



Plan & Architectural Review Meeting

Whitewater Municipal Building Community Room,
312 West Whitewater St., Whitewater, WI 53190
*In Person and Virtual

Monday, August 12, 2024 - 6:00 PM

Citizens are welcome (and encouraged) to join our webinar via computer, smart phone, or telephone. Citizen participation is welcome during topic discussion periods.

Plan and Architectural Review Commission
Aug 12, 2024, 6:00 – 9:00 PM (America/Chicago)

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AGENDA

CALL TO ORDER

ROLL CALL

APPROVAL OF AGENDA

A commission member can choose to remove an item from the agenda or rearrange its order; however, introducing new items to the agenda is not allowed. Any proposed changes require a motion, a second, and approval from the commission to be implemented. the agenda shall be approved at reach meeting even if no changes are being made at that meeting.

HEARING OF CITIZEN COMMENTS

No formal Plan Commission action will be taken during this meeting although issues raised may become a part of a future agenda. Specific items listed on the agenda may not be discussed at this time; however, citizens are invited to speak to those specific issues at the time the Plan Commission discusses that particular item.

CONSENT AGENDA

Items on the Consent Agenda will be approved together unless any commission members requests that an item be removed for individual consideration.

- 1. Approval of Minutes from July 8, 2024

PUBLIC HEARING FOR REVIEW AND POSSIBLE APPROVAL

- 2. Discussion and possible approval of a Conditional Use Permit and Site Plan Review for a multifamily development located on vacant land at the corner of Moraine View Parkway and Jakes Way Tax Parcel # /WPB 00044.
- 3. Discussion and possible approval of a Conditional Use Permit for a New Wireless Telecommunication Facility and 195 foot Free Standing Tower to be located at 1002 S Janesville Street Tax Parcel # /WUP 00341 for LCC Telecom Services.
- 4. Consideration to Approve and Recommend to Common Council a change to the City of Whitewater Municipal Code Chapter 19, Specifically Repeal Section 19.51.180 Truck, Trailer, Mobile Home and Equipment Parking Restrictions.
- 5. Consideration to Approve and Recommend to Common Council a change to the City of Whitewater Municipal Code Chapter 19, Specifically Section 19.48.020 Institutional District Permitted Uses, adding Libraries, Municipal Buildings, Public and Semi Public Uses.

DISCUSSION

- 6. Discussion regarding a change to ordinance 19.69.050 Hearing-Notice to Property Owners to change the 300 foot property buffer zone for public hearings.

FUTURE AGENDA ITEMS

NEXT MEETING DATE SEPTEMBER 9, 2024.

ADJOURNMENT

Anyone requiring special arrangements is asked to call the Office of the City Manager / City Clerk (262-473-0102) at least 72 hours prior to the meeting. Those wishing to weigh in on any of the above-mentioned agenda items but unable to attend the meeting are asked to send their comments to:

c/o Neighborhood Services
312 W. Whitewater Street
Whitewater, WI 53190
or ldostie@whitewater-wi.gov

A quorum of the Common Council might be present. This notice is given to inform the public that no formal action will be taken at this meeting by the Common Council.



Plan & Architectural Review Meeting Item 1.

Whitewater Municipal Building Community Room,
312 West Whitewater St., Whitewater, WI 53190
*In Person and Virtual

Monday, July 08, 2024 - 6:00 PM

Citizens are welcome (and encouraged) to join our webinar via computer, smart phone, or telephone. Citizen participation is welcome during topic discussion periods.

Plan and Architectural Review Commission
Jul 8, 2024, 6:00 – 10:00 PM (America/Chicago)

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MINUTES

CALL TO ORDER

Meeting called to order at 6:00 p.m. by Vice Chairperson Miller.

ROLL CALL

PRESENT

Board Member Bruce Parker
Vice Chairperson Tom Miller
Board Member Michael Smith
Board Member Marjorie Stoneman
Board Member Brian Schanen
Board Member Carol McCormick

ABSENT

Chairman, Councilmember Neil Hicks
Board Member Lynn Binnie

STAFF MEMBERS

Taylor Zeinert, Economic Director
Allison Schwark, Planner
Attorney Jonathan McDonell
Llana Dostie, Neighborhood Services Administrative Assistant
Aftin Hill, Municipal Code Enforcement

APPROVAL OF AGENDA

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Motion made by Board Member Schanen, Seconded by Board Member McCormick.
Voting Yea: Board Member Parker, Vice Chairperson Miller, Board Member Smith, Board Member Stoneman, Board Member Schanen, Board Member McCormick

HEARING OF CITIZEN COMMENTS

No formal Plan Commission action will be taken during this meeting although issues raised may become a part of a future agenda. Specific items listed on the agenda may not be discussed at this time; however, citizens are invited to speak to those specific issues at the time the Commission discusses that particular item.

None.

CONSENT AGENDA

Items on the Consent Agenda will be approved together unless any board members requests that an item be removed for individual consideration.

- 1. Approval of June 10, 2024 Minutes.

Motion made by Vice Chairperson Miller, Seconded by Board Member McCormick.
Voting Yea: Board Member Parker, Vice Chairperson Miller, Board Member Smith, Board Member Stoneman, Board Member Schanen, Board Member McCormick

PUBLIC HEARING FOR REVIEW AND POSSIBLE APPROVAL

- 2. **MATTER REMOVED FROM AGENDA BY APPLICANT AFTER PUBLIC NOTICE WENT OUT.**
Discussion and possible approval of a Conditional Use Permit for a New Wireless Telecommunication Facility and 195 foot Free Standing Tower to be located at 1002 S Janesville Street Tax Parcel # /WUP 00341 for LCC Telecom Services.

3. Consideration to Approve and Recommend to Common Council a change to the City of Whitewater Municipal Code Chapter 19, Specifically Section 19.48.020 Institutional District Permitted Uses, adding Libraries, Municipal Buildings, Public and Semi Public Uses.

Planner explained that instead of using a Conditional Use Permit in a residential zoning the standard is to use the Institutional Zoning. Institutional uses are typically churches, schools, libraries, municipal buildings, community centers and university.

Smith asked about non governmental. The current institutional use zoning is only for the university. Schanen asked where it would go. Planner Schwark stated that it would be letter D adding the additional uses. Smith stated he has issues with public and private school, churches, parks. Smith is questioning whether this is a positive thing for these entities.

Planner Schwark it allows for permanent use for these entities.

Schanen asked if entities would have to come in front of the PARC to allow for the change. Planner Schwark confirmed that this would be the case.

Smith would have wanted to see examples from other communities.

Planner Schwark stated that the only difference has to do with our strict requirement of 1 acre lot size. Elkhorn has a minimum of 9,000 square feet.

Smith motion moved to make the minimum lot coverage to be 1/3 of an acre and second from Schanen.

Voting Yea: Board Member Smith, Board Member Stoneman

Voting Nay: Board Member Parker, Vice Chairperson Miller, Board Member Schanen, Board Member McCormick

Parker asked that Planner Schwark come back with numbers from other communities she works with for minimum lot sizes.

Schanen motioned to table 3, 5 and 6 till August meeting. Second by McCormick .

Ayes: Board Member Smith, Boardmember Stoneman, Board Member Schanen, Board Member McCormick, Board Member Parker and Vice Chairperson Miller.

4. Consideration to Approve and Recommend to Common Council a change to the City of Whitewater Municipal Code Chapter 19, Specifically section 19.55.070 Structural, Design and Aesthetic Standards, Removing letter F requiring Enclosed Buildings for Wireless Telecommunications Support Facilities.

McCormick asked if there were issues with safety. Planner Schwark stated everything is sealed and weather resistant.

Motion made by Board Member Schanen, Seconded by Board Member Parker.

Voting Yea: Board Member Parker, Vice Chairperson Miller, Board Member Smith, Board Member Stoneman, Board Member Schanen, Board Member McCormick.

- 5. Public Hearing for Consideration of a Change in the District Zoning Map to Rezone for the Irvin L. Young Library properties from R-2 (One and Two Family Residence District) to I (Institutional District) for Tax Parcel #'s /OT 00196 and /OT 00197.

Item Tabled

Schanen motioned to table 3, 5 and 6 till August meeting. Second by McCormick .

- 6. Public Hearing for Consideration of a Change in the District Zoning Map to Rezone for the Municipal Building properties from B-2 (Central Business District) to I (Institutional District) for Tax Parcel #'s /OT 00152, /OT 00153, /OT 00154, /OT 00155, /OT 00158, /OT 00159 and /OT 00160.

Item Tabled

Schanen motioned to table 3, 5 and 6 till August meeting. Second by McCormick .

- 7. Public Hearing for Consideration of a Change in the District Zoning Map to Rezone from B-1 (Community Business) to R-2 (One and Two Family Residence) Zoning District, Under Chapter 19.18 of the Zoning Ordinance of the City of Whitewater for the following Tax Parcel Number /HAS 00048D vacant land located at the corner of S Taft Street and E Clay Street.

Board Member McCormick happy with this change since she lives in the neighborhood and has been looking at this empty lot for years.

Motion made by Board Member Schanen, Seconded by Board Member Parker.

Voting Yea: Board Member Parker, Vice Chairperson Miller, Board Member Smith, Board Member Stoneman, Board Member Schanen, Board Member McCormick

- 8. Discussion and possible approval of a Conditional Use Permit for an 12-Foot High Electronic Monument Sign for St Patrick's Church 1235 W Main Street, Tax Parcel #'s /WUP 00219 and /WUP 00220.

Steve from Michael Signs appeared for Commission questions.

Parker asked about the vision triangle. Steve stated that the plan took into consideration all of the setback requirements. Planner Schwark confirmed that this should not effect the vision triangle.

Motion by parker to approve as long as vision triangle is met with Planners recommendations.

Barb Galeg administrator. The sign will be parellal from Elizabeth. Pine trees have all been removed.

Motion made by Board Member Parker, Seconded by Board Member Schanen.

Voting Yea: Board Member Parker, Vice Chairperson Miller, Board Member Stoneman, Board Member Schanen, Board Member McCormick

Voting Abstaining: Board Member Smith

- 9. Discussion and possible approval of a Conditional Use Permit for a proposed Second Wall sign to be located at 1002 S Janesville St., Tax Parcel #/WUP 00341 for Samuel & Dana Hatchett d/b/a Pro Landscape Supply.

Shaun from Innovative Sign was present to answer any questions.

Motion with Planner's recommendations.

Motion made by Board Member Parker, Seconded by Board Member McCormick.

Voting Yea: Board Member Parker, Vice Chairperson Miller, Board Member Smith, Board Member Stoneman, Board Member Schanen, Board Member McCormick

FUTURE AGENDA ITEMS

Look into Buffer Zone requirements for Public Hearings. Currently 300 feet.

NEXT MEETING DATE AUGUST 12, 2024

ADJOURNMENT

Adjourned at 6:56 p.m.

Motion made by Board Member Parker, Seconded by Board Member Schanen.

Voting Yea: Board Member Parker, Vice Chairperson Miller, Board Member Smith, Board Member Stoneman, Board Member Schanen, Board Member McCormick

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or Idostie@whitewater-wi.gov

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MEMORANDUM

To: City of Whitewater Plan and Architectural Review Commission

From: Allison Schwark, Zoning Administrator

Date: August 12, 2024

Re: Conditional Use Permit

Summary of Request	
Requested Approvals:	Conditional Use Permit for more than 4 multi-family units located in the R-3 zoning district
Location:	Vacant Lot on Moraine View Parkway /WPB 00044
Current Land Use:	Vacant
Proposed Land Use:	8, 16-unit multi-family buildings
Current Zoning:	R-3
Proposed Zoning:	N/A
Future Land Use, Comprehensive Plan:	Higher Density Residential

Introduction

The applicant is requesting a conditional use permit and site plan review for a multi-unit, multi-family development within the City of Whitewater. The development will be comprised of 8, 16-unit buildings on an 11.36-acre parcel.

The parcel more precisely identified as /WPB 00044 is currently zoned R-3 Multi-family Residential.

The proposed development will create 128 market rate, mainstream units over 2 phases.

It is anticipated that one (1) part-time employees will be employed at the property during daytime business hours.

Each unit will have individual trash and recycling bins.

Tenant storage will be restricted to the private garages. Property management storage will occur in the garage portion of the office / garage.



History

In 2016, a Conditional Use Permit application was submitted for this site, by another developer with the request to build 96 units, between 12 buildings, 8 units each. The development included 96 garages, 96 parking stalls in front of the garage, and 78 visitor spaces. This development was approved by the PARC, moved by Binne, seconded by Tanis, to allow for the development of similar nature.

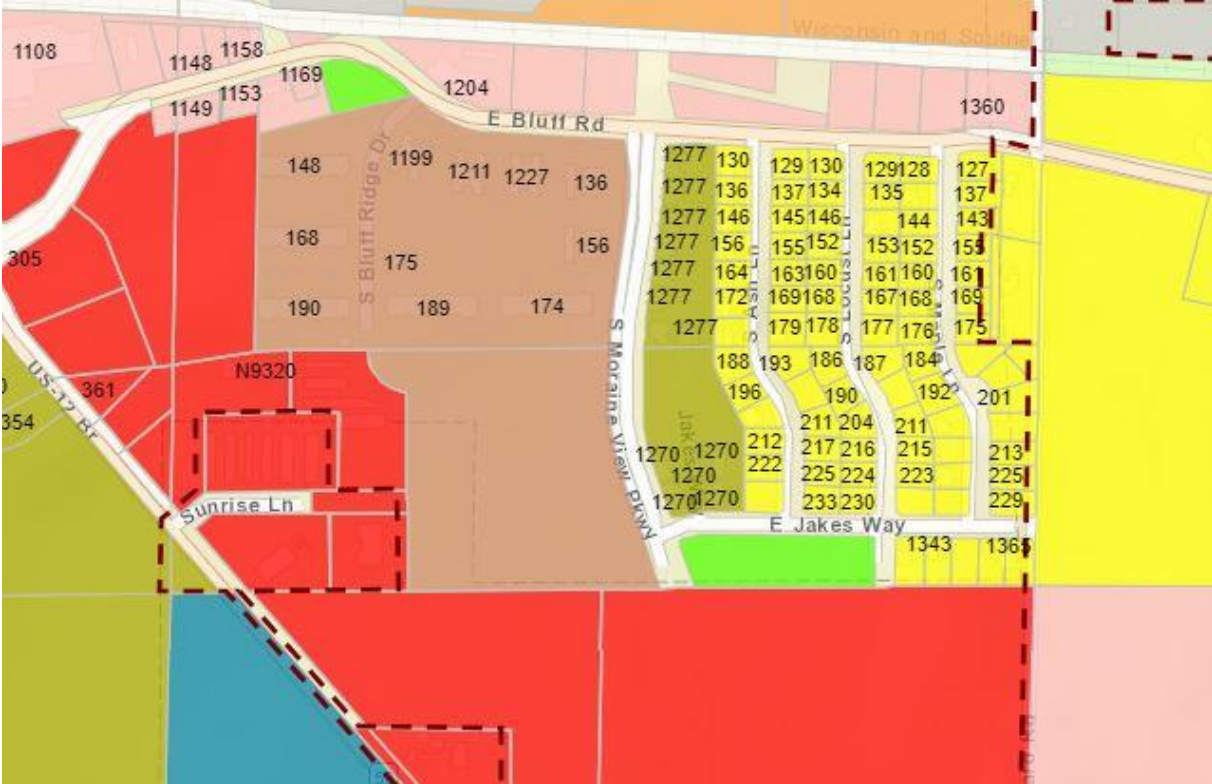
Site Plan and Condition Use Review



The property is currently zoned R-3. The R-3 multifamily residence district is established to provide high-density residential areas, and to allow mixing of certain compatible land uses.

The future land use map depicts the property to become higher density residential.

Description: This future land use designation is intended to accommodate a variety of residential units at higher densities—including rental apartment complexes, condominiums, townhouses, and the continuation of pre-existing single- and two-family residences where desired—all served by sanitary sewer.



According to section 19.21.030 - Conditional uses, Multifamily dwellings and attached dwellings, over four units (new construction only); and two-family attached dwellings (existing construction) require conditional use approval within the R-3 zoning district.

"Conditional uses" means uses of a special nature as to make impractical their complete predetermination as a use in a district.

19.21.040 - Lot area- The minimum requirement for lot area in the R-3 zoning district is based upon a calculation per size of unit:

Type of Unit	Square Feet
Efficiency	2,000
One-bedroom	2,500
Two-bedroom	3,000
Three-bedroom and over	3,500 plus 300 additional square feet (sq ft) for each bedroom over three

Per the calculation the property is in full compliance with required lot area and maximum density.

2 bedroom units= 96

3 bedroom units= 32

96*3,000= 288,000

32*3,500= 112,000

Total= 400,000

Lot= 11.36 acres which is equivalent to approximately 494,800 square feet, leaving an additional 94,800 square feet.

19.21.050 - Lot width- Multifamily dwellings require one hundred feet, which the lot is in full compliance with currently.

19.21.060 - Yard requirements:

- A. Front, thirty feet first floor- *Site plan in full compliance.*
- B. Side, fifteen feet; corner lots twenty-five feet- *Site plan in full compliance.*
- C. Rear, thirty feet- *Site plan in full compliance.*
- D. Shore, seventy-five feet. All shoreland shall be in compliance with Chapter 19.46, and in addition may require DNR approval- *Not applicable to this project.*

19.21.070 - Lot coverage-

A. Three hundred fifty square feet of usable open space shall be required for each dwelling unit for structures with two or more units.

Usable Open Space. Usable open space is that part of the ground level of a zoning lot, other than in a required front or corner side yard, which is unoccupied by driveways, drive aisles, service drives, off-street parking spaces and/or loading berths and is unobstructed to the sky. This space of minimum prescribed dimension shall be available to all occupants of the building and shall be usable for greenery, drying yards, recreational space, gardening and other leisure activities normally carried on outdoors. Where and to the extent prescribed in these regulations, balconies and roof areas, designed and improved for outdoor activities, may also be considered as usable open space. The usable open space shall be planned as an assemblage or singularly designed area that maximizes the size for open space usage.

EXAMPLE: A four-unit building is required to have one thousand four hundred square feet of usable open space.

THIS DEVELOPMENT: 128 units*350= 44,800

44,800 square feet of required open space has been achieved in the included site plans.

Impervious surface requirements, and erosion control and stormwater management policies per section 16.16 and 16.18 have been reviewed by our City engineer, and firm, Strand, and are acceptable with noted comments. Please see enclosed review in your packet.

19.21.080 - Building height- Maximum building height in the R-3 district is forty-five feet, which the buildings depicted in the enclosed packet are in full compliance with.

19.21.090 - Park fees.

All residential development shall be subject to a park acquisition fee per dwelling unit and a park improvement fee per dwelling unit, payable before a building permit is issued. The fee will be recommended by the parks and recreation board and then approved by the common council.

Chapter 19.51 -Traffic, Parking, and Access- The site plan appears to be in compliance with all requirements of section 19.51 including but not limited to parking stall calculations, width, lane width, ingress, egress, landscaping buffer, landscape island requirements, and curbs and barriers.

Planner's Recommendations

1) Staff recommends the PARC **APPROVE** the Conditional Use Permit and Site Plan Review for a multifamily development located on a vacant lot on Moraine View Parkway /WPB 00044 with the following conditions:

- A. The project shall be developed in accordance with the plan of operations, and enclosed site plan. Any deviation from the approved plans shall require zoning administrator and/or Plan Commission approval.
- B. All Engineering Memo comments or conditions be addressed or included.
- C. Applicant shall provide reimbursement to the City of Whitewater, all costs incurred by the City for review of this conditional use including but not limited to engineering, legal and planning review that occurred prior to permit issuance and during the implementation of the plans and construction of the improvements.
- D. Project must begin within one year of the date of approval, or applicant will be required to re-apply for both Conditional Use and Site Plan Review.
- E. The applicant must allow any City employees, or contracted firm, or designee unlimited access to the project site at a reasonable time to investigate the project's constructions, operation, or maintenance.
- F. All exterior lighting shall be in compliance with the City of Whitewater Municipal Ordinances.
- G. Any signage shall be reviewed and approved by the Zoning Administrator.
- H. All police comments or concerns be addressed.
- I. All fire department comments or concerns be addressed.
- J. Sidewalks be added to the site for connections to Moraine Parkway.
- K. Both phases of the development shall be included in this Conditional Use Permit, unless the second phased plan deviates from the plan shown before the PARC on August 12, 2024.

MEMORANDUM

To: Allison Schwark, Municipal Code Enforcement

From: Brad Marquardt, Public Works Director

Date: August 5, 2024

Re: Slater Development, Moraine View Parkway

Allison,

Strand Associates reviewed the plans submitted on July 10, 2024 and have the following comments.

1. Sidewalk should be installed along the west side of Moraine View Parkway. Curb ramps should be provided at the Jakes Way intersection aligning with the curb ramps on the east side of the intersection.
2. Sidewalk connections should be made from the development to the sidewalk along Moraine View Parkway as stated in Item 1 above.
3. The two driveways should have sidewalk extended through the driveways and the drive approach should be concrete. Stop signs should be installed at both locations with a “Right Turn Only” sign at the northern driveway location.
4. Snow storage areas should be identified.
5. As a general comment with all developments, lighting and landscaping plans need to be submitted for review, and dumpster locations should be identified.

Other comments received pertain directly to utilities and storm water management. I will work directly with the developer and their Engineer regarding these comments.



Parks & Recreation Department
312 W. Whitewater Street, P.O. Box 178
Whitewater, Wisconsin 53190
www.wwparks.org
Telephone: (262)473-0520

August 7, 2024

Kevin A. Boehm
Director of Parks, Recreation and Facilities
City of Whitewater

Taylor Zeinert
Director of Economic Development
312 W. Whitewater St.
Whitewater, WI 53190

Dear Ms. Zeinert,

I am writing to express my support for the proposed apartment development project in the City of Whitewater. As the Director of Parks, Recreation and Facilities, I am pleased to see new developments that contribute to the growth and vibrancy of our community.

The proposed site for this development is adjacent to Walton East Gate Park, an existing park property that already serves the recreational needs of the residents in the area. Given this proximity, the Parks Department suggests waiving the dedication of additional land for park use. Instead, we recommend that the developer follow the provisions of city code 18.04.030(a)(2), which allows for moneys in lieu of land dedication.

According to this code, the required amount per residential unit in 2002 was \$218. Adjusted for inflation using the U.S. Department of Labor, Bureau of Labor Statistics inflation calculator, this amount equates to \$386.73 per residential unit in 2024. For the proposed development of 128 units, this totals \$49,501.44.

Additionally, city code 18.04.030(a)(3) requires a Park Improvement Fee. In 2002, this fee was \$514 per residential unit. Adjusted for inflation, the current fee is \$913.61 per residential unit, amounting to \$116,942.08 for the entire development.

These fees will support the continued enhancement and maintenance of our parks and recreational facilities, ensuring that all residents, new and existing, have access to high-quality outdoor spaces.

I am confident that this new apartment development will be a positive addition to our community, providing much-needed housing and contributing to the overall growth and vibrancy of the City of Whitewater. Thank you for your attention to this matter, and I look forward to the successful completion of this project.

Sincerely,

Kevin A. Boehm
Director of Parks, Recreation and Facilities
City of Whitewater
(262)473-0122
kboehm@whitewater-wi.gov

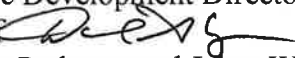
Item 2.



WHITEWATER POLICE DEPARTMENT

Item 2.

312 W. Whitewater Street • P.O. Box 117 • Whitewater, WI 53190
Telephone (262) 473-0555 • Fax (262) 222-5909

To: Taylor Zeinert, Economic Development Director
From: Dan Meyer, Police Chief 
RE: Review of Moraine View Parkway and Jakes Way Site Plan
Date: July 22, 2024

After review of the plans regarding the multifamily development slated to go near Moraine View Parkway and Jakes Way, I'd like to share my thoughts and recommendations. First, I see the development as positive growth and a future asset to our community. With that said, I'd like to offer some considerations to potentially improve the project. The following are recommendations regarding the development:

- Parking:
 - While the current site plan includes two parking spaces per unit (between the garage and driveway), this may be insufficient for three-bedroom apartments, and for visitors. Please consider the addition of an overflow parking location on-site that could be utilized.
- Recreation:
 - Due to the site plan not including a playground/recreation area, it is recommended to ensure there is sidewalk connecting the entire development along the public right of way for access to Walton's East Gate Park. Safe and convenient access to recreational areas is important for the community.

The Police Department has also completed an analysis regarding future call volume. In order to provide an estimate of the call volume that may be associated with the development (128 units), call data was analyzed for the following addresses (120 units total), which are similar in housing type and are adjacent to the proposed development:

- 148 Bluff Ridge Dr.
- 168 Bluff Ridge Dr.
- 190 Bluff Ridge Dr.
- 189 Bluff Ridge Dr.
- 174 Moraine View Pkwy.
- 136 Moraine View Pkwy.
- 156 Moraine View Pkwy.
- 1199 Bluff Rd.
- 1211 Bluff Rd.
- 1227 Bluff Rd.

In the two-year time period from January 1, 2022 through December 31, 2023, a collective total of 60 calls for service were made from these addresses, for an annual average of 30 calls for service. That call volume is quite low, averaging only one call every 12 days. Assuming the proposed development would result in a similar call volume, the impact to the police department



WHITEWATER POLICE DEPARTMENT

Item 2.

312 W. Whitewater Street • P.O. Box 117 • Whitewater, WI 53190
Telephone (262) 473-0555 • Fax (262) 222-5909

would be negligible, given the fact that overall annual call volume received by the police department exceeds 12,000 calls.

Overall, other than the recommendations listed above, the Police Department sees no major safety issues with the proposed plans. If additional parking is provided and the recreational needs are met, we believe that this development will be an asset to our community.



Office of the Fire Chief
312 W. Whitewater Street
Whitewater, Wisconsin 53190

www.whitewater-wi.gov
Telephone: (262) 473-0116

TO: Taylor Zeinert, CDA

FROM: AC Ryan Dion, Whitewater Fire/EMS

RE: Multi-Fam Development, Moraine View Pkwy/Jakes Way

DATE: 17 JULY 2024

Taylor,

After a preliminary review of the plans provided by CJ Engineering for the development off of Moraine View Pkwy, the Fire Department is pleased to share our thoughts and recommendations. We see this as a positive development for Whitewater and believe that with a few adjustments, we can ensure it meets all safety standards. The following recommendations are being submitted after referencing the code as it pertains to fully sprinklered buildings.

Site Access: While the current plan includes two ingress/egress points off of Moraine View, which meet the required width per code, we believe that extending Bluff Ridge Drive to the south would enhance emergency vehicle access. This third avenue of approach would facilitate efficient operations and provide an additional route for our apparatus.

- 18.2.3.3: Multiple Access Roads: More than one fire department access road shall be provided when access by a single road could be impaired by various factors. This adjustment will significantly enhance our ability to respond quickly and effectively.

Turning Radius: We have noted some challenges for our larger apparatus to make the turn near buildings 1 and 2 upon entering the development. To address this, we suggest widening the main approaches or adjusting the curb/walkways by a few feet. Similarly, adjustments at the entrances for garage access to buildings 4 and 5 would improve accessibility. We believe these modifications can be easily discussed and implemented with the developer.

- 18.2.3.4.3 Turning Radius: The turning radius of a fire department access road shall be as approved by the Authority Having Jurisdiction (AHJ), which in this case refers to the fire department. We are confident that the developer will understand the importance of these adjustments for overall safety.

- 18.2.4.1.1: The required width of a fire department access road shall not be obstructed in any manner, including by the parking of vehicles.

Hydrant Placement: We recommend the addition of hydrants at the northeast corner of the property where Moraine View meets the service drive, and between buildings 4 and 5 on the west side of the development. Given the presence of water mains in these areas, this should be a straightforward addition, enhancing our ability to maintain effective access.

Call Volume: Based on our experience with the nearby Bluff Ridge Apartments, which is a 120-unit market rate apartment complex, we anticipate a nominal impact on service demand. We have had seven total responses to that development in the last year, suggesting that this new development will have a similar call volume.

In summary, other than the items listed above, the Fire Department sees no major safety issues with the proposed plans. The inclusion of fire sprinklers in multi-family dwellings significantly reduces the risk of casualties and property loss. We believe the proposed adjustments will further enhance safety and service delivery, and we look forward to working with the developer to implement these changes. If the project is approved, we will follow up to ensure the fire protection systems are installed properly to facilitate rapid access for fire suppression services if needed.

Thank you,



AC Ryan Dion

Fire Prevention Officer

Whitewater Fire/EMS

Proposed Multifamily Development Summary & Statement of Use

Moraine View Pkwy & Jakes Way

- 11.36 acre site
- The proposed development will create 128 market rate, mainstream units over 2 phases.
- Phase 1 - 64 Units - (4) 16-Unit Buildings
- Phase 2 - 64 Units - (4) 16-Unit Buildings
- It is anticipated that one (1) part-time employees will be employed at the property during daytime business hours.
- Each unit will have individual trash and recycling bins.
- Tenant storage will be restricted to the private garages. Property management storage will occur in the garage portion of the office / garage.

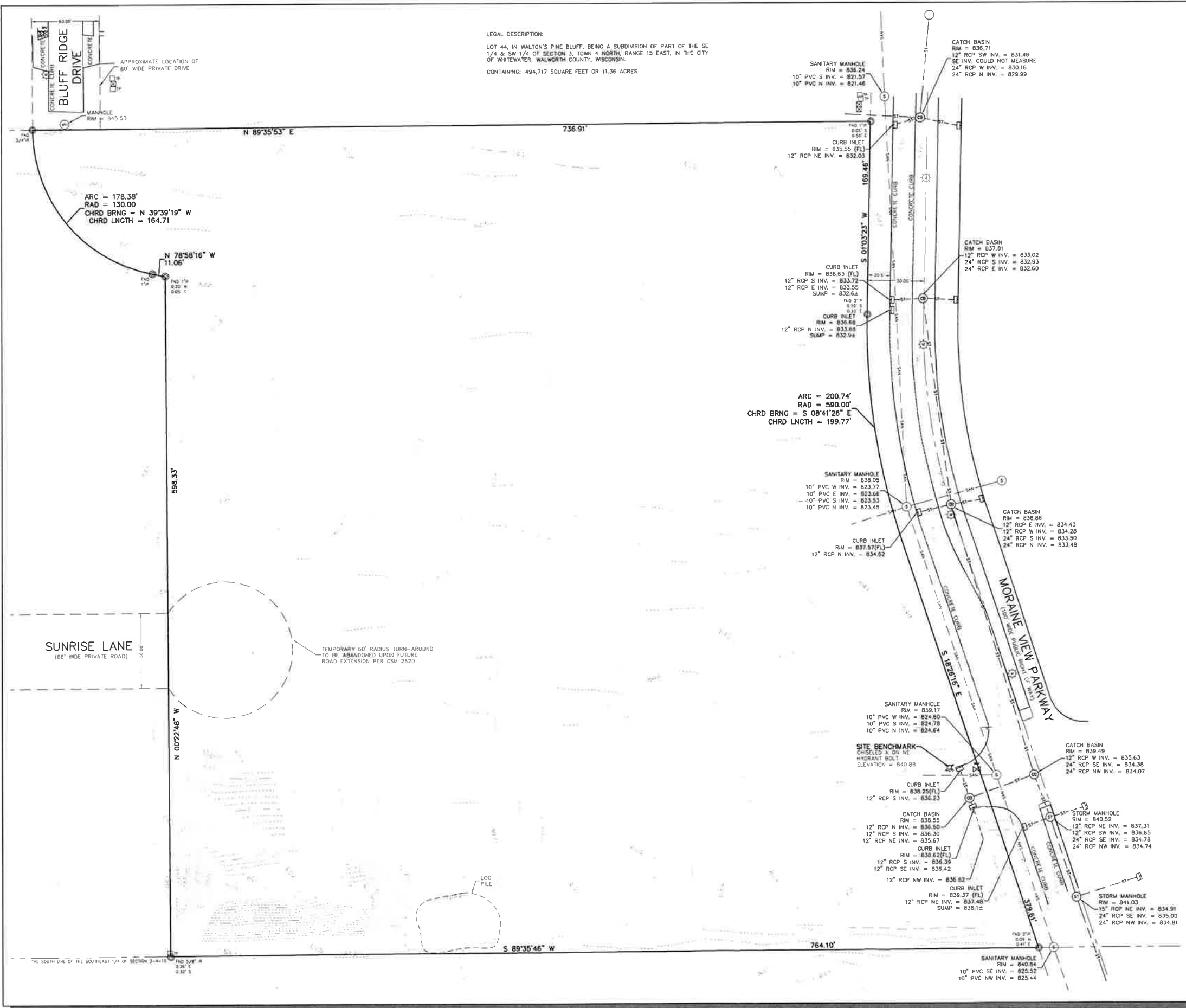


Proposed Multifamily Development Table of Contents

Moraine View Pkwy & Jakes Way

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| <i>4. Landscaping Plan</i> | <i>Page 13</i> |
| <i>5. Site Lighting & Light Fixture Cut Sheet</i> | <i>Pages 14-19</i> |
| <i>6. Stormwater Calculations</i> | <i>Pages 20 - 152</i> |

LEGAL DESCRIPTION:
LOT 44, IN WALTON'S PINE BLUFF, BEING A SUBDIVISION OF PART OF THE SE 1/4 & SW 1/4 OF SECTION 3, TOWN 4 NORTH, RANGE 15 EAST, IN THE CITY OF WHITEWATER, WALWORTH COUNTY, WISCONSIN.
CONTAINING: 494,717 SQUARE FEET OR 11.36 ACRES



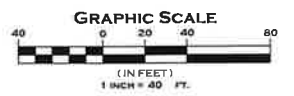
NOTES

- SUBJECT PROPERTY ZONED: R-3, MULTI FAMILY RESIDENTIAL.
- SETBACKS BASED ON THE CITY OF WHITEWATER ZONING CODE AND ARE AS FOLLOWS:
A. FRONT, THIRTY FEET FIRST FLOOR.
B. SIDE, FIFTEEN FEET, CORNER LOTS TWENTY-FIVE FEET.
C. REAR, THIRTY FEET.
D. SHORE, SEVENTY-FIVE FEET. ALL SHORELAND SHALL BE IN COMPLIANCE WITH CHAPTER 19.46, AND IN ADDITION MAY REQUIRE DNR APPROVAL.
- LEGAL DESCRIPTION BASED ON INFORMATION FROM WALWORTH COUNTY TAX RECORDS. LEGAL DESCRIPTION NOT PROVIDED BY CLIENT.
- THE UNDERGROUND UTILITY INFORMATION AS SHOWN HEREON IS BASED, IN PART, ON INFORMATION FURNISHED BY THE UTILITY COMPANIES, DIGGERS HOTLINE AND THE LOCAL MUNICIPALITY. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, ITS ACCURACY AND COMPLETENESS CANNOT BE GUARANTEED NOR CERTIFIED TO.
- SUBJECT PROPERTY IS LOCATED WITHIN AN AREA HAVING A ZONE DESIGNATION X: AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOOD PLAIN, PER INFORMATION FROM THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA), ON FLOOD INSURANCE RATE MAP NO. 55127C0029E, WITH A DATE OF IDENTIFICATION OF 9/3/2014, IN COMMUNITY NO. 550200, CITY OF WHITEWATER, WHICH IS THE COMMUNITY IN WHICH THE SUBJECT PROPERTY IS SITUATED.
- PROJECT BENCHMARK - THE SOUTHWEST CORNER OF THE SOUTHWEST 1/4 OF SECTION 3-4-15, FOUND CONCRETE MONUMENT WITH BRASS CAP WITH AN ELEVATION OF 829.59.
- SITE BENCHMARK - CHISELED CROSS ON NORTHEAST BOLT ON HYDRANT, AS SHOWN HEREON.
- ELEVATIONS BASED ON INFORMATION FROM S.E.W.R.P.C. AND ARE AT NAVD OF 1988(12).
- SURVEY DATUM: COORDINATES ARE BASED ON THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), WALWORTH COUNTY, NORTH AMERICAN DATUM OF 1983, 2011 ADJUSTMENT (NAD83(2011)).

www.DiggersHotline.com



DIAL 811 OR (800) 242-8511



EXISTING CONDITIONS SURVEY
FOR
WHITEWATER MULTI-FAMILY
MORaine VIEW PARKWAY
WHITEWATER, WI

DRAWN BY:	RAP	DATE:	12/01/2023
CHECKED BY:	MJB	DRAWING NO.:	EC - 0
CSE JOB No.:	23 - 116	SHEET	1 OF 1

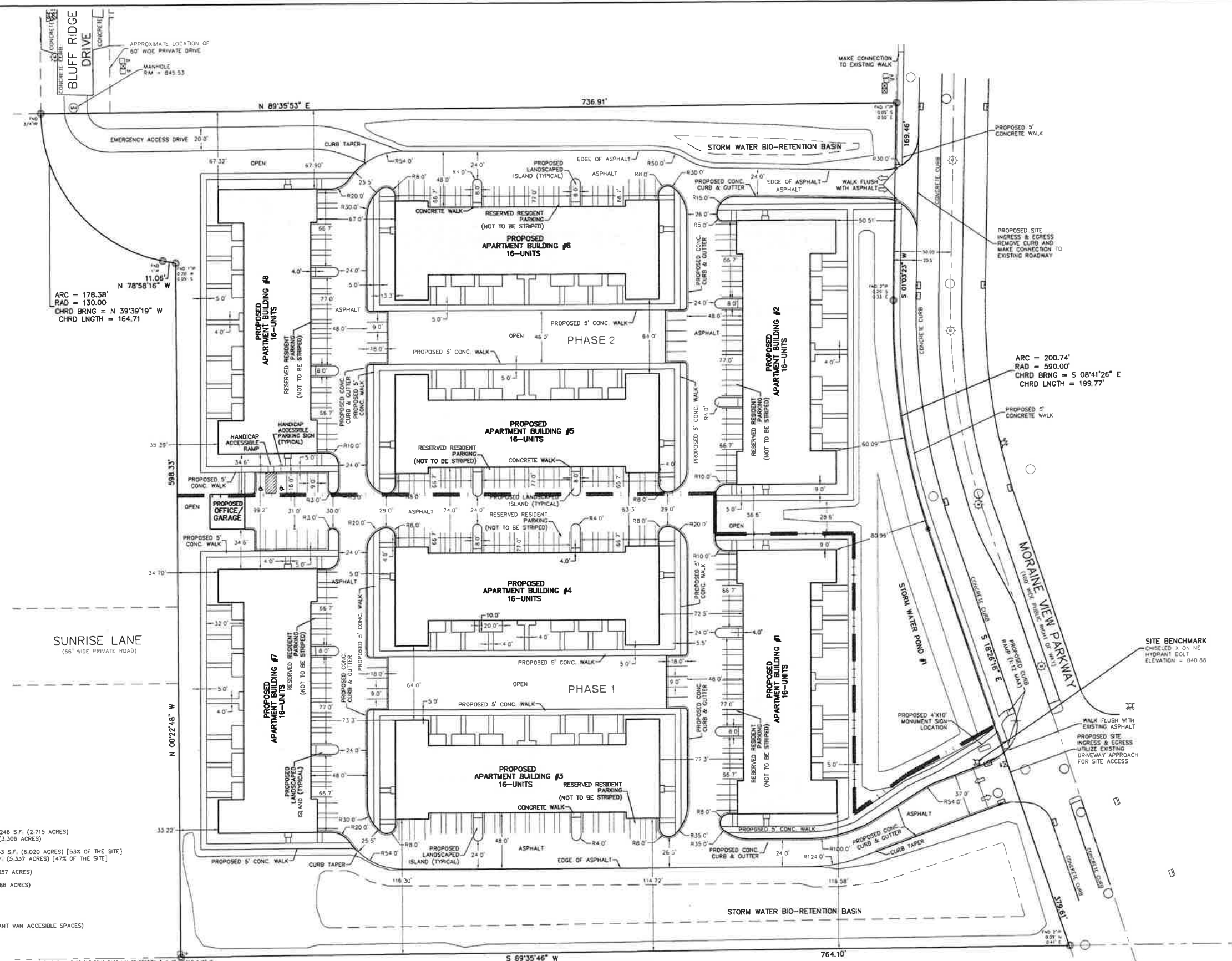
CJ
 engineering
 civil design and consulting
 9205 W. Center Street
 Suite 214
 Milwaukee, WI 53222
 PH: (414) 443-1312
 www.cj-engineering.com



WHITEWATER MULTI-FAMILY DEVELOPMENT
 MORaine View Parkway WHITEWATER, WISCONSIN

CJE NO.: 2364R4
 JULY 15, 2024
 REV.: 08/06/2024

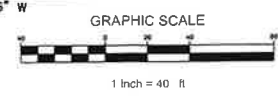
SITE PLAN C1.0



NOTES:
 1. DIMENSIONS ARE TO THE FACE OF CURB OR EDGE OF ASPHALT

SITE AREAS
 PROPOSED BUILDING FOOTPRINT = 118,248 S.F. (2.715 ACRES)
 PROPOSED PAVEMENT = 143,995 S.F. (3.306 ACRES)
 PROPOSED IMPERVIOUS AREA = 262,243 S.F. (6.020 ACRES) [53% OF THE SITE]
 PROPOSED OPEN SPACE = 232,464 S.F. (5.337 ACRES) [47% OF THE SITE]
 TOTAL SITE AREA = 494,707 S.F. (11.357 ACRES)
 DISTURBED AREA = 482,890 S.F. (11.086 ACRES)

PROPOSED SURFACE PARKING
 31 REGULAR CUSTOMER SPACES
 128 RESERVED RESIDENT SPACES
 2 HANDICAPPED SPACES (ADA COMPLIANT VAN ACCESSIBLE SPACES)
 161 TOTAL SPACES



SITE PLAN

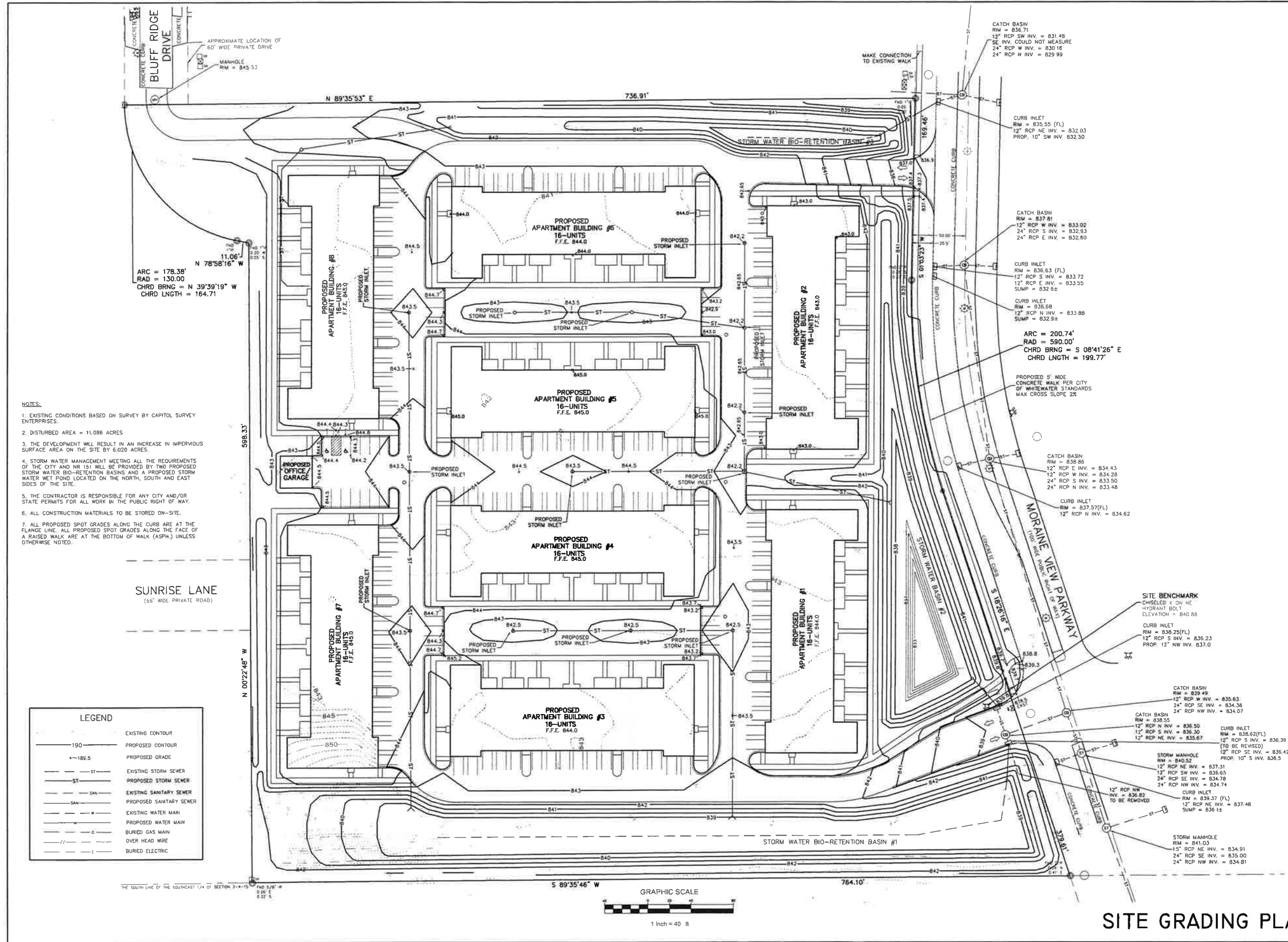
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WHITEWATER MULTI-FAMILY DEVELOPMENT
 MORaine VIEW PARKWAY WHITEWATER, WISCONSIN

CJE NO.: 2364R4
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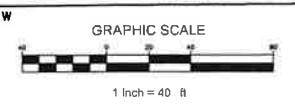
SITE GRADING PLAN C2.0



- NOTES:**
- EXISTING CONDITIONS BASED ON SURVEY BY CAPITOL SURVEY ENTERPRISES.
 - DISTURBED AREA = 11.086 ACRES
 - THE DEVELOPMENT WILL RESULT IN AN INCREASE IN IMPERVIOUS SURFACE AREA ON THE SITE BY 6.020 ACRES.
 - STORM WATER MANAGEMENT MEETING ALL THE REQUIREMENTS OF THE CITY AND NR 151 WILL BE PROVIDED BY TWO PROPOSED STORM WATER BIO-RETENTION BASINS AND A PROPOSED STORM WATER WET POND LOCATED ON THE NORTH, SOUTH AND EAST SIDES OF THE SITE.
 - THE CONTRACTOR IS RESPONSIBLE FOR ANY CITY AND/OR STATE PERMITS FOR ALL WORK IN THE PUBLIC RIGHT OF WAY.
 - ALL CONSTRUCTION MATERIALS TO BE STORED ON-SITE.
 - ALL PROPOSED SPOT GRADES ALONG THE CURB ARE AT THE FLANGE LINE. ALL PROPOSED SPOT GRADES ALONG THE FACE OF A RAISED WALK ARE AT THE BOTTOM OF WALK (ASPH.) UNLESS OTHERWISE NOTED.

