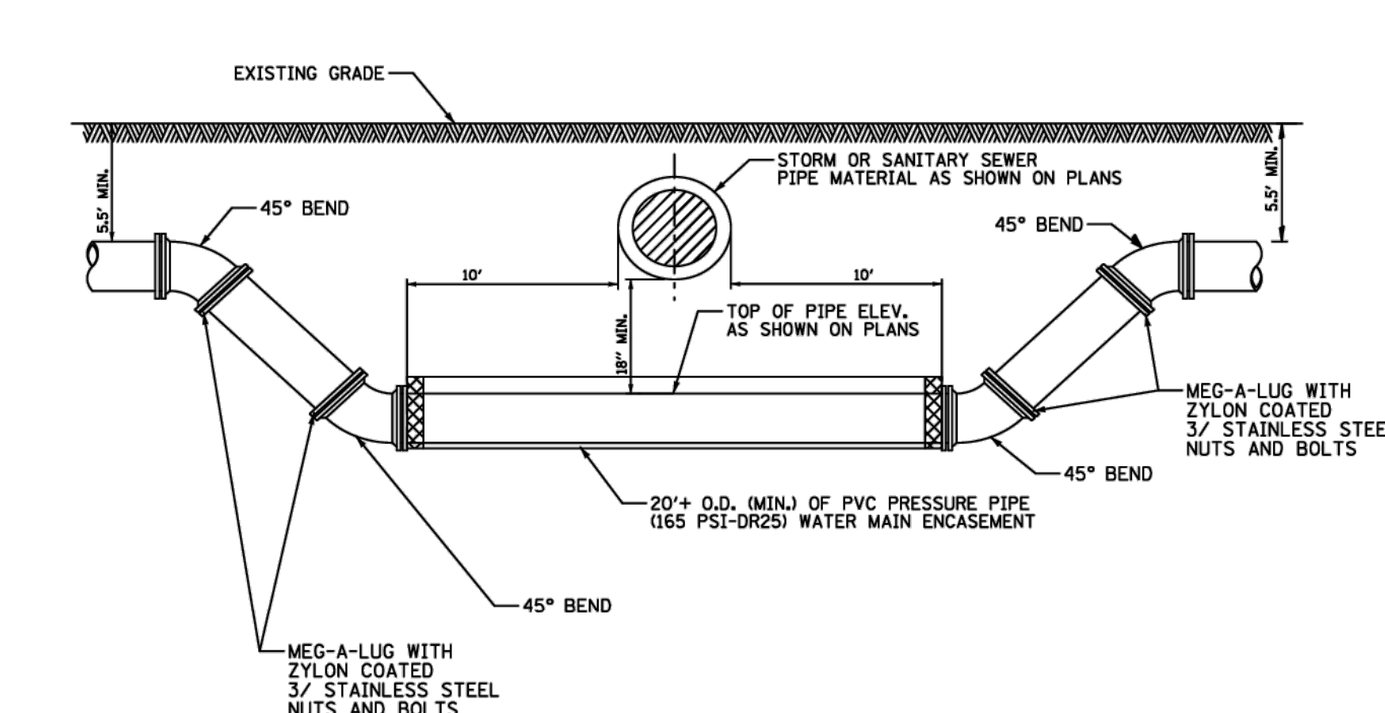
CLIENT: City of CREST HILL Illinois — CITY OF CREST HILL, 1610 PLAINFIELD ROAD, CREST HILL, IL 60403

NO.	DATE	NATURE OF REVISION	CHKD.
FILE NAME	N:\CRESTHILL\210328\Civil\Ref\details.dgn		

DSGN. / DWN. / CHKD. / SCALE: / PLOT DATE: 11/10/2021 / CAD USER: jspeelman / MODEL: Default

TITLE: CITY OF CREST HILL SANITARY SEWER SYSTEM DETAILS

PROJ. NO. / DATE: 11/10/2021 / SHEET 28 OF 38 / DRAWING NO. SAN-1



WATER MAIN LOWERING

CLIENT: City of CREST HILL Illinois — CITY OF CREST HILL, 1610 PLAINFIELD ROAD, CREST HILL, IL 60403

NO.	DATE	NATURE OF REVISION	CHKD.
FILE NAME	N:\CRESTHILL\210328\Civil\Ref\details.dgn		

DSGN. / DWN. / CHKD. / SCALE: / PLOT DATE: 11/10/2021 / CAD USER: jspeelman / MODEL: Default

TITLE: CITY OF CREST HILL WATER DISTRIBUTION SYSTEM DETAILS

PROJ. NO. / DATE: 11/10/2021 / SHEET 27 OF 38 / DRAWING NO. WTR-3

DRAWN BY | REVISIONS | DATE

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SEASONS AT CREST HILL
CITY OF CREST HILL
CONSTRUCTION DETAILS

PROJ. MGR.: JSE
PROJ. ASSOC.: MSL
DRAWN BY: OTHERS
DATE: 01-14-26
SCALE: N/A

SHEET 41 OF 44
FRD.CRIL01

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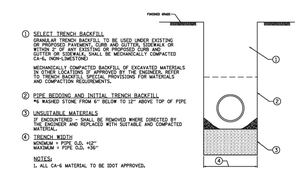
January 14, 2026 – 14:07 Dwg Name: P:\Frdcril01\dwg\Eng\Final Drawings\Plan Set\DETAILS.dwg Updated By: jeverard



1. SELECT TRENCH BACKFILL
GRANULAR TRENCH BACKFILL TO BE USED UNDER EXISTING PAVEMENT, PROPOSED PAVEMENT, AND SIDEWALK AREAS OR WITHIN 5' OF ANY EXISTING OR PROPOSED CURB AND GUTTER OR SIDEWALK, SHALL BE MECHANICALLY COMPACTED CA-6, IDOT CRUSHED STONE.
MECHANICALLY COMPACTED BACKFILL OF EXCAVATED MATERIALS MAY BE USED IN OTHER AREAS. REFER TO SPECIAL PROVISIONS TO TRENCH BACKFILL SPECIAL PROVISIONS FOR MATERIALS AND COMPACTION REQUIREMENTS.

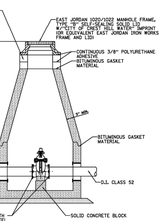
2. PIPE BEDDING AND INITIAL TRENCH BACKFILL
#16 WASHED STONE FROM 6" BELOW TO 12" ABOVE TOP OF PIPE

3. UNSUITABLE MATERIALS
IF ENCOUNTERED - SHALL BE REMOVED WHERE DIRECTED BY THE ENGINEER AND REPLACED WITH SUITABLE AND COMPACTED MATERIAL

4. TRENCH WIDTH
MINIMUM = PIPE O.D. +12"
MAXIMUM = PIPE O.D. +30"

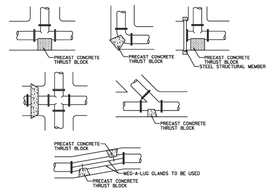
NOTES:
1. ALL CA-6 MATERIAL TO BE IDOT APPROVED.

TYPICAL WATER MAIN TRENCH



1. ALL MECHANICAL JOINT FITTINGS TO BE ASSEMBLED WITH STAINLESS STEEL TEFLON COATED NUTS AND BOLTS.
2. MECHANICAL JOINT RESTRAINT SHALL BE SERIES 2000PV FOR USE WITH C-900 PVC PIPE OR D.I. PIPE CLASS 52.
3. VALVES 4" OR LARGER MUST BE ENCLOSED IN A VALVE VAULT.
4. VALVES LESS THAN 4", OR WHEN DIRECTED BY THE CITY, SHALL USE AN AMERICAN FLOW CONTROL TRENCH ADAPTER.

TYPICAL VALVE VAULT

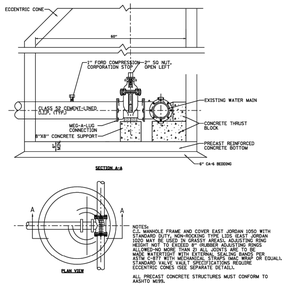


BEARING AREA (SQ. FT.)

PIPE SIZE	TEE/PLUG	90 DEG.	45 DEG.	22½°	11.25°
6	4	2	1	1	1
8	6	4	3	1	1
10	7	5	3	2	1
12	8	6	4	3	2
14	12	9	6	4	3
16	15	12	7	5	3
18	18	15	9	5	4
24	40	30	15	10	5

ALL BLOCKING MUST BEAR ON UNDISTURBED EARTH.
ALL BENDS OR ELBOWS GREATER THAN AND INCLUDING 11.25°
SHALL HAVE THRUST BLOCKING. WOOD SHIMS NOT ALLOWED.

THRUST BLOCK DETAIL

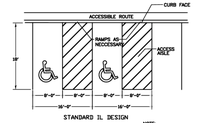


NOTES:
1. MANHOLE FRAME AND COVER EAST JORDAN 1200 WITH STANDARD DUTY, NON-ROCKING TYPE LIDS. EAST JORDAN 1200 MAY BE USED IN GRASSY AREAS. ADJUSTING RING MAY BE USED TO ADJUST TO FINISHED GRADE. ADJUSTING RINGS ALLOWED MORE THAN 8" ALL JOINTS ARE TO BE MADE WATERTIGHT WITH EXTERNAL SEALING BANDS PER ASTM C-877 USING "CORE-SEAL" BY CORE-TECH OR EQUAL, OR EQUAL.
2. STANDARD VALVE VAULT SPECIFICATIONS REQUIRE ECCENTRIC CONES USE SEPARATE DETAILS.

ALL PRECAST CONCRETE STRUCTURES MUST CONFORM TO AASHTO M199.

WATER MAIN PRESSURE CONNECTION

CLIENT: City of CREST HILL Illinois — CITY OF CREST HILL, 1610 PLAINFIELD ROAD, CREST HILL, IL 60403				DSGN.			TITLE: CITY OF CREST HILL WATER DISTRIBUTION SYSTEM DETAILS
				DWN.			PROJ. NO.
				CHKD.			DATE: 11/10/2021
				SCALE:			SHEET 29 OF 38
				PLOT DATE:	11/10/2021		DRAWING NO. WTR-1
				CAD USER:	jspearman		
NO.	DATE	NATURE OF REVISION	CHKD.	MODEL:	Default		
FILE NAME: N:\CRESTHILL\2020\Civil\Ref\details.dgn							



STANDARD IL DESIGN



THE ARROW SHOULD POINT TOWARD WHERE THERE IS ONLY ONE SPACE. THE ARROW MAY ALSO BE MADE TO POINT IN ONE ONE DIRECTION. THE SIGN MUST BE SUPPLEMENTED WITH A SIGN OF THE STANDARD R7-11(P) PLATE GIVING THE AMOUNT OF THE FINE FOR ILLEGALLY PARKING IN THE RESERVED SPACE(S).



ILLINOIS STANDARD R7-11(P)

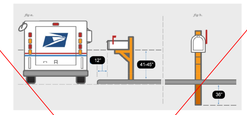
THIS PLATE MAY BE MOUNTED DIRECTLY BELOW THE R7-8 SIGN OR ATTACHED WITH THAT SIGN ON A SINGLE 12" BY 24" PANEL.

NOTE:
1. A HIGH QUALITY YELLOW PAINT RECOMMENDED BY THE PAINT MANUFACTURER FOR PAVEMENT STRIPING SHALL BE USED.
2. REFER TO THE ILLINOIS VEHICLE CODE FOR THE MINIMUM REQUIRED NUMBER OF HANDICAP STALLS.
3. HANDICAP LOGO SHALL BE INSTALLED USING YELLOW PAINT.

HANDICAP STALL

GUIDELINES FOR THE INSTALLATION OF CURBSIDE MAILBOXES

1. THE HEIGHT OF THE MAILBOX MUST BE BETWEEN FORTY-ONE INCHES AND FORTY-FIVE INCHES (41"-45"), FROM THE TOP OF THE STREET TO THE BOTTOM OF THE MAILBOX.
2. HOUSE NUMBERS OF NOT LESS THAN ONE INCH (1") HIGH ARE REQUIRED ON ALL MAILBOXES. NAMES ARE OPTIONAL.
3. THE FACE OF THE MAILBOX SHOULD BE TWELVE INCHES (12") FROM THE BACK OF THE CURB, OR EDGE OF THE PAVEMENT IF NO CURB IS PRESENT.
4. SUPPORT POST SHOULD BE INSTALLED TWENTY-FOUR INCHES (24") BELOW GRADE.
5. ALL POSTS USED TO SUPPORT MAILBOXES MUST BE NEAT AND OF ADEQUATE STRENGTH.
6. MAILBOX SUPPORT STRUCTURES SHOULD BE PAINTED WITH A PRESERVATIVE TO PREVENT RUST OR DECAY.
7. THE CITY OF CREST HILL PROHIBITS THE USE OF BRICKS AND/OR OTHER MASONRY STRUCTURES TO BE USED AS MAILBOX SUPPORTS.



STANDARD MAILBOX GUIDELINES

CLIENT: City of CREST HILL Illinois — CITY OF CREST HILL, 1610 PLAINFIELD ROAD, CREST HILL, IL 60403				DSGN.			TITLE: CITY OF CREST HILL MISCELLANEOUS STANDARDS
				DWN.			PROJ. NO.
				CHKD.			DATE: 11/10/2021
				SCALED:			SHEET 38 OF 38
				PLOT DATE:	11/10/2021		DRAWING NO. MSC-1
				CAD USER:	jspearman		
NO.	DATE	NATURE OF REVISION	CHKD.	MODEL:	Default		
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NOTE:
1. EXTERIOR CLEAN-OUTS CANNOT BE INSTALLED FURTHER THAN 5 FEET FROM THE BUILDING. THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO THE INSTALLATION AS SPECIFIED. THE "CLEAN-OUT MAY" BE INSTALLED IN A LOCATION AS DETERMINED BY THE DIRECTOR OF PUBLIC WORKS.
2. CLEANOUT SHALL BE 6" SDR 26 PSPS.

SANITARY SEWER SERVICE CLEANOUT

CLIENT: City of CREST HILL Illinois — CITY OF CREST HILL, 1610 PLAINFIELD ROAD, CREST HILL, IL 60403				DSGN.			TITLE: CITY OF CREST HILL SANITARY SEWER SYSTEM DETAILS
				DWN.			PROJ. NO.
				CHKD.			DATE: 11/10/2021
				SCALE:			SHEET 30 OF 38
				PLOT DATE:	11/10/2021		DRAWING NO. SAN-3
				CAD USER:	jspearman		
NO.	DATE	NATURE OF REVISION	CHKD.	MODEL:	Default		
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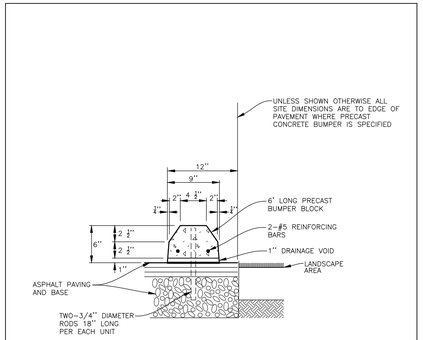

06-01-15
PRECAST CONCRETE WHEEL STOP DETAIL
S-MS-WHEELSTOP

SHOULD A CONFLICT ARISE BETWEEN MANHARD DETAILS AND THE VILLAGE DETAILS, THE VILLAGE DETAILS SHALL TAKE PRECEDENCE.

DRAWN BY | REVISIONS | DATE

Manhard CONSULTING
One Overlook Point, Suite 250, Lincolnshire, IL 60069 | p:847.634.5500 | manhard.com
Civil Engineers • Surveyors • Water Resource Engineers • Water & Wastewater Engineers
Construction Managers • Environmental Scientists • Landscape Architects • Planners

SEASONS AT CREST HILL
CITY OF CREST HILL
CONSTRUCTION DETAILS

PROJ. MGR.: JSE
PROJ. ASSOC.: MSL
DRAWN BY: OTHERS
DATE: 01-14-26
SCALE: N/A

SHEET 42 OF 44
FRD.CRIL01

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January 14, 2026 - 14:07 Data Name: P:\Projects\01\Data\Final Drawings\Plan Set\DETAILS.dwg Updated By: jhorsford

STANDARD SPECIFICATIONS FOR WATER AND SEWER CONSTRUCTION IN ILLINOIS, LATEST EDITION.

41-2.01C VERTICAL SEPARATION – WATER MAINS AND SEWERS

(1.) A water main shall be separated from a sewer so that its invert is a minimum of eighteen (18) inches (460mm) above the crown of the drain or sewer whenever water mains cross storm sewers, sanitary sewers or sewer service connections. The vertical separation shall be maintained for that portion of the water main located within ten (10) feet (3.1m) horizontally of any sewer or drain crossed. A length of water main pipe shall be centered over the sewer to be crossed with joints equidistant from the sewer or drain.

(2.) Both the water main and sewer shall be constructed of slip-on or mechanical joint cast or ductile iron pipe, prestressed concrete pipe, or PVC pipe equivalent to water main standards of construction when:

(a) it is impossible to obtain the proper vertical separation as described in (1) above; or

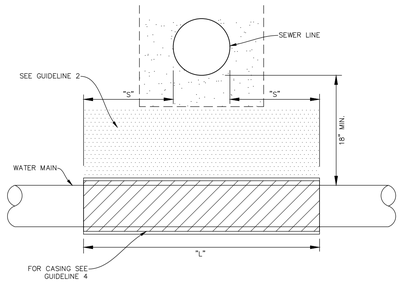
(b) the water main passes under a sewer or drain.

(3.) A vertical separation of eighteen (18) inches (460 mm) between the invert of the sewer or drain and the crown of the water main shall be maintained where a water main crosses under a sewer. Support the sewer or drain lines to prevent settling and breaking the main, as shown on the Plans or as approved by the ENGINEER.

(4.) Construction of water main quality pipe shall extend on each side of the crossing until the perpendicular distance from the water main to the sewer or drain line is at least ten (10) feet (3.1 m) See Standard Drawings No. 19-23.

02-01-19
WATER AND SEWER SEPARATION REQUIREMENTS (VERTICAL SEPARATION)
S-WM-SEP-VERTICAL

WATER MAIN BELOW SEWER LINE WITH 18" MINIMUM VERTICAL SEPERATION.



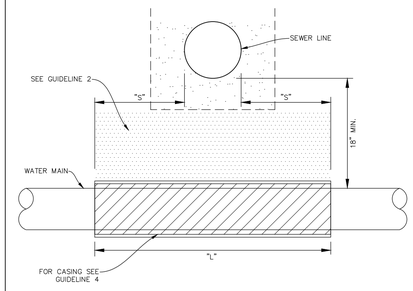
NOTE: "S" = THE LENGTH NECESSARY TO PROVIDE 10 FEET OF SEPARATION AS MEASURED PERPENDICULAR TO THE EXISTING SEWER LINE.

GUIDELINES:

1. OMIT SELECT GRANULAR EMBEDMENT AND GRANULAR BACKFILL TO ONE (1) FOOT OVER TOP OF WATER MAIN AND USE SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT THE LENGTH OF "L" FEET.
2. IF SELECT GRANULAR BACKFILL EXISTS, REMOVE WITHIN WIDTH OF SEWER LINE TRENCH AND REPLACE WITH SELECT SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT.
3. PROVIDE ADEQUATE SUPPORT FOR SEWER LINE TO PREVENT DAMAGE DUE TO SETTLEMENT.
4. USE "L" FEET OF WATER MAIN MATERIAL FOR CASING OF WATER MAIN AND SEAL ENDS OF CASING.

06-01-15
WATER AND SEWER SEPARATION REQUIREMENTS (VERTICAL SEPARATION)
S-WM-SEP-VERTICAL-2

WATER MAIN BELOW SEWER LINE WITH 18" MINIMUM VERTICAL SEPERATION.



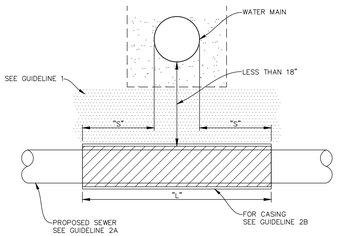
NOTE: "S" = THE LENGTH NECESSARY TO PROVIDE 10 FEET OF SEPARATION AS MEASURED PERPENDICULAR TO THE EXISTING SEWER LINE.

GUIDELINES:

1. OMIT SELECT GRANULAR EMBEDMENT AND GRANULAR BACKFILL TO ONE (1) FOOT OVER TOP OF WATER MAIN AND USE SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT THE LENGTH OF "L" FEET.
2. IF SELECT GRANULAR BACKFILL EXISTS, REMOVE WITHIN WIDTH OF SEWER LINE TRENCH AND REPLACE WITH SELECT SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT.
3. PROVIDE ADEQUATE SUPPORT FOR SEWER LINE TO PREVENT DAMAGE DUE TO SETTLEMENT.
4. USE "L" FEET OF WATER MAIN MATERIAL FOR CASING OF WATER MAIN AND SEAL ENDS OF CASING.

06-01-15
WATER AND SEWER SEPARATION REQUIREMENTS (VERTICAL SEPARATION)
S-WM-SEP-VERTICAL-2

SEWER LINE BELOW WATER MAIN WITH LESS THAN 18" VERTICAL SEPARATION.



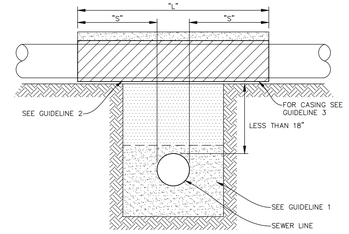
NOTE: "S" = THE LENGTH NECESSARY TO PROVIDE 10 FEET OF SEPARATION AS MEASURED PERPENDICULAR TO THE EXISTING WATER MAIN.

GUIDELINES:

1. OMIT SELECT GRANULAR EMBEDMENT AND GRANULAR BACKFILL TO ONE (1) FOOT OVER TOP OF SEWER AND USE SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT FOR "S" FEET ON EACH SIDE OD WATER MAIN.
2. a) CONSTRUCT "L" FEET OF PROPOSED SEWER OF WATER MAIN MATERIAL AND PRESSURE TEST, OR:
   b) USE "L" FEET OF WATER MAIN MATERIAL FOR CASING OF PROPOSED SEWER AND SEAL ENDS OF CASING.
3. PROVIDE ADEQUATE SUPPORT FOR EXCAVATING WATER MAIN TO PREVENT DAMAGE DUE TO SETTLEMENT OF SEWER TRENCH.

06-01-15
WATER AND SEWER SEPARATION REQUIREMENTS (VERTICAL SEPARATION)
S-WM-SEP-VERTICAL-3

WATER MAIN ABOVE SEWER LINE WITH LESS THAN 18" VERTICAL SEPARATION.



NOTE: "S" = THE LENGTH NECESSARY TO PROVIDE 10 FEET OF SEPARATION AS MEASURED PERPENDICULAR TO THE EXISTING SEWER LINE.

GUIDELINES:

1. OMIT SELECT GRANULAR EMBEDMENT AND GRANULAR BACKFILL TO ONE (1) FOOT OVER TOP OF WATER MAIN AND USE SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT THE LENGTH OF "L".
2. IF SELECT GRANULAR BACKFILL EXISTS, REMOVE WITHIN WIDTH OF EXISTING SEWER LINE TRENCH AND REPLACE WITH SELECT EXCAVATED MATERIAL (CLASS IV) AND COMPACT.
3. USE "L" FEET OF WATER MAIN MATERIAL FOR CASING OF PROPOSED WATER MAIN AND SEAL ENDS OF CASING.
4. POINT LOADS SHALL NOT BE ALLOWED BETWEEN WATER MAIN CASING AND SEWER.

06-01-15
WATER AND SEWER SEPARATION REQUIREMENTS (VERTICAL SEPARATION)
S-WM-SEP-VERTICAL-4

STANDARD SPECIFICATIONS FOR WATER AND SEWER CONSTRUCTION IN ILLINOIS, LATEST EDITION.

41-2.01 PROTECTION OF WATER MAIN AND WATER SERVICE LINES

41-2.01A GENERAL

Water mains and water service lines shall be protected from sanitary sewers, storm sewers, combined sewers, house sewer service connections and drains as follows:

41-2.01B HORIZONTAL SEPARATION – WATER MAINS AND SEWERS

(1.) Water mains shall be located at least ten (10) feet (3.1 m) horizontally from any existing or proposed drain, storm sewer, sanitary sewer, combined sewer or sewer service connection.

(2.) Water mains may be located closer than ten (10) feet (3.1 m) to a sewer line when:

(a) local conditions prevent a lateral separation of ten (10) feet (3.1 m); and

(b) the water main invert is at least eighteen (18) inches (460 mm) above the crown of the sewer; and

(c) the water main is either in a separate trench or in the same trench on an undisturbed earth shelf located to one side of the sewer.

(3.) When it is impossible to meet (1) or (2) above, both the water main and drain or sewer shall be constructed of slip-on or mechanical joint cast or ductile iron pipe, prestressed concrete pipe, or PVC pipe equivalent to water main standards of construction. The drain or sewer shall be pressure tested to the maximum expected surcharge head before backfilling. See Standard Drawing No. 18.

02-01-19
WATER AND SEWER SEPARATION REQUIREMENTS (HORIZONTAL SEPARATION)
S-WM-SEP-HORIZONTAL

SHOULD A CONFLICT ARISE BETWEEN MANHARD DETAILS AND THE VILLAGE DETAILS, THE VILLAGE DETAILS SHALL TAKE PRECEDENCE.

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One Overlook Point, Suite 250, Lincolnshire, IL 60069 p:847.634.0066
Civil Engineers • Structural Engineers • Water Resource Engineers • Surveyors
Construction Managers • Environmental Scientists • Landscape Architects • Planners

DRAWN BY	REVISIONS	DATE

SEASONS AT CREST HILL
CITY OF CREST HILL
CONSTRUCTION DETAILS

PROJ. MGR.: JSE
PROJ. ASSOC.: MSL
DRAWN BY: MANHARD
DATE: 01-14-26
SCALE: N/A

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06-01-16

MANHARD CONSULTING
STANDARD SPECIFICATIONS

GENERAL CONDITIONS

CONTRACTOR acknowledges and agrees that the use and reliance of these Plans and Specifications is sufficient consideration for CONTRACTOR'S covenants stated herein.

DEFINITION OF TERMS

a. "CLIENT" shall mean FRED-Crest Hill HC,LLC. , which is the person or entity with whom Manhard Consulting has contracted with to prepare Civil Engineering PLANS and SPECIFICATIONS.

b. "ENGINEER" shall mean Manhard Consulting, a Civil Engineering consultant on the subject project.

c. "PLANS and SPECIFICATIONS" shall mean the Civil Engineering PLANS and SPECIFICATIONS prepared by the ENGINEER, which may be a part of the contract documents for the subject project.

d. "CONTRACTOR" shall mean any person or entity performing any work described in the PLANS and SPECIFICATIONS.

e. "JURISDICTIONAL GOVERNMENTAL ENTITY" shall mean any municipal, county, state or federal unit of government from whom an approval, permit and/or review is required for any aspect of the subject project.

INTENT OF THE PLANS AND SPECIFICATIONS

The intent of the PLANS and SPECIFICATIONS is to set forth certain requirements of performance, type of equipment and structures, and standards of materials and construction. They may also identify labor and materials, equipment and transportation necessary for the proper execution of the work but are not intended to be infinitely determined so as to include minor items obviously required as part of the work. The PLANS and SPECIFICATIONS require new material and equipment unless otherwise indicated, and to require complete performance of the work in spite of omissions of specific references to any minor component part. It is not intended, however, that materials or work not covered by or properly inferred from any heading, branch, class or trade of the SPECIFICATIONS shall be supplied unless distinctly so noted. Materials or work described in words, which so applied have a well-known technical or trade meaning, shall be held to refer to such recognized standards.

INTERPRETATION OF PLANS AND SPECIFICATIONS

a. The CLIENT and/or CONTRACTOR shall promptly report any errors or ambiguities in the PLANS and SPECIFICATIONS to the ENGINEER. Questions as to meaning of PLANS and SPECIFICATIONS shall be interpreted by the ENGINEER, whose decision shall be final and binding on all parties concerned.

b. The ENGINEER will provide the CLIENT with such information as may be required to show revised or additional details of construction.

c. Should any discrepancies or conflicts on the PLANS or SPECIFICATIONS be discovered either prior to or after award of the contract, the ENGINEER's attention shall be called to the same before the work is begun thereon and the proper corrections made. Neither the CLIENT nor the CONTRACTOR may take advantage of any error or omissions in the PLANS and SPECIFICATIONS. The ENGINEER will provide information when errors or omissions are discovered.

GOVERNING BODIES

All works herein proposed shall be completed in accordance with all requirements of any JURISDICTIONAL GOVERNMENTAL ENTITY, and all such pertinent laws, directives, ordinances and the like shall be considered to be a part of these SPECIFICATIONS. If a discrepancy is noted between the PLANS and SPECIFICATIONS and requirements of any JURISDICTIONAL GOVERNMENTAL ENTITY, the CLIENT and/or the CONTRACTOR shall immediately notify the ENGINEER in writing.

LOCATION OF UNDERGROUND FACILITIES AND UTILITIES

When the PLANS and SPECIFICATIONS include information pertaining to the location of existing underground facilities and utilities (including but not limited to water mains, sanitary sewers, storm sewers, electric, telephone, gas and cable TV lines), such information represents only the opinion of the ENGINEER as to the approximate location and elevation of such facilities and utilities. At the locations wherein detailed positions of these facilities and utilities become necessary to the new construction, including all points of connection, the CONTRACTOR shall furnish all labor and tools to verify or definitely establish the horizontal location, elevation, size and material (if appropriate) of the facilities and utilities. The CONTRACTOR shall notify the ENGINEER at least 48 hours prior to construction if any discrepancies in existing utility information or conflicts with existing utilities exist. The ENGINEER assumes no responsibility whatever with respect to the sufficiency or accuracy of the information shown on the PLANS and SPECIFICATIONS relative to the location of underground facilities and utilities, nor the manner in which they are removed or adjusted.

It shall be the CONTRACTOR's responsibility prior to construction, to notify all Utility Companies of the intent to begin construction and to verify the actual location of all such facilities and utilities. The CONTRACTOR shall also obtain from the respective Utility Companies the working schedules for removing or adjusting these facilities.

UNSUITABLE SOILS

The PLANS have been prepared by the ENGINEER based on the assumption that all soils on the project are suitable to support the proposed improvements shown. The CLIENT or CONTRACTOR shall immediately notify the ENGINEER if he discovers or encounters an obstruction that prevents the installation of the improvement according to the line and grades shown on the PLANS.

PROTECTION OF TREES

All trees that are not to be removed shall be protected from damage. Trees shall not be removed unless requested to do so in writing by the CLIENT.

NOTIFICATION OF OWNERS OF FACILITIES AND UTILITIES

The CONTRACTOR shall notify all applicable Jurisdictional Governmental Entities or utility companies, i.e., water, sewer, electric, telephone, gas and cable TV prior to beginning any construction so that said entity or company can establish the location and elevation of underground pipes, conduits or cables adjoining or crossing proposed construction.

TRAFFIC CONTROL

The CONTRACTOR shall provide when required by any JURISDICTIONAL GOVERNMENTAL ENTITY, all signs, equipment, and personnel necessary to provide for safe and efficient traffic flow in all areas where the work will interrupt, interfere or cause to change in any form, the conditions of traffic flow that existed prior to the commencement of any portions of the work. The CLIENT may, at his discretion, require the CONTRACTOR to furnish traffic control under these or other circumstances where in his opinion it is necessary for the protection of life and property. Emergency vehicle access shall be maintained at all times. Unless authorized by the CLIENT or CLIENT's construction representative, all existing access points shall be maintained at all times by the CONTRACTOR. The need for traffic control shall be anticipated by the CLIENT.

WORK AREA

The CONTRACTOR, his agents and employees and their employees and all equipment, machinery and vehicles shall confine their work within the boundaries of the project or work area specified by the Client. The CONTRACTOR shall be solely liable for damage caused by him or his agents and employees and their equipment, machinery and vehicles on adjacent property or areas outside designated work areas.

UTILITY POLES

It shall be the responsibility of the CONTRACTOR to arrange for the relocation or bracing of existing utility poles that may be within the working limits of this contract. It is expressly understood that all work and costs connected with the maintenance of these utility poles, their temporary relocations, etc., shall be the responsibility of the CLIENT or the CONTRACTOR.

RESTORATION

It is the intent of these SPECIFICATIONS that clean-up and final restoration shall be performed immediately upon completion of each phase of the work, both inside and outside the Project, or when so directed by the CLIENT so that these areas will be restored as nearly as possible to their original condition or better, and shall include but not be limited to, restoration of maintained lawns and rights-of-way, roadways, driveways, sidewalks, ditches, bushes, hedges, trees, shrubs, fences, mailboxes, sewers, drain tiles, water mains, etc.

CLEANING UP

The CONTRACTOR shall at all times keep the premises free from accumulations of waste material or rubbish caused by his employees or work, and at the completion of the work he shall remove all his rubbish, tools, scaffolding and surplus materials and shall leave his work "broom clean" or its equivalent, unless more exactly specified.

ROAD CLEANING

The CONTRACTOR shall maintain roadways adjoining the project site free from mud and debris at all times. If mud and/or debris is carried onto the roadways from vehicles entering onto the highway from either the CONTRACTOR's trucks, his employees' vehicles, or his material suppliers, the CONTRACTOR shall immediately remove said mud and/or debris.

SAFETY AND PROTECTION

The CONTRACTOR shall be solely and completely responsible for the conditions of the job site, including safety of all persons and property during performance of the work. This requirement shall apply continuously and not be limited to normal working hours. The CONTRACTOR shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection. CONTRACTOR's duties and responsibilities for safety and for protection of the work shall continue until such time as all work is completed and the CLIENT has notified CONTRACTOR that the work is acceptable. The duties of the ENGINEER do not include review of the adequacy of either the CONTRACTOR's or the general public's safety in, on, or near the construction site.

HOLD HARMLESS

To the fullest extent permitted by law, any CONTRACTOR; material supplier or other entity by use of these plans and specifications hereby waives any right of contribution and agrees to indemnify, defend, save and hold harmless the CLIENT and ENGINEER and its agents, employees and consultants from and against all manner of claims, causes, causes of action, damages, losses and expenses, including but not limited to, attorneys' fees arising out of, resulting from or in connection with the performance of any work, pursuant to or with respect to these plans and specifications. However, this indemnity shall not be construed to indemnify ENGINEER, its consultants, agents or employees against its own negligence.

Claims, damages, losses and expenses as these words are used in the Agreement shall mean and include, but not be limited to (1) injury or damage occurring by reason of the failure of or use or misuse of any hoist, riggings, blocking, scaffolding or any and all other kinds of items of equipment, whether or not the same be owned, furnished or loaned by any part or entity, including any contractor; (2) all attorneys' fees and costs incurred in bringing an action to enforce the provisions of this indemnity; (3) costs for time expended by the indemnified party and its employees, at its usual rates plus costs or travel, long distance telephone and reproduction of documents and (4) consequential damages.

In any and all claims against the CLIENT or ENGINEER or any of their agents or employees and consultants by any party, including any employee of the CONTRACTOR or any Subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation shall not be limited in any way by any limitation on the amount of type of damages, compensation or benefits payable by or for the CONTRACTOR or any Subcontractor under workers' or workmen's compensation acts, disability benefit acts or other employee benefit acts or any insurance maintained by CONTRACTOR or any Subcontractor or any other party.

INSURANCE

Any party using or relying on these plans, including any contractor, material supplier, or other entity shall obtain, (prior to commencing any work) general public liability insurance insuring against all damages and claims for any bodily injuries, death or property damage arising out of any work, including the construction work provided for in these plans, and shall name the CLIENT and ENGINEER and its consultants, agents and representatives as additional insureds to the limits of such insurance policies; provided that any party using or relying on these plans having obligations to maintain specific insurance by reason of any agreement with CLIENT or any CONTRACTOR or ENGINEER shall provide evidence and certificates of insurance as required by such contract or agreement. Such insurance must contain a clause stating that the insurance is primary coverage for ENGINEER and ENGINEER's other applicable coverage is considered secondary. Policies shall contain a waiver of subrogation against Manhard and Client. Such insurance shall not limit any liability of any party providing work or services or providing materials.

THIRD PARTY BENEFICIARY

Manhard Consulting, the ENGINEER, is intended to be a third party beneficiary of this willing agreement and requirement.

DETAILED SPECIFICATIONS

I. DEMOLITION

The CONTRACTOR shall coordinate with respective utility companies prior to the removal and/or relocation of utilities. The CONTRACTOR shall coordinate with the utility company concerning portions of work which may be performed by the Utility Company's forces and any fees which are to be paid to the utility company for their services. The CONTRACTOR is responsible for paying for all fees and charges.

Should removal and/or relocation activities damage features indicated to remain, the CONTRACTOR shall provide new materials/structures in accordance with the contract documents. Except for materials designed to be relocated on this plan, all other construction materials shall be new.

Prior to demolition occurring, all erosion control devices are to be installed.

All existing utility lines and conduits located under proposed buildings shall be removed and properly backfilled. All utility lines and conduits located under drives, on-site roads, parking lots or sidewalks shall be filled with a flowable backfill and end plugged. All existing structures shall be removed. All existing utility lines located under landscape areas shall be left in place and plugged at all structures.

The CONTRACTOR is responsible for demolition, removal and disposal (in a location approved by all JURISDICTIONAL GOVERNING ENTITIES) of all structures, pads, walls, flumes, foundations, road, parking lots, drives, drainage structures, utilities, etc., such that the improvements shown on these plans can be constructed. All demolition work shall be in accordance with all applicable federal, state and local requirements. All facilities to be removed shall be undercut to suitable material and brought to grade with suitable compacted fill material per the specifications.

The CONTRACTOR is responsible for obtaining all permits required for demolition and disposal.

Electrical, telephone, cable, water, fiber optic cable and/or gas lines needing to be removed shall be coordinated by the CONTRACTOR with the affected utility company.

CONTRACTOR must protect the public at all times with fencing, barricades, enclosures, and other appropriate best management practices.

Continuous access shall be maintained for surrounding properties at all times during demolition.

All fire access lanes within the project area shall remain in service, clean of debris, and accessible for use by emergency vehicles.

The CONTRACTOR shall coordinate water main work with the Fire Department and the JURISDICTIONAL GOVERNING ENTITY to plan the proposed improvements and to ensure adequate fire protection is available to the facility and site throughout this specific work and through all phases of construction. CONTRACTOR shall be responsible for any required water main shut offs with the JURISDICTIONAL GOVERNING ENTITY during construction. Any costs associated with water main shut offs will be the responsibility of the CONTRACTOR and no extra compensation will be provided.

CONTRACTOR shall maintain all existing parking areas, sidewalks, drives, etc. clear and free from any construction activity and/or material to ensure easy and safe pedestrian and vehicular traffic to and from the site. CONTRACTOR shall coordinate/phase all construction activity within proximity of the building and utility interruptions with the facility manager to minimize disturbance and inconvenience to facility operations.

CONTRACTOR may limit saw-cut and pavement removal to only those areas where it is required as shown on these construction plans, however if any damage is incurred on any of the surrounding pavement, etc. the CONTRACTOR shall be responsible for ITS removal and repair.

Any existing wells encountered shall be exposed and sealed 3' below proposed finish grade by the CONTRACTOR in accordance with Section 920.120 (latest edition) of the Illinois Water Well Construction Code, Department of Public Health, and all applicable local rules and regulations. CONTRACTOR is responsible for obtaining all permits required by JURISDICTIONAL GOVERNMENTAL ENTITIES for abandoning existing wells.

Any existing septic tanks and grease traps encountered shall have all liquids and solids removed and disposed of by a licensed commercial hauler in accordance with JURISDICTIONAL GOVERNING ENTITY regulations, and the tank and grease traps shall then be filled with suitable materials or removed from the site and disposed of by the CONTRACTOR.

Voids left by any item removed under any proposed building, pavement, walk, etc. or within 24" thereof shall be filled and compacted with suitable materials by the CONTRACTOR.

The CONTRACTOR shall be responsible for the disconnection of utility services to the existing buildings prior to demolition of the buildings.

Any material containing asbestos found within existing structures shall be removed from the site and disposed of off-site by the CONTRACTOR in accordance with County, State and Federal regulations.

CONTRACTOR shall develop and implement a daily program of dust control and shall submit and obtain JURISDICTIONAL GOVERNING ENTITY approval of dust control procedures prior to demolition of any structures. Modification of dust control procedures shall be performed by the CONTRACTOR to the satisfaction of the JURISDICTIONAL GOVERNING ENTITY as requested.

The CONTRACTOR shall coordinate all demolition with the JURISDICTIONAL GOVERNING ENTITY and CLIENT to ensure protection and maintenance of sanitary sewer and water utilities as necessary and to provide stormwater conveyance until new facilities are constructed, tested and placed into operation.

The locations of all existing utilities shown on this plan have been determined from the best information available and are given for the convenience of the CONTRACTOR and are not to be interpreted as the exact location, or as the only obstacles that may occur on the site. The ENGINEER assumes no responsibility for their accuracy. Prior to the start of any demolition activity, the CONTRACTOR shall notify the utility companies for location of existing utilities and shall verify existing conditions and proceed with caution around any anticipated features.

The CONTRACTOR is responsible for removing the existing irrigation system in the areas of proposed improvements. The contractor shall cap the existing irrigation system to remain such that the remaining system shall continue to function properly.

The paving lot shall be completed in sections such that it does not interrupt the facility operations. The CONTRACTOR shall coordinate with the construction manager for work to be performed.

II.EARTHWORK

STANDARDS

This work shall be completed in conformance with the applicable sections of the Standard Specifications for Road and Bridge Construction, Department of Transportation, State of Illinois, latest edition except as modified below.

SOIL BORING DATA

Copies of results of soil boring and reports, if such borings were taken by the CLIENT in the vicinity of the proposed construction site, should be made available by the CLIENT to the CONTRACTOR. These borings are presented for whatever purpose the CONTRACTOR chooses to make of them. The ENGINEER makes no representation or warranty regarding the number, location, spacing or depth of borings taken, nor of the accuracy or reliability of the information given in the results thereof.

Further, the ENGINEER does not assume responsibility for the possibility that during construction, the soil and groundwater condition may be different than indicated. Neither does the ENGINEER assume responsibility for variations of soil and groundwater at location between borings. The CONTRACTOR is required to make its own borings, explorations and observations to determine soil and groundwater conditions.

EARTHWORK CALCULATIONS AND CROSS SECTIONS

The CONTRACTOR understands that any earthwork calculations, quantities or cross sections that have been furnished by the ENGINEER are for information only and are provided without any guarantee by the CLIENT or ENGINEER whatsoever as to their sufficiency or accuracy. CONTRACTOR warrants that he has performed his own subsurface investigations as necessary and his own calculations and cross sections to determine site soil conditions and earthwork volumes. The ENGINEER makes no representation or guarantee regarding earthwork quantities or that the earthwork for this project will balance due to the varying field conditions, changing soil types, allowable construction to tolerances and construction methods that are beyond the control of the ENGINEER.

CLEARING, GRUBBING AND TREE REMOVAL

The site shall be cleared, grubbed, and trees and stumps removed where designated on the PLANS. Trees designated to remain shall be protected from damage.

TOPSOIL STRIPPING

Upon completion of demolition, clearing, grubbing and tree removal, all topsoil shall be stripped from under all buildings and pavements areas, and other areas necessary to complete the work. Topsoil stripped shall be placed in stockpiles in locations as designated by the CLIENT.

TOPSOIL RESPREAD

Upon completion of roadway and/or parking lot improvements and installation of underground utilities a minimum of six inches (6") of topsoil shall be respread over all unpaved areas which have been disturbed by earthwork construction, except building pads and other designated areas, which shall be kept free from topsoil.

SEEDING

Upon completion of topsoil respread, the CONTRACTOR shall apply seed and fertilizer to all respread areas in accordance with IDOT standards or as designated on landscape drawings and specifications provided by the CLIENT.

SODDING

Upon completion of topsoil respread, the CONTRACTOR shall install sod to all areas designated on the plans or as designated on the landscape drawings and specifications provided by the CLIENT.

EXCAVATION AND EMBANKMENT

Upon completion of topsoil stripping, all excavation and embankments shall be completed as shown on the PLANS. All suitable excavated materials shall be hauled, placed (moisture conditioned if necessary) and compacted in the embankment areas. The CONTRACTOR shall include all dewatering, temporary ditching and culverts necessary to complete the excavation and embankment.

Specifically included in the scope of Excavation and Embankments is grading and shaping of all cut or fill areas including swales and ditches; handling of sewer spoil, etc., and all work required to provide positive drainage at the end of each working day and upon completion of a section.

The CONTRACTOR shall be responsible for the excavation of all swales and ditches and for the excavation or filling of the roads, building pads and parking lots within the work limits to lines & grades shown on the plans. He shall be responsible for obtaining compaction in accordance with the minimum values listed in the table below for all embankments unless more stringent values are listed in the soils report or are approved by the CLIENT, and to use any method approved by the CLIENT necessary to obtain this compaction (i.e., soil fabric or any undercutting that may be required).

Type Material	Percent Compaction Standard	Pavement & Floor Slabs	Grass Areas
Sandy Soils	Modified Proctor	95%	90%
Clayey Soils	Standard Proctor	95%	90%

The CONTRACTOR shall notify the CLIENT if proper compaction cannot be obtained so that the CLIENT may determine what remedial measures may be needed.

A soils testing firm employed by the CLIENT shall determine which soils are unsuitable. Materials in their natural state being defined as unsuitable that would be suitable material if moisture conditioned, shall be conditioned by the CONTRACTOR and used as suitable embankment material or hauled from the site.

For purposes of definition, unsuitable material shall be as follows unless determined otherwise by the Soils Engineer:

1. Any soil whose optimum moisture content exceeds 25%.
2. Any cohesive soil with an unconfined compressive strength of 1.5 tons per square foot or less.
3. Any soil whose silt content exceeds 60% by weight.
4. Any soil whose maximum density is less than 100 pounds per cubic foot.
5. Any soil containing organic, deleterious, or hazardous material.

Upon completion of excavation and shaping of the water retention areas intended to maintain a permanent pool of water, all silt seams and granular or sandy soils shall be removed to a minimum depth of three feet below the subgrade and replaced with an impermeable clay liner, including adjacent to and under storm sewer inlets and outlets. It is the intent of these PLANS and SPECIFICATIONS that the CONTRACTOR shall prepare the lake bottoms, side slopes, and compaction thereof such that the lakes will maintain the proposed normal water level and that leakage does not exceed ½ inch per week.

Ditches and swales are to be excavated to the lines and grades indicated on the PLANS. All suitable materials excavated from the ditches shall be used in construction of the embankments.

The CONTRACTOR shall notify the CLIENT immediately upon encountering groundwater during excavation. If in the opinion of the CLIENT or the JURISDICTIONAL GOVERNING ENTITY this condition necessitates the installation of perforated drain tile bedded in washed gravel or open storm sewer joints wrapped with fabric, the CONTRACTOR shall install the same.

During excavation and embankment, grades may be adjusted to achieve an overall site earthwork balance. The CONTRACTOR shall cooperate fully with the CLIENT in adjustment of grades, construction methods and placement of material to meet the above goals and shall immediately advise CLIENT if he believes that the earthwork will not balance.

It is the intent of these PLANS that storm waters falling on the site be diverted into sedimentation / lake / detention basins during construction. The CONTRACTOR shall construct and maintain any temporary ditches or swales that are necessary to accomplish this prior to beginning mass excavation.

EROSION CONTROL

Suitable erosion control practices shall be maintained by the CONTRACTOR in accordance with Illinois Urban Manual and all applicable Soil Erosion and Sedimentation Control ordinances and the PLANS.

UNDERCUTTING DURING EARTHWORK

If the subgrade cannot be dried adequately by discing as outlined above for placement of material to planned grades and if the CLIENT determines that the subgrade does not meet the standards set forth above, the CLIENT may require undercutting.

MISCELLANEOUS CONTRACT ITEMS

The following items may be required at the CLIENT's option, as indicated on the PLANS or as required by the JURISDICTIONAL GOVERNING ENTITY:

(1) **GEOTEXTILE FABRIC**

Geotextile fabric or approved equal shall be provided in areas as designated by the CLIENT, as indicated on the PLANS or as required by the JURISDICTIONAL GOVERNING ENTITY where proper compaction of embankments over existing soft soils is not possible. Geotextile fabric shall meet the material specifications of and shall be installed in accordance with the above standards.

(2) **EROSION CONTROL BLANKET**

Erosion control blanket or approved equal shall be provided in areas as designated by the CLIENT, as indicated on the PLANS or as required by the JURISDICTIONAL GOVERNING ENTITY for the stabilization of disturbed areas. Erosion control blanket shall meet the material specifications of and shall be installed in accordance with the above standards, the Illinois Urban Manual and/or the details shown on the PLANS.

III.UNDERGROUND IMPROVEMENTS

A. GENERAL

STANDARDS

All underground improvements shall be constructed and tested in accordance with the Standard Specifications for Water and Sewer Construction in Illinois and Standard Specifications for Road and Bridge Construction, Department of Transportation, State of Illinois, latest edition. In the event of conflicting guidelines, the more restrictive shall govern.

SELECTED GRANULAR BACKFILL

Selected Granular Backfill shall be required for all sewer and water main trenches lying under existing or proposed streets, driveways, parking lots and within 24" thereof, and where noted on PLANS. All material placed in such trenches shall be in accordance with the above standards.

MANHOLES, CATCH BASINS, INLETS & VALVE VAULTS

All Manholes, Catch Basins, Inlets, and Valve Vaults shall be constructed of reinforced precast concrete ring construction with tongue and groove joints in conformance with the latest revision of ASTM designation C-478. All joints between sections and frames (except sanitary manholes, see Section IIIB Manholes, below) shall be sealed with mastic type bituminous jointing compound. CONTRACTOR shall remove all excess mastic on inside of structure and butter joints with mortar. Manholes are to have offset cones except that no cone shall be used on storm manholes 6'-0" deep or less in which case a reinforced concrete flat top section shall be used, and Valve Vaults shall have concentric cones. Only concrete adjustment rings will be permitted where necessary and shall be limited to two adjustment rings totaling not more than 8" in height. All manholes and catch basin steps shall be copolymer polypropylene with continuous ½" steel reinforcement as manufactured by MA Industries, or approved equal.

AUGER/BORING AND CASING

Casing pipe shall be welded steel pipe, installed where shown on the PLANS. The carrier pipe shall be securely blocked and banded and sanitary and storm sewers shall maintain the specified gradient. Upon installing the carrier pipe the ends shall be sealed with hydraulic cement.

AUGER (OPEN BORE)

The CONTRACTOR shall auger (open bore) where noted on PLANS.

HORIZONTAL AND VERTICAL SEPARATION OF WATER AND SEWER MAINS

Horizontal and vertical separation of water and sewer mains shall be in accordance with Standard Specifications for Water and Sewer Construction in Illinois Section 41-2.01A and 41-2.01B and Standard Drawing 18, 19, 20, 21, 22, 23 and 24.

STRUCTURE ADJUSTMENTS

Structures shall be adjusted to the finished grade as shown on PLANS.

B. SANITARY SEWERS AND APPURTENANCES

SANITARY SEWER PIPE

Sanitary sewer pipe including building services, shall conform to the following:

(1) Polyvinyl Chloride (PVC) Sewer Pipe shall conform to ASTM D3034 (4-inch thru 15-inch) or ASTM F679 (18-inch thru 48-inch) minimum SDR 26 with flexible elastomeric seal gasket gasketed joints conforming to ASTM D3212 and F477.

(2) Ductile Iron Sewer Pipe shall conform with ANSI/AWWA C151/A21.51 Class 50, cement lined with push on type joints conforming to ANSI/AWWA C111/A21.11.

(3) Extra Strength Clay Sewer Pipe shall conform with ASTM Specification C700 (glazed) with ASTM D1784 type joints conforming to Clow NO-BEL (ESVCP), with flexible gasket meeting ASTM C425 (MWRD only).

Sanitary sewers shall include bedding and backfilling.

MANHOLES

Manholes shall be constructed in conformance with Section IIIA Manholes, etc. above. The concrete base and bottom section shall be constructed of precast reinforced concrete monolithically cast sections including benches, pipe connection and invert flow lines. Manhole frame and lids shall be Neenah R-1772 or approved equal, with lids imprinted "SANITARY", with recessed pick holes. Manhole joints between adjustment rings and frames and between manhole sections shall be set on preformed plastic gasket consisting of a homogeneous blend of refined hydrocarbon resins and plasticizing compounds reinforced with inert mineral filler to provide a water tight seal. All pipe connection openings shall be precast with resilient rubber watertight pipe sleeves. A 10" elastomeric band (chimney seal) shall be installed extending from the manhole top to the manhole frame as shown on detail. Manholes shall include steps, frame & grate, bedding, and trench backfill.

FOUNDATION, BEDDING AND HAUNCHING

Foundation, Bedding and Haunching shall be wet coarse aggregate or moist fine aggregate in accordance with the above standards and placed as shown on the detail.

TESTING

Sanitary sewers shall be air tested and tested for deflection in accordance with the requirements of Section 31-1.12 "TESTING AND INSPECTION FOR ACCEPTANCE OF SANITARY SEWERS" of the Standard Specifications for Water and Sewer Construction in Illinois or the JURISDICTIONAL GOVERNING ENTITY, whichever is more restrictive. In addition, a televised inspection of the completed sanitary sewers shall be conducted and a copy of the videotape and report furnished to the JURISDICTIONAL GOVERNING ENTITY.

All sanitary manholes are to be tested for water tightness in accordance with ASTM C969 "Standard Practice for Infiltration and Exfiltration Acceptance Testing of Installed Precast Concrete Pipe Sewer Lines", or ASTM C1244 "Standard Test Method for Concrete Sewer Manholes by the Negative Pressure (Vacuum) Test".

SERVICES

A wye branch or "tee" and sanitary service line, properly plugged and sealed shall be constructed as shown on the PLANS. The ends of all services shall be marked with a 4"x4" post extending 36" above grade and painted red. The CONTRACTOR shall keep accurate records of all Wye or Tee locations as measured from the downstream manhole as well as the service lengths and furnish same to CLIENT.

RISERS

Risers shall be constructed in locations as shown on the PLANS and according to the detail.

DROP MANHOLE CONNECTIONS

Drop manhole connections to existing manholes shall be constructed according to the PLANS and the detail.

SANITARY SEWER FORCE MAIN

Sanitary sewer force main shall conform to the following:

(1) Polyvinyl Chloride (PVC) Pressure Pipe conforming to the latest revision of ANSI/AWWA C900, Class 150 with integral bell and flexible elastomeric gasket joints conforming to ASTM F477.

(2) Ductile iron cement lined pipe conforming to the latest revision of ANSI/AWWA C151/A21.51, Thickness Class 50, minimum 150 psi working pressure with "push on" type joints.

Force mains shall have a minimum of five feet six inches (5'-6") of cover and shall include bedding and trench backfill. Poured or monolithic concrete thrust blocks are required to brace all tees, plugs, caps, and bends of 11 1/4 degree deflection or greater.

Upon completion of installation, force mains are to be plugged and pressure tested at 2 times the working pressure or total dynamic head for a period of 10 minutes, with no loss of pressure or as required by the JURISDICTIONAL GOVERNING ENTITY, whichever is more stringent.

TELEVISION INSPECTION

Upon completion of construction a television inspection of the sanitary sewer system shall be performed on all portions of the sewer if required by the JURISDICTIONAL GOVERNING ENTITY. Videotapes and written report of all television inspections shall be provided to the CLIENT. The form of report and type and format of the videotape shall be approved by the JURISDICTIONAL GOVERNING ENTITY.

All sewers and appurtenances shall be cleaned prior to inspection and testing required by this section.

All defects and corrective work required as the result of television inspection shall be performed by the CONTRACTOR without delay. All dips, cracks, leaks, improperly sealed joints and departures from approved grades and alignment shall be repaired by removing and replacing the involved sections of pipe. Upon completion thereof, the sewer shall be retested and such further inspection made as may appear warranted by the CLIENT.

MISCELLANEOUS

All floor drains shall be connected to the sanitary sewer.

C. WATER MAINS AND APPURTENANCES

WATER MAIN PIPE (3" AND LARGER)

Water main pipe shall conform to the following:

(1) Ductile iron pipe shall be per ANSI/AWWA C151/A21.51, Thickness Class 52, minimum 150 psi working pressure, cement lined in accordance with ANSI/AWWA C104/A21.4, with "push on" type joints.(2)

(2) Polyvinyl Chloride Pipe (PVC) conforming to the latest revision of ANSI/AWWA C900 (4-inch thru 12-inch) or ANSI/AWWA C905 (14-inch thru 48-inch) with a pressure rating of 235 psi, SDR 18 in accordance with ASTM D2241. Joints shall be pressure rated in accordance with ASTM D3139 with elastomeric seals in accordance with ASTM F477.

Installation shall be in accordance with ANSI/AWWA C600 (Ductile Iron) or ANSI/AWWA C605 (PVC). All water main shall have mechanical joint cast iron or ductile iron fittings in accordance with ANSI/AWWA C110/A21.10 or compact ductile iron fittings in accordance with ANSI/AWWA C153/A21.53 with 250 psi working pressure.

Poured or monolithic concrete thrust blocks are required to brace all tees, plugs, caps, and bends of 11 1/4 degree deflection or greater. Minimum cover for all water mains, including services, shall be 5'-6" from the finished grade. Water main shall include bedding and backfilling.

WATER VALVES

All valves shall be resilient wedge gate valves conforming to the latest revision of ANSI/AWWA C515, with a rated working pressure of 200 psi in accordance with JURISDICTIONAL GOVERNING ENTITY requirements, except that butterfly valves conforming to ANSI/AWWA C504 shall be constructed on all water mains 16" diameter and larger. Valves shall be non-rising stem and shall close by turning clockwise.

VALVE VAULTS

Valve vaults shall be constructed in conformance with Section IIIA Manholes, etc. above. Frame and lids shall be as approved by the JURISDICTIONAL GOVERNING ENTITY and shall be imprinted "WATER".

VALVE BOXES

Valve boxes shall be constructed in conformance with the standard detail. Valve boxes shall be cast iron extension screw type having lids imprinted with the letters "WATER".

FIRE HYDRANTS

Fire Hydrants shall be per JURISDICTIONAL GOVERNING ENTITY requirements. All fire hydrants shall be located as shown on the PLANS and shall be painted in a manner acceptable to the JURISDICTIONAL GOVERNING ENTITY after installation and shall be adjusted to final grade.

TAP, STOPS AND BOX

The CONTRACTOR shall determine from the JURISDICTIONAL GOVERNING ENTITY as to the exact style, type, and manufacture of corporation stops, ground key stops and services boxes preferred by the JURISDICTIONAL GOVERNING ENTITY and shall furnish same.

SMALL WATER SERVICES (2" DIAMETER OR LESS)

Water services shall be type K copper size as shown on PLANS, and constructed where shown on the PLANS. The ends of all services shall be marked with a 4"x4" post extending 36" above grade and painted blue. The CONTRACTOR shall keep accurate records of tap locations and service box locations, as well as the service lengths and furnish same to CLIENT. Water services shall include bedding and backfilling.

DISINFECTION

Disinfections shall meet all of the requirements of the State of Illinois, Environmental Protection Agency, Public Water Supplies Division. The safe quality of the water supply shall be demonstrated by bacteriological analysis of samples collected at sampling taps on at least two consecutive days following disinfection of the mains and copies of the said report submitted to the JURISDICTIONAL GOVERNING ENTITY and the CLIENT.

PRESSURE TEST

Allowable leakage, test pressure and duration shall be as per the requirements of the JURISDICTIONAL GOVERNING ENTITY.

PRESSURE CONNECTION TO EXISTING WATER MAIN

The CONTRACTOR shall maintain system pressure on existing water main at all times. Existing water main shall be located and material excavated, and valve basin slab and main supports installed. The existing water main shall be cleaned and the exterior disinfected prior to installing the tapping tee (material to conform to AWWA C110). The tapping valve shall be installed (valve to conform to AWWA C500) and the pressure tap completed in accordance with the detail on the plans. Valve shall be constructed in conformance with the detail. Payment for pressure connection to existing water main shall include disinfection, tapping valve and tee, valve vault, frame and lid, bedding, and trench backfill.

DRY CONNECTION TO EXISTING WATER MAIN

A dry connection to existing water main shall include a connection to an existing water main stub where shown on the PLANS. The CONTRACTOR shall obtain approval of the JURISDICTIONAL GOVERNING ENTITY to shut down any main, including submittal of a schedule of the time of shut off and the time the line will be returned to service. All mains shut down that are opened to atmosphere must be disinfected prior to returning main into service.

POLYETHYLENE ENCASEMENT (FOR DUCTILE IRON WATER MAIN ONLY)

The CLIENT, or JURISDICTIONAL GOVERNING ENTITY may request that portions of the water main be enclosed in a polyethylene encasement in accordance with ANSI/AWWA C105/A21.5 should soil conditions so warrant its use.

FOUNDATION, BEDDING AND HAUNCHING

Foundation, Bedding and Haunching shall be wet coarse aggregate or moist fine aggregate in accordance with the above standards and placed as shown on the detail.

TRACER WIRE

If the distance between valves when installing PVC pipe exceeds 1,000', tracer wire stations will be required for current induction. Tracer wire stations in grass areas will be Rhino TriView Flex Tracing Wire Stations or approved equal. In paved areas, they will be Valvco Tracer Wire Access Box for H20 loading or approved equal.

For open cut construction, using PVC pipe, a continuous, insulated, 12 gauge copper wire suitable for direct burial shall be taped on top of all piping to provide for locating following construction. This wire shall be securely terminated inside every valve vault on stainless steel hardware with an exposed lead of at least 12". A mechanically secure and soldered connection shall be provided for all wire splices. Where construction is by directional drilling or similar trenchless technology the tracer wire shall be 3/16" 7x19 PVC coated stainless steel aircraft cable with minimum breaking strength of 3,700 lbs (Lexco, Chicago, IL). Or Trace-Safe water blocking tracerwire RT series 19 gauge conductor (RT 1802W water, RT 1803W sewer).

Before final approval of any water main, there will be a monitored tracer wire continuity test in order to confirm proper installation of any tracer wire.

D. STORM SEWERS AND APPURTENANCES

STORM SEWER PIPE

Storm sewer pipe shall conform to the following:

(1) Reinforced concrete pipe minimum Class IV in conformance with the latest revision of ASTM designation C76 with C443 flexible gasket joints, except that bituminous mastic joints may be used in grass areas.

(2) Polyvinyl Chloride (PVC) Pipe: ASTM D3034 (4-inch thru 15-inch) or ASTM F679 (18-inch thru 36-inch), rated SDR 35, continually marked with manufacturer's name, pipe size, cell classification, SDR rating. Joints shall be flexible elastomeric seals conforming to ASTM D3212.

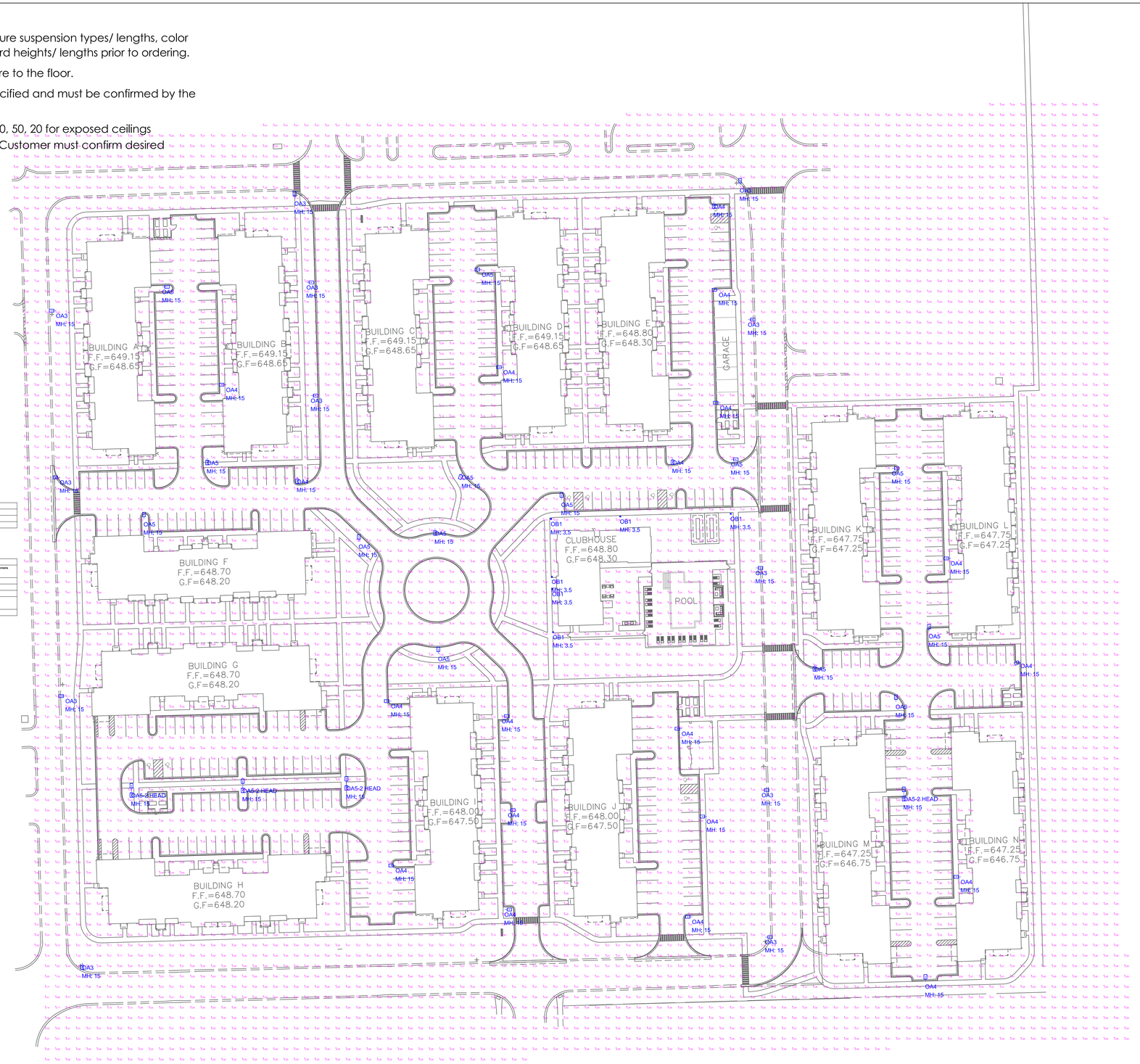
(3) Ductile Iron Pipe (DIP) shall conform to ANSI/AWWA C151/21.5, Class 50 cement lined with push on type joints conforming to ANSI/AWWA C111/A21.11.

(4) Spiral Rib Metal Pipe Type 1R: 18-inch diameter and greater. Pipe ends shall be re-corrugated and installed with semi-corrugated Hugger type brands and "O" ring gaskets. (Only permitted with Municipality approval and/or when specifically indicated on PLANS).

(5) High Density Polyethylene Pipe (HDPE) Smooth Interior, AASHTO Designation M252 and M294, maximum diameter of 48 inches. Pipe joints and fittings shall be watertight gasketed joints. No band seals will be allowed. (Only permitted in landscape areas with Municipality Approval and/or when specifically indicated on PLAN

NOTES:

- Customers are responsible for confirming mounting heights, fixture suspension types/ lengths, color temperature, CRI, linear fixture lengths, pole lengths, and bollard heights/ lengths prior to ordering.
- Mounting height (MH) is measured from the bottom of the fixture to the floor.
- This Lighting layout assumes the following unless values are specified and must be confirmed by the customer prior to ordering.
  - Room reflectance of 80, 50, 20 for standard ceilings and 50, 50, 20 for exposed ceilings
  - Wall sconces are mounted at 7' for calculation purposes. Customer must confirm desired mounting height before rough in.



Calculation Summary

Label	CalcType	Units	Avg	Max	Min	Avg/Min	Max/Min
SITE	Illuminance	Fc	0.44	15.56	0.00	N.A.	N.A.
PARKING AND DRIVES	Illuminance	Fc	0.95	6.4	0.0	N.A.	N.A.

Luminaire Schedule

Qty	Label	Arrangement	LLF	MPR	Description	Lum. Watts	Total Watts	Lum. Lumens
12	OA3	Single	0.950	LITHONIA	RSX1 LED P1 cuft R3 14FT POLE 1FT BASE	51.34	616.08	7098
19	OA4	Single	0.950	LITHONIA	RSX1 LED P1 cuft R4 14FT POLE 1FT BASE	51.34	975.46	7189
14	OA5	Single	0.950	LITHONIA	RSX1 LED P1 cuft R5 14FT POLE 1FT BASE	51.34	718.76	7284
4	OA5-2 HEAD	Back-Back	0.950	LITHONIA	RSX1 LED P1 cuft R5 2@180 14FT POLE 1FT BASE	51.34	410.72	7284
6	OB1	Single	0.950	LUMINIS	BVA118 L1L16 LD4 cuft	19.2	115.2	1392

ENTERPRISE
Lighting & Control

#	DATE	COMMENTS

REVISIONS

DRAWN BY : BB

DATE : JAN 13, 2026

SCALE :1" = 50'-0"

SEASONS AT CREST HILL

CREST HILL, IL

SITE LIGHTING LAYOUT



Manhard CONSULTING

One Overlook Point, Suite 290, Lincolnshire, IL 60069 ph:847.634.5550 fx:847.634.0095 manhard.com
Civil Engineers • Surveyors • Water Resource Engineers • Water & Wastewater Engineers
Construction Managers • Environmental Scientists • Landscape Architects • Planners

SEASONS AT CREST HILL

CITY OF CREST HILL

EXISTING VEGITATION EXHIBIT

PROJ. MGR.:	JSE
PROJ. ASSOC.:	MSL
DRAWN BY:	GAW
DATE:	10-9-25
SCALE:	1"=40'

SHEET

EXB.

FRD.GUIL01

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October 10, 2025 - 16:40 Dwg Name: P:\frdcrit01\dwg\Eng\Preliminary\Exhibits Eng\EXISTING CONDITIONS EXHIBIT.dwg Updated By: gwasielewski

Final Landscape Plan
for
SEASONS AT CREST HILL
CREST HILL, ILLINOIS

Crest Hill Required Landscaping

MINIMUM PLANTING REQUIREMENTS

One approved planting for each 725 sf of gross lot area. For each required planting, there shall be an additional 10 sf of approved ground cover adjacent thereto. Approx. 688,840 sf gross lot area (preliminary) = 950 approved plantings and 9,500 sf approved adjacent groundcover required.

Approved Plantings and Ground Cover: Shade trees min 3" caliper, conifers min 6' height, ornamental trees min 6' in height, border plantings and foundation plantings, living ground coverages at a density sufficient to guarantee total coverage within 2 yrs of planting, other ground covers.

SCREENING AND BUFFERING REQUIREMENTS

Multi-family sites shall be buffered from adjacent single-family sites via landscape berms, plantings, and/or fencing to achieve less than a minimum of 75% visual screen at a min. mature height of 6'.

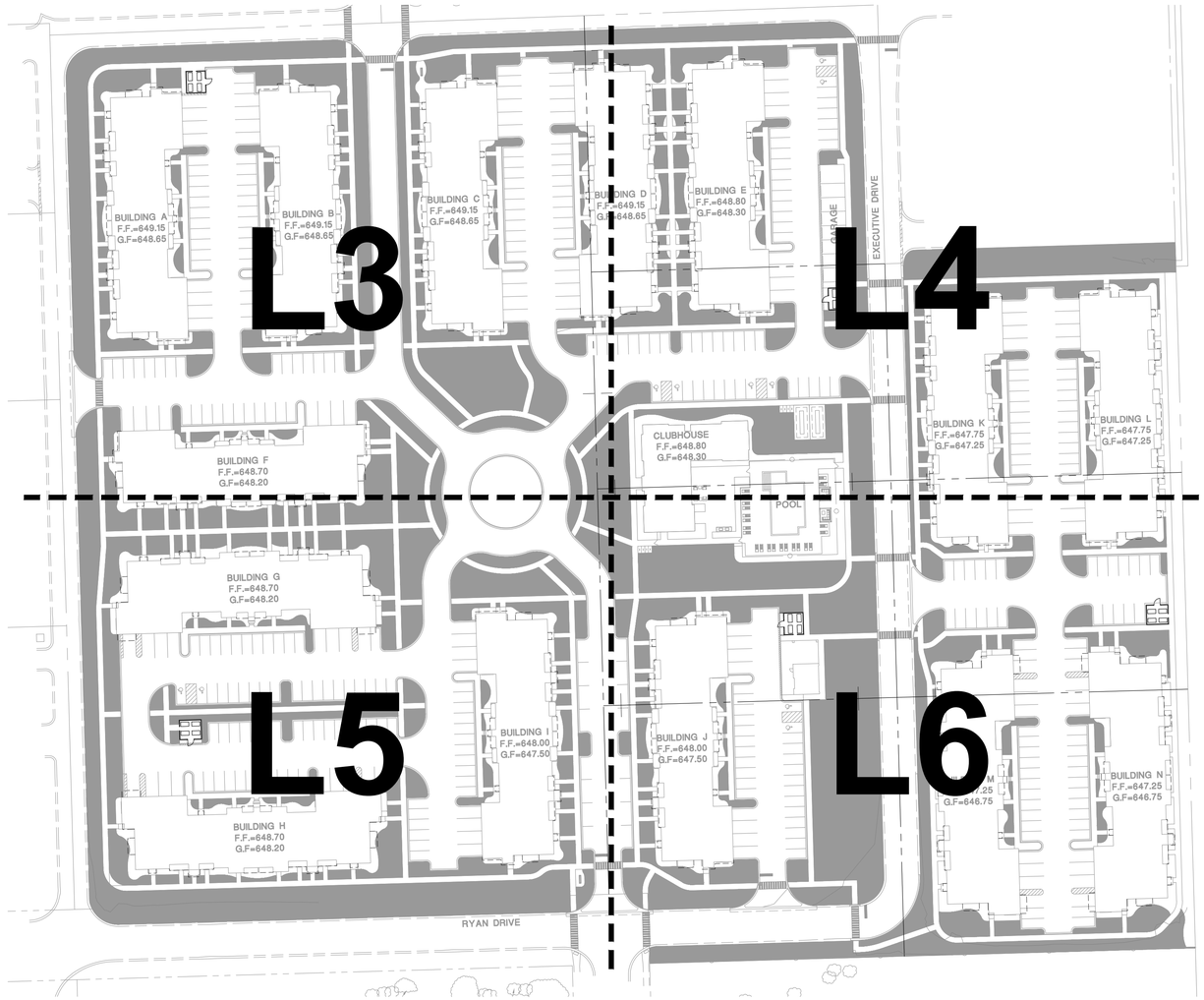
Per 8.3-9.1, a fence, wall, hedge, or shrubbery may be placed along the side and rear lot line. If placed in the front or corner side yard it must maintain a min. setback of 6'. Maximum height 6' in rear and side, 4' in front or corner side.

PARKING REQUIREMENTS

All off-street parking areas containing more than 4 spaces shall be effectively screened on each side adjoining or fronting on any property situated in a R- District. A landscape island shall be required at the end of each parking row. The interior of a parking lot with >20 cars shall include interior landscape islands at 1 tree per 20 parking spaces or fraction thereof, evenly distributed.

Landscape Notes:

1. Seed/ Sod limit line is approximate. Seed/ Sod to limits of grading and disturbance. Contractor responsible for restoration of any unauthorized disruption outside of designated construction area.
2. Contractor responsible for erosion control in all seeded/ sodded areas. Tree mulch rings in turf areas are 5' diameter. Contractor shall provide a mulch ring around all existing trees within the limits of work. Remove all existing grass from area to be mulched and provide a typical spade cut edge. Landscape Fabric shall not be installed under mulch. Root flares shall be at or above grade, per specifications, and all rope/cord shall be removed from the base of tree trunks.
3. Bedlines are to be spade cut to a minimum depth of 3". Curved bedlines are to be smooth and not segmented.
4. All planting, beds shall receive top dressing of mulch. Landscape fabric shall not be installed under mulch.
5. Do not locate plants within 10' of utility structures or within 5' horizontally of underground utility lines unless otherwise shown on plans. Consult with Landscape Architect if these conditions exist.
6. For Lump Sum Contracts, plants and other materials are quantified and summarized for the convenience of the Owner and jurisdictional agencies only. Confirm and install sufficient quantities to complete the work as drawn and specified. No additional payments will be made for materials required to complete the work as drawn and specified.
7. For Unit Price Contracts, payments will be made based on actual quantities installed as measured in place by the Owner's Representative.
8. It is the responsibility of the contractor to locate and provide plant material as specified on this plan. The contractor may submit a request to provide substitutions for the specified plant material under the following conditions:
   a. Any substitutions proposed shall be submitted to the project owner's representative within two weeks of the award of contract. Substitutions must meet equivalent design and functional goals of the original materials as determined by the owner's representative. Any changes must have the approval of the owner's representative,
   b. The request will be accompanied by at least three notices from plant material suppliers that the plant material specified is not available and will not be available prior to construction.
10. Verify site conditions and information on drawings. Promptly report any concealed conditions, mistakes, discrepancies or deviations from the information shown in the Contract Documents. The Owner is not responsible for unauthorized changes or extra work required to correct unreported discrepancies. Commencement of work shall constitute acceptance of conditions and responsibility for corrections
11. A minimum of two working days before performing any digging, call underground service alert for information on the location of natural gas lines, electric cables, telephone cables, etc. The contractor shall be responsible for location and protection of all utilities, and repair of any damage resulting from his work at no additional cost to the owner.
12. Contractor shall promptly repair all damages to existing site at no cost to owner.
13. Refer to landscape specifications for additional conditions, standards, and notes.
14. Downspouts shall be routed underground and/or away from planting beds.



KEY MAP

0 30 60 120
Scale: 1"= 60'-0"

Note: Full Plant Schedule on Sheet L7

JULIE ILLINOIS ONE-CALL SYSTEM
Simply Call 811

LICENSED LANDSCAPE ARCHITECT
JENNIFER HENDRICKS
157-001253
STATE OF ILLINOIS
SEAL
Date: 01/14/26

Jennifer Hendricks, ASLA, PLA
Illinois Registered Landscape Architect # 157-001253
Expires 08/31/2027

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Construction Managers • Environmental Scientists • Landscape Architects • Planners

SEASONS AT CREST HILL
CREST HILL, ILLINOIS
LANDSCAPE COVER SHEET

PROJ. MGR.: PM
PROJ. ASSOC.: ----
DRAWN BY: JSH
DATE: 1/14/2026
SCALE: AS SHOWN

SHEET
L1 OF L8
FRD.CRIL01

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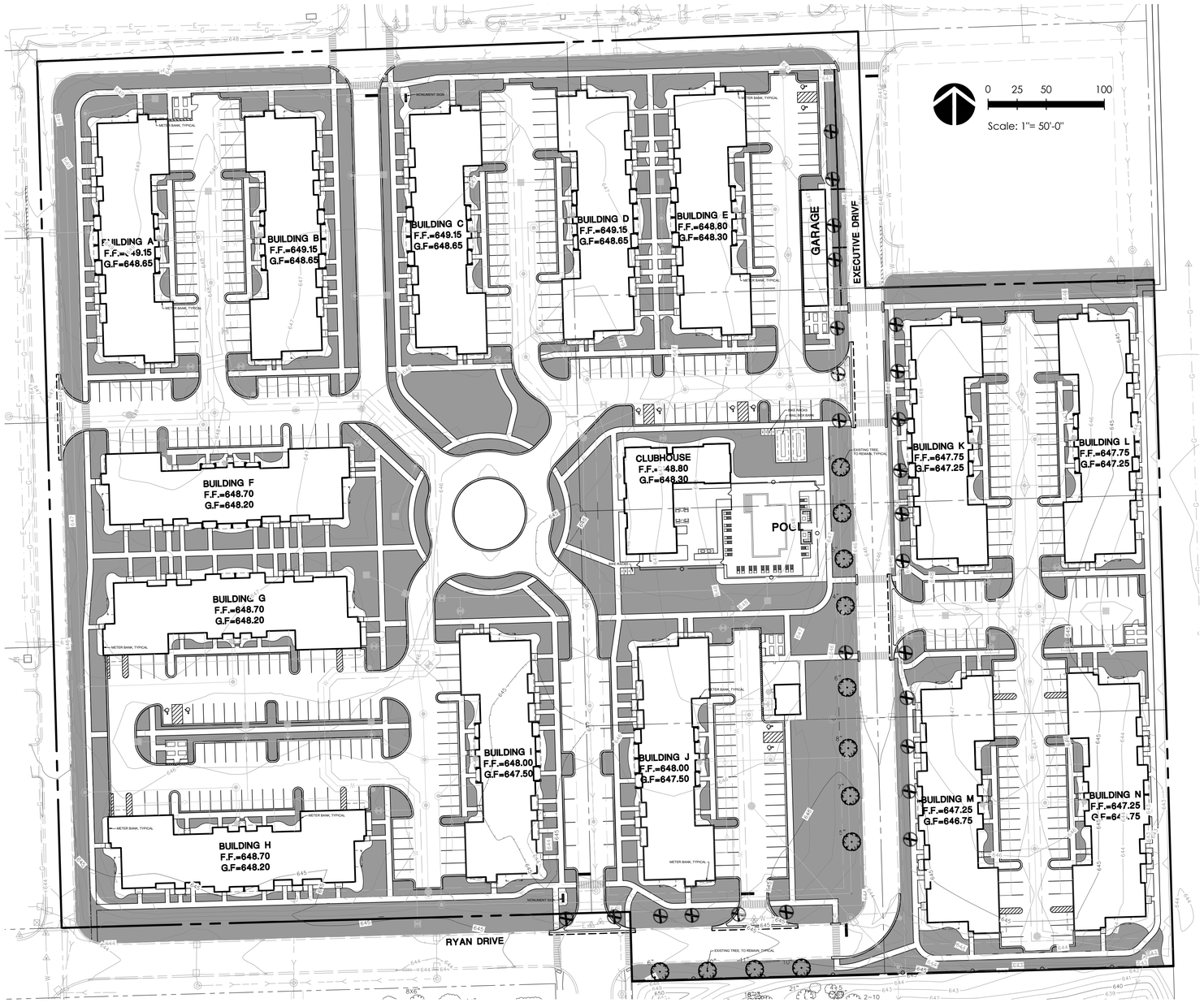
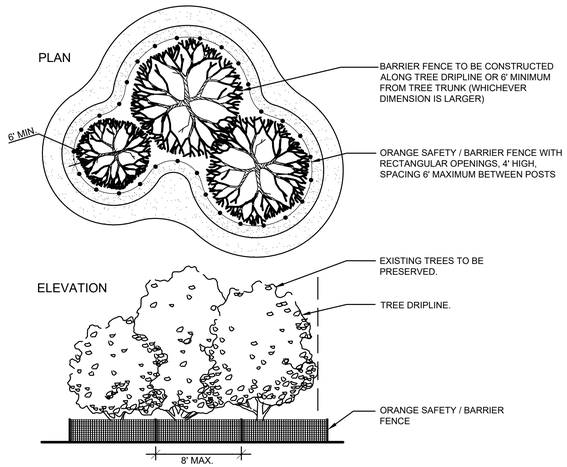
Legend

Existing tree to be removed

Existing tree to remain





ERECT ORANGE SAFETY/BARRIER FENCE PRIOR TO ANY CONSTRUCTION ACTIVITY, **AS SHOWN ON PLAN**. DO NOT STORE ANY EQUIPMENT OR MATERIALS WITHIN THE PROTECTED AREA. REMOVE THE BARRIER FENCE ONLY AFTER CONSTRUCTION OPERATIONS ARE COMPLETED.

A Tree Protection Plan

TREE PROTECTION SPECIFICATION

PART 1 - GENERAL

DEFINITIONS:

Tree and Plant Protection Area: Area surrounding individual trees, groups of trees, shrubs, or other vegetation to be protected during construction, and defined by a circle centered on the trunk with each tree with a radius equal to the crown dripline (the outer edge of the branch crown) unless otherwise indicated on the plans or by the Owner's Representative.

PART 2 - PRODUCTS

2.1 MULCH

2.1.1 Unless otherwise specified in the Plans, mulch shall be shredded hardwood mulch and shall be free of disease, insects, weed seeds, and added color. The minimum range of fine particles shall be 3/8 inch or less in size and a maximum size of individual pieces shall be approximately 1 to 1-1/2 inch in diameter and maximum length of approximately 4 to 5 inches.

2.1.2 Submit suppliers' product data that the product meets the requirements and two-gallon sample for approval.

2.2 TREE PROTECTION FENCING / PLASTIC MESH FENCE: Heavy - duty orange plastic mesh fencing fabric 48 inches wide. Fencing shall be attached to metal "U" or "T" post driven into the ground of sufficient depth to hold the fabric soldily in place without sagging. The fabric shall be attached to the post using attachment ties of sufficient number and strength to hold up the fabric without sagging. The Owner's Representative may request, at any time, additional post, deeper post depths and or additional fabric attachments if the fabric begins to sag, lean or otherwise not present a sufficient barrier to access.

2.3 TREE PROTECTION SIGN: Heavy-duty cardboard signs, 8.5 inches x 11 inches, white colored background with black 2-inch high or larger letters block letters. The signs shall be attached to the tree protection fence every 50 feet o.c. The tree protection sign shall read "Tree and Plant Protection Area- Keep Out".

PART 3 - EXECUTION

3.1 PREPARATION:

3.1.1 Prior to start of construction, layout the limits of the Tree and Plant Protection Area and then alignments of required Tree and Plant Protection Fencing and root pruning. Obtain the Owner's Representative's approval of the limits of the protection area and the alignment of all fencing and root pruning.

3.1.2 Prior to any construction activity at the site including utility work, grading, storage of materials, or installation of temporary construction facilities, install all tree protection fencing, silt fence, tree protection signs, and mulch as shown on the drawings.

3.2 PROTECTION: Protect the Tree and Plant Protection Area at all times from compaction of the soil, damage of any kind to trunks, bark, branches, leaves and roots of all plants, and contamination of the soil, bark or leaves with construction materials, debris, silt, fuels, oils, and any chemicals substance. Notify the Owner's Representative of any spills, compaction or damage and take corrective action immediately using methods approved by the Owner's Representative.

3.3 GENERAL REQUIREMENTS AND LIMITATIONS FOR OPERATIONS WITHIN THE TREE AND PLANT PROTECTION AREA:

3.3.1 The Contractor shall not engage in any construction activity within the Tree and Plant Protection Area without the approval of the Owner's Representative including: operating, moving or storing equipment; storing supplies or materials; locating temporary facilities including trailers or portable toilets and shall not permit employees to traverse the area to access adjacent areas of the project or use the area for lunch or any other work breaks. Permitted activity, if any, within the Tree and Plant Protection Area maybe indicated on the drawings along with any required remedial activity as listed below.

3.3.2 In the event that construction activity is unavoidable within the Tree and Plant Protection Area, notify the Owner's Representative and submit a detailed written plan of action for approval.

3.3.2.1 Tree branches that interfere with the construction may be tied back or pruned to clear only to the point necessary to complete the work. Other branches shall only be removed when specifically indicated by the Owner's Representative. Tying back or trimming of all branches and the cutting of roots shall be in accordance with accepted arboricultural practices (ANSI A300, part 8) and be performed under supervision of an arborist.

3.3.2.2 TRUNK PROTECTION: Protect the trunk of each tree to remain by covering it with a ring of 8-foot long 2-inch x 6-inch planks loosely banded onto the tree with 3 steel bands. Staple the bands to the planks as necessary to hold them securely in place. Trunk protection must be kept in place no longer than 12 months. If construction requires work near a particular tree to continue longer than 12 months, the steel bands shall be inspected every six months and loosened if they are found to have become tight.

3.4 TREE REMOVAL:

3.4.1 Remove all trees indicated by the drawings and specifications, as requiring removal, in a manner that will not damage adjacent trees or structures or compacts the soil.

3.4.2 Remove trees that are adjacent to trees or structures to remain, in sections, to limit the opportunity of damage to adjacent crowns, trunks, ground plane elements and structures.

3.4.3 Remove stumps and immediate root plate from existing trees to be removed. Grind trunk bases and large buttress roots to a depth of the largest buttress root or at least 18 inches below the top-most roots, whichever is less and over the area of three times the diameter of the trunk (DBH).

3.4.3.1 For trees where the stump will fall under new paved areas, grind roots to a total depth of 18 inches below the existing grade. If the sides of the stump hole still have greater than approximately 20% wood visible, continue grinding operation deeper and or wider until the resulting hole has less than 20% wood. Remove all wood chips produced by the grinding operation and back fill in 8-inch layers with controlled fill of a quality acceptable to the site engineer for fill material under structures, compacted to 95% of the maximum dry density standard proctor. The Owner's Representative shall approve each hole at the end of the grinding operation.

3.4.3.2 In areas where the tree location is to be a planting bed or lawn, remove all woodchips and backfill stump holes with planting soil as defined in Specification Section Planting Soil, in maximum of 12-inch layers and compact to 80 - 85% of the maximum dry density.

3.5 PRUNING:

3.5.1 Within six months of the estimated date of substantial completion, prune all dead or hazardous branches larger than 2 inch in diameter from all trees to remain.

3.5.2 All pruning shall be done in accordance with ANSI A300 (part 1), ISA BMP Tree Pruning (latest edition), and the "Structural Pruning: A Guide for the Green Industry", Edward Gilman, Brian Kempf, Nelda Matheny and Jim Clark, 2013 Urban Tree Foundation, Visalia CA.

3.6 WATERING: The Contractor shall be fully responsible to ensure that adequate water is provided to all plants to be preserved during the entire construction period. Adequate water is defined to be maintaining soil moisture above the permanent wilt point to a depth of 8 inches or greater.

3.7 WEED REMOVAL: During the construction period, control any plants that seed in and around the fenced Tree and Plant Protection area at least three times a year, with one final weeding of the Area at the end of the construction period.

3.8 REMOVAL OF FENCING AND OTHER TREE AND PLANT PROTECTION: At the end of the construction period (at Preliminary Acceptance) or when requested by the Owner's Representative, remove all fencing, trunk protection, signs, and any other Tree and Plant Protection material.

3.9 DAMAGE OR LOSS TO EXISTING PLANTS DESIGNATED TO REMAIN

3.9.1 Any trees or plants designated to remain, and which are damaged by the Contractor shall be replaced in kind by the Contractor at their own expense. Trees shall be replaced with a tree of similar species and of equal size or 6-inch caliper, whichever is less. Shrubs shall be replaced with a plant of similar species and equal size or the largest size plants reasonably available whichever is less. Where replacement plants are to be smaller than the size of the plant that is damaged, the Owner's Representative shall approve the size and quality of the replacement plant. All replacement trees and plants shall be installed per the requirements of Specification Section Planting. Note that local ordinance requirements may supercede the replacement specifications stated here.

3.9.2 Plants that are damaged shall be considered as requiring replacement or appraisal when the damage affects more than 25% of the crown, 25% of the trunk circumference or root protection area, or the tree is damaged in such a manner that the tree could develop into a potential hazard. Trees and shrubs to be replaced shall be removed by the Contractor at his own expense.

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SEASONS AT CREST HILL
CREST HILL, ILLINOIS
TREE PRESERVATION PLAN

PROJ. MGR.: PM
PROJ. ASSOC.: ----
DRAWN BY: JSH
DATE: 1/14/2026
SCALE: AS SHOWN

SHEET
L2 OF L8
FRD.CRIL01

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BUILDING A
F.F.=649.15
G.F=648.65

BUILDING B
F.F.=649.15
G.F=648.65

BUILDING C
F.F.=649.15
G.F=648.65

BUILDING D
F.F=649.15
G.F=648.65

BUILDING F
F.F.=648.70
G.F=648.20

METER BANK, TYPICAL

MONUMENT SIGN

MATCHLINE SEE SHEET L5

MATCHLINE SEE SHEET L4

PLANT SCHEDULE

CODE	BOTANICAL NAME
DECIDUOUS TREES	
AA	Acer rubrum 'Armstrong'
AM5	Acer x freemanii 'Marmo'
CB	Carpinus betulus
CA	Carpinus caroliniana
CHI	Celtis occidentalis 'Chicagoland'
CJ	Cercidiphyllum japonicum
CL	Cladrastis lutea
CK	Cornus kousa
GBI	Ginkgo biloba
GY	Gymnocladus dioica
LT	Liriodendron tulipifera
NY	Nyssa sylvatica
OV	Ostrya virginiana
PAM	Platanus x acerifolia 'Morton Circle' TM
QM	Quercus macrocarpa
QE	Quercus x 'Crimschmidt'
TR	Tilia x euchlora 'Redmond'
UE	Ulmus davidiana japonica 'Morton' TM
EVERGREEN TREES	
ABI	Abies concolor
PG	Picea pungens 'Glauca'
PS2	Pinus sylvestris
TS2	Thuja occidentalis 'Smaragd'
ORNAMENTAL TREES	
AO	Acer palmatum dissectum 'Orangeola'
AG4	Amelanchier x grandiflora 'Autumn Brilliance'
CE	Cercis canadensis
CHV	Chionanthus virginicus
HT	Heptacodium miconioides 'SMNHMRF'
MAG	Magnolia x 'Jane'
SYR	Syringa reticulata 'Ivory Silk'
SHRUBS	
VM2	Viburnum dentatum 'Blue Muffin'
DECIDUOUS SHRUBS	
ABR	Aronia arbutifolia 'Brilliantissima'
AP2	Aronia melanocarpa 'SMNANMPEM'
AGH	Aronia melanocarpa 'UCONNAM012' TM
AM2	Aronia melanocarpa elata
COS	Cephalanthus occidentalis 'SMCOSS' TM
CI3	Cornus sericea 'Isanti'
CA3	Cotoneaster acutifolius
FX	Diervilla x splendens 'SMNDSD'
HU	Hydrangea paniculata 'Renba'
HYSS	Hydrangea paniculata 'Rensun' TM
HB	Hydrangea quercifolia 'Brenhill'
HR	Hydrangea quercifolia 'Ruby Slippers'
IN	Itea virginica 'SMNIVDFC'
PYG	Physocarpus opulifolius 'SMNPOBLR' TM
ROR	Rosa x 'Radcon' TM
SH2	Sorbaria sorbifolia 'Bacocot'
VC	Viburnum carlesii
VU	Viburnum dentatum deamii
WS2	Weigela florida 'Bokrasopin'
WS	Weigela x 'Slingco 2'
EVERGREEN SHRUBS	
BGM	Buxus x 'Green Mountain'
JUK	Juniperus chinensis 'Kallays Compact'
JUS	Juniperus chinensis 'Sea Green'
TAX	Taxus x media 'Densiformis'
FERNS	
AL	Athyrium filix-femina 'Lady in Red'
OC	Osmunda cinnamomea
ORNAMENTAL GRASSES	
AB2	Andropogon gerardii 'Blackhawks'
CB2	Calamagrostis brachytricha
HA2	Hakonechloa macra 'All Gold'
PSH	Panicum virgatum 'Cheyenne Sky'
PN	Panicum virgatum 'Northwind'
PLB	Pennisetum alopecuroides 'Little Bunny'
PT	Pennisetum alopecuroides 'Love and Rockets'
SA	Sesleria autumnalis
SG	Sesleria x 'Greenlee'
SH	Sporobolus heterolepis
GROUND COVERS	
CP	Ceratostigma plumbaginoides
VC2	Vinca minor
PERENNIALS	
AS	Allium x 'Serendipity'
BJ	Brunnera macrophylla 'Jack Frost'
CN	Calamintha nepeta nepeta
CZ	Coreopsis verticillata 'Zagreb'
GM	Geranium sanguineum 'Max Frei'
HG	Hemerocallis x 'Going Bananas'
HA3	Hosta x 'Autumn Frost'
NC	Nepeta x 'Cat's Pajamas'

Note: Full Plant Schedule on Sheet L7

0 10 20 40
Scale: 1"= 20'-0"

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SEASONS AT CREST HILL
CREST HILL, ILLINOIS
LANDSCAPE PLAN NORTHWEST

PROJ. MGR.: PM
PROJ. ASSOC.: ----
DRAWN BY: JSH
DATE: 1/14/2026
SCALE: AS SHOWN

SHEET
L3 OF L8
FRD.CRIL01

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PLANT SCHEDULE

CODE	BOTANICAL NAME
DECIDUOUS TREES	
AA	Acer rubrum 'Armstrong'
AMS	Acer x freemanii 'Marmo'
CB	Carpinus betulus
CA	Carpinus caroliniana
CHI	Celtis occidentalis 'Chicagoland'
CJ	Cercidiphyllum japonicum
CL	Cladrastis lutea
CK	Cornus kousa
GBI	Ginkgo biloba
GY	Gymnocladus dioica
LT	Liriodendron tulipifera
NY	Nyssa sylvatica
OV	Ostrya virginiana
PAM	Platanus x acerifolia 'Morton Circle' TM
QM	Quercus macrocarpa
QE	Quercus x 'Crimschmidt'
TR	Tilia x euchlora 'Redmond'
UE	Ulmus davidiana japonica 'Morton' TM
EVERGREEN TREES	
ABI	Abies concolor
PG	Picea pungens 'Glauca'
PS2	Pinus sylvestris
TS2	Thuja occidentalis 'Smaragd'
ORNAMENTAL TREES	
AO	Acer palmatum dissectum 'Orangeola'
AG4	Amelanchier x grandiflora 'Autumn Brilliance'
CE	Cercis canadensis
CHV	Chionanthus virginicus
HT	Hepfacodium miconioides 'SMNHMRF'
MAG	Magnolia x 'Jane'
SYR	Syringa reticulata 'Ivory Silk'
SHRUBS	
VM2	Viburnum dentatum 'Blue Muffin'
DECIDUOUS SHRUBS	
ABR	Aronia arbutifolia 'Brilliantissima'
AP2	Aronia melanocarpa 'SMNAMPEM'
AGH	Aronia melanocarpa 'UCONNAM012' TM
AM2	Aronia melanocarpa elata
COS	Cephalanthus occidentalis 'SMCOSS' TM
CI3	Cornus sericea 'Isanti'
CA3	Cotoneaster acutifolius
PX	Diervilla x splendens 'SMNDSD'
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HR	Hydrangea quercifolia 'Ruby Slippers'
IN	Itea virginica 'SMNIVDFC'
PYG	Physocarpus opulifolius 'SMNPOBLR' TM
ROR	Rosa x 'Radcon' TM
SH2	Sorbaria sorbifolia 'Bococal'
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VU	Viburnum dentatum deamii
WS2	Weigela florida 'Bokrasopin'
WS	Weigela x 'Slingco 2'
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TAX	Taxus x media 'Densiformis'
FERNS	
AL	Athyrium filix-femina 'Lady in Red'
OC	Osmunda cinnamomea
ORNAMENTAL GRASSES	
AB2	Andropogon gerardii 'Blackhawks'
CB2	Calamagrostis brachytricha
HA2	Hakonechloa macra 'All Gold'
PSH	Panicum virgatum 'Cheyenne Sky'
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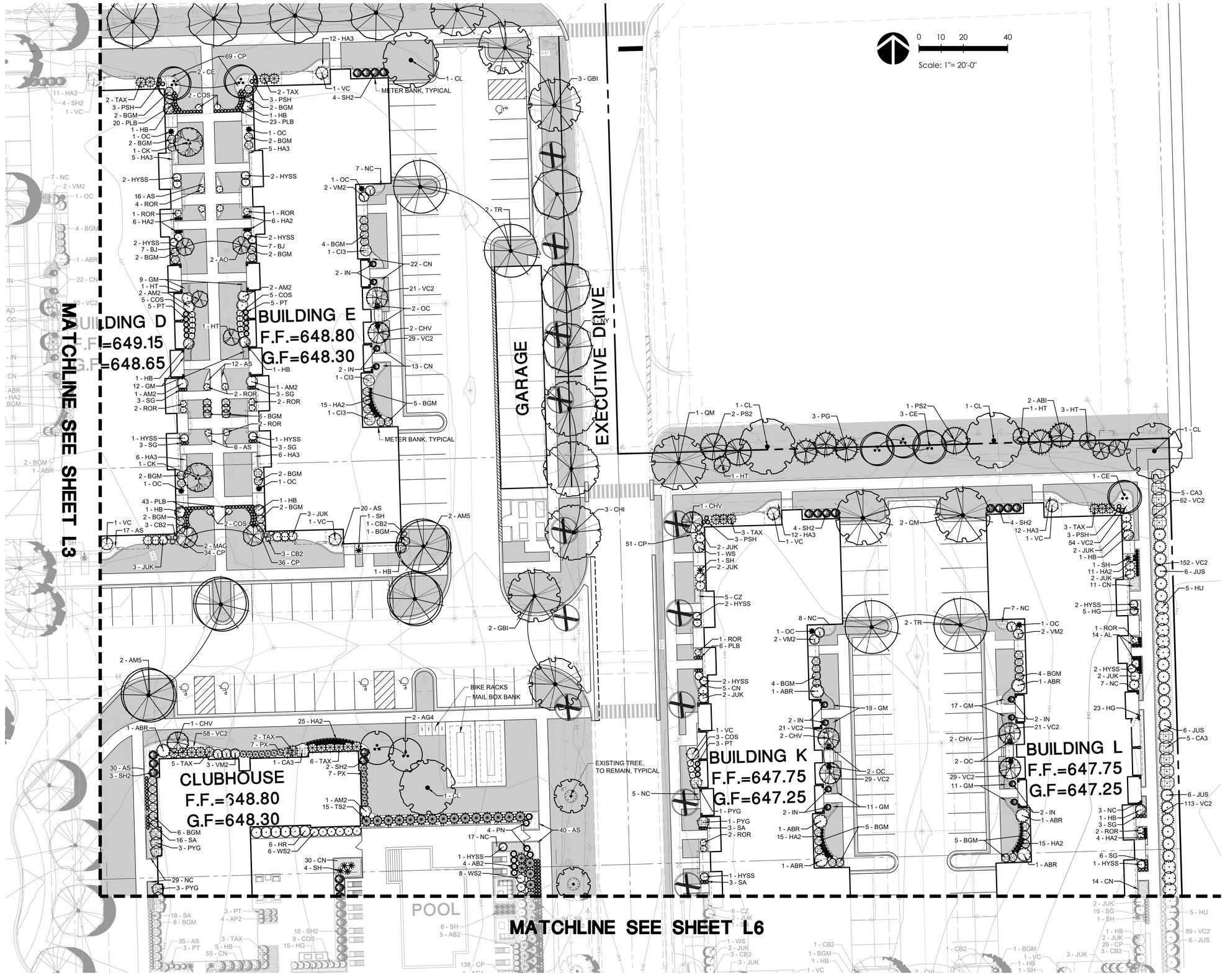
HG	Hemerocallis x 'Going Bananas'
HA3	Hosta x 'Autumn Frost'
NC	Nepeta x 'Cat's Pajamas'

Note: Full Plant Schedule on Sheet L7



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SEASONS AT CREST HILL
CREST HILL, ILLINOIS
LANDSCAPE PLAN NORTHEAST

PROJ. MGR.: PM
PROJ. ASSOC.: ----
DRAWN BY: JSH
DATE: 1/14/2026
SCALE: AS SHOWN

SHEET
L4 OF L8
FRD.CRIL01

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MATCHLINE SEE SHEET L3

BUILDING G
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G.F=648.20

BUILDING H
F.F.=648.70
G.F=648.20

BUILDING I
F.F.=648.00
G.F=647.50

METER BANK, TYPICAL

BIKE RACKS

MONUMENT SIGN

RYAN DRIVE

MATCHLINE SEE SHEET L6

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GM	Geranium sanguineum 'Max Frei'
HG	Hemerocallis x 'Going Bananas'
HA3	Hosta x 'Autumn Frost'
NC	Nepeta x 'Cat's Pajamas'

Note: Full Plant Schedule on Sheet L7

0 10 20 40

Scale: 1"= 20'-0"

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SEASONS AT CREST HILL
CREST HILL, ILLINOIS
LANDSCAPE PLAN SOUTHWEST

PROJ. MGR.: PM
PROJ. ASSOC.: ----
DRAWN BY: JSH
DATE: 1/14/2026
SCALE: AS SHOWN

SHEET
L5 OF L8
FRD.CRIL01

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January 15, 2026 - 16:16 Dwg Name: P:\Frdcrl\01\dwg\Landplan\V03-Final\01-Final Landscape.dwg Updated By: JHendricks

PLANT SCHEDULE	
CODE	**BOTANICAL NAME**
DECIDUOUS TREES	
AA	Acer rubrum 'Armstrong'
AM5	Acer x freemanii 'Marmo'
CB	Carpinus betulus
CA	Carpinus caroliniana
CHI	Celtis occidentalis 'Chicagoland'
CJ	Cercidiphyllum japonicum
CL	Cladrastis lutea
CK	Cornus kousa
GBI	Ginkgo biloba
GY	Gymnocladus dioica
LT	Liriodendron tulipifera
NY	Nyssa sylvatica
OV	Ostrya virginiana
PAM	Platanus x acerifolia 'Morton Circle' TM
QM	Quercus macrocarpa
QE	Quercus x 'Crimschmidt'
TR	Tilia x euchlora 'Redmond'
UE	Ulmus davidiana japonica 'Morton' TM
EVERGREEN TREES	
ABI	Abies concolor
PG	Picea pungens 'Glauca'
PS2	Pinus sylvestris
TS2	Thuja occidentalis 'Smaragd'
ORNAMENTAL TREES	
AO	Acer palmatum dissectum 'Orangeola'
AG4	Amelanchier x grandiflora 'Autumn Brilliance'
CE	Cercis canadensis
CHV	Chionanthus virginicus
HT	Heptacodium micnioides 'SMNHMRF'
MAG	Magnolia x 'Jane'
SYR	Syringa reticulata 'Ivory Silk'
SHRUBS	
VM2	Viburnum dentatum 'Blue Muffin'
DECIDUOUS SHRUBS	
ABR	Aronia arbutifolia 'Brilliantissima'
AP2	Aronia melanocarpa 'SMNAMPEM'
AGH	Aronia melanocarpa 'UCONNAM012' TM
AM2	Aronia melanocarpa elata
COS	Cephalanthus occidentalis 'SMCOSS' TM
CI3	Cornus sericea 'Isanti'
CA3	Cotoneaster acutifolius
PX	Diervilla x splendens 'SMNDSD'
HU	Hydrangea paniculata 'Renba'
HYSS	Hydrangea paniculata 'Rensun' TM
HB	Hydrangea quercifolia 'Brenhill'
HR	Hydrangea quercifolia 'Ruby Slippers'
IN	Itea virginica 'SMNIVDFC'
PYG	Physocarpus opulifolius 'SMNPOBLR' TM
ROR	Rosa x 'Radcon' TM
SH2	Sorbaria sorbifolia 'Bococot'
VC	Viburnum carlesii
VU	Viburnum dentatum deamii
WS2	Weigela florida 'Bokrasopin'
WS	Weigela x 'Slingco 2'
EVERGREEN SHRUBS	
BGM	Buxus x 'Green Mountain'
JUK	Juniperus chinensis 'Kallays Compact'
JU5	Juniperus chinensis 'Sea Green'
TAX	Taxus x media 'Densiformis'
FERNS	
AL	Athyrium filix-femina 'Lady in Red'
OC	Osmunda cinnamomea
ORNAMENTAL GRASSES	
AB2	Andropogon gerardii 'Blackhawks'
CB2	Calamagrostis brachytricha
HA2	Hakonechloa macra 'All Gold'
PSH	Panicum virgatum 'Cheyenne Sky'
PN	Panicum virgatum 'Northwind'
PLB	Pennisetum alopecuroides 'Little Bunny'
PT	Pennisetum alopecuroides 'Love and Rockets'
SA	Sesleria autumnalis
SG	Sesleria x 'Greenlee'
SH	Sporobolus heterolepis
GROUND COVERS	
CP	Ceratostigma plumbaginoides
VC2	Vinca minor
PERENNIALS	
AS	Allium x 'Serendipity'
BJ	Brunnera macrophylla 'Jack Frost'
CN	Calamintha nepeta nepeta
CZ	Coreopsis verticillata 'Zagreb'
GM	Geranium sanguineum 'Max Frei'
HG	Hemerocallis x 'Going Bananas'
HA3	Hosta x 'Autumn Frost'
NC	Nepeta x 'Cat's Pajamas'

Note: Full Plant Schedule on Sheet L7

MATCHLINE SEE SHEET L5

MATCHLINE SEE SHEET L4

G.F=648.30

POOL

BUILDING J
F.F.=648.00
G.F=647.50

BUILDING M
F.F.=647.25
G.F=646.75

BUILDING N
F.F.=647.25
G.F=646.75

BIKE RACKS

METER BANK, TYPICAL

EXISTING TREE, TO REMAIN, TYPICAL

0 10 20 40

Scale: 1"= 20'-0"

January 15, 2026 - 16:15 Dwg Name= P:\Frd\R01\Dwg\Landscape\02-Final\03-Final\03-Final-Landscape.dwg Updated By: jhendricks

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DRAWN BY | REVISIONS | DATE

SEASONS AT CREST HILL
CREST HILL, ILLINOIS
LANDSCAPE PLAN SOUTHEAST

PROJ. MGR.: PM
PROJ. ASSOC.: ----
DRAWN BY: JSH
DATE: 1/14/2026
SCALE: AS SHOWN

SHEET
L6 OF L8
FRD.CRIL01

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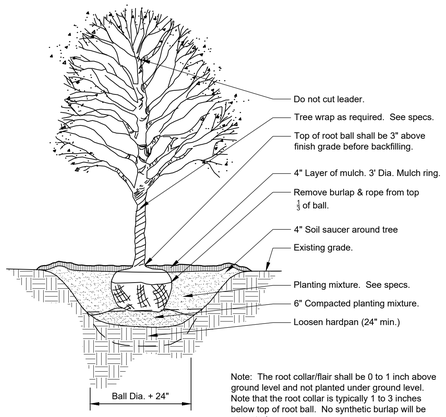
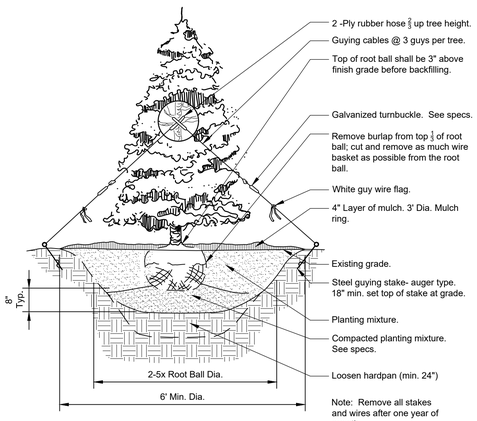


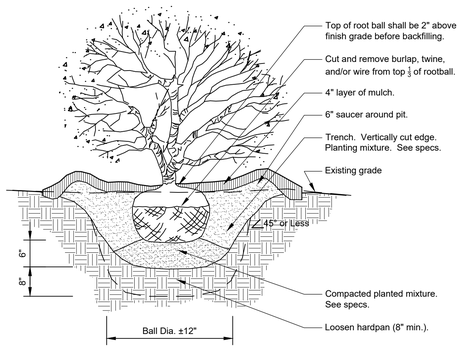
1 DECIDUOUS TREE PLANTING

1/4" = 1'-0" 32 9343.33-20



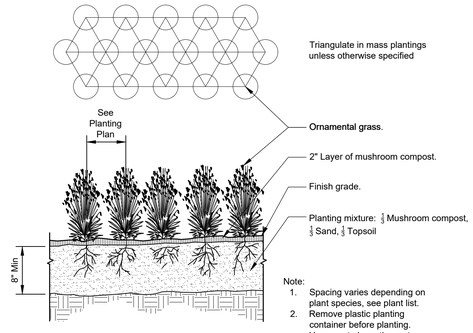
2 CONIFER TREE PLANTING

1/4" = 1'-0" 32 9343.46-01



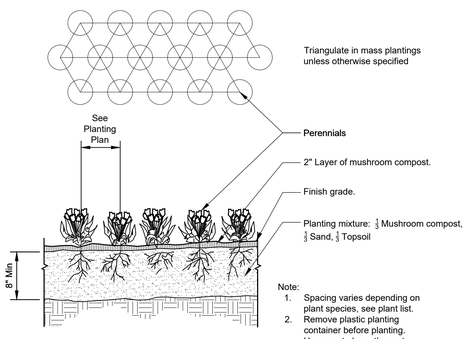
3 SHRUB PLANTING DETAIL

3/4" = 1'-0" 32 9333.16-05



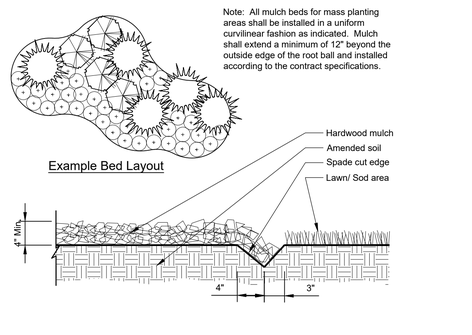
4 ORNAMENTAL GRASS PLANTING

1" = 1'-0" 32 9313-01



5 PERENNIAL / ANNUAL PLANTING

1" = 1'-0" 32 9313-02



6 CONTINUOUS MULCH EDGING

1" = 1'-0" 32 9113.26-01

PLANT SCHEDULE

CODE	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONTAINER	
DECIDUOUS TREES						
AA	18	Acer rubrum 'Armstrong'	Armstrong Red Maple	2.5" Cal.	B&B	
AM5	15	Acer x freemanii 'Marmo'	Marmo Freeman Maple	3" Cal.	B&B	
CB	8	Carpinus betulus	European Hornbeam	2" Cal.	B&B	
CA	3	Carpinus caroliniana	American Hornbeam	2.5" Cal.	B&B	
CHI	13	Celtis occidentalis 'Chicagoland'	Chicagoland Hackberry	2.5" Cal.	B&B	
CJ	1	Cercidiphyllum japonicum	Katsura Tree	3" Cal.	B&B	
CL	7	Cladrastis lutea	American Yellowwood	3" Cal.	B&B	
CK	6	Cornus kousa	Kousa Dogwood	6` Ht.	Pot	
GBI	13	Ginkgo biloba	Maidenhair Tree	2.5" Cal.	B&B	
GY	12	Gymnocladus dioica	Kentucky Coffeetree	2" Cal.	B&B	
LT	11	Liriodendron tulipifera	Tulip Poplar	2.5" Cal.	B&B	
NY	11	Nyssa sylvatica	Tupelo	2" Cal.	B&B	
OV	3	Ostrya virginiana	American Hophornbeam	2" Cal.	Pot	
PAM	9	Platanus x acerifolia 'Morton Circle' TM	Exclamation! London Plane Tree	2.5" Cal.	B&B	
QM	8	Quercus macrocarpa	Burr Oak	3" Cal.	B&B	
QE	2	Quercus x 'Crimschmidt'	Crimson Spire™ Oak	2" Cal.	B&B	
TR	13	Tilia x euchlora 'Redmond'	Redmond Crimean Linden	3" Cal.	B&B	
UE	20	Ulmus davidiana japonica 'Morton' TM	Accolade Elm	2.5" Cal.	B&B	
EVERGREEN TREES						
ABI	8	Abies concolor	White Fir	6` Ht.	B&B	
PG	7	Picea pungens 'Glauca'	Blue Colorado Spruce	6` Ht.	B&B	
PS2	9	Pinus sylvestris	Scotch Pine	6` Ht.	B&B	
TS2	57	Thuja occidentalis 'Smaragd'	Emerald Green Arborvitae	6` Ht.	B&B	
ORNAMENTAL TREES						
AO	8	Acer palmatum dissectum 'Orangeola'	Orangeola Japanese Maple	5 gal.	Pot	
AG4	4	Amelanchier x grandiflora 'Autumn Brilliance'	Autumn Brilliance Apple Serviceberry	8` Ht.	B&B	
CE	13	Cercis canadensis	Eastern Redbud Multi-trunk	8` Ht.	B&B	
CHV	34	Chionanthus virginicus	White Fringetree	2" Cal.	B&B	
HT	10	Heptacodium miconioides 'SMNHMRF'	Temple of Bloom® Seven Son Flower	6` Ht.	B&B	
MAG	7	Magnolia x 'Jane'	Jane Magnolia	8` Ht.	B&B	
SYR	9	Syringa reticulata 'Ivory Silk'	Ivory Silk Japanese Tree Lilac	8` Ht.	B&B	
SHRUBS						
VM2	31	Viburnum dentatum 'Blue Muffin'	Blue Muffin Arrowwood Viburnum	5 gal.		
DECIDUOUS SHRUBS						
ABR	22	Aronia arbutifolia 'Brilliantissima'	Brilliant Red Chokeberry	3 gal.	Pot	
AP2	8	Aronia melanocarpa 'SMNAMPEM'	Low Scape Snowfire™ Black Chokeberry	3 gal.	Pot	
AGH	56	Aronia melanocarpa 'UCONNAM012' TM	Ground Hug Black Chokeberry	3 gal.	Pot	
AM2	24	Aronia melanocarpa elata	Glossy Black Chokeberry	3 gal.	Pot	
COS	64	Cephalanthus occidentalis 'SMCOSS' TM	Sugar Shack Buttonbush	3 gal.	Pot	
CI3	23	Cornus sericea 'Isanti'	Isanti Red Twig Dogwood	3 gal.	Pot	
CA3	26	Cotoneaster acutifolius	Peking Cotoneaster	3 gal.	Pot	
PX	19	Diervilla x splendens 'SMNDSD'	Kodiak® Red 2.0 Diervilla	3 gal.	Pot	
HU	23	Hydrangea paniculata 'Renba'	Berry White® Panicle Hydrangea	3 gal.	Pot	
HYSS	54	Hydrangea paniculata 'Rensun' TM	Strawberry Sundae Panicle Hydrangea	3 gal.	Pot	
HB	47	Hydrangea quercifolia 'Brenhill'	Gatsby Gal® Oakleaf Hydrangea	3 gal.	Pot	
HR	6	Hydrangea quercifolia 'Ruby Slippers'	Ruby Slippers Oakleaf Hydrangea	3 gal.	Pot	
IN	55	Itea virginica 'SMNIVDFC'	Scentlandia® Sweetspire	3 gal.	Pot	
PYG	18	Physocarpus opulifolius 'SMNPOBLR' TM	Ginger Wine Ninebark	3 gal.	Pot	
ROR	46	Rosa x 'Radcon' TM	Pink Knock Out Rose	3 gal.	Pot	
SH2	59	Sorbaria sorbifolia 'Bococot'	Cherry On Top™ False Spiraea	3 gal.	Pot	
VC	29	Viburnum carlesii	Koreanspice Viburnum	3 gal.	Pot	
VU	1	Viburnum dentatum deamii	Glitters & Glows® Arrowood Viburnum	3 gal.	Pot	
WS2	14	Weigela florida 'Bokrasopin'	Sonic Bloom® Pink Weigela	3 gal.	Pot	
WS	32	Weigela x 'Slingco 2'	Maroon Swoon® Weigela	3 gal.	Pot	
EVERGREEN SHRUBS						
BGM	156	Buxus x 'Green Mountain'	Green Mountain Boxwood	18" Ht.	Pot	
JUK	184	Juniperus chinensis 'Kallays Compact'	Kallay Compact Pfitzer Juniper	18" Ht.	Pot	
JUS	54	Juniperus chinensis 'Sea Green'	Sea Green Juniper	18" Ht.	Pot	
TAX	68	Taxus x media 'Densiformis'	Dense Anglo-Japanese Yew	18" Ht.	Pot	
FERNS						
AL	54	Athyrium filix-femina 'Lady in Red'	Lady in Red Fern	1 gal.	Pot	
OC	62	Osmunda cinnamomea	Cinnamon Fern	1 gal.	Pot	
ORNAMENTAL GRASSES						
AB2	33	Andropogon gerardii 'Blackhawks'	Blackhawks Big Bluestem	1 gal.	Pot	
CB2	59	Calamagrostis brachytricha	Korean Feather Reed Grass	1 gal.	Pot	
HA2	184	Hakonechloa macra 'All Gold'	All Gold Japanese Forest Grass	1 gal.	Pot	
PSH	30	Panicum virgatum 'Cheyenne Sky'	Cheyenne Sky Switch Grass	1 gal.	Pot	
PN	5	Panicum virgatum 'Northwind'	Northwind Switch Grass	1 gal.	Pot	
PLB	208	Pennisetum alopecuroides 'Little Bunny'	Little Bunny Dwarf Fountain Grass	1 gal.	Pot	
PT	57	Pennisetum alopecuroides 'Love and Rockets'	Love and Rockets Fountain Grass	1 gal.	Pot	
SA	204	Sesleria autumnalis	Autumn Moor Grass	1 gal.	Pot	
SG	69	Sesleria x 'Greenlee'	Greenlee Moor Grass	1 gal.	Pot	
SH	61	Sporobolus heterolepis	Prairie Dropseed	1 gal.	Pot	
CODE	**QTY**	**BOTANICAL NAME**	**COMMON NAME**	**SIZE**	**CONTAINER**	**SPACING**
GROUND COVERS						
CP	121 flats	Ceratostigma plumbaginoides	Dwarf Plumbago	flat	Plug	12" o.c.
VC2	1,721	Vinca minor	Common Periwinkle	flat	Plug	12" o.c.
PERENNIALS						
AS	389	Allium x 'Serendipity'	Serendipity Ornamental Onion	1 gal.	Pot	15" o.c.
BJ	62	Brunnera macrophylla 'Jack Frost'	Jack Frost Siberian Bugloss	1 gal.	Pot	15" o.c.
CN	322	Calamintha nepeta nepeta	Lesser Calamint	1 gal.	Pot	18" o.c.
CZ	182	Coreopsis verticillata 'Zagreb'	Zagreb Tickseed	1 gal.	Pot	20" o.c.
GM	242	Geranium sanguineum 'Max Frei'	Max Frei Bloodred Geranium	1 gal.	Pot	20" o.c.
HG	397	Hemerocallis x 'Going Bananas'	Going Bananas Daylily	1 gal.	Pot	20" o.c.
HA3	256	Hosta x 'Autumn Frost'	Autumn Frost Hosta	1 gal.	Pot	20" o.c.
NC	550	Nepeta x 'Cat's Pajamas'	Cat's Pajamas Catmint	1 gal.	Pot	20" o.c.

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SEASONS AT CREST HILL
CREST HILL, ILLINOIS
LANDSCAPE DETAILS

PROJ. MGR.: PM
PROJ. ASSOC.: ----
DRAWN BY: JSH
DATE: 1/14/2026
SCALE: AS SHOWN

SHEET L7 OF L8

FRD.CRIL01

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GENERAL PLANTING SPECIFICATIONS:

PART 1 - GENERAL

1-01 DESCRIPTION:

A. Provide trees, shrubs, perennials and groundcovers as shown and specified. This work includes:
1. Spreading of topsoil or soil preparation
2. Trees, shrubs, perennials and groundcovers
3. Planting mixes
4. Mulch and planting accessories
5. Fertilizer and herbicide
6. Maintenance
7. Warranty of plant material

B. The Contractor shall verify all existing conditions and dimensions in the field prior to bidding and report any discrepancies to the Owner or his/her representative.

1-02 QUALITY ASSURANCE:

A. Comply with site work requirements

B. Plant names indicated must comply with 'Standardized Plant Names' as adopted by the latest edition of the American Joint Committee of Horticultural Nomenclature. Names of varieties which are not listed should conform with those generally accepted by the nursery trade. Stock should be legibly tagged.

C. All plant materials shall conform to the 'American Standards for Nursery Stock' (ASNS), latest edition, published by the American Association of Nurserymen, Washington, D.C.

D. All plant material shall be grown and supplied within a 50 mile radius of the project for a minimum of two full growing seasons.

E. Adhere to sizing requirements as listed in the plant list and/or bid form for the project. A plant shall be measured in its natural standing position.

F. Stock that is furnished shall be at least the minimum size shown. With permission of the landscape architect, substitution from the specified plant list will be accepted only when satisfactory evidence in writing is submitted to the landscape architect, showing that the plant specified is not available. Requests for approval of substitute plant material shall include common and botanical names and size of substitute material. Only those substitutions of at least equivalent size and character to that of the specified material will be approved. Stock which is larger than that which is specified is acceptable with permission of the landscape architect, providing there is no additional cost and that the larger plant material will not be cut down in order to conform to the size indicated.

G. All shrubs shall be dense in form. Shrub liners do not meet these specifications. Shrubs specified by height shall have a spread that is equal to the height measurement. Shrubs which are specified by spread shall exhibit the natural growth habit of the plant by having a greater spread than height.

H. All plant materials are subject to inspection and approval. The landscape architect and Owner reserve the right to select and tag all plant material at the nursery prior to planting. The landscape architect and Owner reserve the right to inspect plant material for size and condition of root systems, the presence of insects and diseases, injuries and latent defects (due to Contractor negligence or otherwise), and to reject unacceptable plant material at any time during progress of the project.

I. Container grown deciduous and/or evergreen shrubs will be acceptable in lieu of balled and burlapped shrubs subject to specified limitations for container grown stock. Size of container grown material must conform to size/height requirements of plant list.

1-03 DELIVERY, STORAGE & HANDLING:

A. Fertilizer shall be delivered in original, unopened and undamaged packaging. Containers shall display weight, analysis and manufacturer's name. Store fertilizer in a manner that will prevent wetting and deterioration.

B. Take all precautions customary concerning proper trade practice in preparing plants for transport. Plants shall be dug, packed and transported with care to ensure protection against injury. Inspection certificates required by law shall accompany each shipment invoice or order to stock and on arrival, the certificate shall be filed with the landscape architect . All plants must be protected from drying out. If plant material cannot be planted immediately upon delivery, said material should be properly protected in a manner that is acceptable to the landscape architect . Heeled-in plants must be watered daily. No plant shall be bound with rope or wire in a manner that could strip bark or break or shear branches.

C. Plant material transported on open vehicles should be covered with a protective covering to prevent wind burn.

D. Dry, loose topsoil shall be provided for planting bed mixes. Muddy or frozen topsoil is unacceptable as working with medium in this condition will destroy its structure, making root development more difficult.

1-04 PROJECT CONDITIONS:

A. Notify landscape architect at least seven (7) working days prior to installation of plant material.

B. It shall be the Contractor's responsibility to locate and protect all existing above and below ground utilities. Utilities can be located and marked (in Illinois) by calling J.U.L.I.E. at (800)892-0123.

C. The Contractor shall provide, at his/her own expense, protection against trespassing and damage to seeded areas, planted areas, and other construction areas until the preliminary acceptance. The Contractor shall provide barricades, temporary fencing, signs, and written warning or policing as may be required to protect such areas. The Contractor shall not be responsible for any damage caused by the Owner after such warning has been issued.

D. The Contractor shall be responsible for the protection of crowns, trunks and roots of existing trees, plus shrubs, lawns, paved areas and other landscaped areas that are to remain intact. Existing trees, which may be subject to construction damage, shall be boxed, fenced or otherwise protected before any work is started. The Owner desires to preserve those trees within and adjacent to the limits of construction except those specifically indicated to be removed on the Drawings. The contractor shall erect protective tree fencing and tree armor at locations indicated on the drawings and around all trees on site which are to be preserved. Protective fencing shall be erected between the limits of construction and any tree preservation areas shown on the Drawings.

E. A complete list of plants including a schedule of sizes, quantities and other requirements is shown on the Drawings and on the bid form. In the event that quantity discrepancies or material omissions occur in the plant materials list, the planting plans shall govern.

1-05 PRELIMINARY ACCEPTANCE:

A. All plantings shall be maintained by the Contractor for a period of 90 days after preliminary acceptance by the Owner or his/her representative. Maintenance shall include, but is not limited to: mowing and edging turf, pulling weeds, watering turf and plant material and annual flower maintenance.

1-06 WARRANTY:

A. All plant material (excluding annual color), shall be warranteed for one (1) year after the end of the 90 day maintenance period. The end of the maintenance period is marked by the final acceptance of the Contractor's work by the Owner or his/her representative. Plant materials will be warranteed against defects including death and unsatisfactory growth, except for defects resulting from abuse or damage by others, or unusual phenomena or incidents which are beyond the control of the Contractor. The warranty covers a maximum of one replacement per item.

PART 2 - PRODUCTS

2-01 PLANT MATERIALS:

A. Plants: Provide typical of their species or variety, with normal, densely developed branches and vigorous, fibrous root systems. Only sound, healthy, vigorous plants which are free from sunscald injuries, disfiguring knots, frost cracks, abrasions of the bark, plant diseases, insect eggs, borers, and all forms of infestation shall be provided. All plants shall have a fully developed form without voids and open patches.
1. Balled and burlapped plants shall have a firm natural ball of earth of sufficient diameter and depth to encompass a root system necessary for a full recovery of the plant. Root ball sizes shall comply with the latest edition of the 'American Standards for Nursery Stock' (ASNS). Root balls that are cracked or mushroomed are unacceptable.

2. Container grown stock should be grown for an amount of time that is of sufficient length for the root system to have developed enough to hold its soil togehter, firm and whole. Plants will not be loose in their containers, nor shall they be pot-bound and all container grown stock will comply with the sizes stated on the plant list.

3. No evidence of wounds or pruning cuts shall be allowed unless approved by the Landscape Architect.

4. Evergreen trees shall be branched to the ground. The height of evergreen trees are determined by measuring from the ground to the first lateral branch closest to the top. Height and/or width of other trees are measured by the mass of the plant not the very tip of the branches.

5. Shrubs and small plants shall meet the requirements for spread and/or height indicated in the plant list. The height measurement shall be taken from ground level to the average height of the top of the plant, not the longest branch. Single stem or thin plants will not be accepted. Side branches shall be flushed with growth and have good form to the ground. Plants shall be in a moist, vigorous condition, free from dead wood, bruises or other root or branch injuries.

2-02 ACCESSORIES:

A. Topsoil:
1. Topsoil shall be fertile, natural topsoil of a loamy character, without admixture of subsoil material. Topsoil shall be reasonably free from clay, lumps, coarse sand, stones, plants, roots, sticks and other foreign materials with a pH between 6.5 to 7.0.

B. Topsoil for seed areas shall be a minimum of 6".

C. Soil amendments shall be as follows:
1. For trees and shrubs the plant pit will be backfilled with pulverized black dirt.
2. For perennials and ornamental grasses the soil mixture will be as follows: $\frac{1}{3}$ mushroom compost, $\frac{1}{3}$ sand, $\frac{1}{3}$ topsoil, mixed thoroughly. Top beds with 8" of this mix and till into existing beds to a depth of 8".

D. Fertilizer:
1. For trees and shrubs use: 14-4-6 briquettes 17 g or equivalent available from Arthur Clesen, Inc. Follow manufacturer's recommendation for application. Arthur Clesen, Inc. 543 Diens Drive, Wheeling, IL 60090 (847)537-2177

2. For turf areas use 6-24-16 Clesen Fairway with micronutrients with minor elements 3.0 % S, .02% B, .05% Cu, 1.0% Fe, .0006% Mo, .10% Mn available from Arthur Clesen or approved equal.

E. Herbicide:
1. Round-Up or approved equal

F. Mulch:
1. Bark mulch shall be finely shredded hardwood bark which has been screened and is free of any green foliage, twigs, rocks, sawdust, wood shavings, growth or germination inhibiting ingredients, or other foreign materials. Bark mulch is available from Midwest Trading.
2. Mushroom compost as available from Midwest Trading. Midwest Trading, St. Charles, IL 60174 (630) 365-1990

G. Water:
1. Water service will be available on the site, with the cost of water being paid by the Owner. Transporting of the water from the source to the work areas shall be the responsibility of the Landscape Contractor. All necessary hose, piping, tank truck, etc. shall be supplied by the Landscape Contractor.

H. Guying:
1. Stakes: 5/8" x 40" steel eye anchor with 4" helix

2. Cable:
   a. Trees under 5": flexible 1/8" galvanized aircraft cable, 7x7 strand or approved equal
   b. Trees 5" and over: flexible 3/16" galvanized aircraft cable, 7x7 strand or approved equal.

3. Turnbuckles: 5/16", eye and eye, with 4" takeup.

4. Hose: new two-ply reinforced rubber hose, minimum 1/2" I.D.

I. Tree wrap: Burlap tree wrap 4" wide.

J. Twine: Soft nursery jute.

PART 3 - INSTALLATION OF PLANT MATERIAL

3-01 FIELD VERIFICATION:

A. Examine proposed planting areas and conditions of installation. Do not start planting work until unsatisfactory conditions are corrected.

3-02 PREPARATION:

A. All planting techniques and methods shall be consistent with the latest edition of 'Horticulture Standards of Nurserymen, Inc.' and as detailed on these Drawings.

B. Planting shall be performed by experienced workmen familiar with planting procedures under the supervision of a qualified supervisor.

C. All underground utilities must be located and marked clearly.

D. Apply Round-Up or approved equivalent to kill any existing vegetation in all areas to be planted. Confirm length of waiting period between chemical application and plant installation with manufacturer. Do not begin planting operations until prescribed post-application waiting period has elapsed. Take extreme care to avoid chemical drift to adjoining properties of landscape plantings.

E. Prior to all planting, rototill all areas to be landscaped to prepare for plant installation to a minimum depth of 12". Eliminate uneven areas and low spots. Maintain lines, levels, profiles and contour. Changes in grade are to be gradual. Blend slopes into level areas. Remove all debris, weeds and undesirable plants and their roots from areas to be planted. Remove all concrete slag larger than 2" in diameter.

F. Topsoil shall be spread over the site at a minimum depth of 6". Those areas which are indicated as prairie or natural areas on the Drawings shall have a minimum topsoil depth of 18".

G. It shall be the responsibility of the landscape contractor to prepare all seeded areas by disking and raking prior to planting seed. Soil shall be loosened and scarified to a minimum depth of 6". Fine grading of all seeded areas is required. Maximum size of stone or topsoil lump is 1".

H. Locate all plant material as indicated or as approved in the field by the Landscape Architect. If obstructions are encountered which are not shown on the drawings, then do not proceed with planting operations until alternate plant locations have been selected.

I. Planting holes shall be constructed as shown on the planting details. Holes shall be hand dug or machine dug. Great care will be taken to not excavate the hole deeper than the root ball and the diameter shall be a minimum of two times the root ball width. Remove any materials encountered in excavation that may be injurious to plant growth, including stones larger than 2" in diameter or other debris. Soil to be used as backfill should be pulverized.

J. Provide pre-mixed planting mixture for use around root systems and root balls of the plants. The mixtures are outlined in section B of part 2-02.

K. Prior to planting, provide additional topsoil to all planting beds to bring the finish grade of the bed to 2" above lawn grade and to finish grade of adjacent hard surface grades.

L. Add 2" thickness of mushroom compost to all annual, perennial and groundcover beds. Finish grade bed and install plants.

3-03 PLANTING PROCEDURES:

A. Set plant material in the planting hole to proper grade and alignment. Set plants upright and plumb. Set plant material root flare 2" above the adjacent finish grade. Remove burlap from top 1/3 of root ball. Remove treated burlap (green). Cut and remove or cut and fold down upper half of wire basket, dependent upon tree size. Backfill hole by firmly tamping soil to avoid any air pockets or voids. All ropes/cords shall be removed from base of trunk.

B. Set balled and burlapped plants in the planting hole and compact 8" of soil around the base of the ball. Backfill remaining space with planting mixture. Water plants immediately after planting to eliminate all voids and thoroughly soak the plant root ball.

C. Space groundcover plants according to dimensions given on the plans. Adjust spacing as necessary to evenly fill planting bed with indicated number of plants. Plant to within 18" of the trunks of trees and shrubs or at the edge of the plant ball, whichever is closest. Plant to within 12" of edge of bed.

D. Mulching:
1. Install 4" depth of mulch around all tree and shrub beds as indicated on drawings or planting details. Mulch shrub planting areas as continuous beds. Do not place mulch directly against tree trunk; form mulch to create an inverted cone around trunk.

2. Mulch perennial, groundcover and annual planting beds with 2" mushroom compost. Water mulched areas thoroughly after placing mulch.

E. Tree wrapping is not required, unless the Contractor feels it is necessary due to characteristics of a particular species or past experience with the species. The landscape architect will be notified as to which trees are to be wrapped and shall inspect the trunk(s) before wrapping. Tree wrap will not be used to cover damage or defects. When wrapping is done, trunks will be wrapped spirally with approved tree wrapping tape that is not less than 4" wide, and securely tied with suitable cord at the top, bottom and 2" intervals along the trunk. Wrap from ground to the height of the first branch.

F. Staking and guying of trees is optional. If the Contractor chooses to stake all or part of the trees, he/she shall use the method specified in the planting details. One (1) stake is to be used on trees of 1" caliper and under, or 4' height and under. Two (2) stakes are to be used on trees of 1" to 2 3/4" caliper. Guy trees of 3" caliper or larger at three (3) per tree. The root ball will not be pierced with a stake. Stakes are to be driven at least eighteen (18) inches into subsoil below the planting hole. Stakes and wire attachments shall be removed after three months for spring planted material and by the following May for fall planted stock by the Contractor. Staking and guying should be done immediately after lawn seeding or sodding operations.

G. Seeding of specified lawn areas on plans will be treated as follows:
1. Topsoil shall be spread over all areas to be seeded to a minimum depth of 6" when compacted (to be performed by others).

2. Seed mixture and application rate - use Premium seed mix as supplied by Arthur Clesen, Inc. Apply at a rate of 5 lbs./1000 s.f.

3. Apply fertilizers and conditioners at the rate specified per soil test findings. In lieu of soil test results, apply two (2) tons of ground agricultural limestone and 1000 lbs. 10-10-10 or equivalent analysis fertilizer per acre. At least 40% of the fertilizer nitrogen shall be of an organic origin.

4. Soil preparation areas where vehicular traffic has compacted the soil shall be loosened/scarified to a minimum depth of 6" before fertilizing and seeding. Fine grading of all seeded areas is required. Maximum size of stone or topsoil lump is 1".

5. Watering seeded areas shall be done to ensure proper germination. Once seeds have germinated, watering may be decreased but the seedlings must never be allowed to dry out completely. Frequent watering should be continued approximately four (4) weeks after germination or until grass has become sufficiently established to warrant watering on an 'as needed' basis.
6. Turf is being established on a variety of slope conditions. It shall be the Contractor's responsibility to determine and implement whatever procedures he/she deems necessary to establish the turf as part of his/her work. Seeded areas will be accepted when all areas show a uniform stand of the specified grass in healthy condition and at least 90 days have elapsed since the completion of this work. The Contractor shall submit with his/her bid a description of the methods and procedures he/she intends to use.

H. Erosion Control Blanket
1. Erosion Control Blanket shall be installed per manufacturer's recommendation in all areas shown on the plan.

2. Install S-75 Erosion Control Blanket as manufactured by North American Green or approved equal.

3. Blanket should be premarked with staple pattern.

4. Staples should be 8" wire staples, applied at two (2) per square yard minimum.

5. Suitable erosion control practices shall be maintained by the CONTRACTOR in accordance with Illinois Urban Manual and all applicable Soil Erosion and Sedimentation Control ordinances and the PLANS.

I. Sodding of specified lawn areas on plans will be completed as follows:
1. Rake soil surface to receive sod to completely remove any soil crust no more than one day prior to laying sod.

2. Moisten prepared surface immediately prior to laying sod. Water thoroughly and allow surface moisture to dry before planting lawns. Do not create a muddy soil condition.

3. Sod shall be laid within 24 hours from the time of stripping. Do not plant dormant sod or if the ground is frozen.

4. Lay sod to form a solid mass with tightly fitted joints. Butt ends and sides of sod strips; do not overlap. Stagger strips to offset joints in adjacent courses. Work from boards to avoid damage to subgrade or sod. Work sifted soil into minor cracks between pieces of sod; remove excess to avoid smothering of adjacent sod.

5. Place top elevation of sod 1/2 inch below adjoining edging or paving.

6. Water sod thoroughly with a fine spray immediately after planting.

7. After sod and soil have dried, roll seeded areas to ensure a good bond between the sod and soil, and to remove minor depressions and irregularities.

8. Sodded slopes 3:1 or greater shall be staked to prevent erosion and washout.

9. Warranty sodding for a period of one (1) year from the end of the 90 day maintenance period. If sod fails or lacks vigor and full growth as determined by the Landscape Architect, the Contractor will repeat site preparation operations and re-sod affected areas at the Contractor's expense.

10. Note: Sod shall be a premium Kentucky Bluegrass blend, and is required in all areas indicated on the plans as well as areas which have been affected by construction. Sod can be placed as long as water is available and the ground surface can be properly prepared. Sod shall not be laid on frozen or snow-covered ground. Sod shall be strongly rooted, not less than two (2) years old and free of weeds and undesirable native grasses. Sod should be machine cut to pad thickness of 3/4" (plus or minus 1/4"), excluding top growth and thatch. Provide only sod capable of vigorous growth and development when planted (viable, not dormant). Provide sod of uniform pad sizes with maximum 5% deviation in either length or width. Broken pads or pads with uneven ends will not be acceptable. Sod pads incapable of supporting their own weight when suspended vertically with a firm grasp on the upper 10% of pad will not be accepted.

J. Timing of plant material and seeding operations:
1. Seeding of specified areas shall occur when the soil temperature is above 55° F. No seed shall be sown during periods of high winds, or when the ground is not in proper condition for seeding (see section 3-02 (G)). Seeding operations for the specified mixes shall occur in the spring time frame of April 15 through June 30 and in the summer time frame of August 15 through December 1. The mixes containing bluegrass and fescue seed must have six weeks to harden off for winter survival.

2. Sod shall be installed when the ground is not frozen or snow covered and temperatures are less than 80° F. It shall not be placed during a period of extended drought.

3. Herbaceous ornamental plants shall be planted between May 1 and June 15 or between August 15 and December 1.

4. Spring planting of woody ornamental plants shall be performed from the time the soil can be easily worked until June 1, except that evergreen planting shall end on May 15. Oak, hawthorn and red maple species will only be planted during this spring planting period. Fall planting will begin August 15 and will continue until the ground cannot be worked satisfactorily, except that evergreen planting shall be performed between August 15 and December 1.

3-04 MAINTENANCE:

A. All plantings shall be maintained by the Contractor for a period of 90 days after preliminary acceptance by the Owner or his/her representative. Maintenance shall include but is not limited to: mowing and edging turf, pulling weeds, watering turf areas and plant material plus annual flower maintenance. The Contractor will reset settled plants to proper grade and position. Dead material will be removed. Stakes and guy wires will be tightened and repaired as required.

3-04 ACCEPTANCE:

A. All plant material (excluding annual color), shall be warranteed for one (1) year after the end of the 90 day maintenance period. The end of the maintenance period is marked by the final acceptance of the Contractor's work by the Owner or his/her representative.

3-06 SITE CLEAN-UP:

A. The Contractor shall protect the property of the Owner and the work of other contractors. The Contractor shall also be directly responsible for all damage caused by the activities and for the daily removal of all trash and debris from his/her work area to the satisfaction of the landscape architect .

DATE	REVISIONS	DRAWN BY

Manhard™ CONSULTING
333 East Butterfield Road, Suite 600, Lombard, IL 60148 ph:630.691.8500 fx:630.691.8585 manhard.com
Civil Engineers • Surveyors • Water Resource Engineers • Water & Wastewater Engineers
Construction Managers • Environmental Scientists • Landscape Architects • Planners

SEASONS AT CREST HILL
CREST HILL, ILLINOIS
LANDSCAPE SPECIFICATIONS

PROJ. MGR.: PM
PROJ. ASSOC.: ----
DRAWN BY: JSH
DATE: 1/14/2026
SCALE: AS SHOWN

SHEET
L8 OF L8
FRD.CRIL01

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January 15, 2026 - 16:16 Dwg Name: P:\Frdcril01\dwg\Landplan\02-Final\01-Final-Landscape.dwg Updated By: JHendricks

City Council Work Session Agenda Memo

Crest Hill, IL

Meeting Date: February 23, 2026

Submitter: Daniel Ritter, Community and Economic Development Director
Ron Mentzer, Community and Economic Development Consultant

Department: Community Development

Agenda Item: Plan Commission recommendation on QuikTrip's Preliminary and Final Plat of Subdivision, Zoning Ordinance, and Sign Code Application – Crest Hill Plan Commission Case # V-26-2-2-1

Project Summary

The Subject Property is owned by the City of Crest Hill. The eastern portion of the 4.9 +/- acre site is improved with the former City Hall/Public Works/Police Department Building which has been vacant since the City took occupancy of its new Public Works Building on Oakland Avenue and the new City Hall on City Center Boulevard. The western portion of the site is a vacant future commercial development site.

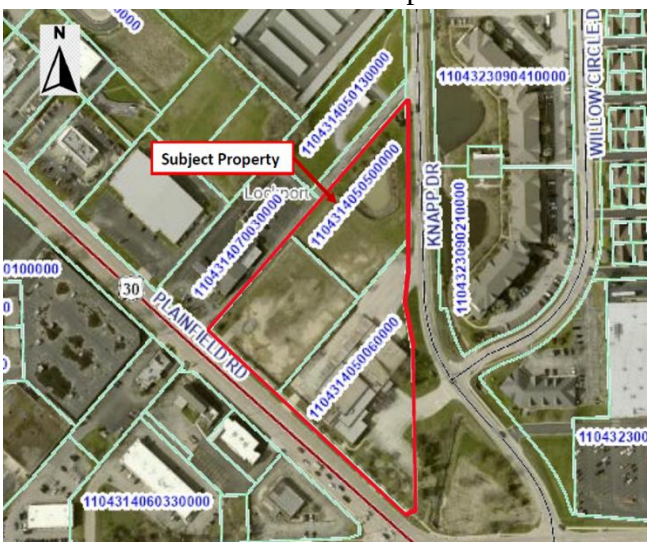
In the summer of 2024, QuikTrip Corporation (QT) executed a contract with the City of Crest Hill for the purchase of the 4.9-acre, B-3 zoned site located at 1618 Plainfield Road and currently occupied by the former Crest Hill City Hall/Public Works Facility (the "Subject Site"). QT is proposing to demolish the existing building and pavement improvements on the Subject Property, resubdivide it into three lots, and develop each lot as follows:

- **Lot 1** (eastern lot): Construct a new 6,445 square foot QT convenience store, an eight pump-island fueling canopy, 48 parking spaces, a right-in/right-out driveway on Route 30, and a new full access driveway on Knapp Drive. This use is a permitted use in the underlying B-3 Zoning District.
- **Lot 2** (western lot): Construct a new full-access driveway on Route 30 at the very west edge of the lot, a new internal cross-access driveway between it and Lot 1 and prepare the lot for future sale and development. It is anticipated to be marketed for a quick-serve restaurant or a multi-tenant commercial building.
- **Lot 3** (northern lot): Expand the existing stormwater detention facility in this area of the Subject Property.

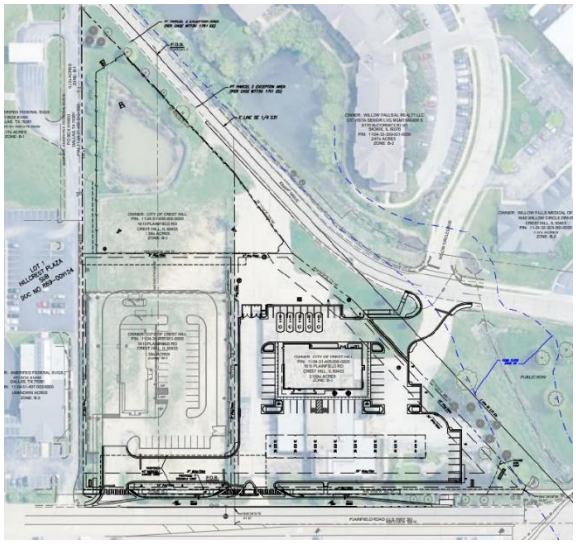
Collectively, these improvements comprise the "Project".

City Council Work Session Meeting
February 23, 2026
QuikTrip Variation and Subdivision Requests

Site Location Map



Site Plan



Requested Approvals

QT has requested Zoning Ordinance and Sign Code Variations and and subdivision-related approvals for the Project to allow:

1. **Increased Driveway Widths**
    a. The proposed full-access driveway on Knapp Drive to be 81 feet wide
    b. The proposed eastern Route 30 right-in/right-out driveway to be 95 feet wide
    c. The proposed western Route 30 full-access driveway to be 47 feet wide

2. **A Multi-Tenant Off-Premises Monument Sign with Increased Sign Area**
    a. A multi-tenant, vertical monument sign that would include advertising for the QT facility proposed on Lot 1 to be installed on the very west edge of proposed Lot 2, adjacent to the Project's only full-access drive on Route 30.
    b. Allow this sign to have a combined sign face area, excluding the electronic gas price component, of approximately 67 sq. ft.

3. **Increased Number of Commercial Wall Signs on Lot 1 Including:**
    a. A 56 sq. ft. QT wall sign on the QT building and a 20 sq. ft. QT wall sign on the gas pump island canopy facing Knapp Drive.
    b. A 56 sq. ft. QT wall sign and a 43.5 sq. ft. QT wall sign on the building and a 20 sq. ft. QT wall sign on the gas pump island canopy facing Route 30/Plainfield Road.
    c. A 20 sq. ft. QT wall sign on the gas pump island canopy facing the west interior side property line.

4. **Location of Wall/Canopy Signs**
    a. Permit each of the three IDC 20 QT wall signs proposed on the gas pump island canopy to extend four inches above the top edge of the canopy.

5. **Increased Area of Commercial Wall Signs**
    a. Permit the 20 QT wall signs on the east and west façades of the gas pump island canopy to cover approximately 17.1% of the canopy face they are mounted to.

6. **Preliminary/Final Plat of Subdivision:** The proposed Final Plat of Subdivision would create three new lots, vacate existing unnecessary utility easements, and dedicate required new utility, stormwater, and cross access easements.

A digital copy of QT's complete application package can be reviewed on the City's website at the following link: https://meetings.municode.com/app/cresthill#!/item-detail/1e372d16-f02b-4dc4-aa1e-87318218bc76 Paper copies of specific components of these application materials will be provided by the Community Development Department upon request.

February 23. 2026, Plan Commission Public Hearing and Recommendation

The Plan Commission conducted a formal public hearing on this application/project at its February 23, 2026, meeting. Six individuals were in the audience at this meeting. Two of these individuals raised These individuals raised concerns regarding the impact traffic the QT project would have on the Willow Falls neighborhood and Knapp Drive and what type of site lighting would be installed in the Project.Director of Engineering, Ron Wiedeman, summarized the City Council's recent discussions and decisions involving traffic calming on Knapp Drive.

The Plan Commission recommended unanimous (7-0) but conditional approval of all the requested special approvals for the QT Project based on the findings and subject to the conditions outlined in the draft Plan Commission Findings and Decision document attached for review and reference as Exhibit A. The video recording of this meeting can be reviewed at the following link: https://www.youtube.com/watch?v=SOjqJJ6ExIk

Council Action Requested: Direction to include the draft approval Ordinance for the QuikTrip Project on March 2, 2026, Regular City Council Agenda for final consideration.

Attachment:

- Exhibit A: Draft Plan Commission Findings and Decision for the QuikTrip Project, Case No. V-26-2-2-1.

EXHIBIT A

FINDINGS AND DECISION OF THE PLAN COMMISSION AS TO PRELIMINARY AND FINAL PLAT OF SUBDIVISION, AND CASE NO. V-26-2-2-1, THE APPLICATION OF QUIKTRIP CORPORATION FOR PRELIMINARY AND FINAL PLAT OF SUBDIVISION AND VARIATIONS FROM THE CREST HILL ZONING ORDINANCE AND CREST HILL SIGN CODE FOR THE PROPERTY LOCATED AS 1610 PLAINFIELD ROAD IN THE CITY OF CREST HILL, ILLINOIS.

THIS APPLICATION, coming before the Plan Commission for hearing and decision, and the Plan Commission having heard the evidence in support and opposition to the application at a regularly scheduled meeting held on February 12, 2026, being fully advised on the premises, THE COMMISSION DOES MAKE THE FOLLOWING FINDINGS:

A. The City of Crest Hill is the owner of real property located at 1610 Plainfield Road in the City of Crest Hill, Illinois, known as the former City Hall, bearing PINs 11-04-31-405-051-0000, 11-04-31-405-006-0000, and 11-04-31-405-050-0000, and which is legally described in Exhibit A-1, attached hereto and incorporated herein by reference (the "Property");

B. That QuikTrip Corporation (the "Applicant") entered into a real estate contract to purchase the Property located at 1610 Plainfield Road in the City of Crest Hill, Illinois from the City of Crest Hill;

C. That the Applicant has submitted an application requesting approval of a preliminary and final plat of subdivision and variations from the Crest Hill Zoning Ordinance and the Crest Hill Sign Code that would allow the Property to be redeveloped with a new QuikTrip convenience store, an 8 pump island fueling canopy, and a future, yet-to-be determined, quick serve restaurant or multi-tenant commercial building (the "Application");

D. That the Property is zoned B-3;

A. That the Application seeks approval of a preliminary and final plat of subdivision to re-subdivide the 4.9-acre Property into three (3) separate lots and dedicate access, utility and drainage easements;

B. That the Application seeks approval of variations from Section 11.6-7.2 Commercial Districts General Requirements of the Crest Hill Zoning Ordinance, to permit a new 47-foot wide full access driveway and a new 95-foot wide right-in/right-out driveway onto Plainfield Road/U.S. Route 30 and a new 81-foot wide full access driveway onto Knapp Drive;

C. That the Application seeks approval of variations from Section 15.12.080 of the Crest Hill City Code of Ordinances-Sign Code to allow a multi-tenant off-premises freestanding sign, increased sign area for a multi-tenant freestanding sign, increased number of commercial wall signs, and adjustments to the permitted locations for commercial wall signs.

I. That the Application was properly submitted and notice of the Application and the public hearing were properly made;

J. That no interested parties filed their appearances herein;

K. That the public hearing was opened and called to order and the Applicant presented evidence and arguments in support of its Application on February 12, 2026.

L That the rules adopted by the Plan Commission for the conduct of public hearings by the Plan Commission were duly followed and observed;

M. That the requested variations meet the three (3) standards for the granting of a variation under Section 12.6-2 as well as the supplemental considerations set forth in subsections 12.6-2(1)-(8) of the Zoning Ordinance.

THEREFORE, IT IS THE DECISION OF THE PLAN COMMISSION OF THE CITY OF CREST HILL, ILLINOIS, BASED UPON THE EVIDENCE HEARD BY SAME AND ARGUMENTS AND SUGGESTIONS HEARD AT THE PUBLIC HEARING, AND HAVING DULY CONSIDERED THE MANDATES AND STANDARDS AS SET FORTH IN THE CITY OF CREST HILL, ILLINOIS ZONING ORDINANCE, SUBDIVISION CODE, AND SIGN CODE FOR THE GRANTING OF PRELIMINARY AND FINAL PLAT OF SUBDIVISION AND VARIATIONS AS FOLLOWS:

1. That the approval of the application of QuikTrip Corporation for preliminary and final plat of subdivision, and variations as listed in attached Exhibit A-2 for property located at 1610 Plainfield Road in Crest Hill, Illinois with PINs 11-04-31-405-051-0000, 11-04-31-405-006-0000, and 11-04-31-405-050-0000 is supported by the evidence adduced;

2. It is therefore the recommendation of the City of Crest Hill Plan Commission that the application for the preliminary and final plat of subdivision, and variations request be granted subject to the project being implemented in substantial conformance with the following five (5) conditions for approval and application documents referenced in the February 12, 2026, Community Development Staff Report for this request, as follows:

1. The final plat of subdivision shall satisfy all applicable City ordinance, staff, and City Attorney requirements and shall include (either on the plat or in a separate document recorded with the final plat) appropriate cross-access easement and maintenance provisions for shared site improvements (pond, sign, and roadway). Any separate agreements/covenants shall be approved and recorded prior to any building occupancies or sale of any lots.
2. All final engineering plans, related supporting information, and development security for the project shall be submitted for the Director of Engineering's review and approval in conjunction with the formal building permit application submitted for the project. Said plans shall be substantially consistent with the application documents submitted for Plan Commission Case #V-26-2-2-1.

3. All final architectural, signage, and landscape plans for the project shall be submitted for Community Development Department staff review and approval in conjunction with the formal building permit application submitted for the project. Said plans shall be substantially consistent with the application documents submitted for Plan Commission Case #V-26-2-2-1.
4. No new permanent driveway improvements shall be constructed onto the adjacent public roadways until proper permits have been issued by the authority having jurisdiction over the adjacent public roadway.
5. The final design for the 15-foot-tall, multi-tenant, vertical monument sign (MV-E2PQ-CC-65-BB) installed on the very west edge of proposed Lot 2 shall be updated so that the tenant panel for the yet-to-be identified future commercial tenant on Lot 2 is located at the top of the sign face. A private agreement and covenant for this sign shall be approved by the city and recorded prior to issuance of a sign permit.

Adopted by the Plan Commission of the City of Crest Hill, Illinois, this 12TH Day of February 2026 upon the following voice vote:

	Aye	Nay	Absent	Abstain
Commissioner Bill Thomas	___X___	_____	_____	_____
Commissioner Ken Carroll	___X___	_____	_____	_____
Commissioner Cheryl Slabozeski	___X___	_____	_____	_____
Commissioner Gordon Butler	___X___	_____	_____	_____
Commissioner Marty Flynn	___X___	_____	_____	_____
Commissioner Jeff Peterson	___X___	_____	_____	_____
Commissioner John Stanton	___X___	_____	_____	_____

Approved:

_____
Bill Thomas, Chairman

Attest:

_____
Christine Vershay-Hall, City Clerk

EXHIBIT A-1

LEGAL DESCRIPTION

PROPERTY ADDRESS: 1610 PLAINFIELD ROAD, CREST HILL, IL, 60403

PERMANENT INDEX NOs: 11-04-31-405-051-0000, 11-04-31-405-006-0000, and 11-04-31-405-050-0000

LEGAL DESCRIPTION:

PARCEL 1:
THAT PART OF THE SOUTHEAST QUARTER OF SECTION 31, IN TOWNSHIP 36 NORTH, AND IN RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN LOCKPORT TOWNSHIP, WILL COUNTY, ILLINOIS, AS HEREINAFTER DESCRIBED: BEGINNING AT THE SOUTHEAST CORNER OF SAID SECTION 31; THENCE NORTHWESTERLY ALONG A LINE PARALLEL WITH THE CENTER LINE OF THE RIGHT OF WAY OF U.S. HIGHWAY ROUTE NO. 30, 500.00 FEET; THENCE NORTHEASTERLY ALONG A LINE THAT IS A RIGHT ANGLE TO THE AFORESAID CENTER LINE OF SAID RIGHT OF WAY OF SAID HIGHWAY, 541.1 FEET, TO THE EAST LINE OF SAID SECTION 31; THENCE SOUTH ALONG THE EAST LINE OF SAID SECTION 31, 736.9 FEET TO THE POINT OF BEGINNING, **EXCEPTING** THEREFROM THE RIGHT OF WAY OF U.S. HIGHWAY ROUTE NO. 30 (PLAINFIELD ROAD) AND WEBER ROAD WHICH INCLUDES THAT PART TAKEN AS PARCEL NO. 0138, CONDEMNED IN CASE NO. W73G1751ED, IN WILL COUNTY, ILLINOIS.

PARCEL 2:
THAT PART OF THE SOUTHEAST 1/4 OF SECTION 31, TOWNSHIP 36 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: COMMENCING AT THE SOUTHEAST CORNER OF THE SAID SOUTHEAST 1/4; THENCE NORTHWESTERLY ALONG A LINE PARALLEL WITH THE CENTER LINE OF UNITED STATES HIGHWAY ROUTE NUMBER 30, 500.00 FEET; THENCE NORTHEASTERLY ALONG A LINE FORMING A RIGHT ANGLE WITH THE LAST DESCRIBED LINE 541.10 FEET TO THE EAST LINE OF THE SAID SOUTHEAST 1/4; THENCE NORTH ALONG THE SAID EAST LINE OF THE SOUTHEAST 1/4, 157.04 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE ALONG THE SAID EAST LINE OF THE SOUTHEAST 1/4, 156.16 FEET; THENCE SOUTHWESTERLY ALONG A LINE FORMING AN ANGLE OF 137 DEGREES 15 MINUTES TO THE LEFT WITH THE PROLONGATION OF THE LAST DESCRIBED LINE, 729.37 FEET TO THE NORTHEASTERLY RIGHT OF WAY LINE OF UNITED STATES HIGHWAY ROUTE NUMBER 30; THENCE SOUTHEASTERLY ALONG THE SAID NORTHEASTERLY RIGHT OF WAY LINE OF UNITED STATES HIGHWAY ROUTE NUMBER 30, 106.00 FEET; THENCE NORTHEASTERLY 615.01 FEET TO THE POINT OF BEGINNING, **EXCEPTING** THEREFROM THE RIGHT OF WAY OF WEBER ROAD WHICH INCLUDES THAT PART TAKEN AS PARCEL NUMBER 0138 CONDEMNED IN CASE NUMBER W73G1751ED, IN WILL COUNTY, ILLINOIS.

PARCEL 3:
THAT PART OF THE SOUTHEAST 1/4 OF SECTION 31, IN TOWNSHIP 36 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, LOCKPORT TOWNSHIP, WILL COUNTY, ILLINOIS DESCRIBED AS FOLLOWS: COMMENCING AT THE SOUTHEAST CORNER OF THE SAID SOUTHEAST 1/4; THENCE NORTHWESTERLY ALONG A LINE PARALLEL WITH THE CENTER LINE OF U.S. HIGHWAY ROUTE NUMBER 30, 500.00 FEET; THENCE NORTHEASTERLY ALONG A LINE FORMING A RIGHT ANGLE WITH THE LAST DESCRIBED LINE 41.10 FEET TO THE POINT OF BEGINNING, SAID POINT BEING ON THE NORTHEASTERLY RIGHT OF WAY LINE OF U.S. HIGHWAY ROUTE NUMBER 30; THENCE CONTINUE NORTHEASTERLY ALONG THE PROLONGATION OF THE LAST DESCRIBED LINE 500.00 FEET TO THE EAST LINE OF THE SAID SOUTHEAST 1/4; THENCE NORTH ALONG THE SAID EAST LINE OF THE SOUTHEAST 1/4 157.04 FEET; THENCE SOUTHWESTERLY ALONG A LINE FORMING AN ANGLE OF 137 DEGREES 15 MINUTES TO THE LEFT WITH THE PROLONGATION OF THE LAST DESCRIBED LINE, 615.01 FEET TO THE SAID NORTHEASTERLY RIGHT OF WAY LINE OF U.S. HIGHWAY NUMBER 30; THENCE SOUTHEASTERLY ALONG THE SAID NORTHEASTERLY RIGHT OF WAY LINE OF U.S. HIGHWAY ROUTE NUMBER 30, 106.60 FEET TO THE POINT OF BEGINNING, **EXCEPTING** THEREFROM THE RIGHT OF WAY OF WEBER ROAD WHICH INCLUDES THAT PART TAKEN AS PARCEL NUMBER 0138 CONDEMNED IN CASE NUMBER W773G 1751 ED, IN WILL COUNTY, ILLINOIS.

EXHIBIT A-2

1610 PLAINFIELD ROAD - LIST OF REQUESTED VARIATIONS

Crest Hill Zoning Ordinance (ZO) Section 11.6-7.2 Commercial Districts General Requirements

- Minimum commercial driveway width shall be twenty (20) feet at the lot line. Maximum commercial driveway width shall be forty (40) feet at the lot line. In no instance shall a commercial driveway or combination of driveways have a width greater than fifty (50) percent of total lot width facing the public right-of-way. *Proposed driveways include a new 47-foot-wide full access driveway, a new 95-foot wide right-in/right-out driveway onto Plainfield Road/U.S. Route 30, and a new 81-foot-wide full access driveway onto Knapp Drive.*

Crest Hill Code of Ordinances Chapter 15.12 Sign Code, Section 15.12.067 On Premises Signs

- Only on premises signs are permitted in any zoning district and must comply with the regulations set forth in this chapter. Off-premises signs are not permitted, except when approved by City Council. *QT has requested a variation that allows for a 15-foot-tall, multi-tenant, vertical monument sign (MV-E2PQ-CC-65-BB) to be installed on the very west edge of proposed Lot 2, adjacent to the Project's only full-access drive on Route 30. As reflected in the application materials for this sign, it will include a tenant panel for the future business that operates on Lot 2 and miscellaneous advertising and gas pricing information for the proposed Lot 1 QT store.*

Crest Hill Code of Ordinances Chapter 15.12 Sign Code, Section 15.12.080 (D)(1) Freestanding Signs in Business Districts

(d) The maximum allowable area for freestanding signs for lots less than 5 acres is 50 square feet, and the maximum allowable sign height is 15 feet. *QT has requested a variation that allow for the proposed multi-tenant monument sign on Lot 2 to have a combined sign face area, excluding the electronic gas price component, of approximately 67 sq. ft.*

(e) Electronic message center sign/changeable copy. In the case of electronic message center/changeable copy signs, the electronic message/changeable copy portion of the sign shall not exceed 20 square feet and will not be counted towards the area of the sign but will be included in the overall height.

Crest Hill Code of Ordinances Chapter 15.12 Sign Code, Section 15.12.080 (C) Wall Signs in Business Districts

(1) Permitted number. One wall sign is permitted per public right-of-way. In no case shall more than two such signs be erected upon each frontage. One additional wall sign may be erected on any premises abutting upon a railroad right-of-way. *QT has requested approval of a variation that allow for the following wall signs to be installed on Lot 1: (i) Knapp Drive Frontage: An IDB 56 sq. ft. QT wall sign on the QT building and an IDC 20 sq. ft. QT wall sign on the gas pump island canopy; (ii) Route 30 Frontage: An IDB-56*

sq. ft. QT wall sign and a 43.5 sq. ft. Gen4-CL60 Quick Trip Wall sign on the building and an IDC 20 sq. ft. QT wall sign on the gas pump island canopy; and (iii) West Interior Side Property Line: An IDC 20 sq. ft. QT wall sign on the gas pump island canopy.

(2) Placement of sign. No wall sign shall cover wholly or partially any wall opening, nor project beyond the ends or top of the wall to which it is attached. No wall sign shall be permitted to extend more than 15 inches beyond the building line, and shall not be attached to a wall of a height of less than ten feet above the ground level. *QT has requested a variation that allows each of the three IDC 20 QT wall signs proposed on the gas pump island canopy to extend four inches above the top edge of the canopy.*

(3) Allowable area. Any one wall sign shall not exceed 15% of the wall area of the wall surface, including window and door areas on which they are displayed. *QT has requested a variation that allows the IDC 20 QT wall signs proposed on the east and west façades of the gas pump island canopy to cover approximately 17.1% of the canopy face they are mounted to.*

EXHIBIT A-3

February 12, 2026, Community Development Department Staff Report

MINUTES OF THE
CREST HILL PLAN COMMISSION

The February 12, 2026, Plan Commission meeting was called to order by Chairman Bill Thomas, at 7:00 p.m. in the Council Chambers of the City Center, 20600 City Center Boulevard, Crest Hill, Will County, Illinois.

The Pledge of Allegiance was recited in unison.

Roll call indicated the following present: Chairman Bill Thomas, Commissioner Ken Carroll, Commissioner Cheryl Slabozeski, Commissioner Gordon Butler, Commissioner Jeff Peterson, Commissioner Marty Flynn, Commissioner John Stanton.

Also present were: City Attorney Mike Stiff, City Engineer Ron Wiedeman, Community & Economic Development Consultant Ron Mentzer, City Planner Atefa Ghaznawi, City Clerk Christine Vershay-Hall, and Executive Secretary Linda Riha.

APPROVAL OF MINUTES: Chairman Thomas asked for a motion to approve the minutes from the Plan Commission meeting held on January 8, 2026, for Commission approval.

(#1) Motion by Commissioner Peterson seconded by Commissioner Slabozeski, to approve the minutes from the Plan Commission meeting held on January 8, 2026.
On roll call, the vote was:
AYES: Commissioners Peterson, Slabozeski, Butler, Flynn, Stanton, Chairman Thomas.
NAYES: None.
ABSTAIN: Commissioner Carroll.
ABSENT: None.
There being six (6) affirmative votes, the MOTION CARRIED.

PUBLIC HEARING:
2. Public Hearing and Consideration of petition PUD-26-1-2-1, a request of Fiduciary Real Estate Development, Inc.
Chairman Bill Thomas presented the petition PUD-26-1-2-1, a request of Fiduciary Real Estate Development, Inc. to (i) rezone the Development Site from B-3 Business Service District to R-3 Multiple Family Residence District; (ii) Preliminary and Final Plat of Subdivision; (iii) Preliminary and Final Planned Unit Development Special Use; and (iv) Planned Unit Development waivers from the Crest Hill Zoning Ordinance, for a new 14 building, 260 unit luxury, market-rate multifamily apartment home community, with a clubhouse, pool amenity, and garage parking on the approximately 16-acre, B-3 Business Service District zoned vacant Development Site located along the north side of Ryan Drive, approximately 280 feet east of Weber Road, and 210 feet south of Renwick Road in the City of Crest Hill, Illinois.

Chairman Thomas asked if the paperwork was in order. City Planner Atefa Ghaznawi confirmed the necessary paperwork was in order.

Chairman Thomas asked for a Motion to Open the Public Hearing.

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(#2) Motion by Commissioner Carroll seconded by Commissioner Peterson, to open a public hearing case number PUD-26-1-2-1.
On roll call, the vote was:
AYES: Commissioners Carroll, Peterson, Flynn, Slabozeski, Stanton, Butler, Chairman Thomas.
NAYES: None.
ABSENT: None.
There being seven (7) affirmative votes, the MOTION CARRIED.

Chairman Thomas asked the Community & Economic Development Consultant Ron Mentzer to present the specifics on this case.

Community & Economic Development Consultant Ron Mentzer presented the case to the Commission, explaining that this case is pertaining to the sixteen acres of vacant property located just southeast of the Weber Road, Renwick Road intersection. He explained this property has been zoned B-3, business service district zoning classification, for a couple of decades with no serious private sector interest to develop the property in a manner that made sense to the City. Fiduciary Real Estate Development, Inc. became aware of and became interested in this property after developing The Bluffs multifamily residential project in Romeoville as they liked the area. Fiduciary contacted the City last spring/summer to explore the opportunity to develop a similar multifamily, class-A development on this Crest Hill property. This meeting will allow the developer to present its development Plan Commission and the public with the goal of obtaining approval to move this plan forward to City Council for approval.

Chairman Thomas swore in the members of the developer's team who would be providing testimony at the public hearing.

Tony DeRosa, Vice President and Chief Development Officer for Fiduciary Real Estate Development, gave an overview of the details of the project, the benefits the project has from a market perspective and to the community. Mr. DeRosa stated that his company, Fiduciary, is also responsible for developing the Bluffs in Romeoville and Seasons at Plainfield luxury apartment projects. Those developments "have achieved strong occupancy, top-of-market rents and have attracted high-quality residents. The success of those projects highlights the strength of our development approach and demonstrates the pent-up demand for modern, amenity-rich rental housing in this part of Will County." Mr. DeRosa went on to say that Crest Hill hasn't seen new apartment development in decades leaving residents with few options for high-quality, luxury rental living options.

Mr. DeRosa acknowledged the team that was present with him. There were two other individuals from Fiduciary, their design partner AG Architecture, their engineering partner Manhard Consulting and a traffic engineer from KLOA.

Mr. DeRosa went over the history of Fiduciary and the many beneficial attributes associated with the proposed Seasons of Crest Hill project. He noted that there will be 260 apartment homes: 120 1-bedroom units, 120 2-bedroom units and 20 3-bedroom units. There will be three access points for the development, a centrally located club house and pool and other amenity options, such as garages, patios, etc. The architectural design of the units, inside and outside, was explained, as

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well as the storm water management, the projected impact on schools and proposed market rents that range from $1500 per month for a one-bedroom unit to $2700 per month for a three-bedroom unit.

Commissioner Cheryl Slabozeski commented that these units were beautiful and wanted to know why they are rentals and not owner occupied. This question gets asked a lot per Mr. DeRosa. Mr. DeRosa stated that the market for condominiums today is quite different than it was twenty years ago. The mindset of the demographic today is concerned more with flexibility. The housing market has become so expensive, with the twenty percent down payment to own a home.

Commissioner Jeff Peterson asked how long a lease is for the units. Mr. DeRosa answered, "12-month minimum. Many times, we're leasing them between fifteen to twenty-four months, actually."

Commissioner Ken Carroll asked if there would be any problem with emergency vehicles getting into or out of the planned project. Mr. DeRosa stated that from a design standpoint this project has to comply with all of the City requirements that allow emergency vehicles to get in and out of the property. City Engineer Ron Wiedeman explained the review process of the Fire District, and they have no concerns with access to and through the project at this time.

Area residents were then sworn in and brought up several issues. There are concerns about more people and traffic coming into the area, especially during peak times. Also, these residents raised concern about impacts to the private streets in their neighborhood, buffering, and protection of the investments they have made into their homes. One resident expressed concern about water pressure issues that already exist in the area and wondered how this development will affect that. She also stated that she has a special needs son and came to this area because it was quiet and was concerned that this project would have a negative impact on the quiet nature of the area..

Resident Nadine Jens stated that her neighborhood owns two private streets and asked who will help them repair those private streets with additional traffic from school buses, garbage trucks, extra traffic and police cars.

Chairman Bill Thomas stated that there were many studies done prior to the introduction of this development, regarding impact on traffic and schools. Crest Hill has looked into things that were brought up by the residents, stating that the traffic impacts from this project will be less than a retail development put in the same area.

Mr. Tony DeRosa stated that the impact of the extra cars from this development will be minimal. Mr. DeRosa said people will go to work at 8:00AM and they will go here and there, but the reality is not that there will be one hundred cars lining up on the streets at the same time. A Principal traffic engineer Principal from KLOA stated that the standards from the City of Crest Hill and the Will County Highway Department were used in the traffic study that was done, looking at the existing and future operation of the intersections surrounding the site, as well as the intersection of Weber and Renwick, during different times of the day. Both the City and the County agreed that this project will not significantly impact the roadway network in the area. He also stated that the traffic signal at the intersection of Ryan Dr and Weber Rd will remain due to the Will County

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Highway Department. City Engineer Ron Wiedeman added that the traffic study that was done was adequate and stated that there will be some improvements recommended to the Council to area roads in the future.

Mr. Tony DeRosa addressed the item of property management when a resident spoke of her HOA and questioned who will be taking care of property management issues that will arise in the new development. Mr. DeRosa stated that there will be on-site management, not an outside company, taking care of things on-site. Mr. DeRosa also stated that the property manager will use a very extensive screening process to vey the individuals who apply for residency in the Seasons, including a look at income and assets, as well as a criminal background check. He noted that this screening process is significantly more thorough than the screening process someone would need to go through to purchase a house in the adjacent neighborhoods.

Another resident asked if the new development would work with a handful of area residents to bridge the gap between current residents (who may be angry) and the new development in the effort to come together for the sake of a cohesive Crest Hill for all.

Commissioner Jeff Peterson and Chairman Bill Thomas both said they visited the Bluffs in Romeoville and found it quiet and well-maintained. Chairman Thomas added that he felt that the Seasons at Crest Hill project would be an asset for the City of Crest Hill.

Chairman Thomas asked for a motion to close the public hearing.

(#3) Motion by Commissioner Peterson seconded by Commissioner Slabozeski, to close the public hearing.
On roll call, the vote was:
AYES: Commissioners Peterson, Slabozeski, Stanton, Flynn, Carroll, Butler, Chairman Thomas.
NAYES: None.
ABSENT: None.
There being seven (7) affirmative votes, the MOTION CARRIED.

The Public Hearing was closed at 8:23 p.m.

Chairman Thomas asked the applicant if he agreed to the seven (7) conditions. The applicant stated he agreed with the modification to #7, which was known by Chairman Thomas dealing with the walkways.

Chairman Bill Thomas asked for a motion to approve the request of Fiduciary Real Estate Development, Inc. seeking approvals for the construction of a multifamily apartment home community near the southeast corner of Renwick and Weber Roads as stated in the February 12, 2026, City of Crest Hill staff report.

(#4) Motion by Commissioner Peterson seconded by Commissioner Flynn, to recommend to the City Council the conditional approval of the Public Hearing and Consideration of petition PUD-26-1-2-1, a request of Fiduciary Real Estate Development, Inc. to (i) rezone the Development Site from B-3 Business Service District to R-3 Multiple Family Residence District; (ii) Preliminary and Final Plat of Subdivision; (iii) Preliminary and Final Planned Unit Development Special Use; and (iv)

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Planned Unit Development waivers from the Crest Hill Zoning Ordinance, for a new 14 building, 260 unit luxury, market-rate multifamily apartment home community, with a clubhouse, pool amenity, and garage parking on the approximately 16-acre, B-3 Business Service District zoned vacant Development Site located along the north side of Ryan Drive, approximately 280 feet east of Weber Road, and 210 feet south of Renwick Road in the City of Crest Hill, Illinois.
On roll call, the vote was:
AYES: Commissioners Peterson, Flynn, Carroll, Slabozeski, Stanton, Butler, Chairman Thomas.
NAYES: None.
ABSENT: None.
There being seven (7) affirmative votes, the MOTION CARRIED.

Chairman Thomas announced that this will be forwarded to the City Council and to keep in mind that the Plan Commission is a recommendation body only. The City Council will hear about this case on February 23, 2026, at the Work Session Meeting and then again on March 2, 2026, City Council meeting for formal vote.

3. Public Hearing and Consideration of petitions Plat of Subdivision, and V-26-2-2-1, a request of QuikTrip Corporation

Chairman Bill Thomas presented the Public Hearing and Consideration of petitions Plat of Subdivision, and V-26-2-2-1, a request of QuikTrip Corporation seeking special approvals from the City of Crest Hill Subdivision, Zoning Ordinance, and City Code for Preliminary and Final Plat of Subdivision and Variations from Section 11.6-7.2 Commercial Districts General Requirements of the Crest Hill Zoning Ordinance to permit a new 47-foot wide full access driveway and a new 95-foot wide right-in/right-out driveway onto Plainfield Road/U.S. Route 30 and a new 81-foot wide full access driveway onto Knapp Drive; and Variations from Section 15.12.080 of the Crest Hill Code of Ordinances-Sign Code to allow a multi-tenant off-premises freestanding sign, increased sign area for a multi-tenant freestanding sign, increased number of commercial wall signs, and adjustments to the permitted locations for commercial wall signs for a proposed new QuikTrip convenience store/gas station and a separate vacant commercial lot located on the 4.9 acre, B-3 Business Service District zoned property located at 1610 Plainfield Road (U.S. Highway Route No. 30), in the City of Crest Hill, Illinois.

Chairman Thomas asked if the paperwork was in order. City Planner Atefa Ghaznawi confirmed the necessary paperwork was in order.

Chairman Thomas asked for a Motion to Open the Public Hearing.

(#5) Motion by Commissioner Butler seconded by Commissioner Carroll, to open a public hearing case number V-26-2-2-1.
On roll call, the vote was:
AYES: Commissioners Butler, Carroll, Peterson, Flynn, Stanton, Slabozeski, Chairman Thomas.
NAYES: None.
ABSENT: None.
There being seven (7) affirmative votes, the MOTION CARRIED.

The Public Hearing was opened at 8:35PM.

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Ron Mentzer, Community and Economic Development Consultant, explained that this case involves the former City Hall property at 1618 Plainfield Road, which the city put up for sale several years ago. In summer 2024, the city entered into a contract with QuikTrip to sell the property, contingent on QuikTrip receiving necessary approvals.

The property is already properly zoned for the proposed use, but QuikTrip is seeking:

- Variations for increased driveway widths on Plainfield Road and Knapp Drive
- Sign code variations for an off-premises sign with increased sign area and an increased number of wall signs
- Approval of a preliminary and final plat of subdivision that would divide the 4.9-acre site into three separate lots

Chairman Thomas swore in the QuikTrip representative who would be providing testimony at the public hearing.

Ali Bukhres, Real Estate Project Manager with QuikTrip Corporation, presented their development plan, which includes:

- A convenience store with gas canopy
- A vacant lot for future commercial/quick serve restaurant development
- A detention pond at the back of the property
- Extensive landscaping throughout the site
- High-quality brick signage
- Modern store design with a full kitchen and individual bathrooms
- No commercial vehicle fueling (unlike their Romeoville location)

Chairman Thomas stated that he recently went to the Romeoville location of QuikTrip to check it out in the evening. He was impressed with the ambient lighting that wasn't overly bright, like a baseball stadium. Chairman Thomas also stated that he was pleased that this project will have the same lighting, so it won't disrupt the surrounding residents. He also spoke positively about the convenience this project would provide to the neighborhood in that it will provide another opportunity for area residents to go inside and buy groceries and get something hot to eat.

Area residents were then sworn in and brought up several issues. Multiple residents from the nearby Willow Falls senior community expressed concerns about increased traffic on Knapp Road, which already has cut-through traffic issues, safety concerns related to large vehicles that would be delivering products to the proposed new QuikTrip, and the potential light pollution the project could have on neighboring properties.

City Engineer Ron Wiedeman provided details about the City's plans to address traffic concerns on Knapp Road, including:

- Making the Willow Falls South intersection a four-way stop
- Building a barrier median on Theodore to restrict eastbound traffic from turning left onto Knapp
- Restricting left turns from Knapp onto Theodore during peak hours (3:30-7:00 PM)
- Evaluating the effectiveness of these measures one year after installation, and again one year after QuikTrip opens

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- Potentially adding speed tables at the north intersection if needed, similar to the ones in downtown Plainfield

Engineer Wiedeman emphasized that these traffic calming measures were recently endorsed by the City Council in response to residents' concerns about cut-through traffic, which the City's study showed accounts for 70% of traffic on Knapp Road.

Chairman Thomas asked for a motion to close the public hearing.

(#6) Motion by Commissioner Peterson seconded by Commissioner Flynn, to close the public hearing.
On roll call, the vote was:
AYES: Commissioners Peterson, Flynn, Slabozeski, Butler, Carroll, Stanton, Chairman Thomas.
NAYES: None.
ABSENT: None.
There being seven (7) affirmative votes, the MOTION CARRIED.

The Public Hearing was closed at 9:18 pm.

Chairman Thomas asked the applicant if he agreed to the five (5) conditions. The applicant stated he agreed.

Chairman Thomas stated that the City of Crest Hill really likes having Willow Falls in Crest Hill. This was made apparent by the comments of City Engineer Ron Wiedeman and Community & Economic Development Consultant Ron Mentzer regarding the City Councils ongoing commitment to evaluate Knapp Road traffic and potential additional future traffic calming improvements on the street. Based on the amount of analysis and discussion the City performed and engaged in regarding Knapp Drive traffic concerns, he suggested the residents should not feel forgotten. He thanked the residents for their attendance at the meeting.

Chairman Bill Thomas asked for a motion to approve the request of QuikTrip Corporation as stated in the February 12, 2026, City of Crest Hill staff report.

(#7) Motion by Commissioner Peterson seconded by Commissioner Carroll.
On roll call, the vote was:
AYES: Commissioners Peterson, Carroll, Stanton, Flynn, Butler, Slabozeski, Chairman Thomas.
NAYES: None.
ABSENT: None.
There being seven (7) affirmative votes, the MOTION CARRIED.

Chairman Thomas announced that this recommendation will be forwarded to the City Council and to keep in mind that the Plan Commission is a recommendation body only. The City Council will hear about this case on February 23, 2026, at the Work Session Meeting and then again on March 2, 2026, City Council meeting for formal vote.

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OTHER BUSINESS:
There was no other business.

PUBLIC COMMENTS:
There were no public comments.

There being no further business before the Commission, a motion for adjournment was in order.

(#8) Motion by Commissioner Carroll seconded by Commissioner Peterson, to adjourn the February 12, 2026, Plan Commission meeting.
On roll call, the vote was:
AYES: Commissioners Carroll, Peterson, Flynn, Slabozeski, Stanton, Butler, Chairman Thomas.
NAYES: None.
ABSENT: None.
There being seven (7) affirmative votes, the MOTION CARRIED

The meeting was adjourned at 9:23 p.m.

As approved this_____day of_____, 2026.
As presented_____
As amended_____

_____
BILL THOMAS, COMMISSION CHAIRMAN

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To: Plan Commission

From: Daniel Ritter, AICP, Community and Economic Development Director
Ronald Mentzer, Community and Economic Development Consultant

Date: February 12, 2026

Re: 1618 Plainfield Road, Proposed QuikTrip Redevelopment of Former Crest Hill City Hall - City Code and Zoning Ordinance Variation Requests and Preliminary/Final Plat of Subdivision – Plan Commission Case # V-26-2-2-1

Project Details

Project:	New QuikTrip Convenience Store/Gas Station #4452 and Adjacent Future Commercial Project
Applicant:	QuikTrip Corporation
Requests:	Zoning variations for increased driveway widths on Plainfield Road/Route 30 and Knapp Drive, City Code Sign Code variations for an off-premises sign with an increased sign area, an increased number of wall signs, and adjustments to the permitted locations for wall signs. A Preliminary and Final Plat of Subdivision that resubdivides the 4.9-acre site into three separate lots.
Location:	1618 Plainfield Road/U.S. Highway Route (the “Subject Property”)

Site Details

Lot Size:	Approximately 4.9 acres
Existing Zoning:	B-3, Business Service District
Existing Improvements:	Former two-story City of Crest Hill City Hall, Public Works, and Police Department Building, stormwater detention pond, and approximately 66 parking spaces.

Surrounding Zoning and Land Use Summary

	Land Use	Comp Plan	Zoning
Subject Parcel	Vacant former Municipal Building and a Vacant Development Parcel	Community Facilities and Local Commercial	B-3
North	Bank	Local Commercial	B-1
South	U.S. Route 30/City of Joliet.	Unknown	Unknown
East	Senior Living Facility	Multi-Family Residential	R-2
West	Bank, Misc. Commercial and Route 30	Local and Regional Commercial	B-1 and City of Joliet

Site Location Map



APPLICATION MATERIALS

The application materials submitted for this project/case and reviewed by City staff/consultants are listed on attached Exhibit A and have been distributed with this report.

APPLICATION BACKGROUND AND PROJECT SUMMARY

The Subject Property is owned by the City of Crest Hill. The eastern portion of the 4.9 +/- acre site is improved with the former City Hall/Public Works/Police Department Building which has been vacant since the City took occupancy of its new Public Works Building on Oakland Avenue and the new City Hall on City Center Boulevard. The western portion of the site is a vacant future commercial development site.

In the summer of 2024, the City of Crest Hill executed a purchase and sale agreement for the Subject Property with QuikTrip Corporation (QT). QT is proposing to demolish the existing building and pavement improvements on the Subject Property, resubdivide it into three lots, and develop each lot as follows:

- **Lot 1** (eastern lot): Construct a new 6,445 square foot QT convenience store, an eight pump island fueling canopy, 48 parking spaces, a right-in/right-out driveway on Route 30, and a new full access driveway on Knapp Drive.
- **Lot 2** (western lot): Construct a new full-access driveway on Route 30 at the very west edge of the lot, a new internal cross-access driveway between it and Lot 1 and prepare the lot for future sale and development. It is anticipated to be marketed for a quick-serve restaurant or a multi-tenant commercial building.
- **Lot 3** (northern lot): Expand the existing stormwater detention facility in this area of the Subject Property.

Collectively, these improvements comprise the “Project”.

QT’s purchase and redevelopment of the Subject Property is contingent on securing acceptable driveway permits from the Illinois Department of Transportation and obtaining City of Crest Hill approval of the variations outlined in this report.

REQUESTED VARIATIONS

QT has requested City approval of the following specific variations for the Project:

1. **Increased Driveway Widths:** Section 11.6-7.2 of the Zoning Ordinance limits the maximum width of commercial driveways to 40 feet measured at the property line. QT is proposing to eliminate the large northern-most driveway on Knapp Drive and has requested approval of variations that allow for:
    a. The remaining proposed full-access Knapp Drive driveway on Lot 1 to be 81 feet wide
    b. The proposed eastern Route 30 right-in/right-out driveway on Lot 1 to be 95 feet wide
    c. The proposed western Route 30 full-access driveway on Lot 2 to be 47 feet wide

2. **A Multi-Tenant Off-Premises Monument Sign with Increased Sign Area**
    a. Section 15.12.067 of the City’s Sign Code specifically prohibits off-premises signs “except when approved by the City Council”. QT has requested a variation that allows for a 15-foot-tall, multi-tenant, vertical monument sign (MV-E2PQ-CC-65-BB) to be installed on the very west edge of proposed

Lot 2, adjacent to the Project's only full-access drive on Route 30. As reflected in the application materials for this sign, it will include a tenant panel for the future business that operates on Lot 2 and miscellaneous advertising and gas pricing information for the proposed Lot 1 QT store.

b. Section 15.12.080 (D)(1)(d) of the Sign Code limits the area of a freestanding commercial sign on the Subject Property, excluding electronic gas pricing components, to 50 sq. ft. per face. QT has requested a variation that allow for the proposed multi-tenant monument sign on Lot 2 to have a combined sign face area, excluding the electronic gas price component, of approximately 67 sq. ft.

3. Increased Number of Commercial Wall Signs

a. Section 15.12.080 (C)(1) of the Sign Code allows one wall sign per public right of way and no more than two wall signs along each street frontage. QT has requested approval of a variation that allow for the following wall signs to be installed on Lot 1:

i. ***Knapp Drive Frontage:*** An IDB 56 sq. ft. QT wall sign on the QT building and an IDC 20 sq. ft. QT wall sign on the gas pump island canopy.

ii. ***Route 30 Frontage:*** An IDB-56 sq. ft. QT wall sign and a 43.5 sq. ft. Gen4-CL60 Quick Trip Wall sign on the building and an IDC 20 sq. ft. QT wall sign on the gas pump island canopy.

iii. ***West Interior Side Property Line:*** An IDC 20 sq. ft. QT wall sign on the gas pump island canopy.

4. Location of Wall/Canopy Signs

a. Section 15.12.080 (C)(2) of the Sign Code prohibits a wall sign from projecting above the top of the façade/wall it is attached to. QT has requested a variation that allows each of the three IDC 20 QT wall signs proposed on the gas pump island canopy to extend four inches above the top edge of the canopy.

5. Increased Area of Commercial Wall Signs

a. Section 15.12.080 (C)(3) prohibits the area of individual wall signs from exceeding 15% of the wall/façade surface the sign is mounted to. QT has requested a variation that allows the IDC 20 QT wall signs proposed on the east and west façades of the gas pump island canopy to cover approximately 17.1% of the canopy face they are mounted to.

OVERALL STAFF ANALYSIS

Overall, staff believes the QT's proposed Final Plat of Subdivision and project plans reflect the desirable redevelopment of a tax-exempt, obsolete governmental facility with a new high-quality, tax-generating QT convenience store and fueling station and a separate, yet to be identified, stand-alone complimentary commercial project. The proposed site circulation, driveway, and landscaping improvements will enhance the commercial character and desirability of the area while effectively managing the projected new traffic the Project will generate on the adjacent roadways. Staff is of the opinion that the requested variations are reasonable and acceptable given the underlying zoning of

the property, similar approvals the City has granted for other comparable projects in the community, and the character of the Subject Property and the adjacent commercial corridors. The resubdivision of the property and the creation of two adjacent commercial lots interconnected by an internal shared access drive that accommodates desirable private commercial development and businesses.

STAFF INPUT ON SPECIFIC PROJECT COMPONENTS

Traffic and Circulation

The Illinois Department of Transportation (IDOT) controls access onto the segment of Route 30 adjacent to the Subject Property. Late in 2025, IDOT finalized its review of the concept plans for this project and indicated the conceptual location and configuration of the project's Route 30 access driveways were acceptable.

The Lockport Fire Protection District has reviewed the application documents for the Project and has no objections or requested revisions at this time.

An attorney representing the Willow Falls Townhouse Association (the Association) submitted the September 16, 2025, letter attached as Exhibit B to formally document the Association's position regarding the proposed project and its request that all vehicular access to it be limited to Route 30 (no access allowed on Knapp Drive). This position is consistent with recent concerns Willow Falls residents have expressed regarding the speed, volume, and level of cut-through traffic on Knapp Drive. Knapp Drive is operated and maintained by the City of Crest Hill.

At the January 26, 2026, City Council Work Session meeting, the City's Director of Engineering presented a study summarizing traffic calming options that the City's traffic engineering consultant prepared for Knapp Drive in December of 2025. The detailed agenda packet backup information for this presentation can be accessed by clicking on agenda item 1. on the January 26, 2026, City Council Work Session agenda available on the City's Website here. The City Council ultimately concurred with Staff's recommendation to install:

- All-way stop signs at the Willow Circle South/Knapp Drive intersection.
- A barrier median on Theodore Street at the Knapp Drive intersection that prohibits left turns from eastbound Theodore Street to northbound Knapp Drive.
- Signage on Knapp Drive that prohibits left turns from southbound Knapp Drive to eastbound Theodore Street during the evening peak traffic hours of 3:30-7 PM Monday through Friday.
- Signage at the Knapp Drive driveway entrance to El Guero Fresh Market which will prohibit cut-thru traffic.

The Applicant prepared and submitted a detailed traffic impact study for the proposed Project. The City's Director of Engineering has reviewed the study and concurs with the following key study conclusions and staff recommendations:

- The traffic projected to be generated by the Project will be reduced due to the volume of pass-by traffic.
- The signalized intersections of Plainfield Road with Theodore Street and Larkin Avenue have sufficient reserve capacity to accommodate Project-generated traffic.

- The intersection of Theodore Street with Knapp Drive can accommodate the additional traffic this Project will generate once the staff recommended Knapp Drive traffic calming improvements are in place.
- Vehicular access to the Project will be provided via a right-in/right-out access drive on Route 30 and a full-access driveway on Route 30 and Knapp Drive.
- Inbound left-turn movements at the proposed full movement access drive on Route 30 can be accommodated within the existing two-way left-turn median.
- A new continuous right-turn lane will be constructed to serve both of the Project's planned Plainfield Road driveways.
- The planned full-movement access driveway on Plainfield Road will connect to an internal private drive and access easement that serves both the Lot 1 QT Project and the adjacent future commercial development on Lot 2.
- The proposed access system will adequately accommodate the traffic estimated to be generated by the Project and will ensure that efficient and flexible access is provided.

Driveway Width Variations

The Director of Engineering has also reviewed the various engineering-related site plans submitted for the project and has concluded that the design/width of the proposed access drives are substantially consistent with sound engineering principles and approved City of Crest Hill construction details and therefore has no objection to the City's approval of the requested driveway width variations. Community Development Department Staff believes the width and configuration of proposed driveways support safe and efficient vehicular access to and from the Project. Reductions to the width of these driveways compromise the ability of the Subject Property to support quality commercial end users and have a negative impact on the operational efficiency and safety of these driveways. It is important to note that the final configuration and alignment of these driveways will be determined during the final engineering review and permitting processes for this project.

Sign Code Variations

In general, the City's Sign Code does not effectively allow a reasonable level of gasoline pump island canopy signage or multi-tenant monument signs for adjacent commercial lots with a shared driveway configuration like what is proposed in this Project. Overall, the number, size, and location of proposed signs in this Project is generally consistent with the signage packages the City has approved for other gas/convenience store projects. The proposed signs will be constructed of high-quality materials, have a desirable coordinated design, and be appropriately located, given the amount of elevation change and somewhat irregular corner lot configuration of the Subject Property.

VARIATION APPROVAL STANDARDS AND FINDINGS

Section 12.6-2 of the Zoning Ordinance states the Plan Commission shall recommend, and the City Council shall grant a variation only when it shall have been determined, and recorded in writing, that all of the following standards are complied with. Staff has drafted the following findings of fact identified in bold italic font. These drafted findings can be modified or changed as the Plan Commission deems fit and based on the specific findings from the public hearing. The Applicant has also included its responses to these standards in the supporting application materials distributed to the Plan Commission for this case.

1. That the property in question cannot yield a reasonable return if permitted to be used only under the conditions allowed by the regulations in that zone.

   The Subject Property cannot yield a reasonable return if it is limited solely to the uses and development standards permitted under the existing Zoning Ordinance and Sign Code regulations. Without approval of the requested driveway width variations, vehicular access to the site will be severely constrained and potentially less safe than the proposed design. Without the approval of the requested Sign Code variations, the quantity and placement of shared monument, wall, and canopy signage is less than the City has approved for other combined convenience and fueling facilities and adjacent commercial lot configurations within the community.

   These limitations would place the Subject Property at a competitive disadvantage, diminish its desirability, and negatively affect its overall value. Approval of the requested variations is necessary to allow the Project to be developed as proposed, ensuring that the property can operate safely and efficiently while yielding a reasonable return.

2. That the plight of the owner is due to unique circumstances.
   The plight of QT is due to unique circumstances specific to the property. The irregular corner-lot configuration, coupled with the existing configuration of adjacent roadway improvements, the operational requirements of the proposed commercial uses, and the necessity of shared internal driveway improvements, creates site-specific conditions not generally applicable to other properties in the zoning district. These unique circumstances justify approval of the requested variations.

3. That the variations, if granted, will not alter the essential character of the locality.
   QT proposes to eliminate an existing excessively wide driveway on Knapp Drive and reconstruct the remaining three existing driveways serving the Subject Property in a manner consistent with sound engineering principles and the approved City of Crest Hill construction details.

   The number, size, and placement of the proposed signs are generally consistent with signage packages previously approved by the City for other gas and **convenience store developments. The proposed signage will be constructed of** ***high-quality materials, feature an aesthetically pleasing and coordinated design, and be appropriately located given the site's elevation changes and irregular corner-lot configuration.***

   Accordingly, the requested variations will not negatively impact the overall commercial character of the adjacent commercial corridors.

In addition, Section 12.6-2 of the Zoning Ordinance further suggests the Plan Commission supplement the above standards by taking into consideration the extent to which the facts listed on Exhibit C have been established by the evidence presented during the public hearing process and further support the approval of the Applicant's requests.

STAFF RECOMMENDATION

Based on the drafted findings reflected in this staff report, Staff recommend the following motion to provide a recommendation to City Council. This motion may be amended by any Plan Commission member making the motion based upon the findings of the public hearing. Staff recommends that any motion be made in the positive form to correspond with the applicant's request and avoid confusion on the recommendation.

The Plan Commission recommends that the City Council approve the QuikTrip No. 4452 Final Plat Subdivision and the Zoning Ordinance and Sign Code variations outlined in the February 12, 2026, Plan Commission staff report for Case # V-26-2-2-1, subject to the following conditions and requirements:

1. ***The final plat of subdivision shall satisfy all applicable City ordinance, staff, and City Attorney requirements and shall include (either on the plat or in a separate document recorded with the Final Plat) appropriate cross-access easement and maintenance provisions for shared site improvements (pond, sign, and roadway). Any separate agreements/covenants shall be approved and recorded prior to any building occupancies or sale of any lots.***
2. ***All final engineering plans, related supporting information, and development security for the project shall be submitted for the Director of Engineering's review and approval in conjunction with the formal building permit application submitted for the project. Said plans shall be substantially consistent with the application documents submitted for Plan Commission Case #V-26-2-2-1.***
3. ***All final architectural, signage, and landscape plans for the project shall be submitted for Community Development Department staff review and approval in conjunction with the formal building permit application submitted for the project. Said plans shall be substantially consistent with the application documents submitted for Plan Commission Case #V-26-2-2-1.***
4. ***No new permanent driveway improvements shall be constructed onto the adjacent public roadways until proper permits have been issued by the authority having jurisdiction over the adjacent public roadway.***
5. ***The final design for the 15-foot-tall, multi-tenant, vertical monument sign (MV-E2PQ-CC-65-BB) installed on the very west edge of proposed Lot 2 shall be updated so that the tenant panel for the yet-to-be identified future commercial tenant on Lot 2 is located at the top of the sign face. A private agreement and covenant for this sign shall be approved by the city and recorded prior to issuance of a sign permit.***

Exhibit A
QuikTrip Application Materials for Store #4452

Misc. Application Materials

- 1/16/2026 Application for Development/Variations and Plat of Subdivision
- Undated Applicant "Development Request" Responses to Standards for Variations
- 12/24/2025 Traffic Impact Study Proposed QuikTrip Convenience Store
- 12/19/2024 Final Plat QuikTrip No. 4452 Subdivision (Sheets 1-3)
- Preliminary Stormwater Drainage Report for QuikTrip Store #4452 sealed 1/9/2026

Building Elevations and Floor Plan

- 02/04/2025 Building Elevations Sheet BE001
- 12/17/2025 Rough Dimension Floor Plan Sheet A110

Engineering/Site Plans

- 01/09/2026 Overall Development Plan Sheet C010
- 01/09/2026 Demolition Plan Sheet C030
- 01/09/2026 Overall Site Plan Sheet C100
- 01/09/2026 Site Plan Sheet C101
- 01/09/2026 Vehicle Tracking Delivery Trucks Sheet C103
- 01/16/2026 Emergency Vehicle Tracking Exhibit
- 01/09/2026 Overall Grading Plan Sheet C110
- 01/09/2026 Grading Plan Sheet C111
- 01/09/2026 Storm Sewer Plan Sheet C120

Signage

- 01/09/2026 Signage Plan Sheet C102
- 12/22/2025 4452 G4 Vertical 8 Gas Canopy drawing
- 03/06/2025 Approved IDB-56 SF Building ID Sign Plans (3 Sheets)
- 04/08/20 IDC-20 SF Building ID Sign (3 Sheets)
- 01/08/2026 MH-E2PGQ-CC-38-BB Horizontal Monument Sign (7 Sheets)
- 01/08/2026 MV-E2PQ-CC-65-BB 12'-0" Vertical Monument Sign (9 Sheets)
- 3/27/25 Approved Gen4 – CL60 Building Channel Letter Sign (4 Sheets)

Lighting

- 01/09/2026 Photometric Site Plan C160
- QuikTrip Store 4452 Lighting Cut Sheets for LSI Site Lights (8 pages), LSI Fuel Canopy Lights (6 pages), LSI Building Canopy Lights (4 pages), LSI Building Wall Sconces (5 pages), and LSI Light Poles (8 pages)

Landscaping

- 01/09/2026 Overall Landscape Impervious Surface Plan Sheet L100
- 01/09/2026 Landscape Plan Sheet L101

Exhibit B
Willow Falls Townhome Association Letter

KEOUGH MOODY

NAPERVILLE
114 East Van Buren Avenue
Naperville, IL 60540
phone 630 369 2700
facsimile 630 369 9279

CHICAGO
181 W. Madison, Suite 4700
Chicago, IL 60601
phone 312 899 9989
www.kmlegal.com

Writer's Direct Dial (630) 369-2700
Writer's Email rtv@kmlegal.com

Correspondence response to be sent to the Naperville office.

September 16, 2025

VIA EMAIL, REGULAR AND CERTIFIED MAIL
rsoliman@cityofcresthill.com

Mayor Raymond R. Soliman
City of Crest Hill
20600 City Center Blvd.
Crest Hill, IL 60403

Re: Quick Trip Development – Knapp Corridor

Dear Mayor Soliman:

Our firm represents the Willow Falls Townhome Association (the "Association"), which consists of 104 Townhomes located near the intersection of Knapp Drive and Willow Circle Drive in Crest Hill. This correspondence is sent on behalf of the Association to formally express its position regarding the proposed Quick Trip Development between U.S. Route 30 and Knapp Drive.

While the Association is encouraged by the City of Crest Hill's continued efforts to support economic development, it has significant concerns regarding the increased vehicular and pedestrian traffic, and the resulting safety impacts, that the proposed development is likely to bring to the surrounding residential area. These concerns, however, would likely be substantially mitigated by restricting vehicle access to the development from Knapp Drive. Accordingly, the Association respectfully requests that all vehicular access to the Quick Trip Development be limited to U.S. Route 30.

As you are aware, Knapp Drive currently experiences a high volume of non-local traffic using the corridor to bypass major intersections, including those at Larkin/Weber, IL Route 7, and U.S. Route 30. Residents have frequently observed this non-local traffic, as well as patrons of local businesses, disregarding the clearly posted 25 mph speed limit, creating serious safety concerns for other vehicles and pedestrians within the area. It is our understanding, however, that the City is seeking to reduce or eliminate the issues caused by this cut-through traffic, as evidenced by the recently approved resolution authorizing a Traffic Impact and Calming Analysis along the Knapp Corridor, from IL Route 7 (Theodore Street) to Larkin Avenue/Weber Road. The Association appreciates and supports this proactive initiative as it has been a cause of concern for quite some time.

To further support the City's initiative to reduce cut-through traffic, the Association urges the City to restrict vehicular access to the Quick Trip Development from Knapp Drive and require all ingress and egress to be routed exclusively via U.S. Route 30. Allowing access from Knapp Drive will likely undermine the City's efforts to mitigate cut-through traffic by providing another route for non-local traffic – thereby exacerbating congestion and safety concerns along the Knapp Corridor.

Conversely, directing all traffic to and from the development through U.S. Route 30 would provide patrons with efficient access immediately after the intersection of IL Route 7 and U.S. Route 30. Given the already elevated traffic volumes and speeding issues along Knapp Drive, the introduction of commercial traffic from a high-volume establishment such as Quick Trip would only intensify the existing challenges.

Accordingly, the Association strongly urges the City to restrict access to the development from Knapp Drive and to require all ingress and egress be routed exclusively through U.S. Route 30. Doing so would not only help preserve the character of the Knapp Corridor and the safety of its residents but may also support the City's broader goals of mitigating cut-through traffic.

We would like to be notified of any updates related to the Traffic Study and the Quick Trip Development. Please direct all notifications and correspondences regarding this matter via email to rrb@kmlegal.com.

Thank you for your attention to this matter.

Very truly yours,

REBECKA R. BRONKEMA
Attorney at Law

cc: Willow Falls Townhome Association

Exhibit C

Supplemental Variation Approval Facts to Consider Per Zoning Ordinance Section 12.6-2

1. *That the particular physical surroundings, shape, or topographical condition of the specific property involved will result in a particular hardship upon the owner, as distinguished from a mere inconvenience, if the strict letter of the regulations were carried out.*
2. *The conditions upon which the petition for a variation is based are unique to the property owner for which the variation is sought and are not applicable, generally, to the other property within the same zoning classification.*
3. *That the alleged difficulty or hardship is caused by the Ordinance and has not been created by any person presently having an interest in the property.*
4. *That the proposed variation will not impair an adequate supply of light and air to adjacent property or substantially increase congestion in the public streets or increase the danger of fire, or endanger the public safety, or substantially. diminish or impair property values within the adjacent neighborhood.*
5. *That the variation does not permit a use otherwise excluded from the particular zone except for uses authorized by the Plan Commission, subject to the approval of the City Council, as "similar and compatible uses."*
6. *That the variation granted is the minimum adjustment necessary for the reasonable use of the land.*
7. *That the granting of any variation is in harmony with the general purposes and intent of the Zoning Ordinance, and will not be injurious to the neighborhood, be detrimental to the public welfare, alter the essential character of the locality, or be in conflict with the Comprehensive Plan for development of the City.*
8. *That, for reasons fully set forth in the recommendations of the Plan Commission, and the report of the City Council, the aforesaid circumstances or conditions are such that the strict application of the provisions of the Zoning Ordinance deprives the applicant of any reasonable use of his land. Mere loss in value shall not justify a variation; there must be a deprivation of beneficial use of land.*

Application for Development

For Office Use Only: **Case Number:** V-26-2-2-1

Project Name: QuikTrip 4452

Owner: City of Crest Hill	Correspondence To: Ron Mentzer
Street No: 20600 City Center BLV	Street No:
City, State, Zip: Crest Hill, IL 60403	City, State, Zip:
Phone: 815-741-5107	Phone:
Email or fax: rmentzer@cityofcresthill.com	Email or fax:

Property Address:
Street No: 1610 Plainfield RD
City, State, Zip: Crest Hill, IL 60403
PIN: 11-04-31-405-051-0000, 11-04-31-407-003-0000,11-04-31-405-050-0000

Property Information:

	Lot 1	Lot 2	Outlot A
Lot Width:	402.51'	212.73'	455.06'
Lot Depth:	336.33'	336.33'	343.91
Total Area:	87,200.56fs	71,685.79sf	53,529.01sf

* Attach a copy of the legal description of the property and applicable fees.
* Submit electronic version of the legal description to:
mdeharo@cityofcresthill.com and lthrasher@cityofcresthill.com.

Existing Zoning: B3 Existing Land Use: Vacant city building
Requested Zoning: B3 Proposed Land Use: New QuikTrip Convenience store with fuel offer on Lot one
And yet to be determined commercial or quick service restaurant on lot 2

Adjoining Properties Zoning and Uses:

North of Property: B-1 Chase Bank
South of Property: Theodore Street
East of Property: B2- senior living
West of Property: Unknown out of Crest Hill limits

Purpose Statement (intended use and approval sought): The requested zoning and sign ordinance Variations would allow for the former city hall building building and related site improvements to be demolished and overdeveloped with anew QuikTrip convenience store with fuel on lot 1 and a yet to be determine future commercial or a quick service restaurant.

City of Crest Hill Development Handbook **Appendix C**

Development Request: Please check all that apply and describe:

__ Rezoning: _____
*Please attach written responses to items listed in Section 12.8-5 of the Zoning Ordinance.

__ Special Use: _____
* Please attach written responses to items listed in Section 12.7-6 of the Zoning Ordinance.

X Variance: increased number of freestanding sign, and increased number of freestanding sign and increased area of freestanding sing
* Please attach written responses to items listed in Section 12.6-2 of the Zoning Ordinance.

__ Planned Unit Development: _____
* Please attach written responses to items listed in Sections 10.0-4 & 10.5 of the Zoning Ordinance.

__ Annexation: _____

X Plat: Preliminary and final plat, subdivision and easement dedication

__ Other: _____

Contact Information – if not yet known, please indicate as TBD. Check those parties in which copies of all correspondences should be forwarded.

__**Civil Engineer** Darla Holman Phone Number _____
Company MDG Email Address _____
__**Contractor** TBD Phone Number _____
Company _____ Email Address _____
__**Architect** Amanda Spitzer Phone Number _____
Company Lickle Email Address _____
__**Builder** TBD Phone Number _____
Company _____ Email Address _____

I agree to be present (in person or by counsel) when the Plan Commission and City Council hear this development request.

_____ 1-16-2025
Signature of the Applicant Date

If you (the applicant) are not the owner of record, please provide the owner's signature.

_____ _____
Signature of the Owner Date

Development Request

12.6-2 STANDARDS FOR VARIATIONS The Plan Commission shall recommend, and the City Council shall grant a variation only when it shall have been determined, and recorded in writing, that all of the following standards are complied with:

1. That the property in question cannot yield a reasonable return if permitted to be used only under the conditions allowed by the regulations in that zone;

Due to the need for delivery truck it enter the site safely we are requesting a variance from the standard 30' maximum drive width to 41.08' and 80.85'. We are also requesting of an offsite signage for a multi-tenant.

2. That the plight of the owner is due to unique circumstances;

of the location of the site and the amount of space needed for trucks to make safe turning movements.

3. That the variation, if granted, will not alter the essential character of the locality.

The variance, if granted, will not alter the essential character of the locality and will also for safer turning movements for bigger trucks at our ingress and egress

CREST HILL, ILLINOIS – STORE #4452
DESCRIPTION OF PROPERTY

PARCEL 1:

THAT PART OF THE SOUTHEAST QUARTER OF SECTION 31, IN TOWNSHIP 36 NORTH, AND IN RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN LOCKPORT TOWNSHIP, WILL COUNTY, ILLINOIS, AS HEREINAFTER DESCRIBED: BEGINNING AT THE SOUTHEAST CORNER OF SAID SECTION 31; THENCE NORTHWESTERLY ALONG A LINE PARALLEL WITH THE CENTER LINE OF THE RIGHT OF WAY OF U.S. HIGHWAY ROUTE NO. 30, 500.00 FEET; THENCE NORTHEASTERLY ALONG A LINE THAT IS A RIGHT ANGLE TO THE AFORESAID CENTER LINE OF SAID RIGHT OF WAY OF SAID HIGHWAY, 541.1 FEET, TO THE EAST LINE OF SAID SECTION 31; THENCE SOUTH ALONG THE EAST LINE OF SAID SECTION 31, 736.9 FEET TO THE POINT OF BEGINNING, **EXCEPTING** THEREFROM THE RIGHT OF WAY OF U.S. HIGHWAY ROUTE NO. 30 (PLAINFIELD ROAD) AND WEBER ROAD WHICH INCLUDES THAT PART TAKEN AS PARCEL NO. 0138, CONDEMNED IN CASE NO. W73G1751ED, IN WILL COUNTY, ILLINOIS.

PARCEL 2:

THAT PART OF THE SOUTHEAST 1/4 OF SECTION 31, TOWNSHIP 36 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: COMMENCING AT THE SOUTHEAST CORNER OF THE SAID SOUTHEAST 1/4; THENCE NORTHWESTERLY ALONG A LINE PARALLEL WITH THE CENTER LINE OF UNITED STATES HIGHWAY ROUTE NUMBER 30, 500.00 FEET; THENCE NORTHEASTERLY ALONG A LINE FORMING A RIGHT ANGLE WITH THE LAST DESCRIBED LINE 541.10 FEET TO THE EAST LINE OF THE SAID SOUTHEAST 1/4; THENCE NORTH ALONG THE SAID EAST LINE OF THE SOUTHEAST 1/4, 157.04 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE ALONG THE SAID EAST LINE OF THE SOUTHEAST 1/4, 156.16 FEET; THENCE SOUTHWESTERLY ALONG A LINE FORMING AN ANGLE OF 137 DEGREES 15 MINUTES TO THE LEFT WITH THE PROLONGATION OF THE LAST DESCRIBED LINE, 729.37 FEET TO THE NORTHEASTERLY RIGHT OF WAY LINE OF UNITED STATES HIGHWAY ROUTE NUMBER 30; THENCE SOUTHEASTERLY ALONG THE SAID NORTHEASTERLY RIGHT OF WAY LINE OF UNITED STATES HIGHWAY ROUTE NUMBER 30, 106.00 FEET; THENCE NORTHEASTERLY 615.01 FEET TO THE POINT OF BEGINNING, **EXCEPTING** THEREFROM THE RIGHT OF WAY OF WEBER ROAD WHICH INCLUDES THAT PART TAKEN AS PARCEL NUMBER 0138 CONDEMNED IN CASE NUMBER W73G1751ED, IN WILL COUNTY, ILLINOIS.

PARCEL 3:

THAT PART OF THE SOUTHEAST 1/4 OF SECTION 31, IN TOWNSHIP 36 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, LOCKPORT TOWNSHIP, WILL COUNTY, ILLINOIS DESCRIBED AS FOLLOWS: COMMENCING AT THE SOUTHEAST CORNER OF THE SAID SOUTHEAST 1/4; THENCE NORTHWESTERLY ALONG A LINE PARALLEL WITH THE CENTER LINE OF U.S. HIGHWAY ROUTE NUMBER 30, 500.00 FEET; THENCE NORTHEASTERLY ALONG A LINE FORMING A RIGHT ANGLE WITH THE LAST

DESCRIBED LINE 41.10 FEET TO THE POINT OF BEGINNING, SAID POINT BEING ON THE NORTHEASTERLY RIGHT OF WAY LINE OF U.S. HIGHWAY ROUTE NUMBER 30; THENCE CONTINUE NORTHEASTERLY ALONG THE PROLONGATION OF THE LAST DESCRIBED LINE 500.00 FEET TO THE EAST LINE OF THE SAID SOUTHEAST 1/4; THENCE NORTH ALONG THE SAID EAST LINE OF THE SOUTHEAST 1/4 157.04 FEET; THENCE SOUTHWESTERLY ALONG A LINE FORMING AN ANGLE OF 137 DEGREES 15 MINUTES TO THE LEFT WITH THE PROLONGATION OF THE LAST DESCRIBED LINE, 615.01 FEET TO THE SAID NORTHEASTERLY RIGHT OF WAY LINE OF U.S. HIGHWAY NUMBER 30; THENCE SOUTHEASTERLY ALONG THE SAID NORTHEASTERLY RIGHT OF WAY LINE OF U.S. HIGHWAY ROUTE NUMBER 30, 106.60 FEET TO THE POINT OF BEGINNING, **EXCEPTING** THEREFROM THE RIGHT OF WAY OF WEBER ROAD WHICH INCLUDES THAT PART TAKEN AS PARCEL NUMBER 0138 CONDEMNED IN CASE NUMBER W773G 1751 ED, IN WILL COUNTY, ILLINOIS.

Traffic Impact Study
Proposed QuikTrip Convenience Store
Crest Hill, Illinois



Prepared For:

QuikTrip

KLOA
Kenig, Lindgren, O'Hara, Aboona, Inc.

December 24, 2025

1. Introduction

This report summarizes the methodologies, results, and findings of a traffic impact study conducted by Kenig, Lindgren, O'Hara, Aboona, Inc. (KLOA, Inc.) for a proposed QuikTrip Convenience Store to be located in Crest Hill, Illinois. The site, which currently contains a vacant Crest Hill Police Department building, is located in the north corner of the intersection of Plainfield Road (U.S. Route 30) with Theodore Street (Illinois Route 7). As proposed, the site will be developed with sixteen passenger vehicle fueling positions and an approximately 5,312 square-foot convenience store. In addition, the north parcel of the site has the potential to be developed with an approximately 3,000 square-foot fast-food restaurant with a drive-through. Access to the proposed development will be provided via a right-in/right-out access drive and a full movement access drive on Plainfield Road and a full movement access drive on Knapp Drive.

The purpose of this study was to examine background traffic conditions, assess the impact that the proposed development will have on traffic conditions in the area, and determine if any roadway or access improvements are necessary to accommodate traffic generated by the proposed development. **Figure 1** shows the location of the site in relation to the area roadway system. **Figure 2** shows an aerial view of the site. The sections of this report present the following:

- Existing roadway conditions
- A description of the proposed development
- Directional distribution of the development traffic
- Vehicle trip generation for the development
- Future traffic conditions including access to the development
- Traffic analyses for the weekday morning, weekday evening, and Saturday midday peak hours
- Recommendations with respect to adequacy of the site access and adjacent roadway system

Traffic capacity analyses were conducted for the weekday morning, weekday evening, and Saturday midday peak hours for the following conditions:

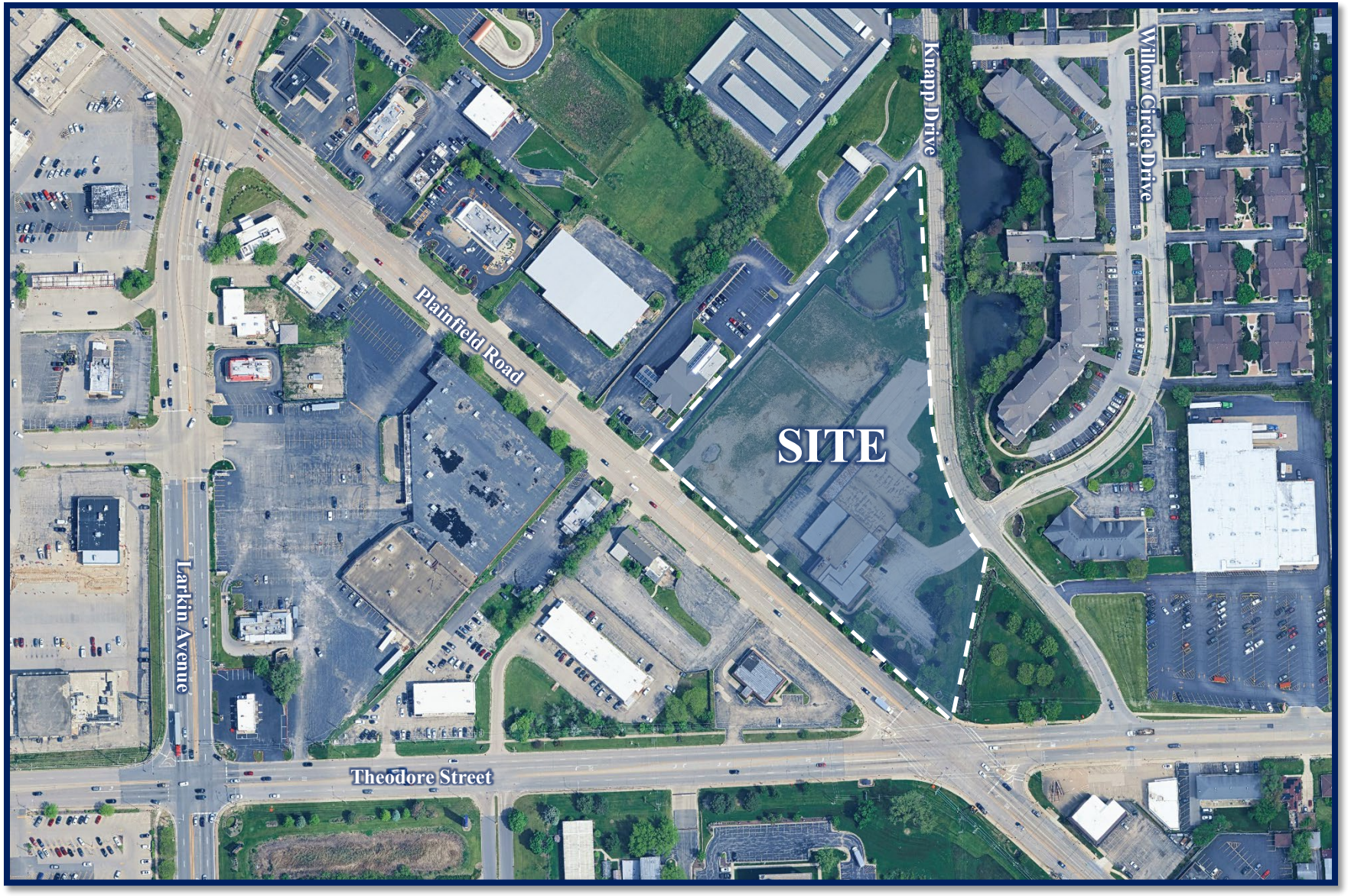
1. Existing Conditions – Analyzes the capacity of the existing roadway system using peak hour traffic volumes from traffic counts conducted in 2024.

2. Year 2030 No-Build Conditions – Analyzes the capacity of the future roadway system using existing traffic volumes increased by an ambient area growth factor not attributable to any particular development and the traffic that could be generated by the vacant parcel north of the site when it is occupied.

3. Year 2030 Total Projected Conditions – Analyzes the capacity of the future roadway system assuming the projected traffic volumes that include the Year 2030 No-Build volumes and the traffic estimated to be generated by the proposed development.



Site Location **Figure 1**



Aerial View of Site **Figure 2**

2. Existing Conditions

Existing transportation conditions in the vicinity of the site were documented based on field visits conducted by KLOA, Inc. in order to obtain a database for projecting future conditions. The following provides a description of the geographical location of the site, physical characteristics of the area roadway system including lane usage and traffic control devices, and existing peak hour traffic volumes.

Site Location

The site, which currently contains a vacant Crest Hill Police building, is bounded by Chase Bank to the north, Knapp Street to the east, Theodore Street to the south, and Plainfield Road to the west. Land uses within the vicinity of the site are primarily residential to the east and commercial to the west.

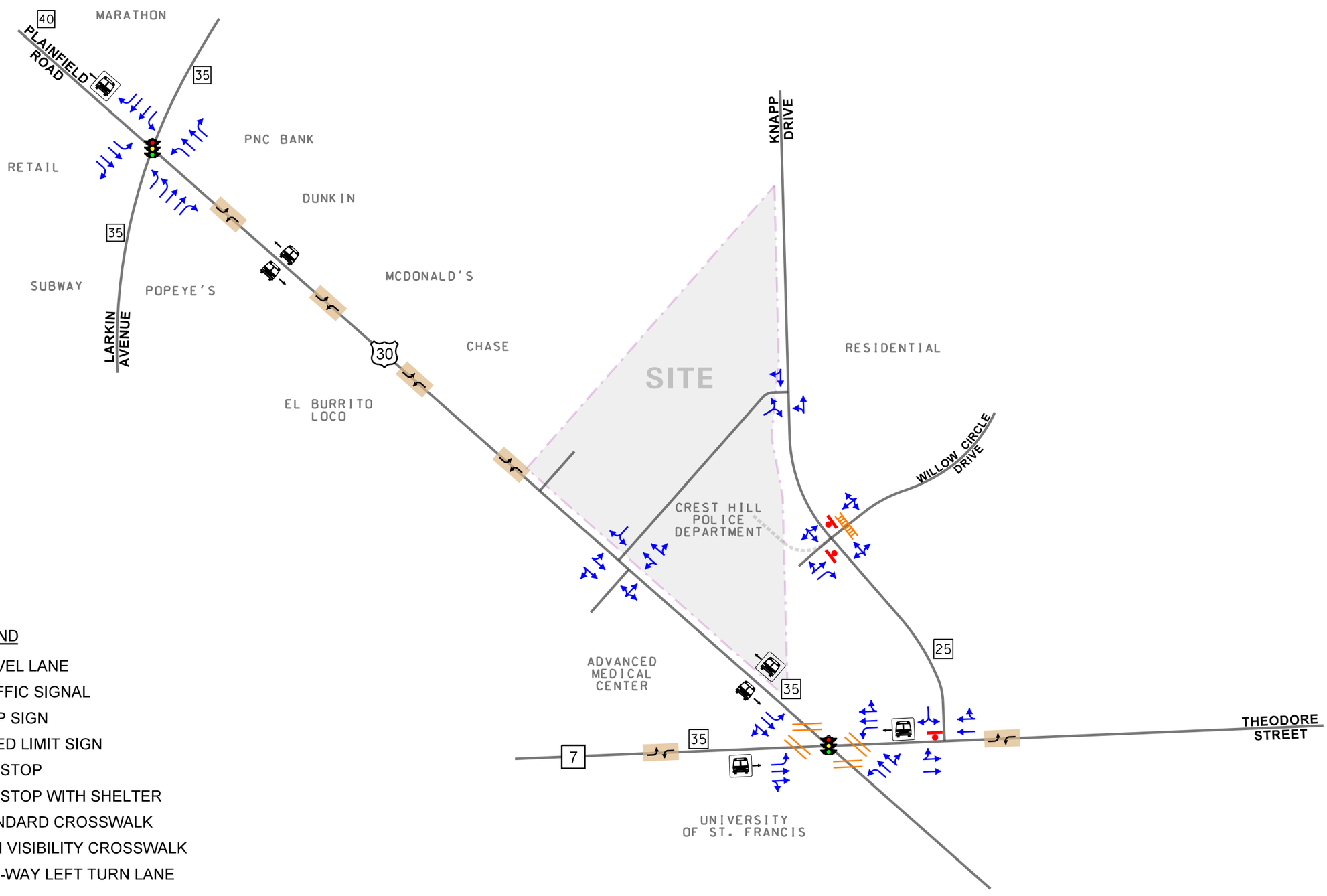
Existing Roadway System Characteristics

The characteristics of the existing roadways near the development site are described below and illustrated in **Figure 3**.

Plainfield Road (U.S. Route 30) is a northwest-southeast other principal arterial roadway that generally provides two through lanes in each direction. At its signalized intersection with Theodore Street provides an exclusive left-turn lane, a through lane, and a shared through/right-turn lane on both approaches. At its signalized intersection with Larkin Avenue, Plainfield Road provides an exclusive left-turn lane, two through lanes, and an exclusive right-turn lane on both approaches. Plainfield Road is under the jurisdiction of the Illinois Department of Transportation (IDOT), is not designated as a Strategic Regional Arterial (SRA), and carries an Annual Average Daily Traffic (AADT) volume of 19,900 vehicles (IDOT 2023). Plainfield Road has a posted speed limit of 40 miles per hour west of Larkin Avenue and 35 miles per hour east of Larkin Avenue.

Theodore Street is an east-west other principal arterial roadway that provides two lanes in each direction. At its signalized intersection with Plainfield Road, Theodore Street provides an exclusive left-turn lane, two through lanes, and an exclusive right-turn lane on both approaches. At its unsignalized intersection with Knapp Drive, Theodore Street provides two lanes in each direction. Theodore Street is under the jurisdiction of IDOT, is not designated as an SRA, carries an AADT volume of 15,600 vehicles (IDOT 2023), and has a posted speed limit of 35 miles per hour.

Larkin Avenue is a north-south other principal arterial roadway that provides two lanes in each direction. At its signalized intersection with Plainfield Road, Theodore Street provides dual left-turn lanes, two through lanes, and an exclusive right-turn lane on both approaches. Larkin Avenue is under the jurisdiction of IDOT south of Plainfield Road and the Will County Division of Transportation north of Plainfield Road. Larkin Avenue is designated as an SRA, carries an AADT volume of 24,800 vehicles (IDOT 2023), and has a posted speed limit of 35 miles per hour.



LEGEND

- TRAVEL LANE
- TRAFFIC SIGNAL
- STOP SIGN
- SPEED LIMIT SIGN
- BUS STOP
- BUS STOP WITH SHELTER
- STANDARD CROSSWALK
- HIGH VISIBILITY CROSSWALK
- TWO-WAY LEFT TURN LANE

QUIKTRIP CONVENIENCE STORE
CREST HILL, ILLINOIS

EXISTING ROADWAY CHARACTERISTICS

KLOA
Kenig,Lindgren,O'Hara,Aboona,Inc.

Job No: 24-200 Figure: 3

Knapp Drive is a north-south local roadway that extends north from Theodore Street and provides one lane in each direction. At its unsignalized intersection with Theodore Street, Knapp Drive provides a shared left-turn/right-turn lane on the southbound approach and is under stop sign control. Knapp Drive is under the jurisdiction of the City of Crest Hill and has a posted speed limit of 25 miles per hour.

Willow Circle Drive is a north-south local roadway that extends north from Knapp Drive and provides one lane in each direction. At its unsignalized intersection with Knapp Drive, Willow Circle Drive is aligned opposite a site access drive, provides a shared left-turn/through/right-turn lane on the southbound approach, and is under stop sign control. Knapp Drive is under the jurisdiction of the City of Crest Hill and has a posted speed limit of 25 miles per hour.

Traffic Signal Interconnect

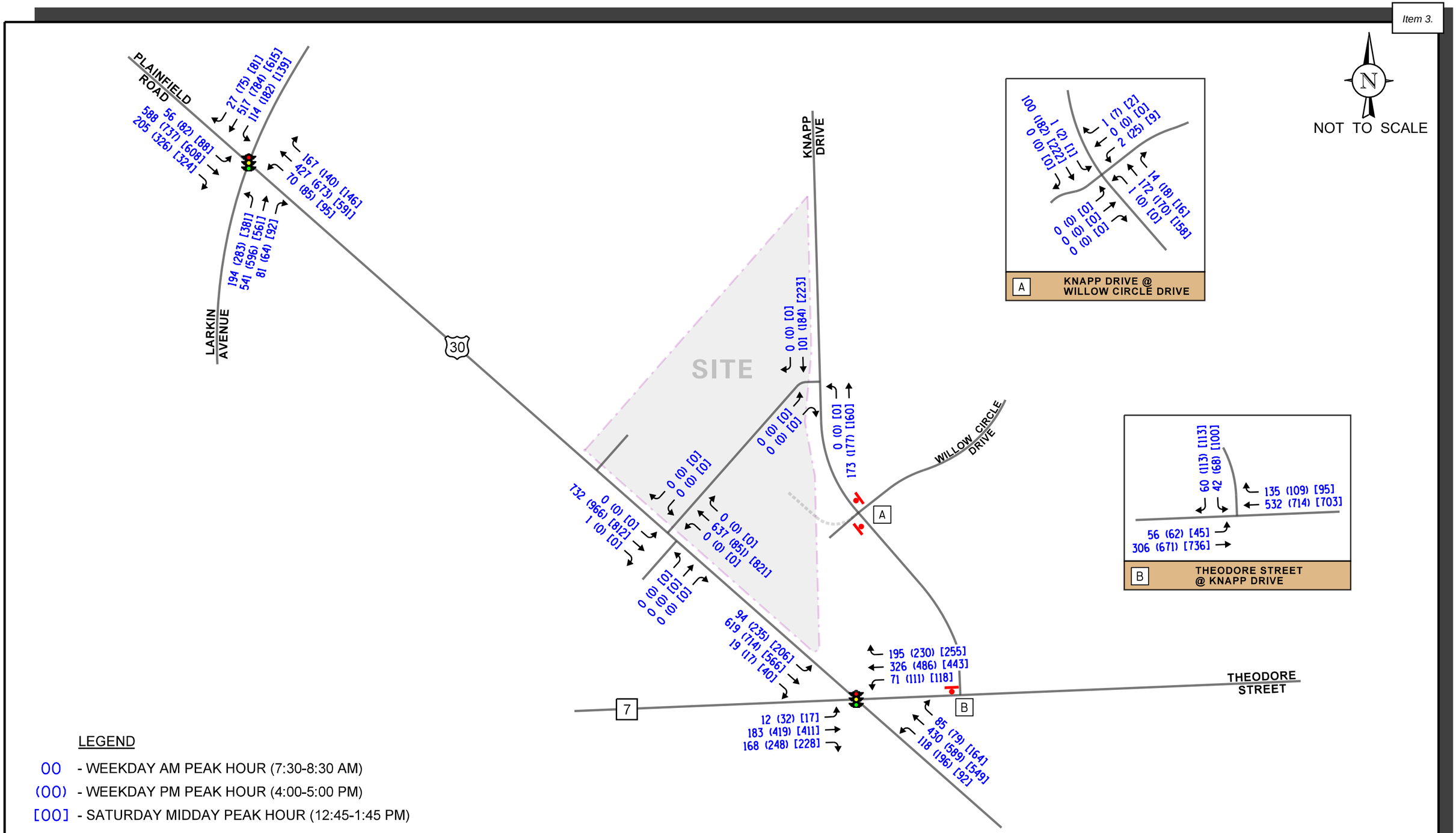
The signalized intersections of Plainfield Road with Larkin Avenue and Theodore Street are part of a six-intersection interconnect system that extends along Plainfield Road from Larkin Avenue in the west and to Arbor Lane in the east and along Larkin Avenue from the North Ridge Plaza entrance in the south to Plainfield Road in the north. The interconnect system is maintained by IDOT.

Existing Traffic Volumes

In order to determine current traffic conditions within the study area, KLOA, Inc. conducted peak period traffic counts at the following intersections:

- Plainfield Road Theodore Street
- Plainfield Road with Larkin Avenue
- Plainfield Road with the existing site access drive
- Theodore Street with Knapp Drive
- Knapp Drive with Willow Circle Drive and the existing site access drive

The traffic counts were conducted on Thursday, September 5, 2024 during the weekday morning (7:00 A.M. to 9:00 A.M.) and weekday evening (4:00 P.M. to 6:00 P.M.) peak periods and on Saturday, September 7, 2024 during the Saturday midday (12:00 P.M. to 2:00 P.M.) peak period. The peak hours of traffic occurred from 7:30 A.M. to 8:30 A.M. during the weekday morning peak hour, from 4:00 P.M. to 5:00 P.M. during the weekday evening peak hour, and from 12:45 P.M. to 1:45 P.M. during the Saturday midday peak hour. The existing peak hour traffic volumes are illustrated in **Figure 4.**



LEGEND

00 - WEEKDAY AM PEAK HOUR (7:30-8:30 AM)

(00) - WEEKDAY PM PEAK HOUR (4:00-5:00 PM)

[00] - SATURDAY MIDDAY PEAK HOUR (12:45-1:45 PM)

QUIKTRIP CONVENIENCE STORE
CREST HILL, ILLINOIS

EXISTING TRAFFIC VOLUMES

KLOA
Kenig,Lindgren,O'Hara,Aboona,Inc.

Job No: 24-200 Figure: 4

Crash Analysis

KLOA, Inc. obtained crash data[1] from IDOT for the most recent available five years (2019 to 2023) for the study area intersections. A review of the crash data revealed only one crash was reported at the intersection of Knapp Drive with Willow Circle Drive during the review period. Further, no fatalities were reported at any of the study area intersections during the review period. The crash data incidents are summarized by year and crash type in **Tables 1** through **3.**

Table 1
PLAINFIELD ROAD WITH THEODORE STREET – CRASH SUMMARY

Year	Type of Crash Frequency							
	Angle	Head On	Object	Rear End	Sideswipe	Turning	Other	Total
2019	0	0	1	7	1	1	0	10
2020	0	2	0	6	1	6	0	15
2021	1	0	0	2	0	1	0	4
2022	1	0	0	5	1	6	1	14
2023	0	0	0	6	1	4	0	11
Total	**2**	**2**	**1**	**26**	**4**	**18**	**1**	**54**
Average	**<1.0**	**<1.0**	**<1.0**	**5.2**	**<1.0**	**3.6**	**<1.0**	**10.8**

Table 2
PLAINFIELD ROAD WITH LARKIN AVENUE – CRASH SUMMARY

Year	Type of Crash Frequency							
	Angle	Head On	Object	Rear End	Sideswipe	Turning	Other	Total
2019	1	0	0	12	1	17	0	31
2020	3	0	0	9	1	18	0	31
2021	0	0	0	8	0	11	0	19
2022	3	0	0	4	4	4	0	15
2023	3	0	0	8	1	5	0	17
Total	**10**	**0**	**0**	**41**	**7**	**55**	**0**	**113**
Average	**2.0**	**--**	**--**	**8.2**	**1.4**	**11.0**	**--**	**22.6**

[1] IDOT DISCLAIMER: The motor vehicle crash data referenced herein was provided by the Illinois Department of Transportation. Any conclusions drawn from analysis of the aforementioned data are the sole responsibility of the data recipient(s).

Table 3
THEODORE STREET WITH KNAPP DRIVE – CRASH SUMMARY

Year	Type of Crash Frequency							
	Angle	Head On	Object	Rear End	Sideswipe	Turning	Other	Total
2019	0	0	0	1	0	4	0	5
2020	0	0	0	1	2	4	0	7
2021	1	0	0	2	2	4	0	9
2022	0	0	1	0	1	6	0	8
2023	0	0	0	1	0	1	0	2
Total	**1**	**0**	**1**	**5**	**5**	**19**	**0**	**31**
Average	**<1.0**	**--**	**<1.0**	**1.0**	**1.0**	**3.8**	**--**	**6.2**

3. Traffic Characteristics of the Proposed Development

In order to properly evaluate future traffic conditions in the surrounding area, it was necessary to determine the traffic characteristics of the proposed development, including the directional distribution and volumes of traffic that it will generate.

Proposed Development Plan

As proposed, the site is proposed to be developed with a QuikTrip Convenience Store that is to contain the following:

- Sixteen (16) passenger vehicle fueling positions
- An approximately 5,312 square-foot convenience store

In addition, the north parcel of the site will be developed in the future with a retail use. For the purposes of this study, it was assumed that the parcel will contain an approximately 3,000 square-foot fast-food restaurant with a drive-through lane. It should be noted that a fast-food restaurant typically generates a higher volume of traffic than other retail uses that could occupy this site, and, as such, provides for a conservative analysis. A copy of the proposed site plan is included in the Appendix.

Site Access

Access to the development site will be provided via the following two access drives:

- A full movement access drive on Plainfield Road located approximately 665 feet west of Theodore Street.
    - The access drive will provide one inbound lane and one outbound lane.
    - Outbound movements should be placed under stop sign control.
    - Inbound left-turn movements can be accommodated within the existing two-way left-turn lane median on Plainfield Road.
    - A continuous right-turn lane will be provided on Plainfield Road serving this access drive and the proposed right-in/right-out access drive.
    - This access drive will be part of a permanent access easement between the south parcel (convenience store site) and the north parcel (future commercial use).
    - The access drive is located as far west as practically possible within the site area.
- A right-in/right-out access drive on Plainfield Road located approximately 465 feet west of Theodore Street.
    - The access drive will provide one inbound lane and one outbound lane
    - Left-turn movements will be restricted via striping, signage, and channelization.
    - Outbound movements should be placed under stop sign control.
    - A continuous right-turn lane will be provided on Plainfield Road serving this access drive and the proposed right-in/right-out access drive.

- A full movement access drive on Knapp Drive located approximately 440 feet north of Theodore Street aligned opposite Willow Circle Drive.
    - The access drive will continue to provide one inbound lane and two outbound lanes striped for a shared left-turn/through lane and an exclusive right-turn lane.
    - Outbound movements will continue to be under stop sign control.

It should be noted that the proposed access system will replace the existing access system serving the site which consists of two full movement access drives on Plainfield Road and two full movement access drives on Knapp Drive.

Directional Distribution

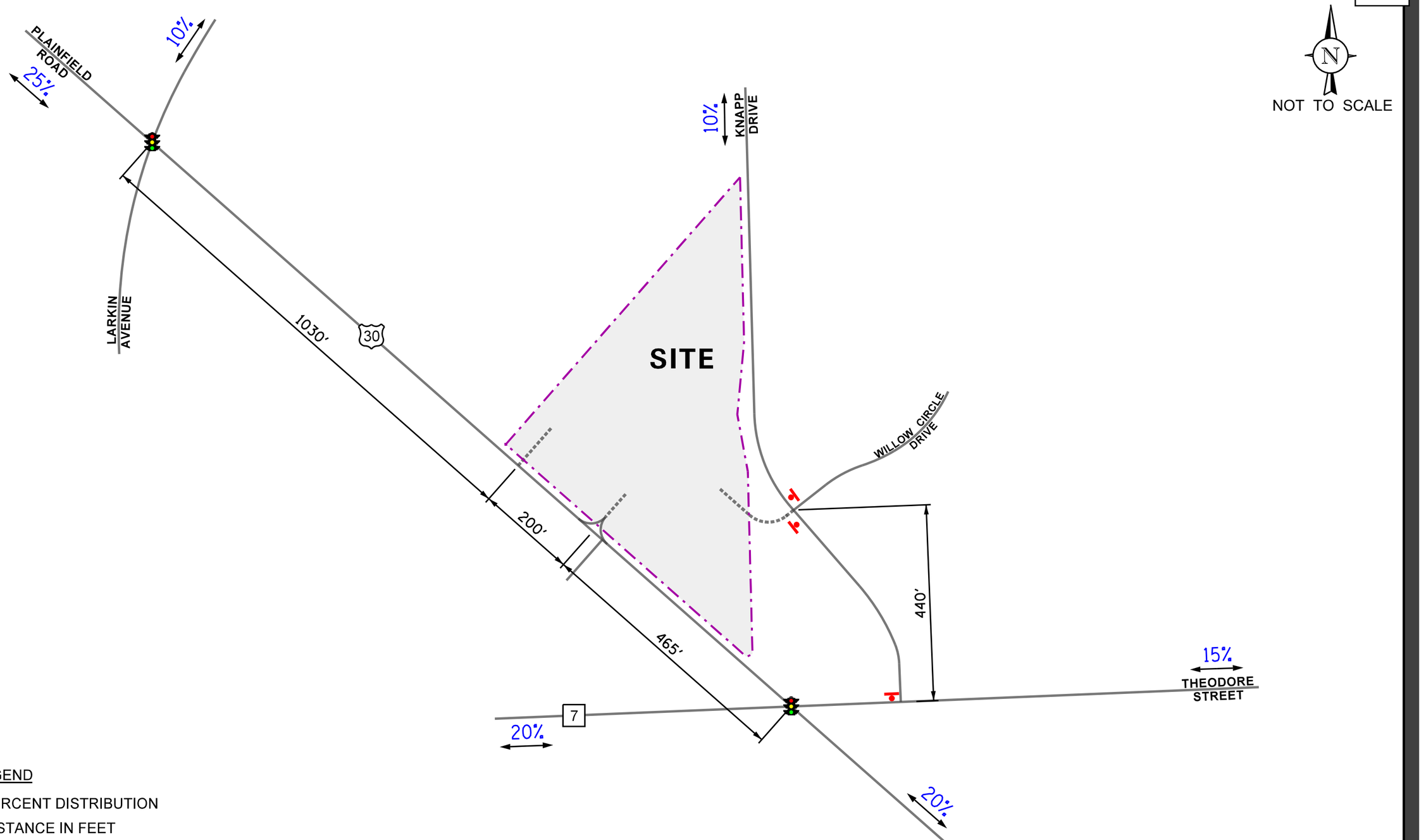
The directional distribution of future site-generated trips on the roadway system is a function of several variables, including the operational characteristics of the roadway system and the ease with which drivers can travel over various sections of the roadway system. This is particularly true for pass-by traffic. The directions from which patrons and employees of the proposed development will approach and depart the site are illustrated in **Figure 5.** Figure 5 also shows the distances between the existing and proposed access intersections.

Peak Hour Traffic Volumes

The number of peak hour trips estimated to be generated by the proposed development was based on vehicle trip generation rates contained in *Trip Generation Manual*, 11th Edition, published by the Institute of Transportation Engineers (ITE). The "Convenience Store/Gas Station" (Land-Use Code 945) rate was used for the passenger vehicle fueling positions and convenience store and the "Fast-Food Restaurant with Drive-Through Window" (Land-Use Code 934) rate was used for the restaurant.

It is important to note that surveys conducted by ITE have shown that approximately 60 percent of trips made to gas stations, fuel centers, and convenience stores are diverted from the existing traffic on the roadway system as well as approximately 50 percent of trips made to fast-food restaurants with drive-throughs. This is particularly true during the weekday morning and weekday evening peak hours when traffic is diverted from the home-to-work and work-to-home trips. As such, the number of new trips to be generated by the development were reduced to account for pass-by traffic.

Table 4 summarizes the trips projected to be generated by the proposed development during the peak hours.



LEGEND

00% - PERCENT DISTRIBUTION

00' - DISTANCE IN FEET

QUIKTRIP CONVENIENCE STORE
CREST HILL, ILLINOIS

DIRECTIONAL DISTRIBUTION

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Job No: 24-200 Figure: 5

Table 4
ESTIMATED PEAK HOUR VEHICLE TRIP GENERATION

ITE Land Use Code	Type/Size	Weekday Morning Peak Hour			Weekday Evening Peak Hour			Saturday Midday Peak Hour		
		In	Out	Total	In	Out	Total	In	Out	Total
945	Convenience Store (16 positions, 5,312 s.f. Store)	216	217	433	182	182	364	167	160	327
Pass-By Reduction (60%)		-130	-130	-260	-109	-109	-218	-98	-98	-196
New Convenience Store Trips		**86**	**87**	**173**	**73**	**73**	**146**	**69**	**62**	**131**
934	Fast-Food Restaurant (3,000 s.f)	68	66	134	52	47	99	85	81	166
Pass-By Reduction (50%)		-34	-34	-68	-25	-25	-50	-42	-42	-84
New Restaurant Trips		**34**	**32**	**66**	**27**	**22**	**49**	**43**	**39**	**82**
Development New Trips		120	119	239	100	95	195	112	101	213
Development Pass-by Trips		164	164	328	134	134	268	140	140	280
Total Development Trips		**284**	**283**	**567**	**234**	**229**	**463**	**252**	**241**	**493**

4. Projected Traffic Conditions

The total projected traffic volumes include the existing traffic volumes, increase in background traffic due to growth, and the traffic estimated to be generated by the proposed development.

Site Traffic Assignment

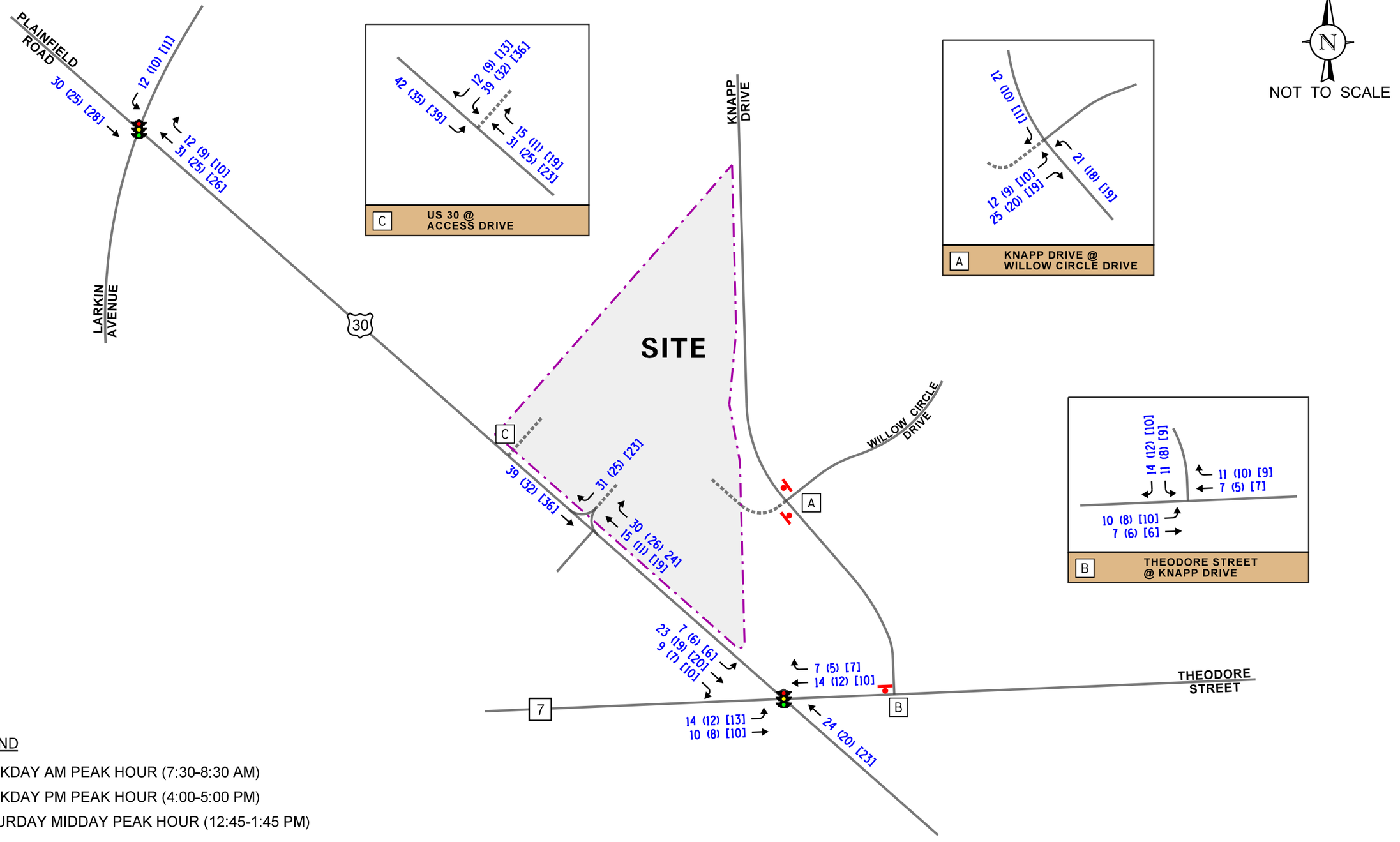
The estimated weekday morning and weekday evening traffic volumes that will be generated by the proposed development were assigned to the roadway system in accordance with the previously described directional distribution (Figure 5). **Figure 6** illustrates the traffic assignment of new vehicle trips and the pass-by traffic assignment is illustrated in **Figure 7**. To provide a conservative analysis of the site access drives, no traffic was assumed to use the cross access connection.

Background (No-Build) Traffic Volumes

Under no-build and total projected conditions, the existing traffic volumes (Figure 4) were increased by a regional growth factor to account for the increase in existing traffic related to regional growth in the area (i.e., not attributable to any particular planned development). Based on AADT projections provided by the Chicago Metropolitan Agency for Planning (CMAP), the area roadways are projected to experience a compounded growth rate of approximately 0.6 percent per year. As such, a total background growth of 3.7 was added to project Year 2030 conditions. A copy of the CMAP projections letter is included in the Appendix. The Year 2030 no-build traffic volumes are illustrated in **Figure 8.**

Total Projected Traffic Volumes

The total projected traffic volumes include the existing Year 2030 volumes (Figure 8) and the volume of traffic expected to be generated by the proposed development (Figures 6 and 7). The Year 2030 total projected traffic volumes are illustrated in **Figure 9.**



LEGEND

00 - WEEKDAY AM PEAK HOUR (7:30-8:30 AM)

(00) - WEEKDAY PM PEAK HOUR (4:00-5:00 PM)

[00] - SATURDAY MIDDAY PEAK HOUR (12:45-1:45 PM)

QUIKTRIP CONVENIENCE STORE
CREST HILL, ILLINOIS

NEW SITE TRAFFIC VOLUMES

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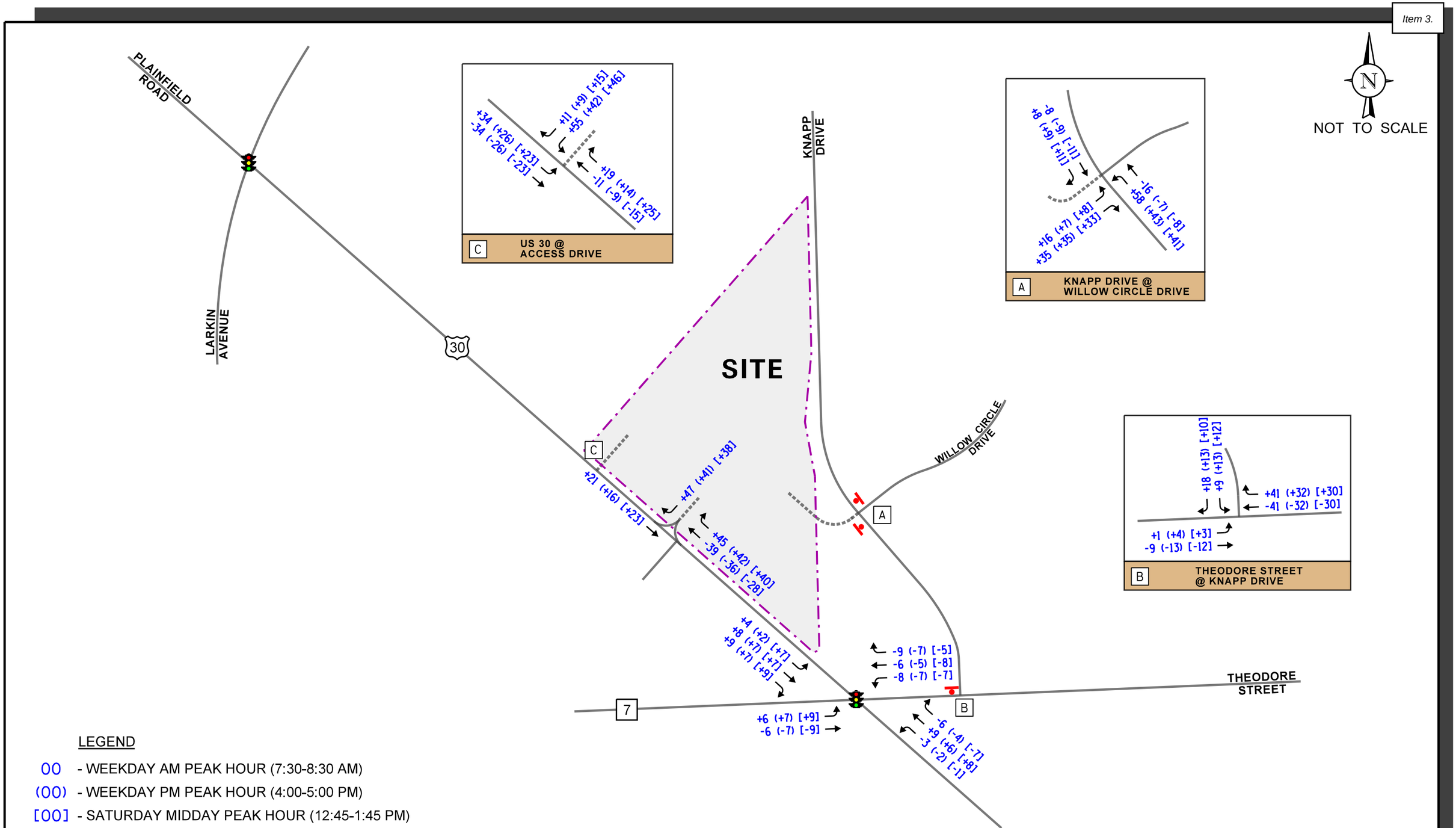
Job No: 24-200 Figure: 6



LEGEND

00 - WEEKDAY AM PEAK HOUR (7:30-8:30 AM)

(00) - WEEKDAY PM PEAK HOUR (4:00-5:00 PM)

[00] - SATURDAY MIDDAY PEAK HOUR (12:45-1:45 PM)

QUIKTRIP CONVENIENCE STORE
CREST HILL, ILLINOIS

PASS-BY TRAFFIC VOLUMES

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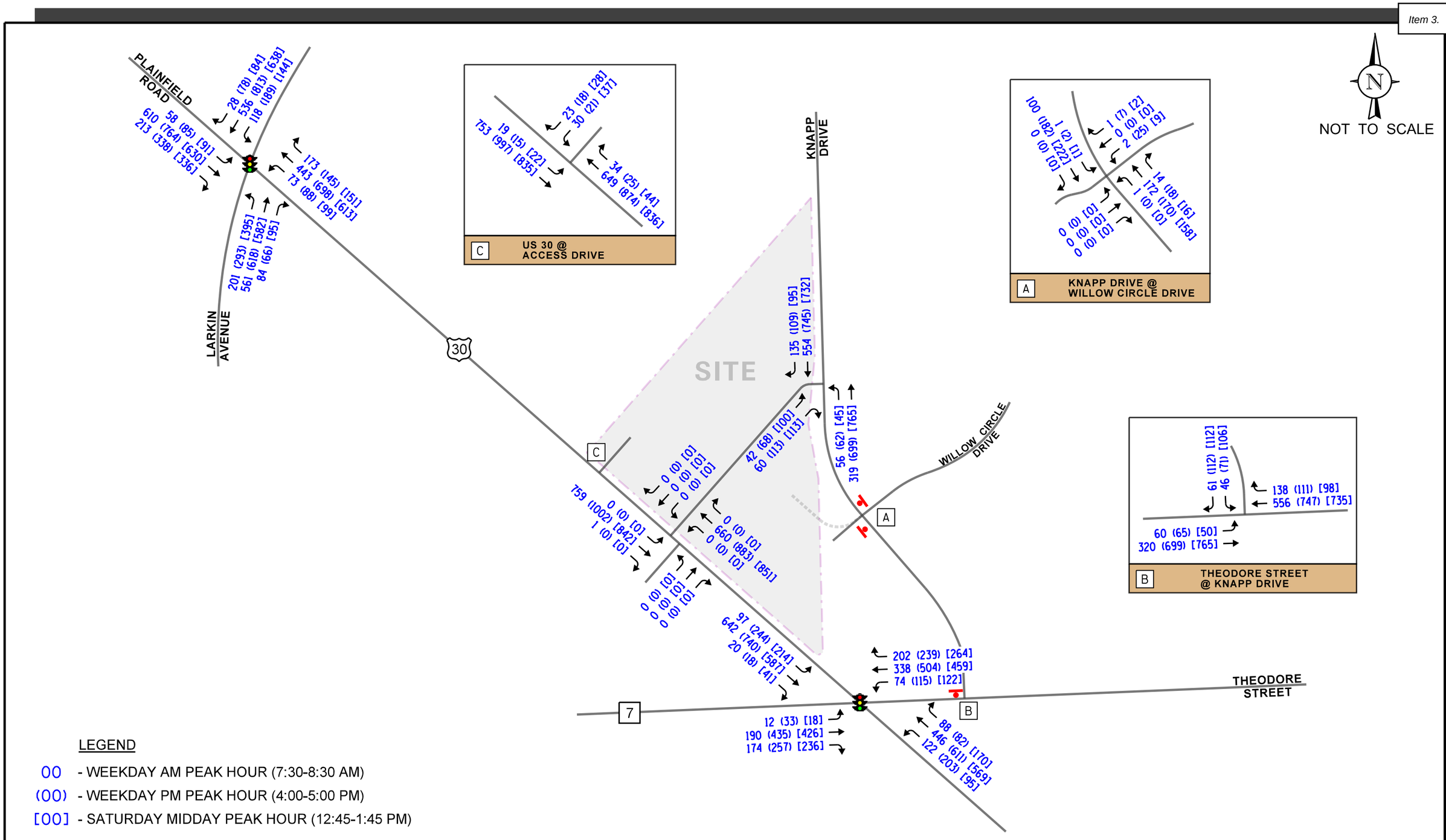
Job No: 24-200 Figure: 7



LEGEND

00 - WEEKDAY AM PEAK HOUR (7:30-8:30 AM)

(00) - WEEKDAY PM PEAK HOUR (4:00-5:00 PM)

[00] - SATURDAY MIDDAY PEAK HOUR (12:45-1:45 PM)

QUIKTRIP CONVENIENCE STORE
CREST HILL, ILLINOIS

YEAR 2030 NO-BUILD TRAFFIC VOLUMES

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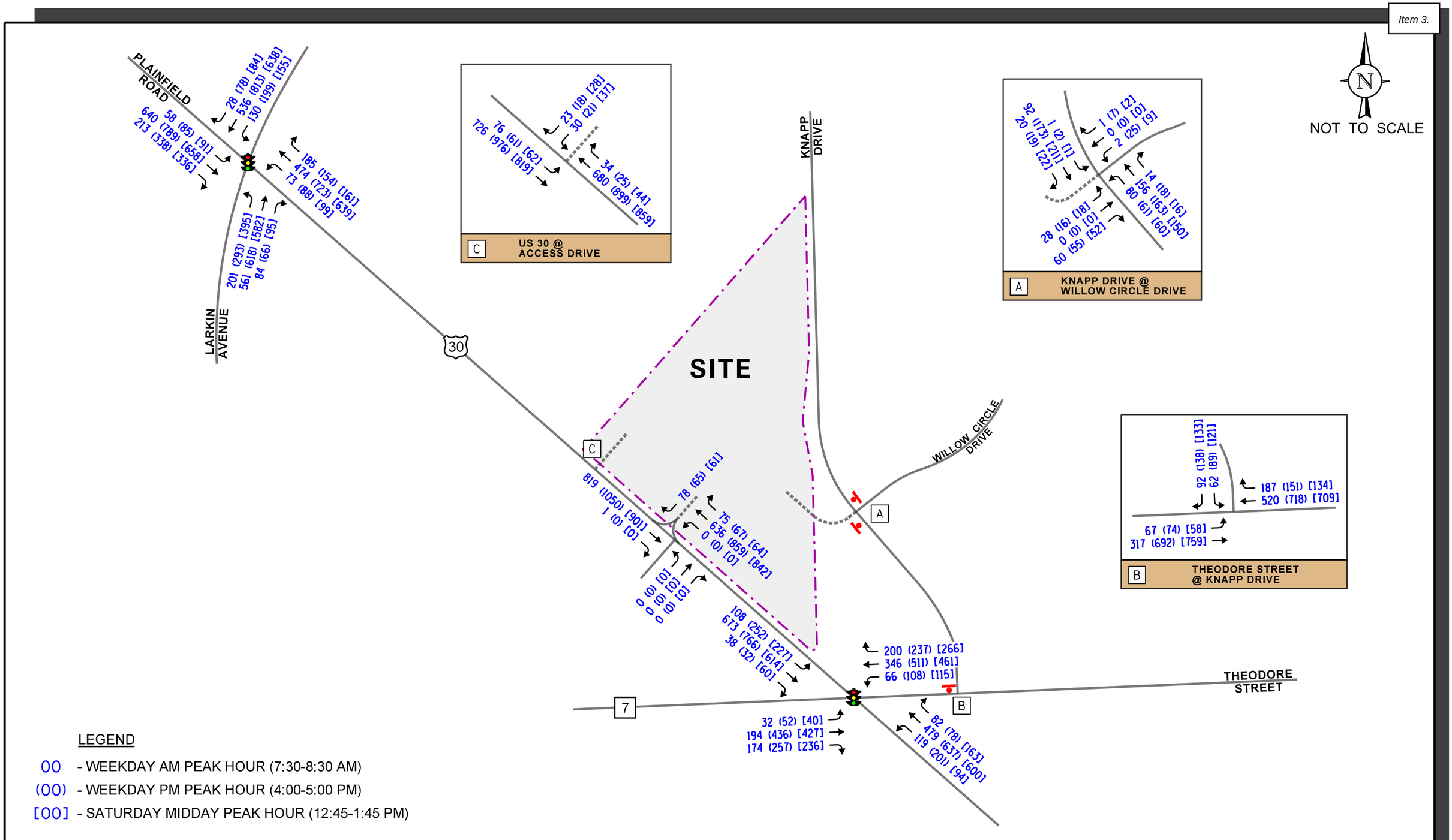
Job No: 24-200 Figure: 8



LEGEND

00 - WEEKDAY AM PEAK HOUR (7:30-8:30 AM)

(00) - WEEKDAY PM PEAK HOUR (4:00-5:00 PM)

[00] - SATURDAY MIDDAY PEAK HOUR (12:45-1:45 PM)

QUIKTRIP CONVENIENCE STORE
CREST HILL, ILLINOIS

YEAR 2030 TOTAL TRAFFIC VOLUMES

KLOA
Kenig,Lindgren,O'Hara,Aboona,Inc.

Job No: 24-200 Figure: 9

5. Traffic Analysis and Recommendations

The following provides an evaluation conducted for the weekday morning, weekday evening, and Saturday midday peak hours. The analysis includes conducting capacity analyses to determine how well the roadway system and access drives are projected to operate and whether any roadway improvements or modifications are required.

Traffic Analyses

Roadway and adjacent or nearby intersection analyses were performed for the weekday morning, weekday evening, and Saturday midday peak hours for the existing, no-build, and total projected traffic volumes.

The traffic analyses were performed using the methodologies outlined in the Transportation Research Board's *Highway Capacity Manual (HCM),* 6th Edition and analyzed using Synchro/SimTraffic 11 software. The analysis for the traffic signal-controlled intersections were performed using actual cycle lengths, phasings, and offsets to determine the average overall vehicle delay and levels of service.

The analyses for the unsignalized intersections determine the average control delay to vehicles at an intersection. Control delay is the elapsed time from a vehicle joining the queue at a stop sign (includes the time required to decelerate to a stop) until its departure from the stop sign and resumption of free flow speed. The methodology analyzes each intersection approach controlled by a stop sign and considers traffic volumes on all approaches and lane characteristics.

The ability of an intersection to accommodate traffic flow is expressed in terms of level of service, which is assigned a letter from A to F based on the average control delay experienced by vehicles passing through the intersection. The *Highway Capacity Manual* definitions for levels of service and the corresponding control delay for signalized intersections and unsignalized intersections are included in the Appendix of this report.

Summaries of the traffic analysis results showing the level of service and overall intersection delay (measured in seconds) for the existing, no-build, total projected conditions are presented in **Tables 5** through **9.** A discussion of each intersection follows. Summary sheets for the capacity analyses are included in the Appendix.

Table 5
CAPACITY ANALYSIS RESULTS – PLAINFIELD ROAD WITH THEODORE STREET– SIGNALIZED

	Peak Hour	Eastbound (Theodore Street)		Westbound (Theodore Street)		Southeast-bound (Plainfield Road)		Northwest-bound (Plainfield Road)		Overall
		L	T/R	L	T/R	L	T/R	L	T/R	
Existing Conditions	Weekday Morning	B 16.1	C 27.4	B 17.4	C 24.8	A 6.5	C 22.3	C 22.0	C 31.9	C 24.9
		C – 27.0		C - 23.9		C – 20.3		C - 30.1		
	Weekday Evening	B 19.3	C 34.8	C 22.5	C 31.2	D 41.8	E 58.1	C 31.9	D 46.1	D 41.1
		C - 34.1		C - 30.1		D - 42.7		D - 42.8		
	Saturday Midday	B 18.4	C 35	C 22.3	C 29.1	C 16.5	C 21.9	B 20	D 41.9	C 30.4
		C - 34.5		C - 28.1		C - 31.3		D - 39.4		
No-Build Conditions	Weekday Morning	B 15.9	C 27.5	B 17.4	C 25.0	A 6.8	C 22.3	C 22.9	C 32.3	C 25.1
		C - 27.2		C - 24.1		C – 20.3		C - 30.5		
	Weekday Evening	B 19.7	D 36.3	C 23.7	C 32.4	D 42.1	E 58.4	C 32.3	D 46.1	D 41.8
		D - 35.5		C - 31.2		D – 54.4		D - 43		
	Saturday Midday	B 18.4	D 35.4	C 22.6	C 29.5	C 18.1	C 22.0	C 20.3	D 43.2	C 31.0
		C - 34.9		C - 28.5		C – 21.0		D - 40.6		
Projected Conditions	Weekday Morning	B 16.6	C 27.8	B 17.4	C 27.6	B 10.3	C 24.6	C 23.2	C 32.3	C 26.5
		C - 26.9		C – 26.5		C – 22.7		C - 30.7		
	Weekday Evening	C 20.3	D 36.1	C 23.1	C 34.6	D 43.4	E 58.6	D 35.2	D 47.6	D 43.0
		D – 35.0		C – 33.2		D – 55.0		D - 44.9		
	Saturday Midday	B 19.3	D 35.6	C 22.5	C 33.8	B 20.1	C 20.6	C 20.6	D 44.3	C 32.0
		C - 34.7		C – 32.3		C – 20.4		D – 41.7		

Letter denotes Level of Service L – Left Turn R – Right Turn
Delay is measured in seconds. T – Through

Table 6
CAPACITY ANALYSIS RESULTS – PLAINFIELD ROAD WITH LARKIN AVENUE– SIGNALIZED

	Peak Hour	Northbound (Larkin Avenue)			Southbound (Larkin Avenue)			Southeast-bound (Plainfield Road)			Northwest-bound (Plainfield Road)			Overall
		L	T	R	L	T	R	L	T	R	L	T	R	
Existing Conditions	Weekday Morning	E 63.7	C 31.2	C 25.7	F 88.7	C 30.5	C 23.7	C 20.1	C 32.5	C 20.6	B 15.3	C 25.9	B 16.9	C 32.6
		D - 38.4			D - 40.3			C - 28.8			C – 22.5			
	Weekday Evening	E 61.1	C 31.5	C 25.3	F 119.1	D 37	C 28.8	C 29.5	D 45.4	C 26.0	C 24.0	C 26.5	B 14.8	D 39.0
		D - 40			D - 50.8			D - 38.8			C – 24.5			
	Saturday Midday	E 59.1	C 29.8	C 25.8	F 85.0	D 36.6	C 30.3	C 25.4	D 38.6	C 21.6	B 17.6	C 30.2	B 14.6	D 35.7
		D - 40.3			D - 44.1			C - 32.1			C – 26.0			
No-Build Conditions	Weekday Morning	E 65.0	C 31.1	C 25.6	F 91.3	C 30.4	C 23.5	C 20.3	C 33.4	C 21.1	B 15.6	C 26.3	B 17.0	C 33.0
		D - 38.6			D - 40.6			C - 29.6			C – 22.8			
	Weekday Evening	E 61.1	C 30.9	C 25.1	F 137.3	D 37.1	C 28.8	C 30.7	D 47.5	C 26.7	C 29.3	C 28.4	B 15.6	D 40.6
		D - 39.5			D - 54.1			D - 40.3			C – 26.5			
	Saturday Midday	E 60.1	C 29.7	C 25.7	F 87.6	D 36.6	C 30.2	C 26.2	D 39.7	C 22.2	C 18.2	D 30.7	C 14.8	D 36.2
		D - 40.5			D - 44.5			C – 33.0			C – 26.5			
Projected Conditions	Weekday Morning	E 65.0	C 31.1	C 25.6	F 98.2	C 30.1	C 23.5	C 20.5	C 34.2	C 21.2	B 17.5	C 28.8	B 17.4	C 33.9
		D - 38.6			D – 42.6			C – 30.3			C - 24.8			
	Weekday Evening	E 61.1	C 30.9	C 25.1	F 153.1	D 37.1	C 28.8	C 31.2	D 48.4	C 26.7	C 26.7	C 31.9	B 16.4	D 42.4
		D - 39.5			E – 57.7			D – 41.1			C – 29.5			
	Saturday Midday	E 60.1	C 29.8	C 25.7	F 94.7	D 36.6	C 30.2	C 26.5	D 40.3	C 22.2	C 21.9	C 34.6	B 16.0	D 37.5
		D - 40.6			D – 46.3			C - 33.5			C – 29.9			

Letter denotes Level of Service L – Left Turn R – Right Turn
Delay is measured in seconds. T – Through

Table 7
CAPACITY ANALYSIS RESULTS – UNSIGNALIZED – EXISTING CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour		Saturday Midday Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Theodore Street with Knapp Drive						
• Eastbound Left Turn	A	9.3	B	10.0	A	9.7
• Southbound Approach	B	14.4	C	23.3	D	26.8
Knapp Drive with Willow Circle Drive and the Existing Site Access Drive						
• Eastbound Approach	--	--	--	--	--	--
• Westbound Approach	B	10.3	B	11.2	B	11.5
• Northbound Left Turn	A	7.4	--	--	--	--
• Southbound Left Turn	A	7.6	A	7.6	A	7.6

LOS = Level of Service
Delay is measured in seconds.
1 – All-way stop control
2 – Two-way stop control

Table 8
CAPACITY ANALYSIS RESULTS – UNSIGNALIZED – NO BUILD CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour		Saturday Midday Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Theodore Street with Knapp Drive						
• Eastbound Left Turn	A	9.3	B	10.2	A	9.9
• Southbound Approach	B	14.7	C	24.8	D	28.7
Knapp Drive with Willow Circle Drive and the Existing Site Access Drive						
• Eastbound Approach	--	--	--	--	--	--
• Westbound Approach	B	10.3	B	11.2	B	11.5
• Northbound Left Turn	A	7.4	--	--	--	--
• Southbound Left Turn	A	7.6	A	7.6	A	7.6

LOS = Level of Service
Delay is measured in seconds.
1 – All-way stop control
2 – Two-way stop control

Table 9
CAPACITY ANALYSIS RESULTS – UNSIGNALIZED – NO BUILD CONDITIONS

Intersection	Weekday Morning Peak Hour		Weekday Evening Peak Hour		Saturday Midday Peak Hour	
	LOS	Delay	LOS	Delay	LOS	Delay
Theodore Street with Knapp Drive						
• Eastbound Left Turn	A	9.5	B	10.4	B	10.0
• Southbound Approach	C	16.6	D	34.2	E	39.6
Plainfield Road with the West Site Access Drive (Full Movement)						
• Southbound Approach	A	8.2	A	8.5	A	8.4
• Eastbound Left-Turn	C	15.0	C	18.0	C	22.7
Plainfield Road with the East Access Drive (Right-in/Right-out)						
• Southbound Approach	B	11.4	B	12.5	B	12.3
Knapp Drive with Willow Circle Drive and the South Site Access Drive						
• Eastbound Approach	B	10.5	B	10.5	B	11.0
• Westbound Approach	B	12.4	B	13.6	B	14.0
• Northbound Left Turn	A	7.6	A	9.6	A	7.9
• Southbound Left Turn	A	7.6	A	7.7	A	7.6

LOS = Level of Service
Delay is measured in seconds.
1 – All-way stop control
2 – Two-way stop control

Discussion and Recommendations

The following summarizes how the intersections are projected to operate and identifies any roadway and traffic control improvements necessary to accommodate the site-generated traffic.

Plainfield Road with Theodore Street

The results of the capacity analyses indicate that the intersection currently operates at an overall Level of Service (LOS) C during the weekday morning and Saturday midday peak hours and LOS D during the weekday evening peak hour. Further, all movements operate at LOS E or better during all three peak hours. Under Year 2030 no-build conditions, this intersection is projected to continue to operate at an overall LOS C during the weekday morning and Saturday midday peak hours and LOS D during the weekday evening peak hour.

Under Year 2030 total projected conditions, this intersection is projected to continue to operate at the same LOS during all three peak hours with increases in delay of less than two seconds over no-build conditions. Further, all movements are projected to continue to operate at LOS E or better.

Overall, the proposed development is projected to increase the volume of traffic traversing this intersection by approximately four percent or less. As such, the intersection has sufficient reserve capacity to accommodate the traffic to be generated by the development and no roadway improvements or traffic control modifications are required.

Plainfield Road with Larkin Avenue

The results of the capacity analyses indicate that the intersection currently operates at an overall LOS C during the weekday morning peak hour and LOS D during the weekday evening and Saturday midday peak hours. Further, all movements operate at LOS D or better during all three peak hours with the exception of the northbound and southbound left-turn movements. This is the result of the long cycle length (110 to 130 seconds) and the protected only operations of these movements. Under Year 2030 no-build conditions, this intersection is projected to continue to operate at an overall LOS C during the weekday morning peak hour and LOS D during the weekday evening and Saturday midday peak hour.

Under Year 2030 total projected conditions, this intersection is projected to continue to operate at the same LOS during all three peak hours with increases in delay of less than two seconds over no-build conditions.

Overall, the proposed development is projected to increase the volume of traffic traversing this intersection by less than three percent. As such, the intersection has sufficient reserve capacity to accommodate the traffic to be generated by the development and no roadway improvements or traffic control modifications are required.

Theodore Street with Knapp Drive

The results of the capacity analyses indicate that turning movements from Knapp Drive operate at LOS B during the weekday morning peak hour, LOS C during the weekday evening peak hour, and LOS D during the Saturday midday peak hour. Under Year 2030 no-build conditions, turning movements from Knapp Drive are projected to operate at LOS C during the weekday morning peak hour and LOS D during the weekday evening and Saturday midday peak hours.

Under Year 2030 total projected conditions turning movements from Knapp Drive are projected to operate at LOS C during the weekday morning peak hour, LOS D during the weekday evening peak hour, and LOS E during the Saturday midday peak hour. The following should be noted:

- Westbound queues from the signalized intersection of Plainfield Road with Theodore Street extend to this intersection and are projected to continue to do so.
    - These queues were observed to clear this intersection with each green phase
    - SimTraffic Simulation of projected conditions indicate that queues will continue to clear the intersection with each green phase and the intersection will be blocked approximately 15 percent of the time or less.
    - This intersection is located between two signalized intersections on a coordinated system. These signals will create gaps in the traffic stream allowing vehicles to turn.
- Southbound vehicles will continue to be able to turn left onto Theodore Street from Knapp Drive
    - This movement is projected to operate at LOS E or better during all three peak hours with a volume to capacity (v/c) ratio of less than one.
    - As discussed above, gaps in the Theodore Street traffic will be available for vehicles to exit.
    - A two-way left-turn lane is provided on Theodore Street which outbound vehicles can utilize to perform a two-part left-turn.
- Eastbound vehicles will continue to be able to turn left onto Knapp Drive from Theodore Street.
    - This movement is projected to operate at LOS B or better during all three peak hours with a volume to capacity (v/c) ratio of less than one.
    - These vehicles can utilize the existing median while waiting to turn. Further, Theodore Street provides two eastbound lanes allowing eastbound traffic to bypass vehicles waiting to turn.

- Westbound left-turn 95th percentile queues at the intersection of Theodore Street and with Plainfield Road are not projected to exceed 100 feet and can be accommodated within the existing 125-foot turn lane and, as such, will not block this movement utilizing the median.

- The 95th percentile queue for vehicles waiting to turn onto Theodore Street is only one to two vehicles.

- The proposed development is projected to increase this volume by less than 10 vehicles during the peak hours. The primary entrance for the proposed development is on Plainfield Road and it is anticipated that a majority of traffic approaching from the north, south, or west will use this entrance.

As such, the intersection has sufficient reserve capacity to accommodate the traffic to be generated by the development and no roadway improvements or traffic control modifications are required.

Plainfield Street with the West Site Access Drive (Full Movement)

The results of the capacity analyses indicate that under Year 2030 total projected conditions turning movements from the access drive are projected to operate at LOS C during the weekday morning, weekday evening, and Saturday midday peak hours. The following should be noted:

- Outbound left-turning vehicles can utilize the two-way left-turn lane to perform a two-part left-turn turn maneuver.

- This intersection is located between two signalized intersections on a coordinated system. These signals will create gaps in the traffic stream allowing vehicles to turn. The location of this intersection is a key factor in its acceptable operation.

- Southeast-bound 95th percentile queues from the signalized intersection of Plainfield Road with Theodore Street are not projected to extend to this intersection.

- Vehicles turning into the site from Plainfield Road are able to queue within the existing two-way left-turn median on Plainfield Road. Southbound left-turn vehicles at the intersection of Plainfield Road with Theodore Street are projected to be accommodated within the existing turn lane and will not block this movement.

- All movements are projected to operate with a volume to capacity (v/c) ratio of less than one.

- SimTraffic Simulation of this intersection under projected conditions indicated the following:

    - Queues on Plainfield Road from the signalized intersections to the east and west will not block this access drive

- Outbound vehicles will experience some delay during peak periods but will generally be able to exit the site as the signals on Plainfield Road consistently create gaps in the traffic stream.

When the total projected traffic volumes are compared to the right-turn lane guidelines in Chapter 36 of IDOT's Bureau of Design and Environment (BDE) Manual, a right-turn lane on Plainfield Road will not be warranted serving this access drive.

As such, the intersection has sufficient reserve capacity to accommodate the traffic to be generated by the development and no roadway improvements or traffic control modifications are required.

Plainfield Street with the East Site Access Drive (Right-in/Right-out)

The results of the capacity analyses indicate that under Year 2030 total projected conditions turning movements from the access drive are projected to operate at LOS B during the weekday morning, weekday evening, and Saturday midday peak hours. The following should be noted:

- Southeast-bound queues from the signalized intersection of Plainfield Road with Theodore Street were observed to occasionally extend to this intersection during the weekday evening peak hour and are projected to continue to do so. However, these queues will not block right-turn movements and this access drive will be restricted to right-turn only movements.

- This intersection is located between two signalized intersections on a coordinated system. These signals will create gaps in the traffic stream allowing vehicles to turn.

- The restriction of this access drive will allow for future improvements by IDOT on Plainfield Road at its intersection with Theodore Street (such as southeast-bound dual left-turn lanes) to be provided without impacting this intersection.

As such, the intersection has sufficient reserve capacity to accommodate the traffic to be generated by the development and no roadway improvements or traffic control modifications are required.

Knapp Drive with Willow Circle Drive and the Site Access Drive

The results of the capacity analysis indicate that all critical movements at this intersection currently operates at LOS B or better during the weekday morning, weekday evening, and Saturday midday peak hours. Under no-build and total projected conditions, all critical movements are projected to continue to operate at LOS B or better during all three peak hours. As such, this intersection has sufficient reserve capacity to accommodate the traffic estimated to be generated by the proposed development and the access drive will adequately accommodate the traffic estimated to be generated by the proposed development.

6. Conclusion

Based on the preceding analyses and recommendations, the following conclusions have been made:

- The traffic projected to be generated by the proposed development will be reduced due to the volume of pass-by traffic.
- The signalized intersections of Plainfield Road with Theodore Street and Larkin Avenue have sufficient reserve capacity to accommodate site-generated traffic.
- The intersection of Theodore Street with Knapp Drive can accommodate site-generated traffic. Restriction of this intersection is not recommended.
- Access to the proposed development will be provided via a right-in/right-out access drive and a full movement access drive on Plainfield Road and a full movement access drive on Knapp Drive
    - Inbound left-turn movements at the full movement site access drive on Plainfield Road can be accommodated within the existing two-way left-turn median.
    - A continuous right-turn lane will be provided on Plainfield Road serving the site access drives.
    - The full movement access drive on Plainfield Road will be part of a permanent access easement between the south parcel (convenience store site) and the north parcel (future commercial use).
- The proposed access system will adequately accommodate the traffic estimated to be generated by the proposed development and will ensure that efficient and flexible access is provided.