LEGEND

	EXISTING CONTOUR
	PROPOSED CONTOUR
	PROPOSED GRADE
	EXISTING STORM SEWER
	PROPOSED STORM SEWER
	EXISTING SANITARY SEWER
	PROPOSED SANITARY SEWER
	EXISTING WATER MAIN
	PROPOSED WATER MAIN
	BURIED GAS MAIN
	OVER HEAD WIRE
	BURIED ELECTRIC



THE SOUTH LINE OF THE SOUTHWEST 1/4 OF SECTION 3-4-13
 N 89°35'53" E 736.91'
 S 89°35'46" W 764.10'

SUNRISE LANE
 (55' WIDE PRIVATE ROAD)

N 00°22'46" W 588.33'
 N 78°58'16" W 11.06'
 ARC = 178.38°
 RAD = 130.00
 CHR D BRNG = N 39°39'19" W
 CHR D LGTH = 164.71

CATCH BASIN
 RM = 836.71
 12" RCP SW INV = 831.48
 SE INV. COULD NOT MEASURE
 24" RCP W INV = 830.16
 24" RCP N INV = 829.99

CURB INLET
 RM = 835.55 (FL)
 12" RCP NE INV = 832.03
 PROP. 10" SW INV. 832.50

CATCH BASIN
 RM = 837.81
 12" RCP W INV = 833.02
 24" RCP S INV = 832.93
 24" RCP E INV = 832.60

CURB INLET
 RM = 835.83 (FL)
 12" RCP E INV = 833.72
 12" RCP S INV = 833.55
 SUMP = 832.62

CURB INLET
 RM = 835.88
 12" RCP N INV = 833.88
 SUMP = 832.92

ARC = 200.74°
 RAD = 590.00°
 CHR D BRNG = S 08°41'26" E
 CHR D LGTH = 199.77'

PROPOSED 5' WIDE
 CONCRETE WALK PER CITY
 OF WHITEWATER STANDARDS
 MAX CROSS SLOPE 2%

CATCH BASIN
 RM = 839.86
 12" RCP E INV = 834.43
 12" RCP W INV = 834.28
 24" RCP S INV = 833.50
 24" RCP N INV = 833.48

CURB INLET
 RM = 837.57 (FL)
 12" RCP N INV = 834.62

SITE BENCHMARK
 CHISELED X ON NE
 HYDRANT BOLT
 ELEVATION = 840.88

CURB INLET
 RM = 838.25 (FL)
 12" RCP S INV = 836.23
 PROP. 12" NW INV. 837.0

CATCH BASIN
 RM = 839.49
 12" RCP W INV = 835.63
 24" RCP SE INV = 834.36
 24" RCP NW INV = 834.07

CATCH BASIN
 RM = 838.55
 12" RCP W INV = 836.50
 12" RCP S INV = 836.30
 12" RCP NE INV = 835.67

CURB INLET
 RM = 838.62 (FL)
 12" RCP S INV = 836.39
 (TO BE REVISED)
 12" RCP SE INV = 835.42
 PROP. 10" S INV. 836.5

STORM MANHOLE
 RM = 840.52
 12" RCP NE INV = 837.31
 12" RCP SW INV = 836.65
 24" RCP SE INV = 834.78
 24" RCP NW INV = 834.74

CURB INLET
 RM = 839.37 (FL)
 12" RCP NE INV = 837.48
 SUMP = 836.12

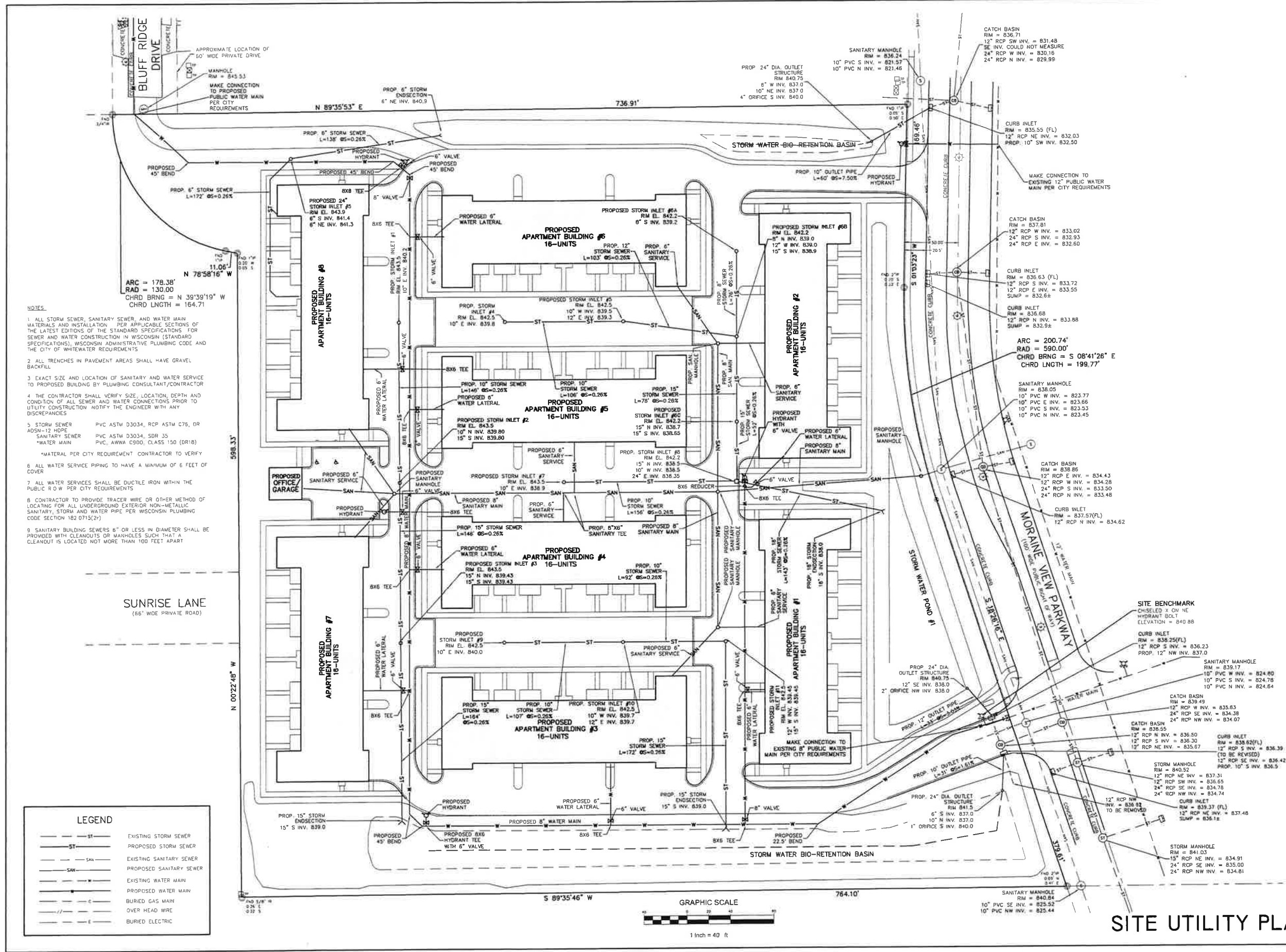
STORM MANHOLE
 RM = 841.03
 15" RCP NE INV = 834.91
 24" RCP SE INV = 835.00
 24" RCP NW INV = 834.81



WHITEWATER MULTI-FAMILY DEVELOPMENT
 MORaine VIEW PARKWAY WHITEWATER, WISCONSIN

CJE NO.: 2364R4
 JULY 15, 2024
 REV.: 08/06/2024

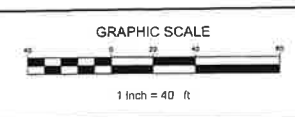
SITE UTILITY PLAN C3.0



- NOTES:**
1. ALL STORM SEWER, SANITARY SEWER, AND WATER MAIN MATERIALS AND INSTALLATION PER APPLICABLE SECTIONS OF THE LATEST EDITIONS OF THE STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN (STANDARD SPECIFICATIONS), WISCONSIN ADMINISTRATIVE PLUMBING CODE AND THE CITY OF WHITEWATER REQUIREMENTS
 2. ALL TRENCHES IN PAVEMENT AREAS SHALL HAVE GRAVEL BACKFILL
 3. EXACT SIZE AND LOCATION OF SANITARY AND WATER SERVICE TO PROPOSED BUILDING BY PLUMBING CONSULTANT/CONTRACTOR
 4. THE CONTRACTOR SHALL VERIFY SIZE, LOCATION, DEPTH AND CONDITION OF ALL SEWER AND WATER CONNECTIONS PRIOR TO UTILITY CONSTRUCTION NOTIFY THE ENGINEER WITH ANY DISCREPANCIES
 5. STORM SEWER PVC ASTM D3034, RCP ASTM C78, OR ADSN-12 HOPE
 SANITARY SEWER PVC ASTM D3034, SDR 35
 WATER MAIN PVC, AWWA C900, CLASS 150 (DR18)
 *MATERIAL PER CITY REQUIREMENT CONTRACTOR TO VERIFY
 6. ALL WATER SERVICE PIPING TO HAVE A MINIMUM OF 6 FEET OF COVER
 7. ALL WATER SERVICES SHALL BE DUCTILE IRON WITHIN THE PUBLIC R.O.W PER CITY REQUIREMENTS
 8. CONTRACTOR TO PROVIDE TRACER WIRE OR OTHER METHOD OF LOCATING FOR ALL UNDERGROUND EXTERIOR NON-METALLIC SANITARY, STORM AND WATER PIPE PER WISCONSIN PLUMBING CODE SECTION 182.07(5)(2)
 9. SANITARY BUILDING SEWERS 6" OR LESS IN DIAMETER SHALL BE PROVIDED WITH CLEANOUTS OR MANHOLES SUCH THAT A CLEANOUT IS LOCATED NOT MORE THAN 100 FEET APART

LEGEND

---	EXISTING STORM SEWER
---	PROPOSED STORM SEWER
---	EXISTING SANITARY SEWER
---	PROPOSED SANITARY SEWER
---	EXISTING WATER MAIN
---	PROPOSED WATER MAIN
---	BURIED GAS MAIN
---	OVER HEAD WIRE
---	BURIED ELECTRIC





WINTER CONDITIONS

DURING WINTER CONSTRUCTION (NOVEMBER 1 TO MAY 1), CONTRACTOR TO PROVIDE TYPE B SOIL STABILIZER, POLYACRYLAMIDE (PAM) PER LATEST WDOT PAL (UPDATED 11/2/2017) ON ALL DISTURBED AREAS THAT ARE NOT TO BE DISTURBED BEYOND 7 DAYS, CONTRACTOR TO INSTALL PAM PER WDMR TECHNICAL STANDARD 1050 AND THE MANUFACTURERS SPECIFICATIONS.

PRESCRIPTIVE COMPLIANCE AREAS
PER WDMR NR15111 WS ADM. CODE
MAXIMUM PERIOD OF BARE SOIL EXPOSURE FOR SLOPES EXCEEDING 20%

SLOPE AREA DRAINS TO SEDIMENT BASIN OR SEDIMENT TRAP	MAXIMUM PERIOD OF BARE SOIL EXPOSURE (CALENDAR DAYS)	LAND DISTURBANCE BETWEEN SEPT. 16TH AND MAY 1ST	LAND DISTURBANCE BETWEEN MAY 2ND AND SEPT. 15TH
COIS	131		
Cereal Rye	131*	97	
Winter Wheat	131*	95	
Annual Ryegrass	80*	97	

* Fall Seeding

TEMPORARY STABILIZATION METHODS

TEMPORARY SEEDING:
DURING GROWING SEASON (MAY 2 - OCTOBER 31) TEMPORARY SEEDING (COVER CROP) TO BE USED FOR TEMPORARY STABILIZATION DURING SITE CONSTRUCTION.

Species	Lbs./Acre	Percent Purity
Cereal Rye	131*	97
Winter Wheat	131*	95
Annual Ryegrass	80*	97

* Fall Seeding

LAND APPLICATION OF ADDITIVES:
DURING NONGROWING SEASON (NOVEMBER 1 - MAY 1) CONTRACTOR TO PROVIDE TYPE B SOIL STABILIZER DURING SITE CONSTRUCTION. STABILIZER TO BE POLYACRYLAMIDE (PAM) PER LATEST WDOT PAL (UPDATED 11/2/2017) - SEE WDMR TECHNICAL STANDARD 1050.

STABILIZATION SHOULD BE COMPLETED WITHIN 7 DAYS OF ESTABLISHING FINAL GRADE OR THAT WILL OTHERWISE EXIST FOR MORE THAN 14 DAYS.

CONSTRUCTION SCHEDULE

- OBTAIN PLAN APPROVAL AND OTHER APPLICABLE PERMITS.
- INSTALL CONSTRUCTION EXIT.
- INSTALL SILT FENCE AND CONSTRUCTION FENCE.
- STOP AND STOCK PILE TOP SOIL SURROUNDING TOP SOIL STOCK PILE WITH SILT FENCE AND TEMP. STABILIZE LOCATION OF STOCK PILE TO BE DETERMINED BY CONTRACTOR.
- INSTALL SEDIMENT BASINS (FUTURE BIOTENTION BASINS & WET POND).
- THE AREA OF THE BIOTENTION BASINS WILL BE USED AS A SEDIMENTATION BASIN DURING CONSTRUCTION. DO NOT INSTALL DRAIN TILE, AGGREGATE OR ENGINEERED SOIL AT THIS STAGE.
- ROUGH GRADE BASINS AND INSTALL BASINS STANDPIPE AND 24" OUTLET PIPE AND RIP RAP.
- UTILIZE DEWATERING BAG AS NECESSARY DURING EXCAVATION FOR BUILDING CONSTRUCTION. DIRECT RUNOFF FROM BAG TO EXISTING STORM WATER FACILITIES.
- INSTALL PROPOSED UTILITIES.
- INSTALL OUTLET PROTECTION.
- INSTALL BASE COURSE OF PAVEMENT.
- INSTALL BIOTENTION BASINS. INSTALL AGGREGATE, 6" DRAIN TILE, ENGINEERED SOIL AND PLANTINGS PROVIDE FINAL STABILIZATION OF BASIN SIDE SLOPES THAT INCLUDE SEEDING AND MATTING.
- FINAL GRADE SLOPES AND TOPSOIL CRITICAL SLOPES; VEGETATE AND MAT ALL DISTURBED AREAS.
- ALL EROSION CONTROL PRACTICES WILL BE INSPECTED WEEKLY AND AFTER RAINFALL, NEEDED REPAIRS WILL BE PERFORMED IMMEDIATELY.
- AFTER SITE IS STABILIZED, REMOVE ALL TEMPORARY MEASURES AND VEGETATE THE DISTURBED AREAS.

MAINTENANCE PLAN

- ALL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE CHECKED FOR STABILITY AND OPERATION FOLLOWING EVERY 1/2" RUNOFF-PRODUCTION RAINFALL BUT IN NO CASE LESS THAN ONCE EVERY WEEK. ANY NEEDED REPAIRS WILL BE MADE IMMEDIATELY TO MAINTAIN ALL PRACTICES AS DESIGNED.
- SEDIMENT WILL BE REMOVED FROM BEHIND THE SILT FENCE WHEN IT BECOMES ABOUT 0.5 FT. DEEP AT THE FENCE. THE SILT FENCE WILL BE REPAIRED AS NECESSARY TO MAINTAIN A BARRIER.
- ALL SEEDED AREAS WILL BE WATERED, FERTILIZED, RESEED AS NECESSARY, AND MULCHED TO MAINTAIN A WOODROUS, DENSE VEGETATIVE COVER.
- ANY SEDIMENT REACHING A PUBLIC OR PRIVATE ROAD SHALL BE REMOVED BY STREET CLEANING BEFORE THE END OF EACH DAY.

EROSION CONTROL PRACTICES

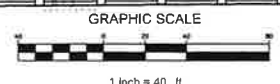
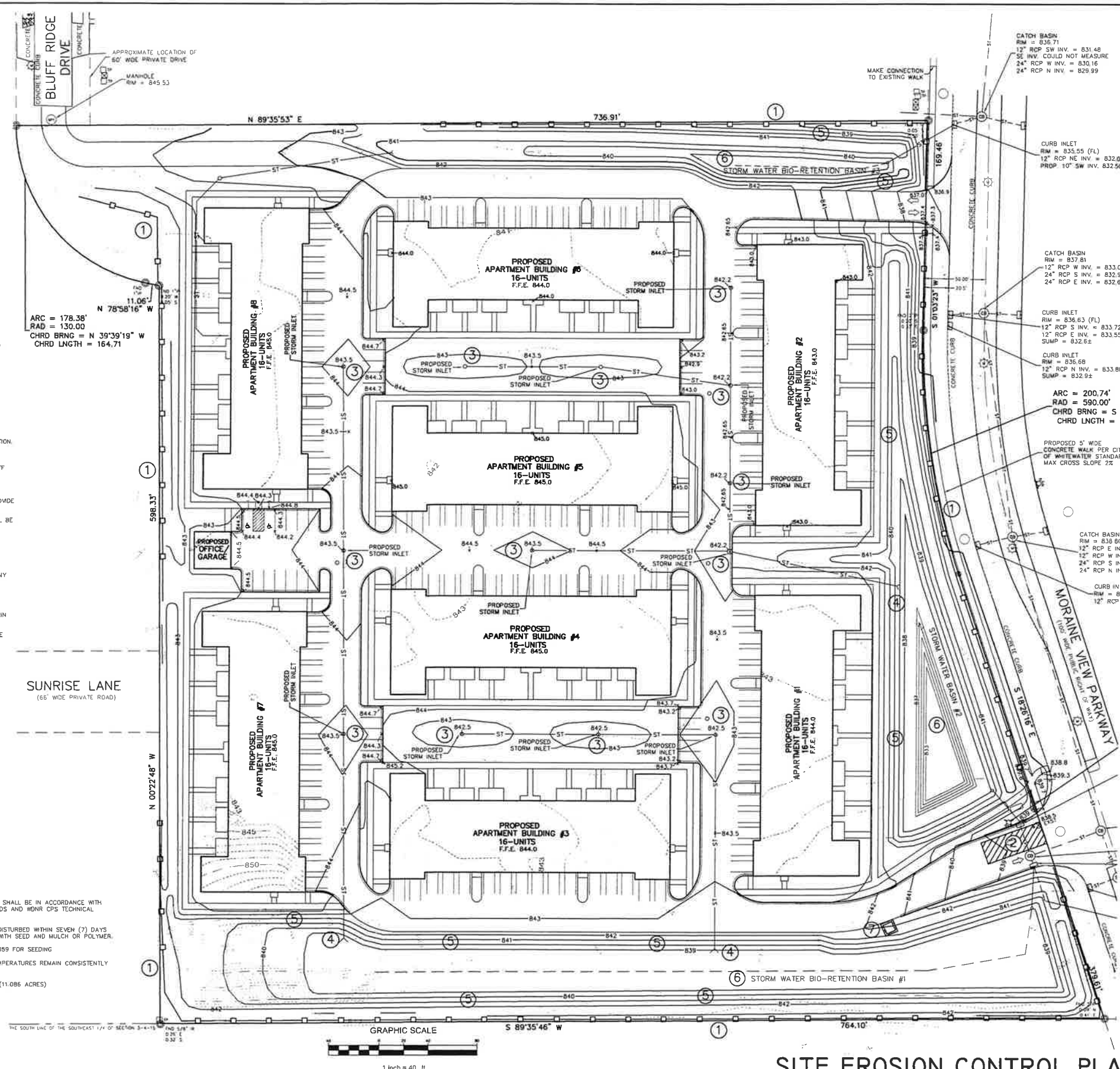
- SILT FENCE
- CONSTRUCTION EXIT
- INLET PROTECTION
- OUTLET PROTECTION
- EROSION MATTING
- SEDIMENT BASIN
- HAY BALE SEDIMENT DEWATERING PIT

FOR FINAL STABILIZATION, PROVIDE CLASS I TYPE B EROSION MAT PER WISDOT EROSION CONTROL PAL (OR EQUAL) IN ALL ROADSIDE DITCHES, DEFINED SWALES, SIDE SLOPES, OUTLOT BERMS AND ALL OTHER SLOPES 4:1 OR GREATER. INSTALL PER MANUFACTURERS SPECIFICATIONS.

LEGEND

---	EXISTING CONTOUR
---	PROPOSED CONTOUR
---	PROPOSED GRADE
---	EXISTING STORM SEWER
---	PROPOSED STORM SEWER
---	EXISTING SANITARY SEWER
---	PROPOSED SANITARY SEWER
---	EXISTING WATER MAIN
---	PROPOSED WATER MAIN
---	BURIED GAS MAIN
---	OVER HEAD WIRE
---	BURIED ELECTRIC
---	SILT FENCE

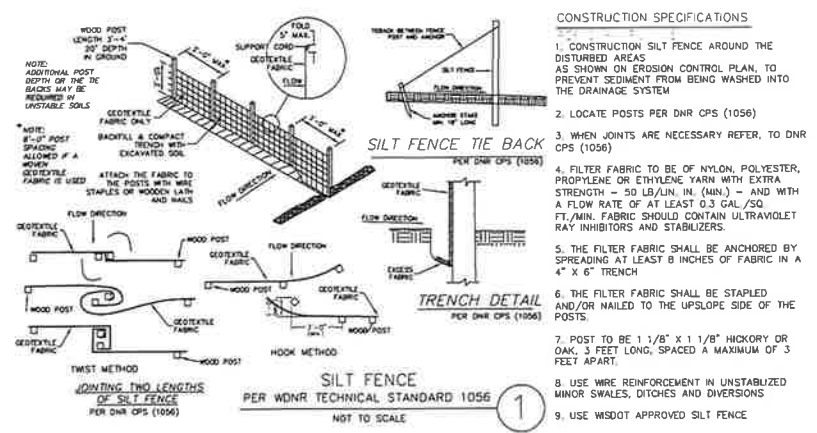
- NOTES:**
- ALL EROSION CONTROL METHODS SHALL BE IN ACCORDANCE WITH THE CITY OF WHITEWATER STANDARDS AND WDMR CPS TECHNICAL STANDARDS.
 - ALL EXPOSED SOIL AREAS NOT DISTURBED WITHIN SEVEN (7) DAYS SHALL BE IMMEDIATELY RESTORED WITH SEED AND MULCH OR POLYMER, SEE WDMR TECHNICAL STANDARD 1059 FOR SEEDING DURING GROWING SEASON (SOIL TEMPERATURES REMAIN CONSISTENTLY ABOVE 53°).
 - DISTURBED AREA: 482,890 S.F. (11.086 ACRES)



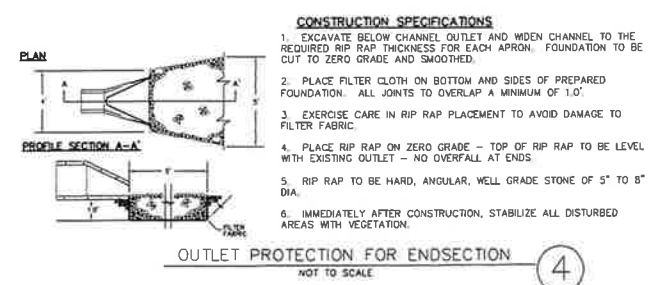
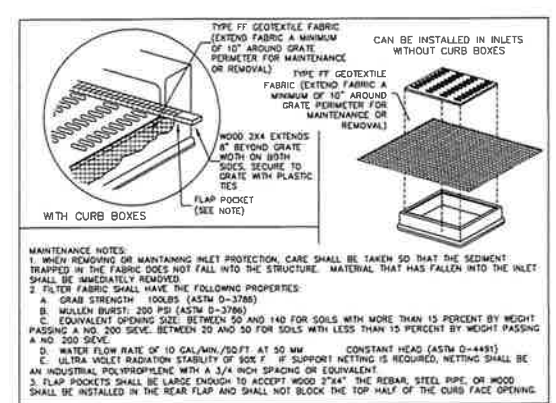
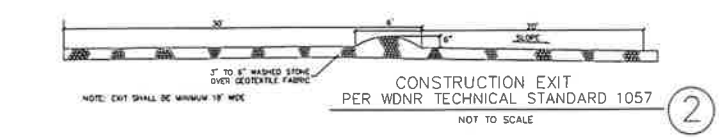
SITE EROSION CONTROL PLAN C4.0

CJE NO.: 2364R4
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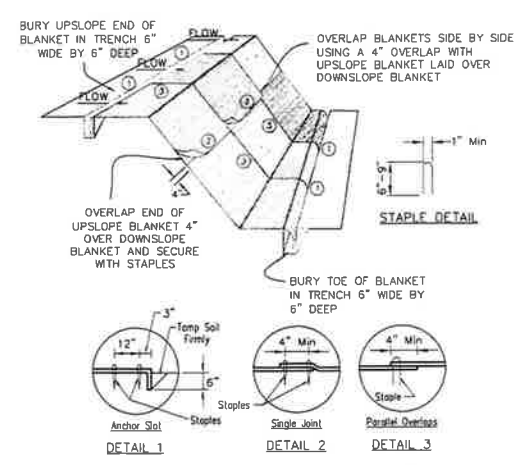
WHITEWATER MULTI-FAMILY DEVELOPMENT
MORaine VIEW PARKWAY WHITEWATER, WISCONSIN



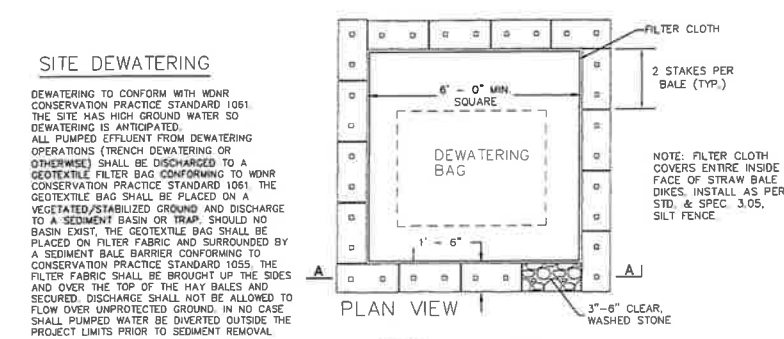
- CONSTRUCTION SPECIFICATIONS**
1. CONSTRUCTION SILT FENCE AROUND THE DISTURBED AREAS AS SHOWN ON EROSION CONTROL PLAN, TO PREVENT SEDIMENT FROM BEING WASHED INTO THE DRAINAGE SYSTEM.
 2. LOCATE POSTS PER DNR CPS (1056)
 3. WHEN JOINTS ARE NECESSARY REFER, TO DNR CPS (1056)
 4. FILTER FABRIC TO BE OF NYLON, POLYESTER, PROPYLENE OR ETHYLENE YARN WITH EXTRA STRENGTH - 50 LB/LIN. IN. (MIN.) - AND WITH A FLOW RATE OF AT LEAST 0.3 GAL./SQ. FT./MIN. FABRIC SHOULD CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS.
 5. THE FILTER FABRIC SHALL BE ANCHORED BY SPREADING AT LEAST 8 INCHES OF FABRIC IN A 4" X 6" TRENCH.
 6. THE FILTER FABRIC SHALL BE STAPLED AND/OR NAILED TO THE UPSLOPE SIDE OF THE POSTS.
 7. POST TO BE 1 1/8" X 1 1/8" HICKORY OR OAK, 3 FEET LONG, SPACED A MAXIMUM OF 3 FEET APART.
 8. USE WIRE REINFORCEMENT IN UNSTABILIZED MINOR SWALES, DITCHES AND DIVERSIONS
 9. USE WSDOT APPROVED SILT FENCE

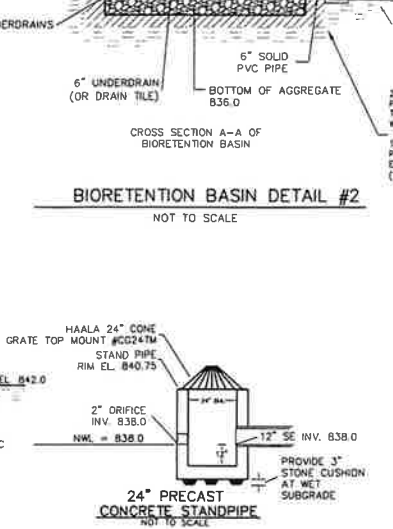
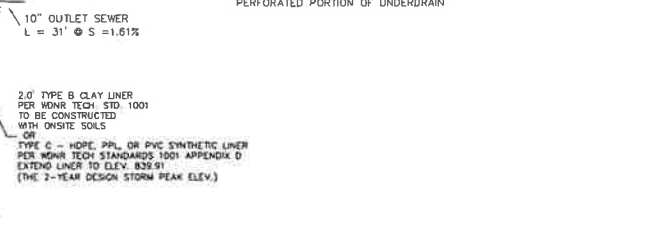
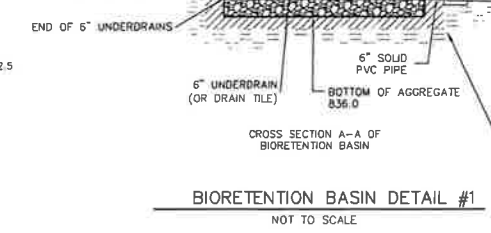
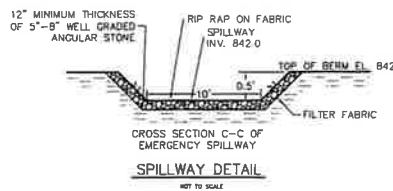
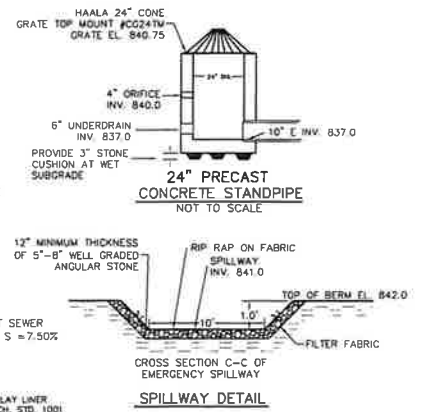
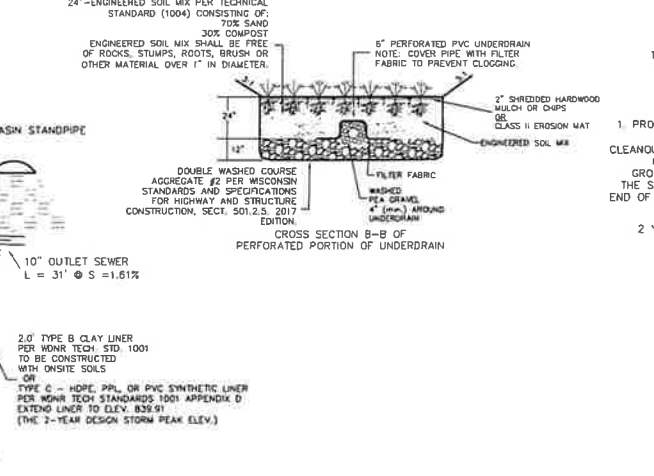
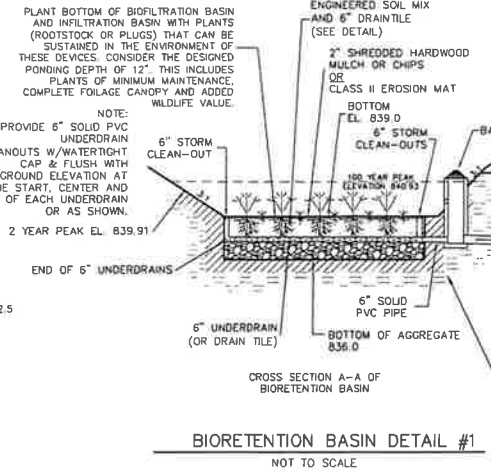
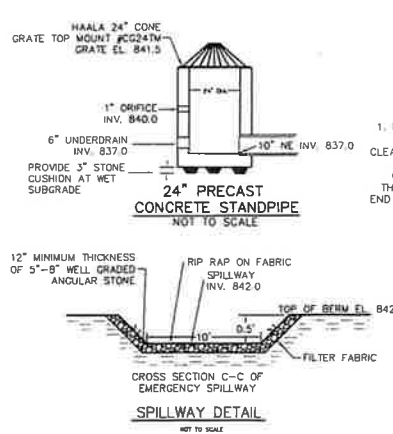
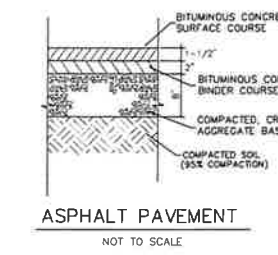
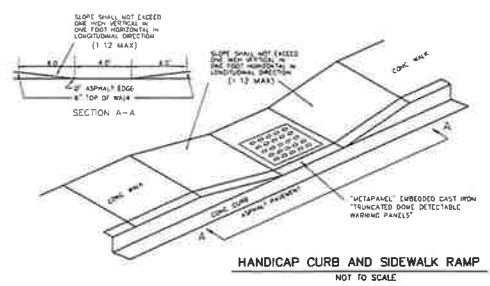
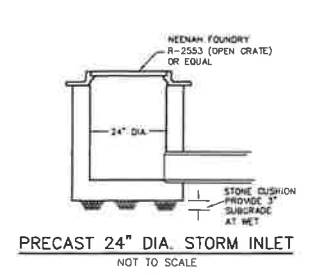
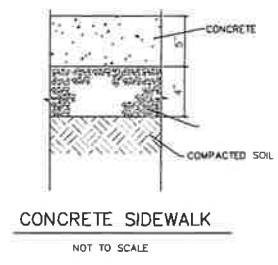
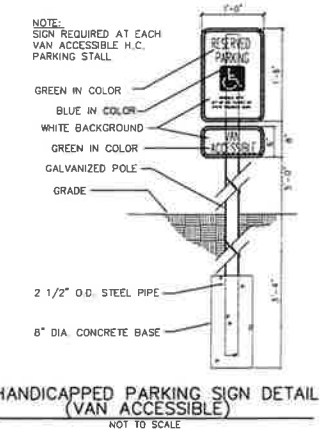
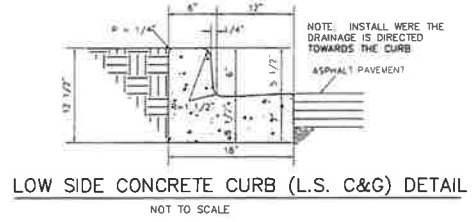
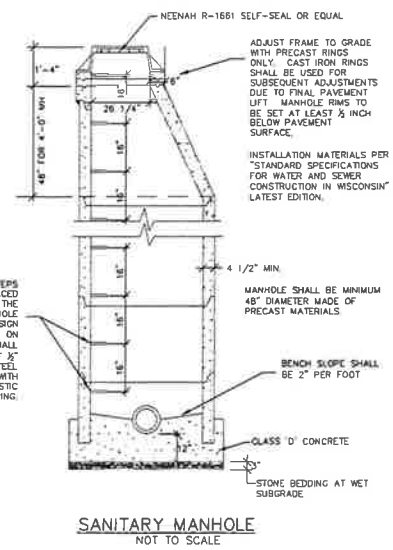
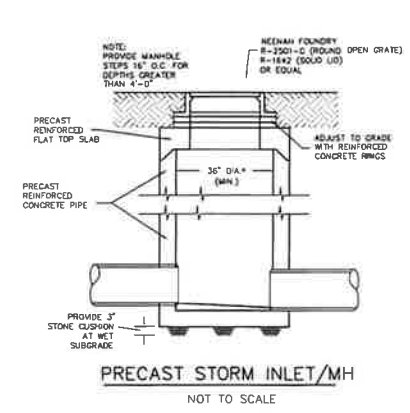
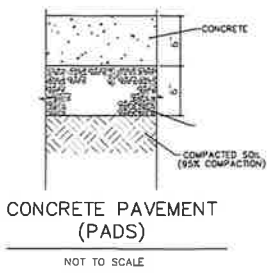
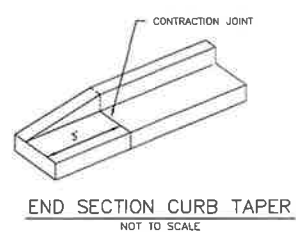
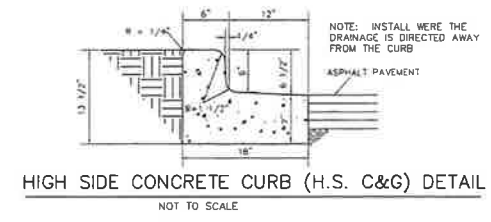


- CONSTRUCTION SPECIFICATIONS**
1. EXCAVATE BELOW CHANNEL OUTLET AND WIDEN CHANNEL TO THE REQUIRED RIP RAP THICKNESS FOR EACH APRON. FOUNDATION TO BE CUT TO ZERO GRADE AND SMOOTHED.
 2. PLACE FILTER CLOTH ON BOTTOM AND SIDES OF PREPARED FOUNDATION. ALL JOINTS TO OVERLAP A MINIMUM OF 1.0'.
 3. EXERCISE CARE IN RIP RAP PLACEMENT TO AVOID DAMAGE TO FILTER FABRIC.
 4. PLACE RIP RAP ON ZERO GRADE - TOP OF RIP RAP TO BE LEVEL WITH EXISTING OUTLET - NO OVERFALL AT ENDS.
 5. RIP RAP TO BE HARD, ANGULAR, WELL GRADE STONE OF 5" TO 8" DIA.
 6. IMMEDIATELY AFTER CONSTRUCTION, STABILIZE ALL DISTURBED AREAS WITH VEGETATION.



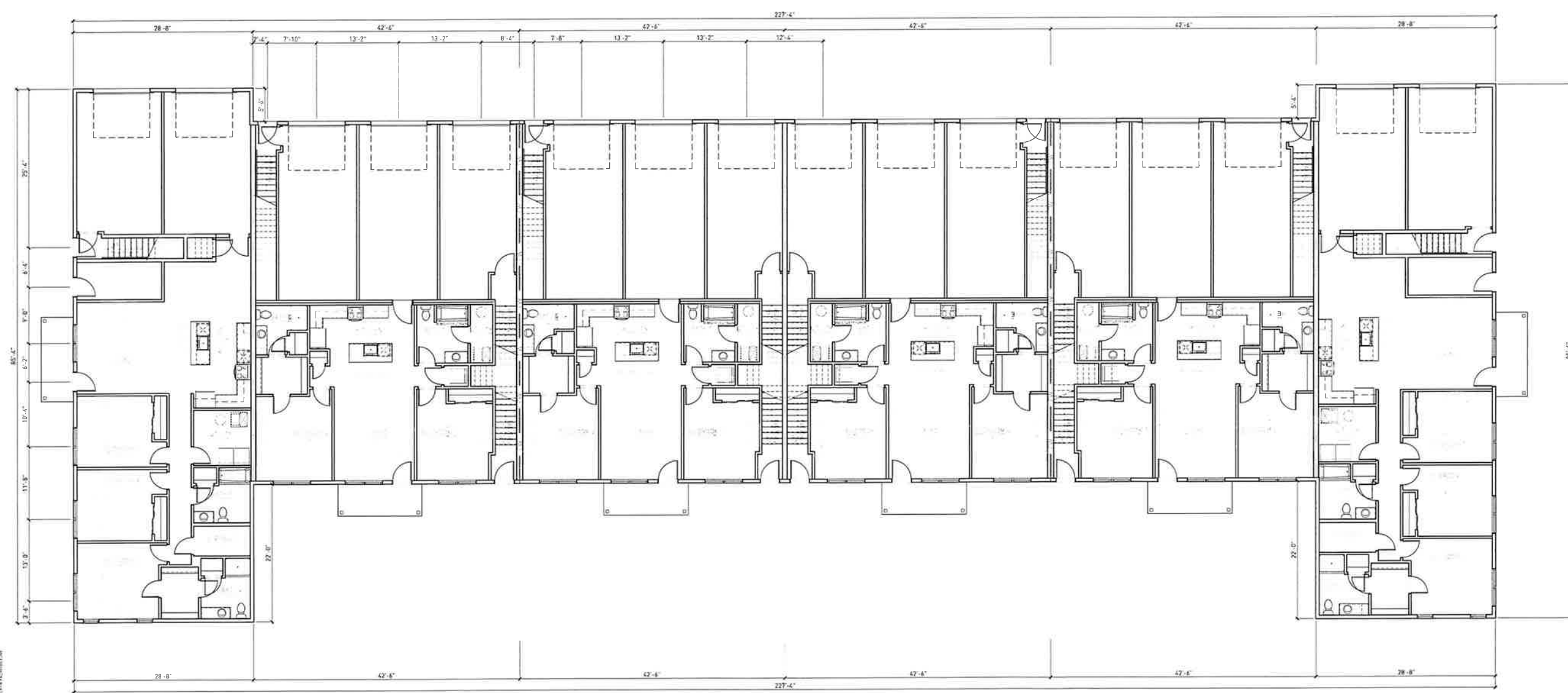
- CONSTRUCTION SPECIFICATIONS**
1. BURY UPSLOPE END OF BLANKET IN TRENCH 6" WIDE BY 6" DEEP
 2. OVERLAP END OF UPSLOPE BLANKET 4" OVER DOWNSLOPE BLANKET AND SECURE WITH STAPLES
 3. OVERLAP BLANKETS SIDE BY SIDE USING A 4" OVERLAP WITH UPSLOPE BLANKET LAID OVER DOWNSLOPE BLANKET
 4. BURY TOE OF BLANKET IN TRENCH 6" WIDE BY 6" DEEP





CJE NO.: 2364R4
 JULY 15, 2024
 REV.: 08/06/2024

PROJECT TEAM



PROJECT NAME
 WHITEWATER MULTI-FAMILY
 WHITEWATER, WISCONSIN

ARCHITECT PROJECT NUMBER
 26006

DRAWING REVISIONS

DRAWING DATE
 07.12.2024

SET TYPE

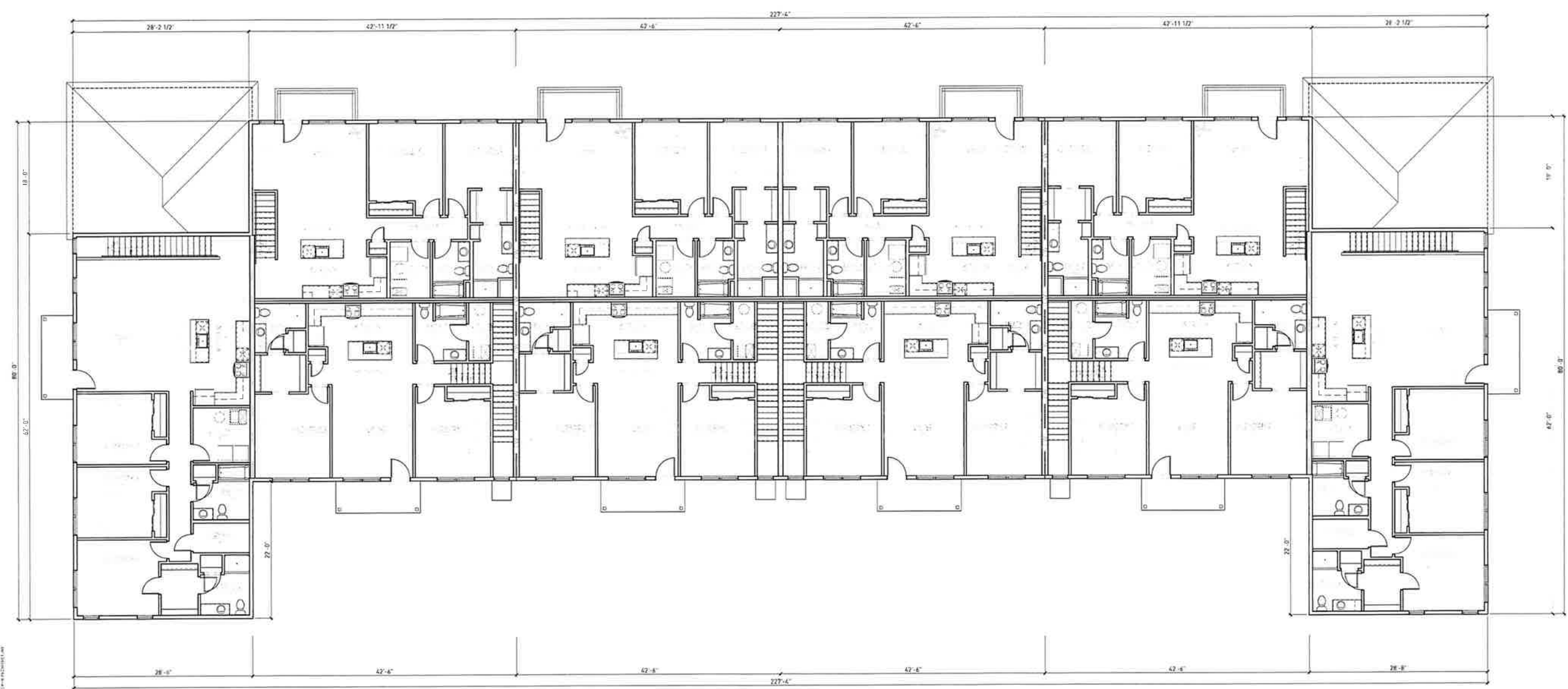
SHEET NAME
 FLOOR PLAN - FIRST FLOOR

SHEET NUMBER

01 FLOOR PLAN - FIRST FLOOR
 FOUNDATION FOOTPRINT (w/o stoops) = 14,752 s.f. SCALE = 1/8" = 1'-0"

A200

PROJECT TEAM



PROJECT NAME
 WHITEWATER MULTI-FAMILY
 WHITEWATER, WISCONSIN

ARCHITECT PROJECT NUMBER
 24005

DRAWING REVISIONS

DRAWING DATE
 07.12.2024

SET TYPE

SHEET NAME
 FLOOR PLAN - SECOND FLOOR

SHEET NUMBER

01 FLOOR PLAN - SECOND FLOOR
 GROSS AREA (including stairs) = 13,431 s.f. SCALE = 1/8" = 1'-0"

A201

PROJECT TEAM



PROJECT NAME
WHITWATER MULTI-FAMILY
WHITWATER, WISCONSIN

ARCHITECT PROJECT NUMBER
24006

DRAWING REVISIONS

DRAWING DATE
07.12.2024
SET TYPE

SHEET NAME
EXTERIOR ELEVATIONS

SHEET NUMBER

A400

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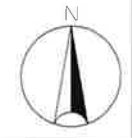
REVISIONS:

NO	DATE	DESCRIPTION
1	7/17/24	REV 1

CLIENT NAME:
 Integris

PROJECT NAME:
 Whitewater Multi-Family Development

PROJECT ADDRESS:
 Moraine View Parkway
 Whitewater, WI



DRAWN BY:
 Travis Bischoff

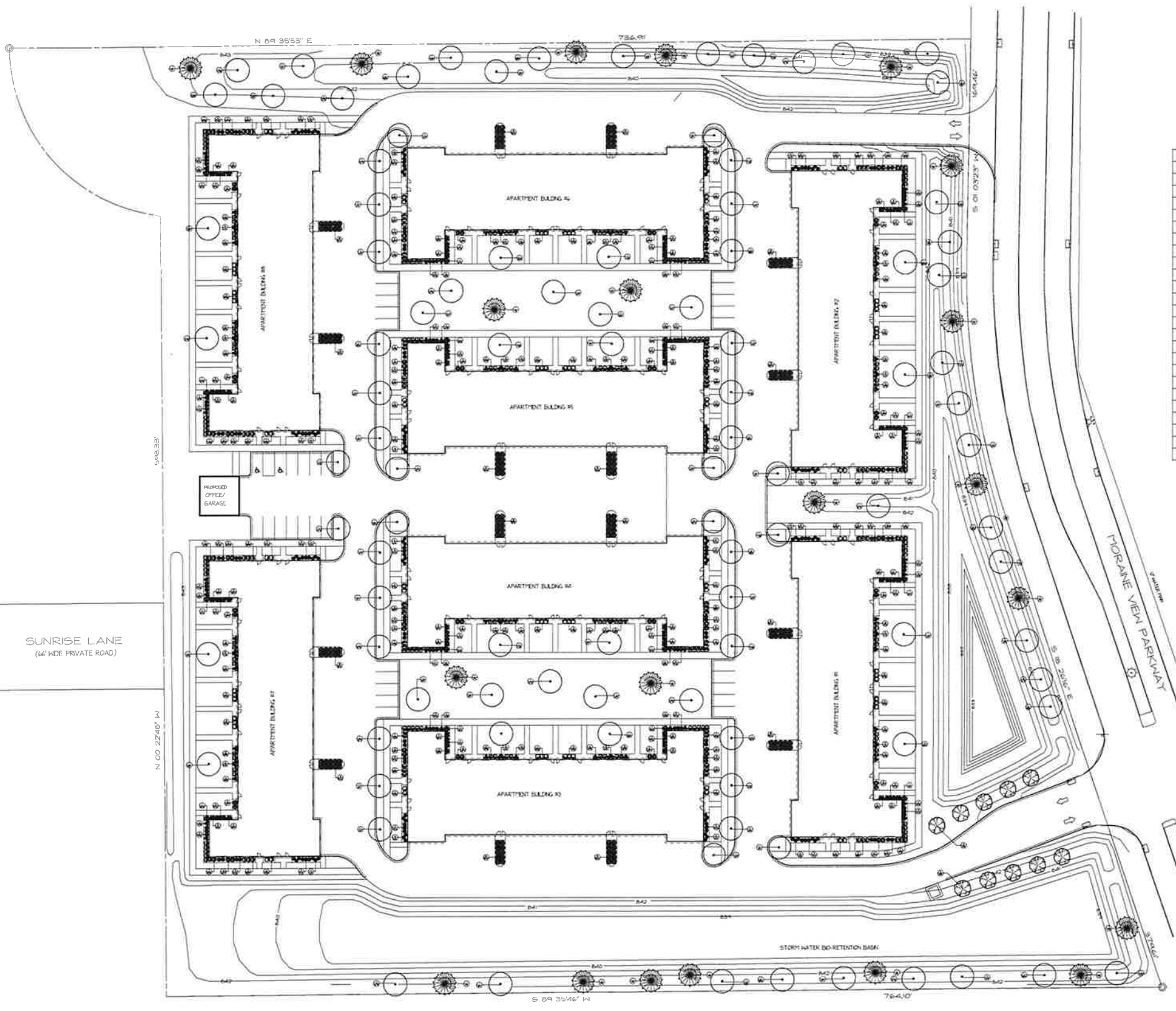
CHECKED BY:
 Chris Kujawa

DATE:
 7/17/2024

SHEET:
 1 of 1

SCALE:
 1" = 40'

SHEET NUMBER
 L-100



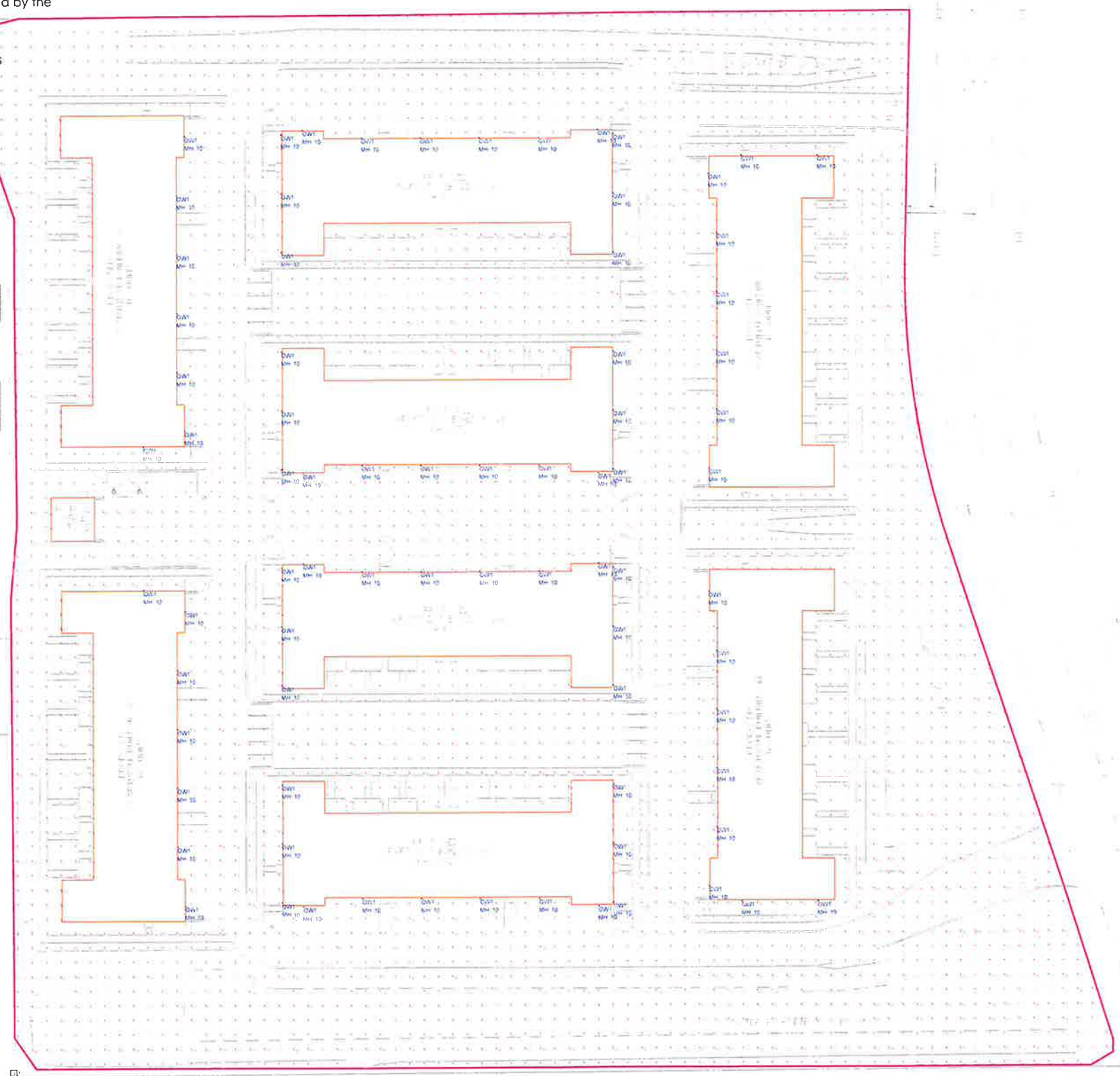
Key	Qty	Common Name
Trees		
AXF	33	Autumn Blaze Maple
GBA	17	Autumn Gold Ginkgo
TAB	12	Boulevard American Linden
QM	17	Chinkapin Oak
SRI	10	Ivory Silk Japanese Tree Lilac
GTS	19	Skyline Honeylocust
Conifers		
PS	8	Eastern White Pine
PR	6	Red Pine
PO	7	Serbian Spruce
Shrubs		
SXS	26	Blossoming Dark Purple Lilac
HPB	286	Boba Hydrangea
RAG	260	Gro-low Sumac
POD	130	Little Devil Nnebark
WFM	104	Minuet Weigela
RRP	78	Purple Pavement Rose
Ornamental Grasses		
CaK	156	Karl Forester Grass
PVS	422	Shenandoah Switch Grass
Perennials and Annuals		
SSA	130	Autumn Fire Sedum
H-R	312	Happy Returns Daylily
SNH	130	Marcus Salvia


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.
 - Color Temperature is 4000K
 - Room reflectance of 80, 50, 20 for standard ceilings and 50, 50, 20 for exposed ceilings
 - Wall sconces are mounted at 7 feet for calculations.