Appendix

Traffic Count Summary Sheets
Site Plan
CMAP 2050 Projections Letter
ITE Trip Generation Sheets
Level of Service Criteria Capacity Analysis Summary Sheets

Traffic Count Summary Sheets

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 abowen@kloainc.com

Count Name: Knapp Drive with Willow Circle Drive TMC
Site Code:
Start Date: 09/05/2024
Page No: 1

Turning Movement Data

Start Time	Access Drive Eastbound						Willow Circle Drive Westbound						Knapp Street Northbound						Knapp Street Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:00 AM	0	0	0	0	0	0	0	1	0	1	1	2	0	0	21	0	0	21	0	1	14	0	0	15	38
7:15 AM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	28	1	0	29	0	1	12	0	0	13	43
7:30 AM	0	0	0	0	0	0	0	1	0	1	0	2	0	0	37	1	0	38	0	0	24	0	0	24	64
7:45 AM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	38	1	0	39	0	1	28	0	0	29	69
Hourly Total	0	0	0	0	0	0	0	4	0	2	1	6	0	0	124	3	0	127	0	3	78	0	0	81	214
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42	7	0	49	0	0	26	0	0	26	75
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	56	5	0	62	0	0	22	0	0	22	84
8:30 AM	0	0	0	0	0	0	1	1	0	0	0	2	0	0	38	5	0	43	1	1	31	0	0	33	78
8:45 AM	0	0	0	0	0	0	0	3	0	0	0	3	0	0	24	5	0	29	0	1	31	0	0	32	64
Hourly Total	0	0	0	0	0	0	1	4	0	0	0	5	1	0	160	22	0	183	1	2	110	0	0	113	301
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	0	0	0	0	0	0	6	0	1	0	7	0	0	41	2	0	43	0	0	55	0	0	55	105
4:15 PM	0	0	0	0	0	0	0	5	0	1	0	6	0	0	45	6	0	51	0	0	52	0	0	52	109
4:30 PM	0	0	0	0	0	0	0	7	0	1	0	8	0	0	40	6	0	46	0	1	44	0	0	45	99
4:45 PM	0	0	0	0	1	0	0	7	0	4	0	11	0	0	44	4	0	48	0	1	31	0	0	32	91
Hourly Total	0	0	0	0	1	0	0	25	0	7	0	32	0	0	170	18	0	188	0	2	182	0	0	184	404
5:00 PM	0	0	0	0	0	0	0	4	0	2	0	6	0	0	49	5	0	54	0	0	45	0	0	45	105
5:15 PM	0	0	0	1	0	1	0	8	0	1	0	9	0	1	47	7	0	55	0	0	40	0	0	40	105
5:30 PM	0	0	0	0	0	0	0	5	0	2	0	7	0	0	35	3	0	38	0	1	54	0	0	55	100
5:45 PM	0	0	0	0	0	0	0	7	0	3	1	10	0	1	38	3	0	42	0	0	47	0	0	47	99
Hourly Total	0	0	0	1	0	1	0	24	0	8	1	32	0	2	169	18	0	189	0	1	186	0	0	187	409
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 PM	0	0	0	0	0	0	0	3	0	3	0	6	0	0	31	1	0	32	0	0	41	0	0	41	79
12:15 PM	0	0	0	0	0	0	0	7	0	0	1	7	0	0	40	6	0	46	0	0	38	0	0	38	91
12:30 PM	0	0	0	0	0	0	0	2	0	0	1	2	0	0	39	3	0	42	0	0	48	0	0	48	92
12:45 PM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	42	3	0	45	0	0	45	0	0	45	91
Hourly Total	0	0	0	0	0	0	0	13	0	3	2	16	0	0	152	13	0	165	0	0	172	0	0	172	353
1:00 PM	0	0	0	0	0	0	0	6	0	0	0	6	0	0	36	3	0	39	0	1	70	0	0	71	116
1:15 PM	0	0	0	0	0	0	0	2	0	1	0	3	0	0	49	6	0	55	0	0	48	0	0	48	106
1:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	31	4	0	35	0	0	59	0	0	59	95
1:45 PM	0	0	0	0	0	0	0	3	0	0	0	3	0	0	28	7	0	35	0	0	53	0	0	53	91
Hourly Total	0	0	0	0	0	0	0	11	0	2	0	13	0	0	144	20	0	164	0	1	230	0	0	231	408
Grand Total	0	0	0	1	1	1	1	81	0	22	4	104	1	2	919	94	0	1016	1	9	958	0	0	968	2089
Approach %	0.0	0.0	0.0	100.0	-	-	1.0	77.9	0.0	21.2	-	-	0.1	0.2	90.5	9.3	-	-	0.1	0.9	99.0	0.0	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	3.9	0.0	1.1	-	5.0	0.0	0.1	44.0	4.5	-	48.6	0.0	0.4	45.9	0.0	-	46.3	

Lights	0	0	0	1	-	1	1	79	0	21	-	101	1	2	905	93	-	1001	1	9	948	0	-	958	1059
% Lights	-	-	-	100.0	-	100.0	100.0	97.5	-	95.5	-	97.1	100.0	100.0	98.5	98.9	-	98.5	100.0	100.0	99.0	-	-	99.0	98.7
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	7	0	-	7	0	0	3	0	-	3	10
% Buses	-	-	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	0.8	0.0	-	0.7	0.0	0.0	0.3	-	-	0.3	0.5
Single-Unit Trucks	0	0	0	0	-	0	0	2	0	1	-	3	0	0	6	1	-	7	0	0	5	0	-	5	15
% Single-Unit Trucks	-	-	-	0.0	-	0.0	0.0	2.5	-	4.5	-	2.9	0.0	0.0	0.7	1.1	-	0.7	0.0	0.0	0.5	-	-	0.5	0.7
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	2	0	-	2	2
% Articulated Trucks	-	-	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.2	-	-	0.2	0.1
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	0	0	0	0	-	0	1
% Bicycles on Road	-	-	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	0.1	0.0	-	0.1	0.0	0.0	0.0	-	-	0.0	0.0
Pedestrians	-	-	-	-	1	-	-	-	-	-	4	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 abowen@kloainc.com

Count Name: Knapp Drive with Willow Circle Drive TMC
Site Code:
Start Date: 09/05/2024

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Access Drive Eastbound						Willow Circle Drive Westbound						Knapp Street Northbound						Knapp Street Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:30 AM	0	0	0	0	0	0	0	1	0	1	0	2	0	0	37	1	0	38	0	0	24	0	0	24	64
7:45 AM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	38	1	0	39	0	1	28	0	0	29	69
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42	7	0	49	0	0	26	0	0	26	75
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	56	5	0	62	0	0	22	0	0	22	84
Total	0	0	0	0	0	0	0	2	0	1	0	3	1	0	173	14	0	188	0	1	100	0	0	101	292
Approach %	0.0	0.0	0.0	0.0	-	-	0.0	66.7	0.0	33.3	-	-	0.5	0.0	92.0	7.4	-	-	0.0	1.0	99.0	0.0	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	0.7	0.0	0.3	-	1.0	0.3	0.0	59.2	4.8	-	64.4	0.0	0.3	34.2	0.0	-	34.6	-
PHF	0.000	0.000	0.000	0.000	-	0.000	0.000	0.500	0.000	0.250	-	0.375	0.250	0.000	0.772	0.500	-	0.758	0.000	0.250	0.893	0.000	-	0.871	0.869
Lights	0	0	0	0	-	0	0	2	0	1	-	3	1	0	166	13	-	180	0	1	99	0	-	100	283
% Lights	-	-	-	-	-	-	-	100.0	-	100.0	-	100.0	100.0	-	96.0	92.9	-	95.7	-	100.0	99.0	-	-	99.0	96.9
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	3	0	-	3	0	0	1	0	-	1	4
% Buses	-	-	-	-	-	-	-	0.0	-	0.0	-	0.0	0.0	-	1.7	0.0	-	1.6	-	0.0	1.0	-	-	1.0	1.4
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	3	1	-	4	0	0	0	0	-	0	4
% Single-Unit Trucks	-	-	-	-	-	-	-	0.0	-	0.0	-	0.0	0.0	-	1.7	7.1	-	2.1	-	0.0	0.0	-	-	0.0	1.4
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	-	-	-	-	-	-	-	0.0	-	0.0	-	0.0	0.0	-	0.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	0.0
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	0	0	0	0	-	0	1
% Bicycles on Road	-	-	-	-	-	-	-	0.0	-	0.0	-	0.0	0.0	-	0.6	0.0	-	0.5	-	0.0	0.0	-	-	0.0	0.3
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 abowen@kloainc.com

Count Name: Knapp Drive with Willow Circle Drive TMC
Site Code:
Start Date: 09/05/2024

Turning Movement Peak Hour Data (4:00 PM)

Start Time	Access Drive Eastbound						Willow Circle Drive Westbound						Knapp Street Northbound						Knapp Street Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
4:00 PM	0	0	0	0	0	0	0	6	0	1	0	7	0	0	41	2	0	43	0	0	55	0	0	55	105
4:15 PM	0	0	0	0	0	0	0	5	0	1	0	6	0	0	45	6	0	51	0	0	52	0	0	52	109
4:30 PM	0	0	0	0	0	0	0	7	0	1	0	8	0	0	40	6	0	46	0	1	44	0	0	45	99
4:45 PM	0	0	0	0	1	0	0	7	0	4	0	11	0	0	44	4	0	48	0	1	31	0	0	32	91
Total	0	0	0	0	1	0	0	25	0	7	0	32	0	0	170	18	0	188	0	2	182	0	0	184	404
Approach %	0.0	0.0	0.0	0.0	-	-	0.0	78.1	0.0	21.9	-	-	0.0	0.0	90.4	9.6	-	-	0.0	1.1	98.9	0.0	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	6.2	0.0	1.7	-	7.9	0.0	0.0	42.1	4.5	-	46.5	0.0	0.5	45.0	0.0	-	45.5	-
PHF	0.000	0.000	0.000	0.000	-	0.000	0.000	0.893	0.000	0.438	-	0.727	0.000	0.000	0.944	0.750	-	0.922	0.000	0.500	0.827	0.000	-	0.836	0.927
Lights	0	0	0	0	-	0	0	25	0	7	-	32	0	0	169	18	-	187	0	2	180	0	-	182	401
% Lights	-	-	-	-	-	-	-	100.0	-	100.0	-	100.0	-	-	99.4	100.0	-	99.5	-	100.0	98.9	-	-	98.9	99.3
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	0	0	0	0	-	0	1
% Buses	-	-	-	-	-	-	-	0.0	-	0.0	-	0.0	-	-	0.6	0.0	-	0.5	-	0.0	0.0	-	-	0.0	0.2
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	2	0	-	2	2
% Single-Unit Trucks	-	-	-	-	-	-	-	0.0	-	0.0	-	0.0	-	-	0.0	0.0	-	0.0	-	0.0	1.1	-	-	1.1	0.5
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	-	-	-	-	-	-	-	0.0	-	0.0	-	0.0	-	-	0.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	0.0
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	-	-	-	-	-	-	0.0	-	0.0	-	0.0	-	-	0.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	0.0
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 abowen@kloainc.com

Count Name: Knapp Drive with Willow Circle Drive TMC
Site Code:
Start Date: 09/05/2024

Turning Movement Peak Hour Data (12:45 PM)

Start Time	Access Drive Eastbound						Willow Circle Drive Westbound						Knapp Street Northbound						Knapp Street Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
12:45 PM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	42	3	0	45	0	0	45	0	0	45	91
1:00 PM	0	0	0	0	0	0	0	6	0	0	0	6	0	0	36	3	0	39	0	1	70	0	0	71	116
1:15 PM	0	0	0	0	0	0	0	2	0	1	0	3	0	0	49	6	0	55	0	0	48	0	0	48	106
1:30 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	31	4	0	35	0	0	59	0	0	59	95
Total	0	0	0	0	0	0	0	9	0	2	0	11	0	0	158	16	0	174	0	1	222	0	0	223	408
Approach %	0.0	0.0	0.0	0.0	-	-	0.0	81.8	0.0	18.2	-	-	0.0	0.0	90.8	9.2	-	-	0.0	0.4	99.6	0.0	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	2.2	0.0	0.5	-	2.7	0.0	0.0	38.7	3.9	-	42.6	0.0	0.2	54.4	0.0	-	54.7	-
PHF	0.000	0.000	0.000	0.000	-	0.000	0.000	0.375	0.000	0.500	-	0.458	0.000	0.000	0.806	0.667	-	0.791	0.000	0.250	0.793	0.000	-	0.785	0.879
Lights	0	0	0	0	-	0	0	9	0	2	-	11	0	0	158	16	-	174	0	1	221	0	-	222	407
% Lights	-	-	-	-	-	-	-	100.0	-	100.0	-	100.0	-	-	100.0	100.0	-	100.0	-	100.0	99.5	-	-	99.6	99.8
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Buses	-	-	-	-	-	-	-	0.0	-	0.0	-	0.0	-	-	0.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	0.0
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	1
% Single-Unit Trucks	-	-	-	-	-	-	-	0.0	-	0.0	-	0.0	-	-	0.0	0.0	-	0.0	-	0.0	0.5	-	-	0.4	0.2
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Articulated Trucks	-	-	-	-	-	-	-	0.0	-	0.0	-	0.0	-	-	0.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	0.0
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	-	-	-	-	-	-	0.0	-	0.0	-	0.0	-	-	0.0	0.0	-	0.0	-	0.0	0.0	-	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 abowen@kloainc.com

Count Name: Plainfield Road with Access Drive (south) TMC
Site Code:
Start Date: 09/05/2024

Turning Movement Data

Start Time	Access Drive Eastbound						Police Department Access Drive Westbound						Plainfield Road Northbound						Plainfield Road Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	109	0	0	109	0	0	118	1	0	119	228
7:15 AM	0	0	0	1	0	1	0	0	0	0	0	0	0	0	144	0	0	144	0	0	174	0	0	174	319
7:30 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	171	0	0	171	0	0	201	0	0	201	372
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	179	0	0	179	0	0	197	0	0	197	376
Hourly Total	0	0	0	1	0	1	0	0	0	0	3	0	0	0	603	0	0	603	0	0	690	1	0	691	1295
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	134	0	0	134	0	0	169	1	0	170	304
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	149	0	0	149	0	0	165	0	0	165	314
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	147	0	0	147	0	0	161	0	0	161	308
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	147	0	0	147	0	0	163	0	0	163	310
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	577	0	0	577	0	0	658	1	0	659	1236
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	214	0	0	214	0	0	272	0	0	272	486
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	194	0	0	194	0	0	245	0	0	245	439
4:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	216	0	0	216	0	0	226	0	0	226	442
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	214	0	0	214	0	0	224	0	0	224	438
Hourly Total	0	0	0	0	1	0	0	0	0	0	0	0	0	0	838	0	0	838	0	0	967	0	0	967	1805
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	182	0	0	182	0	0	228	0	0	228	410
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	202	0	0	202	0	0	196	0	0	196	398
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	184	0	0	184	0	0	211	0	0	211	395
5:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	203	0	0	203	0	0	226	0	0	226	429
Hourly Total	0	0	0	0	0	0	0	0	0	0	2	0	0	0	771	0	0	771	0	0	861	0	0	861	1632
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	204	0	0	204	0	0	171	0	0	171	375
12:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	216	0	0	216	0	0	220	0	0	220	436
12:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	205	0	0	205	0	0	174	0	0	174	379
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	200	0	0	200	0	0	232	0	0	232	432
Hourly Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	825	0	0	825	0	0	797	0	0	797	1622
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	209	0	0	209	0	0	193	0	0	193	402
1:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	224	0	0	224	0	0	213	0	0	213	437
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	188	0	0	188	0	0	174	0	0	174	362
1:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	204	0	0	204	0	0	208	0	0	208	412
Hourly Total	0	0	0	0	0	0	0	0	0	0	3	0	0	0	825	0	0	825	0	0	788	0	0	788	1613
Grand Total	0	0	0	1	1	1	0	0	0	0	8	0	0	0	4439	0	0	4439	0	0	4761	2	0	4763	9203
Approach %	0.0	0.0	0.0	100.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	100.0	0.0	-	-	0.0	0.0	100.0	0.0	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	48.2	0.0	-	48.2	0.0	0.0	51.7	0.0	-	51.8	

Lights	0	0	0	1	-	1	0	0	0	0	-	0	0	0	4341	0	-	4341	0	0	4652	2	-	4654	4654
% Lights	-	-	-	100.0	-	100.0	-	-	-	-	-	-	-	-	97.8	-	-	97.8	-	-	97.7	100.0	-	97.7	97.8
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	19	0	-	19	0	0	29	0	-	29	48
% Buses	-	-	-	0.0	-	0.0	-	-	-	-	-	-	-	-	0.4	-	-	0.4	-	-	0.6	0.0	-	0.6	0.5
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	54	0	-	54	0	0	56	0	-	56	110
% Single-Unit Trucks	-	-	-	0.0	-	0.0	-	-	-	-	-	-	-	-	1.2	-	-	1.2	-	-	1.2	0.0	-	1.2	1.2
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	25	0	-	25	0	0	22	0	-	22	47
% Articulated Trucks	-	-	-	0.0	-	0.0	-	-	-	-	-	-	-	-	0.6	-	-	0.6	-	-	0.5	0.0	-	0.5	0.5
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	2	0	-	2	2
% Bicycles on Road	-	-	-	0.0	-	0.0	-	-	-	-	-	-	-	-	0.0	-	-	0.0	-	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	1	-	-	-	-	-	8	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 abowen@kloainc.com

Count Name: Plainfield Road with Access Drive (south) TMC
Site Code:
Start Date: 09/05/2024

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Access Drive Eastbound						Police Department Access Drive Westbound						Plainfield Road Northbound						Plainfield Road Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:30 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	171	0	0	171	0	0	201	0	0	201	372
7:45 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	179	0	0	179	0	0	197	0	0	197	376
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	134	0	0	134	0	0	169	1	0	170	304
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	149	0	0	149	0	0	165	0	0	165	314
Total	0	0	0	0	0	0	0	0	0	0	3	0	0	0	633	0	0	633	0	0	732	1	0	733	1366
Approach %	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	100.0	0.0	-	-	0.0	0.0	99.9	0.1	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	46.3	0.0	-	46.3	0.0	0.0	53.6	0.1	-	53.7	-
PHF	0.000	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	0.000	0.000	0.000	0.884	0.000	-	0.884	0.000	0.000	0.910	0.250	-	0.912	0.908
Lights	0	0	0	0	-	0	0	0	0	0	-	0	0	0	604	0	-	604	0	0	705	1	-	706	1310
% Lights	-	-	-	-	-	-	-	-	-	-	-	-	-	-	95.4	-	-	95.4	-	-	96.3	100.0	-	96.3	95.9
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	3	0	-	3	0	0	4	0	-	4	7
% Buses	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	-	-	0.5	-	-	0.5	0.0	-	0.5	0.5
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	23	0	-	23	0	0	17	0	-	17	40
% Single-Unit Trucks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.6	-	-	3.6	-	-	2.3	0.0	-	2.3	2.9
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	3	0	-	3	0	0	6	0	-	6	9
% Articulated Trucks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.5	-	-	0.5	-	-	0.8	0.0	-	0.8	0.7
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	0.0	-	-	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	3	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 abowen@kloainc.com

Count Name: Plainfield Road with Access Drive (south) TMC
Site Code:
Start Date: 09/05/2024

Turning Movement Peak Hour Data (4:00 PM)

Start Time	Access Drive Eastbound						Police Department Access Drive Westbound						Plainfield Road Northbound						Plainfield Road Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	214	0	0	214	0	0	272	0	0	272	486
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	194	0	0	194	0	0	245	0	0	245	439
4:30 PM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	216	0	0	216	0	0	226	0	0	226	442
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	214	0	0	214	0	0	224	0	0	224	438
Total	0	0	0	0	1	0	0	0	0	0	0	0	0	0	838	0	0	838	0	0	967	0	0	967	1805
Approach %	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	100.0	0.0	-	-	0.0	0.0	100.0	0.0	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	46.4	0.0	-	46.4	0.0	0.0	53.6	0.0	-	53.6	-
PHF	0.000	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	0.000	0.000	0.000	0.970	0.000	-	0.970	0.000	0.000	0.889	0.000	-	0.889	0.928
Lights	0	0	0	0	-	0	0	0	0	0	-	0	0	0	819	0	-	819	0	0	947	0	-	947	1766
% Lights	-	-	-	-	-	-	-	-	-	-	-	-	-	-	97.7	-	-	97.7	-	-	97.9	-	-	97.9	97.8
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	6	0	-	6	0	0	5	0	-	5	11
% Buses	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.7	-	-	0.7	-	-	0.5	-	-	0.5	0.6
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	3	0	-	3	0	0	7	0	-	7	10
% Single-Unit Trucks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.4	-	-	0.4	-	-	0.7	-	-	0.7	0.6
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	10	0	-	10	0	0	7	0	-	7	17
% Articulated Trucks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.2	-	-	1.2	-	-	0.7	-	-	0.7	0.9
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	1
% Bicycles on Road	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	0.0	-	-	0.1	-	-	0.1	0.1
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Plainfield Road with Access Drive (south) TMC
Site Code:
Start Date: 09/05/2024

Turning Movement Peak Hour Data (12:45 PM)

Start Time	Access Drive Eastbound						Police Department Access Drive Westbound						Plainfield Road Northbound						Plainfield Road Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
12:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	200	0	0	200	0	0	232	0	0	232	432
1:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	209	0	0	209	0	0	193	0	0	193	402
1:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	224	0	0	224	0	0	213	0	0	213	437
1:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	188	0	0	188	0	0	174	0	0	174	362
Total	0	0	0	0	0	0	0	0	0	0	1	0	0	0	821	0	0	821	0	0	812	0	0	812	1633
Approach %	0.0	0.0	0.0	0.0	-	-	0.0	0.0	0.0	0.0	-	-	0.0	0.0	100.0	0.0	-	-	0.0	0.0	100.0	0.0	-	-	-
Total %	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0	0.0	50.3	0.0	-	50.3	0.0	0.0	49.7	0.0	-	49.7	-
PHF	0.000	0.000	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	0.000	0.000	0.000	0.916	0.000	-	0.916	0.000	0.000	0.875	0.000	-	0.875	0.934
Lights	0	0	0	0	-	0	0	0	0	0	-	0	0	0	812	0	-	812	0	0	793	0	-	793	1605
% Lights	-	-	-	-	-	-	-	-	-	-	-	-	-	-	98.9	-	-	98.9	-	-	97.7	-	-	97.7	98.3
Buses	0	0	0	0	-	0	0	0	0	0	-	0	0	0	1	0	-	1	0	0	4	0	-	4	5
% Buses	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	0.1	-	-	0.5	-	-	0.5	0.3
Single-Unit Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	3	0	-	3	0	0	10	0	-	10	13
% Single-Unit Trucks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.4	-	-	0.4	-	-	1.2	-	-	1.2	0.8
Articulated Trucks	0	0	0	0	-	0	0	0	0	0	-	0	0	0	5	0	-	5	0	0	5	0	-	5	10
% Articulated Trucks	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.6	-	-	0.6	-	-	0.6	-	-	0.6	0.6
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.0	-	-	0.0	-	-	0.0	-	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 abowen@kloainc.com

Count Name: Plainfield Road with Larkin Avenue
TMC
Site Code:
Start Date: 09/05/2024

Turning Movement Data

Start Time	Larkin Avenue Eastbound						Larkin Avenue Westbound						Plainfield Road Northbound						Plainfield Road Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:00 AM	0	12	83	34	0	129	0	11	102	52	0	165	0	25	92	5	0	122	0	26	111	8	0	145	561
7:15 AM	0	16	97	32	0	145	0	11	141	51	0	203	0	30	134	1	0	165	0	39	116	14	0	169	682
7:30 AM	0	16	82	53	0	151	0	11	166	57	0	234	0	24	148	5	0	177	1	37	160	23	0	221	783
7:45 AM	0	22	123	52	0	197	0	18	149	61	0	228	0	29	144	11	0	184	0	59	143	22	0	224	833
Hourly Total	0	66	385	171	0	622	0	51	558	221	0	830	0	108	518	22	0	648	1	161	530	67	0	759	2859
8:00 AM	0	14	103	29	0	146	0	13	149	53	0	215	0	31	117	7	0	155	0	43	116	18	0	177	693
8:15 AM	0	18	119	33	0	170	0	14	124	34	0	172	0	30	108	4	0	142	0	54	122	18	0	194	678
8:30 AM	0	19	89	26	0	134	0	15	134	44	0	193	0	30	118	15	0	163	0	38	128	20	0	186	676
8:45 AM	0	20	103	27	0	150	0	19	131	73	0	223	0	22	154	5	1	181	0	51	131	20	0	202	756
Hourly Total	0	71	414	115	0	600	0	61	538	204	0	803	0	113	497	31	1	641	0	186	497	76	0	759	2803
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	18	168	40	0	226	0	19	202	101	0	322	0	50	195	16	0	261	0	69	133	14	0	216	1025
4:15 PM	0	27	148	34	0	209	0	18	190	83	0	291	0	42	190	20	0	252	0	90	169	18	0	277	1029
4:30 PM	0	18	165	34	0	217	0	24	164	74	0	262	0	46	197	19	0	262	0	69	159	16	0	244	985
4:45 PM	0	22	192	32	0	246	0	21	181	68	0	270	0	44	202	20	0	266	0	55	135	16	0	206	988
Hourly Total	0	85	673	140	0	898	0	82	737	326	0	1145	0	182	784	75	0	1041	0	283	596	64	0	943	4027
5:00 PM	0	17	143	44	0	204	0	19	160	72	0	251	0	50	190	18	0	258	2	89	168	10	1	269	982
5:15 PM	0	16	165	42	0	223	0	21	148	74	0	243	0	45	168	13	0	226	0	69	163	16	0	248	940
5:30 PM	0	23	133	26	0	182	0	16	158	65	0	239	0	38	188	26	0	252	1	93	159	19	0	272	945
5:45 PM	1	28	137	28	0	194	0	18	171	85	0	274	0	34	153	16	0	203	1	71	144	21	0	237	908
Hourly Total	1	84	578	140	0	803	0	74	637	296	0	1007	0	167	699	73	0	939	4	322	634	66	1	1026	3775
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 PM	0	22	113	41	0	176	0	24	119	79	0	222	0	31	132	23	0	186	0	105	144	23	0	272	856
12:15 PM	0	22	136	40	0	198	0	19	167	101	0	287	0	19	144	11	0	174	0	108	145	27	0	280	939
12:30 PM	0	21	181	26	0	228	0	23	139	90	0	252	0	40	136	18	0	194	0	100	135	21	0	256	930
12:45 PM	0	17	134	47	0	198	0	24	158	90	0	272	0	37	141	19	0	197	0	92	148	20	0	260	927
Hourly Total	0	82	564	154	0	800	0	90	583	360	0	1033	0	127	553	71	0	751	0	405	572	91	0	1068	3652
1:00 PM	0	26	164	36	0	226	0	14	154	78	0	246	0	33	146	18	0	197	0	97	121	17	0	235	904
1:15 PM	0	29	135	29	1	193	0	23	151	99	0	273	0	33	160	22	0	215	0	89	130	31	0	250	931
1:30 PM	0	23	159	34	0	216	0	27	145	57	0	229	0	36	168	22	0	226	0	103	162	24	0	289	960
1:45 PM	0	23	148	36	0	207	0	18	147	83	0	248	0	26	141	22	0	189	0	91	143	22	0	256	900
Hourly Total	0	101	606	135	1	842	0	82	597	317	0	996	0	128	615	84	0	827	0	380	556	94	0	1030	3695
Grand Total	1	489	3220	855	1	4565	0	440	3650	1724	0	5814	0	825	3666	356	1	4847	5	1737	3385	458	1	5585	20811
Approach %	0.0	10.7	70.5	18.7	-	-	0.0	7.6	62.8	29.7	-	-	0.0	17.0	75.6	7.3	-	-	0.1	31.1	60.6	8.2	-	-	-
Total %	0.0	2.3	15.5	4.1	-	21.9	0.0	2.1	17.5	8.3	-	27.9	0.0	4.0	17.6	1.7	-	23.3	0.0	8.3	16.3	2.2	-	26.8	

Lights	1	488	3155	842	-	4486	0	426	3567	1689	-	5682	0	798	3497	344	-	4639	5	1711	3217	456	-	5389	20
% Lights	100.0	99.8	98.0	98.5	-	98.3	-	96.8	97.7	98.0	-	97.7	-	96.7	95.4	96.6	-	95.7	100.0	98.5	95.0	99.6	-	96.5	97.0
Buses	0	0	13	4	-	17	0	3	24	2	-	29	0	3	15	2	-	20	0	4	28	0	-	32	98
% Buses	0.0	0.0	0.4	0.5	-	0.4	-	0.7	0.7	0.1	-	0.5	-	0.4	0.4	0.6	-	0.4	0.0	0.2	0.8	0.0	-	0.6	0.5
Single-Unit Trucks	0	1	30	7	-	38	0	7	44	29	-	80	0	16	77	7	-	100	0	16	71	1	-	88	306
% Single-Unit Trucks	0.0	0.2	0.9	0.8	-	0.8	-	1.6	1.2	1.7	-	1.4	-	1.9	2.1	2.0	-	2.1	0.0	0.9	2.1	0.2	-	1.6	1.5
Articulated Trucks	0	0	21	2	-	23	0	4	15	4	-	23	0	8	76	2	-	86	0	6	69	1	-	76	208
% Articulated Trucks	0.0	0.0	0.7	0.2	-	0.5	-	0.9	0.4	0.2	-	0.4	-	1.0	2.1	0.6	-	1.8	0.0	0.3	2.0	0.2	-	1.4	1.0
Bicycles on Road	0	0	1	0	-	1	0	0	0	0	-	0	0	0	1	1	-	2	0	0	0	0	-	0	3
% Bicycles on Road	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.3	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 abowen@kloainc.com

Count Name: Plainfield Road with Larkin Avenue
TMC
Site Code:
Start Date: 09/05/2024

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Larkin Avenue Eastbound						Larkin Avenue Westbound						Plainfield Road Northbound						Plainfield Road Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:30 AM	0	16	82	53	0	151	0	11	166	57	0	234	0	24	148	5	0	177	1	37	160	23	0	221	783
7:45 AM	0	22	123	52	0	197	0	18	149	61	0	228	0	29	144	11	0	184	0	59	143	22	0	224	833
8:00 AM	0	14	103	29	0	146	0	13	149	53	0	215	0	31	117	7	0	155	0	43	116	18	0	177	693
8:15 AM	0	18	119	33	0	170	0	14	124	34	0	172	0	30	108	4	0	142	0	54	122	18	0	194	678
Total	0	70	427	167	0	664	0	56	588	205	0	849	0	114	517	27	0	658	1	193	541	81	0	816	2987
Approach %	0.0	10.5	64.3	25.2	-	-	0.0	6.6	69.3	24.1	-	-	0.0	17.3	78.6	4.1	-	-	0.1	23.7	66.3	9.9	-	-	-
Total %	0.0	2.3	14.3	5.6	-	22.2	0.0	1.9	19.7	6.9	-	28.4	0.0	3.8	17.3	0.9	-	22.0	0.0	6.5	18.1	2.7	-	27.3	-
PHF	0.000	0.795	0.868	0.788	-	0.843	0.000	0.778	0.886	0.840	-	0.907	0.000	0.919	0.873	0.614	-	0.894	0.250	0.818	0.845	0.880	-	0.911	0.896
Lights	0	70	413	165	-	648	0	51	568	199	-	818	0	109	485	24	-	618	1	188	496	80	-	765	2849
% Lights	-	100.0	96.7	98.8	-	97.6	-	91.1	96.6	97.1	-	96.3	-	95.6	93.8	88.9	-	93.9	100.0	97.4	91.7	98.8	-	93.8	95.4
Buses	0	0	3	1	-	4	0	2	4	1	-	7	0	0	4	1	-	5	0	1	5	0	-	6	22
% Buses	-	0.0	0.7	0.6	-	0.6	-	3.6	0.7	0.5	-	0.8	-	0.0	0.8	3.7	-	0.8	0.0	0.5	0.9	0.0	-	0.7	0.7
Single-Unit Trucks	0	0	7	1	-	8	0	2	14	5	-	21	0	3	16	2	-	21	0	3	24	1	-	28	78
% Single-Unit Trucks	-	0.0	1.6	0.6	-	1.2	-	3.6	2.4	2.4	-	2.5	-	2.6	3.1	7.4	-	3.2	0.0	1.6	4.4	1.2	-	3.4	2.6
Articulated Trucks	0	0	4	0	-	4	0	1	2	0	-	3	0	2	12	0	-	14	0	1	16	0	-	17	38
% Articulated Trucks	-	0.0	0.9	0.0	-	0.6	-	1.8	0.3	0.0	-	0.4	-	1.8	2.3	0.0	-	2.1	0.0	0.5	3.0	0.0	-	2.1	1.3
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Plainfield Road with Larkin Avenue
TMC
Site Code:
Start Date: 09/05/2024

Turning Movement Peak Hour Data (4:00 PM)

Start Time	Larkin Avenue Eastbound						Larkin Avenue Westbound						Plainfield Road Northbound						Plainfield Road Southbound						
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
4:00 PM	0	18	168	40	0	226	0	19	202	101	0	322	0	50	195	16	0	261	0	69	133	14	0	216	1025
4:15 PM	0	27	148	34	0	209	0	18	190	83	0	291	0	42	190	20	0	252	0	90	169	18	0	277	1029
4:30 PM	0	18	165	34	0	217	0	24	164	74	0	262	0	46	197	19	0	262	0	69	159	16	0	244	985
4:45 PM	0	22	192	32	0	246	0	21	181	68	0	270	0	44	202	20	0	266	0	55	135	16	0	206	988
Total	0	85	673	140	0	898	0	82	737	326	0	1145	0	182	784	75	0	1041	0	283	596	64	0	943	4027
Approach %	0.0	9.5	74.9	15.6	-	-	0.0	7.2	64.4	28.5	-	-	0.0	17.5	75.3	7.2	-	-	0.0	30.0	63.2	6.8	-	-	-
Total %	0.0	2.1	16.7	3.5	-	22.3	0.0	2.0	18.3	8.1	-	28.4	0.0	4.5	19.5	1.9	-	25.9	0.0	7.0	14.8	1.6	-	23.4	-
PHF	0.000	0.787	0.876	0.875	-	0.913	0.000	0.854	0.912	0.807	-	0.889	0.000	0.910	0.970	0.938	-	0.978	0.000	0.786	0.882	0.889	-	0.851	0.978
Lights	0	85	659	137	-	881	0	80	721	322	-	1123	0	175	747	74	-	996	0	281	565	64	-	910	3910
% Lights	-	100.0	97.9	97.9	-	98.1	-	97.6	97.8	98.8	-	98.1	-	96.2	95.3	98.7	-	95.7	-	99.3	94.8	100.0	-	96.5	97.1
Buses	0	0	5	2	-	7	0	0	4	0	-	4	0	1	4	1	-	6	0	0	15	0	-	15	32
% Buses	-	0.0	0.7	1.4	-	0.8	-	0.0	0.5	0.0	-	0.3	-	0.5	0.5	1.3	-	0.6	-	0.0	2.5	0.0	-	1.6	0.8
Single-Unit Trucks	0	0	4	0	-	4	0	1	7	4	-	12	0	4	13	0	-	17	0	2	6	0	-	8	41
% Single-Unit Trucks	-	0.0	0.6	0.0	-	0.4	-	1.2	0.9	1.2	-	1.0	-	2.2	1.7	0.0	-	1.6	-	0.7	1.0	0.0	-	0.8	1.0
Articulated Trucks	0	0	5	1	-	6	0	1	5	0	-	6	0	2	20	0	-	22	0	0	10	0	-	10	44
% Articulated Trucks	-	0.0	0.7	0.7	-	0.7	-	1.2	0.7	0.0	-	0.5	-	1.1	2.6	0.0	-	2.1	-	0.0	1.7	0.0	-	1.1	1.1
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Count Name: Plainfield Road with Larkin Avenue
TMC
Site Code:
Start Date: 09/05/2024

Turning Movement Peak Hour Data (12:45 PM)

Start Time	Larkin Avenue Eastbound						Larkin Avenue Westbound						Plainfield Road Northbound						Plainfield Road Southbound						
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	Int. Total
12:45 PM	0	17	134	47	0	198	0	24	158	90	0	272	0	37	141	19	0	197	0	92	148	20	0	260	927
1:00 PM	0	26	164	36	0	226	0	14	154	78	0	246	0	33	146	18	0	197	0	97	121	17	0	235	904
1:15 PM	0	29	135	29	1	193	0	23	151	99	0	273	0	33	160	22	0	215	0	89	130	31	0	250	931
1:30 PM	0	23	159	34	0	216	0	27	145	57	0	229	0	36	168	22	0	226	0	103	162	24	0	289	960
Total	0	95	592	146	1	833	0	88	608	324	0	1020	0	139	615	81	0	835	0	381	561	92	0	1034	3722
Approach %	0.0	11.4	71.1	17.5	-	-	0.0	8.6	59.6	31.8	-	-	0.0	16.6	73.7	9.7	-	-	0.0	36.8	54.3	8.9	-	-	-
Total %	0.0	2.6	15.9	3.9	-	22.4	0.0	2.4	16.3	8.7	-	27.4	0.0	3.7	16.5	2.2	-	22.4	0.0	10.2	15.1	2.5	-	27.8	-
PHF	0.000	0.819	0.902	0.777	-	0.921	0.000	0.815	0.962	0.818	-	0.934	0.000	0.939	0.915	0.920	-	0.924	0.000	0.925	0.866	0.742	-	0.894	0.969
Lights	0	95	585	143	-	823	0	87	594	323	-	1004	0	137	591	80	-	808	0	376	553	91	-	1020	3655
% Lights	-	100.0	98.8	97.9	-	98.8	-	98.9	97.7	99.7	-	98.4	-	98.6	96.1	98.8	-	96.8	-	98.7	98.6	98.9	-	98.6	98.2
Buses	0	0	0	0	-	0	0	0	4	0	-	4	0	0	0	0	-	0	0	0	1	0	-	1	5
% Buses	-	0.0	0.0	0.0	-	0.0	-	0.0	0.7	0.0	-	0.4	-	0.0	0.0	0.0	-	0.0	-	0.0	0.2	0.0	-	0.1	0.1
Single-Unit Trucks	0	0	2	2	-	4	0	1	9	1	-	11	0	0	19	1	-	20	0	4	4	0	-	8	43
% Single-Unit Trucks	-	0.0	0.3	1.4	-	0.5	-	1.1	1.5	0.3	-	1.1	-	0.0	3.1	1.2	-	2.4	-	1.0	0.7	0.0	-	0.8	1.2
Articulated Trucks	0	0	4	1	-	5	0	0	1	0	-	1	0	2	5	0	-	7	0	1	3	1	-	5	18
% Articulated Trucks	-	0.0	0.7	0.7	-	0.6	-	0.0	0.2	0.0	-	0.1	-	1.4	0.8	0.0	-	0.8	-	0.3	0.5	1.1	-	0.5	0.5
Bicycles on Road	0	0	1	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1
% Bicycles on Road	-	0.0	0.2	0.0	-	0.1	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
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Count Name: Theodore Street with Knapp Street
TMC
Site Code:
Start Date: 09/05/2024

Turning Movement Data

Start Time	Theodore Street Eastbound						Theodore Street Westbound						Access Drive Northbound						Knapp Street Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:00 AM	0	8	82	1	0	91	0	0	102	11	1	113	0	1	0	0	2	1	0	6	0	10	0	16	221
7:15 AM	0	6	72	1	0	79	0	0	126	25	0	151	0	0	0	0	0	0	0	7	0	6	0	13	243
7:30 AM	0	12	67	0	0	79	0	0	133	30	0	163	0	0	0	0	1	0	0	10	0	18	0	28	270
7:45 AM	0	16	85	0	1	101	0	1	144	22	0	167	0	0	0	0	0	0	0	16	0	13	0	29	297
Hourly Total	0	42	306	2	1	350	0	1	505	88	1	594	0	1	0	0	3	1	0	39	0	47	0	86	1031
8:00 AM	0	16	68	0	0	84	0	0	128	33	0	161	0	1	0	0	0	1	0	9	0	14	0	23	269
8:15 AM	0	13	83	2	0	98	1	0	123	50	0	174	0	1	0	0	0	1	0	7	0	15	1	22	295
8:30 AM	0	15	77	0	0	92	0	0	98	21	0	119	0	1	0	1	1	2	0	16	0	16	0	32	245
8:45 AM	0	8	66	3	0	77	0	0	126	24	0	150	0	0	0	0	0	0	0	17	2	14	0	33	260
Hourly Total	0	52	294	5	0	351	1	0	475	128	0	604	0	3	0	1	1	4	0	49	2	59	1	110	1069
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	13	170	3	0	186	0	0	178	30	0	208	0	1	0	0	0	1	0	21	0	31	1	52	447
4:15 PM	0	20	193	1	0	214	0	1	171	20	0	192	0	1	1	0	1	2	0	16	0	31	0	47	455
4:30 PM	0	15	143	0	0	158	0	0	168	31	0	199	0	1	0	0	0	1	0	17	0	30	0	47	405
4:45 PM	0	14	158	3	0	175	0	0	171	28	0	199	0	0	0	1	0	1	0	14	0	21	1	35	410
Hourly Total	0	62	664	7	0	733	0	1	688	109	0	798	0	3	1	1	1	5	0	68	0	113	2	181	1717
5:00 PM	0	14	197	1	0	212	0	1	167	30	0	198	0	3	2	4	0	9	0	16	0	30	1	46	465
5:15 PM	0	13	160	2	0	175	0	0	195	31	0	226	0	1	1	1	0	3	0	25	0	21	1	46	450
5:30 PM	1	12	174	0	0	187	0	1	152	24	1	177	0	1	0	0	1	1	0	31	0	27	0	58	423
5:45 PM	0	12	159	0	0	171	0	0	172	27	0	199	0	2	0	0	0	2	0	21	0	27	0	48	420
Hourly Total	1	51	690	3	0	745	0	2	686	112	1	800	0	7	3	5	1	15	0	93	0	105	2	198	1758
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12:00 PM	0	13	151	3	0	167	0	0	161	21	0	182	0	0	0	1	0	1	0	17	0	20	0	37	387
12:15 PM	0	16	151	1	1	168	0	0	154	28	0	182	0	2	0	0	1	2	0	15	0	22	0	37	389
12:30 PM	0	11	155	3	0	169	0	0	160	19	0	179	0	0	0	2	3	2	0	18	0	22	0	40	390
12:45 PM	0	10	159	1	0	170	0	1	165	31	0	197	0	5	0	2	0	7	0	21	1	28	0	50	424
Hourly Total	0	50	616	8	1	674	0	1	640	99	0	740	0	7	0	5	4	12	0	71	1	92	0	164	1590
1:00 PM	0	9	172	1	0	182	0	0	162	18	0	180	0	3	1	0	0	4	0	25	0	37	1	62	428
1:15 PM	0	14	168	1	0	183	0	0	183	34	0	217	0	0	0	1	0	1	0	25	0	20	0	45	446
1:30 PM	0	12	163	2	0	177	0	0	173	12	0	185	0	2	0	0	0	2	0	28	0	28	0	56	420
1:45 PM	0	18	172	1	0	191	0	0	154	14	0	168	0	1	1	1	0	3	0	20	0	23	2	43	405
Hourly Total	0	53	675	5	0	733	0	0	672	78	0	750	0	6	2	2	0	10	0	98	0	108	3	206	1699
Grand Total	1	310	3245	30	2	3586	1	5	3666	614	2	4286	0	27	6	14	10	47	0	418	3	524	8	945	8864
Approach %	0.0	8.6	90.5	0.8	-	-	0.0	0.1	85.5	14.3	-	-	0.0	57.4	12.8	29.8	-	-	0.0	44.2	0.3	55.4	-	-	-
Total %	0.0	3.5	36.6	0.3	-	40.5	0.0	0.1	41.4	6.9	-	48.4	0.0	0.3	0.1	0.2	-	0.5	0.0	4.7	0.0	5.9	-	10.7	

Lights	1	307	3176	29	-	3513	1	4	3576	600	-	4181	0	27	6	14	-	47	0	414	3	519	-	936	4
% Lights	100.0	99.0	97.9	96.7	-	98.0	100.0	80.0	97.5	97.7	-	97.6	-	100.0	100.0	100.0	-	100.0	-	99.0	100.0	99.0	-	99.0	97.9
Buses	0	1	23	0	-	24	0	0	26	6	-	32	0	0	0	0	-	0	0	1	0	1	-	2	58
% Buses	0.0	0.3	0.7	0.0	-	0.7	0.0	0.0	0.7	1.0	-	0.7	-	0.0	0.0	0.0	-	0.0	-	0.2	0.0	0.2	-	0.2	0.7
Single-Unit Trucks	0	1	29	1	-	31	0	0	31	7	-	38	0	0	0	0	-	0	0	2	0	4	-	6	75
% Single-Unit Trucks	0.0	0.3	0.9	3.3	-	0.9	0.0	0.0	0.8	1.1	-	0.9	-	0.0	0.0	0.0	-	0.0	-	0.5	0.0	0.8	-	0.6	0.8
Articulated Trucks	0	0	17	0	-	17	0	0	33	1	-	34	0	0	0	0	-	0	0	1	0	0	-	1	52
% Articulated Trucks	0.0	0.0	0.5	0.0	-	0.5	0.0	0.0	0.9	0.2	-	0.8	-	0.0	0.0	0.0	-	0.0	-	0.2	0.0	0.0	-	0.1	0.6
Bicycles on Road	0	1	0	0	-	1	0	1	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	2
% Bicycles on Road	0.0	0.3	0.0	0.0	-	0.0	0.0	20.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	2	-	-	-	-	-	2	-	-	-	-	-	10	-	-	-	-	-	8	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 abowen@kloainc.com

Count Name: Theodore Street with Knapp Street
TMC
Site Code:
Start Date: 09/05/2024

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Theodore Street Eastbound						Theodore Street Westbound						Access Drive Northbound						Knapp Street Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:30 AM	0	12	67	0	0	79	0	0	133	30	0	163	0	0	0	0	1	0	0	10	0	18	0	28	270
7:45 AM	0	16	85	0	1	101	0	1	144	22	0	167	0	0	0	0	0	0	0	16	0	13	0	29	297
8:00 AM	0	16	68	0	0	84	0	0	128	33	0	161	0	1	0	0	0	1	0	9	0	14	0	23	269
8:15 AM	0	13	83	2	0	98	1	0	123	50	0	174	0	1	0	0	0	1	0	7	0	15	1	22	295
Total	0	57	303	2	1	362	1	1	528	135	0	665	0	2	0	0	1	2	0	42	0	60	1	102	1131
Approach %	0.0	15.7	83.7	0.6	-	-	0.2	0.2	79.4	20.3	-	-	0.0	100.0	0.0	0.0	-	-	0.0	41.2	0.0	58.8	-	-	-
Total %	0.0	5.0	26.8	0.2	-	32.0	0.1	0.1	46.7	11.9	-	58.8	0.0	0.2	0.0	0.0	-	0.2	0.0	3.7	0.0	5.3	-	9.0	-
PHF	0.000	0.891	0.891	0.250	-	0.896	0.250	0.250	0.917	0.675	-	0.955	0.000	0.500	0.000	0.000	-	0.500	0.000	0.656	0.000	0.833	-	0.879	0.952
Lights	0	56	288	2	-	346	1	1	508	128	-	638	0	2	0	0	-	2	0	41	0	60	-	101	1087
% Lights	-	98.2	95.0	100.0	-	95.6	100.0	100.0	96.2	94.8	-	95.9	-	100.0	-	-	-	100.0	-	97.6	-	100.0	-	99.0	96.1
Buses	0	0	4	0	-	4	0	0	9	3	-	12	0	0	0	0	-	0	0	1	0	0	-	1	17
% Buses	-	0.0	1.3	0.0	-	1.1	0.0	0.0	1.7	2.2	-	1.8	-	0.0	-	-	-	0.0	-	2.4	-	0.0	-	1.0	1.5
Single-Unit Trucks	0	0	5	0	-	5	0	0	5	4	-	9	0	0	0	0	-	0	0	0	0	0	-	0	14
% Single-Unit Trucks	-	0.0	1.7	0.0	-	1.4	0.0	0.0	0.9	3.0	-	1.4	-	0.0	-	-	-	0.0	-	0.0	-	0.0	-	0.0	1.2
Articulated Trucks	0	0	6	0	-	6	0	0	6	0	-	6	0	0	0	0	-	0	0	0	0	0	-	0	12
% Articulated Trucks	-	0.0	2.0	0.0	-	1.7	0.0	0.0	1.1	0.0	-	0.9	-	0.0	-	-	-	0.0	-	0.0	-	0.0	-	0.0	1.1
Bicycles on Road	0	1	0	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	1
% Bicycles on Road	-	1.8	0.0	0.0	-	0.3	0.0	0.0	0.0	0.0	-	0.0	-	0.0	-	-	-	0.0	-	0.0	-	0.0	-	0.0	0.1
Pedestrians	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

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(847)518-9990 abowen@kloainc.com

Count Name: Theodore Street with Knapp Street
TMC
Site Code:
Start Date: 09/05/2024

Turning Movement Peak Hour Data (4:00 PM)

Start Time	Theodore Street Eastbound						Theodore Street Westbound						Access Drive Northbound						Knapp Street Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
4:00 PM	0	13	170	3	0	186	0	0	178	30	0	208	0	1	0	0	0	1	0	21	0	31	1	52	447
4:15 PM	0	20	193	1	0	214	0	1	171	20	0	192	0	1	1	0	1	2	0	16	0	31	0	47	455
4:30 PM	0	15	143	0	0	158	0	0	168	31	0	199	0	1	0	0	0	1	0	17	0	30	0	47	405
4:45 PM	0	14	158	3	0	175	0	0	171	28	0	199	0	0	0	1	0	1	0	14	0	21	1	35	410
Total	0	62	664	7	0	733	0	1	688	109	0	798	0	3	1	1	1	5	0	68	0	113	2	181	1717
Approach %	0.0	8.5	90.6	1.0	-	-	0.0	0.1	86.2	13.7	-	-	0.0	60.0	20.0	20.0	-	-	0.0	37.6	0.0	62.4	-	-	-
Total %	0.0	3.6	38.7	0.4	-	42.7	0.0	0.1	40.1	6.3	-	46.5	0.0	0.2	0.1	0.1	-	0.3	0.0	4.0	0.0	6.6	-	10.5	-
PHF	0.000	0.775	0.860	0.583	-	0.856	0.000	0.250	0.966	0.879	-	0.959	0.000	0.750	0.250	0.250	-	0.625	0.000	0.810	0.000	0.911	-	0.870	0.943
Lights	0	62	645	7	-	714	0	1	673	108	-	782	0	3	1	1	-	5	0	67	0	112	-	179	1680
% Lights	-	100.0	97.1	100.0	-	97.4	-	100.0	97.8	99.1	-	98.0	-	100.0	100.0	100.0	-	100.0	-	98.5	-	99.1	-	98.9	97.8
Buses	0	0	9	0	-	9	0	0	4	1	-	5	0	0	0	0	-	0	0	0	0	0	-	0	14
% Buses	-	0.0	1.4	0.0	-	1.2	-	0.0	0.6	0.9	-	0.6	-	0.0	0.0	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.8
Single-Unit Trucks	0	0	7	0	-	7	0	0	5	0	-	5	0	0	0	0	-	0	0	1	0	1	-	2	14
% Single-Unit Trucks	-	0.0	1.1	0.0	-	1.0	-	0.0	0.7	0.0	-	0.6	-	0.0	0.0	0.0	-	0.0	-	1.5	-	0.9	-	1.1	0.8
Articulated Trucks	0	0	3	0	-	3	0	0	6	0	-	6	0	0	0	0	-	0	0	0	0	0	-	0	9
% Articulated Trucks	-	0.0	0.5	0.0	-	0.4	-	0.0	0.9	0.0	-	0.8	-	0.0	0.0	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.5
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	-	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	2	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

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Count Name: Theodore Street with Knapp Street
TMC
Site Code:
Start Date: 09/05/2024

Turning Movement Peak Hour Data (12:45 PM)

Start Time	Theodore Street Eastbound						Theodore Street Westbound						Access Drive Northbound						Knapp Street Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
12:45 PM	0	10	159	1	0	170	0	1	165	31	0	197	0	5	0	2	0	7	0	21	1	28	0	50	424
1:00 PM	0	9	172	1	0	182	0	0	162	18	0	180	0	3	1	0	0	4	0	25	0	37	1	62	428
1:15 PM	0	14	168	1	0	183	0	0	183	34	0	217	0	0	0	1	0	1	0	25	0	20	0	45	446
1:30 PM	0	12	163	2	0	177	0	0	173	12	0	185	0	2	0	0	0	2	0	28	0	28	0	56	420
Total	0	45	662	5	0	712	0	1	683	95	0	779	0	10	1	3	0	14	0	99	1	113	1	213	1718
Approach %	0.0	6.3	93.0	0.7	-	-	0.0	0.1	87.7	12.2	-	-	0.0	71.4	7.1	21.4	-	-	0.0	46.5	0.5	53.1	-	-	-
Total %	0.0	2.6	38.5	0.3	-	41.4	0.0	0.1	39.8	5.5	-	45.3	0.0	0.6	0.1	0.2	-	0.8	0.0	5.8	0.1	6.6	-	12.4	-
PHF	0.000	0.804	0.962	0.625	-	0.973	0.000	0.250	0.933	0.699	-	0.897	0.000	0.500	0.250	0.375	-	0.500	0.000	0.884	0.250	0.764	-	0.859	0.963
Lights	0	45	654	5	-	704	0	1	670	95	-	766	0	10	1	3	-	14	0	99	1	112	-	212	1696
% Lights	-	100.0	98.8	100.0	-	98.9	-	100.0	98.1	100.0	-	98.3	-	100.0	100.0	100.0	-	100.0	-	100.0	100.0	99.1	-	99.5	98.7
Buses	0	0	1	0	-	1	0	0	1	0	-	1	0	0	0	0	-	0	0	0	0	0	-	0	2
% Buses	-	0.0	0.2	0.0	-	0.1	-	0.0	0.1	0.0	-	0.1	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.1
Single-Unit Trucks	0	0	4	0	-	4	0	0	5	0	-	5	0	0	0	0	-	0	0	0	0	1	-	1	10
% Single-Unit Trucks	-	0.0	0.6	0.0	-	0.6	-	0.0	0.7	0.0	-	0.6	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.9	-	0.5	0.6
Articulated Trucks	0	0	3	0	-	3	0	0	7	0	-	7	0	0	0	0	-	0	0	0	0	0	-	0	10
% Articulated Trucks	-	0.0	0.5	0.0	-	0.4	-	0.0	1.0	0.0	-	0.9	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.6
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

Kenig Lindgren O'Hara Aboona, Inc.
9575 W. Higgins Rd., Suite 400

Rosemont, Illinois, United States 60018
(847)518-9990 abowen@kloainc.com

Count Name: Theodore Street with Plainfield Road TMC
Site Code:
Start Date: 09/05/2024

Turning Movement Data

Start Time	Theodore Street Eastbound						Theodore Street Westbound						Plainfield Road Northbound						Plainfield Road Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:00 AM	0	2	51	29	0	82	0	19	60	33	0	112	0	9	84	11	2	104	0	20	99	3	0	122	420
7:15 AM	0	2	43	36	0	81	0	14	74	51	0	139	0	17	92	12	1	121	0	21	153	6	0	180	521
7:30 AM	0	3	44	59	0	106	0	18	95	47	0	160	0	28	127	22	0	177	0	18	172	5	0	195	638
7:45 AM	0	6	43	46	0	95	0	20	85	48	1	153	0	41	125	24	0	190	0	26	160	7	0	193	631
Hourly Total	0	13	181	170	0	364	0	71	314	179	1	564	0	95	428	69	3	592	0	85	584	21	0	690	2210
8:00 AM	0	2	43	37	0	82	0	17	70	53	0	140	0	28	81	18	0	127	0	23	145	3	0	171	520
8:15 AM	0	1	53	26	0	80	0	16	76	47	0	139	0	21	97	21	0	139	0	27	141	4	1	172	530
8:30 AM	0	1	51	34	0	86	0	12	62	35	0	109	1	23	108	20	1	152	0	21	137	5	0	163	510
8:45 AM	0	2	44	37	0	83	0	18	92	43	1	153	0	29	102	17	0	148	0	27	134	4	0	165	549
Hourly Total	0	6	191	134	0	331	0	63	300	178	1	541	1	101	388	76	1	566	0	98	557	16	1	671	2109
*** BREAK ***	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4:00 PM	0	5	87	62	0	154	0	23	128	71	0	222	0	40	143	22	0	205	0	69	192	7	0	268	849
4:15 PM	0	4	123	70	0	197	0	38	122	50	0	210	0	41	145	21	1	207	0	63	171	3	0	237	851
4:30 PM	0	17	91	66	0	174	0	34	111	51	0	196	0	61	142	16	0	219	0	47	169	3	1	219	808
4:45 PM	0	6	95	50	0	151	0	16	125	58	0	199	0	54	159	20	0	233	0	56	177	4	0	237	820
Hourly Total	0	32	396	248	0	676	0	111	486	230	0	827	0	196	589	79	1	864	0	235	709	17	1	961	3328
5:00 PM	0	3	127	41	0	171	0	28	118	51	0	197	0	61	123	25	0	209	0	60	150	4	0	214	791
5:15 PM	0	6	112	50	0	168	0	14	130	73	0	217	0	36	144	20	0	200	0	50	145	6	0	201	786
5:30 PM	0	3	96	58	0	157	0	19	106	48	0	173	0	43	108	13	1	164	0	67	151	7	1	225	719
5:45 PM	0	5	106	40	0	151	0	24	135	71	0	230	0	39	138	23	0	200	0	55	158	4	0	217	798
Hourly Total	0	17	441	189	0	647	0	85	489	243	0	817	0	179	513	81	1	773	0	232	604	21	1	857	3094
Grand Total	0	68	1209	741	0	2018	0	330	1589	830	2	2749	1	571	1918	305	6	2795	0	650	2454	75	3	3179	10741
Approach %	0.0	3.4	59.9	36.7	-	-	0.0	12.0	57.8	30.2	-	-	0.0	20.4	68.6	10.9	-	-	0.0	20.4	77.2	2.4	-	-	-
Total %	0.0	0.6	11.3	6.9	-	18.8	0.0	3.1	14.8	7.7	-	25.6	0.0	5.3	17.9	2.8	-	26.0	0.0	6.1	22.8	0.7	-	29.6	-
Lights	0	68	1175	731	-	1974	0	316	1550	808	-	2674	1	562	1880	300	-	2743	0	630	2400	72	-	3102	10493
% Lights	-	100.0	97.2	98.7	-	97.8	-	95.8	97.5	97.3	-	97.3	100.0	98.4	98.0	98.4	-	98.1	-	96.9	97.8	96.0	-	97.6	97.7
Buses	0	0	10	9	-	19	0	8	12	5	-	25	0	5	15	4	-	24	0	10	14	0	-	24	92
% Buses	-	0.0	0.8	1.2	-	0.9	-	2.4	0.8	0.6	-	0.9	0.0	0.9	0.8	1.3	-	0.9	-	1.5	0.6	0.0	-	0.8	0.9
Single-Unit Trucks	0	0	14	1	-	15	0	4	15	9	-	28	0	3	15	0	-	18	0	6	30	3	-	39	100
% Single-Unit Trucks	-	0.0	1.2	0.1	-	0.7	-	1.2	0.9	1.1	-	1.0	0.0	0.5	0.8	0.0	-	0.6	-	0.9	1.2	4.0	-	1.2	0.9
Articulated Trucks	0	0	10	0	-	10	0	2	12	8	-	22	0	1	8	1	-	10	0	4	10	0	-	14	56
% Articulated Trucks	-	0.0	0.8	0.0	-	0.5	-	0.6	0.8	1.0	-	0.8	0.0	0.2	0.4	0.3	-	0.4	-	0.6	0.4	0.0	-	0.4	0.5
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0

% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-
Pedestrians	-	-	-	-	0	-	-	-	-	-	2	-	-	-	-	-	6	-	-	-	-	-	-	3	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-	-	-	-	-	100.0	-	-

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(847)518-9990 abowen@kloainc.com

Count Name: Theodore Street with Plainfield Road TMC
Site Code:
Start Date: 09/05/2024

Turning Movement Peak Hour Data (7:30 AM)

Start Time	Theodore Street Eastbound						Theodore Street Westbound						Plainfield Road Northbound						Plainfield Road Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
7:30 AM	0	3	44	59	0	106	0	18	95	47	0	160	0	28	127	22	0	177	0	18	172	5	0	195	638
7:45 AM	0	6	43	46	0	95	0	20	85	48	1	153	0	41	125	24	0	190	0	26	160	7	0	193	631
8:00 AM	0	2	43	37	0	82	0	17	70	53	0	140	0	28	81	18	0	127	0	23	145	3	0	171	520
8:15 AM	0	1	53	26	0	80	0	16	76	47	0	139	0	21	97	21	0	139	0	27	141	4	1	172	530
Total	0	12	183	168	0	363	0	71	326	195	1	592	0	118	430	85	0	633	0	94	618	19	1	731	2319
Approach %	0.0	3.3	50.4	46.3	-	-	0.0	12.0	55.1	32.9	-	-	0.0	18.6	67.9	13.4	-	-	0.0	12.9	84.5	2.6	-	-	-
Total %	0.0	0.5	7.9	7.2	-	15.7	0.0	3.1	14.1	8.4	-	25.5	0.0	5.1	18.5	3.7	-	27.3	0.0	4.1	26.6	0.8	-	31.5	-
PHF	0.000	0.500	0.863	0.712	-	0.856	0.000	0.888	0.858	0.920	-	0.925	0.000	0.720	0.846	0.885	-	0.833	0.000	0.870	0.898	0.679	-	0.937	0.909
Lights	0	12	176	164	-	352	0	65	317	189	-	571	0	115	418	85	-	618	0	90	601	19	-	710	2251
% Lights	-	100.0	96.2	97.6	-	97.0	-	91.5	97.2	96.9	-	96.5	-	97.5	97.2	100.0	-	97.6	-	95.7	97.2	100.0	-	97.1	97.1
Buses	0	0	2	4	-	6	0	3	4	3	-	10	0	1	3	0	-	4	0	2	3	0	-	5	25
% Buses	-	0.0	1.1	2.4	-	1.7	-	4.2	1.2	1.5	-	1.7	-	0.8	0.7	0.0	-	0.6	-	2.1	0.5	0.0	-	0.7	1.1
Single-Unit Trucks	0	0	2	0	-	2	0	1	2	2	-	5	0	2	6	0	-	8	0	0	12	0	-	12	27
% Single-Unit Trucks	-	0.0	1.1	0.0	-	0.6	-	1.4	0.6	1.0	-	0.8	-	1.7	1.4	0.0	-	1.3	-	0.0	1.9	0.0	-	1.6	1.2
Articulated Trucks	0	0	3	0	-	3	0	2	3	1	-	6	0	0	3	0	-	3	0	2	2	0	-	4	16
% Articulated Trucks	-	0.0	1.6	0.0	-	0.8	-	2.8	0.9	0.5	-	1.0	-	0.0	0.7	0.0	-	0.5	-	2.1	0.3	0.0	-	0.5	0.7
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	0	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-

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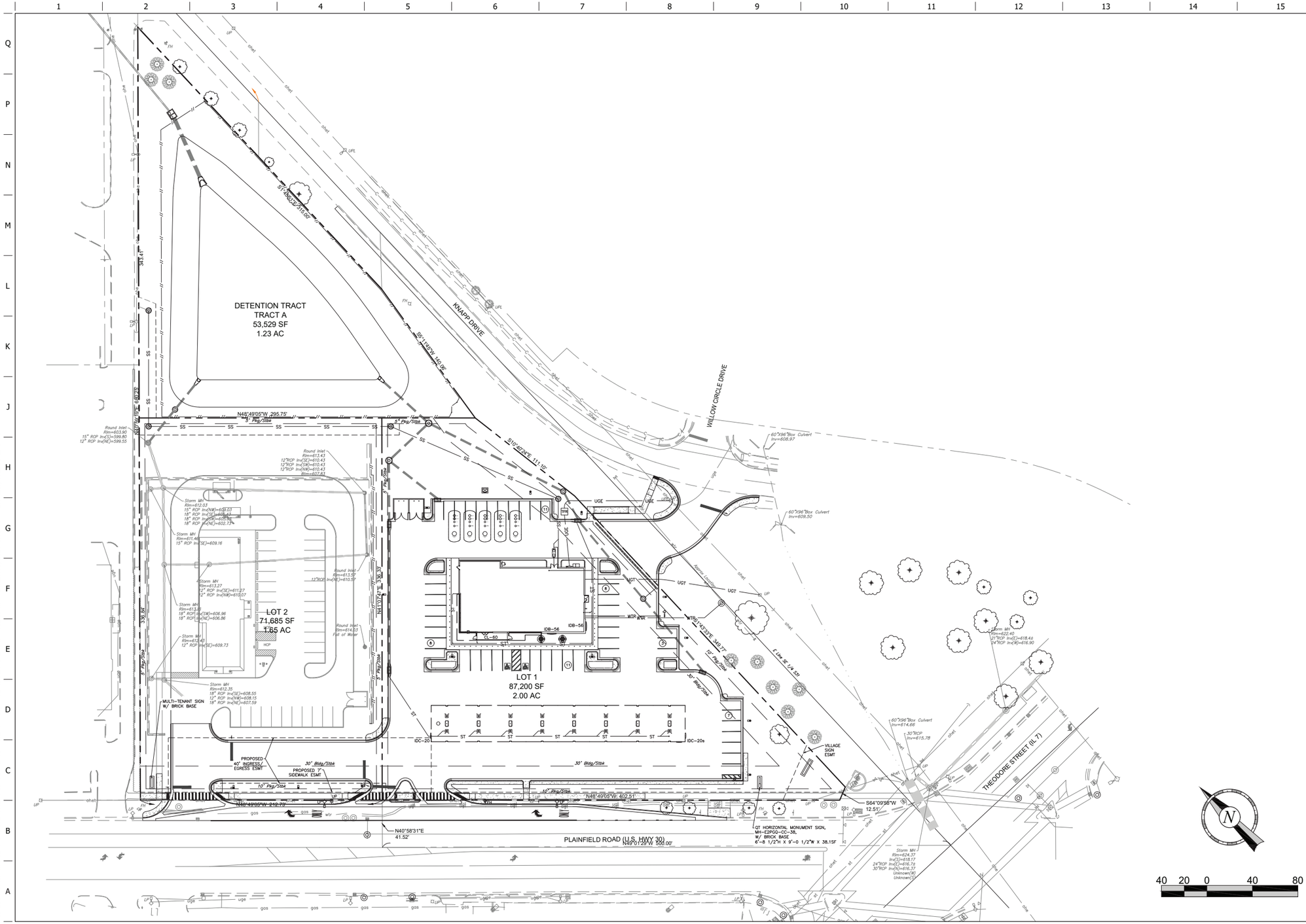
(847)518-9990 abowen@kloainc.com

Count Name: Theodore Street with Plainfield Road TMC
Site Code:
Start Date: 09/05/2024

Turning Movement Peak Hour Data (4:00 PM)

Start Time	Theodore Street Eastbound						Theodore Street Westbound						Plainfield Road Northbound						Plainfield Road Southbound						Int. Total
	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	U-Turn	Left	Thru	Right	Peds	App. Total	
4:00 PM	0	5	87	62	0	154	0	23	128	71	0	222	0	40	143	22	0	205	0	69	192	7	0	268	849
4:15 PM	0	4	123	70	0	197	0	38	122	50	0	210	0	41	145	21	1	207	0	63	171	3	0	237	851
4:30 PM	0	17	91	66	0	174	0	34	111	51	0	196	0	61	142	16	0	219	0	47	169	3	1	219	808
4:45 PM	0	6	95	50	0	151	0	16	125	58	0	199	0	54	159	20	0	233	0	56	177	4	0	237	820
Total	0	32	396	248	0	676	0	111	486	230	0	827	0	196	589	79	1	864	0	235	709	17	1	961	3328
Approach %	0.0	4.7	58.6	36.7	-	-	0.0	13.4	58.8	27.8	-	-	0.0	22.7	68.2	9.1	-	-	0.0	24.5	73.8	1.8	-	-	-
Total %	0.0	1.0	11.9	7.5	-	20.3	0.0	3.3	14.6	6.9	-	24.8	0.0	5.9	17.7	2.4	-	26.0	0.0	7.1	21.3	0.5	-	28.9	-
PHF	0.000	0.471	0.805	0.886	-	0.858	0.000	0.730	0.949	0.810	-	0.931	0.000	0.803	0.926	0.898	-	0.927	0.000	0.851	0.923	0.607	-	0.896	0.978
Lights	0	32	387	246	-	665	0	107	480	225	-	812	0	193	577	78	-	848	0	228	697	16	-	941	3266
% Lights	-	100.0	97.7	99.2	-	98.4	-	96.4	98.8	97.8	-	98.2	-	98.5	98.0	98.7	-	98.1	-	97.0	98.3	94.1	-	97.9	98.1
Buses	0	0	4	2	-	6	0	1	3	0	-	4	0	3	5	1	-	9	0	3	2	0	-	5	24
% Buses	-	0.0	1.0	0.8	-	0.9	-	0.9	0.6	0.0	-	0.5	-	1.5	0.8	1.3	-	1.0	-	1.3	0.3	0.0	-	0.5	0.7
Single-Unit Trucks	0	0	3	0	-	3	0	3	1	1	-	5	0	0	4	0	-	4	0	2	6	1	-	9	21
% Single-Unit Trucks	-	0.0	0.8	0.0	-	0.4	-	2.7	0.2	0.4	-	0.6	-	0.0	0.7	0.0	-	0.5	-	0.9	0.8	5.9	-	0.9	0.6
Articulated Trucks	0	0	2	0	-	2	0	0	2	4	-	6	0	0	3	0	-	3	0	2	4	0	-	6	17
% Articulated Trucks	-	0.0	0.5	0.0	-	0.3	-	0.0	0.4	1.7	-	0.7	-	0.0	0.5	0.0	-	0.3	-	0.9	0.6	0.0	-	0.6	0.5
Bicycles on Road	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0	0	0	0	-	0	0
% Bicycles on Road	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	-	0.0	0.0	0.0	-	0.0	0.0
Pedestrians	-	-	-	-	0	-	-	-	-	-	0	-	-	-	-	-	1	-	-	-	-	-	1	-	-
% Pedestrians	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100.0	-	-	-	-	-	100.0	-	-

Site Plan



DARLA K. HOLMAN
062-072191
ILLINOIS
1/9/26

PROJECT NO.: 84-4452

Midwest Design Group
Kansas City
PO Box 860015
Shawnee, KS 66286-0015
P 913.248.9385

QuikTrip No. 4452

1610 PLAINFIELD ROAD
CREST HILL, WILL COUNTY, ILLINOIS 60403

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PROTOTYPE:	P-122
DIVISION:	84
VERSION:	001
DESIGNED BY:	DKH
DRAWN BY:	CSH
REVIEWED BY:	CJC

REV	DATE	DESCRIPTION
		ORIGINAL ISSUE DATE: 01/09/2026

SHEET TITLE:
OVERALL SITE PLAN

SHEET NUMBER:
C100

FILE LOCATION:C:\Civil 3D Projects\QT4452 Crest Hill, IL\84-4452 Civil.dwg TAB NAME:Overall Site USER:dkhol SAVED:1/9/2026 2:18 PM PLOTTED:1/9/2026 2:19 PM

CMAP 2050 Projections Letter

Chicago Metropolitan Agency for Planning

433 West Van Buren Street, Suite 450
Chicago, IL 60607
cmap.illinois.gov | 312-454-0400

August 13, 2024

Ryan May
Project Coordinator
Kenig, Lindgren, O'Hara and Aboona, Inc.
9575 West Higgins Road
Suite 400
Rosemont, IL 60018

Subject: Plainfield Road @ Larkin Avenue and @ Theodore Street
IDOT

Dear Ms. May:

In response to a request made on your behalf and dated August 9, 2024, we have developed year 2050 average daily traffic (ADT) projections for the subject location.

ROAD SEGMENT	Current ADT (2023)	Year 2050 ADT
Larkin Ave E of Plainfield Rd	21,100	26,100
Larkin Ave W of Plainfield Rd	24,800	30,700
Plainfield Rd, @ Larkin Ave	19,900	23,000
Theodore St east of Plainfield Rd	15,600	18,000
Theodore St wast of Plainfield Rd	12,600	14,500

Traffic projections are developed using existing ADT data provided in the request letter and the results from the June 2024 CMAP Travel Demand Analysis. The regional travel model uses CMAP 2050 socioeconomic projections and assumes the implementation of the ON TO 2050 Comprehensive Regional Plan for the Northeastern Illinois area. The provision of this data in support of your request does not constitute a CMAP endorsement of the proposed development or any subsequent developments.

If you have any questions, please call me at (312) 386-8806 or email me at jrodriguez@cmap.illinois.gov

Jose Rodriguez, PTP, AICP
Senior Planner, Research & Analysis

cc: Rios (IDOT)
\2024_TrafficForecasts\CrestHill\wi-33-24\wi-33-24.docx

ITE Trip Generation Sheets

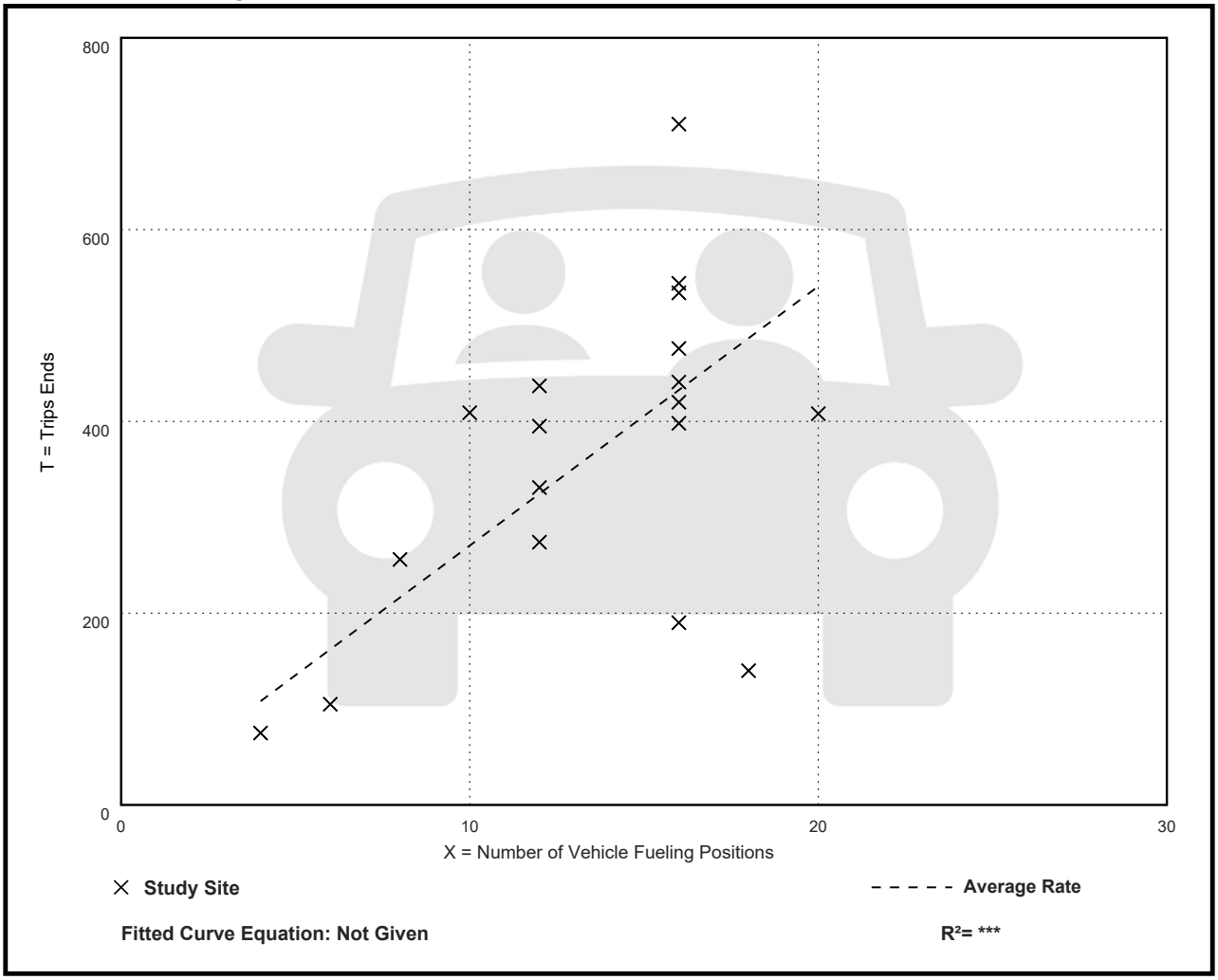
Convenience Store/Gas Station - GFA (4-5.5k) (945)

Vehicle Trip Ends vs: Vehicle Fueling Positions
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 18
Avg. Num. of Vehicle Fueling Positions: 13
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Vehicle Fueling Position

Average Rate	Range of Rates	Standard Deviation
27.04	7.78 - 44.38	9.88

Data Plot and Equation



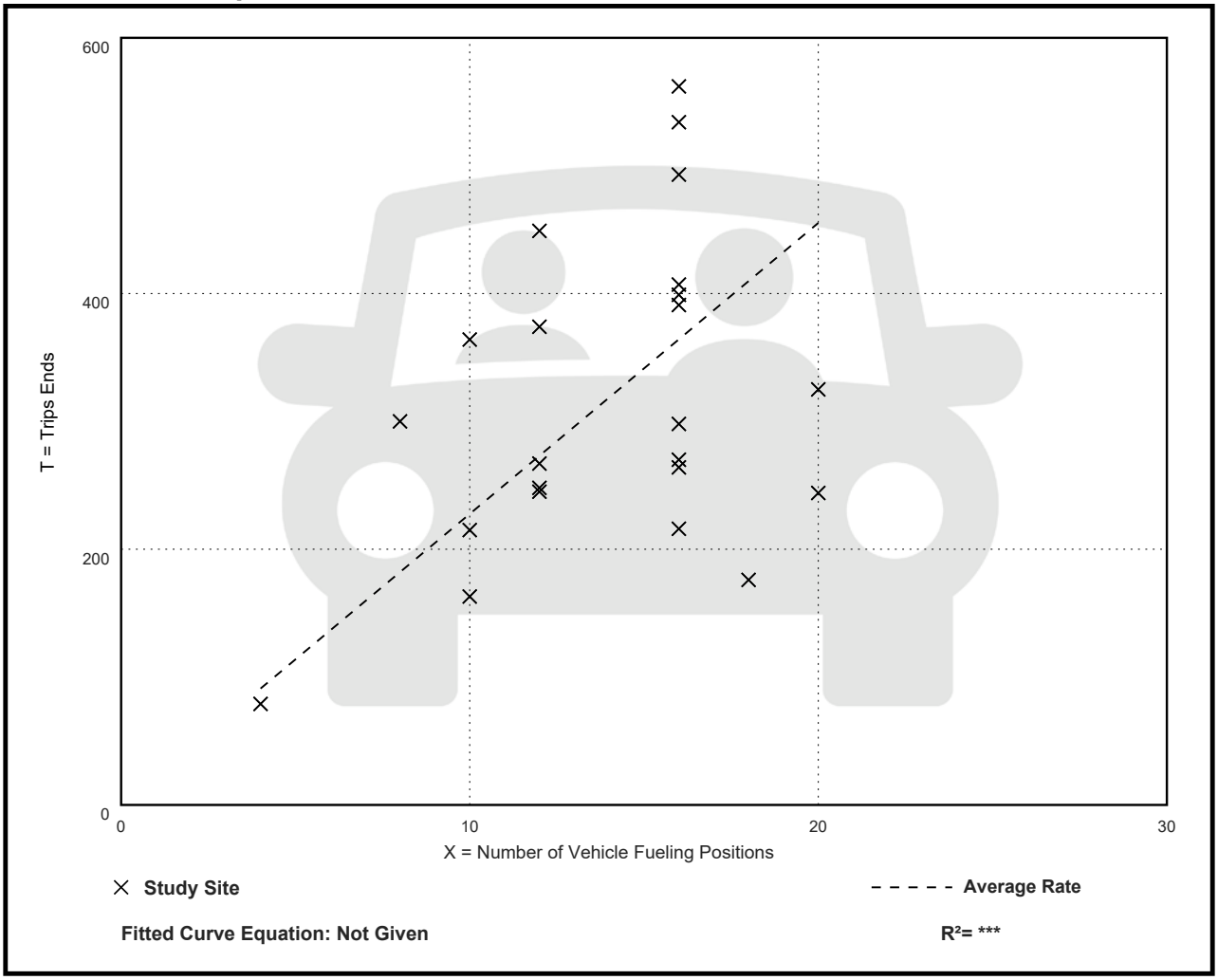
Convenience Store/Gas Station - GFA (4-5.5k) (945)

Vehicle Trip Ends vs: Vehicle Fueling Positions
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 23
Avg. Num. of Vehicle Fueling Positions: 14
Directional Distribution: 50% entering, 50% exiting

Vehicle Trip Generation per Vehicle Fueling Position

Average Rate	Range of Rates	Standard Deviation
22.76	9.78 - 37.50	8.49

Data Plot and Equation



Convenience Store/Gas Station - GFA (4-5.5k) (945)

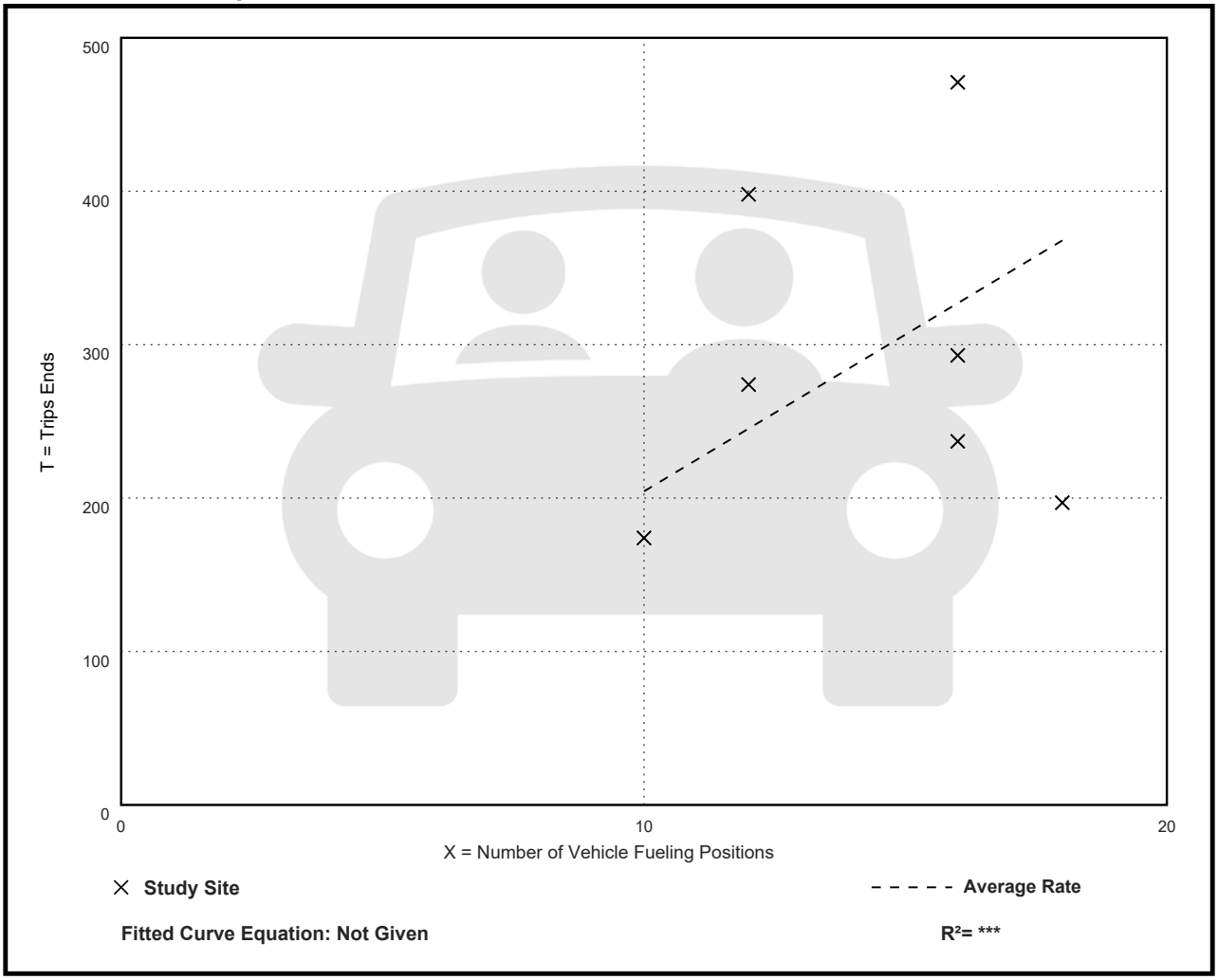
Vehicle Trip Ends vs: Vehicle Fueling Positions
On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 7
Avg. Num. of Vehicle Fueling Positions: 14
Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per Vehicle Fueling Position

Average Rate	Range of Rates	Standard Deviation
20.44	10.94 - 33.17	8.08

Data Plot and Equation



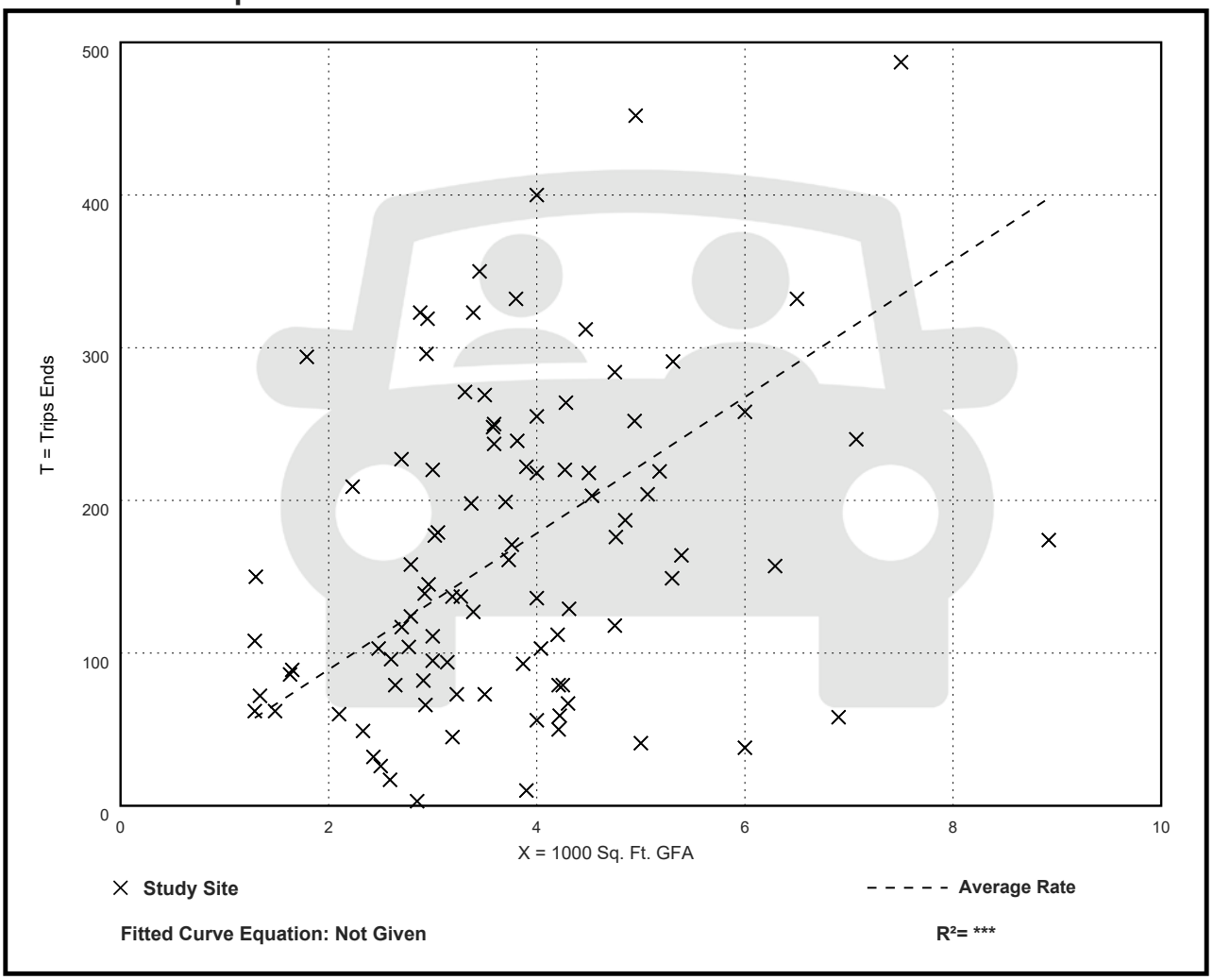
Fast-Food Restaurant with Drive-Through Window (934)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.
Setting/Location: General Urban/Suburban
Number of Studies: 96
Avg. 1000 Sq. Ft. GFA: 4
Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
44.61	1.05 - 164.25	27.14

Data Plot and Equation



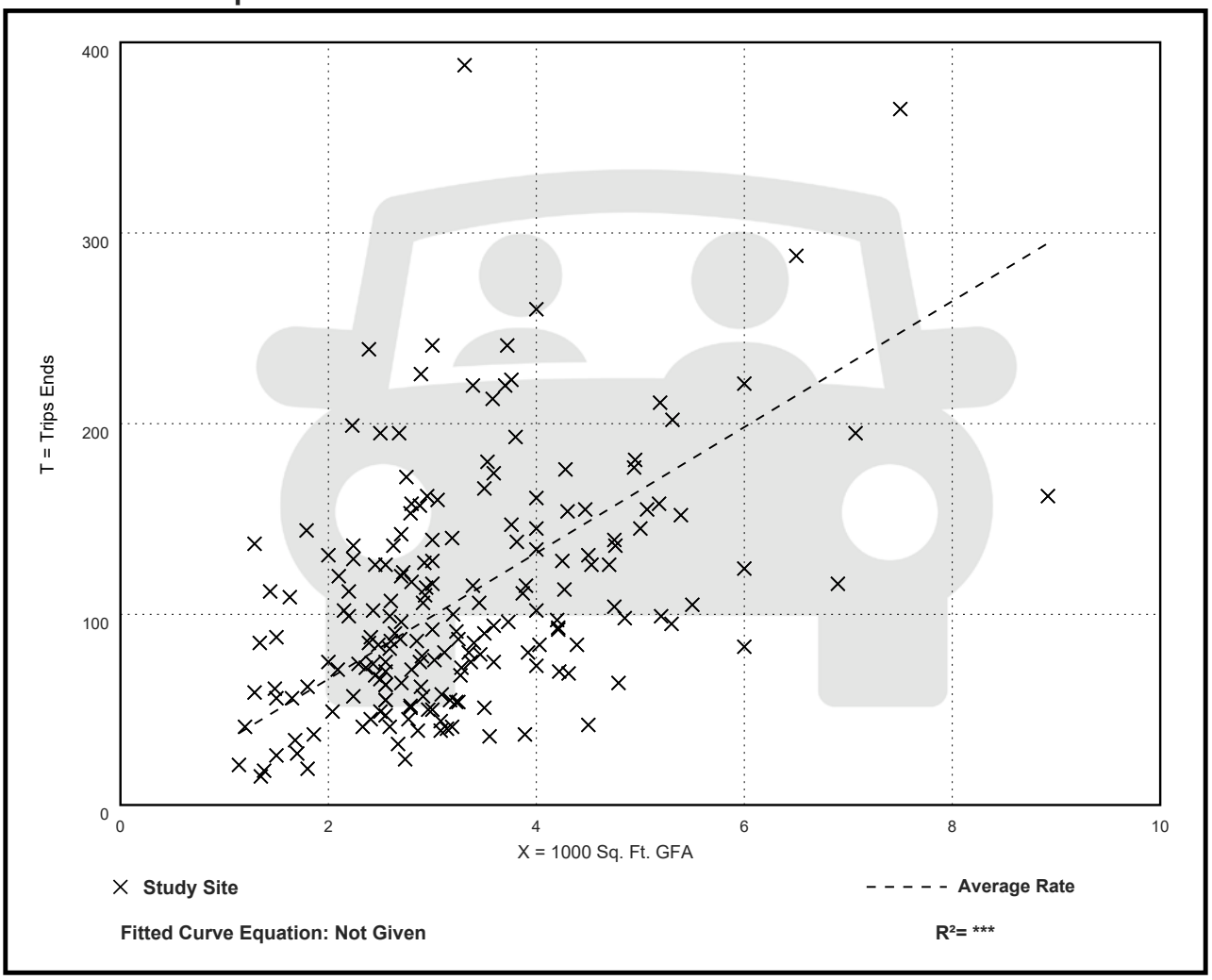
Fast-Food Restaurant with Drive-Through Window (934)

Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.
Setting/Location: General Urban/Suburban
Number of Studies: 190
Avg. 1000 Sq. Ft. GFA: 3
Directional Distribution: 52% entering, 48% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
33.03	8.77 - 117.22	17.59

Data Plot and Equation



Fast-Food Restaurant with Drive-Through Window (934)

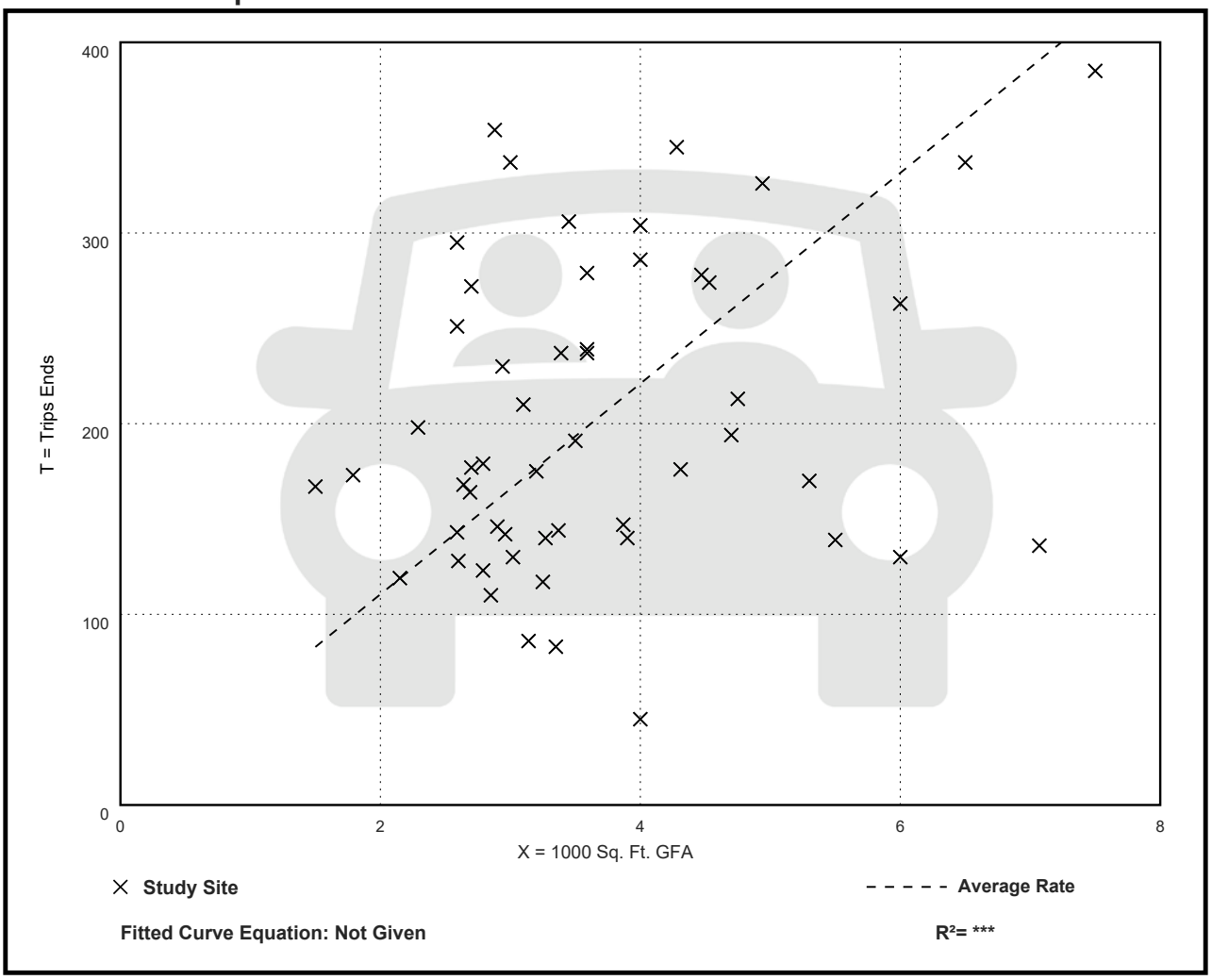
Vehicle Trip Ends vs: 1000 Sq. Ft. GFA
On a: Saturday, Peak Hour of Generator

Setting/Location: General Urban/Suburban
Number of Studies: 53
Avg. 1000 Sq. Ft. GFA: 4
Directional Distribution: 51% entering, 49% exiting

Vehicle Trip Generation per 1000 Sq. Ft. GFA

Average Rate	Range of Rates	Standard Deviation
55.25	11.25 - 122.92	24.62

Data Plot and Equation



Level of Service Criteria

LEVEL OF SERVICE CRITERIA

Signalized Intersections		
Level of Service	Interpretation	Average Control Delay (seconds per vehicle)
A	Favorable progression. Most vehicles arrive during the green indication and travel through the intersection without stopping.	≤10
B	Good progression, with more vehicles stopping than for Level of Service A.	>10 - 20
C	Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear. Number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping.	>20 - 35
D	The volume-to-capacity ratio is high and either progression is ineffective or the cycle length is too long. Many vehicles stop and individual cycle failures are noticeable.	>35 - 55
E	Progression is unfavorable. The volume-to-capacity ratio is high and the cycle length is long. Individual cycle failures are frequent.	>55 - 80
F	The volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue.	>80.0

Unsignalized Intersections	
Level of Service	Average Total Delay (SEC/VEH)
A	0 - 10
B	> 10 - 15
C	> 15 - 25
D	> 25 - 35
E	> 35 - 50
F	> 50

Source: *Highway Capacity Manual*, 6th Edition.

Capacity Analysis Summary Sheets

Existing Weekday Morning Peak Hour

Lanes, Volumes, Timings
1: Plainfield Road & Theodore Street

11/08/2024

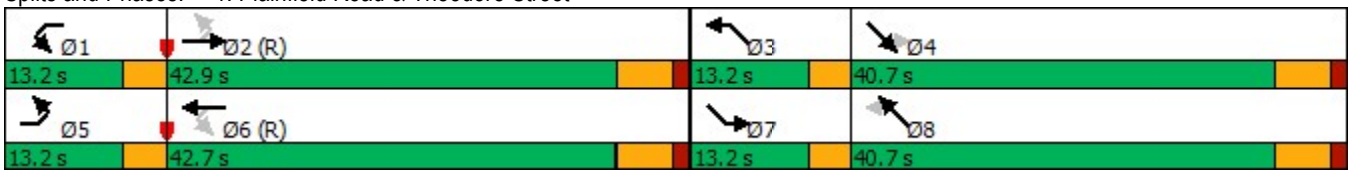
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	12	183	168	71	326	195	94	619	19	118	430	85
Future Volume (vph)	12	183	168	71	326	195	94	619	19	118	430	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	180		0	125		0	310		0	270		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	115			115			220			150		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.928			0.944			0.996			0.975	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	3251	0	1671	3309	0	1736	3494	0	1752	3434	0
Flt Permitted	0.405			0.445			0.336			0.238		
Satd. Flow (perm)	770	3251	0	783	3309	0	614	3494	0	439	3434	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		933			319			463			1681	
Travel Time (s)		18.2			6.2			9.0			32.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	4%	2%	8%	3%	3%	4%	3%	0%	3%	3%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	386	0	78	572	0	103	701	0	130	566	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2			6			4			8		
Detector Phase	5	2		1	6		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	6.5	21.0		6.5	21.0		6.5	21.0		6.5	21.0	
Total Split (s)	13.2	42.9		13.2	42.7		13.2	40.7		13.2	40.7	
Total Split (%)	12.0%	39.0%		12.0%	38.8%		12.0%	37.0%		12.0%	37.0%	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Act Effct Green (s)	47.8	40.4		52.5	46.2		46.4	35.2		47.3	35.7	
Actuated g/C Ratio	0.43	0.37		0.48	0.42		0.42	0.32		0.43	0.32	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
v/c Ratio	0.03	0.32		0.18	0.41		0.30	0.63		0.44	0.51	
Control Delay	16.1	27.4		17.4	24.8		6.5	22.3		22.0	31.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	16.1	27.4		17.4	24.8		6.5	22.3		22.0	31.9	
LOS	B	C		B	C		A	C		C	C	
Approach Delay		27.0			23.9			20.3			30.1	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	5	113		32	148		3	220		48	157	
Queue Length 95th (ft)	15	150		57	214		m8	287		90	227	
Internal Link Dist (ft)		853			239			383			1601	
Turn Bay Length (ft)	180			125			310			270		
Base Capacity (vph)	445	1216		452	1389		364	1145		308	1135	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.03	0.32		0.17	0.41		0.28	0.61		0.42	0.50	

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 11 (10%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.63
Intersection Signal Delay: 24.9 Intersection LOS: C
Intersection Capacity Utilization 59.5% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Plainfield Road & Theodore Street



Lanes, Volumes, Timings
2: Larkin Avenue & Plainfield Road

11/08/2024

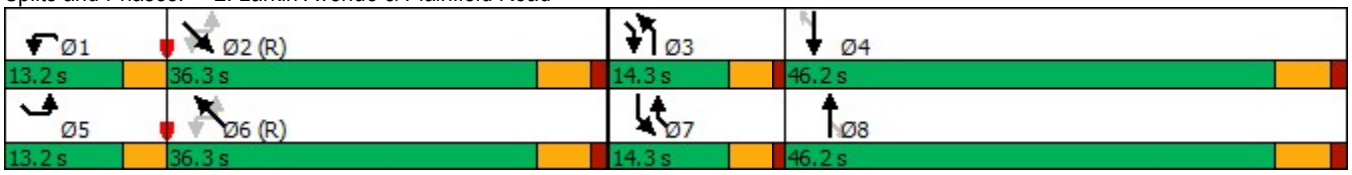
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	194	541	81	114	517	27	56	588	205	70	427	167
Future Volume (vph)	194	541	81	114	517	27	56	588	205	70	427	167
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	190		150	200		200	215		285	155		165
Storage Lanes	2		1	1		1	1		1	1		1
Taper Length (ft)	220			175			250			110		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3400	3519	1599	1736	3585	1455	1656	3689	1568	1805	3689	1599
Flt Permitted	0.950			0.950			0.411			0.282		
Satd. Flow (perm)	3400	3519	1599	1736	3585	1455	716	3689	1568	536	3689	1599
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			40			35	
Link Distance (ft)		853			840			808			1222	
Travel Time (s)		16.6			16.4			13.8			23.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	1%	4%	6%	11%	9%	3%	3%	0%	3%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	216	601	90	127	574	30	62	653	228	78	474	186
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	3	8		7	4		5	2	3	1	6	7
Permitted Phases			8			4	2		2	6		6
Detector Phase	3	8	8	7	4	4	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	3.0	15.0	15.0	3.0	15.0	15.0	3.0	15.0	3.0	3.0	15.0	3.0
Minimum Split (s)	7.5	21.0	21.0	7.5	21.0	21.0	6.5	21.0	7.5	6.5	21.0	7.5
Total Split (s)	14.3	46.2	46.2	14.3	46.2	46.2	13.2	36.3	14.3	13.2	36.3	14.3
Total Split (%)	13.0%	42.0%	42.0%	13.0%	42.0%	42.0%	12.0%	33.0%	13.0%	12.0%	33.0%	13.0%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	3.5	3.5	4.5	3.5
All-Red Time (s)	1.0	1.5	1.5	1.0	1.5	1.5	0.0	1.5	1.0	0.0	1.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0	3.5	6.0	4.5	3.5	6.0	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	None
Act Effct Green (s)	9.6	36.0	36.0	9.7	36.1	36.1	47.3	38.1	53.7	47.7	38.3	54.0
Actuated g/C Ratio	0.09	0.33	0.33	0.09	0.33	0.33	0.43	0.35	0.49	0.43	0.35	0.49

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
v/c Ratio	0.73	0.52	0.17	0.83	0.49	0.06	0.17	0.51	0.30	0.24	0.37	0.24
Control Delay	63.7	31.2	25.7	88.7	30.5	23.7	20.1	32.5	20.6	15.3	25.9	16.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.7	31.2	25.7	88.7	30.5	23.7	20.1	32.5	20.6	15.3	25.9	16.9
LOS	E	C	C	F	C	C	C	C	C	B	C	B
Approach Delay		38.4			40.3			28.8			22.5	
Approach LOS		D			D			C			C	
Queue Length 50th (ft)	77	171	43	90	161	14	26	207	104	36	137	94
Queue Length 95th (ft)	#127	222	79	#195	210	35	53	276	170	62	223	157
Internal Link Dist (ft)		773			760			728			1142	
Turn Bay Length (ft)	190		150	200		200	215		285	155		165
Base Capacity (vph)	302	1286	584	154	1310	531	397	1277	768	348	1284	786
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.47	0.15	0.82	0.44	0.06	0.16	0.51	0.30	0.22	0.37	0.24

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 16.5 (15%), Referenced to phase 2:SETL and 6:NWTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 32.6 Intersection LOS: C
Intersection Capacity Utilization 56.9% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Larkin Avenue & Plainfield Road



Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	56	306	532	135	42	60
Future Vol, veh/h	56	306	532	135	42	60
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	5	4	5	2	0
Mvmt Flow	59	322	560	142	44	63

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	702	0	-	0	910	351
Stage 1	-	-	-	-	631	-
Stage 2	-	-	-	-	279	-
Critical Hdwy	4.1	-	-	-	6.84	6.9
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.2	-	-	-	3.52	3.3
Pot Cap-1 Maneuver	905	-	-	-	274	651
Stage 1	-	-	-	-	492	-
Stage 2	-	-	-	-	743	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	905	-	-	-	252	651
Mov Cap-2 Maneuver	-	-	-	-	360	-
Stage 1	-	-	-	-	453	-
Stage 2	-	-	-	-	743	-

Approach	EB	WB	SB
HCM Control Delay, s	1.7	0	14.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	905	-	-	-	488
HCM Lane V/C Ratio	0.065	-	-	-	0.22
HCM Control Delay (s)	9.3	0.3	-	-	14.4
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.8

Intersection	
Int Delay, s/veh	0

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	0	732	1	0	637	0	0	0	0	0	0	0
Future Vol, veh/h	0	732	1	0	637	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	10	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	4	0	0	5	0	0	0	0	0	0	0
Mvmt Flow	0	804	1	0	700	0	0	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	700	0	0	805	0	0	1155	1505	403	1102	1505	350
Stage 1	-	-	-	-	-	-	805	805	-	700	700	-
Stage 2	-	-	-	-	-	-	350	700	-	402	805	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	906	-	-	828	-	-	154	122	603	169	122	652
Stage 1	-	-	-	-	-	-	347	398	-	401	444	-
Stage 2	-	-	-	-	-	-	645	444	-	601	398	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	906	-	-	828	-	-	154	122	603	169	122	652
Mov Cap-2 Maneuver	-	-	-	-	-	-	154	122	-	169	122	-
Stage 1	-	-	-	-	-	-	347	398	-	401	444	-
Stage 2	-	-	-	-	-	-	645	444	-	601	398	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	0	0	0	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NELn1	NWL	NWT	NWR	SEL	SET	SER	SWLn1
Capacity (veh/h)	-	828	-	-	906	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↰	↗		↕	
Traffic Vol, veh/h	1	100	0	1	172	14	0	0	0	2	0	1
Future Vol, veh/h	1	100	0	1	172	14	0	0	0	2	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	0	3	7	0	1	0	0	0	0	0	0	0
Mvmt Flow	1	115	0	1	198	16	0	0	0	2	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	214	0	0	115	0	0	326	333	115	325	325	206
Stage 1	-	-	-	-	-	-	117	117	-	208	208	-
Stage 2	-	-	-	-	-	-	209	216	-	117	117	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1368	-	-	1487	-	-	631	590	943	632	596	840
Stage 1	-	-	-	-	-	-	892	803	-	799	734	-
Stage 2	-	-	-	-	-	-	798	728	-	892	803	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1368	-	-	1487	-	-	629	589	943	631	595	840
Mov Cap-2 Maneuver	-	-	-	-	-	-	629	589	-	631	595	-
Stage 1	-	-	-	-	-	-	891	802	-	798	733	-
Stage 2	-	-	-	-	-	-	796	727	-	891	802	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	0.1	0	0	10.3
HCM LOS			A	B

Minor Lane/Major Mvmt	NELn1	NELn2	NWL	NWT	NWR	SEL	SET	SER	SWLn1
Capacity (veh/h)	-	-	1487	-	-	1368	-	-	688
HCM Lane V/C Ratio	-	-	0.001	-	-	0.001	-	-	0.005
HCM Control Delay (s)	0	0	7.4	0	-	7.6	0	-	10.3
HCM Lane LOS	A	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	-	-	0	-	-	0	-	-	0

Capacity Analysis Summary Sheets

Existing Weekday Evening Peak Hour

Lanes, Volumes, Timings
1: Plainfield Road & Theodore Street

11/08/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	32	419	248	111	486	230	235	714	17	196	589	79
Future Volume (vph)	32	419	248	111	486	230	235	714	17	196	589	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	180		0	125		0	310		0	270		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	115			115			220			150		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.944			0.952			0.997			0.982	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	3321	0	1719	3369	0	1736	3525	0	1752	3442	0
Flt Permitted	0.293			0.259			0.202			0.191		
Satd. Flow (perm)	557	3321	0	469	3369	0	369	3525	0	352	3442	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		933			319			463			1681	
Travel Time (s)		18.2			6.2			9.0			32.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	3%	2%	5%	2%	2%	4%	2%	6%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	33	681	0	113	731	0	240	746	0	200	682	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2			6			4			8		
Detector Phase	5	2		1	6		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	6.5	21.0		6.5	21.0		6.5	21.0		6.5	21.0	
Total Split (s)	13.0	52.0		13.0	52.0		24.7	40.3		24.7	40.3	
Total Split (%)	10.0%	40.0%		10.0%	40.0%		19.0%	31.0%		19.0%	31.0%	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Act Effct Green (s)	57.9	48.6		62.5	54.3		57.8	38.7		54.4	37.0	
Actuated g/C Ratio	0.45	0.37		0.48	0.42		0.44	0.30		0.42	0.28	

Lanes, Volumes, Timings
1: Plainfield Road & Theodore Street

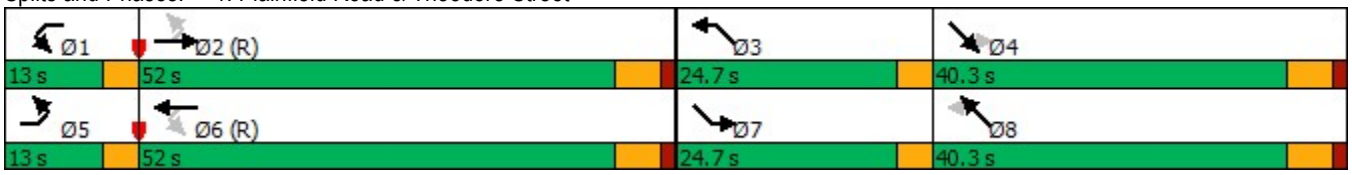
11/08/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
v/c Ratio	0.11	0.55		0.36	0.52		0.71	0.71		0.65	0.70	
Control Delay	19.3	34.8		22.5	31.2		41.8	58.1		31.9	46.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	19.3	34.8		22.5	31.2		41.8	58.1		31.9	46.1	
LOS	B	C		C	C		D	E		C	D	
Approach Delay		34.1			30.1			54.1			42.8	
Approach LOS		C			C			D			D	
Queue Length 50th (ft)	15	244		53	256		201	350		98	263	
Queue Length 95th (ft)	34	308		90	328		m279	m407		151	351	
Internal Link Dist (ft)		853			239			383			1601	
Turn Bay Length (ft)	180			125			310			270		
Base Capacity (vph)	350	1240		316	1408		390	1050		386	980	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.09	0.55		0.36	0.52		0.62	0.71		0.52	0.70	

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 33.8 (26%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 41.1 Intersection LOS: D
Intersection Capacity Utilization 74.2% ICU Level of Service D
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Plainfield Road & Theodore Street



Lanes, Volumes, Timings
2: Larkin Avenue & Plainfield Road

11/08/2024

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	283	596	64	182	784	75	82	737	326	85	673	140
Future Volume (vph)	283	596	64	182	784	75	82	737	326	85	673	140
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	190		150	200		200	215		285	155		165
Storage Lanes	2		1	1		1	1		1	1		1
Taper Length (ft)	220			175			250			110		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3467	3519	1615	1736	3619	1568	1770	3689	1599	1805	3689	1553
Flt Permitted	0.950			0.950			0.219			0.179		
Satd. Flow (perm)	3467	3519	1615	1736	3619	1568	408	3689	1599	340	3689	1553
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			40			35	
Link Distance (ft)		853			840			808			1222	
Travel Time (s)		16.6			16.4			13.8			23.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	8%	0%	4%	5%	3%	2%	3%	1%	0%	3%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	289	608	65	186	800	77	84	752	333	87	687	143
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	3	8		7	4		5	2	3	1	6	7
Permitted Phases			8			4	2		2	6		6
Detector Phase	3	8	8	7	4	4	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	3.0	15.0	15.0	3.0	15.0	15.0	3.0	15.0	3.0	3.0	15.0	3.0
Minimum Split (s)	7.5	21.0	21.0	7.5	21.0	21.0	6.5	21.0	7.5	6.5	21.0	7.5
Total Split (s)	27.3	58.5	58.5	18.2	49.4	49.4	13.0	40.3	27.3	13.0	40.3	18.2
Total Split (%)	21.0%	45.0%	45.0%	14.0%	38.0%	38.0%	10.0%	31.0%	21.0%	10.0%	31.0%	14.0%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	3.5	3.5	4.5	3.5
All-Red Time (s)	1.0	1.5	1.5	1.0	1.5	1.5	0.0	1.5	1.0	0.0	1.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0	3.5	6.0	4.5	3.5	6.0	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	None
Act Effct Green (s)	16.5	48.6	48.6	14.2	46.3	46.3	49.7	38.6	61.1	49.7	38.6	58.9
Actuated g/C Ratio	0.13	0.37	0.37	0.11	0.36	0.36	0.38	0.30	0.47	0.38	0.30	0.45

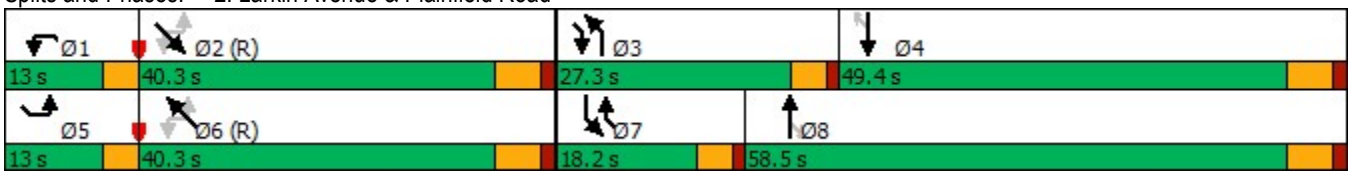
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
v/c Ratio	0.66	0.46	0.11	0.98	0.62	0.14	0.34	0.69	0.44	0.38	0.63	0.20
Control Delay	61.1	31.5	25.3	119.1	37.0	28.8	29.5	45.4	26.0	24.0	26.5	14.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.1	31.5	25.3	119.1	37.0	28.8	29.5	45.4	26.0	24.0	26.5	14.8
LOS	E	C	C	F	D	C	C	D	C	C	C	B
Approach Delay		40.0			50.8			38.8			24.5	
Approach LOS		D			D			D			C	
Queue Length 50th (ft)	121	192	34	~163	277	42	45	310	197	27	138	39
Queue Length 95th (ft)	162	244	66	#320	367	83	83	384	265	m49	168	m58
Internal Link Dist (ft)		773			760			728			1142	
Turn Bay Length (ft)	190		150	200		200	215		285	155		165
Base Capacity (vph)	608	1421	652	189	1311	568	258	1095	829	239	1096	703
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.43	0.10	0.98	0.61	0.14	0.33	0.69	0.40	0.36	0.63	0.20

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 6.5 (5%), Referenced to phase 2:SETL and 6:NWTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay: 39.0 Intersection LOS: D
Intersection Capacity Utilization 69.8% ICU Level of Service C
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Larkin Avenue & Plainfield Road



Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	62	671	714	109	68	113
Future Vol, veh/h	62	671	714	109	68	113
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	4	3	2	1	1
Mvmt Flow	66	714	760	116	72	120

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	876	0	-	0	1307	438
Stage 1	-	-	-	-	818	-
Stage 2	-	-	-	-	489	-
Critical Hdwy	4.1	-	-	-	6.82	6.92
Critical Hdwy Stg 1	-	-	-	-	5.82	-
Critical Hdwy Stg 2	-	-	-	-	5.82	-
Follow-up Hdwy	2.2	-	-	-	3.51	3.31
Pot Cap-1 Maneuver	779	-	-	-	153	569
Stage 1	-	-	-	-	397	-
Stage 2	-	-	-	-	585	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	779	-	-	-	132	569
Mov Cap-2 Maneuver	-	-	-	-	251	-
Stage 1	-	-	-	-	341	-
Stage 2	-	-	-	-	585	-

Approach	EB	WB	SB
HCM Control Delay, s	1.4	0	23.3
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	779	-	-	-	386
HCM Lane V/C Ratio	0.085	-	-	-	0.499
HCM Control Delay (s)	10	0.6	-	-	23.3
HCM Lane LOS	B	A	-	-	C
HCM 95th %tile Q(veh)	0.3	-	-	-	2.7

Intersection	
Int Delay, s/veh	2.2

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	0	966	0	0	851	0	0	0	0	50	0	0
Future Vol, veh/h	0	966	0	0	851	0	0	0	0	50	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	10	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	2	0	0	3	0	0	0	0	0	0	0
Mvmt Flow	0	1039	0	0	915	0	0	0	0	54	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	915	0	0	1039	0	0	1497	1954	520	1435	1954	458
Stage 1	-	-	-	-	-	-	1039	1039	-	915	915	-
Stage 2	-	-	-	-	-	-	458	915	-	520	1039	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	754	-	-	677	-	-	86	65	506	96	65	555
Stage 1	-	-	-	-	-	-	250	310	-	298	354	-
Stage 2	-	-	-	-	-	-	557	354	-	512	310	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	754	-	-	677	-	-	86	65	506	96	65	555
Mov Cap-2 Maneuver	-	-	-	-	-	-	86	65	-	96	65	-
Stage 1	-	-	-	-	-	-	250	310	-	298	354	-
Stage 2	-	-	-	-	-	-	557	354	-	512	310	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	0	0	0	82.3
HCM LOS			A	F

Minor Lane/Major Mvmt	NELn1	NWL	NWT	NWR	SEL	SET	SERSWLn1
Capacity (veh/h)	-	677	-	-	754	-	- 96
HCM Lane V/C Ratio	-	-	-	-	-	-	- 0.56
HCM Control Delay (s)	0	0	-	-	0	-	- 82.3
HCM Lane LOS	A	A	-	-	A	-	- F
HCM 95th %tile Q(veh)	-	0	-	-	0	-	- 2.6

Intersection	
Int Delay, s/veh	0.9

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↰	↱		↕	
Traffic Vol, veh/h	2	182	0	0	170	18	0	0	0	25	0	7
Future Vol, veh/h	2	182	0	0	170	18	0	0	0	25	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	1	0	0	1	0	0	0	0	0	0	0
Mvmt Flow	2	196	0	0	183	19	0	0	0	27	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	202	0	0	196	0	0	397	402	196	393	393	193
Stage 1	-	-	-	-	-	-	200	200	-	193	193	-
Stage 2	-	-	-	-	-	-	197	202	-	200	200	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1382	-	-	1389	-	-	567	540	850	570	546	854
Stage 1	-	-	-	-	-	-	806	739	-	813	745	-
Stage 2	-	-	-	-	-	-	809	738	-	806	739	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1382	-	-	1389	-	-	561	539	850	569	545	854
Mov Cap-2 Maneuver	-	-	-	-	-	-	561	539	-	569	545	-
Stage 1	-	-	-	-	-	-	804	738	-	811	745	-
Stage 2	-	-	-	-	-	-	802	738	-	804	738	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	0.1	0	0	11.2
HCM LOS			A	B

Minor Lane/Major Mvmt	NELn1	NELn2	NWL	NWT	NWR	SEL	SET	SER	SWLn1
Capacity (veh/h)	-	-	1389	-	-	1382	-	-	614
HCM Lane V/C Ratio	-	-	-	-	-	0.002	-	-	0.056
HCM Control Delay (s)	0	0	0	-	-	7.6	0	-	11.2
HCM Lane LOS	A	A	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	-	-	0	-	-	0	-	-	0.2

Capacity Analysis Summary Sheets

Existing Saturday Midday Peak Hour

Lanes, Volumes, Timings
1: Plainfield Road & Theodore Street

11/08/2024

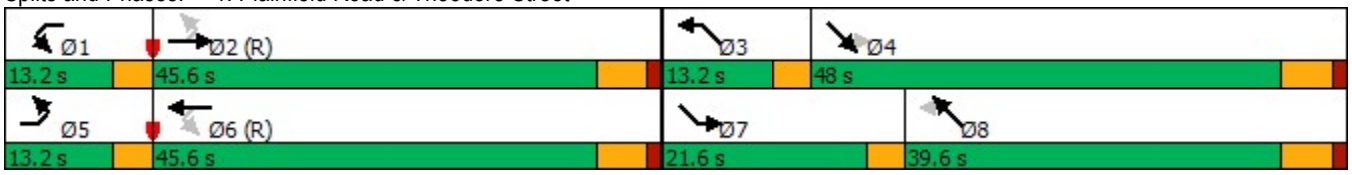
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	17	411	228	118	443	255	206	566	40	92	549	164
Future Volume (vph)	17	411	228	118	443	255	206	566	40	92	549	164
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	180		0	125		0	310		0	270		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	115			115			220			150		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.947			0.945			0.990			0.966	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	3363	0	1787	3353	0	1787	3476	0	1787	3437	0
Flt Permitted	0.314			0.255			0.181			0.353		
Satd. Flow (perm)	597	3363	0	480	3353	0	340	3476	0	664	3437	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		933			319			463			1681	
Travel Time (s)		18.2			6.2			9.0			32.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	1%	1%	1%	3%	1%	3%	0%	1%	1%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	18	659	0	122	720	0	212	625	0	95	735	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2			6			4			8		
Detector Phase	5	2		1	6		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	6.5	21.0		6.5	21.0		6.5	21.0		6.5	21.0	
Total Split (s)	13.2	45.6		13.2	45.6		21.6	48.0		13.2	39.6	
Total Split (%)	11.0%	38.0%		11.0%	38.0%		18.0%	40.0%		11.0%	33.0%	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Act Effct Green (s)	50.1	41.4		56.1	49.7		56.6	42.1		47.2	36.2	
Actuated g/C Ratio	0.42	0.34		0.47	0.41		0.47	0.35		0.39	0.30	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
v/c Ratio	0.06	0.57		0.38	0.52		0.63	0.51		0.28	0.71	
Control Delay	18.4	35.0		22.3	29.1		16.5	21.9		20.0	41.9	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	18.4	35.0		22.3	29.1		16.5	21.9		20.0	41.9	
LOS	B	C		C	C		B	C		B	D	
Approach Delay		34.5			28.1			20.5			39.4	
Approach LOS		C			C			C			D	
Queue Length 50th (ft)	7	223		53	205		100	207		39	262	
Queue Length 95th (ft)	21	285		92	306		m130	273		71	348	
Internal Link Dist (ft)		853			239			383			1601	
Turn Bay Length (ft)	180			125			310			270		
Base Capacity (vph)	364	1163		329	1389		378	1241		358	1036	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.05	0.57		0.37	0.52		0.56	0.50		0.27	0.71	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 7.2 (6%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 30.4 Intersection LOS: C
Intersection Capacity Utilization 73.7% ICU Level of Service D
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Plainfield Road & Theodore Street



Lanes, Volumes, Timings
2: Larkin Avenue & Plainfield Road

11/08/2024

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	381	561	92	139	615	81	88	608	324	95	591	146
Future Volume (vph)	381	561	92	139	615	81	88	608	324	95	591	146
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	190		150	200		200	215		285	155		165
Storage Lanes	2		1	1		1	1		1	1		1
Taper Length (ft)	220			175			250			110		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3467	3762	1599	1787	3654	1599	1787	3725	1615	1805	3762	1583
Flt Permitted	0.950			0.950			0.284			0.269		
Satd. Flow (perm)	3467	3762	1599	1787	3654	1599	534	3725	1615	511	3762	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			40			35	
Link Distance (ft)		853			840			808			1222	
Travel Time (s)		16.6			16.4			13.8			23.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	1%	1%	4%	1%	1%	2%	0%	0%	1%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	393	578	95	143	634	84	91	627	334	98	609	151
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	3	8		7	4		5	2	3	1	6	7
Permitted Phases			8			4	2		2	6		6
Detector Phase	3	8	8	7	4	4	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	3.0	15.0	15.0	3.0	15.0	15.0	3.0	15.0	3.0	3.0	15.0	3.0
Minimum Split (s)	7.5	21.0	21.0	7.5	21.0	21.0	6.5	21.0	7.5	6.5	21.0	7.5
Total Split (s)	24.0	52.8	52.8	16.8	45.6	45.6	13.2	37.2	24.0	13.2	37.2	16.8
Total Split (%)	20.0%	44.0%	44.0%	14.0%	38.0%	38.0%	11.0%	31.0%	20.0%	11.0%	31.0%	14.0%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	3.5	3.5	4.5	3.5
All-Red Time (s)	1.0	1.5	1.5	1.0	1.5	1.5	0.0	1.5	1.0	0.0	1.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0	3.5	6.0	4.5	3.5	6.0	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	None
Act Effct Green (s)	17.9	42.8	42.8	11.9	36.8	36.8	47.6	36.6	60.4	47.9	36.7	54.6
Actuated g/C Ratio	0.15	0.36	0.36	0.10	0.31	0.31	0.40	0.30	0.50	0.40	0.31	0.46

Lanes, Volumes, Timings
2: Larkin Avenue & Plainfield Road

11/08/2024

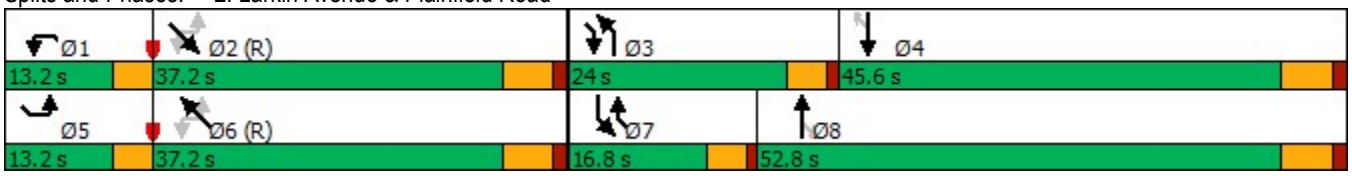
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
v/c Ratio	0.76	0.43	0.17	0.81	0.57	0.17	0.30	0.55	0.41	0.33	0.53	0.21
Control Delay	59.1	29.8	25.8	85.0	36.6	30.3	25.4	38.6	21.6	17.6	30.2	14.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.1	29.8	25.8	85.0	36.6	30.3	25.4	38.6	21.6	17.6	30.2	14.6
LOS	E	C	C	F	D	C	C	D	C	B	C	B
Approach Delay		40.3			44.1			32.1			26.0	
Approach LOS		D			D			C			C	
Queue Length 50th (ft)	150	167	47	110	208	46	45	227	167	27	221	83
Queue Length 95th (ft)	204	217	86	#217	267	86	81	293	247	m48	320	m119
Internal Link Dist (ft)		773			760			728			1142	
Turn Bay Length (ft)	190		150	200		200	215		285	155		165
Base Capacity (vph)	563	1467	623	183	1205	527	318	1134	835	312	1150	725
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.39	0.15	0.78	0.53	0.16	0.29	0.55	0.40	0.31	0.53	0.21

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 7.2 (6%), Referenced to phase 2:SETL and 6:NWTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 35.7 Intersection LOS: D
Intersection Capacity Utilization 65.3% ICU Level of Service C
Analysis Period (min) 15

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Larkin Avenue & Plainfield Road



Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	45	736	703	95	100	113
Future Vol, veh/h	45	736	703	95	100	113
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	1	2	0	0	1
Mvmt Flow	47	767	732	99	104	118

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	831	0	-	0	1260	416
Stage 1	-	-	-	-	782	-
Stage 2	-	-	-	-	478	-
Critical Hdwy	4.1	-	-	-	6.8	6.92
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.31
Pot Cap-1 Maneuver	810	-	-	-	165	588
Stage 1	-	-	-	-	417	-
Stage 2	-	-	-	-	595	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	810	-	-	-	148	588
Mov Cap-2 Maneuver	-	-	-	-	273	-
Stage 1	-	-	-	-	375	-
Stage 2	-	-	-	-	595	-

Approach	EB	WB	SB
HCM Control Delay, s	0.9	0	26.8
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	810	-	-	-	381
HCM Lane V/C Ratio	0.058	-	-	-	0.582
HCM Control Delay (s)	9.7	0.4	-	-	26.8
HCM Lane LOS	A	A	-	-	D
HCM 95th %tile Q(veh)	0.2	-	-	-	3.5

Intersection	
Int Delay, s/veh	0

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	0	812	0	0	821	0	0	0	0	0	0	0
Future Vol, veh/h	0	812	0	0	821	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	10	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	2	0	0	3	0	0	0	0	0	0	0
Mvmt Flow	0	873	0	0	883	0	0	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	883	0	0	873	0	0	1315	1756	437	1320	1756	442
Stage 1	-	-	-	-	-	-	873	873	-	883	883	-
Stage 2	-	-	-	-	-	-	442	883	-	437	873	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	775	-	-	781	-	-	118	86	573	117	86	569
Stage 1	-	-	-	-	-	-	316	370	-	311	367	-
Stage 2	-	-	-	-	-	-	570	367	-	574	370	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	775	-	-	781	-	-	118	86	573	117	86	569
Mov Cap-2 Maneuver	-	-	-	-	-	-	118	86	-	117	86	-
Stage 1	-	-	-	-	-	-	316	370	-	311	367	-
Stage 2	-	-	-	-	-	-	570	367	-	574	370	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	0	0	0	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NELn1	NWL	NWT	NWR	SEL	SET	SER	SWLn1
Capacity (veh/h)	-	781	-	-	775	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↰	↗		↕	
Traffic Vol, veh/h	1	222	0	0	158	16	0	0	0	9	0	2
Future Vol, veh/h	1	222	0	0	158	16	0	0	0	9	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	1	252	0	0	180	18	0	0	0	10	0	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	198	0	0	252	0	0	444	452	252	443	443	189
Stage 1	-	-	-	-	-	-	254	254	-	189	189	-
Stage 2	-	-	-	-	-	-	190	198	-	254	254	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1387	-	-	1325	-	-	528	506	792	528	512	858
Stage 1	-	-	-	-	-	-	755	701	-	817	748	-
Stage 2	-	-	-	-	-	-	816	741	-	755	701	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1387	-	-	1325	-	-	526	505	792	527	511	858
Mov Cap-2 Maneuver	-	-	-	-	-	-	526	505	-	527	511	-
Stage 1	-	-	-	-	-	-	754	700	-	816	748	-
Stage 2	-	-	-	-	-	-	814	741	-	754	700	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	0	0	0	11.5
HCM LOS			A	B

Minor Lane/Major Mvmt	NELn1	NELn2	NWL	NWT	NWR	SEL	SET	SER	SWLn1
Capacity (veh/h)	-	-	1325	-	-	1387	-	-	567
HCM Lane V/C Ratio	-	-	-	-	-	0.001	-	-	0.022
HCM Control Delay (s)	0	0	0	-	-	7.6	0	-	11.5
HCM Lane LOS	A	A	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	-	-	0	-	-	0	-	-	0.1

Capacity Analysis Summary Sheets

Year 2030 No-Build Weekday Morning Peak Hour

Lanes, Volumes, Timings
1: Plainfield Road & Theodore Street

11/08/2024

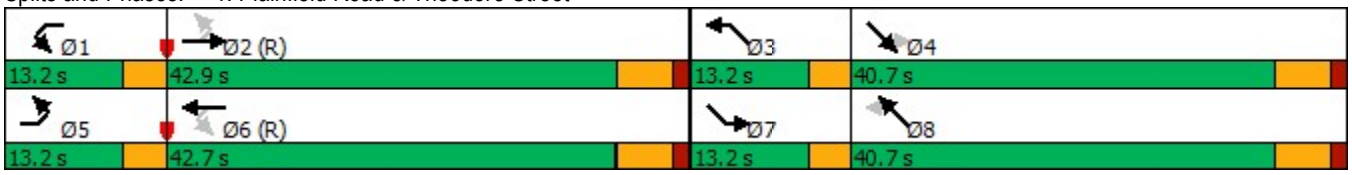
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	12	190	174	74	338	202	97	642	20	122	446	88
Future Volume (vph)	12	190	174	74	338	202	97	642	20	122	446	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	180		0	125		0	310		0	270		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	115			115			220			150		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.928			0.944			0.995			0.975	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	3251	0	1671	3309	0	1736	3490	0	1752	3434	0
Flt Permitted	0.391			0.435			0.322			0.222		
Satd. Flow (perm)	743	3251	0	765	3309	0	588	3490	0	410	3434	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		933			319			463			1681	
Travel Time (s)		18.2			6.2			9.0			32.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	4%	2%	8%	3%	3%	4%	3%	0%	3%	3%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	400	0	81	593	0	107	727	0	134	587	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2			6			4			8		
Detector Phase	5	2		1	6		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	6.5	21.0		6.5	21.0		6.5	21.0		6.5	21.0	
Total Split (s)	13.2	42.9		13.2	42.7		13.2	40.7		13.2	40.7	
Total Split (%)	12.0%	39.0%		12.0%	38.8%		12.0%	37.0%		12.0%	37.0%	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Act Effct Green (s)	47.6	40.3		52.4	46.1		46.4	35.3		47.4	35.8	
Actuated g/C Ratio	0.43	0.37		0.48	0.42		0.42	0.32		0.43	0.33	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
v/c Ratio	0.03	0.34		0.19	0.43		0.32	0.65		0.47	0.53	
Control Delay	15.9	27.5		17.4	25.0		6.8	22.3		22.9	32.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	15.9	27.5		17.4	25.0		6.8	22.3		22.9	32.3	
LOS	B	C		B	C		A	C		C	C	
Approach Delay		27.2			24.1			20.3			30.5	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	5	116		33	152		3	234		50	168	
Queue Length 95th (ft)	15	154		58	223		m8	m296		93	236	
Internal Link Dist (ft)		853			239			383			1601	
Turn Bay Length (ft)	180			125			310			270		
Base Capacity (vph)	435	1205		445	1387		355	1142		298	1134	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.03	0.33		0.18	0.43		0.30	0.64		0.45	0.52	

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 11 (10%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.65
Intersection Signal Delay: 25.1 Intersection LOS: C
Intersection Capacity Utilization 61.0% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Plainfield Road & Theodore Street



Lanes, Volumes, Timings
2: Larkin Avenue & Plainfield Road

11/08/2024

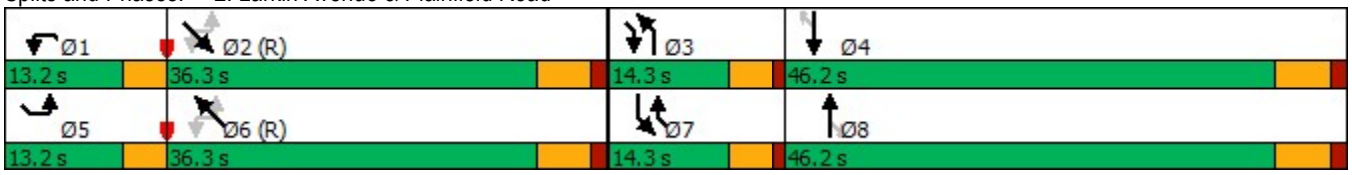
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	201	561	84	118	536	28	58	610	213	73	443	173
Future Volume (vph)	201	561	84	118	536	28	58	610	213	73	443	173
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	190		150	200		200	215		285	155		165
Storage Lanes	2		1	1		1	1		1	1		1
Taper Length (ft)	220			175			250			110		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3400	3519	1599	1736	3585	1455	1656	3689	1568	1805	3689	1599
Flt Permitted	0.950			0.950			0.396			0.262		
Satd. Flow (perm)	3400	3519	1599	1736	3585	1455	690	3689	1568	498	3689	1599
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			40			35	
Link Distance (ft)		853			840			808			1222	
Travel Time (s)		16.6			16.4			13.8			23.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	1%	4%	6%	11%	9%	3%	3%	0%	3%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	223	623	93	131	596	31	64	678	237	81	492	192
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	3	8		7	4		5	2	3	1	6	7
Permitted Phases			8			4	2		2	6		6
Detector Phase	3	8	8	7	4	4	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	3.0	15.0	15.0	3.0	15.0	15.0	3.0	15.0	3.0	3.0	15.0	3.0
Minimum Split (s)	7.5	21.0	21.0	7.5	21.0	21.0	6.5	21.0	7.5	6.5	21.0	7.5
Total Split (s)	14.3	46.2	46.2	14.3	46.2	46.2	13.2	36.3	14.3	13.2	36.3	14.3
Total Split (%)	13.0%	42.0%	42.0%	13.0%	42.0%	42.0%	12.0%	33.0%	13.0%	12.0%	33.0%	13.0%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	3.5	3.5	4.5	3.5
All-Red Time (s)	1.0	1.5	1.5	1.0	1.5	1.5	0.0	1.5	1.0	0.0	1.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0	3.5	6.0	4.5	3.5	6.0	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	None
Act Effct Green (s)	9.7	36.5	36.5	9.8	36.6	36.6	46.6	37.4	53.1	47.1	37.6	53.5
Actuated g/C Ratio	0.09	0.33	0.33	0.09	0.33	0.33	0.42	0.34	0.48	0.43	0.34	0.49

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
v/c Ratio	0.75	0.53	0.18	0.85	0.50	0.06	0.18	0.54	0.31	0.26	0.39	0.25
Control Delay	65.0	31.1	25.6	91.3	30.4	23.5	20.3	33.4	21.1	15.6	26.3	17.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.0	31.1	25.6	91.3	30.4	23.5	20.3	33.4	21.1	15.6	26.3	17.0
LOS	E	C	C	F	C	C	C	C	C	B	C	B
Approach Delay		38.6			40.6			29.6			22.8	
Approach LOS		D			D			C			C	
Queue Length 50th (ft)	80	176	44	93	166	14	27	220	110	37	145	99
Queue Length 95th (ft)	#134	230	82	#203	218	35	55	288	177	64	231	161
Internal Link Dist (ft)		773			760			728			1142	
Turn Bay Length (ft)	190		150	200		200	215		285	155		165
Base Capacity (vph)	302	1286	584	154	1310	531	383	1253	757	331	1262	777
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.48	0.16	0.85	0.45	0.06	0.17	0.54	0.31	0.24	0.39	0.25

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 16.5 (15%), Referenced to phase 2:SETL and 6:NWTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.85
Intersection Signal Delay: 33.0 Intersection LOS: C
Intersection Capacity Utilization 58.4% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Larkin Avenue & Plainfield Road



Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	56	319	554	135	42	60
Future Vol, veh/h	56	319	554	135	42	60
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	5	4	5	2	0
Mvmt Flow	59	336	583	142	44	63

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	725	0	-	0	940	363
Stage 1	-	-	-	-	654	-
Stage 2	-	-	-	-	286	-
Critical Hdwy	4.1	-	-	-	6.84	6.9
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.2	-	-	-	3.52	3.3
Pot Cap-1 Maneuver	887	-	-	-	262	640
Stage 1	-	-	-	-	479	-
Stage 2	-	-	-	-	737	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	887	-	-	-	241	640
Mov Cap-2 Maneuver	-	-	-	-	350	-
Stage 1	-	-	-	-	440	-
Stage 2	-	-	-	-	737	-

Approach	EB	WB	SB
HCM Control Delay, s	1.7	0	14.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	887	-	-	-	477
HCM Lane V/C Ratio	0.066	-	-	-	0.225
HCM Control Delay (s)	9.3	0.3	-	-	14.7
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.9

Intersection	
Int Delay, s/veh	6.7

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	0	759	1	0	660	0	0	0	0	0	0	0
Future Vol, veh/h	0	759	1	0	660	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	10	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	4	0	0	5	0	0	0	0	0	0	0
Mvmt Flow	0	834	1	0	725	0	0	0	0	0	0	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	364	1	1	419	1	0	1	0	0	0	0	0
Stage 1	1	1	-	0	0	-	-	-	-	-	-	-
Stage 2	363	0	-	419	1	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.54	6.2	7.1	6.55	6.2	4.1	-	-	4.1	-	-
Critical Hdwy Stg 1	6.1	5.54	-	6.1	5.55	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.54	-	6.1	5.55	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4.036	3.3	3.5	4.045	3.3	2.2	-	-	2.2	-	-
Pot Cap-1 Maneuver	596	891	1090	548	889	-	1635	-	-	-	-	-
Stage 1	1027	891	-	-	-	-	-	-	-	-	-	-
Stage 2	660	-	-	616	889	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	891	1090	94	889	-	1635	-	-	-	-	-
Mov Cap-2 Maneuver	-	891	-	94	889	-	-	-	-	-	-	-
Stage 1	1027	891	-	-	-	-	-	-	-	-	-	-
Stage 2	660	-	-	39	889	-	-	-	-	-	-	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	12.6		0	0
HCM LOS	B	-		

Minor Lane/Major Mvmt	NEL	NET	NER	NWLn1	NWLn2	SELn1	SELn2	SELn3	SWL	SWT	SWR
Capacity (veh/h)	1635	-	-	889	-	-	891	891	-	-	-
HCM Lane V/C Ratio	-	-	-	0.408	-	-	0.468	0.469	-	-	-
HCM Control Delay (s)	0	-	-	11.8	-	0	12.5	12.6	0	-	-
HCM Lane LOS	A	-	-	B	-	A	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	2	-	-	2.5	2.5	-	-	-

Intersection	
Int Delay, s/veh	0.1

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↰	↗		↕	
Traffic Vol, veh/h	1	100	0	1	172	14	0	0	0	2	0	1
Future Vol, veh/h	1	100	0	1	172	14	0	0	0	2	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	0	3	7	0	1	0	0	0	0	0	0	0
Mvmt Flow	1	115	0	1	198	16	0	0	0	2	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	214	0	0	115	0	0	326	333	115	325	325	206
Stage 1	-	-	-	-	-	-	117	117	-	208	208	-
Stage 2	-	-	-	-	-	-	209	216	-	117	117	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1368	-	-	1487	-	-	631	590	943	632	596	840
Stage 1	-	-	-	-	-	-	892	803	-	799	734	-
Stage 2	-	-	-	-	-	-	798	728	-	892	803	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1368	-	-	1487	-	-	629	589	943	631	595	840
Mov Cap-2 Maneuver	-	-	-	-	-	-	629	589	-	631	595	-
Stage 1	-	-	-	-	-	-	891	802	-	798	733	-
Stage 2	-	-	-	-	-	-	796	727	-	891	802	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	0.1	0	0	10.3
HCM LOS			A	B

Minor Lane/Major Mvmt	NELn1	NELn2	NWL	NWT	NWR	SEL	SET	SER	SWLn1
Capacity (veh/h)	-	-	1487	-	-	1368	-	-	688
HCM Lane V/C Ratio	-	-	0.001	-	-	0.001	-	-	0.005
HCM Control Delay (s)	0	0	7.4	0	-	7.6	0	-	10.3
HCM Lane LOS	A	A	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	-	-	0	-	-	0	-	-	0

Capacity Analysis Summary Sheets

Year 2030 No-Build Weekday Evening Peak Hour

Lanes, Volumes, Timings
1: Plainfield Road & Theodore Street

11/08/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	33	435	257	115	504	239	244	740	18	203	611	82
Future Volume (vph)	33	435	257	115	504	239	244	740	18	203	611	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	180		0	125		0	310		0	270		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	115			115			220			150		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.944			0.952			0.997			0.982	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	3321	0	1719	3369	0	1736	3525	0	1752	3442	0
Flt Permitted	0.274			0.240			0.193			0.179		
Satd. Flow (perm)	521	3321	0	434	3369	0	353	3525	0	330	3442	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		933			319			463			1681	
Travel Time (s)		18.2			6.2			9.0			32.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	3%	2%	5%	2%	2%	4%	2%	6%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	34	706	0	117	758	0	249	773	0	207	707	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2			6			4			8		
Detector Phase	5	2		1	6		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	6.5	21.0		6.5	21.0		6.5	21.0		6.5	21.0	
Total Split (s)	13.0	52.0		13.0	52.0		24.7	40.3		24.7	40.3	
Total Split (%)	10.0%	40.0%		10.0%	40.0%		19.0%	31.0%		19.0%	31.0%	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Act Effct Green (s)	56.7	47.4		61.4	53.2		58.6	39.3		55.7	37.8	
Actuated g/C Ratio	0.44	0.36		0.47	0.41		0.45	0.30		0.43	0.29	

Lanes, Volumes, Timings
1: Plainfield Road & Theodore Street

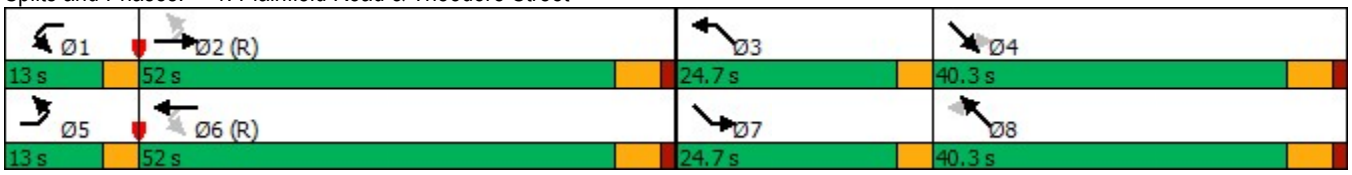
11/08/2024

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
v/c Ratio	0.12	0.58		0.40	0.55		0.74	0.73		0.67	0.71	
Control Delay	19.7	36.3		23.7	32.4		42.1	58.4		32.3	46.1	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	19.7	36.3		23.7	32.4		42.1	58.4		32.3	46.1	
LOS	B	D		C	C		D	E		C	D	
Approach Delay		35.5			31.2			54.4			43.0	
Approach LOS		D			C			D			D	
Queue Length 50th (ft)	15	255		55	269		209	363		102	277	
Queue Length 95th (ft)	34	321		93	342		m279	m415		157	366	
Internal Link Dist (ft)		853			239			383			1601	
Turn Bay Length (ft)	180			125			310			270		
Base Capacity (vph)	332	1227		298	1379		388	1064		383	1000	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.10	0.58		0.39	0.55		0.64	0.73		0.54	0.71	

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 33.8 (26%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 41.8 Intersection LOS: D
Intersection Capacity Utilization 76.3% ICU Level of Service D
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Plainfield Road & Theodore Street



Lanes, Volumes, Timings
2: Larkin Avenue & Plainfield Road

11/08/2024

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	293	618	66	189	813	78	85	764	338	88	698	145
Future Volume (vph)	293	618	66	189	813	78	85	764	338	88	698	145
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	190		150	200		200	215		285	155		165
Storage Lanes	2		1	1		1	1		1	1		1
Taper Length (ft)	220			175			250			110		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3467	3519	1615	1736	3619	1568	1770	3689	1599	1805	3689	1553
Flt Permitted	0.950			0.950			0.196			0.153		
Satd. Flow (perm)	3467	3519	1615	1736	3619	1568	365	3689	1599	291	3689	1553
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			40			35	
Link Distance (ft)		853			840			808			1222	
Travel Time (s)		16.6			16.4			13.8			23.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	8%	0%	4%	5%	3%	2%	3%	1%	0%	3%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	299	631	67	193	830	80	87	780	345	90	712	148
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	3	8		7	4		5	2	3	1	6	7
Permitted Phases			8			4	2		2	6		6
Detector Phase	3	8	8	7	4	4	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	3.0	15.0	15.0	3.0	15.0	15.0	3.0	15.0	3.0	3.0	15.0	3.0
Minimum Split (s)	7.5	21.0	21.0	7.5	21.0	21.0	6.5	21.0	7.5	6.5	21.0	7.5
Total Split (s)	27.3	58.5	58.5	18.2	49.4	49.4	13.0	40.3	27.3	13.0	40.3	18.2
Total Split (%)	21.0%	45.0%	45.0%	14.0%	38.0%	38.0%	10.0%	31.0%	21.0%	10.0%	31.0%	14.0%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	3.5	3.5	4.5	3.5
All-Red Time (s)	1.0	1.5	1.5	1.0	1.5	1.5	0.0	1.5	1.0	0.0	1.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0	3.5	6.0	4.5	3.5	6.0	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	None
Act Effct Green (s)	16.8	50.0	50.0	13.7	47.0	47.0	48.7	37.6	60.4	48.7	37.6	57.3
Actuated g/C Ratio	0.13	0.38	0.38	0.11	0.36	0.36	0.37	0.29	0.46	0.37	0.29	0.44

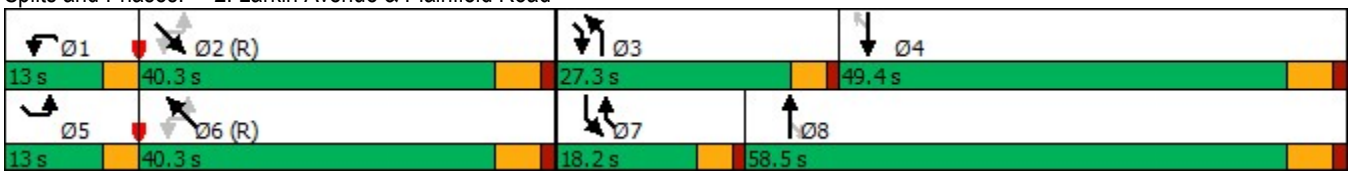
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
v/c Ratio	0.67	0.47	0.11	1.05	0.64	0.14	0.38	0.73	0.46	0.43	0.67	0.22
Control Delay	61.1	30.9	25.1	137.3	37.1	28.8	30.7	47.5	26.7	29.3	28.4	15.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.1	30.9	25.1	137.3	37.1	28.8	30.7	47.5	26.7	29.3	28.4	15.6
LOS	E	C	C	F	D	C	C	D	C	C	C	B
Approach Delay		39.5			54.1			40.3			26.5	
Approach LOS		D			D			D			C	
Queue Length 50th (ft)	125	201	35	~178	292	44	47	324	205	28	140	40
Queue Length 95th (ft)	167	254	67	#334	385	85	85	401	274	m63	195	m59
Internal Link Dist (ft)		773			760			728			1142	
Turn Bay Length (ft)	190		150	200		200	215		285	155		165
Base Capacity (vph)	608	1421	652	183	1315	570	241	1065	816	221	1066	685
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.44	0.10	1.05	0.63	0.14	0.36	0.73	0.42	0.41	0.67	0.22

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 6.5 (5%), Referenced to phase 2:SETL and 6:NWTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.05
Intersection Signal Delay: 40.6 Intersection LOS: D
Intersection Capacity Utilization 71.7% ICU Level of Service C
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Larkin Avenue & Plainfield Road



Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	62	699	745	109	68	113
Future Vol, veh/h	62	699	745	109	68	113
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	4	3	2	1	1
Mvmt Flow	66	744	793	116	72	120

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	909	0	-	0	1355	455
Stage 1	-	-	-	-	851	-
Stage 2	-	-	-	-	504	-
Critical Hdwy	4.1	-	-	-	6.82	6.92
Critical Hdwy Stg 1	-	-	-	-	5.82	-
Critical Hdwy Stg 2	-	-	-	-	5.82	-
Follow-up Hdwy	2.2	-	-	-	3.51	3.31
Pot Cap-1 Maneuver	757	-	-	-	142	555
Stage 1	-	-	-	-	381	-
Stage 2	-	-	-	-	575	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	757	-	-	-	121	555
Mov Cap-2 Maneuver	-	-	-	-	238	-
Stage 1	-	-	-	-	324	-
Stage 2	-	-	-	-	575	-

Approach	EB	WB	SB
HCM Control Delay, s	1.4	0	24.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	757	-	-	-	370
HCM Lane V/C Ratio	0.087	-	-	-	0.52
HCM Control Delay (s)	10.2	0.6	-	-	24.8
HCM Lane LOS	B	A	-	-	C
HCM 95th %tile Q(veh)	0.3	-	-	-	2.9

Intersection	
Int Delay, s/veh	0

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	0	1002	0	0	883	0	0	0	0	0	0	0
Future Vol, veh/h	0	1002	0	0	883	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	10	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	2	0	0	3	0	0	0	0	0	0	0
Mvmt Flow	0	1077	0	0	949	0	0	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	949	0	0	1077	0	0	1552	2026	539	1488	2026	475
Stage 1	-	-	-	-	-	-	1077	1077	-	949	949	-
Stage 2	-	-	-	-	-	-	475	949	-	539	1077	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	732	-	-	655	-	-	79	58	492	88	58	541
Stage 1	-	-	-	-	-	-	237	298	-	284	342	-
Stage 2	-	-	-	-	-	-	545	342	-	499	298	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	732	-	-	655	-	-	79	58	492	88	58	541
Mov Cap-2 Maneuver	-	-	-	-	-	-	79	58	-	88	58	-
Stage 1	-	-	-	-	-	-	237	298	-	284	342	-
Stage 2	-	-	-	-	-	-	545	342	-	499	298	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	0	0	0	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NELn1	NWL	NWT	NWR	SEL	SET	SER	SWLn1
Capacity (veh/h)	-	655	-	-	732	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0.9

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	2	182	0	0	170	18	0	0	0	25	0	7
Future Vol, veh/h	2	182	0	0	170	18	0	0	0	25	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	1	0	0	1	0	0	0	0	0	0	0
Mvmt Flow	2	196	0	0	183	19	0	0	0	27	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	202	0	0	196	0	0	397	402	196	393	393	193
Stage 1	-	-	-	-	-	-	200	200	-	193	193	-
Stage 2	-	-	-	-	-	-	197	202	-	200	200	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1382	-	-	1389	-	-	567	540	850	570	546	854
Stage 1	-	-	-	-	-	-	806	739	-	813	745	-
Stage 2	-	-	-	-	-	-	809	738	-	806	739	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1382	-	-	1389	-	-	561	539	850	569	545	854
Mov Cap-2 Maneuver	-	-	-	-	-	-	561	539	-	569	545	-
Stage 1	-	-	-	-	-	-	804	738	-	811	745	-
Stage 2	-	-	-	-	-	-	802	738	-	804	738	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	0.1	0	0	11.2
HCM LOS			A	B

Minor Lane/Major Mvmt	NELn1	NELn2	NWL	NWT	NWR	SEL	SET	SER	SWLn1
Capacity (veh/h)	-	-	1389	-	-	1382	-	-	614
HCM Lane V/C Ratio	-	-	-	-	-	0.002	-	-	0.056
HCM Control Delay (s)	0	0	0	-	-	7.6	0	-	11.2
HCM Lane LOS	A	A	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	-	-	0	-	-	0	-	-	0.2

Capacity Analysis Summary Sheets

Year 2030 No-Build Saturday Midday Peak Hour

Lanes, Volumes, Timings
1: Plainfield Road & Theodore Street

11/08/2024

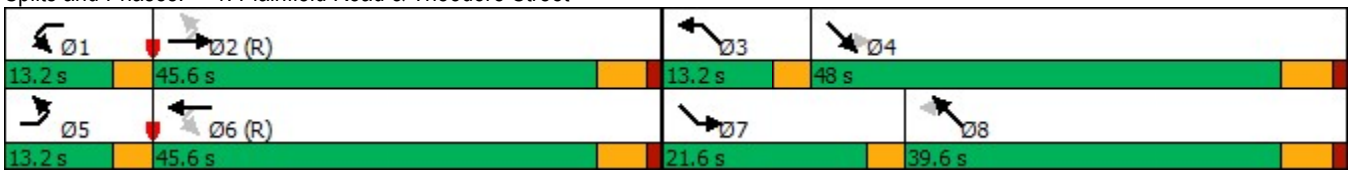
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	18	426	236	122	459	264	214	587	41	95	569	170
Future Volume (vph)	18	426	236	122	459	264	214	587	41	95	569	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	180		0	125		0	310		0	270		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	115			115			220			150		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.947			0.945			0.990			0.966	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	3363	0	1787	3353	0	1787	3476	0	1787	3437	0
Flt Permitted	0.297			0.243			0.165			0.337		
Satd. Flow (perm)	564	3363	0	457	3353	0	310	3476	0	634	3437	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		933			319			463			1681	
Travel Time (s)		18.2			6.2			9.0			32.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	1%	1%	1%	3%	1%	3%	0%	1%	1%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	19	682	0	126	745	0	221	647	0	98	762	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2			6			4			8		
Detector Phase	5	2		1	6		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	6.5	21.0		6.5	21.0		6.5	21.0		6.5	21.0	
Total Split (s)	13.2	45.6		13.2	45.6		21.6	48.0		13.2	39.6	
Total Split (%)	11.0%	38.0%		11.0%	38.0%		18.0%	40.0%		11.0%	33.0%	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Act Effct Green (s)	50.0	41.3		56.0	49.6		56.7	42.1		47.1	36.0	
Actuated g/C Ratio	0.42	0.34		0.47	0.41		0.47	0.35		0.39	0.30	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
v/c Ratio	0.06	0.59		0.40	0.54		0.68	0.53		0.30	0.74	
Control Delay	18.4	35.4		22.6	29.5		18.1	22.0		20.3	43.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	18.4	35.4		22.6	29.5		18.1	22.0		20.3	43.2	
LOS	B	D		C	C		B	C		C	D	
Approach Delay		34.9			28.5			21.0			40.6	
Approach LOS		C			C			C			D	
Queue Length 50th (ft)	8	232		55	214		101	214		41	275	
Queue Length 95th (ft)	22	297		94	320		m131	286		73	363	
Internal Link Dist (ft)		853			239			383			1601	
Turn Bay Length (ft)	180			125			310			270		
Base Capacity (vph)	351	1156		320	1387		368	1229		348	1030	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.05	0.59		0.39	0.54		0.60	0.53		0.28	0.74	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 7.2 (6%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 31.0 Intersection LOS: C
Intersection Capacity Utilization 75.8% ICU Level of Service D
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Plainfield Road & Theodore Street



Lanes, Volumes, Timings
2: Larkin Avenue & Plainfield Road

11/08/2024

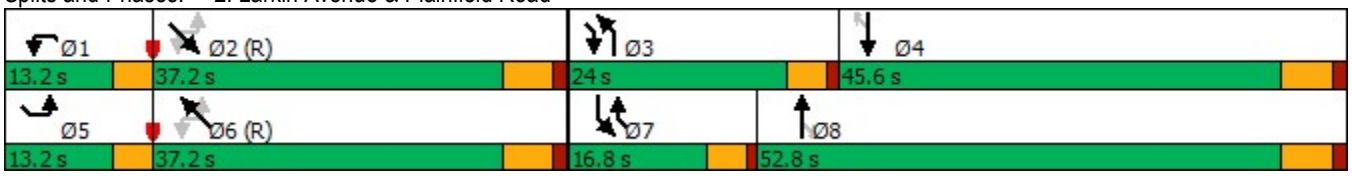
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	395	582	95	144	638	84	91	630	336	99	613	151
Future Volume (vph)	395	582	95	144	638	84	91	630	336	99	613	151
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	190		150	200		200	215		285	155		165
Storage Lanes	2		1	1		1	1		1	1		1
Taper Length (ft)	220			175			250			110		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3467	3762	1599	1787	3654	1599	1787	3725	1615	1805	3762	1583
Flt Permitted	0.950			0.950			0.262			0.249		
Satd. Flow (perm)	3467	3762	1599	1787	3654	1599	493	3725	1615	473	3762	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			40			35	
Link Distance (ft)		853			840			808			1222	
Travel Time (s)		16.6			16.4			13.8			23.8	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	1%	1%	4%	1%	1%	2%	0%	0%	1%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	407	600	98	148	658	87	94	649	346	102	632	156
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	3	8		7	4		5	2	3	1	6	7
Permitted Phases			8			4	2		2	6		6
Detector Phase	3	8	8	7	4	4	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	3.0	15.0	15.0	3.0	15.0	15.0	3.0	15.0	3.0	3.0	15.0	3.0
Minimum Split (s)	7.5	21.0	21.0	7.5	21.0	21.0	6.5	21.0	7.5	6.5	21.0	7.5
Total Split (s)	24.0	52.8	52.8	16.8	45.6	45.6	13.2	37.2	24.0	13.2	37.2	16.8
Total Split (%)	20.0%	44.0%	44.0%	14.0%	38.0%	38.0%	11.0%	31.0%	20.0%	11.0%	31.0%	14.0%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	3.5	3.5	4.5	3.5
All-Red Time (s)	1.0	1.5	1.5	1.0	1.5	1.5	0.0	1.5	1.0	0.0	1.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0	3.5	6.0	4.5	3.5	6.0	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	None
Act Effct Green (s)	18.0	43.5	43.5	12.0	37.4	37.4	46.9	35.8	59.8	47.2	35.9	53.9
Actuated g/C Ratio	0.15	0.36	0.36	0.10	0.31	0.31	0.39	0.30	0.50	0.39	0.30	0.45

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
v/c Ratio	0.78	0.44	0.17	0.83	0.58	0.17	0.33	0.58	0.43	0.36	0.56	0.22
Control Delay	60.1	29.7	25.7	87.6	36.6	30.2	26.2	39.7	22.2	18.2	30.7	14.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.1	29.7	25.7	87.6	36.6	30.2	26.2	39.7	22.2	18.2	30.7	14.8
LOS	E	C	C	F	D	C	C	D	C	B	C	B
Approach Delay		40.5			44.5			33.0			26.5	
Approach LOS		D			D			C			C	
Queue Length 50th (ft)	156	175	49	114	218	48	46	237	175	27	232	86
Queue Length 95th (ft)	211	225	88	#226	278	88	84	304	258	m49	331	m117
Internal Link Dist (ft)		773			760			728			1142	
Turn Bay Length (ft)	190		150	200		200	215		285	155		165
Base Capacity (vph)	563	1467	623	183	1205	527	301	1110	824	297	1125	714
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.41	0.16	0.81	0.55	0.17	0.31	0.58	0.42	0.34	0.56	0.22

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 7.2 (6%), Referenced to phase 2:SETL and 6:NWTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 36.2 Intersection LOS: D
Intersection Capacity Utilization 67.1% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Larkin Avenue & Plainfield Road



Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	45	765	732	95	100	113
Future Vol, veh/h	45	765	732	95	100	113
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	1	2	0	0	1
Mvmt Flow	47	797	763	99	104	118

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	862	0	-	0	1306	431
Stage 1	-	-	-	-	813	-
Stage 2	-	-	-	-	493	-
Critical Hdwy	4.1	-	-	-	6.8	6.92
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.31
Pot Cap-1 Maneuver	789	-	-	-	154	575
Stage 1	-	-	-	-	402	-
Stage 2	-	-	-	-	585	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	789	-	-	-	138	575
Mov Cap-2 Maneuver	-	-	-	-	261	-
Stage 1	-	-	-	-	359	-
Stage 2	-	-	-	-	585	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	28.7
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	789	-	-	-	367
HCM Lane V/C Ratio	0.059	-	-	-	0.605
HCM Control Delay (s)	9.9	0.5	-	-	28.7
HCM Lane LOS	A	A	-	-	D
HCM 95th %tile Q(veh)	0.2	-	-	-	3.8

Intersection	
Int Delay, s/veh	0

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	0	842	0	0	851	0	0	0	0	0	0	0
Future Vol, veh/h	0	842	0	0	851	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	10	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	2	0	0	3	0	0	0	0	0	0	0
Mvmt Flow	0	905	0	0	915	0	0	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	915	0	0	905	0	0	1363	1820	453	1368	1820	458
Stage 1	-	-	-	-	-	-	905	905	-	915	915	-
Stage 2	-	-	-	-	-	-	458	915	-	453	905	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	754	-	-	760	-	-	109	78	559	108	78	555
Stage 1	-	-	-	-	-	-	302	358	-	298	354	-
Stage 2	-	-	-	-	-	-	557	354	-	561	358	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	754	-	-	760	-	-	109	78	559	108	78	555
Mov Cap-2 Maneuver	-	-	-	-	-	-	109	78	-	108	78	-
Stage 1	-	-	-	-	-	-	302	358	-	298	354	-
Stage 2	-	-	-	-	-	-	557	354	-	561	358	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	0	0	0	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NELn1	NWL	NWT	NWR	SEL	SET	SER	SWLn1
Capacity (veh/h)	-	760	-	-	754	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↰	↗		↕	
Traffic Vol, veh/h	1	222	0	0	158	16	0	0	0	9	0	2
Future Vol, veh/h	1	222	0	0	158	16	0	0	0	9	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	1	252	0	0	180	18	0	0	0	10	0	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	198	0	0	252	0	0	444	452	252	443	443	189
Stage 1	-	-	-	-	-	-	254	254	-	189	189	-
Stage 2	-	-	-	-	-	-	190	198	-	254	254	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1387	-	-	1325	-	-	528	506	792	528	512	858
Stage 1	-	-	-	-	-	-	755	701	-	817	748	-
Stage 2	-	-	-	-	-	-	816	741	-	755	701	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1387	-	-	1325	-	-	526	505	792	527	511	858
Mov Cap-2 Maneuver	-	-	-	-	-	-	526	505	-	527	511	-
Stage 1	-	-	-	-	-	-	754	700	-	816	748	-
Stage 2	-	-	-	-	-	-	814	741	-	754	700	-

Approach	SE	NW	NE	SW
HCM Control Delay, s	0	0	0	11.5
HCM LOS			A	B

Minor Lane/Major Mvmt	NELn1	NELn2	NWL	NWT	NWR	SEL	SET	SER	SWLn1
Capacity (veh/h)	-	-	1325	-	-	1387	-	-	567
HCM Lane V/C Ratio	-	-	-	-	-	0.001	-	-	0.022
HCM Control Delay (s)	0	0	0	-	-	7.6	0	-	11.5
HCM Lane LOS	A	A	A	-	-	A	A	-	B
HCM 95th %tile Q(veh)	-	-	0	-	-	0	-	-	0.1

Capacity Analysis Summary Sheets

Year 2030 Total Projected Weekday Morning Peak Hour

Lanes, Volumes, Timings
1: Plainfield Road & Theodore Street

02/28/2025

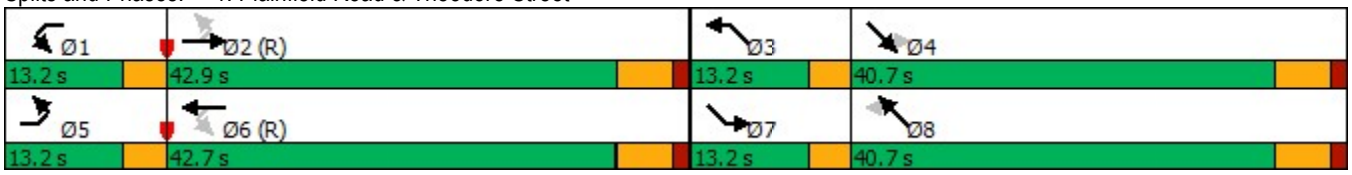
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	32	194	174	66	346	200	108	673	38	119	479	82
Future Volume (vph)	32	194	174	66	346	200	108	673	38	119	479	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	180		0	125		0	310		0	270		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	115			115			220			150		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.929			0.945			0.992			0.978	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	3254	0	1671	3312	0	1736	3482	0	1752	3442	0
Flt Permitted	0.358			0.441			0.303			0.199		
Satd. Flow (perm)	680	3254	0	776	3312	0	554	3482	0	367	3442	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		933			319			234			1681	
Travel Time (s)		18.2			6.2			4.6			32.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	4%	2%	8%	3%	3%	4%	3%	0%	3%	3%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	35	404	0	73	600	0	119	782	0	131	616	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2			6			4			8		
Detector Phase	5	2		1	6		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	6.5	21.0		6.5	21.0		6.5	21.0		6.5	21.0	
Total Split (s)	13.2	42.9		13.2	42.7		13.2	40.7		13.2	40.7	
Total Split (%)	12.0%	39.0%		12.0%	38.8%		12.0%	37.0%		12.0%	37.0%	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Act Effct Green (s)	47.7	39.6		50.6	42.8		47.6	36.2		48.0	36.4	
Actuated g/C Ratio	0.43	0.36		0.46	0.39		0.43	0.33		0.44	0.33	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
v/c Ratio	0.10	0.35		0.17	0.47		0.36	0.68		0.48	0.54	
Control Delay	16.6	27.8		17.4	27.6		10.3	24.6		23.2	32.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	16.6	27.8		17.4	27.6		10.3	24.6		23.2	32.3	
LOS	B	C		B	C		B	C		C	C	
Approach Delay		26.9			26.5			22.7			30.7	
Approach LOS		C			C			C			C	
Queue Length 50th (ft)	13	112		28	174		13	261		51	186	
Queue Length 95th (ft)	31	156		54	231		m22	m319		91	249	
Internal Link Dist (ft)		853			239			154			1601	
Turn Bay Length (ft)	180			125			310			270		
Base Capacity (vph)	407	1193		439	1287		348	1150		285	1142	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.09	0.34		0.17	0.47		0.34	0.68		0.46	0.54	

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 11 (10%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.68
Intersection Signal Delay: 26.5 Intersection LOS: C
Intersection Capacity Utilization 62.4% ICU Level of Service B
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Plainfield Road & Theodore Street



Lanes, Volumes, Timings
2: Larkin Avenue & Plainfield Road

02/28/2025

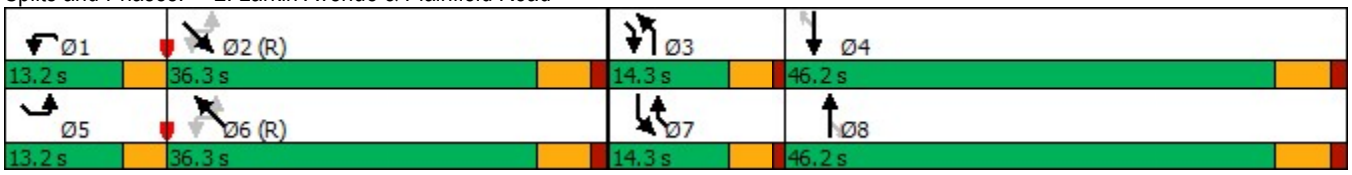
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	201	561	84	130	536	28	58	640	213	73	474	185
Future Volume (vph)	201	561	84	130	536	28	58	640	213	73	474	185
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	190		150	200		200	215		285	155		165
Storage Lanes	2		1	1		1	1		1	1		1
Taper Length (ft)	220			175			250			110		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3400	3519	1599	1736	3585	1455	1656	3689	1568	1805	3689	1599
Flt Permitted	0.950			0.950			0.367			0.239		
Satd. Flow (perm)	3400	3519	1599	1736	3585	1455	640	3689	1568	454	3689	1599
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			40			35	
Link Distance (ft)		853			840			808			1023	
Travel Time (s)		16.6			16.4			13.8			19.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	3%	8%	1%	4%	6%	11%	9%	3%	3%	0%	3%	1%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	223	623	93	144	596	31	64	711	237	81	527	206
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	3	8		7	4		5	2	3	1	6	7
Permitted Phases			8			4	2		2	6		6
Detector Phase	3	8	8	7	4	4	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	3.0	15.0	15.0	3.0	15.0	15.0	3.0	15.0	3.0	3.0	15.0	3.0
Minimum Split (s)	7.5	21.0	21.0	7.5	21.0	21.0	6.5	21.0	7.5	6.5	21.0	7.5
Total Split (s)	14.3	46.2	46.2	14.3	46.2	46.2	13.2	36.3	14.3	13.2	36.3	14.3
Total Split (%)	13.0%	42.0%	42.0%	13.0%	42.0%	42.0%	12.0%	33.0%	13.0%	12.0%	33.0%	13.0%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	3.5	3.5	4.5	3.5
All-Red Time (s)	1.0	1.5	1.5	1.0	1.5	1.5	0.0	1.5	1.0	0.0	1.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0	3.5	6.0	4.5	3.5	6.0	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	None
Act Effct Green (s)	9.7	36.5	36.5	10.2	37.1	37.1	46.2	36.9	52.6	46.7	37.2	53.5
Actuated g/C Ratio	0.09	0.33	0.33	0.09	0.34	0.34	0.42	0.34	0.48	0.42	0.34	0.49