Luminaire Schedule						
Qty	Label	Arrangement	LLF	MFR	Description	
78	DW1	SINGLE	0.955	LITHONIA	WDOG2 LED P3 v1K 68CRI TFTM	Lum. Watts: 22,173 Total Watts: 25,657.29 Lum. Lumens: 3169

Calculation Summary							
Label	Calc Type	Units	Avg	Max	Min	Avg/Min	Max/Min
SITE	Illuminance	Fc	0.54	4.66	0.00	N/A	N/A
PARKING • DRIVES	Illuminance	Fc	1.19	4.4	0.0	N/A	N/A





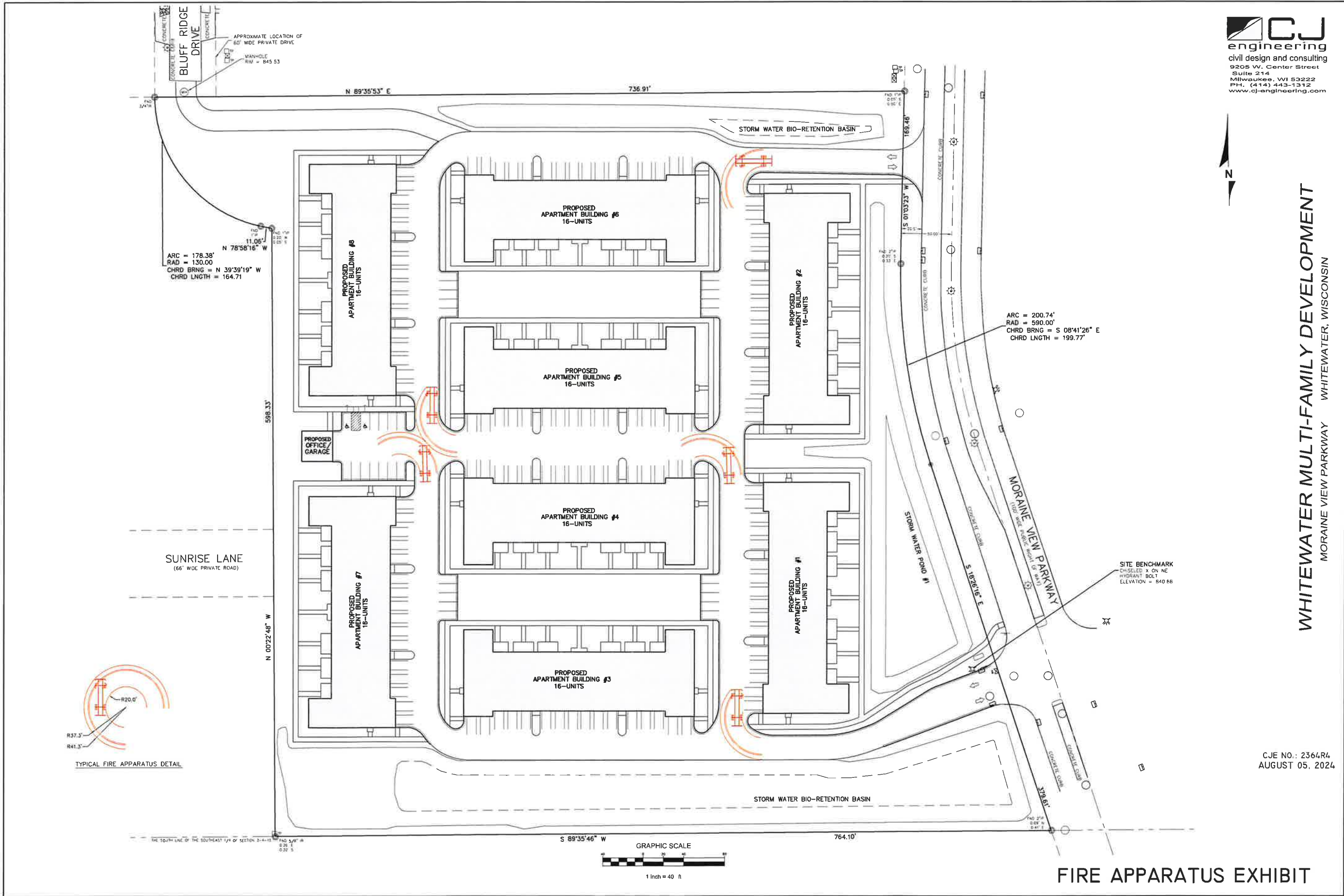
ENTERPRISE
Lighting & Controls

#	DATE	COMMENTS

REVISIONS

DRAWN BY : AD	DATE : JULY 16, 2024	SCALE : 1" = 40'-0"
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WHITEWATER MULTI-FAMILY	WHITEWATER, WI	LIGHTING LAYOUT
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CJ
 engineering
 civil design and consulting
 9205 W. Center Street
 Suite 214
 Milwaukee, WI 53222
 PH. (414) 443-1312
 www.cj-engineering.com



WHITEWATER MULTI-FAMILY DEVELOPMENT
 MORAINNE VIEW PARKWAY WHITEWATER, WISCONSIN

CJE NO.: 2364R4
 AUGUST 05, 2024

FIRE APPARATUS EXHIBIT

Submitted by Enterprise Lighting, LTD.



Job Name:
WHITEWATER MULTI-FAMILY

Catalog Number:
WDGE2 LED P3 40K 80CRI TFTM
MVOLT SRM DDBXD
Notes:

Type:
OW1
ELL24-131359



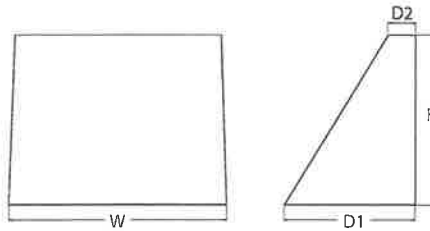
WDGE2 LED
Architectural Wall Sconce
Precision Refractive Optic



Catalog Number
Notes
Type

Specifications

Depth (D1): 7"
Depth (D2): 1.5"
Height: 9"
Width: 11.5"
Weight: 13.5 lbs
(without options)



Introduction

The WDGE LED family is designed to meet specifier's every wall-mounted lighting need in a widely accepted shape that blends with any architecture. The clean rectilinear design comes in four sizes with lumen packages ranging from 1,200 to 25,000 lumens, providing a true site-wide solution. Embedded with nLight® AIR wireless controls, the WDGE family provides additional energy savings and code compliance.

WDGE2 with industry leading precision refractive optics provides great uniform distribution and optical control. When combined with multiple integrated emergency battery backup options, including an 18W cold temperature option, the WDGE2 becomes the ideal wall-mounted lighting solution for pedestrian scale applications in any environment.



Items marked by a shaded background qualify for the Design Select program and ship in 15 days or less. To learn more about Design Select, visit www.acuitybrands.com/designselect.
*See ordering tree for details

WDGE LED Family Overview

Luminaire	Optics	Standard EM, 0°C	Cold EM, -20°C	Sensor	Approximate Lumens (4000K, 80CRI)						
					P0	P1	P2	P3	P4	P5	P6
WDGE1 LED	Visual Comfort	4W		--	750	1,200	2,000	--	--	--	--
WDGE2 LED	Visual Comfort	10W	18W	Standalone / nLight	--	1,200	2,000	3,000	4,500	6,000	--
WDGE2 LED	Precision Refractive	10W	18W	Standalone / nLight	700	1,200	2,000	3,200	4,200	--	--
WDGE3 LED	Precision Refractive	15W	18W	Standalone / nLight	--	7,500	8,500	10,000	12,000	--	--
WDGE4 LED	Precision Refractive			Standalone / nLight	--	12,000	16,000	18,000	20,000	22,000	25,000

Ordering Information

EXAMPLE: WDGE2 LED P3 40K 80CRI T3M MVOLT SRM DDBXD

Series	Package	Color Temperature	CRI	Distribution	Voltage	Mounting
WDGE2 LED	P0 ¹	27K 2700K	70CRI ⁴	T1S Type I Short	MVOLT	Shipped included
	P1 ¹	30K 3000K	80CRI	T2M Type II Medium	347 ⁵	SRM Surface mounting bracket
	P2 ²	40K 4000K	LW ³ Limited Wavelength	T3M Type III Medium	480 ⁵	ICW Indirect Canopy/Ceiling Washer bracket (dry/damp locations only) ¹
	P3	50K 5000K		T4M Type IV Medium		
	P4 ²	AMB ² Amber		TFTM Forward Throw Medium		
						Shipped separately
						AWS 3/8inch Architectural wall spacer
						PBBW Surface-mounted back box (top, left, right conduit entry). Use when there is no junction box available

Options	Finish
E10WH Emergency battery backup, Certified in CA Title 20 WAEDBS (10W, 5°C min)	DDBXD Dark bronze
E20WC Emergency battery backup, Certified in CA Title 20 WAEDBS (18W, -20°C min)	DBLXD Black
PE ¹ Photocell, Button Type	DHAXD Natural aluminum
DMG ³ 0-12V dimming wires pulled outside fixture (for use with an external control, ordered separately)	DWHXD White
BCE Bottom conduit entry for back box (PBBW). Total of 4 entry points	DSSXD Sandstone
CCCE Coastal Construction	DDBTXD Textured dark bronze
	DBL6XD Textured black
	DNATXD Textured natural aluminum
	DWHGXD Textured white
	DSSTXD Textured sandstone
Standalone Sensors/Controls	
PIR Bi-level (100/35%) motion sensor for 8-15' mounting heights. Intended for use on switched circuits with external dusk to dawn switching	
PIRH Bi-level (100/35%) motion sensor for 15-30' mounting heights. Intended for use on switched circuits with external dusk to dawn switching	
PIR1FC3V Bi-level (100/35%) motion sensor for 8-15' mounting heights with photocell pre-programmed for dusk to dawn operation.	
PIRH1FC3V Bi-level (100/35%) motion sensor for 15-30' mounting heights with photocell pre-programmed for dusk to dawn operation	
Networked Sensors/Controls	
NLTAIR2 PIR Embedded wireless controls by nLight wit- Passive Infrared Occ sensor and on/off photocell for 8-15' mounting heights	
NLTAIR2 PIRH Embedded wireless controls by nLight wit- Passive Infrared Occ sensor and on/off photocell for 15-30' mounting heights	
NLTAIREM2 Embedded wireless controls by nLight wit- UL9241 listed emergency operation, Passive Infrared Occ sensor and on/off photocell for 15-30' mounting heights	
See page 4 for out of box functionality	



COMMERCIAL OUTDOOR

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WDGE2 LED
Rev. 05/30/24

Submitted by Enterprise Lighting, LTD.



Job Name:
WHITEWATER MULTI-FAMILY

Catalog Number:
WDGE2 LED P3 40K 80CRI TFTM
MVOLT SRM DDBXD
Notes:

Type:
OW1
ELL24-131359

Accessories

Ordered and shipped separately.

- WDGEAWS DDBXD U WDGE 3/8Inch Architectural Wall Spacer (specify finish)
- WDGEZPBBW DDBXD U WDGE2 surface-mounted back box (specify finish)

NOTES

- 1 P0 option not available with sensors/controls.
- 2 P1-P4 not available with AMB and LW.
- 3 AMB and LW always go together.
- 4 70CRI only available with T3M and T4M.
- 5 347V and 480V not available with E10WH or E20WC.
- 6 Not qualified for DLC. Not available with emergency battery backup or sensors/controls.
- 7 PE not available in 480V or with sensors/controls.
- 8 DMG option not available with sensors/controls.

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Performance Package	System Watts	Dist. Type	27K (2700K, 80 CRI)					30K (3000K, 80 CRI)					40K (4000K, 80 CRI)					50K (5000K, 80 CRI)					Amber (Limited Wavelength)					
			Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	
P0	7W	T1S	636	92	0	0	0	666	97	0	0	0	699	101	0	0	0	691	100	0	0	0	712	47	0	0	0	1
		T2M	662	96	0	0	0	693	101	0	0	0	728	106	0	0	0	719	104	0	0	0	741	48	0	0	0	0
		T3M	662	96	0	0	0	693	101	0	0	0	728	106	0	0	0	719	104	0	0	0	741	48	0	0	0	0
		T4M	648	94	0	0	0	679	98	0	0	0	712	103	0	0	0	704	102	0	0	0	726	47	0	0	0	0
		TFTM	652	95	0	0	0	683	99	0	0	0	717	104	0	0	0	708	103	0	0	0	730	48	0	0	0	1
P1	11W	T1S	1,105	99	0	0	1	1,157	104	0	0	1	1,215	109	0	0	1	1,200	107	0	0	1						
		T2M	1,150	103	0	0	1	1,204	108	0	0	1	1,264	113	0	0	1	1,249	112	0	0	1						
		T3M	1,150	103	0	0	1	1,205	108	0	0	1	1,265	113	0	0	1	1,250	112	0	0	1						
		T4M	1,126	101	0	0	1	1,179	106	0	0	1	1,238	111	0	0	1	1,223	110	0	0	1						
		TFTM	1,133	101	0	0	1	1,186	106	0	0	1	1,245	112	0	0	1	1,230	110	0	0	1						
P2	19W	T1S	1,801	95	1	0	1	1,886	99	1	0	1	1,981	104	1	0	1	1,957	103	1	0	1						
		T2M	1,875	99	1	0	1	1,963	103	1	0	1	2,061	109	1	0	1	2,037	107	1	0	1						
		T3M	1,876	99	1	0	1	1,964	103	1	0	1	2,062	109	1	0	1	2,038	107	1	0	1						
		T4M	1,836	97	1	0	1	1,922	101	1	0	1	2,018	106	1	0	1	1,994	105	1	0	1						
		TFTM	1,847	97	1	0	1	1,934	102	1	0	1	2,030	107	1	0	1	2,006	106	1	0	1						
P3	32W	T1S	2,809	87	1	0	1	2,942	92	1	0	1	3,089	96	1	0	1	3,052	95	1	0	1						
		T2M	2,924	91	1	0	1	3,062	95	1	0	1	3,215	100	1	0	1	3,176	99	1	0	1						
		T3M	2,925	91	1	0	1	3,063	95	1	0	1	3,216	100	1	0	1	3,177	99	1	0	1						
		T4M	2,862	89	1	0	1	2,997	93	1	0	1	3,147	98	1	0	1	3,110	97	1	0	1						
		TFTM	2,880	90	1	0	1	3,015	94	1	0	1	3,166	99	1	0	1	3,128	97	1	0	1						
P4	47W	T1S	3,729	80	1	0	1	3,904	84	1	0	1	4,099	88	1	0	1	4,051	87	1	0	1						
		T2M	3,881	83	1	0	1	4,063	87	1	0	1	4,267	91	1	0	1	4,216	90	1	0	1						
		T3M	3,882	83	1	0	1	4,065	87	1	0	1	4,268	91	1	0	1	4,217	90	1	0	1						
		T4M	3,799	81	1	0	1	3,978	85	1	0	1	4,177	90	1	0	1	4,127	88	1	0	1						
		TFTM	3,822	82	1	0	1	4,002	86	1	0	1	4,202	90	1	0	1	4,152	89	1	0	1						

Performance Package	System Watts	Dist. Type	27K (2700K, 70 CRI)					30K (3000K, 70 CRI)					40K (4000K, 70 CRI)					50K (5000K, 70 CRI)									
			Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G					
P0	7W	T3M	737	107	0	0	0	763	111	0	0	0	822	119	0	0	0	832	121	0	0	0	1				
		T4M	721	105	0	0	0	746	108	0	0	0	804	117	0	0	0	814	118	0	0	0	1				
P1	11W	T3M	1,280	115	0	0	1	1,325	119	0	0	1	1,427	128	1	0	1	1,445	129	1	0	1					
		T4M	1,253	112	0	0	1	1,297	116	0	0	1	1,397	125	0	0	1	1,415	127	0	0	1					
P2	19W	T3M	2,087	110	1	0	1	2,160	114	1	0	1	2,327	123	1	0	1	2,357	124	1	0	1					
		T4M	2,042	108	1	0	1	2,114	111	1	0	1	2,278	120	1	0	1	2,306	121	1	0	1					
P3	32W	T3M	3,254	101	1	0	1	3,369	105	1	0	1	3,629	113	1	0	1	3,675	114	1	0	1					
		T4M	3,185	99	1	0	1	3,297	103	1	0	1	3,552	111	1	0	1	3,597	112	1	0	1					
P4	47W	T3M	4,319	93	1	0	1	4,471	96	1	0	1	4,817	103	1	0	2	4,876	105	1	0	2					
		T4M	4,227	91	1	0	1	4,376	94	1	0	2	4,714	101	1	0	2	4,774	102	1	0	2					



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WDGE2 LED
Rev 05/30/24

Submitted by Enterprise Lighting, LTD.



Job Name:
WHITEWATER MULTI-FAMILY

Catalog Number:
WDGE2 LED P3 40K 80CRI TFTM
MVOLT SRM DDBXD
Notes:

Type:
OW1
ELL24-131359

Electrical Load

Performance Package	System Watts	Current (A)					
		120Vac	208Vac	240Vac	277Vac	347Vac	480Vac
P0	7.0	0.061	0.042	0.04	0.039	--	--
	9.0	--	--	--	--	0.031	0.021
P1	11.0	0.100	0.064	0.059	0.054	--	--
	14.1	--	--	--	--	0.046	0.031
P2	19.0	0.168	0.106	0.095	0.083	--	--
	22.8	--	--	--	--	0.067	0.050
P3	32.0	0.284	0.163	0.144	0.131	--	--
	37.1	--	--	--	--	0.107	0.079
P4	47.0	0.412	0.234	0.207	0.185	--	--
	53.5	--	--	--	--	0.153	0.112

Lumen Output in Emergency Mode (4000K, 80 CRI, T3M)

Option	Lumens
E10WH	1,358
E20WC	2,230

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.03
10°C	50°F	1.02
20°C	68°F	1.01
25°C	77°F	1.00
30°C	86°F	0.99
40°C	104°F	0.97

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a 25°C ambient, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	1.0	>0.96	>0.93	>0.87

Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit the Lithonia Lighting WDGE LED homepage. Tested in accordance with IESNA LM-79 and LM-80 standards.

LEGEND

- 0.25 fc
- 0.5 fc
- 1.0 fc
- 3.0 fc

MH = 10ft
Grid = 10ft x 10ft



Emergency Egress Options

Emergency Battery Backup

The emergency battery backup is integral to the luminaire — no external housing required! This design provides reliable emergency operation while maintaining the aesthetics of the product. All emergency battery backup configurations include an independent secondary driver with an integral relay to immediately detect loss of normal power and automatically energize the luminaire. The emergency battery will power the luminaire for a minimum duration of 90 minutes (maximum duration of three hours) from the time normal power is lost and maintain a minimum of 60% of the light output at the end of 90minutes.

Applicable codes: NFPA 70/NEC – section 700.16, NFPA 101 Life Safety Code Section 7.9



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WDGE2 LED
Rev 05/30/24

Submitted by Enterprise Lighting, LTD.



Job Name:
WHITEWATER MULTI-FAMILY

Catalog Number:
WDGE2 LED P3 40K 80CRI TFTM
MVOLT SRM DDBXD
Notes:

Type:
OW1
ELL24-131359

Control / Sensor Options

Motion/Ambient Sensor (PIR, PIRH)

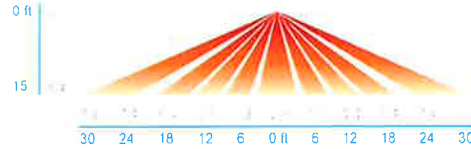
Motion/Ambient sensor (Sensor Switch MSOD) is integrated into the the luminaire. The sensor provides both Motion and Daylight based dimming of the luminaire. For motion detection, the sensor utilizes 100% Digital Passive Infrared (PIR) technology that is tuned for walking size motion while preventing false tripping from the environment. The integrated photocell enables additional energy savings during daytime periods when there is sufficient daylight. Optimize sensor coverage by either selecting PIR or PIRH option. PIR option comes with a sensor lens that is optimized to provide maximum coverage for mounting heights between 8-15ft, while PIRH is optimized for 15-40ft mounting height.

Networked Control (NLTAIR2)

nLight® AIR is a wireless lighting controls platform that allows for seamless integration of both indoor and outdoor luminaires. Five-tier security architecture, 900 MHz wireless communication and app (CLAIRITY™ Pro) based configurability combined together make nLight® AIR a secure, reliable and easy to use platform.

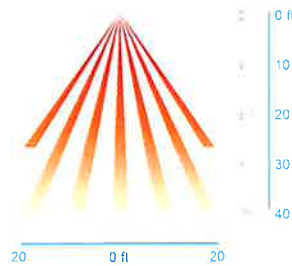
PIR

HIGH VIEW



PIRH

SIDE VIEW



TOP VIEW



Option	Dim Level	High Level (when triggered)	Photocell Operation	Motion Time Delay	Ramp-down Time	Ramp-up Time
PIR or PIRH	Motion - 3V (37% of full output) Photocell - 0V (turned off)	10V (100% output)	Enabled @ 5fc	5 min	5 min	Motion - 3 sec Photocell - 45 sec
PIR1FC3V, PIRH1FC3V	Motion - 3V (37% of full output) Photocell - 0V (turned off)	10V (100% output)	Enabled @ 1fc	5 min	5 min	Motion - 3 sec Photocell - 45 sec
NLTAIR2 PIR, NLTAIR2 PIRH (out of box)	Motion - 3V (37% of full output) Photocell - 0V (turned off)	10V (100% output)	Enabled @ 5fc	7.5 min	5 min	Motion - 3 sec Photocell - 45 sec



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Job Name:
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Catalog Number:
WDGE2 LED P3 40K 80CRI TFTM
MVOLT SRM DDBXD
Notes:

Type:
OW1
ELL24-131359

Mounting, Options & Accessories



Motion/Ambient Sensor

D = 7"
H = 9" (Standalone controls)
11" (nLight AIR controls, 2" antenna will be pointing down behind the sensor)
W = 11.5"



PBBW - Surface-Mounted Back Box
Use when there is no junction box available.

D = 1.75"
H = 9"
W = 11.5"



AWS - 3/8inch Architectural Wall Spacer

D = 0.38"
H = 4.4"
W = 7.5"

FEATURES & SPECIFICATIONS

INTENDED USE

Common architectural look, with clean rectilinear shape, of the WDGE LED was designed to blend with any type of construction, whether it be tilt-up, frame or brick. Applications include commercial offices, warehouses, hospitals, schools, malls, restaurants, and other commercial buildings.

CONSTRUCTION

The single-piece die-cast aluminum housing integrates secondary heat sinks to optimize thermal transfer from the internal light engine heat sinks and promote long life. The driver is mounted in direct contact with the casting for a low operating temperature and long life. The die-cast door frame is fully gasketed with a one-piece solid silicone gasket to keep out moisture and dust, providing an IP66 rating for the luminaire.

FINISH

Exterior painted parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Standard Super Durable colors include dark bronze, black, natural aluminum, sandstone and white. Available in textured and non-textured finishes.

OPTICS

Individually formed acrylic lenses are engineered for superior application efficiency which maximizes the light in the areas where it is most needed. The WDGE LED has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

ELECTRICAL

Light engine consists of high-efficiency LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to L91/100,000 hours at 25°C). The electronic driver has a power factor of >90%, THD <20%. Luminaire comes with built in 6kV surge protection, which meets a minimum Category C low exposure (per ANSI/IEEE C62.41.2). Fixture ships standard with 0-10v dimmable driver.

INSTALLATION

A universal mounting plate with integral mounting support arms allows the fixture to hinge down for easy access while making wiring connections. The 3/8" Architectural Wall Spacer (AWS) can be used to create a floating appearance or to accommodate small imperfections in the wall surface. The ICW option can be used to mount the luminaire inverted for indirect lighting in dry and damp locations. Design can withstand up to a 1.5 G vibration load rating per ANSI C136.31.

LISTINGS

CSA certified to U.S. and Canadian standards. Luminaire is IP66 rated. PIR options are rated for wet location. Rated for -40°C minimum ambient. DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified. International Dark-Sky Association (IDA) Fixture Seal of Approval (FSA) is available for all products on this page utilizing 2700K and 3000K color temperature only and SRM mounting only.

GOVERNMENT PROCUREMENT

BABA - Build America Buy America: Product qualifies as produced in the United States under the definitions of the Build America, Buy America Act. Please refer to [www.acuitybrands.com/buyamerica.com](http://www.acuitybrands.com/buyamerica) for additional information.

WARRANTY

5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at: www.acuitybrands.com/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.



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WDGE2 LED
Rev 05/30/24



STORM WATER MANAGEMENT PLAN

FOR

Whitewater Multi-Family Development

Moraine View Parkway
Whitewater, Wisconsin

July 10th, 2024

PREPARED BY:
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CJE Job No.: 2364R0-SWMP

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 - i. SWMP – Proposed Conditions Plan
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Narrative:

The Whitewater Multi-Family Development is a project which is proposing the development of an existing vacant parcel of land which is located along Moraine Parkway in Whitewater, Wisconsin. The proposed development will consist of 8 uniform multi-family apartment buildings as well as the construction of a facilities office and 33 onsite parking stalls. The development will also include access drive aisles and concrete pedestrian walkways throughout the property. Said walks and drives will provide access to the proposed multi-family apartment buildings.

The existing site predominantly drains from west to east and in which the site runoff is discharged to the existing storm sewer system located in Morain Parkway. The remaining portion of the site which is not captured in the storm sewer system drains to the neighboring properties to the northwest. The proposed development will maintain the existing drainage pattern of the undeveloped site while also capturing additional areas which are not currently captured in the storm sewer system in Morain parkway. The proposed development will increase the impervious area by 262,243 s.f. (6.020 acres) and will disturb approximately 11.086 acres. This value exceeds the one-acre threshold which requires the development to meet the City of whitewater's storm water ordinance for water quantity and quality. In order to meet the storm water management requirement of NR 151 and the City of Whitewater storm water ordinance, the development must not exceed the existing developments peak runoff rate during the 1,2,5,10,25 and 100 year storm events and provide a 80% reduction of total suspended solids (TSS). For the purpose of meeting both of these requirements, the development is proposing to implement three storm water basins throughout the site. There will be two bio-retention basins and one wet pond. The bio-retention basins will be located on the north and south sides of the property and the wet pond on the east side. The south bio-retention basin and the east wet pond will collect the majority of the runoff from the proposed buildings, walks and drives through a combination of storm sewer conveyance systems, grassed swales and sheet draining directly to said basins. The north bio retention will collect a portion of the stormwater runoff from the north situated buildings, walks and drives. This runoff will sheet predominantly sheet drain to the basin while a small portion of the southwest building #6 will be collected and routed using a downspout connector pipe system. The runoff that is collected in the basins will then discharge through multistage outlet structures to the existing storm sewer system on the east side of the property, maintaining the existing draining pattern. Any runoff not captured by the proposed stormwater basins has been accounted for and analyzed as undetained area in the modeling.

This development has been designed to meet to the storm water management requirements of NR 151 and the City of Whitewater which utilizes the NOAA Atlas 14 rainfall values and the MSE3 distribution for Walworth County as recommended by WI DNR and SEWRPC.

Existing Site:

Soil Types: BpB – Boyer Complex: HSG A
 DdA – Dodge Silt Loam: HSG C
 KiA – Kendall Silt Loam: HSG B/D
 KwB - Knowles Silt Loam: HSG C
 MpB- McHenry Silt Loam: HSG B

Per USDA NRCS Web Soil Survey Viewer – Walworth County, WI

Cover & CN: CN 74, >75% Grass, Good, HSG C

Area: Total Analyzed Area: 494,707 s.f. (11.357 acres)

Developed Site: (See the Proposed Conditions Plan).

Cover & CN: CN 74, >75% Grass, Good, HSG C
 CN 98, Paved Parking, HSG C
 CN 98, Roofs, HSG C
 CN 98, Water Surface, HSG C

Area: Total Analyzed Area: 494,707 s.f. (11.357 acres)

24-Hour Rainfall Values:

1-Year: 2.46”
 2-Year: 2.80”
 5-Year: 3.42”
 10-Year: 3.97”
 25-Year: 4.80”
 100-Year: 6.55”

All rainfall data is for 24-hour duration per the NOAA Atlas 14 rainfall values and the MSE3 distribution for Walworth County as recommended by WI DNR and SEWRPC.

Method of Analysis:

The storm water runoff quantity was calculated using the methods outlines in TR-55 (“Urban Hydrology for Small Watersheds” by the U.S. Department of Agriculture’s Soil Conservation Services). Calculations were performed with the “HydroCAD 10.0” computer software.

City of Whitewater and WDNR NR151 runoff control requirements:

Whitewater: By Design, BMP's Shall be employed to maintain or reduce the peak runoff discharge rates, to the maximum extent practicable, as compared to pre-development conditions for the 2 through 100-year design storm applicable to the development site.

NR 151.123(1): By design, BMPs shall be employed to maintain or reduce the 1-year, 24-hour and the 2-year, 24-hour post-construction peak runoff discharge rates to the 1-year, 24-hour and the 2-year, 24-hour pre-development peak runoff discharge rates respectively, or to the maximum extent practicable.

Drainage Summary: (See Summary of Calculations in Appendix)

Area	1 Year Storm	2 Year Storm	5 Year Storm	10 Year Storm	25 Year Storm	100 Year Storm
Existing Conditions	8.08 cfs	11.25 cfs	17.63 cfs	23.94 cfs	33.88 cfs	56.20 cfs
Proposed Conditions						
Subcatchment 1: Area to Bioretention Basin #1	11.90 cfs	14.40 cfs	19.04 cfs	23.18 cfs	29.44 cfs	42.58 cfs
Basin #1: South Bio-Retention basin Discharge	0.04 cfs	0.08 cfs	0.16 cfs	0.22 cfs	0.33 cfs	0.54 cfs
Subcatchment 2: Area to Stormwater Pond #2	8.04 cfs	9.74 cfs	12.88 cfs	15.68 cfs	19.91 cfs	28.79 cfs
Basin #2: East Stormwater Pond Discharge	0.11 cfs	0.12 cfs	0.14 cfs	0.15 cfs	0.17 cfs	2.88 cfs
Subcatchment 3: Area to Bioretention Basin #3	3.58 cfs	4.34 cfs	5.74 cfs	6.99 cfs	8.87 cfs	12.83 cfs
Basin #3: North Bio-Retention basin Discharge	0.84 cfs	0.89 cfs	1.01 cfs	1.19 cfs	1.35 cfs	4.08 cfs
Subcatchment 4: Undetained Area	2.41 cfs	3.10 cfs	4.43 cfs	5.66 cfs	7.58 cfs	11.72 cfs
Proposed Total Runoff	3.26 cfs	4.00 cfs	5.41 cfs	6.69 cfs	8.87 cfs	13.28 cfs
Allowable Runoff	8.08 cfs	11.25 cfs	17.63 cfs	23.94 cfs	33.88 cfs	56.20 cfs

Water Quality:

Based on the proposed construction of the wet pond and grass filter strips, the site meets the City of Whitewater and WDNR requirements for water quality for redevelopment by removing over 80% of the total suspended solids (TSS) prior to discharge off site, as quantified using WinSLAMM for Windows version 10.2.0 (See appendix for inputs and calculation results). The TSS from the site development analysis is summarized below:

	Before Drainage System	After Controls	% Reduction
Total site	3079 lbs.	523.1 lbs.	83.01 %

Infiltration Exemption:

Per the USDA Natural Resources Conservation Service, Web Soil Survey, the site area consists primarily of silty clay loam and silty loam which are classified as soils with an infiltration rate less than 0.6 inches per hour. Based on NR 151.124(4)(c)1, the site is exempt from storm water infiltration requirements.

Conclusion:

The design and implementation of a new storm water wet pond and reduction of impervious surface allow the redeveloped site to meet and exceed the design requirements for storm water quantity and quality per City of Whitewater and WI DNR regulations. Therefore, the proposed development meets the storm water management water quantity and quality requirements for the City of Whitewater storm water ordinance and WDNR 151.

APPENDIX A



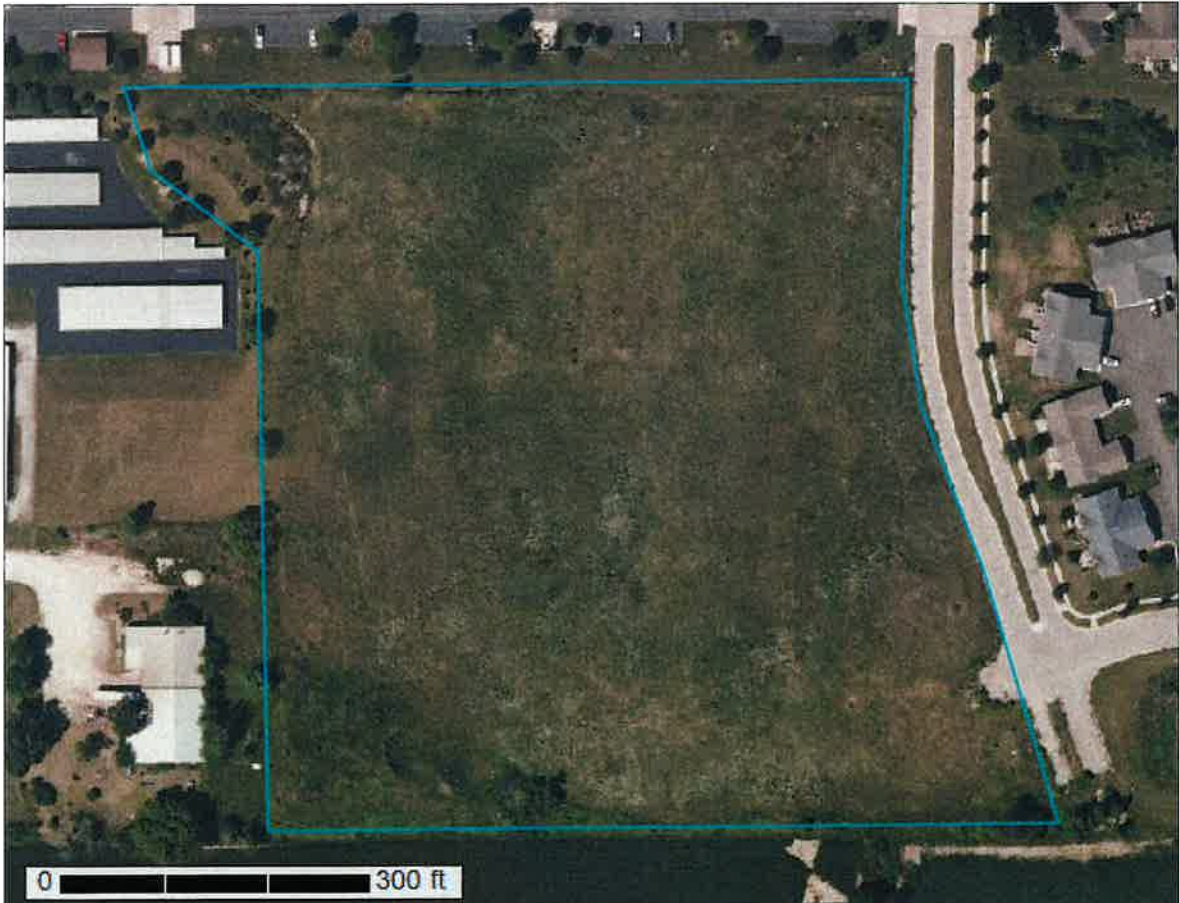
United States
Department of
Agriculture

NRCS

Natural
Resources
Conservation
Service

A product of the National
Cooperative Soil Survey,
a joint effort of the United
States Department of
Agriculture and other
Federal agencies, State
agencies including the
Agricultural Experiment
Stations, and local
participants

Custom Soil Resource Report for Walworth County, Wisconsin



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (<http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/>) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (<https://offices.sc.egov.usda.gov/locator/app?agency=nrcs>) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

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Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report Soil Map



Map Scale: 1:1,860 if printed on A landscape (11" x 8.5") sheet.

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 Map Unit Polygons
 - Soil Map Unit Lines
 - Soil Map Unit Points
- Special Point Features**
 - Blowout
 - Borrow Pit
 - Clay Spot
 - Closed Depression
 - Gravel Pit
 - Gravelly Spot
 - Landfill
 - Lava Flow
 - Marsh or swamp
 - Mine or Quarry
 - Miscellaneous Water
 - Perennial Water
 - Rock Outcrop
 - Saline Spot
 - Sandy Spot
 - Severely Eroded Spot
 - Sinkhole
 - Slide or Slip
 - Sodic Spot
- Water Features**
 - Streams and Canals
- Transportation**
 - Rails
 - Interstate Highways
 - US Routes
 - Major Roads
 - Local Roads
- Background**
 - Aerial Photography
- Other Features**
 - Spoil Area
 - Stony Spot
 - Very Stony Spot
 - Wet Spot
 - Other
 - Special Line Features

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

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: Walworth County, Wisconsin
 Survey Area Data: Version 20, Sep 8, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 30, 2022—Aug 18, 2022

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.

Custom Soil Resource Report

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BpB	Boyer complex, 2 to 6 percent slopes	2.3	19.8%
DdA	Dodge silt loam, 0 to 2 percent slopes	2.0	17.5%
KIA	Kendall silt loam, 1 to 3 percent slopes	0.7	6.2%
KwB	Knowles silt loam, 2 to 6 percent slopes	5.8	51.2%
MpB	McHenry silt loam, 2 to 6 percent slopes	0.6	5.2%
Totals for Area of Interest		11.4	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

Custom Soil Resource Report

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Custom Soil Resource Report

Walworth County, Wisconsin**BpB—Boyer complex, 2 to 6 percent slopes****Map Unit Setting**

National map unit symbol: g8vv
Elevation: 660 to 980 feet
Mean annual precipitation: 30 to 38 inches
Mean annual air temperature: 43 to 48 degrees F
Frost-free period: 150 to 190 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Boyer and similar soils: 65 percent
Boyer and similar soils: 35 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Boyer**Setting**

Landform: Outwash plains, stream terraces
Parent material: Sandy and loamy drift over sandy and gravelly outwash

Typical profile

Ap - 0 to 7 inches: loamy sand
BE,Bt - 7 to 26 inches: sandy loam
BC,2C - 26 to 60 inches: gravelly sand

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: About 60 to 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 25 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Ecological site: F095XB007WI - Loamy Upland with Carbonates
Forage suitability group: Low AWC, adequately drained (G095BY002WI)
Other vegetative classification: Low AWC, adequately drained (G095BY002WI)
Hydric soil rating: No

Description of Boyer**Setting**

Landform: Stream terraces, outwash plains
Parent material: Sandy and loamy drift over sandy and gravelly outwash

Custom Soil Resource Report

Typical profile

Ap - 0 to 7 inches: sandy loam
BE,Bt - 7 to 26 inches: sandy loam
BC,2C - 26 to 60 inches: gravelly sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: About 60 to 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 25 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Ecological site: F095XB007WI - Loamy Upland with Carbonates
Forage suitability group: Low AWC, adequately drained (G095BY002WI)
Other vegetative classification: Low AWC, adequately drained (G095BY002WI)
Hydric soil rating: No

DdA—Dodge silt loam, 0 to 2 percent slopes**Map Unit Setting**

National map unit symbol: 2szfn
Elevation: 890 to 1,200 feet
Mean annual precipitation: 31 to 35 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 125 to 175 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Dodge and similar soils: 87 percent
Minor components: 13 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Dodge**Setting**

Landform: Ground moraines
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex

Custom Soil Resource Report

Parent material: Loess over calcareous loamy till

Typical profile

Ap - 0 to 7 inches: silt loam
BE - 7 to 17 inches: silt loam
Bt1 - 17 to 29 inches: silty clay loam
2Bt2 - 29 to 35 inches: clay loam
2C - 35 to 79 inches: gravelly sandy loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 10.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: C
Ecological site: F095XB007WI - Loamy Upland with Carbonates
Forage suitability group: High AWC, adequately drained (G095BY008WI)
Other vegetative classification: High AWC, adequately drained (G095BY008WI)
Hydric soil rating: No

Minor Components**St. charles**

Percent of map unit: 7 percent
Landform: Ground moraines
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: F095XB010WI - Loamy and Clayey Upland
Hydric soil rating: No

Mayville

Percent of map unit: 4 percent
Landform: Ground moraines
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F095XB010WI - Loamy and Clayey Upland
Hydric soil rating: No

Lamartine

Percent of map unit: 2 percent
Landform: Ground moraines
Landform position (two-dimensional): Summit

Custom Soil Resource Report

Landform position (three-dimensional): Crest
Down-slope shape: Linear
Across-slope shape: Concave
Ecological site: F095XB005WI - Moist Loamy or Clayey Lowland
Hydric soil rating: No

KIA—Kendall silt loam, 1 to 3 percent slopes**Map Unit Setting**

National map unit symbol: g8x2
Elevation: 660 to 980 feet
Mean annual precipitation: 30 to 38 inches
Mean annual air temperature: 43 to 48 degrees F
Frost-free period: 150 to 190 days
Farmland classification: Prime farmland if drained

Map Unit Composition

Kendall and similar soils: 95 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Kendall**Setting**

Landform: Drainageways
Landform position (three-dimensional): Talf
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Loess over stratified loamy outwash

Typical profile

A,E,BE - 0 to 12 inches: silt loam
Bt,Btg - 12 to 26 inches: silty clay loam
BCg,2BC,2C - 26 to 60 inches: stratified sandy loam to silt loam

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
 (0.57 to 1.98 in/hr)
Depth to water table: About 0 to 24 inches
Frequency of flooding: None
Frequency of ponding: Occasional
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 11.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2w

Custom Soil Resource Report

Hydrologic Soil Group: B/D
Ecological site: F095XB005WI - Moist Loamy or Clayey Lowland
Forage suitability group: High AWC, high water table (G095BY007WI)
Other vegetative classification: High AWC, high water table (G095BY007WI)
Hydric soil rating: No

Minor Components**Pella**

Percent of map unit: 3 percent
Landform: Depressions
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: F095XB004WI - Wet Loamy or Clayey Lowland
Hydric soil rating: Yes

St. charles

Percent of map unit: 2 percent
Landform: Rises
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: F095XB010WI - Loamy and Clayey Upland
Hydric soil rating: No

KwB—Knowles silt loam, 2 to 6 percent slopes**Map Unit Setting**

National map unit symbol: 2wsry
Elevation: 640 to 1,180 feet
Mean annual precipitation: 31 to 37 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 124 to 181 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Knowles and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Knowles**Setting**

Landform: Ground moraines
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Loess over loamy till over dolomite

Custom Soil Resource Report

Typical profile

Ap - 0 to 8 inches: silt loam
BE - 8 to 12 inches: silt loam
Bt1 - 12 to 29 inches: silty clay loam
2Bt2 - 29 to 39 inches: clay loam
3R - 39 to 79 inches: bedrock

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: 33 to 40 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 7.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: F095XB006WI - Shallow Upland
Forage suitability group: Mod AWC, adequately drained (G095BY005WI)
Other vegetative classification: Mod AWC, adequately drained (G095BY005WI)
Hydric soil rating: No

Minor Components**Dodge**

Percent of map unit: 4 percent
Landform: Ground moraines
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluv
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F095XB007WI - Loamy Upland with Carbonates
Other vegetative classification: High AWC, adequately drained (G095BY008WI)
Hydric soil rating: No

Lamartine

Percent of map unit: 3 percent
Landform: Ground moraines
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluv
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F095XB005WI - Moist Loamy or Clayey Lowland
Other vegetative classification: High AWC, high water table (G095BY007WI)
Hydric soil rating: No

Ritchey

Percent of map unit: 3 percent
Landform: Ground moraines

Custom Soil Resource Report

Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: F095XB006WI - Shallow Upland
Hydric soil rating: No

MpB—McHenry silt loam, 2 to 6 percent slopes**Map Unit Setting**

National map unit symbol: 2tjyr
Elevation: 820 to 1,490 feet
Mean annual precipitation: 31 to 37 inches
Mean annual air temperature: 45 to 48 degrees F
Frost-free period: 126 to 181 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Mchenry and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Mchenry**Setting**

Landform: Moraines
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Loess over loamy till

Typical profile

Ap - 0 to 5 inches: silt loam
E - 5 to 10 inches: silt loam
Bt1 - 10 to 22 inches: silty clay loam
2Bt2 - 22 to 32 inches: loam
2Bt3 - 32 to 37 inches: fine sandy loam
2C - 37 to 79 inches: gravelly sandy loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high
 (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None

Custom Soil Resource Report

Calcium carbonate, maximum content: 30 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: High (about 9.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: F095XB010WI - Loamy and Clayey Upland
Forage suitability group: High AWC, adequately drained (G095BY008WI)
Other vegetative classification: High AWC, adequately drained (G095BY008WI)
Hydric soil rating: No

Minor Components**Dodge, eroded**

Percent of map unit: 5 percent
Landform: Moraines
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: F095XB007WI - Loamy Upland with Carbonates
Hydric soil rating: No

Elburn

Percent of map unit: 3 percent
Landform: Drainageways
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: F095XB002WI - Wet Floodplain
Hydric soil rating: No

Fox

Percent of map unit: 2 percent
Landform: Moraines
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Convex
Ecological site: F095XB010WI - Loamy and Clayey Upland
Hydric soil rating: No

References

- American Association of State Highway and Transportation Officials (AASHTO). 2004. Standard specifications for transportation materials and methods of sampling and testing. 24th edition.
- American Society for Testing and Materials (ASTM). 2005. Standard classification of soils for engineering purposes. ASTM Standard D2487-00.
- Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of wetlands and deep-water habitats of the United States. U.S. Fish and Wildlife Service FWS/OBS-79/31.
- Federal Register. July 13, 1994. Changes in hydric soils of the United States.
- Federal Register. September 18, 2002. Hydric soils of the United States.
- Hurt, G.W., and L.M. Vasilas, editors. Version 6.0, 2006. Field indicators of hydric soils in the United States.
- National Research Council. 1995. Wetlands: Characteristics and boundaries.
- Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service. U.S. Department of Agriculture Handbook 18. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_054262
- Soil Survey Staff. 1999. Soil taxonomy: A basic system of soil classification for making and interpreting soil surveys. 2nd edition. Natural Resources Conservation Service, U.S. Department of Agriculture Handbook 436. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053577
- Soil Survey Staff. 2010. Keys to soil taxonomy. 11th edition. U.S. Department of Agriculture, Natural Resources Conservation Service. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053580
- Tiner, R.W., Jr. 1985. Wetlands of Delaware. U.S. Fish and Wildlife Service and Delaware Department of Natural Resources and Environmental Control, Wetlands Section.
- United States Army Corps of Engineers, Environmental Laboratory. 1987. Corps of Engineers wetlands delineation manual. Waterways Experiment Station Technical Report Y-87-1.
- United States Department of Agriculture, Natural Resources Conservation Service. National forestry manual. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/home/?cid=nrcs142p2_053374
- United States Department of Agriculture, Natural Resources Conservation Service. National range and pasture handbook. <http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/landuse/rangepasture/?cid=stelprdb1043084>

Custom Soil Resource Report

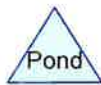
United States Department of Agriculture, Natural Resources Conservation Service. National soil survey handbook, title 430-VI. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/scientists/?cid=nrcs142p2_054242

United States Department of Agriculture, Natural Resources Conservation Service. 2006. Land resource regions and major land resource areas of the United States, the Caribbean, and the Pacific Basin. U.S. Department of Agriculture Handbook 296. http://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053624

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs142p2_052290.pdf



EXISTING CONDITIONS



Routing Diagram for CJE2364R0
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CJE2364R0

MSE 24-hr 3 1-year Rainfall=2.46"

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Summary for Subcatchment ES: EXISITNG CONDITIONS

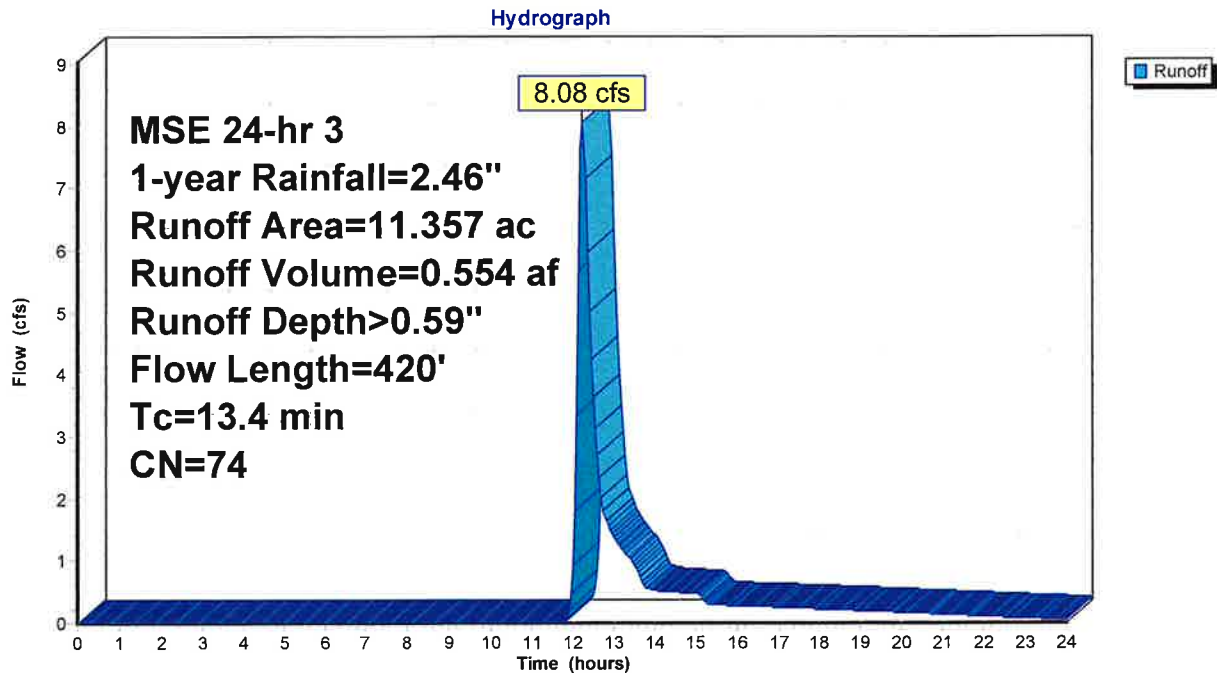
Runoff = 8.08 cfs @ 12.24 hrs, Volume= 0.554 af, Depth> 0.59"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 1-year Rainfall=2.46"

Area (ac)	CN	Description
11.357	74	>75% Grass cover, Good, HSG C
11.357		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.7	100	0.0200	0.16		Sheet Flow, A-B
					Grass: Short n= 0.150 P2= 2.70"
2.7	320	0.0156	2.01		Shallow Concentrated Flow, B-C
					Unpaved Kv= 16.1 fps
13.4	420	Total			

Subcatchment ES: EXISITNG CONDITIONS



CJE2364R0

MSE 24-hr 3 2-year Rainfall=2.80"

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Summary for Subcatchment ES: EXISITNG CONDITIONS

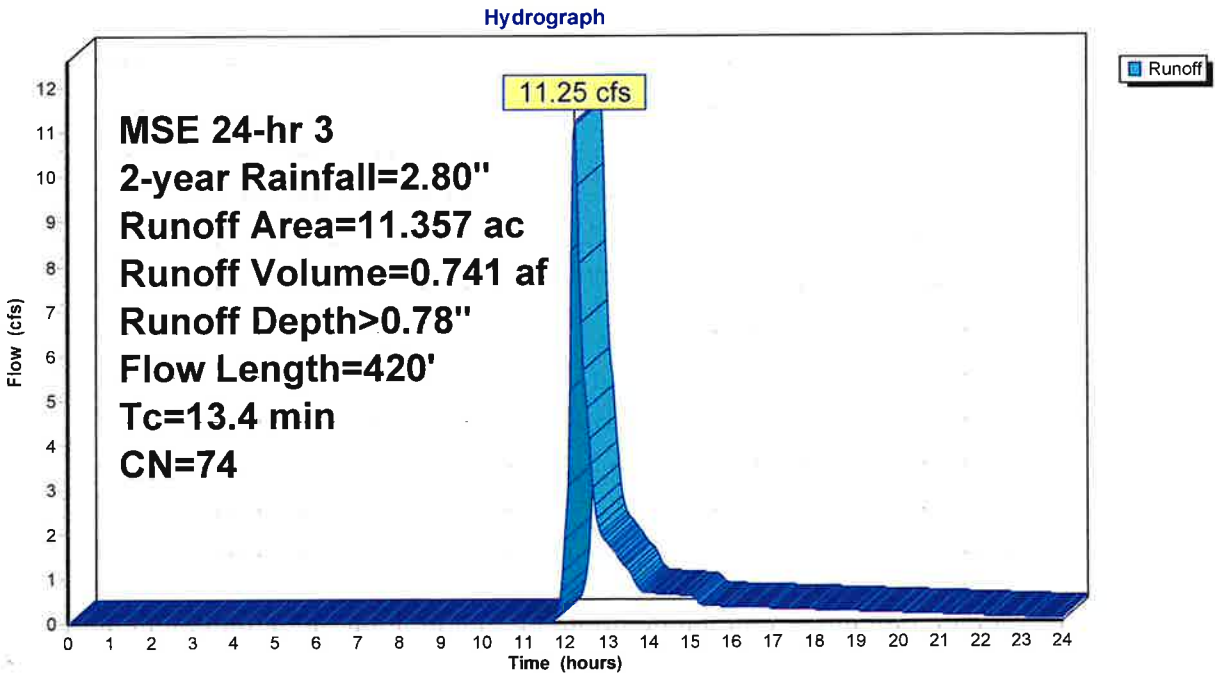
Runoff = 11.25 cfs @ 12.23 hrs, Volume= 0.741 af, Depth> 0.78"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-year Rainfall=2.80"

Area (ac)	CN	Description
11.357	74	>75% Grass cover, Good, HSG C
11.357		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.7	100	0.0200	0.16		Sheet Flow, A-B
					Grass: Short n= 0.150 P2= 2.70"
2.7	320	0.0156	2.01		Shallow Concentrated Flow, B-C
					Unpaved Kv= 16.1 fps
13.4	420	Total			

Subcatchment ES: EXISITNG CONDITIONS



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MSE 24-hr 3 5-year Rainfall=3.42"

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Summary for Subcatchment ES: EXISITNG CONDITIONS

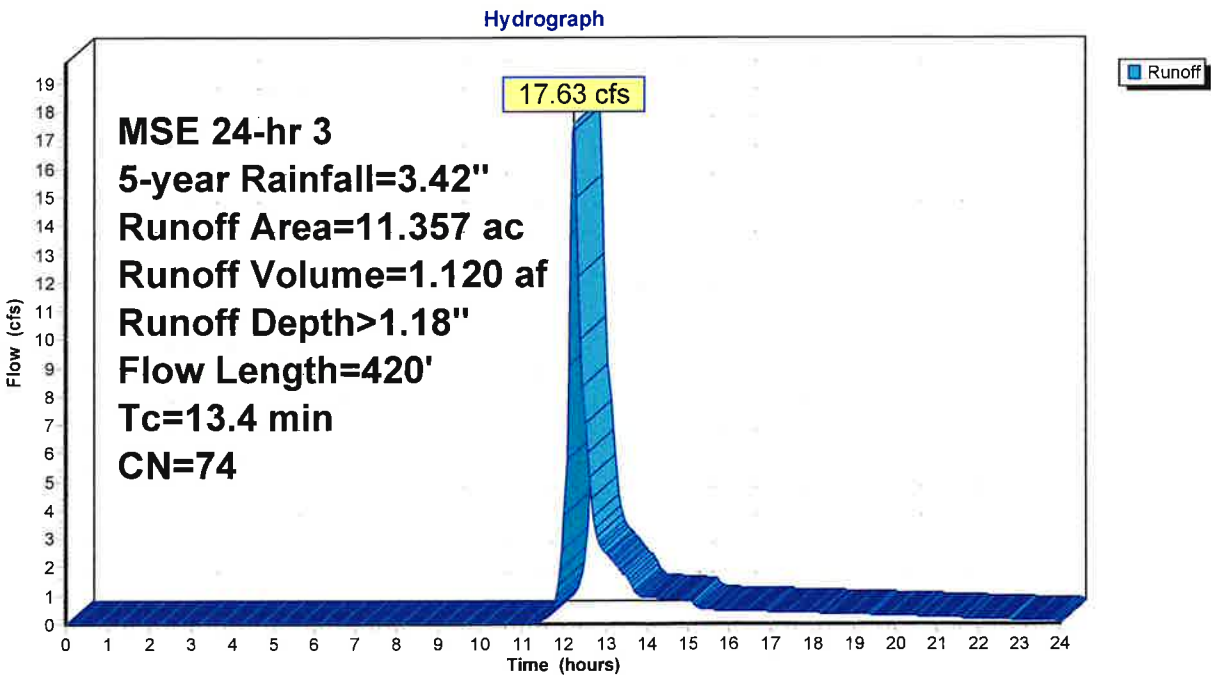
Runoff = 17.63 cfs @ 12.23 hrs, Volume= 1.120 af, Depth> 1.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 5-year Rainfall=3.42"

Area (ac)	CN	Description
11.357	74	>75% Grass cover, Good, HSG C
11.357		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.7	100	0.0200	0.16		Sheet Flow, A-B Grass: Short n= 0.150 P2= 2.70"
2.7	320	0.0156	2.01		Shallow Concentrated Flow, B-C Unpaved Kv= 16.1 fps
13.4	420	Total			

Subcatchment ES: EXISITNG CONDITIONS



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MSE 24-hr 3 10-year Rainfall=3.97"

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Summary for Subcatchment ES: EXISITNG CONDITIONS

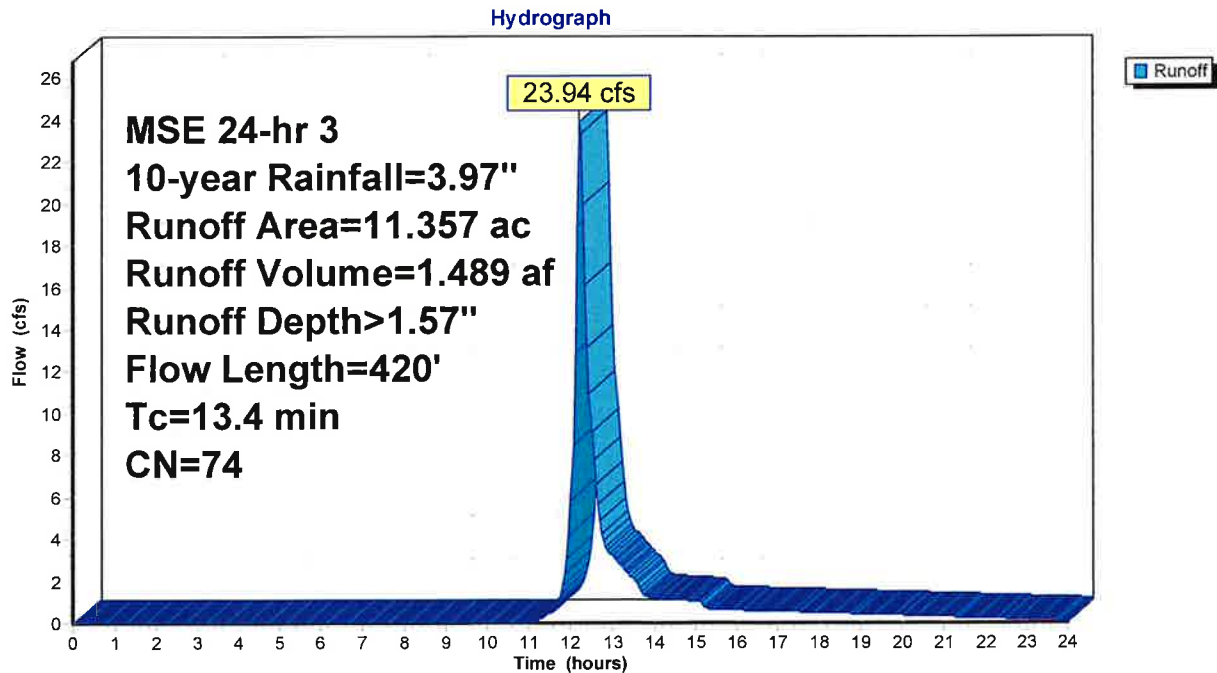
Runoff = 23.94 cfs @ 12.22 hrs, Volume= 1.489 af, Depth> 1.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-year Rainfall=3.97"

Area (ac)	CN	Description
11.357	74	>75% Grass cover, Good, HSG C
11.357		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.7	100	0.0200	0.16		Sheet Flow, A-B Grass: Short n= 0.150 P2= 2.70"
2.7	320	0.0156	2.01		Shallow Concentrated Flow, B-C Unpaved Kv= 16.1 fps
13.4	420	Total			

Subcatchment ES: EXISITNG CONDITIONS



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MSE 24-hr 3 25-year Rainfall=4.80"

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Summary for Subcatchment ES: EXISITNG CONDITIONS

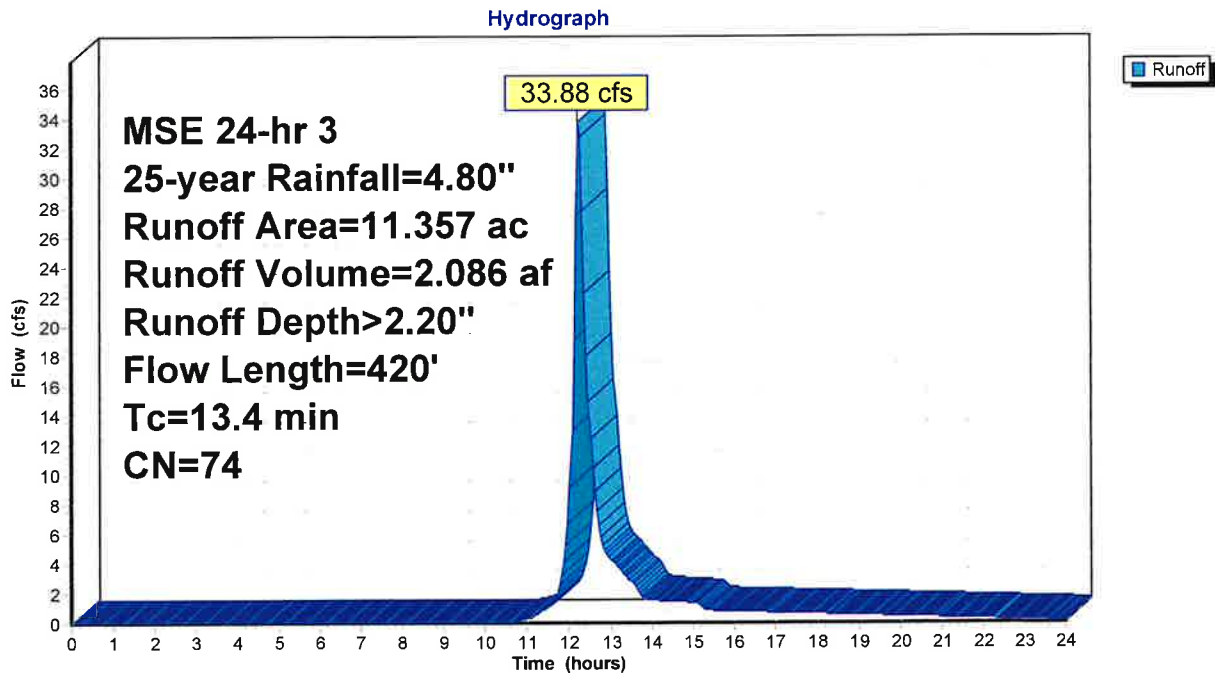
Runoff = 33.88 cfs @ 12.22 hrs, Volume= 2.086 af, Depth> 2.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 25-year Rainfall=4.80"

Area (ac)	CN	Description
11.357	74	>75% Grass cover, Good, HSG C
11.357		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.7	100	0.0200	0.16		Sheet Flow, A-B Grass: Short n= 0.150 P2= 2.70"
2.7	320	0.0156	2.01		Shallow Concentrated Flow, B-C Unpaved Kv= 16.1 fps
13.4	420	Total			

Subcatchment ES: EXISITNG CONDITIONS



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MSE 24-hr 3 100-year Rainfall=6.55"

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Summary for Subcatchment ES: EXISITNG CONDITIONS

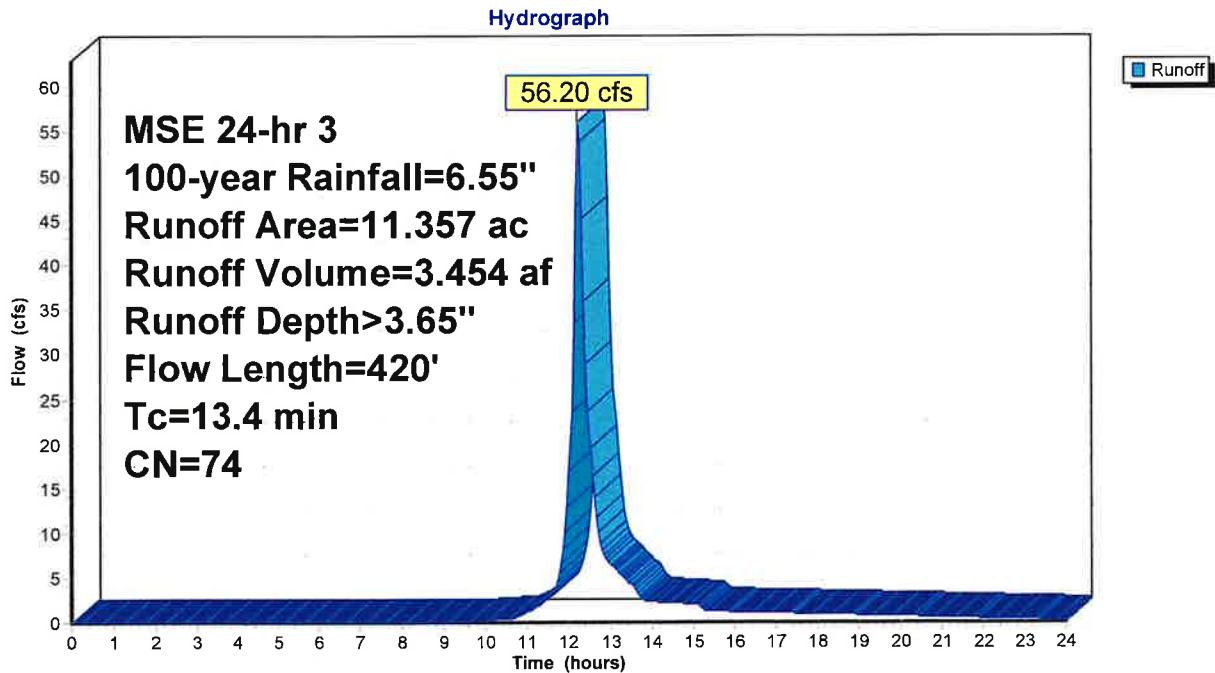
Runoff = 56.20 cfs @ 12.22 hrs, Volume= 3.454 af, Depth> 3.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-year Rainfall=6.55"

Area (ac)	CN	Description
11.357	74	>75% Grass cover, Good, HSG C
11.357		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.7	100	0.0200	0.16		Sheet Flow, A-B Grass: Short n= 0.150 P2= 2.70"
2.7	320	0.0156	2.01		Shallow Concentrated Flow, B-C Unpaved Kv= 16.1 fps
13.4	420	Total			

Subcatchment ES: EXISITNG CONDITIONS



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MSE 24-hr 3 Custom Rainfall=6.22"

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Summary for Subcatchment ES: EXISITNG CONDITIONS

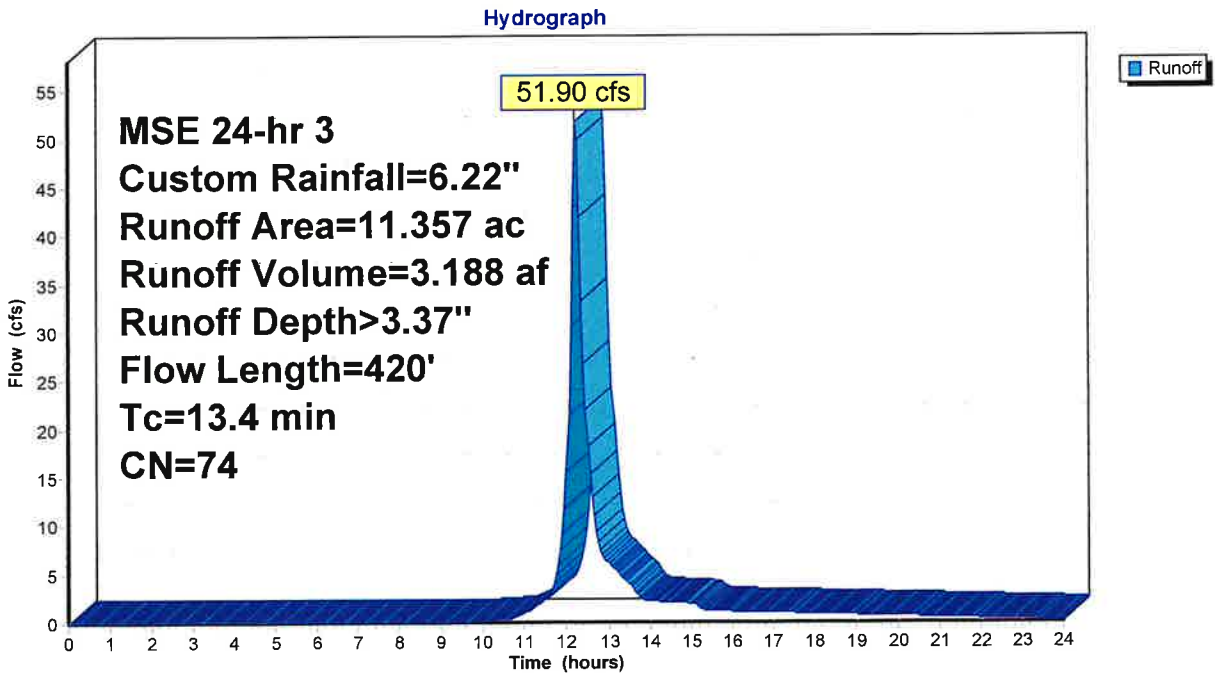
Runoff = 51.90 cfs @ 12.22 hrs, Volume= 3.188 af, Depth> 3.37"

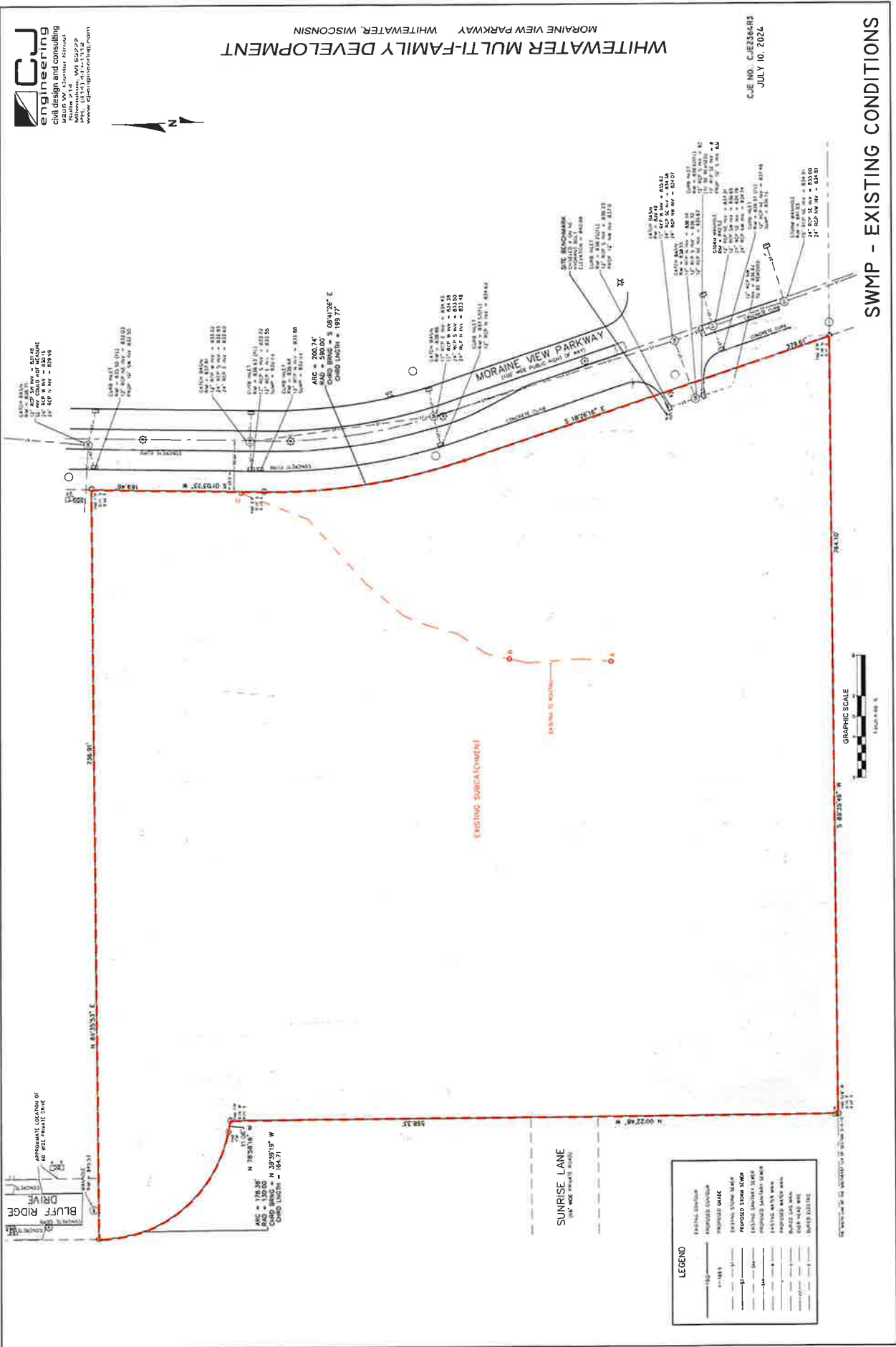
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 Custom Rainfall=6.22"

Area (ac)	CN	Description
11.357	74	>75% Grass cover, Good, HSG C
11.357		100.00% Pervious Area

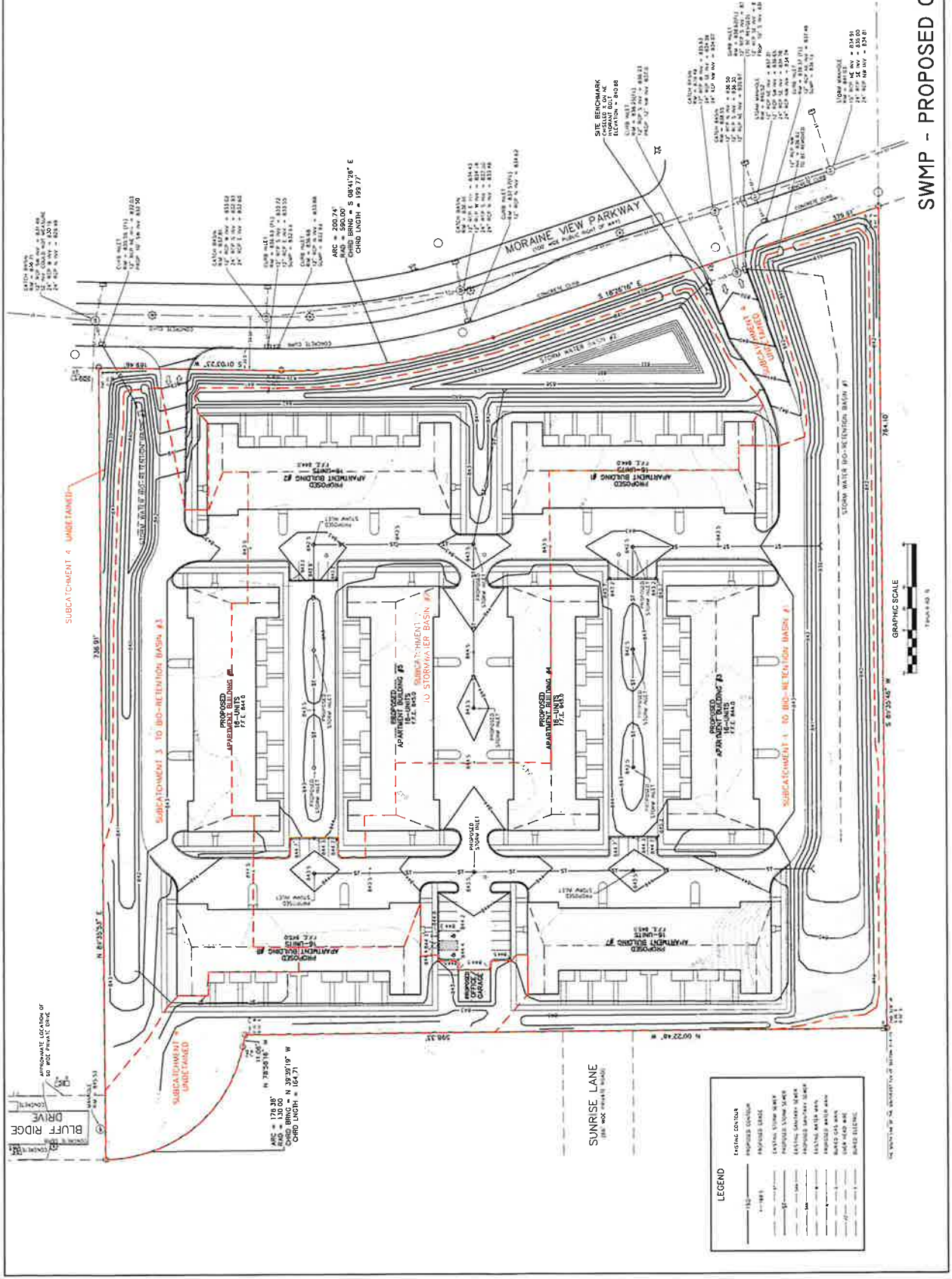
Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.7	100	0.0200	0.16		Sheet Flow, A-B Grass: Short n= 0.150 P2= 2.70"
2.7	320	0.0156	2.01		Shallow Concentrated Flow, B-C Unpaved Kv= 16.1 fps
13.4	420	Total			

Subcatchment ES: EXISITNG CONDITIONS



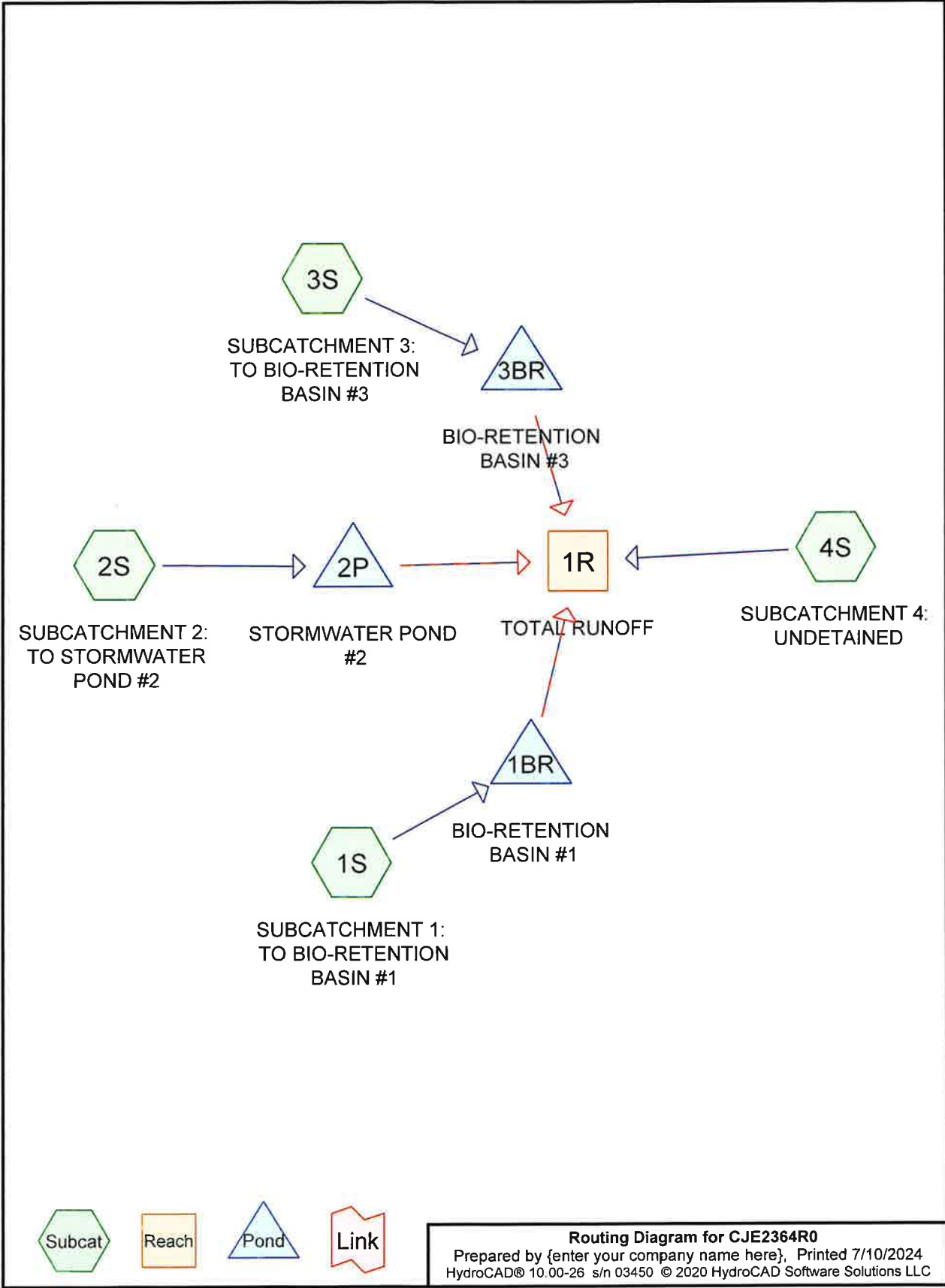


APPENDIX B



SWMP - PROPOSED CONDITIONS





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Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
5.249	74	>75% Grass cover, Good, HSG C (1S, 2S, 3S, 4S)
1.236	98	Bldg Roof, HSG C (1S)
0.279	98	Paved parking, HSG B (4S)
3.027	98	Paved parking, HSG C (1S, 2S, 3S)
1.362	98	Roofs, HSG C (2S, 3S, 4S)
0.205	98	Water Surface, HSG C (2S)
11.358	87	TOTAL AREA

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Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.279	HSG B	4S
11.079	HSG C	1S, 2S, 3S, 4S
0.000	HSG D	
0.000	Other	
11.358		TOTAL AREA

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Ground Covers (selected nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	5.249	0.000	0.000	5.249	>75% Grass cover, Good	1S, 2S, 3S, 4S
0.000	0.000	1.236	0.000	0.000	1.236	Bldg Roof	1S
0.000	0.279	3.027	0.000	0.000	3.306	Paved parking	1S, 2S, 3S, 4S
0.000	0.000	1.362	0.000	0.000	1.362	Roofs	2S, 3S, 4S
0.000	0.000	0.205	0.000	0.000	0.205	Water Surface	2S
0.000	0.279	11.079	0.000	0.000	11.358	TOTAL AREA	

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Pipe Listing (selected nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	1BR	837.00	836.50	31.0	0.0161	0.011	10.0	0.0	0.0
2	1BR	837.50	837.00	550.0	0.0009	0.011	6.0	0.0	0.0
3	2P	838.00	837.00	33.0	0.0303	0.013	12.0	0.0	0.0
4	3BR	837.00	832.50	60.0	0.0750	0.011	10.0	0.0	0.0
5	3BR	837.50	837.00	100.0	0.0050	0.011	6.0	0.0	0.0

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MSE 24-hr 3 1-year Rainfall=2.46"

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: SUBCATCHMENT1: TO Runoff Area=4.951 ac 57.67% Impervious Runoff Depth>1.35"
 Tc=6.0 min CN=88 Runoff=11.90 cfs 0.556 af

Subcatchment2S: SUBCATCHMENT2: TO Runoff Area=3.348 ac 59.89% Impervious Runoff Depth>1.35"
 Tc=6.0 min CN=88 Runoff=8.04 cfs 0.376 af

Subcatchment3S: SUBCATCHMENT3: TO Runoff Area=1.492 ac 58.11% Impervious Runoff Depth>1.35"
 Tc=6.0 min CN=88 Runoff=3.58 cfs 0.167 af

Subcatchment4S: SUBCATCHMENT4: Runoff Area=1.567 ac 24.38% Impervious Runoff Depth>0.86"
 Tc=6.0 min CN=80 Runoff=2.41 cfs 0.112 af

Reach 1R: TOTAL RUNOFF Inflow=3.26 cfs 0.393 af
 Outflow=3.26 cfs 0.393 af

Pond 1BR: BIO-RETENTIONBASIN #1 Peak Elev=839.16' Storage=23,184 cf Inflow=11.90 cfs 0.556 af
 Primary=0.04 cfs 0.024 af Secondary=0.00 cfs 0.000 af Outflow=0.04 cfs 0.024 af

Pond 2P: STORMWATERPOND #2 Peak Elev=839.22' Storage=12,689 cf Inflow=8.04 cfs 0.376 af
 Primary=0.11 cfs 0.109 af Secondary=0.00 cfs 0.000 af Outflow=0.11 cfs 0.109 af

Pond 3BR: BIO-RETENTIONBASIN #3 Peak Elev=839.56' Storage=2,956 cf Inflow=3.58 cfs 0.167 af
 Primary=0.84 cfs 0.147 af Secondary=0.00 cfs 0.000 af Outflow=0.84 cfs 0.147 af

Total Runoff Area = 11.358 ac Runoff Volume = 1.211 af Average Runoff Depth = 1.28"
46.21% Pervious = 5.249 ac 53.79% Impervious = 6.109 ac

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Summary for Subcatchment 1S: SUBCATCHMENT 1: TO BIO-RETENTION BASIN #1

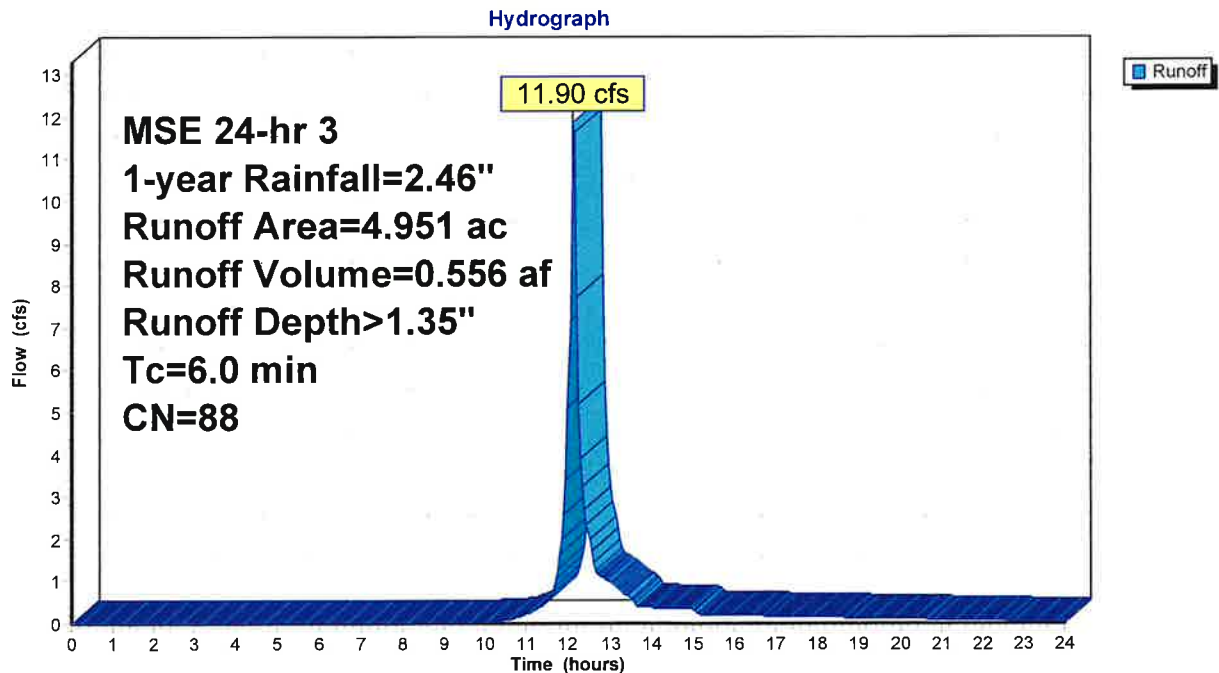
Runoff = 11.90 cfs @ 12.13 hrs, Volume= 0.556 af, Depth> 1.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 1-year Rainfall=2.46"

Area (ac)	CN	Description
* 1.236	98	Bldg Roof, HSG C
* 1.619	98	Paved parking, HSG C
2.096	74	>75% Grass cover, Good, HSG C
4.951	88	Weighted Average
2.096		42.33% Pervious Area
2.855		57.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MIN TC

Subcatchment 1S: SUBCATCHMENT 1: TO BIO-RETENTION BASIN #1



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MSE 24-hr 3 1-year Rainfall=2.46"

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Summary for Subcatchment 2S: SUBCATCHMENT 2: TO STORMWATER POND #2

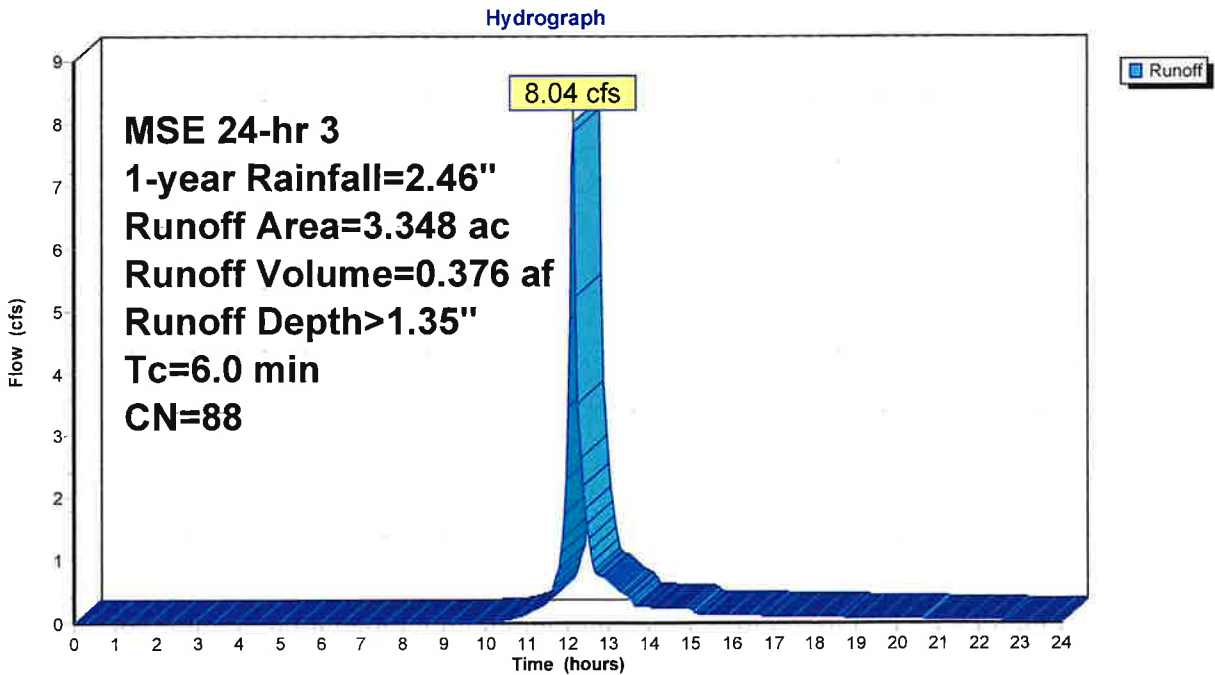
Runoff = 8.04 cfs @ 12.13 hrs, Volume= 0.376 af, Depth> 1.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 1-year Rainfall=2.46"