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
v/c Ratio	0.75	0.53	0.18	0.89	0.49	0.06	0.19	0.57	0.32	0.28	0.42	0.27
Control Delay	65.0	31.1	25.6	98.2	30.1	23.5	20.5	34.2	21.2	17.5	28.8	17.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	65.0	31.1	25.6	98.2	30.1	23.5	20.5	34.2	21.2	17.5	28.8	17.4
LOS	E	C	C	F	C	C	C	C	C	B	C	B
Approach Delay		38.6			42.6			30.3			24.8	
Approach LOS		D			D			C			C	
Queue Length 50th (ft)	80	176	44	103	166	14	27	233	110	34	181	105
Queue Length 95th (ft)	#134	230	82	#226	218	35	55	304	177	61	244	172
Internal Link Dist (ft)		773			760			728			943	
Turn Bay Length (ft)	190		150	200		200	215		285	155		165
Base Capacity (vph)	302	1286	584	161	1310	531	364	1238	751	315	1248	777
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.48	0.16	0.89	0.45	0.06	0.18	0.57	0.32	0.26	0.42	0.27

Intersection Summary

Area Type: Other
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 16.5 (15%), Referenced to phase 2:SETL and 6:NWTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 33.9 Intersection LOS: C
Intersection Capacity Utilization 59.9% ICU Level of Service B
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Larkin Avenue & Plainfield Road



Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	67	317	520	186	62	92
Future Vol, veh/h	67	317	520	186	62	92
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	5	4	5	2	0
Mvmt Flow	71	334	547	196	65	97

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	743	0	-	0	954	372
Stage 1	-	-	-	-	645	-
Stage 2	-	-	-	-	309	-
Critical Hdwy	4.1	-	-	-	6.84	6.9
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.2	-	-	-	3.52	3.3
Pot Cap-1 Maneuver	873	-	-	-	257	631
Stage 1	-	-	-	-	484	-
Stage 2	-	-	-	-	718	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	873	-	-	-	231	631
Mov Cap-2 Maneuver	-	-	-	-	343	-
Stage 1	-	-	-	-	436	-
Stage 2	-	-	-	-	718	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	1.9	0	16.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	873	-	-	-	472
HCM Lane V/C Ratio	0.081	-	-	-	0.343
HCM Ctrl Dly (s/v)	9.5	0.3	-	-	16.6
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q (veh)	0.3	-	-	-	1.5

Intersection	
Int Delay, s/veh	0.6

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	0	819	1	0	636	75	0	0	0	0	0	78
Future Vol, veh/h	0	819	1	0	636	75	0	0	0	0	0	78
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	None	-	-	Stop
Storage Length	-	-	-	-	-	115	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	0	4	0	0	5	0	0	0	0	0	0	0
Mvmt Flow	0	900	1	0	699	82	0	0	0	0	0	86

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	901	0	0	1251	1600	451	-	-	350
Stage 1	-	-	-	-	-	-	901	901	-	-	-	-
Stage 2	-	-	-	-	-	-	350	699	-	-	-	-
Critical Hdwy	-	-	-	4.1	-	-	7.5	6.5	6.9	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	-	-	-
Follow-up Hdwy	-	-	-	2.2	-	-	3.5	4	3.3	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	763	-	0	131	107	561	0	0	652
Stage 1	0	-	-	-	-	0	303	360	-	0	0	-
Stage 2	0	-	-	-	-	0	645	445	-	0	0	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	763	-	-	114	107	561	-	-	652
Mov Cap-2 Maneuver	-	-	-	-	-	-	114	107	-	-	-	-
Stage 1	-	-	-	-	-	-	303	360	-	-	-	-
Stage 2	-	-	-	-	-	-	560	445	-	-	-	-

Approach	SE	NW	NE	SW
HCM Ctrl Dly, s/v	0	0	0	11.4
HCM LOS			A	B

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER	SWLn1
Capacity (veh/h)	-	763	-	-	-	652
HCM Lane V/C Ratio	-	-	-	-	-	0.131
HCM Ctrl Dly (s/v)	0	0	-	-	-	11.4
HCM Lane LOS	A	A	-	-	-	B
HCM 95th %tile Q (veh)	-	0	-	-	-	0.5

Intersection	
Int Delay, s/veh	3.4

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	1	94	20	79	159	14	28	0	60	2	0	1
Future Vol, veh/h	1	94	20	79	159	14	28	0	60	2	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	0	3	7	0	1	0	0	0	0	0	0	0
Mvmt Flow	1	108	23	91	183	16	32	0	69	2	0	1

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	199	0	0	131	0	0	496	503	120	529	506	191
Stage 1	-	-	-	-	-	-	122	122	-	373	373	-
Stage 2	-	-	-	-	-	-	374	381	-	156	133	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1385	-	-	1467	-	-	487	474	937	463	472	856
Stage 1	-	-	-	-	-	-	887	799	-	652	622	-
Stage 2	-	-	-	-	-	-	651	617	-	851	790	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1385	-	-	1467	-	-	460	440	937	406	438	856
Mov Cap-2 Maneuver	-	-	-	-	-	-	460	440	-	406	438	-
Stage 1	-	-	-	-	-	-	886	798	-	651	578	-
Stage 2	-	-	-	-	-	-	605	574	-	788	789	-

Approach	SE	NW	NE	SW
HCM Ctrl Dly, s/v	0.1	2.4	10.5	12.4
HCM LOS			B	B

Minor Lane/Major Mvmt	NELn1	NELn2	NWL	NWT	NWR	SEL	SET	SER	SWLn1
Capacity (veh/h)	460	937	1467	-	-	1385	-	-	492
HCM Lane V/C Ratio	0.07	0.074	0.062	-	-	0.001	-	-	0.007
HCM Ctrl Dly (s/v)	13.4	9.1	7.6	0	-	7.6	0	-	12.4
HCM Lane LOS	B	A	A	A	-	A	A	-	B
HCM 95th %tile Q (veh)	0.2	0.2	0.2	-	-	0	-	-	0

Intersection	
Int Delay, s/veh	4.8

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	76	726	680	34	94	23
Future Vol, veh/h	76	726	680	34	94	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	4	5	0	0	0
Mvmt Flow	80	764	716	36	99	24

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	752	0	-	0	1258	358
Stage 1	-	-	-	-	716	-
Stage 2	-	-	-	-	542	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	867	-	-	-	166	644
Stage 1	-	-	-	-	450	-
Stage 2	-	-	-	-	553	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	867	-	-	-	151	644
Mov Cap-2 Maneuver	-	-	-	-	151	-
Stage 1	-	-	-	-	409	-
Stage 2	-	-	-	-	553	-

Approach	SE	NW	SW
HCM Ctrl Dly, s/v	0.9	0	61.3
HCM LOS			F

Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1
Capacity (veh/h)	-	-	867	-	178
HCM Lane V/C Ratio	-	-	0.092	-	0.692
HCM Ctrl Dly (s/v)	-	-	9.6	-	61.3
HCM Lane LOS	-	-	A	-	F
HCM 95th %tile Q (veh)	-	-	0.3	-	4.2

Capacity Analysis Summary Sheets

Year 2030 Total Projected Weekday Evening Peak Hour

Lanes, Volumes, Timings
1: Plainfield Road & Theodore Street

02/28/2025

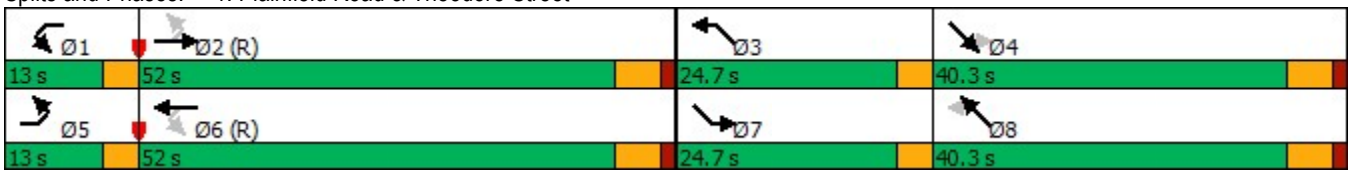
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	52	436	257	108	511	237	252	766	32	201	637	78
Future Volume (vph)	52	436	257	108	511	237	252	766	32	201	637	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	180		0	125		0	310		0	270		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	115			115			220			150		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.944			0.952			0.994			0.984	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	3321	0	1719	3369	0	1736	3512	0	1752	3449	0
Flt Permitted	0.251			0.244			0.174			0.155		
Satd. Flow (perm)	477	3321	0	442	3369	0	318	3512	0	286	3449	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		933			319			234			1681	
Travel Time (s)		18.2			6.2			4.6			32.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	3%	2%	5%	2%	2%	4%	2%	6%	3%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	53	707	0	110	763	0	257	815	0	205	730	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2			6			4			8		
Detector Phase	5	2		1	6		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	6.5	21.0		6.5	21.0		6.5	21.0		6.5	21.0	
Total Split (s)	13.0	52.0		13.0	52.0		24.7	40.3		24.7	40.3	
Total Split (%)	10.0%	40.0%		10.0%	40.0%		19.0%	31.0%		19.0%	31.0%	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Act Effct Green (s)	57.4	47.4		60.5	50.6		59.1	39.2		55.4	37.4	
Actuated g/C Ratio	0.44	0.36		0.47	0.39		0.45	0.30		0.43	0.29	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
v/c Ratio	0.18	0.58		0.38	0.58		0.77	0.77		0.69	0.74	
Control Delay	20.3	36.1		23.1	34.6		43.4	58.6		35.2	47.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	20.3	36.1		23.1	34.6		43.4	58.6		35.2	47.6	
LOS	C	D		C	C		D	E		D	D	
Approach Delay		35.0			33.2			55.0			44.9	
Approach LOS		D			C			D			D	
Queue Length 50th (ft)	24	256		51	274		210	380		101	290	
Queue Length 95th (ft)	48	322		88	351		m274	m433		166	380	
Internal Link Dist (ft)		853			239			154			1601	
Turn Bay Length (ft)	180			125			310			270		
Base Capacity (vph)	314	1213		299	1310		377	1058		369	991	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.17	0.58		0.37	0.58		0.68	0.77		0.56	0.74	

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 33.8 (26%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.77
Intersection Signal Delay: 43.0 Intersection LOS: D
Intersection Capacity Utilization 77.0% ICU Level of Service D
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Plainfield Road & Theodore Street



Lanes, Volumes, Timings
2: Larkin Avenue & Plainfield Road

02/28/2025

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	293	618	66	199	813	78	85	789	338	88	723	154
Future Volume (vph)	293	618	66	199	813	78	85	789	338	88	723	154
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	190		150	200		200	215		285	155		165
Storage Lanes	2		1	1		1	1		1	1		1
Taper Length (ft)	220			175			250			110		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3467	3519	1615	1736	3619	1568	1770	3689	1599	1805	3689	1553
Flt Permitted	0.950			0.950			0.180			0.139		
Satd. Flow (perm)	3467	3519	1615	1736	3619	1568	335	3689	1599	264	3689	1553
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			40			35	
Link Distance (ft)		853			840			808			1023	
Travel Time (s)		16.6			16.4			13.8			19.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	8%	0%	4%	5%	3%	2%	3%	1%	0%	3%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	299	631	67	203	830	80	87	805	345	90	738	157
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	3	8		7	4		5	2	3	1	6	7
Permitted Phases			8			4	2		2	6		6
Detector Phase	3	8	8	7	4	4	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	3.0	15.0	15.0	3.0	15.0	15.0	3.0	15.0	3.0	3.0	15.0	3.0
Minimum Split (s)	7.5	21.0	21.0	7.5	21.0	21.0	6.5	21.0	7.5	6.5	21.0	7.5
Total Split (s)	27.3	58.5	58.5	18.2	49.4	49.4	13.0	40.3	27.3	13.0	40.3	18.2
Total Split (%)	21.0%	45.0%	45.0%	14.0%	38.0%	38.0%	10.0%	31.0%	21.0%	10.0%	31.0%	14.0%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	3.5	3.5	4.5	3.5
All-Red Time (s)	1.0	1.5	1.5	1.0	1.5	1.5	0.0	1.5	1.0	0.0	1.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0	3.5	6.0	4.5	3.5	6.0	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	None
Act Effct Green (s)	16.8	50.1	50.1	13.7	47.0	47.0	48.7	37.6	60.4	48.7	37.6	57.3
Actuated g/C Ratio	0.13	0.39	0.39	0.11	0.36	0.36	0.37	0.29	0.46	0.37	0.29	0.44

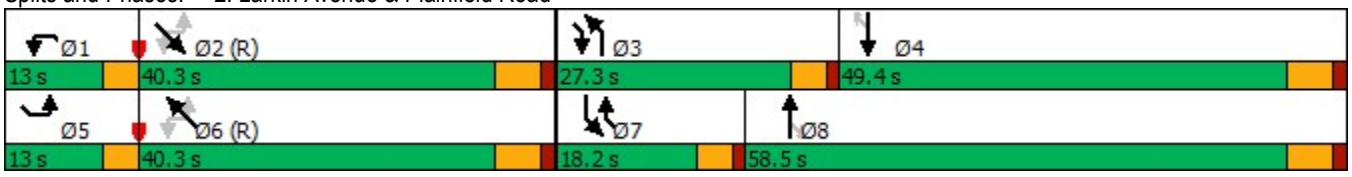
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
v/c Ratio	0.67	0.47	0.11	1.12	0.64	0.14	0.39	0.76	0.46	0.45	0.69	0.23
Control Delay	61.1	30.9	25.1	153.1	37.1	28.8	31.2	48.4	26.7	31.9	32.0	16.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.1	30.9	25.1	153.1	37.1	28.8	31.2	48.4	26.7	31.9	32.0	16.4
LOS	E	C	C	F	D	C	C	D	C	C	C	B
Approach Delay		39.5			57.7			41.1			29.5	
Approach LOS		D			E			D			C	
Queue Length 50th (ft)	125	201	35	~195	292	44	47	337	205	31	166	46
Queue Length 95th (ft)	167	254	67	#353	385	85	85	417	274	m67	254	m66
Internal Link Dist (ft)		773			760			728			943	
Turn Bay Length (ft)	190		150	200		200	215		285	155		165
Base Capacity (vph)	608	1421	652	182	1315	570	232	1065	816	213	1066	684
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.49	0.44	0.10	1.12	0.63	0.14	0.38	0.76	0.42	0.42	0.69	0.23

Intersection Summary

Area Type: Other
Cycle Length: 130
Actuated Cycle Length: 130
Offset: 6.5 (5%), Referenced to phase 2:SETL and 6:NWTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.12
Intersection Signal Delay: 42.4 Intersection LOS: D
Intersection Capacity Utilization 72.4% ICU Level of Service C
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Larkin Avenue & Plainfield Road



Intersection	
Int Delay, s/veh	4.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	74	692	718	151	89	138
Future Vol, veh/h	74	692	718	151	89	138
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	0	4	3	2	1	1
Mvmt Flow	79	736	764	161	95	147

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	925	0	-	0	1371	463
Stage 1	-	-	-	-	845	-
Stage 2	-	-	-	-	526	-
Critical Hdwy	4.1	-	-	-	6.82	6.92
Critical Hdwy Stg 1	-	-	-	-	5.82	-
Critical Hdwy Stg 2	-	-	-	-	5.82	-
Follow-up Hdwy	2.2	-	-	-	3.51	3.31
Pot Cap-1 Maneuver	747	-	-	-	138	548
Stage 1	-	-	-	-	384	-
Stage 2	-	-	-	-	560	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	747	-	-	-	113	548
Mov Cap-2 Maneuver	-	-	-	-	230	-
Stage 1	-	-	-	-	315	-
Stage 2	-	-	-	-	560	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	1.7	0	34.2
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	747	-	-	-	355
HCM Lane V/C Ratio	0.105	-	-	-	0.68
HCM Ctrl Dly (s/v)	10.4	0.8	-	-	34.2
HCM Lane LOS	B	A	-	-	D
HCM 95th %tile Q (veh)	0.4	-	-	-	4.8

Intersection	
Int Delay, s/veh	0.4

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	0	1050	0	0	858	68	0	0	0	0	0	66
Future Vol, veh/h	0	1050	0	0	858	68	0	0	0	0	0	66
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	None	-	-	Stop
Storage Length	-	-	-	-	-	115	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	2	0	0	3	0	0	0	0	0	0	0
Mvmt Flow	0	1129	0	0	923	73	0	0	0	0	0	71

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	1129	0	0	1591	2052	565	-	-	462
Stage 1	-	-	-	-	-	-	1129	1129	-	-	-	-
Stage 2	-	-	-	-	-	-	462	923	-	-	-	-
Critical Hdwy	-	-	-	4.1	-	-	7.5	6.5	6.9	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	-	-	-
Follow-up Hdwy	-	-	-	2.2	-	-	3.5	4	3.3	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	626	-	0	73	56	473	0	0	552
Stage 1	0	-	-	-	-	0	221	281	-	0	0	-
Stage 2	0	-	-	-	-	0	554	351	-	0	0	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	626	-	-	64	56	473	-	-	552
Mov Cap-2 Maneuver	-	-	-	-	-	-	64	56	-	-	-	-
Stage 1	-	-	-	-	-	-	221	281	-	-	-	-
Stage 2	-	-	-	-	-	-	483	351	-	-	-	-

Approach	SE	NW	NE	SW
HCM Ctrl Dly, s/v	0	0	0	12.5
HCM LOS			A	B

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER	SWLn1
Capacity (veh/h)	-	626	-	-	-	552
HCM Lane V/C Ratio	-	-	-	-	-	0.129
HCM Ctrl Dly (s/v)	0	0	-	-	-	12.5
HCM Lane LOS	A	A	-	-	-	B
HCM 95th %tile Q (veh)	-	0	-	-	-	0.4

Intersection	
Int Delay, s/veh	3.1

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↰	↗		↕	
Traffic Vol, veh/h	2	173	19	61	163	18	16	0	55	25	0	7
Future Vol, veh/h	2	173	19	61	163	18	16	0	55	25	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	1	0	0	1	0	0	0	0	0	0	0
Mvmt Flow	2	186	20	66	175	19	17	0	59	27	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	194	0	0	206	0	0	521	526	196	547	527	185
Stage 1	-	-	-	-	-	-	200	200	-	317	317	-
Stage 2	-	-	-	-	-	-	321	326	-	230	210	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1391	-	-	1377	-	-	469	460	850	451	459	862
Stage 1	-	-	-	-	-	-	806	739	-	698	658	-
Stage 2	-	-	-	-	-	-	695	652	-	777	732	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1391	-	-	1377	-	-	445	434	850	402	433	862
Mov Cap-2 Maneuver	-	-	-	-	-	-	445	434	-	402	433	-
Stage 1	-	-	-	-	-	-	804	738	-	697	622	-
Stage 2	-	-	-	-	-	-	652	617	-	721	731	-

Approach	SE	NW	NE	SW
HCM Ctrl Dly, s/v	0.1	2	10.5	13.6
HCM LOS			B	B

Minor Lane/Major Mvmt	NELn1	NELn2	NWL	NWT	NWR	SEL	SET	SER	SWLn1
Capacity (veh/h)	445	850	1377	-	-	1391	-	-	455
HCM Lane V/C Ratio	0.039	0.07	0.048	-	-	0.002	-	-	0.076
HCM Ctrl Dly (s/v)	13.4	9.6	7.7	0	-	7.6	0	-	13.6
HCM Lane LOS	B	A	A	A	-	A	A	-	B
HCM 95th %tile Q (veh)	0.1	0.2	0.2	-	-	0	-	-	0.2

Intersection	
Int Delay, s/veh	6

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	61	976	899	25	74	18
Future Vol, veh/h	61	976	899	25	74	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	2	3	0	0	0
Mvmt Flow	64	1027	946	26	78	19

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	972	0	-	0	1588	473
Stage 1	-	-	-	-	946	-
Stage 2	-	-	-	-	642	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	717	-	-	-	101	543
Stage 1	-	-	-	-	343	-
Stage 2	-	-	-	-	492	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	717	-	-	-	92	543
Mov Cap-2 Maneuver	-	-	-	-	92	-
Stage 1	-	-	-	-	312	-
Stage 2	-	-	-	-	492	-

Approach	SE	NW	SW
HCM Ctrl Dly, s/v	0.6	0	127.8
HCM LOS			F

Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1
Capacity (veh/h)	-	-	717	-	110
HCM Lane V/C Ratio	-	-	0.09	-	0.88
HCM Ctrl Dly (s/v)	-	-	10.5	-	127.8
HCM Lane LOS	-	-	B	-	F
HCM 95th %tile Q (veh)	-	-	0.3	-	5.3

Capacity Analysis Summary Sheets

Year 2030 Total Projected Saturday Midday Peak Hour

Lanes, Volumes, Timings
1: Plainfield Road & Theodore Street

02/28/2025

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	40	427	236	115	461	266	227	614	60	94	600	163
Future Volume (vph)	40	427	236	115	461	266	227	614	60	94	600	163
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	180		0	125		0	310		0	270		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	115			115			220			150		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95	1.00	0.95	0.95
Ped Bike Factor												
Frt		0.947			0.945			0.987			0.968	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	3363	0	1787	3353	0	1787	3468	0	1787	3445	0
Flt Permitted	0.258			0.242			0.151			0.309		
Satd. Flow (perm)	490	3363	0	455	3353	0	284	3468	0	581	3445	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			35			35	
Link Distance (ft)		933			319			234			1681	
Travel Time (s)		18.2			6.2			4.6			32.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	2%	1%	1%	1%	3%	1%	3%	0%	1%	1%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	41	683	0	119	749	0	234	695	0	97	787	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases	2			6			4			8		
Detector Phase	5	2		1	6		7	4		3	8	
Switch Phase												
Minimum Initial (s)	3.0	15.0		3.0	15.0		3.0	15.0		3.0	15.0	
Minimum Split (s)	6.5	21.0		6.5	21.0		6.5	21.0		6.5	21.0	
Total Split (s)	13.2	45.6		13.2	45.6		21.6	48.0		13.2	39.6	
Total Split (%)	11.0%	38.0%		11.0%	38.0%		18.0%	40.0%		11.0%	33.0%	
Yellow Time (s)	3.5	4.5		3.5	4.5		3.5	4.5		3.5	4.5	
All-Red Time (s)	0.0	1.5		0.0	1.5		0.0	1.5		0.0	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	3.5	6.0		3.5	6.0		3.5	6.0		3.5	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Act Effct Green (s)	50.5	41.0		54.8	44.7		57.1	42.5		47.0	35.9	
Actuated g/C Ratio	0.42	0.34		0.46	0.37		0.48	0.35		0.39	0.30	

Lanes, Volumes, Timings
1: Plainfield Road & Theodore Street

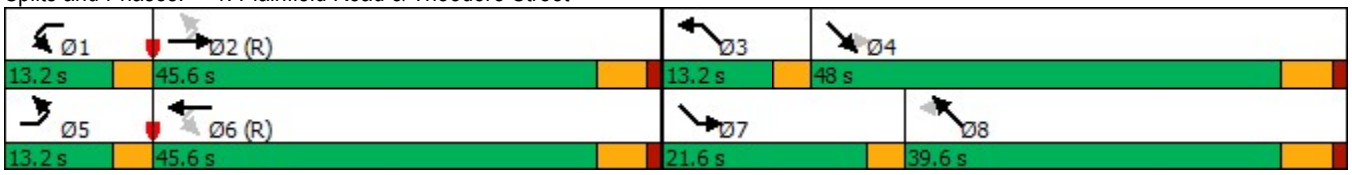
02/28/2025

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
v/c Ratio	0.14	0.59		0.39	0.60		0.72	0.57		0.31	0.76	
Control Delay	19.3	35.6		22.5	33.8		20.1	20.6		20.6	44.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	19.3	35.6		22.5	33.8		20.1	20.6		20.6	44.3	
LOS	B	D		C	C		C	C		C	D	
Approach Delay		34.7			32.3			20.4			41.7	
Approach LOS		C			C			C			D	
Queue Length 50th (ft)	17	233		52	252		58	230		40	287	
Queue Length 95th (ft)	38	297		89	327		m100	m282		72	377	
Internal Link Dist (ft)		853			239			154			1601	
Turn Bay Length (ft)	180			125			310			270		
Base Capacity (vph)	323	1148		316	1249		361	1228		330	1031	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.13	0.59		0.38	0.60		0.65	0.57		0.29	0.76	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 7.2 (6%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.76
Intersection Signal Delay: 32.0 Intersection LOS: C
Intersection Capacity Utilization 76.8% ICU Level of Service D
Analysis Period (min) 15
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Plainfield Road & Theodore Street



Lanes, Volumes, Timings
2: Larkin Avenue & Plainfield Road

02/28/2025

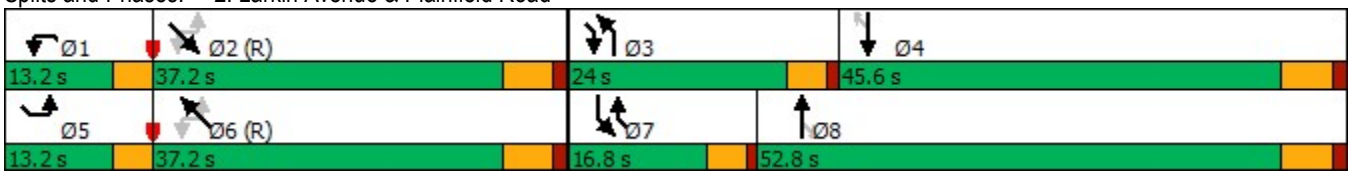
Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	395	582	95	155	638	84	91	658	336	99	639	161
Future Volume (vph)	395	582	95	155	638	84	91	658	336	99	639	161
Ideal Flow (vphpl)	1900	2000	1900	1900	2000	1900	1900	2000	1900	1900	2000	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	190		150	200		200	215		285	155		165
Storage Lanes	2		1	1		1	1		1	1		1
Taper Length (ft)	220			175			250			110		
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	3467	3762	1599	1787	3654	1599	1787	3725	1615	1805	3762	1583
Flt Permitted	0.950			0.950			0.245			0.230		
Satd. Flow (perm)	3467	3762	1599	1787	3654	1599	461	3725	1615	437	3762	1583
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		35			35			40			35	
Link Distance (ft)		853			840			808			1023	
Travel Time (s)		16.6			16.4			13.8			19.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	1%	1%	1%	1%	4%	1%	1%	2%	0%	0%	1%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	407	600	98	160	658	87	94	678	346	102	659	166
Turn Type	Prot	NA	Perm	Prot	NA	Perm	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov
Protected Phases	3	8		7	4		5	2	3	1	6	7
Permitted Phases			8			4	2		2	6		6
Detector Phase	3	8	8	7	4	4	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	3.0	15.0	15.0	3.0	15.0	15.0	3.0	15.0	3.0	3.0	15.0	3.0
Minimum Split (s)	7.5	21.0	21.0	7.5	21.0	21.0	6.5	21.0	7.5	6.5	21.0	7.5
Total Split (s)	24.0	52.8	52.8	16.8	45.6	45.6	13.2	37.2	24.0	13.2	37.2	16.8
Total Split (%)	20.0%	44.0%	44.0%	14.0%	38.0%	38.0%	11.0%	31.0%	20.0%	11.0%	31.0%	14.0%
Yellow Time (s)	3.5	4.5	4.5	3.5	4.5	4.5	3.5	4.5	3.5	3.5	4.5	3.5
All-Red Time (s)	1.0	1.5	1.5	1.0	1.5	1.5	0.0	1.5	1.0	0.0	1.5	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.5	6.0	6.0	4.5	6.0	6.0	3.5	6.0	4.5	3.5	6.0	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Min	None	None	C-Min	None
Act Effct Green (s)	18.0	43.2	43.2	12.2	37.4	37.4	46.9	35.8	59.8	47.2	35.9	54.1
Actuated g/C Ratio	0.15	0.36	0.36	0.10	0.31	0.31	0.39	0.30	0.50	0.39	0.30	0.45

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
v/c Ratio	0.78	0.44	0.17	0.88	0.58	0.17	0.34	0.61	0.43	0.38	0.59	0.23
Control Delay	60.1	29.8	25.7	94.7	36.6	30.2	26.5	40.3	22.2	21.9	34.6	16.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.1	29.8	25.7	94.7	36.6	30.2	26.5	40.3	22.2	21.9	34.6	16.0
LOS	E	C	C	F	D	C	C	D	C	C	C	B
Approach Delay		40.6			46.3			33.5			29.9	
Approach LOS		D			D			C			C	
Queue Length 50th (ft)	156	175	49	124	218	48	46	251	175	38	275	94
Queue Length 95th (ft)	211	225	88	#251	278	88	84	319	258	m50	337	m123
Internal Link Dist (ft)		773			760			728			943	
Turn Bay Length (ft)	190		150	200		200	215		285	155		165
Base Capacity (vph)	563	1467	623	183	1205	527	291	1110	824	285	1125	714
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.72	0.41	0.16	0.87	0.55	0.17	0.32	0.61	0.42	0.36	0.59	0.23

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 7.2 (6%), Referenced to phase 2:SETL and 6:NWTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.88
Intersection Signal Delay: 37.5 Intersection LOS: D
Intersection Capacity Utilization 67.9% ICU Level of Service C
Analysis Period (min) 15
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Larkin Avenue & Plainfield Road



HCM 6th TWSC
3: Theodore Street & Knapp Street

Intersection	
Int Delay, s/veh	5.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	58	759	709	134	121	133
Future Vol, veh/h	58	759	709	134	121	133
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	1	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	0	1	2	0	0	1
Mvmt Flow	60	791	739	140	126	139

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	879	0	-	0	1325	440
Stage 1	-	-	-	-	809	-
Stage 2	-	-	-	-	516	-
Critical Hdwy	4.1	-	-	-	6.8	6.92
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.31
Pot Cap-1 Maneuver	777	-	-	-	150	568
Stage 1	-	-	-	-	403	-
Stage 2	-	-	-	-	570	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	777	-	-	-	129	568
Mov Cap-2 Maneuver	-	-	-	-	251	-
Stage 1	-	-	-	-	347	-
Stage 2	-	-	-	-	570	-

Approach	EB	WB	SB
HCM Ctrl Dly, s/v	1.3	0	39.6
HCM LOS			E

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	777	-	-	-	355
HCM Lane V/C Ratio	0.078	-	-	-	0.745
HCM Ctrl Dly (s/v)	10	0.6	-	-	39.6
HCM Lane LOS	B	A	-	-	E
HCM 95th %tile Q (veh)	0.3	-	-	-	5.8

Intersection	
Int Delay, s/veh	0.4

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Vol, veh/h	0	901	0	0	842	64	0	0	0	0	0	61
Future Vol, veh/h	0	901	0	0	842	64	0	0	0	0	0	61
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	Free	-	-	None	-	-	Stop
Storage Length	-	-	-	-	-	115	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	0	2	0	0	3	0	0	0	0	0	0	0
Mvmt Flow	0	969	0	0	905	69	0	0	0	0	0	66

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	969	0	0	1422	1874	485	-	-	453
Stage 1	-	-	-	-	-	-	969	969	-	-	-	-
Stage 2	-	-	-	-	-	-	453	905	-	-	-	-
Critical Hdwy	-	-	-	4.1	-	-	7.5	6.5	6.9	-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	-	-	-
Follow-up Hdwy	-	-	-	2.2	-	-	3.5	4	3.3	-	-	3.3
Pot Cap-1 Maneuver	0	-	-	719	-	0	98	73	533	0	0	559
Stage 1	0	-	-	-	-	0	276	334	-	0	0	-
Stage 2	0	-	-	-	-	0	561	358	-	0	0	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	719	-	-	87	73	533	-	-	559
Mov Cap-2 Maneuver	-	-	-	-	-	-	87	73	-	-	-	-
Stage 1	-	-	-	-	-	-	276	334	-	-	-	-
Stage 2	-	-	-	-	-	-	495	358	-	-	-	-

Approach	SE	NW	NE	SW
HCM Ctrl Dly, s/v	0	0	0	12.3
HCM LOS			A	B

Minor Lane/Major Mvmt	NELn1	NWL	NWT	SET	SER	SWLn1
Capacity (veh/h)	-	719	-	-	-	559
HCM Lane V/C Ratio	-	-	-	-	-	0.117
HCM Ctrl Dly (s/v)	0	0	-	-	-	12.3
HCM Lane LOS	A	A	-	-	-	B
HCM 95th %tile Q (veh)	-	0	-	-	-	0.4

Intersection	
Int Delay, s/veh	2.6

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↕			↕			↰	↗		↕	
Traffic Vol, veh/h	1	211	22	60	150	16	18	0	52	9	0	2
Future Vol, veh/h	1	211	22	60	150	16	18	0	52	9	0	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	0	0	0	0	0	0	0	0	0	0	0	0
Mvmt Flow	1	240	25	68	170	18	20	0	59	10	0	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	188	0	0	265	0	0	571	579	253	599	582	179
Stage 1	-	-	-	-	-	-	255	255	-	315	315	-
Stage 2	-	-	-	-	-	-	316	324	-	284	267	-
Critical Hdwy	4.1	-	-	4.1	-	-	7.1	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1398	-	-	1311	-	-	435	429	791	416	427	869
Stage 1	-	-	-	-	-	-	754	700	-	700	659	-
Stage 2	-	-	-	-	-	-	699	653	-	727	692	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1398	-	-	1311	-	-	414	404	791	368	402	869
Mov Cap-2 Maneuver	-	-	-	-	-	-	414	404	-	368	402	-
Stage 1	-	-	-	-	-	-	753	699	-	699	621	-
Stage 2	-	-	-	-	-	-	657	615	-	672	691	-

Approach	SE	NW	NE	SW
HCM Ctrl Dly, s/v	0	2.1	11	14
HCM LOS			B	B

Minor Lane/Major Mvmt	NELn1	NELn2	NWL	NWT	NWR	SEL	SET	SER	SWLn1
Capacity (veh/h)	414	791	1311	-	-	1398	-	-	411
HCM Lane V/C Ratio	0.049	0.075	0.052	-	-	0.001	-	-	0.03
HCM Ctrl Dly (s/v)	14.1	9.9	7.9	0	-	7.6	0	-	14
HCM Lane LOS	B	A	A	A	-	A	A	-	B
HCM 95th %tile Q (veh)	0.2	0.2	0.2	-	-	0	-	-	0.1

Intersection	
Int Delay, s/veh	6.2

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Vol, veh/h	62	819	859	44	82	28
Future Vol, veh/h	62	819	859	44	82	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	50	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	0	2	3	0	0	0
Mvmt Flow	65	862	904	46	86	29

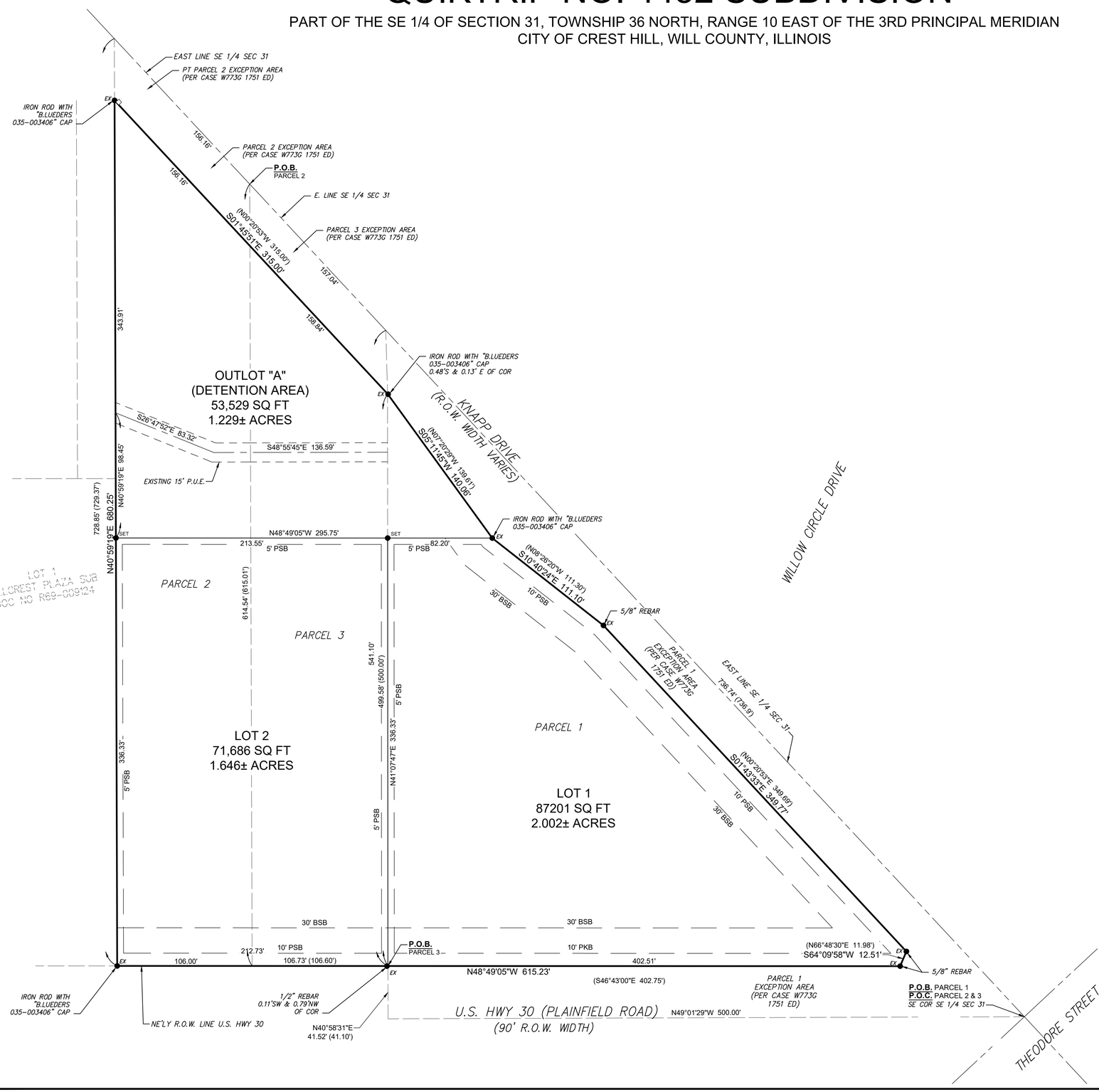
Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	950	0	-	0	1465	452
Stage 1	-	-	-	-	904	-
Stage 2	-	-	-	-	561	-
Critical Hdwy	4.1	-	-	-	6.8	6.9
Critical Hdwy Stg 1	-	-	-	-	5.8	-
Critical Hdwy Stg 2	-	-	-	-	5.8	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	731	-	-	-	121	560
Stage 1	-	-	-	-	360	-
Stage 2	-	-	-	-	540	-
Platoon blocked, %			-	-	-	
Mov Cap-1 Maneuver	731	-	-	-	110	560
Mov Cap-2 Maneuver	-	-	-	-	110	-
Stage 1	-	-	-	-	328	-
Stage 2	-	-	-	-	540	-

Approach	SE	NW	SW
HCM Ctrl Dly, s/v	0.7	0	100.5
HCM LOS			F

Minor Lane/Major Mvmt	NWT	NWR	SEL	SET	SWLn1
Capacity (veh/h)	-	-	731	-	138
HCM Lane V/C Ratio	-	-	0.089	-	0.839
HCM Ctrl Dly (s/v)	-	-	10.4	-	100.5
HCM Lane LOS	-	-	B	-	F
HCM 95th %tile Q (veh)	-	-	0.3	-	5.3

FINAL PLAT
QUIKTRIP NO. 4452 SUBDIVISION

PART OF THE SE 1/4 OF SECTION 31, TOWNSHIP 36 NORTH, RANGE 10 EAST OF THE 3RD PRINCIPAL MERIDIAN
CITY OF CREST HILL, WILL COUNTY, ILLINOIS

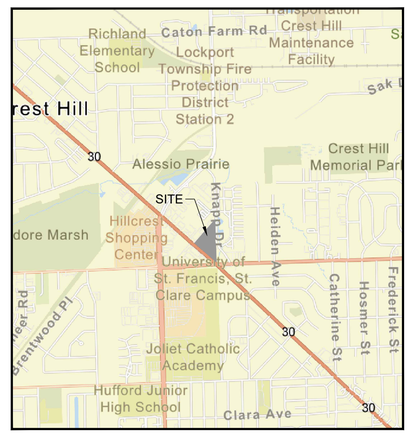


0 20 40 80
SCALE: 1"=40'
U.S. SURVEY FEET

BASIS OF BEARINGS IS ILLINOIS STATE PLANE COORDINATE SYSTEM, EAST ZONE, NAD 83, 2011 ADJUSTMENT (GEOID18 CONUS)

LEGEND

SET ●	SET 5/8" REBAR WITH PLASTIC CAP STAMPED "FARNSWORTH GROUP"
EX ●	EXISTING IRON ROD FOUND
PSB	PUBLIC UTILITY SETBACK
BSB	BUILDING SETBACK



Location Map
Not to Scale

Farnsworth GROUP
2211 WEST BRADLEY AVENUE
CHAMPAIGN, ILLINOIS 61821
(217) 352-7408 / info@f-w.com
www.f-w.com
Engineers | Architects | Surveyors | Scientists

ISSUE:

#	DATE:	DESCRIPTION:

PROJECT:

DATE:	12/19/2024
DESIGNED:	KJS
DRAWN:	PDM
REVIEWED:	####
FIELD BOOK NO.:	BMI 3410 63

SHEET TITLE:
FINAL PLAT

DRAFT

SHEET NUMBER:
1
OF 3

PROJECT NO.: 0241200

666

FINAL PLAT
QUIKTRIP NO. 4452 SUBDIVISION

PART OF THE SE 1/4 OF SECTION 31, TOWNSHIP 36 NORTH, RANGE 10 EAST OF THE 3RD PRINCIPAL MERIDIAN
CITY OF CREST HILL, WILL COUNTY, ILLINOIS

STATE OF ILLINOIS)
)SS
COUNTY OF WILL)

THE UNDERSIGNED, _____, AS TITLEHOLDER TO THE PROPERTY AS DESCRIBED HEREON, IN THE CITY OF CREST HILL, ILLINOIS, DOES HEREBY CERTIFY THAT AS SUCH TITLEHOLDER IT HAS CAUSED SAID PROPERTY TO BE SURVEYED AND SUBDIVIDED AS SHOWN HEREON.

ALSO, THIS IS TO CERTIFY THAT THE PROPERTY DESCRIBED HEREIN, TO THE BEST OF THE TITLEHOLDER'S KNOWLEDGE AND BELIEF, LIES WITHIN THE BOUNDARIES OF:

RICHLAND SCHOOL DISTRICT 88A
LOCKPORT TOWNSHIP HIGH SCHOOL DISTRICT 202
JOLIET JUNIOR COLLEGE COMMUNITY COLLEGE DISTRICT 525

DATED THIS _____ DAY OF _____ 2026.

BY: _____
_____

ATTEST: _____
_____

STATE OF ILLINOIS)
)SS
COUNTY OF WILL)

I, _____ A NOTARY PUBLIC IN AND FOR SAID COUNTY IN THE STATE AFORESAID DO I, HEREBY CERTIFY THAT

_____, OF _____, ILLINOIS PERSONALLY KNOWN TO ME TO BE THE SAME PERSONS WHOSE NAMES ARE SUBSCRIBED TO THE FOREGOING INSTRUMENT AS MAYOR AND CITY CLERK RESPECTIVELY, APPEARED BEFORE ME THIS DAY IN PERSON AND ACKNOWLEDGED THAT THEY SIGNED AND DELIVERED THE SAID INSTRUMENT AS THEIR OWN FREE AND VOLUNTARY ACT AND AS THE FREE AND VOLUNTARY ACT OF SAID CITY, FOR THE USES AND PURPOSES THEREIN SET FORTH; AND THAT THE SAID CITY CLERK DID ALSO THEN AND THERE ACKNOWLEDGE THAT THEY, AS CUSTODIAN OF THE CORPORATE SEAL OF SAID CITY, DID AFFIX SAID SEAL OF SAID CITY TO THE SAID INSTRUMENT AS THEIR OWN FREE AND VOLUNTARY ACT, AND AS THE FREE AND VOLUNTARY ACT OF SAID CITY, FOR THE USES AND PURPOSES THEREIN SET FORTH.

GIVEN UNDER MY HAND AND SEAL THIS _____ DAY OF _____ , 2026.

_____
NOTARY PUBLIC

EASEMENT PROVISIONS

AN EASEMENT FOR SERVING THE SUBDIVISION AND OTHER PROPERTY WITH ELECTRIC AND COMMUNICATIONS SERVICE IS HEREBY RESERVED FOR AND GRANTED TO:

COMMONWEALTH EDISON COMPANY, A.T. & T.,
APPLICABLE CABLE TELEVISION COMPANY, GRANTEES

THEIR RESPECTIVE SUCCESSORS AND ASSIGNS, JOINTLY AND SEVERALLY, TO INSTALL, OPERATE, MAINTAIN AND REMOVE, FROM TIME TO TIME, FACILITIES USED IN CONNECTION WITH OVERHEAD AND UNDERGROUND TRANSMISSION AND DISTRIBUTION OF ELECTRICITY AND SOUNDS AND SIGNALS IN, OVER, UNDER, ACROSS, ALONG AND UPON THE SURFACE OF THE PROPERTY SHOWN WITHIN THE DOTTED LINES ON THE PLAT AND MARKED "EASEMENT", THE PROPERTY DESIGNATED IN THE DECLARATION OF CONDOMINIUM AND/OR ON THIS PLAT AS "COMMON ELEMENTS", AND THE PROPERTY DESIGNATED ON THE PLAT AS A "COMMON AREA OR AREAS", AND THE PROPERTY DESIGNATED ON THE PLAT FOR STREETS AND ALLEYS, WHETHER PUBLIC OR PRIVATE, TOGETHER WITH THE RIGHT TO INSTALL REQUIRED SERVICE CONNECTIONS OVER OR UNDER THE SURFACE OF EACH LOT AND COMMON AREA OR AREAS TO SERVE IMPROVEMENTS THEREON, OR ON ADJACENT LOTS, AND COMMON AREA OR AREAS, THE RIGHT TO CUT, TRIM OR REMOVE TREES, BUSHES AND ROOTS AS MAY BE REASONABLY REQUIRED INCIDENT TO THE RIGHTS HEREIN GIVEN, AND THE RIGHT TO ENTER UPON THE SUBDIVIDED PROPERTY FOR ALL SUCH PURPOSES. OBSTRUCTIONS SHALL NOT BE PLACED OVER GRANTEES' FACILITIES OR IN, UPON OR OVER THE PROPERTY WITHIN THE DOTTED LINES MARKED "EASEMENT" WITHOUT THE PRIOR WRITTEN CONSENT OF GRANTEES. AFTER INSTALLATION OF ANY SUCH FACILITIES, THE GRADE OF THE SUBDIVIDED PROPERTY SHALL NOT BE ALTERED IN A MANNER SO AS TO INTERFERE WITH THE PROPER OPERATION AND MAINTENANCE THEREOF.

THE TERM "COMMON ELEMENTS" SHALL HAVE THE MEANING SET FORTH FOR SUCH TERM IN THE "CONDOMINIUM PROPERTY ACT", CHAPTER 765 ILCS 605/2(E), AS AMENDED FROM TIME TO TIME.

THE TERM "COMMON AREA OR AREAS" IS DEFINED AS A LOT, PARCEL OR AREA OF REAL PROPERTY, THE BENEFICIAL USE AND ENJOYMENT OF WHICH IS RESERVED IN WHOLE AS AN APPURTENANCE TO THE SEPARATELY OWNED LOTS, PARCELS OR AREAS WITHIN THE PLANNED DEVELOPMENT, EVEN THOUGH SUCH BE OTHERWISE DESIGNATED ON THE PLAT BY OTHER TERMS SUCH AS, "OUTLOTS", "COMMON ELEMENTS", "OPEN SPACE", "OPEN AREA", COMMON GROUND", "PARKING AND COMMON AREA". THE TERMS "COMMON AREA OR AREAS" AND "COMMON ELEMENTS" INCLUDES REAL PROPERTY SURFACED WITH INTERIOR DRIVEWAYS AND WALKWAYS, BUT EXCLUDES REAL PROPERTY PHYSICALLY OCCUPIED BY A BUILDING, SERVICE BUSINESS DISTRICT OR STRUCTURES SUCH AS A POOL OR RETENTION POND, OR MECHANICAL EQUIPMENT. RELOCATION OF FACILITIES WILL BE DONE BY GRANTEES AT COST OF GRANTOR/LOT OWNER, UPON WRITTEN REQUEST.

AN EASEMENT IS HEREBY RESERVED FOR AND GRANTED TO NORTHERN ILLINOIS GAS COMPANY, ITS SUCCESSORS AND ASSIGNS ("NI-GAS") TO INSTALL, OPERATE, MAINTAIN, REPAIR AND REMOVE, FACILITIES USED IN CONNECTION WITH THE TRANSMISSION AND DISTRIBUTION OF NATURAL GAS IN, OVER, UNDER, ACROSS, ALONG AND UPON THE SURFACE OF THE PROPERTY SHOWN ON THIS PLAT MARKED "EASEMENT", COMMON AREA OR AREAS", AND STREETS AND ALLEYS, WETHER PUBLIC OR PRIVATE, AND THE PROPERTY DESIGNATED IN THE DECLARATION OF CONDOMINIUM AND/OR ON THIS PLAT AS "COMMON ELEMENTS" TOGETHER WITH THE RIGHT TO INSTALL REQUIRED SERVICE CONNECTIONS OVER OR UNDER THE SURFACE OF EACH LOT AND COMMON AREA OR AREAS TO SERVE IMPROVEMENTS THEREON, OR ON ADJACENT LOTS, AND COMMON AREA OR AREAS, AND TO SERVE OTHER PROPERTY. ADJACENT OR OTHERWISE, AND THE RIGHT TO REMOVE OBSTRUCTIONS, INCLUDING BUT NOT LIMITED TO, TREES, BUSHES, ROOTS AND FENCES, AS MAY BE REASONABLY REQUIRED INCIDENT TO THE RIGHTS HEREIN GIVEN, AN THE RIGHT TO ENTER UPON THE PROPERTY FOR ALL SUCH PURPOSES. OBSTRUCTIONS SHALL NOT BE PLACED OVER NI-GAS FACILITIES OR IN, UPON OR OVER THE PROPERTY IDENTIFIED ON THIS PLAT FOR UTILITY PURPOSES WITHOUT THE PRIOR WRITTEN CONSENT OF NI-GAS. AFTER INSTALLATION OF ANY SUCH FACILITIES, THE GRADE OF THE PROPERTY SHALL NOT BE ALTERED IN A MANNER SO AS TO INTERFERE WITH THE PROPER OPERATION AND MAINTENANCE THEREOF. THE TERM ""COMMON ELEMENTS" SHALL HAVE THAT MEANING SET FORTH FOR SUCH TERM IN SECTION 605/2(E) OF THE "CONDOMINIUM PROPERTY ACT" (ILLINOIS COMPILED STATUTES, CH. 765, SEC. 605/2(E)), AS AMENDED FROM TIME TO TIME. THE TERM "COMMON AREA OR AREAS" IS DEFINED AS A LOT, PARCEL OR AREA OF REAL PROPERTY, INCLUDING REAL PROPERTY SURFACED WITH INTERIOR DRIVEWAYS AND WALKWAYS, THE BENEFICIAL USE AND ENJOYMENT OF WHICH IS RESERVED IN WHOLE AS AN APPURTENANCE TO THE SEPARATELY OWNED LOTS, PARCELS OR AREAS WITHIN THE PROPERTY, EVEN THOUGH SUCH AREAS MAY BE DESIGNATED ON THIS PLAT BY OTHER TERMS.

DETENTION EASEMENTS PROVISIONS

ALL EASEMENTS INDICATED AS DETENTION EASEMENTS ARE RESERVED FOR AND GRANTED TO THE CITY OF CREST HILL AND ITS SUCCESSOR'S AND ASSIGN'S ON A NON-EXCLUSIVE BASIS NO BUILDINGS SHALL BE PLACED ON SAID EASEMENT BUT THE SAME MAY BE USED FOR OTHER PURPOSES THAT DO NOT ADVERSELY AFFECT THE STORAGE/FREE FLOW OR STORMWATER THE OWNER OF DETENTION EASEMENT IN THIS SUBDIVISION AND ANY SUBSEQUENT PURCHASER (FUTURE OWNER) SHALL BE RESPONSIBLE FOR MAINTAINING SUCH STORMWATER MANAGEMENT FACILITY AND SHALL NOT DESTROY OR MODIFY GRADES OR SLOPES WITHOUT FIRST HAVING RECEIVED WRITTEN APPROVAL FROM THE CITY OF CREST HILL.

IN THE EVENT THE OWNER OF DETENTION EASEMENT IN THIS SUBDIVISION OR ANY SUBSEQUENT PURCHASER (FUTURE OWNER) FAILS TO MAINTAIN ANY SUCH EASEMENT/STORMWATER MANAGEMENT FACILITY, THE CITY OF CREST HILL, ILLINOIS SHALL UPON THIRTY (30) DAYS WRITTEN NOTICE TO THE OWNER OUTLINING THE NATURE AND DEFECT OF THE OWNERS DEFAULT AND THAT THE OWNER SHALL NOT HAVE CURED SAID DEFAULT SHALL RESERVE THE RIGHT TO PERFORM OR HAVE PERFORMED ON ITS BEHALF, ANY MAINTENANCE WORK UPON THE DETENTION EASEMENT REASONABLY NECESSARY TO INSURE ADEQUATE STORM WATER STORAGE FREE/FLOW OF WATER, EROSION CONTROL AND TURF MAINTENANCE TO ELIMINATE STAGNANT WATER WITHIN THE DETENTION AREA AND PROVIDED FUTURE THAT IN THE EVENT THAT THE CITY OF CREST HILL ELECTS TO PERFORM OR CAUSES TO PERFORM ANY SUCH WORK IT SHALL PROVIDE THE OWNERS WITH PROPER INSURANCE CERTIFICATES OF ALL SUBCONTRACTORS WORKING ON THE EASEMENT PREMISES CO-INSURING THE OWNER FOR THE WORK TO BE PERFORMED.

IN THE EVENT THE CITY OF CREST HILL, ILLINOIS SHALL BE REQUIRED TO PERFORM OR HAVE PERFORMED ON IT'S BEHALF ANY MAINTENANCE WORK TO OR UPON ANY SUCH FACILITY OR EASEMENT AREA THE COST TOGETHER WITH AN ADDITIONAL SUM OF TEN (10) PERCENT OF SAID COST SHALL BE ASSESSED TO THE OWNER OF DETENTION EASEMENTS IN THIS SUBDIVISION, IT'S SUCCESSOR'S AND ASSIGNS AND SHALL CONSTITUTE ALIEN AGAINST THE PROPERTY WHICH MAY BE ENFORCED BY ANY ACTION BROUGHT BY OR ON BEHALF OF THE CITY OF CREST HILL.

PUBLIC UTILITY AND DRAINAGE EASEMENT PROVISIONS

ALL EASEMENTS INDICATED AS PUBLIC UTILITY AND/OR DRAINAGE AND UTILITY EASEMENTS ON THIS PLAT ARE RESERVED FOR AND GRANTED TO THE CITY OF CREST HILL AND ALSO AS A NON-EXCLUSIVE EASEMENT TO THOSE PUBLIC UTILITY COMPANIES OPERATING UNDER FRANCHISE FROM THE CITY OF CREST HILL INCLUDING, BUT NOT LIMITED TO, AT&T/SBC/AMERITECH COMPANY, NICOR GAS COMPANY, COMMONWEALTH EDISON COMPANY AND THEIR SUCCESSORS AND ASSIGNS (COLLECTIVELY GRANTEE) FOR THE PERPETUAL RIGHT, PRIVILEGE AND AUTHORITY TO CONSTRUCT, RECONSTRUCT, REPAIR, INSPECT, MAINTAIN AND OPERATE "THE PUBLIC UTILITY TOGETHER WITH ANY AND ALL NECESSARY MANHOLES, CATCH BASINS, CONNECTIONS, APPLIANCES AND OTHER STRUCTURES AND APPURTENANCES AS MAY BE DEEMED NECESSARY BY SAID CITY OF CREST HILL, UPON, ALONG, UNDER AND THROUGH SAID INDICATED EASEMENT, TOGETHER WITH RIGHT OF ACCESS ACROSS THE PROPERTY FOR NECESSARY MEN AND EQUIPMENT TO DO ANY OF THE ABOVE WORK. THE RIGHT IS ALSO GRANTED TO CUT DOWN, TRIM OR REMOVE ANY TREES, SHRUBS OR OTHER PLANTS ON THE EASEMENT THAT INTERFERE WITH THE OPERATION OF THE PUBLIC UTILITY. THE GRANTEE OR GRANTEES PERFORMING OR CAUSING TO BE PERFORMED ANY OF SAID WORK SHALL BE RESPONSIBLE AT IT'S OR THEIR EXPENSE, TO BACKFILL ALL AREAS WITH APPROVED MATERIALS BUT SHALL NOT BE LIABLE TO RESTORE ANY PAVEMENT, CURB AND GUTTER, SIDEWALKS OR LANDSCAPING DISTURBED DURING MAINTENANCE, THE GRANTOR SHALL BE RESPONSIBLE FOR THE FULL AND COMPLETE RESTORATION OF THE EASEMENT PREMISES. NO PERMANENT BUILDINGS SHALL BE PLACED ON SAID EASEMENT, BUT SAME MAY BE USED FOR ASPHALT AND IMPROVEMENTS NORMALLY FOUND IN A PARKING LOT SUCH AS LIGHT FIXTURES AND SIGNS, GARDENS, SHRUBS, LANDSCAPING AND OTHER PURPOSES THAT DO NOT THEN OR LATER INTERFERE WITH THE AFORESAID USES OR RIGHTS, ELEVATIONS OR GRADES SHALL NOT BE CHANGED WITHIN THE EASEMENT PREMISES WITHOUT THE WRITTEN APPROVAL OF THE CITY OF CREST HILL.

MUNICIPAL UTILITY AND DRAINAGE EASEMENTS (M.U.E.)

A PERPETUAL NON-EXCLUSIVE EASEMENT APPURTENANT IS HEREBY RESERVED FOR AND GRANTED TO THE CITY OF CREST HILL AND THEIR RESPECTIVE SUCCESSORS AND ASSIGNS, OVER, UPON, ACROSS, THROUGH AND UNDER THOSE PORTIONS OF THE PROPERTY DESIGNATED AS MUNICIPAL UTILITY AND/OR DRAINAGE EASEMENT (M.U.E.) ON THIS PLAT FOR THE PURPOSE OF INSTALLING, LAYING, CONSTRUCTING, OPERATING, MAINTAINING, REPAIRING, RENEWING AND REPLACING WATER MAINS, SANITARY SEWER LINES, FORCE MAIN LINES, STORM SEWER LINES, IRRIGATION LINES, PIPES, STREET LIGHTS, DITCHES, SWALES AND APPURTENANCES, POLES, WIRES, CABLES, CONDUIT, MANHOLES, PEDESTALS AND OTHER FACILITIES USED IN CONNECTION WITH UNDERGROUND TRANSMISSION AND DISTRIBUTION OF MUNICIPAL UTILITY SERVICES AND DRAINAGE OF STORMWATER, TOGETHER WITH ALL APPURTENANT STRUCTURES, INCLUDING, BUT NOT LIMITED TO, WET WELLS, LIFT STATIONS, FIRE HYDRANTS, VALVE VAULTS, STREET LIGHTING EQUIPMENT AND ANY AND ALL OTHER FIXTURES AND EQUIPMENT REQUIRED FOR THE PURPOSE OF SERVICE THE PROPERTY WITH WATER SERVICE, SANITARY SEWER SERVICE, STORM WATER MANAGEMENT, IRRIGATIONS, STREET LIGHTING AND OTHER MUNICIPAL SERVICES, ALL INSTALLATION OF MUNICIPAL UTILITIES SHALL BE UNDERGROUND OR ON THE SURFACE BUT NOT OVERHEAD.

NO OBSTRUCTIONS SHALL BE PLACED IN THE M.U.E. AREAS, BUT THE M.U.E. AREAS MAY BE USED FOR FENCES, GARDENS, SHRUBS, LANDSCAPING AND SUCH OTHER PURPOSES THAT DO NOT, AND WILL NOT IN THE FUTURE, INTERFERE UNREASONABLY WITH THE EASEMENT RIGHTS HEREIN GRANTED.

BLANKET UTILITY AND DRAINAGE EASEMENT PROVISIONS

A BLANKET EASEMENT FOR UTILITIES AND DRAINAGE IS HEREBY RESERVED FOR AND GRANTED TO THE CITY OF CREST HILL, ILLINOIS, AND TO THOSE PUBLIC UTILITY COMPANIES OPERATING UNDER FRANCHISE FROM THE CITY OF CREST HILL, ILLINOIS, INCLUDING, BUT NOT LIMITED TO COMMONWEALTH EDISON COMPANY, A.T. & T., APPLICABLE CABLE TELEVISION COMPANIES, NORTHERN ILLINOIS GAS COMPANY AND THEIR SUCCESSORS AND ASSIGNS, OVER LOTS 1 AND 2 AS SHOWN HEREON, FOR THE PERPETUAL RIGHT, PRIVILEGE, AND AUTHORITY TO CONSTRUCT, RECONSTRUCT, REPAIR, INSPECT, MAINTAIN, AND OPERATE VARIOUS UTILITY TRANSMISSION AND DISTRIBUTION SYSTEMS AND INCLUDING WATERMAINS AND SERVICES, STORM WATER DETENTION, STORM AND/OR SANITARY SEWER MAINS AND SERVICES, STREET LIGHTS AND WIRING TOGETHER WITH ANY AND ALL NECESSARY MANHOLES, CATCH BASINS, CONNECTIONS, APPLIANCES, AND OTHER STRUCTURES AND APPURTENANCES AS MAY BE DEEMED NECESSARY BY SAID CITY, OVER, UPON ALONG, UNDER, AND THROUGH SAID INDICATED BLANKET EASEMENT, TOGETHER WITH RIGHT OF ACCESS ACROSS THE PROPERTY FOR NECESSARY MEN AND EQUIPMENT TO DO ANY OF THE ABOVE WORK. THE RIGHT IS ALSO GRANTED TO CUT DOWN, TRIM, OR REMOVE ANY TREES, SHRUBS, OR OTHER PLANTS ON THE BLANKET EASEMENT THAT INTERFERE WITH THE SAME OPERATION OF THE SEWERS OR OTHER UTILITIES. NO PERMANENT STRUCTURES SHALL BE PLACED ON SAID BLANKET EASEMENT, BUT SAME MAY BE USED FOR GARDENS, SHRUBS, LANDSCAPING, AND OTHER PURPOSES THAT DO NOT THEN OR LATER INTERFERE WITH THE AFORESAID USES OR RIGHTS. WHERE THE EASEMENT IS USED FOR BOTH SEWER AND OTHER UTILITIES, THE OTHER UTILITY INSTALLATION SHALL BE SUBJECT TO THE ORDINANCES OF THE CITY OF CREST HILL.

STORM SEWER, DRAINAGE, AND STORMWATER MANAGEMENT EASEMENT PROVISIONS

A PERPETUAL, NON-EXCLUSIVE EASEMENT IS HEREBY RESERVED FOR AND GRANTED TO THE CITY OF CREST HILL, ILLINOIS, WITHIN THE AREAS SHOWN ON THE HEREON PLAT BY DASHED LINES AND MARKED "STORM SEWER EASEMENT HEREBY GRANTED" AND/OR "DRAINAGE & STORMWATER MANAGEMENT EASEMENT HEREBY GRANTED" OR OTHER SIMILAR DESCRIPTION TO INSTALL, CONSTRUCT, RENEW, OPERATE, MAINTAIN, RELOCATE, AND EXTEND STORM SEWERS AND OTHER APPURTENANCES AND EQUIPMENT REQUIRED FOR THE PURPOSE OF SERVING THE SUBJECT PROPERTY, SUBDIVISION AND ADJACENT PROPERTY, SUBJECT TO ALL COVENANTS, CONDITIONS, EASEMENTS AND RESTRICTIONS OF RECORD, INCLUDING, WITHOUT LIMITATION, THAT CERTAIN PIPELINE EASEMENT DESCRIBED BY DOCUMENTS 775308 AND 775310 AND DEPICTED BY DOCUMENTS 795125 AND R1966-016525 (COLLECTIVELY, "PIPELINE EASEMENT"). GRANTEE HEREBY AGREES TO INSTALL, CONSTRUCT, RENEW, OPERATE, MAINTAIN, RELOCATE, EXTEND AND OTHERWISE COMPLETE ALL WORK TO THE STORM SEWER AND ALL APPURTENANCES AND EQUIPMENT RELATED THERETO IN SUCH A MANNER THAT COMPLIES WITH ALL TERMS, CONDITIONS AND RESTRICTIONS SET FORTH IN THE PIPELINE EASEMENT AND GRANTEE FURTHER AGREES NOT TO INTERFERE WITH THE RIGHTS GRANTED UNDER THE PIPELINE EASEMENT. GRANTEE HEREBY AGREES TO INDEMNIFY, DEFEND AND HOLD HARMLESS GRANTOR, ITS SUCCESSORS AND/OR ASSIGNS, FROM ANY AND ALL CLAIMS, DAMAGES, LOSSES, LIABILITIES, COSTS AND EXPENSES (INCLUDING, COURT COSTS AND ATTORNEYS' FEES) ARISING OUT OF OR OTHERWISE RELATING TO THE INSTALLATION, CONSTRUCTION, RENEWAL, OPERATION, MAINTENANCE, RELOCATION, AND EXTENSION OF THE STORM SEWER AND ALL APPURTENANCES AND EQUIPMENT RELATED THERETO, EXCEPT TO THE EXTENT SUCH CLAIMS ARISE AS A RESULT OF GRANTOR'S NEGLIGENCE. THE RIGHT IS GRANTED TO CUT, TRIM, OR REMOVE TREES, BUSHES, AND FENCES AS MAY BE REASONABLY REQUIRED INCIDENT TO THE RIGHTS HEREIN GIVEN, AND THE RIGHT TO ENTER UPON SAID PROPERTY FOR ALL SUCH PURPOSES STATED HEREIN, NO PERMANENT BUILDINGS SHALL BE PLACED ON SAID EASEMENTS; HOWEVER, THE SAME MAY BE USED FOR GARDENS, SHRUBS, LANDSCAPING, PARKING IMPROVEMENTS, DRIVEWAYS, WALKWAYS, AND OTHER PURPOSES THAT DO NOT THEN OR LATER INTERFERE WITH THE AFORESAID USES OR THE RIGHTS HEREIN GRANTED.

STATE OF ILLINOIS)
)SS
COUNTY OF PEORIA)

WE, FARNSWORTH GROUP, INC., ILLINOIS PROFESSIONAL DESIGN FIRM NUMBER 184-001856, DO HEREBY CERTIFY THAT A LAND SURVEY HAS BEEN MADE UNDER OUR DIRECTION OF THE FOLLOWING DESCRIBED PROPERTY:

PARCEL 1:

THAT PART OF THE SOUTHEAST QUARTER OF SECTION 31, IN TOWNSHIP 36 NORTH, AND IN RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN LOCKPORT TOWNSHIP, WILL COUNTY, ILLINOIS, AS HEREINAFTER DESCRIBED: BEGINNING AT THE SOUTHEAST CORNER OF SAID SECTION 31; THENCE NORTHWESTERLY ALONG A LINE PARALLEL WITH THE CENTER LINE OF THE RIGHT OF WAY OF U.S. HIGHWAY ROUTE NO. 30, 500.00 FEET; THENCE NORTHEASTERLY ALONG A LINE THAT IS A RIGHT ANGLE TO THE AFORESAID CENTER LINE OF SAID RIGHT OF WAY OF SAID HIGHWAY, 541.1 FEET, TO THE EAST LINE OF SAID SECTION 31; THENCE SOUTH ALONG THE EAST LINE OF SAID SECTION 31, 736.9 FEET TO THE POINT OF BEGINNING, EXCEPTING THEREFROM THE RIGHT OF WAY OF U.S. HIGHWAY ROUTE NO. 30 (PLAINFIELD ROAD) AND WEBER ROAD WHICH INCLUDES THAT PART TAKEN AS PARCEL NO. 0138, CONDEMNED IN CASE NO. W73G1751ED, IN WILL COUNTY, ILLINOIS.

PARCEL 2:

THAT PART OF THE SOUTHEAST 1/4 OF SECTION 31, TOWNSHIP 36 NORTH, RANGE 10, EAST OF THE THIRD PRINCIPAL MERIDIAN, DESCRIBED AS FOLLOWS: COMMENCING AT THE SOUTHEAST CORNER OF THE SAID SOUTHEAST 1/4; THENCE NORTHWESTERLY ALONG A LINE PARALLEL WITH THE CENTER LINE OF UNITED STATES HIGHWAY ROUTE NUMBER 30, 500.00 FEET; THENCE NORTHEASTERLY ALONG A LINE FORMING A RIGHT ANGLE WITH THE LAST DESCRIBED LINE 541.10 FEET TO THE EAST LINE OF THE SAID SOUTHEAST 1/4; THENCE NORTH ALONG THE SAID EAST LINE OF THE SOUTHEAST 1/4, 157.04 FEET TO THE POINT OF BEGINNING; THENCE CONTINUE ALONG THE SAID EAST LINE OF THE SOUTHEAST 1/4, 156.16 FEET; THENCE SOUTHWESTERLY ALONG A LINE FORMING AN ANGLE OF 137 DEGREES 15 MINUTES TO THE LEFT WITH THE PROLONGATION OF THE LAST DESCRIBED LINE, 729.37 FEET TO THE NORTHEASTERLY RIGHT OF WAY LINE OF UNITED STATES HIGHWAY ROUTE NUMBER 30; THENCE SOUTHEASTERLY ALONG THE SAID NORTHEASTERLY RIGHT OF WAY LINE OF UNITED STATES HIGHWAY ROUTE NUMBER 30, 106.00 FEET; THENCE NORTHEASTERLY 615.01 FEET TO THE POINT OF BEGINNING, EXCEPTING THEREFROM THE RIGHT OF WAY OF WEBER ROAD WHICH INCLUDES THAT PART TAKEN AS PARCEL NUMBER 0138 CONDEMNED IN CASE NUMBER W73G1751ED, IN WILL COUNTY, ILLINOIS.

PARCEL 3:

THAT PART OF THE SOUTHEAST 1/4 OF SECTION 31, IN TOWNSHIP 36 NORTH, RANGE 10 EAST OF THE THIRD PRINCIPAL MERIDIAN, LOCKPORT TOWNSHIP, WILL COUNTY, ILLINOIS DESCRIBED AS FOLLOWS: COMMENCING AT THE SOUTHEAST CORNER OF THE SAID SOUTHEAST 1/4; THENCE NORTHWESTERLY ALONG A LINE PARALLEL WITH THE CENTER LINE OF U.S. HIGHWAY ROUTE NUMBER 30, 500.00 FEET; THENCE NORTHEASTERLY ALONG A LINE FORMING A RIGHT ANGLE WITH THE LAST DESCRIBED LINE 41.10 FEET TO THE POINT OF BEGINNING, SAID POINT BEING ON THE NORTHEASTERLY RIGHT OF WAY LINE OF U.S. HIGHWAY ROUTE NUMBER 30; THENCE CONTINUE NORTHEASTERLY ALONG THE PROLONGATION OF THE LAST DESCRIBED LINE 500.00 FEET TO THE EAST LINE OF THE SAID SOUTHEAST 1/4; THENCE NORTH ALONG THE SAID EAST LINE OF THE SOUTHEAST 1/4 157.04 FEET; THENCE SOUTHWESTERLY ALONG A LINE FORMING AN ANGLE OF 137 DEGREES 15 MINUTES TO THE LEFT WITH THE PROLONGATION OF THE LAST DESCRIBED LINE, 615.01 FEET TO THE SAID NORTHEASTERLY RIGHT OF WAY LINE OF U.S. HIGHWAY NUMBER 30; THENCE SOUTHEASTERLY ALONG THE SAID NORTHEASTERLY RIGHT OF WAY LINE OF U.S. HIGHWAY ROUTE NUMBER 30, 106.60 FEET TO THE POINT OF BEGINNING, EXCEPTING THEREFROM THE RIGHT OF WAY OF WEBER ROAD WHICH INCLUDES THAT PART TAKEN AS PARCEL NUMBER 0138 CONDEMNED IN CASE NUMBER W773G 1751 ED, IN WILL COUNTY, ILLINOIS.

WE HAVE SURVEYED SAID PROPERTY INTO TWO LOTS AND ONE OUTLOT OF WHICH ARE REPRESENTED ON THE PLAT HEREON DRAWN. DISTANCES ARE SHOWN IN FEET AND DECIMAL PARTS THEREOF AND ANGULAR BEARINGS ARE SHOWN IN DEGREES, MINUTES, AND SECONDS.

WE FURTHER STATE THAT SAID PROPERTY FALLS WITHIN THE CORPORATE LIMITS OF THE CITY OF CREST HILL, WILL COUNTY, ILLINOIS AND THAT BASED ON EXAMINATION OF THE NATIONAL FLOOD INSURANCE PROGRAM, FLOOD INSURANCE RATE MAP, COMMUNITY PANEL NUMBER 17089C0070H, WITH AN EFFECTIVE DATE OF AUGUST 03, 2009, NO PART OF SAID PROPERTY IS SITUATED WITHIN A FLOOD HAZARD AREA.

WE HEREBY DESIGNATE _____ TO SUBMIT THIS PLAT, IN THE ORIGINAL VERSION AS DATED AND SIGNED BELOW FOR RECORDING ON OUR BEHALF.

ALL EXTERIOR AND INTERIOR CORNERS HAVE BEEN SET PER 765 ILCS 205/1.

DATED AT PEORIA, ILLINOIS, THIS _____ DAY OF _____ , 2026.

FARNSWORTH GROUP, INC.
100 WALNUT STREET SUITE 200
PEORIA, IL 61602

BY: DRAFT
_____
KENNETH J SILVERTHORN
ILLINOIS PROFESSIONAL LAND SURVEYOR NO. 3413
ksilverthorn@f-w.com www.f-w.com
PHONE: 309-689-9888

KENNETH J. SILVERTHORN
3413
PROFESSIONAL LAND SURVEYOR
STATE OF ILLINOIS
PEORIA, ILLINOIS

DATE: _____
EXP. DATE: 11-30-2026
DESIGN FIRM REGISTRATION NO. 184-001856

Farnsworth
GROUP
2211 WEST BRADLEY AVENUE
CHAMPAIGN, ILLINOIS 61821
(217) 352-7408 / info@f-w.com
www.f-w.com
Engineers | Architects | Surveyors | Scientists

ISSUE:

#	DATE:	DESCRIPTION:

PROJECT:

DATE:	12/19/2024
DESIGNED:	KJS
DRAWN:	PDM
REVIEWED:	####
FIELD BOOK NO.:	BMI 3410 63

SHEET TITLE:

FINAL PLAT

DRAFT

SHEET NUMBER:

2
OF 3

PROJECT NO.: 0241200

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FINAL PLAT
QUIKTRIP NO. 4452 SUBDIVISION

PART OF THE SE 1/4 OF SECTION 31, TOWNSHIP 36 NORTH, RANGE 10 EAST OF THE 3RD PRINCIPAL MERIDIAN
CITY OF CREST HILL, WILL COUNTY, ILLINOIS

STATE OF ILLINOIS)
) SS
COUNTY OF WILL)

_____ DOES HEREBY STATE THAT TO THE BEST OF OUR KNOWLEDGE AND BELIEF THE DRAINAGE OF SURFACE WATERS WILL NOT BE CHANGED BY THE CONSTRUCTION OF SUCH SUBDIVISION OR ANY PART THEREOF OR THAT IF SUCH SURFACE WATER DRAINAGE WILL CHANGE, ADEQUATE PROVISION HAS BEEN MADE FOR THE COLLECTION AND DIVERSION OF SUCH SURFACE WATERS INTO PUBLIC AREAS OR DRAINS WHICH THE SUBDIVIDER HAS A RIGHT TO USE AND THAT SUCH SURFACE WATERS WILL NOT BE DEPOSITED ON THE PROPERTY OF ADJOINING LAND OWNERS IN SUCH CONCENTRATIONS AS MAY CAUSE DAMAGE TO THE ADJOINING PROPERTY BECAUSE OF THE CONSTRUCTION OF THE SUBDIVISION.

DATED AT _____, THIS ____, DAY OF _____2026.

_____
ENGINEER

STATE OF ILLINOIS)
)SS
COUNTY OF WILL)

THIS IS TO CERTIFY THAT I FIND NO DELINQUENT OR UNPAID CURRENT TAXES OR SPECIAL ASSESSMENTS AGAINST ANY OF THE REAL ESTATE INCLUDED IN THIS PLAT OF SUBDIVISION.

DATED THIS ____ DAY OF _____, 2026.

_____
WILL COUNTY CLERK

STATE OF ILLINOIS)
)SS
COUNTY OF WILL)

I, _____, DIRECTOR OF THE TAX MAPPING AND PLATTING OFFICE DO HEREBY CERTIFY THAT I HAVE CHECKED THE PROPERTY DESCRIPTION ON THIS PLAT AGAINST AVAILABLE COUNTY RECORDS AND FIND SAID DESCRIPTION TO BE TRUE AND CORRECT, THE PROPERTY HEREIN DESCRIBED IS LOCATED ON MAP PAGE # 07-06B-W AND IDENTIFIED AS PERMANENT REAL ESTATE TAX INDEX NUMBERS (P.I.N.) 11-04-31-405-006-0000, 11-04-31-405-051-0000, AND 11-04-31-405-050-0000.

DATED THIS ____ DAY OF _____, 2026.

_____
DIRECTOR

STATE OF ILLINOIS)
)SS
COUNTY OF WILL)

THIS INSTRUMENT NO. _____ WAS FILED FOR RECORD IN THE RECORDER'S OFFICE OF WILL COUNTY, ILLINOIS, ON THE _____ DAY OF _____, 2026, AT _____ O'CLOCK _M.

_____
WILL COUNTY RECORDER

STATE OF ILLINOIS)
)SS
COUNTY OF WILL)

APPROVED BY THE CITY OF CREST HILL PLANNING COMMISSION AT A MEETING HELD ON THE ___ DAY OF _____, 2026.

_____
CHAIRPERSON

_____
SECRETARY

STATE OF ILLINOIS)
)SS
COUNTY OF WILL)

APPROVED BY THE CITY COUNCIL OF THE CITY OF CREST HILL AT A MEETING HELD ON DAY OF __ DAY OF _____, 2026.

_____
MAYOR

_____
CITY CLERK

THIS PLAT HAS BEEN APPROVED BY THE ILLINOIS DEPARTMENT OF TRANSPORTATION WITH RESPECT TO ROADWAY ACCESS PURSUANT OF §2 OF "AN ACT TO REVISE THE LAW IN RELATION TO PLATS," AS AMENDED. A PLAN THAT MEETS THE REQUIREMENTS CONTAINED IN THE DEPARTMENT'S "POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS" WILL, BE REQUIRED BY THE DEPARTMENT.

DATED: _____

_____, P.E.
REGION _____ ENGINEER

Farnsworth
GROUP
2211 WEST BRADLEY AVENUE
CHAMPAIGN, ILLINOIS 61821
(217) 352-7408 / info@f-w.com

www.f-w.com
Engineers | Architects | Surveyors | Scientists

ISSUE:

#	DATE:	DESCRIPTION:

PROJECT:

DATE:	12/19/2024
DESIGNED:	KJS
DRAWN:	PDM
REVIEWED:	####
FIELD BOOK NO.:	BMI 3410 63

SHEET TITLE:

FINAL PLAT

DRAFT

SHEET NUMBER:

3
OF 3

PROJECT NO.: 0241200

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PRELIMINARY

STORMWATER DRAINAGE REPORT

for

QuikTrip Store #4452

1610 Plainfield Road
Crest Hill, Will County, Illinois 60403

Prepared For:
QuikTrip Corporation
5725 Foxridge Drive
Mission, Kansas 66202

Prepared By:
Midwest Design Group
P.O. Box 860015
Shawnee, Kansas 66286-0015
913.248.9385

Midwest Design Group

ENGINEER'S CERTIFICATION
Stormwater Drainage Report
QuikTrip Store #4452

1610 Plainfield Road
Crest Hill, Will County, Illinois 60403

I Hereby Certify that this Engineering Document was prepared by me, or under my direct supervision, and that I am a duly Registered Professional Engineer under the laws of the State of Illinois.

Jonathon Smith

Jonathon Smith, P.E.
Project Manager
IL Registration No. 062-073894

January 9, 2026
Date



Seal

REPORT PURPOSE

This stormwater drainage report has been prepared to detail the stormwater drainage design for the QuikTrip Store #4452 facility to be located at the north corner of the intersection of Plainfield Road and Theodore Street in Crest Hill, Will County, Illinois. This study will confirm that the proposed development will comply with the design parameters set forth by the Crest Hill Stormwater Drainage and Detention Ordinance.

PROJECT SUMMARY

QuikTrip Corporation is proposing to build a new convenience store with fuel offerings in the north corner of the intersection of Plainfield Road and Theodore Street. The development will include a convenience store, auto fuel canopy, parking stalls, and associated sidewalk and curb and gutter. The store will be oriented to face Plainfield Road (southwest) with an auto fuel canopy southwest of the store. The new QuikTrip facility will constructed on a parcel of land located in the Southeast ¼ of Section 31, Township 36 North, Range 10 East of the Third Principal Meridian in Crest Hill, Will County, Illinois. The land will be split into Lot 1 (87,201 sf), Lot 2 (71,685 sf), and Tract A (53,529 sf). The new QuikTrip project will be constructed on Lot 1 and a detention facility will be constructed on Tract A that will serve both Lots 1 and 2. The entire property will contain 212,415 s.f. (4.876 acres). The Overall Site Plan (C010) and Site Plan (C100) have been included in the Appendix of this report for reference.

WATERSHED

This property lies within the Des Plaines River Watershed. The detention facility will outlet north using the existing control structure's outlet pipe, which outlets to a ditch along Knapp Drive which drains to an outlet point under Larkin Avenue to the Rock Run located along the west side of Larkin Avenue. Ultimately, runoff drains to the Des Plaines River. Refer to FEMA and USGS map in the Appendix.

FLOODPLAIN CERTIFICATE

According to the National Flood Insurance Program (NFIP) Flood Insurance Rate Map (FIRM) Panel No. 17197C0161G, effective February 15, 2019, as published by the Federal Emergency Management Agency, the subject property lies mostly within Flood Zone "X", areas determined to be "outside the 0.2% annual chance floodplain". It appears a minimal portion of the south corner of the property is within Zone AE, but no grading or improvements are proposed in this area.



Map taken from FIRM Panel Number 17197C0161G, dated February 15, 2019.

SITE SOIL CHARACTERISTICS

This property contains the following soil classifications:

- 149A – Brenton Silt Loam, 0-2% slopes, HSG B/D
- 223C2 – Varna Silt Loam, 4-6% slopes, HSG C
- 223D2 – Varna Silt Loam, 6-12% slopes, HSG C
- 329A – Will silty clay loam, 0-2% slopes, HSG B/D

The USDA/NRCS soil survey can be found in the Appendix.



Map taken from USDA/NRCS Soil Survey

WETLANDS

Per the U.S. Fish and Wildlife Service National Wetland Inventory (NWI) map, there are no wetlands present within the property. Refer to the Appendix for the NWI map.

METHODOLOGY

The proposed drainage characteristics of the site were evaluated and analyzed based on the Crest Hill Stormwater Drainage and Detention Ordinance criteria. Hydrologic calculations were performed and detention requirements were determined using the Autodesk Hydraflow Hydrographs program (SCS Method). Runoff curve numbers of 80 for proposed pervious areas and 98 for impervious areas were used. Illinois State Water Survey (ISWS) Bulletin 75 rainfall data was used with Huff 3rd Quartile distribution for a 24-hour storm event.

EXISTING DEVELOPMENT

The existing property is currently partially developed with a commercial development (Crest Hill Public Works) within Lot 1 and part of Tract A. Lot 2 was previously rough graded and storm sewer was installed for a pad site but was never fully developed. Tract A was also previously partially developed as a pad site and an existing detention facility was constructed. It appears Lot 2 and Tract A drain to the existing detention facility but it does not appear that the Crest Hill Public Works building development drains to the existing detention facility. The property is bordered on the east by Knapp Drive, on the northwest by an adjacent commercial property, on the southwest by Plainfield Road, and on the south by Theodore Street.

In the existing conditions, the site generally drains from southwest to northeast either into the detention facility or into Knapp Drive. It appears the southern corner of the site drains directly into Rock Run. The rest of the site drains either directly into Knapp Drive, which appears to have drainage swales adjacent to the property, or through the detention facility which then outlets north and it is assumed it ultimately drains to Rock Run.

The existing site contains approximately 75,122 sf of impervious areas (35.4%), 1,746 sf of gravel area (0.8%), and 135,547 sf of pervious areas (63.8%). A pre-development runoff coefficient and Curve Number was calculated for all drainage areas using the NRCS Soils Report and TR-55 runoff coefficient tables. The pre-development composite runoff coefficient and Curve Number (CN) is 0.52 and 86.5, accordingly. The associated calculations are included in the Appendix. Refer to the Pre-Developed Drainage Map in the Appendix (Pending final report).

PROPOSED DEVELOPMENT

The proposed development will be graded to generally maintain existing drainage patterns. Stormwater runoff from the QuikTrip development will be captured and conveyed in private storm sewers to the detention facility within Tract A. The private storm sewer has been designed to convey the 100-year design storm. The proposed detention facility will have a control structure to reduce peak runoff from the proposed improvements. The proposed control structure will utilize the existing outlet pipe from the existing control structure.

For this preliminary report, simplified drainage areas were used for analysis purposes. Drainage area “Detained” is the estimated area that will be detained in full build out condition (when Lots 1 and 2 are fully developed). A Curve Number (CN) value of 95 was assumed based on the TR-55 Manual, using a cover type of Urban Districts, Commercial and Businesses and Hydrologic Soil Group (HSG) D. It is preliminarily estimated that 12% of the total site area will not be

captured and will be uncontrolled runoff (Drainage area "Uncontrolled"). A CN Value of 85 was assumed for the uncontrolled area.

It is estimated the full build out condition will contain 172,665 sf of impervious areas (81.3%) and 39,750 sf of pervious areas (18.7%). This is an increase of 95,797 square feet in impervious area from existing conditions. A post-development runoff coefficient and Curve Number was calculated for all drainage areas using the NRCS Soils Report and TR.-55 runoff coefficient tables. The post-development composite runoff coefficient and Curve Number (CN) is 0.79 and 94.6, accordingly. The proposed storm sewer system, detention facilities, and associated calculations are included in the Appendix. Refer to the Post-Developed Drainage Map in the Appendix (Pending final report).

DETENTION REQUIREMENTS

Per the Crest Hill Stormwater Drainage and Detention Ordinance, "*The peak discharge from events less than or equal to the two-year event shall not be greater than 0.04 cfs per acre of property drained. The peak 100-year discharge shall not be greater than 0.15 cfs per acres of property drained.*"

The total property drained is 4.876 acres, which results in allowable release rates for the 2-year and 100-year storm events of 0.195 cfs and 0.731 cfs, accordingly. Peak discharges from the facility will be controlled through a control structure with an internal weir wall and multi-stage orifices. Additional detention information and design calculations can be found in the Appendix.

DOWNSTREAM DRAINAGE IMPACTS

The proposed stormwater detention facilities will control peak runoff so that there will be no adverse impacts to downstream drainage facilities.

STORMWATER TREATMENT

QuikTrip will install SNOUT water quality units upstream of the detention facility and in the detention outlet structure. Bio-skirts will be added to the SNOUT units for oil absorption. Information on these water quality units can be found in the Appendix.

FLOOD STUDY

The QuikTrip Store No. 4452 improvements will be within Zone "X" on the property, as shown in the Floodplain Certificate section. This development is not expected to incur damages as a result of flooding.

U.S. ARMY CORPS OF ENGINEERS RQUIREMENTS

The QuikTrip Store No. 4452 project will not disturb jurisdictional waters or wetlands of the U.S.

CONCLUSION

The QuikTrip Store No. 4452 development will comply with the design parameters set forth by the Crest Hill Stormwater Drainage and Detention Ordinance. The existing detention pond provides approximately 75,213 cubic-feet of detention volume (at elevation 603.00). The existing detention pond will be removed and replaced with a new detention facility that will provide 153,030 cubic-feet of volume (at elevation 603.00). The required detention volume, based on the CN assumptions described in the *Proposed Development* section, will be approximately 106,476 cubic-feet and will be provided at pond elevation 601.72. A stormwater detention facility has been designed to control the peak stormwater runoff from Lots 1 and 2 and Tract A (see table below for release rate summary). A private stormwater drainage system will convey runoff to the stormwater detention facility. Best Management Practices will be implemented to help improve water quality. No adverse effects are expected on adjacent properties or downstream drainage systems after the proposed improvements are completed.

Allowable Release Rates vs Post-Developed Release Rates Summary

Storm Event	Allowable Release Rate (cfs)	Post-Developed Peak Release Rate (cfs)
2-year	0.195	0.179
100-year	0.731	0.686

QuikTrip Store #4452

1610 Plainfield Road
Crest Hill, Will County, Illinois 60403

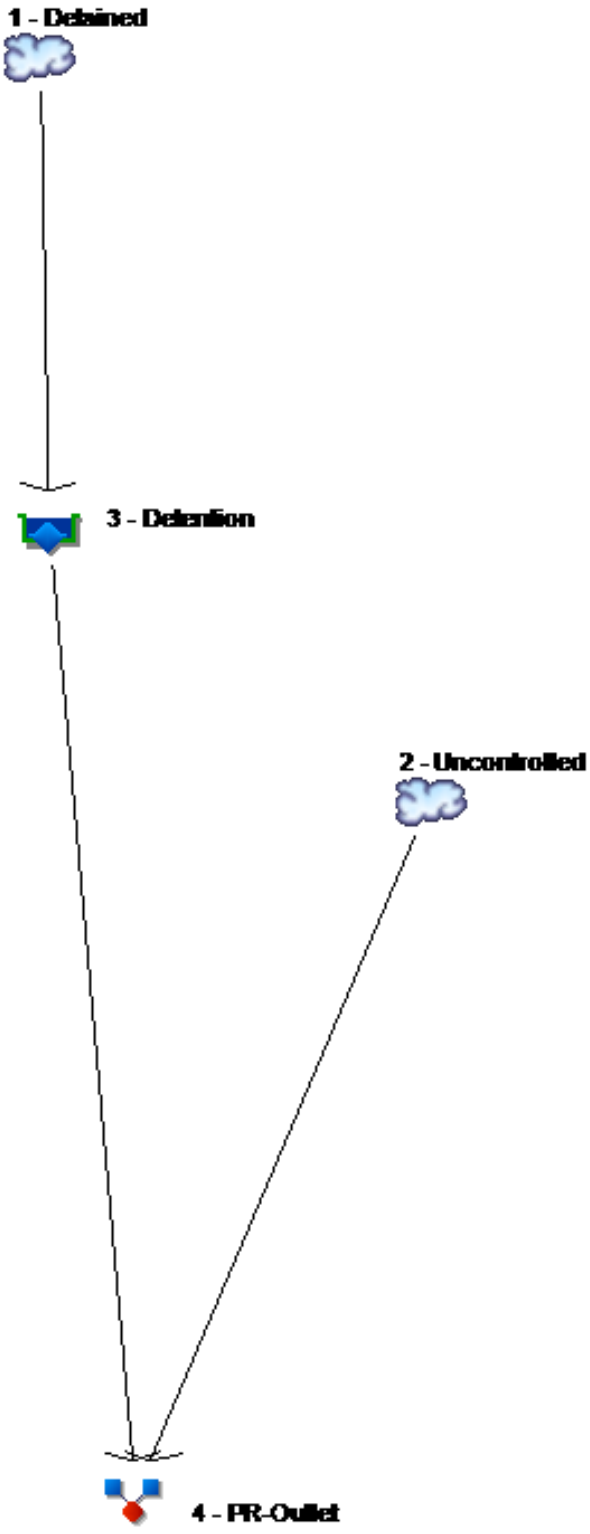
APPENDIX

Midwest Design Group

QuikTrip Store #4452

AutoDesk Hydraflow Hydrographs Results

Watershed Model Schematic



Hydraflow Rainfall Report

Precip. file name: \\DESKTOP-HIMC8GB\Documents\IL Northeast Precip (Bulletin 75-HUFF) Depths.pcp

Storm Distribution	Rainfall Precipitation Table (in)							
	1-yr	2-yr	3-yr	5-yr	10-yr	25-yr	50-yr	100-yr
SCS 24-hour	0.00	0.00	0.00	3.30	0.00	5.77	5.83	0.00
SCS 6-Hr	0.00	0.00	0.00	0.00	0.00	0.00	4.33	0.00
Huff-1st	0.00	0.00	0.00	2.75	0.00	5.38	6.50	0.00
Huff-2nd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-3rd	0.00	3.34	0.00	0.00	5.15	0.00	0.00	8.57
Huff-4th	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Huff-Indy	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Custom	0.00	0.00	0.00	2.80	0.00	5.25	6.00	0.00

Pond Report

Pond No. 3 - Detention

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 596.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	596.00	00	0	0
1.00	597.00	10,000	3,333	3,333
2.00	598.00	15,000	12,415	15,748
3.00	599.00	20,000	17,438	33,186
4.00	600.00	25,000	22,451	55,637
5.00	601.00	30,000	27,459	83,097
6.00	602.00	35,000	32,465	115,561
7.00	603.00	40,000	37,468	153,030

Culvert / Orifice Structures

	[A]	[B]	[C]	[PrfRsr]
Rise (in)	= 0.75	2.25	0.00	0.00
Span (in)	= 0.75	2.25	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 596.00	599.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 0.00	0.00	0.00	0.00
Crest El. (ft)	= 0.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= ---	---	---	---
Multi-Stage	= No	No	No	No

Exfil.(in/hr) = 0.000 (by Wet area)

TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).

Stage / Storage / Discharge Table

Stage ft	Storage cuft	Elevation ft	Clv A cfs	Clv B cfs	Clv C cfs	PrfRsr cfs	Wr A cfs	Wr B cfs	Wr C cfs	Wr D cfs	Exfil cfs	User cfs	Total cfs
0.00	0	596.00	0.00	0.00	---	---	---	---	---	---	---	---	0.000
1.00	3,333	597.00	0.01 ic	0.00	---	---	---	---	---	---	---	---	0.015
2.00	15,748	598.00	0.02 ic	0.00	---	---	---	---	---	---	---	---	0.021
3.00	33,186	599.00	0.03 ic	0.00	---	---	---	---	---	---	---	---	0.025
4.00	55,637	600.00	0.03 ic	0.13 ic	---	---	---	---	---	---	---	---	0.156
5.00	83,097	601.00	0.03 ic	0.18 ic	---	---	---	---	---	---	---	---	0.216
6.00	115,561	602.00	0.04 ic	0.23 ic	---	---	---	---	---	---	---	---	0.263
7.00	153,030	603.00	0.04 ic	0.26 ic	---	---	---	---	---	---	---	---	0.302

Pond Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Wednesday, 02 / 26 / 2025

Pond No. 3 - Detention

Pond Data

Contours -User-defined contour areas. Conic method used for volume calculation. Begining Elevation = 596.00 ft

Stage / Storage Table

Stage (ft)	Elevation (ft)	Contour area (sqft)	Incr. Storage (cuft)	Total storage (cuft)
0.00	596.00	00	0	0
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Rise (in)	= 0.75	2.25	0.00	0.00
Span (in)	= 0.75	2.25	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 596.00	599.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

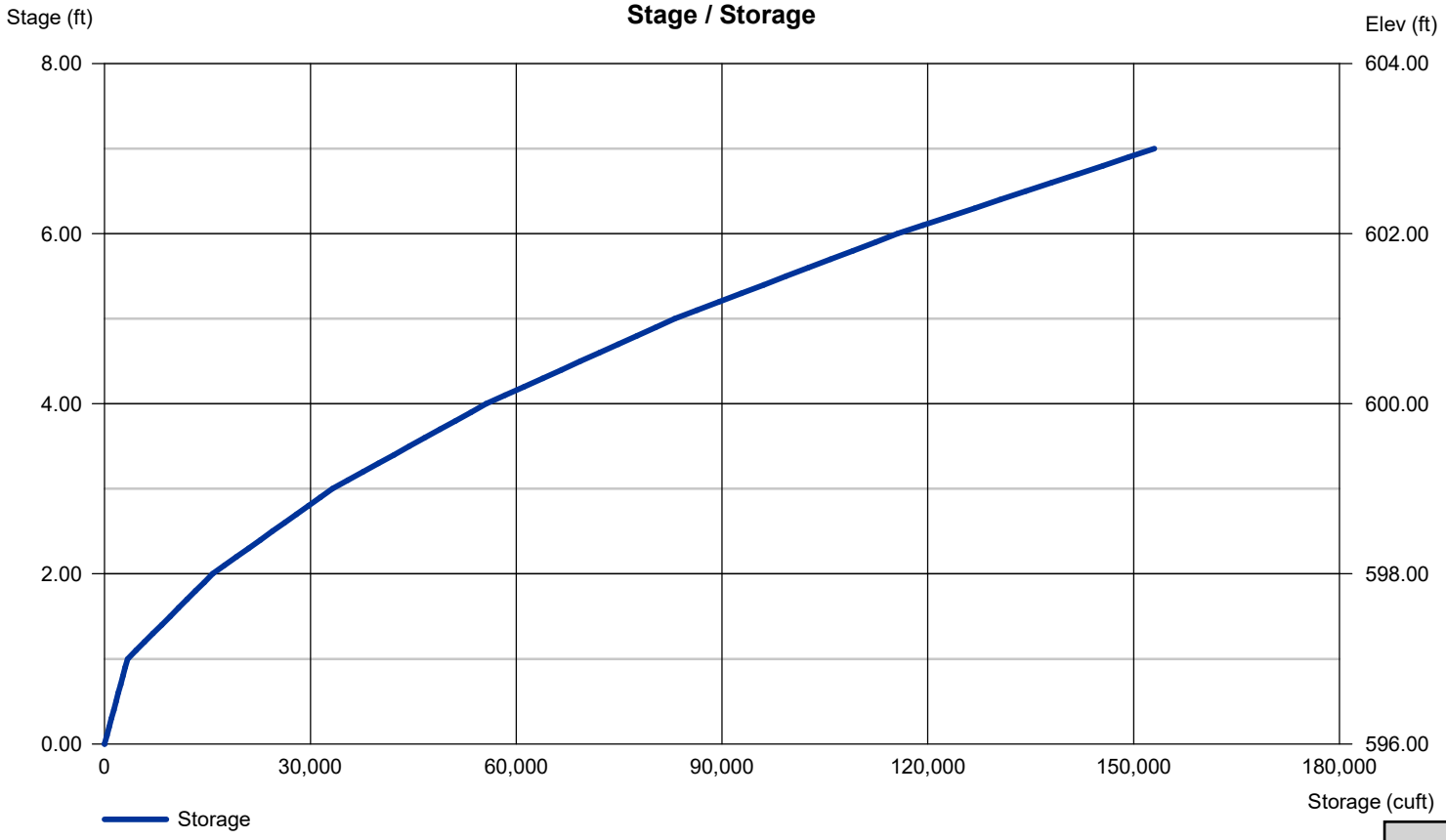
Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 0.00	0.00	0.00	0.00
Crest El. (ft)	= 0.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= ---	---	---	---
Multi-Stage	= No	No	No	No

Exfil.(in/hr) = 0.000 (by Wet area)

TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).



Pond Report

Hydraflow Hydrographs Extension for Autodesk® Civil 3D® by Autodesk, Inc. v2023 Wednesday, 02 / 26 / 2025

Pond No. 3 - Detention

Pond Data

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Span (in)	= 0.75	2.25	0.00	0.00
No. Barrels	= 1	1	0	0
Invert El. (ft)	= 596.00	599.00	0.00	0.00
Length (ft)	= 0.00	0.00	0.00	0.00
Slope (%)	= 0.00	0.00	0.00	n/a
N-Value	= .013	.013	.013	n/a
Orifice Coeff.	= 0.60	0.60	0.60	0.60
Multi-Stage	= n/a	No	No	No

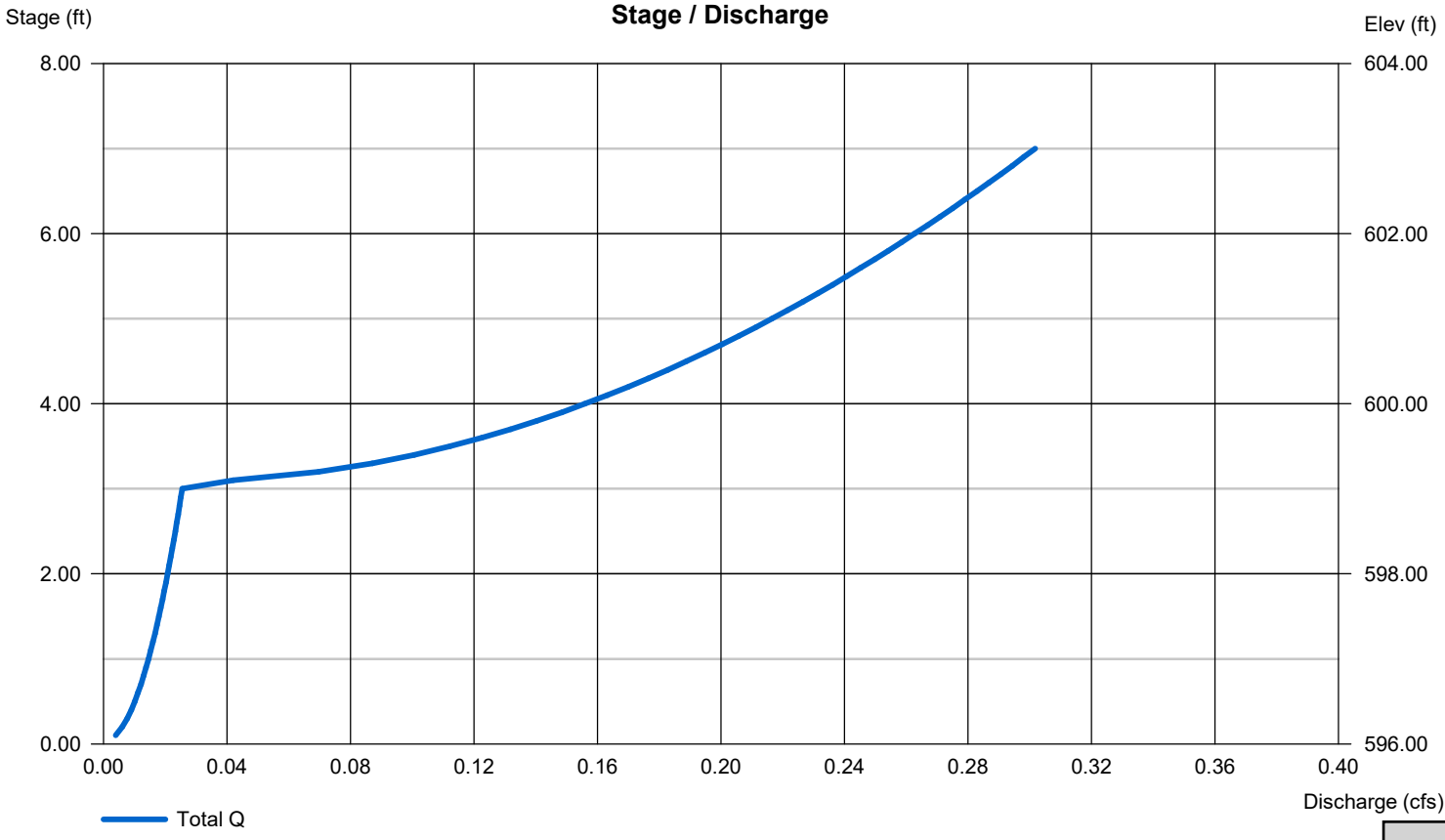
Weir Structures

	[A]	[B]	[C]	[D]
Crest Len (ft)	= 0.00	0.00	0.00	0.00
Crest El. (ft)	= 0.00	0.00	0.00	0.00
Weir Coeff.	= 3.33	3.33	3.33	3.33
Weir Type	= ---	---	---	---
Multi-Stage	= No	No	No	No

Exfil.(in/hr) = 0.000 (by Wet area)

TW Elev. (ft) = 0.00

Note: Culvert/Orifice outflows are analyzed under inlet (ic) and outlet (oc) control. Weir risers checked for orifice conditions (ic) and submergence (s).



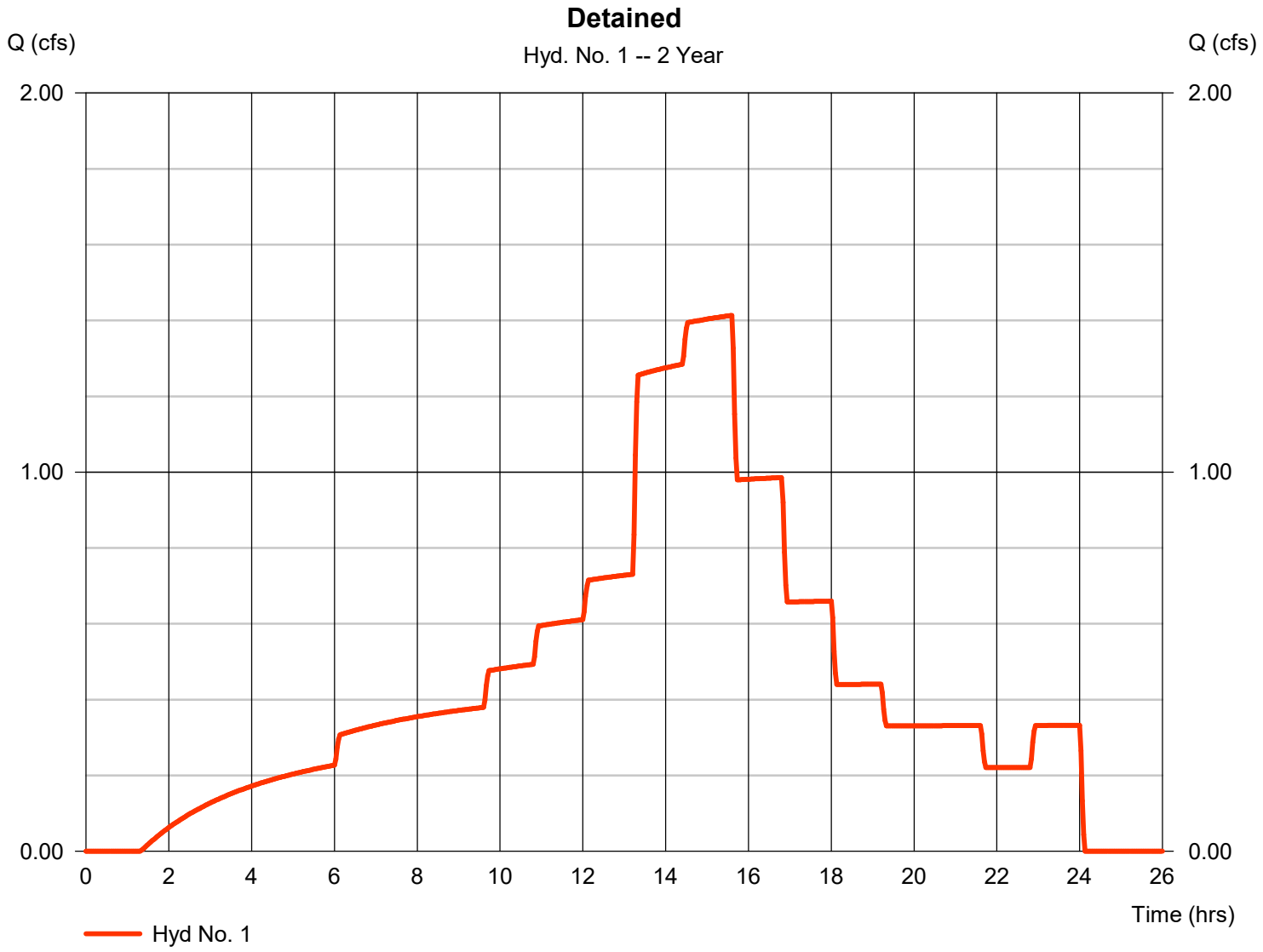
Hydrograph Report

Hyd. No. 1

Detained

Hydrograph type	=	SCS Runoff	Peak discharge	=	1.413 cfs
Storm frequency	=	2 yrs	Time to peak	=	15.60 hrs
Time interval	=	2 min	Hyd. volume	=	40,626 cuft
Drainage area	=	4.291 ac	Curve number	=	95*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	3.34 in	Distribution	=	Huff-3rd
Storm duration	=	24.00 hrs	Shape factor	=	484

* Composite (Area/CN) = [(1.550 x 98) + (0.560 x 80)] / 4.291

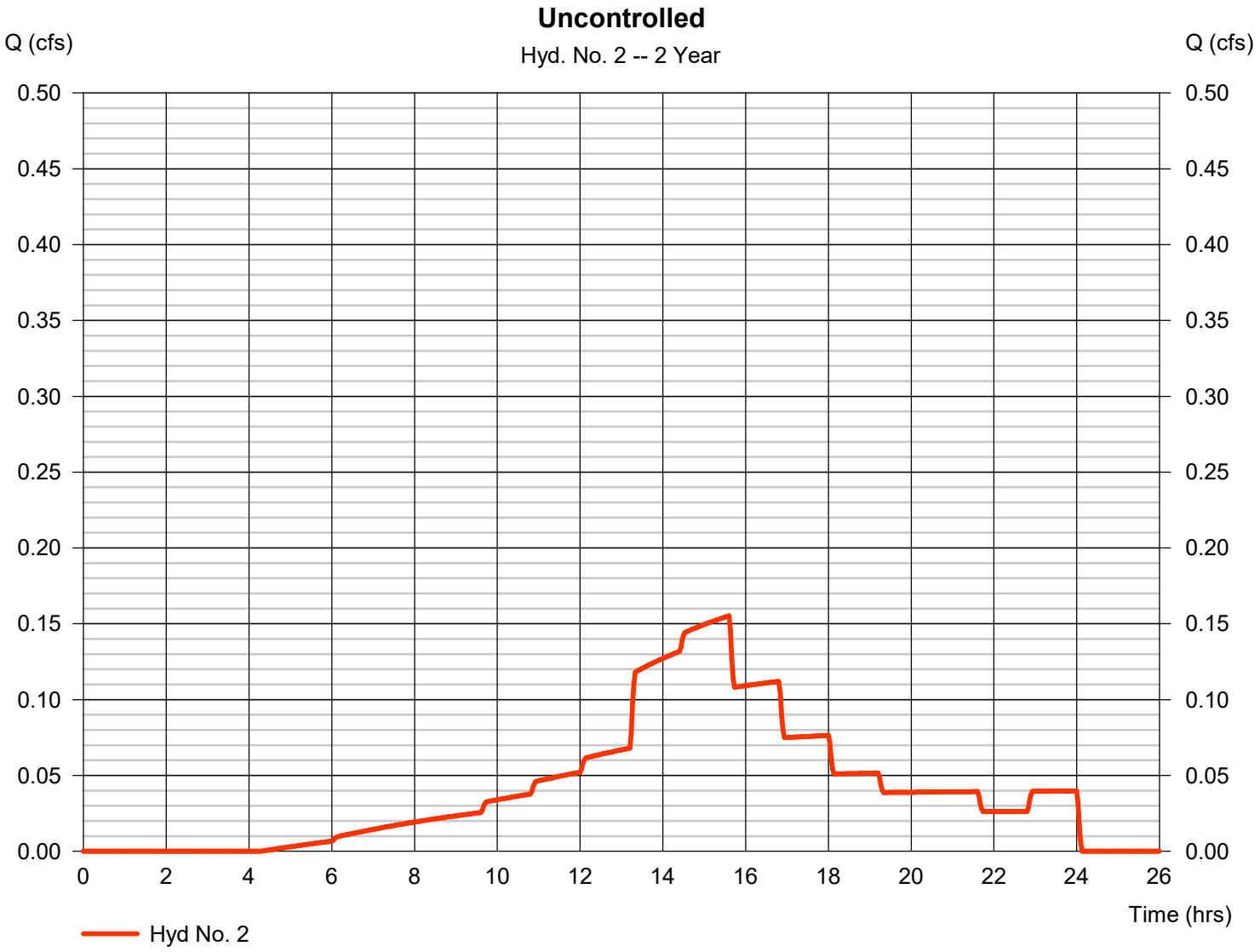


Hydrograph Report

Hyd. No. 2

Uncontrolled

Hydrograph type	= SCS Runoff	Peak discharge	= 0.155 cfs
Storm frequency	= 2 yrs	Time to peak	= 15.60 hrs
Time interval	= 2 min	Hyd. volume	= 3,738 cuft
Drainage area	= 0.585 ac	Curve number	= 85
Basin Slope	= 0.0 %	Hydraulic length	= 0 ft
Tc method	= User	Time of conc. (Tc)	= 5.00 min
Total precip.	= 3.34 in	Distribution	= Huff-3rd
Storm duration	= 24.00 hrs	Shape factor	= 484



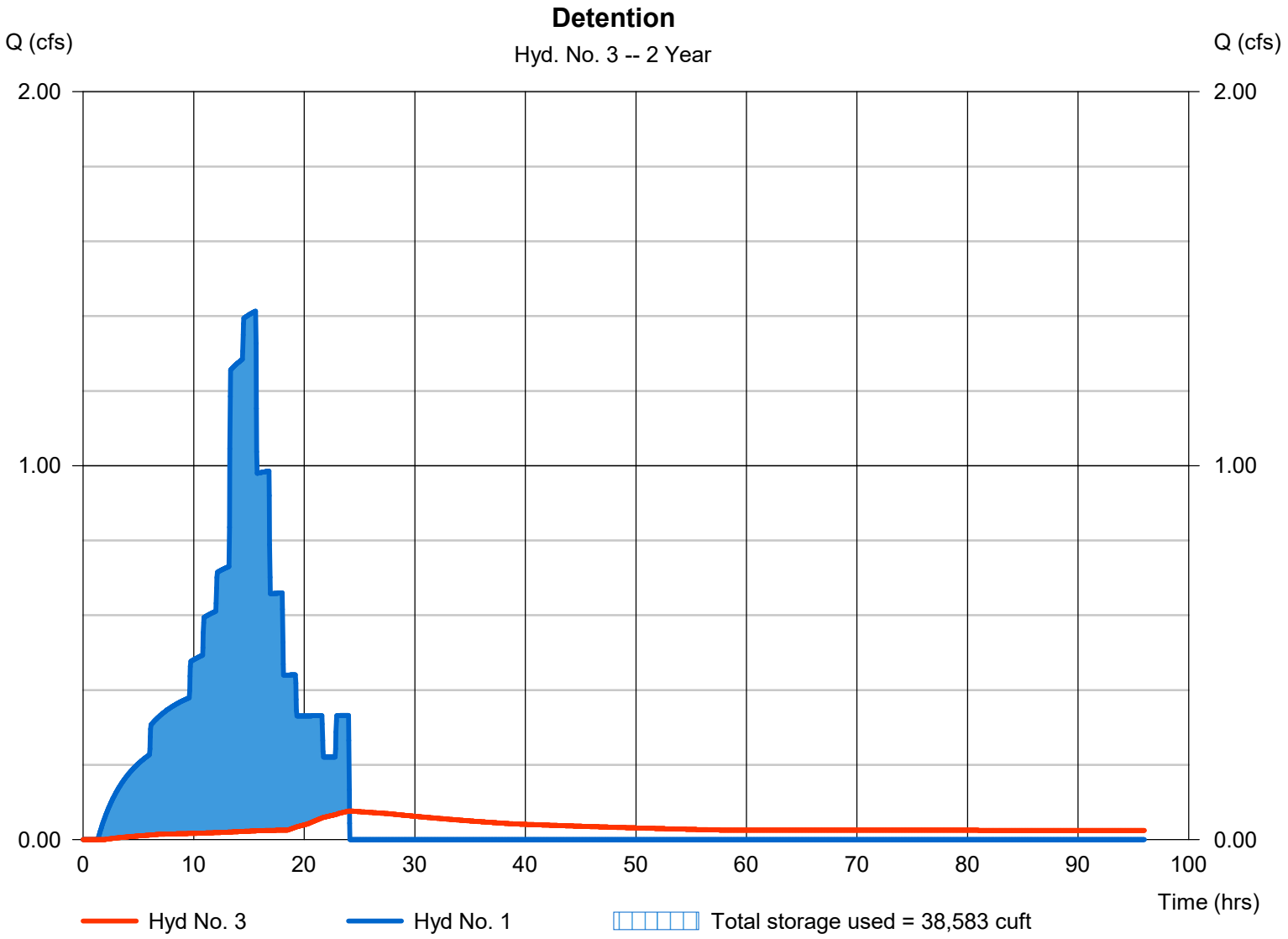
Hydrograph Report

Hyd. No. 3

Detention

Hydrograph type	= Reservoir	Peak discharge	= 0.077 cfs
Storm frequency	= 2 yrs	Time to peak	= 24.10 hrs
Time interval	= 2 min	Hyd. volume	= 10,878 cuft
Inflow hyd. No.	= 1 - Detained	Max. Elevation	= 599.24 ft
Reservoir name	= Detention	Max. Storage	= 38,583 cuft

Storage Indication method used.

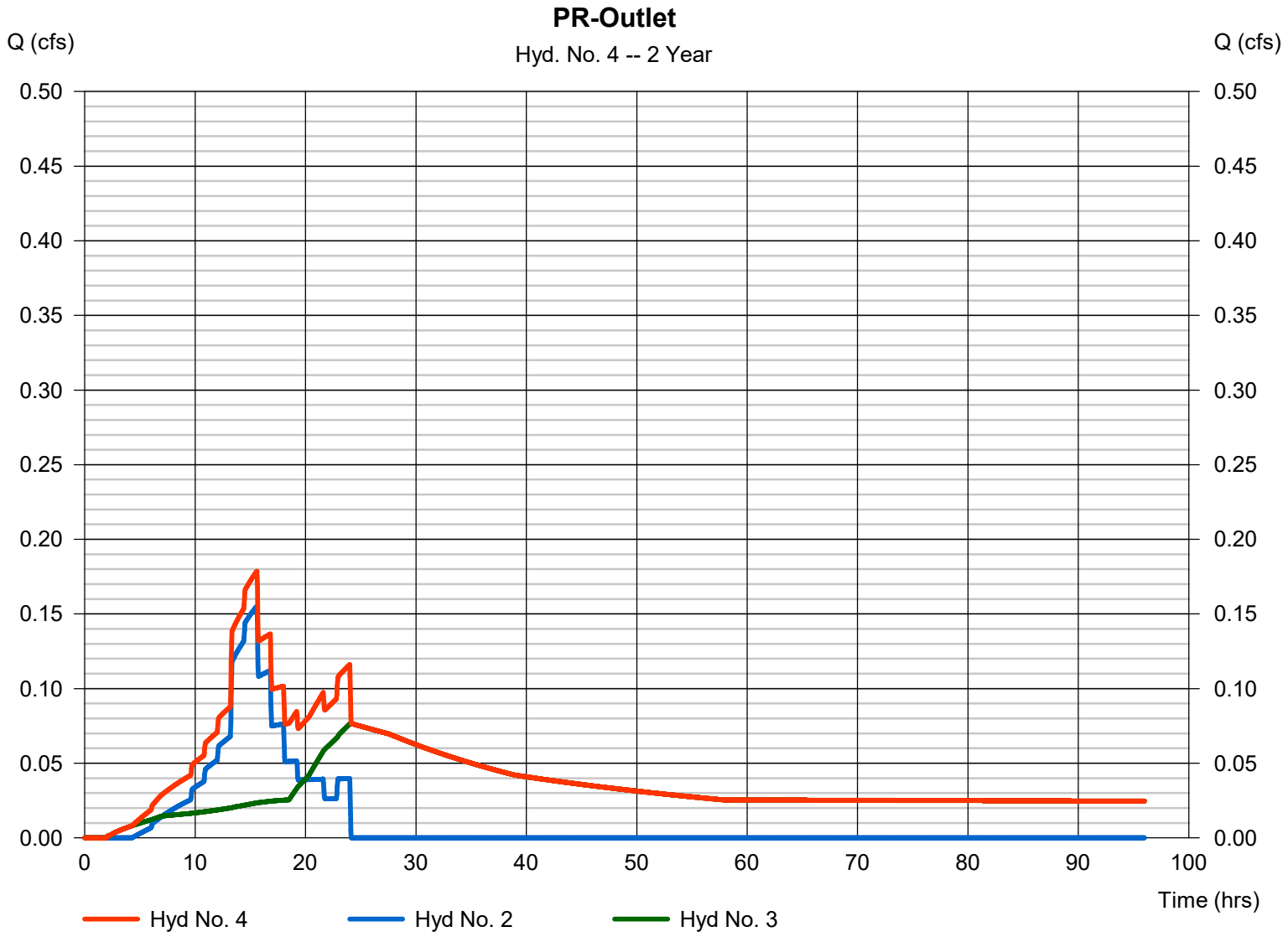


Hydrograph Report

Hyd. No. 4

PR-Outlet

Hydrograph type	= Combine	Peak discharge	= 0.179 cfs
Storm frequency	= 2 yrs	Time to peak	= 15.60 hrs
Time interval	= 2 min	Hyd. volume	= 14,617 cuft
Inflow hyds.	= 2, 3	Contrib. drain. area	= 0.585 ac



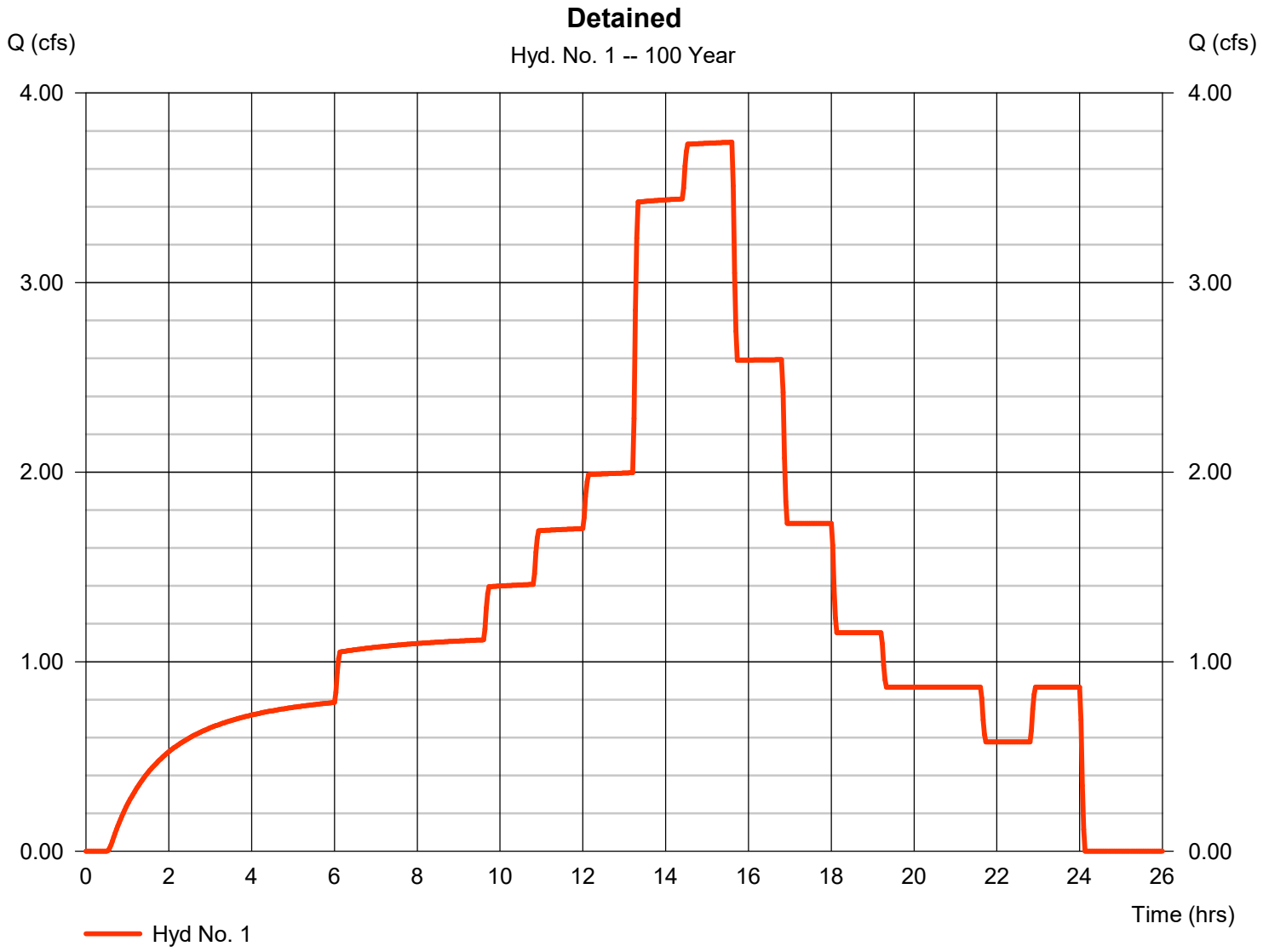
Hydrograph Report

Hyd. No. 1

Detained

Hydrograph type	=	SCS Runoff	Peak discharge	=	3.740 cfs
Storm frequency	=	100 yrs	Time to peak	=	15.60 hrs
Time interval	=	2 min	Hyd. volume	=	116,373 cuft
Drainage area	=	4.291 ac	Curve number	=	95*
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	8.57 in	Distribution	=	Huff-3rd
Storm duration	=	24.00 hrs	Shape factor	=	484

* Composite (Area/CN) = [(1.550 x 98) + (0.560 x 80)] / 4.291

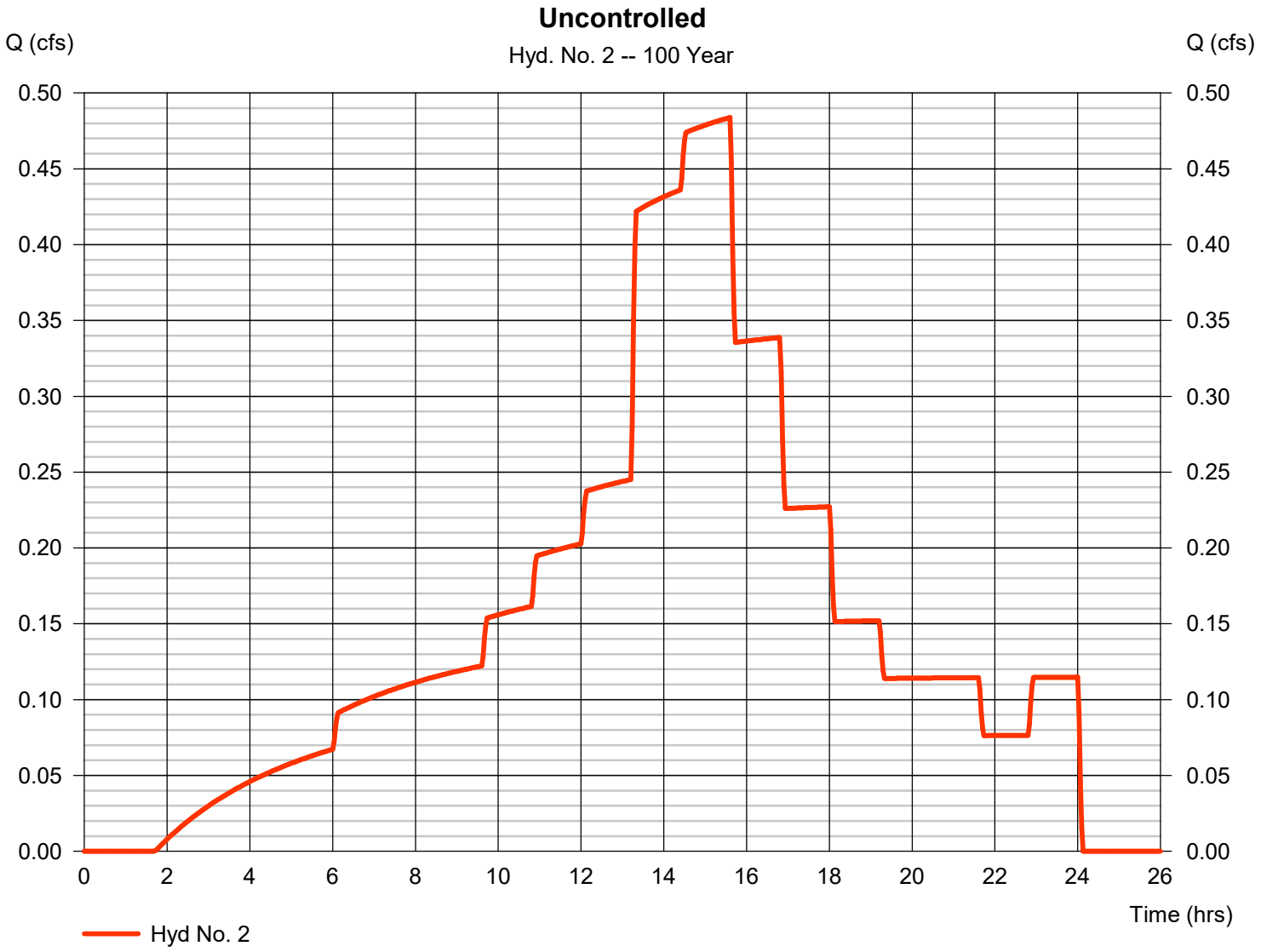


Hydrograph Report

Hyd. No. 2

Uncontrolled

Hydrograph type	=	SCS Runoff	Peak discharge	=	0.484 cfs
Storm frequency	=	100 yrs	Time to peak	=	15.60 hrs
Time interval	=	2 min	Hyd. volume	=	13,467 cuft
Drainage area	=	0.585 ac	Curve number	=	85
Basin Slope	=	0.0 %	Hydraulic length	=	0 ft
Tc method	=	User	Time of conc. (Tc)	=	5.00 min
Total precip.	=	8.57 in	Distribution	=	Huff-3rd
Storm duration	=	24.00 hrs	Shape factor	=	484



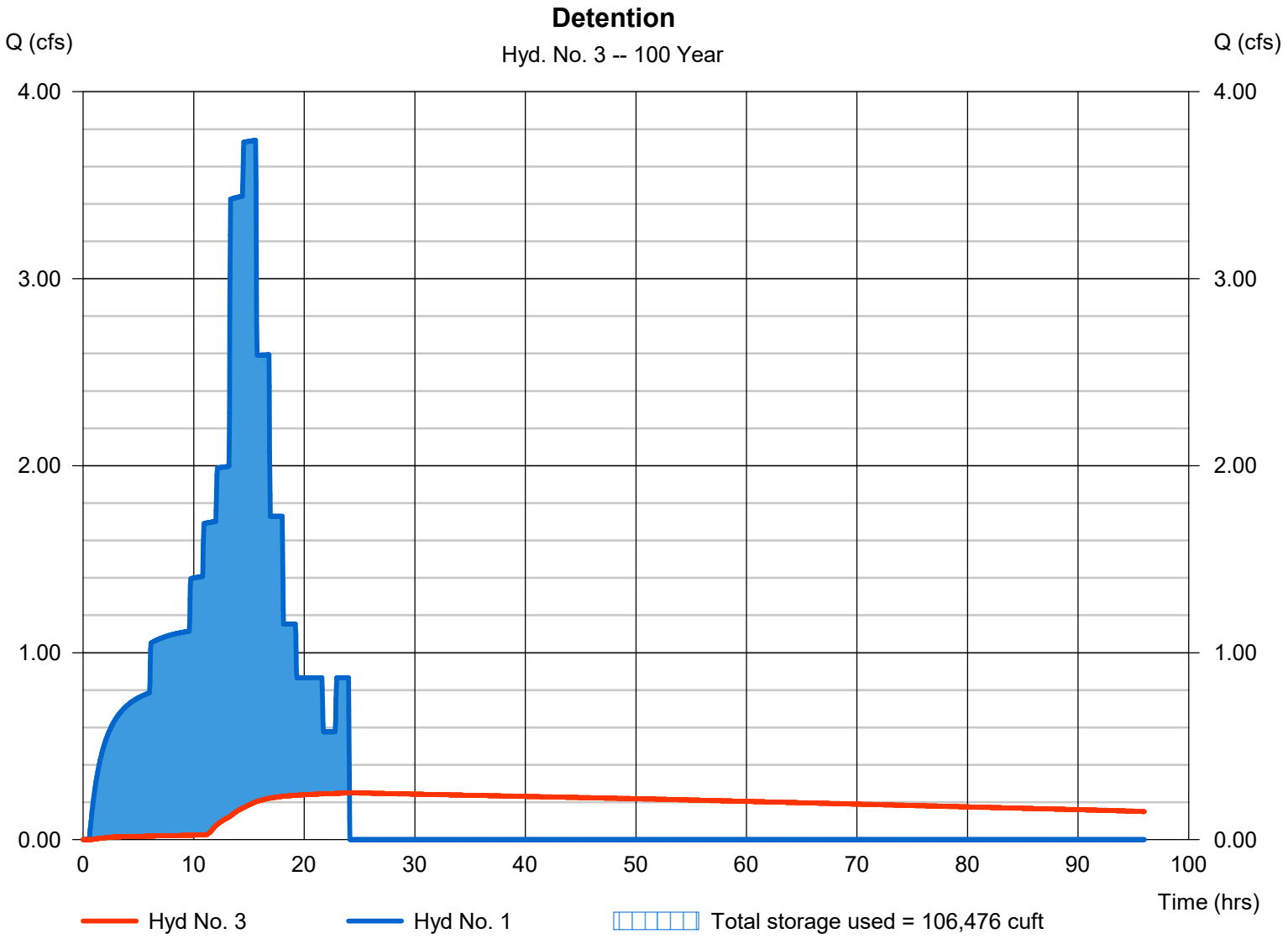
Hydrograph Report

Hyd. No. 3

Detention

Hydrograph type	=	Reservoir	Peak discharge	=	0.251 cfs
Storm frequency	=	100 yrs	Time to peak	=	24.07 hrs
Time interval	=	2 min	Hyd. volume	=	62,483 cuft
Inflow hyd. No.	=	1 - Detained	Max. Elevation	=	601.72 ft
Reservoir name	=	Detention	Max. Storage	=	106,476 cuft

Storage Indication method used.

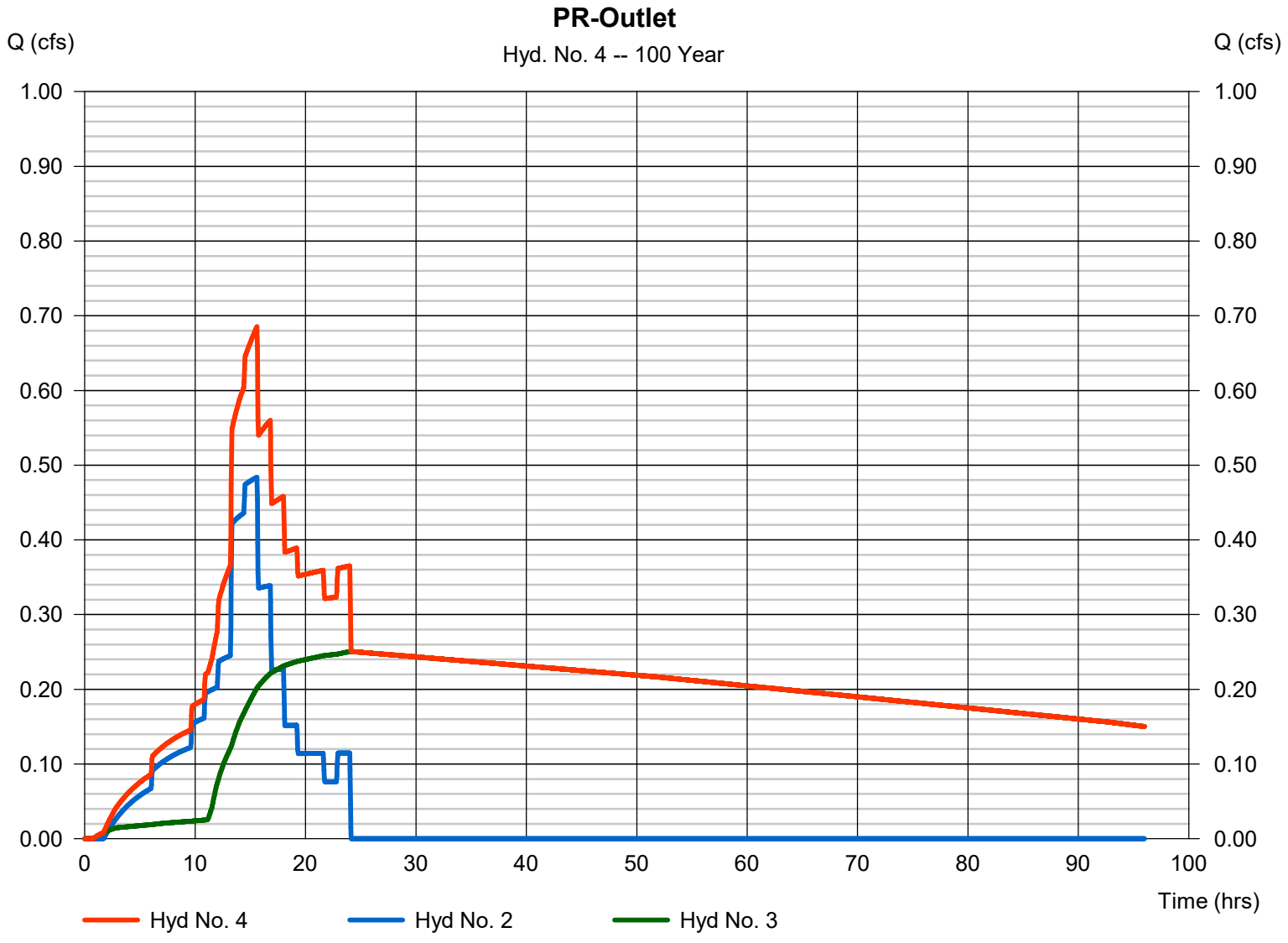


Hydrograph Report

Hyd. No. 4

PR-Outlet

Hydrograph type	= Combine	Peak discharge	= 0.686 cfs
Storm frequency	= 100 yrs	Time to peak	= 15.60 hrs
Time interval	= 2 min	Hyd. volume	= 75,950 cuft
Inflow hyds.	= 2, 3	Contrib. drain. area	= 0.585 ac



QuikTrip Store #4452

- **NRCS Soils Report**
- **NWI Wetland Map**
- **USGS Maps**
- **FEMA Maps**

Hydrologic Soil Group—Will County, Illinois
(QT4452 Spring Hill)



Map Scale: 1:1,700 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 25 50 100 150

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 16N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils

Soil Rating Polygons
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Lines
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Soil Rating Points
- A
- A/D
- B
- B/D
- C
- C/D
- D
- Not rated or not available

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Will County, Illinois
Survey Area Data: Version 19, Aug 21, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 7, 2020—Oct 13, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
149A	Brenton silt loam, 0 to 2 percent slopes	B/D	0.6	10.9%
223C2	Varna silt loam, 4 to 6 percent slopes, eroded	C	1.0	18.1%
223D2	Varna silt loam, 6 to 12 percent slopes, eroded	C	3.6	64.2%
329A	Will silty clay loam, 0 to 2 percent slopes	B/D	0.4	6.8%
Totals for Area of Interest			**5.6**	**100.0%**

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

Rating Options

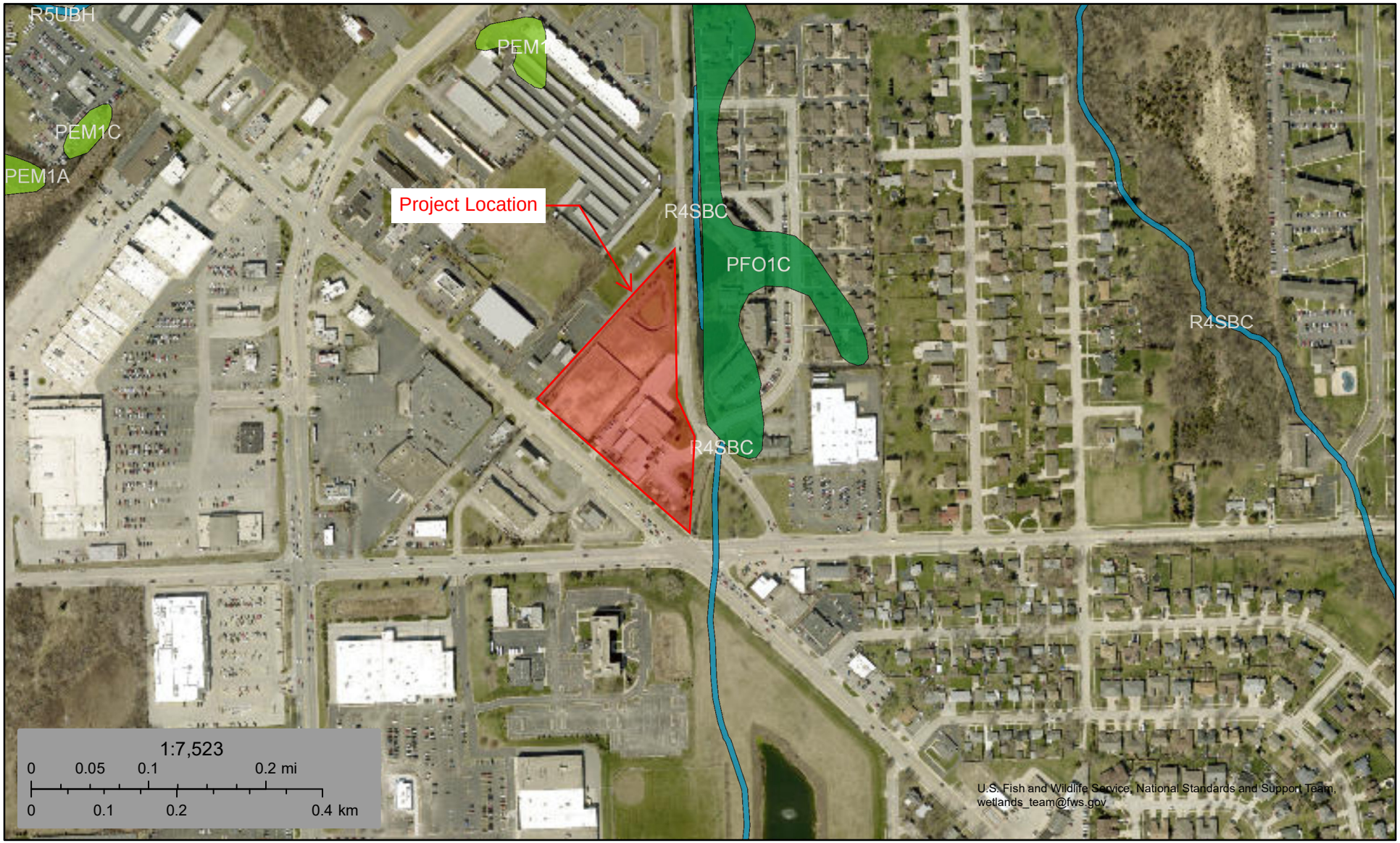
Aggregation Method: Dominant Condition

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

U.S. Fish and Wildlife Service
National Wetlands Inventory

QT4452 Crest Hill



February 25, 2025

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

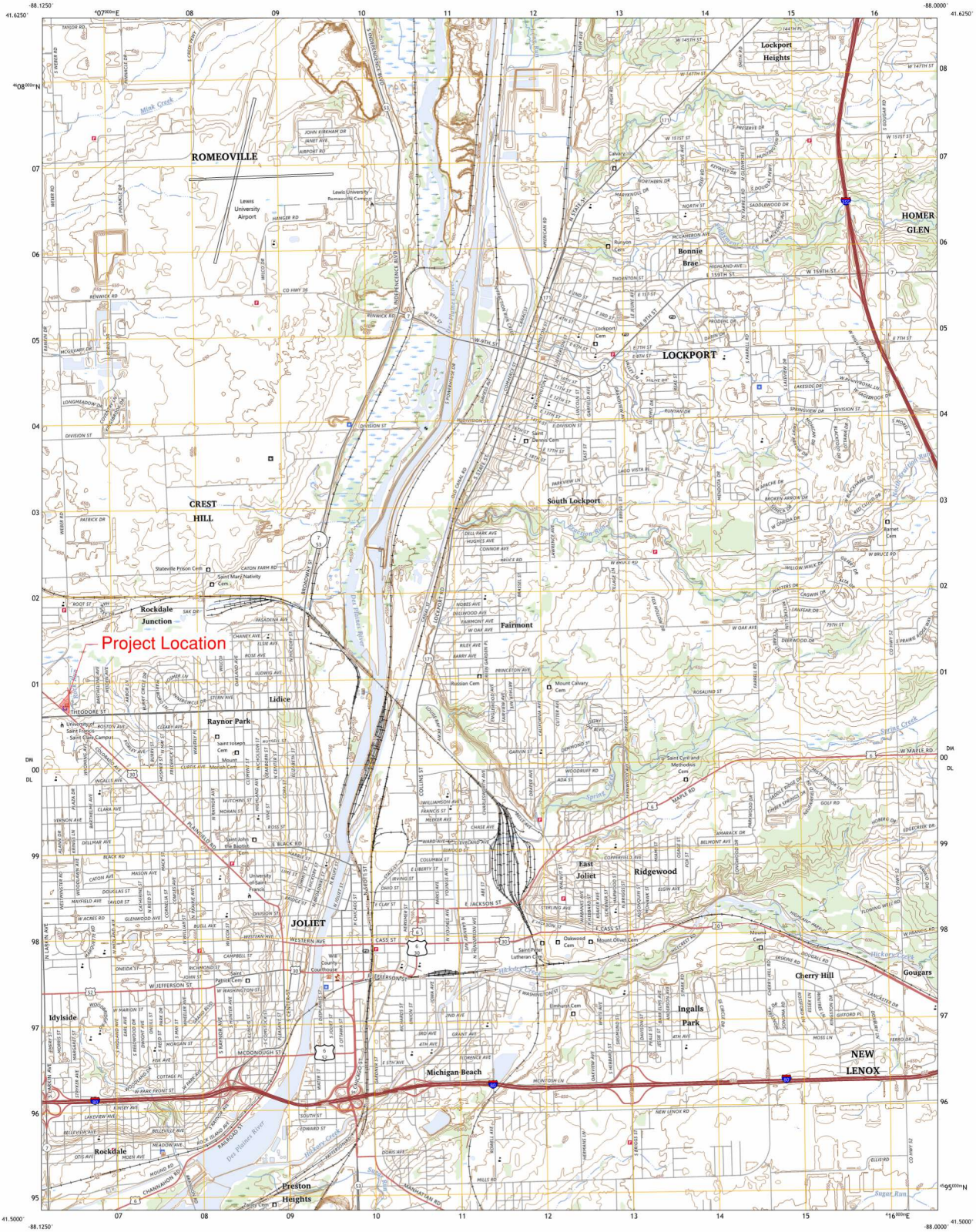
This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

USGS science for a changing world

U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

The National Map US Topo

JOLIET QUADRANGLE
ILLINOIS - WILL COUNTY
7.5-MINUTE SERIES



Produced by the United States Geological Survey
North American Datum of 1983 (NAD83)
World Geodetic System of 1984 (WGS84). Projection and
1 000-meter grid:Universal Transverse Mercator, Zone 16T
This map is not a legal document. Boundaries may be
generalized for this map scale. Private lands within government
reservations may not be shown. Obtain permission before
entering private lands.

Imagery.....NAIP, August 2019 - August 2019
Roads.....U.S. Census Bureau, 2017
Names.....GNIS, 1980 - 2023
Hydrography.....National Hydrography Dataset, 2002 - 2022
Contours.....National Elevation Dataset, 2016
Boundaries.....Multiple sources; see metadata file 2021 - 2022
Public Land Survey System.....BLM, 2020
Wetlands.....FWS National Wetlands Inventory Not Available

UTM GRID AND 2023 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

SCALE 1:24 000

1 0.5 0 KILOMETERS 1 2
1000 500 0 METERS 1000 2000
1 0.5 0 1
1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000
FEET

CONTOUR INTERVAL 10 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

This map was produced to conform with the
National Geospatial Program US Topo Product Standard.

ILLINOIS
QUADRANGLE LOCATION

ADJOINING QUADRANGLES
1 Normantown
2 Romeoville
3 Sag Bridge
4 Plainfield
5 Mokena
6 Channahon
7 Elwood
8 Manhattan

ROAD CLASSIFICATION
Expressway — Local Connector
Secondary Hwy — Local Road
Ramp — 4WD
Interstate Route — US Route — State Route

JOLIET, IL
2024

NSN 7643-01-463-2745
NGA REF NO. US 5X24K2274S



FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT HTTP://MSC.FEMA.GOV

SPECIAL FLOOD HAZARD AREAS	Without Base Flood Elevation (BFE) Zone A, V, A99
	With BFE or Depth Zone AE, AO, AH, VE, AR
	Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD	0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
	Future Conditions 1% Annual Chance Flood Hazard Zone X
	Area with Reduced Flood Risk due to Levee See Notes Zone X
	Area with Flood Risk due to Levee Zone D
OTHER AREAS	NO SCREEN Area of Minimal Flood Hazard Zone X
	Area of Undetermined Flood Hazard Zone D
GENERAL STRUCTURES	Channel, Culvert, or Storm Sewer
	Dam, Jetty, or Weir
	Levee, Dike or Floodwall
	718.7 / 717.5 Cross Sections with 1% Annual Chance Water Surface Elevation (BFE)
	Coastal Transect
	Coastal Transect Baseline
OTHER FEATURES	Profile Baseline
	Hydrographic Feature
	512 Base Flood Elevation Line (BFE)
	Limit of Study
	Jurisdiction Boundary

NOTES TO USERS

For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM, including historic versions, the current map date for each FIRM panel, how to order products, or the National Flood Insurance Program (NFIP) in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Flood Map Service Center website at http://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Flood Map Service Center at the number listed above.

For community and countywide map dates refer to the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

Base map information shown on this FIRM was provided in digital format by Will County, Illinois. This information was derived from digital orthoimagery at a spatial resolution of 4 inches where available and 9 inches otherwise, from aerial photography dated 2013.