Area (ac)	CN	Description
0.895	98	Roofs, HSG C
1.343	74	>75% Grass cover, Good, HSG C
0.905	98	Paved parking, HSG C
0.205	98	Water Surface, HSG C
3.348	88	Weighted Average
1.343		40.11% Pervious Area
2.005		59.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MIN TC

Subcatchment 2S: SUBCATCHMENT 2: TO STORMWATER POND #2



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MSE 24-hr 3 1-year Rainfall=2.46"

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Summary for Subcatchment 3S: SUBCATCHMENT 3: TO BIO-RETENTION BASIN #3

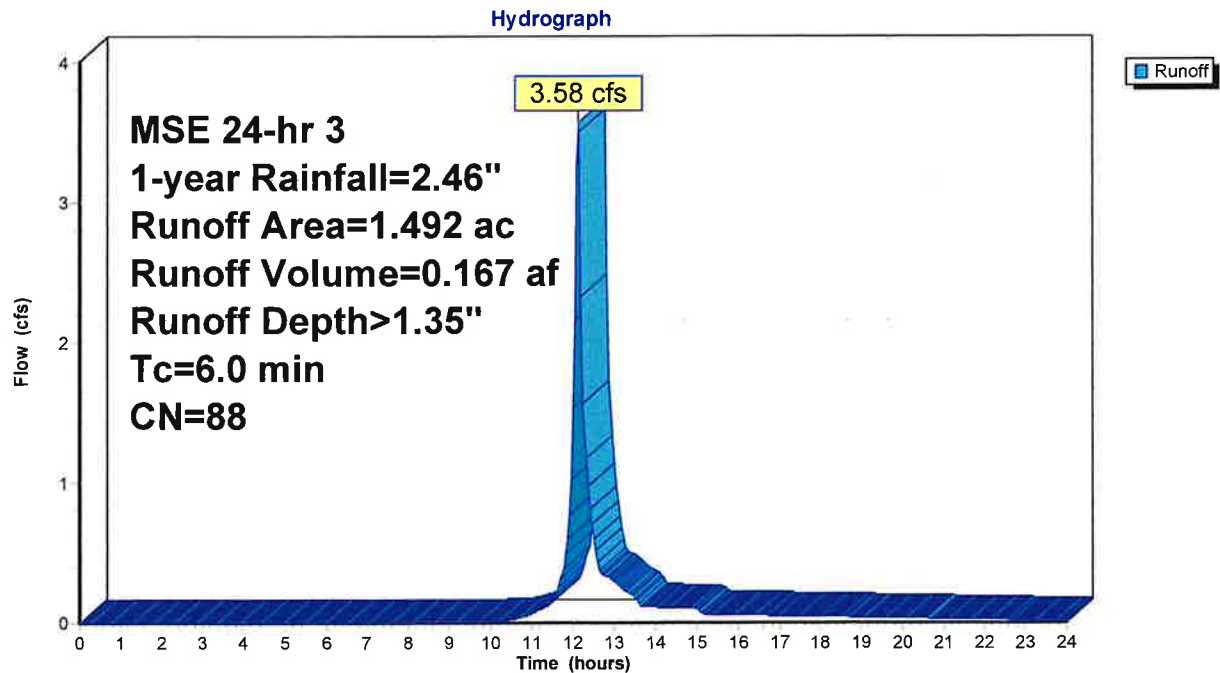
Runoff = 3.58 cfs @ 12.13 hrs, Volume= 0.167 af, Depth> 1.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 1-year Rainfall=2.46"

Area (ac)	CN	Description
* 0.503	98	Paved parking, HSG C
0.625	74	>75% Grass cover, Good, HSG C
0.364	98	Roofs, HSG C
1.492	88	Weighted Average
0.625		41.89% Pervious Area
0.867		58.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Min TC

Subcatchment 3S: SUBCATCHMENT 3: TO BIO-RETENTION BASIN #3



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Summary for Subcatchment 4S: SUBCATCHMENT 4: UNDETAINED

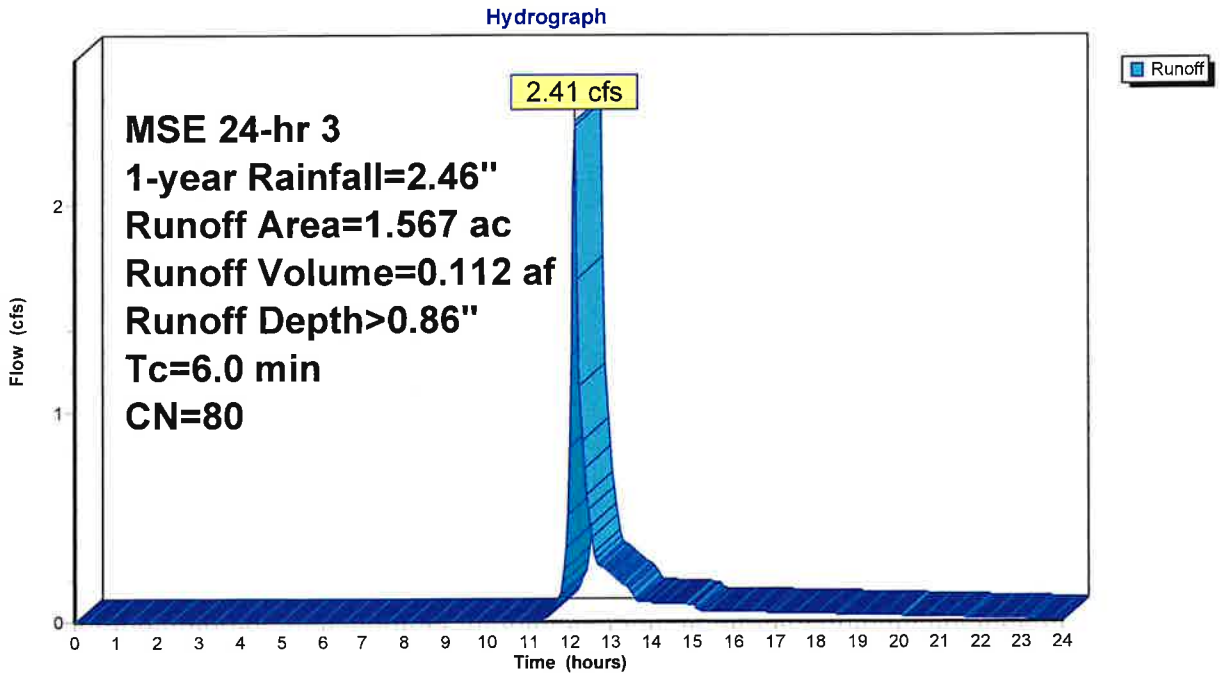
Runoff = 2.41 cfs @ 12.14 hrs, Volume= 0.112 af, Depth> 0.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 1-year Rainfall=2.46"

Area (ac)	CN	Description
* 0.279	98	Paved parking, HSG B
1.185	74	>75% Grass cover, Good, HSG C
0.103	98	Roofs, HSG C
1.567	80	Weighted Average
1.185		75.62% Pervious Area
0.382		24.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Min TC

Subcatchment 4S: SUBCATCHMENT 4: UNDETAINED



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MSE 24-hr 3 1-year Rainfall=2.46"

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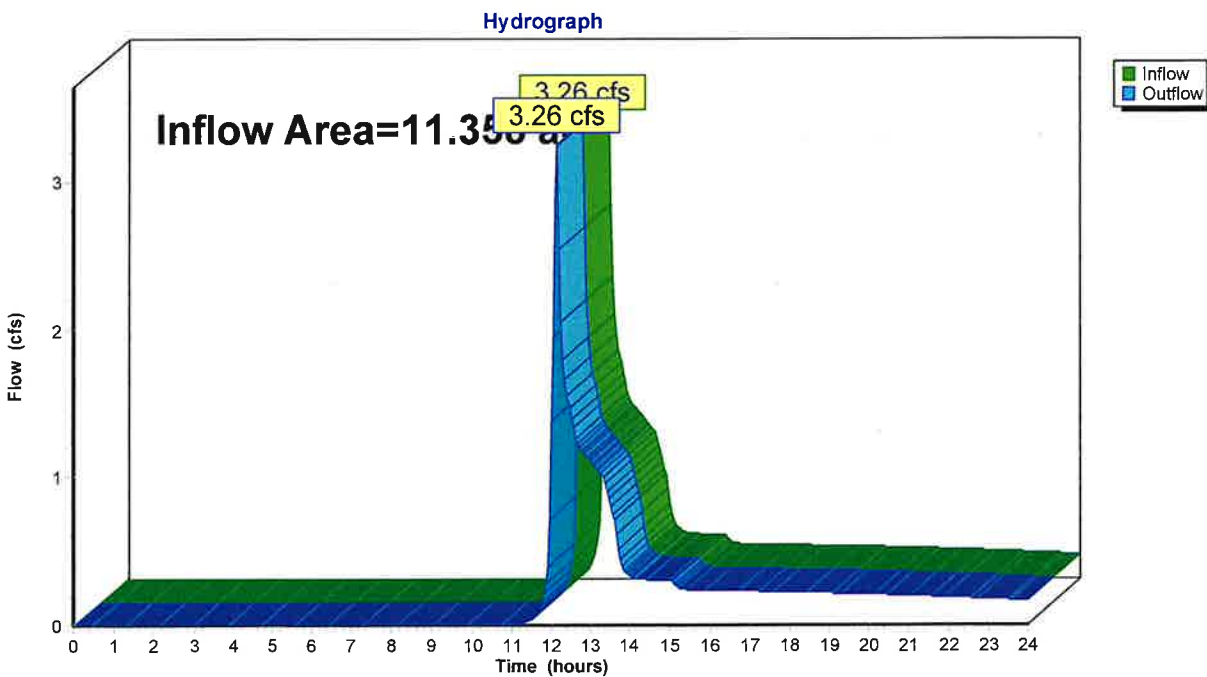
Summary for Reach 1R: TOTAL RUNOFF

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 11.358 ac, 53.79% Impervious, Inflow Depth > 0.42" for 1-year event
Inflow = 3.26 cfs @ 12.14 hrs, Volume= 0.393 af
Outflow = 3.26 cfs @ 12.14 hrs, Volume= 0.393 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach 1R: TOTAL RUNOFF



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Summary for Pond 1BR: BIO-RETENTION BASIN #1

Inflow Area = 4.951 ac, 57.67% Impervious, Inflow Depth > 1.35" for 1-year event
 Inflow = 11.90 cfs @ 12.13 hrs, Volume= 0.556 af
 Outflow = 0.04 cfs @ 23.38 hrs, Volume= 0.024 af, Atten= 100%, Lag= 674.6 min
 Primary = 0.04 cfs @ 23.38 hrs, Volume= 0.024 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 839.16' @ 23.38 hrs Surf.Area= 23,419 sf Storage= 23,184 cf

Plug-Flow detention time= 552.3 min calculated for 0.024 af (4% of inflow)
 Center-of-Mass det. time= 411.7 min (1,214.2 - 802.5)

Volume	Invert	Avail.Storage	Storage Description
#1	836.00'	143,934 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
836.00	22,316	0.0	0	0
836.01	22,316	33.0	74	74
837.00	22,316	33.0	7,291	7,364
837.01	22,316	27.0	60	7,425
838.99	22,316	27.0	11,930	19,355
839.00	22,316	100.0	223	19,578
840.00	29,313	100.0	25,815	45,392
841.00	36,810	100.0	33,062	78,454
842.00	45,695	100.0	41,253	119,706
842.50	51,216	100.0	24,228	143,934

Device	Routing	Invert	Outlet Devices
#1	Primary	837.00'	10.0" Round Culvert L= 31.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 837.00' / 836.50' S= 0.0161 '/' Cc= 0.900 n= 0.011, Flow Area= 0.55 sf
#2	Device 1	837.50'	6.0" Round Culvert L= 550.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 837.50' / 837.00' S= 0.0009 '/' Cc= 0.900 n= 0.011, Flow Area= 0.20 sf
#3	Device 2	837.00'	1.630 in/hr Exfiltration over Surface area above 837.00' Excluded Surface area = 22,316 sf
#4	Device 1	840.00'	1.0" Vert. Orifice/Grate C= 0.600
#5	Device 1	841.50'	24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#6	Secondary	842.00'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

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MSE 24-hr 3 1-year Rainfall=2.46"

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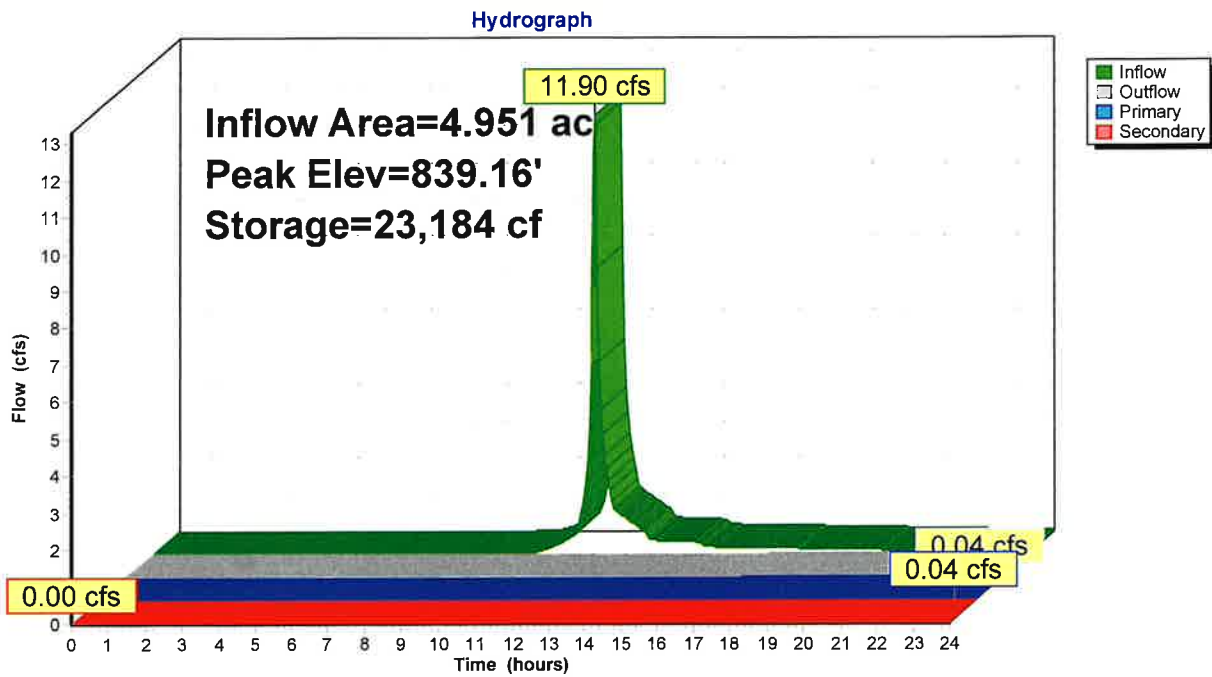
Primary OutFlow Max=0.04 cfs @ 23.38 hrs HW=839.16' TW=0.00' (Dynamic Tailwater)

- 1=Culvert (Passes 0.04 cfs of 3.47 cfs potential flow)
- 2=Culvert (Passes 0.04 cfs of 0.36 cfs potential flow)
- 3=Exfiltration (Exfiltration Controls 0.04 cfs)
- 4=Orifice/Grate (Controls 0.00 cfs)
- 5=Orifice/Grate (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=836.00' TW=0.00' (Dynamic Tailwater)

- 6=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 1BR: BIO-RETENTION BASIN #1



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MSE 24-hr 3 1-year Rainfall=2.46"

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Summary for Pond 2P: STORMWATER POND #2

Inflow Area = 3.348 ac, 59.89% Impervious, Inflow Depth > 1.35" for 1-year event
 Inflow = 8.04 cfs @ 12.13 hrs, Volume= 0.376 af
 Outflow = 0.11 cfs @ 17.27 hrs, Volume= 0.109 af, Atten= 99%, Lag= 307.9 min
 Primary = 0.11 cfs @ 17.27 hrs, Volume= 0.109 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 839.22' @ 17.27 hrs Surf.Area= 12,141 sf Storage= 12,689 cf

Plug-Flow detention time= 372.0 min calculated for 0.109 af (29% of inflow)
 Center-of-Mass det. time= 278.4 min (1,080.9 - 802.5)

Volume	Invert	Avail.Storage	Storage Description
#1	838.00'	61,695 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
838.00	8,920	0	0
839.00	11,375	10,148	10,148
840.00	14,920	13,148	23,295
841.00	19,480	17,200	40,495
842.00	22,920	21,200	61,695

Device	Routing	Invert	Outlet Devices
#1	Primary	838.00'	12.0" Round Culvert L= 33.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 838.00' / 837.00' S= 0.0303 ' / S= 0.0303 ' / Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	838.00'	2.0" Vert. Orifice/Grate C= 0.600
#3	Device 1-	840.75'	24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Secondary	841.10'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.11 cfs @ 17.27 hrs HW=839.22' TW=0.00' (Dynamic Tailwater)
 ↑1=Culvert (Passes 0.11 cfs of 3.20 cfs potential flow)
 ↑2=Orifice/Grate (Orifice Controls 0.11 cfs @ 5.12 fps)
 ↑3=Orifice/Grate (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=838.00' TW=0.00' (Dynamic Tailwater)
 ↑4=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

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MSE 24-hr 3 1-year Rainfall=2.46"

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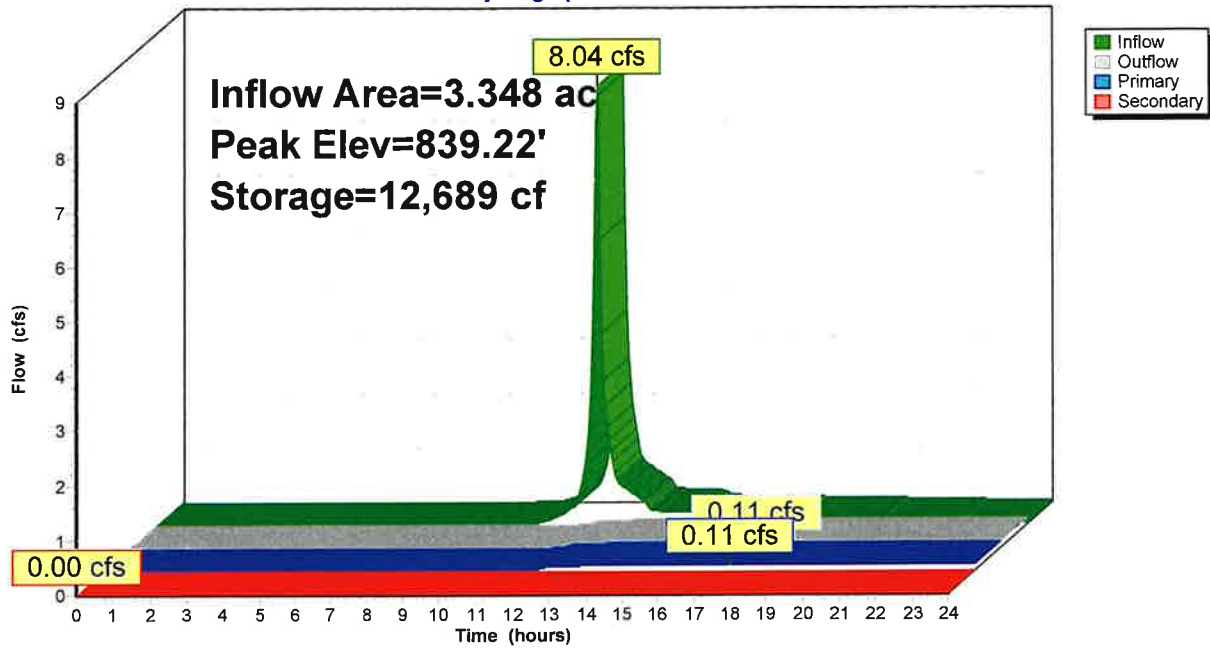
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Pond 2P: STORMWATER POND #2

Hydrograph



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Summary for Pond 3BR: BIO-RETENTION BASIN #3

Inflow Area = 1.492 ac, 58.11% Impervious, Inflow Depth > 1.35" for 1-year event
 Inflow = 3.58 cfs @ 12.13 hrs, Volume= 0.167 af
 Outflow = 0.84 cfs @ 12.39 hrs, Volume= 0.147 af, Atten= 76%, Lag= 15.6 min
 Primary = 0.84 cfs @ 12.39 hrs, Volume= 0.147 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 839.56' @ 12.39 hrs Surf.Area= 3,057 sf Storage= 2,956 cf

Plug-Flow detention time= 85.9 min calculated for 0.147 af (88% of inflow)
 Center-of-Mass det. time= 38.3 min (840.8 - 802.5)

Volume	Invert	Avail.Storage	Storage Description
#1	836.00'	22,288 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
836.00	1,815	0.0	0	0
836.01	1,815	33.0	6	6
837.00	1,815	33.0	593	599
837.01	1,815	27.0	5	604
838.99	1,815	27.0	970	1,574
839.00	1,815	100.0	18	1,592
840.00	4,033	100.0	2,924	4,516
841.00	9,355	100.0	6,694	11,210
842.00	12,800	100.0	11,078	22,288

Device	Routing	Invert	Outlet Devices
#1	Primary	837.00'	10.0" Round Culvert L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 837.00' / 832.50' S= 0.0750 '/ Cc= 0.900 n= 0.011, Flow Area= 0.55 sf
#2	Device 1	837.50'	6.0" Round Culvert L= 100.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 837.50' / 837.00' S= 0.0050 '/ Cc= 0.900 n= 0.011, Flow Area= 0.20 sf
#3	Device 1	840.00'	4.0" Vert. Orifice/Grate C= 0.600
#4	Device 1	840.75'	24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Secondary	841.00'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

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Primary OutFlow Max=0.84 cfs @ 12.39 hrs HW=839.56' TW=0.00' (Dynamic Tailwater)

1=Culvert (Passes 0.84 cfs of 3.84 cfs potential flow)

2=Culvert (Barrel Controls 0.84 cfs @ 4.30 fps)

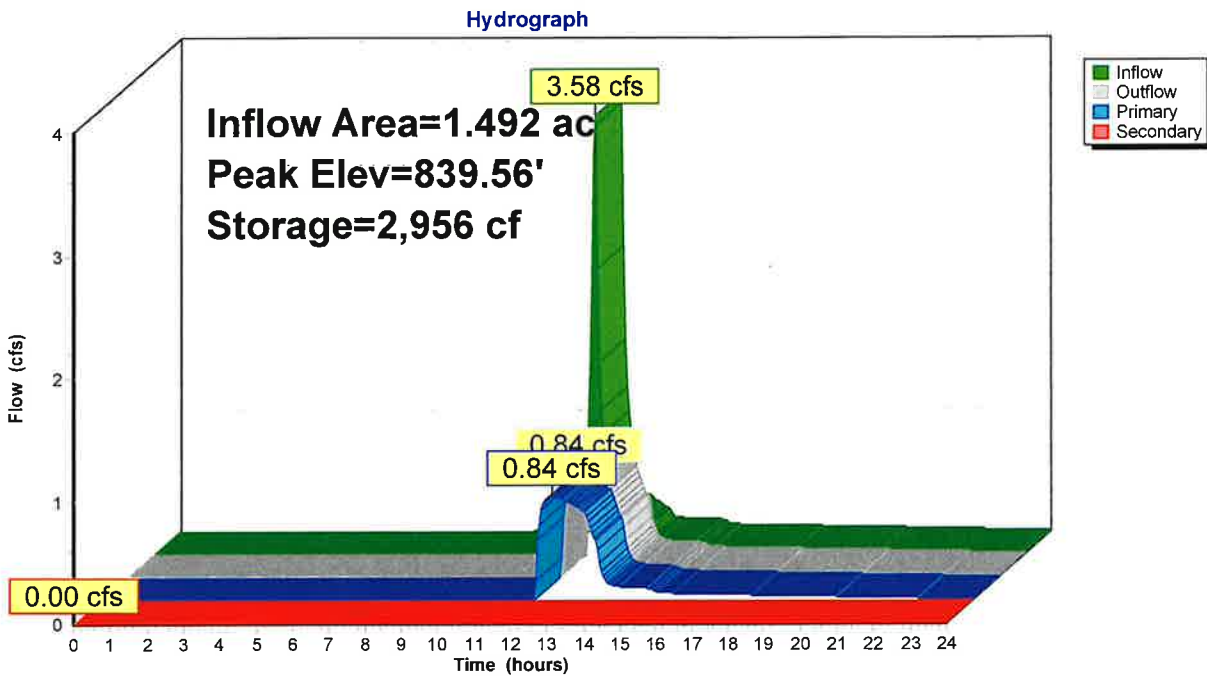
3=Orifice/Grate (Controls 0.00 cfs)

4=Orifice/Grate (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=836.00' TW=0.00' (Dynamic Tailwater)

5=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 3BR: BIO-RETENTION BASIN #3



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MSE 24-hr 3 2-year Rainfall=2.80"

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: SUBCATCHMENT1: TO Runoff Area=4.951 ac 57.67% Impervious Runoff Depth>1.64"
 Tc=6.0 min CN=88 Runoff=14.40 cfs 0.677 af

Subcatchment2S: SUBCATCHMENT2: TO Runoff Area=3.348 ac 59.89% Impervious Runoff Depth>1.64"
 Tc=6.0 min CN=88 Runoff=9.74 cfs 0.458 af

Subcatchment3S: SUBCATCHMENT3: TO Runoff Area=1.492 ac 58.11% Impervious Runoff Depth>1.64"
 Tc=6.0 min CN=88 Runoff=4.34 cfs 0.204 af

Subcatchment4S: SUBCATCHMENT4: Runoff Area=1.567 ac 24.38% Impervious Runoff Depth>1.10"
 Tc=6.0 min CN=80 Runoff=3.10 cfs 0.144 af

Reach 1R: TOTAL RUNOFF Inflow=4.00 cfs 0.513 af
 Outflow=4.00 cfs 0.513 af

Pond 1BR: BIO-RETENTIONBASIN #1 Peak Elev=839.31' Storage=26,896 cf Inflow=14.40 cfs 0.677 af
 Primary=0.08 cfs 0.064 af Secondary=0.00 cfs 0.000 af Outflow=0.08 cfs 0.064 af

Pond 2P: STORMWATERPOND #2 Peak Elev=839.46' Storage=15,753 cf Inflow=9.74 cfs 0.458 af
 Primary=0.12 cfs 0.121 af Secondary=0.00 cfs 0.000 af Outflow=0.12 cfs 0.121 af

Pond 3BR: BIO-RETENTIONBASIN #3 Peak Elev=839.79' Storage=3,732 cf Inflow=4.34 cfs 0.204 af
 Primary=0.89 cfs 0.184 af Secondary=0.00 cfs 0.000 af Outflow=0.89 cfs 0.184 af

Total Runoff Area = 11.358 ac Runoff Volume = 1.483 af Average Runoff Depth = 1.57"
46.21% Pervious = 5.249 ac 53.79% Impervious = 6.109 ac

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MSE 24-hr 3 2-year Rainfall=2.80"

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Summary for Subcatchment 1S: SUBCATCHMENT 1: TO BIO-RETENTION BASIN #1

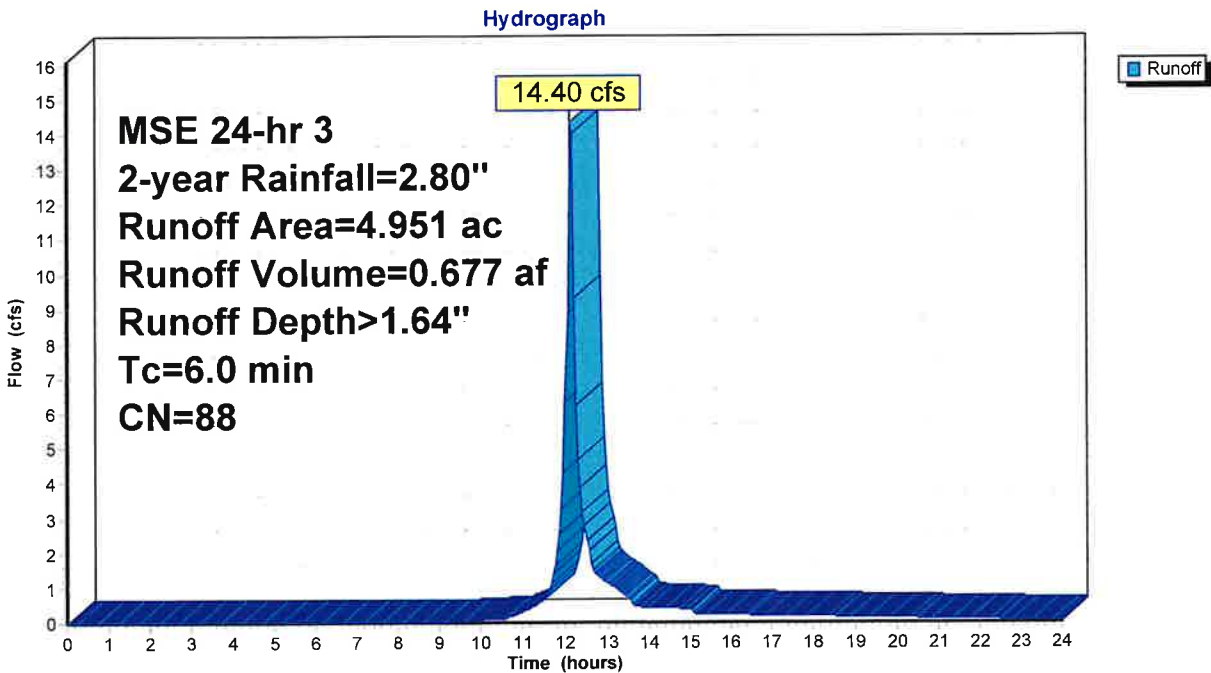
Runoff = 14.40 cfs @ 12.13 hrs, Volume= 0.677 af, Depth> 1.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-year Rainfall=2.80"

Area (ac)	CN	Description
* 1.236	98	Bldg Roof, HSG C
* 1.619	98	Paved parking, HSG C
2.096	74	>75% Grass cover, Good, HSG C
4.951	88	Weighted Average
2.096		42.33% Pervious Area
2.855		57.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MIN TC

Subcatchment 1S: SUBCATCHMENT 1: TO BIO-RETENTION BASIN #1



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MSE 24-hr 3 2-year Rainfall=2.80"

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Summary for Subcatchment 2S: SUBCATCHMENT 2: TO STORMWATER POND #2

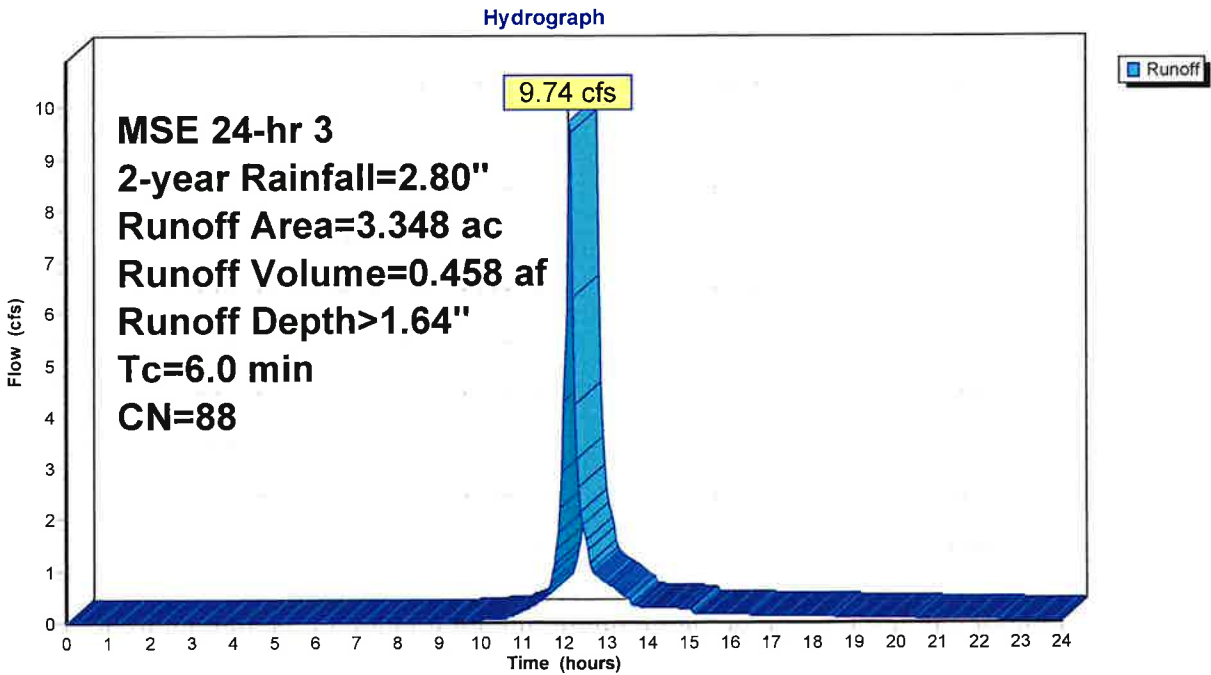
Runoff = 9.74 cfs @ 12.13 hrs, Volume= 0.458 af, Depth> 1.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 2-year Rainfall=2.80"

Area (ac)	CN	Description
0.895	98	Roofs, HSG C
1.343	74	>75% Grass cover, Good, HSG C
0.905	98	Paved parking, HSG C
0.205	98	Water Surface, HSG C
3.348	88	Weighted Average
1.343		40.11% Pervious Area
2.005		59.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MIN TC

Subcatchment 2S: SUBCATCHMENT 2: TO STORMWATER POND #2



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MSE 24-hr 3 2-year Rainfall=2.80"

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Summary for Subcatchment 3S: SUBCATCHMENT 3: TO BIO-RETENTION BASIN #3

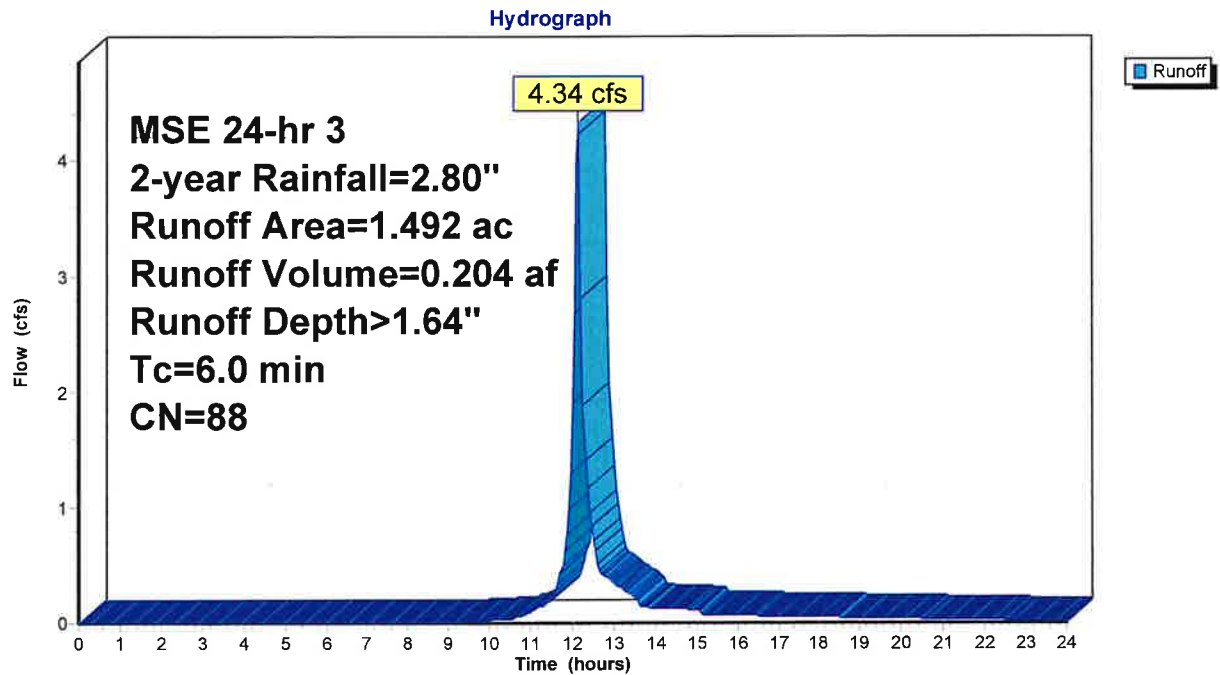
Runoff = 4.34 cfs @ 12.13 hrs, Volume= 0.204 af, Depth> 1.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-year Rainfall=2.80"

Area (ac)	CN	Description
* 0.503	98	Paved parking, HSG C
0.625	74	>75% Grass cover, Good, HSG C
0.364	98	Roofs, HSG C
1.492	88	Weighted Average
0.625		41.89% Pervious Area
0.867		58.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Min TC

Subcatchment 3S: SUBCATCHMENT 3: TO BIO-RETENTION BASIN #3



CJE2364R0

MSE 24-hr 3 2-year Rainfall=2.80"

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Summary for Subcatchment 4S: SUBCATCHMENT 4: UNDETAINED

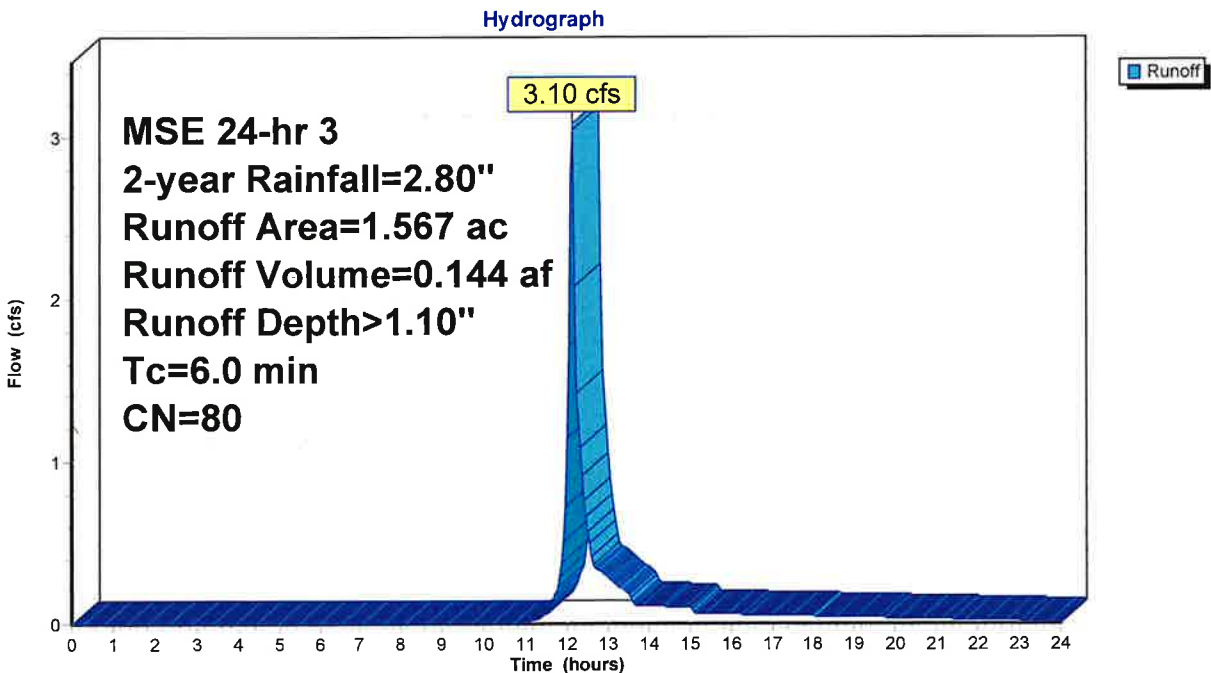
Runoff = 3.10 cfs @ 12.14 hrs, Volume= 0.144 af, Depth> 1.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-year Rainfall=2.80"

Area (ac)	CN	Description
* 0.279	98	Paved parking, HSG B
1.185	74	>75% Grass cover, Good, HSG C
0.103	98	Roofs, HSG C
1.567	80	Weighted Average
1.185		75.62% Pervious Area
0.382		24.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Min TC

Subcatchment 4S: SUBCATCHMENT 4: UNDETAINED



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MSE 24-hr 3 2-year Rainfall=2.80"

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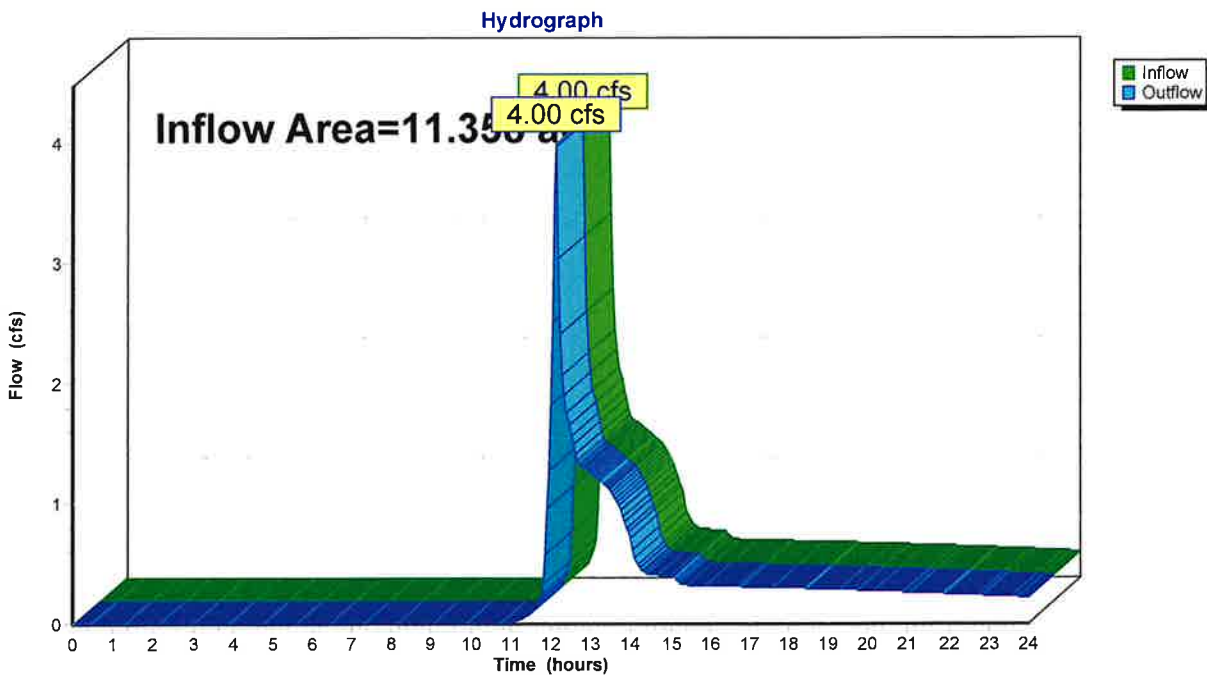
Summary for Reach 1R: TOTAL RUNOFF

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 11.358 ac, 53.79% Impervious, Inflow Depth > 0.54" for 2-year event
Inflow = 4.00 cfs @ 12.14 hrs, Volume= 0.513 af
Outflow = 4.00 cfs @ 12.14 hrs, Volume= 0.513 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach 1R: TOTAL RUNOFF



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MSE 24-hr 3 2-year Rainfall=2.80"

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Summary for Pond 1BR: BIO-RETENTION BASIN #1

Inflow Area = 4.951 ac, 57.67% Impervious, Inflow Depth > 1.64" for 2-year event
 Inflow = 14.40 cfs @ 12.13 hrs, Volume= 0.677 af
 Outflow = 0.08 cfs @ 21.97 hrs, Volume= 0.064 af, Atten= 99%, Lag= 590.3 min
 Primary = 0.08 cfs @ 21.97 hrs, Volume= 0.064 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 839.31' @ 21.97 hrs Surf.Area= 24,503 sf Storage= 26,896 cf

Plug-Flow detention time= 471.8 min calculated for 0.064 af (9% of inflow)
 Center-of-Mass det. time= 349.1 min (1,147.6 - 798.5)

Volume	Invert	Avail.Storage	Storage Description
#1	836.00'	143,934 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
836.00	22,316	0.0	0	0
836.01	22,316	33.0	74	74
837.00	22,316	33.0	7,291	7,364
837.01	22,316	27.0	60	7,425
838.99	22,316	27.0	11,930	19,355
839.00	22,316	100.0	223	19,578
840.00	29,313	100.0	25,815	45,392
841.00	36,810	100.0	33,062	78,454
842.00	45,695	100.0	41,253	119,706
842.50	51,216	100.0	24,228	143,934

Device	Routing	Invert	Outlet Devices
#1	Primary	837.00'	10.0" Round Culvert L= 31.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 837.00' / 836.50' S= 0.0161 '/ Cc= 0.900 n= 0.011, Flow Area= 0.55 sf
#2	Device 1	837.50'	6.0" Round Culvert L= 550.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 837.50' / 837.00' S= 0.0009 '/ Cc= 0.900 n= 0.011, Flow Area= 0.20 sf
#3	Device 2	837.00'	1.630 in/hr Exfiltration over Surface area above 837.00' Excluded Surface area = 22,316 sf
#4	Device 1	840.00'	1.0" Vert. Orifice/Grate C= 0.600
#5	Device 1	841.50'	24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#6	Secondary	842.00'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

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MSE 24-hr 3 2-year Rainfall=2.80"

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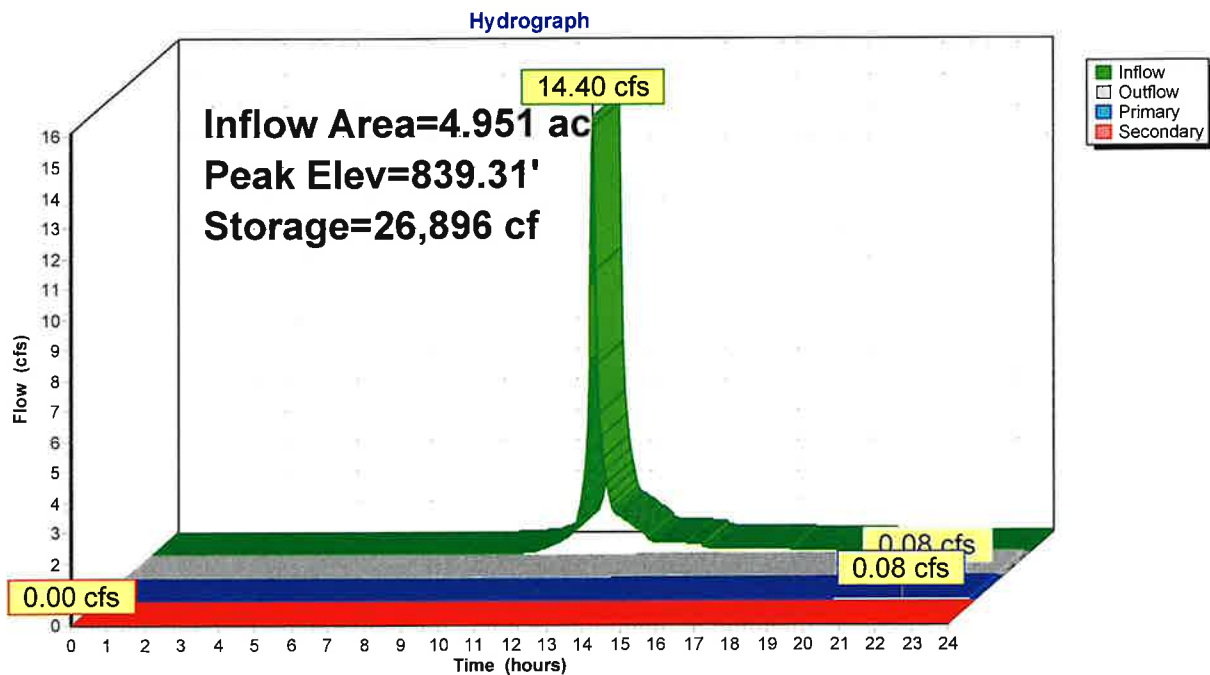
Primary OutFlow Max=0.08 cfs @ 21.97 hrs HW=839.31' TW=0.00' (Dynamic Tailwater)

- 1=Culvert (Passes 0.08 cfs of 3.62 cfs potential flow)
- 2=Culvert (Passes 0.08 cfs of 0.37 cfs potential flow)
- 3=Exfiltration (Exfiltration Controls 0.08 cfs)
- 4=Orifice/Grate (Controls 0.00 cfs)
- 5=Orifice/Grate (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=836.00' TW=0.00' (Dynamic Tailwater)

- 6=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 1BR: BIO-RETENTION BASIN #1



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MSE 24-hr 3 2-year Rainfall=2.80"

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Summary for Pond 2P: STORMWATER POND #2

Inflow Area = 3.348 ac, 59.89% Impervious, Inflow Depth > 1.64" for 2-year event
 Inflow = 9.74 cfs @ 12.13 hrs, Volume= 0.458 af
 Outflow = 0.12 cfs @ 17.77 hrs, Volume= 0.121 af, Atten= 99%, Lag= 338.3 min
 Primary = 0.12 cfs @ 17.77 hrs, Volume= 0.121 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 839.46' @ 17.77 hrs Surf.Area= 13,005 sf Storage= 15,753 cf

Plug-Flow detention time= 376.0 min calculated for 0.121 af (27% of inflow)
 Center-of-Mass det. time= 280.6 min (1,079.2 - 798.5)

Volume	Invert	Avail.Storage	Storage Description
#1	838.00'	61,695 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
838.00	8,920	0	0
839.00	11,375	10,148	10,148
840.00	14,920	13,148	23,295
841.00	19,480	17,200	40,495
842.00	22,920	21,200	61,695

Device	Routing	Invert	Outlet Devices
#1	Primary	838.00'	12.0" Round Culvert L= 33.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 838.00' / 837.00' S= 0.0303 1/1 Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	838.00'	2.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	840.75'	24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Secondary	841.10'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.12 cfs @ 17.77 hrs HW=839.46' TW=0.00' (Dynamic Tailwater)
 1=Culvert (Passes 0.12 cfs of 3.70 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 0.12 cfs @ 5.65 fps)
 3=Orifice/Grate (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=838.00' TW=0.00' (Dynamic Tailwater)
 4=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

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MSE 24-hr 3 2-year Rainfall=2.80"

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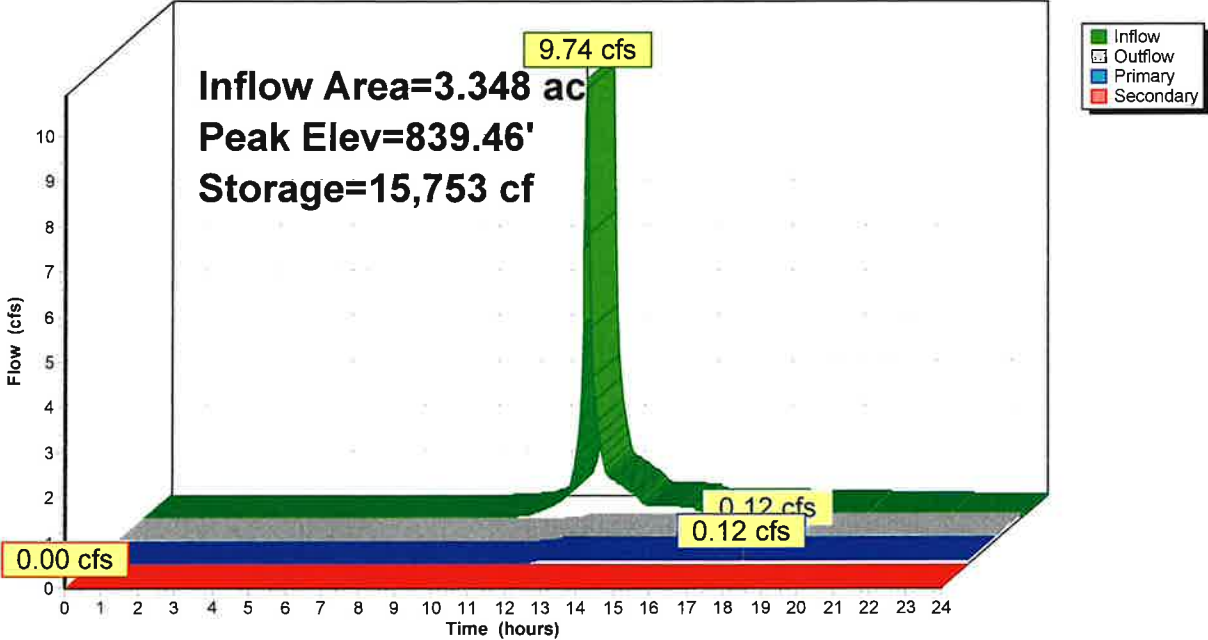
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Pond 2P: STORMWATER POND #2

Hydrograph



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MSE 24-hr 3 2-year Rainfall=2.80"

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Summary for Pond 3BR: BIO-RETENTION BASIN #3

Inflow Area = 1.492 ac, 58.11% Impervious, Inflow Depth > 1.64" for 2-year event
 Inflow = 4.34 cfs @ 12.13 hrs, Volume= 0.204 af
 Outflow = 0.89 cfs @ 12.43 hrs, Volume= 0.184 af, Atten= 79%, Lag= 17.7 min
 Primary = 0.89 cfs @ 12.43 hrs, Volume= 0.184 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 839.79' @ 12.43 hrs Surf.Area= 3,576 sf Storage= 3,732 cf

Plug-Flow detention time= 84.5 min calculated for 0.184 af (90% of inflow)
 Center-of-Mass det. time= 42.3 min (840.9 - 798.5)

Volume	Invert	Avail.Storage	Storage Description	
#1	836.00'	22,288 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
836.00	1,815	0.0	0	0
836.01	1,815	33.0	6	6
837.00	1,815	33.0	593	599
837.01	1,815	27.0	5	604
838.99	1,815	27.0	970	1,574
839.00	1,815	100.0	18	1,592
840.00	4,033	100.0	2,924	4,516
841.00	9,355	100.0	6,694	11,210
842.00	12,800	100.0	11,078	22,288

Device	Routing	Invert	Outlet Devices
#1	Primary	837.00'	10.0" Round Culvert L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 837.00' / 832.50' S= 0.0750 '/' Cc= 0.900 n= 0.011, Flow Area= 0.55 sf
#2	Device 1	837.50'	6.0" Round Culvert L= 100.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 837.50' / 837.00' S= 0.0050 '/' Cc= 0.900 n= 0.011, Flow Area= 0.20 sf
#3	Device 1	840.00'	4.0" Vert. Orifice/Grate C= 0.600
#4	Device 1	840.75'	24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Secondary	841.00'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

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MSE 24-hr 3 2-year Rainfall=2.80"

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Primary OutFlow Max=0.89 cfs @ 12.43 hrs HW=839.79' TW=0.00' (Dynamic Tailwater)

1=Culvert (Passes 0.89 cfs of 4.05 cfs potential flow)

2=Culvert (Barrel Controls 0.89 cfs @ 4.54 fps)

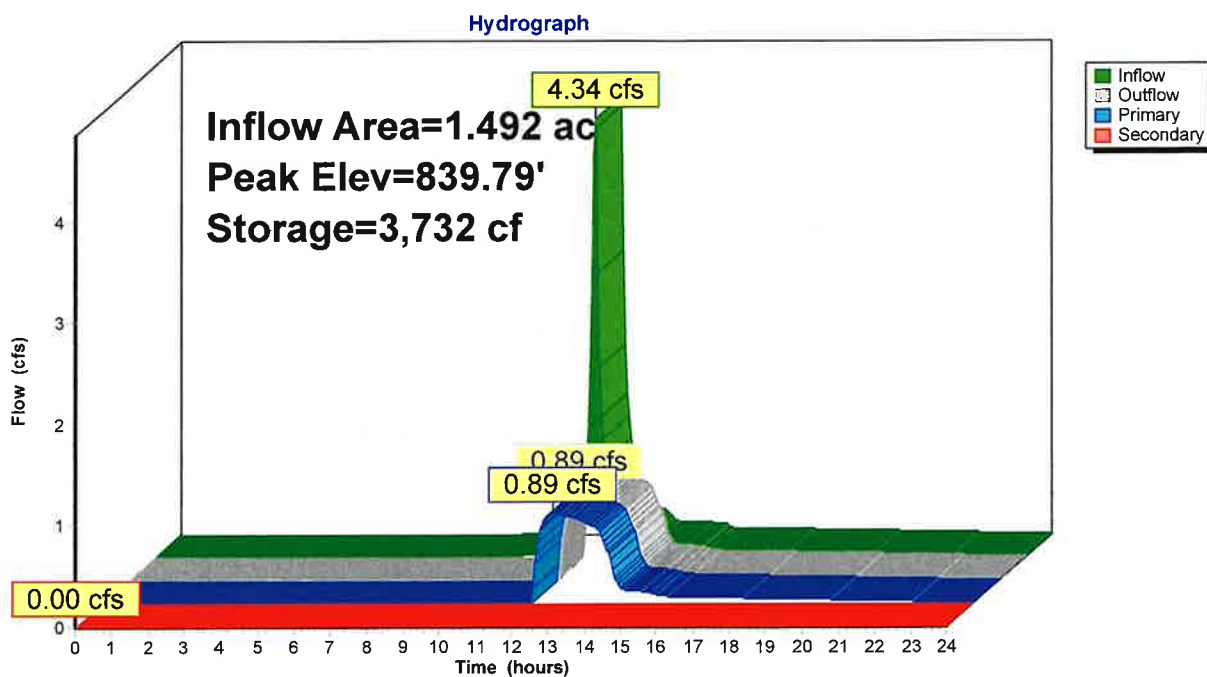
3=Orifice/Grate (Controls 0.00 cfs)

4=Orifice/Grate (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=836.00' TW=0.00' (Dynamic Tailwater)

5=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 3BR: BIO-RETENTION BASIN #3



CJE2364R0*MSE 24-hr 3 5-year Rainfall=3.42"*

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: SUBCATCHMENT1: TO Runoff Area=4.951 ac 57.67% Impervious Runoff Depth>2.20"
 Tc=6.0 min CN=88 Runoff=19.04 cfs 0.906 af

Subcatchment2S: SUBCATCHMENT2: TO Runoff Area=3.348 ac 59.89% Impervious Runoff Depth>2.20"
 Tc=6.0 min CN=88 Runoff=12.88 cfs 0.612 af

Subcatchment3S: SUBCATCHMENT3: TO Runoff Area=1.492 ac 58.11% Impervious Runoff Depth>2.20"
 Tc=6.0 min CN=88 Runoff=5.74 cfs 0.273 af

Subcatchment4S: SUBCATCHMENT4: Runoff Area=1.567 ac 24.38% Impervious Runoff Depth>1.57"
 Tc=6.0 min CN=80 Runoff=4.43 cfs 0.205 af

Reach 1R: TOTAL RUNOFF

Inflow=5.41 cfs 0.738 af
 Outflow=5.41 cfs 0.738 af

Pond 1BR: BIO-RETENTIONBASIN #1 Peak Elev=839.60' Storage=34,139 cf Inflow=19.04 cfs 0.906 af
 Primary=0.16 cfs 0.139 af Secondary=0.00 cfs 0.000 af Outflow=0.16 cfs 0.139 af

Pond 2P: STORMWATERPOND #2 Peak Elev=839.89' Storage=21,638 cf Inflow=12.88 cfs 0.612 af
 Primary=0.14 cfs 0.141 af Secondary=0.00 cfs 0.000 af Outflow=0.14 cfs 0.141 af

Pond 3BR: BIO-RETENTIONBASIN #3 Peak Elev=840.15' Storage=5,189 cf Inflow=5.74 cfs 0.273 af
 Primary=1.01 cfs 0.253 af Secondary=0.00 cfs 0.000 af Outflow=1.01 cfs 0.253 af

Total Runoff Area = 11.358 ac Runoff Volume = 1.997 af Average Runoff Depth = 2.11"
46.21% Pervious = 5.249 ac 53.79% Impervious = 6.109 ac

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MSE 24-hr 3 5-year Rainfall=3.42"

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Summary for Subcatchment 1S: SUBCATCHMENT 1: TO BIO-RETENTION BASIN #1

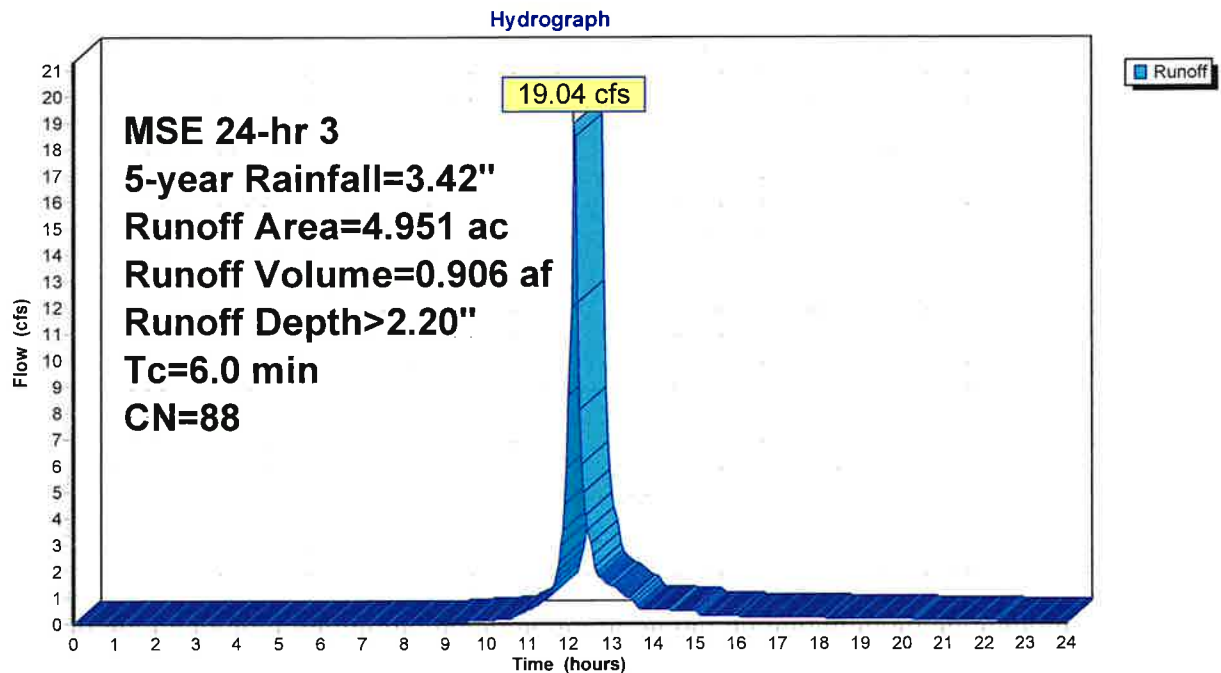
Runoff = 19.04 cfs @ 12.13 hrs, Volume= 0.906 af, Depth> 2.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 5-year Rainfall=3.42"

	Area (ac)	CN	Description
*	1.236	98	Bldg Roof, HSG C
*	1.619	98	Paved parking, HSG C
	2.096	74	>75% Grass cover, Good, HSG C
	4.951	88	Weighted Average
	2.096		42.33% Pervious Area
	2.855		57.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MIN TC

Subcatchment 1S: SUBCATCHMENT 1: TO BIO-RETENTION BASIN #1



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MSE 24-hr 3 5-year Rainfall=3.42"

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Summary for Subcatchment 2S: SUBCATCHMENT 2: TO STORMWATER POND #2

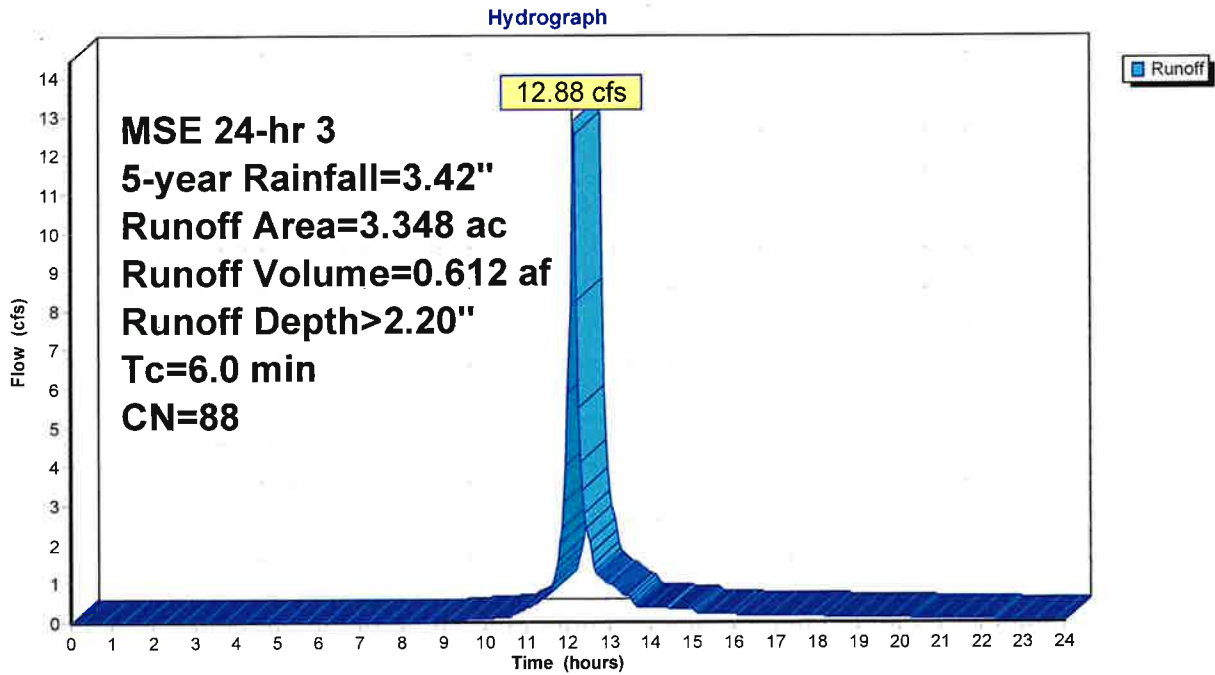
Runoff = 12.88 cfs @ 12.13 hrs, Volume= 0.612 af, Depth> 2.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 5-year Rainfall=3.42"

Area (ac)	CN	Description
0.895	98	Roofs, HSG C
1.343	74	>75% Grass cover, Good, HSG C
0.905	98	Paved parking, HSG C
0.205	98	Water Surface, HSG C
3.348	88	Weighted Average
1.343		40.11% Pervious Area
2.005		59.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MIN TC

Subcatchment 2S: SUBCATCHMENT 2: TO STORMWATER POND #2



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MSE 24-hr 3 5-year Rainfall=3.42"

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Summary for Subcatchment 3S: SUBCATCHMENT 3: TO BIO-RETENTION BASIN #3

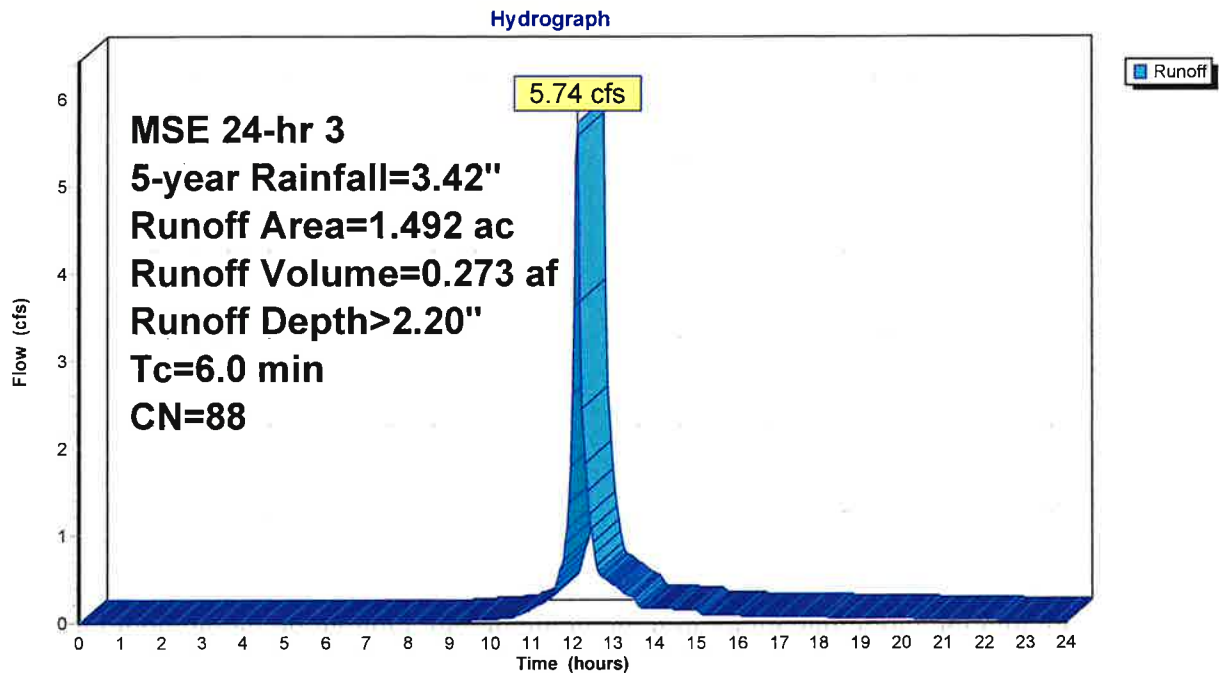
Runoff = 5.74 cfs @ 12.13 hrs, Volume= 0.273 af, Depth> 2.20"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 5-year Rainfall=3.42"

Area (ac)	CN	Description
* 0.503	98	Paved parking, HSG C
0.625	74	>75% Grass cover, Good, HSG C
0.364	98	Roofs, HSG C
1.492	88	Weighted Average
0.625		41.89% Pervious Area
0.867		58.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Min TC

Subcatchment 3S: SUBCATCHMENT 3: TO BIO-RETENTION BASIN #3



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MSE 24-hr 3 5-year Rainfall=3.42"

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Summary for Subcatchment 4S: SUBCATCHMENT 4: UNDETAINED

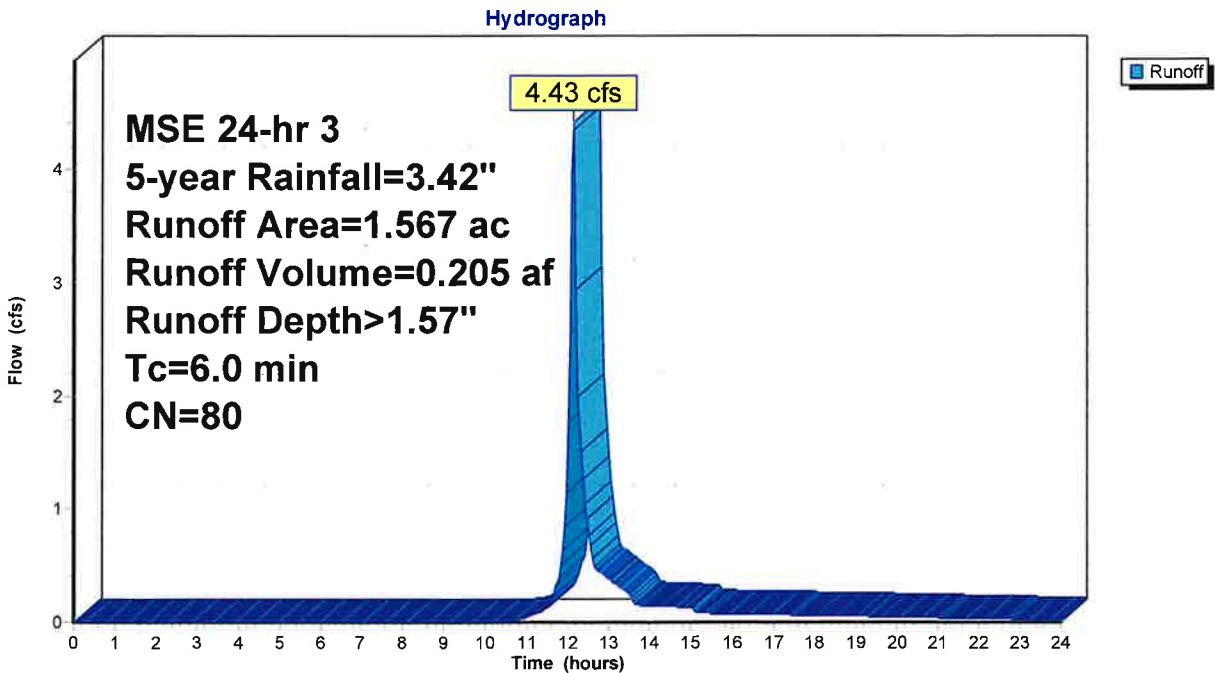
Runoff = 4.43 cfs @ 12.14 hrs, Volume= 0.205 af, Depth> 1.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 5-year Rainfall=3.42"

Area (ac)	CN	Description
* 0.279	98	Paved parking, HSG B
1.185	74	>75% Grass cover, Good, HSG C
0.103	98	Roofs, HSG C
1.567	80	Weighted Average
1.185		75.62% Pervious Area
0.382		24.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Min TC

Subcatchment 4S: SUBCATCHMENT 4: UNDETAINED



CJE2364R0

MSE 24-hr 3 5-year Rainfall=3.42"

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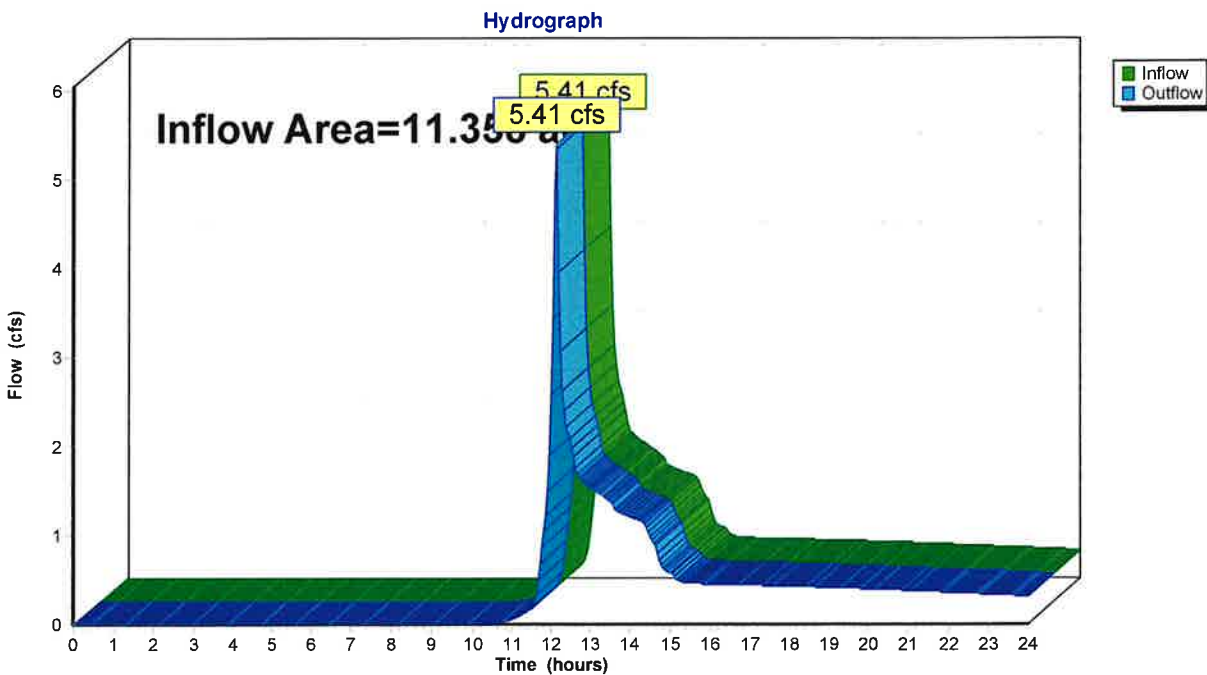
Summary for Reach 1R: TOTAL RUNOFF

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 11.358 ac, 53.79% Impervious, Inflow Depth > 0.78" for 5-year event
Inflow = 5.41 cfs @ 12.14 hrs, Volume= 0.738 af
Outflow = 5.41 cfs @ 12.14 hrs, Volume= 0.738 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach 1R: TOTAL RUNOFF



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Summary for Pond 1BR: BIO-RETENTION BASIN #1

Inflow Area = 4.951 ac, 57.67% Impervious, Inflow Depth > 2.20" for 5-year event
 Inflow = 19.04 cfs @ 12.13 hrs, Volume= 0.906 af
 Outflow = 0.16 cfs @ 20.21 hrs, Volume= 0.139 af, Atten= 99%, Lag= 485.0 min
 Primary = 0.16 cfs @ 20.21 hrs, Volume= 0.139 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 839.60' @ 20.21 hrs Surf.Area= 26,491 sf Storage= 34,139 cf

Plug-Flow detention time= 431.9 min calculated for 0.139 af (15% of inflow)
 Center-of-Mass det. time= 319.0 min (1,111.8 - 792.7)

Volume	Invert	Avail.Storage	Storage Description
#1	836.00'	143,934 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
836.00	22,316	0.0	0	0
836.01	22,316	33.0	74	74
837.00	22,316	33.0	7,291	7,364
837.01	22,316	27.0	60	7,425
838.99	22,316	27.0	11,930	19,355
839.00	22,316	100.0	223	19,578
840.00	29,313	100.0	25,815	45,392
841.00	36,810	100.0	33,062	78,454
842.00	45,695	100.0	41,253	119,706
842.50	51,216	100.0	24,228	143,934

Device	Routing	Invert	Outlet Devices
#1	Primary	837.00'	10.0" Round Culvert L= 31.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 837.00' / 836.50' S= 0.0161 '/ Cc= 0.900 n= 0.011, Flow Area= 0.55 sf
#2	Device 1	837.50'	6.0" Round Culvert L= 550.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 837.50' / 837.00' S= 0.0009 '/ Cc= 0.900 n= 0.011, Flow Area= 0.20 sf
#3	Device 2	837.00'	1.630 in/hr Exfiltration over Surface area above 837.00' Excluded Surface area = 22,316 sf
#4	Device 1	840.00'	1.0" Vert. Orifice/Grate C= 0.600
#5	Device 1	841.50'	24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#6	Secondary	842.00'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

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MSE 24-hr 3 5-year Rainfall=3.42"

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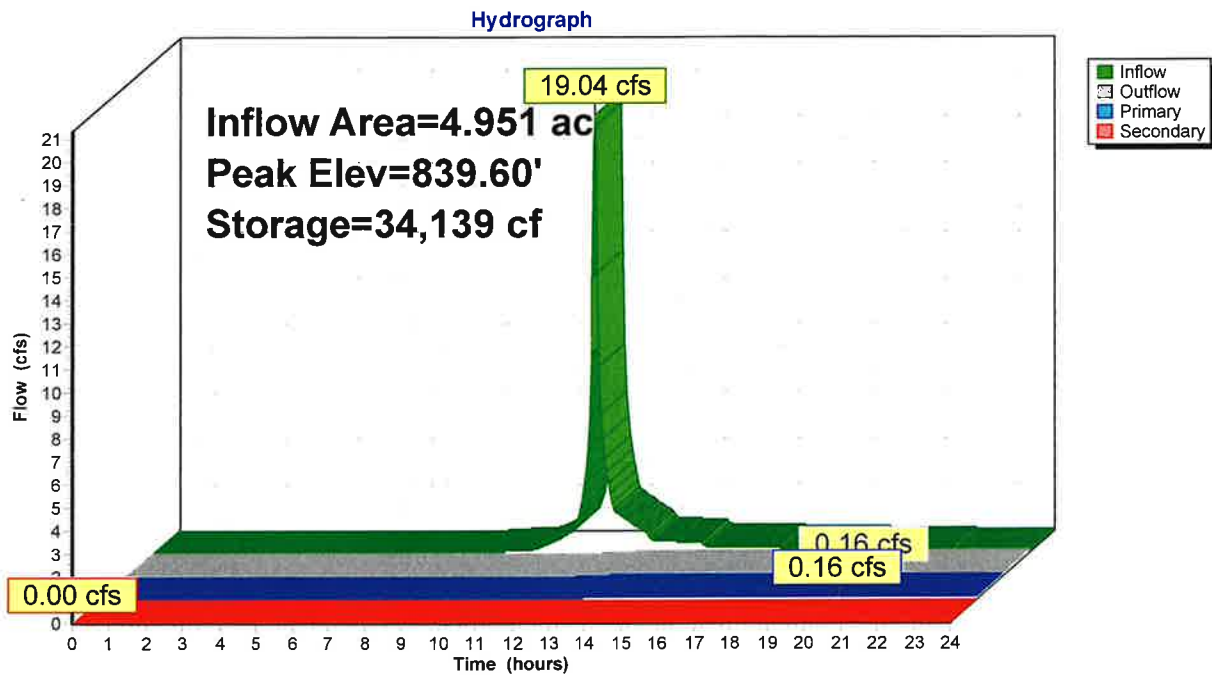
Primary OutFlow Max=0.16 cfs @ 20.21 hrs HW=839.60' TW=0.00' (Dynamic Tailwater)

- 1=Culvert (Passes 0.16 cfs of 3.88 cfs potential flow)
- 2=Culvert (Passes 0.16 cfs of 0.40 cfs potential flow)
- 3=Exfiltration (Exfiltration Controls 0.16 cfs)
- 4=Orifice/Grate (Controls 0.00 cfs)
- 5=Orifice/Grate (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=836.00' TW=0.00' (Dynamic Tailwater)

- 6=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 1BR: BIO-RETENTION BASIN #1



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MSE 24-hr 3 5-year Rainfall=3.42"

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Summary for Pond 2P: STORMWATER POND #2

Inflow Area = 3.348 ac, 59.89% Impervious, Inflow Depth > 2.20" for 5-year event
 Inflow = 12.88 cfs @ 12.13 hrs, Volume= 0.612 af
 Outflow = 0.14 cfs @ 18.55 hrs, Volume= 0.141 af, Atten= 99%, Lag= 385.1 min
 Primary = 0.14 cfs @ 18.55 hrs, Volume= 0.141 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 839.89' @ 18.55 hrs Surf.Area= 14,521 sf Storage= 21,638 cf

Plug-Flow detention time= 382.7 min calculated for 0.140 af (23% of inflow)
 Center-of-Mass det. time= 282.8 min (1,075.5 - 792.7)

Volume	Invert	Avail.Storage	Storage Description
#1	838.00'	61,695 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
838.00	8,920	0	0
839.00	11,375	10,148	10,148
840.00	14,920	13,148	23,295
841.00	19,480	17,200	40,495
842.00	22,920	21,200	61,695

Device	Routing	Invert	Outlet Devices
#1	Primary	838.00'	12.0" Round Culvert L= 33.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 838.00' / 837.00' S= 0.0303 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	838.00'	2.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	840.75'	24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Secondary	841.10'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.14 cfs @ 18.55 hrs HW=839.89' TW=0.00' (Dynamic Tailwater)
 ↑1=Culvert (Passes 0.14 cfs of 4.45 cfs potential flow)
 ↑2=Orifice/Grate (Orifice Controls 0.14 cfs @ 6.47 fps)
 ↑3=Orifice/Grate (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=838.00' TW=0.00' (Dynamic Tailwater)
 ↑4=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

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MSE 24-hr 3 5-year Rainfall=3.42"

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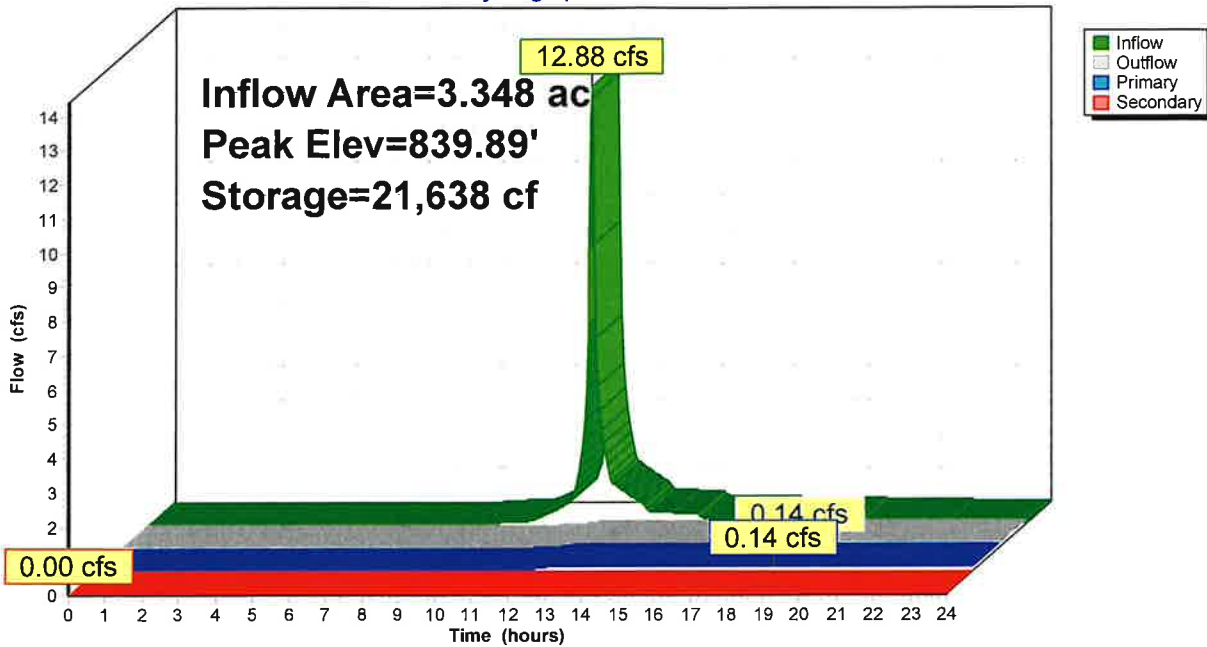
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Pond 2P: STORMWATER POND #2

Hydrograph



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Summary for Pond 3BR: BIO-RETENTION BASIN #3

Inflow Area = 1.492 ac, 58.11% Impervious, Inflow Depth > 2.20" for 5-year event
 Inflow = 5.74 cfs @ 12.13 hrs, Volume= 0.273 af
 Outflow = 1.01 cfs @ 12.47 hrs, Volume= 0.253 af, Atten= 82%, Lag= 20.4 min
 Primary = 1.01 cfs @ 12.47 hrs, Volume= 0.253 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 840.15' @ 12.47 hrs Surf.Area= 4,840 sf Storage= 5,189 cf

Plug-Flow detention time= 84.2 min calculated for 0.252 af (92% of inflow)
 Center-of-Mass det. time= 50.8 min (843.6 - 792.7)

Volume	Invert	Avail.Storage	Storage Description
#1	836.00'	22,288 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
836.00	1,815	0.0	0	0
836.01	1,815	33.0	6	6
837.00	1,815	33.0	593	599
837.01	1,815	27.0	5	604
838.99	1,815	27.0	970	1,574
839.00	1,815	100.0	18	1,592
840.00	4,033	100.0	2,924	4,516
841.00	9,355	100.0	6,694	11,210
842.00	12,800	100.0	11,078	22,288

Device	Routing	Invert	Outlet Devices
#1	Primary	837.00'	10.0" Round Culvert L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 837.00' / 832.50' S= 0.0750 '/' Cc= 0.900 n= 0.011, Flow Area= 0.55 sf
#2	Device 1	837.50'	6.0" Round Culvert L= 100.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 837.50' / 837.00' S= 0.0050 '/' Cc= 0.900 n= 0.011, Flow Area= 0.20 sf
#3	Device 1	840.00'	4.0" Vert. Orifice/Grate C= 0.600
#4	Device 1	840.75'	24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Secondary	841.00'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

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MSE 24-hr 3 5-year Rainfall=3.42"

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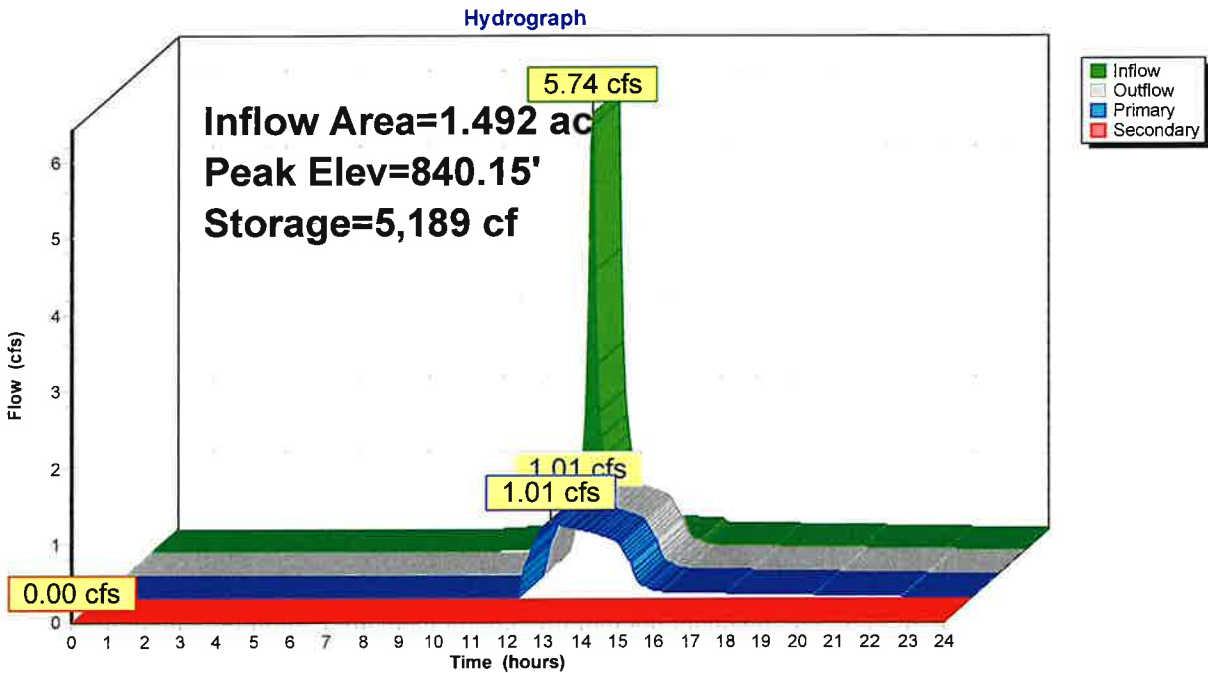
Primary OutFlow Max=1.01 cfs @ 12.47 hrs HW=840.15' TW=0.00' (Dynamic Tailwater)

- 1=Culvert (Passes 1.01 cfs of 4.34 cfs potential flow)
- 2=Culvert (Barrel Controls 0.96 cfs @ 4.88 fps)
- 3=Orifice/Grate (Orifice Controls 0.05 cfs @ 1.32 fps)
- 4=Orifice/Grate (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=836.00' TW=0.00' (Dynamic Tailwater)

- 5=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 3BR: BIO-RETENTION BASIN #3



CJE2364R0*MSE 24-hr 3 10-year Rainfall=3.97"*

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: SUBCATCHMENT1: TO Runoff Area=4.951 ac 57.67% Impervious Runoff Depth>2.70"
 Tc=6.0 min CN=88 Runoff=23.18 cfs 1.114 af

Subcatchment2S: SUBCATCHMENT2: TO Runoff Area=3.348 ac 59.89% Impervious Runoff Depth>2.70"
 Tc=6.0 min CN=88 Runoff=15.68 cfs 0.753 af

Subcatchment3S: SUBCATCHMENT3: TO Runoff Area=1.492 ac 58.11% Impervious Runoff Depth>2.70"
 Tc=6.0 min CN=88 Runoff=6.99 cfs 0.336 af

Subcatchment4S: SUBCATCHMENT4: Runoff Area=1.567 ac 24.38% Impervious Runoff Depth>2.02"
 Tc=6.0 min CN=80 Runoff=5.66 cfs 0.263 af

Reach 1R: TOTAL RUNOFF Inflow=6.69 cfs 0.939 af
 Outflow=6.69 cfs 0.939 af

Pond 1BR: BIO-RETENTIONBASIN #1 Peak Elev=839.85' Storage=41,032 cf Inflow=23.18 cfs 1.114 af
 Primary=0.22 cfs 0.205 af Secondary=0.00 cfs 0.000 af Outflow=0.22 cfs 0.205 af

Pond 2P: STORMWATERPOND #2 Peak Elev=840.25' Storage=27,098 cf Inflow=15.68 cfs 0.753 af
 Primary=0.15 cfs 0.156 af Secondary=0.00 cfs 0.000 af Outflow=0.15 cfs 0.156 af

Pond 3BR: BIO-RETENTIONBASIN #3 Peak Elev=840.38' Storage=6,417 cf Inflow=6.99 cfs 0.336 af
 Primary=1.19 cfs 0.315 af Secondary=0.00 cfs 0.000 af Outflow=1.19 cfs 0.315 af

Total Runoff Area = 11.358 ac Runoff Volume = 2.467 af Average Runoff Depth = 2.61"
46.21% Pervious = 5.249 ac 53.79% Impervious = 6.109 ac

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MSE 24-hr 3 10-year Rainfall=3.97"

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Summary for Subcatchment 1S: SUBCATCHMENT 1: TO BIO-RETENTION BASIN #1

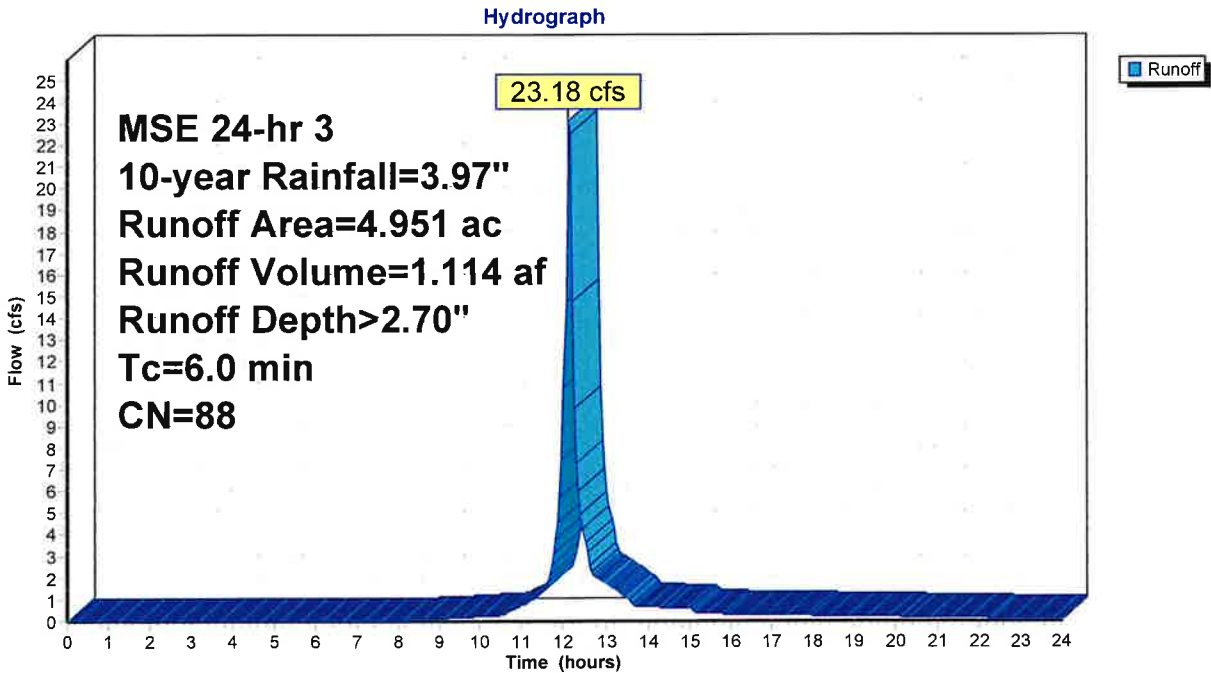
Runoff = 23.18 cfs @ 12.13 hrs, Volume= 1.114 af, Depth> 2.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-year Rainfall=3.97"

	Area (ac)	CN	Description
*	1.236	98	Bldg Roof, HSG C
*	1.619	98	Paved parking, HSG C
	2.096	74	>75% Grass cover, Good, HSG C
	4.951	88	Weighted Average
	2.096		42.33% Pervious Area
	2.855		57.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MIN TC