ILLINOIS
Illinois State Water Survey
PRAIRIE RESEARCH INSTITUTE

SCALE

N

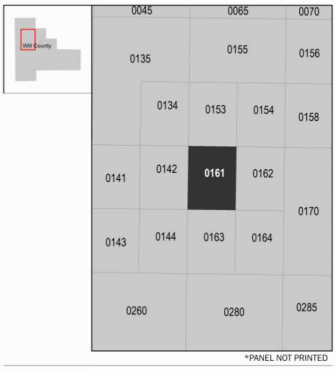
Map Projection:
Universal Transverse Mercator Zone 16N; North American Datum 1983;
Western Hemisphere; Vertical Datum: NAVD88

1 inch = 500 feet 1:6,000

0 500 1,000 2,000 feet

0 125 250 500 meters

PANEL LOCATOR



*PANEL NOT PRINTED

FEMA
National Flood Insurance Program

NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP

WILL COUNTY, ILLINOIS
and Incorporated Areas

PANEL 161 OF 585

FEMA

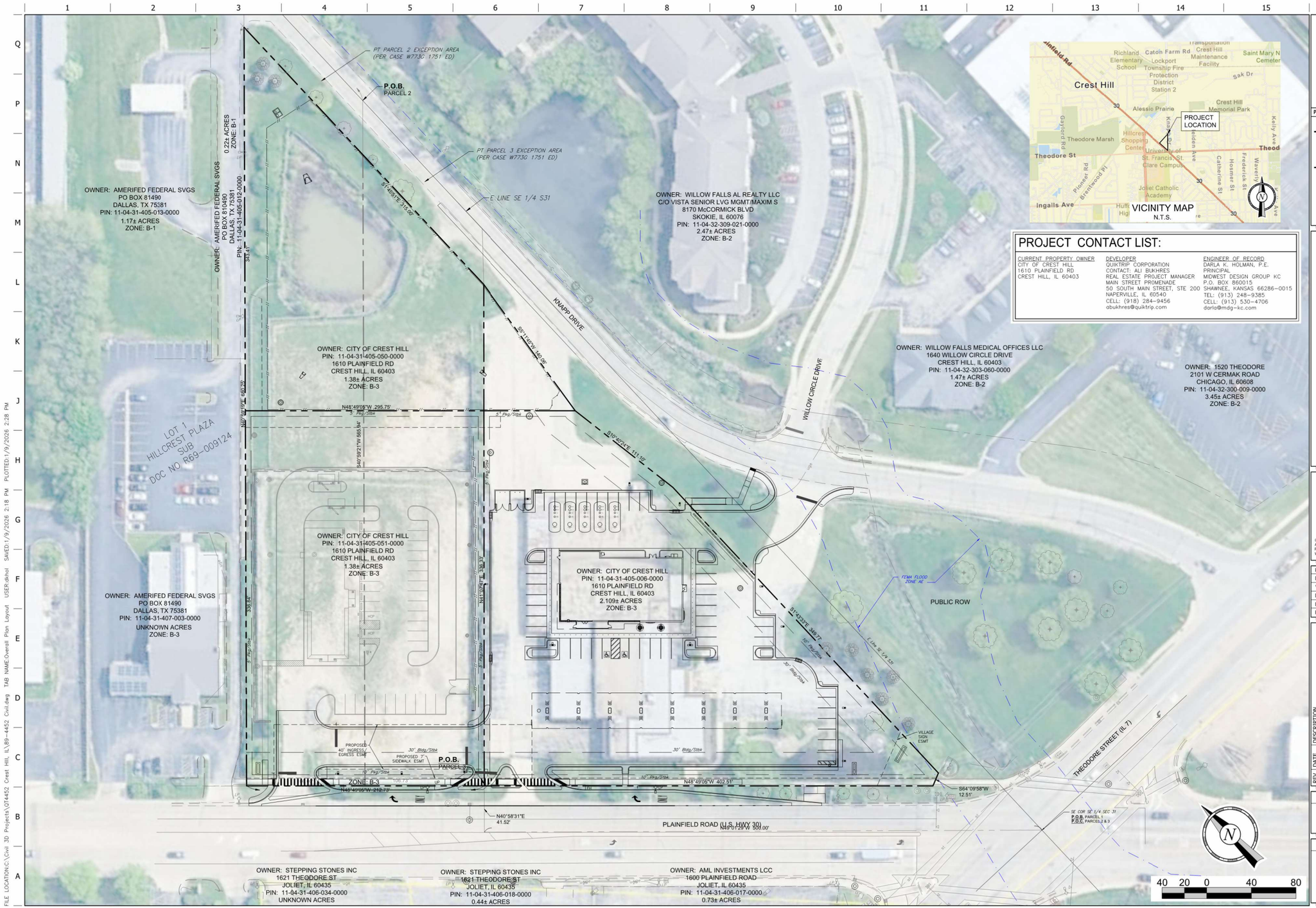
Panel Contains:

COMMUNITY	NUMBER	PANEL	SUFFIX
CREST HILL, CITY OF	170699	0161	G
JOLIET, CITY OF	170702	0161	G

VERSION NUMBER
2.3.3.3
MAP NUMBER
17197C0161G
MAP REVISED
FEBRUARY 15, 2019

QuikTrip Store #4452

Plan Sheets



PROJECT CONTACT LIST:

CURRENT PROPERTY OWNER	DEVELOPER	ENGINEER OF RECORD
CITY OF CREST HILL 1610 PLAINFIELD RD CREST HILL, IL 60403	QUIKTRIP CORPORATION CONTACT: ALI BUKHRES REAL ESTATE PROJECT MANAGER MAIN STREET PROMENADE 50 SOUTH MAIN STREET, STE 200 NAPERVILLE, IL 60540 CELL: (918) 284-9456 abukhres@quiktrip.com	DARLA K. HOLMAN, P.E. PRINCIPAL MIDWEST DESIGN GROUP KC P.O. BOX 860015 SHAWNEE, KANSAS 66286-0015 TEL: (913) 248-9385 CELL: (913) 530-4706 darla@mdg-kc.com

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ILLINOIS
1/9/26

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1610 PLAINFIELD ROAD
CREST HILL, WILL COUNTY, ILLINOIS 60403

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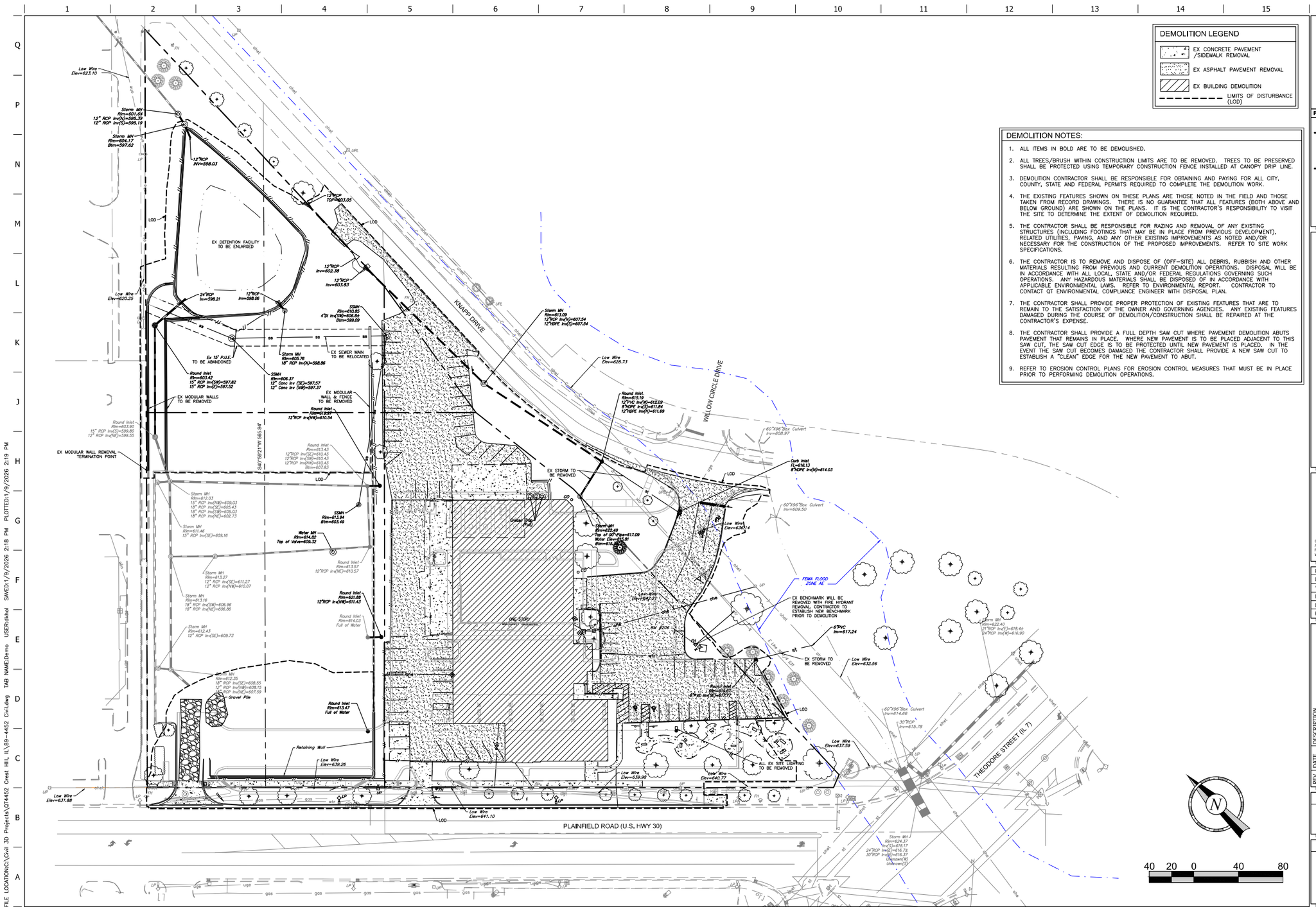
VERSION:	001
DESIGNED BY:	DKH
DRAWN BY:	CSH
REVIEWED BY:	CJC

REV	DATE	DESCRIPTION
		ORIGINAL ISSUE DATE: 01/09/2026

SHEET TITLE:
OVERALL DEVELOPMENT PLAN

SHEET NUMBER:
C010

FILE LOCATION:C:\Civil 3D Projects\QT4452 Crest Hill, IL\89-4452 Civil.dwg TAB NAME:Overall Plan Layout USER:dkhol SAVED:1/9/2026 2:18 PM PLOTTED:1/9/2026 2:28 PM



DEMOLITION LEGEND

- EX CONCRETE PAVEMENT /SIDEWALK REMOVAL
- EX ASPHALT PAVEMENT REMOVAL
- EX BUILDING DEMOLITION
- LIMITS OF DISTURBANCE (LOD)

DEMOLITION NOTES:

1. ALL ITEMS IN BOLD ARE TO BE DEMOLISHED.
2. ALL TREES/BRUSH WITHIN CONSTRUCTION LIMITS ARE TO BE REMOVED. TREES TO BE PRESERVED SHALL BE PROTECTED USING TEMPORARY CONSTRUCTION FENCE INSTALLED AT CANOPY DRIP LINE.
3. DEMOLITION CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND PAYING FOR ALL CITY, COUNTY, STATE AND FEDERAL PERMITS REQUIRED TO COMPLETE THE DEMOLITION WORK.
4. THE EXISTING FEATURES SHOWN ON THESE PLANS ARE THOSE NOTED IN THE FIELD AND THOSE TAKEN FROM RECORD DRAWINGS. THERE IS NO GUARANTEE THAT ALL FEATURES (BOTH ABOVE AND BELOW GROUND) ARE SHOWN ON THE PLANS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VISIT THE SITE TO DETERMINE THE EXTENT OF DEMOLITION REQUIRED.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RAZING AND REMOVAL OF ANY EXISTING STRUCTURES (INCLUDING FOOTINGS THAT MAY BE IN PLACE FROM PREVIOUS DEVELOPMENT), RELATED UTILITIES, PAVING, AND ANY OTHER EXISTING IMPROVEMENTS AS NOTED AND/OR NECESSARY FOR THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS. REFER TO SITE WORK SPECIFICATIONS.
6. THE CONTRACTOR IS TO REMOVE AND DISPOSE OF (OFF-SITE) ALL DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM PREVIOUS AND CURRENT DEMOLITION OPERATIONS. DISPOSAL WILL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS. ANY HAZARDOUS MATERIALS SHALL BE DISPOSED OF IN ACCORDANCE WITH APPLICABLE ENVIRONMENTAL LAWS. REFER TO ENVIRONMENTAL REPORT. CONTRACTOR TO CONTACT 'Q' ENVIRONMENTAL COMPLIANCE ENGINEER WITH DISPOSAL PLAN.
7. THE CONTRACTOR SHALL PROVIDE PROPER PROTECTION OF EXISTING FEATURES THAT ARE TO REMAIN TO THE SATISFACTION OF THE OWNER AND GOVERNING AGENCIES. ANY EXISTING FEATURES DAMAGED DURING THE COURSE OF DEMOLITION/CONSTRUCTION SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
8. THE CONTRACTOR SHALL PROVIDE A FULL DEPTH SAW CUT WHERE PAVEMENT DEMOLITION ABUTS PAVEMENT THAT REMAINS IN PLACE. WHERE NEW PAVEMENT IS TO BE PLACED ADJACENT TO THIS SAW CUT, THE SAW CUT EDGE IS TO BE PROTECTED UNTIL NEW PAVEMENT IS PLACED. IN THE EVENT THE SAW CUT BECOMES DAMAGED THE CONTRACTOR SHALL PROVIDE A NEW SAW CUT TO ESTABLISH A "CLEAN" EDGE FOR THE NEW PAVEMENT TO ABUT.
9. REFER TO EROSION CONTROL PLANS FOR EROSION CONTROL MEASURES THAT MUST BE IN PLACE PRIOR TO PERFORMING DEMOLITION OPERATIONS.

DARLA K. HOLMAN 062-072191 ILLINOIS PROFESSIONAL ENGINEER
1/9/26

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1610 PLAINFIELD ROAD
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QT

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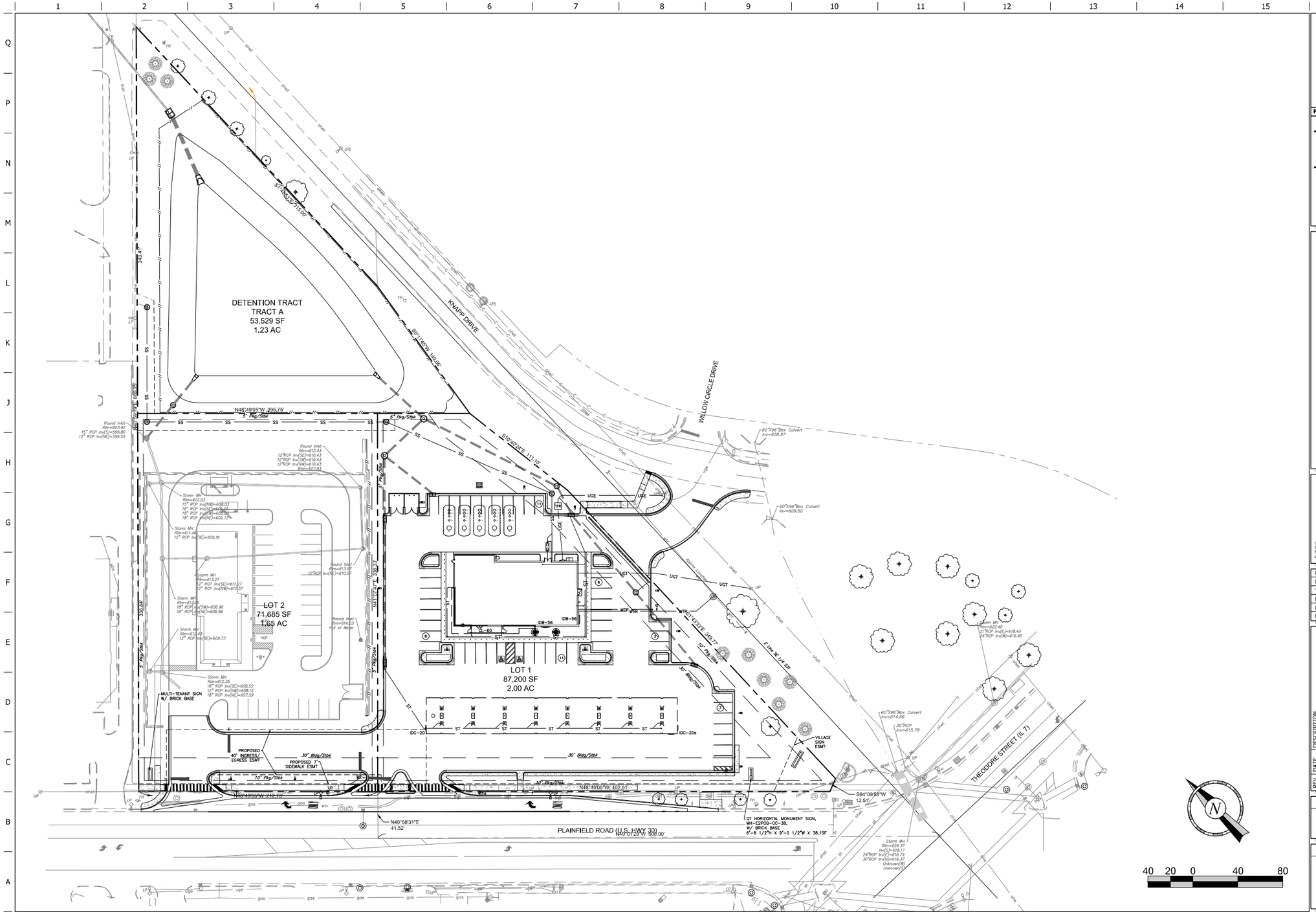
VERSION:	001
DESIGNED BY:	DKH
DRAWN BY:	CSH
REVIEWED BY:	CJC

REV	DATE	DESCRIPTION
		ORIGINAL ISSUE DATE: 01/09/2026

SHEET TITLE:
DEMOLITION PLAN

SHEET NUMBER:
C030

FILE LOCATION:C:\Civil 3D Projects\QT4452 Crest Hill, IL\84-4452 Civil.dwg TAB NAME:Demo USER:dkhol SAVED:1/9/2026 2:18 PM PLOTTED:1/9/2026 2:19 PM



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DRAWN BY:	CSH
REVIEWED BY:	CJC

REV	DATE	DESCRIPTION
		ORIGINAL ISSUE DATE: 01/09/2026

SHEET TITLE:
OVERALL SITE PLAN

SHEET NUMBER:
C100

SITE NOTES:

1. ALL DIMENSIONS SHOWN ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
2. THE MAXIMUM CROSS SLOPE ON ALL PROPOSED SIDEWALKS, INCLUDING PUBLIC AND PRIVATE SIDEWALK DRIVEWAY CROSSINGS, IS 2%.
3. REFERENCE PHOTOMETRIC SITE PLAN (C160) FOR SITE LIGHTING DETAILS. LIGHT POLE LOCATIONS CAN BE SCALED FROM DRAWINGS OR STAKED BY CONSTRUCTION STAKING CONTRACTOR.
4. REGULATORY SIGNAGE SHALL CONFORM TO M.U.T.C.D.
5. ALL IMPROVEMENTS WITHIN PUBLIC RIGHT OF WAY SHALL BE CONSTRUCTED IN ACCORDANCE WITH GOVERNING AGENCY SPECIFICATIONS.
6. CONTRACTOR IS RESPONSIBLE FOR PROVIDING TRAFFIC CONTROL WHEN WORKING WITHIN AND ADJACENT TO PUBLIC STREETS.

SITE LEGEND

- BOUNDARY LINE
- CONCRETE CURB AND GUTTER
- MOUNTABLE CURB W/RADIUS PROTECTOR
- (7) PARKING SPACE INDICATOR
- AREA LIGHT
- MULTIPLE PRODUCT DISPENSER WITH CANOPY COLUMNS AND BOLLARDS
- TFR TRANSFORMER
- FUEL SYSTEM ACCESS MANWAY

PROPOSED SITE DEVELOPMENT DATA

LOT/TRACT	LOT 1
ZONING	B-3
LOT SQUARE FOOTAGE	91,858 SF
GROSS FLOOR AREA	6,445 SF
FLOOR AREA	? SF
BUILDING HEIGHT	20 FT
NUMBER OF FLOORS	1
TOTAL IMPERVIOUS	64,739 SF
PERCENT IMPERVIOUS	70.5%
MAX ALLOWED IMPERVIOUS	85%

PARKING REGULATIONS

2 SPACES PER PUMP ISLAND
+ 1 SPACE/200 SF MERCANTILE FLOOR AREA
+ 1 STALL/EMPLOYEE (12 MAX)

REQUIRED: (2X8)+(3,663/200)+12 = 47
PROVIDED: 48 PARKING STALLS (2 ADA)
16 PUMP STALLS (4 ADA)

DETENTION FACILITY
KNAPP DRIVE (R.O.W. WIDTH VARIES)
WILLOW CIRCLE DRIVE
8" SS MAIN EXTENSION W/ 15' SS/ESMT
4' BLACK VINYL CHAIN-LINK FENCE DETENTION PERIMETER FENCE
10'W DOUBLE GATE ACCESS
6" SS SERVICE
FUEL SUMP FAN & VENT STACK RE: FUEL
5' SIDEWALK W/ HANDRAILS
PRIMARY ELEC SERVICE
4'ø SAMPLING SSMH
PADMOUNT TRANSFORMER
DBL TRASH ENCLOSURE
FUEL TANKS W/ NON-STD FILL PORTS
TANK EXCAVATION AREA (SEE SHEET C-5 FOR TANKS)
SECONDARY ELEC SERVICE
GREASE INTERCEPTOR
OIL RECLAMATION TANK
ELEC EQUIP
INTERNAL ROOF DRAIN
G4 (P-124)
STORE NO.: 4452
6,445 S.F.
BLDG. HT.= 20'-0"
ADA TABLE
ADA SIGNAGE
IDB-56
IDB-20s
CL-60
ADA PARKING W/ VAN ACCESSIBLE STALL
ADA DISPENSERS
ESO RE: FUEL
TRANSITION SUMP
FUEL CANOPY W/ BRICK COLUMNS
AUTO CANOPY ROOF DRAIN
PEDESTRIAN ACCESS RAMP
RUT PROTECTOR
AIR STATION
FUTURE VILLAGE SIGN BY OTHERS
VILLAGE SIGN ESMT
STOP SIGN
RADIUS PROTECTOR (TYP)
TELE SERVICE
PRIVATE 6" FH ASSEMBLY
6" FIRE SUPPRESSION /WATER SERVICE LINE
SITE LIGHTING (TYP) RE: C160
Retaining Wall
4' BLACK VINYL CHAIN-LINK FENCE
MULTI-TENANT SIGN W/ BRICK BASE
2'W WHITE STOP BAR (TYP)
PROPOSED 40' INGRESS/ EGRESS ESMT
PROPOSED 7' SIDEWALK ESMT
STOP SIGNS
RELOCATED STREETLIGHT
RELOCATED UTILITY POLE
RELOCATED BEAUTIFICATION SIGN
RELOCATED STREETLIGHT
QT HORIZONTAL MONUMENT SIGN, MH-E2PGQ-CC-38, W/ BRICK BASE
6'-8 1/2"H X 9'-0 1/2"W X 38.1SF
PLAINFIELD ROAD (U.S. HWY 30)
(90' R.O.W. WIDTH)
THEODORE STREET (IL 7)
60"X96" Box Culvert Inv=608.97
60"X96" Box Culvert Inv=609.50
60"X96" Box Culvert Inv=614.66
30"RCP Inv=615.78
Storm MH Rim=622.40 21"RCP Inv(E)=618.44 24"RCP Inv(W)=616.90
Storm MH Rim=624.37 Inv(S)=618.17
Round Inlet Rim=613.43 12"RCP Inv(SE)=610.43 12"RCP Inv(SW)=610.43 12"RCP Inv(NW)=610.43 Btm=602.83
Storm MH Rim=612.03 15" RCP Inv(NW)=609.03 15" RCP Inv(SE)=609.43 18" RCP Inv(SW)=605.83 18" RCP Inv(NE)=602.73
Storm MH Rim=611.46 15" RCP Inv(SE)=609.16
Storm MH Rim=613.27 12" RCP Inv(SE)=611.27 12" RCP Inv(NW)=610.07
Storm MH Rim=613.36 18" RCP Inv(SW)=606.96 18" RCP Inv(NE)=606.86
Storm MH Rim=612.43 12" RCP Inv(SE)=609.73
Storm MH Rim=612.35 18" RCP Inv(SE)=608.55 12" RCP Inv(NW)=608.15 18" RCP Inv(NE)=607.59
Round Inlet Rim=615.52 12"RCP Inv(NE)=610.57
Round Inlet Rim=614.03 Full of Water
Round Inlet Inv=603.90 599.80 599.55
N 30 15 0 30 60

DARLA K. HOLMAN
062-072191
REGISTERED PROFESSIONAL ENGINEER
STATE OF ILLINOIS
1/9/26

PROJECT NO.: 84-4452

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1610 PLAINFIELD ROAD
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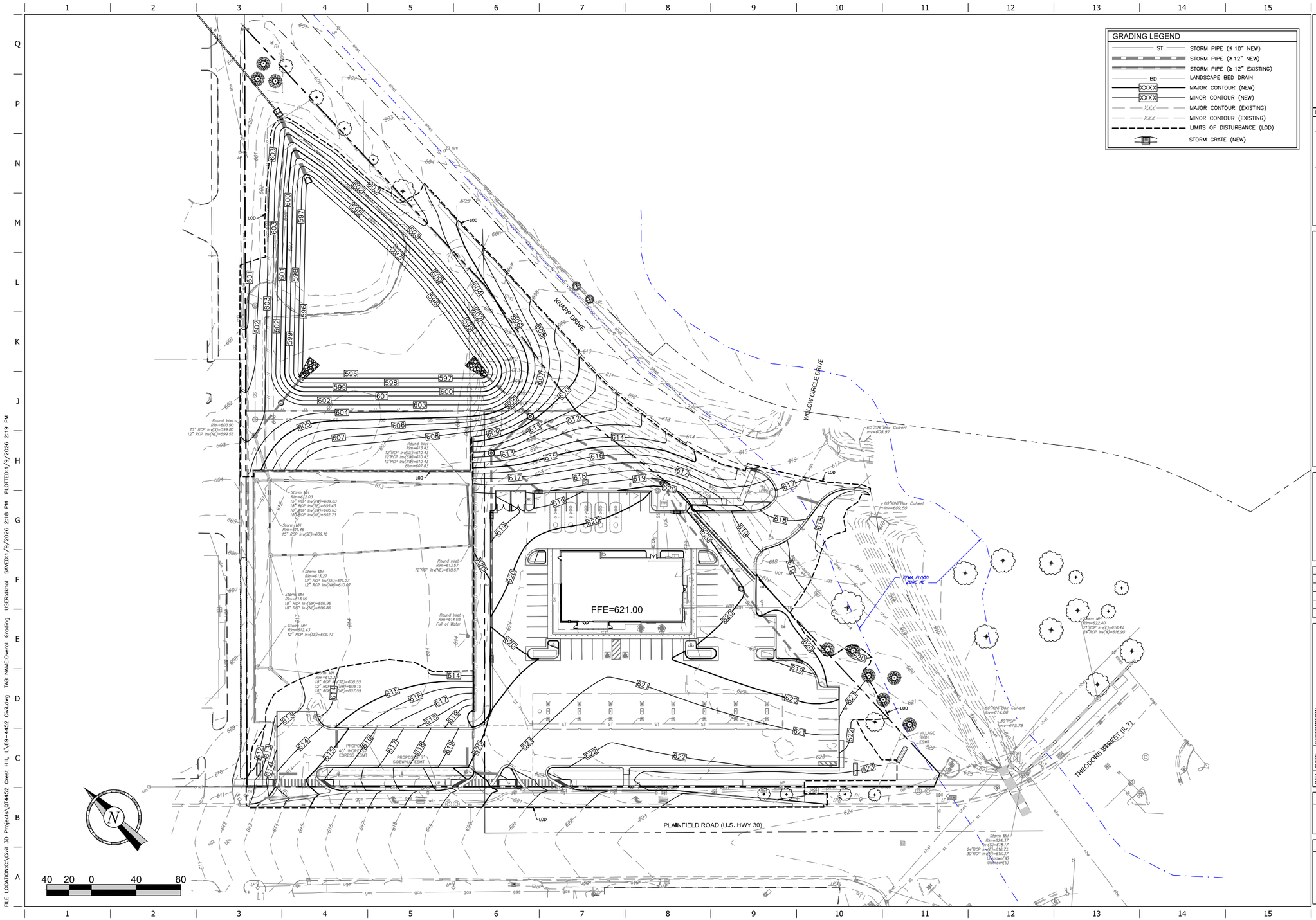
DESIGNED BY:	DKH
DRAWN BY:	CSH
REVIEWED BY:	CJC

REV	DATE	DESCRIPTION
		ORIGINAL ISSUE DATE: 01/09/2026

SHEET TITLE: SITE PLAN

SHEET NUMBER: C101

FILE LOCATION:C:\Civil 3D Projects\QT4452 Crest Hill, IL\84-4452 Civil.dwg TAB NAME:Site USER:dkholman SAVED:1/9/2026 2:18 PM PLOTTED:1/9/2026 2:19 PM



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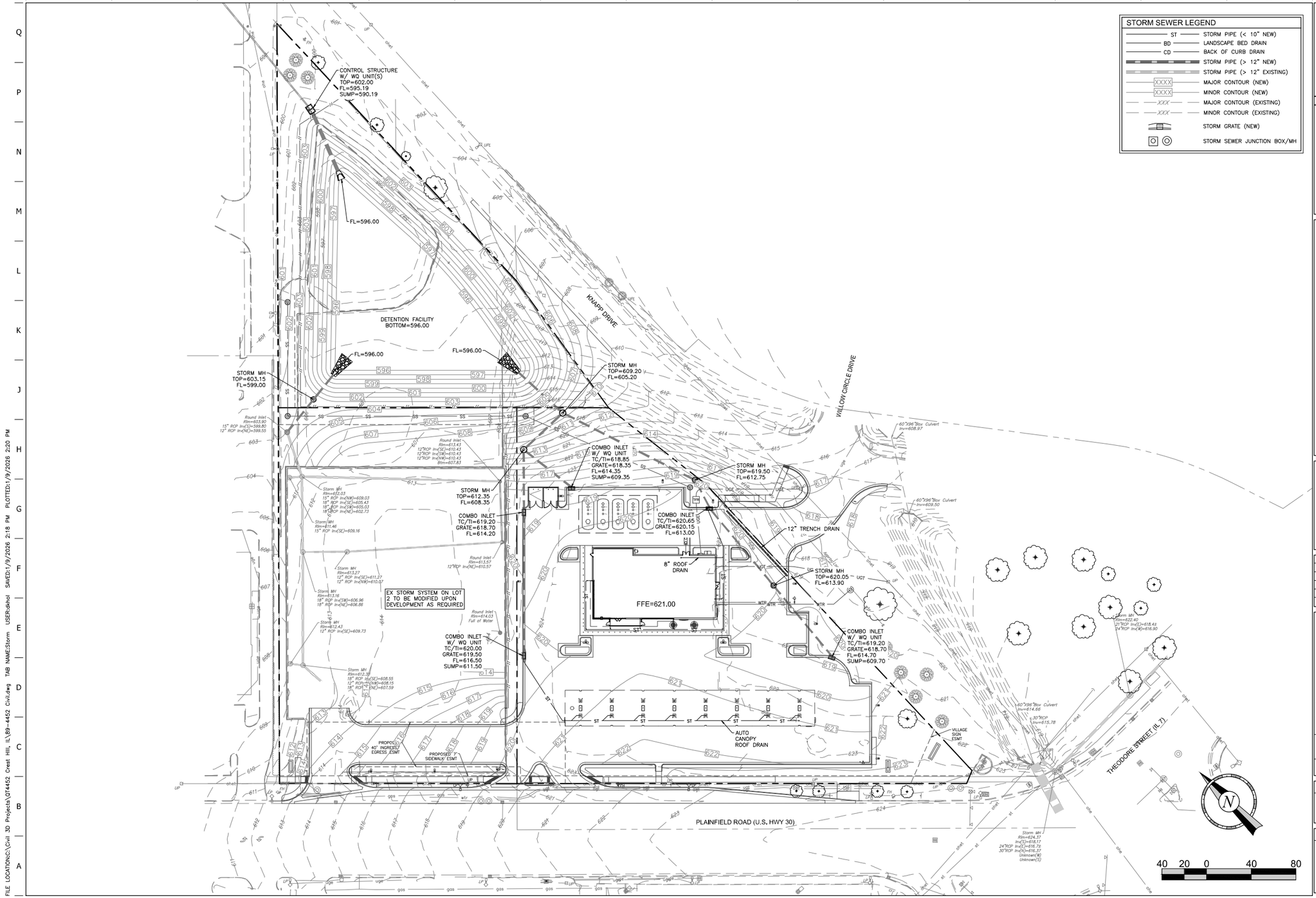
REVIEWED BY:	CJC

REV	DATE	DESCRIPTION
		ORIGINAL ISSUE DATE: 01/09/2026

SHEET TITLE:
OVERALL GRADING PLAN

SHEET NUMBER:
C110

FILE LOCATION:C:\Civil 3D Projects\QT4452 Crest Hill, IL\89-4452 Civil.dwg TAB NAME:Overall Grading USER:dkholl SAVED:1/9/2026 2:18 PM PLOTTED:1/9/2026 2:19 PM



STORM SEWER LEGEND

ST	STORM PIPE (< 10" NEW)
BD	LANDSCAPE BED DRAIN
CD	BACK OF CURB DRAIN
	STORM PIPE (> 12" NEW)
	STORM PIPE (> 12" EXISTING)
XXXX	MAJOR CONTOUR (NEW)
XXXX	MINOR CONTOUR (NEW)
XXX	MAJOR CONTOUR (EXISTING)
XXX	MINOR CONTOUR (EXISTING)
	STORM GRATE (NEW)
	STORM SEWER JUNCTION BOX/MH

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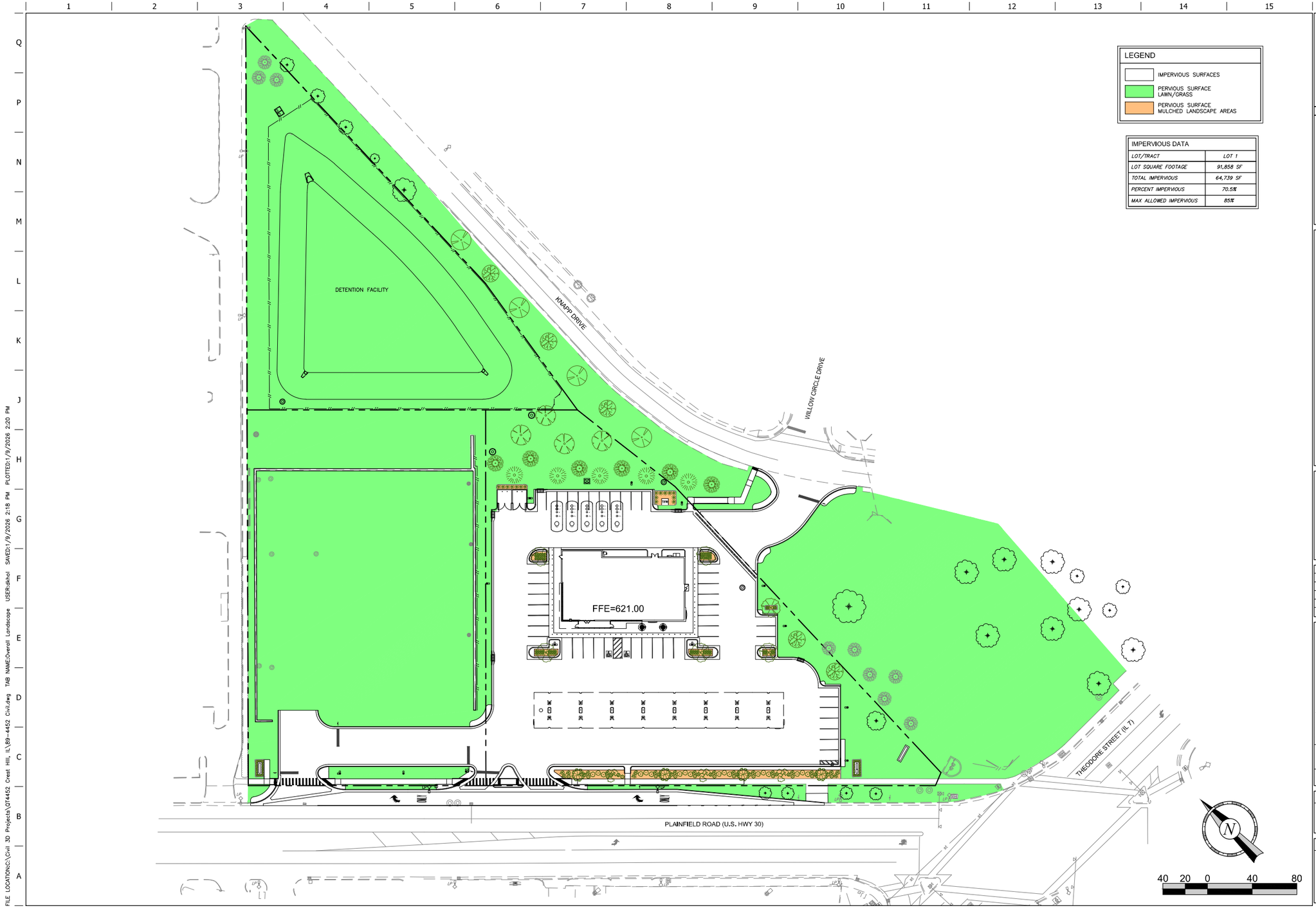
REVIEWED BY:	CJC

REV	DATE	DESCRIPTION
		ORIGINAL ISSUE DATE: 01/09/2026

SHEET TITLE:
STORM SEWER PLAN

SHEET NUMBER:
C120

FILE LOCATION:C:\Civil 3D Projects\QT4452 Crest Hill, IL\84-4452 Civil.dwg TAB NAME:Storm USER:dkholman SAVED:1/9/2026 2:18 PM PLOTTED:1/9/2026 2:20 PM



LEGEND

- IMPERVIOUS SURFACES
- PERVIOUS SURFACE LAWN/GRASS
- PERVIOUS SURFACE MULCHED LANDSCAPE AREAS

IMPERVIOUS DATA	
LOT/TRACT	LOT 1
LOT SQUARE FOOTAGE	91,858 SF
TOTAL IMPERVIOUS	64,739 SF
PERCENT IMPERVIOUS	70.5%
MAX ALLOWED IMPERVIOUS	85%

DARLA K. HOLMAN
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1/9/26

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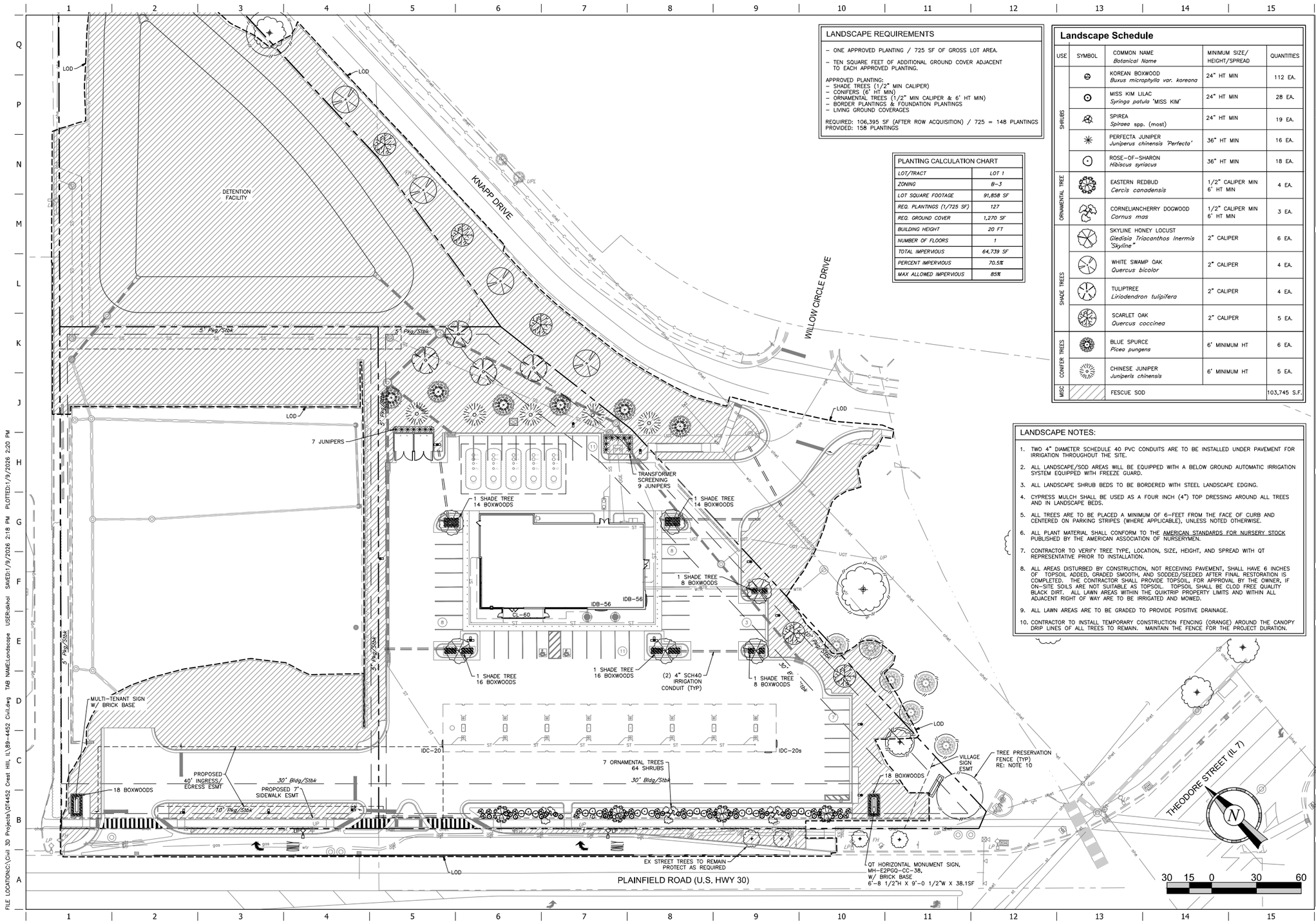
REV	DATE	DESCRIPTION
		ORIGINAL ISSUE DATE: 01/09/2026

SHEET TITLE:
OVERALL LANDSCAPE IMPERVIOUS SURFACE PLAN

SHEET NUMBER:
L100

FILE LOCATION=C:\Civil 3D Projects\QT4452 Crest Hill, IL\84-4452 Civil.dwg TAB NAME=Overall Landscape USER=dkhol SAVED=1/9/2026 2:18 PM PLOTTED=1/9/2026 2:20 PM



LANDSCAPE REQUIREMENTS

- ONE APPROVED PLANTING / 725 SF OF GROSS LOT AREA.
- TEN SQUARE FEET OF ADDITIONAL GROUND COVER ADJACENT TO EACH APPROVED PLANTING.

APPROVED PLANTING:
- SHADE TREES (1/2" MIN CALIPER)
- CONIFERS (6' HT MIN)
- ORNAMENTAL TREES (1/2" MIN CALIPER & 6' HT MIN)
- BORDER PLANTINGS & FOUNDATION PLANTINGS
- LIVING GROUND COVERAGES

REQUIRED: 106,395 SF (AFTER ROW ACQUISITION) / 725 = 148 PLANTINGS
PROVIDED: 158 PLANTINGS

PLANTING CALCULATION CHART	
LOT/TRACT	*LOT 1*
ZONING	*B-3*
LOT SQUARE FOOTAGE	*91,858 SF*
REQ. PLANTINGS (1/725 SF)	*127*
REQ. GROUND COVER	*1,270 SF*
BUILDING HEIGHT	*20 FT*
NUMBER OF FLOORS	*1*
TOTAL IMPERVIOUS	*64,739 SF*
PERCENT IMPERVIOUS	*70.5%*
MAX ALLOWED IMPERVIOUS	*85%*

Landscape Schedule

USE	SYMBOL	COMMON NAME *Botanical Name*	MINIMUM SIZE/ HEIGHT/SPREAD	QUANTITIES
SHRUBS		KOREAN BOXWOOD *Buxus microphylla var. koreana*	24" HT MIN	112 EA.
		MISS KIM LILAC *Syringa patula 'MISS KIM'*	24" HT MIN	28 EA.
		SPIREA *Spiraea spp. (most)*	24" HT MIN	19 EA.
		PERFECTA JUNIPER *Juniperus chinensis 'Perfecta'*	36" HT MIN	16 EA.
		ROSE-OF-SHARON *Hibiscus syriacus*	36" HT MIN	18 EA.
ORNAMENTAL TREE		EASTERN REDBUD *Cercis canadensis*	1/2" CALIPER MIN 6' HT MIN	4 EA.
		CORNELIANCHERRY DOGWOOD *Cornus mas*	1/2" CALIPER MIN 6' HT MIN	3 EA.
SHADE TREES		SKYLINE HONEY LOCUST *Gleditsia Triacanthos Inermis "Skyline"*	2" CALIPER	6 EA.
		WHITE SWAMP OAK *Quercus bicolor*	2" CALIPER	4 EA.
		TULIPTREE *Liriodendron tulipifera*	2" CALIPER	4 EA.
		SCARLET OAK *Quercus coccinea*	2" CALIPER	5 EA.
CONIFER TREES		BLUE SPURCE *Picea pungens*	6' MINIMUM HT	6 EA.
		CHINESE JUNIPER *Juniperis chinensis*	6' MINIMUM HT	5 EA.
MISC		FESCUE SOD		103,745 S.F.

LANDSCAPE NOTES:

1. TWO 4" DIAMETER SCHEDULE 40 PVC CONDUITS ARE TO BE INSTALLED UNDER PAVEMENT FOR IRRIGATION THROUGHOUT THE SITE.
2. ALL LANDSCAPE/SOD AREAS WILL BE EQUIPPED WITH A BELOW GROUND AUTOMATIC IRRIGATION SYSTEM EQUIPPED WITH FREEZE GUARD.
3. ALL LANDSCAPE SHRUB BEDS TO BE BORDERED WITH STEEL LANDSCAPE EDGING.
4. CYPRESS MULCH SHALL BE USED AS A FOUR INCH (4") TOP DRESSING AROUND ALL TREES AND IN LANDSCAPE BEDS.
5. ALL TREES ARE TO BE PLACED A MINIMUM OF 6-FEET FROM THE FACE OF CURB AND CENTERED ON PARKING STRIPES (WHERE APPLICABLE), UNLESS NOTED OTHERWISE.
6. ALL PLANT MATERIAL SHALL CONFORM TO THE AMERICAN STANDARDS FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
7. CONTRACTOR TO VERIFY TREE TYPE, LOCATION, SIZE, HEIGHT, AND SPREAD WITH QT REPRESENTATIVE PRIOR TO INSTALLATION.
8. ALL AREAS DISTURBED BY CONSTRUCTION, NOT RECEIVING PAVEMENT, SHALL HAVE 6 INCHES OF TOPSOIL ADDED, GRADED SMOOTH, AND SODDED/SEEDED AFTER FINAL RESTORATION IS COMPLETED. THE CONTRACTOR SHALL PROVIDE TOPSOIL, FOR APPROVAL BY THE OWNER, IF ON-SITE SOILS ARE NOT SUITABLE AS TOPSOIL. TOPSOIL SHALL BE CLOD FREE QUALITY BLACK DIRT. ALL LAWN AREAS WITHIN THE QUIKTRIP PROPERTY LIMITS AND WITHIN ALL ADJACENT RIGHT OF WAY ARE TO BE IRRIGATED AND MOWED.
9. ALL LAWN AREAS ARE TO BE GRADED TO PROVIDE POSITIVE DRAINAGE.
10. CONTRACTOR TO INSTALL TEMPORARY CONSTRUCTION FENCING (ORANGE) AROUND THE CANOPY DRIP LINES OF ALL TREES TO REMAIN. MAINTAIN THE FENCE FOR THE PROJECT DURATION.

DARLA K. HOLMAN 062-072191 REGISTERED LANDSCAPE ARCHITECT STATE OF ILLINOIS
1/9/26

PROJECT NO.:84-4452

Midwest Design Group
Kansas City
PO Box 860015
Shawnee, KS 66286-0015
P 913.248.9385

QuikTrip No. 4452

1610 PLAINFIELD ROAD
CREST HILL, WILL COUNTY, ILLINOIS 60403

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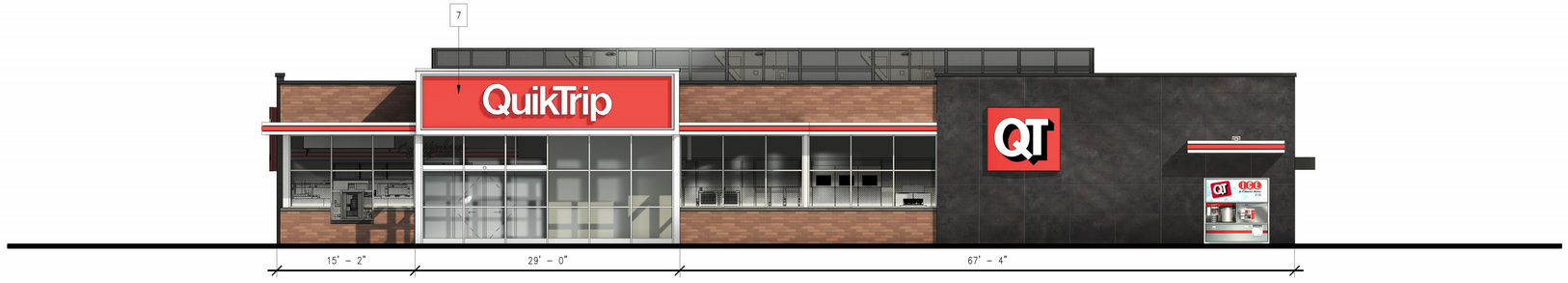
PROTOTYPE:	P-122
DIVISION:	84
VERSION:	001
DESIGNED BY:	DKH
DRAWN BY:	CSH
REVIEWED BY:	CJC

REV	DATE	DESCRIPTION
		ORIGINAL ISSUE DATE: 01/09/2026

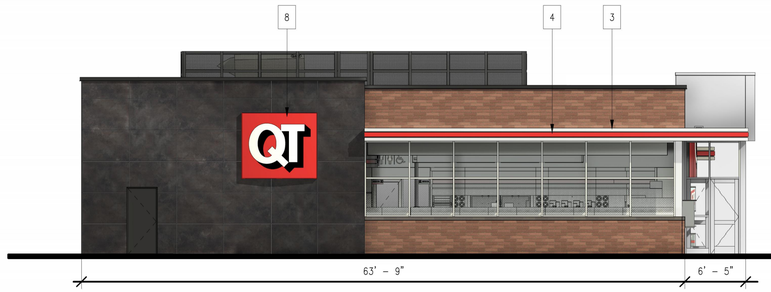
SHEET TITLE:
LANDSCAPE PLAN

SHEET NUMBER:
L101

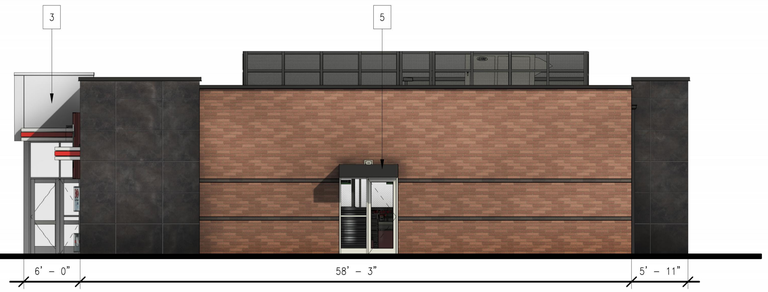
FILE LOCATION:C:\Civil 3D Projects\QT4452 Crest Hill, IL\84-4452 Civil.dwg TAB NAME:Landscape USER:dkholi SAVED:1/9/2026 2:18 PM PLOTTED:1/9/2026 2:20 PM



FRONT ELEVATION 1/8" : 1'-0"



LEFT ELEVATION 1/8" : 1'-0"



RIGHT ELEVATION 1/8" : 1'-0"



REAR ELEVATION 1/8" : 1'-0"

FINISH SCHEDULE

#	FINISH	MANUFACTURER	SPECIFICATION
1	BRONZESTONE	INTERSTATE BRICK	ATLAS STRUCTURAL BRICK
2	MIDNIGHT	INTERSTATE BRICK	ATLAS STRUCTURAL BRICK
3	BRUSHED ALUMINUM	REYNOBOND	FASCIA
4	RED POLYCARBONATE	ALLEN INDUSTRIES	ILLUMINATED BAND
5	QT BROWN	LANE	METAL/PAINT
6	BLACK	ALL COURT FABRICS	POLYPRO MESH
7	CL-60R	ALLEN INDUSTRIES	SIGNAGE
8	IDB-56	ALLEN INDUSTRIES	ILLUMINATED SIGNAGE
9	OSSIDO NERO	CROSSVILLE	EXTERIOR TILE

QuikTrip

PROTOTYPE	
ISSUE DATE	02/04/25
DRAWN BY	JTC
PHASE	

DOCUMENT TYPE

SCHEMATIC

STORE TYPE

G4

SUB TYPE

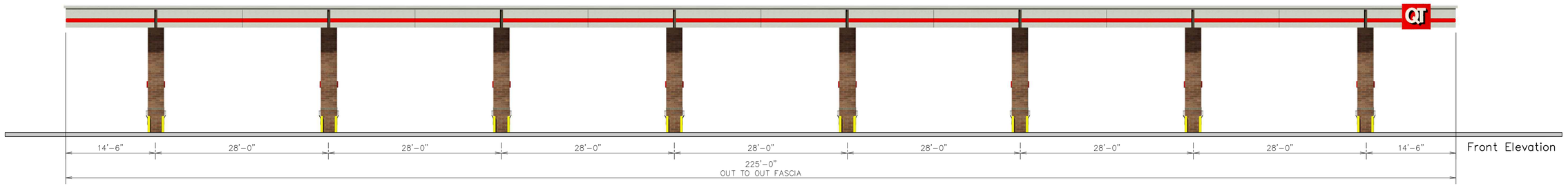
BUILDING ELEVATIONS

SHEET TITLE:

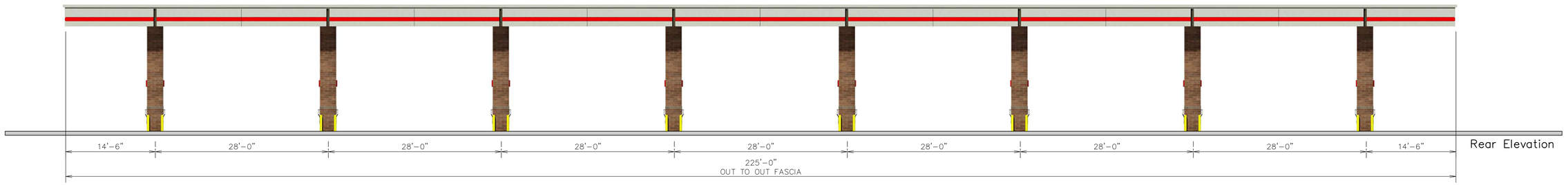
BUILDING ELEVATIONS

SHEET NUMBER:

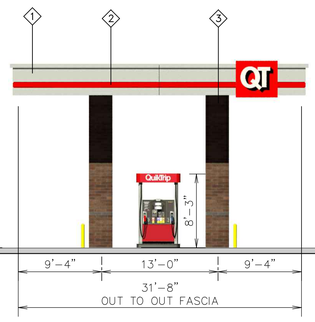
BE001



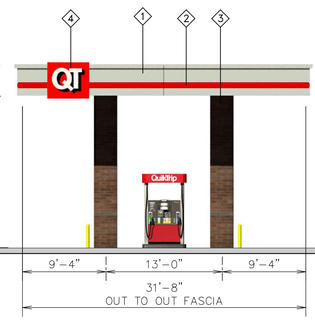
Front Elevation



Rear Elevation



Left Elevation



Right Elevation

QuikTrip.
4705 South 129th East Ave.
Tulsa, OK 74134–7008
P.O. Box 3475
Tulsa, OK 74101–3475
(918) 615–7700

Store #		Address:	City, State:
4452	G4 Vertical 8 Gas Canopy	1610 Plainfield Rd	Crest Hill, IL

Serial #	Scale:	Issue Date:	Drawn By:	Rev/Notes:
84–4452–G4–GV08	1/8"=1'–0"	12.22.25	JK	

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#	FINISH	MANUFACTURER	SPECIFICATION
1	BRUSHED ALUMINUM	REYNOBOND	CANOPY
2	RED POLYCARBONATE	ALLEN INDUSTRIES	ILLUMINATED BAND
3	BRONZESTONE	INTERSTATE BRICK	ATLAS STRUCTURAL BRICK
4	IDC–20	ALLEN INDUSTRIES	ILLUMINATED SIGNAGE

A1 ROUGH DIMENSION FLOOR PLAN

1/4" = 1'-0"

NORTH

FLOOR AREA: 3663 SF =
TOTAL BUILDING AREA: 6445 SF

LICKEL ARCHITECTURE
16200 MIDLAND DRIVE
SHAWNEE, KS 66217
(P) 913.389.7888

SIGNATURE DATE: 12/17/2025

QuikTrip No. 4452

1610 PLAINFIELD ROAD
CREST HILL, ILLINOIS

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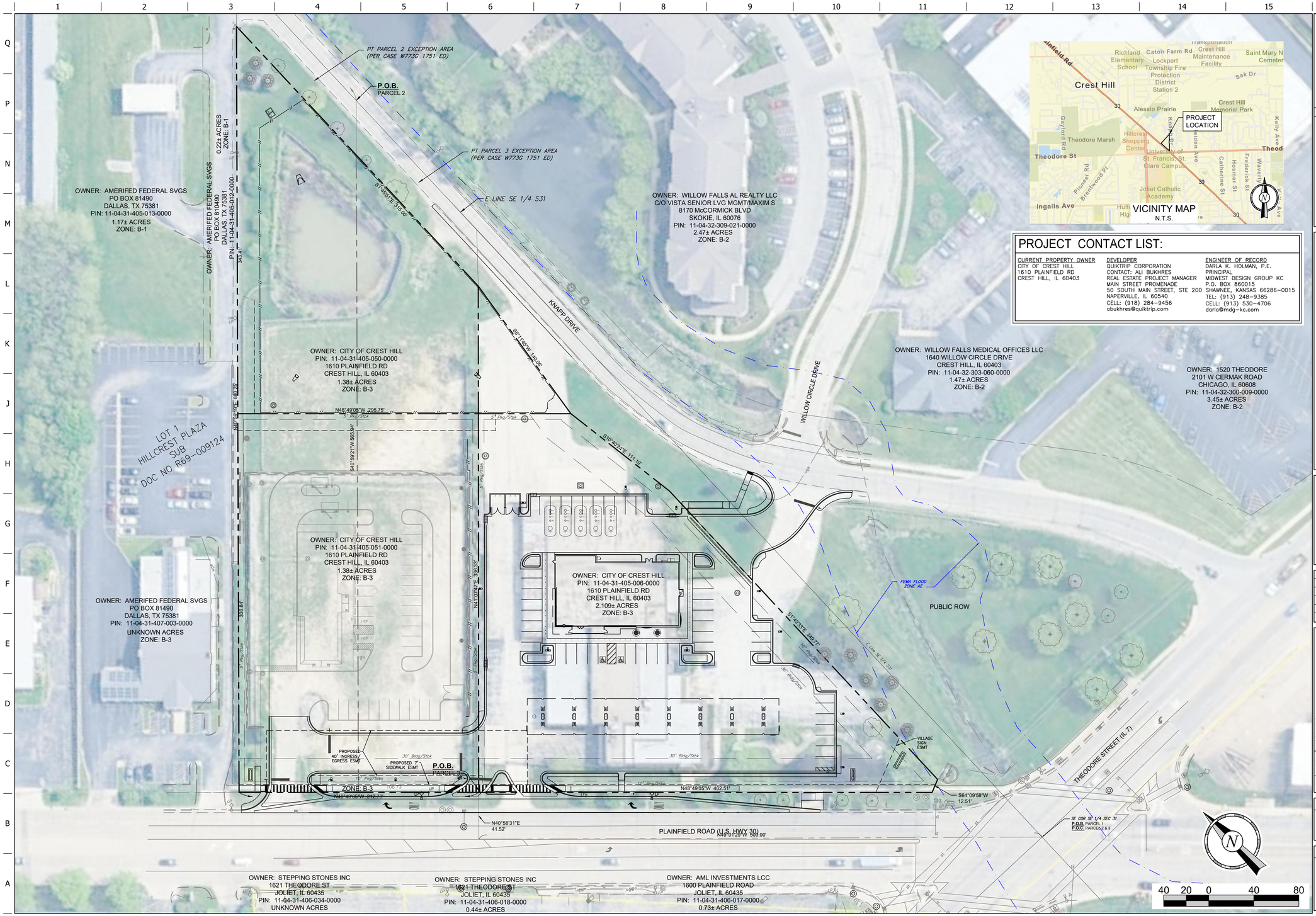
PROTOTYPE	P124.00
DIVISION	CHICAGO
VERSION	G4
DATE	11/05/2025

REV	DATE	DESCRIPTION

ORIGINAL ISSUE DATE: 12/17/2025

SHEET TITLE:
ROUGH DIMENSION FLOOR PLAN

SHEET NUMBER:
A110



PROJECT CONTACT LIST:

CURRENT PROPERTY OWNER	DEVELOPER	ENGINEER OF RECORD
CITY OF CREST HILL 1610 PLAINFIELD RD CREST HILL, IL 60403	QUIKTRIP CORPORATION CONTACT: ALI BUKHRES REAL ESTATE PROJECT MANAGER MAIN STREET PROMENADE 50 SOUTH MAIN STREET, STE 200 NAPERVILLE, IL 60540 CELL: (918) 284-9456 abukhres@quiktrip.com	DARLA K. HOLMAN, P.E. PRINCIPAL MIDWEST DESIGN GROUP KC P.O. BOX 860015 SHAWNEE, KANSAS 66286-0015 TEL: (913) 248-9385 CELL: (913) 530-4706 darla@mdg-kc.com

PROFESSIONAL ENGINEER
DARLA K. HOLMAN
062-072191
OF ILLINOIS
1/9/26

PROJECT NO.: 84-4452

MDG
Midwest Design Group
Kansas City
PO Box 860015
Shawnee, KS 66286-0015
P 913.248.9385

QuikTrip No. 4452

1610 PLAINFIELD ROAD
CREST HILL, WILL COUNTY, ILLINOIS 60403

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PROTOTYPE:	P-122
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VERSION:	001
DESIGNED BY:	DKH
DRAWN BY:	CSH
REVIEWED BY:	CJC

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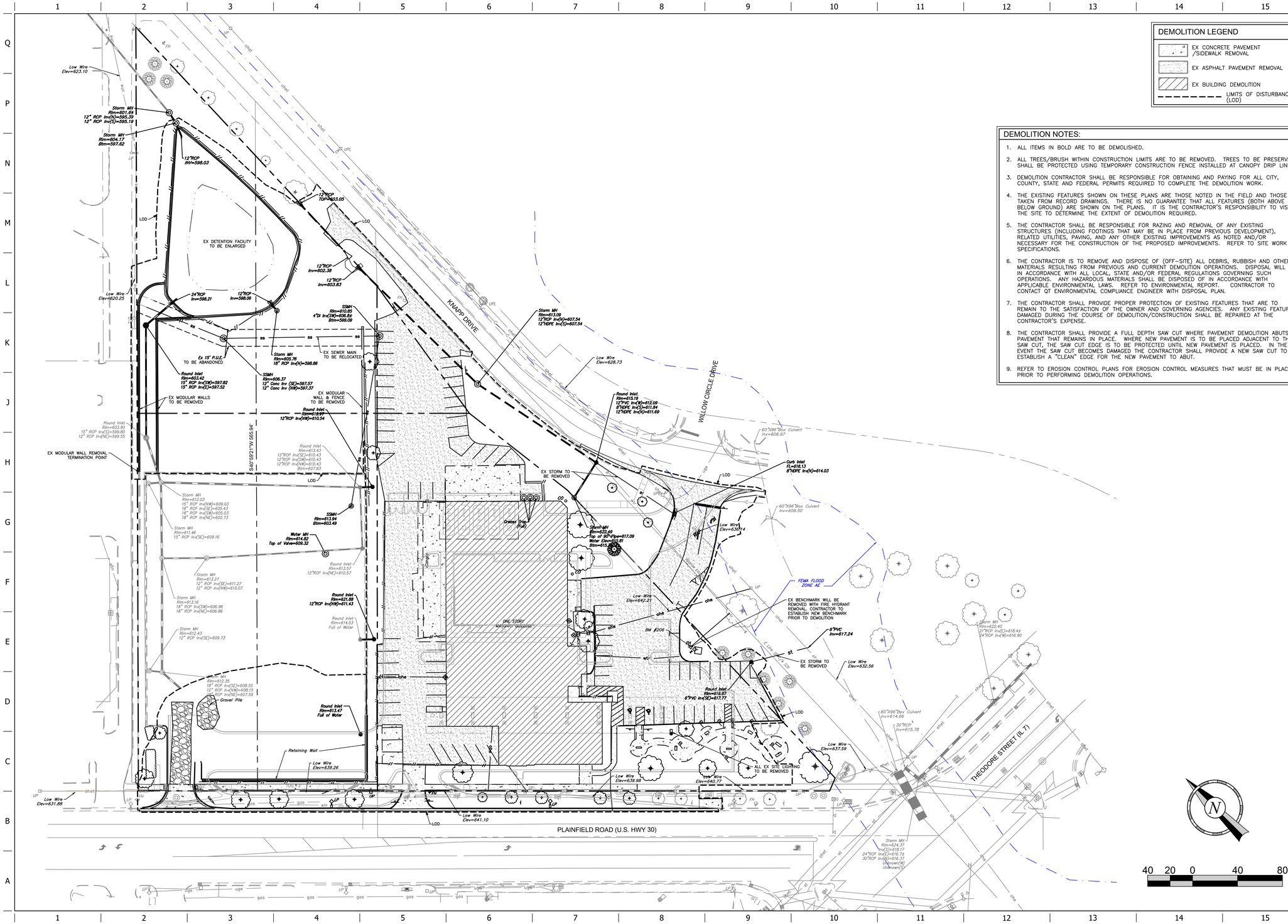
		ORIGINAL ISSUE DATE: 01/09/2026

SHEET TITLE:
OVERALL DEVELOPMENT PLAN

SHEET NUMBER:
C010

FILE LOCATION:C:\Civil 3D Projects\QT4452 Crest Hill, IL\89-4452 Civil.dwg TAB NAME:Overall Plan Layout USER:dkhol SAVED:1/9/2026 2:18 PM PLOTTED:1/9/2026 2:28 PM



DEMOLITION LEGEND

- EX CONCRETE PAVEMENT /SIDEWALK REMOVAL
- EX ASPHALT PAVEMENT REMOVAL
- EX BUILDING DEMOLITION
- LIMITS OF DISTURBANCE (LOD)

DEMOLITION NOTES:

1. ALL ITEMS IN BOLD ARE TO BE DEMOLISHED.
2. ALL TREES/BRUSH WITHIN CONSTRUCTION LIMITS ARE TO BE REMOVED. TREES TO BE PRESERVED SHALL BE PROTECTED USING TEMPORARY CONSTRUCTION FENCE INSTALLED AT CANOPY DRIP LINE.
3. DEMOLITION CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND PAYING FOR ALL CITY, COUNTY, STATE AND FEDERAL PERMITS REQUIRED TO COMPLETE THE DEMOLITION WORK.
4. THE EXISTING FEATURES SHOWN ON THESE PLANS ARE THOSE NOTED IN THE FIELD AND THOSE TAKEN FROM RECORD DRAWINGS. THERE IS NO GUARANTEE THAT ALL FEATURES (BOTH ABOVE AND BELOW GROUND) ARE SHOWN ON THE PLANS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VISIT THE SITE TO DETERMINE THE EXTENT OF DEMOLITION REQUIRED.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RAZING AND REMOVAL OF ANY EXISTING STRUCTURES (INCLUDING FOOTINGS THAT MAY BE IN PLACE FROM PREVIOUS DEVELOPMENT), RELATED UTILITIES, PAVING, AND ANY OTHER EXISTING IMPROVEMENTS AS NOTED AND/OR NECESSARY FOR THE CONSTRUCTION OF THE PROPOSED IMPROVEMENTS. REFER TO SITE WORK SPECIFICATIONS.
6. THE CONTRACTOR IS TO REMOVE AND DISPOSE OF (OFF-SITE) ALL DEBRIS, RUBBISH AND OTHER MATERIALS RESULTING FROM PREVIOUS AND CURRENT DEMOLITION OPERATIONS. DISPOSAL WILL BE IN ACCORDANCE WITH ALL LOCAL, STATE AND/OR FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS. ANY HAZARDOUS MATERIALS SHALL BE DISPOSED OF IN ACCORDANCE WITH APPLICABLE ENVIRONMENTAL LAWS. REFER TO ENVIRONMENTAL REPORT. CONTRACTOR TO CONTACT QT ENVIRONMENTAL COMPLIANCE ENGINEER WITH DISPOSAL PLAN.
7. THE CONTRACTOR SHALL PROVIDE PROPER PROTECTION OF EXISTING FEATURES THAT ARE TO REMAIN TO THE SATISFACTION OF THE OWNER AND GOVERNING AGENCIES. ANY EXISTING FEATURES DAMAGED DURING THE COURSE OF DEMOLITION/CONSTRUCTION SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
8. THE CONTRACTOR SHALL PROVIDE A FULL DEPTH SAW CUT WHERE PAVEMENT DEMOLITION ABUTS PAVEMENT THAT REMAINS IN PLACE. WHERE NEW PAVEMENT IS TO BE PLACED ADJACENT TO THIS SAW CUT, THE SAW CUT EDGE IS TO BE PROTECTED UNTIL NEW PAVEMENT IS PLACED. IN THE EVENT THE SAW CUT BECOMES DAMAGED THE CONTRACTOR SHALL PROVIDE A NEW SAW CUT TO ESTABLISH A "CLEAN" EDGE FOR THE NEW PAVEMENT TO ABUT.
9. REFER TO EROSION CONTROL PLANS FOR EROSION CONTROL MEASURES THAT MUST BE IN PLACE PRIOR TO PERFORMING DEMOLITION OPERATIONS.

DARLA K. HOLMAN 062-072191 PROFESSIONAL ENGINEER OF ILLINOIS
1/9/26

PROJECT NO.: 84-4452

MDG
Midwest Design Group
Kansas City
PO Box 860015
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P 913.248.9385

QuikTrip No. 4452

1610 PLAINFIELD ROAD
CREST HILL, WILL COUNTY, ILLINOIS 60403

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PROTOTYPE:	P-122
DIVISION:	84
VERSION:	001
DESIGNED BY:	DKH
DRAWN BY:	CSH
REVIEWED BY:	CJC

REV	DATE	DESCRIPTION

ORIGINAL ISSUE DATE: 01/09/2026

SHEET TITLE:
DEMOLITION PLAN

SHEET NUMBER:
C030

FILE LOCATION:C:\Civil 3D Projects\QT4452 Crest Hill, IL\89-4452 Civil.dwg TAB NAME:Demo USER:dkhol SAVED:1/9/2026 2:18 PM PLOTTED:1/9/2026 2:19 PM

DETENTION TRACT
TRACT A
53,529 SF
1.23 AC

LOT 2
71,685 SF
1.65 AC

LOT 1
87,200 SF
2.00 AC

KNAPP DRIVE

WILLOW CIRCLE DRIVE

THEODORE STREET (IL 7)

PLAINFIELD ROAD (U.S. HWY 30)

S51°45'57"E 315.00'

S51°13'45"W 401.98'

N48°49'05"W 295.75'

S10°46'24"E 111.10'

N41°10'47"E 328.39'

S41°10'47"W 348.27'

N40°49'05"W 210.79'

N48°49'05"W 402.51'

S64°09'58"W 12.51'

N40°58'31"E 41.52'

N49°01'29"W 500.00'

MULTI-TENANT SIGN W/ BRICK BASE

PROPOSED 40' INGRESS/ EGRESS ESMT

PROPOSED 7' SIDEWALK ESMT

VILLAGE SIGN ESMT

QT HORIZONTAL MONUMENT SIGN, MH-E2P02-CC-38, W/ BRICK BASE 6'-8 1/2"H X 9'-0 1/2"W X 38.1SF

Round Inlet Rim=603.90 15" RCP Inv(S)=599.80 12" RCP Inv(NE)=599.55

Storm MH Rim=612.03 15" RCP Inv(NW)=609.03 18" RCP Inv(SE)=608.43 18" RCP Inv(SW)=608.33 18" RCP Inv(NE)=602.73

Storm MH Rim=611.46 15" RCP Inv(SE)=609.16

Storm MH Rim=613.27 12" RCP Inv(SE)=611.27 12" RCP Inv(NW)=610.07

Storm MH Rim=613.85 18" RCP Inv(SW)=606.96 18" RCP Inv(NE)=606.86

Storm MH Rim=613.43 12" RCP Inv(SE)=609.73

Storm MH Rim=612.35 18" RCP Inv(SE)=608.55 12" RCP Inv(NW)=608.15 18" RCP Inv(NE)=607.59

Round Inlet Rim=613.43 12"RCP Inv(SE)=610.43 12"RCP Inv(SW)=610.43 12"RCP Inv(NW)=610.43 Rim=607.63

Round Inlet Rim=613.50 12"RCP Inv(NE)=610.50

Round Inlet Rim=614.33 Fill of Water

60"X96"Box Culvert Inv=608.97

60"X96"Box Culvert Inv=609.50

60"X96"Box Culvert Inv=614.66

30"RCP Inv=615.78

Storm MH Rim=622.40 21"RCP Inv(E)=618.46 24"RCP Inv(W)=616.90

Storm MH Rim=624.37 Inv(S)=618.17 24"RCP Inv(E)=616.76 30"RCP Inv(N)=616.37 Unknown(W) Unknown(S)

IDB-56

IDC-20

IDC-20s

CL-60

ST

UGE

UGT

WTR

Access Location

5' Bldg/Stbk

10' Bldg/Stbk

30' Bldg/Stbk

40' Bldg/Stbk

E Line SE 1/4 S33

N

40 20 0 40 80

DARLA K. HOLMAN
062-072191
PROFESSIONAL ENGINEER
OF ILLINOIS
1/9/26

PROJECT NO.: 84-4452

MDG
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PO Box 860015
Shawnee, KS 66286-0015
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QuikTrip No. 4452

1610 PLAINFIELD ROAD
CREST HILL, WILL COUNTY, ILLINOIS 60403

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PROTOTYPE:	P-122
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VERSION:	001
DESIGNED BY:	DKH
DRAWN BY:	CSH
REVIEWED BY:	CJC

REV	DATE	DESCRIPTION

ORIGINAL ISSUE DATE: 01/09/2026

SHEET TITLE:
OVERALL SITE PLAN

SHEET NUMBER:
C100

FILE LOCATION:C:\Civil 3D Projects\QT4452 Crest Hill, IL\89-4452 Civil.dwg TAB NAME:Overall Site USER:dkhol SAVED:1/9/2026 2:18 PM PLOTTED:1/9/2026 2:19 PM

SITE NOTES:

1. ALL DIMENSIONS SHOWN ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
2. THE MAXIMUM CROSS SLOPE ON ALL PROPOSED SIDEWALKS, INCLUDING PUBLIC AND PRIVATE SIDEWALK DRIVEWAY CROSSINGS, IS 2%.
3. REFERENCE PHOTOMETRIC SITE PLAN (C160) FOR SITE LIGHTING DETAILS. LIGHT POLE LOCATIONS CAN BE SCALED FROM DRAWINGS OR STAKED BY CONSTRUCTION STAKING CONTRACTOR.
4. REGULATORY SIGNAGE SHALL CONFORM TO M.U.T.C.D.
5. ALL IMPROVEMENTS WITHIN PUBLIC RIGHT OF WAY SHALL BE CONSTRUCTED IN ACCORDANCE WITH GOVERNING AGENCY SPECIFICATIONS.
6. CONTRACTOR IS RESPONSIBLE FOR PROVIDING TRAFFIC CONTROL WHEN WORKING WITHIN AND ADJACENT TO PUBLIC STREETS.

SITE LEGEND

- BOUNDARY LINE
- CONCRETE CURB AND GUTTER
- MOUNTABLE CURB W/RADIUS PROTECTOR
- (7) PARKING SPACE INDICATOR
- AREA LIGHT
- MULTIPLE PRODUCT DISPENSER WITH CANOPY COLUMNS AND BOLLARDS
- TFR TRANSFORMER
- FUEL SYSTEM ACCESS MANWAY

PROPOSED SITE DEVELOPMENT DATA

LOT/TRACT	LOT 1
ZONING	B-3
LOT SQUARE FOOTAGE	91,858 SF
GROSS FLOOR AREA	6,445 SF
FLOOR AREA	? SF
BUILDING HEIGHT	20 FT
NUMBER OF FLOORS	1
TOTAL IMPERVIOUS	64,739 SF
PERCENT IMPERVIOUS	70.5%
MAX ALLOWED IMPERVIOUS	85%

PARKING REGULATIONS

2 SPACES PER PUMP ISLAND
+ 1 SPACE/200 SF MERCANTILE FLOOR AREA
+ 1 STALL/EMPLOYEE (12 MAX)

REQUIRED: (2X8)+(3,663/200)+12 = 47
PROVIDED: 48 PARKING STALLS (2 ADA)
16 PUMP STALLS (4 ADA)

DETENTION FACILITY
KNAPP DRIVE (R.O.W. WIDTH VARIES)
WILLOW CIRCLE DRIVE
8" SS MAIN EXTENSION W/ 15' SS/ESMT
4' BLACK VINYL CHAIN-LINK FENCE DETENTION PERIMETER FENCE
10'W DOUBLE GATE ACCESS
6" SS SERVICE
FUEL SUMP FAN & VENT STACK RE: FUEL
5' SIDEWALK W/ HANDRAILS
PRIMARY ELEC SERVICE
4'ø SAMPLING SSMH
PADMOUNT TRANSFORMER
DBL TRASH ENCLOSURE
FUEL TANKS W/ NON-STD FILL PORTS
TANK EXCAVATION AREA (DEPTHS N.A. TANKS)
SECONDARY ELEC SERVICE
GREASE INTERCEPTOR
OIL RECLAMATION TANK
ELEC EQUIP
INTERNAL ROOF DRAIN
G4 (P-124) STORE NO.: 4452 6,445 S.F. BLDG. HT.= 20'-0"
FDC
PRIVATE 6" FH ASSEMBLY
TELE SERVICE
6" FIRE SUPPRESSION /WATER SERVICE LINE
ADA TABLE
ADA SIGNAGE
IDB-56
CL-60
ADA PARKING W/ VAN ACCESSIBLE STALL
ADA DISPENSERS
ESO RE: FUEL
TRANSITION SUMP
IDC-20
IDC-20s
FUEL CANOPY W/ BRICK COLUMNS
AUTO CANOPY ROOF DRAIN
PEDESTRIAN ACCESS RAMP
RUT PROTECTOR
AIR STATION
FUTURE VILLAGE SIGN BY OTHERS
VILLAGE SIGN ESMT
SITE LIGHTING (TYP) RE: C160
4' BLACK VINYL CHAIN-LINK FENCE
MULTI-TENANT SIGN W/ BRICK BASE
STOP SIGN
2'W WHITE STOP BAR (TYP)
PROPOSED 40' INGRESS/ EGRESS ESMT
PROPOSED 7' SIDEWALK ESMT
STOP SIGNS
RADIUS PROTECTOR (TYP)
QT HORIZONTAL MONUMENT SIGN, MH-E2PGQ-CC-38, W/ BRICK BASE 6'-8 1/2"H X 9'-0 1/2"W X 38.1SF
RELOCATED STREETLIGHT
RELOCATED UTILITY POLE
RELOCATED BEAUTIFICATION SIGN
RELOCATED STREETLIGHT
PLAINFIELD ROAD (U.S. HWY 30)
(90' R.O.W. WIDTH)
THEODORE STREET (IL 7)
Retaining Wall
Round Inlet Rim=613.43 12"RCP Inv(SE)=610.43 12"RCP Inv(SW)=610.43 12"RCP Inv(NW)=610.43 Btm=607.83
Storm MH Rim=612.03 15" RCP Inv(NW)=609.03 18" RCP Inv(SE)=608.43 18" RCP Inv(SW)=608.03 18" RCP Inv(NE)=602.73
Storm MH Rim=611.46 15" RCP Inv(SE)=609.16
Storm MH Rim=613.27 12" RCP Inv(SE)=611.27 12" RCP Inv(NW)=610.07
Storm MH Rim=613.16 18" RCP Inv(SW)=606.96 18" RCP Inv(NE)=606.86
Round Inlet Rim=613.57 12"RCP Inv(NE)=610.57
Round Inlet Rim=614.03 Full of Water
Storm MH Rim=612.43 12" RCP Inv(SE)=609.73
Storm MH Rim=612.35 18" RCP Inv(SE)=608.55 12" RCP Inv(NW)=608.15 18" RCP Inv(NE)=607.59
60"X96"Box Culvert Inv=608.97
60"X96"Box Culvert Inv=609.50
60"X96"Box Culvert Inv=614.66
30"RCP Inv=615.78
Storm MH Rim=624.37 Inv(S)=618.17
Storm MH Rim=622.40 21"RCP Inv(E)=618.4± 24"RCP Inv(W)=616.90
Asphalt
Concrete
Sidewalk
Bus Stop
Village Welcome Sign
E Line SE 1/4 S31
Approx Location of Property Line
80.85' BC/BC
10' Pkg/Stbk
30' Bldg/Stbk
5' Pkg/Stbk
191.17'
590.51'
399.38'
115'
132'
41.08'
30'R
50'R
60'R
25'R
35'R
20'R
15'R
10'R
5'R
3'R
2'R

30 15 0 30 60

DARLA K. HOLMAN
062-072191
PROFESSIONAL ENGINEER
OF ILLINOIS
1/9/26

PROJECT NO.:84-4452

MDG
Midwest Design Group
Kansas City
PO Box 860015
Shawnee, KS 66286-0015
P 913.248.9385

QuikTrip No. 4452

1610 PLAINFIELD ROAD
CREST HILL, WILL COUNTY, ILLINOIS 60403

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DIVISION:	84
VERSION:	001
DESIGNED BY:	DKH
DRAWN BY:	CSH
REVIEWED BY:	CJC

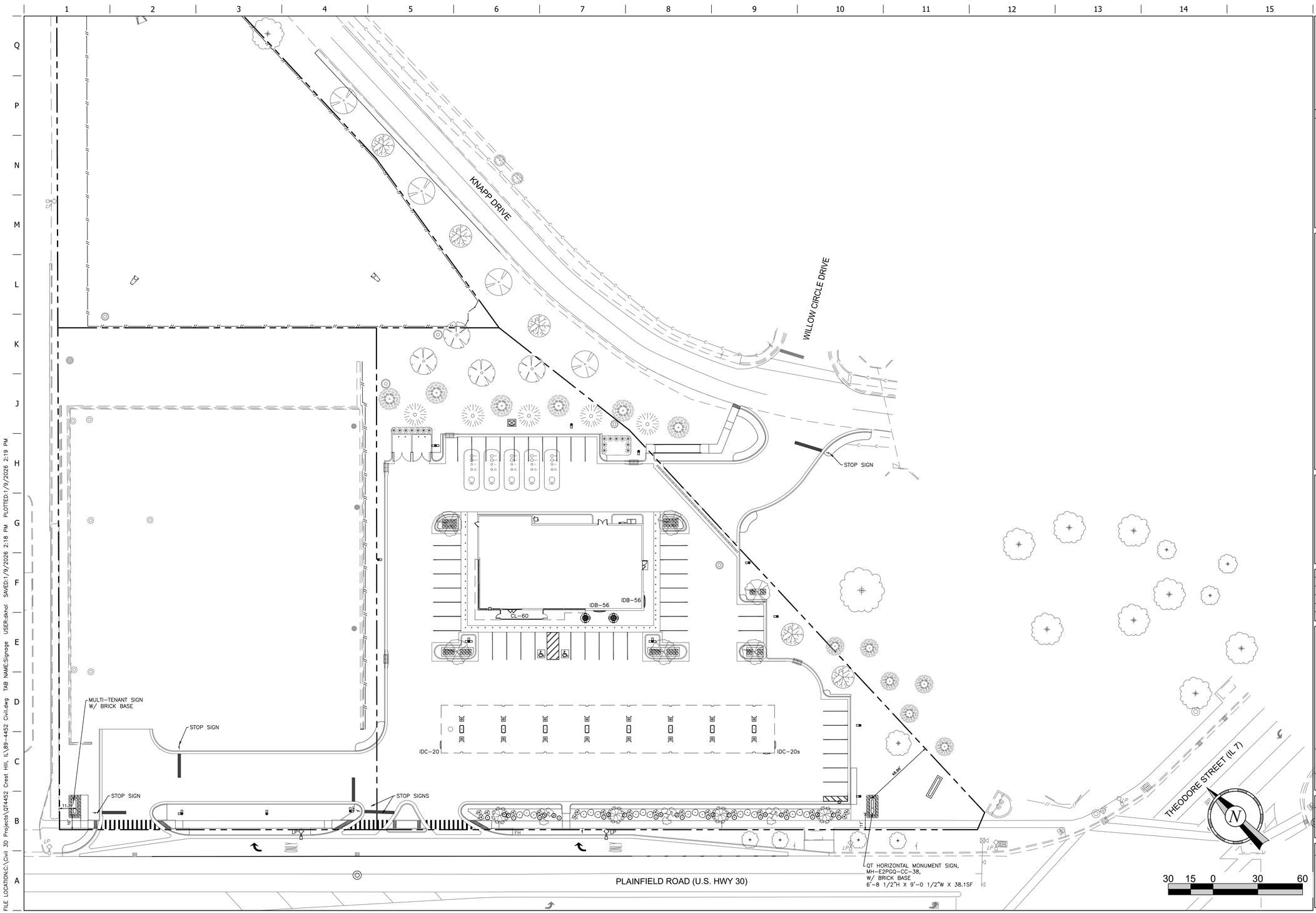
REV	DATE	DESCRIPTION

ORIGINAL ISSUE DATE: 01/09/2026

SHEET TITLE:
SITE PLAN

SHEET NUMBER:
C101

FILE LOCATION:C:\Civil 3D Projects\QT4452 Crest Hill, IL\89-4452 Civil.dwg TAB NAME:Site USER:dkholl SAVED:1/9/2026 2:18 PM PLOTTED:1/9/2026 2:19 PM



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REV	DATE	DESCRIPTION

ORIGINAL ISSUE DATE: 01/09/2026

SHEET TITLE:
SIGNAGE PLAN

SHEET NUMBER:
C102

FILE LOCATION:C:\Civil 3D Projects\QT4452 Crest Hill, IL\89-4452 Civil.dwg TAB NAME:Signage USER:dkhol SAVED:1/9/2026 2:18 PM PLOTTED:1/9/2026 2:19 PM

KNAPP DRIVE

WILLOW CIRCLE DRIVE

PLAINFIELD ROAD (U.S. HWY 30)

WB-50 - Intermediate Semi-Trailer

WB-50 - Intermediate Semi-Trailer

WB-50 - Intermediate Semi-Trailer

30 15 0 30 60

N

FILE LOCATION:C:\Civil 3D Projects\QT4452 Crest Hill, IL\89-4452 Civil.dwg TAB NAME:Vehicle Tracking USER:dkhol SAVED:1/9/2026 2:18 PM PLOTTED:1/9/2026 2:19 PM

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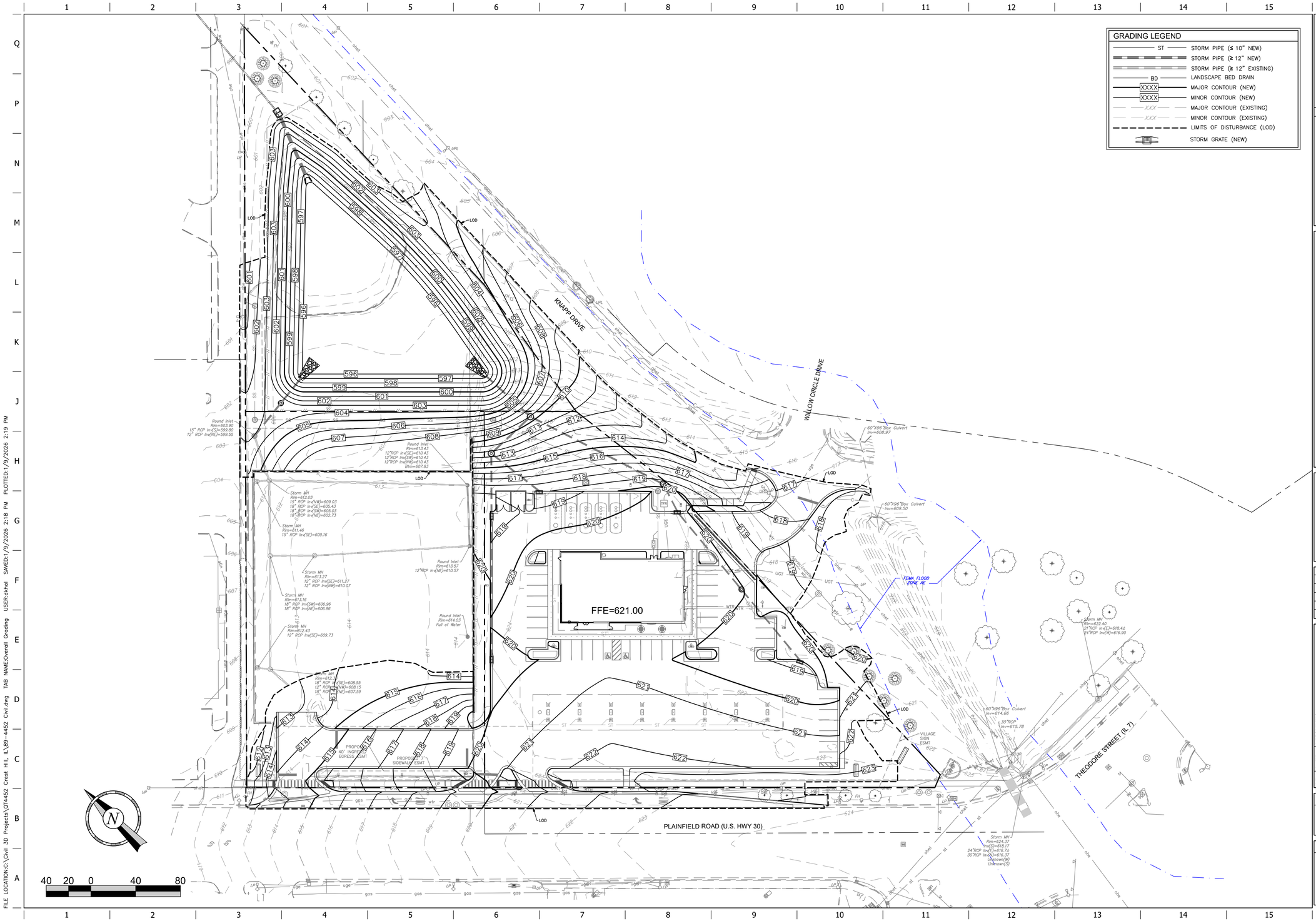
SHEET TITLE:

VEHICLE TRACKING (DELIVERY TRUCKS)

SHEET NUMBER:

C103



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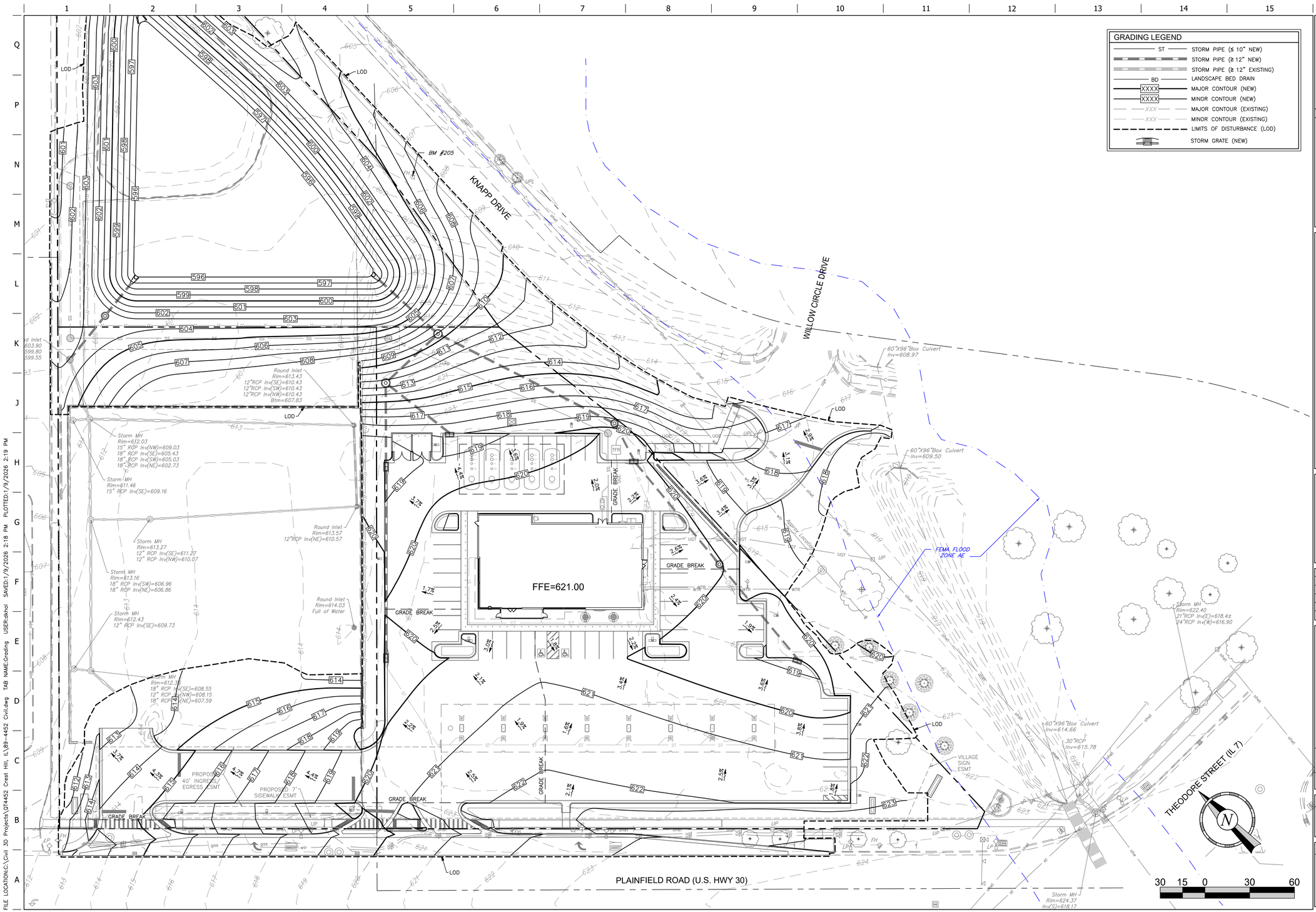
SHEET TITLE:
OVERALL GRADING PLAN

SHEET NUMBER:
C110

FILE LOCATION:C:\Civil 3D Projects\QT4452 Crest Hill, IL\89--4452 Civil.dwg TAB NAME:Overall Grading USER:dkhol SAVED:1/9/2026 2:18 PM PLOTTED:1/9/2026 2:19 PM



DARLA K. HOLMAN 062-072191 PROFESSIONAL ENGINEER OF ILLINOIS
1/9/26

PROJECT NO.: 84-4452

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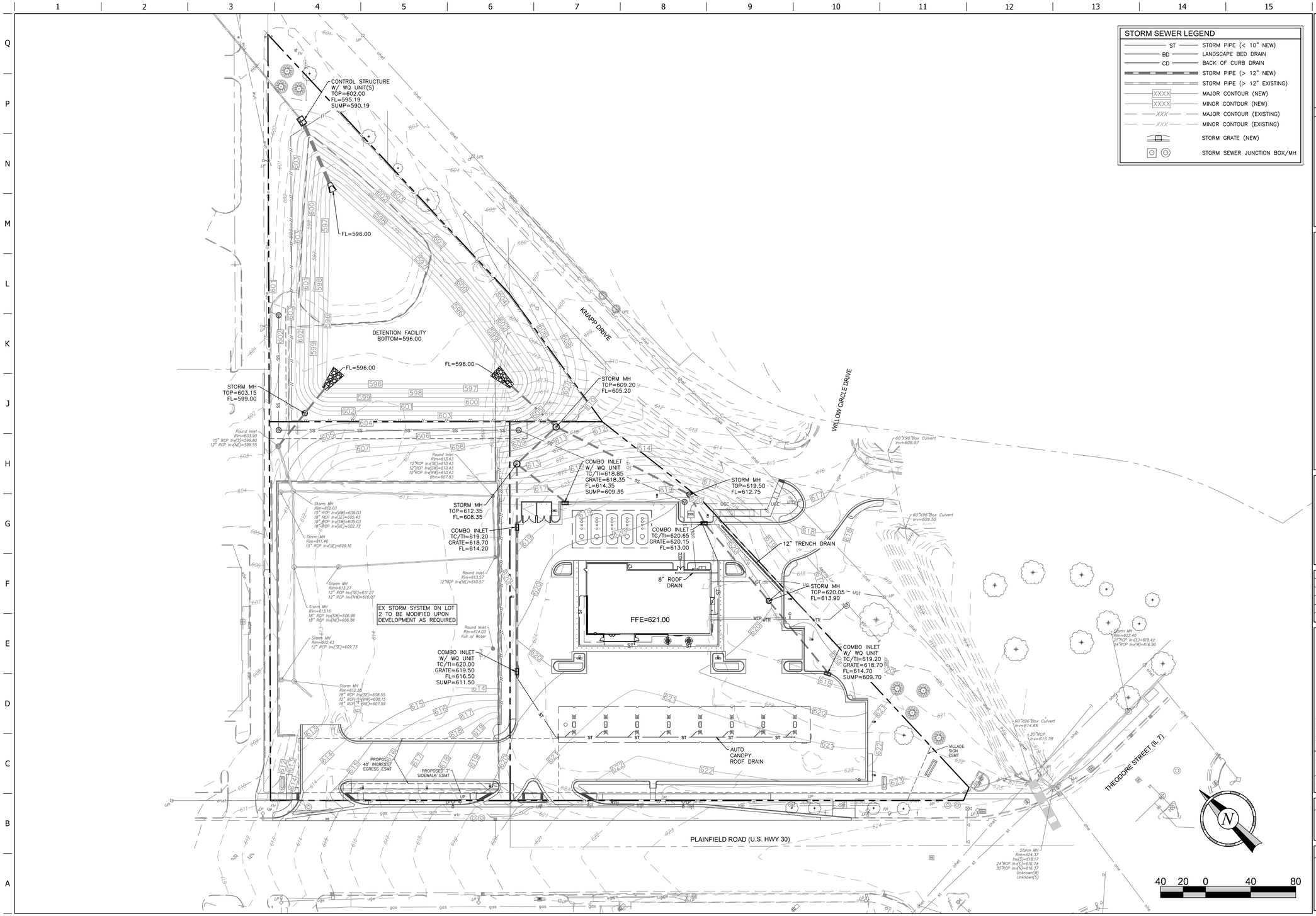
		ORIGINAL ISSUE DATE: 01/09/2026

SHEET TITLE:
GRADING PLAN

SHEET NUMBER:
C111

FILE LOCATION:C:\Civil 3D Projects\GT4452 Crest Hill, IL\84--4452 Civil.dwg TAB NAME:Grading USER:dkhol SAVED:1/9/2026 2:18 PM PLOTTED:1/9/2026 2:19 PM



STORM SEWER LEGEND

ST	STORM PIPE (< 10" NEW)
BD	LANDSCAPE BED DRAIN
CD	BACK OF CURB DRAIN
	STORM PIPE (> 12" NEW)
	STORM PIPE (> 12" EXISTING)
XXXX	MAJOR CONTOUR (NEW)
XXXX	MINOR CONTOUR (NEW)
XXX	MAJOR CONTOUR (EXISTING)
XXX	MINOR CONTOUR (EXISTING)
	STORM GRATE (NEW)
	STORM SEWER JUNCTION BOX/MH

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SHEET TITLE:
STORM SEWER PLAN

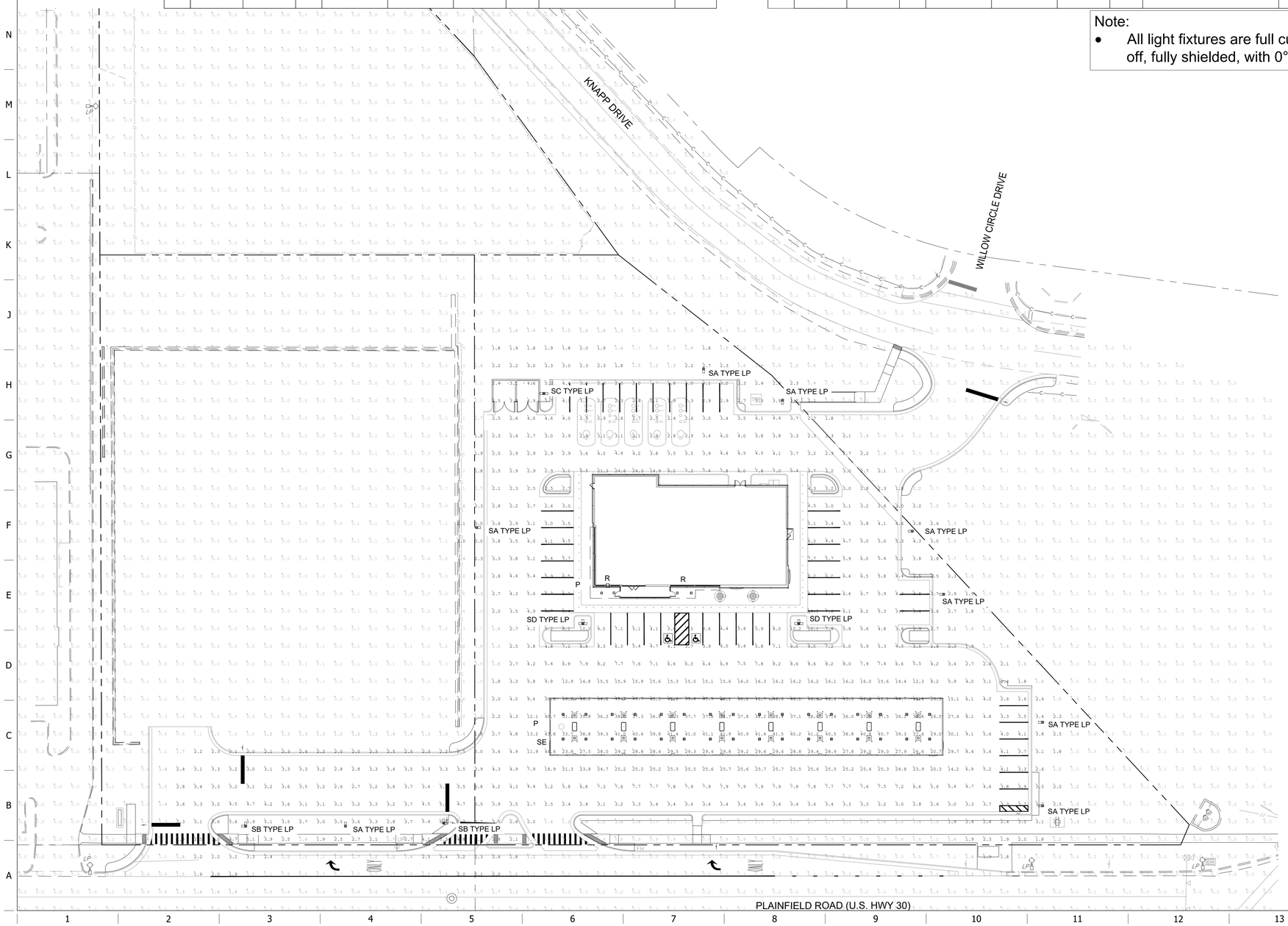
SHEET NUMBER:
C120

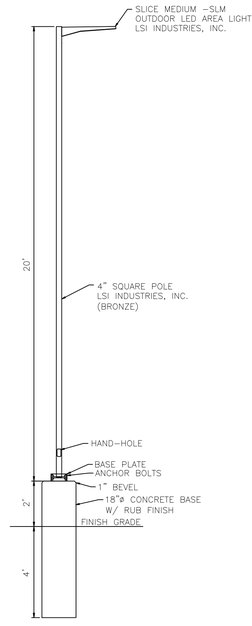
FILE LOCATION:C:\Civil 3D Projects\QT4452 Crest Hill, IL\89-4452 Civil.dwg TAB NAME:Storm USER:dkhol SAVED:1/9/2026 2:18 PM PLOTTED:1/9/2026 2:20 PM

LUMINAIRE SCHEDULE									
	SYMBOL	LABEL	QTY	ARRANGEMENT	MOUNTING HEIGHT	LUMENS PER LAMP	LLF	DESCRIPTION	TOTAL WATTS
		SA	08	SINGLE	22'	12,591	0.90	SLM-LED-12L-SIL-FT-40-70-CRI	93.1
		SB	02	2 @ 90°	22'	12,591	0.90	SLM-LED-12L-SIL-FT-40-70-CRI	93.1
		SC	01	2 @ 180°	22'	12,591	0.90	SLM-LED-12L-SIL-FT-40-70-CRI	93.1
		SD	02	3 @ 90°	22'	12,591	0.90	SLM-LED-12L-SIL-FT-40-70-CRI	93.1

LUMINAIRE SCHEDULE									
	SYMBOL	LABEL	QTY	ARRANGEMENT	MOUNTING HEIGHT	LUMENS PER LAMP	LLF	DESCRIPTION	TOTAL WATTS
		SE	32	SINGLE	15' TO 19'	12,793	0.90	SCV-LED-13L-SC-40 (WHITE)	83.6
		R	04	SINGLE	10' TO 12'	6,041	0.90	XSPS-S-LED-VHO-NW-DFL	48.7
		DL	862LF	VARIES	16' TO 18'	447.5/FT	0.90	ARCH-LED-BW-MULTI	10/FT
		SV	00	N/A	22'	N/A	N/A	LOW VOLTAGE POLE	N/A

Note:
- All light fixtures are full cut off, fully shielded, with 0° tilt.





AUTO SIDE LIGHT STANDARD
NOT TO SCALE



30 15 0 30 60

PROJECT NO.: 84-4452

CRUX
TECHNOLOGY + SECURITY SOLUTIONS
800.685.6440
www.cruxsolutions.com

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1610 PLAINFIELD ROAD
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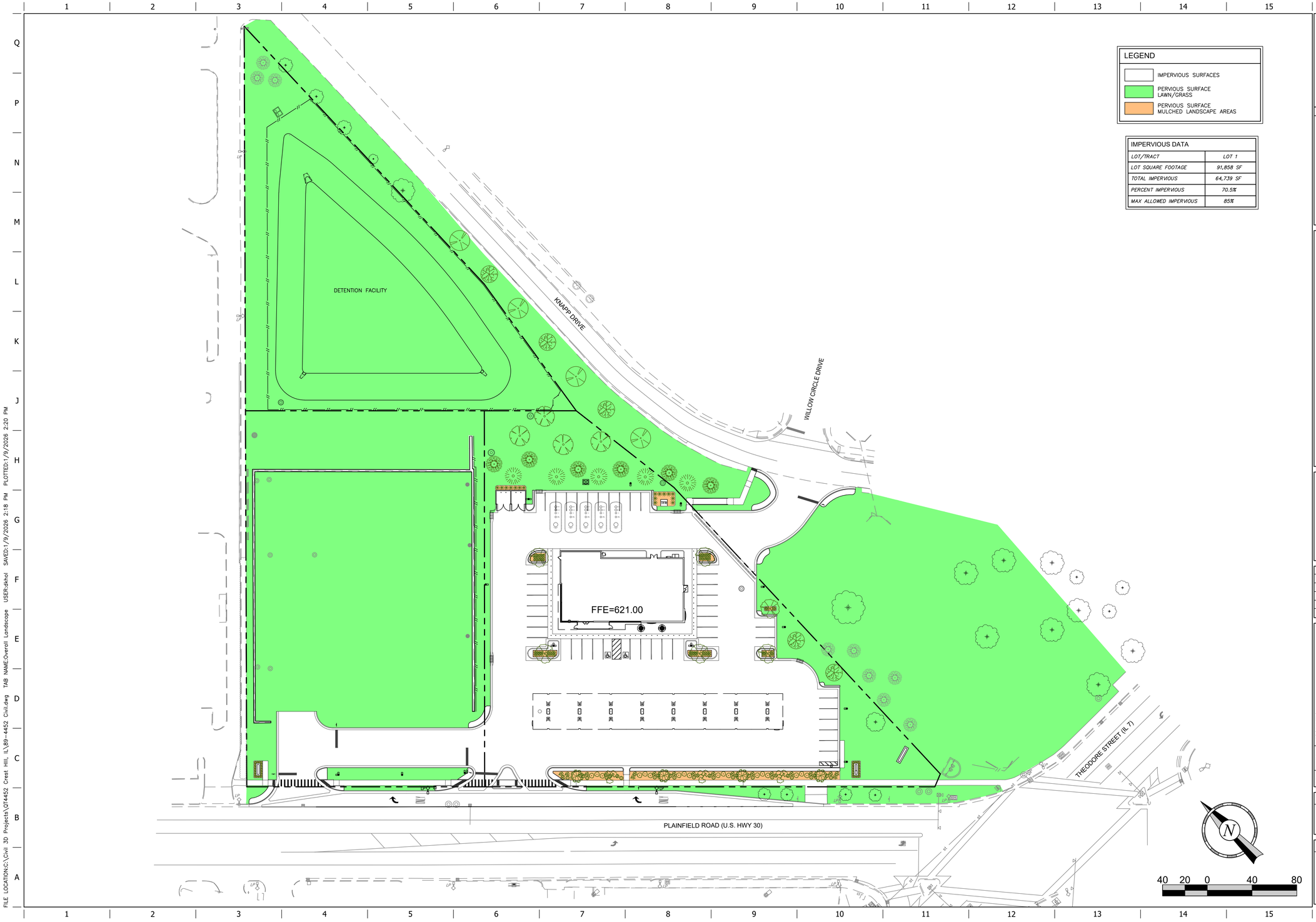
REV	DATE	DESCRIPTION
		ORIGINAL ISSUE DATE: 01/09/2026

SHEET TITLE:
PHOTOMETRIC SITE PLAN

SHEET NUMBER:
C160

FILE LOCATION:c:\Civil 3D Projects\QT4452 Crest Hill, IL\84-4452 Photometric.dwg TAB NAME:Photometric USER:dkhol SAVED:1/6/2026 11:27 AM PLOTTED:1/9/2026 2:20 PM



LEGEND

- IMPERVIOUS SURFACES
- PERVIOUS SURFACE LAWN/GRASS
- PERVIOUS SURFACE MULCHED LANDSCAPE AREAS

IMPERVIOUS DATA	
LOT/TRACT	LOT 1
LOT SQUARE FOOTAGE	91,858 SF
TOTAL IMPERVIOUS	64,739 SF
PERCENT IMPERVIOUS	70.5%
MAX ALLOWED IMPERVIOUS	85%

PROFESSIONAL ENGINEER
DARLA K. HOLMAN
062-072191
OF ILLINOIS
1/9/26

PROJECT NO.: 84-4452

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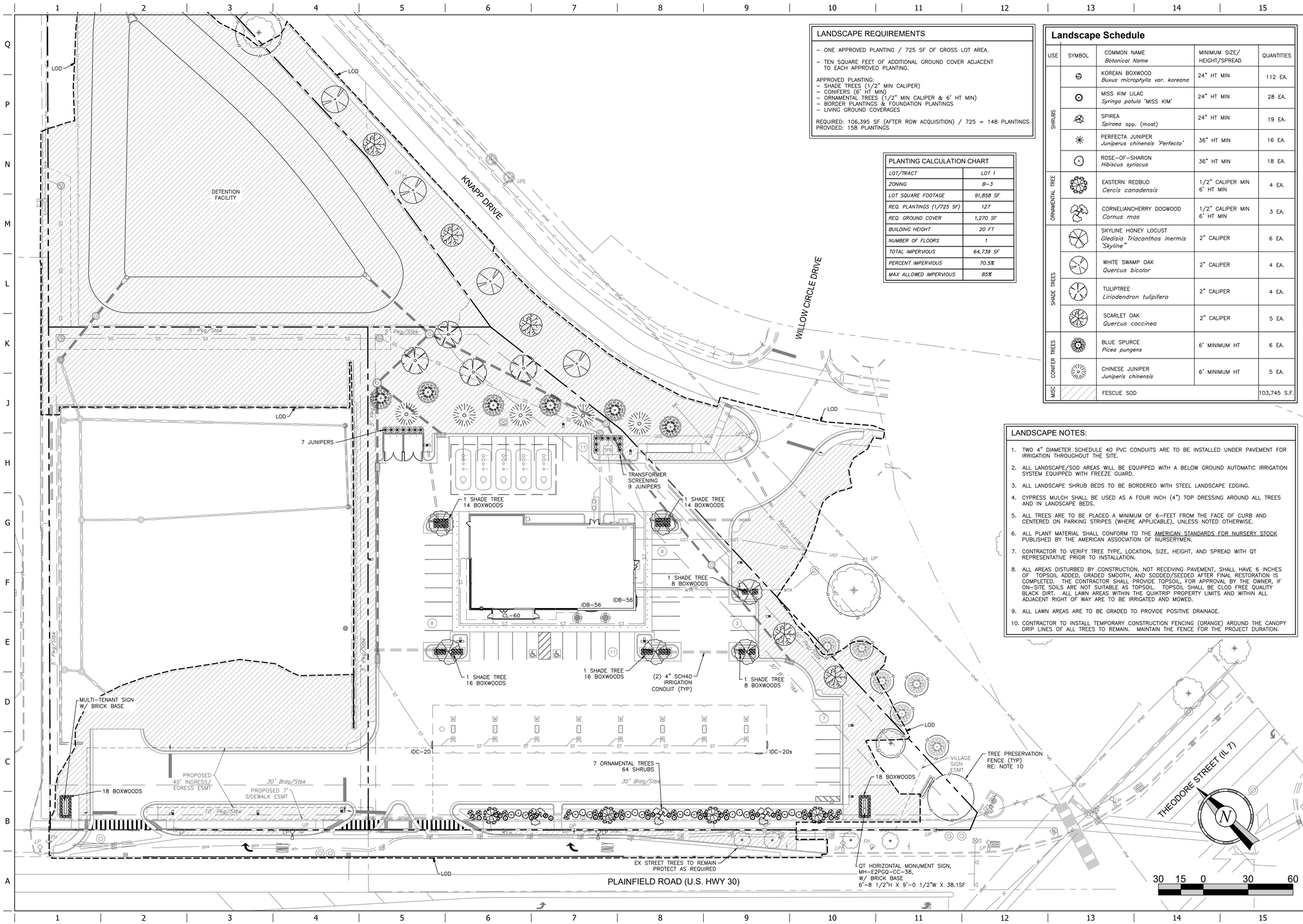
REV	DATE	DESCRIPTION

ORIGINAL ISSUE DATE: 01/09/2026

SHEET TITLE:
OVERALL LANDSCAPE IMPERVIOUS SURFACE PLAN

SHEET NUMBER:
L100

FILE LOCATION:C:\Civil 3D Projects\QT4452 Crest Hill, IL\84-4452 Civil.dwg TAB NAME:Overall Landscape USER:dkhol SAVED:1/9/2026 2:18 PM PLOTTED:1/9/2026 2:20 PM



LANDSCAPE REQUIREMENTS

- ONE APPROVED PLANTING / 725 SF OF GROSS LOT AREA.
- TEN SQUARE FEET OF ADDITIONAL GROUND COVER ADJACENT TO EACH APPROVED PLANTING.

APPROVED PLANTING:
- SHADE TREES (1/2" MIN CALIPER)
- CONIFERS (6' HT MIN)
- ORNAMENTAL TREES (1/2" MIN CALIPER & 6' HT MIN)
- BORDER PLANTINGS & FOUNDATION PLANTINGS
- LIVING GROUND COVERAGES

REQUIRED: 106,395 SF (AFTER ROW ACQUISITION) / 725 = 148 PLANTINGS
PROVIDED: 158 PLANTINGS

PLANTING CALCULATION CHART

LOT/TRACT	LOT 1
ZONING	B-3
LOT SQUARE FOOTAGE	91,858 SF
REQ. PLANTINGS (1/725 SF)	127
REQ. GROUND COVER	1,270 SF
BUILDING HEIGHT	20 FT
NUMBER OF FLOORS	1
TOTAL IMPERVIOUS	64,739 SF
PERCENT IMPERVIOUS	70.5%
MAX ALLOWED IMPERVIOUS	85%

Landscape Schedule

USE	SYMBOL	COMMON NAME / *Botanical Name*	MINIMUM SIZE/ HEIGHT/SPREAD	QUANTITIES
SHRUBS		KOREAN BOXWOOD *Buxus microphylla var. koreana*	24" HT MIN	112 EA.
		MISS KIM LILAC *Syringa patula* 'MISS KIM'	24" HT MIN	28 EA.
		SPIREA *Spiraea* spp. (most)	24" HT MIN	19 EA.
		PERFECTA JUNIPER *Juniperus chinensis 'Perfecta'*	36" HT MIN	16 EA.
		ROSE-OF-SHARON *Hibiscus syriacus*	36" HT MIN	18 EA.
ORNAMENTAL TREE		EASTERN REDBUD *Cercis canadensis*	1/2" CALIPER MIN 6' HT MIN	4 EA.
		CORNELIANCHERRY DOGWOOD *Cornus mas*	1/2" CALIPER MIN 6' HT MIN	3 EA.
SHADE TREES		SKYLINE HONEY LOCUST *Gledisia Triacanthos Inermis 'Skyline"*	2" CALIPER	6 EA.
		WHITE SWAMP OAK *Quercus bicolor*	2" CALIPER	4 EA.
		TULIPTREE *Liriodendron tulipifera*	2" CALIPER	4 EA.
		SCARLET OAK *Quercus coccinea*	2" CALIPER	5 EA.
CONIFER TREES		BLUE SPURCE *Picea pungens*	6' MINIMUM HT	6 EA.
		CHINESE JUNIPER *Juniperis chinensis*	6' MINIMUM HT	5 EA.
MISC		FESCUE SOD		103,745 S.F.

LANDSCAPE NOTES:

1. TWO 4" DIAMETER SCHEDULE 40 PVC CONDUITS ARE TO BE INSTALLED UNDER PAVEMENT FOR IRRIGATION THROUGHOUT THE SITE.
2. ALL LANDSCAPE/SOD AREAS WILL BE EQUIPPED WITH A BELOW GROUND AUTOMATIC IRRIGATION SYSTEM EQUIPPED WITH FREEZE GUARD.
3. ALL LANDSCAPE SHRUB BEDS TO BE BORDERED WITH STEEL LANDSCAPE EDGING.
4. CYPRESS MULCH SHALL BE USED AS A FOUR INCH (4") TOP DRESSING AROUND ALL TREES AND IN LANDSCAPE BEDS.
5. ALL TREES ARE TO BE PLACED A MINIMUM OF 6-FEET FROM THE FACE OF CURB AND CENTERED ON PARKING STRIPES (WHERE APPLICABLE), UNLESS NOTED OTHERWISE.
6. ALL PLANT MATERIAL SHALL CONFORM TO THE AMERICAN STANDARDS FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
7. CONTRACTOR TO VERIFY TREE TYPE, LOCATION, SIZE, HEIGHT, AND SPREAD WITH QT REPRESENTAITVE PRIOR TO INSTALLATION.
8. ALL AREAS DISTURBED BY CONSTRUCTION, NOT RECEIVING PAVEMENT, SHALL HAVE 6 INCHES OF TOPSOIL ADDED, GRADED SMOOTH, AND SODDED/SEEDED AFTER FINAL RESTORATION IS COMPLETED. THE CONTRACTOR SHALL PROVIDE TOPSOIL, FOR APPROVAL BY THE OWNER, IF ON-SITE SOILS ARE NOT SUITABLE AS TOPSOIL. TOPSOIL SHALL BE CLOD FREE QUALITY BLACK DIRT. ALL LAWN AREAS WITHIN THE QUIKTRIP PROPERTY LIMITS AND WITHIN ALL ADJACENT RIGHT OF WAY ARE TO BE IRRIGATED AND MOWED.
9. ALL LAWN AREAS ARE TO BE GRADED TO PROVIDE POSITIVE DRAINAGE.
10. CONTRACTOR TO INSTALL TEMPORARY CONSTRUCTION FENCING (ORANGE) AROUND THE CANOPY DRIP LINES OF ALL TREES TO REMAIN. MAINTAIN THE FENCE FOR THE PROJECT DURATION.

Professional Engineer
DARLA K. HOLMAN
062-072191
OF ILLINOIS
1/9/26

PROJECT NO.:84-4452

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CREST HILL, WILL COUNTY, ILLINOIS 60403

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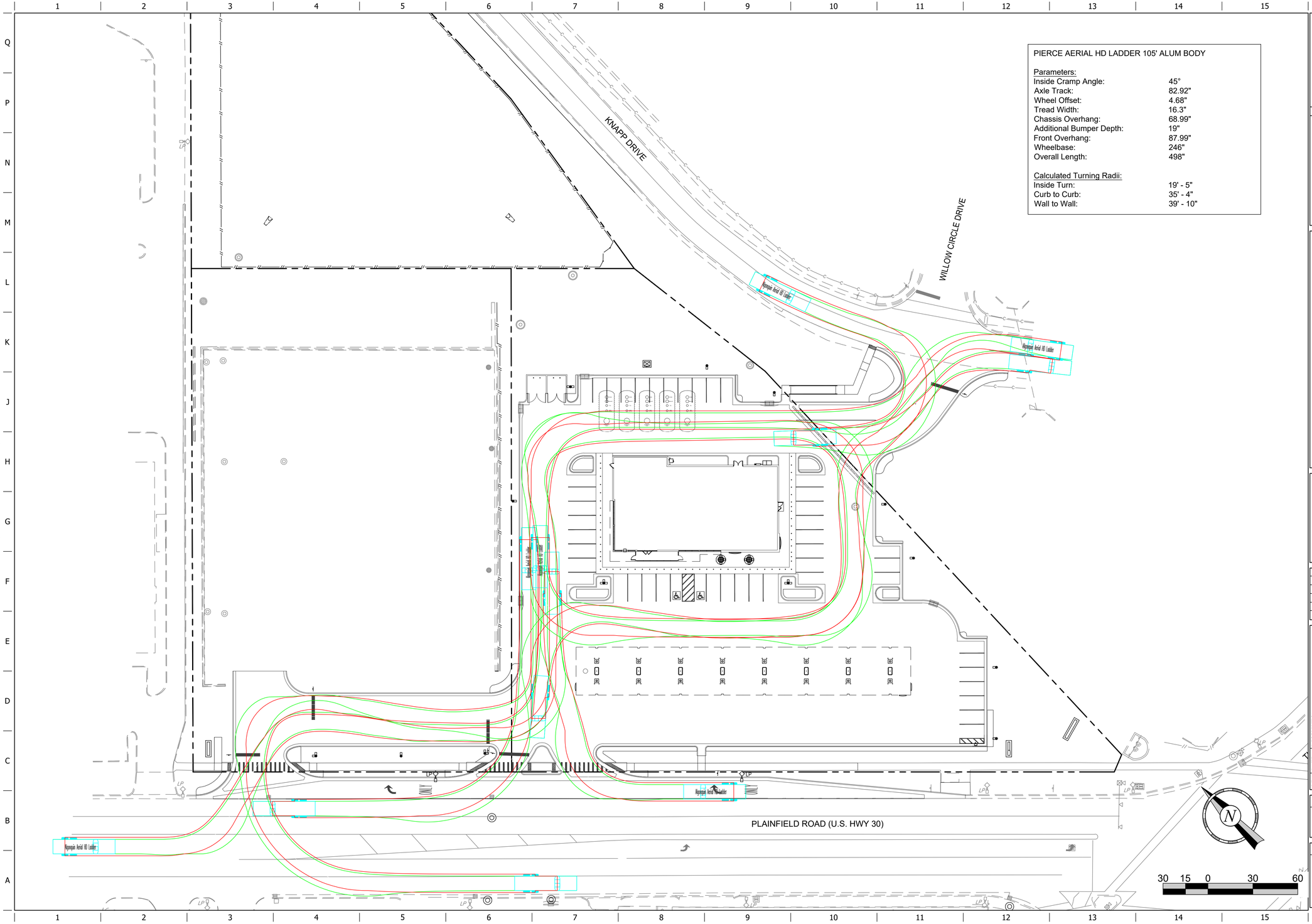
ORIGINAL ISSUE DATE: 01/09/2026

SHEET TITLE:
LANDSCAPE PLAN

SHEET NUMBER:
L101

FILE LOCATION:C:\Civil 3D Projects\QT4452 Crest Hill, IL\89-4452 Civil.dwg TAB NAME:Landscape USER:dkhol SAVED:1/9/2026 2:18 PM PLOTTED:1/9/2026 2:20 PM



PIERCE AERIAL HD LADDER 105' ALUM BODY

Parameters:

Inside Cramp Angle:	45°
Axle Track:	82.92"
Wheel Offset:	4.68"
Tread Width:	16.3"
Chassis Overhang:	68.99"
Additional Bumper Depth:	19"
Front Overhang:	87.99"
Wheelbase:	246"
Overall Length:	498"

Calculated Turning Radii:

Inside Turn:	19' - 5"
Curb to Curb:	35' - 4"
Wall to Wall:	39' - 10"

LICENSED PROFESSIONAL ENGINEER
DARLA K. HOLMAN
062-072191
OF ILLINOIS

PROJECT NO.:84-4452

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REV	DATE	DESCRIPTION

ORIGINAL ISSUE DATE: 01/16/2026

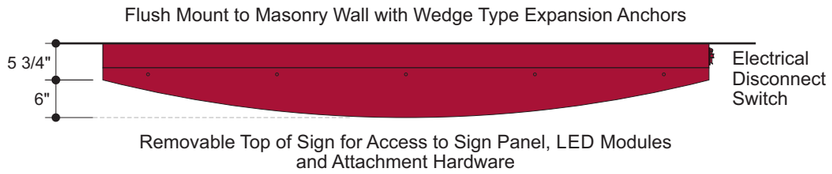
SHEET TITLE:
VEHICLE TRACKING
(AERIAL HD LADDER TRUCK)

SHEET NUMBER:
EXHIBIT

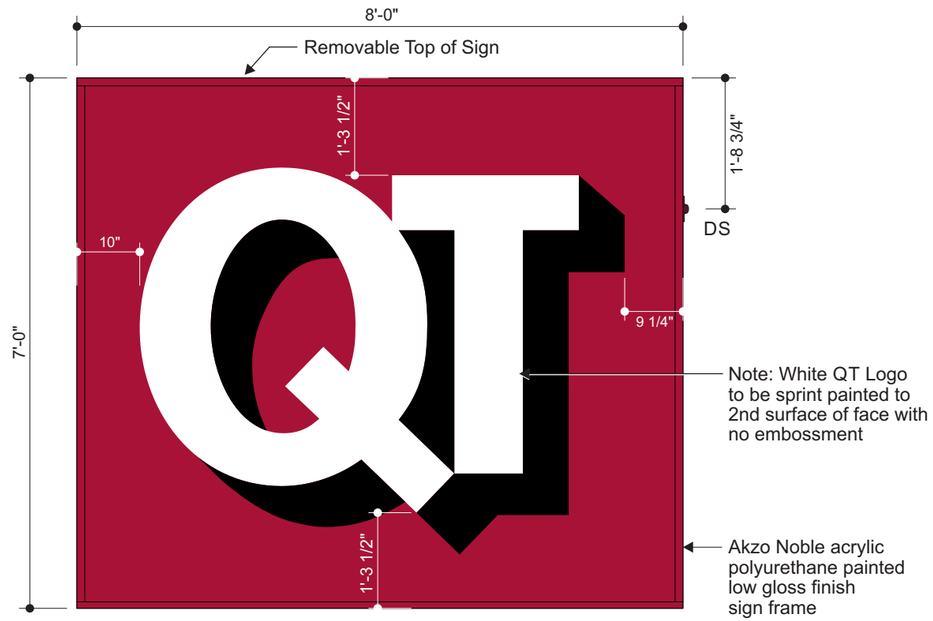
FILE LOCATION:C:\Civil 3D Projects\QT4452 Crest Hill, IL\89-4452 Civil.dwg TAB NAME:Vehicle Tracking Fire USER:dkhol SAVED:2/4/2026 3:12 PM PLOTTED:2/4/2026 3:17 PM

IDB-56
56 SF Building ID Sign

- Flat Bowed Face Panel and 1 1/4" Wide Face Retainers
- 56 Square Feet Sign Area



Top View



Front View
Scale: 1/2" = 1'-0"



Side View

APPROVED

3/6/25

Color Specifications

All Paint Finishes to be Akzo Nobel

- Opaque Silver
- Translucent White
- Black - Low Gloss
- Matte White (Interior of Sign)
- Match 3M Cardinal Red #3630-53

Regarding Fabrication Fit & Finish of All QT Signs:

- Visible fabrication seams and welded joints are to be sanded smooth, filled and finished to QT specifications.
- Any visible fasteners are to be countersunk and have painted heads.
- Face retainers must fit flush and have even, minimal seams.
- Any variation from this directive must be brought to the attention of the QT Quality Control Manager without delay.

Allen Industries — FILE NUMBER: E212503 | Listed MET E212503 | Electric Sign Complies with UL48

THIS SIGN IS INTENDED TO BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF **ARTICLE 600 OF THE NATIONAL ELECTRICAL CODE** AND/OR OTHER APPLICABLE LOCAL CODES. THIS INCLUDES PROPER GROUNDING AND BONDING OF THE SIGN.

GROUNDED ELECTRICAL CONNECTIONS

Item #QT-IDB-56

Project Information

Client
QuikTrip

Location
Various

File
QT Gen4_IDB-56_102

Sales	Design	Project Manager
House	**CT**	**James Gentry**

Date / Description

01/20/25		Issue Date
01/21/25	1	Internal correction
03/05/25	2	Dimensioned J-box
	3	
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Notes

Client Review Status

Allen Industries, Inc. requires that an "☑ **Approved**" drawing be obtained from the client prior to any production release or production release revision.

☐ **Approved** ☐ **Approved as Noted** ☐ **Revise & Resubmit**

Name

Title Date

Declaration

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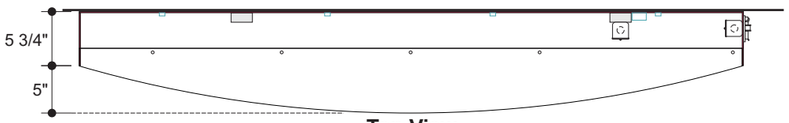
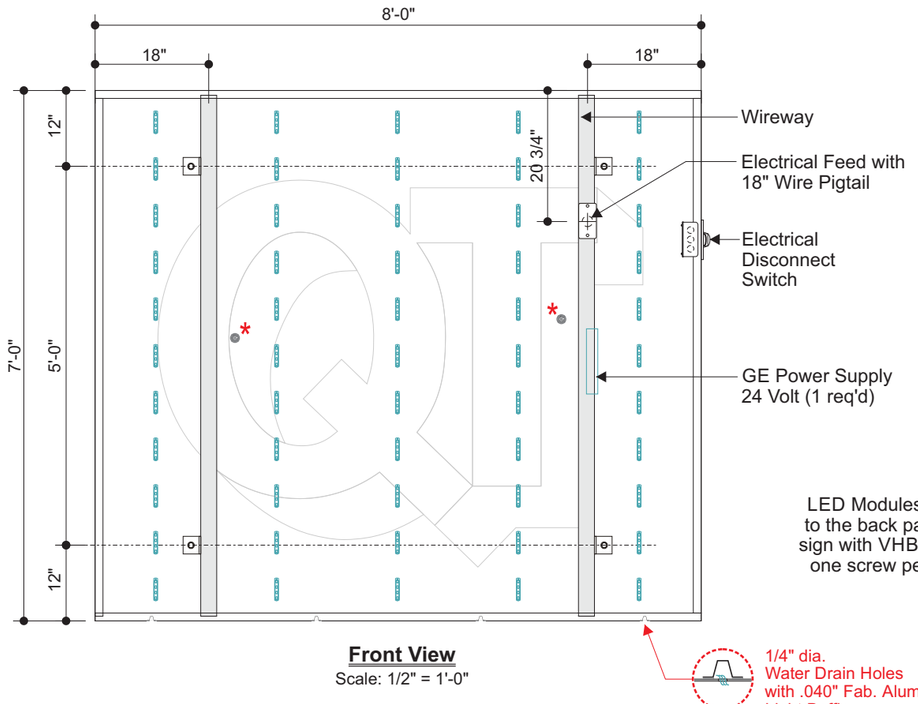
LED Specification

E

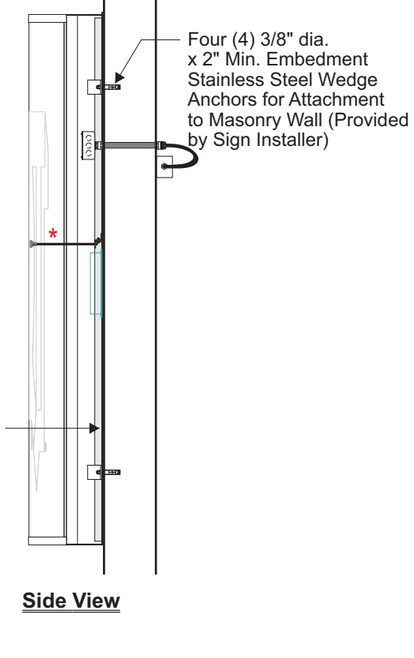
55 ea. GEPMH2471-W1X
1 ea. GEPS24-100U-GLX
Total Electrical Amp Load = 1.1 Amps
One (1) 120 Volt - 20 Amp
Circuit Breaker Required for Sign



Top View

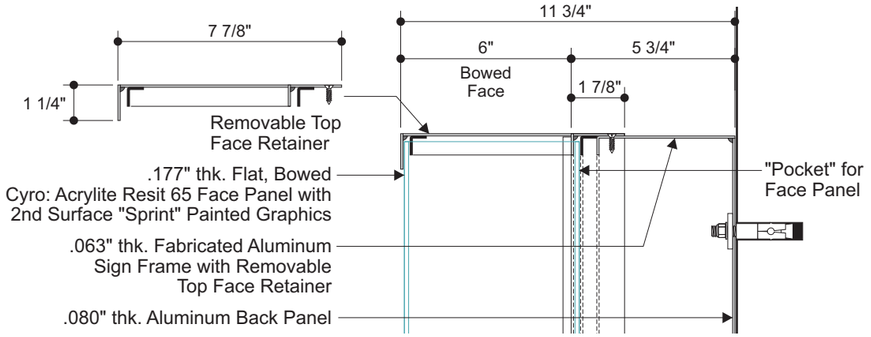


Front View
Scale: 1/2" = 1'-0"



Side View

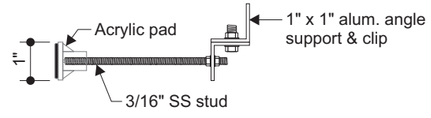
Construction Details



Side Section View
Scale: 3/16" = 1"



Top View



*** Face Support Bumpers**
Scale: NTS

1" dia. perforated acrylic pad with applied black silicone adhesive cushion and 3/16" dia. SS stud, attached to vertical rails

Acrylic face bumpers to be installed in the Black drop shadow area of the QT Logo.

Regarding Fabrication Fit & Finish of All QT Signs:

- Visible fabrication seams and welded joints are to be sanded smooth, filled and finished to QT specifications.
- Any visible fasteners are to be countersunk and have painted heads.
- Face retainers must fit flush and have even, minimal seams.
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Allen Industries — FILE NUMBER: E212503 | Listed MET E212503 | Electric Sign Complies with UL48 | GROUNDED ELECTRICAL CONNECTIONS

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Item #QT-IDB-56

Project Information

Client
QuikTrip

Location
Various

File
QT Gen4_IDB-56_102

Sales	Design	Project Manager
House	**CT**	**James Gentry**

Date / Description

01/20/25		Issue Date
01/21/25	1	Internal correction
03/05/25	2	Dimensioned J-box
	3	
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Notes

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☐ Approved ☐ Approved as Noted ☐ Revise & Resubmit

Name

Title Date

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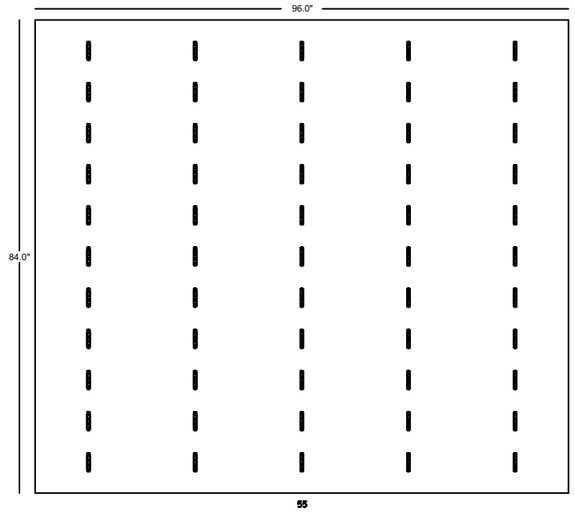
Illumination Detail



Tetra®
Tech Support
1-888-694-3533
tetradrawings@gecurrent.com

Current



Illumination	Depth	Power Supplies	Qty	Module Name	CCT	Qty	Ordering Length
Face Lit	11.000 in	GEPS24-100U-GLX	1 ea	GEPMH2471-W1X	7100K	55 ea	39.286 feet

Height	Width	Total Circuit Amps (120 VAC)	Max Load Per PS	Total Module Watts
85.0 in	96.0 in	1.100	64.00	71.50 watts

Date	Job ID
January 20, 2025	

THE GRAPHICS ABOVE ARE FOR REFERENCE ONLY and should not be used for commercial quotation or bid without validation. The material estimates for Tetra® LED Systems are based upon our engineering standards and information provided pertaining to font, letter height, can depth, face material, and any special instructions provided by the customer. Missing information will cause delays in delivery of estimates as well as affect product selection, quantities, application, and illumination. LED MODULE PLACEMENT AND QUANTITY IS AN APPROXIMATION ONLY. The sign manufacturer must verify module placement and quantity to ensure even illumination. Final material quantities for estimation purposes and construction are the responsibility of the sign OEM. All signs should be tested as complete units (including correct Tetra® power supply) before installation for acceptable color, illumination, intensity, & functionality. For detailed information refer to the applicable Tetra® product found under Signage; https://www.led.com/applications/led-signage-lighting

QT

Item #QT-IDB-56

Project Information

Client
QuikTrip

Location
Various

File
QT Gen4_IDB-56_102

Sales	Design	Project Manager
House	**CT**	**James Gentry**

Date / Description

01/20/25		Issue Date
01/21/25	1	Internal correction
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Name

Title Date

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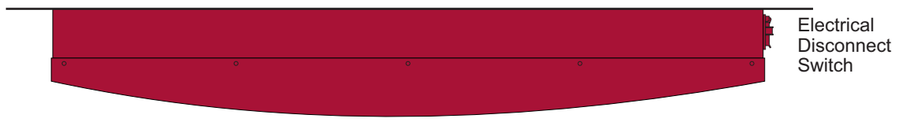
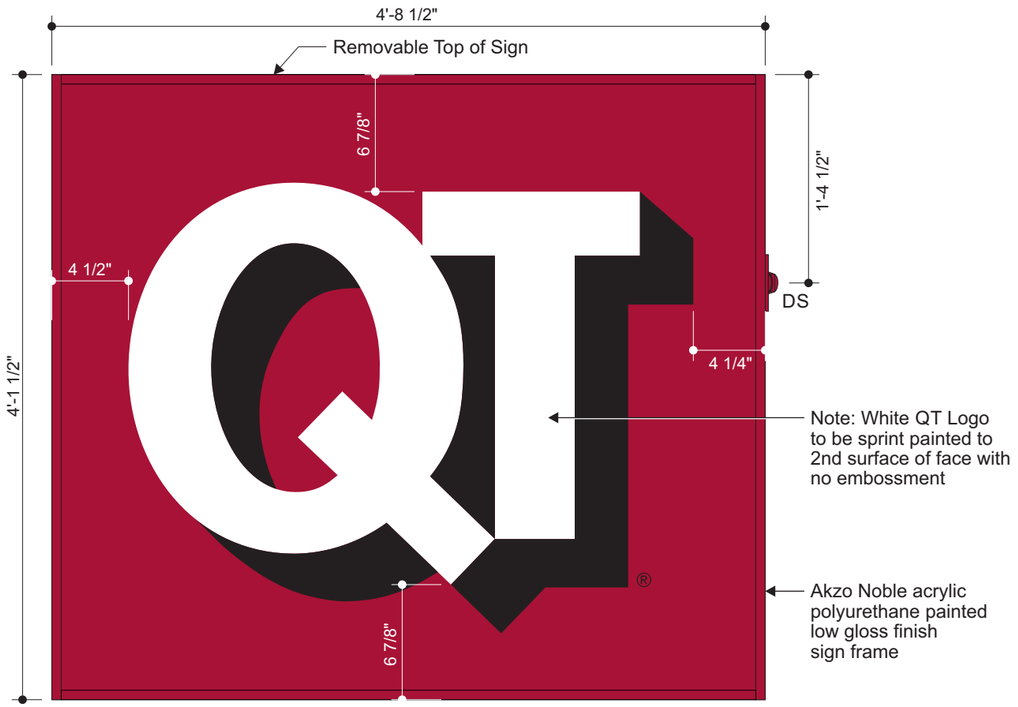
IDC-20
20 SF Building ID Sign

- Flat Bowed Face Panel and 3/4" Wide Face Retainers
- 19.42 Square Feet Sign Area

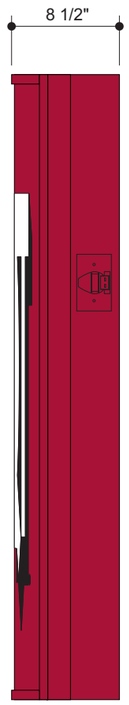


Removable Top of Sign for Access to Sign Panel, LED Modules and Attachment Hardware

Top View



Front View
Scale: 1" = 1'-0"



Side View

Color Specifications

All Paint Finishes to be Akzo Nobel

- Opaque Silver
- Translucent White
- Black - Low Gloss
- Matte White (Interior of Sign)
- Match 3M Cardinal Red #3632-53
- Match PMS 349C

Regarding Fabrication Fit & Finish of All QT Signs:

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- Any visible fasteners are to be countersunk and have painted heads.
- Face retainers must fit flush and have even, minimal seams.
- Any variation from this directive must be brought to the attention of the QT Quality Control Manager without delay.

Allen Industries
MET FILE NUMBER: E212503

Listed Electric Sign Complies with UL48
MET E212503
CSA C22.2 No.207
AI1 017510

GROUNDED ELECTRICAL CONNECTIONS

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Item #QT-IDC-20

Project Information

Client
QuikTrip

Location
Various

File
QT-IDC-20_100

Sales	Design	Project Manager
House	**CT**	**James Gentry**

Date / Description

Date		Initial
04/08/20	Issue Date	
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Notes

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Name

Title Date

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Construction Details

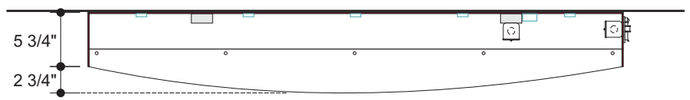
LED Specification

E

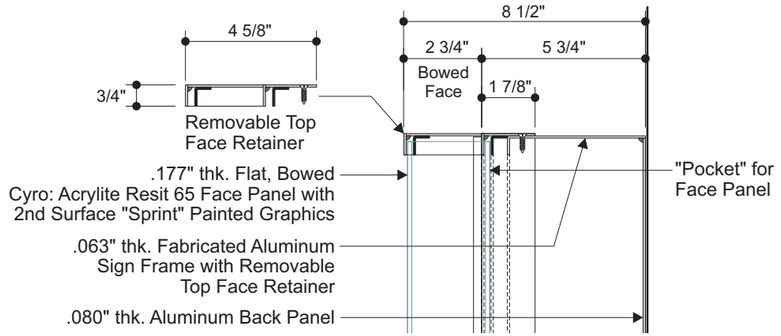
20 ea. GESS2471-2
1 ea. GEPS24-100U-NA
Total Electrical Amp Load = 1.1 Amps
One (1) 120 Volt - 20 Amp
Circuit Breaker Required for Sign



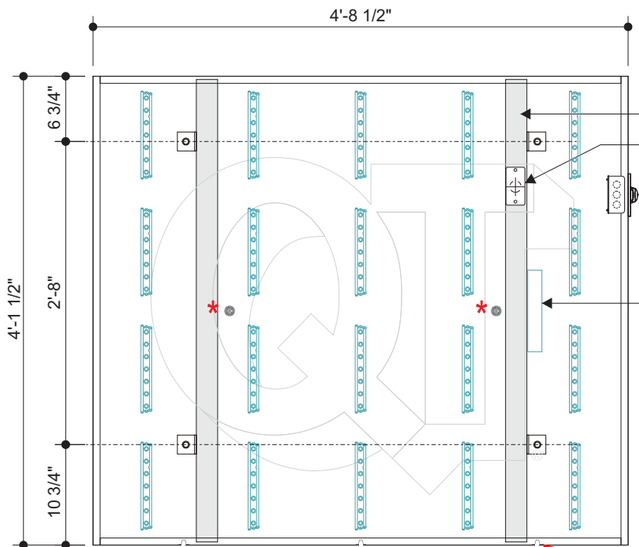
LED DETAIL
#GESS2471-2 24 VOLT SINGLE SIDED
LED Internal Illumination powered by
GE Power Supply **#GEPS24-100U-NA**
120-277 VAC 50/60 HZ
Input Current 1.1 Amp
Output Current 4.0 Amps Single Output
Note: 36 Module Max. Load per Power Supply



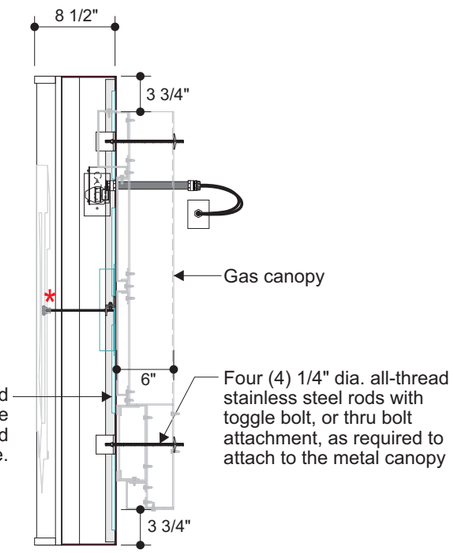
Top View



Side Section View
Scale: 3/16" = 1"



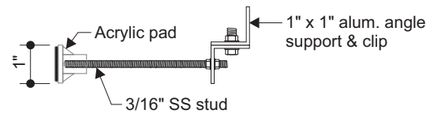
Front View
Scale: 3/4" = 1'-0"



Side View



Top View



*** Face Support Bumpers**
Scale: NTS

1" dia. perforated acrylic pad with applied black silicone adhesive cushion and 3/16" dia. SS stud, attached to vertical rails

Acrylic face bumpers to be installed in the Black drop shadow area of the QT Logo.

Regarding Fabrication Fit & Finish of All QT Signs:

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- Any visible fasteners are to be countersunk and have painted heads.
- Face retainers must fit flush and have even, minimal seams.
- Any variation from this directive must be brought to the attention of the QT Quality Control Manager without delay.

Allen Industries — FILE NUMBER: E212503 | Listed (MET) E212503 Electric Sign Complies with UL48 CSA C22.2 No.207 AI1 017510 | GROUNDED ELECTRICAL CONNECTIONS

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Item #QT-IDC-20

Project Information

Client
QuikTrip

Location
Various

File
QT-IDC-20_100

Sales	Design	Project Manager
House	**CT**	**James Gentry**

Date / Description

04/08/20 Issue Date Initial

1
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Notes

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☐ **Approved** ☐ **Approved as Noted** ☐ **Revise & Resubmit**

Name

Title Date

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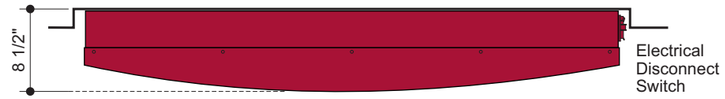
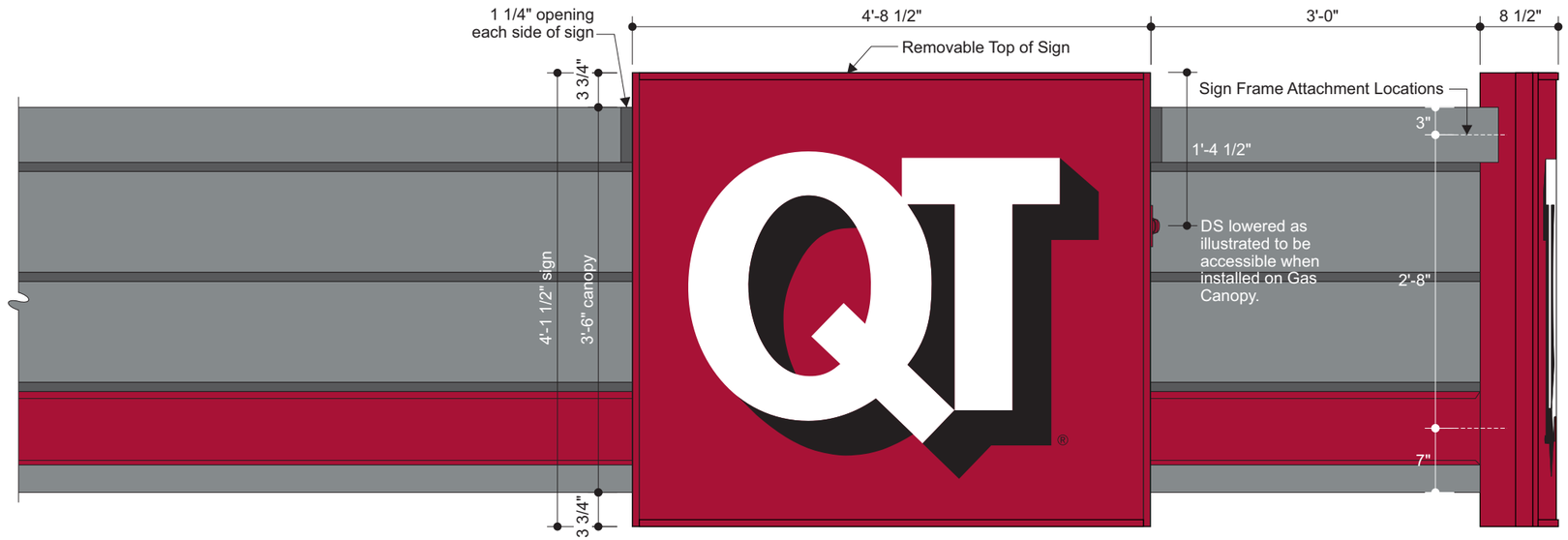
Installation Detail



Top View



Gas Canopy Elevation
Scale: 3/4" = 1'-0"

Side Elevation

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Listed Electric Sign Complies with UL48 CSA C22.2 No.207 AI1 017510 E212503

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GROUNDED ELECTRICAL CONNECTIONS

Item #QT-IDC-20

Project Information

Client
QuikTrip

Location
Various

File
QT-IDC-20_100

Sales	Design	Project Manager
House	**CT**	**James Gentry**

Date / Description

04/08/20 Issue Date Initial

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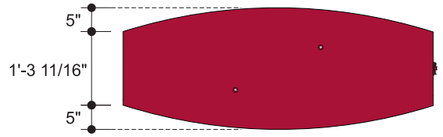
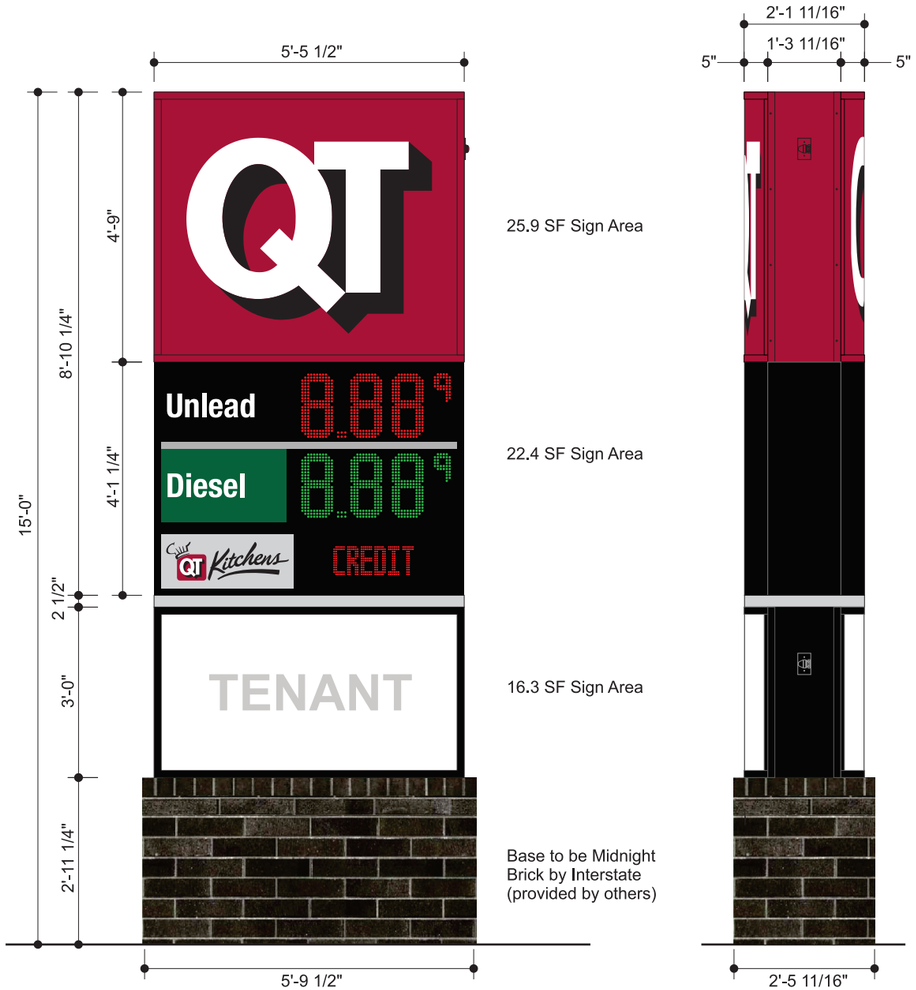


Top View



25.9 SF Sign Area

22.4 SF Sign Area

16.3 SF Sign Area

Base to be Midnight Brick by Interstate (provided by others)

Front Elevation
Scale: 3/8" = 1'-0"

Side Elevation
Scale: 3/8" = 1'-0"

MV-E2PQ-CC-65-BB
12'-0" Vertical Monument Sign

- Two (2) Product LED Gas Price Sign with Cash & Credit
- 64.6 Square Feet Sign Area
- Midnight Brick by Interstate base provided by others

Notes:
1.) Engineering provided by QT.
2.) Steel supports provided by sign installer.