Subcatchment 1S: SUBCATCHMENT 1: TO BIO-RETENTION BASIN #1



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Summary for Subcatchment 2S: SUBCATCHMENT 2: TO STORMWATER POND #2

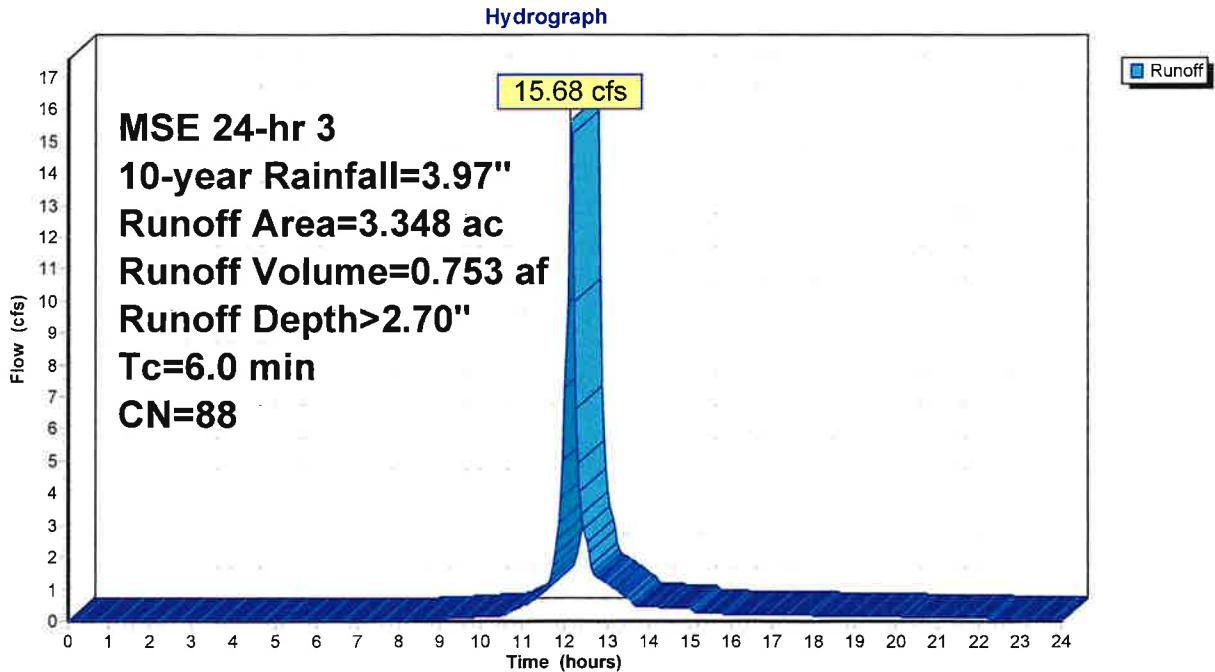
Runoff = 15.68 cfs @ 12.13 hrs, Volume= 0.753 af, Depth> 2.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-year Rainfall=3.97"

Area (ac)	CN	Description
0.895	98	Roofs, HSG C
1.343	74	>75% Grass cover, Good, HSG C
0.905	98	Paved parking, HSG C
0.205	98	Water Surface, HSG C
3.348	88	Weighted Average
1.343		40.11% Pervious Area
2.005		59.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MIN TC

Subcatchment 2S: SUBCATCHMENT 2: TO STORMWATER POND #2



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Summary for Subcatchment 3S: SUBCATCHMENT 3: TO BIO-RETENTION BASIN #3

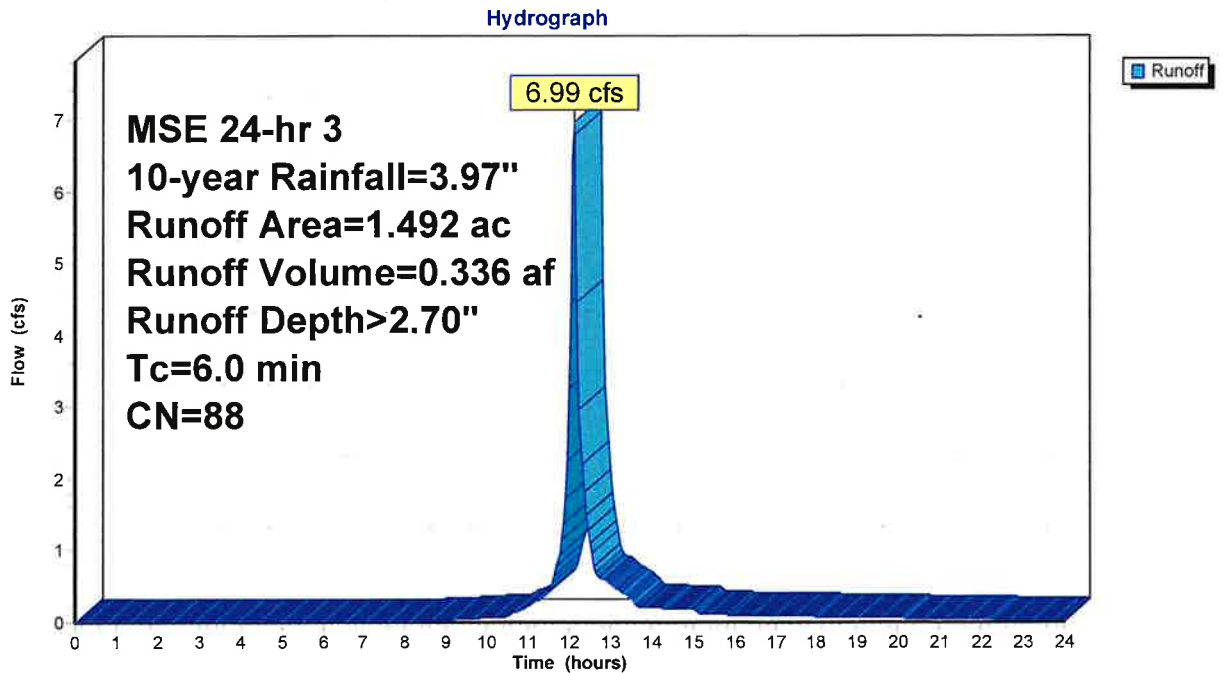
Runoff = 6.99 cfs @ 12.13 hrs, Volume= 0.336 af, Depth> 2.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-year Rainfall=3.97"

Area (ac)	CN	Description
* 0.503	98	Paved parking, HSG C
0.625	74	>75% Grass cover, Good, HSG C
0.364	98	Roofs, HSG C
1.492	88	Weighted Average
0.625		41.89% Pervious Area
0.867		58.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Min TC

Subcatchment 3S: SUBCATCHMENT 3: TO BIO-RETENTION BASIN #3



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Summary for Subcatchment 4S: SUBCATCHMENT 4: UNDETAINED

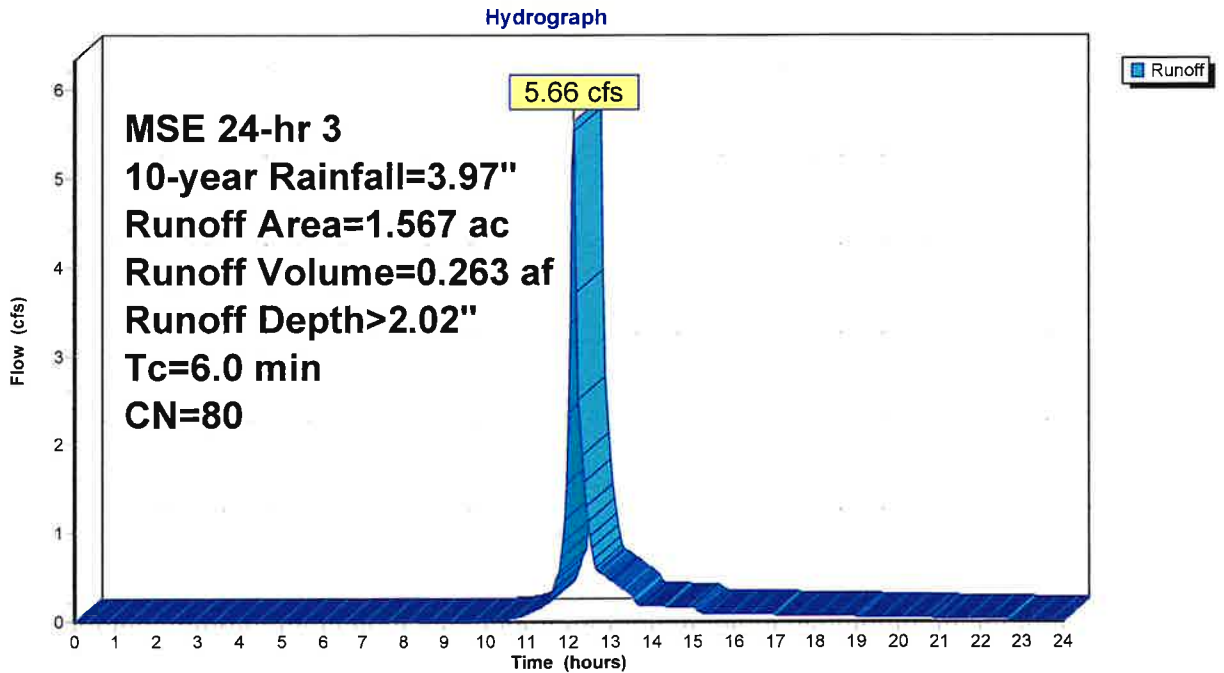
Runoff = 5.66 cfs @ 12.13 hrs, Volume= 0.263 af, Depth> 2.02"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-year Rainfall=3.97"

Area (ac)	CN	Description
* 0.279	98	Paved parking, HSG B
1.185	74	>75% Grass cover, Good, HSG C
0.103	98	Roofs, HSG C
1.567	80	Weighted Average
1.185		75.62% Pervious Area
0.382		24.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Min TC

Subcatchment 4S: SUBCATCHMENT 4: UNDETAINED



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MSE 24-hr 3 10-year Rainfall=3.97"

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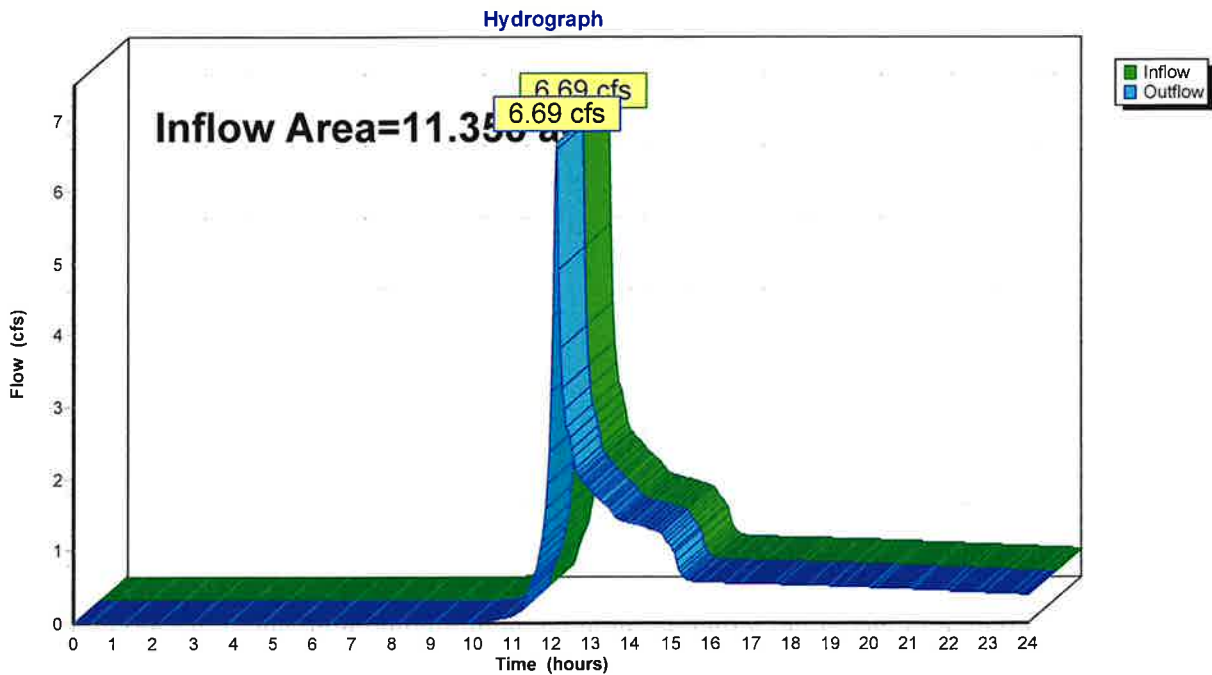
Summary for Reach 1R: TOTAL RUNOFF

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 11.358 ac, 53.79% Impervious, Inflow Depth > 0.99" for 10-year event
Inflow = 6.69 cfs @ 12.14 hrs, Volume= 0.939 af
Outflow = 6.69 cfs @ 12.14 hrs, Volume= 0.939 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach 1R: TOTAL RUNOFF



CJE2364R0

MSE 24-hr 3 10-year Rainfall=3.97"

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Summary for Pond 1BR: BIO-RETENTION BASIN #1

Inflow Area = 4.951 ac, 57.67% Impervious, Inflow Depth > 2.70" for 10-year event
 Inflow = 23.18 cfs @ 12.13 hrs, Volume= 1.114 af
 Outflow = 0.22 cfs @ 19.20 hrs, Volume= 0.205 af, Atten= 99%, Lag= 424.0 min
 Primary = 0.22 cfs @ 19.20 hrs, Volume= 0.205 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 839.85' @ 19.20 hrs Surf.Area= 28,253 sf Storage= 41,032 cf

Plug-Flow detention time= 422.6 min calculated for 0.205 af (18% of inflow)
 Center-of-Mass det. time= 312.3 min (1,100.9 - 788.6)

Volume	Invert	Avail.Storage	Storage Description
#1	836.00'	143,934 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
836.00	22,316	0.0	0	0
836.01	22,316	33.0	74	74
837.00	22,316	33.0	7,291	7,364
837.01	22,316	27.0	60	7,425
838.99	22,316	27.0	11,930	19,355
839.00	22,316	100.0	223	19,578
840.00	29,313	100.0	25,815	45,392
841.00	36,810	100.0	33,062	78,454
842.00	45,695	100.0	41,253	119,706
842.50	51,216	100.0	24,228	143,934

Device	Routing	Invert	Outlet Devices
#1	Primary	837.00'	10.0" Round Culvert L= 31.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 837.00' / 836.50' S= 0.0161 '/ Cc= 0.900 n= 0.011, Flow Area= 0.55 sf
#2	Device 1	837.50'	6.0" Round Culvert L= 550.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 837.50' / 837.00' S= 0.0009 '/ Cc= 0.900 n= 0.011, Flow Area= 0.20 sf
#3	Device 2	837.00'	1.630 in/hr Exfiltration over Surface area above 837.00' Excluded Surface area = 22,316 sf
#4	Device 1	840.00'	1.0" Vert. Orifice/Grate C= 0.600
#5	Device 1	841.50'	24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#6	Secondary	842.00'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

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MSE 24-hr 3 10-year Rainfall=3.97"

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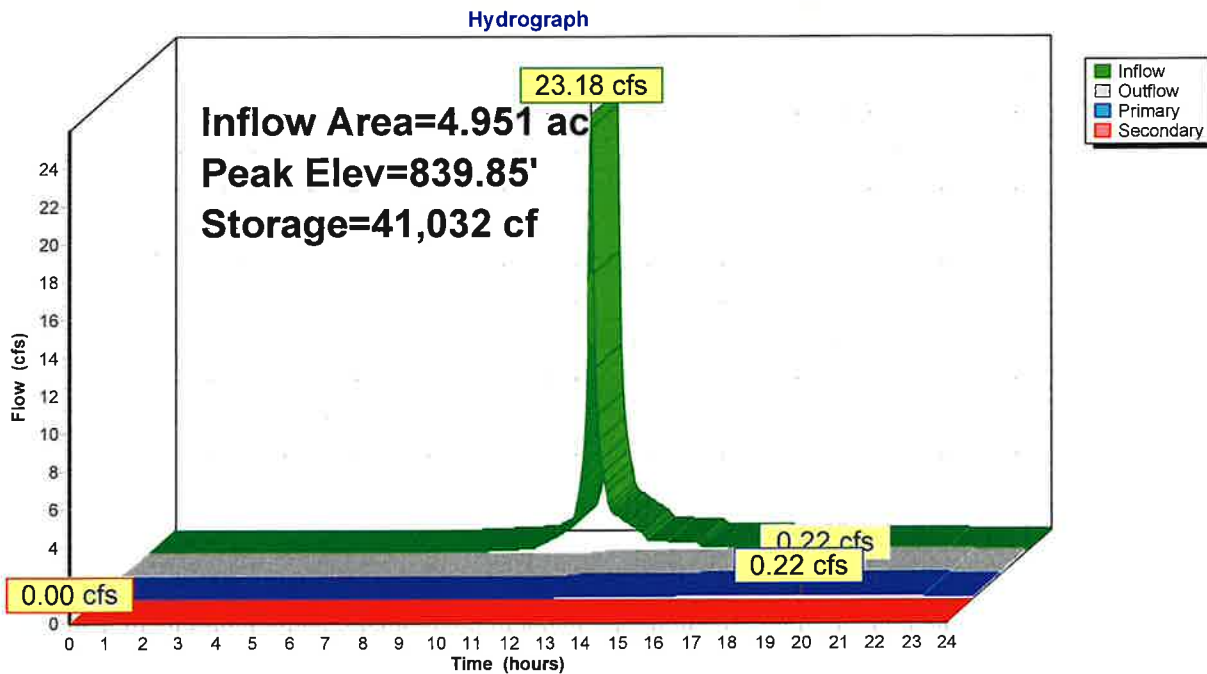
Primary OutFlow Max=0.22 cfs @ 19.20 hrs HW=839.85' TW=0.00' (Dynamic Tailwater)

- 1=Culvert (Passes 0.22 cfs of 4.10 cfs potential flow)
- 2=Culvert (Passes 0.22 cfs of 0.42 cfs potential flow)
- 3=Exfiltration (Exfiltration Controls 0.22 cfs)
- 4=Orifice/Grate (Controls 0.00 cfs)
- 5=Orifice/Grate (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=836.00' TW=0.00' (Dynamic Tailwater)

- 6=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 1BR: BIO-RETENTION BASIN #1



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MSE 24-hr 3 10-year Rainfall=3.97"

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Summary for Pond 2P: STORMWATER POND #2

Inflow Area = 3.348 ac, 59.89% Impervious, Inflow Depth > 2.70" for 10-year event
 Inflow = 15.68 cfs @ 12.13 hrs, Volume= 0.753 af
 Outflow = 0.15 cfs @ 19.05 hrs, Volume= 0.156 af, Atten= 99%, Lag= 415.5 min
 Primary = 0.15 cfs @ 19.05 hrs, Volume= 0.156 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 840.25' @ 19.05 hrs Surf.Area= 16,040 sf Storage= 27,098 cf

Plug-Flow detention time= 389.4 min calculated for 0.155 af (21% of inflow)
 Center-of-Mass det. time= 283.4 min (1,072.0 - 788.6)

Volume	Invert	Avail.Storage	Storage Description
#1	838.00'	61,695 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
838.00	8,920	0	0
839.00	11,375	10,148	10,148
840.00	14,920	13,148	23,295
841.00	19,480	17,200	40,495
842.00	22,920	21,200	61,695

Device	Routing	Invert	Outlet Devices
#1	Primary	838.00'	12.0" Round Culvert L= 33.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 838.00' / 837.00' S= 0.0303 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	838.00'	2.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	840.75'	24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Secondary	841.10'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.15 cfs @ 19.05 hrs HW=840.25' TW=0.00' (Dynamic Tailwater)
 ↑1=Culvert (Passes 0.15 cfs of 5.00 cfs potential flow)
 ↑2=Orifice/Grate (Orifice Controls 0.15 cfs @ 7.08 fps)
 ↑3=Orifice/Grate (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=838.00' TW=0.00' (Dynamic Tailwater)
 ↑4=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

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MSE 24-hr 3 10-year Rainfall=3.97"

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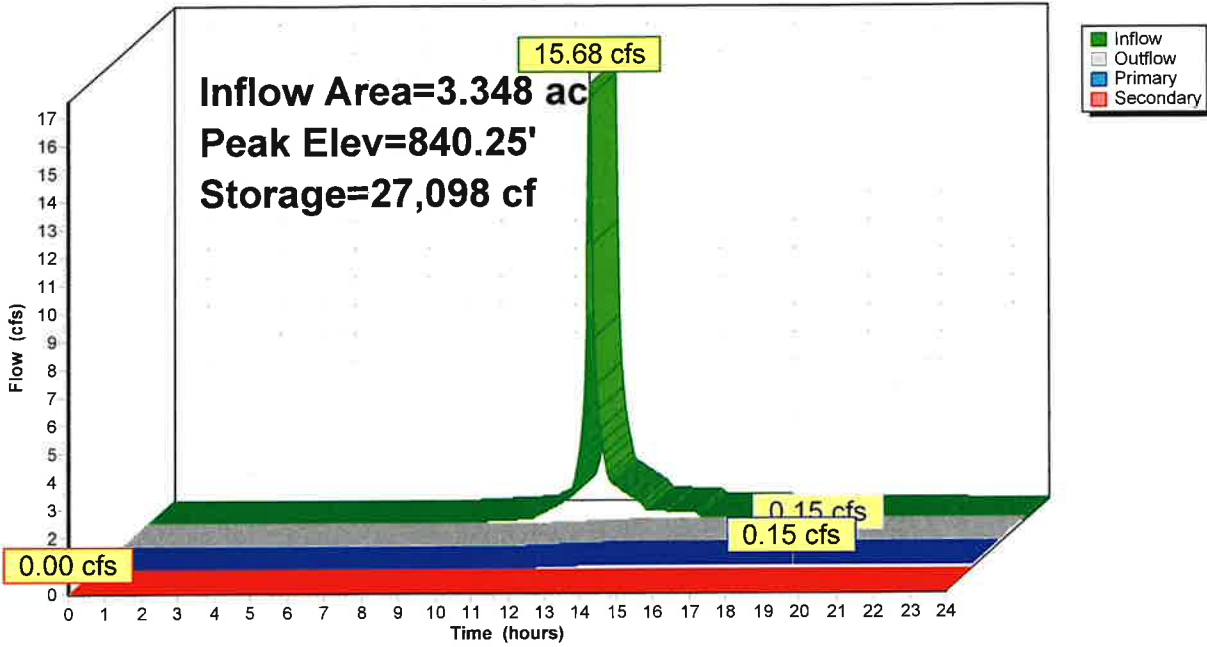
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Pond 2P: STORMWATER POND #2

Hydrograph



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MSE 24-hr 3 10-year Rainfall=3.97"

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Summary for Pond 3BR: BIO-RETENTION BASIN #3

Inflow Area = 1.492 ac, 58.11% Impervious, Inflow Depth > 2.70" for 10-year event
 Inflow = 6.99 cfs @ 12.13 hrs, Volume= 0.336 af
 Outflow = 1.19 cfs @ 12.48 hrs, Volume= 0.315 af, Atten= 83%, Lag= 20.7 min
 Primary = 1.19 cfs @ 12.48 hrs, Volume= 0.315 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 840.38' @ 12.48 hrs Surf.Area= 6,041 sf Storage= 6,417 cf

Plug-Flow detention time= 84.1 min calculated for 0.315 af (94% of inflow)
 Center-of-Mass det. time= 55.6 min (844.2 - 788.6)

Volume	Invert	Avail.Storage	Storage Description	
#1	836.00'	22,288 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
836.00	1,815	0.0	0	0
836.01	1,815	33.0	6	6
837.00	1,815	33.0	593	599
837.01	1,815	27.0	5	604
838.99	1,815	27.0	970	1,574
839.00	1,815	100.0	18	1,592
840.00	4,033	100.0	2,924	4,516
841.00	9,355	100.0	6,694	11,210
842.00	12,800	100.0	11,078	22,288

Device	Routing	Invert	Outlet Devices
#1	Primary	837.00'	10.0" Round Culvert L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 837.00' / 832.50' S= 0.0750 ' /' Cc= 0.900 n= 0.011, Flow Area= 0.55 sf
#2	Device 1	837.50'	6.0" Round Culvert L= 100.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 837.50' / 837.00' S= 0.0050 ' /' Cc= 0.900 n= 0.011, Flow Area= 0.20 sf
#3	Device 1	840.00'	4.0" Vert. Orifice/Grate C= 0.600
#4	Device 1	840.75'	24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Secondary	841.00'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

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MSE 24-hr 3 10-year Rainfall=3.97"

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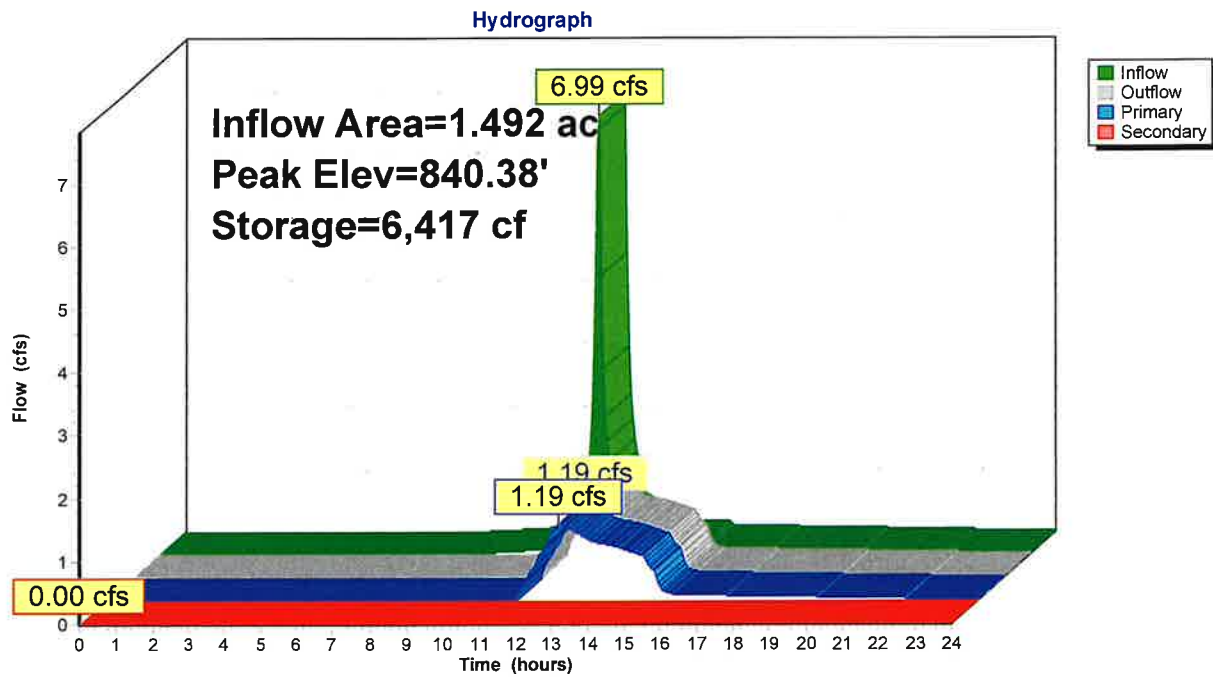
Primary OutFlow Max=1.19 cfs @ 12.48 hrs HW=840.38' TW=0.00' (Dynamic Tailwater)

- 1=Culvert (Passes 1.19 cfs of 4.52 cfs potential flow)
- 2=Culvert (Barrel Controls 1.00 cfs @ 5.09 fps)
- 3=Orifice/Grate (Orifice Controls 0.19 cfs @ 2.21 fps)
- 4=Orifice/Grate (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=836.00' TW=0.00' (Dynamic Tailwater)

- 5=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 3BR: BIO-RETENTION BASIN #3



CJE2364R0*MSE 24-hr 3 25-year Rainfall=4.80"*

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: SUBCATCHMENT1: TO Runoff Area=4.951 ac 57.67% Impervious Runoff Depth>3.48"
 Tc=6.0 min CN=88 Runoff=29.44 cfs 1.435 af

Subcatchment2S: SUBCATCHMENT2: TO Runoff Area=3.348 ac 59.89% Impervious Runoff Depth>3.48"
 Tc=6.0 min CN=88 Runoff=19.91 cfs 0.970 af

Subcatchment3S: SUBCATCHMENT3: TO Runoff Area=1.492 ac 58.11% Impervious Runoff Depth>3.48"
 Tc=6.0 min CN=88 Runoff=8.87 cfs 0.432 af

Subcatchment4S: SUBCATCHMENT4: Runoff Area=1.567 ac 24.38% Impervious Runoff Depth>2.72"
 Tc=6.0 min CN=80 Runoff=7.58 cfs 0.355 af

Reach 1R: TOTAL RUNOFF Inflow=8.87 cfs 1.253 af
 Outflow=8.87 cfs 1.253 af

Pond 1BR: BIO-RETENTIONBASIN #1 Peak Elev=840.21' Storage=51,791 cf Inflow=29.44 cfs 1.435 af
 Primary=0.33 cfs 0.311 af Secondary=0.00 cfs 0.000 af Outflow=0.33 cfs 0.311 af

Pond 2P: STORMWATERPOND #2 Peak Elev=840.74' Storage=35,639 cf Inflow=19.91 cfs 0.970 af
 Primary=0.17 cfs 0.175 af Secondary=0.00 cfs 0.000 af Outflow=0.17 cfs 0.175 af

Pond 3BR: BIO-RETENTIONBASIN #3 Peak Elev=840.67' Storage=8,423 cf Inflow=8.87 cfs 0.432 af
 Primary=1.35 cfs 0.412 af Secondary=0.00 cfs 0.000 af Outflow=1.35 cfs 0.412 af

Total Runoff Area = 11.358 ac Runoff Volume = 3.193 af Average Runoff Depth = 3.37"
46.21% Pervious = 5.249 ac 53.79% Impervious = 6.109 ac

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MSE 24-hr 3 25-year Rainfall=4.80"

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Summary for Subcatchment 1S: SUBCATCHMENT 1: TO BIO-RETENTION BASIN #1

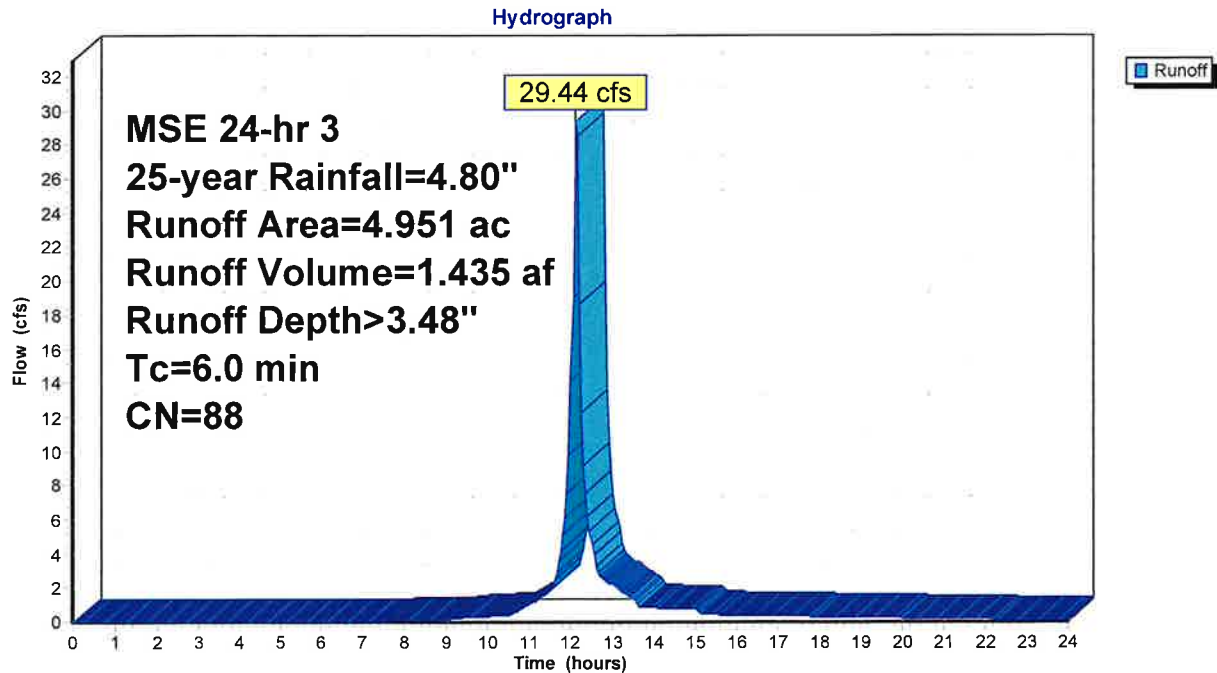
Runoff = 29.44 cfs @ 12.13 hrs, Volume= 1.435 af, Depth> 3.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 25-year Rainfall=4.80"

Area (ac)	CN	Description
* 1.236	98	Bldg Roof, HSG C
* 1.619	98	Paved parking, HSG C
2.096	74	>75% Grass cover, Good, HSG C
4.951	88	Weighted Average
2.096		42.33% Pervious Area
2.855		57.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MIN TC

Subcatchment 1S: SUBCATCHMENT 1: TO BIO-RETENTION BASIN #1



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MSE 24-hr 3 25-year Rainfall=4.80"

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Summary for Subcatchment 2S: SUBCATCHMENT 2: TO STORMWATER POND #2

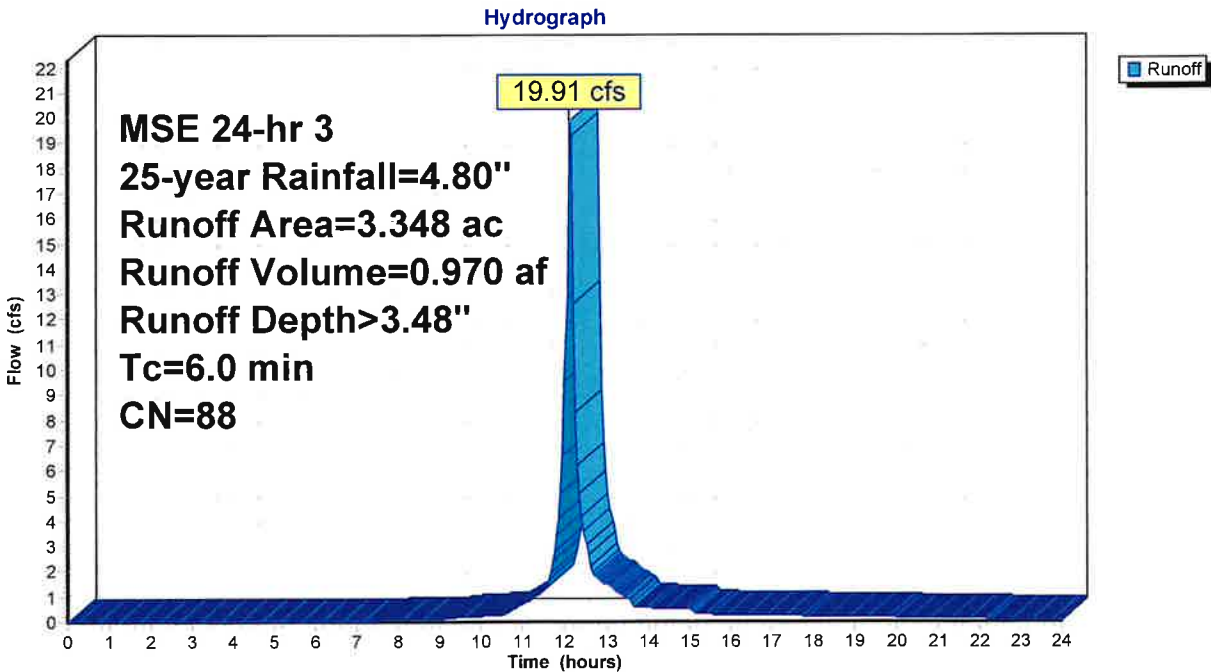
Runoff = 19.91 cfs @ 12.13 hrs, Volume= 0.970 af, Depth> 3.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 25-year Rainfall=4.80"

Area (ac)	CN	Description
0.895	98	Roofs, HSG C
1.343	74	>75% Grass cover, Good, HSG C
0.905	98	Paved parking, HSG C
0.205	98	Water Surface, HSG C
3.348	88	Weighted Average
1.343		40.11% Pervious Area
2.005		59.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MIN TC

Subcatchment 2S: SUBCATCHMENT 2: TO STORMWATER POND #2



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MSE 24-hr 3 25-year Rainfall=4.80"

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Summary for Subcatchment 3S: SUBCATCHMENT 3: TO BIO-RETENTION BASIN #3

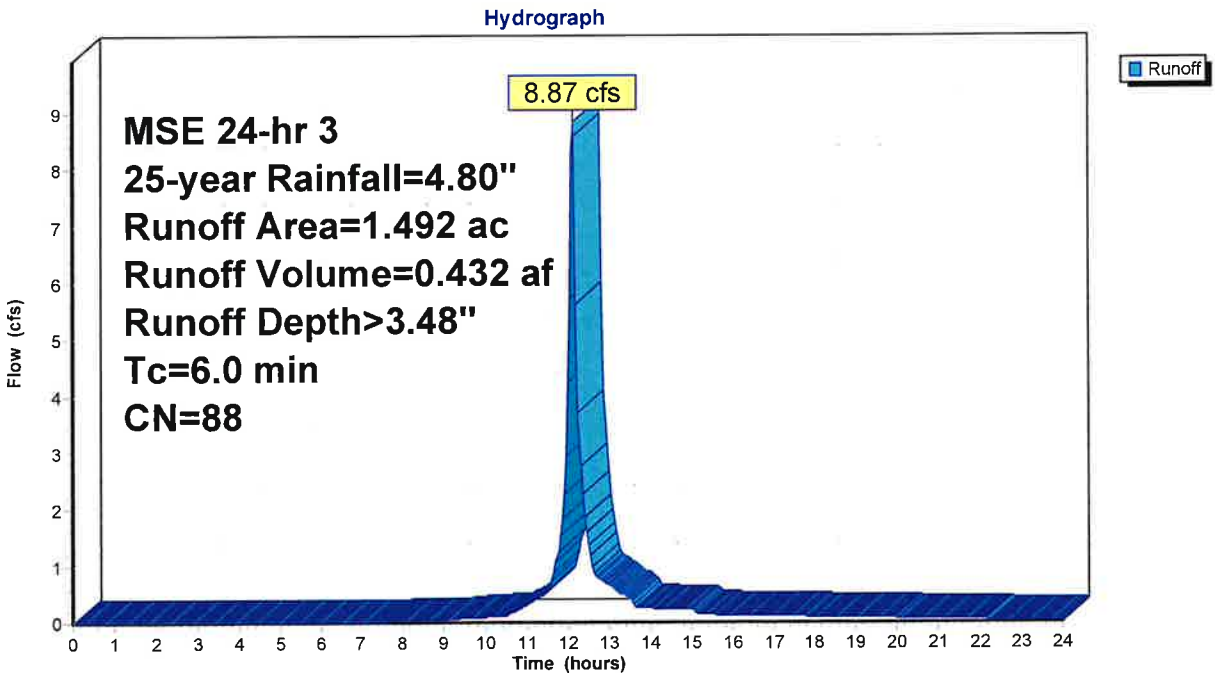
Runoff = 8.87 cfs @ 12.13 hrs, Volume= 0.432 af, Depth> 3.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 25-year Rainfall=4.80"

Area (ac)	CN	Description
* 0.503	98	Paved parking, HSG C
0.625	74	>75% Grass cover, Good, HSG C
0.364	98	Roofs, HSG C
1.492	88	Weighted Average
0.625		41.89% Pervious Area
0.867		58.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Min TC

Subcatchment 3S: SUBCATCHMENT 3: TO BIO-RETENTION BASIN #3



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MSE 24-hr 3 25-year Rainfall=4.80"

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Summary for Subcatchment 4S: SUBCATCHMENT 4: UNDETAINED

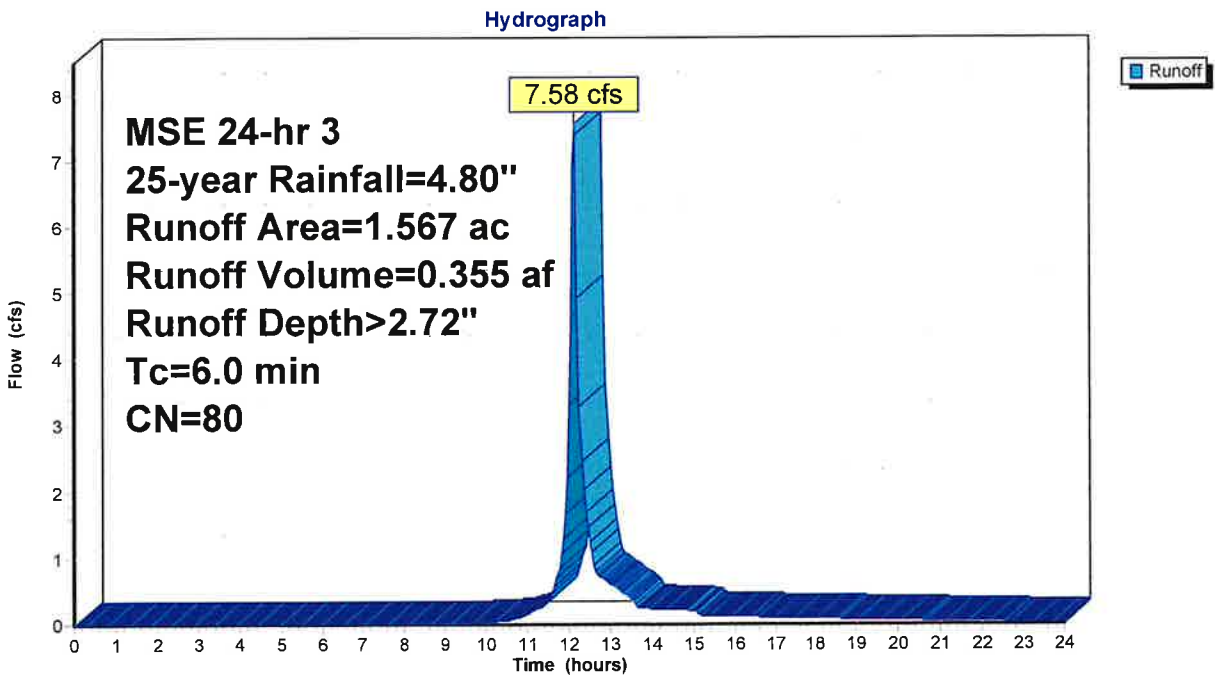
Runoff = 7.58 cfs @ 12.13 hrs, Volume= 0.355 af, Depth> 2.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 25-year Rainfall=4.80"

Area (ac)	CN	Description
* 0.279	98	Paved parking, HSG B
1.185	74	>75% Grass cover, Good, HSG C
0.103	98	Roofs, HSG C
1.567	80	Weighted Average
1.185		75.62% Pervious Area
0.382		24.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Min TC

Subcatchment 4S: SUBCATCHMENT 4: UNDETAINED



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MSE 24-hr 3 25-year Rainfall=4.80"

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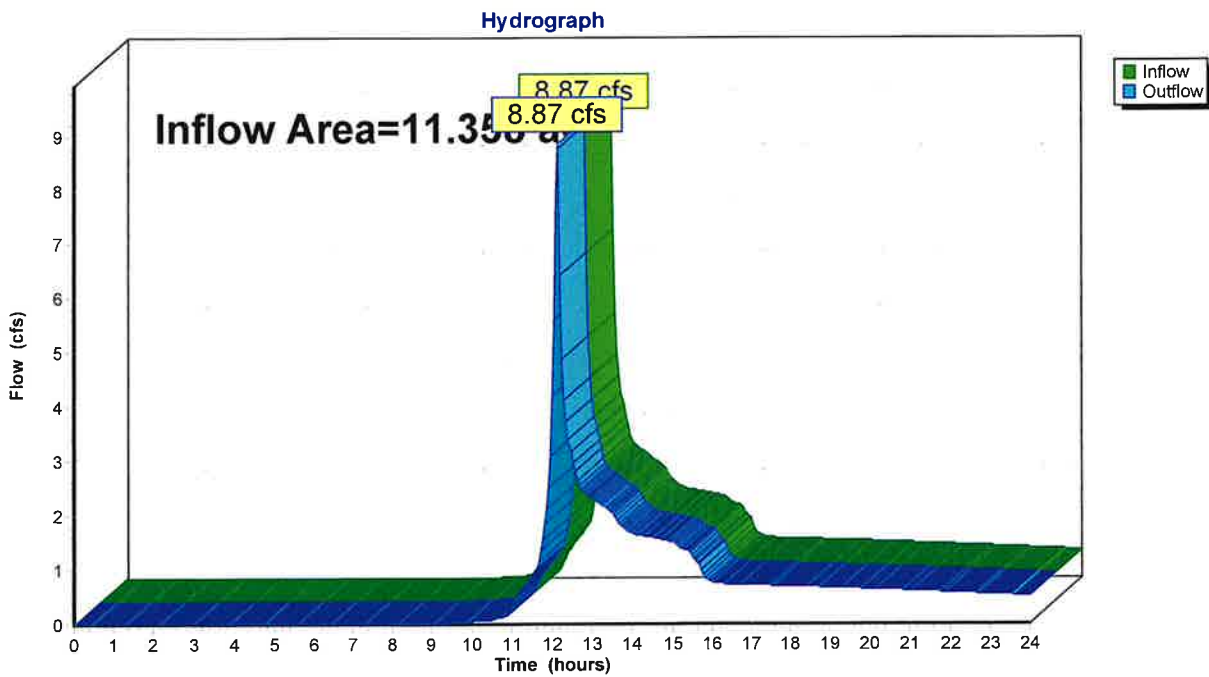
Summary for Reach 1R: TOTAL RUNOFF

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 11.358 ac, 53.79% Impervious, Inflow Depth > 1.32" for 25-year event
Inflow = 8.87 cfs @ 12.14 hrs, Volume= 1.253 af
Outflow = 8.87 cfs @ 12.14 hrs, Volume= 1.253 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach 1R: TOTAL RUNOFF



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MSE 24-hr 3 25-year Rainfall=4.80"

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Summary for Pond 1BR: BIO-RETENTION BASIN #1

Inflow Area = 4.951 ac, 57.67% Impervious, Inflow Depth > 3.48" for 25-year event
 Inflow = 29.44 cfs @ 12.13 hrs, Volume= 1.435 af
 Outflow = 0.33 cfs @ 17.87 hrs, Volume= 0.311 af, Atten= 99%, Lag= 344.3 min
 Primary = 0.33 cfs @ 17.87 hrs, Volume= 0.311 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 840.21' @ 17.87 hrs Surf.Area= 30,906 sf Storage= 51,791 cf

Plug-Flow detention time= 419.5 min calculated for 0.311 af (22% of inflow)
 Center-of-Mass det. time= 310.2 min (1,093.8 - 783.6)

Volume	Invert	Avail.Storage	Storage Description	
#1	836.00'	143,934 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
836.00	22,316	0.0	0	0
836.01	22,316	33.0	74	74
837.00	22,316	33.0	7,291	7,364
837.01	22,316	27.0	60	7,425
838.99	22,316	27.0	11,930	19,355
839.00	22,316	100.0	223	19,578
840.00	29,313	100.0	25,815	45,392
841.00	36,810	100.0	33,062	78,454
842.00	45,695	100.0	41,253	119,706
842.50	51,216	100.0	24,228	143,934

Device	Routing	Invert	Outlet Devices
#1	Primary	837.00'	10.0" Round Culvert L= 31.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 837.00' / 836.50' S= 0.0161 '/ Cc= 0.900 n= 0.011, Flow Area= 0.55 sf
#2	Device 1	837.50'	6.0" Round Culvert L= 550.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 837.50' / 837.00' S= 0.0009 '/ Cc= 0.900 n= 0.011, Flow Area= 0.20 sf
#3	Device 2	837.00'	1.630 in/hr Exfiltration over Surface area above 837.00' Excluded Surface area = 22,316 sf
#4	Device 1	840.00'	1.0" Vert. Orifice/Grate C= 0.600
#5	Device 1	841.50'	24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#6	Secondary	842.00'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

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MSE 24-hr 3 25-year Rainfall=4.80"