Color Specifications

All Paint Finishes to be Akzo Nobel

- Opaque Silver
- Translucent White
- Black - Low Gloss
- Matte White (Interior of Sign)
- Match 3M Cardinal Red #3630-53
- Match PMS 349C

Regarding Fabrication Fit & Finish of All QT Signs:

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GROUNDED ELECTRICAL CONNECTIONS

Item #QT-MV-E2PQ-CC-65-BB

Project Information

Client
QuikTrip

Location
Store 4452

File
QT-MV-E2PQ-CC-65-BB_4452_100

Sales	Design	Project Manager
House	CT	James Gentry

Date / Description

01/08/26 Issue Date

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Notes

-

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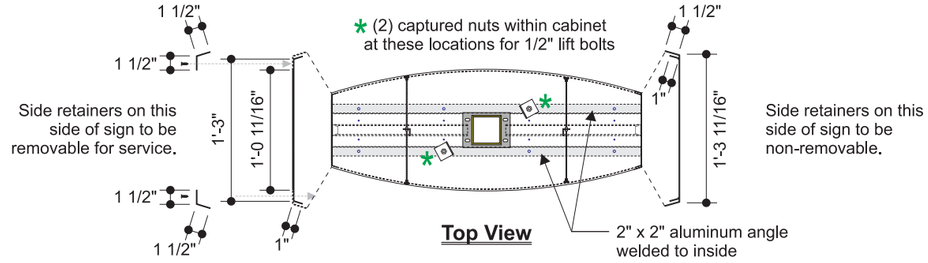
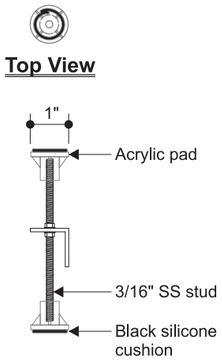
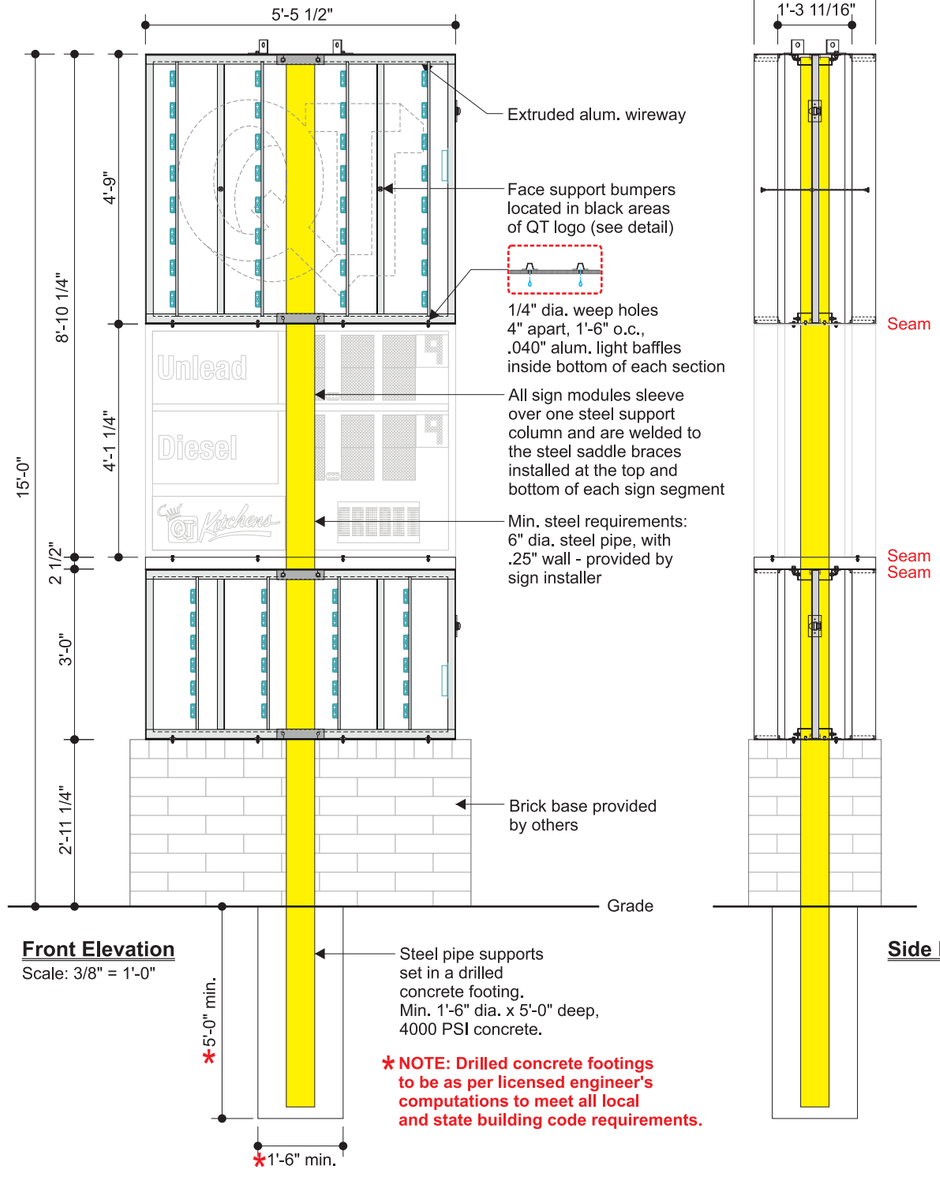


Top View



Face Support Bumpers
Scale: NTS

1" dia. perforated acrylic pad with applied black silicone adhesive cushion and 3/16" dia. SS stud, attached to vertical rails



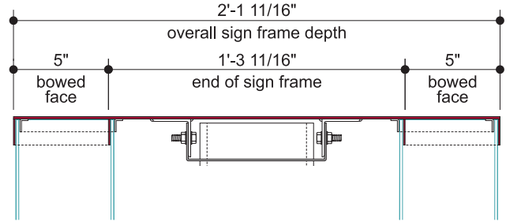
Front Elevation
Scale: 3/8" = 1'-0"

Side Elevation

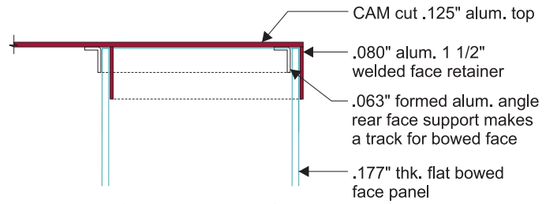
NOTE: Drilled concrete footings to be as per licensed engineer's computations to meet all local and state building code requirements.

Construction Details

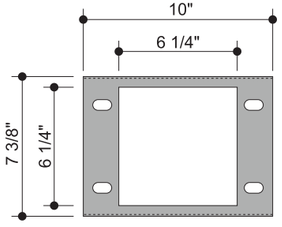
- Installation by others
- Steel should be primed and painted white for max. reflectivity
- Engineering, steel size requirements and footing specifications are obtained by QT



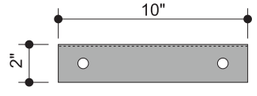
Sign Frame Detail
Scale: 1/8" = 1"



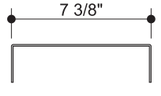
Side View Detail
Scale: 1/4" = 1"



Top View



Steel Saddle Detail
Scale: 1/8" = 1"



Side View

YELLOW INDICATES THE STEEL SUPPORT PROVIDED BY SIGN INSTALLER

Allen Industries FILE NUMBER:E212503 | Listed MET E212503 | Electric Sign Complies with UL48 CSA C22.2 No.207 | GROUNDED ELECTRICAL CONNECTIONS

THIS SIGN IS INTENDED TO BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF **ARTICLE 600 OF THE NATIONAL ELECTRICAL CODE** AND/OR OTHER APPLICABLE LOCAL CODES. THIS INCLUDES PROPER GROUNDING AND BONDING OF THE SIGN.

Item #QT-MV-E2PQ-CC-65-BB

Project Information

Client
QuikTrip

Location
Store 4452

File
QT-MV-E2PQ-CC-65-BB_4452_100

Sales	Design	Project Manager
House	**CT**	**James Gentry**

Date / Description

01/08/26 Issue Date

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Client Review Status

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Name

Title Date

Declaration

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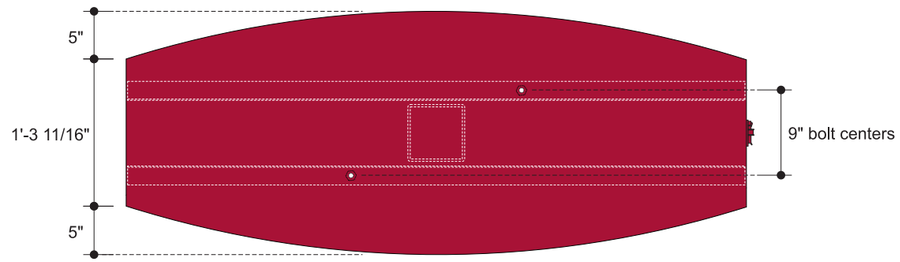
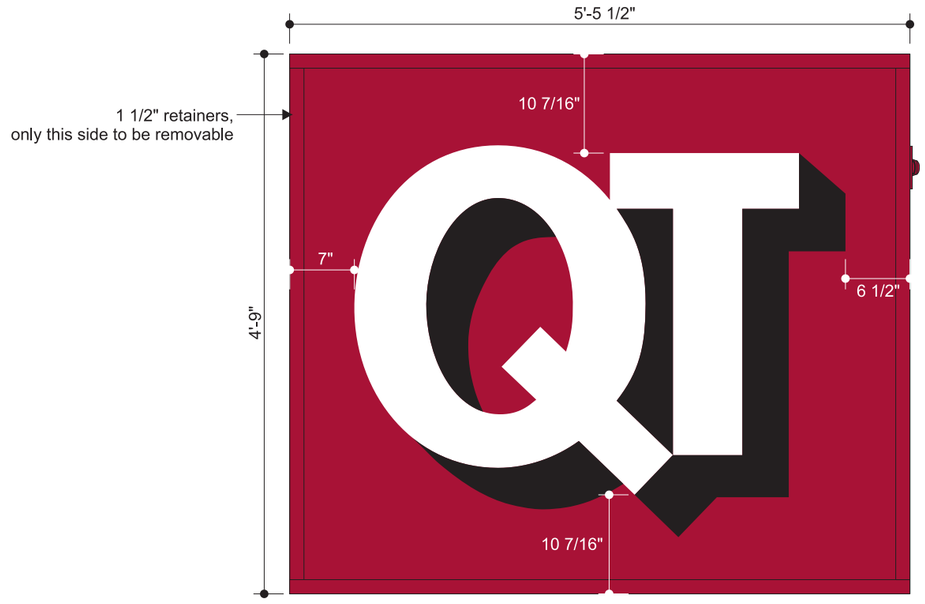
QT Logo Cabinet



Top View

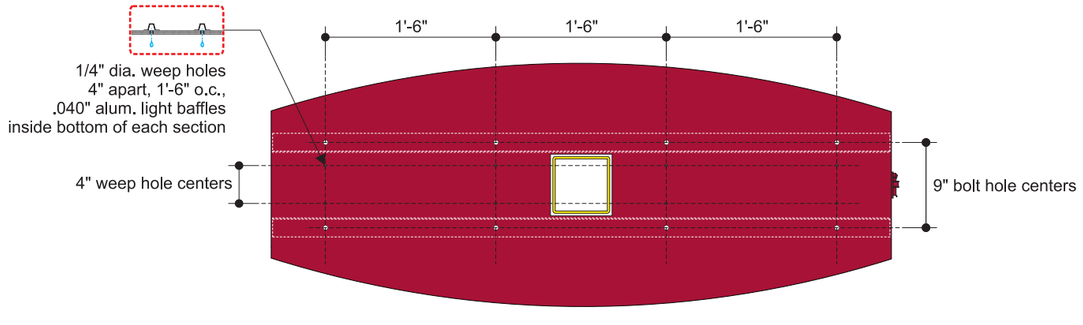


Front View - QT Cabinet

Scale: 3/4" = 1'-0"



Side View



Bottom View

All Sign Modules constructed with removable alum. face retainers and clear acrylic, .177" thickness, face panels with 2nd surface painted background colors and graphics.

Note: No Embossment

Translucent Graphics Red Background Color to Paint Match 3M Cardinal Red #3630-53 Translucent Vinyl

Color Specifications

All Paint Finishes to be Akzo Nobel

- Translucent White
- Black - Low Gloss
- Matte White (Interior of Sign)
- Match 3M Cardinal Red #3630-53

Regarding Fabrication Fit & Finish of All QT Signs:

- Visible fabrication seams and welded joints are to be sanded smooth, filled and finished to QT specifications.
- Any visible fasteners are to be countersunk and have painted heads.
- Face retainers must fit flush and have even, minimal seams.
- Any variation from this directive must be brought to the attention of the QT Quality Control Manager without delay.

Allen Industries — FILE NUMBER: E212503 — Listed (MET) E212503 — Electric Sign Complies with UL48 CSA C22.2 No.207

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GROUNDED ELECTRICAL CONNECTIONS

Item #QT-MV-E2PQ-CC-65-BB

Project Information

Client
QuikTrip

Location
Store 4452

File
QT-MV-E2PQ-CC-65-BB_4452_100

Sales	Design	Project Manager
House	**CT**	**James Gentry**

Date / Description

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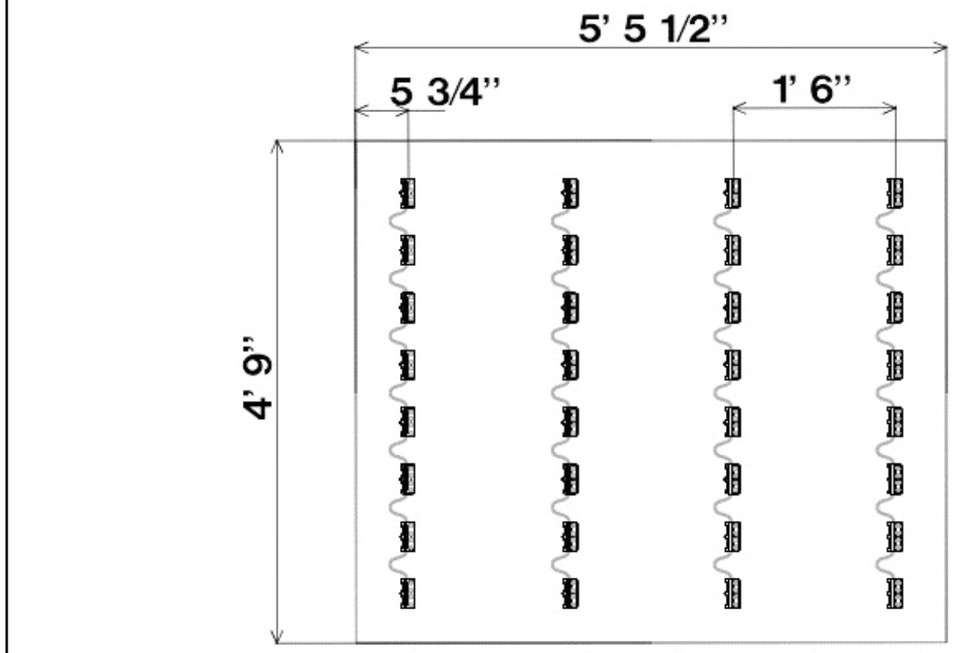
Illumination Details



Material Breakdown		
Snap DS 71K (24V)	Modules	24V P/S
COLUMN 1	8	P/S 1
COLUMN 2	8	
COLUMN 3	8	
COLUMN 4	8	

1) **THE GRAPHICS ABOVE ARE FOR REFERENCE ONLY** and should not be used for commercial quotation or bid without validation. The material estimates for Tetra® LED Systems are based upon our engineering standards and information provided pertaining to font, letter height, can depth, face material, and any special instructions provided by the customer. Missing information will cause delays in delivery of estimates as well as affect product selection, quantities, application, and illumination.
2) **LED MODULE PLACEMENT AND QUANTITY IS AN APPROXIMATION ONLY.** The sign manufacturer must verify module placement and quantity to ensure even illumination.
3) Final material quantities for estimation purposes and construction are the responsibility of the sign OEM.
4) All signs should be tested as complete units (including correct Tetra® power supply) before installation for acceptable color, illumination, intensity, & functionality.
5) For detailed information refer to the applicable Tetra® product found under Signage; https://products.gecurrent.com/led-signage-lighting

Sign Type		Illumination
DOUBLE SIDED CABINET		FACE LIT
Can Depth	LED Distance From Face	Power Supply Location
32"	N/A	SELF-CONTAINED
Special Instructions		
ESTIMATE FOR BOTH SIDES OF SIGN		
SNAP DS TO BE INSTALLED @ 6.3" OC (HO - 1.9 modules/ft)		
Notes		
QT-HR8-ELP-ME3P_103, QT-HR8-ELP-ME4P_104		

Primary Circuit (120 VAC)	SKU	Description	Name	Quantity	
1.1 Amps	93128533	GEDS71-3	Snap DS 71K (24V)	32 Modules	23 Ft
Sign Area					
51.86 Sq Ft					
Total Module Watts					
82.88 Watts		GEPS24-100U-GLX2	100W - 24V (GLX2)	1 Ea	
Total System Watts		-	-		
99.20 Watts		GEDSRL08-3	Rails (8')	4 Ea	
Energy Usage		GEDSSE-3 / GEDSFE-3	Socket / Frame Endcap	8 Ea	
1.91 Watts/Sq Ft		GEDSIC-3	Interconnector	0 Ea	
Total Lumens					
12800.00 Lumens	191600041 or 192160004		Wire Connector	20 Ea	
246.82 Lumens/Sq Ft	9409		18 AWG Supply Wire	40 Ft	
	191600041		Wire End Cap	20 Ea	

TECHNICAL SUPPORT:
888-694-3533
EMAIL: tetradrawings@gecurrent.com

Current

Drawn By: GG
Checked By: MK
Date: 9/5/22

Job Name: Quik Trip
Customer Name:

Drwg #: 096021 - 02 **Rev -**

Item #QT-MV-E2PQ-CC-65-BB

Project Information

Client
QuikTrip

Location
Store 4452

File
QT-MV-E2PQ-CC-65-BB_4452_100

Sales	Design	Project Manager
House	CT	James Gentry

Date / Description

01/08/26 Issue Date

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Allen Industries FILE NUMBER:E212503 | Listed (MET) E212503 | Electric Sign Complies with UL48 CSA C22.2 No.207

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GROUNDED ELECTRICAL CONNECTIONS

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Sunshine Pricer

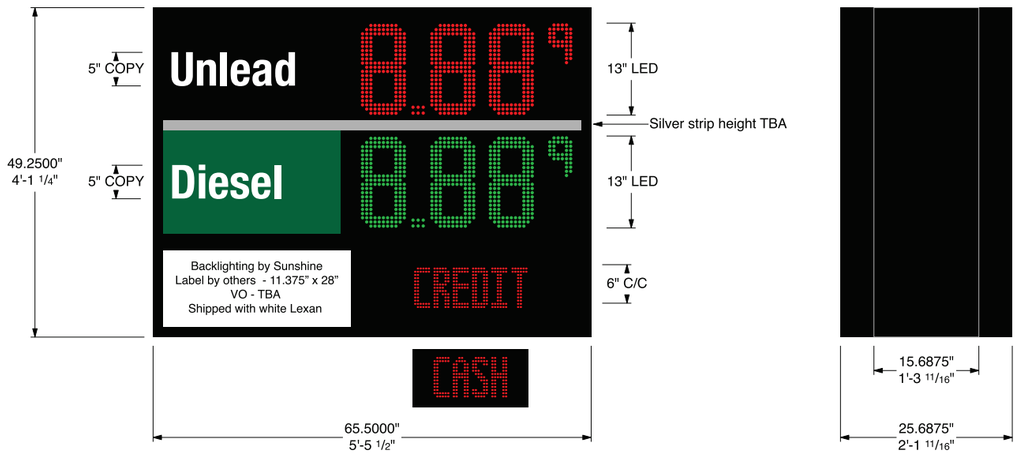
SUNSHINE
316 S. 6th Street
St. Joseph, MO 64501
800. 821. 9013

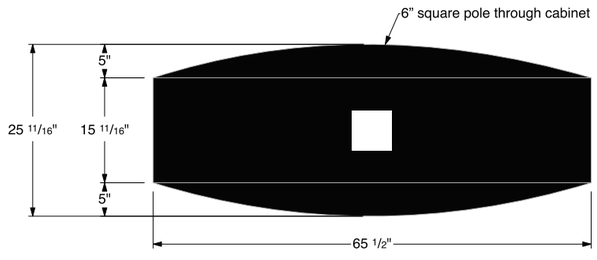
Client	Install Location	Sales
QuikTrip Corporation		Scottie Burnham 816-387-4202 scottie@sunshine.us.com

Client Approval: Date:

Date: Aug 1, 2022 Job #:

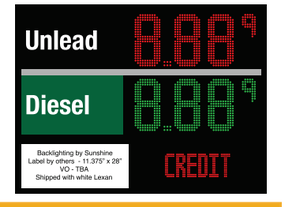
Revisions: Date:





* Final layout to be determined by build specs

* Same layout both sides



Cabinet Specs		Label Specs		Other
Digit Size & Style:	13" LED	LED Backlit Label Panel -		* Label and cabinet colors for representation only
Digit Color:	Red/Green	Label Font:	Helvetica Bold Cond	* 22.4 sq ft
Overall Cabinet Size:	49.25"h x 65.5"w x 25.6875"d	Label Panel Color:	3M 3632-22 Black	* 4.15 total AC amps including both sides
Cabinet Color:	Black		3M 3632-26 Green	* Cabinet(s) will have lifting/install eyebolt(s)
Single or Double Face:	Double	Label Type Color:	White	* Electrical to be knocked out and ran at installer's preference
Build type:	New cabinet			

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* Actual LED size and configuration may vary

c UL us LISTED
UL File Number: E340294
CCN: UXYT

ETL LISTED
CONFORMS TO UL STD 48
UL STD 1433
CERTIFIED TO CAN/CSA STD C22.2 NO. 207
102482

Allen Industries
FILE NUMBER: E212503
Listed MET E212503
Electric Sign Complies with UL48
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GROUNDED ELECTRICAL CONNECTIONS

Item #QT-MV-E2PQ-CC-65-BB

Project Information

Client
QuikTrip

Location
Store 4452

File
QT-MV-E2PQ-CC-65-BB_4452_100

Sales	Design	Project Manager
House	CT	James Gentry

Date / Description

01/08/26 Issue Date

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Notes

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Client Review Status

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Name

Title Date

Declaration

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QT Kitchens Insert



Front View - QT Kitchens Insert
Scale: 3/16" = 1"

.177" thick clear acrylic face panels with 2nd surface painted background colors and graphics.

Color Specifications

All Paint Finishes to be Akzo Nobel

- Opaque Silver
- Translucent White
- 3M Day/Night Vinyl #3635-0171
- Matte White (Interior of Sign)
- 3M Cardinal Red #3630-53 Translucent Vinyl

Regarding Fabrication Fit & Finish of All QT Signs:

- Visible fabrication seams and welded joints are to be sanded smooth, filled and finished to QT specifications.
- Any visible fasteners are to be countersunk and have painted heads.
- Face retainers must fit flush and have even, minimal seams.
- Any variation from this directive must be brought to the attention of the QT Quality Control Manager without delay.

Item #QT-MV-E2PQ-CC-65-BB

Project Information

Client
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Location
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House	**CT**	**James Gentry**

Date / Description

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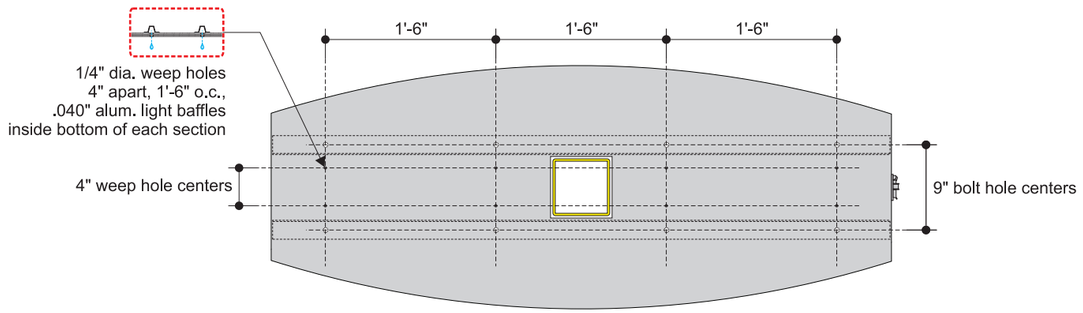
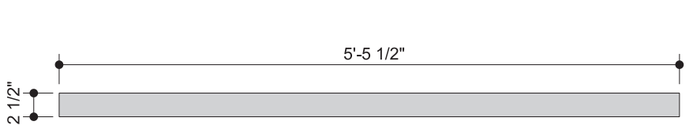
Silver Divider

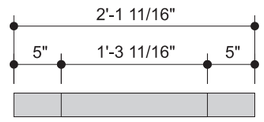


Top View

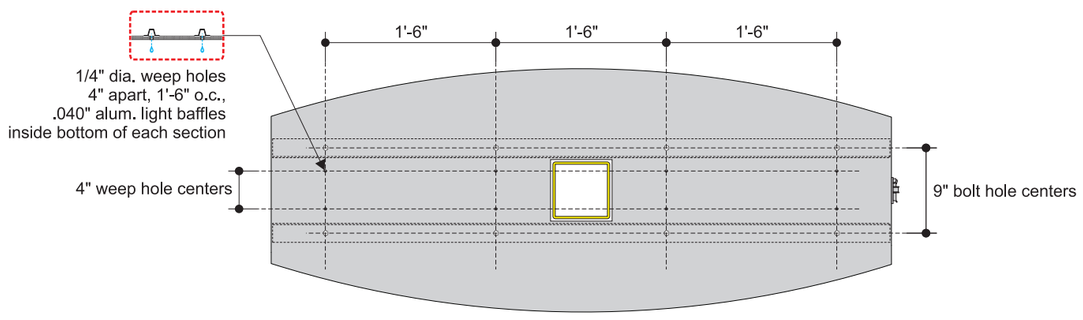


Front View - Silver Divider

Scale: 3/4" = 1'-0"



Side View



Bottom View

Color Specifications

All Paint Finishes to be Akzo Nobel

Opaque Silver

Regarding Fabrication Fit & Finish of All QT Signs:

- Visible fabrication seams and welded joints are to be sanded smooth, filled and finished to QT specifications.
- Any visible fasteners are to be countersunk and have painted heads.
- Face retainers must fit flush and have even, minimal seams.
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Item #QT-MV-E2PQ-CC-65-BB

Project Information

Client
QuikTrip

Location
Store 4452

File
QT-MV-E2PQ-CC-65-BB_4452_100

Sales	Design	Project Manager
House	**CT**	**James Gentry**

Date / Description

01/08/26 Issue Date

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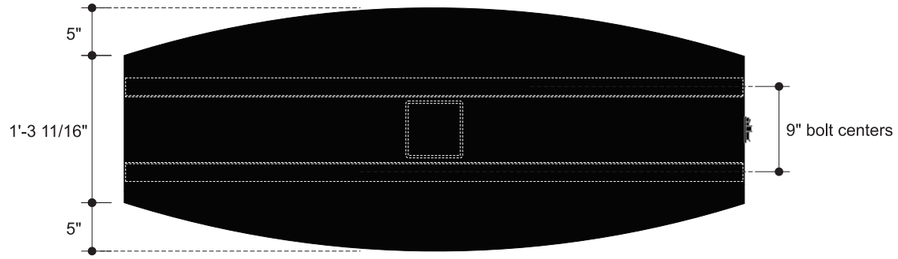
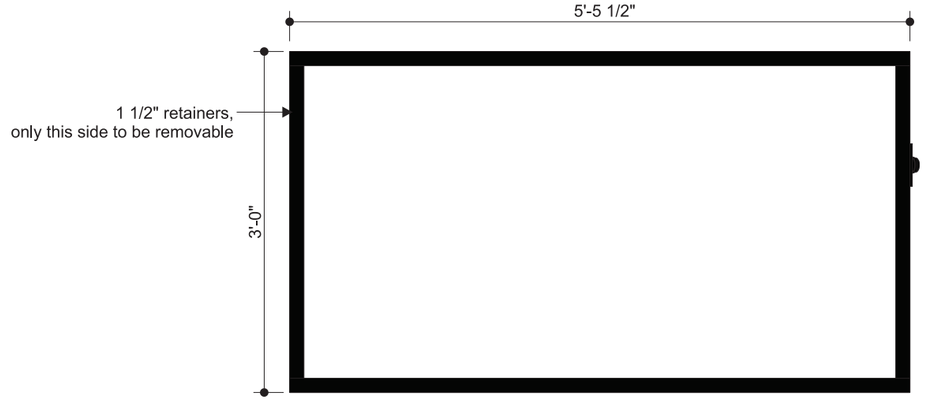
Tenant Cabinet

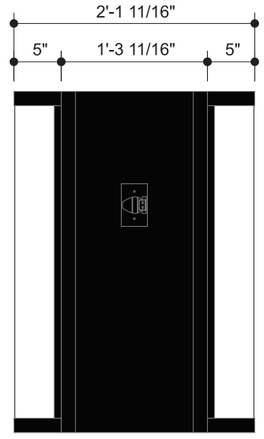


Top View

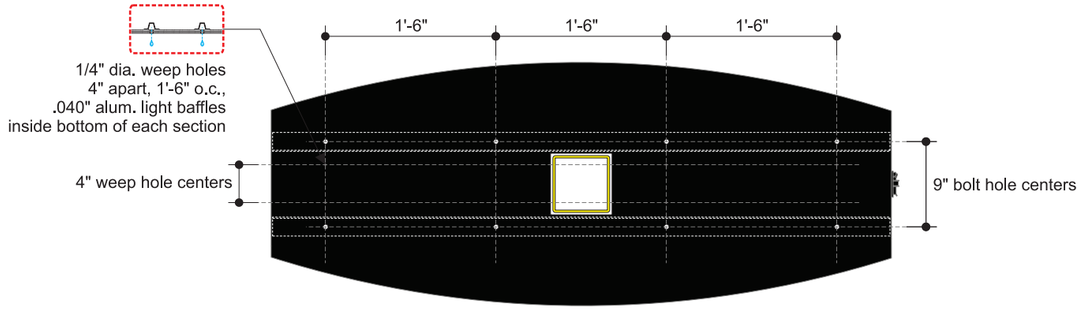


Front View - Tenant Cabinet

Scale: 3/4" = 1'-0"



Side View



Bottom View

All Sign Modules constructed with removable alum. face retainers and clear acrylic, .177" thickness, face panels with 2nd surface painted background colors and graphics.

Note: No Embossment

Color Specifications

All Paint Finishes to be Akzo Nobel

- Translucent White
- Black - Low Gloss
- Matte White (Interior of Sign)

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Allen Industries — FILE NUMBER:E212503 — Listed MET E212503 — Electric Sign Complies with UL48 CSA C22.2 No.207

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GROUNDED ELECTRICAL CONNECTIONS

Item #QT-MV-E2PQ-CC-65-BB

Project Information

Client
QuikTrip

Location
Store 4452

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Sales	Design	Project Manager
House	**CT**	**James Gentry**

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Illumination Details

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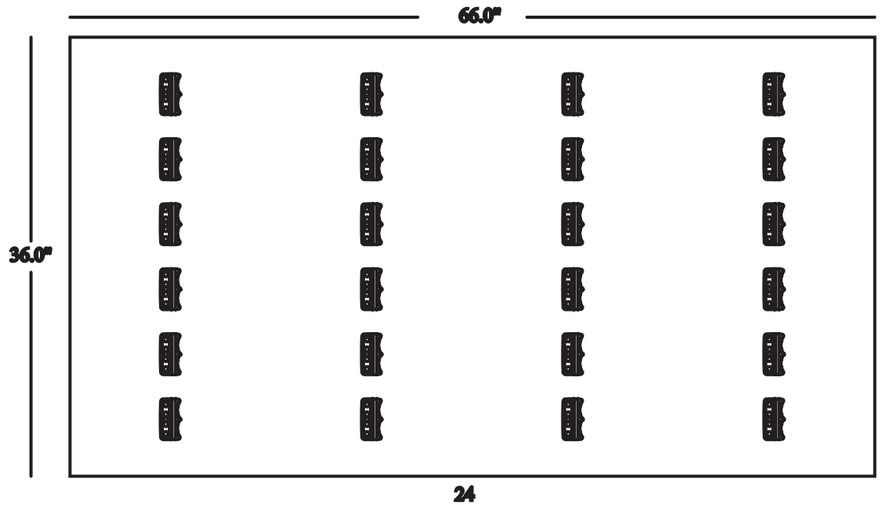
Current



Illumination	Depth	Power Supplies	Qty	Module Name	CCT	Qty	Ordering Length
Face Lit	18.00 in	GEPS24-100U-TT	1 ea	GEDS71-3	7100K	24 ea	17.15 feet

Height	Width	Total Circuit Amps (120 VAC)	Max Load Per PS	Total Module Watts
36.00 in	66.00 in	1.10	33	62.16 watts

Date
January 08, 2026

Job ID

THE GRAPHICS ABOVE ARE FOR REFERENCE ONLY and should not be used for commercial quotation or bid without validation. The material estimates for Tetra® LED Systems are based upon our engineering standards and information provided pertaining to font, letter height, can depth, face material, and any special instructions provided by the customer. Missing information will cause delays in delivery of estimates as well as affect product selection, quantities, application, and illumination. LED MODULE PLACEMENT AND QUANTITY IS AN APPROXIMATION ONLY. The sign manufacturer must verify module placement and quantity to ensure even illumination. Final material quantities for estimation purposes and construction are the responsibility of the sign OEM. All signs should be tested as complete units (including correct Tetra® power supply) before installation for acceptable color, illumination, intensity, & functionality. For detailed information refer to the applicable Tetra® product found under Signage; https://www.led.com/applications/led-signage-lighting

Item #QT-MV-E2PQ-CC-65-BB

Project Information

Client
QuikTrip

Location
Store 4452

File
QT-MV-E2PQ-CC-65-BB_4452_100

Sales	Design	Project Manager
House	CT	James Gentry

Date / Description

01/08/26 Issue Date

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Name

Title Date

Declaration

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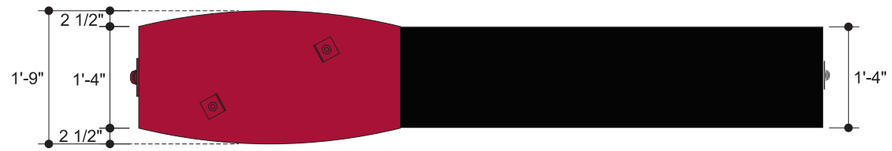
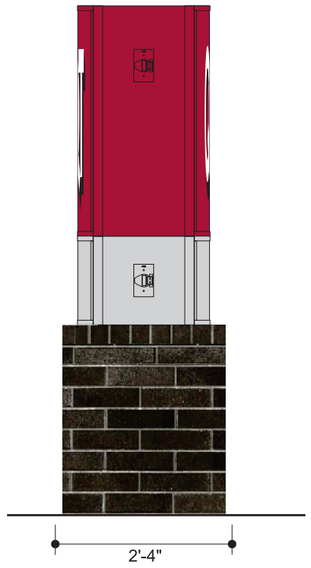
MH-E2PGQ-CC-38-BB
Horizontal Monument Sign

- Two (2) Product LED Gas Price Sign
- 38.1 Square Feet Sign Area
- Brick base by others

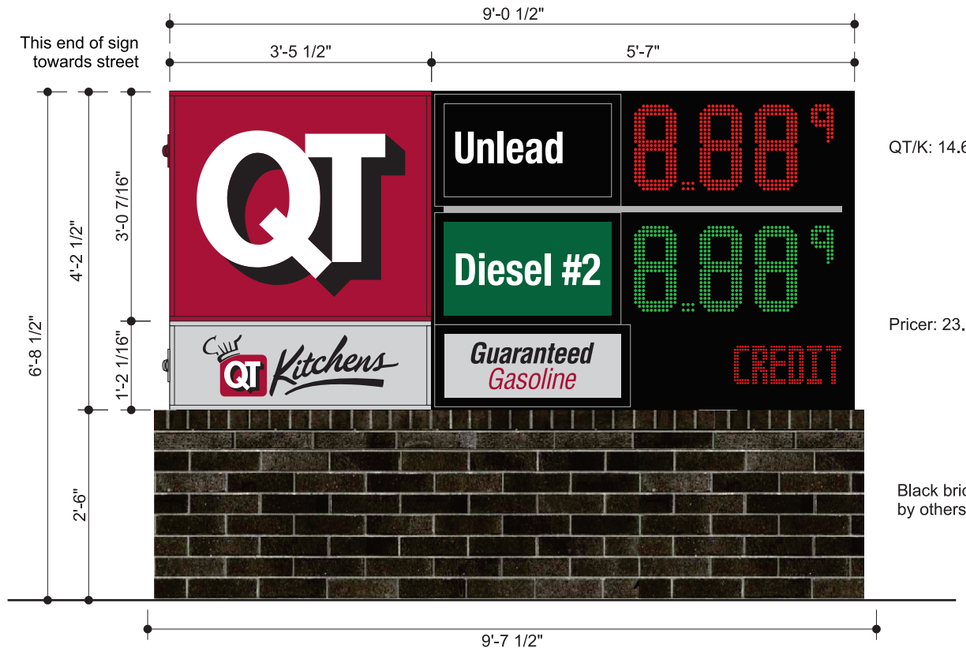
Notes:
1.) Engineering provided by QT.
2.) Steel supports provided by sign installer.



Top View



Side Elevation

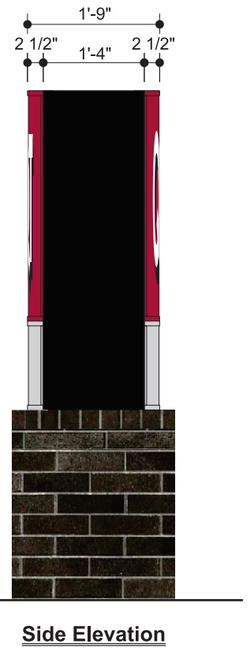


Front Elevation
Scale: 1/2" = 1'-0"

QT/K: 14.6 SF Sign Area

Pricer: 23.5 SF Sign Area

Black brick base by others



Side Elevation

Color Specifications

All Paint Finishes to be Akzo Nobel

- Opaque Silver
- Translucent White
- Black - Low Gloss
- Matte White (Interior of Sign)
- Match 3M Cardinal Red #3632-53
- Match PMS 349C

Regarding Fabrication Fit & Finish of All QT Signs:

- Visible fabrication seams and welded joints are to be sanded smooth, filled and finished to QT specifications.
- Any visible fasteners are to be countersunk and have painted heads.
- Face retainers must fit flush and have even, minimal seams.
- Any variation from this directive must be brought to the attention of the QT Quality Control Manager without delay.

Allen Industries | FILE NUMBER: E212503 | Listed MET E212503 | Electric Sign Complies with UL48 CSA C22.2 No.207

THIS SIGN IS INTENDED TO BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF **ARTICLE 600 OF THE NATIONAL ELECTRICAL CODE** AND/OR OTHER APPLICABLE LOCAL CODES. THIS INCLUDES PROPER GROUNDING AND BONDING OF THE SIGN.

GROUNDED ELECTRICAL CONNECTIONS

Item #QT-MH-E2PGQ-CC-38-BB

Project Information

Client
QuikTrip

Location
Store 4452

File
QT-MH-E2PGQ-CC-38-BB_4452_100

Sales	Design	Project Manager
House	CT	James Gentry

Date / Description

01/08/26 Issue Date

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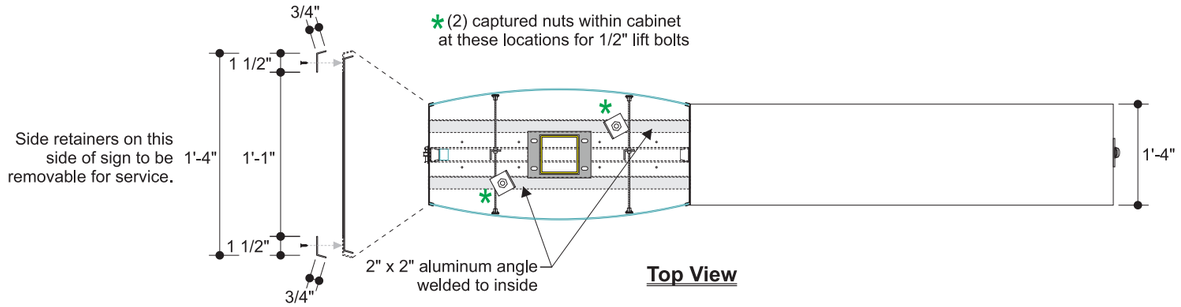
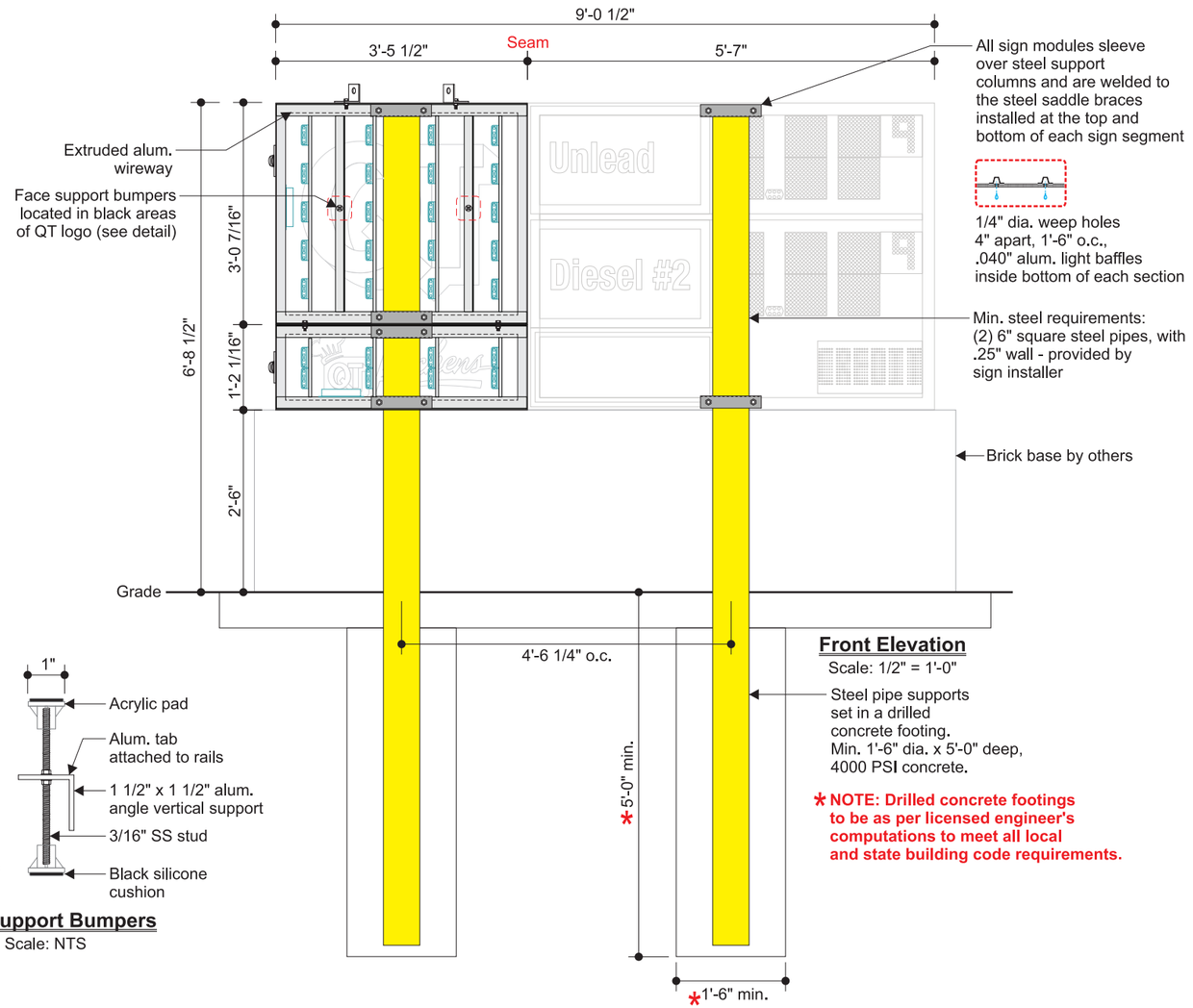


Top View



Front Elevation
Scale: 1/2" = 1'-0"

Steel pipe supports set in a drilled concrete footing. Min. 1'-6" dia. x 5'-0" deep, 4000 PSI concrete.

***NOTE: Drilled concrete footings to be as per licensed engineer's computations to meet all local and state building code requirements.**

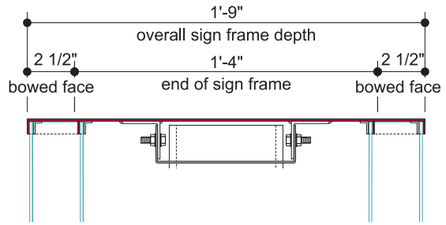
Top View

1" dia. perforated acrylic pad with applied black silicone adhesive cushion and 3/16" dia. SS stud, attached to vertical LED rails

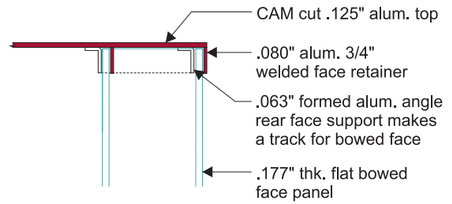
Face Support Bumpers
Scale: NTS

Construction Details

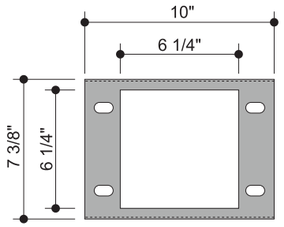
- Installation by others
- Steel should be primed and painted white for max. reflectivity
- Engineering, steel size requirements and footing specifications are obtained by QT



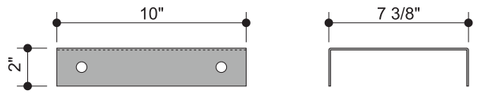
Sign Frame Detail
Scale: 1/8" = 1"



Side View Detail
Scale: 1/4" = 1"



Top View



Steel Saddle Detail
Scale: 1/8" = 1"

Side View

YELLOW INDICATES THE STEEL SUPPORT PROVIDED BY SIGN INSTALLER

Allen Industries | Listed (MET) E212503 | Electric Sign Complies with UL48 CSA C22.2 No.207 | FILE NUMBER: E212503

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GROUNDED ELECTRICAL CONNECTIONS

Item #QT-MH-E2PGQ-CC-38-BB

Project Information

Client
QuikTrip

Location
Store 4452

File
QT-MH-E2PGQ-CC-38-BB_4452_100

Sales	Design	Project Manager
House	CT	James Gentry

Date / Description

01/08/26 Issue Date

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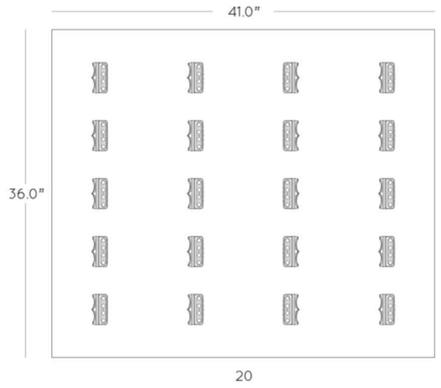
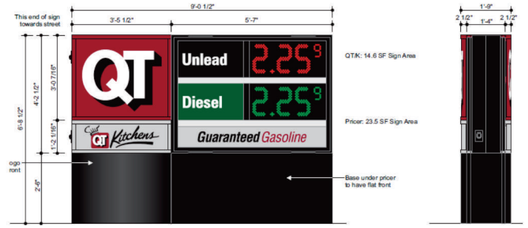
Illumination Details





Material Breakdown		
Snap DS 71K (24V)	**Modules**	**24V P/S**
QUIK TRIP	20	
QT	8	P/S 1-2

DIMMABLE POWER SUPPLY	5 YEAR WARRANTY POWER SUPPLY	5 YEAR WARRANTY POWER SUPPLY	10 YEAR WARRANTY POWER SUPPLY
GEPS24D-100U-NA	Sku# 93137579 - GEPS24-100U-GLX2	Sku# 95054945 - GEPS24LT-100U-NA	Sku# 93137578 - GEPS24-100U-TT

1) **THE GRAPHICS ABOVE ARE FOR REFERENCE ONLY** and should not be used for commercial quotation or bid without validation. The material estimates for Tetra® LED Systems are based upon our engineering standards and information provided pertaining to font, letter height, can depth, face material, and any special instructions provided by the customer. Missing information will cause delays in delivery of estimates as well as affect product selection, quantities, application, and illumination.
2) **LED MODULE PLACEMENT AND QUANTITY IS AN APPROXIMATION ONLY.** The sign manufacturer must verify module placement and quantity to ensure even illumination.
3) Final material quantities for estimation purposes and construction are the responsibility of the sign OEM.
4) All signs should be tested as complete units (including correct Tetra® power supply) before installation for acceptable color, illumination, intensity, & functionality.
5) For detailed information refer to the applicable Tetra® product found under Signage; https://products.gecurrent.com/led-signage-lighting

TECHNICAL SUPPORT:
888-694-3533
EMAIL: tetradrawings@gecurrent.com

Sign Type		Illumination	Primary Circuit (120 VAC)	SKU	Description	Name	Quantity	
DOUBLE SIDED CABINET		FACE LIT	2.2 Amps	93128533	GEDS71-3	Snap DS 71K (24V)	28 Modules	
Can Depth	LED Distance From Face	Power Supply Location	Sign Area					
21"	N/A	SELF-CONTAINED	41.40 Sq Ft					
Special Instructions			Total Module Watts					
SNAP DS TO BE INSTALLED @ 8" OC (Standard - 1.5 modules/ft)			93.24 Watts	SEE OPTIONS ABOVE	100W - 24V DRIVER	100W - 24V DRIVER	2 Ea	
ESTIMATE FOR BOTH SIDES OF SIGN				-	-	-		
					GEDSRL08-3	Rails (8')		
Notes					GEDSSE-3 / GEDSFE-3	Socket / Frame Endcap		
					GEDSIC-3	Interconnector		
			Total Lumens					
			14400.00 Lumens	191600041		Wire Connector		
			347.83 Lumens/Sq Ft	9409		18 AWG Supply Wire		

Current

Drawn By: CMK
Checked By: CMK
Date: 12/12/24

Job Name: QUIK TRIP
Customer Name:

Drwg #: 106563 - 02 **Rev -**

Item #QT-MH-E2PGQ-CC-38-BB

Project Information

Client
QuikTrip

Location
Store 4452

File
QT-MH-E2PGQ-CC-38-BB_4452_100

Sales	Design	Project Manager
House	**CT**	**James Gentry**

Date / Description

01/08/26 Issue Date

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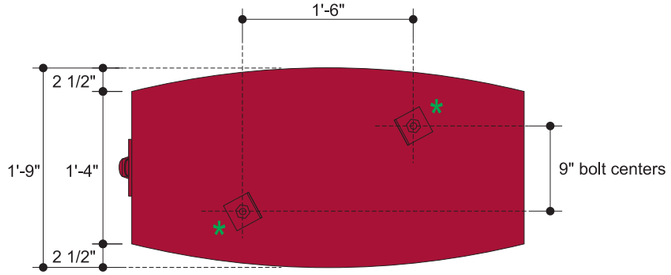
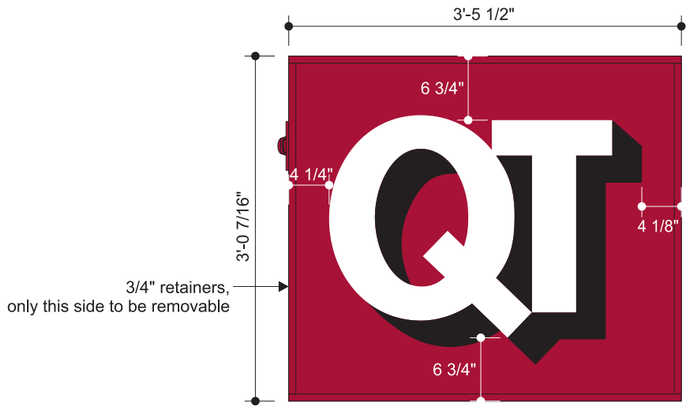
QT Logo Cabinet



Top View

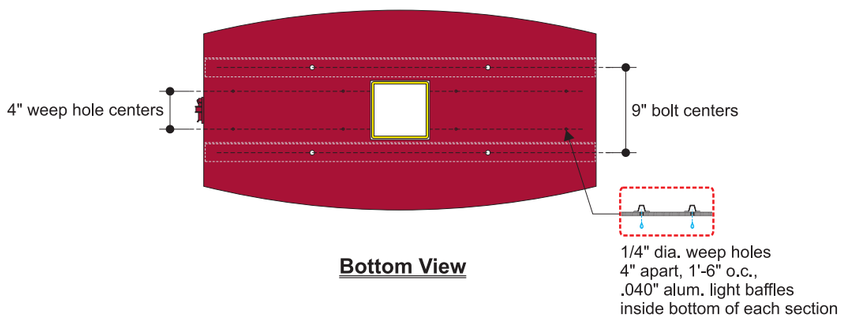


Front View - QT Cabinet

Scale: 3/4" = 1'-0"



Side View



Bottom View

All Sign Modules constructed with removable alum. face retainers and clear acrylic, .177" thickness, face panels with 2nd surface painted background colors and graphics.

Note: No Embossment

Translucent Graphics Red Background Color to Paint Match 3M Cardinal Red #3630-53 Translucent Vinyl

Color Specifications

All Paint Finishes to be Akzo Nobel

- Translucent White
- Black - Low Gloss
- Matte White (Interior of Sign)
- Match 3M Cardinal Red #3630-53

Regarding Fabrication Fit & Finish of All QT Signs:

- Visible fabrication seams and welded joints are to be sanded smooth, filled and finished to QT specifications.
- Any visible fasteners are to be countersunk and have painted heads.
- Face retainers must fit flush and have even, minimal seams.
- Any variation from this directive must be brought to the attention of the QT Quality Control Manager without delay.

Allen Industries — FILE NUMBER: E212503 | Listed MET E212503 | Electric Sign Complies with UL48

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GROUNDED ELECTRICAL CONNECTIONS

Item #QT-MH-E2PGQ-CC-38-BB

Project Information

Client
QuikTrip

Location
Store 4452

File
QT-MH-E2PGQ-CC-38-BB_4452_100

Sales	Design	Project Manager
House	CT	James Gentry

Date / Description

01/08/26 Issue Date

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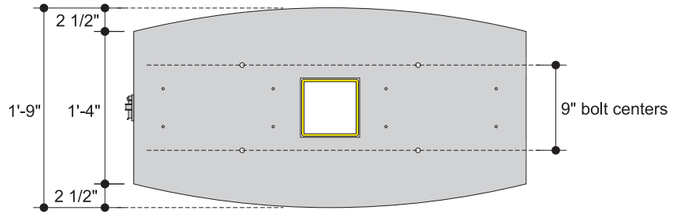
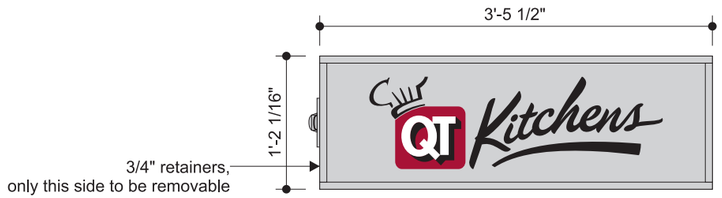
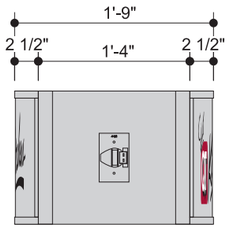
QT Kitchens Cabinet



Top View



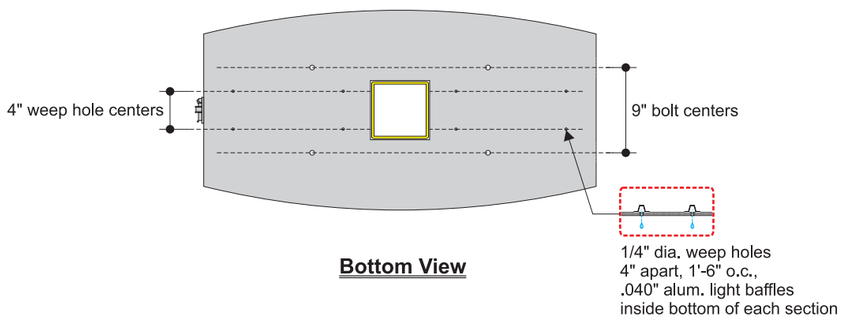
Front View - QT Kitchens Cabinet
Scale: 3/4" = 1'-0"



Side View

All Sign Modules constructed with removable alum. face retainers and clear acrylic, .177" thickness, face panels with 2nd surface painted background colors and graphics.

Note: No Embossment



Bottom View

Color Specifications

All Paint Finishes to be Akzo Nobel

- Opaque Silver
- Translucent White
- 3M Day/Night Vinyl #3635-0171 (Day / Night)
- Matte White (Interior of Sign)
- 3M Cardinal Red #3630-53 Translucent Vinyl

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GROUNDED ELECTRICAL CONNECTIONS

Item #QT-MH-E2PGQ-CC-38-BB

Project Information

Client
QuikTrip

Location
Store 4452

File
QT-MH-E2PGQ-CC-38-BB_4452_100

Sales	Design	Project Manager
House	**CT**	**James Gentry**

Date / Description

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Sunshine Pricer

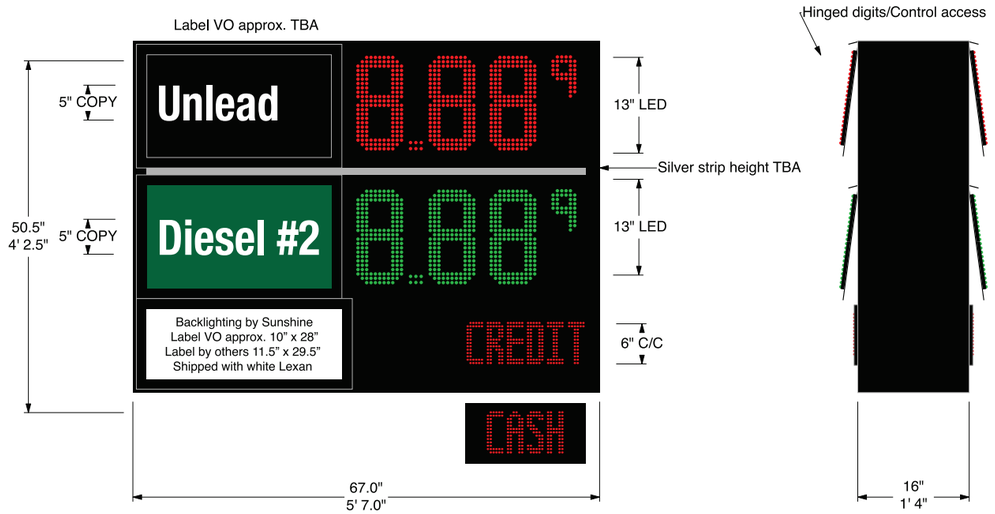
SUNSHINE
316 S. 6th Street
St. Joseph, MO 64501
800. 821. 9013

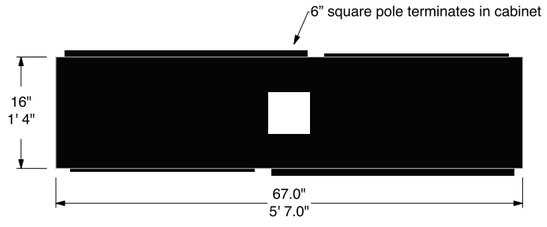
Client	Install Location	Sales
QuikTrip Corporation	TBA	Scottie Burnham 816-387-4202 scottie@sunshine.us.com

Client Approval: Date:

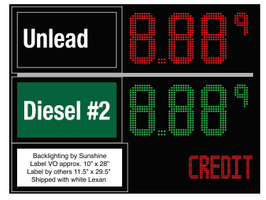
Date: Aug 19, 2022 Job #:

Revisions:	Date:





* Same layout both sides



Cabinet Specs		Label Specs		Other
Digit Size & Style:	13" LED	LED Backlit Label Panel -		* Label and cabinet colors for representation only
Digit Color:	Red/Green	Label Font:	Helvetica Bold Cond	* 23.5 sq ft
Overall Cabinet Size:	4'2.5"h x 5'7"w x 16"d	Label Panel Color:	3M 3632-22 Black	* 4.15 total AC amps including both sides
Cabinet Color:	Black		3M 3632-26 Green	* Cabinet(s) will have lifting/install eyebolt(s)
Single or Double Face:	Double	Label Type Color:	White	* Electrical to be knocked out and ran at installer's preference
Build type:	New cabinet			

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* Actual LED size and configuration may vary

c UL us LISTED
UL File Number: E340294
CCN: UXYT

c ETL us 102482
ETL LISTED
CONFORMS TO UL STD 48
UL STD 1433
CERTIFIED TO CAN/CSA STD C22.2 NO. 207

Item #QT-MH-E2PGQ-CC-38-BB

Project Information

Client
QuikTrip

Location
Store 4452

File
QT-MH-E2PGQ-CC-38-BB_4452_100

Sales	Design	Project Manager
House	CT	James Gentry

Date / Description

01/08/26 Issue Date
1
2
3
4
5
6
7
8
9

Notes

-

Client Review Status

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☐ Approved ☐ Approved as Noted ☐ Revise & Resubmit

Name

Title Date

Declaration

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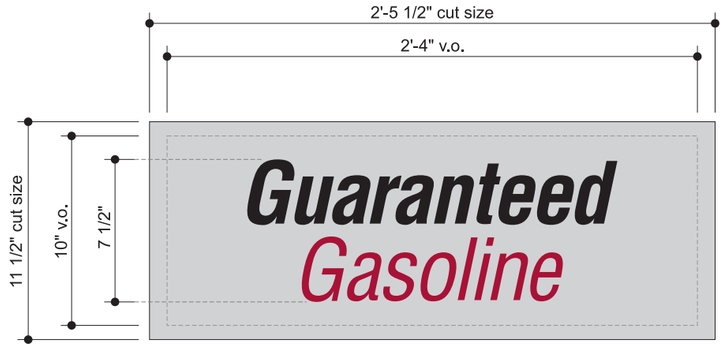
GG Insert



Front View - GG Insert
Scale: 1/8" = 1"

.177" thick clear acrylic face panels with 2nd surface painted background colors and graphics.

Color Specifications

All Paint Finishes to be Akzo Nobel

- Opaque Silver
- Translucent White
- 3M Day/Night Vinyl #3635-0171 (Day / Night)
- Matte White (Interior of Sign)
- 3M Cardinal Red #3630-53 Translucent Vinyl

Regarding Fabrication Fit & Finish of All QT Signs:

- Visible fabrication seams and welded joints are to be sanded smooth, filled and finished to QT specifications.
- Any visible fasteners are to be countersunk and have painted heads.
- Face retainers must fit flush and have even, minimal seams.
- Any variation from this directive must be brought to the attention of the QT Quality Control Manager without delay.

Item #QT-MH-E2PGQ-CC-38-BB

Project Information

Client
QuikTrip

Location
Store 4452

File
QT-MH-E2PGQ-CC-38-BB_4452_100

Sales	Design	Project Manager
House	**CT**	**James Gentry**

Date / Description

01/08/26 Issue Date

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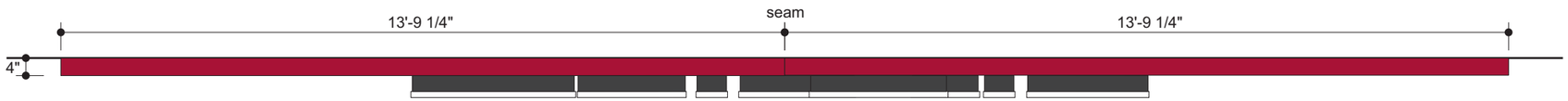
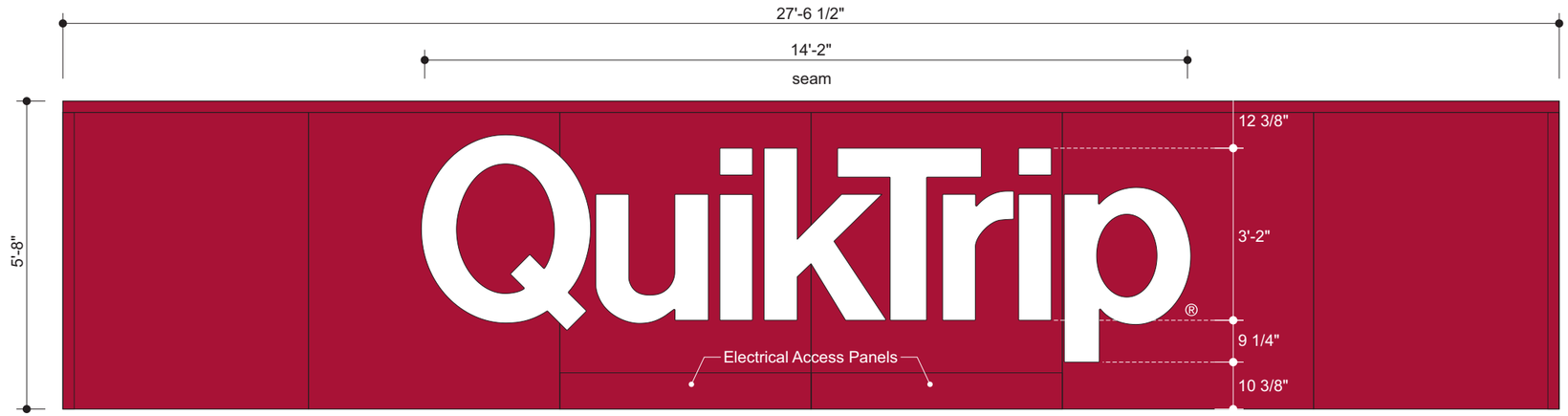


Top View
Scale: 3/8" = 1'-0"



Front Elevation
Scale: 3/8"=1'-0"

General Specifications

Backer Panel: custom fabricated aluminum tube frame with .080" thk. aluminum faces

Letter Faces: .177" translucent White Evonik Cyro SG-7328 formed face

Letter Returns: 5" deep, .063" welded aluminum

Illumination: White LEDs as required by manufacturer with remote power supplies

Wall Type: TBD

Install: Flush to wall as per detail

Quantity: TBD

APPROVED

3/27/25

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- Any variation from this directive must be brought to the attention of the QT Quality Control Manager without delay.

Paint Specifications

Akzo Noble to match 3M Cardinal Red #3630-53

Akzo Nobel to match SW 7069 Iron Ore

All paint finishes to be Satin unless otherwise specified

Allen Industries FILE NUMBER: E212503 | Listed MET E212503 Electric Sign Complies with UL48 | THIS SIGN IS INTENDED TO BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF **ARTICLE 600 OF THE NATIONAL ELECTRICAL CODE** AND/OR OTHER APPLICABLE LOCAL CODES. THIS INCLUDES PROPER GROUNDING AND BONDING OF THE SIGN. | GROUNDED ELECTRICAL CONNECTIONS

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Client: **QuikTrip**

Address: **Various**

Date: **01/17/25** | Estimate #: **E21326** | Job #: **-** | Page #: **1 of 4**

File Name: **QT Gen4 - CL60_101**

Sales: **House** | Design: **CT** | PM: **JG**

#	Date	Description	Initial
1	03/09/25	Revised size per customer	CT
2	03/19/25	Revised size & electrical notes per customer	CT
3	-	-	-
4	-	-	-
5	-	-	-
6	-	-	-

Client Review Status
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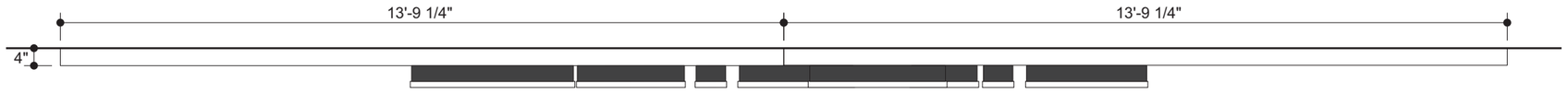
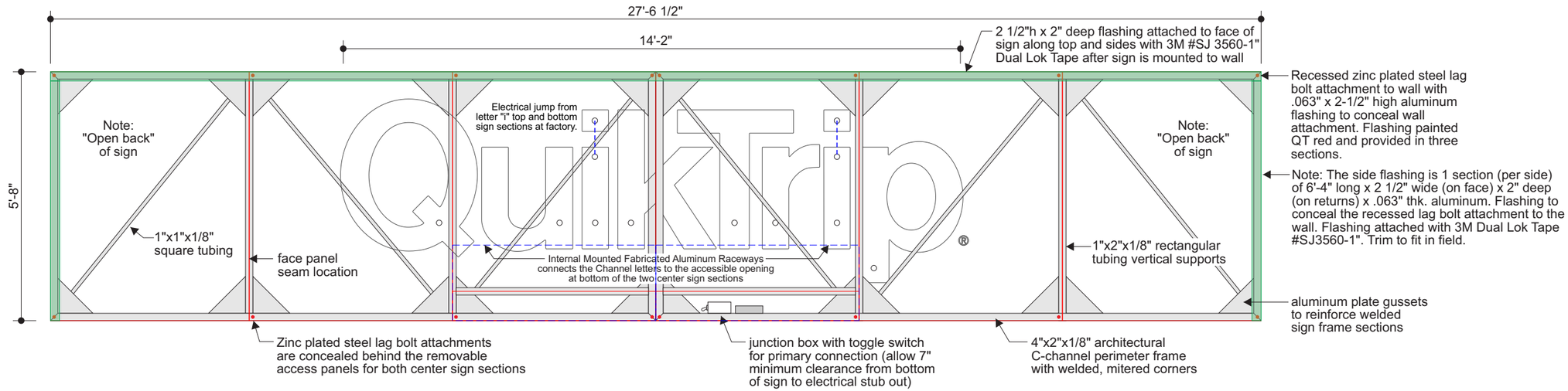
Client Signature: | Approval Date:



Top View
Scale: 3/8" = 1'-0"



Internal fabricated aluminum raceways contain the remote located GE power supplies allowing service access through the removable service doors located at the bottom center sign sections to maintain UL approved construction.

Front View
Scale: 3/8" = 1'-0"

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Paint Specifications

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Akzo Nobel to match SW 7069 Iron Ore

All paint finishes to be Satin unless otherwise specified

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Client: **QuikTrip**

Address: **Various**

Date:	Estimate #:	Job #:	Page #:
01/17/25	E21326	-	2 of 4

File Name: **QT Gen4 - CL60_101**

Sales:	Design:	PM:
House	CT	JG

#	Date	Description	Initial
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2	03/19/25	Revised size & electrical notes per customer	CT
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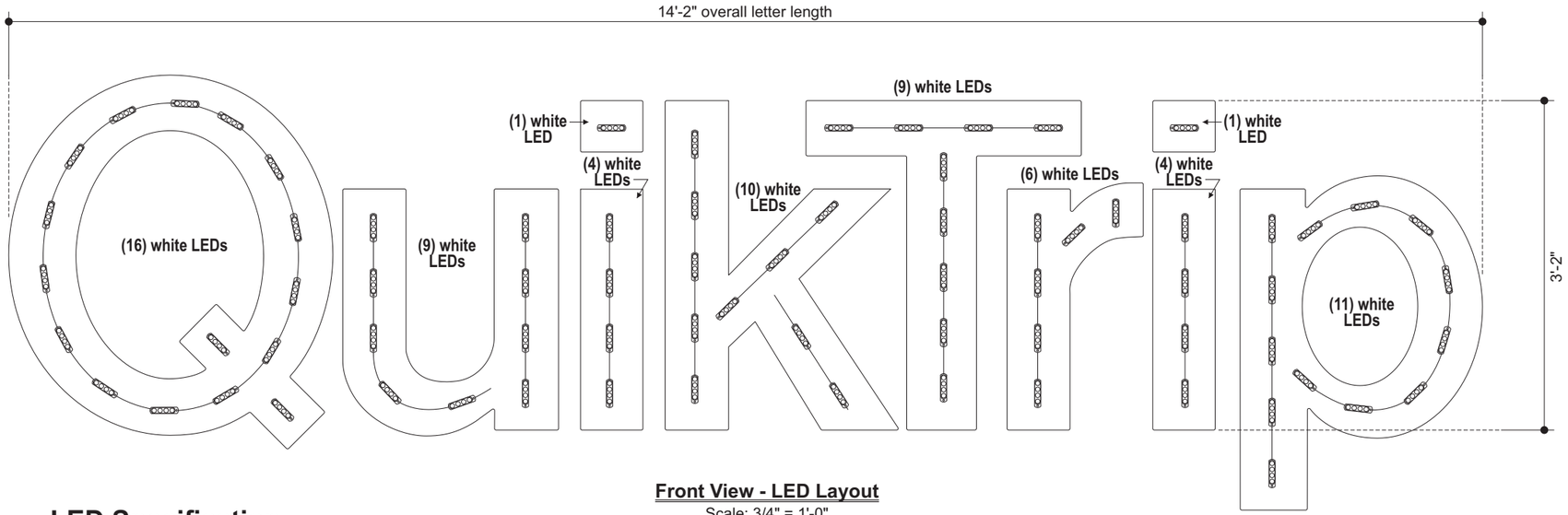

Front View - LED Layout
Scale: 3/4" = 1'-0"

LED Specification

E

71 ea. GEMX2471-W1 7100K White
4 LEDs per Module, Spaced 8" OC
1 ea. GEPS24-100U-GLX (pulls 130 modules)
Total Electrical Amp Load = 1.1 Amps
One (1) 120 Volt - 20 Amp
Circuit Breaker Required for Sign

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Address: **Various**

Date:	Estimate #:	Job #:	Page #:
01/17/25	E21326	-	3 of 4

File Name: **QT Gen4 - CL60_101**

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Client Review Status
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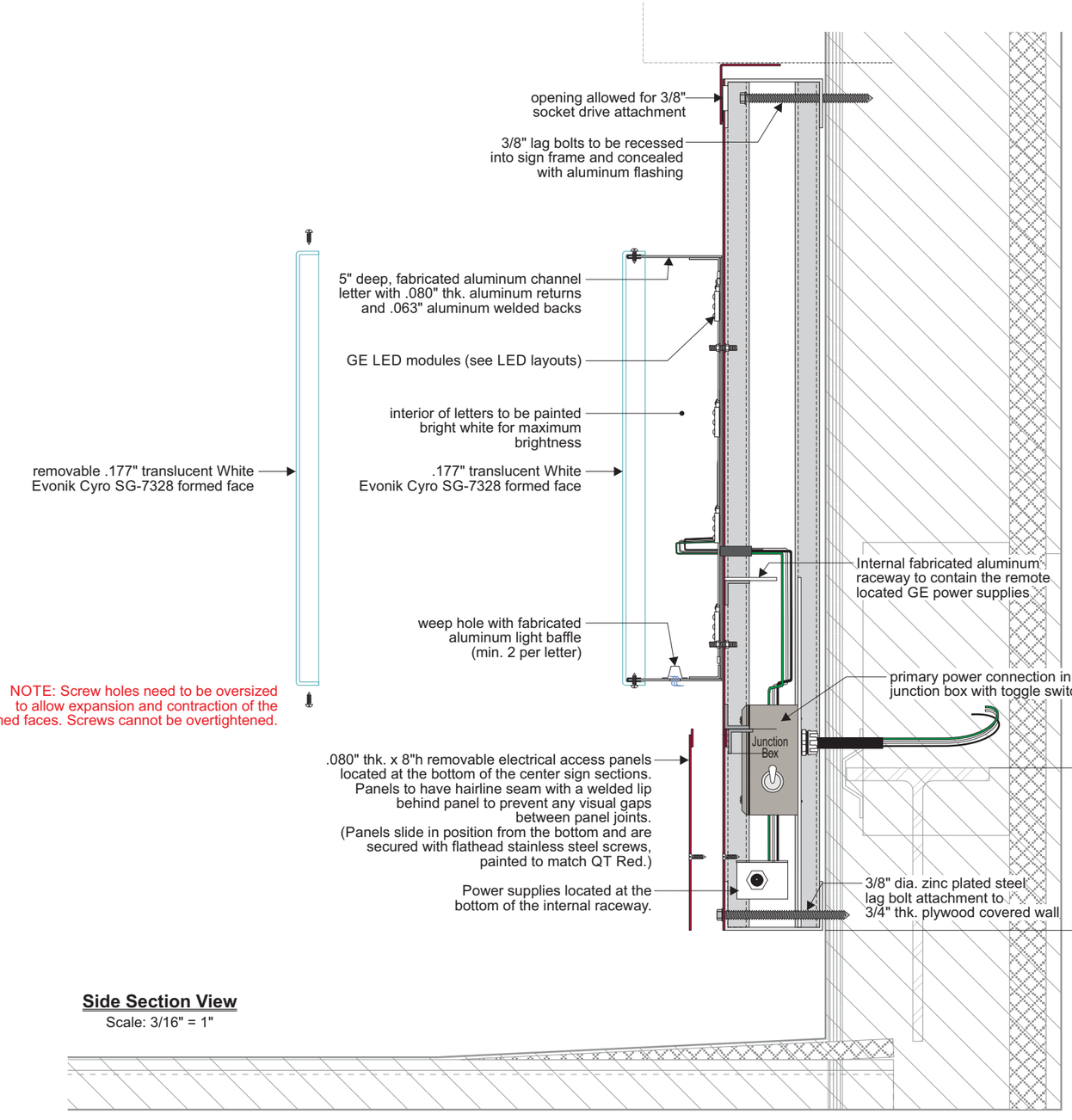
Client Signature:

Approval Date:

748

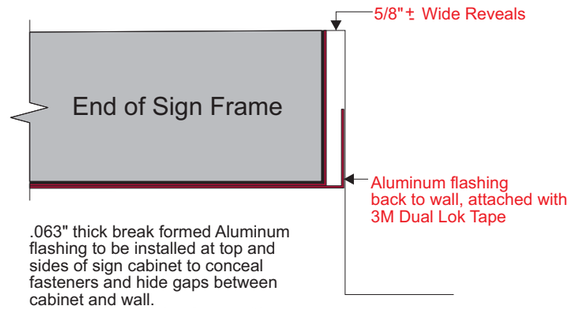
Gen4 - C

Building Channel Letters



NOTE: Screw holes need to be oversized to allow expansion and contraction of the formed faces. Screws cannot be overtightened.

Side Section View
Scale: 3/16" = 1"



.063" thick break formed Aluminum flashing to be installed at top and sides of sign cabinet to conceal fasteners and hide gaps between cabinet and wall.
Trim attached to sign frame with 3M #SJ3560-1" Dual Lok Tape.

Top View - Top Trim Detail
Scale: 1/4" = 1"

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Client: **QuikTrip**
Address: **Various**

Date:	Estimate #:	Job #:	Page #:
01/17/25	E21326	-	4 of 4

File Name: **QT Gen4 - CL60_101**

Sales:	Design:	PM:
House	CT	JG

#	Date	Description	Initial
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2	03/19/25	Revised size & electrical notes per customer	CT
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Client Signature: | Approval Date:

QuikTrip Store 4452
Lighting Cut Sheets
Site Lights

Catalog # :	Project :
Prepared By :	Date :

Slice Medium - SLM
Outdoor LED Area Light



The Slice's sleek design makes it perfectly-suited for Commercial & Industrial applications, while its cost-effective die-cast aluminum housing makes its acquisition cost very competitive. The Slice offers high performance silicone optics, die cast aluminum housing, 42,000+ lumens and is available with integral Airlink Synapse controls.

Features & Specifications

Optical System

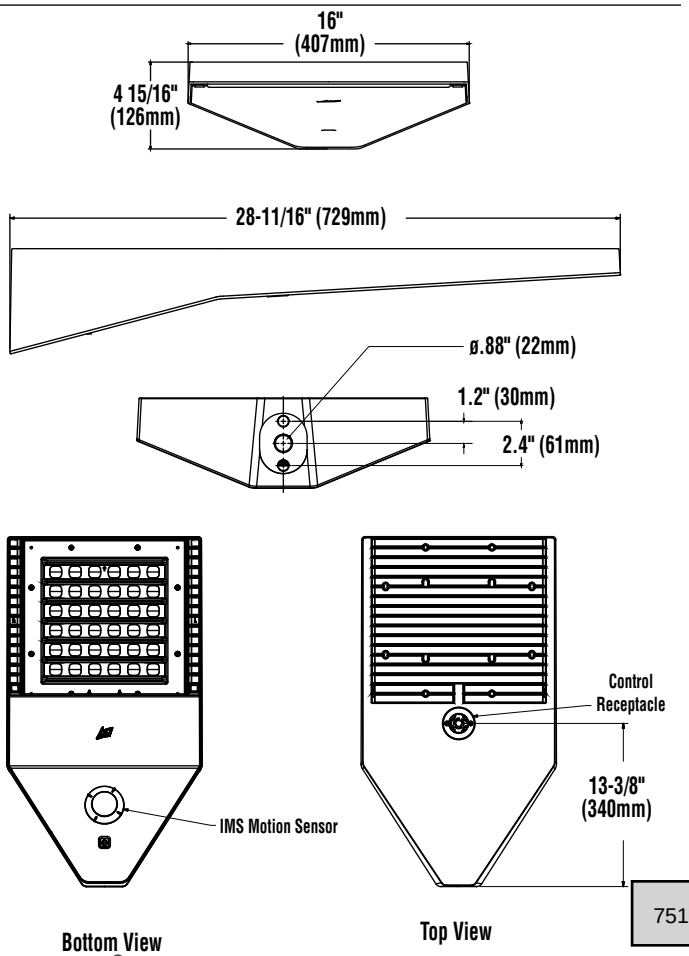
- State-of-the-Art one piece silicone optic sheet delivers industry leading optical control with an integrated gasket to provide IP66 rated sealed optical chamber in 1 component.
- Proprietary silicone refractor optics provide exceptional coverage and uniformity in IES Types 2, 3, 5W, FT and FTA.
- Silicone optical material does not yellow or crack with age and provides a typical light transmittance of 93%.
- Zero uplight.
- Available in 5000K, 4000K, 3000K, and 2700K color temperatures per ANSI C78.377. Optional 5700K CCT available in 90CRI only.
- Minimum CRI of 70. Optional 80 and 90 CRI available, consult factory for lead time.
- Integral Louver (IL) option available for improved back-light control without sacrificing street side performance. See page 5 for more details.

Electrical

- High-performance driver features over-voltage, under-voltage, short-circuit and over temperature protection.
- 0-10V dimming (10% - 100%) standard.
- Standard Universal Voltage (120-277 Vac) Input 50/60 Hz or optional High Voltage (347-480 Vac).
- L80 Calculated Life: >100k Hours (See Lumen Maintenance on Page 3)
- Total harmonic distortion: <20%
- Operating temperature: -40°C to +50°C (-40°F to +122°F). 42L lumen package rated to +40ºC.
- Power factor: >.90
- Input power stays constant over life.
- Field replaceable surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).
- High-efficacy LEDs mounted to metal-core circuit board to maximize heat dissipation
- Terminal block provided accepts up to 10ga wire.
- Components are fully encased in potting material for moisture resistance. Driver complies with FCC standards. Driver and key electronic components can easily be accessed.

Dimmable · WIRELESS CONTROLS · IP66 · RoHS COMPLIANT · ARRA Funding Compliant · c UL us LISTED · MANUFACTURED IN USA · TITLE 24 COMPLIANT · ida DARK SKY APPROVED · DLC LISTED · DLC LISTED PREMIUM

Product Dimensions



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Slice Medium - SLM
Outdoor LED Area Light

Features & Specifications (Cont.)

Construction

- Rugged die-cast aluminum housing contains factory prewired driver and optical unit. Cast aluminum wiring access door located underneath.
- Designed to mount to square poles.
- Luminaire is proudly manufactured in the U.S.of U.S. and imported parts.
- IP66 rated luminaire protects integral components from harsh environments.
- 3G rated for ANSI C136.31 high vibration applications
- Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling. Other standard LSI finishes available. Consult factory.
- Shipping weight: 30 lbs in carton.

Controls

Wireless Controls System

To make this fixture AirLink ready, simply order one of the following options:

a. The integrated Wireless Lighting Controller: ALSC or ALSCH (see ordering guide) as the controls option, or

b. Integrated Wireless Controller option (above) with integrated motion sensor: ALSCS (ordering guide for mounting heights) or

c. The 7-Pin Photoelectric Control Receptacle: CR7P as the controls option; and either the 5-Pin or 7-Pin Twist Lock Controller: ALSC UNV TL5 or ALSC UNV TL7 as an accessory

To see how the components of AirLink system work together, reference the diagram in the controls section of this specsheet. For more information on our AirLink products, visit our website: www.lsi-airlink.com/airlink-synapse/

Stand-Alone Controls

- The integral passive infrared motion sensor (IMS) activates switching of luminaire light levels (see the controls section for more details).
- The 7-pin ANSI C136.41-2013 photocontrol receptacle option (CR7P) is available for twist lock photocontrols or wireless control modules.
- The Button Type Photocells (PCI) are capable of switching luminaires ON/OFF in response to the amount of available daylight.

Installation

- A single fastener secures the hinged door, underneath the housing and provides quick & easy access to the electrical compartment for installing/servicing.
- Included terminal block provides quick and easy on-site wiring.
- Utilizes LSI's traditional 3" drill pattern for easy fastening of LSI products. (See drawing on page 1)

Warranty

- LSI LED Fixtures carry a 5-year warranty.

Listings

- Listed to UL 1598 and UL 8750.
- RoHS Compliant.
- American Recovery and Reinvestment Act Funding Compliant.
- IDA compliant; with 3000K color temperature selection.
- Title 24 Compliant; see local ordinance for qualification information.
- Suitable For wet Locations.
- IP66 rated Luminaire. IP66 rated optical chamber.
- 3G rated for ANSI C136.31 high vibration applications

Performance

ELECTRICAL DATA (AMPS)*

Lumens	Watts	120V	208V	240V	277V	347V	480V
9L	68.2	0.6A	0.3A	0.3A	0.2A	0.2A	0.1A
12L	93.1	0.8A	0.4A	0.4A	0.3A	0.3A	0.2A
18L	148.5	1.2A	0.7A	0.6A	0.5A	0.4A	0.3A
24L	188.8	1.6A	0.9A	0.8A	0.7A	0.5A	0.4A
30L	248.6	2.1A	1.2A	1.0A	0.9A	0.7A	0.5A
36L	317.8	2.6A	1.5A	1.3A	1.1A	0.9A	0.7A
42L	393.4	3.3A	1.9A	1.6A	1.4A	1.1A	0.8A

*Electrical data at 25C (77F). Actual wattage may differ by +/-10%

ELECTRICAL DATA - PHOSPHOR CONVERTED AMBER (AMPS)*

Lumens	Watts	120V	208V	240V	277V	347V	480V
9L	74.3	0.6A	0.4A	0.3A	0.3A	0.2A	0.2A
12L	102.9	0.9A	0.5A	0.4A	0.4A	0.3A	0.2A

*Electrical data at 25C (77F). Actual wattage may differ by +/-10%

RECOMMENDED LUMEN MAINTENANCE[1](24-42L)

Ambient	Initial[2]	25 hr[2]	50 hr[2]	75 hr[3]	100 hr[3]
0-40 C	100%	100%	97%	94%	92%

RECOMMENDED LUMEN MAINTENANCE[1](9-18L)

Ambient	Initial[2]	25 hr[2]	50 hr[2]	75 hr[3]	100 hr[3]
0-50 C	100%	96%	91%	87%	83%

1- Lumen maintenance values at 25C are calculated per TM-21 based on LM-80 data and in-situ testing.
2- In accordance with IESNA TM-21-11, Projected Values represent interpolated value based on time durations that are within six times the IESNA LM-80-08 total test duration for the device under testing.
3- In accordance with IESNA TM-21-11, Calculated Values represent time durations that exceed six times the IESNA LM-80-08 total test duration for the device under testing

DELIVERED LUMENS*

Lumen Package	Distribution	Phosphor Converted Amber			Wattage
		Delivered Lumens	Efficacy	BUG Rating	
9L	2	5958	80	B2-U0-G1	74
	2 IL	3735	50	B0-U0-G1	
	3	6196	83	B1-U0-G1	
	3 IL	4205	56	B0-U0-G1	
	5W	5528	74	B3-U0-G1	
	FT	5922	79	B1-U0-G2	
	FT IL	3712	50	B0-U0-G1	
	FTA	5997	80	B2-U0-G2	
	FTA IL	4254	57	B0-U0-G1	
12L	2	7559	73	B2-U0-G2	103
	2 IL	4738	46	B0-U0-G1	
	3	7860	76	B2-U0-G2	
	3 IL	5335	52	B0-U0-G1	
	5W	7013	68	B3-U0-G2	
	FT	7513	73	B2-U0-G2	
	FT IL	4709	46	B0-U0-G2	
	FTA	7608	74	B2-U0-G2	
	FTA IL	5397	52	B0-U0-G1	

*LED Chips are frequently updated therefore values are nominal

LUMINAIRE EPA CHART - SLM

Tilt Degree		0°	30°	45°	Tilt Degree		0°	30°	45°
	Single	0.5	2.1	2.6		T90°	1.2	2.9	3.6
	D180°	1.1	2.1	2.6		TN120°	1.3	4.4	5.4
	D90°	0.9	2.5	3.1		Q90°	1.2	2.9	3.6

Specifications and dimensions subject to change without notice.

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Slice Medium - SLM
Outdoor LED Area Light

DELIVERED LUMENS*

Lumen Package	Distribution	CRI	2700K CCT			3000K CCT			4000K CCT			5000K CCT			Wattage
			Delivered Lumens	Efficacy	BUG Rating	Delivered Lumens	Efficacy	BUG Rating	Delivered Lumens	Efficacy	BUG Rating	Delivered Lumens	Efficacy	BUG Rating	
9L	2	70	8349	122	B2-U0-G2	8576	125	B2-U0-G2	9396	137	B2-U0-G2	9784	143	B2-U0-G2	69
	2 IL	70	5185	76	B0-U0-G1	5326	78	B0-U0-G1	5835	85	B0-U0-G1	6076	89	B0-U0-G1	
	3	70	8571	125	B1-U0-G2	8804	129	B1-U0-G2	9646	141	B2-U0-G2	10044	147	B2-U0-G2	
	3 IL	70	6283	92	B0-U0-G2	6454	94	B0-U0-G2	7071	103	B0-U0-G2	7363	107	B0-U0-G2	
	5W	70	8158	119	B3-U0-G2	8380	122	B3-U0-G2	9181	134	B3-U0-G2	9560	140	B4-U0-G2	
	FT	70	8337	122	B2-U0-G2	8563	125	B2-U0-G2	9382	137	B2-U0-G2	9769	143	B2-U0-G2	
	FT IL	70	5393	79	B0-U0-G2	5540	81	B0-U0-G2	6069	89	B0-U0-G2	6320	92	B0-U0-G2	
	FTA	70	8459	123	B2-U0-G2	8689	127	B2-U0-G2	9520	139	B2-U0-G2	9913	145	B2-U0-G2	
	FTA IL	70	6200	91	B1-U0-G1	6369	93	B1-U0-G1	6978	102	B1-U0-G1	7266	106	B1-U0-G1	
12L	2	70	11157	119	B2-U0-G2	11461	122	B2-U0-G2	12556	134	B3-U0-G2	13075	139	B3-U0-G2	94
	2 IL	70	6929	74	B1-U0-G1	7117	76	B1-U0-G2	7798	83	B1-U0-G2	8119	86	B1-U0-G2	
	3	70	11454	122	B2-U0-G2	11766	125	B2-U0-G2	12890	137	B2-U0-G2	13423	143	B2-U0-G2	
	3 IL	70	8396	89	B0-U0-G2	8625	92	B0-U0-G2	9449	101	B0-U0-G2	9839	105	B0-U0-G2	
	5W	70	10902	116	B4-U0-G2	11199	119	B4-U0-G2	12269	131	B4-U0-G2	12775	136	B4-U0-G2	
	FT	70	11141	119	B2-U0-G2	11444	122	B2-U0-G2	12538	133	B2-U0-G3	13055	139	B2-U0-G3	
	FT IL	70	7207	77	B0-U0-G2	7403	79	B0-U0-G2	8110	86	B0-U0-G2	8445	90	B0-U0-G2	
	FTA	70	11304	120	B2-U0-G2	11612	124	B2-U0-G2	12722	135	B2-U0-G2	13247	141	B2-U0-G2	
	FTA IL	70	8286	88	B1-U0-G1	8511	91	B1-U0-G1	9325	99	B1-U0-G1	9710	103	B1-U0-G1	
18L	2	70	16714	112	B3-U0-G3	17168	115	B3-U0-G3	18809	126	B3-U0-G3	19586	131	B3-U0-G3	150
	2 IL	70	10379	69	B1-U0-G2	10662	71	B1-U0-G2	11681	78	B1-U0-G2	12163	81	B1-U0-G2	
	3	70	17158	115	B2-U0-G3	17625	118	B2-U0-G3	19310	129	B3-U0-G3	20107	134	B3-U0-G3	
	3 IL	70	12578	84	B1-U0-G3	12920	86	B1-U0-G3	14155	95	B1-U0-G3	14739	99	B1-U0-G3	
	5W	70	16331	109	B4-U0-G2	16776	112	B4-U0-G2	18379	123	B4-U0-G2	19138	128	B5-U0-G3	
	FT	70	16689	112	B3-U0-G3	17143	115	B3-U0-G3	18781	126	B3-U0-G4	19557	131	B3-U0-G4	
	FT IL	70	10795	72	B1-U0-G2	11089	74	B1-U0-G2	12149	81	B1-U0-G3	12651	85	B1-U0-G3	
	FTA	70	16934	113	B3-U0-G3	17395	116	B3-U0-G3	19058	127	B3-U0-G3	19844	133	B3-U0-G3	
	FTA IL	70	12412	83	B1-U0-G1	12750	85	B1-U0-G2	13969	93	B1-U0-G2	14546	97	B1-U0-G2	
24L	2	70	20880	112	B3-U0-G3	22701	121	B4-U0-G3	24276	130	B4-U0-G3	24784	133	B4-U0-G3	187
	2 IL	70	13100	70	B1-U0-G2	14243	76	B1-U0-G2	15231	81	B1-U0-G2	15550	83	B1-U0-G2	
	3	70	21739	116	B3-U0-G3	23636	126	B3-U0-G4	25275	135	B3-U0-G4	25804	138	B3-U0-G4	
	3 IL	70	15828	85	B1-U0-G3	17209	92	B1-U0-G3	18403	98	B1-U0-G4	18788	100	B1-U0-G4	
	5W	70	20632	110	B5-U0-G3	22432	120	B5-U0-G3	23988	128	B5-U0-G3	24490	131	B5-U0-G3	
	FT	70	21611	116	B3-U0-G4	23496	126	B3-U0-G4	25126	134	B3-U0-G4	25652	137	B3-U0-G4	
	FT IL	70	13692	73	B1-U0-G3	14886	80	B1-U0-G3	15919	85	B1-U0-G3	16252	87	B1-U0-G3	
	FTA	70	21496	115	B3-U0-G3	23371	125	B3-U0-G3	24992	134	B3-U0-G3	25515	136	B3-U0-G3	
	FTA IL	70	15226	81	B1-U0-G2	16555	89	B1-U0-G2	17703	95	B2-U0-G2	18073	97	B2-U0-G2	
30L	2	70	26581	108	B4-U0-G3	28900	117	B4-U0-G3	30905	125	B4-U0-G3	31551	128	B4-U0-G3	247
	2 IL	70	16677	68	B1-U0-G2	18132	73	B1-U0-G2	19390	79	B1-U0-G2	19796	80	B1-U0-G2	
	3	70	27675	112	B3-U0-G4	30089	122	B3-U0-G4	32176	130	B3-U0-G4	32850	133	B3-U0-G4	
	3 IL	70	20150	82	B1-U0-G4	21908	89	B1-U0-G4	23428	95	B1-U0-G4	23918	97	B1-U0-G4	
	5W	70	26266	106	B5-U0-G3	28557	116	B5-U0-G3	30538	124	B5-U0-G4	31177	126	B5-U0-G4	
	FT	70	27512	111	B3-U0-G4	29912	121	B3-U0-G4	31987	130	B3-U0-G4	32656	132	B3-U0-G5	
	FT IL	70	17430	71	B1-U0-G3	18951	77	B1-U0-G4	20266	82	B1-U0-G4	20690	84	B1-U0-G4	
	FTA	70	27365	111	B3-U0-G3	29752	120	B4-U0-G3	31816	129	B4-U0-G3	32482	132	B4-U0-G3	
	FTA IL	70	19384	78	B2-U0-G2	21075	85	B2-U0-G2	22537	91	B2-U0-G2	23008	93	B2-U0-G2	
36L	2	70	32214	102	B4-U0-G3	35025	111	B4-U0-G3	37454	118	B4-U0-G3	38238	121	B4-U0-G4	317
	2 IL	70	20212	64	B1-U0-G2	21975	69	B1-U0-G3	23499	74	B2-U0-G3	23991	76	B2-U0-G3	
	3	70	33540	106	B3-U0-G4	36466	115	B3-U0-G5	38996	123	B3-U0-G5	39812	126	B3-U0-G5	
	3 IL	70	24421	77	B1-U0-G4	26551	84	B1-U0-G4	28393	90	B1-U0-G4	28987	92	B1-U0-G5	
	5W	70	31832	101	B5-U0-G4	34609	109	B5-U0-G4	37010	117	B5-U0-G4	37785	119	B5-U0-G4	
	FT	70	33342	105	B3-U0-G5	36251	114	B3-U0-G5	38766	122	B4-U0-G5	39577	125	B4-U0-G5	
	FT IL	70	21125	67	B1-U0-G4	22968	73	B1-U0-G4	24561	78	B1-U0-G4	25075	79	B1-U0-G4	
	FTA	70	33164	105	B4-U0-G3	36058	114	B4-U0-G4	38559	122	B4-U0-G4	39366	124	B4-U0-G3	
	FTA IL	70	23492	74	B2-U0-G2	25541	81	B2-U0-G2	27313	86	B2-U0-G2	27885	88	B2-U0-G2	
42L	2	70	36785	94	B4-U0-G3	39994	103	B5-U0-G4	42768	110	B5-U0-G4	43663	112	B5-U0-G4	390
	2 IL	70	23079	59	B1-U0-G3	25093	64	B2-U0-G3	26833	69	B2-U0-G3	27395	70	B2-U0-G3	
	3	70	38299	98	B3-U0-G5	41640	107	B4-U0-G5	44528	114	B4-U0-G5	45460	117	B4-U0-G5	
	3 IL	70	27886	72	B1-U0-G4	30319	78	B1-U0-G5	32422	83	B1-U0-G5	33100	85	B1-U0-G5	
	5W	70	36349	93	B5-U0-G4	39520	101	B5-U0-G4	42261	108	B5-U0-G4	43145	111	B5-U0-G4	
	FT	70	38073	98	B4-U0-G5	41395	106	B4-U0-G5	44266	114	B4-U0-G5	45192	116	B4-U0-G5	
	FT IL	70	24122	62	B1-U0-G4	26226	67	B1-U0-G4	28045	72	B1-U0-G4	28632	73	B1-U0-G4	
	FTA	70	37870	97	B4-U0-G4	41174	106	B4-U0-G4	44030	113	B4-U0-G4	44951	115	B4-U0-G4	
	FTA IL	70	26825	69	B2-U0-G2	29165	75	B2-U0-G2	31188	80	B2-U0-G2	31841	82	B2-U0-G2	

*LED Chips are frequently updated therefore values are nominal

Specifications and dimensions subject to change without notice.

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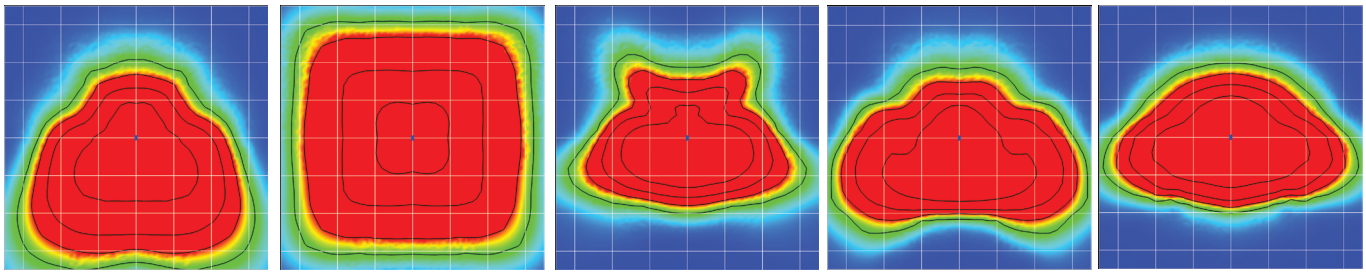
Slice Medium - SL
Outdoor LED Area Light

Performance (Cont.)

All published luminaire photometric testing performed to IESNA LM-79 standards. ISO footcandle plots below demonstrate the Slice (SLM) light patterns only. Not for total fixture output. For complete specifications and IES files, see website.



FT | 5W | FTA | Type 3 | Type 2

Ordering Guide

TYPICAL ORDER EXAMPLE: **SLM LED 36L SIL FTA UNV DIM 50 70CRI ALSCS04 BRZ IL**

Luminaire Prefix	Light Source	Lumen Package*	Light Output	Distribution	Orientation[1]	Voltage	Driver
SLM Slice Medium	**LED**	**9L** - 9,000 lms **12L** - 12,000 lms **18L** - 18,000 lms **24L** - 24,000 lms **30L** - 30,000 lms **36L** - 36,000 lms **42L** - 42,000 lms *Consult factory for programmable wattages and lumen packages	**SIL** - Silicone	**2** - Type 2 **3** - Type 3 **5W** - Type 5 Wide **FT** - Forward Throw **FTA** - Forward Throw Automotive	**(blank)** - standard **L**- Optics rotated left 90 **R** - Optics rotated right 90	**UNV** - Universal Voltage (120-277V) **HV** - High Voltage (347-480V)	**DIM** - 0-10V Dimming (0-10%)

Color Temp	Color Rendering	Controls (Choose One)	Finish	Options
57 - 5,700 CCT[2,12] **50** - 5,000 CCT **40** - 4,000 CCT **30** - 3,000 CCT[2] **27** - 2,700 CCT[2] **AMB** - Phosphor Converted Amber[2,3]	**70CRI** - 70 CRI **80CRI** - 80 CRI[2] **90CRI** - 80 CRI [2,12]	**(Blank)** - None **Wireless Controls System** **ALSC** - AirLink Synapse Control System [4] **ALSCH** - AirLink Synapse Control System Host / Satelite [4,5] **ALSCS01** - AirLink Synapse Control System with 8-12' Motion Sensor [4] **ALSCHS01** - AirLink Synapse Control System Host / Satelite with 8-12' Motion Sensor [4,5] **ALSCS02** - AirLink Synapse Control System with 12-20' Motion Sensor[4] **ALSCHS02** - AirLink Synapse Control System Host / Satelite with 12-20' Motion Sensor [4,5] **ALSCS04** - AirLink Synapse Control System with 20-40' Motion Sensor [4] **ALSCHS04** - AirLink Synapse Control System Host / Satelite with 20-40' Motion Sensor [4,5] **Stand-Alone Controls** **EXT** - 0-10v Dimming (from external signal) **IMS0M1** - Integral Motion Sensor 8-12' 120-277V [4,6] **IMS0M2** - Integral Motion Sensor 12-20' 120-277V [4,6] **IMS0M4** - Integral Motion Sensor 20-40' 120-277V [4,6] **IMS0M1HV** - Integral Motion Sensor 8-12' 347-480V [6,10] **IMS0M2HV** - Integral Motion Sensor 12-20' 347-480V [6,10] **IMS0M4HV** - Integral Motion Sensor 20-40' 347-480V [6,10] **CR7P** - 7 Pin Control Receptacle ANSI C136.41 [7] **Button Type Photocells** **PCI120** - 120V **PCI208-277** - 208 -277V **PCI347** - 347V	**BRZ** - Bronze **BLK** - Black **GPT** - Graphite **MSV** - Metallic Silver **WHT** - White **PLP** - Platinum Plus **SVG** - Satin Verde Green	**(Blank)** - None **IL** - Integral Louver HSS[1]

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Slice Medium - SLM
Outdoor LED Area Light

Accessory Ordering Information[8]

Description	Order Number	Description	Order Number
PC120 Photocell for use with CR7P option (120V)[9]	122514	DFK208, 240 Double Fusing (208V, 240V)	DFK240
PC208-277 Photocell for use with CR7P option (208V, 240V, 277V)[9]	122515	DFK480 Double Fusing (480V)	DFK480
PC347 Photocell for use with CR7P option (347V)[9]	122516	DFK347 Double Fusing (347V)	DFK347
PC480 Photocell for use with CR7P option (480V)[9]	1225180	X5RPP - Round Pole Adapter for 5" Poles[11]	379968CLR
ALSC UNV TL5 - Airlink 5Pin Twist Lock Controller[4,9]	661409	IL - Integral Louver HSS	684812
ALSC UNV TL7 - Airlink 7Pin Twist Lock Controller[4,9]	661410	Universal Mounting Bracket (UMB)[11]	684616CLR
PMOS24 - 24V Pole-Mount Occupancy Sensor (ALSC/H Compatible)[10,11]	663284CLR	Adjustable Slip Fitter (ASF)[11]	688138CLR
IMS/PC Remote Configurator Tool	584929	Pole Quick Mount Bracket - Square Pole[11]	687073CLR
X3RPP - Round Pole Adapter for 3" Round Tapered Poles[11]	408273CLR	Pole Quick Mount Bracket - 4-5" Round Pole[11]	689903CLR
X4RPP - Round Pole Adapter for 4" Poles[11]	379967CLR	15° Tilt Pole Quick Mount Bracket - Square Pole[11]	688003CLR
FK120 Single Fusing (120V)	FK120	15° Tilt Pole Quick Mount Bracket - 4-5" Round Pole[11]	689905CLR
FK277 Single Fusing (277V)	FK277	BKS XBO WM * CLR Wall Mount Bracket[11]	382132CLR

FOOTNOTES:
1 - Not available on "Type V" distribution.
2 - Consult Factory for availability.
3 - Only available in 9L and 12L Lumen Packages
4 - Not available in HV.
5 - Consult Factory for Site Layout
6 - IMS is field adjustable, via a hand held Remote Configurator Tool, which must be ordered separately. See Accessory Ordering Information.
7 - Control device must be ordered separately. 7 pin standard. See Accessory Ordering Information.
8 - Accessories are shipped seperately and field installed.
9 - Factory installed CR7P option required. See Options.
10 - Only available with ALSC* Controls
11 - "CLR" denotes finish. See Finish options.
12 - Only available in 5700K 90CRI for lumen packages 24L-42L.

Accessories/Options

Integral Louver (IL)

Accessory Integral Louver available for improved back-light control without sacrificing street side performance. LSI's Integral Louver (IL) option delivers backlight control that significantly reduces light spill behind the pole for applications with pole locations close to adjacent properties. The integrated louvers' design maximizes forward-reflected light while - reducing glare, maintaining the optical distribution selected, and most importantly, eliminating light trespass. The Integral louver rotates with the optical distribution.

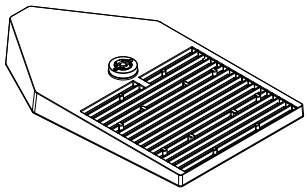
Luminaire Shown with Integral Louver (IL)



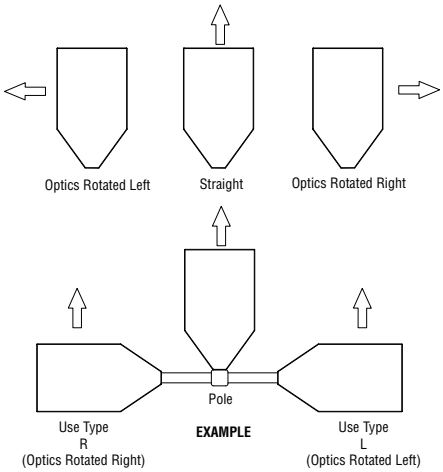
7 Pin Photoelectric Control

7-pin ANSI C136.41-2013 control receptacle option available for twist lock photocontrols or wireless control modules. Control accessories sold separately. Dimming leads from the receptacle will be connected to the driver dimming leads (Consult factory for alternate wiring).

Fixture Shown with CR7P



Optics Rotation



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Slice Medium - SLM
Outdoor LED Area Light

Stand-alone Controls: Occupancy Sensor (IMS)

The integral passive infrared motion sensor activates switching of luminaire light levels. Standard Factory settings: High level light is activated and increased to full bright upon detection of motion. Lowlight level (10% maximum drive current) is activated when target zone is absent of motion activity for ~5 minutes. See coverage diagram for detection cone.

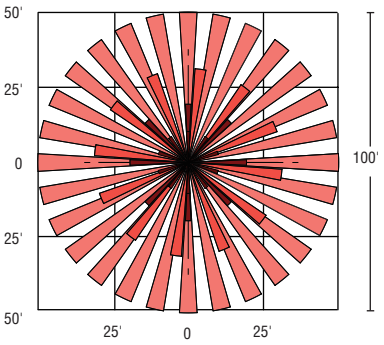
The Remote Configurator Tool allows for easy and safe programming of each luminaire from ground level.
See the Remote Configurator User Guide for programming instructions.

When ordering the Stand-alone Occupancy Sensor on the fixture, you must include IMS (see ordering guide for mounting height options) as the controls option in the fixture nomenclature.

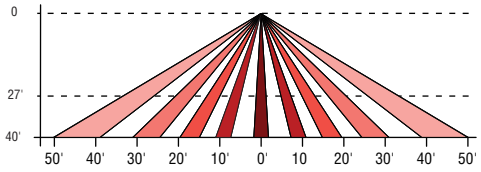
To order as a motion sensor with the AirLink Wireless Control System, see ordering guide under “Wireless Controls System” and select the ALSCS controls option with the desired mounting height.

IMS Coverage Diagrams

TOP VIEW



SIDE VIEW



Remote Configurator Tool



Luminaire Shown with IMS



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Slice Medium - SLM
Outdoor LED Area Light

AirLink™ enabled by Synapse®

The AirLink enabled by Synapse Wireless Lighting Control System is the perfect solution for commercial, industrial and municipal applications, such as: auto dealerships, parking lots, garages, shopping complexes and warehouses.

AirLink utilizes robust wireless communication via 2.4 GHz Self-Healing Mesh Network which not only increases reliability and accuracy of system, but also eliminates single point of failure.

The flexibility of the system make it perfect for new construction and retrofit projects. The user-friendly AirLink web application is accessible through any device with an internet connection and allows for complete customization of the system's features.

Some capabilities of the system include: occupancy/vacancy sensing, daylight harvesting, scheduling, high-end trim, dimming, zone control, BMS integration and energy monitoring.

The AirLink System

Wireless controls & sensors



Wireless & Override Switches



Occupancy/Vacancy & Daylight Sensors



AirLink-integrated Fixtures



AirLink-compatible Fixtures



Circuit & Zone Controllers

Centralized control & integration



Site Manager Controller



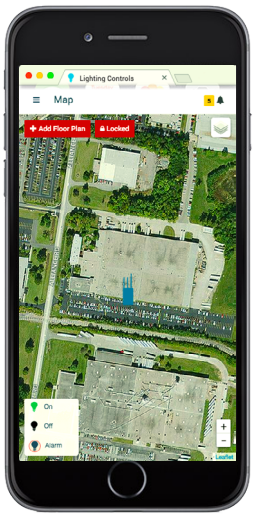
Gateway Module

BACnet®



WiFi, Cellular or Ethernet Connection

Simple-to-use software



AirLink Site Manger: Lighting control web app

Contact LSI Controls

Sales
controls.sales@lsi-industries.com

Support
controls.support@lsi-industries.com
1 (800) 436-7800 (support, option 8)

More information
For more information on AirLink, visit our website at **www.lsi-airlink.com**

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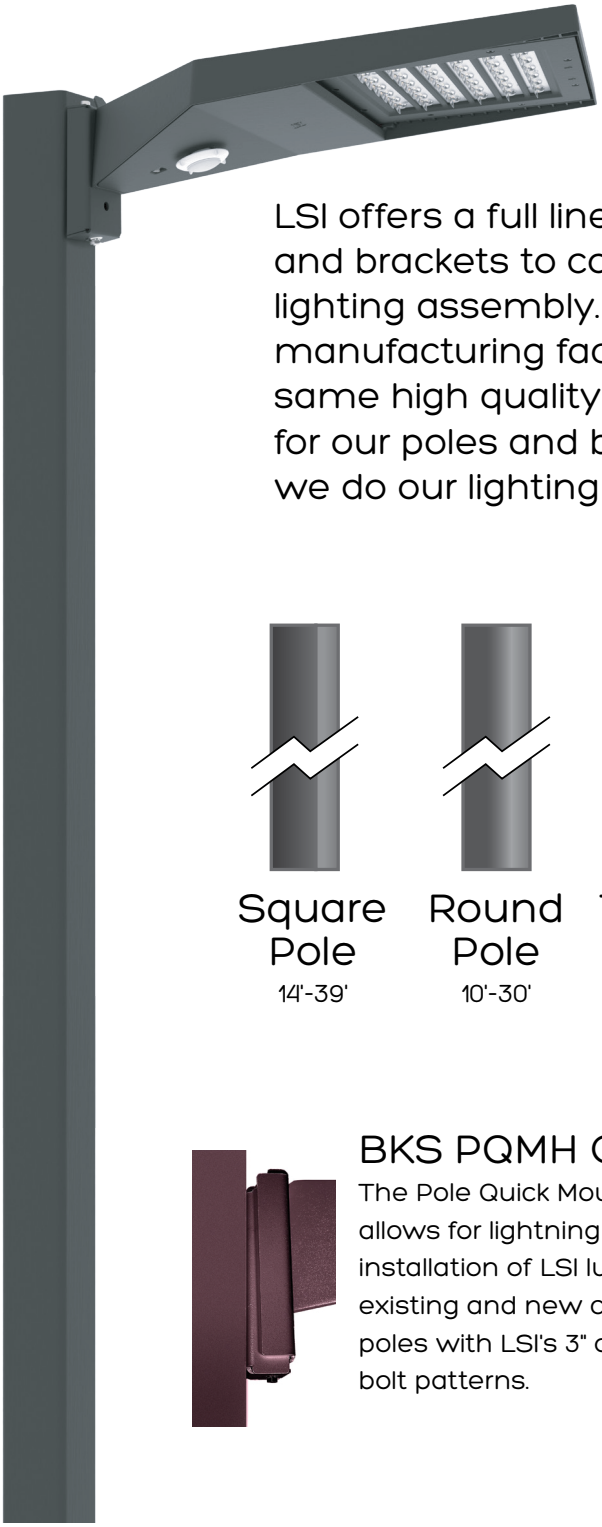
poles & Brackets



LSI offers a full line of poles and brackets to complete your lighting assembly. Our USA manufacturing facility has the same high quality standards for our poles and brackets as we do our lighting fixtures.



BKA UMB CLR

The 3G rated Universal Mounting Bracket (UMB) allows for seemless integration of LSI Luminaires onto existing or new construction poles. The UMB bracket was designed specifically for square or round (tapered/ straight) poles with (2) mounting hole spaces between 3.5"-5".

Square Pole
14'-39'

Round Pole
10'-30'

Tapered Pole
20'-39'

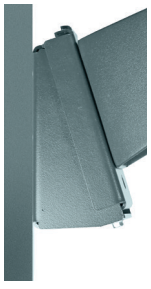


BKA ASF CLR

The adjustable Slip Fitter is a 3G rated rugged die cast aluminum adapter to mount LSI luminaires onto a 2" (51mm) IP, 2.375" (60mm) O.D. tenon. The Adjustable Slip Fitter can be rotated 180° allowing for tilting LSI luminaires up to 45° and 90° when using a vertical tenon.

BKS PQMH CLR

The Pole Quick Mount Bracket allows for lightning fast installation of LSI luminaires onto existing and new construction poles with LSI's 3" or 5"standard bolt patterns.



BKS PQM15 CLR

The Pole Quick Mount Bracket allows for preset 15° uptilt of LSI luminaires for greater throw of light and increased vertical illumination aswell as fast installation onto poles with LSI's 3" or 5" bolt pattern.

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QuikTrip Store 4452
Lighting Cut Sheets
Fuel Canopy Lights

Catalog # : _____ Project : _____ Type : _____

Prepared By : _____ Date : _____

Item 3.

Scottsdale Vertex™ (SCV)

Petroleum Canopy Light



OVERVIEW	
Lumen Package (lm)	9,000 - 23,000
Wattage Range (W)	67 - 188
Efficacy Range (LPW)	109 - 154
Weight lbs (kg)	18.5 (8.4)

QUICK LINKS

Ordering Guide | Performance | Photometrics | Dimensions

FEATURES & SPECIFICATIONS

Construction

- Rugged low-profile die-cast aluminum housing, optical unit, and driver cover.
- Below canopy access to optical chamber and driver housing for serviceability.
- IP66 rated luminaire protects integral components from dust and water.
- Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling.
- Four fasteners secure the door frame to housing. Door frame also provides quick and easy access to the electrical compartment for servicing.
- Shipping weight: 18.5 lbs in carton.

Optical System

- Symmetrical distribution utilizes a clear tempered flat glass lens to uniformly illuminate the area under the gas canopy.
- Combination Forward Throw distribution uses clear tempered flat glass and optical grade PMMA acrylic lens to create an industry leading unique distribution pattern to illuminate the area under the gas canopy and the area between the gas canopy and convenience store eliminating the need for extra floodlights.
- Available in 5000K, 4000K and 3000K color temperatures.
- Minimum CRI of 80.

Electrical

- High-performance factory programmable driver; features include over-voltage, undervoltage, short circuit and over temperature protection.
- Integral 6kV surge protection that meets IEEE C62.41.2 and ANSI C82.77-5 Location Category C Low standards.
- Additional field replaceable 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).
- Custom lumen and wattage packages available.
- 0-10V dimming (10% - 100%) standard.
- Standard Universal Voltage (120-277 Vac) Input 50/60 Hz or optional High Voltage (347-480 Vac).
- L80 Calculated Life: >100k Hours (See Lumen Maintenance on Page 2).
- Total harmonic distortion: <20%.
- Operating temperature: -40°C to +50°C. (-40°F to +122°F) when mounted to Steel/ Aluminum surfaces for 10L, 13L, & 15L Lumen Packages, +45°C for 20L Lumen Package, and +35°C for 23L Lumen Package. If mounted to a non-metallic surface, reduce ambient by 5°C.
- Power factor: >0.90.
- High-efficacy LEDs are mounted to (4) circuit boards to maximize heat dissipation.
- Driver components are fully encased in potting material for moisture resistance. Driver complies with FCC standards.

Hazardous Location

- Designed for lighter than air fuel applications. Product is suitable for Class 1 Division 2 with all lumen packages and distributions only when properly installed per LSI installation instructions. Models with optional controls are not approved for Class 1, Division 2 applications.
  - Gas Groups A, B, C, and D – Group A: Acetylene / Group B: Hydrogen / Group C: Propane and Ethylene / Group D: Benzene, Butane, Methane & Propane.

Installation (Standard)

- Installs in a 12" or 16" deck pan.
- Four fasteners are provided for use in single deck steel canopies. Other suitable fasteners may be required and provided by others.
- Unit is designed to quickly retrofit into existing Scottsdale (4") hole.
- Aluminum locking collar and gasket are included and required for complete seal and support of canopy deck.
- Retrofit panels are available for existing Encores, Richmond, 2x2 Universal, and more.
- Direct mount to surface or recessed J box with hardware bracket kit ordered separately as an accessory.

Installation (REDiMount)

- Patent pending 3 piece quick mounting system; components include collar, capsule and connector.
- Designed to reduce canopy penetrations and increase installation efficiency.
- Installs in 12" or 16" deck pan.

Warranty

- LSI luminaires carry a 5-year limited warranty. Refer to https://www.lsicorp.com/resources/terms-conditions-warranty/ for more information.

Listings

- Listed to UL 1598 and UL 8750.
- Meets Buy American Act requirements.
- State of California Title 24 Compliant with IMSBT option.
- DesignLights Consortium® (DLC) Premium qualified product. Not all versions of this product may be DLC Premium qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.
- IDA compliant with 3000K or lower color temperature.

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Scottsdale Vertex™ (SCV) Petroleum Canopy Light

Have questions? Call us at (800) 436-7800

Type : Item 3.

ORDERING GUIDE

Back to Quick Links

TYPICAL ORDER EXAMPLE: SCV LED 13L SC UNV DIM 50 WHT IMSBT2 REDI

Prefix	Light Source	Lumen Package	Distribution	Voltage	Driver	Color Temperature	Finish	Options	Mounting
SCV - Petroleum Canopy Luminaire	**LED** **23L** - 23,000 Lumens	**10L** - 10,000 Lumens **13L** - 13,000 Lumens **15L** - 15,000 Lumens **20L** - 20,000 Lumens **23L** - 23,000 Lumens **Custom Lumen Packages**[1] **SCFT** - Combination Standard Symmetric and Forward Throw[1]	**SC** - Standard Symmetric	**UNV** - Universal Voltage (120-277VAC) **HV** - 347-480V[2]	**DIM** - 0-10V Dimming[3]	**30** - 3000K **40** - 4000K **50** - 5000K	**WHT** - White **BLK** - Black **BRZ** - Bronze	**Blank** - None **ALBCS1** - AirLink Blue Wireless Motion & Photo Sensor Controller (8-24' mounting height) **ALBCS2** - AirLink Blue Wireless Motion & Photo Sensor Controller (25-40' mounting height) **IMSBT1L** - Integral Bluetooth™ Motion and Photocell Sensor (8 - 24' mounting height)[4] **IMSBT2L** - Integral Bluetooth™ Motion and Photocell Sensor (25 - 40' mounting height)[4] **HL** - Hazardous Location Class 1 Div 2[5]	**Blank** - None **REDI** - REDiMount integrated junction box system[6]

Need more information?
Click here for our glossary

Have additional questions?
Call us at (800) 436-7800

ACCESSORY ORDERING INFORMATION

Part Number	Description
673425R2	Retrofit Panel Kit - EC / ECTA / SCF to SCV, for 16" Deck Panel with larger openings[7]
676011R2	Retrofit Panel Kit - EC / ECTA / SCF to SCV, for 12" Deck Panel[8]
673426R2	Retrofit Panel Kit - RECU Richmond to SCV
673427R2	Retrofit Panel Kit - UNV Universal 2x2 to SCV
357282	Retrofit 2x2 Cover Panel Blank (no holes)
354702	Retrofit RIC Cover Panel Blank (no holes)
557193WHT	26" X 26" Beauty Plate Kit (with 4" Center hole)
564160WHT	26" X 32" Beauty Plate Kit (with 4" Center hole)

Part Number	Description
687461	Junction Box
1320540	Kit - Hole Plugs and Sealant (enough for 25 retrofits)
678291R2WHT	Rectangular Top Plate Kit (includes top plate and sealant)
673433R2	Surface Mount Box
687462R2	Retrofit Kit - CRU/CRUS to SCV
744333	Retrofit Kit for SCM/SCV to upgrade SC/SCF/EC/ECTA White
752172R2	Bracket SCM/SCV Direct Mount with Hardware

1 Custom lumen and wattage packages available consult factory. Values are within industry standard tolerances but not DLC listed.
2 HV not available with REDiMount.
3 0-10 low voltage wired dimming not available with REDiMount.
4 IMSBT is field configurable via the LSI app that can be downloaded from your smartphone's native app store.
5 HL not compatible with AirLink, IMSBT, 3000K, or REDiMount.
6 Light fixture engine ships with REDiMount attached.
7 Ideal for 9" to 12" openings.
8 Ideal for 9" openings.

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PERFORMANCE

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Delivered Lumens*

Lumen Package	3000K CCT			4000K CCT			5000K CCT			Wattage
	Delivered Lumens	Efficiency	BUG Ratings	Delivered Lumens	Efficiency	BUG Ratings	Delivered Lumens	Efficiency	BUG Ratings	
10L	9,652	144	B3-U0-G1	9,928	148	B3-U0-G1	10,317	154	B3-U0-G1	67
13L	12,567	140	B3-U0-G1	12,927	144	B3-U0-G1	13,443	149	B3-U0-G1	90
15L	13,999	137	B3-U0-G1	14,399	141	B3-U0-G1	14,963	147	B3-U0-G1	102
20L	18,755	141	B4-U0-G1	19,598	147	B4-U0-G1	20,234	152	B4-U0-G1	133
23L	21,783	141	B4-U0-G2	22,406	145	B4-U0-G2	23,284	150	B4-U0-G2	155
23L (SCFT)	20,886	111	B3-U0-G3	23,187	123	B4-U0-G3	23,101	123	B3-U0-G3	188

*LEDs are frequently updated therefore values are nominal.

Recommended Lumen Maintenance - SCV 15L SC[1]

Ambient Temperature °C	Lumen Multiplier				
	Initial[2]	25k hr[2]	50k hr[2]	75k hr[3]	100k hr[3]
25	102%	97%	92%	88%	84%
30	102%	97%	92%	88%	84%
35	102%	97%	92%	88%	84%
40	102%	97%	92%	88%	84%
45	101%	95%	91%	86%	81%
50	101%	95%	90%	85%	80%

Recommended Lumen Maintenance - SCV 23 SCFT[1]

Ambient Temperature °C	Lumen Multiplier				
	Initial[2]	25k hr[2]	50k hr[2]	75k hr[3]	100k hr[3]
25	105%	88%	73%	61%	51%
30	105%	80%	61%	47%	36%
35	105%	70%	47%	32%	21%

Recommended Lumen Maintenance - SCV 23 SC[1]

Ambient emperature °C	Lumen Multiplier				
	Initial[2]	25k hr[2]	50k hr[2]	75k hr[3]	100k hr[3]
25	102%	97%	92%	88%	84%
30	102%	97%	92%	88%	84%
35	102%	97%	92%	88%	84%
40	101%	96%	91%	86%	82%

Electrical Data - Current draw in AMPS*

Lumen Package	Wattage	120V	208V	240V	277V	347V	480V
10L	67	0.56	0.32	0.28	0.24	0.19	0.14
13L	90	0.75	0.43	0.37	0.32	0.26	0.19
15L	102	0.85	0.49	0.42	0.37	0.29	0.21
20L	133	1.1	0.64	0.55	0.48	0.38	0.28
23L (SC)	155	1.29	0.75	0.65	0.56	0.45	0.32
23L (SCFT)	188	1.57	0.9	0.78	0.68	0.54	0.39

*Electrical data at 25˚C (77F). Actual wattage may differ by +/-10%.

1 Lumen maintenance values at 25˚C are calculated per TM-21 based on LM-80 data and in-situ luminaire testing.
2 In accordance with IESNA TM-21-11, Projected Values represent interpolated value based on time durations that are within six times (6X) the IESNA LM-80-08 total test duration (in hours) for the device under testing ((DUT) i.e. the packaged LED chip).
3 In accordance with IESNA TM-21-11, Calculated Values represent time durations that exceed six times NA LM-80-08 total test duration (in hours) for the device under testing ((DUT) i.e. the packaged LED chip).

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PHOTOMETRICS

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Luminaire photometry has been conducted by a NVLAP accredited testing laboratory in accordance with IESNA LM-79-08. As specified by IESNA LM-79-08 the entire luminaire is tested as the source resulting in a luminaire efficiency of 100%.

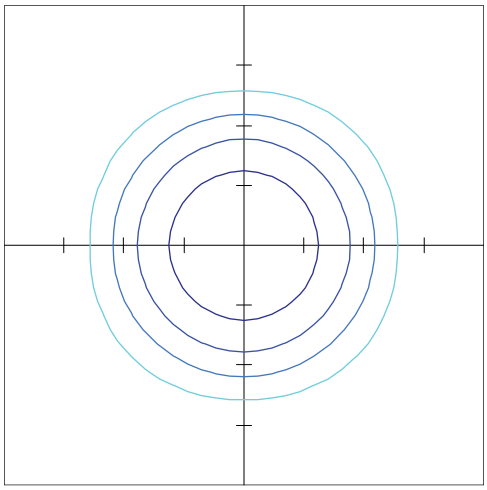
See the individual product page on https://www.lsicorp.com/ for detailed photometric data.

SCV-LED-15L-SC-50

Luminaire Data	
Wide Distribution	
Description	5000 Kelvin, 80 CRI
Delivered Lumens	15,410
Watts	103
Efficacy	150
IES Type	Type VS - Very Short
BUG Rating	B3-U0-G1

Zonal Lumen Summary		
Zone	**Lumens**	**% Luminaire**
Low (0-30°)	4,101.6	26.6%
Medium (30-60°)	8,386.4	54.4%
High (60-80°)	2,748.8	17.8%
Very High (80-90°)	173.4	1.1%
Uplight (90-180°)	0	0.0%
Total Flux	15,410.2	100%

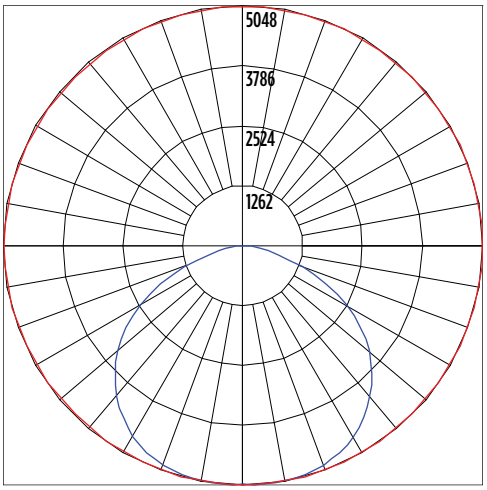
ISO Footcandle



15' Mounting Height / 15' Grid Spacing

5 FC 2 FC 1 FC 0.5 FC

Polar Curve



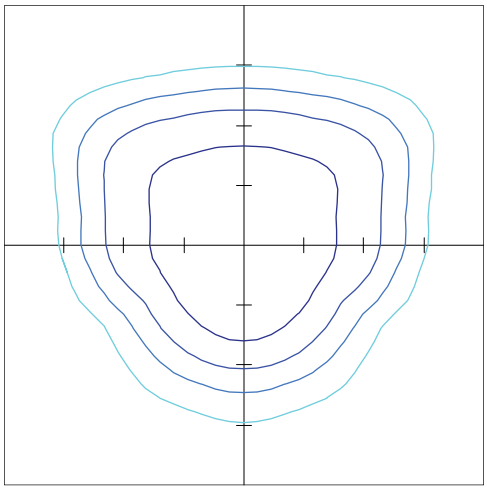
Vertical Plane Horizontal Cone

SCV-LED-23L-SCFT-50

Luminaire Data	
Wide Distribution	
Description	5000 Kelvin, 80 CRI
Delivered Lumens	24,361
Watts	191.5
Efficacy	127
IES Type	Type IV - Short
BUG Rating	B3-U0-G3

Zonal Lumen Summary		
Zone	**Lumens**	**% Luminaire**
Low (0-30°)	4,368.4	17.9%
Medium (30-60°)	12,592.5	51.7%
High (60-80°)	6,960.6	28.6%
Very High (80-90°)	439.5	1.8%
Uplight (90-180°)	0	0.0%
Total Flux	24,361.0	100%

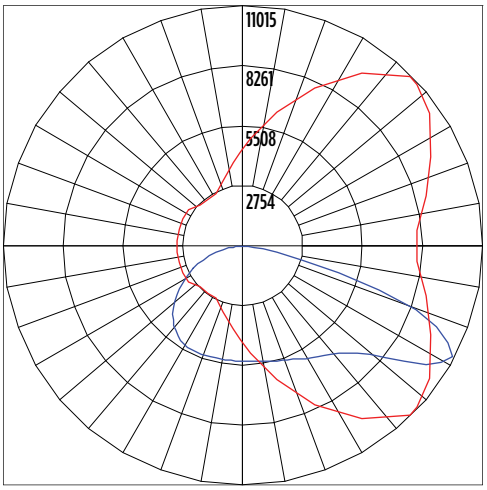
ISO Footcandle



15' Mounting Height / 15' Grid Spacing

5 FC 2 FC 1 FC 0.5 FC

Polar Curve



Vertical Plane Horizontal Cone

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PRODUCT DIMENSIONS

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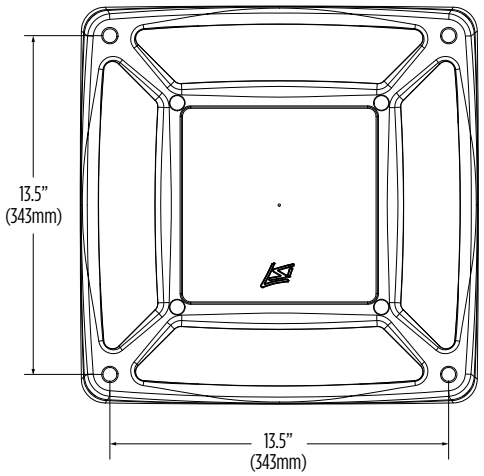
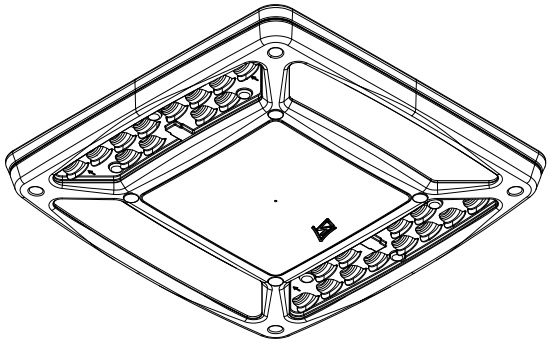
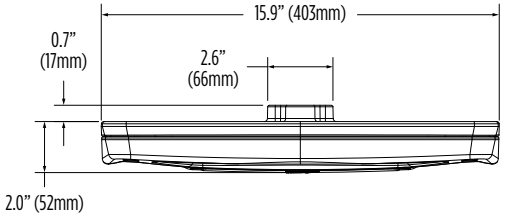
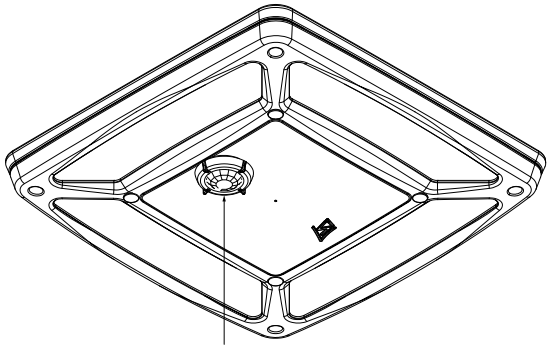


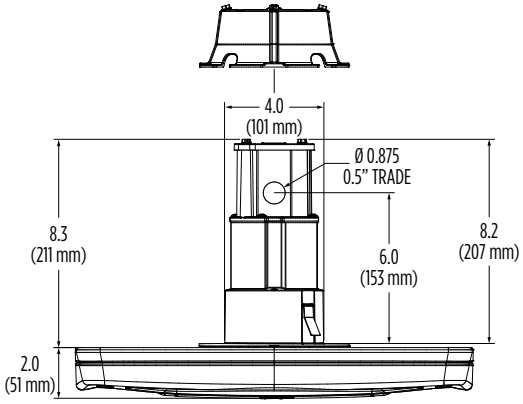


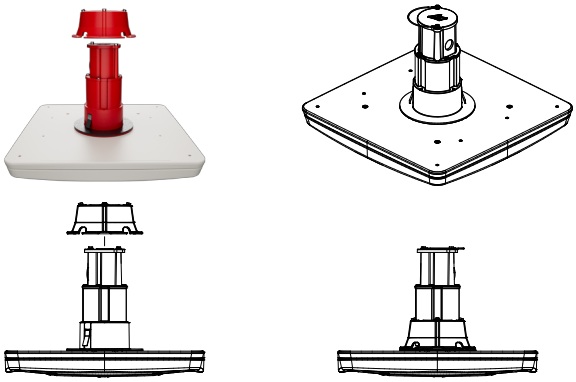
SCFT Distribution



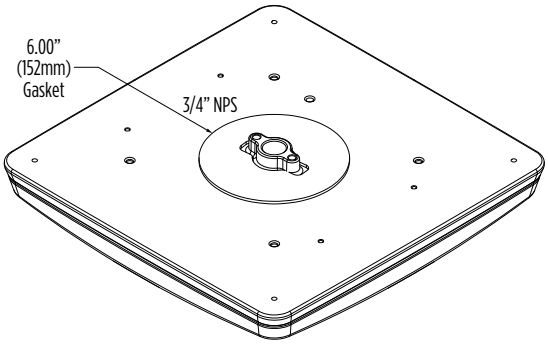


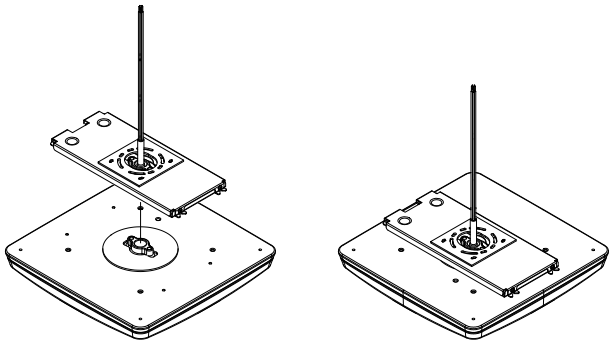
IMSBTxL Option





REDiMount





Direct Mount Accessory

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CONTROLS

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Integral Bluetooth™ Motion and Photocell Sensor (IMSBT1L, IMSBT2L)

Slim low profile sensor provides multi-level control based on motion and/or daylight. Sensor controls 0-10 VDC LED drivers and is rated for cold and wet locations (-30° C to 70° C). Two unique PIR lenses are available and used based on fixture mounting height. All control parameters are adjustable via an iOS or Android App capable of storing and transmitting sensor profiles.

Click here to learn more details about IMSBTxL

AirLink Blue (ALBC, ALBCS1, ALBCS2)

Wireless Bluetooth Mesh Lighting Control System that provides energy savings, code compliance and enhanced safety/security. Three key components; Bluetooth wireless radio/sensor controller, Time Keeper and an App. Capable of grouping multiple fixtures and sensors as well as scheduling time-based events by zone. Radio/Sensor Controller is factory integrated into luminaires.

Click here to learn more details about AirLink Blue

RETROFIT KITS

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LSI Industries offers a full line of Retrofit Kits for existing Encore, Richmond, 2x2 Universal and many more older canopy luminaires.

Click here to learn more details on all our Retrofit Kits

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QuikTrip Store 4452
Lighting Cut Sheets
Building Canopy Lights

XSPS

LED Soffit Light



OVERVIEW	
Lumen Package	4000 - 8000
Wattage Range	43 -59
Efficacy Range (LPW)	96 -104
Weight lbs (kg)	7.6 (3.5)

QUICK LINKS

Ordering Guide | Performance | Photometrics | Dimensions

FEATURES & SPECIFICATIONS

Construction

- Housing is die-formed aluminum with diffuse acrylic lens providing a water-resistant seal. Enclosure contains factory prewired driver and optical unit containing LEDs.
- Recess mount into an enclosed soffit with screws through the mounting frame. 8" clearance required for ease of installation.
- Finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling, and is guaranteed for five full years. Standard color is gloss white.
- Shipping weight: 7.6 lbs in carton.
- Suitable for wet locations.

Optical System

- Symmetric distribution with excellent uniformity and a BUG rating of B2-UO-G1. Diffuse lens is standard to minimizing visibility of LEDs.
- Select high-brightness LEDs.
- Available in 5000K, 4000K and 3000K
- Color temperatures per ANSI C78.377.
- Minimum CRI of 80.

Electrical

- High-performance factory programmable driver features over-voltage, under voltage, short-circuit and over temperature protection with integral surge protection that meets IEEE C62.41.2 and ANSI C82.77. -5 Location Category C Low standards.
- 0-10 volt dimming (10% - 100%) standard.
- 120-347VAC 50/60Hz
- Thermal protector standard on 5000-8000 lumen versions.
- L80 Calculated Life: >100k Hours (See Lumen Maintenance chart)
- Total harmonic distortion: <20%
- Operating temperature: -40°C to 40°C (-40°F to 104°F) for HO and VHO. -40°C to 45°C (-40°F to 113°F) for SS. -40°C to 35°C (-40°F to 95°F) for SHO .
- Power factor: >0.90
- Input power stays constant over life.
- High-efficacy LEDs with integrated circuit board mount to the housing to maximize heat dissipation and promote long life.
- Driver components are fully encased in potting material for moisture resistance. Driver complies with FCC standards.

Warranty

- LSI luminaires carry a 5-year limited warranty. Refer to https://www.lsicorp.com/resources/terms-conditions-warranty/ for more information.

Listings

- Listed to UL 1598 and UL 8750
- Suitable For Damp Locations
- Meets Buy American Act requirements.
- DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.
- IDA compliant with 3000K or lower color temperature.

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XSPS LED Soffit Light

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ORDERING GUIDE

TYPICAL ORDER EXAMPLE: **XSPS S LED SS CW 120 GWT DFL**

Prefix	Distribution	Light Source	Drive Current	Color Temperature	Input Voltage	Finish	Lens	Options
XSPS - LED Soffit	**S -** Symmetric	**LED**	**SS -** 4,000 Lumens **HO -** 5,000 Lumens **VHO -** 6,000 Lumens **SHO -** 8,000 Lumens	**CW -** 5000K 80 CRI **NW -** 4000K 80 CRI **WW -** 3000K 80 CRI	**120 -** 120V **208 -** 208V **240 -** 240V **277 -** 277V **347 -** 347V	**GWT -** Gloss White	**DFL -** Diffused Acrylic Lens	**CMT -** Channel Bar Mounting Kit **BB -** Emergency Battery Pack[1]

1 - Emergency Battery Pack only available on the SS - 4000 lumen version (120, 208, 240 & 277V versions).

PERFORMANCE

DELIVERED LUMENS

Lumen Package	Distribution	Lens Type	CRI	3000K CCT			4000K CCT			5000K CCT			Wattage
				Delivered Lumens	Efficacy	Bug Rating	Delivered Lumens	Efficacy	Bug Rating	Delivered Lumens	Efficacy	Bug Rating	
SS	S	DFL	80	3816	123	B2-U0-G1	4022	129	B2-U0-G1	3966	128	B2-U0-G1	31
HO	S	DFL	80	4756	120	B2-U0-G1	5011	127	B2-U0-G1	4941	125	B2-U0-G1	40
VHO	S	DFL	80	5733	118	B2-U0-G1	6041	124	B2-U0-G1	5957	122	B2-U0-G1	49
SHO	S	DFL	80	7559	113	B3-U0-G1	7965	119	B3-U0-G1	7853	118	B3-U0-G1	67

LEDs are frequently updated therefore values are nominal.

Electrical Data (Amps)*

Lumen Package	Wattage	120V	208V	240V	277V	347V
SS	31	0.26	0.15	0.13	0.11	0.09
HO	40	0.33	0.19	0.16	0.14	0.11
VHO	49	0.41	0.23	0.2	0.18	0.14
SHO	67	0.56	0.32	0.28	0.24	0.19

*Electrical data at 25C (77F). Actual wattage may differ by +/-10%.

RECOMMENDED LUMEN MAINTENANCE

Ambient Temp C	Initial[1]	25K hrs.[1]	50K hrs.[1]	75K hrs.[2]	100K hrs.[2]
25 C	100%	95%	91%	86%	82%

1 - In accordance with IESNA TM-21-11, Projected Values represent interpolated value based on time durations that are within six times the IESNA LM-80-08 total test duration for the device under testing.
2 - In accordance with IESNA TM-21-11, Calculated Values represent time durations that exceed six times the IESNA LM-80-08 total test duration for the device under testing.

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PHOTOMETRICS

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Luminaire photometry has been conducted by a NVLAP accredited testing laboratory in accordance with IESNA LM-79-08. As specified by IESNA LM-79-08 the entire luminaire is tested as the source resulting in a luminaire efficiency of 100%.

For complete specifications and IES files, see website.

XSPS S LED HO NW DFL

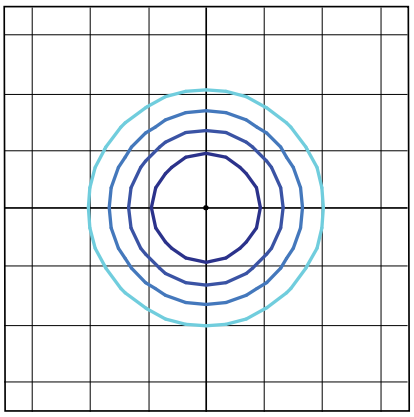
Luminaire Data

Type S Distribution	
Description	4000 Kelvin, 70 CRI
Delivered Lumens	5,011
Watts	39.5
Efficacy	127
IES Type	Type VS - Very Short
BUG Rating	B2-U0-G1

Zonal Lumen Summary

Zone	Lumens	%Luminaire
Low (0-30°)	1536	31%
Medium (30-60°)	2565	51%
High (60-80°)	826	16%
Very High (80-90°)	84	2%
Uplight (90-180°)	0	0%
Total Flux	5011	100%

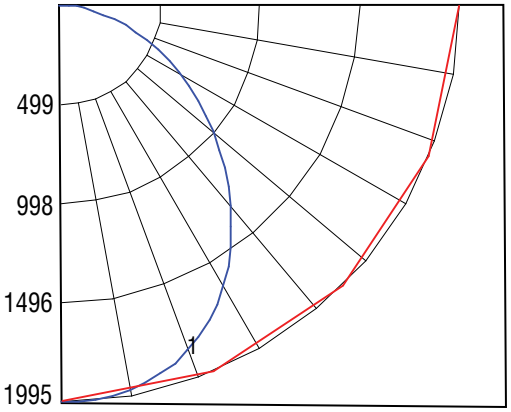
ISO FOOTCANDLE PLOT



10' Mounting Height/10' Grid Spacing

5 FC 2 FC 1 FC 0.5 FC

POLAR CURVE



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PRODUCT DIMENSIONS

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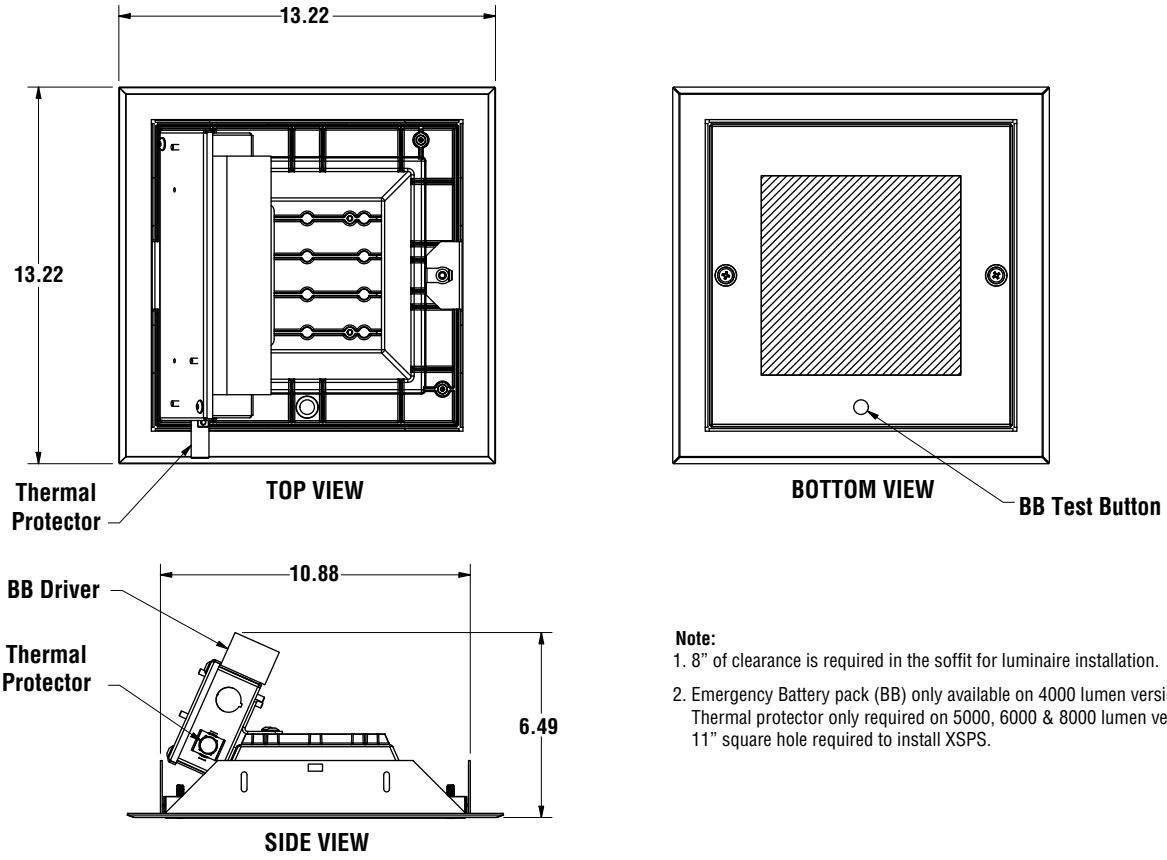

Note:
1. 8” of clearance is required in the soffit for luminaire installation.
2. Emergency Battery pack (BB) only available on 4000 lumen version. Thermal protector only required on 5000, 6000 & 8000 lumen versions. 11” square hole required to install XSPS.

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QuikTrip Store 4452
Lighting Cut Sheets
Building Wall Sconce

Mirada Medium Wall Sconce (XWM)

Outdoor Wall Sconce

IK08



OVERVIEW	
Lumen Range	3,000 - 21,000
Wattage Range	23 - 175
Efficacy Range (LPW)	125 - 158
Weight lbs(kg)	30 (13.6)

QUICK LINKS

Ordering Guide | Performance | Photometrics | Dimensions

FEATURES & SPECIFICATIONS

Construction

- Rugged die-cast aluminum housing contains factory prewired driver and optical unit. Hinged die-cast aluminum wiring access door located underneath.
- Galvanized-steel universal wall mount bracket comes standard with hinging mechanism to easily access the junction box wire connections without removing the luminaire.
- Optional pole-mounting bracket (XPMA) permits mounting to standard poles.
- Fixtures are finished with LSI's DuraGrip® polyester powder coat finishing process. The DuraGrip finish withstands extreme weather changes without cracking or peeling. Other standard LSI finishes available. Consult factory.
- Shipping weight: 30 lbs in carton.

Optical System

- State-of-the-Art one piece silicone optic sheet delivers industry leading optical control with an integrated gasket to provide IP65 rated sealed optical chamber in 1 component.
- Proprietary silicone refractor optics provide exceptional coverage and uniformity in Types 2, 3, and Forward Throw (FT) distributions.
- Silicone optical material does not yellow or crack with age and provides a typical light transmittance of 93%.
- Zero uplight.
- Available in 5000K, 4000K and 3000K color temperatures per ANSI C78.377. Also Available in Phosphor Converted Amber with Peak intensity at 610nm.
- Minimum CRI of 70.

Electrical

- High-performance programmable driver features over-voltage, under-voltage, short-circuit and over temperature protection. Custom lumen and wattage packages available.
- 0-10V dimming (10% - 100%) standard.
- Standard Universal Voltage (120-277 Vac) Input 50/60 Hz or optional High Voltage (347-480 Vac).
- L80 Calculated Life: >100k Hours
- Total harmonic distortion: <20%
- 3L to 12L operating temperature: -40°C to +50°C (-40°F to +122°F)
- 15L operating temperature: -40°C to +45°C (-40°F to +113°F).
- 18L operating temperature: -40°C to +40°C (-40°F to +104°F).
- 21L operating temperature: -40°C to +35°C (-40°F to + 95°F).
- Power factor: >.90
- Input power stays constant over life.
- Optional 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).
- High-efficacy LEDs mounted to metal-core circuit board to maximize heat dissipation
- Components are fully encased in potting material for moisture resistance. Driver complies with FCC standards. Driver and key electronic components can easily be accessed via hinged door.
- Optional integral emergency battery pack provides 90-minutes of constant power to the LED system, ensuring code compliance. A test switch/indicator button is installed on the housing for ease of maintenance. The fixture delivers 1500 lumens during emergency mode.

Controls

- Integral passive infrared Bluetooth™ motion and photocell sensor options. Fixtures operate independently and can be commissioned via an iOS or Android configuration app. Updates and modifications to the control strategy are easily implemented via an intuitive app.
- LSI's AirLink™ Blue lighting control system is a simple feature rich wireless Bluetooth mesh network. The integrated fixture sensor module provides wireless control of grouped fixtures based on motion sensors, daylight or a fully customizable schedule.

Installation

- Universal wall mounting plate easily mounts directly to 4" octagonal or square junction box.
- 2 fasteners secure the hinged door underneath the housing and provide quick & easy access to the electrical compartment for installing/servicing.
- Optional terminal block accepts up to 12 ga wire.

Warranty

- LSI LED Fixtures carry a 5-year warranty.
- 1 Year warranty on Battery Back-up option.

Listings

- Listed to UL 1598 and UL 8750.
- Meets Buy American Act requirements.
- IDA compliant; with 3000K or lower color temperature selection.
- Title 24 Compliant; see local ordinance for qualification information.
- Suitable for wet Locations.
- IP65 rated luminaire per IEC 60598.
- 3G rated for ANSI C136.31 high vibration applications when pole mounted (using optional XPMA bracket) or wall mounted.
- IK08 rated luminiare per IEC 66262 mechanical impact code
- DesignLights Consortium® (DLC) qualified product. Not all versions of this product may be DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

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Mirada Wall Sconce (XWM)

ORDERING GUIDE

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TYPICAL ORDER EXAMPLE: **XWM 2 LED 03L 30 UE BRZ ALSC**

Family	Distribution	LED Technology	Lumen Package	Color Temperature	Voltage
XWM - Mirada Medium Wall Sconce	**2** - Type 2 **3** - Type 3 **FT** - Type 4 Forward Throw	**LED**	**3L** - 3,000 lms **4L** - 4,000 lms **6L** - 6,000 lms **8L** - 8,000 lms **12L** - 12,000 lms **15L** - 15,000 lms **18L** - 18,000 lms **21L** - 21,000 lms **Custom Lumen Packages**[6]	**30** - 3000K **40** - 4000K **50** - 5000K **AMB** - Phosphor Converted Amber[1]	**UE** - Universal Voltage (120-277V) **HV** - High Voltage (347-480V)

Finish	Controls (Choose One)	Options
BLK - Black **BRZ -** Dark Bronze **GMG -** Gun Metal Gray **GPT -** Graphite **MSV -** Metallic Silver **PLP -** Platinum Plus **SVG -** Satin Verde Green **WHT -** White	**Wireless Controls** **ALSC** - Airlink Synapse Control System **ALSCS01** - AirLink Synapse Control System with 8-12' Motion Sensor **ALSCS02** - AirLink Synapse Control System with 12-20' Motion Sensor **ALBCS1** - AirLink Blue Wireless Motion & Photo Sensor Controller (8-24' mounting height) **ALBCS2** - AirLink Blue Wireless Motion & Photo Sensor Controller (25-40' mounting height) **Standalone Controls** **DIM** - 0-10v Dimming leads extended to housing exterior **IMSBT1-** Integral Bluetooth™ Motion and Photocell Sensor max 8-24' mounting height[4] **IMSBT2-** Integral Bluetooth Motion and Photocell Sensor max 25-40' mounting height[4] **Button Type Photocells** **PCI120** - 120V **PCI208-277** - 208 -277V **PCI347** - 347V	**BB** - Battery Back-up (0°C)[2] **CWBB** - Cold Weather Battery Backup (-20°C)[2] **XPMA** - Pole Mounting Bracket **SP1** - 10kV Surge Protection **TB** - Terminal Block

ACCESSORY ORDERING INFORMATION[7]

Description	Order Number	Description	Order Number
XWM Surface Wiring Box	356915CLR	FK347 - Single Fusing	FK347[5]
10' Linear Bird Spike Kit (2' Recommended per Luminaire)	751632	DFK - Double Fusing	DFK208[5]
FK120 - Single Fusing	FK120[5]	DFK - Double Fusing (240V)	DFK240[5]
FK277 - Single Fusing	FK277[5]	DFK - Double Fusing (480V)	DFK480[5]

1. Only available in 6L Lumen Package. Consult factory for lead time and availability.
2. Not available in HV.
3. Consult Factory for Site Layout.
4. IMSBT is field configurable via the LSI app that can be downloaded from your smartphone's native app store.
5. Fusing must be located in a hand hole for pole or in the junction box.
6. Custom lumen and wattage packages available consult factory. Values are within industry standard tolerances but not DLC listed.
7. Accessories are shipped separately and field installed.

Mirada Wall Sconce (XWM)

PERFORMANCE

Back to Quick Links

DELIVERED LUMENS*

Lumen Package	Distribution	CRI	3000K			4000K			5000K			Wattage
			Delivered Lumens	Efficacy	BUG Rating	Delivered Lumens	Efficacy	BUG Rating	Delivered Lumens	Efficacy	BUG Rating	
03L	2	70	3178	138	B1-U0-G1	3368	146	B1-U0-G1	3313	143	B1-U0-G1	23
	3	70	3224	140	B1-U0-G1	3416	148	B1-U0-G1	3361	145	B1-U0-G1	
	FT	70	3160	137	B1-U0-G1	3349	145	B1-U0-G1	3294	143	B1-U0-G1	
04L	2	70	4230	139	B1-U0-G1	4483	147	B1-U0-G1	4410	145	B1-U0-G1	30
	3	70	4291	141	B1-U0-G1	4547	150	B1-U0-G1	4473	147	B1-U0-G1	
	FT	70	4206	138	B1-U0-G1	4458	147	B1-U0-G1	4385	144	B1-U0-G1	
06L	2	70	6326	134	B2-U0-G1	6704	142	B2-U0-G2	6595	140	B2-U0-G2	47
	3	70	6417	136	B1-U0-G2	6800	144	B1-U0-G2	6689	142	B1-U0-G2	
	FT	70	6290	134	B2-U0-G2	6666	142	B2-U0-G2	6557	139	B2-U0-G2	
08L	2	70	8166	128	B2-U0-G2	8654	135	B2-U0-G2	8513	133	B2-U0-G2	64
	3	70	8283	129	B2-U0-G2	8778	137	B2-U0-G2	8635	134	B2-U0-G2	
	FT	70	8120	126	B2-U0-G2	8605	134	B2-U0-G2	8465	132	B2-U0-G2	
12L	2	70	11902	146	B3-U0-G2	12358	151	B3-U0-G2	12927	158	B3-U0-G2	82
	3	70	11834	145	B2-U0-G2	12287	150	B2-U0-G2	12853	157	B2-U0-G2	
	FT	70	11737	143	B2-U0-G2	12186	149	B2-U0-G2	12747	156	B2-U0-G2	
15L	2	70	14662	140	B3-U0-G3	15223	145	B3-U0-G3	15924	152	B3-U0-G3	105
	3	70	14603	139	B2-U0-G2	15162	145	B2-U0-G3	15860	151	B2-U0-G3	
	FT	70	14502	139	B2-U0-G3	15057	144	B2-U0-G3	15750	150	B2-U0-G3	
18L	2	70	17403	134	B3-U0-G3	18069	139	B3-U0-G3	18901	145	B3-U0-G3	130
	3	70	17438	134	B3-U0-G3	18106	139	B3-U0-G3	18940	146	B3-U0-G3	
	FT	70	17259	133	B3-U0-G3	17920	138	B3-U0-G3	18745	144	B3-U0-G3	
21L	2	70	20380	127	B3-U0-G3	21160	132	B3-U0-G3	22134	138	B4-U0-G3	161
	3	70	20375	125	B3-U0-G3	21155	131	B3-U0-G3	22129	131	B3-U0-G3	
	FT	70	20215	126	B3-U0-G3	20989	130	B3-U0-G3	21955	136	B3-U0-G3	

*LEDs are frequently updated therefore values are nominal.

ELECTRICAL DATA*

Lumen Package	120V	208V	240V	277V	347V	480V
03L	0.19	0.11	0.10	0.08	0.07	0.05
04L	0.25	0.15	0.13	0.11	0.09	0.06
06L	0.39	0.23	0.20	0.17	0.14	0.10
08L	0.54	0.31	0.27	0.23	0.19	0.13
12L	0.68	0.39	0.34	0.30	0.24	0.17
15L	0.87	0.50	0.44	0.38	0.30	0.22
18L	1.08	0.63	0.54	0.47	0.37	0.27
21L	1.34	0.77	0.67	0.58	0.46	0.34

*Electrical data at 25C (77F). Actual wattage may differ by +/-10%.

DELIVERED LUMENS*

Lumen Package	Distribution	Amber			Wattage
		Delivered Lumens	Efficacy	BUG Rating	
6L	2	3325	76	B1-U0-G1	43.5
	3	3385	78	B1-U0-G1	
	FT	3343	77	B1-U0-G1	

RECOMMENDED LUMEN MAINTENANCE (3L-8L)[1]

Ambient Temperature C	Initial [2]	25K hrs.[2]	50K hrs.[3]	75K hrs.[3]	100K hrs.[3]
0 C - 50 C	100%	98%	95%	93%	90%

RECOMMENDED LUMEN MAINTENANCE (12L-21L)[1]

Ambient Temperature C	Initial [2]	25K hrs.[2]	50K hrs.[3]	75K hrs.[3]	100K hrs.[3]
0 - 35 C	99%	97%	95%	93%	91%

1 - Lumen maintenance values at 25C are calculated per TM-21 based on LM-80 data and in-situ testing.
2 - In accordance with IESNA TM-21-11, Projected Values represent interpolated value based on time durations that are within six times the IESNA LM-80-08 total test duration for the device under testing.
3 - Lumen maintenance values at 25C are calculated per TM-21 based on LM-80 data and in-situ testing times the IESNA LM-80-08 total test duration for the device under testing

PHOTOMETRICS

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All published luminaire photometric testing performed to IESNA LM-79 standards. ISO footcandle plots below demonstrate the Mirada Wall Sconce (XWM) light patterns only. Not for total fixture output. For complete specifications and IES files, see website.

XWM-2-LED-6L-40

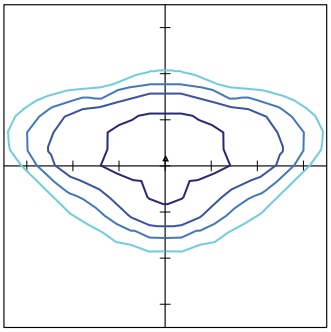
LUMINAIRE DATA

Type 2 Distribution	
Description	4000 Kelvin, 70 CRI
Delivered Lumens	6,025
Watts	44.7
Efficacy	135
IES Type	Type III - Medium
BUG Rating	B2-U0-G2

Zonal Lumen Summary

Zone	Lumens	%Luminaire
Low (0-30)°	807.1	13.4%
Medium (30-60)°	3301.0	54.8%
High (60-80)°	1847.4	30.7%
Very High (80-90)°	69.2	1.1%
Uplight (90-180)°	0.0	0.0%
Total Flux	6024.7	100%

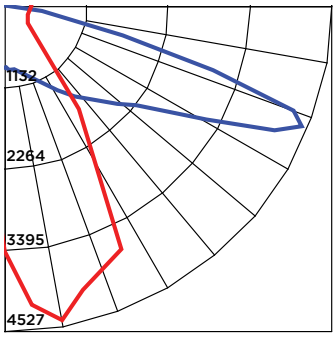
ISO FOOTCANDLE PLOT



15' Mounting Height / 10' Grid Spacing

5 FC 2 FC 1 FC 0.5 FC

POLAR CURVE



XWM-3-LED-6L-40

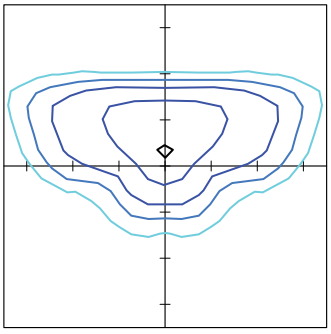
LUMINAIRE DATA

Type 3 Distribution	
Description	4000 Kelvin, 70 CRI
Delivered Lumens	6,133
Watts	44.7
Efficacy	137
IES Type	Type III - Medium
BUG Rating	B1-U0-G2

Zonal Lumen Summary

Zone	Lumens	%Luminaire
Low (0-30)°	567.4	9.3%
Medium (30-60)°	3106.3	50.6%
High (60-80)°	2368.8	38.6%
Very High (80-90)°	90.7	1.5%
Uplight (90-180)°	0.0	0.0%
Total Flux	6133.2	100%

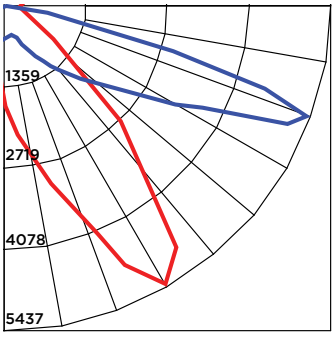
ISO FOOTCANDLE PLOT



10' Mounting Height / 10' Grid Spacing

5 FC 2 FC 1 FC 0.5 FC

POLAR CURVE



XWM-FT-LED-6L-40

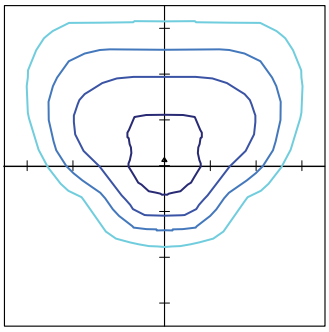
LUMINAIRE DATA

Type FT Distribution	
Description	4000 Kelvin, 70 CRI
Delivered Lumens	6,058
Watts	44.7
Efficacy	136
IES Type	Type IV - Short
BUG Rating	B1-U0-G2

Zonal Lumen Summary

Zone	Lumens	%Luminaire
Low (0-30)°	779.0	12.9%
Medium (30-60)°	2584.4	42.7%
High (60-80)°	2523.2	41.7%
Very High (80-90)°	170.8	2.8%
Uplight (90-180)°	0.0	0.0%
Total Flux	6057.4	100.0%

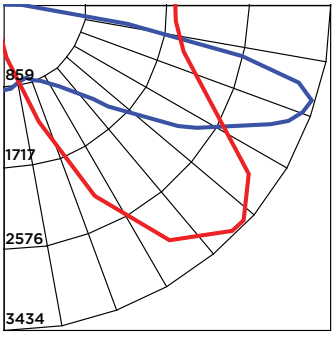
ISO FOOTCANDLE PLOT



10' Mounting Height / 10' Grid Spacing

5 FC 2 FC 1 FC 0.5 FC

POLAR CURVE



Mirada Wall Sconce (XWM)

PRODUCT DIMENSIONS

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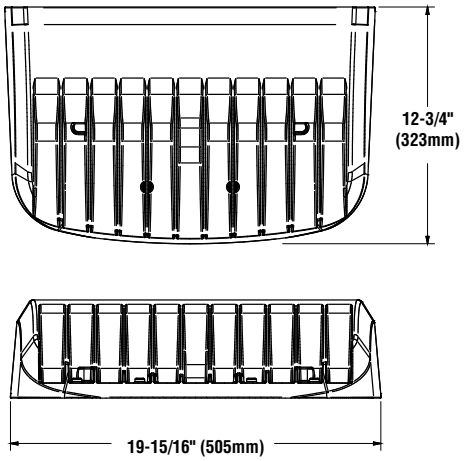
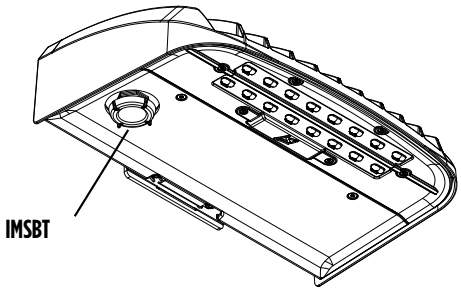
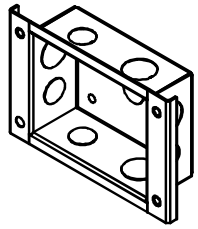


Luminaire Shown with IMSBT

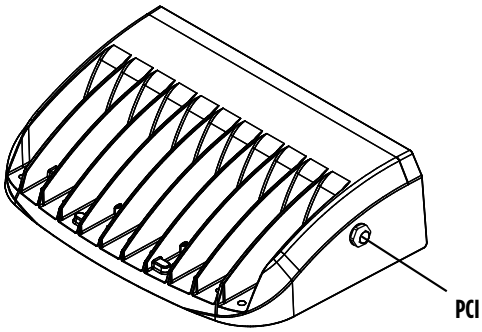


Surface Wiring Box



Wet location rated surface wiring box features 1/2" and 3/4" knockouts for surface conduit

Luminaire Shown with PCI



CONTROLS

AirLink Wireless Lighting Controller

The AirLink integrated controller is a California Title 24 compliant lighting controller that provides real-time light monitoring and control with utility-grade power monitoring. It includes a 24V sensor input and power supply to connect a sensor into the outdoor AirLink wireless lighting system. The wireless integrated controller is compatible with this fixture.

Click here to learn more about AirLink.

Integral Bluetooth™ Motion and Photocell Sensor (IMSBT)

Slim low profile sensor provides multi-level control based on motion and/or daylight. Sensor controls 0-10 VDC LED drivers and is rated for cold and wet locations (-30° C to 70° C). Two unique PIR lenses are available and used based on fixture mounting height. All control parameters are adjustable via an iOS or Android App capable of storing and transmitting sensor profiles.

Click here to learn more about IMSBT.

AirLink Blue

Wireless Bluetooth Mesh Outdoor Lighting Control System that provides energy savings, code compliance and enhanced safety/security for parking lots and parking garages. Three key components; Bluetooth wireless radio/sensor controller, Time Keeper and an iOS App. Capable of grouping multiple fixtures and sensors as well as scheduling time-based events by zone. Radio/Sensor Controller is factory integrated into Area/Site, Wall Mounted, Parking Garage and Canopy luminaires.

Click here to learn more about AirLink Blue.

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QuikTrip Store 4452
Lighting Cut Sheets
Light Poles

Steel Poles

Square Straight



QUICK LINKS

Ordering Guide | Configurations | Dimensions | EPA

FEATURES & SPECIFICATIONS

Pole Shaft

- Straight poles are 4”, 5”, or 6” square.
- Pole shaft is electro-welded ASTM-A500 Grade C steel tubing with a minimum yield strength of 50,000 psi.
- On Tenon Mount steel poles, tenon is 2-3/8” O.D. high-strength pipe. Tenon is 4-3/4” in length.

Hand-Hole

- Standard hand-hole location is 12” above pole base.
- Poles 22’ and above have a 3” x 6” reinforced hand-hole. Shorter poles have a 2” x 4” non-reinforced hand-hole.

Base

- Pole base is ASTM-A36 hot-rolled steel plate with a minimum yield strength of 36,000 psi.
- Two-piece square base cover is optional.

Anchor Bolts

- Poles are furnished with anchor bolts featuring zinc-plated double nuts and washers. Galvanized anchor bolts are optional.
- Anchor Bolts conform to ASTM F 1554-07a Grade 55 with a minimum yield strength of 55,000 PSI.

Ground Lug

- Ground lug is standard.

Duplex Receptacle

- Weatherproof duplex receptacle is optional.

Ground Fault Circuit Interrupter

- Self-testing Ground fault circuit interrupter is optional.

Finishes

- Every pole is provided with the DuraGrip Protection System and a 5-year limited warranty:
- When the top-of-the line DuraGrip Plus Protection System is selected, in addition to the DuraGrip Protection System, a non-porous, automotive-grade corrosion coating is applied to the lower portion of the pole interior sealing and further protecting it from corrosion. This option extends the limited warranty to 7 years.

Determining The Luminaire/Pole Combination For Your Application:

- Select luminaire from luminaire ordering information.
- Select bracket configuration if required
- Determine EPA value from luminaire/ bracket EPA chart
- Select Pole Height
- Select MPH to match wind speed in the application area (See windspeed maps).
- Confirm pole EPA equal to or exceeding value of luminaire/bracket EPA
- Consult factory for special wind load requirements and banner brackets.

Pole Vibration Damper

- A pole vibration damper is recommended in open terrain areas of the country where low steady state winds are common.
- Non-tapered poles and lightly loaded poles are more susceptible to destructive vibration if a damper is not installed.

Listings

- UL Listed
- BAA/TAA Compliant

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Steel Poles Square Straight

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ORDERING GUIDE

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TYPICAL ORDER EXAMPLE: 4SQ B3 S11G 24 S PLP DGP

Pole Series	Mounting Method	Material	Height [2]	Mounting Configuration	Pole Finish	Options
4SQ - 4" x 4" Square Straight Pole (New Build) **5SQ** - 5" x 5" Square Straight Pole (New Build) **6SQ** - 6" x 6" Square Straight Pole (New Build) **4SQU** - 4" x 4" Square Straight Pole (Retrofit) **5SQU** - 5" x 5" Square Straight Pole (Retrofit) **6SQU** - 6" x 6" Square Straight Pole (Retrofit)	**Bolt-On Mount**[1] - See pole selection guide for patterns and fixture matches **B5** - 5" Traditional Drilling Pattern **B3** - 3" Reduced Drilling Pattern **B2** - 2" Reduced Drilling Pattern **T** - Tenon Mount - See pole selection guide for tenon and fixture/bracket matches **I** - No Mounting Holes[1]	**S11G** – 11 Ga. Steel (4SQ/4SQU and 5SQ/5SQU Only) **S07G** – 07 Ga. Steel	**8'** **10'** **12'** **13'** **14'** **15'** **16'** **17'** **17'6"** **18'** **20'** **22'** **22'6"** **23'** **24'** **25'** **26'** **27'** **28'** **30'** **32'** **35'** **39'**	**S** – Single/Parallel **D180** – Double **D90** – Double **DN90** – Double **T90** – Triple **TN120** – Triple **Q90** – Quad **QN90** – Quad **N** – Tenon Mount (Standard Tenon size is 2-3/8" O.D.)[8] **(Blank)** - Use with I for Mounting Method	**BRZ** – Bronze **BLK** – Black **PLP** – Platinum Plus **WHT** – White **SVG** – Satin Verde Green **GPT** – Graphite **MSV** – Metallic Silver **BZA** – Alternate Bronze	**GA** – Galvanized Anchor Bolts **SF** – Single Flood[3] **DF** – Double Flood[3] **DGP** – DuraGrip® Plus **LAB** – Less Anchor Bolts **CRXX** - Conduit Raceway[4]

Need more information?
Click here for our glossary

Have additional questions?
Call us at (800) 436-7800

ACCESSORY ORDERING INFORMATION

Part Number	Description
122559CLR	4BC – 4" Square Base Cover
122561CLR	5BC – 5" Square Base Cover
122563CLR	6BC – 6" Square Base Cover
132488CLR	5BC - 5' Square Universal Base Cover
131252CLR	6BC - 6' Square Universal Base Cover
122566CLR	ER2 – Weatherproof Duplex Receptacle
122567CLR	GFI – Ground Fault Circuit Interrupter
132336	MH5 - mounting Hole Plugs for use with 5" traditional drill pattern (3 set of 3 plugs)
681126	MH3 - mounting Hole Plugs for use with 3" reduced drill pattern (3 set of 3 plugs)
725841	MH2 - Mounting Hole Plugs for use with 2" reduced drill pattern (3 sets of 3 plugs)
172539	Vibration Damper - 4" Square Pole (bolt-on mount only)
172538	Vibration Damper - 5" Square Pole (bolt-on mount only)
178361	Vibration Damper - 6" Square Pole (bolt-on mount only)

ANCHOR BOLT KIT ORDERING INFORMATION

Part Number	Description
AB KIT 122584	4SQ S11G/S07G Anchor Bolts (Steel Plated)
AB KIT 122609	4SQ S11G/S07G Anchor Bolts (Galvanized)
AB KIT 1225850	5SQ S11G Anchor Bolts (Steel Plated)
AB KIT 122610	5SQ S11G Anchor Bolts (Galvanized)
AB KIT 122586	5SQ S07G Anchor Bolts (Steel Plated)
AB KIT 122611	5SQ S07G Anchor Bolts (Galvanized)
AB KIT 122612	6SQ S07G Anchor Bolts (Galvanized)

1 - See Area Light Brackets - 3" Reduced Drill Pattern and Area Light Brackets - 5" Traditional Drill Pattern Spec Sheets.
2 - Pole heights will have +/- 1/2" tolerance.
3 - See Flood Lighting Brackets section for choice of FBO brackets.
4 - CR selection must indicate required height and side of pole mounting location. Mounting template required at time of order.

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Steel Poles Square Straight

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DRILLING LOCATIONS

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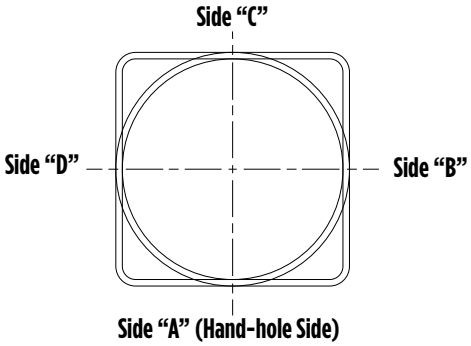
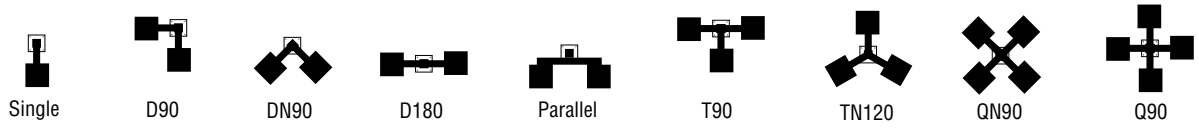
Sides	A	B	C	D
Hand-hole	X			
Single	X			
D180		X		X
D90	X			X
DN90[1]				
T90	X	X		X
TN120[2]				
Q90	X	X	X	X
QN90[3]				
Single FBO	X			
Double FBO		X		X



1 - Two locations will be 45° to the left and right of Side A.
2 - Other two locations will be 120° to the left and right of Side A.
3 - Two locations will be 45° to the left and right of Side A and two locations will be 135° to the left and right of Side A.

Consult factory for custom variations. Standard SF and DF pole preparations are located 3/4 of the height of the pole from the base, except on 20' poles. Maximum height for SF and DF pole preparations on 20' poles is 13' from the base.

FIXTURE CONFIGURATIONS



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BOLT CIRCLE

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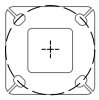
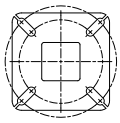
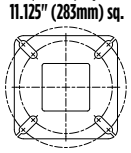
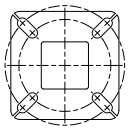
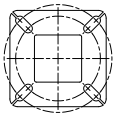
STANDARD BASEPLATE

	4" (102mm) square 10-1/8" (257mm) sq.	5" (127mm) square 10-1/8" (257mm) sq.	5" (127mm) square 10-1/8" (257mm) sq.	6" (152mm) square 12" (305mm) sq.
				
	11" (279mm) Dia. Bolt Circle	11" (279mm) Dia. Bolt Circle	11" (279mm) Dia. Bolt Circle	12" (305mm) Dia. Bolt Circle
Bolt Circle Designator	**B**	**C**	**D**	**J**
Bolt Circle	Slotted 8"-11" (203mm-279mm)	Slotted 9"-11" (229mm-279mm)	Slotted 9"-11" (229mm-279mm)	Slotted 12" (305mm)
Anchor Bolt Size	3/4" x 24" (19mm x 609mm)	3/4" x 24" (19mm x 609mm)	1"x30" (25mm x 762mm)	1"x30" (25mm x 762mm)
Anchor Bolt Projection	3-1/4" (83mm)	3-1/4" (83mm)	4" (102mm)	4" (102mm)
Base Plate Opening for Wireway Entry	3-5/8" (92mm)	4-3/4" (121mm)	4-5/8" (117mm)	5-5/8" (143mm)
Base Plate Dimensions	10-1/8" sq. x 3/4" thk. (257mm x 19mm)	10-1/8" sq. x 3/4" thk. (257mm x 19mm)	10-1/8" sq. x 1" thk. (257mm x 25mm)	12" sq. x 1-1/8" thk. (305mm x 29mm)
Pole Gauge	11	11	7	7

Note: Base plate illustrations may change without notice. Do not use for setting anchor bolts. Consult factory for the appropriate anchor bolt template.

UNIVERSAL BASEPLATE

	4" (102mm) square 10.5" (267mm) sq.	5" (127mm) square 11.125" (283mm) sq.	5" (127mm) square 11.75" (298mm) sq.	6" (152mm) square 12-1/2" (318mm) sq.
				
	4SQ	5SQ	5SQ	14" (356mm) Dia. Bolt Circle
Bolt Circle Designator	**E**	**F**	**G**	**H**
Bolt Circle	Slotted 9"-12"	Slotted 10-13"	Slotted 10-13"	Slotted 11"-14" (279mm-356mm)
Anchor Bolt Size	3/4" x 24" (19mm x 609 mm)	3/4x 24" (19mm x 609 mm)	1"x30" (25mm x 762mm)	1"x30" (25mm x 762mm)
Anchor Bolt Projection	3-1/4" (83 mm)	3-1/4" (83 mm)	4" (102 mm)	4" (102mm)
Base Plate Opening for Wireway Entry	3-5/8" (92mm)	4-3/4" (121mm)	5-1/8" (130 mm)	5-5/8" (143mm)
Base Plate Dimensions	10-1/2" sq. x 3/4" thk. (267 mm x 19 mm)	11-1/8 sq. x 3/4" thk. (283 mm x 19 mm)	11-3/4" sq. x 1" thk. (298 mm x 25 mm)	12 1/2" sq. x 1 1/8" thk. (318mm x 29mm)
Pole Gauge	11	11	7	7

Note: Base plate illustrations may change without notice. Do not use for setting anchor bolts. Consult factory for the appropriate anchor bolt template.

1 - Full Galvanized option is 1" x 30" straight headed anchor bolt. Contact factory for questions

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PRODUCT DIMENSIONS

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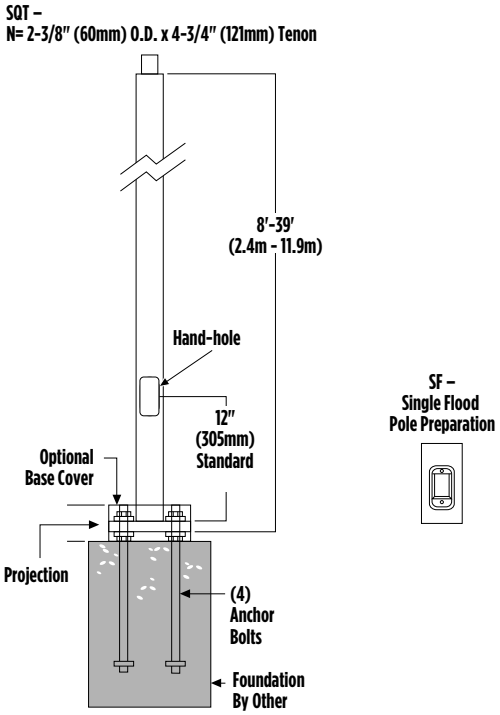
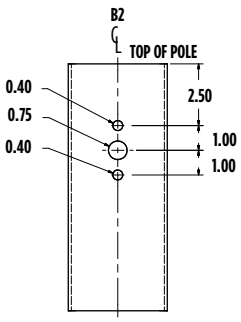
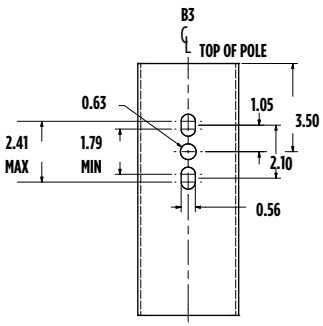
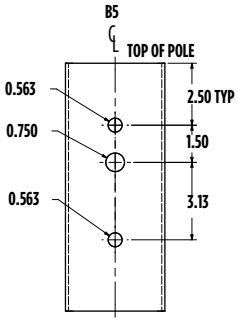


SHIPPING WEIGHTS	
4"(102mm) sq. 11 Ga. is approximately	7.50 lbs./ft.
4"(102mm) sq. 07 Ga. is approximately	10.00 lbs./ft.
5"(127mm) sq. 11 Ga. is approximately	9.00 lbs./ft.
5"(127mm) sq. 07 Ga. is approximately	12.50 lbs./ft.
6"(152mm) sq. 07 Ga. is approximately	15.40 lbs./ft.
Anchor Bolts (3/4" x 24")(19mm x 609mm)	15 lbs. (7kg)/set
Anchor Bolts (1" x 30") (25mm x 762mm)	30 lbs. (14kg)/set

Bolt-On Mount 2-Bolt Pattern







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Steel Poles Square Straight

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Type : _____

Item 3.

WIND SPEED

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EPA Information

All LSI Industries' poles are guaranteed to meet the EPA requirements listed. LSI Industries is not responsible if a pole order has a lower EPA rating than the indicated wind-loading zone where the pole will be located.

CAUTION: This guarantee does not apply if the pole/bracket/fixture combination is used to support any other items such as flags, pennants, or signs, which would add stress to the pole. LSI Industries cannot accept responsibility for harm or damage caused in these situations.

NOTE: Pole calculations include a 1.3 gust factor over steady wind velocity. Example: poles designed to withstand 80 MPH steady wind will withstand gusts to 104 MPH. EPAs are for locations 100 miles away from hurricane ocean lines. Consult LSI for other areas. Note: Hurricane ocean lines are the Atlantic and Gulf of Mexico coastal areas. For applications in Florida or Canada, consult factory.

POLE[1]	Mtg. Height Length (ft)	Wall Thick (ga)	BOLT CIRCLE			EPA								
			Designator	Dia. (in)	Anchor bolt Dia {in}	110 MPH	115 MPH	120 MPH	130 MPH	140 MPH	150 MPH	160 MPH	170 MPH	180 MPH
4" x 11-ga x 12'	12	11	B	8" - 11"	0.75	13.9	12.5	11.3	9.2	7.6	6.3	5.2	4.3	3.6
4" x 11-ga x 14'	14	11	B	8" - 11"	0.75	10.7	9.5	8.5	6.8	5.4	4.4	3.5	2.7	2.1
4" x 11-ga x 16'	16	11	B	8" - 11"	0.75	8.2	7.2	6.4	4.9	3.8	2.9	2.1	1.5	1.0
4" x 11-ga x 18'	18	11	B	8" - 11"	0.75	6.3	5.4	4.7	3.4	2.4	1.6	1.0	0.4	n/a
4" x 11-ga x 20'	20	11	B	8" - 11"	0.75	4.6	3.9	3.2	2.1	1.2	0.6	n/a	n/a	n/a
4" x 11-ga x 22'	22	11	B	8" - 11"	0.75	7.6	6.6	5.7	4.2	3.0	2.0	1.2	0.5	n/a
4" x 11-ga x 24'	24	11	B	8" - 11"	0.75	6.0	5.1	4.3	2.9	1.8	0.9	n/a	n/a	n/a
4" x 11-ga x 26'	26	11	B	8" - 11"	0.75	4.6	3.7	3.0	1.7	0.7	n/a	n/a	n/a	n/a
4" x 7-ga x 14'	14	7	B	8" - 11"	0.75	18.3	16.4	14.9	12.2	10.2	8.5	7.1	5.9	5.0
4" x 7-ga x 16'	16	7	B	8" - 11"	0.75	14.7	13.2	11.8	9.6	7.8	6.3	5.2	4.2	3.4
4" x 7-ga x 18'	18	7	B	8" - 11"	0.75	11.9	10.5	9.3	7.4	5.9	4.6	3.6	2.8	2.1
4" x 7-ga x 20'	20	7	B	8" - 11"	0.75	9.6	8.4	7.4	5.7	4.3	3.2	2.3	1.6	0.9
4" x 7-ga x 22'	22	7	B	8" - 11"	0.75	7.7	6.6	5.7	4.2	3.0	2.0	1.2	0.5	n/a
4" x 7-ga x 24'	24	7	B	8" - 11"	0.75	6.0	5.1	4.3	2.9	1.8	0.9	n/a	n/a	n/a
4" x 7-ga x 26'	26	7	B	8" - 11"	0.75	4.6	3.7	3.0	1.7	0.7	n/a	n/a	n/a	n/a
4" x 7-ga x 28"[2]	28	7	B	8" - 11"	0.75	3.3	2.5	1.8	0.7	n/a	n/a	n/a	n/a	n/a
4" x 7-ga x 30"[2]	30	7	B	8" - 11"	0.75	2.2	1.4	0.8	n/a	n/a	n/a	n/a	n/a	n/a
5" x 11-ga x 14'	14	11	C	9" - 11"	0.75	17.4	15.7	14.1	11.5	9.3	7.7	6.3	5.2	4.2
5" x 11-ga x 16'	16	11	C	9" - 11"	0.75	13.8	12.3	10.9	8.7	6.9	5.5	4.3	3.3	2.5
5" x 11-ga x 18'	18	11	C	9" - 11"	0.75	10.8	9.6	8.4	6.5	4.9	3.7	2.6	1.8	1.1
5" x 11-ga x 20'	20	11	C	9" - 11"	0.75	8.5	7.3	6.3	4.6	3.2	2.1	1.2	0.5	n/a
5" x 11-ga x 22'	22	11	C	9" - 11"	0.75	10.9	9.5	8.3	6.2	4.5	3.2	2.1	1.2	0.5
5" x 11-ga x 24'	24	11	C	9" - 11"	0.75	8.8	7.5	6.4	4.5	3.0	1.8	0.8	n/a	n/a
5" x 11-ga x 26'	26	11	C	9" - 11"	0.75	6.8	5.7	4.6	3.0	1.6	0.6	n/a	n/a	n/a
5" x 11-ga x 28'	28	11	C	9" - 11"	0.75	5.2	4.1	3.2	1.6	0.4	n/a	n/a	n/a	n/a
5" x 11-ga x 30'	30	11	C	9" - 11"	0.75	3.6	2.7	1.8	0.4	n/a	n/a	n/a	n/a	n/a
5" x 7-ga x 20'	20	7	D	9" - 11"	1.00	21.6	19.3	17.3	14.0	11.3	9.2	7.4	6.0	4.8
5" x 7-ga x 22'	22	7	D	9" - 11"	1.00	20.7	18.6	16.6	13.3	10.7	8.5	6.8	5.4	4.2
5" x 7-ga x 24'	24	7	D	9" - 11"	1.00	17.7	15.6	13.8	10.8	8.5	6.6	5.0	3.7	2.6
5" x 7-ga x 26'	26	7	D	9" - 11"	1.00	14.9	13.1	11.4	8.8	6.6	4.9	3.5	2.3	1.3
5" x 7-ga x 28'	28	7	D	9" - 11"	1.00	12.5	10.9	9.4	6.9	4.9	3.4	2.1	1.0	n/a
5" x 7-ga x 30'	30	7	D	9" - 11"	1.00	10.3	8.9	7.5	5.2	3.4	2.0	0.8	n/a	n/a
5" x 7-ga x 35'	35	7	D	9" - 11"	1.00	6.0	4.8	3.6	1.8	n/a	n/a	n/a	n/a	n/a
6" x 7-ga x 24'	24	7	J	12"	1.00	18.6	16.4	14.3	11.2	8.6	6.5	4.8	3.4	2.2
6" x 7-ga x 26'	26	7	J	12"	1.00	15.6	13.4	11.7	8.8	6.5	4.6	3.0	1.8	0.7
6" x 7-ga x 28'	28	7	J	12"	1.00	12.9	10.9	9.3	6.7	4.6	2.8	1.5	n/a	n/a
6" x 7-ga x 30'	30	7	J	12"	1.00	10.4	8.8	7.3	4.8	2.9	1.3	n/a	n/a	n/a
6" x 7-ga x 32'	32	7	J	12"	1.00	8.3	6.8	5.5	3.1	1.3	n/a	n/a	n/a	n/a
6" x 7-ga x 34'	34	7	J	12"	1.00	6.5	5.0	3.7	1.6	n/a	n/a	n/a	n/a	n/a
6" x 7-ga x 35'	35	7	J	12"	1.00	5.5	4.2	2.9	0.9	n/a	n/a	n/a	n/a	n/a
6" x 7-ga x 39'	39	7	J	12"	1.00	2.3	1.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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Type : _____

Item 3.

WIND SPEED

POLE[1]	Mtg. Height Length (ft)	Wall Thick (ga)	BOLT CIRCLE			EPA								
			Designator	Dia. (in)	Anchor Bolt Dia (in)	110 MPH	115 MPH	120 MPH	130 MPH	140 MPH	150 MPH	160 MPH	170 MPH	180 MPH
5" x 11-ga x 14'	14	11	F	11"	0.75	17.6	15.8	14.2	11.5	9.4	7.7	6.3	5.2	4.3
5" x 11-ga x 14'	14	11	F	13"	0.75	17.6	15.8	14.2	11.5	9.4	7.7	6.3	5.2	4.3
5" x 11-ga x 16'	16	11	F	11"	0.75	13.9	12.2	11.0	8.8	7.0	5.5	4.3	3.4	2.5
5" x 11-ga x 16'	16	11	F	13"	0.75	13.9	12.2	11.0	8.8	7.0	5.5	4.3	3.4	2.5
5" x 11-ga x 18'	18	11	F	11"	0.75	11.0	9.6	8.4	6.5	5.0	3.7	2.7	1.8	1.1
5" x 11-ga x 18'	18	11	F	13"	0.75	11.0	9.6	8.4	6.5	5.0	3.7	2.7	1.8	1.1
5" x 11-ga x 20'	20	11	F	11"	0.75	8.6	7.4	6.4	4.6	3.3	2.2	1.3	0.5	-
5" x 11-ga x 20'	20	11	F	13"	0.75	8.6	7.4	6.4	4.6	3.3	2.2	1.3	0.5	-
5" x 11-ga x 22'	22	11	F	11"	0.75	12.7	11.1	9.6	7.4	5.6	4.1	3.0	2.0	1.1
5" x 11-ga x 22'	22	11	F	12"	0.75	10.3	8.9	7.7	5.7	4.1	2.8	1.8	0.9	-
5" x 11-ga x 22'	22	11	F	13"	0.75	8.6	7.4	6.4	4.6	3.1	2.0	1.1	-	-
5" x 11-ga x 24'	24	11	F	11"	0.75	10.2	8.9	7.6	5.6	4.0	2.6	1.6	0.7	-
5" x 11-ga x 24'	24	11	F	12"	0.75	8.0	6.9	5.8	4.0	2.6	1.5	0.5	-	-
5" x 11-ga x 24'	24	11	F	13"	0.75	6.7	5.5	4.6	3.0	1.7	0.7	-	-	-
5" x 11-ga x 26'	26	11	F	11"	0.75	8.1	6.9	5.8	4.0	2.5	1.3	-	-	-
5" x 11-ga x 26'	26	11	F	12"	0.75	6.2	5.1	4.1	2.6	1.3	-	-	-	-
5" x 11-ga x 26'	26	11	F	13"	0.75	5.0	4.0	3.1	1.6	0.5	-	-	-	-
5" x 11-ga x 28'	28	11	F	11"	0.75	6.3	5.2	4.3	2.5	1.1	-	-	-	-
5" x 11-ga x 28'	28	11	F	12"	0.75	4.6	3.6	2.7	1.2	-	-	-	-	-
5" x 11-ga x 28'	28	11	F	13"	0.75	3.4	2.5	1.7	-	-	-	-	-	-
5" x 11-ga x 30'	30	11	F	11"	0.75	4.7	3.7	2.8	1.2	-	-	-	-	-
5" x 11-ga x 30'	30	11	F	12"	0.75	3.1	2.2	1.4	-	-	-	-	-	-
5" x 11-ga x 30'	30	11	F	13"	0.75	2.0	1.2	0.5	-	-	-	-	-	-
5" x 7-ga x 20'	20	7	G	11"	0.75	19.0	17.0	15.0	12.2	9.7	7.8	6.2	5.0	3.8
5" x 7-ga x 20'	20	7	G	12"	0.75	21.4	19.1	17.1	13.8	11.2	9.1	7.3	5.9	4.7
5" x 7-ga x 20'	20	7	G	13"	0.75	21.4	19.2	17.2	13.9	11.3	9.2	7.4	6.0	4.8
5" x 7-ga x 20'	20	7	G	11"	1	21.7	19.4	17.4	14.0	11.4	9.3	7.5	6.0	4.8
5" x 7-ga x 20'	20	7	G	13"	1	21.7	19.4	17.4	14.0	11.4	9.3	7.5	6.0	4.8
5" x 7-ga x 22'	22	7	G	11"	0.75	16.0	14.1	12.5	9.8	7.6	5.9	4.4	3.3	2.3
5" x 7-ga x 22'	22	7	G	12"	0.75	17.7	15.9	14.2	11.2	8.7	7.0	5.4	4.1	3.0
5" x 7-ga x 22'	22	7	G	13"	0.75	19.9	17.3	15.6	12.6	10.0	8.0	6.3	5.0	3.8
5" x 7-ga x 22'	22	7	G	11"	1	21.0	18.7	16.7	13.4	10.6	8.5	6.8	5.4	4.2
5" x 7-ga x 22'	22	7	G	12"	1	23.4	20.6	18.4	15.0	12.2	9.9	8.0	6.4	5.1
5" x 7-ga x 22'	22	7	G	13"	1	21.3	18.8	17.0	13.7	11.0	8.8	7.0	5.6	4.3
5" x 7-ga x 24'	24	7	G	11"	0.75	13.3	11.6	10.0	7.7	5.7	4.2	2.9	1.9	1.0
5" x 7-ga x 24'	24	7	G	12"	0.75	15.0	13.0	11.6	8.9	6.8	5.1	3.8	2.6	1.7
5" x 7-ga x 24'	24	7	G	13"	0.75	16.6	14.6	12.9	10.2	8.0	6.1	4.6	3.3	2.3
5" x 7-ga x 24'	24	7	G	11"	1	17.5	15.7	13.9	10.9	8.6	6.7	5.0	3.7	2.7
5" x 7-ga x 24'	24	7	G	12"	1	20.0	17.4	15.4	12.3	9.9	7.8	6.0	4.7	3.5
5" x 7-ga x 24'	24	7	G	13"	1	18.1	16.0	14.2	11.0	8.7	6.7	5.3	3.9	2.8
5" x 7-ga x 26'	26	7	G	11"	0.75	10.9	9.3	8.0	5.9	4.1	2.7	1.6	0.6	-
5" x 7-ga x 26'	26	7	G	12"	0.75	12.4	10.9	9.5	7.0	5.1	3.6	2.3	1.3	-
5" x 7-ga x 26'	26	7	G	13"	0.75	14.0	12.3	10.7	8.1	6.0	4.4	3.1	2.0	1.0
5" x 7-ga x 26'	26	7	G	11"	1	15.0	13.2	11.5	8.8	6.7	4.9	3.5	2.3	1.3

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Steel Poles Square Straight

Have questions? Call us at (800) 436-7800

Type : Item 3.

WIND SPEED

POLE[1]	Mtg. Height Length (ft)	Wall Thick (ga)	BOLT CIRCLE			EPA								
			Designator	Dia. (in)	Anchor Bolt Dia (in)	110 MPH	115 MPH	120 MPH	130 MPH	140 MPH	150 MPH	160 MPH	170 MPH	180 MPH
5" x 7-ga x 26'	26	7	G	12"	1	17.0	14.8	13.0	10.2	7.9	6.0	4.4	3.1	2.1
5" x 7-ga x 26'	26	7	G	13"	1	15.3	13.5	11.8	9.0	6.8	5.0	3.6	2.5	1.4
5" x 7-ga x 28'	28	7	G	11"	0.75	8.9	7.4	6.3	4.3	2.7	1.4	-	-	-
5" x 7-ga x 28'	28	7	G	12"	0.75	10.2	8.8	7.5	5.3	3.5	2.1	1.0	-	-
5" x 7-ga x 28'	28	7	G	13"	0.75	11.8	10.2	8.8	6.4	4.5	3.0	1.7	0.7	-
5" x 7-ga x 28'	28	7	G	11"	1	12.5	10.9	9.5	7.0	5.0	3.3	2.1	1.0	-
5" x 7-ga x 28'	28	7	G	12"	1	14.2	12.4	11.0	8.2	6.0	4.3	3.0	1.7	0.8
5" x 7-ga x 28'	28	7	G	13"	1	12.9	11.0	9.7	7.2	5.2	3.6	2.2	1.1	-
5" x 7-ga x 30'	30	7	G	11"	0.75	7.0	5.8	4.7	2.8	1.3	-	-	-	-
5" x 7-ga x 30'	30	7	G	12"	0.75	8.4	7.0	5.8	3.8	2.2	0.9	-	-	-
5" x 7-ga x 30'	30	7	G	13"	0.75	9.7	8.2	7.0	4.8	3.0	1.6	0.5	-	-
5" x 7-ga x 30'	30	7	G	11"	1	10.4	8.8	7.6	5.3	3.4	2.0	0.8	-	-
5" x 7-ga x 30'	30	7	G	12"	1	12.0	10.3	9.0	6.4	4.4	2.9	1.6	0.5	-
5" x 7-ga x 30'	30	7	G	13"	1	10.6	9.1	7.7	5.5	3.6	2.1	1.0	-	-
5" x 7-ga x 35'	35	7	G	11"	0.75	3.2	2.2	1.2	-	-	-	-	-	-
5" x 7-ga x 35'	35	7	G	12"	0.75	4.4	3.2	2.2	0.5	-	-	-	-	-
5" x 7-ga x 35'	35	7	G	13"	0.75	5.5	4.2	3.1	1.3	-	-	-	-	-
5" x 7-ga x 35'	35	7	G	11"	1	6.0	4.8	3.6	1.8	-	-	-	-	-
5" x 7-ga x 35'	35	7	G	12"	1	7.3	6.0	4.8	2.7	1.1	-	-	-	-
5" x 7-ga x 35'	35	7	G	13"	1	6.3	5.0	3.8	1.9	-	-	-	-	-
6" x 7-ga x 24'	24	7	H	11"	1	16.5	14.4	12.6	9.6	7.2	5.3	3.8	2.5	1.4
6" x 7-ga x 24'	24	7	H	12-1/2"	1	19.8	17.5	15.4	12.0	9.2	7.0	5.3	3.8	2.7
6" x 7-ga x 24'	24	7	H	14"	1	23.0	20.5	18.0	14.3	11.2	8.9	6.9	5.3	3.8
6" x 7-ga x 26'	26	7	H	11"	1	13.7	11.8	10.2	7.5	5.3	3.6	2.1	1.0	-
6" x 7-ga x 26'	26	7	H	12-1/2"	1	16.5	14.6	12.6	9.6	7.0	5.2	3.6	2.2	1.1
6" x 7-ga x 26'	26	7	H	14"	1	19.6	17.3	15.2	11.7	8.9	6.7	5.0	3.5	2.2
6" x 7-ga x 28'	28	7	H	11"	1	11.0	9.3	7.8	5.5	3.5	1.9	0.6	-	-
6" x 7-ga x 28'	28	7	H	12-1/2"	1	13.8	12.0	10.2	7.5	5.2	3.4	1.9	0.7	-
6" x 7-ga x 28'	28	7	H	14"	1	16.4	14.5	12.5	9.4	6.9	4.7	3.2	1.8	0.7
6" x 7-ga x 30'	30	7	H	11"	1	9.0	7.3	6.0	3.6	1.9	0.5	-	-	-
6" x 7-ga x 30'	30	7	H	12-1/2"	1	11.4	9.6	8.0	5.5	3.4	1.7	-	-	-
6" x 7-ga x 30'	30	7	H	14"	1	14.0	12.0	10.0	7.2	5.0	3.2	1.6	-	-
6" x 7-ga x 32'	32	7	H	11"	1	7.0	5.5	4.2	2.0	-	-	-	-	-
6" x 7-ga x 32'	32	7	H	12-1/2"	1	9.2	7.6	6.0	3.8	1.8	-	-	-	-
6" x 7-ga x 32'	32	7	H	14"	1	11.4	9.7	8.0	5.4	3.2	1.6	-	-	-
6" x 7-ga x 34'	34	7	H	11"	1	5.1	3.7	2.5	0.6	-	-	-	-	-
6" x 7-ga x 34'	34	7	H	12-1/2"	1	7.2	5.6	4.4	2.2	-	-	-	-	-
6" x 7-ga x 34'	34	7	H	14"	1	9.3	7.6	6.2	3.6	1.7	-	-	-	-
6" x 7-ga x 35'	35	7	H	11"	1	4.2	3.0	1.8	-	-	-	-	-	-
6" x 7-ga x 35'	35	7	H	12-1/2"	1	6.2	4.8	3.6	1.4	-	-	-	-	-
6" x 7-ga x 35'	35	7	H	14"	1	8.2	6.6	5.2	2.9	1.0	-	-	-	-
6" x 7-ga x 39'	39	7	H	11"	1	1.0	-	-	-	-	-	-	-	-
6" x 7-ga x 39'	39	7	H	12-1/2"	1	3.0	1.6	0.5	-	-	-	-	-	-
6" x 7-ga x 39'	39	7	H	14"	1	4.6	3.3	2.0	-	-	-	-	-	-

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Agenda Memo

Crest Hill, IL

Meeting Date:	February 23, 2026
Submitter:	Ronald J Wiedeman
Department:	Engineering
Agenda Item:	A Resolution Approving an Amendment to the Construction Agreement by and between the City of Crest Hill, Will County, Illinois and Fer-Pal Construction, Ltd. for CIPP Water Main Rehabilitation, Phase 1 Improvement.

Summary: The change order being presented to Council for approval is a Mid-Project Balancing Change Order from Fer-Pal Construction due to field conditions that differed from what was shown in the plans.

The differing conditions required more time, and additional work effort, which caused an increase in quantities from what was estimated during the design phase. These increases have necessitated a change order to the contract for an increase of $107,738.89

Change Order No. 2 includes additional work completed according to Adjusted Unit Prices (AUPs), Time and Material (T&M), and Bid Item Quantity Additions and Deductions.

The attached Stand letter provides a more detailed scope of work changes and is summarized below.

- Replacement of a non-working water valves and fire hydrants outside the project limits that were needed to shut down the water main to perform the lining repair.
- The inclusion of a new 6-inch gate valve at Ludwig and Broadway required to isolate the water main along Broadway while maintaining flow to the existing fire hydrant to supply water to the residents through a temporary water line system.
- This conflict was not anticipated due to Nicor providing a letter stating that there was no conflict with the city's work proposed in the contract, but during construction, the Contractor discovered that the actual location of the transmission gas line was above the existing water main. Therefore, the contractor was required to modify the construction of the lining pits and have them executed by hand instead of using mechanical equipment. This conflict required additional work effort, rock execution, backfill material, additional

time due to hand digging and the installation of butterfly valve instead of a gate valve to provide the city the ability to shut down the Broadway water main. The work involved with this items was the largest percentage of cost increase for this entire change order.

- During construction the city encountered unknown water main interconnect between the City's water main and the City's of Joliet's water system at the intersection of Theodore and Broadway. Additionally, the Contractor encountered unknown sewer and buried utilities that were located in the proposed lining access pits at different locations within the project limits. Due to these unknowns the contractor needed to perform exploratory excavation to find the best locations for the lining access pits. The interconnect with the city of Joliet was removed as part of this work.
- The City directed the Contractor to relocate existing b-boxes and curb stops to locations that would not be in conflict with the new retaining wall being installed by a different City Contractor. This same work was removed from the retaining wall Contractors work. This was done to save time and money.
- Repairs made on November 12th and 21st to replace out water services were not determined until construction when during the video process of the water main it was found that these services had bad connections to the water main and due to this the epoxy resin enter the services and required complete replacement of these water services.
- The work on December 15th was due to a broken water meter ball valve inside a resident's home. This item was removed and replaced so this resident home could be put on the temporary water supply.

If Council approves this change order, then the improvement can be completed per the limits defined in the contact documents. If approval is not received the limits will need to be reduced in order to keep the improvement under the approved contract amount.

Recommended Council Action: A Resolution Approving an Amendment to the Construction Agreement by and between the City of Crest Hill, Will County, Illinois and Fer-Pal Construction, Ltd. for CIPP Water Main Rehabilitation, Phase 1 Improvement.

Financial Impact:

Funding Source: IEPA Loan & Water Fund

Budgeted Amount: $2,479,975.70 (2026 Budget)**;** $120,000.00 (2027 Budget-Change Order 2)

Cost Approved to Date:

Award Construction Amount $2,479,975.70

Plus Change Order No.2 $107,738.89

New Cost Approved to Date $2,587,714.59

Attachments

Fer-Pal Construction CO-2-Resolution

Exhibit A Crest Hill_No_2 to be signed by City

Stand Mid Balancing CO 2 Letter

Backup Documentation

RESOLUTION NO. _____

A RESOLUTION APPROVING AN AMENDMENT TO THE CONSTRUCTION AGREEMENT BY AND BETWEEN THE CITY OF CREST HILL, WILL COUNTY, ILLINOIS AND FER-PAL CONSTRUCTION, LTD. FOR CIPP WATER MAIN REHABILITATION, PHASE 1 IMPROVEMENT

WHEREAS, the Corporate Authorities of the City of Crest Hill, Will County, Illinois, have the authority to adopt resolutions and to promulgate rules and regulations that pertain to the City's government and affairs and protect the public health and, safety, and welfare of its citizens; and

WHEREAS, pursuant to Section 2-2-12 of the Illinois Municipal Code (65 ILCS 5/2-2-12), the City Council possesses the authority to enter into contracts that serve the legitimate corporate purposes of the City; and

WHEREAS, Fer-Pal Construction, Ltd. (the "COMPANY"), is an entity that is in the business of providing Construction Services and on August 18, 2025, the City of Crest Hill, by the passage of Resolution 1339, was awarded the contract to perform the CIPP Water Main Rehabilitation, Phase 1 Improvement. (the "Project") in the amount of $2,479,975.70; and

WHEREAS, due to the change of field conditions from what was known at the time of the design was prepared additional work as outlined in Exhibit A was required to complete the improvements.

WHEREAS, the City Council has determined that it is in the best interests of the City and its residents to approve the Change Order and amendment to the total contract price to line the existing water main so it can continue to provide safe drinking water to the residents of Crest Hill.

WHEREAS, City Staff and the City Council have reviewed Exhibit A and determined that the conditions, terms, and provisions are fair, reasonable, and acceptable to the City and that the Contract approved by Resolution #1339 should be amended to include the Change Order attached as Exhibit A

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Crest Hill, Illinois, pursuant to its statuary authority, as follows:

SECTION 1: PREAMBLE. The City Council hereby finds that all the recitals contained in the preamble to this Resolution are true, correct and complete and are hereby incorporated by reference hereto and made part hereof.

SECTION 2: AGREEMENT APPROVED. The City Council hereby finds and declares that the conditions, terms, and provisions of the Change Order to the Contract approved by Resolution #1339, which Change Order is attached as (Exhibit A) in the amount of $107,738.89 are fair, reasonable, and acceptable to the City and that the same is hereby approved in form and substance.

Therefore, the City Council hereby authorizes and directs the Mayor to execute and deliver, and the Clerk to attest, the Change Order, and further to take any and all other actions, including without limitation the execution and delivery of any and all documents, necessary and appropriate to effectuate the intent of this Resolution, which is to increase the total contract amount of the Contract approved by Resolution #1339 by $107,738.89 to $2,587,714.59.

SECTION 3: SEVERABILITY. If any section, paragraph, clause or provisions of this Resolution is held invalid, the invalidity of such section, paragraph, clause or provision shall not affect any other provision of this Resolution.

SECTION 4: REPEALER. All ordinances, resolutions or orders, or parts thereof, which conflict with the provisions of this Resolution, are to the extent of such conflict herby repealed.

SECTION 5: EFFECTIVE DATE. This Resolution shall be in full force and effect immediately upon its passage and publication according to law.

[Intentionally Blank]

PASSED THIS 2ND DAY MARCH, 2026.

	Aye	Nay	Absent	Abstain
Alderman Scott Dyke	_____	_____	_____	_____
Alderman Angelo Deserio	_____	_____	_____	_____
Alderwoman Claudia Gazal	_____	_____	_____	_____
Alderman Darrell Jefferson	_____	_____	_____	_____
Alderperson Tina Oberlin	_____	_____	_____	_____
Alderman Mark Cipiti	_____	_____	_____	_____
Alderman Nate Albert	_____	_____	_____	_____
Alderman Joe Kubal	_____	_____	_____	_____
Mayor Raymond R. Soliman	_____	_____	_____	_____

APPROVED THIS 2ND DAY OF MARCH, 2026.

_____
Raymond R. Soliman, Mayor

ATTEST:

_____
Christine Vershay-Hall, City Clerk

EXHIBIT A

(FER-PAL CONSTUCTION LTD. CHANGE ORDER #2)

Strand Associates, Inc.®
1170 South Houbolt Road
Joliet, IL 60431
(P) 815.744.4200
www.strand.com

Exhibit A

January 28, 2026

CHANGE ORDER NO. 2

PROJECT:	CIPP Water Main Rehabilitation Phase 1
OWNER:	City of Crest Hill, Illinois
CONTRACT:	3-2024
CONTRACTOR:	Fer-Pal Construction USA, LLC

Description of Change

2a	Adjusted Unit Price (AUP) No. 2–6-Inch Gate Valve (1 each [EA] at $2,264.80/EA).	ADD	$2,264.80
2b	AUP No. 3–Lining Pit Modification (9 EA at $15,288.77/EA).	ADD	$137,598.93
2c	AUP No. 4–10-Inch Butterfly Valve (4 EA at $6,184.45/EA).	ADD	$24,737.80
2d	Time and Material (T&M) No. 1–September 24 through 26, 2025.	ADD	$45,008.47
2e	T&M No. 2–November 17, 2025; 360 and 358 Theodore Street B-Box Relocates.	ADD	$12,200.75
2f	T&M No. 3–November 12, 2025; 460 Theodore Street 2-Inch Service Removal.	ADD	$4,065.32
2g	T&M No. 4–November 21, 2025; 460 Theodore Street 2-Inch Service Reinstatement.	ADD	$5,068.96
2h	T&M No. 5–November 14, 2025.	ADD	$3,595.11
2i	T&M No. 6–1613 Bradway Street Ball Valve Replacement.	ADD	$1,061.40
2j	Bid Item No. 1–Rock Excavation (70 cubic yards [CY] at $440.00/CY).	ADD	$30,800.00
2k	Bid Item No. 2–Removal and Disposal of Non-Clean Construction or Demolition Debris (CCDD) Material (125 tons [TON] at $192.50/TON).	ADD	$24,062.50
2l	Bid Item No. 4–Trench Backfill (50 CY at $60.50/CY).	ADD	$3,025.00
2m	Bid Item No. 6–Exploratory Excavation (2 EA at $2,750.00/EA).	ADD	$5,500.00

2n	Bid Item No. 7–Pavement Removal (200 square yards [SY] at $27.50/SY).	ADD	$5,500.00
2o	Bid Item No. 10–Class B Patches, 10 Inches (242 SY at $165.00/SY).	ADD	$39,963.00
2p	Bid Item No. 11–Class B Patches, 12 Inches (30.3 SY at $192.50/SY).	(DEDUCT)	($5,832.75)
2q	Bid Item No. 12–Class B Patches, 13 Inches (46 SY at $214.50/SY).	(DEDUCT)	($9,867.00)
2r	Bid Item No. 15–Class D Patches, 10 Inches (70 SY at $137.50/SY).	ADD	$9,625.00
2s	Bid Item No. 16–Inlet Filters (41 EA at $220.00/EA).	(DEDUCT)	($9,020.00)
2t	Bid Item No. 20–Portland Cement Concrete (PCC) Sidewalk, 5 Inches (2,435 square feet [SF] at $18.70/SF).	(DEDUCT)	($45,534.50)
2u	Bid Item No. 34–Valve Vault to be Abandoned (2 EA at $1,100.00/EA).	ADD	$2,200.00
2v	Bid Item No. 35–Valve Vault to be Removed (3 EA at $1,650.00/EA).	(DEDUCT)	($4,950.00)
2w	Bid Item No. 41–8-Inch Gate Valve (1 EA at $2,200/EA).	ADD	$2,200.00
2x	Bid Item No. 44–Valve Vault, Type A, Type 1 Frame, 5-Foot-Diameter (4 EA at $10,450.00/EA).	(DEDUCT)	($41,800.00)
2y	Bid Item No. 45–Valve Boxes (6 EA at $275.00/EA).	ADD	$1,650.00
2z	Bid Item No. 47–Fire Hydrant to be Removed (1 EA at $1,100/EA).	ADD	$1,100.00
2aa	Bid Item No. 48–Insertion Valve, 6 Inches (1 EA at $23,980/EA).	(DEDUCT)	($23,980.00)
2bb	Bid Item No. 51–Water Main Lining, 8 Inches (112 linear feet [LF] at $125.00/LF).	ADD	$14,000.00
2cc	Bid Item No. 52–Water Main Lining, 10 Inches (90 LF at $150.00/LF).	ADD	$13,500.00
2dd	Bid Item No. 54–Temporary Bypass Piping, 2 Inches (2,521 LF at $15.00/LF).	ADD	$37,815.00

2ee	Bid Item No. 55–Temporary Bypass Piping, 4 Inches (1,955 LF at $20.00/LF).	(DEDUCT)	($39,100.00)
2ff	Bid Item No. 56–Pipe Ramp (28 EA at $100.00/EA).	ADD	$2,800.00
2gg	Bid Item No. 67–Illinois Department of Transportation Individual Utility Permit Bond (0.97 lump sum [LS] at $50,000/LS).	(DEDUCT)	($48,500.00)
2hh	Bid Alternative Item No. A-3–Sidewalk Removal (533 SF at $3.30/SF).	(DEDUCT)	($1,758.90)
2ii	Bid Alternative Item No. A-4–Curb and Curb and Gutter Removal (24 feet [FT] at $16.50/FT).	(DEDUCT)	($396.00)
2jj	Bid Alternative Item No. A-6–Class D Patches, 8 Inches (31 SY at $104.50/SY).	(DEDUCT)	($3,239.50)
2kk	Bid Alternative Item No. A-7–Inlet Filter (12 EA at $220.00/EA).	(DEDUCT)	($2,640.00)
2ll	Bid Alternative Item No. A-8–Combination Concrete Curb and Gutter, B.6-12 (24 FT at $110.00/FT).	(DEDUCT)	($2,640.00)
2mm	Bid Alternative Item No. A-9–PCC Sidewalk, 5 Inches (533 SF at $16.50/SF).	(DEDUCT)	($8,794.50)
2nn	Bid Alternative Item No. A-14–Valve Vault to be Abandoned (1 EA at $1,100.00/EA).	ADD	$1,100.00
2oo	Bid Alternative Item No. A-16–Water Main, 6-Inch-Diameter (4 LF at $385.00/LF).	(DEDUCT)	($1,540.00)
2pp	Bid Alternative Item No. A-17–Water Main, 8-Inch-Diameter (22 LF at $192.50/LF).	(DEDUCT)	($4,235.00)
2qq	Bid Alternative Item No. A-19–Valve Vault , Type A, Type 1 Frame, 4-Foot-Diameter (1 EA at $9,350.00/EA).	(DEDUCT)	($9,350.00)
2rr	Bid Alternative Item No. A-20–Water Main Lining, 8 Inches (60 LF at $125.00/LF).	ADD	$7,500.00
2ss	Bid Alternative Item No. A-21–Temporary Bypass Piping, 4 Inches (930 LF at $30.00/LF).	(DEDUCT)	($27,900.00)
2tt	Bid Alternative Item No. A-22–Pipe Ramp (10 EA at $100.00/EA).	ADD	$1,000.00

2uu	Bid Alternative Item No. A-23–Hose Bib Repair (9 EA at $825.00/EA).	(DEDUCT)	($7,425.00)
2vv	Bid Alternative Item No. A-25–Addenda Pit Excavation (23.30 SY at $1,500/SY).	(DEDUCT)	($34,950.00)
2ww	Bid Alternative Item No. A-26–Addenda Water Service Internal Reinstatement (3 EA at $750.00/EA).	ADD	$2,250.00
TOTAL VALUE OF THIS CHANGE ORDER:		ADD	$107,738.89

Contract Price Adjustment

Original Contract Price	$2,479,970.40
Previous Change Order Adjustments	$5.30
Adjustment in Contract Price this Change Order	$107,738.89
Current Contract Price including this Change Order	$2,587,714.59

Contract Substantial Completion Date Adjustment

Original Contract Substantial Completion Date	September 30, 2025
Contract Substantial Completion Date Adjustments due to previous Change Orders	273 Days
Contract Substantial Completion Date Adjustments due to this Change Order	0 Days
Current Substantial Contract Completion Dates including all Change Orders	June 30, 2026

Contract Final Completion Date Adjustment

Original Contract Final Completion Date	October 30, 2025
Contract Final Completion Date Adjustments due to previous Change Orders	274 Days
Contract Final Completion Date Adjustments due to this Change Order	0 Days
Current Final Contract Completion Dates including all Change Orders	July 31, 2026

This document shall become a supplement to the Contract and all provisions will apply hereto.

RECOMMENDED

ENGINEER–Strand Associates, Inc.® — Date: 1/30/2026

APPROVED

CONTRACTOR–Fer-Pal Construction USA, LLC — Date: 01/30/26

APPROVED

OWNER–City of Crest Hill, Illinois — Date

DPR:amm\S:\JOL\3800--3899\3894\073\Construction\Change Orders\CO No. 2\CO_Crest Hill_No 2.docx

Change Order

FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120

Distribution ☐ CREST HILL, IL - BROADWAY ST.
☐
☐ Office ☐ Field
☐ Other

Project: CREST HILL, IL - BROADWAY ST. **Contract Number:** EH25330- CREST HILL, IL - BROADWAY ST

Proposed Change Order #: FO 6 Re-instatement of 2" water service

To (Contractor): FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120

Change Order Date : 12/03/25

You are directed to make the following changes in this Contract:

C.O. Item	Contract Item	Change in Days	UM	Units	Description	Unit Price	Amount
6			LS		Re-instatement of 2" water service (labor & I		5,068.96
					Total For Change Order:		**5,068.96**

Not valid until signed by both the Owner and Architect. Signature of the Contractor indicates the Contractor's agreement herewith, including any adjustment in the Contract Sum or Contract Time.

The original Contract Sum was	**2,479,975.70**
The net change by previously authorized Change Orders was	**0.00**
The Contract Sum prior to this Change Order was	**2,479,975.70**
The Contract Sum will be increased by this Change Order	**5,068.96**
The new Contract Sum will be	**2,485,044.66**

Authorized By Owner:	**Accepted By Contractor:**	**Architect/Engineer:**
City of Crest Hill	FER-PAL Construction USA LLC 1350 Gasket Drive Elgin, IL 60120	
By: _____	**By:** _____	**By:** _____
Date: _____	**Date:** 12/03/25	**Date:** _____

SHERIDAN PLUMBING & SEWER

6754 W. 74th Street
Bedford Park, IL 60638
(708)475-7100 (708)475-7138 fax
IL Plumbing License No. 055-027841

November 25, 2025

Fer-Pal Construction USA LLC
1350 Gasket Drive
Elgin, IL. 60120

Attn: Joel Ponce

PROJECT: City of Crest Hill, CIPP Water Main Rehabilitation – Phase 1
Request for CO #2A – Re-instatement of 2" Water Service Connection- (Labor and materials for connection and backfill on 11/21/2025.

Summary of attached force account billings

Labor:			$1,683.25
Equipment:			$247.16
Material:			$2,793.25
Rented Equipment:			$0.00
Subcontractor			$0.00
		Total:	$4,723.66
Bond:	2.0%		$94.47
Bond MU	10%		$9.45
		Total Bill:	$4,827.58

Please see attached for itemized force account costs.

PROJECT COST: The Scope of Work has been completed on an force account basis for **$4,827.58.** This cost includes weekday work, environmental monitoring, personal protective equipment up to Chemical Protection Level D, travel time, standard insurance and any other items stated in above Scope of Work.

Initials _____

SHERIDAN PLUMBING & SEWER

6754 W. 74th Street
Bedford Park, IL 60638-6029
(708) 475-7114 (708) 475-7138 fax
IL Plumbing License No. 055-027841
IDOT Contractor No: 050C
WBE Certified

General Contractor:	Sheridan Plumbing & Sewer
Job No.:	S25-150
Description:	Water Main Rehabilitation Phase 1, Contract 3-2024
Location:	Crest Hill, Illinois
Desc. Of Work:	CO #2A
Route:	
Mile Post	
County	WILL
Report. No.	CO #2A
Owner:	City of Crest Hill
Contract No.:	
Authorization No.	2A
Project No.	Crest Hill Water Main Lining, Phase 1

Month:	**November-2025**				
Days:	21				

Notes: Re-instatement for 2" Water Service Connection on Theodore St.

File Save Name: Crest Hill Water Main Lining_CO2A 2in Water Service Reinstate Theodore 11_21_25

November-2025 | 21

ATERIAL USED	Unit	Total	Unit Price	Amount
2" Ty. K Copper	LF	40	$32.25	$1,290.00
8" x 2" Tapt Saddle	EA	1	$360.52	$360.52
2" Corp	EA	1	$455.74	$455.74
2" Curb Stop	EA	1	$686.99	$686.99

Subtotal $2,793.25

Total Material Plus 15% $2,793.25

Job No.: S25-150
Description: Water Main Rehabilitation Phase 1, Contract 3-2024
Location: Crest Hill, Illinois
Desc. of Work: CO #2A

AFFIDAVIT

This is to certify that any material entered on this force account bill which was taken from stock is shown at our cost

Sheridan Plumbing & Sewer

By _____

Subscribed and sworn to before me this _____ day of _____ 20____.

_____
Notary Public

: S25-150
tion: Water Main Rehabilitation Phase 1, Contract 3-2024
n: Crest Hill, Illinois
f Work: CO #2A

November-2025

Name	Position	21 ST	21 OT	21 DT	21					Total Hours ST	OT	DT	Rate	Insurance Amount	Payroll Amount	Earnings to Date	Unemployme F.U.T.
George Gentry	Oper. 150 Foreman jc 35*												$66.000			$ 10,000.00	
Guy Lepore	Oper. 150 Class 1 jc 31*	2			2.0					2.0			$63.000	$126.00	$126.00	$ 10,000.00	
Shawn Radloff	Laborer, Semi-Skilled jc 12	2			2.0					2.0			$51.400	$102.80	$102.80	$ 10,000.00	
Modesto Gamboa	Laborer, Semi-Skilled jc 12	2			2.0					2.0			$51.400	$102.80	$102.80	$ 10,000.00	
Miguel Garcia	Laborer, Semi-Skilled jc 12	2			2.0					2.0			$51.400	$102.80	$102.80	$ 10,000.00	
Jesus Guzmen	Laborer, Semi-Skilled jc 12												$51.400			$ 10,000.00	
Jake Collins	Laborer, Semi-Skilled jc 12	2			2.0					2.0			$51.400	$102.80	$102.80	$ 10,000.00	
Isreal Garcia	Labor Apprentice jc 17	2			2.0					2.0			$30.840	$61.68	$61.68	$ 10,000.00	
Dylan Strand	Plumber journeymen 130												$58.500			$ 10,000.00	
Tracy Morano																	

Subtotals, Labor $598.88 $598.88

Tax Deferred Savings

	Total			ST	OT	DT
Laborers Benefits Funds	10.0	hours @	$37.28			
Plumber's Local 130		hours @	$39.28			$372.80
Operating Engineers Apprentice Benefits Funds	2.0	hours @	$52.83			$105.66

Subtotals, Labor				$1,077.34
Plus 35 % of		$1,077.34		$377.07
				$1,454.41
Workmen's Compensation Insurance	15.85 % of	$598.88	$94.92	
Public Liability & Property Damage	4.41 % of	$598.88	$26.41	
Federal Unemployment Tax	0.80 % of			
State Unemployment Tax	6.83 % of	$598.88	$40.90	
Federal Social Security Tax	7.65 % of	$598.88	$45.81	
Total Payroll Additives			$208.04	
Plus 10 % of		$208.04	$20.80	
				$228.84
Total Labor				$1,683.25

I hereby certify that the above statement is a copy of that portion of the payroll which applies to the above state work and that the rates shown for taxes and insurance are actual costs.

Sheridan Plumbing & Sewer

Job No. : S25-150
Description: Water Main Rehabilitation Phase 1, Contract 3-2024
Location: Crest Hill, Illinois
Desc. Of Work: CO #2A

Date(s): November-2025

ID	Subcategory	Manufacturer	Model	Year	Config	Rate						total hours	amount
							21						
	Mini Excavator	John Deere	JD35	2024		$ 24.81							
ST11	Service Truck	Ford	F450 DXL 4x4	2024		$ 43.46	2					2.00	$ 86.92
	Tracked Excavator	John Deere	JD 135G	2019		$ 78.97							
	Tracked Excavator	John Deere	JD 85	2024		$ 75.37	2					2.00	$ 150.74
	Excavator Bucket	John Deere	.875 Cu Yd	2019		$ 5.16							
	Excavator Bucket	John Deere	.5 Cu Yd	2019		$ 4.75	2					2.00	$ 9.50
VA 19	Vactor	Kenworth	T800	2014	Kenworth T800 chassis 2115-1024 PD	$ 342.51							
	Tracked Skid Steer Loader	John Deere	JD 329	2019		$ 92.39							
DT07	Six Wheel Dump Truck	Peterbilt	T-800	2024	350HP	$ 67.20							
	Wheel Loader	John Deere	JD344L	2020	103HP	$ 37.42							
	Tow Behind Trailer	Eager Beaver	20XPT	2015	21' flat deck, 20 ton non-tilit trailer	$ 10.82							
	Confined space entry Equipment			2022		$ 12.50							
	4 gas monitor			2022		$ 4.16							

TOTAL EQUIPMENT $247.16

Route _____ Mile Post _____ County WILL Auth. No. _____

Force Account bill for City of Crest Hill Contract No. _____

Summary of attached force account billings

Labor:		$1,683.25
Equipment:		$247.16
Material:		$2,793.25
Rented Equipment:		$0.00
Subcontractor		$0.00
	Total:	$4,723.66
Bond:	2.0%	$94.47
Bond MU	10%	$9.45
	Total Bill:	$4,827.58

_____

Resident

Job No.: S25-150

Description: Water Main Rehabilitation Phase 1, Contract 3-2024

Location: Crest Hill, Illinois

Desc. Of Work CO #2A

November-2025

NOTES: Re-instatement for 2" Water Service Connection on Theodore St.

CORE & MAIN

INVOICE

1830 Craig Park Court
St. Louis, MO 63146

Invoice #	Y111289
Invoice Date	11/13/25
Account #	140714
Sales Rep	RICH COOPER
Phone #	847-473-1900
Branch # 482	Lake Bluff, IL
Total Amount Due	$3,170.51

NOV 20 2025

JS

Remit To:
CORE & MAIN LP
PO BOX 28330
ST LOUIS, MO 63146

362 1 MB 0.672 E0345X I0514 D14736301054 S2 P10936600 0001:0001

SHERIDAN PLUMBING & SEWER
6754 W 74TH ST
BEDFORD PARK IL 60638-6029

Shipped to:

CUSTOMER PICK-UP -

Thank you for the opportunity to serve you! We appreciate your prompt payment.

Date Ordered	Date Shipped	Customer PO #	Job Name	Job #	Bill of Lading	Shipped Via	Invoice #
11/12/25	11/12/25	PENDING				WILL CALL	Y111289

Product Code	Description	Quantity Ordered	Quantity Shipped	B/O	Price	UM	Extended Price
0820S040K	2X40 SOFT K COPPER USA PER FOOT	40	40		32.25000	FT	1,290.00
65REHF2	2 HAMMER FLARING TOOL HF2	1	1		142.40000	EA	142.40
72264090512015	264-090512-015 8X12-1/2X2CC TAPT REP CLP 8.99-9.39 OD	1	1		360.52000	EA	360.52
362074701B	74701B 2 BALL CORP STOP CCXFLR NO LEAD 5133-107	1	1		455.74000	EA	455.74
372076104	76104 2 BALL CURB STOP FLRXFLR MINN PATT NO LEAD 5129-121	1	1		686.99000	EA	686.99

Job materials - 2" x 40' Copper pipe, Flaring tool, Clip, Corp stop, Curb stop

Job #

Online ADVANTAGE™
• Manage billing online • Reprint invoices
• Retrieve proof of deliveries
Be suspicious of emails requesting wire transfers or payments to Core & Main using updated remittance information. For tips about how to identify bad actors, visit coreandmain.com/identifying-fraud.

Freight	Delivery	Handling	Restock	Misc.		
					Subtotal:	2,935.65
					Other:	0.00
					Tax:	234.86
					Invoice Total:	$3,170.51

Terms: NET 30
Ordered By: GEORGE

This transaction is governed by and subject to CORE & MAIN's standard terms and conditions, which are incorporated by reference and accepted. To review these terms and conditions, please visit: https://coreandmain.com/terms-of-sale/.

0001-0001

Change Order

FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120

Distribution ☐ CREST HILL, IL - BROADWAY ST.
☐ Office ☐ Field
☐ Other

Project: CREST HILL, IL - BROADWAY ST. **Contract Number:** EH25330- CREST HILL, IL - BROADWAY ST

Proposed Change Order #: FO 2 AUP #2 6" Gate Valve

To (Contractor): FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120

Change Order Date : 09/19/25

You are directed to make the following changes in this Contract:

C.O. Item	Contract Item	Change in Days	UM	Units	Description	Unit Price	Amount
2			EA	1.000	AUP #2 6" Gate Valve	2,264.80000	2,264.80
					Total For Change Order:		**2,264.80**

Not valid until signed by both the Owner and Architect. Signature of the Contractor indicates the Contractor's agreement herewith, including any adjustment in the Contract Sum or Contract Time.

The original Contract Sum was	**2,479,975.70**
The net change by previously authorized Change Orders was	**0.00**
The Contract Sum prior to this Change Order was	**2,479,975.70**
The Contract Sum will be increased by this Change Order	**2,264.80**
The new Contract Sum will be	**2,482,240.50**

Authorized By Owner:	**Accepted By Contractor:**	**Architect/Engineer:**
City of Crest Hill	FER-PAL Construction USA LLC 1350 Gasket Drive, Elgin, IL 60120	
By: _____	**By:** _____	**By:** _____
Date: _____	**Date:** _____	**Date:** _____

Change Order

FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120

Distribution ☐ CREST HILL, IL - BROADWAY ST.
☐
☐ Office ☐ Field
☐ Other

Project: CREST HILL, IL - BROADWAY ST. **Contract Number:** EH25330- CREST HILL, IL - BROADWAY ST

Proposed Change Order #: FO 4 Lining Pit Modification

To (Contractor): FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120

Change Order Date : 10/31/25

You are directed to make the following changes in this Contract:

C.O. Item	Contract Item	Change in Days	UM	Units	Description	Unit Price	Amount
4			EA	6.000	Lining Pit Modification	15,288.77000	91,732.62
					Total For Change Order:		**91,732.62**

Not valid until signed by both the Owner and Architect. Signature of the Contractor indicates the Contractor's agreement herewith, including any adjustment in the Contract Sum or Contract Time.

The original Contract Sum was	**2,632,460.83**
The net change by previously authorized Change Orders was	**0.00**
The Contract Sum prior to this Change Order was	**2,632,460.83**
The Contract Sum will be increased by this Change Order	**91,732.62**
The new Contract Sum will be	**2,724,193.45**

Authorized By Owner:	**Accepted By Contractor:**	**Architect/Engineer:**
City of Crest Hill	FER-PAL Construction USA LLC 1350 Gasket Drive, Elgin, IL 60120	
By: _____	**By:** _____	**By:** _____
Date: _____	**Date:** _____	**Date:** _____

SHERIDAN PLUMBING & SEWER

6754 W. 74th Street
Bedford Park, IL 60638
(708)475-7100 (708)475-7138 fax
IL Plumbing License No. 055-027841

September 29, 2025

Fer-Pal Construction USA LLC
1350 Gasket Drive
Elgin, IL. 60120

Attn: Joel Ponce

PROJECT: City of Crest Hill, CIPP Water Main Rehabilitation – Phase 1
Request for AUP #3 – Broadway St. Lining pit modifications and additional labor due to critical utility conflicts (10" high pressure gas main)

Summary of attached force account billings

Labor:			$8,788.74
Equipment:			$4,496.24
Material:			$0.00
Rented Equipment:			$0.00
Subcontractor			$1,275.75
		Total:	$14,560.73
Bond:	0.0%		$0.00
Bond MU	0%		$0.00
		Total Bill:	$14,560.73

Notes:

The above referenced force account estimate represents the additional time (on average per lining pit) to successfully complete the additional required labor, equipment and modifications for lining access pits as indicated for CIPP water main lining on Broadway St.

Upon excavation for the indicated lining access pits on Broadway Street, an existing 10" high pressure gas main was discovered running parallel above the existing 10" water main with less than 24 inches of seperation between the utilities. The existing soils in the area are solid rock and it appears that the installation of the 10" gas main utilized the existing 10" watermain trench at the time of installation to avoid additional costs that would be assosiated with the rock removal. The representatives for the gas main (Nicor) informed the contractor that no excavation (with the exception of hydro or hand excavation) would be allowed within a 24" minimum of their facility.

Initials _____

Based on the adverage time required on Theordore Street to install the same lining access pits, the excavation contractor has adveraged 2 lining access pits per day. All required lining access pits have been installed on Theodore Street thus providing an accurate time frame for the installation of a lining access pit without conflict. As of September 29th, two lining access pits have been installed on Broadway Street (Pit #11 - Station 403+20 and Pit # 12 Station 406+50.) Both lining access pits have taken 1 ½ days to install requiring an additional 8 hours of labor and equipment per lining access pit

The force account costs provided represent the labor and equipment costs necessary per lining access pit to facilitate the contruction of Broadway Street lining pits. Due to the critical restraints added by Nicor's high pressure 10" gas main the excavation contractor must adhear to the utility owner's demands which greatly hampers proven production rates.

In an attempt to simplify the additional costs associated with the conflict the following request for additional unit pricing or AUP (Broadway Street Lining Pit modifications) is requested per a quantity of each or per pit.

After several exploratory excavations of Broadway Street it appears that the total quantity necessary for the AUP would be 3 EA (Broadway Street from Theodore Street north to Ludwig Ave.) and a possible total of 6 EA (Broadway Street from Ludwig Ave. north to Chaney Ave.) Please note that the Ludwig lining access pit was able to be installed without major additional costs and has been removed from the proposed requsted quantities.

The following AUP request has taken only the ammount of additional labor and equipment into consideration for work to be performed outside the innitial scope. Additional line items such as pavement removal, Trench backfill, rock excavation, necessary re-instatement piping etc. are to be paid for per their respective line item pricing.

Please see attached for itemized force account costs.

PROJECT COST: The Scope of Work has been estimated on an force account basis. This cost includes weekday work, environmental monitoring, personal protective equipment up to Chemical Protection Level D, travel time, standard insurance and any other items stated in above Scope of Work.

Initials _____

SHERIDAN PLUMBING & SEWER

6754 W. 74th Street
Bedford Park, IL 60638-6029
(708) 475-7114 (708) 475-7138 fax
IL Plumbing License No. 055-027841
IDOT Contractor No: 050C
WBE Certified

General Contractor:	Sheridan Plumbing & Sewer
Job No.:	S25-150
Description:	Water Main Rehabilitation Phase 1, Contract 3-2024
Location:	Crest Hill, Illinois
Desc. Of Work:	CO #1
Route:	
Mile Post	
County	WILL
Report. No.	AUP #3
Owner:	City of Crest Hill
Contract No.:	
Authorization No.	
Project No.	

Month:	**September-2025**				
Days:	24				

Notes: Broadway Lining Pit Modification Costs for Existing 10in Gas Main

File Save Name: Crest Hill_CIPP WM Lining 2025_ AUP3 Broadway lining pit modifications for 10in gas

J S25-150
D on: Water Main Rehabilitation Phase 1, Contract 3-2024
L Crest Hill, Illinois
D Work: CO #1

September-2025

Name	Position	24 ST	24 OT	24 DT	24	25	26			Total Hours ST	OT	DT	Rate	Insurance Amount	Payroll Amount	Earnings to Date	Unemployme F.U.T.
George Gentry	Oper. 150 Foreman jc 35*	8			8.0					8.0			$65.000	$520.00	$520.00	$ 10,000.00	
Guy Lepore	Oper. 150 Class 1 jc 31*	8			8.0					8.0			$63.000	$504.00	$504.00	$ 10,000.00	
Shawn Radloff	Laborer, Semi-Skilled jc 12	8			8.0					8.0			$51.400	$411.20	$411.20	$ 10,000.00	
Modesto Gamboa	Laborer, Semi-Skilled jc 12	8			8.0					8.0			$51.400	$411.20	$411.20	$ 10,000.00	
Miguel Garcia	Laborer, Semi-Skilled jc 12	8			8.0					8.0			$51.400	$411.20	$411.20	$ 10,000.00	
Jake Collins	Laborer, Semi-Skilled jc 12	8			8.0					8.0			$51.400	$411.20	$411.20	$ 10,000.00	
Ruben	Laborer, Semi-Skilled jc 12	8			8.0					8.0			$51.400	$411.20	$411.20	$ 10,000.00	
Dylan Strand	Labor Apprentice jc 17												$30.840			$ 10,000.00	
Tracy Morano	Plumber journeymen 130												$58.500			$ 10,000.00	

Subtotals, Labor $3,080.00 $3,080.00

Tax Deferred Savings

	DT	Total			ST	OT	DT
Laborers Benefits Funds		40.0	hours @	$37.28			
Plumber's Local 130			hours @	$39.28			
Operating Engineers Apprentice Benefits Funds		16.0	hours @	$52.83			

$1,491.20

$845.28

Subtotals, Labor				$5,416.48
Plus 35 % of		$5,416.48		$1,895.77
				$7,312.25
Workmen's Compensation Insurance	24.69 % of	$3,080.00	$760.45	
Public Liability & Property Damage	4.41 % of	$3,080.00	$135.83	
Federal Unemployment Tax	0.80 % of			
State Unemployment Tax	6.83 % of	$3,080.00	$210.36	
Federal Social Security Tax	7.65 % of	$3,080.00	$235.62	
Total Payroll Additives			$1,342.26	
	Plus 10 % of	$1,342.26	$134.23	
				$1,476.49
Total Labor				$8,788.74

I hereby certify that the above statement is a copy of that portion of the payroll which applies to the above state work and that the rates shown for taxes and insurance are actual costs.

Sheridan Plumbing & Sewer

Job No. : S25-150
Description: Water Main Rehabilitation Phase 1, Contract 3-2024
Location: Crest Hill, Illinois
Desc. Of Work: CO #1

ID	Subcategory	Manufacturer	Model	Year	Config	Rate	Date(s): September-2025 24	25	26			total hours	amount
	Mini Excavator	John Deere	JD35	2024		$ 24.81							
ST11	Service Truck	Ford	F450 DXL 4x4	2024		$ 43.29	8					8.00	$ 346.32
	Tracked Excavator	John Deere	JD 135G	2019		$ 78.98							
	Tracked Excavator	John Deere	JD 85	2024		$ 75.37	8					8.00	$ 602.96
	Excavator Bucket	John Deere	.875 Cu Yd	2019		$ 5.16							
	Excavator Bucket	John Deere	.5 Cu Yd	2019		$ 4.75	8					8.00	$ 38.00
VA 19	Vactor	Kenworth	T800	2014	Kenworth T800 chassis 2115-1024 PD	$ 334.00	8					8.00	$ 2,672.00
	Tracked Skid Steer Loader		JD 329	2019		$ 92.39							
DT07	Six Wheel Dump Truck	Peterbilt	T-800	2024	350HP	$ 67.20	8					8.00	$ 537.60
	Wheel Loader	John Deere	JD344L	2020	103HP	$ 37.42	8					8.00	$ 299.36
	Tow Behind Trailer	Eager Beaver	20XPT	2015	21' flat deck, 20 ton non-tilit trailer	$ 6.70							
	Confined space entry Equipment			2022		$ 12.50							
	4 gas monitor			2022		$ 4.16							

TOTAL EQUIPMENT $4,496.24

September-2025 24

Sub Contractor Items	Unit	Total	Unit Price	Amount
Trucking	HR	-	$0.00	$0.00
		9	$135.00	$1,215.00
		0	$0.00	$0.00
		0	$0.00	$0.00
		0	$0.00	$0.00
		0	$0.00	$0.00
		0	$0.00	$0.00
		0	$0.00	$0.00
		0	$0.00	$0.00
		0	$0.00	$0.00
		0	$0.00	$0.00
		Subtotal		$1,215.00
		Plus 5%		$60.75
Total Material				$1,275.75

Job No.: S25-150
Description: Water Main Rehabilitation Phase 1, Contract 3-2024
Location: Crest Hill, Illinois
Desc. of Work: CO #1

Route _____ Mile Post _____ County WILL Auth. No. _____

Force Account bill for City of Crest Hill Contract No. _____

Summary of attached force account billings

Labor:		$8,788.74
Equipment:		$4,496.24
Material:		$0.00
Rented Equipment:		$0.00
Subcontractor		$1,275.75
	Total:	$14,560.73
Bond:	0.0%	$0.00
Bond MU	0%	$0.00
	Total Bill:	$14,560.73

_____

Resident

Job No.: S25-150

Description: Water Main Rehabilitation Phase 1, Contract 3-2024

Location: Crest Hill, Illinois

Desc. Of Work CO#1

September-2025

NOTES: Broadway Lining Pit Modification Costs for Existing 10in Gas Main

Change Order

FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120

Distribution ☐ CREST HILL, IL - BROADWAY ST.
☐ Office ☐ Field
☐ Other

Project: CREST HILL, IL - BROADWAY ST. **Contract Number:** EH25330- CREST HILL, IL - BROADWAY ST

Proposed Change Order #: FO 10 10" Butterfly Valve (2) each

To (Contractor): FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120

Change Order Date : 12/15/25

You are directed to make the following changes in this Contract:

C.O. Item	Contract Item	Change in Days	UM	Units	Description	Unit Price	Amount
10			EA	2.000	10" Butterfly Valve (2) each	6,184.45000	12,368.90
					Total For Change Order:		**12,368.90**

Not valid until signed by both the Owner and Architect. Signature of the Contractor indicates the Contractor's agreement herewith, including any adjustment in the Contract Sum or Contract Time.

The original Contract Sum was	**2,479,975.70**
The net change by previously authorized Change Orders was	**5.30**
The Contract Sum prior to this Change Order was	**2,479,981.00**
The Contract Sum will be increased by this Change Order	**12,368.90**
The new Contract Sum will be	**2,492,349.90**

Authorized By Owner:	**Accepted By Contractor:**	**Architect/Engineer:**
City of Crest Hill	FER-PAL Construction USA LLC 1350 Gasket Drive, Elgin, IL 60120	
By: _____	**By:** _____	**By:** _____
Date: _____	**Date:** 12/15/25	**Date:** _____

Change Order

FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120

Distribution ☐ CREST HILL, IL - BROADWAY ST.
☐ Office ☐ Field
☐ Other

Project: CREST HILL, IL - BROADWAY ST. **Contract Number:** EH25330- CREST HILL, IL - BROADWAY ST

Proposed Change Order #: FO 3 T & M Theodore and Broadway Ex

To (Contractor): FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120

Change Order Date : 10/31/25

You are directed to make the following changes in this Contract:

C.O. Item	Contract Item	Change in Days	UM	Units	Description	Unit Price	Amount
3			LS		T & M Theodore and Broadway Exploration		45,008.47
					Total For Change Order:		**45,008.47**

Not valid until signed by both the Owner and Architect. Signature of the Contractor indicates the Contractor's agreement herewith, including any adjustment in the Contract Sum or Contract Time.

The original Contract Sum was	**2,632,460.83**
The net change by previously authorized Change Orders was	**0.00**
The Contract Sum prior to this Change Order was	**2,632,460.83**
The Contract Sum will be increased by this Change Order	**45,008.47**
The new Contract Sum will be	**2,677,469.30**

Authorized By Owner:	**Accepted By Contractor:**	**Architect/Engineer:**
City of Crest Hill	FER-PAL Construction USA LLC 1350 Gasket Drive, Elgin, IL 60120	
By: _____	**By:** _____	**By:** _____
Date: _____	**Date:** _____	**Date:** _____

SHERIDAN PLUMBING & SEWER

6754 W. 74th Street
Bedford Park, IL 60638
(708)475-7100 (708)475-7138 fax
IL Plumbing License No. 055-027841

September 29, 2025

Fer-Pal Construction USA LLC
1350 Gasket Drive
Elgin, IL. 60120

Attn: Joel Ponce

PROJECT: City of Crest Hill, CIPP Water Main Rehabilitation – Phase 1
Request for CO #1 – Broadway St. and Theodore St. exploratory excavations for existing utility conflicts and lining pit re-alignment locations

Summary of attached force account billings

Labor:			$29,376.49
Equipment:			$13,488.72
Material:			$0.00
Rented Equipment:			$0.00
Subcontractor			$0.00
		Total:	$42,865.21
Bond:	0.0%		$0.00
Bond MU	0%		$0.00
		Total Bill:	$42,865.21

Notes:

Wednesday, 9-24-2025

1. **Excavation of proposed lining pit at the intersection of Broadway St. and Theodore St. (P-9) discovered an existing 10" gas main running parallel with the existing 10" watermain. The existing configuration of the existing watermain was determined to be an existing 10" x 8" tee rather than a 10" 90* bend.**
2. **The location of (P9) was then re-located approx. 25 LF to the north of original location. Upon installation of the lining pit (9A), a 8" sanitary sewer was discovered at the same elevation of the existing watermain located perpendicular to the existing 10" watermain. Additional discussions were neccesary to assess the feasibility of design in regards to IEPA regulations regarding sewer seperation. After discussion, It was determined that Pit (P9A) could be utilized after lining to facilitate the istallation of a new 8" valve and vault.**

Initials _____

Thursday, 9-25-2025

1. **Excavation of an additional lining pit (P9-B) approx. 25 LF north of the orginal location of pit (P-9) was perfromed to determine if lining pits (9A and 9B) could be utilized in conjunction with open cut installation of new watermain to avoid mutiple conflicts. Upon excavation of Pit (P9-B) the existing 10" gas main along with an additonal unknown 10" pipe was discovered and the dicision was made to backfill the excavation.**
2. **The Original lining pit (P9) was re-excavated and an safety shoring design was implemented to to encompass the existing utilities within the footprint of the lining pit.**

Friday, 9-26-2025

1. **Excavation of proposed lining pit (P-11) uncovered a 10" gas main parellel to the existing 10" watermain. A 10" ductile storm sewer was also discovered approx. 16" south running parallel to the gas main. Safety shoring design was modified to encompass the existing utilities within the footprint of the lining pit.**

The following invoice has taken only the ammount of additional labor and equipment into consideration for work performed and down time incurred out side the innitial scope between 9/24 and 9/26. Additional line items such as pavement removal, Trench backfill, rock excavation, necessary re-instatement piping etc. are to be paid for per their respective line item pricing.

Please see attached for itemized force account costs.

PROJECT COST: The Scope of Work has been estimated on an force account basis. This cost includes weekday work, environmental monitoring, personal protective equipment up to Chemical Protection Level D, travel time, standard insurance and any other items stated in above Scope of Work.

Initials _____

SHERIDAN PLUMBING & SEWER

6754 W. 74th Street
Bedford Park, IL 60638-6029
(708) 475-7114 (708) 475-7138 fax
IL Plumbing License No. 055-027841
IDOT Contractor No: 050C
WBE Certified

General Contractor:	Sheridan Plumbing & Sewer
Job No.:	S25-150
Description:	Water Main Rehabilitation Phase 1, Contract 3-2024
Location:	Crest Hill, Illinois
Desc. Of Work:	CO #1
Route:	
Mile Post	
County	WILL
Report. No.	CO #1
Owner:	City of Crest Hill
Contract No.:	
Authorization No.	
Project No.	

Month:	**August-2025**				
Days:	24				

Notes: Exploration Excavations for the Intersection of Broadway and Theodore St.

File Save Name: Crest Hill_CIPP WM Lining 2025_ CO1 Broadway and Theodore Exploration

: S25-150
tion: Water Main Rehabilitation Phase 1, Contract 3-2024
n: Crest Hill, Illinois
Desc. Of Work: CO #1

August-2025

Name	Position	24 ST	24	25	26			Total Hours ST	OT	DT	Rate	Insurance Amount	Payroll Amount	Earnings to Date	Unemployme F.U.T.
George Gentry	Oper. 150 Foreman jc 35*	8	8.5	8.0	9.0			24.0	1.5		$65.000	$1,657.50	$1,704.83	$ 10,000.00	
Guy Lepore	Oper. 150 Class 1 jc 31*	8	8.0	8.0	8.0			24.0			$63.000	$1,512.00	$1,512.00	$ 10,000.00	
Shawn Radloff	Laborer, Semi-Skilled jc 12	8	8.0	8.0	8.0			24.0			$51.400	$1,233.60	$1,233.60	$ 10,000.00	
Modesto Gamboa	Laborer, Semi-Skilled jc 12	8	8.0	8.0				24.0			$51.400	$1,233.60	$1,233.60	$ 10,000.00	
Miguel Garcia	Laborer, Semi-Skilled jc 12	8	8.0	8.0	8.0			24.0			$51.400	$1,233.60	$1,233.60	$ 10,000.00	
Jake Collins	Laborer, Semi-Skilled jc 12	8	8.0	8.0	8.5			24.0	0.5		$51.400	$1,259.30	$1,272.15	$ 10,000.00	
Ruben	Laborer, Semi-Skilled jc 12	8	8.0	8.0	8.0			24.0			$51.400	$1,233.60	$1,233.60	$ 10,000.00	
Dylan Strand	Labor Apprentice jc 17	8	8.0	8.0	8.0			24.0			$30.840	$740.16	$740.16	$ 10,000.00	
Tracy Morano	Plumber journeymen 130										$58.500			$ 10,000.00	

Subtotals, Labor $10,103.36 $10,163.54

Tax Deferred Savings

	Total			ST	OT	DT
Laborers Benefits Funds	144.5	hours @	$37.28			
Plumber's Local 130		hours @	$39.28			
Operating Engineers Apprentice Benefits Funds	49.5	hours @	$52.83			

$5,386.96

$2,615.09

Subtotals, Labor $18,165.59

Plus 35 % of $18,165.59 $6,357.96

$24,523.55

Workmen's Compensation Insurance	24.69 %	of	$10,103.36	$2,494.52
Public Liability & Property Damage	4.41 %	of	$10,103.36	$445.56
Federal Unemployment Tax	0.80 %	of		
State Unemployment Tax	6.83 %	of	$10,163.54	$694.17
Federal Social Security Tax	7.65 %	of	$10,163.54	$777.51
Total Payroll Additives				$4,411.76
	Plus 10 %	of	$4,411.76	$441.18

$4,852.94

Total Labor $29,376.49

I hereby certify that the above statement is a copy of that portion of the payroll which applies to the above state work and that the rates shown for taxes and insurance are actual costs.

Sheridan Plumbing & Sewer

Job No. : S25-150
Description: Water Main Rehabilitation Phase 1, Contract 3-2024
Location: Crest Hill, Illinois
Desc. Of Work: CO #1

Date(s): August-2025

ID	Subcategory	Manufacturer	Model	Year	Config	Rate	24	25	26			total hours	amount
	Mini Excavator	John Deere	JD35	2024		$ 24.81							
ST11	Service Truck	Ford	F450 DXL 4x4	2024		$ 43.29	8	8	8			24.00	$ 1,038.96
	Tracked Excavator	John Deere	JD 135G	2019		$ 78.98							
	Tracked Excavator	John Deere	JD 85	2024		$ 75.37	8	8	8			24.00	$ 1,808.88
	Excavator Bucket	John Deere	.875 Cu Yd	2019		$ 5.16							
	Excavator Bucket	John Deere	.5 Cu Yd	2019		$ 4.75	8	8	8			24.00	$ 114.00
VA 19	Vactor	Kenworth	T800	2014	Kenworth T800 chassis 2115-1024 PD	$ 334.00	8	8	8			24.00	$ 8,016.00
	Tracked Skid Steer Loader		JD 329	2019		$ 92.39							
DT07	Six Wheel Dump Truck	Peterbilt	T-800	2024	350HP	$ 67.20	8	8	8			24.00	$ 1,612.80
	Wheel Loader	John Deere	JD344L	2020	103HP	$ 37.42	8	8	8			24.00	$ 898.08
	Tow Behind Trailer	Eager Beaver	20XPT	2015	21' flat deck, 20 ton non-tilit trailer	$ 6.70							
	Confined space entry Equipment			2022		$ 12.50							
	4 gas monitor			2022		$ 4.16							

TOTAL EQUIPMENT $13,488.72

Route _____ Mile Post _____ County WILL Auth. No. _____

Force Account bill for City of Crest Hill Contract No. _____

Summary of attached force account billings

Labor:		$29,376.49
Equipment:		$13,488.72
Material:		$0.00
Rented Equipment:		$0.00
Subcontractor		$0.00
	Total:	$42,865.21
Bond:	0.0%	$0.00
Bond MU	0%	$0.00
	Total Bill:	$42,865.21

_____

Resident

Job No.: S25-150

Description: Water Main Rehabilitation Phase 1, Contract 3-2024

Location: Crest Hill, Illinois

Desc. Of Work CO#1

August-2025

NOTES: Exploration Excavations for the Intersection of Broadway and Theodore St.

SHERIDAN PROCESS EQUIPMENT

Daily Time Sheet

Day (circle one)	SU M (W) TH F SA
Date	9-24
Start Time	630
End Time	230
Contract #	
Gen. Contractor	Crest Hill.
Job Name	Lining.
Sheridan Job #	
Task	Excavation - Cleaning - Clean & CCTV

Employee Name	ST	OT	DT	Travel	Down	Lunch	Total
George Gentry	8	.5					8.5
Shawn Radloff	8						8
Miguel Garcia	8						8
Modesto Gamboa 6.2	8						8
O.Ilan	8						8
Cuy	8						8
Jake	8						
Rubin	8						8
							8

Materials Summary

Vendor	Pick Ticket/PO#
GNL	47908

Materials from Inventory

Description	Quantity

Comments: Meet Midwest & Install an 8" Insert Valve. Back Fill with 7 Stone
* Remove Concrete at R7 53 & Theodore & D3 Down Locate.
8" 90 Ran Into 12" Gas & T Instead of 90
* Moved P.H west 25' And Broke out Concrete For Lining P.H.
* Back Filled P.H with T with 7 Stone.

344 Loader

Sheridan Vehicles

JD 410J	
Deere 85	✓
Dump Truck	04
JD 135	
JD 135 Breaker	
Eager Beaver	
KX080	
JD35G	
Pick-Up	
Service Truck 08	11
Skid Steer	
Skid Steer Breaker	
Trailer	
PU 20	
Vacuu	
JD 344	✓
Loader	

Sheridan Equipment

Description		Description		Description	
2" Pump		Push Camera		Rental Vehicles/Equipment	
3" Pump		Pipe Machine		Description	Vendor
6" Pump		Snappers			
Compactor		Grade/ PLS Laser			
Compressor		VOC gas Meter			
Concrete Blankets		Wet/Dry Vac			
Concrete Mixer		Hand Tools			
Confined Space		Sawzall			
Demo Hammer		Steel Plates			
Generator		Cordless Drill			
Grout Pump		**Locating Equipment**			
Hammer Drill		GPR			
Jack Hammer		Mac 51			
Partner Saw		RD4000			

Supervisor's Signature:

Date:

SHERIDAN PUBLIC CONSULTING

Daily Time Sheet

Day (circle one)	SU M T W (TH) F SA	Contract #	
Date	9-25-25	Gen. Contractor	Crest Hill
Start Time		Job Name	Linny
End Time		Sheridan Job #	
		Task	Excavation - Cleaning - Clean & CCTV

Employee Name	ST	OT	DT	Travel	Down	Lunch	Total
George Gentry	8						8
Shawn Radloff	8						8
Miguel Garcia	8						8
Modesto Gamboa out of Town	Vacation						
D. Ilen	8						8
Cory	8						8
Jake	8						8
Ruby	8						8

Materials Summary

Vendor	Pick Ticket/PO#
GNL	47909

Materials from Inventory

Description	Quantity

Comments: * Break out 10x7 of 20" Asphalt & Dig out for Linny - P.H. Run into 12" Cross Elect Duct & 2 12" Storm Lines. Showed Inspector & Back Filled with 7 Stone.
* Install 8-6 Wood Box on Theodore West for Linny
* Re dig Hole over T on Rt 53 Cut Out & Remove 10x8 Cross
Break Out 1.5 Ft of Bed Rock 8X8 for Re bolt. of Pipe

344 Loader.

Sheridan Vehicles	
JD 410J	
Deere 85	✓
Dump Truck	
JD 135	
JD 135 Breaker	
Eager Beaver	
KX080	
JD35G	
Pick-Up	
Service Truck 08	//
Skid Steer	
Skid Steer Breaker	
Trailer	
PU 20	
Vactor	
JD 344	✓

Sheridan Equipment

Description		Description	
2" Pump		Push Camera	
3" Pump		Pipe Machine	
6" Pump		Snappers	
Compactor		Grade/ PLS Laser	
Compressor		VOC gas Meter	
Concrete Blankets		Wet/Dry Vac	
Concrete Mixer		Hand Tools	
Confined Space		Sawzall	
Demo Hammer		Steel Plates	
Generator		Cordless Drill	
Grout Pump		**Locating Equipment**	
Hammer Drill		GPR	
Jack Hammer		Mac 51	
Partner Saw		RD4000	
		Backhoe Breaker	✓

Rental Vehicles/Equipment

Description	Vendor

Supervisor's Signature: [signature]

Date:

Daily Time Sheet

...me)	SU M T W TH (F) SA	Contract #	
	9-26-25	Gen. Contractor	Crest Hill
...me	630	Job Name	Lining
...me	230	Sheridan Job #	
		Task	Excavation - Cleaning - Clean & CCTV

Employee Name	ST	OT	DT	Travel	Down	Lunch	Total
George Gentry	8	1					8
Shawn Radloff	8						8
Miguel Garcia	8						8
Modesto Gamboa OFF	—	Vacation					—
Dillon	8						8
Guy	8						8
Rulin	8						8
Jake 630 - 300	8	.5					8.5

Materials Summary

Vendor	Pick Ticket/PO#

Materials from Inventory

Description	Quantity

Comments: * work on 2 Pits ① at Car Lot & ① on Storm. Use Vactor To Lo date 12" gas at Both spotts, use 85 + Breaker To Remove Rd cut & Remove 2' Storm Tubed From Directly on Top of 12" gas.

344 Loader

Sheridan Vehicles	
JD 410J	
Deere 85	✓
Dump Truck	
JD 135	
JD 135 Breaker	
Eager Beaver	
KX080	
JD35G	
Pick-Up	
Service Truck 08	
Skid Steer	
Skid Steer Breaker	
Trailer	
PU 20	
Vactor	19
JD 344	✓

Sheridan Equipment

Description		Description	
2" Pump		Push Camera	
3" Pump		Pipe Machine	
6" Pump		Snappers	
Compactor		Grade/ PLS Laser	
Compressor		VOC gas Meter	
Concrete Blankets		Wet/Dry Vac	
Concrete Mixer		Hand Tools	
Confined Space		Sawzall	
Demo Hammer		Steel Plates	
Generator		Cordless Drill	
Grout Pump		Locating Equipment	
Hammer Drill		GPR	
Jack Hammer		Mac 51	
Partner Saw		RD4000	
		Breaker Attachment	✓

Rental Vehicles/Equipment

Description	Vendor

Supervisor's Signature:

Date:

Change Order

FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120

Distribution ☐ CREST HILL, IL - BROADWAY ST.
☐ Office ☐ Field
☐ Other

Project: CREST HILL, IL - BROADWAY ST. **Contract Number:** EH25330- CREST HILL, IL - BROADWAY ST

Proposed Change Order #: FO 7 Relocate Existing roundwas and B

To (Contractor): FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120

Change Order Date : 12/03/25

You are directed to make the following changes in this Contract:

C.O. Item	Contract Item	Change in Days	UM	Units	Description	Unit Price	Amount
7			LS		Relocate Existing roundwas and B boxes		12,200.75
					Total For Change Order:		**12,200.75**

Not valid until signed by both the Owner and Architect. Signature of the Contractor indicates the Contractor's agreement herewith, including any adjustment in the Contract Sum or Contract Time.

The original Contract Sum was	**2,479,975.70**
The net change by previously authorized Change Orders was	**0.00**
The Contract Sum prior to this Change Order was	**2,479,975.70**
The Contract Sum will be increased by this Change Order	**12,200.75**
The new Contract Sum will be	**2,492,176.45**

Authorized By Owner:	**Accepted By Contractor:**	**Architect/Engineer:**
City of Crest Hill	FER-PAL Construction USA LLC 1350 Gasket Drive, Elgin, IL 60120	
By: _____	**By:** _____	**By:** _____
Date: _____	**Date:** 12/03/25	**Date:** _____

SHERIDAN PLUMBING & SEWER

6754 W. 74th Street
Bedford Park, IL 60638
(708)475-7100 (708)475-7138 fax
IL Plumbing License No. 055-027841

November 20, 2025

Fer-Pal Construction USA LLC
1350 Gasket Drive
Elgin, IL. 60120

Attn: Joel Ponce

PROJECT: City of Crest Hill, CIPP Water Main Rehabilitation – Phase 1
Request for CO #3 – Relocate existing roundways and B Boxes from behind existing retaining wall to sidewalk, 11/17/2025 per village request.

Summary of attached force account billings

Labor:			$7,103.31
Equipment:			$4,266.32
Material:			$0.00
Rented Equipment:			$0.00
Subcontractor			$0.00
		Total:	$11,369.63
Bond:	2.0%		$227.39
Bond MU	10%		$22.74
		Total Bill:	$11,619.76

Please see attached for itemized force account costs.

PROJECT COST: The Scope of Work has been completed on an force account basis for **$11,619.76.** This cost includes weekday work, environmental monitoring, personal protective equipment up to Chemical Protection Level D, travel time, standard insurance and any other items stated in above Scope of Work.

Initials _____

SHERIDAN PLUMBING & SEWER

6754 W. 74th Street
Bedford Park, IL 60638-6029
(708) 475-7114 (708) 475-7138 fax
IL Plumbing License No. 055-027841
IDOT Contractor No: 050C
WBE Certified

General Contractor:	Sheridan Plumbing & Sewer
Job No.:	S25-150
Description:	Water Main Rehabilitation Phase 1, Contract 3-2024
Location:	Crest Hill, Illinois
Desc. Of Work:	CO #3
Route:	
Mile Post	
County	WILL
Report. No.	CO #3
Owner:	City of Crest Hill
Contract No.:	
Authorization No.	3
Project No.	Crest Hill Water Main Lining, Phase 1

Month:	**November-2025**				
Days:	17				

Notes: Relocation of existing Roundways and B-Boxes from behind existing retaining wall into sidewalk. Per City's request

File Save Name: Crest Hill Water Main Lining_CO3 Relocate existing B Boxes Theodore 11_17_25

J S25-150
D on: Water Main Rehabilitation Phase 1, Contract 3-2024
Location: Crest Hill, Illinois
Desc. Of Work: CO #2

November-2025					17					Total Hours				Insurance	Payroll	Earnings	Unemployme
Name	Position	17 ST	17 OT	17 DT						ST	OT	DT	Rate	Amount	Amount	to Date	F.U.T.
George Gentry	Oper. 150 Foreman jc 35*	8			8.0					8.0			$66.000	$528.00	$528.00	$ 10,000.00	
Guy Lepore	Oper. 150 Class 1 jc 31*	8			8.0					8.0			$63.000	$504.00	$504.00	$ 10,000.00	
Shawn Radloff	Laborer, Semi-Skilled jc 12												$51.400			$ 10,000.00	
Modesto Gamboa	Laborer, Semi-Skilled jc 12	8			8.0					8.0			$51.400	$411.20	$411.20	$ 10,000.00	
Miguel Garcia	Laborer, Semi-Skilled jc 12	8			8.0					8.0			$51.400	$411.20	$411.20	$ 10,000.00	
Jesus Guzmen	Laborer, Semi-Skilled jc 12												$51.400			$ 10,000.00	
Jake Collins	Laborer, Semi-Skilled jc 12	8			8.0					8.0			$51.400	$411.20	$411.20	$ 10,000.00	
Isreal Garcia	Laborer, Semi-Skilled jc 12												$51.400			$ 10,000.00	
Dylan Strand	Labor Apprentice jc 17	8			8.0					8.0			$30.840	$246.72	$246.72	$ 10,000.00	
Tracy Morano	Plumber journeymen 130												$58.500			$ 10,000.00	

				Subtotals, Labor			$2,512.32	$2,512.32
				Tax Deferred Savings				
	Total			ST	OT	DT		
Laborers Benefits Funds	32.0	hours @	$37.28					$1,192.96
Plumber's Local 130		hours @	$39.28					
Operating Engineers Apprentice Benefits Funds	16.0	hours @	$52.83					$845.28

Subtotals, Labor					$4,550.56
Plus 35 % of		$4,550.56			$1,592.70
					$6,143.26
Workmen's Compensation Insurance	15.85 % of	$2,512.32	$398.20		
Public Liability & Property Damage	4.41 % of	$2,512.32	$110.79		
Federal Unemployment Tax	0.80 % of				
State Unemployment Tax	6.83 % of	$2,512.32	$171.59		
Federal Social Security Tax	7.65 % of	$2,512.32	$192.19		
Total Payroll Additives			$872.77		
	Plus 10 % of	$872.77	$87.28		
					$960.05
Total Labor					$7,103.31

I hereby certify that the above statement is a copy of that portion of the payroll which applies to the above state work and that the rates shown for taxes and insurance are actual costs.

Sheridan Plumbing & Sewer

Job No. : S25-150
Description: Water Main Rehabilitation Phase 1, Contract 3-2024
Location: Crest Hill, Illinois
Desc. Of Work: CO #2

ID	Subcategory	Manufacturer	Model	Year	Config	Rate	Date(s): November-2025 17					total hours	amount
	Mini Excavator	John Deere	JD35	2024		$ 24.81							
ST11	Service Truck	Ford	F450 DXL 4x4	2024		$ 43.46	8					8.00	$ 347.68
	Tracked Excavator	John Deere	JD 135G	2019		$ 78.97							
	Tracked Excavator	John Deere	JD 85	2024		$ 75.37	8					8.00	$ 602.96
	Excavator Bucket	John Deere	.875 Cu Yd	2019		$ 5.16							
	Excavator Bucket	John Deere	.5 Cu Yd	2019		$ 4.75	8					8.00	$ 38.00
VA 19	Vactor	Kenworth	T800	2014	Kenworth T800 chassis 2115-1024 PD	$ 342.51	8					8.00	$ 2,740.08
	Tracked Skid Steer Loader	John Deere	JD 329	2019		$ 92.39							
DT07	Six Wheel Dump Truck	Peterbilt	T-800	2024	350HP	$ 67.20	8					8.00	$ 537.60
	Wheel Loader	John Deere	JD344L	2020	103HP	$ 37.42							
	Tow Behind Trailer	Eager Beaver	20XPT	2015	21' flat deck, 20 ton non-tilit trailer	$ 10.82							
	Confined space entry Equipment			2022		$ 12.50							
	4 gas monitor			2022		$ 4.16							

TOTAL EQUIPMENT $4,266.32

Route _____ Mile Post _____ County WILL Auth. No. _____

Force Account bill for City of Crest Hill Contract No. _____

Summary of attached force account billings

Labor:			$7,103.31
Equipment:			$4,266.32
Material:			$0.00
Rented Equipment:			$0.00
Subcontractor			$0.00
		Total:	$11,369.63
Bond:	2.0%		$227.39
Bond MU	10%		$22.74
		Total Bill:	$11,619.76

_____

Resident

Job No.: S25-150

Description: Water Main Rehabilitation Phase 1, Contract 3-2024

Location: Crest Hill, Illinois

Desc. Of Work CO #2

November-2025

NOTES: Relocation of existing Roundways and B-Boxes from behind existing retaining wall into sidewalk. Per City's request

Change Order

FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120

Distribution ☐ CREST HILL, IL - BROADWAY ST.
☐
☐ Office ☐ Field
☐ Other

Project: CREST HILL, IL - BROADWAY ST.
Contract Number: EH25330- CREST HILL, IL - BROADWAY ST
Proposed Change Order #: FO 5 Re-instatement of 2" water service
To (Contractor): FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120
Change Order Date : 12/03/25

You are directed to make the following changes in this Contract:

C.O. Item	Contract Item	Change in Days	UM	Units	Description	Unit Price	Amount
5			LS		Re-instatement of 2" water service (excavate		4,065.32
					Total For Change Order:		**4,065.32**

Not valid until signed by both the Owner and Architect. Signature of the Contractor indicates the Contractor's agreement herewith, including any adjustment in the Contract Sum or Contract Time.

The original Contract Sum was	**2,479,975.70**
The net change by previously authorized Change Orders was	**0.00**
The Contract Sum prior to this Change Order was	**2,479,975.70**
The Contract Sum will be increased by this Change Order	**4,065.32**
The new Contract Sum will be	**2,484,041.02**

Authorized By Owner:	**Accepted By Contractor:**	**Architect/Engineer:**
City of Crest Hill	FER-PAL Construction USA LLC 1350 Gasket Drive, Elgin, IL 60120	
By: _____	**By:** _____	**By:** _____
Date: _____	**Date:** 12/03/25	**Date:** _____

SHERIDAN PLUMBING & SEWER

6754 W. 74th Street
Bedford Park, IL 60638
(708)475-7100 (708)475-7138 fax
IL Plumbing License No. 055-027841

November 14, 2025

Fer-Pal Construction USA LLC
1350 Gasket Drive
Elgin, IL. 60120

Attn: Joel Ponce

PROJECT: City of Crest Hill, CIPP Water Main Rehabilitation – Phase 1
Request for CO #2 – Re-instatement of 2" Water Service Connection, 11/12/2025. Excavation, locate and dis-connect existing 2" corporation and copper. Final connection shall be made at another date.

Summary of attached force account billings

Labor:			$1,486.17
Equipment:			$2,302.22
Material:			$0.00
Rented Equipment:			$0.00
Subcontractor			$0.00
		Total:	$3,788.39
Bond:	2.0%		$75.77
Bond MU	10%		$7.58
		Total Bill:	$3,871.73

Please see attached for itemized force account costs.

PROJECT COST: The Scope of Work has been completed on an force account basis for $3,871.73. This cost includes weekday work, environmental monitoring, personal protective equipment up to Chemical Protection Level D, travel time, standard insurance and any other items stated in above Scope of Work.

Initials _____

SHERIDAN PLUMBING & SEWER

6754 W. 74th Street
Bedford Park, IL 60638-6029
(708) 475-7114 (708) 475-7138 fax
IL Plumbing License No. 055-027841
IDOT Contractor No: 050C
WBE Certified

General Contractor:	Sheridan Plumbing & Sewer
Job No.:	S25-150
Description:	Water Main Rehabilitation Phase 1, Contract 3-2024
Location:	Crest Hill, Illinois
Desc. Of Work:	CO #2
Route:	
Mile Post	
County	WILL
Report. No.	CO #2
Owner:	City of Crest Hill
Contract No.:	
Authorization No.	2
Project No.	Crest Hill Water Main Lining, Phase 1

Month:	**November-2025**				
Days:	12				

Notes: Excavation for 2" Water Service Connection on Theodore St.

File Save Name: Crest Hill Water Main Lining_CO2 2in Water Service Connection Theodore 11_12_25

: S25-150
tion: Water Main Rehabilitation Phase 1, Contract 3-2024
n: Crest Hill, Illinois
f Work: CO #2

November-2025

Name	Position	12 ST	12 OT	12 DT	12					Total Hours ST	OT	DT	Rate	Insurance Amount	Payroll Amount	Earnings to Date	Unemployme F.U.T.
George Gentry	Oper. 150 Foreman jc 35*	2			2.0					2.0			$66.000	$132.00	$132.00	$ 10,000.00	
Guy Lepore	Oper. 150 Class 1 jc 31*												$63.000			$ 10,000.00	
Shawn Radloff	Laborer, Semi-Skilled jc 12	2			2.0					2.0			$51.400	$102.80	$102.80	$ 10,000.00	
Modesto Gamboa	Laborer, Semi-Skilled jc 12												$51.400			$ 10,000.00	
Miguel Garcia	Laborer, Semi-Skilled jc 12												$51.400			$ 10,000.00	
Jesus Guzmen	Laborer, Semi-Skilled jc 12												$51.400			$ 10,000.00	
Jake Collins	Laborer, Semi-Skilled jc 12	6			6.0					6.0			$51.400	$308.40	$308.40	$ 10,000.00	
Isreal Garcia	Laborer, Semi-Skilled jc 12												$51.400			$ 10,000.00	
Dylan Strand	Labor Apprentice jc 17												$30.840			$ 10,000.00	
Tracy Morano	Plumber journeymen 130												$58.500			$ 10,000.00	
	Subtotals, Labor													$543.20	$543.20		

Tax Deferred Savings

	Total			ST	OT	DT	
Laborers Benefits Funds	8.0	hours @	$37.28				
Plumber's Local 130		hours @	$39.28				$298.24
Operating Engineers Apprentice Benefits Funds	2.0	hours @	$52.83				$105.66

Subtotals, Labor					$947.10
Plus 35 % of	$947.10				$331.49
					$1,278.59
Workmen's Compensation Insurance	15.85 % of	$543.20	$86.10		
Public Liability & Property Damage	4.41 % of	$543.20	$23.96		
Federal Unemployment Tax	0.80 % of				
State Unemployment Tax	6.83 % of	$543.20	$37.10		
Federal Social Security Tax	7.65 % of	$543.20	$41.55		
Total Payroll Additives			$188.71		
Plus 10 % of	$188.71		$18.87		
					$207.58
Total Labor					$1,486.17

I hereby certify that the above statement is a copy of that portion of the payroll which applies to the above state work and that the rates shown for taxes and insurance are actual costs.

Sheridan Plumbing & Sewer

Job No. : S25-150
Description: Water Main Rehabilitation Phase 1, Contract 3-2024
Location: Crest Hill, Illinois
Desc. Of Work: CO #2

ID	Subcategory	Manufacturer	Model	Year	Config	Rate	Date(s): November-2025 12	total hours	amount
	Mini Excavator	John Deere	JD35	2024		$ 24.81			
ST11	Service Truck	Ford	F450 DXL 4x4	2024		$ 43.46	2	2.00	$ 86.92
	Tracked Excavator	John Deere	JD 135G	2019		$ 78.97			
	Tracked Excavator	John Deere	JD 85	2024		$ 75.37	2	2.00	$ 150.74
	Excavator Bucket	John Deere	.875 Cu Yd	2019		$ 5.16			
	Excavator Bucket	John Deere	.5 Cu Yd	2019		$ 4.75	2	2.00	$ 9.50
VA 19	Vactor	Kenworth	T800	2014	Kenworth T800 chassis 2115-1024 PD	$ 342.51	6	6.00	$ 2,055.06
	Tracked Skid Steer Loader	John Deere	JD 329	2019		$ 92.39			
DT07	Six Wheel Dump Truck	Peterbilt	T-800	2024	350HP	$ 67.20			
	Wheel Loader	John Deere	JD344L	2020	103HP	$ 37.42			
	Tow Behind Trailer	Eager Beaver	20XPT	2015	21' flat deck, 20 ton non-tilit trailer	$ 10.82			
	Confined space entry Equipment			2022		$ 12.50			
	4 gas monitor			2022		$ 4.16			

TOTAL EQUIPMENT $2,302.22

Route _____ Mile Post _____ County WILL Auth. No. _____

Force Account bill for City of Crest Hill Contract No. _____

Summary of attached force account billings

Labor:		$1,486.17
Equipment:		$2,302.22
Material:		$0.00
Rented Equipment:		$0.00
Subcontractor		$0.00
	Total:	$3,788.39
Bond:	2.0%	$75.77
Bond MU	10%	$7.58
	Total Bill:	$3,871.73

_____

Resident

Job No.: S25-150

Description: Water Main Rehabilitation Phase 1, Contract 3-2024

Location: Crest Hill, Illinois

Desc. Of Work CO #2

November-2025

NOTES: Excavation for 2" Water Service Connection on Theodore St.

Change Order

FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120

Distribution ☐ CREST HILL, IL - BROADWAY ST.
☐
☐ Office ☐ Field
☐ Other

Project: CREST HILL, IL - BROADWAY ST. **Contract Number:** EH25330- CREST HILL, IL - BROADWAY ST

Proposed Change Order #: FO 6 Re-instatement of 2" water service

To (Contractor): FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120

Change Order Date : 12/03/25

You are directed to make the following changes in this Contract:

C.O. Item	Contract Item	Change in Days	UM	Units	Description	Unit Price	Amount
6			LS		Re-instatement of 2" water service (labor & I		5,068.96
					Total For Change Order:		**5,068.96**

Not valid until signed by both the Owner and Architect. Signature of the Contractor indicates the Contractor's agreement herewith, including any adjustment in the Contract Sum or Contract Time.

The original Contract Sum was	**2,479,975.70**
The net change by previously authorized Change Orders was	**0.00**
The Contract Sum prior to this Change Order was	**2,479,975.70**
The Contract Sum will be increased by this Change Order	**5,068.96**
The new Contract Sum will be	**2,485,044.66**

Authorized By Owner:	**Accepted By Contractor:**	**Architect/Engineer:**
City of Crest Hill	FER-PAL Construction USA LLC 1350 Gasket Drive Elgin, IL 60120	
By: _____	**By:** _____	**By:** _____
Date: _____	**Date:** 12/03/25	**Date:** _____

SHERIDAN PLUMBING & SEWER

6754 W. 74th Street
Bedford Park, IL 60638
(708)475-7100 (708)475-7138 fax
IL Plumbing License No. 055-027841

November 25, 2025

Fer-Pal Construction USA LLC
1350 Gasket Drive
Elgin, IL. 60120

Attn: Joel Ponce

PROJECT: City of Crest Hill, CIPP Water Main Rehabilitation – Phase 1
Request for CO #2A – Re-instatement of 2" Water Service Connection- (Labor and materials for connection and backfill on 11/21/2025.

Summary of attached force account billings

Labor:			$1,683.25
Equipment:			$247.16
Material:			$2,793.25
Rented Equipment:			$0.00
Subcontractor			$0.00
		Total:	$4,723.66
Bond:	2.0%		$94.47
Bond MU	10%		$9.45
		Total Bill:	$4,827.58

Please see attached for itemized force account costs.

PROJECT COST: The Scope of Work has been completed on an force account basis for **$4,827.58.** This cost includes weekday work, environmental monitoring, personal protective equipment up to Chemical Protection Level D, travel time, standard insurance and any other items stated in above Scope of Work.

Initials _____

SHERIDAN PLUMBING & SEWER

6754 W. 74th Street
Bedford Park, IL 60638-6029
(708) 475-7114 (708) 475-7138 fax
IL Plumbing License No. 055-027841
IDOT Contractor No: 050C
WBE Certified

General Contractor:	Sheridan Plumbing & Sewer
Job No.:	S25-150
Description:	Water Main Rehabilitation Phase 1, Contract 3-2024
Location:	Crest Hill, Illinois
Desc. Of Work:	CO #2A
Route:	
Mile Post	
County	WILL
Report. No.	CO #2A
Owner:	City of Crest Hill
Contract No.:	
Authorization No.	2A
Project No.	Crest Hill Water Main Lining, Phase 1

Month:	**November-2025**				
Days:	21				

Notes: Re-instatement for 2" Water Service Connection on Theodore St.

File Save Name: Crest Hill Water Main Lining_CO2A 2in Water Service Reinstate Theodore 11_21_25

November-2025 | 21

ATERIAL USED	Unit	Total	Unit Price	Amount
2" Ty. K Copper	LF	40	$32.25	$1,290.00
8" x 2" Tapt Saddle	EA	1	$360.52	$360.52
2" Corp	EA	1	$455.74	$455.74
2" Curb Stop	EA	1	$686.99	$686.99

Subtotal $2,793.25

Total Material — Plus 15% $2,793.25

Job No.: S25-150
Description: Water Main Rehabilitation Phase 1, Contract 3-2024
Location: Crest Hill, Illinois
Desc. of Work: CO #2A

AFFIDAVIT

This is to certify that any material entered on this force account bill which was taken from stock is shown at our cost

Sheridan Plumbing & Sewer

By _____

Subscribed and sworn to before me this _____ day of _____ 20____.

_____
Notary Public

: S25-150
tion: Water Main Rehabilitation Phase 1, Contract 3-2024
n: Crest Hill, Illinois
f Work: CO #2A

November-2025

Name	Position	21 ST	21 OT	21 DT	21					Total Hours ST	OT	DT	Rate	Insurance Amount	Payroll Amount	Earnings to Date	Unemployme F.U.T.
George Gentry	Oper. 150 Foreman jc 35*												$66.000			$ 10,000.00	
Guy Lepore	Oper. 150 Class 1 jc 31*	2			2.0					2.0			$63.000	$126.00	$126.00	$ 10,000.00	
Shawn Radloff	Laborer, Semi-Skilled jc 12	2			2.0					2.0			$51.400	$102.80	$102.80	$ 10,000.00	
Modesto Gamboa	Laborer, Semi-Skilled jc 12	2			2.0					2.0			$51.400	$102.80	$102.80	$ 10,000.00	
Miguel Garcia	Laborer, Semi-Skilled jc 12	2			2.0					2.0			$51.400	$102.80	$102.80	$ 10,000.00	
Jesus Guzmen	Laborer, Semi-Skilled jc 12												$51.400			$ 10,000.00	
Jake Collins	Laborer, Semi-Skilled jc 12	2			2.0					2.0			$51.400	$102.80	$102.80	$ 10,000.00	
Isreal Garcia	Labor Apprentice jc 17	2			2.0					2.0			$30.840	$61.68	$61.68	$ 10,000.00	
Dylan Strand	Plumber journeymen 130												$58.500			$ 10,000.00	
Tracy Morano																	

Subtotals, Labor $598.88 $598.88

Tax Deferred Savings

	Total			ST	OT	DT	
Laborers Benefits Funds	10.0	hours @	$37.28				$372.80
Plumber's Local 130		hours @	$39.28				
Operating Engineers Apprentice Benefits Funds	2.0	hours @	$52.83				$105.66

Subtotals, Labor				$1,077.34
Plus 35 % of		$1,077.34		$377.07
				$1,454.41
Workmen's Compensation Insurance	15.85 % of	$598.88	$94.92	
Public Liability & Property Damage	4.41 % of	$598.88	$26.41	
Federal Unemployment Tax	0.80 % of			
State Unemployment Tax	6.83 % of	$598.88	$40.90	
Federal Social Security Tax	7.65 % of	$598.88	$45.81	
Total Payroll Additives			$208.04	
Plus 10 % of		$208.04	$20.80	
				$228.84
Total Labor				$1,683.25

I hereby certify that the above statement is a copy of that portion of the payroll which applies to the above state work and that the rates shown for taxes and insurance are actual costs.

Sheridan Plumbing & Sewer

Job No. : S25-150
Description: Water Main Rehabilitation Phase 1, Contract 3-2024
Location: Crest Hill, Illinois
Desc. Of Work: CO #2A

Date(s): November-2025

ID	Subcategory	Manufacturer	Model	Year	Config	Rate	21					total hours	amount
	Mini Excavator	John Deere	JD35	2024		$ 24.81							
ST11	Service Truck	Ford	F450 DXL 4x4	2024		$ 43.46	2					2.00	$ 86.92
	Tracked Excavator	John Deere	JD 135G	2019		$ 78.97							
	Tracked Excavator	John Deere	JD 85	2024		$ 75.37	2					2.00	$ 150.74
	Excavator Bucket	John Deere	.875 Cu Yd	2019		$ 5.16							
	Excavator Bucket	John Deere	.5 Cu Yd	2019		$ 4.75	2					2.00	$ 9.50
VA 19	Vactor	Kenworth	T800	2014	Kenworth T800 chassis 2115-1024 PD	$ 342.51							
	Tracked Skid Steer Loader	John Deere	JD 329	2019		$ 92.39							
DT07	Six Wheel Dump Truck	Peterbilt	T-800	2024	350HP	$ 67.20							
	Wheel Loader	John Deere	JD344L	2020	103HP	$ 37.42							
	Tow Behind Trailer	Eager Beaver	20XPT	2015	21' flat deck, 20 ton non-tilit trailer	$ 10.82							
	Confined space entry Equipment			2022		$ 12.50							
	4 gas monitor			2022		$ 4.16							

TOTAL EQUIPMENT $247.16

Route _____ Mile Post _____ County WILL Auth. No. _____

Force Account bill for City of Crest Hill Contract No. _____

Summary of attached force account billings

Labor:		$1,683.25
Equipment:		$247.16
Material:		$2,793.25
Rented Equipment:		$0.00
Subcontractor		$0.00
	Total:	$4,723.66
Bond:	2.0%	$94.47
Bond MU	10%	$9.45
	Total Bill:	$4,827.58

_____

Resident

Job No.: S25-150

Description: Water Main Rehabilitation Phase 1, Contract 3-2024

Location: Crest Hill, Illinois

Desc. Of Work CO #2A

November-2025

NOTES: Re-instatement for 2" Water Service Connection on Theodore St.

CORE & MAIN

INVOICE

Invoice #	Y111289
Invoice Date	11/13/25
Account #	140714
Sales Rep	RICH COOPER
Phone #	847-473-1900
Branch # 482	Lake Bluff, IL
Total Amount Due	$3,170.51

1830 Craig Park Court
St. Louis, MO 63146

NOV 20 2025

JS

Remit To:
CORE & MAIN LP
PO BOX 28330
ST LOUIS, MO 63146

362 1 MB 0.672 E0345X I0514 D14736301054 S2 P10936600 0001:0001

SHERIDAN PLUMBING & SEWER
6754 W 74TH ST
BEDFORD PARK IL 60638-6029

Shipped to:

CUSTOMER PICK-UP -

Thank you for the opportunity to serve you! We appreciate your prompt payment.

Date Ordered	Date Shipped	Customer PO #	Job Name	Job #	Bill of Lading	Shipped Via	Invoice #
11/12/25	11/12/25	PENDING				WILL CALL	Y111289

Product Code	Description	Quantity Ordered	Quantity Shipped	Quantity B/O	Price	UM	Extended Price
0820S040K	2X40 SOFT K COPPER USA PER FOOT	40	40		32.25000	FT	1,290.00
65REHF2	2 HAMMER FLARING TOOL HF2	1	1		142.40000	EA	142.40
72264090512015	264-090512-015 8X12-1/2X2CC TAPT REP CLP 8.99-9.39 OD	1	1		360.52000	EA	360.52
362074701B	74701B 2 BALL CORP STOP CCXFLR NO LEAD 5133-107	1	1		455.74000	EA	455.74
372076104	76104 2 BALL CURB STOP FLRXFLR MINN PATT NO LEAD 5129-121	1	1		686.99000	EA	686.99

Job materials - 2" x 40' Copper pipe, Flaring tool, Clip, Corp stop, Curb stop

Job #

Online ADVANTAGE™
• Manage billing online • Reprint invoices
• Retrieve proof of deliveries
Be suspicious of emails requesting wire transfers or payments to Core & Main using updated remittance information. For tips about how to identify bad actors, visit coreandmain.com/identifying-fraud.

Freight	Delivery	Handling	Restock	Misc.		
					Subtotal:	2,935.65
					Other:	0.00
					Tax:	234.86
					Invoice Total:	$3,170.51

Terms: NET 30
Ordered By: GEORGE

This transaction is governed by and subject to CORE & MAIN's standard terms and conditions, which are incorporated by reference and accepted. To review these terms and conditions, please visit: https://coreandmain.com/terms-of-sale/.

0001-0001

Change Order

FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120

Distribution ☐ CREST HILL, IL - BROADWAY ST.
☐ Office ☐ Field
☐ Other

Project: CREST HILL, IL - BROADWAY ST. **Contract Number:** EH25330- CREST HILL, IL - BROADWAY ST

Proposed Change Order #: FO 2 AUP #2 6" Gate Valve

To (Contractor): FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120

Change Order Date : 09/19/25

You are directed to make the following changes in this Contract:

C.O. Item	Contract Item	Change in Days	UM	Units	Description	Unit Price	Amount
2			EA	1.000	AUP #2 6" Gate Valve	2,264.80000	2,264.80
					Total For Change Order:		**2,264.80**

Not valid until signed by both the Owner and Architect. Signature of the Contractor indicates the Contractor's agreement herewith, including any adjustment in the Contract Sum or Contract Time.

The original Contract Sum was	**2,479,975.70**
The net change by previously authorized Change Orders was	**0.00**
The Contract Sum prior to this Change Order was	**2,479,975.70**
The Contract Sum will be increased by this Change Order	**2,264.80**
The new Contract Sum will be	**2,482,240.50**

Authorized By Owner:	**Accepted By Contractor:**	**Architect/Engineer:**
City of Crest Hill	FER-PAL Construction USA LLC 1350 Gasket Drive, Elgin, IL 60120	
By: _____	**By:** _____	**By:** _____
Date: _____	**Date:** _____	**Date:** _____

Change Order

FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120

Distribution ☐ CREST HILL, IL - BROADWAY ST.
☐
☐ Office ☐ Field
☐ Other

Project: CREST HILL, IL - BROADWAY ST. **Contract Number:** EH25330- CREST HILL, IL - BROADWAY ST

Proposed Change Order #: FO 4 Lining Pit Modification

To (Contractor): FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120

Change Order Date : 10/31/25

You are directed to make the following changes in this Contract:

C.O. Item	Contract Item	Change in Days	UM	Units	Description	Unit Price	Amount
4			EA	6.000	Lining Pit Modification	15,288.77000	91,732.62
					Total For Change Order:		**91,732.62**

Not valid until signed by both the Owner and Architect. Signature of the Contractor indicates the Contractor's agreement herewith, including any adjustment in the Contract Sum or Contract Time.

The original Contract Sum was	**2,632,460.83**
The net change by previously authorized Change Orders was	**0.00**
The Contract Sum prior to this Change Order was	**2,632,460.83**
The Contract Sum will be increased by this Change Order	**91,732.62**
The new Contract Sum will be	**2,724,193.45**

Authorized By Owner:	**Accepted By Contractor:**	**Architect/Engineer:**
City of Crest Hill	FER-PAL Construction USA LLC 1350 Gasket Drive, Elgin, IL 60120	
By: _____	**By:** _____	**By:** _____
Date: _____	**Date:** _____	**Date:** _____

SHERIDAN PLUMBING & SEWER

6754 W. 74th Street
Bedford Park, IL 60638
(708)475-7100 (708)475-7138 fax
IL Plumbing License No. 055-027841

September 29, 2025

Fer-Pal Construction USA LLC
1350 Gasket Drive
Elgin, IL. 60120

Attn: Joel Ponce

PROJECT: City of Crest Hill, CIPP Water Main Rehabilitation – Phase 1
Request for AUP #3 – Broadway St. Lining pit modifications and additional labor due to critical utility conflicts (10" high pressure gas main)

Summary of attached force account billings

Labor:			$8,788.74
Equipment:			$4,496.24
Material:			$0.00
Rented Equipment:			$0.00
Subcontractor			$1,275.75
		Total:	$14,560.73
Bond:	0.0%		$0.00
Bond MU	0%		$0.00
		Total Bill:	$14,560.73

Notes:

The above referenced force account estimate represents the additional time (on average per lining pit) to successfully complete the additional required labor, equipment and modifications for lining access pits as indicated for CIPP water main lining on Broadway St.

Upon excavation for the indicated lining access pits on Broadway Street, an existing 10" high pressure gas main was discovered running parallel above the existing 10" water main with less than 24 inches of seperation between the utilities. The existing soils in the area are solid rock and it appears that the installation of the 10" gas main utilized the existing 10" watermain trench at the time of installation to avoid additional costs that would be assosiated with the rock removal. The representatives for the gas main (Nicor) informed the contractor that no excavation (with the exception of hydro or hand excavation) would be allowed within a 24" minimum of their facility.

Initials _____

Based on the adverage time required on Theordore Street to install the same lining access pits, the excavation contractor has adveraged 2 lining access pits per day. All required lining access pits have been installed on Theodore Street thus providing an accurate time frame for the installation of a lining access pit without conflict. As of September 29th, two lining access pits have been installed on Broadway Street (Pit #11 - Station 403+20 and Pit # 12 Station 406+50.) Both lining access pits have taken 1 ½ days to install requiring an additional 8 hours of labor and equipment per lining access pit

The force account costs provided represent the labor and equipment costs necessary per lining access pit to facilitate the contruction of Broadway Street lining pits. Due to the critical restraints added by Nicor's high pressure 10" gas main the excavation contractor must adhear to the utility owner's demands which greatly hampers proven production rates.

In an attempt to simplify the additional costs associated with the conflict the following request for additional unit pricing or AUP (Broadway Street Lining Pit modifications) is requested per a quantity of each or per pit.

After several exploratory excavations of Broadway Street it appears that the total quantity necessary for the AUP would be 3 EA (Broadway Street from Theodore Street north to Ludwig Ave.) and a possible total of 6 EA (Broadway Street from Ludwig Ave. north to Chaney Ave.) Please note that the Ludwig lining access pit was able to be installed without major additional costs and has been removed from the proposed requsted quantities.

The following AUP request has taken only the ammount of additional labor and equipment into consideration for work to be performed outside the innitial scope. Additional line items such as pavement removal, Trench backfill, rock excavation, necessary re-instatement piping etc. are to be paid for per their respective line item pricing.

Please see attached for itemized force account costs.

PROJECT COST: The Scope of Work has been estimated on an force account basis. This cost includes weekday work, environmental monitoring, personal protective equipment up to Chemical Protection Level D, travel time, standard insurance and any other items stated in above Scope of Work.

Initials _____

SHERIDAN PLUMBING & SEWER

6754 W. 74th Street
Bedford Park, IL 60638-6029
(708) 475-7114 (708) 475-7138 fax
IL Plumbing License No. 055-027841
IDOT Contractor No: 050C
WBE Certified

General Contractor:	Sheridan Plumbing & Sewer
Job No.:	S25-150
Description:	Water Main Rehabilitation Phase 1, Contract 3-2024
Location:	Crest Hill, Illinois
Desc. Of Work:	CO #1
Route:	
Mile Post	
County	WILL
Report. No.	AUP #3
Owner:	City of Crest Hill
Contract No.:	
Authorization No.	
Project No.	

Month:	**September-2025**				
Days:	24				

Notes: Broadway Lining Pit Modification Costs for Existing 10in Gas Main

File Save Name: Crest Hill_CIPP WM Lining 2025_ AUP3 Broadway lining pit modifications for 10in gas

J S25-150
D on: Water Main Rehabilitation Phase 1, Contract 3-2024
L Crest Hill, Illinois
D Work: CO #1

September-2025

Name	Position	24 ST	24 OT	24 DT	24	25	26			Total Hours ST	OT	DT	Rate	Insurance Amount	Payroll Amount	Earnings to Date	Unemployme F.U.T.
George Gentry	Oper. 150 Foreman jc 35*	8			8.0					8.0			$65.000	$520.00	$520.00	$ 10,000.00	
Guy Lepore	Oper. 150 Class 1 jc 31*	8			8.0					8.0			$63.000	$504.00	$504.00	$ 10,000.00	
Shawn Radloff	Laborer, Semi-Skilled jc 12	8			8.0					8.0			$51.400	$411.20	$411.20	$ 10,000.00	
Modesto Gamboa	Laborer, Semi-Skilled jc 12	8			8.0					8.0			$51.400	$411.20	$411.20	$ 10,000.00	
Miguel Garcia	Laborer, Semi-Skilled jc 12	8			8.0					8.0			$51.400	$411.20	$411.20	$ 10,000.00	
Jake Collins	Laborer, Semi-Skilled jc 12	8			8.0					8.0			$51.400	$411.20	$411.20	$ 10,000.00	
Ruben	Laborer, Semi-Skilled jc 12	8			8.0					8.0			$51.400	$411.20	$411.20	$ 10,000.00	
Dylan Strand	Labor Apprentice jc 17												$30.840			$ 10,000.00	
Tracy Morano	Plumber journeymen 130												$58.500			$ 10,000.00	

Subtotals, Labor $3,080.00 $3,080.00

	DT	Total			Tax Deferred Savings ST	OT	DT	
Laborers Benefits Funds		40.0	hours @	$37.28				$1,491.20
Plumber's Local 130			hours @	$39.28				
Operating Engineers Apprentice Benefits Funds		16.0	hours @	$52.83				$845.28

Subtotals, Labor				$5,416.48
Plus 35 % of		$5,416.48		$1,895.77
				$7,312.25
Workmen's Compensation Insurance	24.69 % of	$3,080.00	$760.45	
Public Liability & Property Damage	4.41 % of	$3,080.00	$135.83	
Federal Unemployment Tax	0.80 % of			
State Unemployment Tax	6.83 % of	$3,080.00	$210.36	
Federal Social Security Tax	7.65 % of	$3,080.00	$235.62	
Total Payroll Additives			$1,342.26	
	Plus 10 % of	$1,342.26	$134.23	
				$1,476.49
Total Labor				$8,788.74

I hereby certify that the above statement is a copy of that portion of the payroll which applies to the above state work and that the rates shown for taxes and insurance are actual costs.

Sheridan Plumbing & Sewer

Job No. : S25-150
Description: Water Main Rehabilitation Phase 1, Contract 3-2024
Location: Crest Hill, Illinois
Desc. Of Work: CO #1

ID	Subcategory	Manufacturer	Model	Year	Config	Rate	Date(s): September-2025 24	25	26			total hours	amount
	Mini Excavator	John Deere	JD35	2024		$ 24.81							
ST11	Service Truck	Ford	F450 DXL 4x4	2024		$ 43.29	8					8.00	$ 346.32
	Tracked Excavator	John Deere	JD 135G	2019		$ 78.98							
	Tracked Excavator	John Deere	JD 85	2024		$ 75.37	8					8.00	$ 602.96
	Excavator Bucket	John Deere	.875 Cu Yd	2019		$ 5.16							
	Excavator Bucket	John Deere	.5 Cu Yd	2019		$ 4.75	8					8.00	$ 38.00
VA 19	Vactor	Kenworth	T800	2014	Kenworth T800 chassis 2115-1024 PD	$ 334.00	8					8.00	$ 2,672.00
	Tracked Skid Steer Loader		JD 329	2019		$ 92.39							
DT07	Six Wheel Dump Truck	Peterbilt	T-800	2024	350HP	$ 67.20	8					8.00	$ 537.60
	Wheel Loader	John Deere	JD344L	2020	103HP	$ 37.42	8					8.00	$ 299.36
	Tow Behind Trailer	Eager Beaver	20XPT	2015	21' flat deck, 20 ton non-tilit trailer	$ 6.70							
	Confined space entry Equipment			2022		$ 12.50							
	4 gas monitor			2022		$ 4.16							

TOTAL EQUIPMENT $4,496.24

September-2025 24

Sub Contractor Items	Unit	Total	Unit Price	Amount
Trucking	HR	-	$0.00	$0.00
		9	$135.00	$1,215.00
		0	$0.00	$0.00
		0	$0.00	$0.00
		0	$0.00	$0.00
		0	$0.00	$0.00
		0	$0.00	$0.00
		0	$0.00	$0.00
		0	$0.00	$0.00
		0	$0.00	$0.00
		0	$0.00	$0.00
		Subtotal		$1,215.00
		Plus 5%		$60.75
Total Material				$1,275.75

Job No.: S25-150
Description: Water Main Rehabilitation Phase 1, Contract 3-2024
Location: Crest Hill, Illinois
Desc. of Work: CO #1

Route _____ Mile Post _____ County WILL Auth. No. _____

Force Account bill for City of Crest Hill Contract No. _____

Summary of attached force account billings

Labor:		$8,788.74
Equipment:		$4,496.24
Material:		$0.00
Rented Equipment:		$0.00
Subcontractor		$1,275.75
	Total:	$14,560.73
Bond:	0.0%	$0.00
Bond MU	0%	$0.00
	Total Bill:	$14,560.73

_____

Resident

Job No.: S25-150
Description: Water Main Rehabilitation Phase 1, Contract 3-2024
Location: Crest Hill, Illinois
Desc. Of Work CO#1
September-2025
NOTES: Broadway Lining Pit Modification Costs for Existing 10in Gas Main

Change Order

FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120

Distribution ☐ CREST HILL, IL - BROADWAY ST.
☐ Office ☐ Field
☐ Other

Project: CREST HILL, IL - BROADWAY ST. **Contract Number:** EH25330- CREST HILL, IL - BROADWAY ST

Proposed Change Order #: FO 10 10" Butterfly Valve (2) each

To (Contractor): FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120

Change Order Date : 12/15/25

You are directed to make the following changes in this Contract:

C.O. Item	Contract Item	Change in Days	UM	Units	Description	Unit Price	Amount
10			EA	2.000	10" Butterfly Valve (2) each	6,184.45000	12,368.90
					Total For Change Order:		**12,368.90**

Not valid until signed by both the Owner and Architect. Signature of the Contractor indicates the Contractor's agreement herewith, including any adjustment in the Contract Sum or Contract Time.

The original Contract Sum was	**2,479,975.70**
The net change by previously authorized Change Orders was	**5.30**
The Contract Sum prior to this Change Order was	**2,479,981.00**
The Contract Sum will be increased by this Change Order	**12,368.90**
The new Contract Sum will be	**2,492,349.90**

Authorized By Owner:	**Accepted By Contractor:**	**Architect/Engineer:**
City of Crest Hill	FER-PAL Construction USA LLC 1350 Gasket Drive, Elgin, IL 60120	
By: _____	**By:** _____	**By:** _____
Date: _____	**Date:** 12/15/25	**Date:** _____

Change Order

FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120

Distribution ☐ CREST HILL, IL - BROADWAY ST.
☐
☐ Office ☐ Field
☐ Other

Project: CREST HILL, IL - BROADWAY ST. **Contract Number:** EH25330- CREST HILL, IL - BROADWAY ST

Proposed Change Order #: FO 3 T & M Theodore and Broadway Ex

To (Contractor): FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120

Change Order Date : 10/31/25

You are directed to make the following changes in this Contract:

C.O. Item	Contract Item	Change in Days	UM	Units	Description	Unit Price	Amount
3			LS		T & M Theodore and Broadway Exploration		45,008.47
					Total For Change Order:		**45,008.47**

Not valid until signed by both the Owner and Architect. Signature of the Contractor indicates the Contractor's agreement herewith, including any adjustment in the Contract Sum or Contract Time.

The original Contract Sum was	**2,632,460.83**
The net change by previously authorized Change Orders was	**0.00**
The Contract Sum prior to this Change Order was	**2,632,460.83**
The Contract Sum will be increased by this Change Order	**45,008.47**
The new Contract Sum will be	**2,677,469.30**

Authorized By Owner:	**Accepted By Contractor:**	**Architect/Engineer:**
City of Crest Hill	FER-PAL Construction USA LLC 1350 Gasket Drive, Elgin, IL 60120	
By: _____	**By:** _____	**By:** _____
Date: _____	**Date:** _____	**Date:** _____

SHERIDAN PLUMBING & SEWER

6754 W. 74th Street
Bedford Park, IL 60638
(708)475-7100 (708)475-7138 fax
IL Plumbing License No. 055-027841

September 29, 2025

Fer-Pal Construction USA LLC
1350 Gasket Drive
Elgin, IL. 60120

Attn: Joel Ponce

PROJECT: City of Crest Hill, CIPP Water Main Rehabilitation – Phase 1
Request for CO #1 – Broadway St. and Theodore St. exploratory excavations for existing utility conflicts and lining pit re-alignment locations

Summary of attached force account billings

Labor:			$29,376.49
Equipment:			$13,488.72
Material:			$0.00
Rented Equipment:			$0.00
Subcontractor			$0.00
		Total:	$42,865.21
Bond:	0.0%		$0.00
Bond MU	0%		$0.00
		Total Bill:	$42,865.21

Notes:

Wednesday, 9-24-2025

1. **Excavation of proposed lining pit at the intersection of Broadway St. and Theodore St. (P-9) discovered an existing 10" gas main running parallel with the existing 10" watermain. The existing configuration of the existing watermain was determined to be an existing 10" x 8" tee rather than a 10" 90* bend.**
2. **The location of (P9) was then re-located approx. 25 LF to the north of original location. Upon installation of the lining pit (9A), a 8" sanitary sewer was discovered at the same elevation of the existing watermain located perpendicular to the existing 10" watermain. Additional discussions were neccesary to assess the feasibility of design in regards to IEPA regulations regarding sewer seperation. After discussion, It was determined that Pit (P9A) could be utilized after lining to facilitate the istallation of a new 8" valve and vault.**

Initials _____

Thursday, 9-25-2025

1. **Excavation of an additional lining pit (P9-B) approx. 25 LF north of the orginal location of pit (P-9) was perfromed to determine if lining pits (9A and 9B) could be utilized in conjunction with open cut installation of new watermain to avoid mutiple conflicts. Upon excavation of Pit (P9-B) the existing 10" gas main along with an additonal unknown 10" pipe was discovered and the dicision was made to backfill the excavation.**
2. **The Original lining pit (P9) was re-excavated and an safety shoring design was implemented to to encompass the existing utilities within the footprint of the lining pit.**

Friday, 9-26-2025

1. **Excavation of proposed lining pit (P-11) uncovered a 10" gas main parellel to the existing 10" watermain. A 10" ductile storm sewer was also discovered approx. 16" south running parallel to the gas main. Safety shoring design was modified to encompass the existing utilities within the footprint of the lining pit.**

The following invoice has taken only the ammount of additional labor and equipment into consideration for work performed and down time incurred out side the innitial scope between 9/24 and 9/26. Additional line items such as pavement removal, Trench backfill, rock excavation, necessary re-instatement piping etc. are to be paid for per their respective line item pricing.

Please see attached for itemized force account costs.

PROJECT COST: The Scope of Work has been estimated on an force account basis. This cost includes weekday work, environmental monitoring, personal protective equipment up to Chemical Protection Level D, travel time, standard insurance and any other items stated in above Scope of Work.

Initials _____

SHERIDAN PLUMBING & SEWER

6754 W. 74th Street
Bedford Park, IL 60638-6029
(708) 475-7114 (708) 475-7138 fax
IL Plumbing License No. 055-027841
IDOT Contractor No: 050C
WBE Certified

General Contractor:	Sheridan Plumbing & Sewer
Job No.:	S25-150
Description:	Water Main Rehabilitation Phase 1, Contract 3-2024
Location:	Crest Hill, Illinois
Desc. Of Work:	CO #1
Route:	
Mile Post	
County	WILL
Report. No.	CO #1
Owner:	City of Crest Hill
Contract No.:	
Authorization No.	
Project No.	

Month:	**August-2025**				
Days:	24				

Notes: Exploration Excavations for the Intersection of Broadway and Theodore St.

File Save Name: Crest Hill_CIPP WM Lining 2025_ CO1 Broadway and Theodore Exploration

: S25-150
tion: Water Main Rehabilitation Phase 1, Contract 3-2024
n: Crest Hill, Illinois
Desc. Of Work: CO #1

August-2025

Name	Position	24 ST	24	25	26			Total Hours ST	OT	DT	Rate	Insurance Amount	Payroll Amount	Earnings to Date	Unemployme F.U.T.
George Gentry	Oper. 150 Foreman jc 35*	8	8.5	8.0	9.0			24.0	1.5		$65.000	$1,657.50	$1,704.83	$ 10,000.00	
Guy Lepore	Oper. 150 Class 1 jc 31*	8	8.0	8.0	8.0			24.0			$63.000	$1,512.00	$1,512.00	$ 10,000.00	
Shawn Radloff	Laborer, Semi-Skilled jc 12	8	8.0	8.0	8.0			24.0			$51.400	$1,233.60	$1,233.60	$ 10,000.00	
Modesto Gamboa	Laborer, Semi-Skilled jc 12	8	8.0	8.0				24.0			$51.400	$1,233.60	$1,233.60	$ 10,000.00	
Miguel Garcia	Laborer, Semi-Skilled jc 12	8	8.0	8.0	8.0			24.0			$51.400	$1,233.60	$1,233.60	$ 10,000.00	
Jake Collins	Laborer, Semi-Skilled jc 12	8	8.0	8.0	8.5			24.0	0.5		$51.400	$1,259.30	$1,272.15	$ 10,000.00	
Ruben	Laborer, Semi-Skilled jc 12	8	8.0	8.0	8.0			24.0			$51.400	$1,233.60	$1,233.60	$ 10,000.00	
Dylan Strand	Labor Apprentice jc 17	8	8.0	8.0	8.0			24.0			$30.840	$740.16	$740.16	$ 10,000.00	
Tracy Morano	Plumber journeymen 130										$58.500			$ 10,000.00	

Subtotals, Labor $10,103.36 $10,163.54

	Total			Tax Deferred Savings ST	OT	DT	
Laborers Benefits Funds	144.5	hours @	$37.28				
Plumber's Local 130		hours @	$39.28				$5,386.96
Operating Engineers Apprentice Benefits Funds	49.5	hours @	$52.83				$2,615.09

Subtotals, Labor				$18,165.59
Plus 35 % of		$18,165.59		$6,357.96
				$24,523.55
Workmen's Compensation Insurance	24.69 % of	$10,103.36	$2,494.52	
Public Liability & Property Damage	4.41 % of	$10,103.36	$445.56	
Federal Unemployment Tax	0.80 % of			
State Unemployment Tax	6.83 % of	$10,163.54	$694.17	
Federal Social Security Tax	7.65 % of	$10,163.54	$777.51	
Total Payroll Additives			$4,411.76	
Plus 10 % of		$4,411.76	$441.18	
				$4,852.94
Total Labor				$29,376.49

I hereby certify that the above statement is a copy of that portion of the payroll which applies to the above state work and that the rates shown for taxes and insurance are actual costs.

Sheridan Plumbing & Sewer

Job No. : S25-150
Description: Water Main Rehabilitation Phase 1, Contract 3-2024
Location: Crest Hill, Illinois
Desc. Of Work: CO #1

ID	Subcategory	Manufacturer	Model	Year	Config	Rate	Date(s): August-2025 24	25	26			total hours	amount
	Mini Excavator	John Deere	JD35	2024		$ 24.81							
ST11	Service Truck	Ford	F450 DXL 4x4	2024		$ 43.29	8	8	8			24.00	$ 1,038.96
	Tracked Excavator	John Deere	JD 135G	2019		$ 78.98							
	Tracked Excavator	John Deere	JD 85	2024		$ 75.37	8	8	8			24.00	$ 1,808.88
	Excavator Bucket	John Deere	.875 Cu Yd	2019		$ 5.16							
	Excavator Bucket	John Deere	.5 Cu Yd	2019		$ 4.75	8	8	8			24.00	$ 114.00
VA 19	Vactor	Kenworth	T800	2014	Kenworth T800 chassis 2115-1024 PD	$ 334.00	8	8	8			24.00	$ 8,016.00
	Tracked Skid Steer Loader		JD 329	2019		$ 92.39							
DT07	Six Wheel Dump Truck	Peterbilt	T-800	2024	350HP	$ 67.20	8	8	8			24.00	$ 1,612.80
	Wheel Loader	John Deere	JD344L	2020	103HP	$ 37.42	8	8	8			24.00	$ 898.08
	Tow Behind Trailer	Eager Beaver	20XPT	2015	21' flat deck, 20 ton non-tilit trailer	$ 6.70							
	Confined space entry Equipment			2022		$ 12.50							
	4 gas monitor			2022		$ 4.16							

TOTAL EQUIPMENT $13,488.72

Route _____ Mile Post _____ County WILL Auth. No. _____

Force Account bill for City of Crest Hill Contract No. _____

Summary of attached force account billings

Labor:		$29,376.49
Equipment:		$13,488.72
Material:		$0.00
Rented Equipment:		$0.00
Subcontractor		$0.00
	Total:	$42,865.21
Bond:	0.0%	$0.00
Bond MU	0%	$0.00
	Total Bill:	$42,865.21

_____

Resident

Job No.: S25-150

Description: Water Main Rehabilitation Phase 1, Contract 3-2024

Location: Crest Hill, Illinois

Desc. Of Work CO#1

August-2025

NOTES: Exploration Excavations for the Intersection of Broadway and Theodore St.

SHERIDAN PROCESS SYSTEMS

Daily Time Sheet

Day (circle one)	SU M (W) TH F SA
Date	9-24
Start Time	630
End Time	230
Contract #	
Gen. Contractor	Crest Hill.
Job Name	Lining.
Sheridan Job #	
Task	Excavation - Cleaning - Clean & CCTV

Employee Name	ST	OT	DT	Travel	Down	Lunch	Total
George Gentry	8	.5					8.5
Shawn Radloff	8						8
Miguel Garcia	8						8
Modesto Gamboa 6.2	8						8
O.Ilan	8						8
Cory	8						8
Jake	8						
Rubin	8						8
							8

Materials Summary

Vendor	Pick Ticket/PO#
GNL	47908

Materials from Inventory

Description	Quantity

Comments: Meet Midwest & Install an 8" Insert Valve. Back Fill with 7 Stone
* Remove Concrete at R7 53 & Theodore & D3 Down Locate.
8" 90 Ran Into 12" Gas & T Instead of 90
* Moved P.H west 25' And Broke out Concrete For Lining P.H.
* Back Filled P.H with T with 7 Stone.

344 Loader

Sheridan Vehicles

JD 410J	
Deere 85	✓
Dump Truck	04
JD 135	
JD 135 Breaker	
Eager Beaver	
KX080	
JD35G	
Pick-Up	
Service Truck 08	11
Skid Steer	
Skid Steer Breaker	
Trailer	
PU 20	
Vacuu	
JD 344 Loader	✓

Sheridan Equipment

Description		Description		Description	
2" Pump		Push Camera		Locating Equipment	
3" Pump		Pipe Machine		GPR	
6" Pump		Snappers		Mac 51	
Compactor		Grade/ PLS Laser		RD4000	
Compressor		VOC gas Meter			
Concrete Blankets		Wet/Dry Vac			
Concrete Mixer		Hand Tools			
Confined Space		Sawzall			
Demo Hammer		Steel Plates			
Generator		Cordless Drill			
Grout Pump					
Hammer Drill					
Jack Hammer					
Partner Saw					

Rental Vehicles/Equipment

Description	Vendor	

Supervisor's Signature:

Date:

SHERIDAN PUBLIC CONSULTING

Daily Time Sheet

Day (circle one)	SU M T W (TH) F SA	Contract #	
Date	9-25-25	Gen. Contractor	Crest Hill
Start Time		Job Name	Linny
End Time		Sheridan Job #	
		Task	Excavation - Cleaning - Clean & CCTV

Employee Name	ST	OT	DT	Travel	Down	Lunch	Total
George Gentry	8						8
Shawn Radloff	8						8
Miguel Garcia	8						8
Modesto Gamboa out of Town	Vacation						
D. Ilen	8						8
Cory	8						8
Jake	8						8
Ruby	8						8

Materials Summary

Vendor	Pick Ticket/PO#
GNL	47909

Materials from Inventory

Description	Quantity

Comments: * Break out 10x7 of 20" Asphalt & Dig out for Linny - P.H.
Rent into 12" Gas Elect Duct & 2 12" Storm Lines.
Showed Inspector & Back Filled with 7 Stone.
* Install 8-6 Wood Box on Theodore West for Linny
* Re dig Hole over T on Rt 53 Cut out & Remove 10x8 Cross
Break out 1.5 Ft of Bed Rock 8x8 for Re bolt. of Pipe

344 Loader.

Sheridan Vehicles	
JD 410J	
Deere 85	✓
Dump Truck	
JD 135	
JD 135 Breaker	
Eager Beaver	
KX080	
JD35G	
Pick-Up	
Service Truck 08	//
Skid Steer	
Skid Steer Breaker	
Trailer	
PU 20	
Vactor	
JD 344	✓

Sheridan Equipment

Description		Description	
2" Pump		Push Camera	
3" Pump		Pipe Machine	
6" Pump		Snappers	
Compactor		Grade/ PLS Laser	
Compressor		VOC gas Meter	
Concrete Blankets		Wet/Dry Vac	
Concrete Mixer		Hand Tools	
Confined Space		Sawzall	
Demo Hammer		Steel Plates	
Generator		Cordless Drill	
Grout Pump		**Locating Equipment**	
Hammer Drill		GPR	
Jack Hammer		Mac 51	
Partner Saw		RD4000	
		Backhoe Breaker	✓

Rental Vehicles/Equipment

Description	Vendor

Supervisor's Signature: [signature]

Date:

Daily Time Sheet

...me)	SU M T W TH (F) SA	Contract #	
	9-26-25	Gen. Contractor	Crest Hill
...me	630	Job Name	Lining
...me	230	Sheridan Job #	
		Task	Excavation - Cleaning - Clean & CCTV

Employee Name	ST	OT	DT	Travel	Down	Lunch	Total
George Gentry	8	1					8
Shawn Radloff	8						8
Miguel Garcia	8						8
Modesto Gamboa OFF	—	Vacation					—
Dillon	8						8
Guy	8						8
Rubin	8						8
Jake 630 - 300	8	.5					8.5

Materials Summary

Vendor	Pick Ticket/PO#

Materials from Inventory

Description	Quantity

Comments: * work on 2 Pits (1) at Car Lot & (1) on Storm. Use Vactor To Lodate 12" gas at Both Spotts, use 85 & Breaker To Remove Rd Cut & Remove 2' Storm Inlet From Directly on Top of 12" gas.

344 Loader

Sheridan Vehicles	
JD 410J	
Deere 85	✓
Dump Truck	
JD 135	
JD 135 Breaker	
Eager Beaver	
KX080	
JD35G	
Pick-Up	
Service Truck 08	
Skid Steer	
Skid Steer Breaker	
Trailer	
PU 20	
Vactor	19
JD 344	✓

Sheridan Equipment

Description		Description	
2" Pump		Push Camera	
3" Pump		Pipe Machine	
6" Pump		Snappers	
Compactor		Grade/ PLS Laser	
Compressor		VOC gas Meter	
Concrete Blankets		Wet/Dry Vac	
Concrete Mixer		Hand Tools	
Confined Space		Sawzall	
Demo Hammer		Steel Plates	
Generator		Cordless Drill	
Grout Pump		Locating Equipment	
Hammer Drill		GPR	
Jack Hammer		Mac 51	
Partner Saw		RD4000	
		Breaker Attachment	✓

Rental Vehicles/Equipment

Description	Vendor

Supervisor's Signature:

Date:

Change Order

FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120

Distribution ☐ CREST HILL, IL - BROADWAY ST.
☐
☐ Office ☐ Field
☐ Other

Project: CREST HILL, IL - BROADWAY ST. **Contract Number:** EH25330- CREST HILL, IL - BROADWAY ST

Proposed Change Order #: FO 7 Relocate Existing roundwas and B

To (Contractor): FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120

Change Order Date : 12/03/25

You are directed to make the following changes in this Contract:

C.O. Item	Contract Item	Change in Days	UM	Units	Description	Unit Price	Amount
7			LS		Relocate Existing roundwas and B boxes		12,200.75
					Total For Change Order:		**12,200.75**

Not valid until signed by both the Owner and Architect. Signature of the Contractor indicates the Contractor's agreement herewith, including any adjustment in the Contract Sum or Contract Time.

The original Contract Sum was	**2,479,975.70**
The net change by previously authorized Change Orders was	**0.00**
The Contract Sum prior to this Change Order was	**2,479,975.70**
The Contract Sum will be increased by this Change Order	**12,200.75**
The new Contract Sum will be	**2,492,176.45**

Authorized By Owner:	**Accepted By Contractor:**	**Architect/Engineer:**
City of Crest Hill	FER-PAL Construction USA LLC 1350 Gasket Drive, Elgin, IL 60120	
By: _____	**By:** _____	**By:** _____
Date: _____	**Date:** 12/03/25	**Date:** _____

SHERIDAN PLUMBING & SEWER

6754 W. 74th Street
Bedford Park, IL 60638
(708)475-7100 (708)475-7138 fax
IL Plumbing License No. 055-027841

November 20, 2025

Fer-Pal Construction USA LLC
1350 Gasket Drive
Elgin, IL. 60120

Attn: Joel Ponce

PROJECT: City of Crest Hill, CIPP Water Main Rehabilitation – Phase 1
Request for CO #3 – Relocate existing roundways and B Boxes from behind existing retaining wall to sidewalk, 11/17/2025 per village request.

Summary of attached force account billings

Labor:			$7,103.31
Equipment:			$4,266.32
Material:			$0.00
Rented Equipment:			$0.00
Subcontractor			$0.00
		Total:	$11,369.63
Bond:	2.0%		$227.39
Bond MU	10%		$22.74
		Total Bill:	$11,619.76

Please see attached for itemized force account costs.

PROJECT COST: The Scope of Work has been completed on an force account basis for **$11,619.76.** This cost includes weekday work, environmental monitoring, personal protective equipment up to Chemical Protection Level D, travel time, standard insurance and any other items stated in above Scope of Work.

Initials _____

SHERIDAN PLUMBING & SEWER

6754 W. 74th Street
Bedford Park, IL 60638-6029
(708) 475-7114 (708) 475-7138 fax
IL Plumbing License No. 055-027841
IDOT Contractor No: 050C
WBE Certified

General Contractor:	Sheridan Plumbing & Sewer
Job No.:	S25-150
Description:	Water Main Rehabilitation Phase 1, Contract 3-2024
Location:	Crest Hill, Illinois
Desc. Of Work:	CO #3
Route:	
Mile Post	
County	WILL
Report. No.	CO #3
Owner:	City of Crest Hill
Contract No.:	
Authorization No.	3
Project No.	Crest Hill Water Main Lining, Phase 1

Month:	**November-2025**				
Days:	17				

Notes: Relocation of existing Roundways and B-Boxes from behind existing retaining wall into sidewalk. Per City's request

File Save Name: Crest Hill Water Main Lining_CO3 Relocate existing B Boxes Theodore 11_17_25

J S25-150
D on: Water Main Rehabilitation Phase 1, Contract 3-2024
Location: Crest Hill, Illinois
Desc. Of Work: CO #2

November-2025					17					Total Hours				Insurance	Payroll	Earnings	Unemployme
Name	Position	17 ST	17 OT	17 DT						ST	OT	DT	Rate	Amount	Amount	to Date	F.U.T.
George Gentry	Oper. 150 Foreman jc 35*	8			8.0					8.0			$66.000	$528.00	$528.00	$ 10,000.00	
Guy Lepore	Oper. 150 Class 1 jc 31*	8			8.0					8.0			$63.000	$504.00	$504.00	$ 10,000.00	
Shawn Radloff	Laborer, Semi-Skilled jc 12												$51.400			$ 10,000.00	
Modesto Gamboa	Laborer, Semi-Skilled jc 12	8			8.0					8.0			$51.400	$411.20	$411.20	$ 10,000.00	
Miguel Garcia	Laborer, Semi-Skilled jc 12	8			8.0					8.0			$51.400	$411.20	$411.20	$ 10,000.00	
Jesus Guzmen	Laborer, Semi-Skilled jc 12												$51.400			$ 10,000.00	
Jake Collins	Laborer, Semi-Skilled jc 12	8			8.0					8.0			$51.400	$411.20	$411.20	$ 10,000.00	
Isreal Garcia	Laborer, Semi-Skilled jc 12												$51.400			$ 10,000.00	
Dylan Strand	Labor Apprentice jc 17	8			8.0					8.0			$30.840	$246.72	$246.72	$ 10,000.00	
Tracy Morano	Plumber journeymen 130												$58.500			$ 10,000.00	

				Subtotals, Labor			$2,512.32	$2,512.32
				Tax Deferred Savings				
	Total			ST	OT	DT		
Laborers Benefits Funds	32.0	hours @	$37.28					$1,192.96
Plumber's Local 130		hours @	$39.28					
Operating Engineers Apprentice Benefits Funds	16.0	hours @	$52.83					$845.28

Subtotals, Labor					$4,550.56
Plus 35 % of	$4,550.56				$1,592.70
					$6,143.26
Workmen's Compensation Insurance	15.85 % of	$2,512.32	$398.20		
Public Liability & Property Damage	4.41 % of	$2,512.32	$110.79		
Federal Unemployment Tax	0.80 % of				
State Unemployment Tax	6.83 % of	$2,512.32	$171.59		
Federal Social Security Tax	7.65 % of	$2,512.32	$192.19		
Total Payroll Additives			$872.77		
Plus 10 % of	$872.77		$87.28		
					$960.05
Total Labor					$7,103.31

I hereby certify that the above statement is a copy of that portion of the payroll which applies to the above state work and that the rates shown for taxes and insurance are actual costs.

Sheridan Plumbing & Sewer

Job No. : S25-150
Description: Water Main Rehabilitation Phase 1, Contract 3-2024
Location: Crest Hill, Illinois
Desc. Of Work: CO #2

Date(s): November-2025

ID	Subcategory	Manufacturer	Model	Year	Config	Rate	17					total hours	amount
	Mini Excavator	John Deere	JD35	2024		$ 24.81							
ST11	Service Truck	Ford	F450 DXL 4x4	2024		$ 43.46	8					8.00	$ 347.68
	Tracked Excavator	John Deere	JD 135G	2019		$ 78.97							
	Tracked Excavator	John Deere	JD 85	2024		$ 75.37	8					8.00	$ 602.96
	Excavator Bucket	John Deere	.875 Cu Yd	2019		$ 5.16							
	Excavator Bucket	John Deere	.5 Cu Yd	2019		$ 4.75	8					8.00	$ 38.00
VA 19	Vactor	Kenworth	T800	2014	Kenworth T800 chassis 2115-1024 PD	$ 342.51	8					8.00	$ 2,740.08
	Tracked Skid Steer Loader	John Deere	JD 329	2019		$ 92.39							
DT07	Six Wheel Dump Truck	Peterbilt	T-800	2024	350HP	$ 67.20	8					8.00	$ 537.60
	Wheel Loader	John Deere	JD344L	2020	103HP	$ 37.42							
	Tow Behind Trailer	Eager Beaver	20XPT	2015	21' flat deck, 20 ton non-tilit trailer	$ 10.82							
	Confined space entry Equipment			2022		$ 12.50							
	4 gas monitor			2022		$ 4.16							

TOTAL EQUIPMENT $4,266.32

Route _____ Mile Post _____ County WILL Auth. No. _____

Force Account bill for City of Crest Hill Contract No. _____

Summary of attached force account billings

Labor:			$7,103.31
Equipment:			$4,266.32
Material:			$0.00
Rented Equipment:			$0.00
Subcontractor			$0.00
		Total:	$11,369.63
Bond:	2.0%		$227.39
Bond MU	10%		$22.74
		Total Bill:	$11,619.76

_____

Resident

Job No.: S25-150

Description: Water Main Rehabilitation Phase 1, Contract 3-2024

Location: Crest Hill, Illinois

Desc. Of Work CO #2

November-2025

NOTES: Relocation of existing Roundways and B-Boxes from behind existing retaining wall into sidewalk. Per City's request

Change Order

FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120

Distribution ☐ CREST HILL, IL - BROADWAY ST.
☐
☐ Office ☐ Field
☐ Other

Project: CREST HILL, IL - BROADWAY ST.
Contract Number: EH25330- CREST HILL, IL - BROADWAY ST
Proposed Change Order #: FO 5 Re-instatement of 2" water service
To (Contractor): FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120
Change Order Date : 12/03/25

You are directed to make the following changes in this Contract:

C.O. Item	Contract Item	Change in Days	UM	Units	Description	Unit Price	Amount
5			LS		Re-instatement of 2" water service (excavate		4,065.32
					Total For Change Order:		**4,065.32**

Not valid until signed by both the Owner and Architect. Signature of the Contractor indicates the Contractor's agreement herewith, including any adjustment in the Contract Sum or Contract Time.

The original Contract Sum was	**2,479,975.70**
The net change by previously authorized Change Orders was	**0.00**
The Contract Sum prior to this Change Order was	**2,479,975.70**
The Contract Sum will be increased by this Change Order	**4,065.32**
The new Contract Sum will be	**2,484,041.02**

Authorized By Owner:	**Accepted By Contractor:**	**Architect/Engineer:**
City of Crest Hill	FER-PAL Construction USA LLC 1350 Gasket Drive, Elgin, IL 60120	
By: _____	**By:** _____	**By:** _____
Date: _____	**Date:** 12/03/25	**Date:** _____

SHERIDAN PLUMBING & SEWER

6754 W. 74th Street
Bedford Park, IL 60638
(708)475-7100 (708)475-7138 fax
IL Plumbing License No. 055-027841

November 14, 2025

Fer-Pal Construction USA LLC
1350 Gasket Drive
Elgin, IL. 60120

Attn: Joel Ponce

PROJECT: City of Crest Hill, CIPP Water Main Rehabilitation – Phase 1
Request for CO #2 – Re-instatement of 2" Water Service Connection, 11/12/2025. Excavation, locate and dis-connect existing 2" corporation and copper. Final connection shall be made at another date.

Summary of attached force account billings

Labor:			$1,486.17
Equipment:			$2,302.22
Material:			$0.00
Rented Equipment:			$0.00
Subcontractor			$0.00
		Total:	$3,788.39
Bond:	2.0%		$75.77
Bond MU	10%		$7.58
		Total Bill:	$3,871.73

Please see attached for itemized force account costs.

PROJECT COST: The Scope of Work has been completed on an force account basis for $3,871.73. This cost includes weekday work, environmental monitoring, personal protective equipment up to Chemical Protection Level D, travel time, standard insurance and any other items stated in above Scope of Work.

Initials _____

SHERIDAN PLUMBING & SEWER

6754 W. 74th Street
Bedford Park, IL 60638-6029
(708) 475-7114 (708) 475-7138 fax
IL Plumbing License No. 055-027841
IDOT Contractor No: 050C
WBE Certified

General Contractor:	Sheridan Plumbing & Sewer
Job No.:	S25-150
Description:	Water Main Rehabilitation Phase 1, Contract 3-2024
Location:	Crest Hill, Illinois
Desc. Of Work:	CO #2
Route:	
Mile Post	
County	WILL
Report. No.	CO #2
Owner:	City of Crest Hill
Contract No.:	
Authorization No.	2
Project No.	Crest Hill Water Main Lining, Phase 1

Month:	**November-2025**				
Days:	12				

Notes: Excavation for 2" Water Service Connection on Theodore St.

File Save Name: Crest Hill Water Main Lining_CO2 2in Water Service Connection Theodore 11_12_25

: S25-150
tion: Water Main Rehabilitation Phase 1, Contract 3-2024
n: Crest Hill, Illinois
f Work: CO #2

November-2025

Name	Position	12 ST	12 OT	12 DT	12					Total Hours ST	OT	DT	Rate	Insurance Amount	Payroll Amount	Earnings to Date	Unemployme F.U.T.
George Gentry	Oper. 150 Foreman jc 35*	2			2.0					2.0			$66.000	$132.00	$132.00	$ 10,000.00	
Guy Lepore	Oper. 150 Class 1 jc 31*												$63.000			$ 10,000.00	
Shawn Radloff	Laborer, Semi-Skilled jc 12	2			2.0					2.0			$51.400	$102.80	$102.80	$ 10,000.00	
Modesto Gamboa	Laborer, Semi-Skilled jc 12												$51.400			$ 10,000.00	
Miguel Garcia	Laborer, Semi-Skilled jc 12												$51.400			$ 10,000.00	
Jesus Guzmen	Laborer, Semi-Skilled jc 12												$51.400			$ 10,000.00	
Jake Collins	Laborer, Semi-Skilled jc 12	6			6.0					6.0			$51.400	$308.40	$308.40	$ 10,000.00	
Isreal Garcia	Laborer, Semi-Skilled jc 12												$51.400			$ 10,000.00	
Dylan Strand	Labor Apprentice jc 17												$30.840			$ 10,000.00	
Tracy Morano	Plumber journeymen 130												$58.500			$ 10,000.00	
	Subtotals, Labor													$543.20	$543.20		

Tax Deferred Savings

	Total			ST	OT	DT	
Laborers Benefits Funds	8.0	hours @	$37.28				
Plumber's Local 130		hours @	$39.28				$298.24
Operating Engineers Apprentice Benefits Funds	2.0	hours @	$52.83				$105.66

Subtotals, Labor					$947.10
Plus 35 % of		$947.10			$331.49
					$1,278.59
Workmen's Compensation Insurance	15.85 %	of	$543.20	$86.10	
Public Liability & Property Damage	4.41 %	of	$543.20	$23.96	
Federal Unemployment Tax	0.80 %	of			
State Unemployment Tax	6.83 %	of	$543.20	$37.10	
Federal Social Security Tax	7.65 %	of	$543.20	$41.55	
Total Payroll Additives				$188.71	
Plus 10 % of			$188.71	$18.87	
					$207.58
Total Labor					$1,486.17

I hereby certify that the above statement is a copy of that portion of the payroll which applies to the above state work and that the rates shown for taxes and insurance are actual costs.

Sheridan Plumbing & Sewer

Job No. : S25-150
Description: Water Main Rehabilitation Phase 1, Contract 3-2024
Location: Crest Hill, Illinois
Desc. Of Work: CO #2

ID	Subcategory	Manufacturer	Model	Year	Config	Rate	Date(s): November-2025					total hours		amount
							12							
	Mini Excavator	John Deere	JD35	2024		$ 24.81								
ST11	Service Truck	Ford	F450 DXL 4x4	2024		$ 43.46	2					2.00	$	86.92
	Tracked Excavator	John Deere	JD 135G	2019		$ 78.97								
	Tracked Excavator	John Deere	JD 85	2024		$ 75.37	2					2.00	$	150.74
	Excavator Bucket	John Deere	.875 Cu Yd	2019		$ 5.16								
	Excavator Bucket	John Deere	.5 Cu Yd	2019		$ 4.75	2					2.00	$	9.50
VA 19	Vactor	Kenworth	T800	2014	Kenworth T800 chassis 2115-1024 PD	$ 342.51	6					6.00	$	2,055.06
	Tracked Skid Steer Loader	John Deere	JD 329	2019		$ 92.39								
DT07	Six Wheel Dump Truck	Peterbilt	T-800	2024	350HP	$ 67.20								
	Wheel Loader	John Deere	JD344L	2020	103HP	$ 37.42								
	Tow Behind Trailer	Eager Beaver	20XPT	2015	21' flat deck, 20 ton non-tilit trailer	$ 10.82								
	Confined space entry Equipment			2022		$ 12.50								
	4 gas monitor			2022		$ 4.16								

TOTAL EQUIPMENT $2,302.22

Route _____ Mile Post _____ County WILL Auth. No. _____

Force Account bill for City of Crest Hill Contract No. _____

Summary of attached force account billings

Labor:		$1,486.17
Equipment:		$2,302.22
Material:		$0.00
Rented Equipment:		$0.00
Subcontractor		$0.00
	Total:	$3,788.39
Bond:	2.0%	$75.77
Bond MU	10%	$7.58
	Total Bill:	$3,871.73

_____

Resident

Job No.: S25-150

Description: Water Main Rehabilitation Phase 1, Contract 3-2024

Location: Crest Hill, Illinois

Desc. Of Work CO #2

November-2025

NOTES: Excavation for 2" Water Service Connection on Theodore St.

Change Order

FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120

Distribution
- ☐ CREST HILL, IL - BROADWAY ST.
- ☐
- ☐ Office
- ☐ Field
- ☐ Other

Project: CREST HILL, IL - BROADWAY ST.

Contract Number: EH25330- CREST HILL, IL - BROADWAY ST

Proposed Change Order #: FO 8 Downtime incurred at Nicholson St

To (Contractor): FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120

Change Order Date : 12/03/25

You are directed to make the following changes in this Contract:

C.O. Item	Contract Item	Change in Days	UM	Units	Description	Unit Price	Amount
8			LS		Downtime incurred at Nicholson St. unidentil		3,595.11
					Total For Change Order:		**3,595.11**

Not valid until signed by both the Owner and Architect. Signature of the Contractor indicates the Contractor's agreement herewith, including any adjustment in the Contract Sum or Contract Time.

The original Contract Sum was	**2,479,975.70**
The net change by previously authorized Change Orders was	**0.00**
The Contract Sum prior to this Change Order was	**2,479,975.70**
The Contract Sum will be increased by this Change Order	**3,595.11**
The new Contract Sum will be	**2,483,570.81**

Authorized By Owner:	**Accepted By Contractor:**	**Architect/Engineer:**
City of Crest Hill	FER-PAL Construction USA LLC 1350 Gasket Drive, Elgin, IL 60120	
By: _____	**By:** _____	**By:** _____
Date: _____	**Date:** 12/03/25	**Date:** _____

SHERIDAN PLUMBING & SEWER

6754 W. 74th Street
Bedford Park, IL 60638
(708)475-7100 (708)475-7138 fax
IL Plumbing License No. 055-027841

November 14, 2025

Fer-Pal Construction USA LLC
1350 Gasket Drive
Elgin, IL. 60120

Attn: Joel Ponce

PROJECT: City of Crest Hill, CIPP Water Main Rehabilitation – Phase 1
Request for CO #4 – Downtime incurred for identification of unidentified existing storm and sanitary sewer pipes at Nicholson Street

Summary of attached force account billings

Labor:			$2,663.75
Equipment:			$684.60
Material:			$0.00
Rented Equipment:			$0.00
Subcontractor			$0.00
		Total:	$3,348.35
Bond:	2.0%		$66.97
Bond MU	10%		$6.70
		Total Bill:	$3,422.01

Please see attached for itemized force account costs.

PROJECT COST: The Scope of Work has been completed on an force account basis for **$3,422.01.** This cost includes weekday work, environmental monitoring, personal protective equipment up to Chemical Protection Level D, travel time, standard insurance and any other items stated in above Scope of Work.

Initials _____

SHERIDAN PLUMBING & SEWER

6754 W. 74th Street
Bedford Park, IL 60638-6029
(708) 475-7114 (708) 475-7138 fax
IL Plumbing License No. 055-027841
IDOT Contractor No: 050C
WBE Certified

General Contractor:	Sheridan Plumbing & Sewer
Job No.:	S25-150
Description:	Water Main Rehabilitation Phase 1, Contract 3-2024
Location:	Crest Hill, Illinois
Desc. Of Work:	CO #4
Route:	
Mile Post	
County	WILL
Report. No.	CO #4
Owner:	City of Crest Hill
Contract No.:	
Authorization No.	4
Project No.	Crest Hill Water Main Lining, Phase 1

Month:	**November-2025**				
Days:	14				

Notes: Downtime incurred for identification of existing storm and sanitary sewers
3 hours

File Save Name: Crest Hill Water Main Lining_CO4 Downtime for exist utilities Nicholson 11_14_25

: S25-150
tion: Water Main Rehabilitation Phase 1, Contract 3-2024
n: Crest Hill, Illinois
f Work: CO #4

November-2025

Name	Position	14 ST	14 OT	14 DT	14	Total Hours ST	OT	DT	Rate	Insurance Amount	Payroll Amount	Earnings to Date	Unemployme F.U.T.
George Gentry	Oper. 150 Foreman jc 35*	3			3.0	3.0			$66.000	$198.00	$198.00	$ 10,000.00	
Guy Lepore	Oper. 150 Class 1 jc 31*	3			3.0	3.0			$63.000	$189.00	$189.00	$ 10,000.00	
Shawn Radloff	Laborer, Semi-Skilled jc 12								$51.400			$ 10,000.00	
Modesto Gamboa	Laborer, Semi-Skilled jc 12	3			3.0	3.0			$51.400	$154.20	$154.20	$ 10,000.00	
Miguel Garcia	Laborer, Semi-Skilled jc 12	3			3.0	3.0			$51.400	$154.20	$154.20	$ 10,000.00	
Jesus Guzmen	Laborer, Semi-Skilled jc 12								$51.400			$ 10,000.00	
Jake Collins	Laborer, Semi-Skilled jc 12	3			3.0	3.0			$51.400	$154.20	$154.20	$ 10,000.00	
Isreal Garcia	Laborer, Semi-Skilled jc 12								$51.400			$ 10,000.00	
Dylan Strand	Labor Apprentice jc 17	3			3.0	3.0			$30.840	$92.52	$92.52	$ 10,000.00	
Tracy Morano	Plumber journeymen 130								$58.500			$ 10,000.00	
	Subtotals, Labor									$942.12	$942.12		

Tax Deferred Savings

	Total			ST	OT	DT	
Laborers Benefits Funds	12.0	hours @	$37.28				$447.36
Plumber's Local 130		hours @	$39.28				
Operating Engineers Apprentice Benefits Funds	6.0	hours @	$52.83				$316.98

Subtotals, Labor				$1,706.46
Plus 35 % of		$1,706.46		$597.26
				$2,303.72
Workmen's Compensation Insurance	15.85 % of	$942.12	$149.33	
Public Liability & Property Damage	4.41 % of	$942.12	$41.55	
Federal Unemployment Tax	0.80 % of			
State Unemployment Tax	6.83 % of	$942.12	$64.35	
Federal Social Security Tax	7.65 % of	$942.12	$72.07	
Total Payroll Additives			$327.30	
Plus 10 % of		$327.30	$32.73	
				$360.03
Total Labor				$2,663.75

I hereby certify that the above statement is a copy of that portion of the payroll which applies to the above state work and that the rates shown for taxes and insurance are actual costs.

Sheridan Plumbing & Sewer

Job No. : S25-150
Description: Water Main Rehabilitation Phase 1, Contract 3-2024
Location: Crest Hill, Illinois
Desc. Of Work: CO #4

ID	Subcategory	Manufacturer	Model	Year	Config	Rate	Date(s): November-2025 14					total hours	amount
	Mini Excavator	John Deere	JD35	2024		$ 24.81							
ST11	Service Truck	Ford	F450 DXL 4x4	2024		$ 43.46	3					3.00	$ 130.38
	Tracked Excavator	John Deere	JD 135G	2019		$ 78.97							
	Tracked Excavator	John Deere	JD 85	2024		$ 75.37	3					3.00	$ 226.11
	Excavator Bucket	John Deere	.875 Cu Yd	2019		$ 5.16							
	Excavator Bucket	John Deere	.5 Cu Yd	2019		$ 4.75	3					3.00	$ 14.25
VA 19	Vactor	Kenworth	T800	2014	Kenworth T800 chassis 2115-1024 PD	$ 342.51							
	Tracked Skid Steer Loader	John Deere	JD 329	2019		$ 92.39							
DT07	Six Wheel Dump Truck	Peterbilt	T-800	2024	350HP	$ 67.20	3					3.00	$ 201.60
	Wheel Loader	John Deere	JD344L	2020	103HP	$ 37.42	3					3.00	$ 112.26
	Tow Behind Trailer	Eager Beaver	20XPT	2015	21' flat deck, 20 ton non-tilit trailer	$ 10.82							
	Confined space entry Equipment			2022		$ 12.50							
	4 gas monitor			2022		$ 4.16							

TOTAL EQUIPMENT $684.60

Route _____ Mile Post _____ County WILL Auth. No. _____

Force Account bill for City of Crest Hill Contract No. _____

Summary of attached force account billings

Labor:		$2,663.75
Equipment:		$684.60
Material:		$0.00
Rented Equipment:		$0.00
Subcontractor		$0.00
	Total:	$3,348.35
Bond:	2.0%	$66.97
Bond MU	10%	$6.70
	Total Bill:	$3,422.01

_____

Resident

Job No.: S25-150
Description: Water Main Rehabilitation Phase 1, Contract 3-2024
Location: Crest Hill, Illinois
Desc. Of Work CO #4
November-2025
NOTES: Downtime incurred for identification of existing storm and sanitary sewers
3 hours

STRAND ASSOCIATES®
Excellence in Engineering℠

Strand Associates,
1170 South Houbolt Road
Joliet, IL 60431
(P) 815.744.4200
www.strand.com

February 13, 2026

Mr. Ron Wiedeman, City Engineer
City of Crest Hill
20600 City Center Boulevard
Crest Hill, IL 60403

Re: Water Main CIPP Lining Rehabilitation Phase 1 (Loan No. L176384)
Change Order No. 2 Mid-Project Balancing Change Order
City of Crest Hill, Illinois (City)

Dear Ron,

Strand Associates, Inc.® (Strand) has reviewed Change Order No. 2, Mid-Project Balancing Change Order, from Fer-Pal Construction USA, LLC (Contractor). The total value of Change Order No. 2 is $107,738.89. Approval of Change Order No. 2 increases the Contract Price from $2,479,975.70 to $2,587,714.59 (approximate 4.3 percent increase).

Change Order No. 2 is a cost and scope change order resulting from unforeseen circumstances during construction. Change Order No. 2 includes additional work completed according to Adjusted Unit Prices (AUP), Time and Material (T&M), and Bid Item Quantity Additions and Deductions. The following scope of work descriptions provide a summary of the additional work completed under Change Order No. 2.

At Elsie Avenue and Broadway Street, the existing gate valve and fire hydrant were not functioning properly to perform the water main lining work. The City directed Contractor to replace the gate valve and fire hydrant. This work increased the quantity of rock removal, trench backfill, water main appurtenances, and restoration.

The addition of a 6-inch gate valve (AUP No. 2) was required at Ludwig Avenue and Broadway Street. The new 6-inch gate valve isolated the water main for lining while maintaining water flow through the fire hydrant to supply temporary water service to residents along Broadway Street.

During the project design phase, Strand received a letter from Nicor Gas (Nicor) stating that no conflict is anticipated between the City's proposed water main lining project and the existing gas main. During construction, Contractor discovered the existing Nicor gas main above the existing water main to be lined. Contractor submitted AUP No. 3, Lining Pit Modification, because hand digging and lining pit modifications were required to work near the gas main.

A 10-inch butterfly valve was required to be added at the proposed valve location at Ludwig Avenue and Broadway Street (AUP No. 4). The valve addition was required to offset the valve operating nut away from the existing gas main.

Contractor completed work under T&M No. 1 from September 24, 2025, through September 26, 2025. Contractor encountered an unknown water main interconnect between the City's water main and City of Joliet's water main in the intersection of Theodore and Broadway Streets. Additionally, Contractor encountered multiple sewers and buried utilities located at the lining access pit locations.

Contractor spent time performing exploratory excavations to evaluate alternative water main routes. Contractor removed the interconnect, installed a 90-degree bend, and relocated the proposed valve.

Contractor completed work under T&M No. 2 on November 17, 2025. The City directed Contractor to relocate the existing curb stops and B-boxes from behind the existing retaining wall at 358 and 360 Theodore Street. The retaining wall was being replaced under a separate City contract, and the existing water services would have been affected by the retaining wall work.

Contractor completed work under T&M Nos. 3 and 4 on November 12 and 21, 2025. During the water main lining process, an existing water service tapping sleeve for 460 Theodore Street was compromised and resulted in epoxy resin obstructing the copper service. The affected water service line and corporation stop required excavation and removal to facilitate the installation of a new water service connection and corporation stop. Contractor installed a new corporation stop and 2-inch copper water service line from the water main to the B-box.

Contractor completed work under T&M No. 5 on November 14, 2025. Contractor encountered previously unidentified storm and sanitary sewer lines at Nicholson and Theodore Streets. The location of the sewer lines provided insufficient space for the valve vault installation, and Contractor experienced a delay while waiting for the City's direction on how to proceed. City confirmed that the sanitary sewer line was abandoned, and Contractor installed the valve vault.

Contractor completed work under T&M No. 6 on December 15, 2025. When Contractor was transitioning the resident at 1613 Broadway Street from the bypass piping back to the water main, the water meter ball valve was stuck in the closed position. The work required a licensed plumber to replace the ball valve.

Change Order No. 2 includes a mid-project balancing change order to change the total Contract Price in anticipation of no additional unforeseen circumstances during construction. The Bid Alternate is mostly complete with the corresponding bid items being balanced to reflect the completed work.

Contractor previously received payment in the amount of $2,684.80 for AUP No. 2 under Pay Application No. 1; however, the correct amount is $2,264.80 (see Item No. 2a. in Change Order No. 2). Contractor's Application for Payment No. 2 will include line item, "Unit Price Correction for CO-2: AUP#2 6" Gate Valve" with a deduction of $420.00 to correct the amount.

Enclosed is a signed copy of Change Order No. 2 for the City's approval and signature.

If there are any questions, please call 815-744-4200.

Sincerely,

STRAND ASSOCIATES, INC.®



Matthew J. Lichtenwalter

Enclosures

c/enc.: Joel Ponce, Fer-Pal Construction USA, LLC
Keith Zollers, Fer-Pal Construction USA, LLC

MJL:amm\S:\JOL\3800--3899\3894\073\Construction\Change Orders\CO No. 2\CrestHill_Mid Balancing CO 2 Letter.021326.docx

STRAND ASSOCIATES®
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Strand Associates, Inc.®
1170 South Houbolt Road
Joliet, IL 60431
(P) 815.744.4200
www.strand.com

January 28, 2026

CHANGE ORDER NO. 2

PROJECT:	CIPP Water Main Rehabilitation Phase 1
OWNER:	City of Crest Hill, Illinois
CONTRACT:	3-2024
CONTRACTOR:	Fer-Pal Construction USA, LLC

Description of Change

2a	Adjusted Unit Price (AUP) No. 2–6-Inch Gate Valve (1 each [EA] at $2,264.80/EA).	ADD	$2,264.80
2b	AUP No. 3–Lining Pit Modification (9 EA at $15,288.77/EA).	ADD	$137,598.93
2c	AUP No. 4–10-Inch Butterfly Valve (4 EA at $6,184.45/EA).	ADD	$24,737.80
2d	Time and Material (T&M) No. 1–September 24 through 26, 2025.	ADD	$45,008.47
2e	T&M No. 2–November 17, 2025; 360 and 358 Theodore Street B-Box Relocates.	ADD	$12,200.75
2f	T&M No. 3–November 12, 2025; 460 Theodore Street 2-Inch Service Removal.	ADD	$4,065.32
2g	T&M No. 4–November 21, 2025; 460 Theodore Street 2-Inch Service Reinstatement.	ADD	$5,068.96
2h	T&M No. 5–November 14, 2025.	ADD	$3,595.11
2i	T&M No. 6–1613 Bradway Street Ball Valve Replacement.	ADD	$1,061.40
2j	Bid Item No. 1–Rock Excavation (70 cubic yards [CY] at $440.00/CY).	ADD	$30,800.00
2k	Bid Item No. 2–Removal and Disposal of Non-Clean Construction or Demolition Debris (CCDD) Material (125 tons [TON] at $192.50/TON).	ADD	$24,062.50
2l	Bid Item No. 4–Trench Backfill (50 CY at $60.50/CY).	ADD	$3,025.00
2m	Bid Item No. 6–Exploratory Excavation (2 EA at $2,750.00/EA).	ADD	$5,500.00

2n	Bid Item No. 7–Pavement Removal (200 square yards [SY] at $27.50/SY).	ADD	$5,500.00
2o	Bid Item No. 10–Class B Patches, 10 Inches (242 SY at $165.00/SY).	ADD	$39,963.00
2p	Bid Item No. 11–Class B Patches, 12 Inches (30.3 SY at $192.50/SY).	(DEDUCT)	($5,832.75)
2q	Bid Item No. 12–Class B Patches, 13 Inches (46 SY at $214.50/SY).	(DEDUCT)	($9,867.00)
2r	Bid Item No. 15–Class D Patches, 10 Inches (70 SY at $137.50/SY).	ADD	$9,625.00
2s	Bid Item No. 16–Inlet Filters (41 EA at $220.00/EA).	(DEDUCT)	($9,020.00)
2t	Bid Item No. 20–Portland Cement Concrete (PCC) Sidewalk, 5 Inches (2,435 square feet [SF] at $18.70/SF).	(DEDUCT)	($45,534.50)
2u	Bid Item No. 34–Valve Vault to be Abandoned (2 EA at $1,100.00/EA).	ADD	$2,200.00
2v	Bid Item No. 35–Valve Vault to be Removed (3 EA at $1,650.00/EA).	(DEDUCT)	($4,950.00)
2w	Bid Item No. 41–8-Inch Gate Valve (1 EA at $2,200/EA).	ADD	$2,200.00
2x	Bid Item No. 44–Valve Vault, Type A, Type 1 Frame, 5-Foot-Diameter (4 EA at $10,450.00/EA).	(DEDUCT)	($41,800.00)
2y	Bid Item No. 45–Valve Boxes (6 EA at $275.00/EA).	ADD	$1,650.00
2z	Bid Item No. 47–Fire Hydrant to be Removed (1 EA at $1,100/EA).	ADD	$1,100.00
2aa	Bid Item No. 48–Insertion Valve, 6 Inches (1 EA at $23,980/EA).	(DEDUCT)	($23,980.00)
2bb	Bid Item No. 51–Water Main Lining, 8 Inches (112 linear feet [LF] at $125.00/LF).	ADD	$14,000.00
2cc	Bid Item No. 52–Water Main Lining, 10 Inches (90 LF at $150.00/LF).	ADD	$13,500.00
2dd	Bid Item No. 54–Temporary Bypass Piping, 2 Inches (2,521 LF at $15.00/LF).	ADD	$37,815.00

2ee	Bid Item No. 55–Temporary Bypass Piping, 4 Inches (1,955 LF at $20.00/LF).	(DEDUCT)	($39,100.00)
2ff	Bid Item No. 56–Pipe Ramp (28 EA at $100.00/EA).	ADD	$2,800.00
2gg	Bid Item No. 67–Illinois Department of Transportation Individual Utility Permit Bond (0.97 lump sum [LS] at $50,000/LS).	(DEDUCT)	($48,500.00)
2hh	Bid Alternative Item No. A-3–Sidewalk Removal (533 SF at $3.30/SF).	(DEDUCT)	($1,758.90)
2ii	Bid Alternative Item No. A-4–Curb and Curb and Gutter Removal (24 feet [FT] at $16.50/FT).	(DEDUCT)	($396.00)
2jj	Bid Alternative Item No. A-6–Class D Patches, 8 Inches (31 SY at $104.50/SY).	(DEDUCT)	($3,239.50)
2kk	Bid Alternative Item No. A-7–Inlet Filter (12 EA at $220.00/EA).	(DEDUCT)	($2,640.00)
2ll	Bid Alternative Item No. A-8–Combination Concrete Curb and Gutter, B.6-12 (24 FT at $110.00/FT).	(DEDUCT)	($2,640.00)
2mm	Bid Alternative Item No. A-9–PCC Sidewalk, 5 Inches (533 SF at $16.50/SF).	(DEDUCT)	($8,794.50)
2nn	Bid Alternative Item No. A-14–Valve Vault to be Abandoned (1 EA at $1,100.00/EA).	ADD	$1,100.00
2oo	Bid Alternative Item No. A-16–Water Main, 6-Inch-Diameter (4 LF at $385.00/LF).	(DEDUCT)	($1,540.00)
2pp	Bid Alternative Item No. A-17–Water Main, 8-Inch-Diameter (22 LF at $192.50/LF).	(DEDUCT)	($4,235.00)
2qq	Bid Alternative Item No. A-19–Valve Vault , Type A, Type 1 Frame, 4-Foot-Diameter (1 EA at $9,350.00/EA).	(DEDUCT)	($9,350.00)
2rr	Bid Alternative Item No. A-20–Water Main Lining, 8 Inches (60 LF at $125.00/LF).	ADD	$7,500.00
2ss	Bid Alternative Item No. A-21–Temporary Bypass Piping, 4 Inches (930 LF at $30.00/LF).	(DEDUCT)	($27,900.00)
2tt	Bid Alternative Item No. A-22–Pipe Ramp (10 EA at $100.00/EA).	ADD	$1,000.00

2uu	Bid Alternative Item No. A-23–Hose Bib Repair (9 EA at $825.00/EA).	(DEDUCT)	($7,425.00)
2vv	Bid Alternative Item No. A-25–Addenda Pit Excavation (23.30 SY at $1,500/SY).	(DEDUCT)	($34,950.00)
2ww	Bid Alternative Item No. A-26–Addenda Water Service Internal Reinstatement (3 EA at $750.00/EA).	ADD	$2,250.00
TOTAL VALUE OF THIS CHANGE ORDER:		ADD	$107,738.89

Contract Price Adjustment

Original Contract Price	$2,479,970.40
Previous Change Order Adjustments	$5.30
Adjustment in Contract Price this Change Order	$107,738.89
Current Contract Price including this Change Order	$2,587,714.59

Contract Substantial Completion Date Adjustment

Original Contract Substantial Completion Date	September 30, 2025
Contract Substantial Completion Date Adjustments due to previous Change Orders	273 Days
Contract Substantial Completion Date Adjustments due to this Change Order	0 Days
Current Substantial Contract Completion Dates including all Change Orders	June 30, 2026

Contract Final Completion Date Adjustment

Original Contract Final Completion Date	October 30, 2025
Contract Final Completion Date Adjustments due to previous Change Orders	274 Days
Contract Final Completion Date Adjustments due to this Change Order	0 Days
Current Final Contract Completion Dates including all Change Orders	July 31, 2026

This document shall become a supplement to the Contract and all provisions will apply hereto.

RECOMMENDED

ENGINEER–Strand Associates, Inc.® — Date: 1/30/2026

APPROVED

CONTRACTOR–Fer-Pal Construction USA, LLC — Date: 01/30/26

APPROVED

OWNER–City of Crest Hill, Illinois — Date

DPR:amm\S:\JOL\3800--3899\3894\073\Construction\Change Orders\CO No. 2\CO_Crest Hill_No 2.docx

Change Order

FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120

Distribution ☐ CREST HILL, IL - BROADWAY ST.
☐ Office ☐ Field
☐ Other

Project: CREST HILL, IL - BROADWAY ST. **Contract Number:** EH25330- CREST HILL, IL - BROADWAY ST

Proposed Change Order #: FO 2 AUP #2 6" Gate Valve

To (Contractor): FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120

Change Order Date : 09/19/25

You are directed to make the following changes in this Contract:

C.O. Item	Contract Item	Change in Days	UM	Units	Description	Unit Price	Amount
2			EA	1.000	AUP #2 6" Gate Valve	2,264.80000	2,264.80
					Total For Change Order:		**2,264.80**

Not valid until signed by both the Owner and Architect. Signature of the Contractor indicates the Contractor's agreement herewith, including any adjustment in the Contract Sum or Contract Time.

The original Contract Sum was	**2,479,975.70**
The net change by previously authorized Change Orders was	**0.00**
The Contract Sum prior to this Change Order was	**2,479,975.70**
The Contract Sum will be increased by this Change Order	**2,264.80**
The new Contract Sum will be	**2,482,240.50**

Authorized By Owner:	**Accepted By Contractor:**	**Architect/Engineer:**
City of Crest Hill	FER-PAL Construction USA LLC 1350 Gasket Drive, Elgin, IL 60120	
By: _____	**By:** _____	**By:** _____
Date: _____	**Date:** _____	**Date:** _____

Change Order

FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120

Distribution ☐ CREST HILL, IL - BROADWAY ST.
☐ Office ☐ Field
☐ Other

Project: CREST HILL, IL - BROADWAY ST. **Contract Number:** EH25330- CREST HILL, IL - BROADWAY ST

Proposed Change Order #: FO 4 Lining Pit Modification

To (Contractor): FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120

Change Order Date : 10/31/25

You are directed to make the following changes in this Contract:

C.O. Item	Contract Item	Change in Days	UM	Units	Description	Unit Price	Amount
4			EA	6.000	Lining Pit Modification	15,288.77000	91,732.62
					Total For Change Order:		**91,732.62**

Not valid until signed by both the Owner and Architect. Signature of the Contractor indicates the Contractor's agreement herewith, including any adjustment in the Contract Sum or Contract Time.

The original Contract Sum was	**2,632,460.83**
The net change by previously authorized Change Orders was	**0.00**
The Contract Sum prior to this Change Order was	**2,632,460.83**
The Contract Sum will be increased by this Change Order	**91,732.62**
The new Contract Sum will be	**2,724,193.45**

Authorized By Owner:	**Accepted By Contractor:**	**Architect/Engineer:**
City of Crest Hill	FER-PAL Construction USA LLC 1350 Gasket Drive, Elgin, IL 60120	
By: _____	**By:** _____	**By:** _____
Date: _____	**Date:** _____	**Date:** _____

SHERIDAN PLUMBING & SEWER

6754 W. 74th Street
Bedford Park, IL 60638
(708)475-7100 (708)475-7138 fax
IL Plumbing License No. 055-027841

September 29, 2025

Fer-Pal Construction USA LLC
1350 Gasket Drive
Elgin, IL. 60120

Attn: Joel Ponce

PROJECT: City of Crest Hill, CIPP Water Main Rehabilitation – Phase 1
Request for AUP #3 – Broadway St. Lining pit modifications and additional labor due to critical utility conflicts (10" high pressure gas main)

Summary of attached force account billings

Labor:			$8,788.74
Equipment:			$4,496.24
Material:			$0.00
Rented Equipment:			$0.00
Subcontractor			$1,275.75
		Total:	$14,560.73
Bond:	0.0%		$0.00
Bond MU	0%		$0.00
		Total Bill:	$14,560.73

Notes:

The above referenced force account estimate represents the additional time (on average per lining pit) to successfully complete the additional required labor, equipment and modifications for lining access pits as indicated for CIPP water main lining on Broadway St.

Upon excavation for the indicated lining access pits on Broadway Street, an existing 10" high pressure gas main was discovered running parallel above the existing 10" water main with less than 24 inches of seperation between the utilities. The existing soils in the area are solid rock and it appears that the installation of the 10" gas main utilized the existing 10" watermain trench at the time of installation to avoid additional costs that would be assosiated with the rock removal. The representatives for the gas main (Nicor) informed the contractor that no excavation (with the exception of hydro or hand excavation) would be allowed within a 24" minimum of their facility.

Initials _____

Based on the adverage time required on Theordore Street to install the same lining access pits, the excavation contractor has adveraged 2 lining access pits per day. All required lining access pits have been installed on Theodore Street thus providing an accurate time frame for the installation of a lining access pit without conflict. As of September 29th, two lining access pits have been installed on Broadway Street (Pit #11 - Station 403+20 and Pit # 12 Station 406+50.) Both lining access pits have taken 1 ½ days to install requiring an additional 8 hours of labor and equipment per lining access pit

The force account costs provided represent the labor and equipment costs necessary per lining access pit to facilitate the contruction of Broadway Street lining pits. Due to the critical restraints added by Nicor's high pressure 10" gas main the excavation contractor must adhear to the utility owner's demands which greatly hampers proven production rates.

In an attempt to simplify the additional costs associated with the conflict the following request for additional unit pricing or AUP (Broadway Street Lining Pit modifications) is requested per a quantity of each or per pit.

After several exploratory excavations of Broadway Street it appears that the total quantity necessary for the AUP would be 3 EA (Broadway Street from Theodore Street north to Ludwig Ave.) and a possible total of 6 EA (Broadway Street from Ludwig Ave. north to Chaney Ave.) Please note that the Ludwig lining access pit was able to be installed without major additional costs and has been removed from the proposed requsted quantities.

The following AUP request has taken only the ammount of additional labor and equipment into consideration for work to be performed outside the innitial scope. Additional line items such as pavement removal, Trench backfill, rock excavation, necessary re-instatement piping etc. are to be paid for per their respective line item pricing.

Please see attached for itemized force account costs.

PROJECT COST: The Scope of Work has been estimated on an force account basis. This cost includes weekday work, environmental monitoring, personal protective equipment up to Chemical Protection Level D, travel time, standard insurance and any other items stated in above Scope of Work.

Initials _____

SHERIDAN PLUMBING & SEWER

6754 W. 74th Street
Bedford Park, IL 60638-6029
(708) 475-7114 (708) 475-7138 fax
IL Plumbing License No. 055-027841
IDOT Contractor No: 050C
WBE Certified

General Contractor:	Sheridan Plumbing & Sewer
Job No.:	S25-150
Description:	Water Main Rehabilitation Phase 1, Contract 3-2024
Location:	Crest Hill, Illinois
Desc. Of Work:	CO #1
Route:	
Mile Post	
County	WILL
Report. No.	AUP #3
Owner:	City of Crest Hill
Contract No.:	
Authorization No.	
Project No.	

Month:	**September-2025**				
Days:	24				

Notes: Broadway Lining Pit Modification Costs for Existing 10in Gas Main

File Save Name: Crest Hill_CIPP WM Lining 2025_ AUP3 Broadway lining pit modifications for 10in gas

J S25-150
D on: Water Main Rehabilitation Phase 1, Contract 3-2024
L Crest Hill, Illinois
D Work: CO #1

September-2025

Name	Position	24 ST	24 OT	24 DT	24	25	26			Total Hours ST	OT	DT	Rate	Insurance Amount	Payroll Amount	Earnings to Date	Unemployme F.U.T.
George Gentry	Oper. 150 Foreman jc 35*	8			8.0					8.0			$65.000	$520.00	$520.00	$ 10,000.00	
Guy Lepore	Oper. 150 Class 1 jc 31*	8			8.0					8.0			$63.000	$504.00	$504.00	$ 10,000.00	
Shawn Radloff	Laborer, Semi-Skilled jc 12	8			8.0					8.0			$51.400	$411.20	$411.20	$ 10,000.00	
Modesto Gamboa	Laborer, Semi-Skilled jc 12	8			8.0					8.0			$51.400	$411.20	$411.20	$ 10,000.00	
Miguel Garcia	Laborer, Semi-Skilled jc 12	8			8.0					8.0			$51.400	$411.20	$411.20	$ 10,000.00	
Jake Collins	Laborer, Semi-Skilled jc 12	8			8.0					8.0			$51.400	$411.20	$411.20	$ 10,000.00	
Ruben	Laborer, Semi-Skilled jc 12	8			8.0					8.0			$51.400	$411.20	$411.20	$ 10,000.00	
Dylan Strand	Labor Apprentice jc 17												$30.840			$ 10,000.00	
Tracy Morano	Plumber journeymen 130												$58.500			$ 10,000.00	
									Subtotals, Labor					$3,080.00	$3,080.00		

	DT	Total			Tax Deferred Savings ST	OT	DT	
Laborers Benefits Funds		40.0	hours @	$37.28				$1,491.20
Plumber's Local 130			hours @	$39.28				
Operating Engineers Apprentice Benefits Funds		16.0	hours @	$52.83				$845.28

Subtotals, Labor				$5,416.48
Plus 35 % of		$5,416.48		$1,895.77
				$7,312.25
Workmen's Compensation Insurance	24.69 % of	$3,080.00	$760.45	
Public Liability & Property Damage	4.41 % of	$3,080.00	$135.83	
Federal Unemployment Tax	0.80 % of			
State Unemployment Tax	6.83 % of	$3,080.00	$210.36	
Federal Social Security Tax	7.65 % of	$3,080.00	$235.62	
Total Payroll Additives			$1,342.26	
	Plus 10 % of	$1,342.26	$134.23	
				$1,476.49
Total Labor				$8,788.74

I hereby certify that the above statement is a copy of that portion of the payroll which applies to the above state work and that the rates shown for taxes and insurance are actual costs.

Sheridan Plumbing & Sewer

Job No. : S25-150
Description: Water Main Rehabilitation Phase 1, Contract 3-2024
Location: Crest Hill, Illinois
Desc. Of Work: CO #1

ID	Subcategory	Manufacturer	Model	Year	Config	Rate	Date(s): September-2025 24	25	26			total hours	amount
	Mini Excavator	John Deere	JD35	2024		$ 24.81							
ST11	Service Truck	Ford	F450 DXL 4x4	2024		$ 43.29	8					8.00	$ 346.32
	Tracked Excavator	John Deere	JD 135G	2019		$ 78.98							
	Tracked Excavator	John Deere	JD 85	2024		$ 75.37	8					8.00	$ 602.96
	Excavator Bucket	John Deere	.875 Cu Yd	2019		$ 5.16							
	Excavator Bucket	John Deere	.5 Cu Yd	2019		$ 4.75	8					8.00	$ 38.00
VA 19	Vactor	Kenworth	T800	2014	Kenworth T800 chassis 2115-1024 PD	$ 334.00	8					8.00	$ 2,672.00
	Tracked Skid Steer Loader		JD 329	2019		$ 92.39							
DT07	Six Wheel Dump Truck	Peterbilt	T-800	2024	350HP	$ 67.20	8					8.00	$ 537.60
	Wheel Loader	John Deere	JD344L	2020	103HP	$ 37.42	8					8.00	$ 299.36
	Tow Behind Trailer	Eager Beaver	20XPT	2015	21' flat deck, 20 ton non-tilit trailer	$ 6.70							
	Confined space entry Equipment			2022		$ 12.50							
	4 gas monitor			2022		$ 4.16							

TOTAL EQUIPMENT $4,496.24

September-2025 24

Sub Contractor Items	Unit	Total	Unit Price	Amount
Trucking	HR	-	$0.00	$0.00
		9	$135.00	$1,215.00
		0	$0.00	$0.00
		0	$0.00	$0.00
		0	$0.00	$0.00
		0	$0.00	$0.00
		0	$0.00	$0.00
		0	$0.00	$0.00
		0	$0.00	$0.00
		0	$0.00	$0.00
		0	$0.00	$0.00
		Subtotal		$1,215.00
		Plus 5%		$60.75
Total Material				$1,275.75

Job No.: S25-150
Description: Water Main Rehabilitation Phase 1, Contract 3-2024
Location: Crest Hill, Illinois
Desc. of Work: CO #1

Route _____ Mile Post _____ County WILL Auth. No. _____

Force Account bill for City of Crest Hill Contract No. _____

Summary of attached force account billings

Labor:		$8,788.74
Equipment:		$4,496.24
Material:		$0.00
Rented Equipment:		$0.00
Subcontractor		$1,275.75
	Total:	$14,560.73
Bond:	0.0%	$0.00
Bond MU	0%	$0.00
	Total Bill:	$14,560.73

_____

Resident

Job No.: S25-150

Description: Water Main Rehabilitation Phase 1, Contract 3-2024

Location: Crest Hill, Illinois

Desc. Of Work CO#1

September-2025

NOTES: Broadway Lining Pit Modification Costs for Existing 10in Gas Main

Change Order

FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120

Distribution ☐ CREST HILL, IL - BROADWAY ST.
☐ Office ☐ Field
☐ Other

Project: CREST HILL, IL - BROADWAY ST. **Contract Number:** EH25330- CREST HILL, IL - BROADWAY ST

Proposed Change Order #: FO 10 10" Butterfly Valve (2) each

To (Contractor): FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120

Change Order Date : 12/15/25

You are directed to make the following changes in this Contract:

C.O. Item	Contract Item	Change in Days	UM	Units	Description	Unit Price	Amount
10			EA	2.000	10" Butterfly Valve (2) each	6,184.45000	12,368.90
					Total For Change Order:		**12,368.90**

Not valid until signed by both the Owner and Architect. Signature of the Contractor indicates the Contractor's agreement herewith, including any adjustment in the Contract Sum or Contract Time.

The original Contract Sum was	**2,479,975.70**
The net change by previously authorized Change Orders was	**5.30**
The Contract Sum prior to this Change Order was	**2,479,981.00**
The Contract Sum will be increased by this Change Order	**12,368.90**
The new Contract Sum will be	**2,492,349.90**

Authorized By Owner:	**Accepted By Contractor:**	**Architect/Engineer:**
City of Crest Hill	FER-PAL Construction USA LLC 1350 Gasket Drive, Elgin, IL 60120	
By: _____	**By:** _____	**By:** _____
Date: _____	**Date:** 12/15/25	**Date:** _____

Change Order

FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120

Distribution ☐ CREST HILL, IL - BROADWAY ST.
☐
☐ Office ☐ Field
☐ Other

Project: CREST HILL, IL - BROADWAY ST. **Contract Number:** EH25330- CREST HILL, IL - BROADWAY ST

Proposed Change Order #: FO 3 T & M Theodore and Broadway Ex

To (Contractor): FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120

Change Order Date : 10/31/25

You are directed to make the following changes in this Contract:

C.O. Item	Contract Item	Change in Days	UM	Units	Description	Unit Price	Amount
3			LS		T & M Theodore and Broadway Exploration		45,008.47
					Total For Change Order:		**45,008.47**

Not valid until signed by both the Owner and Architect. Signature of the Contractor indicates the Contractor's agreement herewith, including any adjustment in the Contract Sum or Contract Time.

The original Contract Sum was	**2,632,460.83**
The net change by previously authorized Change Orders was	**0.00**
The Contract Sum prior to this Change Order was	**2,632,460.83**
The Contract Sum will be increased by this Change Order	**45,008.47**
The new Contract Sum will be	**2,677,469.30**

Authorized By Owner:	**Accepted By Contractor:**	**Architect/Engineer:**
City of Crest Hill	FER-PAL Construction USA LLC 1350 Gasket Drive, Elgin, IL 60120	
By: _____	**By:** _____	**By:** _____
Date: _____	**Date:** _____	**Date:** _____

SHERIDAN PLUMBING & SEWER

6754 W. 74th Street
Bedford Park, IL 60638
(708)475-7100 (708)475-7138 fax
IL Plumbing License No. 055-027841

September 29, 2025

Fer-Pal Construction USA LLC
1350 Gasket Drive
Elgin, IL. 60120

Attn: Joel Ponce

PROJECT: City of Crest Hill, CIPP Water Main Rehabilitation – Phase 1
Request for CO #1 – Broadway St. and Theodore St. exploratory excavations for existing utility conflicts and lining pit re-alignment locations

Summary of attached force account billings

Labor:			$29,376.49
Equipment:			$13,488.72
Material:			$0.00
Rented Equipment:			$0.00
Subcontractor			$0.00
		Total:	$42,865.21
Bond:	0.0%		$0.00
Bond MU	0%		$0.00
		Total Bill:	$42,865.21

Notes:

Wednesday, 9-24-2025

1. **Excavation of proposed lining pit at the intersection of Broadway St. and Theodore St. (P-9) discovered an existing 10" gas main running parallel with the existing 10" watermain. The existing configuration of the existing watermain was determined to be an existing 10" x 8" tee rather than a 10" 90* bend.**
2. **The location of (P9) was then re-located approx. 25 LF to the north of original location. Upon installation of the lining pit (9A), a 8" sanitary sewer was discovered at the same elevation of the existing watermain located perpendicular to the existing 10" watermain. Additional discussions were neccesary to assess the feasibility of design in regards to IEPA regulations regarding sewer seperation. After discussion, It was determined that Pit (P9A) could be utilized after lining to facilitate the istallation of a new 8" valve and vault.**

Initials _____

Thursday, 9-25-2025

1. **Excavation of an additional lining pit (P9-B) approx. 25 LF north of the orginal location of pit (P-9) was perfromed to determine if lining pits (9A and 9B) could be utilized in conjunction with open cut installation of new watermain to avoid mutiple conflicts. Upon excavation of Pit (P9-B) the existing 10" gas main along with an additonal unknown 10" pipe was discovered and the dicision was made to backfill the excavation.**
2. **The Original lining pit (P9) was re-excavated and an safety shoring design was implemented to to encompass the existing utilities within the footprint of the lining pit.**

Friday, 9-26-2025

1. **Excavation of proposed lining pit (P-11) uncovered a 10" gas main parellel to the existing 10" watermain. A 10" ductile storm sewer was also discovered approx. 16" south running parallel to the gas main. Safety shoring design was modified to encompass the existing utilities within the footprint of the lining pit.**

The following invoice has taken only the ammount of additional labor and equipment into consideration for work performed and down time incurred out side the innitial scope between 9/24 and 9/26. Additional line items such as pavement removal, Trench backfill, rock excavation, necessary re-instatement piping etc. are to be paid for per their respective line item pricing.

Please see attached for itemized force account costs.

PROJECT COST: The Scope of Work has been estimated on an force account basis. This cost includes weekday work, environmental monitoring, personal protective equipment up to Chemical Protection Level D, travel time, standard insurance and any other items stated in above Scope of Work.

Initials _____

SHERIDAN PLUMBING & SEWER

6754 W. 74th Street
Bedford Park, IL 60638-6029
(708) 475-7114 (708) 475-7138 fax
IL Plumbing License No. 055-027841
IDOT Contractor No: 050C
WBE Certified

General Contractor:	Sheridan Plumbing & Sewer
Job No.:	S25-150
Description:	Water Main Rehabilitation Phase 1, Contract 3-2024
Location:	Crest Hill, Illinois
Desc. Of Work:	CO #1
Route:	
Mile Post	
County	WILL
Report. No.	CO #1
Owner:	City of Crest Hill
Contract No.:	
Authorization No.	
Project No.	

Month:	**August-2025**				
Days:	24				

Notes: Exploration Excavations for the Intersection of Broadway and Theodore St.

File Save Name: Crest Hill_CIPP WM Lining 2025_ CO1 Broadway and Theodore Exploration

: S25-150
tion: Water Main Rehabilitation Phase 1, Contract 3-2024
n: Crest Hill, Illinois
Desc. Of Work: CO #1

August-2025

Name	Position	24 ST	24	25	26			Total Hours ST	OT	DT	Rate	Insurance Amount	Payroll Amount	Earnings to Date	Unemployme F.U.T.
George Gentry	Oper. 150 Foreman jc 35*	8	8.5	8.0	9.0			24.0	1.5		$65.000	$1,657.50	$1,704.83	$ 10,000.00	
Guy Lepore	Oper. 150 Class 1 jc 31*	8	8.0	8.0	8.0			24.0			$63.000	$1,512.00	$1,512.00	$ 10,000.00	
Shawn Radloff	Laborer, Semi-Skilled jc 12	8	8.0	8.0	8.0			24.0			$51.400	$1,233.60	$1,233.60	$ 10,000.00	
Modesto Gamboa	Laborer, Semi-Skilled jc 12	8	8.0	8.0				24.0			$51.400	$1,233.60	$1,233.60	$ 10,000.00	
Miguel Garcia	Laborer, Semi-Skilled jc 12	8	8.0	8.0	8.0			24.0			$51.400	$1,233.60	$1,233.60	$ 10,000.00	
Jake Collins	Laborer, Semi-Skilled jc 12	8	8.0	8.0	8.5			24.0	0.5		$51.400	$1,259.30	$1,272.15	$ 10,000.00	
Ruben	Laborer, Semi-Skilled jc 12	8	8.0	8.0	8.0			24.0			$51.400	$1,233.60	$1,233.60	$ 10,000.00	
Dylan Strand	Labor Apprentice jc 17	8	8.0	8.0	8.0			24.0			$30.840	$740.16	$740.16	$ 10,000.00	
Tracy Morano	Plumber journeymen 130										$58.500			$ 10,000.00	

Subtotals, Labor $10,103.36 $10,163.54

	Total			Tax Deferred Savings ST	OT	DT	
Laborers Benefits Funds	144.5	hours @	$37.28				
Plumber's Local 130		hours @	$39.28				$5,386.96
Operating Engineers Apprentice Benefits Funds	49.5	hours @	$52.83				$2,615.09

Subtotals, Labor				$18,165.59
Plus 35 % of		$18,165.59		$6,357.96
				$24,523.55
Workmen's Compensation Insurance	24.69 % of	$10,103.36	$2,494.52	
Public Liability & Property Damage	4.41 % of	$10,103.36	$445.56	
Federal Unemployment Tax	0.80 % of			
State Unemployment Tax	6.83 % of	$10,163.54	$694.17	
Federal Social Security Tax	7.65 % of	$10,163.54	$777.51	
Total Payroll Additives			$4,411.76	
Plus 10 % of		$4,411.76	$441.18	
				$4,852.94
Total Labor				$29,376.49

I hereby certify that the above statement is a copy of that portion of the payroll which applies to the above state work and that the rates shown for taxes and insurance are actual costs.

Sheridan Plumbing & Sewer

Job No. : S25-150
Description: Water Main Rehabilitation Phase 1, Contract 3-2024
Location: Crest Hill, Illinois
Desc. Of Work: CO #1

Date(s): August-2025

ID	Subcategory	Manufacturer	Model	Year	Config	Rate	24	25	26			total hours	amount
	Mini Excavator	John Deere	JD35	2024		$ 24.81							
ST11	Service Truck	Ford	F450 DXL 4x4	2024		$ 43.29	8	8	8			24.00	$ 1,038.96
	Tracked Excavator	John Deere	JD 135G	2019		$ 78.98							
	Tracked Excavator	John Deere	JD 85	2024		$ 75.37	8	8	8			24.00	$ 1,808.88
	Excavator Bucket	John Deere	.875 Cu Yd	2019		$ 5.16							
	Excavator Bucket	John Deere	.5 Cu Yd	2019		$ 4.75	8	8	8			24.00	$ 114.00
VA 19	Vactor	Kenworth	T800	2014	Kenworth T800 chassis 2115-1024 PD	$ 334.00	8	8	8			24.00	$ 8,016.00
	Tracked Skid Steer Loader		JD 329	2019		$ 92.39							
DT07	Six Wheel Dump Truck	Peterbilt	T-800	2024	350HP	$ 67.20	8	8	8			24.00	$ 1,612.80
	Wheel Loader	John Deere	JD344L	2020	103HP	$ 37.42	8	8	8			24.00	$ 898.08
	Tow Behind Trailer	Eager Beaver	20XPT	2015	21' flat deck, 20 ton non-tilit trailer	$ 6.70							
	Confined space entry Equipment			2022		$ 12.50							
	4 gas monitor			2022		$ 4.16							

TOTAL EQUIPMENT $13,488.72

Route _____ Mile Post _____ County WILL Auth. No. _____

Force Account bill for City of Crest Hill Contract No. _____

Summary of attached force account billings

Labor:		$29,376.49
Equipment:		$13,488.72
Material:		$0.00
Rented Equipment:		$0.00
Subcontractor		$0.00
	Total:	$42,865.21
Bond:	0.0%	$0.00
Bond MU	0%	$0.00
	Total Bill:	$42,865.21

_____

Resident

Job No.: S25-150

Description: Water Main Rehabilitation Phase 1, Contract 3-2024

Location: Crest Hill, Illinois

Desc. Of Work CO#1

August-2025

NOTES: Exploration Excavations for the Intersection of Broadway and Theodore St.

SHERIDAN PROCESS SYSTEMS

Daily Time Sheet

Day (circle one)	SU M (W) TH F SA
Date	9-24
Start Time	630
End Time	230
Contract #	
Gen. Contractor	Crest Hill.
Job Name	Lining.
Sheridan Job #	
Task	Excavation - Cleaning - Clean & CCTV

Employee Name	ST	OT	DT	Travel	Down	Lunch	Total
George Gentry	8	.5					8.5
Shawn Radloff	8						8
Miguel Garcia	8						8
Modesto Gamboa 6.2	8						8
O.Ilan	8						8
Cruz	8						8
Jake	8						8
Rubin	8						8

Materials Summary

Vendor	Pick Ticket/PO#
GNL	47908

Materials from Inventory

Description	Quantity

Comments: Meet Midwest & Install an 8" Insert Valve. Back Fill with 7 Stone
* Remove Concrete at R7 53 & Theodore & D3 Down Locate.
8" 90 Ran Into 12" Gas & T Instead of 90
* Moved P.H west 25' And Broke out Concrete For Lining P.H.
* Back Filled P.H with T with 7 Stone.

344 Loader

Sheridan Vehicles

JD 410J	
Deere 85	✓
Dump Truck	04
JD 135	
JD 135 Breaker	
Eager Beaver	
KX080	
JD35G	
Pick-Up	
Service Truck 08	11
Skid Steer	
Skid Steer Breaker	
Trailer	
PU 20	
Vactor	
JD 344 Loader	✓

Sheridan Equipment

Description		Description		Description	Vendor	
2" Pump		Push Camera				
3" Pump		Pipe Machine				
6" Pump		Snappers				
Compactor		Grade/ PLS Laser				
Compressor		VOC gas Meter				
Concrete Blankets		Wet/Dry Vac				
Concrete Mixer		Hand Tools				
Confined Space		Sawzall				
Demo Hammer		Steel Plates				
Generator		Cordless Drill				
Grout Pump		**Locating Equipment**				
Hammer Drill		GPR				
Jack Hammer		Mac 51				
Partner Saw		RD4000				

Rental Vehicles/Equipment

Supervisor's Signature:

Date:

SHERIDAN PUBLIC SAFETY

Daily Time Sheet

Day (circle one)	SU M T W (TH) F SA	Contract #	
Date	9-25-25	Gen. Contractor	Crest Hill
Start Time		Job Name	Linny
End Time		Sheridan Job #	
		Task	Excavation - Cleaning - Clean & CCTV

Employee Name	ST	OT	DT	Travel	Down	Lunch	Total
George Gentry	8						8
Shawn Radloff	8						8
Miguel Garcia	8						8
Modesto Gamboa out of Town	Vacation						
D. Ilen	8						8
Cory	8						8
Jake	8						8
Ruby	8						8

Materials Summary

Vendor	Pick Ticket/PO#
GNL	47909

Materials from Inventory

Description	Quantity

Comments: * Break out 10x7 of 20" Asphalt & Dig out for Linny - P.H.
Run into 12" Gas Elect Duct & 2 12" Storm Lines.
Showed Inspector & Back Filled with 7 Stone.
* Install 8-6 Wood Box on Theodore West for Linny
* Re dig Hole over T on Rt 53 Cut out & Remove 10x8 Cross
Break out 1.5 Ft of Bed Rock 8x8 for Re bolt. of Pipe

344 Loader.

Sheridan Vehicles	
JD 410J	
Deere 85	✓
Dump Truck	
JD 135	
JD 135 Breaker	
Eager Beaver	
KX080	
JD35G	
Pick-Up	
Service Truck 08	//
Skid Steer	
Skid Steer Breaker	
Trailer	
PU 20	
Vactor	
JD 344	✓

Sheridan Equipment

Description		Description	
2" Pump		Push Camera	
3" Pump		Pipe Machine	
6" Pump		Snappers	
Compactor		Grade/ PLS Laser	
Compressor		VOC gas Meter	
Concrete Blankets		Wet/Dry Vac	
Concrete Mixer		Hand Tools	
Confined Space		Sawzall	
Demo Hammer		Steel Plates	
Generator		Cordless Drill	
Grout Pump		**Locating Equipment**	
Hammer Drill		GPR	
Jack Hammer		Mac 51	
Partner Saw		RD4000	
		Backhoe Breaker	✓

Rental Vehicles/Equipment

Description	Vendor

Supervisor's Signature: [signature]

Date:

Daily Time Sheet

...me)	SU M T W TH (F) SA	Contract #	
	9-26-25	Gen. Contractor	Crest Hill
...me	630	Job Name	Lining
...me	230	Sheridan Job #	
		Task	Excavation - Cleaning - Clean & CCTV

Employee Name	ST	OT	DT	Travel	Down	Lunch	Total
George Gentry	8	1					8
Shawn Radloff	8						8
Miguel Garcia	8						8
Modesto Gamboa OFF	—	Vacation					—
Dillon	8						8
Guy	8						8
Rulin	8						8
Jake 630 - 300	8	.5					8.5

Materials Summary

Vendor	Pick Ticket/PO#

Materials from Inventory

Description	Quantity

Comments: * work on 2 Pits (1) at Car Lot & (1) on Storm. Use Vactor To Lodate 12" gas at Both Spotts, use 85 & Breaker To Remove Rd Cut & Remove 2' Storm Inlet From Directly on Top of 12" gas.

344 Loader

Sheridan Vehicles	
JD 410J	
Deere 85	✓
Dump Truck	
JD 135	
JD 135 Breaker	
Eager Beaver	
KX080	
JD35G	
Pick-Up	
Service Truck 08	
Skid Steer	
Skid Steer Breaker	
Trailer	
PU 20	
Vactor	19
JD 344	✓

Sheridan Equipment

Description		Description	
2" Pump		Push Camera	
3" Pump		Pipe Machine	
6" Pump		Snappers	
Compactor		Grade/ PLS Laser	
Compressor		VOC gas Meter	
Concrete Blankets		Wet/Dry Vac	
Concrete Mixer		Hand Tools	
Confined Space		Sawzall	
Demo Hammer		Steel Plates	
Generator		Cordless Drill	
Grout Pump		Locating Equipment	
Hammer Drill		GPR	
Jack Hammer		Mac 51	
Partner Saw		RD4000	
		Breaker Attachment	✓

Rental Vehicles/Equipment

Description	Vendor

Supervisor's Signature:

Date:

Change Order

FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120

Distribution ☐ CREST HILL, IL - BROADWAY ST.
☐
☐ Office ☐ Field
☐ Other

Project: CREST HILL, IL - BROADWAY ST. **Contract Number:** EH25330- CREST HILL, IL - BROADWAY ST

Proposed Change Order #: FO 7 Relocate Existing roundwas and B

To (Contractor): FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120

Change Order Date : 12/03/25

You are directed to make the following changes in this Contract:

C.O. Item	Contract Item	Change in Days	UM	Units	Description	Unit Price	Amount
7			LS		Relocate Existing roundwas and B boxes		12,200.75
					Total For Change Order:		**12,200.75**

Not valid until signed by both the Owner and Architect. Signature of the Contractor indicates the Contractor's agreement herewith, including any adjustment in the Contract Sum or Contract Time.

The original Contract Sum was	**2,479,975.70**
The net change by previously authorized Change Orders was	**0.00**
The Contract Sum prior to this Change Order was	**2,479,975.70**
The Contract Sum will be increased by this Change Order	**12,200.75**
The new Contract Sum will be	**2,492,176.45**

Authorized By Owner:	**Accepted By Contractor:**	**Architect/Engineer:**
City of Crest Hill	FER-PAL Construction USA LLC 1350 Gasket Drive, Elgin, IL 60120	
By: _____	**By:** _____	**By:** _____
Date: _____	**Date:** 12/03/25	**Date:** _____

SHERIDAN PLUMBING & SEWER

6754 W. 74th Street
Bedford Park, IL 60638
(708)475-7100 (708)475-7138 fax
IL Plumbing License No. 055-027841

November 20, 2025

Fer-Pal Construction USA LLC
1350 Gasket Drive
Elgin, IL. 60120

Attn: Joel Ponce

PROJECT: City of Crest Hill, CIPP Water Main Rehabilitation – Phase 1
Request for CO #3 – Relocate existing roundways and B Boxes from behind existing retaining wall to sidewalk, 11/17/2025 per village request.

Summary of attached force account billings

Labor:			$7,103.31
Equipment:			$4,266.32
Material:			$0.00
Rented Equipment:			$0.00
Subcontractor			$0.00
		Total:	$11,369.63
Bond:	2.0%		$227.39
Bond MU	10%		$22.74
		Total Bill:	$11,619.76

Please see attached for itemized force account costs.

PROJECT COST: The Scope of Work has been completed on an force account basis for **$11,619.76.** This cost includes weekday work, environmental monitoring, personal protective equipment up to Chemical Protection Level D, travel time, standard insurance and any other items stated in above Scope of Work.

Initials _____

SHERIDAN PLUMBING & SEWER

6754 W. 74th Street
Bedford Park, IL 60638-6029
(708) 475-7114 (708) 475-7138 fax
IL Plumbing License No. 055-027841
IDOT Contractor No: 050C
WBE Certified

General Contractor:	Sheridan Plumbing & Sewer
Job No.:	S25-150
Description:	Water Main Rehabilitation Phase 1, Contract 3-2024
Location:	Crest Hill, Illinois
Desc. Of Work:	CO #3
Route:	
Mile Post	
County	WILL
Report. No.	CO #3
Owner:	City of Crest Hill
Contract No.:	
Authorization No.	3
Project No.	Crest Hill Water Main Lining, Phase 1

Month:	**November-2025**				
Days:	17				

Notes: Relocation of existing Roundways and B-Boxes from behind existing retaining wall into sidewalk. Per City's request

File Save Name: Crest Hill Water Main Lining_CO3 Relocate existing B Boxes Theodore 11_17_25

J S25-150
D on: Water Main Rehabilitation Phase 1, Contract 3-2024
Location: Crest Hill, Illinois
Desc. Of Work: CO #2

November-2025					17					Total Hours				Insurance	Payroll	Earnings	Unemployme
Name	Position	17 ST	17 OT	17 DT						ST	OT	DT	Rate	Amount	Amount	to Date	F.U.T.
George Gentry	Oper. 150 Foreman jc 35*	8			8.0					8.0			$66.000	$528.00	$528.00	$ 10,000.00	
Guy Lepore	Oper. 150 Class 1 jc 31*	8			8.0					8.0			$63.000	$504.00	$504.00	$ 10,000.00	
Shawn Radloff	Laborer, Semi-Skilled jc 12												$51.400			$ 10,000.00	
Modesto Gamboa	Laborer, Semi-Skilled jc 12	8			8.0					8.0			$51.400	$411.20	$411.20	$ 10,000.00	
Miguel Garcia	Laborer, Semi-Skilled jc 12	8			8.0					8.0			$51.400	$411.20	$411.20	$ 10,000.00	
Jesus Guzmen	Laborer, Semi-Skilled jc 12												$51.400			$ 10,000.00	
Jake Collins	Laborer, Semi-Skilled jc 12	8			8.0					8.0			$51.400	$411.20	$411.20	$ 10,000.00	
Isreal Garcia	Laborer, Semi-Skilled jc 12												$51.400			$ 10,000.00	
Dylan Strand	Labor Apprentice jc 17	8			8.0					8.0			$30.840	$246.72	$246.72	$ 10,000.00	
Tracy Morano	Plumber journeymen 130												$58.500			$ 10,000.00	

				Subtotals, Labor			$2,512.32	$2,512.32
				Tax Deferred Savings				
	Total			ST	OT	DT		
Laborers Benefits Funds	32.0	hours @	$37.28					$1,192.96
Plumber's Local 130		hours @	$39.28					
Operating Engineers Apprentice Benefits Funds	16.0	hours @	$52.83					$845.28

Subtotals, Labor					$4,550.56
Plus 35 % of	$4,550.56				$1,592.70
					$6,143.26
Workmen's Compensation Insurance	15.85 % of	$2,512.32	$398.20		
Public Liability & Property Damage	4.41 % of	$2,512.32	$110.79		
Federal Unemployment Tax	0.80 % of				
State Unemployment Tax	6.83 % of	$2,512.32	$171.59		
Federal Social Security Tax	7.65 % of	$2,512.32	$192.19		
Total Payroll Additives			$872.77		
Plus 10 % of	$872.77		$87.28		
					$960.05
Total Labor					$7,103.31

I hereby certify that the above statement is a copy of that portion of the payroll which applies to the above state work and that the rates shown for taxes and insurance are actual costs.

Sheridan Plumbing & Sewer

Job No. : S25-150
Description: Water Main Rehabilitation Phase 1, Contract 3-2024
Location: Crest Hill, Illinois
Desc. Of Work: CO #2

ID	Subcategory	Manufacturer	Model	Year	Config	Rate	Date(s): November-2025 17					total hours	amount
	Mini Excavator	John Deere	JD35	2024		$ 24.81							
ST11	Service Truck	Ford	F450 DXL 4x4	2024		$ 43.46	8					8.00	$ 347.68
	Tracked Excavator	John Deere	JD 135G	2019		$ 78.97							
	Tracked Excavator	John Deere	JD 85	2024		$ 75.37	8					8.00	$ 602.96
	Excavator Bucket	John Deere	.875 Cu Yd	2019		$ 5.16							
	Excavator Bucket	John Deere	.5 Cu Yd	2019		$ 4.75	8					8.00	$ 38.00
VA 19	Vactor	Kenworth	T800	2014	Kenworth T800 chassis 2115-1024 PD	$ 342.51	8					8.00	$ 2,740.08
	Tracked Skid Steer Loader	John Deere	JD 329	2019		$ 92.39							
DT07	Six Wheel Dump Truck	Peterbilt	T-800	2024	350HP	$ 67.20	8					8.00	$ 537.60
	Wheel Loader	John Deere	JD344L	2020	103HP	$ 37.42							
	Tow Behind Trailer	Eager Beaver	20XPT	2015	21' flat deck, 20 ton non-tilit trailer	$ 10.82							
	Confined space entry Equipment			2022		$ 12.50							
	4 gas monitor			2022		$ 4.16							

TOTAL EQUIPMENT $4,266.32

Route _____ Mile Post _____ County WILL Auth. No. _____

Force Account bill for City of Crest Hill Contract No. _____

Summary of attached force account billings

Labor:			$7,103.31
Equipment:			$4,266.32
Material:			$0.00
Rented Equipment:			$0.00
Subcontractor			$0.00
		Total:	$11,369.63
Bond:	2.0%		$227.39
Bond MU	10%		$22.74
		Total Bill:	$11,619.76

_____

Resident

Job No.: S25-150

Description: Water Main Rehabilitation Phase 1, Contract 3-2024

Location: Crest Hill, Illinois

Desc. Of Work CO #2

November-2025

NOTES: Relocation of existing Roundways and B-Boxes from behind existing retaining wall into sidewalk. Per City's request

Change Order

FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120

Distribution ☐ CREST HILL, IL - BROADWAY ST.
☐
☐ Office ☐ Field
☐ Other

Project: CREST HILL, IL - BROADWAY ST.
Contract Number: EH25330- CREST HILL, IL - BROADWAY ST
Proposed Change Order #: FO 5 Re-instatement of 2" water service
To (Contractor): FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120
Change Order Date : 12/03/25

You are directed to make the following changes in this Contract:

C.O. Item	Contract Item	Change in Days	UM	Units	Description	Unit Price	Amount
5			LS		Re-instatement of 2" water service (excavate		4,065.32
					Total For Change Order:		**4,065.32**

Not valid until signed by both the Owner and Architect. Signature of the Contractor indicates the Contractor's agreement herewith, including any adjustment in the Contract Sum or Contract Time.

The original Contract Sum was	**2,479,975.70**
The net change by previously authorized Change Orders was	**0.00**
The Contract Sum prior to this Change Order was	**2,479,975.70**
The Contract Sum will be increased by this Change Order	**4,065.32**
The new Contract Sum will be	**2,484,041.02**

Authorized By Owner:	**Accepted By Contractor:**	**Architect/Engineer:**
City of Crest Hill	FER-PAL Construction USA LLC 1350 Gasket Drive, Elgin, IL 60120	
By: _____	**By:** _____	**By:** _____
Date: _____	**Date:** 12/03/25	**Date:** _____

SHERIDAN PLUMBING & SEWER

6754 W. 74th Street
Bedford Park, IL 60638
(708)475-7100 (708)475-7138 fax
IL Plumbing License No. 055-027841

November 14, 2025

Fer-Pal Construction USA LLC
1350 Gasket Drive
Elgin, IL. 60120

Attn: Joel Ponce

PROJECT: City of Crest Hill, CIPP Water Main Rehabilitation – Phase 1
Request for CO #2 – Re-instatement of 2" Water Service Connection, 11/12/2025. Excavation, locate and dis-connect existing 2" corporation and copper. Final connection shall be made at another date.

Summary of attached force account billings

Labor:			$1,486.17
Equipment:			$2,302.22
Material:			$0.00
Rented Equipment:			$0.00
Subcontractor			$0.00
		Total:	$3,788.39
Bond:	2.0%		$75.77
Bond MU	10%		$7.58
		Total Bill:	$3,871.73

Please see attached for itemized force account costs.

PROJECT COST: The Scope of Work has been completed on an force account basis for $3,871.73. This cost includes weekday work, environmental monitoring, personal protective equipment up to Chemical Protection Level D, travel time, standard insurance and any other items stated in above Scope of Work.

Initials _____

SHERIDAN PLUMBING & SEWER

6754 W. 74th Street
Bedford Park, IL 60638-6029
(708) 475-7114 (708) 475-7138 fax
IL Plumbing License No. 055-027841
IDOT Contractor No: 050C
WBE Certified

General Contractor:	Sheridan Plumbing & Sewer
Job No.:	S25-150
Description:	Water Main Rehabilitation Phase 1, Contract 3-2024
Location:	Crest Hill, Illinois
Desc. Of Work:	CO #2
Route:	
Mile Post	
County	WILL
Report. No.	CO #2
Owner:	City of Crest Hill
Contract No.:	
Authorization No.	2
Project No.	Crest Hill Water Main Lining, Phase 1

Month:	**November-2025**				
Days:	12				

Notes: Excavation for 2" Water Service Connection on Theodore St.

File Save Name: Crest Hill Water Main Lining_CO2 2in Water Service Connection Theodore 11_12_25

: S25-150
tion: Water Main Rehabilitation Phase 1, Contract 3-2024
n: Crest Hill, Illinois
f Work: CO #2

November-2025

Name	Position	12 ST	12 OT	12 DT	12					Total Hours ST	OT	DT	Rate	Insurance Amount	Payroll Amount	Earnings to Date	Unemployme F.U.T.
George Gentry	Oper. 150 Foreman jc 35*	2			2.0					2.0			$66.000	$132.00	$132.00	$ 10,000.00	
Guy Lepore	Oper. 150 Class 1 jc 31*												$63.000			$ 10,000.00	
Shawn Radloff	Laborer, Semi-Skilled jc 12	2			2.0					2.0			$51.400	$102.80	$102.80	$ 10,000.00	
Modesto Gamboa	Laborer, Semi-Skilled jc 12												$51.400			$ 10,000.00	
Miguel Garcia	Laborer, Semi-Skilled jc 12												$51.400			$ 10,000.00	
Jesus Guzmen	Laborer, Semi-Skilled jc 12												$51.400			$ 10,000.00	
Jake Collins	Laborer, Semi-Skilled jc 12	6			6.0					6.0			$51.400	$308.40	$308.40	$ 10,000.00	
Isreal Garcia	Laborer, Semi-Skilled jc 12												$51.400			$ 10,000.00	
Dylan Strand	Labor Apprentice jc 17												$30.840			$ 10,000.00	
Tracy Morano	Plumber journeymen 130												$58.500			$ 10,000.00	
	Subtotals, Labor													$543.20	$543.20		

	Total			Tax Deferred Savings ST	OT	DT			
Laborers Benefits Funds	8.0	hours @	$37.28						$298.24
Plumber's Local 130		hours @	$39.28						
Operating Engineers Apprentice Benefits Funds	2.0	hours @	$52.83						$105.66
							Subtotals, Labor		$947.10
							Plus 35 % of	$947.10	$331.49
									$1,278.59
Workmen's Compensation Insurance							15.85 % of	$543.20	$86.10
Public Liability & Property Damage							4.41 % of	$543.20	$23.96
Federal Unemployment Tax							0.80 % of		
State Unemployment Tax							6.83 % of	$543.20	$37.10
Federal Social Security Tax							7.65 % of	$543.20	$41.55
Total Payroll Additives									$188.71
							Plus 10 % of	$188.71	$18.87
Total Labor									$207.58
									$1,486.17

I hereby certify that the above statement is a copy of that portion of the payroll which applies to the above state work and that the rates shown for taxes and insurance are actual costs.

Sheridan Plumbing & Sewer

Job No. : S25-150
Description: Water Main Rehabilitation Phase 1, Contract 3-2024
Location: Crest Hill, Illinois
Desc. Of Work: CO #2

ID	Subcategory	Manufacturer	Model	Year	Config	Rate	Date(s): November-2025					total hours	amount
							12						
	Mini Excavator	John Deere	JD35	2024		$ 24.81							
ST11	Service Truck	Ford	F450 DXL 4x4	2024		$ 43.46	2					2.00	$ 86.92
	Tracked Excavator	John Deere	JD 135G	2019		$ 78.97							
	Tracked Excavator	John Deere	JD 85	2024		$ 75.37	2					2.00	$ 150.74
	Excavator Bucket	John Deere	.875 Cu Yd	2019		$ 5.16							
	Excavator Bucket	John Deere	.5 Cu Yd	2019		$ 4.75	2					2.00	$ 9.50
VA 19	Vactor	Kenworth	T800	2014	Kenworth T800 chassis 2115-1024 PD	$ 342.51	6					6.00	$ 2,055.06
	Tracked Skid Steer Loader	John Deere	JD 329	2019		$ 92.39							
DT07	Six Wheel Dump Truck	Peterbilt	T-800	2024	350HP	$ 67.20							
	Wheel Loader	John Deere	JD344L	2020	103HP	$ 37.42							
	Tow Behind Trailer	Eager Beaver	20XPT	2015	21' flat deck, 20 ton non-tilit trailer	$ 10.82							
	Confined space entry Equipment			2022		$ 12.50							
	4 gas monitor			2022		$ 4.16							

TOTAL EQUIPMENT $2,302.22

Route _____ Mile Post _____ County WILL Auth. No. _____

Force Account bill for City of Crest Hill Contract No. _____

Summary of attached force account billings

Labor:		$1,486.17
Equipment:		$2,302.22
Material:		$0.00
Rented Equipment:		$0.00
Subcontractor		$0.00
	Total:	$3,788.39
Bond:	2.0%	$75.77
Bond MU	10%	$7.58
	Total Bill:	$3,871.73

_____

Resident

Job No.: S25-150

Description: Water Main Rehabilitation Phase 1, Contract 3-2024

Location: Crest Hill, Illinois

Desc. Of Work CO #2

November-2025

NOTES: Excavation for 2" Water Service Connection on Theodore St.

Change Order

FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120

Distribution ☐ CREST HILL, IL - BROADWAY ST.
☐
☐ Office ☐ Field
☐ Other

Project: CREST HILL, IL - BROADWAY ST. **Contract Number:** EH25330- CREST HILL, IL - BROADWAY ST

Proposed Change Order #: FO 6 Re-instatement of 2" water service

To (Contractor): FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120

Change Order Date : 12/03/25

You are directed to make the following changes in this Contract:

C.O. Item	Contract Item	Change in Days	UM	Units	Description	Unit Price	Amount
6			LS		Re-instatement of 2" water service (labor & I		5,068.96
					Total For Change Order:		**5,068.96**

Not valid until signed by both the Owner and Architect. Signature of the Contractor indicates the Contractor's agreement herewith, including any adjustment in the Contract Sum or Contract Time.

The original Contract Sum was	**2,479,975.70**
The net change by previously authorized Change Orders was	**0.00**
The Contract Sum prior to this Change Order was	**2,479,975.70**
The Contract Sum will be increased by this Change Order	**5,068.96**
The new Contract Sum will be	**2,485,044.66**

Authorized By Owner:	**Accepted By Contractor:**	**Architect/Engineer:**
City of Crest Hill	FER-PAL Construction USA LLC 1350 Gasket Drive Elgin, IL 60120	
By: _____	**By:** _____	**By:** _____
Date: _____	**Date:** 12/03/25	**Date:** _____

SHERIDAN PLUMBING & SEWER

6754 W. 74th Street
Bedford Park, IL 60638
(708)475-7100 (708)475-7138 fax
IL Plumbing License No. 055-027841

November 25, 2025

Fer-Pal Construction USA LLC
1350 Gasket Drive
Elgin, IL. 60120

Attn: Joel Ponce

PROJECT: City of Crest Hill, CIPP Water Main Rehabilitation – Phase 1
Request for CO #2A – Re-instatement of 2" Water Service Connection- (Labor and materials for connection and backfill on 11/21/2025.

Summary of attached force account billings

Labor:			$1,683.25
Equipment:			$247.16
Material:			$2,793.25
Rented Equipment:			$0.00
Subcontractor			$0.00
		Total:	$4,723.66
Bond:	2.0%		$94.47
Bond MU	10%		$9.45
		Total Bill:	$4,827.58

Please see attached for itemized force account costs.

PROJECT COST: The Scope of Work has been completed on an force account basis for **$4,827.58.** This cost includes weekday work, environmental monitoring, personal protective equipment up to Chemical Protection Level D, travel time, standard insurance and any other items stated in above Scope of Work.

Initials _____

SHERIDAN PLUMBING & SEWER

6754 W. 74th Street
Bedford Park, IL 60638-6029
(708) 475-7114 (708) 475-7138 fax
IL Plumbing License No. 055-027841
IDOT Contractor No: 050C
WBE Certified

General Contractor:	Sheridan Plumbing & Sewer
Job No.:	S25-150
Description:	Water Main Rehabilitation Phase 1, Contract 3-2024
Location:	Crest Hill, Illinois
Desc. Of Work:	CO #2A
Route:	
Mile Post	
County	WILL
Report. No.	CO #2A
Owner:	City of Crest Hill
Contract No.:	
Authorization No.	2A
Project No.	Crest Hill Water Main Lining, Phase 1

Month:	**November-2025**				
Days:	21				

Notes: Re-instatement for 2" Water Service Connection on Theodore St.

File Save Name: Crest Hill Water Main Lining_CO2A 2in Water Service Reinstate Theodore 11_21_25

November-2025 | 21

924

ATERIAL USED	Unit	Total	Unit Price	Amount
2" Ty. K Copper	LF	40	$32.25	$1,290.00
8" x 2" Tapt Saddle	EA	1	$360.52	$360.52
2" Corp	EA	1	$455.74	$455.74
2" Curb Stop	EA	1	$686.99	$686.99

Subtotal $2,793.25

Total Material Plus 15% $2,793.25

Job No.: S25-150
Description: Water Main Rehabilitation Phase 1, Contract 3-2024
Location: Crest Hill, Illinois
Desc. of Work: CO #2A

AFFIDAVIT

This is to certify that any material entered on this force account bill which was taken from stock is shown at our cost

Sheridan Plumbing & Sewer

By _____

Subscribed and sworn to before me this _____ day of _____ 20____.

_____
Notary Public

: S25-150
tion: Water Main Rehabilitation Phase 1, Contract 3-2024
n: Crest Hill, Illinois
f Work: CO #2A

November-2025

Name	Position	21 ST	21 OT	21 DT	21					Total Hours ST	OT	DT	Rate	Insurance Amount	Payroll Amount	Earnings to Date	Unemployme F.U.T.
George Gentry	Oper. 150 Foreman jc 35*												$66.000			$ 10,000.00	
Guy Lepore	Oper. 150 Class 1 jc 31*	2			2.0					2.0			$63.000	$126.00	$126.00	$ 10,000.00	
Shawn Radloff	Laborer, Semi-Skilled jc 12	2			2.0					2.0			$51.400	$102.80	$102.80	$ 10,000.00	
Modesto Gamboa	Laborer, Semi-Skilled jc 12	2			2.0					2.0			$51.400	$102.80	$102.80	$ 10,000.00	
Miguel Garcia	Laborer, Semi-Skilled jc 12	2			2.0					2.0			$51.400	$102.80	$102.80	$ 10,000.00	
Jesus Guzmen	Laborer, Semi-Skilled jc 12												$51.400			$ 10,000.00	
Jake Collins	Laborer, Semi-Skilled jc 12	2			2.0					2.0			$51.400	$102.80	$102.80	$ 10,000.00	
Isreal Garcia	Labor Apprentice jc 17	2			2.0					2.0			$30.840	$61.68	$61.68	$ 10,000.00	
Dylan Strand	Plumber journeymen 130												$58.500			$ 10,000.00	
Tracy Morano																	

Subtotals, Labor $598.88 $598.88

Tax Deferred Savings

	Total			ST	OT	DT
Laborers Benefits Funds	10.0	hours @	$37.28			
Plumber's Local 130		hours @	$39.28			$372.80
Operating Engineers Apprentice Benefits Funds	2.0	hours @	$52.83			$105.66

Subtotals, Labor				$1,077.34
Plus 35 % of		$1,077.34		$377.07
				$1,454.41
Workmen's Compensation Insurance	15.85 % of	$598.88	$94.92	
Public Liability & Property Damage	4.41 % of	$598.88	$26.41	
Federal Unemployment Tax	0.80 % of			
State Unemployment Tax	6.83 % of	$598.88	$40.90	
Federal Social Security Tax	7.65 % of	$598.88	$45.81	
Total Payroll Additives			$208.04	
Plus 10 % of		$208.04	$20.80	
				$228.84
Total Labor				$1,683.25

I hereby certify that the above statement is a copy of that portion of the payroll which applies to the above state work and that the rates shown for taxes and insurance are actual costs.

Sheridan Plumbing & Sewer

Job No. : S25-150
Description: Water Main Rehabilitation Phase 1, Contract 3-2024
Location: Crest Hill, Illinois
Desc. Of Work: CO #2A

Date(s): November-2025

ID	Subcategory	Manufacturer	Model	Year	Config	Rate	21					total hours	amount
	Mini Excavator	John Deere	JD35	2024		$ 24.81							
ST11	Service Truck	Ford	F450 DXL 4x4	2024		$ 43.46	2					2.00	$ 86.92
	Tracked Excavator	John Deere	JD 135G	2019		$ 78.97							
	Tracked Excavator	John Deere	JD 85	2024		$ 75.37	2					2.00	$ 150.74
	Excavator Bucket	John Deere	.875 Cu Yd	2019		$ 5.16							
	Excavator Bucket	John Deere	.5 Cu Yd	2019		$ 4.75	2					2.00	$ 9.50
VA 19	Vactor	Kenworth	T800	2014	Kenworth T800 chassis 2115-1024 PD	$ 342.51							
	Tracked Skid Steer Loader	John Deere	JD 329	2019		$ 92.39							
DT07	Six Wheel Dump Truck	Peterbilt	T-800	2024	350HP	$ 67.20							
	Wheel Loader	John Deere	JD344L	2020	103HP	$ 37.42							
	Tow Behind Trailer	Eager Beaver	20XPT	2015	21' flat deck, 20 ton non-tilit trailer	$ 10.82							
	Confined space entry Equipment			2022		$ 12.50							
	4 gas monitor			2022		$ 4.16							

TOTAL EQUIPMENT $247.16

Route _____ Mile Post _____ County WILL Auth. No. _____

Force Account bill for City of Crest Hill Contract No. _____

Summary of attached force account billings

Labor:		$1,683.25
Equipment:		$247.16
Material:		$2,793.25
Rented Equipment:		$0.00
Subcontractor		$0.00
	Total:	$4,723.66
Bond:	2.0%	$94.47
Bond MU	10%	$9.45
	Total Bill:	$4,827.58

_____

Resident

Job No.: S25-150

Description: Water Main Rehabilitation Phase 1, Contract 3-2024

Location: Crest Hill, Illinois

Desc. Of Work CO #2A

November-2025

NOTES: Re-instatement for 2" Water Service Connection on Theodore St.

CORE & MAIN

INVOICE

Invoice #	Y111289
Invoice Date	11/13/25
Account #	140714
Sales Rep	RICH COOPER
Phone #	847-473-1900
Branch # 482	Lake Bluff, IL
Total Amount Due	$3,170.51

1830 Craig Park Court
St. Louis, MO 63146

NOV 20 2025

JS

Remit To:
CORE & MAIN LP
PO BOX 28330
ST LOUIS, MO 63146

362 1 MB 0.672 E0345X I0514 D14736301054 S2 P10936600 0001:0001

SHERIDAN PLUMBING & SEWER
6754 W 74TH ST
BEDFORD PARK IL 60638-6029

Shipped to:

CUSTOMER PICK-UP -

Thank you for the opportunity to serve you! We appreciate your prompt payment.

Date Ordered	Date Shipped	Customer PO #	Job Name	Job #	Bill of Lading	Shipped Via	Invoice #
11/12/25	11/12/25	PENDING				WILL CALL	Y111289

Product Code	Description	Quantity Ordered	Quantity Shipped	Quantity B/O	Price	UM	Extended Price
0820S040K	2X40 SOFT K COPPER USA PER FOOT	40	40		32.25000	FT	1,290.00
65REHF2	2 HAMMER FLARING TOOL HF2	1	1		142.40000	EA	142.40
72264090512015	264-090512-015 8X12-1/2X2CC TAPT REP CLP 8.99-9.39 OD	1	1		360.52000	EA	360.52
362074701B	74701B 2 BALL CORP STOP CCXFLR NO LEAD 5133-107	1	1		455.74000	EA	455.74
372076104	76104 2 BALL CURB STOP FLRXFLR MINN PATT NO LEAD 5129-121	1	1		686.99000	EA	686.99

Job materials - 2" x 40' Copper pipe, Flaring tool, Clip, Corp stop, Curb stop

Job #

Online ADVANTAGE™
• Manage billing online • Reprint invoices
• Retrieve proof of deliveries
Be suspicious of emails requesting wire transfers or payments to Core & Main using updated remittance information. For tips about how to identify bad actors, visit coreandmain.com/identifying-fraud.

Freight	Delivery	Handling	Restock	Misc.		
					Subtotal:	2,935.65
					Other:	0.00
					Tax:	234.86
					Invoice Total:	$3,170.51

Terms: NET 30
Ordered By: GEORGE

This transaction is governed by and subject to CORE & MAIN's standard terms and conditions, which are incorporated by reference and accepted. To review these terms and conditions, please visit: https://coreandmain.com/terms-of-sale/.

0001-0001

Change Order

FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120

Distribution ☐ CREST HILL, IL - BROADWAY ST.
☐
☐ Office ☐ Field
☐ Other

Project: CREST HILL, IL - BROADWAY ST. **Contract Number:** EH25330- CREST HILL, IL - BROADWAY ST

Proposed Change Order #: FO 8 Downtime incurred at Nicholson St

To (Contractor): FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120

Change Order Date : 12/03/25

You are directed to make the following changes in this Contract:

C.O. Item	Contract Item	Change in Days	UM	Units	Description	Unit Price	Amount
8			LS		Downtime incurred at Nicholson St. unidentif		3,595.11
					Total For Change Order:		**3,595.11**

Not valid until signed by both the Owner and Architect. Signature of the Contractor indicates the Contractor's agreement herewith, including any adjustment in the Contract Sum or Contract Time.

The original Contract Sum was	**2,479,975.70**
The net change by previously authorized Change Orders was	**0.00**
The Contract Sum prior to this Change Order was	**2,479,975.70**
The Contract Sum will be increased by this Change Order	**3,595.11**
The new Contract Sum will be	**2,483,570.81**

Authorized By Owner:	**Accepted By Contractor:**	**Architect/Engineer:**
City of Crest Hill	FER-PAL Construction USA LLC 1350 Gasket Drive, Elgin, IL 60120	
By: _____	**By:** _____	**By:** _____
Date: _____	**Date:** 12/03/25	**Date:** _____

SHERIDAN PLUMBING & SEWER

6754 W. 74th Street
Bedford Park, IL 60638
(708)475-7100 (708)475-7138 fax
IL Plumbing License No. 055-027841

November 14, 2025

Fer-Pal Construction USA LLC
1350 Gasket Drive
Elgin, IL. 60120

Attn: Joel Ponce

PROJECT: City of Crest Hill, CIPP Water Main Rehabilitation – Phase 1
Request for CO #4 – Downtime incurred for identification of unidentified existing storm and sanitary sewer pipes at Nicholson Street

Summary of attached force account billings

Labor:			$2,663.75
Equipment:			$684.60
Material:			$0.00
Rented Equipment:			$0.00
Subcontractor			$0.00
		Total:	$3,348.35
Bond:	2.0%		$66.97
Bond MU	10%		$6.70
		Total Bill:	$3,422.01

Please see attached for itemized force account costs.

PROJECT COST: The Scope of Work has been completed on an force account basis for **$3,422.01.** This cost includes weekday work, environmental monitoring, personal protective equipment up to Chemical Protection Level D, travel time, standard insurance and any other items stated in above Scope of Work.

Initials _____

SHERIDAN PLUMBING & SEWER

6754 W. 74th Street
Bedford Park, IL 60638-6029
(708) 475-7114 (708) 475-7138 fax
IL Plumbing License No. 055-027841
IDOT Contractor No: 050C
WBE Certified

General Contractor:	Sheridan Plumbing & Sewer
Job No.:	S25-150
Description:	Water Main Rehabilitation Phase 1, Contract 3-2024
Location:	Crest Hill, Illinois
Desc. Of Work:	CO #4
Route:	
Mile Post	
County	WILL
Report. No.	CO #4
Owner:	City of Crest Hill
Contract No.:	
Authorization No.	4
Project No.	Crest Hill Water Main Lining, Phase 1

Month:	**November-2025**				
Days:	14				

Notes: Downtime incurred for identification of existing storm and sanitary sewers
3 hours

File Save Name: Crest Hill Water Main Lining_CO4 Downtime for exist utilities Nicholson 11_14_25

: S25-150
tion: Water Main Rehabilitation Phase 1, Contract 3-2024
n: Crest Hill, Illinois
f Work: CO #4

November-2025

Name	Position	14 ST	14 OT	14 DT	14	Total Hours ST	OT	DT	Rate	Insurance Amount	Payroll Amount	Earnings to Date	Unemployme F.U.T.
George Gentry	Oper. 150 Foreman jc 35*	3			3.0	3.0			$66.000	$198.00	$198.00	$ 10,000.00	
Guy Lepore	Oper. 150 Class 1 jc 31*	3			3.0	3.0			$63.000	$189.00	$189.00	$ 10,000.00	
Shawn Radloff	Laborer, Semi-Skilled jc 12								$51.400			$ 10,000.00	
Modesto Gamboa	Laborer, Semi-Skilled jc 12	3			3.0	3.0			$51.400	$154.20	$154.20	$ 10,000.00	
Miguel Garcia	Laborer, Semi-Skilled jc 12	3			3.0	3.0			$51.400	$154.20	$154.20	$ 10,000.00	
Jesus Guzmen	Laborer, Semi-Skilled jc 12								$51.400			$ 10,000.00	
Jake Collins	Laborer, Semi-Skilled jc 12	3			3.0	3.0			$51.400	$154.20	$154.20	$ 10,000.00	
Isreal Garcia	Laborer, Semi-Skilled jc 12								$51.400			$ 10,000.00	
Dylan Strand	Labor Apprentice jc 17	3			3.0	3.0			$30.840	$92.52	$92.52	$ 10,000.00	
Tracy Morano	Plumber journeymen 130								$58.500			$ 10,000.00	

Subtotals, Labor $942.12 $942.12

Tax Deferred Savings

	Total			ST	OT	DT	
Laborers Benefits Funds	12.0	hours @	$37.28				$447.36
Plumber's Local 130		hours @	$39.28				
Operating Engineers Apprentice Benefits Funds	6.0	hours @	$52.83				$316.98

Subtotals, Labor				$1,706.46
Plus 35 % of		$1,706.46		$597.26
				$2,303.72
Workmen's Compensation Insurance	15.85 % of	$942.12	$149.33	
Public Liability & Property Damage	4.41 % of	$942.12	$41.55	
Federal Unemployment Tax	0.80 % of			
State Unemployment Tax	6.83 % of	$942.12	$64.35	
Federal Social Security Tax	7.65 % of	$942.12	$72.07	
Total Payroll Additives			$327.30	
Plus 10 % of		$327.30	$32.73	
				$360.03
Total Labor				$2,663.75

I hereby certify that the above statement is a copy of that portion of the payroll which applies to the above state work and that the rates shown for taxes and insurance are actual costs.

Sheridan Plumbing & Sewer

Job No. : S25-150
Description: Water Main Rehabilitation Phase 1, Contract 3-2024
Location: Crest Hill, Illinois
Desc. Of Work: CO #4

Date(s): November-2025

ID	Subcategory	Manufacturer	Model	Year	Config	Rate	14					total hours	amount
	Mini Excavator	John Deere	JD35	2024		$ 24.81							
ST11	Service Truck	Ford	F450 DXL 4x4	2024		$ 43.46	3					3.00	$ 130.38
	Tracked Excavator	John Deere	JD 135G	2019		$ 78.97							
	Tracked Excavator	John Deere	JD 85	2024		$ 75.37	3					3.00	$ 226.11
	Excavator Bucket	John Deere	.875 Cu Yd	2019		$ 5.16							
	Excavator Bucket	John Deere	.5 Cu Yd	2019		$ 4.75	3					3.00	$ 14.25
VA 19	Vactor	Kenworth	T800	2014	Kenworth T800 chassis 2115-1024 PD	$ 342.51							
	Tracked Skid Steer Loader	John Deere	JD 329	2019		$ 92.39							
DT07	Six Wheel Dump Truck	Peterbilt	T-800	2024	350HP	$ 67.20	3					3.00	$ 201.60
	Wheel Loader	John Deere	JD344L	2020	103HP	$ 37.42	3					3.00	$ 112.26
	Tow Behind Trailer	Eager Beaver	20XPT	2015	21' flat deck, 20 ton non-tilit trailer	$ 10.82							
	Confined space entry Equipment			2022		$ 12.50							
	4 gas monitor			2022		$ 4.16							

TOTAL EQUIPMENT $684.60

Route _____ Mile Post _____ County WILL Auth. No. _____

Force Account bill for City of Crest Hill Contract No. _____

Summary of attached force account billings

Labor:		$2,663.75
Equipment:		$684.60
Material:		$0.00
Rented Equipment:		$0.00
Subcontractor		$0.00
	Total:	$3,348.35
Bond:	2.0%	$66.97
Bond MU	10%	$6.70
	Total Bill:	$3,422.01

_____

Resident

Job No.: S25-150
Description: Water Main Rehabilitation Phase 1, Contract 3-2024
Location: Crest Hill, Illinois
Desc. Of Work CO #4
November-2025
NOTES: Downtime incurred for identification of existing storm and sanitary sewers
3 hours

Change Order

FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120

Distribution ☐ CREST HILL, IL - BROADWAY ST.
☐
☐ Office ☐ Field
☐ Other

Project: CREST HILL, IL - BROADWAY ST. **Contract Number:** EH25330- CREST HILL, IL - BROADWAY ST

Proposed Change Order #: FO 12 Ball Valve Replacement 1613 Bro

To (Contractor): FER-PAL Construction USA LLC
1350 Gasket Drive,
Elgin, IL 60120

Change Order Date : 01/07/26

You are directed to make the following changes in this Contract:

C.O. Item	Contract Item	Change in Days	UM	Units	Description	Unit Price	Amount
12			LS		Ball Valve Replacement 1613 Broadway Stre		1,061.40
					Total For Change Order:		**1,061.40**

Not valid until signed by both the Owner and Architect. Signature of the Contractor indicates the Contractor's agreement herewith, including any adjustment in the Contract Sum or Contract Time.

The original Contract Sum was	**2,479,975.70**
The net change by previously authorized Change Orders was	**0.00**
The Contract Sum prior to this Change Order was	**2,479,975.70**
The Contract Sum will be increased by this Change Order	**1,061.40**
The new Contract Sum will be	**2,481,037.10**

Authorized By Owner:	**Accepted By Contractor:**	**Architect/Engineer:**
City of Crest Hill	FER-PAL Construction USA LLC 1350 Gasket Drive, Elgin, IL 60120	
By: _____	**By:** _____	**By:** _____
Date: _____	**Date:** 01/07/2026	**Date:** _____

SHERIDAN PLUMBING & SEWER

6754 W. 74th Street
Bedford Park, IL 60638
(708)475-7100 (708)475-7138 fax
IL Plumbing License No. 055-027841

December 29, 2025

Fer-Pal Construction USA LLC
1350 Gasket Drive
Elgin, IL. 60120

Attn: Joel Ponce

PROJECT: City of Crest Hill, CIPP Water Main Rehabilitation – Phase 1
Plumber assistance for bypass connections - Work performed 12/15/2025.

Summary of attached force account billings

Labor:			$771.80
Equipment:			$217.30
Material:			$0.00
Rented Equipment:			$0.00
Subcontractor			$0.00
		Total:	$989.10
Bond:	2.0%		$19.78
Bond MU	10%		$1.98
		Total Bill:	$1,010.86

Please see attached for itemized force account costs.

PROJECT COST: The Scope of Work has been completed on an force account basis for **$1,010.86.** This cost includes weekday work, environmental monitoring, personal protective equipment up to Chemical Protection Level D, travel time, standard insurance and any other items stated in above Scope of Work.

Initials _____

6754 W. 74th Street
Bedford Park, IL 60638-6029
(708) 475-7114 (708) 475-7138 fax
IL Plumbing License No. 055-027841
IDOT Contractor No: 050C
WBE Certified

General Contractor:	Sheridan Plumbing & Sewer
Job No.:	S25-150
Description:	Water Main Rehabilitation Phase 1, Contract 3-2024
Location:	Crest Hill, Illinois
Desc. Of Work:	CO #FERPAL2
Route:	
Mile Post	
County	WILL
Report. No.	CO #FERPAL2
Owner:	City of Crest Hill
Contract No.:	
Authorization No.	FERPAL 2
Project No.	Crest Hill Water Main Lining, Phase 1

Month:	**December-2025**				
Days:	15				

Notes: Plumber assistance for bypass connections

File Save Name: Crest Hill Water Main Lining_Plumber Assistance for connections 12_16_25

Job No. : S25-150
Description: Water Main Rehabilitation Phase 1, Contract 3-2024
Location: Crest Hill, Illinois
Desc. Of Work: CO #FERPAL2

December-2025 — 15

Name	Position	15 ST	15 OT	15 DT	Total Hours ST	OT	DT	Rate	Insurance Amount	Payroll Amount	Earnings to Date	Unemployme F.U.T.
George Gentry	Oper. 150 Foreman jc 35*							$66.000			$ 10,000.00	
Guy Lepore	Oper. 150 Class 1 jc 31*							$63.000			$ 10,000.00	
Shawn Radloff	Laborer, Semi-Skilled jc 12							$51.400			$ 10,000.00	
Modesto Gamboa	Laborer, Semi-Skilled jc 12							$51.400			$ 10,000.00	
Miguel Garcia	Laborer, Semi-Skilled jc 12							$51.400			$ 10,000.00	
Jesus Guzmen	Laborer, Semi-Skilled jc 12							$51.400			$ 10,000.00	
Jake Collins	Laborer, Semi-Skilled jc 12							$51.400			$ 10,000.00	
Isreal Garcia	Laborer, Semi-Skilled jc 12							$51.400			$ 10,000.00	
Dylan Strand	Labor Apprentice jc 17							$30.840			$ 10,000.00	
Tracy Morano	Plumber journeymen 130	5		5.0			5.0	$58.500	$292.50	$292.50	$ 10,000.00	
	Subtotals, Labor								$292.50	$292.50		

	Total		Tax Deferred Savings ST	OT	DT			
Laborers Benefits Funds		hours @	$37.28					
Plumber's Local 130	5.0	hours @	$39.28					$196.40
Operating Engineers Apprentice Benefits Funds		hours @	$52.83					

Subtotals, Labor					$488.90
Plus 35 % of			$488.90		$171.12
					$660.02
Workmen's Compensation Insurance	15.85	% of	$292.50	$46.36	
Public Liability & Property Damage	4.41	% of	$292.50	$12.90	
Federal Unemployment Tax	0.80	% of			
State Unemployment Tax	6.83	% of	$292.50	$19.98	
Federal Social Security Tax	7.65	% of	$292.50	$22.38	
Total Payroll Additives				$101.62	
Plus 10 % of			$101.62	$10.16	
					$111.78
Total Labor					$771.80

I hereby certify that the above statement is a copy of that portion of the payroll which applies to the above state work and that the rates shown for taxes and insurance are actual costs.

Sheridan Plumbing & Sewer

Job No. : S25-150
Description: Water Main Rehabilitation Phase 1, Contract 3-2024
Location: Crest Hill, Illinois
Desc. Of Work: CO #FERPAL2

ID	Subcategory	Manufacturer	Model	Year	Config	Rate	Date(s): December-2025 15					total hours	amount
	Mini Excavator	John Deere	JD35	2024		$ 24.81							
ST11	Service Truck	Ford	F450 DXL 4x4	2024		$ 43.46	5					5.00	$ 217.30
	Tracked Excavator	John Deere	JD 135G	2019		$ 78.97							
	Tracked Excavator	John Deere	JD 85	2024		$ 75.37							
	Excavator Bucket	John Deere	.875 Cu Yd	2019		$ 5.16							
	Excavator Bucket	John Deere	.5 Cu Yd	2019		$ 4.75							
VA 19	Vactor	Kenworth	T800	2014	Kenworth T800 chassis 2115-1024 PD	$ 342.51							
	Tracked Skid Steer Loader	John Deere	JD 329	2019		$ 92.39							
DT07	Six Wheel Dump Truck	Peterbilt	T-800	2024	350HP	$ 67.20							
	Wheel Loader	John Deere	JD344L	2020	103HP	$ 37.42							
	Tow Behind Trailer	Eager Beaver	20XPT	2015	21' flat deck, 20 ton non-tilt trailer	$ 10.82							
	Confined space entry Equipment			2022		$ 12.50							
	4 gas monitor			2022		$ 4.16							

TOTAL EQUIPMENT $217.30

Route _____ Mile Post _____ County WILL Auth. No. _____

Force Account bill for City of Crest Hill Contract No. _____

Summary of attached force account billings

Labor:			$771.80
Equipment:			$217.30
Material:			$0.00
Rented Equipment:			$0.00
Subcontractor			$0.00
		Total:	$989.10
Bond:	2.0%		$19.78
Bond MU	10%		$1.98
		Total Bill:	$1,010.86

_____

Resident

Job No.: S25-150
Description: Water Main Rehabilitation Phase 1, Contract 3-2024
Location: Crest Hill, Illinois
Desc. Of Work CO #FERPAL2
December-2025
NOTES: Plumber assistance for bypass connections

Agenda Memo

Crest Hill, IL

Meeting Date:	2/23/2026
Submitter:	Gary Richardson Director of Public Works
Department:	Public Works
Agenda Item:	Approval of the purchase of a new new Morbark BVR16 Brush Chipper in the amount of $79,324.70

Summary:

The Public Works Department is requesting approval to purchase a new Morbark BVR16 Brush Chipper, as detailed in the attached quote. Our current chipper, which is still in operation, was manufactured in 1992. At 34 years old, it has surpassed its expected service life and increasingly poses maintenance challenges, operational delays, and safety concerns. Given our year-round demand for chipping operations, reliable equipment is essential for both productivity and crew safety.

The proposed Morbark BVR16 model includes significant modern safety improvements, including:

- Electronic three-position control bar for improved operator control.
- Dual horizontal feed wheels with hydraulic lift assist, improving stability and reducing operator strain.
- Chipper operator safety shield (dealer-added), providing added protection at the infeed area.
- Gauge panel mounted on the side of the infeed, allowing safer visibility and operation.

These upgrades represent substantial advancements over our current 1992 unit and directly support the City's commitment to a safe working environment for employees.

We are requesting approval to complete this purchase within the current fiscal year to meet both current and future operational needs. A dependable and modern chipper is critical to maintaining efficiency and ensuring uninterrupted Public Works operations.

Recommended Council Action:

Approve the purchase of a new Morbark BVR16 Brush Chipper in the amount of $79,324.70.

Funding Source: Funding for this purchase is available within Fund 11, specifically:11-00-7304 – $100,000 budgeted

Attachments:

Quote for one (1) new Morbark BVR16 Brush Chipper.

MORBARK

BOXER DENIS CIMAF RAYCO

Equipment Quote and Order

Sold To: City of Crest Hill
1610 Plainfield Rd
Crest Hill IL 60403

Herein referred to as 'buyer'

Final Delivery: City of Crest Hill
1610 Plainfield Rd
Crest Hill IL 60403

Ship To: Alexander Equipment Co Inc
4728 Yender Ave
Lisle IL 60532

(Matt Linn mlinn@alexequip.com)

Quote #: **Quote Date:** 2/4/2026 **Contact:** Brian Semplinski **Lead Time:** 180 Days ARO

Terms: Net 30 Days **Ph #:** 779-227-4416 **Delivery Instructions:** FOB - Destination

Preparer: Janelle Joslin **Email:** **Customer PO#:**

2026 Morbark BVR16 Brush Chipper

EQUIPMENT AND OPTIONS

STANDARD UNIT:

- Morbark orange urethane paint system
- Dual horizontal feed wheels with hydraulic lift assist, manually applied hydraulic down pressure at the control panel, direct drive bottom feed wheel with torque arm coupler and reversing automatic feed system
- Electronic three position control bar
- Gauge panel mounted on side of infeed
- 24" diameter x 24-5/8" wide staggered knife pocket drum with four (4) dual-edged chipper knives
- Manual crank swivel discharge with 360° rotation
- 30-gallon composite fuel tank with sight gauge and drain plug
- 12-gallon composite hydraulic reservoir with sight gauge and drain plug
- 6" x 3" tubular steel tongue with hitch plate
- 7-pin flat electrical connector
- 9,000# Torsion axle with electric brakes and break-away actuator
- Toolbox
- Complete set of manuals
- PSI 6.0L, 174-HP gasoline engine with Morbark ZeroClutch (centrifugal) in lieu of standard

OPTIONS:

- Electric front stabilizer in lieu of standard 10,000# tongue jack
- Hydraulic swivel discharge chute in lieu of standard
- Winch package: Heavy-duty, 10' chafe guard and interlock device

COMMENTS:

Sourcewell #010925-MBI, Member ID #44531

TOTAL CALCULATION

F.O.B. Shipping Point and customer is responsible for freight charges

Quantity Requested: 1

	Entries		Calculation
Configured Total		=	$ 83,110.00
Sourcewell Discount	13.0%	=	$ (10,804.30)
Tax Applied	0.0%	=	$ -
Freight In	$ 800.00	=	$ 800.00
PDI	$ 1,000.00	=	$ 1,000.00
Chipper Operator Safety Shield (added by Dealer)	$ 5,219.00	=	$ 5,219.00
Extended Price		=	**$79,324.70**

QUOTE IS VALID FOR 30 DAYS

Equipment Quote and Order

MORBARK

BOXER A MORBARK COMPANY DENIS CIMAF A MORBARK COMPANY RAYCO A MORBARK COMPANY

Sold To: City of Crest Hill
1610 Plainfield Rd
Crest Hill IL 60403

Herein referred to as 'buyer'

Final Delivery: City of Crest Hill
1610 Plainfield Rd
Crest Hill IL 60403

Ship To: Alexander Equipment Co Inc
4728 Yender Ave
Lisle IL 60532
(Matt Linn mlinn@alexequip.com)

Quote #:		**Quote Date:**	2/4/2026	**Contact:**	Brian Semplinski
Lead Time:	180 Days ARO				
Terms:	Net 30 Days	**Ph #:**	779-227-4416	**Delivery Instructions:**	FOB - Destination
Preparer:	Janelle Joslin	**Email:**		**Customer PO#:**	

2026 Morbark BVR16 Brush Chipper

PURCHASE ORDERS MUST BE MADE OUT TO MORBARK LLC

Morbark LLC
PO Box 277213
Atlanta, Georgia 30384-7213

Equipment Quote and Order

MORBARK

BOXER A MORBARK COMPANY DENIS CIMAF A MORBARK COMPANY RAYCO A MORBARK COMPANY

Sold To: City of Crest Hill
1610 Plainfield Rd
Crest Hill IL 60403

Herein referred to as 'buyer'

Final Delivery: City of Crest Hill
1610 Plainfield Rd
Crest Hill IL 60403

Ship To: Alexander Equipment Co Inc
4728 Yender Ave
Lisle IL 60532

(Matt Linn mlinn@alexequip.com)

Quote #:		**Quote Date:**	2/4/2026	**Contact:**	Brian Semplinski
Lead Time:	180 Days ARO				
Terms:	Net 30 Days	**Ph #:**	779-227-4416	**Delivery Instructions:**	FOB - Destination
Preparer:	Janelle Joslin	**Email:**		**Customer PO#:**	

2026 Morbark BVR16 Brush Chipper

Agenda Memo

Crest Hill, IL

Meeting Date:	2/23/2026
Submitter:	Gary Richardson Director of Public Works
Department:	Public Works
Agenda Item:	Approval of the purchase of a new Caterpillar 926-14A Small Wheel Loader in the amount of $222,000.00

Summary:

The Public Works Department respectfully requests City Council approval to purchase one (1) new Caterpillar 926-14A Wheel Loader, as detailed in the attached specification and quote document. A wheel loader will be primarily assigned to the West Sewer Treatment Plant to support daily operations, maintenance activities, and material handling needs.

Through Cooperative purchasing/Sourcewell we have secured the best pricing. We have identified the need for a new wheel loader as a critical addition to the department. Due to the high demand here is a 4-to-6-month delivery time. The attached quote outlines the features of the CAT 926-14A, which include:

- CAT C7.1 ACERT engine
- Enclosed ROPS/FOPS cab with climate control
- Fusion quick coupler
- 3.0 yd³ bucket and pallet forks
- Rear-view camera and enhanced safety features
- 60-month / 2,500-hour Premier Extended Warranty

Recommended Council Action:

Approve the purchase of a new Caterpillar 926-14A Small Wheel Loader in the amount of $222,000.00.

Financial Impact:

Funding Source: Funding for this purchase is available within Fund 12, specifically:

- 12-00-7300 – $100,000 budgeted
- 12-00-7301 – $175,000 budgeted

Attachments:

Quote for one (1) new Caterpillar 926-14A Small Wheel Loader from Altorfer CAT.

130936-01

Oct 16, 2025

CITY OF CREST HILL
20600 CITY CENTER BLVD
CREST HILL, IL 60403

Attention: BRIAN SEMPLINSKI



Dear Brian,

We would like to thank you for your interest in our company and our products and are pleased to quote the following for your consideration.

ONE (1) NEW CATERPILLAR MODEL: 926-14A SMALL WHEEL LOADER WITH ALL STANDARD EQUIPMENT IN ADDITION TO THE ADDITIONAL SPECIFICATIONS LISTED BELOW:

STOCK NUMBER: Y01386 **SERIAL NUMBER:** 0K8E01773 **YEAR:** 2025 **SMU:** 10.20

We wish to thank you for the opportunity of quoting on your equipment needs. This quotation is valid for 30 days, after which time we reserve the right to re-quote. If there are any questions, please do not hesitate to contact me. **In closing, we do greatly appreciate this opportunity to earn your business. We are confident that our products, backed by our unparalleled product support after the sale, will exceed your expectations.**

Sincerely,

Jeff Speer

Jeff Speer
Machine Sales Representative

ONE (1) NEW CATERPILLAR MODEL: 926-14A SMALL WHEEL LOADER WITH ALL STANDARD EQUIPMENT IN ADDITION TO THE ADDITIONAL SPECIFICATIONS LISTED BELOW:

STANDARD EQUIPMENT

POWERTRAIN -Cat C7.1 ACERT engine -- Auto Idle shut down feature -- Auto Engine RPM -- Power modes (Standard and Performance) -- Power by range (High power in range 4) -- Tier 4 final/Stage V compliant -- Turbocharged and aftercooled -- Filtered crankcase breather -- Diesel particulate filter -- Selective catalyst reduction -Dry type air cleaner -Coolant protection to -34C (-29F) -Fuel priming pump, automatic -Fuel Water separator -Differential lock in front axle -Axle seal guards -Enclosed wet disc full hydraulic brakes -Parking brake, electric -Lubed for life driveshafts -Hydrostatic transmission with electronic -control -- Operator modes (TC, Hydrostat, Single Pedal -and Ice) -- Directional shift aggressiveness (Fast, -Medium, Slow) -- Auto Rim pull control, adjust wheel -torque -- Creeper control, adjust ground speed -Single plane cooling package wide 6 fins -per inch density -Hydraulically driven demand cooling fan -S-O-S port, engine, coolant, transmission -oil -

HYDRAULICS -Automatic lift and bucket kick outs, -adjustable in-cab -Bucket and fork modes, adjustable in-cab -Cylinder damping at kick out and -mechanical end stops -Fine mode control (fast, medium, slow) -in Fork Mode -Hydraulic response setting (fast, -medium, slow) -Hydraulic diagnostic connectors and -S-O-S ports -Hydraulic sight gauge, visible -Load sensing hydraulics and steering -Seat mounted hydraulic joystick controls -Cat Payload 250 hours of Demo -

ELECTRICAL -Alternator, 115-amp, heavy duty -12V power supply in cab (2) -Batteries, 1,000 CCA (2) 24-volt system, -disconnect switch -Back up alarm -Emergency shutdown switch -LED rear stop and turn lights -Heavy duty gear reduction starter -Product Link -Remote jump start post -Resettable main and critical function -breakers -Roading lights front and rear -

OPERATOR ENVIRONMENT -75 mm (3 in) retractable seatbelt -Automatic temperature control -Cab, enclosed ROPS/FOPS pressurized -and sound suppressed -Push to Start -8-Inch Touch Screen -Jog Dial with Screen Control -Programmable Joystick -Cup holders -External mirrors with lower -parabolic -Ground level cab door release -Hydraulic control lockout -Interior cab lighting, door -Lunch box storage -Operator warning system indicators -Radio ready speakers -Rear window defrost, electric -Seat mounted electronic implement -controls, adjustable -Sliding glass on the side windows -Column mounted multi-function control -- lights, wipers, turn signal -Suspension seat, fabric -Tilt steering wheel -Tinted front glass -Wet arm wiper/washer, 2-speed and -intermittent, front -Wet arm wiper washer, rear -Mounting Provision -Gauges -- Digital hour meter, odometer and -tachometer -- Digital ground speedometer and -direction indicator -- Engine coolant temperature gauge -- Fuel and diesel exhaust fluid level -indicator -- Hydraulic oil temperature gauge -

OTHER STANDARD EQUIPMENT -Large-access enclosure doors with -adjustable close/open force -Parallel lift loader linkage -Recovery hitch with pin -Remote mounted lubrication points -Vandalism protection- -lockable compartments -1000-hour Service Intervals -(after initial 500) -



MACHINE SPECIFICATIONS

926 14A WHEEL LOADER	579-7700
POWER TRAIN AR	593-8990
INSTALLATION AR	593-8998
ELECTRONICS AR-M	595-9693
LANE 3 ORDER	0P-9003
PREP PACK, UNITED STATES	593-8900
PRODUCT LINK, CELLULAR PLE643	573-8455
FILM GP, WARNING, PL, ANSI	638-5475
STANDARD LIFT, COUPLER READY	593-8911
HYDRAULICS, STANDARD, SL	536-5281
HYDRAULICS, 3V	593-8913
JOYSTICK 3V, STEERING WHEEL	593-8916
STEERING WHEEL, STANDARD	579-7716
DIFFERENTIAL, LIMITED SLIP REAR	333-6527
ENVIRONMENT, MEDIUM DEBRIS	579-7722
WEATHER, COLD START 120V	611-3021
CAB, STANDARD	578-1363
AIR CONDITIONING, R134A REF	579-7735
ENGINE	593-8993
PUSH START, PASSCODE SECURITY	579-7738
CAMERA, REAR VIEW	579-7761
MIRRORS, HEAT, ELEC ADJUST	578-1409
SEAT, DELUXE, TILT AND TELE	593-8962
LIGHTS, HALOGEN, AUX LED	590-8868
LIGHTS, ROADING, LED, RH	633-0598
STANDARD RADIO (12V)	590-8872
WINDSHIELD ACCESS STEPS	598-2802
TIRES, 20.5R25 MX XTLA * L2	366-6896
FENDERS, STANDARD	593-8950
CTWT, STD, 538LBS, 2PCS	376-0502
TOOLBOX AUX	491-7922
HYDRAULIC OIL, STANDARD	619-8443
SERIALIZED TECHNICAL MEDIA KIT	421-8926
LINES, AUX 3RD, STD LIFT	530-1623
RIDE CONTROL	579-7697
MIRRORS, INTERNAL 1X REAR VIEW	596-5866
VISOR, INTERNAL, REAR	342-0215
CAT PAYLOAD, ENABLED	627-5236
PACK, DOMESTIC TRUCK	0P-0210
JUMPER LINES, NONE	536-5339
SEA, CAT PAYLOAD, SWL (LIFETIME)	518-3210
QUICK COUPLER, FUSION	579-9974
BUCKET-GP, 3.0 YD3, FUS, BOCE	360-3323
CARRIAGE, PAL C3/4, 62", FUS	532-8222
FORK TINE, 2.25" X 6" X 54" (TWO)	371-2354

WARRANTY & COVERAGE

Standard Warranty:	**12 Months/Unlimited Hours Full Machine Standard Warranty**
Extended Warranty:	**60 Months 2500 hours Premier Extended Warranty**

LIST PRICE	$337,336.00
FREIGHT & DEALER PREP	$2,910.00
USA SOURCE WELL GOVERNMENTAL DISCOUNT	**($118,246.00)**
NET BALANCE DUE	**$222,000.00**
AFTER TAX BALANCE	**$222,000.00**

***60 Months 2500 Hours Premier Extended Warranty Included $3,500 Value**



Agenda Memo

Crest Hill, IL

Meeting Date:	2/23/2026
Submitter:	Gary Richardson Director of Public Works
Department:	Public Works
Agenda Item:	Approve an ordinance declaring certain personal property in the City of Crest Hill to be surplus.

Summary:

The City of Crest Hill seeks to designate the equipment listed below as surplus and authorize its sale on GovDeals.com. The listed items are no longer in use, no longer useful to City operations, or have been replaced by newer equipment. In addition, miscellaneous metals and motors collected from the East Plant and Elrose will be sent to the scrap yard for disposal.

2016	Ford	Interceptor
2017	Ford	Interceptor
2016	Ford	Interceptor
2009	Magnum	MTP6000D
2009	Magnum	MTP6000D
2014	John Deere	D100
2003	John Deere	L120
2007	Kubota	F2560E
Honda	WT30X	Pump
Honda	WT30X	Pump
Homelite	LR4400	Generator
Homelite		Generator
Honda	WT30X	Pump
Wacker Neuson	PT3	Pump
Wacker Neuson		Pump
Wen		Generator
Crown		Concrete Saw
Magnum	MTP 6000D	Pump
Magnum	MTP 6000D	Pump

Recommended Council Action:

Approve an ordinance declaring certain personal property owned by the City of Crest Hill to be surplus and authorize its disposal through public auction or scrap recycling, as applicable.

Funding Impact:

If the surplus property is sold, the City will receive revenue from the auction. The total amount of revenue is unknown and will vary depending on the final auction results. Miscellaneous metals and motors taken to the scrap yard will also generate scrap-metal proceeds. All revenue from both the surplus auction and scrap recycling will be deposited into the Vehicle Replacement Fund, 11-00-7301.