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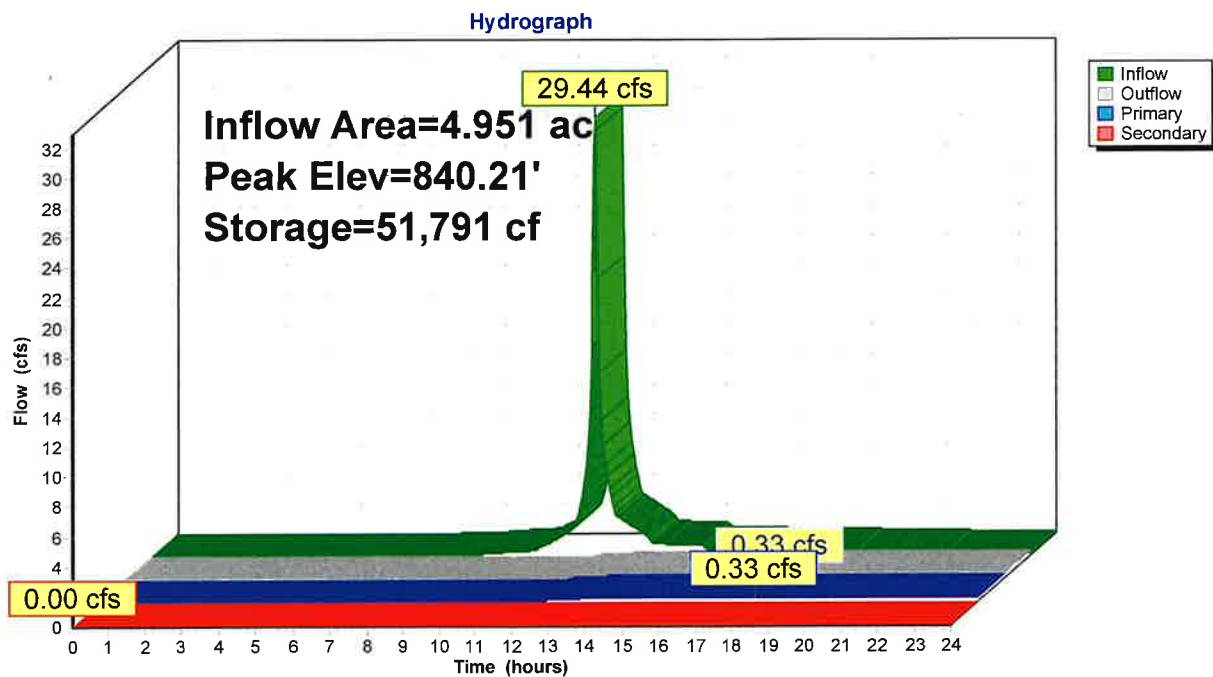
Primary OutFlow Max=0.33 cfs @ 17.87 hrs HW=840.21' TW=0.00' (Dynamic Tailwater)

- 1=Culvert (Passes 0.33 cfs of 4.39 cfs potential flow)
- 2=Culvert (Passes 0.32 cfs of 0.45 cfs potential flow)
- 3=Exfiltration (Exfiltration Controls 0.32 cfs)
- 4=Orifice/Grate (Orifice Controls 0.01 cfs @ 1.99 fps)
- 5=Orifice/Grate (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=836.00' TW=0.00' (Dynamic Tailwater)

- 6=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 1BR: BIO-RETENTION BASIN #1



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MSE 24-hr 3 25-year Rainfall=4.80"

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Summary for Pond 2P: STORMWATER POND #2

Inflow Area = 3.348 ac, 59.89% Impervious, Inflow Depth > 3.48" for 25-year event
 Inflow = 19.91 cfs @ 12.13 hrs, Volume= 0.970 af
 Outflow = 0.17 cfs @ 19.71 hrs, Volume= 0.175 af, Atten= 99%, Lag= 454.8 min
 Primary = 0.17 cfs @ 19.71 hrs, Volume= 0.175 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 840.74' @ 19.71 hrs Surf.Area= 18,308 sf Storage= 35,639 cf

Plug-Flow detention time= 400.4 min calculated for 0.175 af (18% of inflow)
 Center-of-Mass det. time= 282.6 min (1,066.2 - 783.6)

Volume	Invert	Avail.Storage	Storage Description
#1	838.00'	61,695 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
838.00	8,920	0	0
839.00	11,375	10,148	10,148
840.00	14,920	13,148	23,295
841.00	19,480	17,200	40,495
842.00	22,920	21,200	61,695

Device	Routing	Invert	Outlet Devices
#1	Primary	838.00'	12.0" Round Culvert L= 33.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 838.00' / 837.00' S= 0.0303 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	838.00'	2.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	840.75'	24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Secondary	841.10'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.17 cfs @ 19.71 hrs HW=840.74' TW=0.00' (Dynamic Tailwater)
 ↑1=Culvert (Passes 0.17 cfs of 5.66 cfs potential flow)
 ↑2=Orifice/Grate (Orifice Controls 0.17 cfs @ 7.85 fps)
 ↑3=Orifice/Grate (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=838.00' TW=0.00' (Dynamic Tailwater)
 ↑4=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

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MSE 24-hr 3 25-year Rainfall=4.80"

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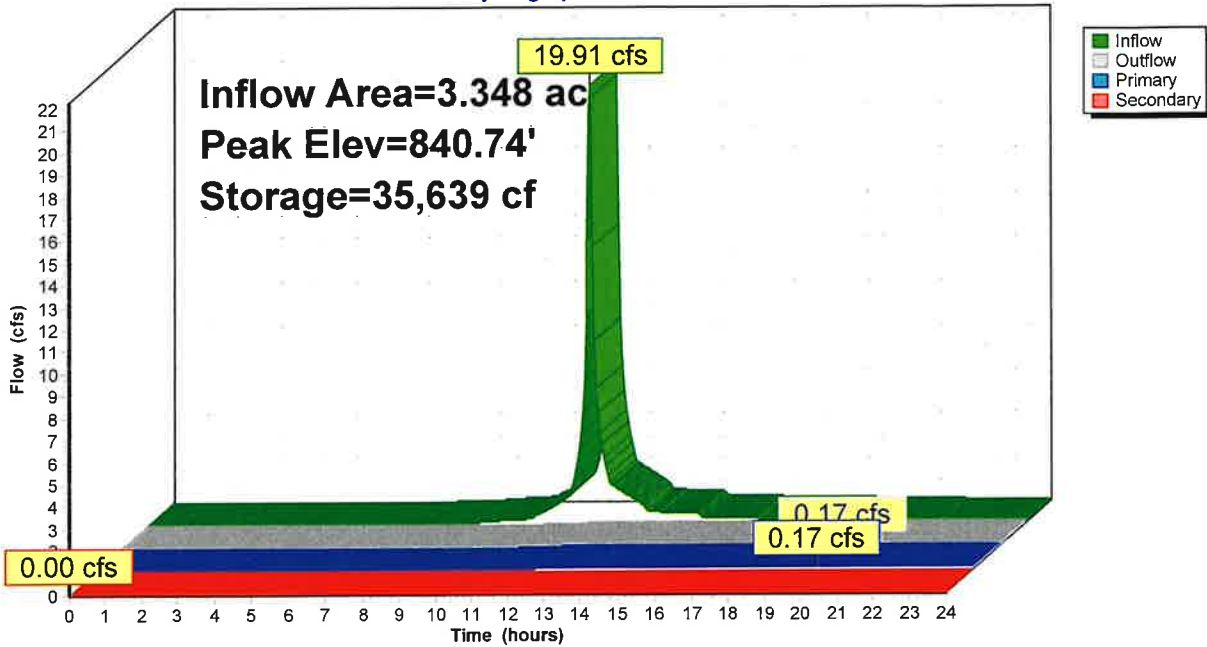
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Pond 2P: STORMWATER POND #2

Hydrograph



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MSE 24-hr 3 25-year Rainfall=4.80"

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Summary for Pond 3BR: BIO-RETENTION BASIN #3

Inflow Area = 1.492 ac, 58.11% Impervious, Inflow Depth > 3.48" for 25-year event
 Inflow = 8.87 cfs @ 12.13 hrs, Volume= 0.432 af
 Outflow = 1.35 cfs @ 12.51 hrs, Volume= 0.412 af, Atten= 85%, Lag= 22.8 min
 Primary = 1.35 cfs @ 12.51 hrs, Volume= 0.412 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 840.67' @ 12.51 hrs Surf.Area= 7,606 sf Storage= 8,423 cf

Plug-Flow detention time= 86.7 min calculated for 0.411 af (95% of inflow)
 Center-of-Mass det. time= 63.4 min (847.0 - 783.6)

Volume	Invert	Avail.Storage	Storage Description	
#1	836.00'	22,288 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
836.00	1,815	0.0	0	0
836.01	1,815	33.0	6	6
837.00	1,815	33.0	593	599
837.01	1,815	27.0	5	604
838.99	1,815	27.0	970	1,574
839.00	1,815	100.0	18	1,592
840.00	4,033	100.0	2,924	4,516
841.00	9,355	100.0	6,694	11,210
842.00	12,800	100.0	11,078	22,288

Device	Routing	Invert	Outlet Devices
#1	Primary	837.00'	10.0" Round Culvert L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 837.00' / 832.50' S= 0.0750 '/ Cc= 0.900 n= 0.011, Flow Area= 0.55 sf
#2	Device 1	837.50'	6.0" Round Culvert L= 100.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 837.50' / 837.00' S= 0.0050 '/ Cc= 0.900 n= 0.011, Flow Area= 0.20 sf
#3	Device 1	840.00'	4.0" Vert. Orifice/Grate C= 0.600
#4	Device 1	840.75'	24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Secondary	841.00'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

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MSE 24-hr 3 25-year Rainfall=4.80"

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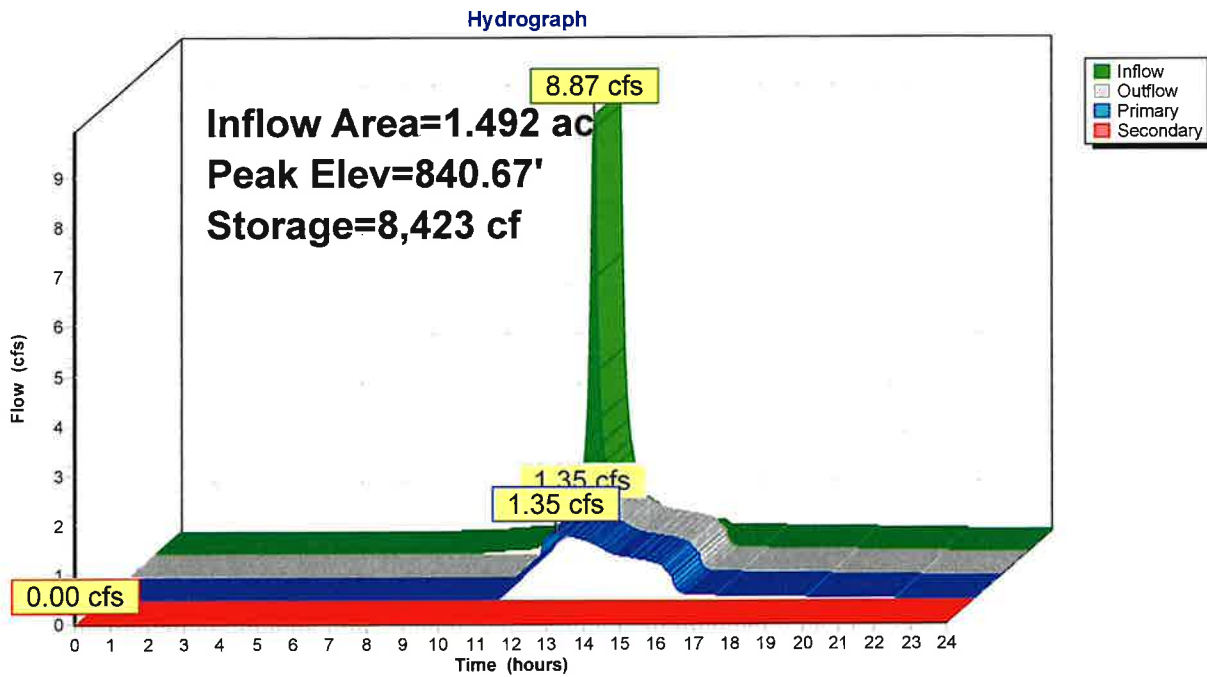
Primary OutFlow Max=1.35 cfs @ 12.51 hrs HW=840.67' TW=0.00' (Dynamic Tailwater)

- 1=Culvert (Passes 1.35 cfs of 4.74 cfs potential flow)
- 2=Culvert (Barrel Controls 1.05 cfs @ 5.34 fps)
- 3=Orifice/Grate (Orifice Controls 0.30 cfs @ 3.42 fps)
- 4=Orifice/Grate (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=836.00' TW=0.00' (Dynamic Tailwater)

- 5=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 3BR: BIO-RETENTION BASIN #3



CJE2364R0*MSE 24-hr 3 100-year Rainfall=6.55"*

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: SUBCATCHMENT1: TO Runoff Area=4.951 ac 57.67% Impervious Runoff Depth>5.16"
 Tc=6.0 min CN=88 Runoff=42.58 cfs 2.127 af

Subcatchment2S: SUBCATCHMENT2: TO Runoff Area=3.348 ac 59.89% Impervious Runoff Depth>5.16"
 Tc=6.0 min CN=88 Runoff=28.79 cfs 1.438 af

Subcatchment3S: SUBCATCHMENT3: TO Runoff Area=1.492 ac 58.11% Impervious Runoff Depth>5.16"
 Tc=6.0 min CN=88 Runoff=12.83 cfs 0.641 af

Subcatchment4S: SUBCATCHMENT4: Runoff Area=1.567 ac 24.38% Impervious Runoff Depth>4.28"
 Tc=6.0 min CN=80 Runoff=11.72 cfs 0.559 af

Reach 1R: TOTAL RUNOFF

Inflow=13.28 cfs 2.319 af
 Outflow=13.28 cfs 2.319 af

Pond 1BR: BIO-RETENTIONBASIN #1 Peak Elev=840.93' Storage=75,944 cf Inflow=42.58 cfs 2.127 af
 Primary=0.54 cfs 0.514 af Secondary=0.00 cfs 0.000 af Outflow=0.54 cfs 0.514 af

Pond 2P: STORMWATERPOND #2 Peak Elev=841.01' Storage=40,661 cf Inflow=28.79 cfs 1.438 af
 Primary=2.88 cfs 0.626 af Secondary=0.00 cfs 0.000 af Outflow=2.88 cfs 0.626 af

Pond 3BR: BIO-RETENTIONBASIN #3 Peak Elev=841.00' Storage=11,226 cf Inflow=12.83 cfs 0.641 af
 Primary=4.08 cfs 0.620 af Secondary=0.00 cfs 0.000 af Outflow=4.08 cfs 0.620 af

Total Runoff Area = 11.358 ac Runoff Volume = 4.766 af Average Runoff Depth = 5.03"
46.21% Pervious = 5.249 ac 53.79% Impervious = 6.109 ac

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MSE 24-hr 3 100-year Rainfall=6.55"

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Summary for Subcatchment 1S: SUBCATCHMENT 1: TO BIO-RETENTION BASIN #1

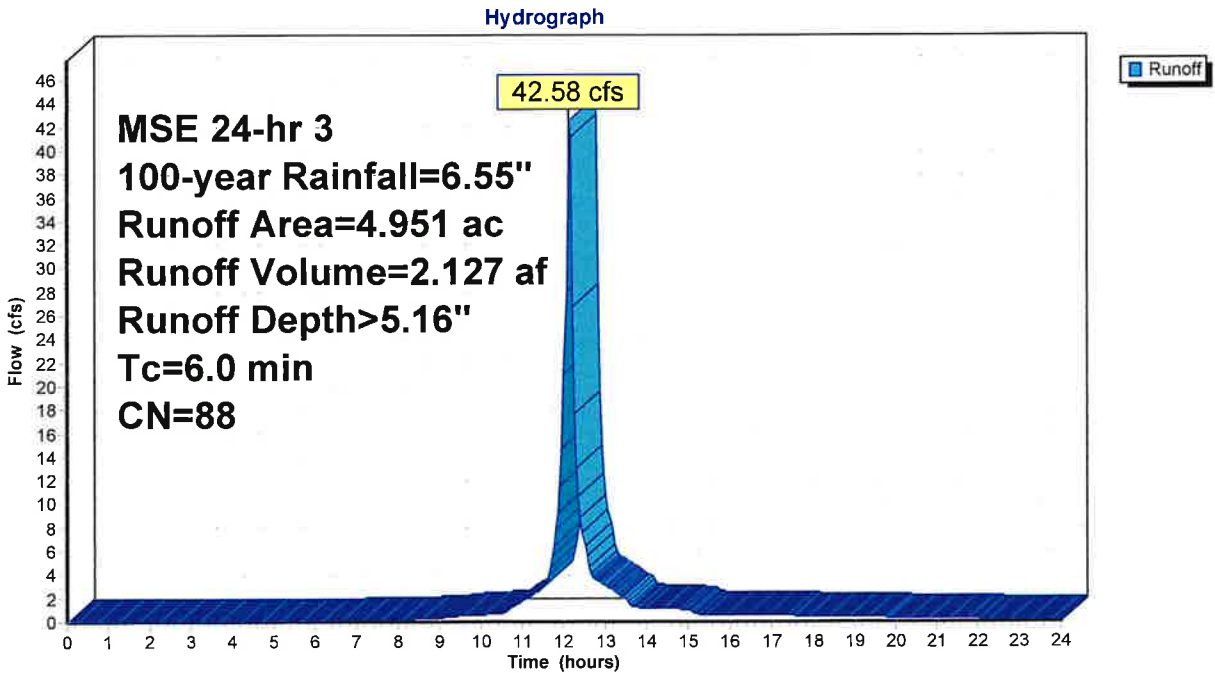
Runoff = 42.58 cfs @ 12.13 hrs, Volume= 2.127 af, Depth> 5.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-year Rainfall=6.55"

Area (ac)	CN	Description
* 1.236	98	Bldg Roof, HSG C
* 1.619	98	Paved parking, HSG C
2.096	74	>75% Grass cover, Good, HSG C
4.951	88	Weighted Average
2.096		42.33% Pervious Area
2.855		57.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MIN TC

Subcatchment 1S: SUBCATCHMENT 1: TO BIO-RETENTION BASIN #1



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MSE 24-hr 3 100-year Rainfall=6.55"

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Summary for Subcatchment 2S: SUBCATCHMENT 2: TO STORMWATER POND #2

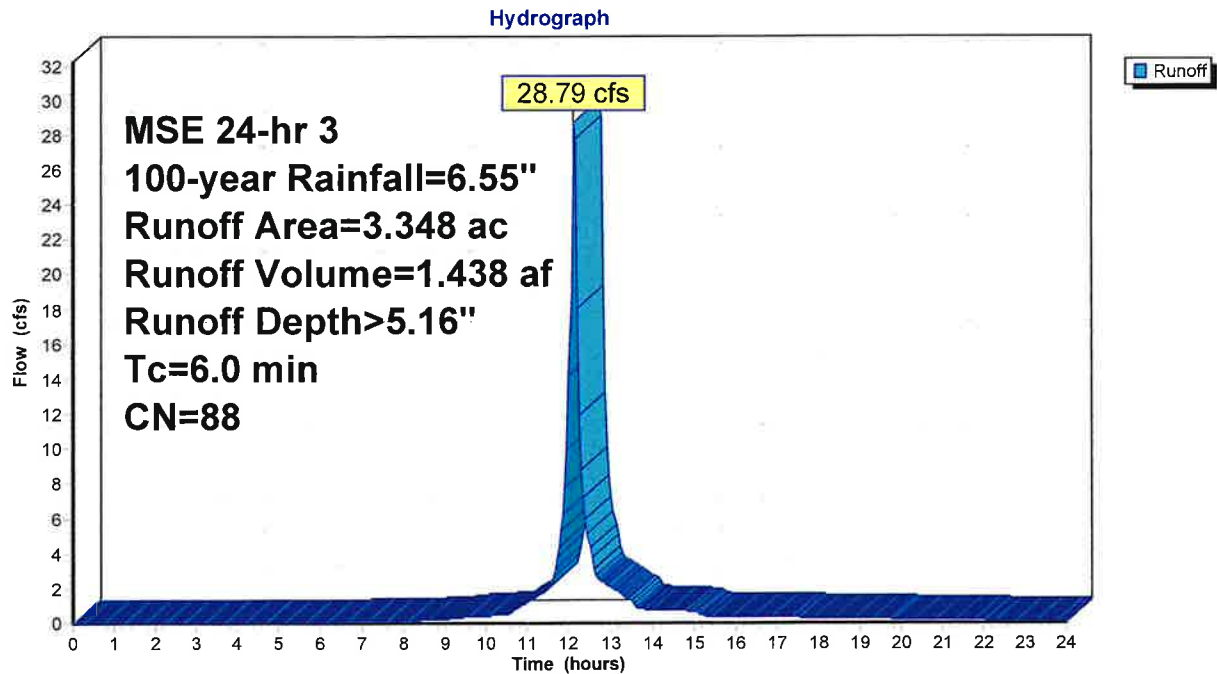
Runoff = 28.79 cfs @ 12.13 hrs, Volume= 1.438 af, Depth> 5.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 MSE 24-hr 3 100-year Rainfall=6.55"

Area (ac)	CN	Description
0.895	98	Roofs, HSG C
1.343	74	>75% Grass cover, Good, HSG C
0.905	98	Paved parking, HSG C
0.205	98	Water Surface, HSG C
3.348	88	Weighted Average
1.343		40.11% Pervious Area
2.005		59.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MIN TC

Subcatchment 2S: SUBCATCHMENT 2: TO STORMWATER POND #2



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MSE 24-hr 3 100-year Rainfall=6.55"

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Summary for Subcatchment 3S: SUBCATCHMENT 3: TO BIO-RETENTION BASIN #3

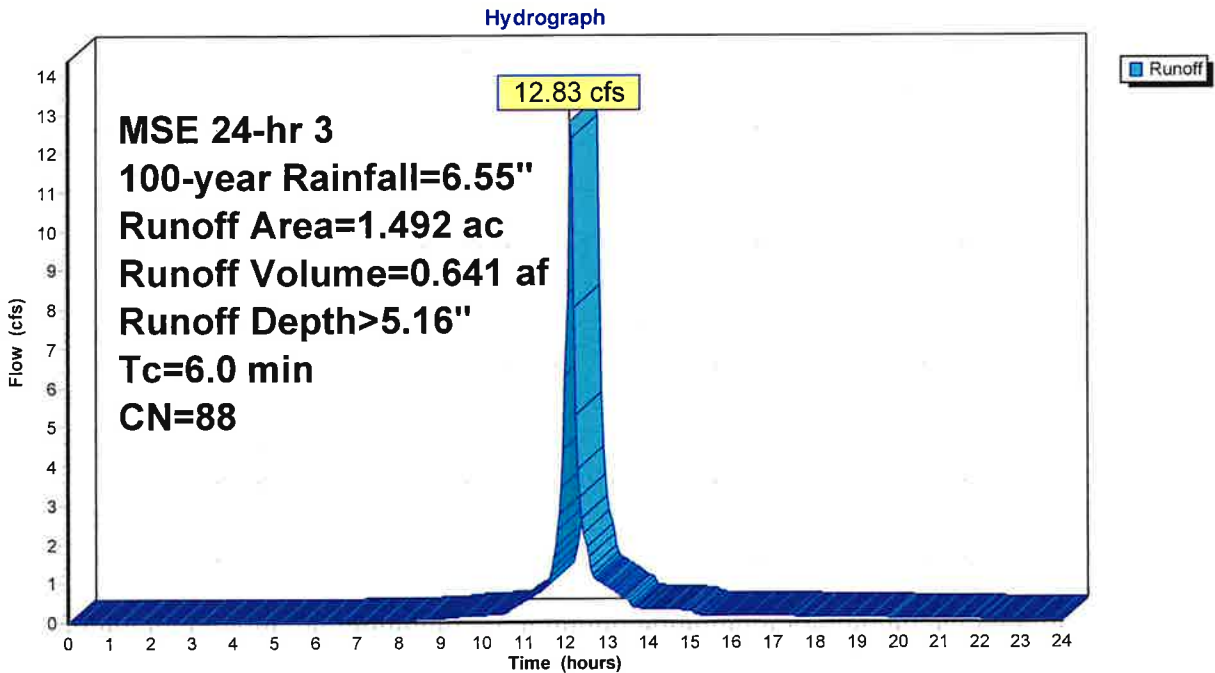
Runoff = 12.83 cfs @ 12.13 hrs, Volume= 0.641 af, Depth> 5.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-year Rainfall=6.55"

Area (ac)	CN	Description
* 0.503	98	Paved parking, HSG C
0.625	74	>75% Grass cover, Good, HSG C
0.364	98	Roofs, HSG C
1.492	88	Weighted Average
0.625		41.89% Pervious Area
0.867		58.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Min TC

Subcatchment 3S: SUBCATCHMENT 3: TO BIO-RETENTION BASIN #3



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MSE 24-hr 3 100-year Rainfall=6.55"

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Summary for Subcatchment 4S: SUBCATCHMENT 4: UNDETAINED

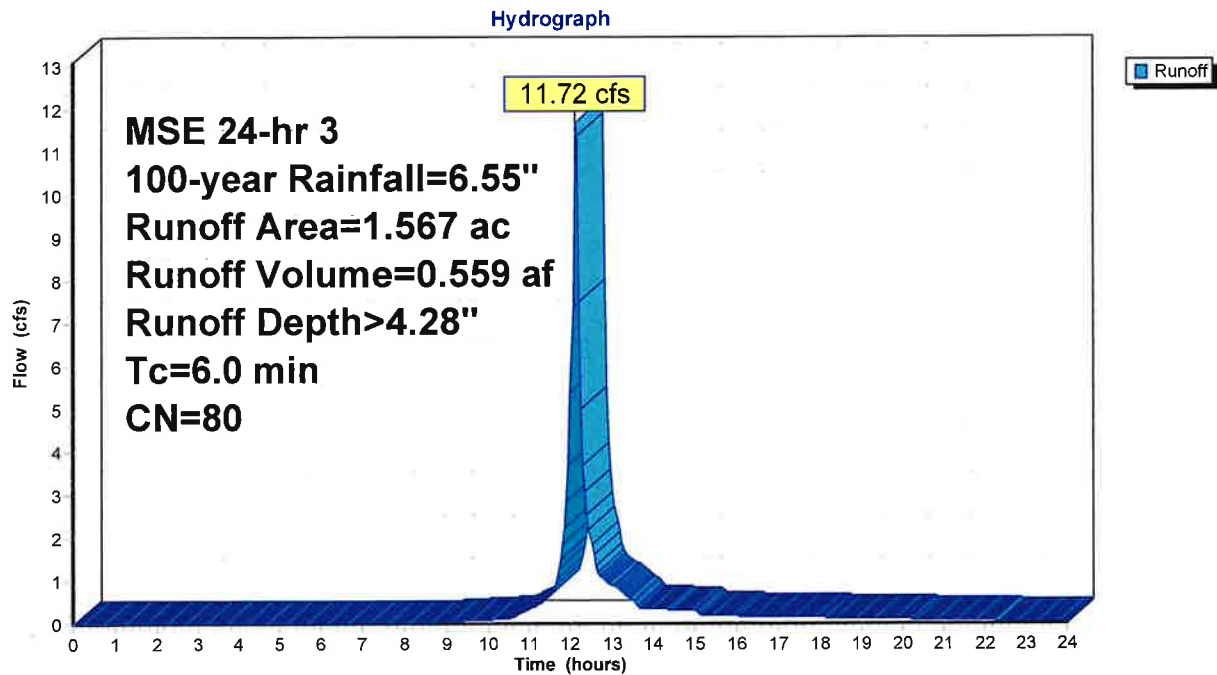
Runoff = 11.72 cfs @ 12.13 hrs, Volume= 0.559 af, Depth> 4.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-year Rainfall=6.55"

Area (ac)	CN	Description
* 0.279	98	Paved parking, HSG B
1.185	74	>75% Grass cover, Good, HSG C
0.103	98	Roofs, HSG C
1.567	80	Weighted Average
1.185		75.62% Pervious Area
0.382		24.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Min TC

Subcatchment 4S: SUBCATCHMENT 4: UNDETAINED



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MSE 24-hr 3 100-year Rainfall=6.55"

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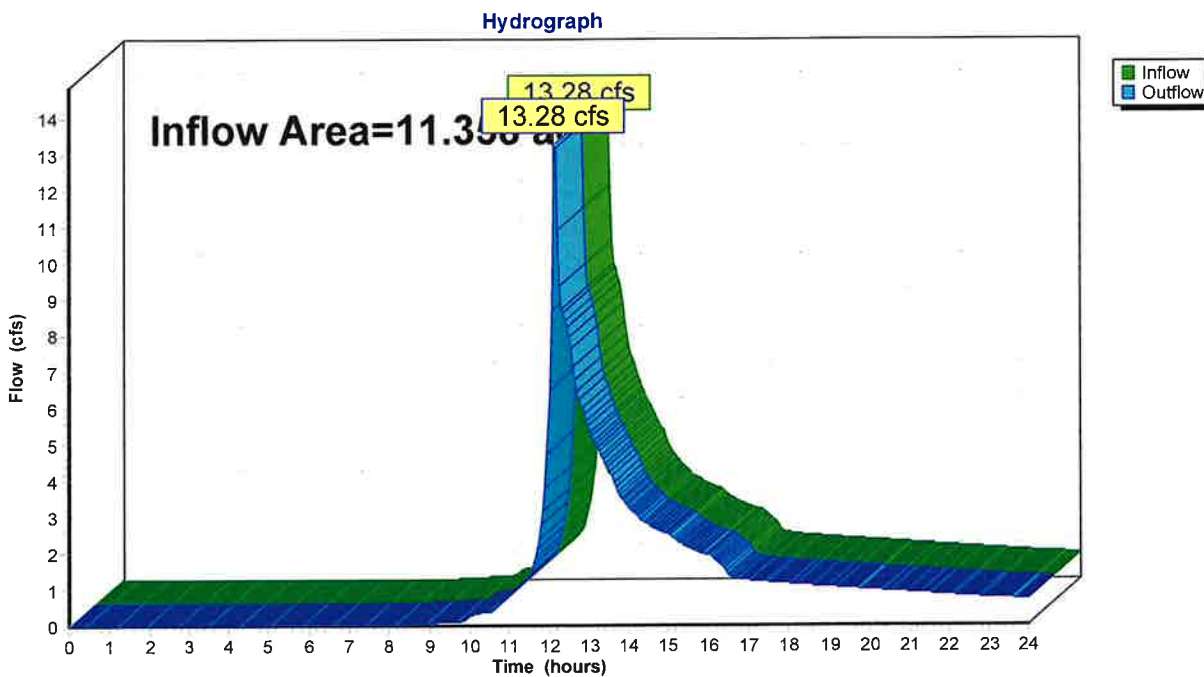
Summary for Reach 1R: TOTAL RUNOFF

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 11.358 ac, 53.79% Impervious, Inflow Depth > 2.45" for 100-year event
Inflow = 13.28 cfs @ 12.14 hrs, Volume= 2.319 af
Outflow = 13.28 cfs @ 12.14 hrs, Volume= 2.319 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach 1R: TOTAL RUNOFF



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MSE 24-hr 3 100-year Rainfall=6.55"

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Summary for Pond 1BR: BIO-RETENTION BASIN #1

Inflow Area = 4.951 ac, 57.67% Impervious, Inflow Depth > 5.16" for 100-year event
 Inflow = 42.58 cfs @ 12.13 hrs, Volume= 2.127 af
 Outflow = 0.54 cfs @ 16.79 hrs, Volume= 0.514 af, Atten= 99%, Lag= 279.9 min
 Primary = 0.54 cfs @ 16.79 hrs, Volume= 0.514 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 840.93' @ 16.79 hrs Surf.Area= 36,295 sf Storage= 75,944 cf

Plug-Flow detention time= 424.2 min calculated for 0.514 af (24% of inflow)
 Center-of-Mass det. time= 311.9 min (1,087.7 - 775.8)

Volume	Invert	Avail.Storage	Storage Description	
#1	836.00'	143,934 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
836.00	22,316	0.0	0	0
836.01	22,316	33.0	74	74
837.00	22,316	33.0	7,291	7,364
837.01	22,316	27.0	60	7,425
838.99	22,316	27.0	11,930	19,355
839.00	22,316	100.0	223	19,578
840.00	29,313	100.0	25,815	45,392
841.00	36,810	100.0	33,062	78,454
842.00	45,695	100.0	41,253	119,706
842.50	51,216	100.0	24,228	143,934

Device	Routing	Invert	Outlet Devices
#1	Primary	837.00'	10.0" Round Culvert L= 31.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 837.00' / 836.50' S= 0.0161 '/' Cc= 0.900 n= 0.011, Flow Area= 0.55 sf
#2	Device 1	837.50'	6.0" Round Culvert L= 550.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 837.50' / 837.00' S= 0.0009 '/' Cc= 0.900 n= 0.011, Flow Area= 0.20 sf
#3	Device 2	837.00'	1.630 in/hr Exfiltration over Surface area above 837.00' Excluded Surface area = 22,316 sf
#4	Device 1	840.00'	1.0" Vert. Orifice/Grate C= 0.600
#5	Device 1	841.50'	24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#6	Secondary	842.00'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

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MSE 24-hr 3 100-year Rainfall=6.55"

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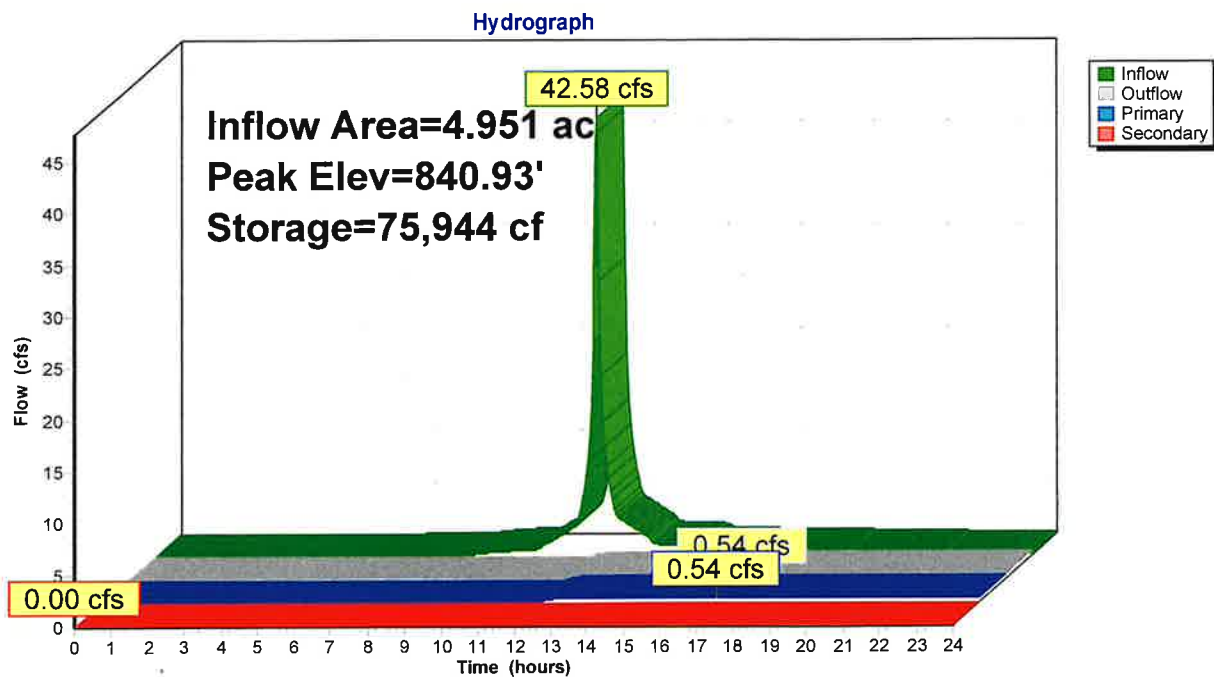
Primary OutFlow Max=0.54 cfs @ 16.79 hrs HW=840.93' TW=0.00' (Dynamic Tailwater)

- 1=Culvert (Passes 0.54 cfs of 4.92 cfs potential flow)
- 2=Culvert (Barrel Controls 0.51 cfs @ 2.60 fps)
- 3=Exfiltration (Passes 0.51 cfs of 0.53 cfs potential flow)
- 4=Orifice/Grate (Orifice Controls 0.02 cfs @ 4.54 fps)
- 5=Orifice/Grate (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=836.00' TW=0.00' (Dynamic Tailwater)

- 6=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 1BR: BIO-RETENTION BASIN #1



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MSE 24-hr 3 100-year Rainfall=6.55"

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Summary for Pond 2P: STORMWATER POND #2

Inflow Area = 3.348 ac, 59.89% Impervious, Inflow Depth > 5.16" for 100-year event
 Inflow = 28.79 cfs @ 12.13 hrs, Volume= 1.438 af
 Outflow = 2.88 cfs @ 12.64 hrs, Volume= 0.626 af, Atten= 90%, Lag= 30.5 min
 Primary = 2.88 cfs @ 12.64 hrs, Volume= 0.626 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 841.01' @ 12.64 hrs Surf.Area= 19,509 sf Storage= 40,661 cf

Plug-Flow detention time= 222.5 min calculated for 0.626 af (43% of inflow)
 Center-of-Mass det. time= 136.7 min (912.5 - 775.8)

Volume	Invert	Avail.Storage	Storage Description
#1	838.00'	61,695 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
838.00	8,920	0	0
839.00	11,375	10,148	10,148
840.00	14,920	13,148	23,295
841.00	19,480	17,200	40,495
842.00	22,920	21,200	61,695

Device	Routing	Invert	Outlet Devices
#1	Primary	838.00'	12.0" Round Culvert L= 33.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 838.00' / 837.00' S= 0.0303 ' /' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	838.00'	2.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	840.75'	24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Secondary	841.10'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=2.88 cfs @ 12.64 hrs HW=841.01' TW=0.00' (Dynamic Tailwater)
 ↑1=Culvert (Passes 2.88 cfs of 5.99 cfs potential flow)
 ↑2=Orifice/Grate (Orifice Controls 0.18 cfs @ 8.23 fps)
 ↑3=Orifice/Grate (Weir Controls 2.70 cfs @ 1.66 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=838.00' TW=0.00' (Dynamic Tailwater)
 ↑4=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

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MSE 24-hr 3 100-year Rainfall=6.55"

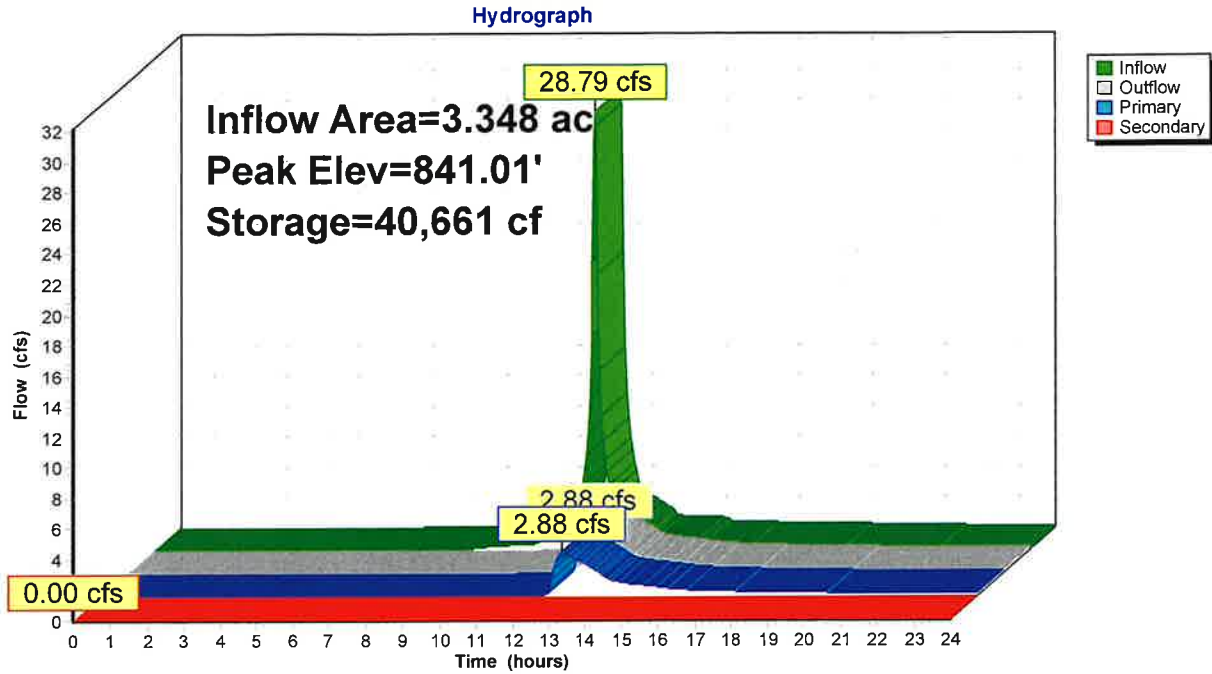
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Pond 2P: STORMWATER POND #2



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MSE 24-hr 3 100-year Rainfall=6.55"

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Summary for Pond 3BR: BIO-RETENTION BASIN #3

Inflow Area = 1.492 ac, 58.11% Impervious, Inflow Depth > 5.16" for 100-year event
 Inflow = 12.83 cfs @ 12.13 hrs, Volume= 0.641 af
 Outflow = 4.08 cfs @ 12.30 hrs, Volume= 0.620 af, Atten= 68%, Lag= 10.5 min
 Primary = 4.08 cfs @ 12.30 hrs, Volume= 0.620 af
 Secondary = 0.00 cfs @ 12.30 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 841.00' @ 12.30 hrs Surf.Area= 9,361 sf Storage= 11,226 cf

Plug-Flow detention time= 78.0 min calculated for 0.620 af (97% of inflow)
 Center-of-Mass det. time= 60.8 min (836.6 - 775.8)

Volume	Invert	Avail.Storage	Storage Description	
#1	836.00'	22,288 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
836.00	1,815	0.0	0	0
836.01	1,815	33.0	6	6
837.00	1,815	33.0	593	599
837.01	1,815	27.0	5	604
838.99	1,815	27.0	970	1,574
839.00	1,815	100.0	18	1,592
840.00	4,033	100.0	2,924	4,516
841.00	9,355	100.0	6,694	11,210
842.00	12,800	100.0	11,078	22,288

Device	Routing	Invert	Outlet Devices
#1	Primary	837.00'	10.0" Round Culvert L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 837.00' / 832.50' S= 0.0750 '/' Cc= 0.900 n= 0.011, Flow Area= 0.55 sf
#2	Device 1	837.50'	6.0" Round Culvert L= 100.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 837.50' / 837.00' S= 0.0050 '/' Cc= 0.900 n= 0.011, Flow Area= 0.20 sf
#3	Device 1	840.00'	4.0" Vert. Orifice/Grate C= 0.600
#4	Device 1	840.75'	24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Secondary	841.00'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

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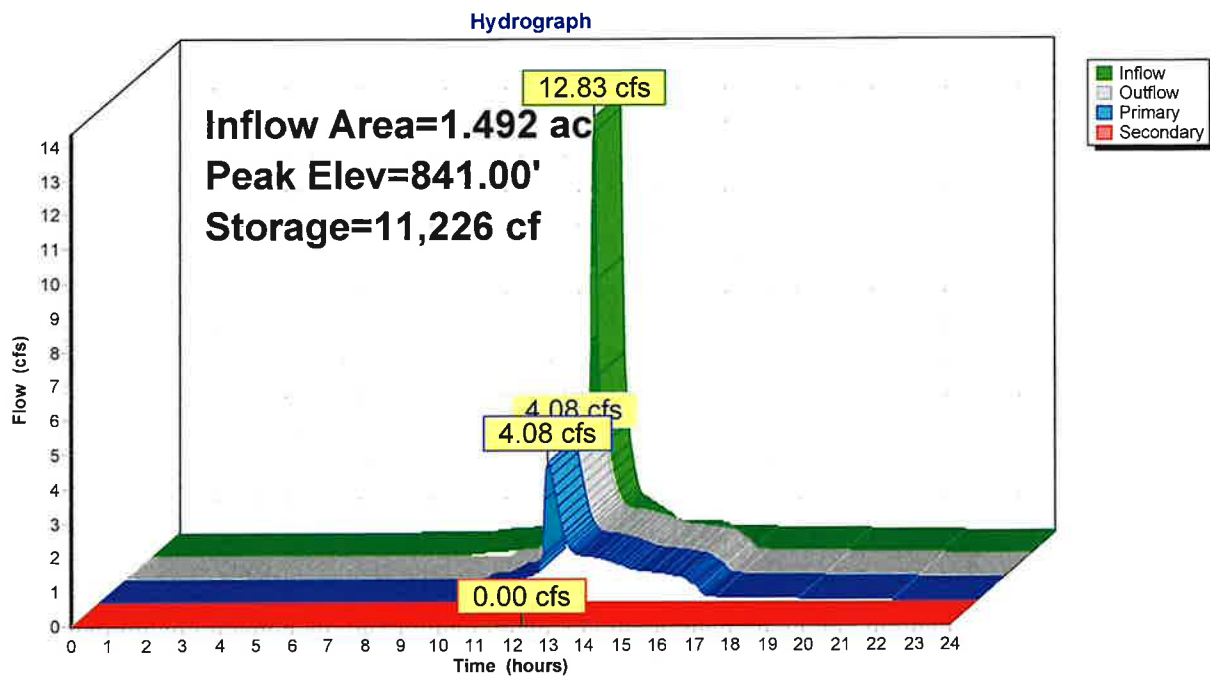
Primary OutFlow Max=4.07 cfs @ 12.30 hrs HW=841.00' TW=0.00' (Dynamic Tailwater)

- 1=Culvert (Passes 4.07 cfs of 4.97 cfs potential flow)
- 2=Culvert (Barrel Controls 1.10 cfs @ 5.61 fps)
- 3=Orifice/Grate (Orifice Controls 0.38 cfs @ 4.40 fps)
- 4=Orifice/Grate (Weir Controls 2.58 cfs @ 1.64 fps)

Secondary OutFlow Max=0.00 cfs @ 12.30 hrs HW=841.00' TW=0.00' (Dynamic Tailwater)

- 5=Broad-Crested Rectangular Weir (Weir Controls 0.00 cfs @ 0.10 fps)

Pond 3BR: BIO-RETENTION BASIN #3



CJE2364R0*MSE 24-hr 3 Custom Rainfall=6.22"*

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Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment1S: SUBCATCHMENT1: TO Runoff Area=4.951 ac 57.67% Impervious Runoff Depth>4.84"
 Tc=6.0 min CN=88 Runoff=40.11 cfs 1.996 af

Subcatchment2S: SUBCATCHMENT2: TO Runoff Area=3.348 ac 59.89% Impervious Runoff Depth>4.84"
 Tc=6.0 min CN=88 Runoff=27.12 cfs 1.349 af

Subcatchment3S: SUBCATCHMENT3: TO Runoff Area=1.492 ac 58.11% Impervious Runoff Depth>4.84"
 Tc=6.0 min CN=88 Runoff=12.09 cfs 0.601 af

Subcatchment4S: SUBCATCHMENT4: Runoff Area=1.567 ac 24.38% Impervious Runoff Depth>3.98"
 Tc=6.0 min CN=80 Runoff=10.93 cfs 0.520 af

Reach 1R: TOTAL RUNOFF

Inflow=12.51 cfs 2.121 af
 Outflow=12.51 cfs 2.121 af

Pond 1BR: BIO-RETENTIONBASIN #1 Peak Elev=840.80' Storage=71,180 cf Inflow=40.11 cfs 1.996 af
 Primary=0.51 cfs 0.483 af Secondary=0.00 cfs 0.000 af Outflow=0.51 cfs 0.483 af

Pond 2P: STORMWATERPOND #2 Peak Elev=840.95' Storage=39,605 cf Inflow=27.12 cfs 1.349 af
 Primary=2.07 cfs 0.538 af Secondary=0.00 cfs 0.000 af Outflow=2.07 cfs 0.538 af

Pond 3BR: BIO-RETENTIONBASIN #3 Peak Elev=840.95' Storage=10,792 cf Inflow=12.09 cfs 0.601 af
 Primary=3.37 cfs 0.581 af Secondary=0.00 cfs 0.000 af Outflow=3.37 cfs 0.581 af

Total Runoff Area = 11.358 ac Runoff Volume = 4.466 af Average Runoff Depth = 4.72"
46.21% Pervious = 5.249 ac 53.79% Impervious = 6.109 ac

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Summary for Subcatchment 1S: SUBCATCHMENT 1: TO BIO-RETENTION BASIN #1

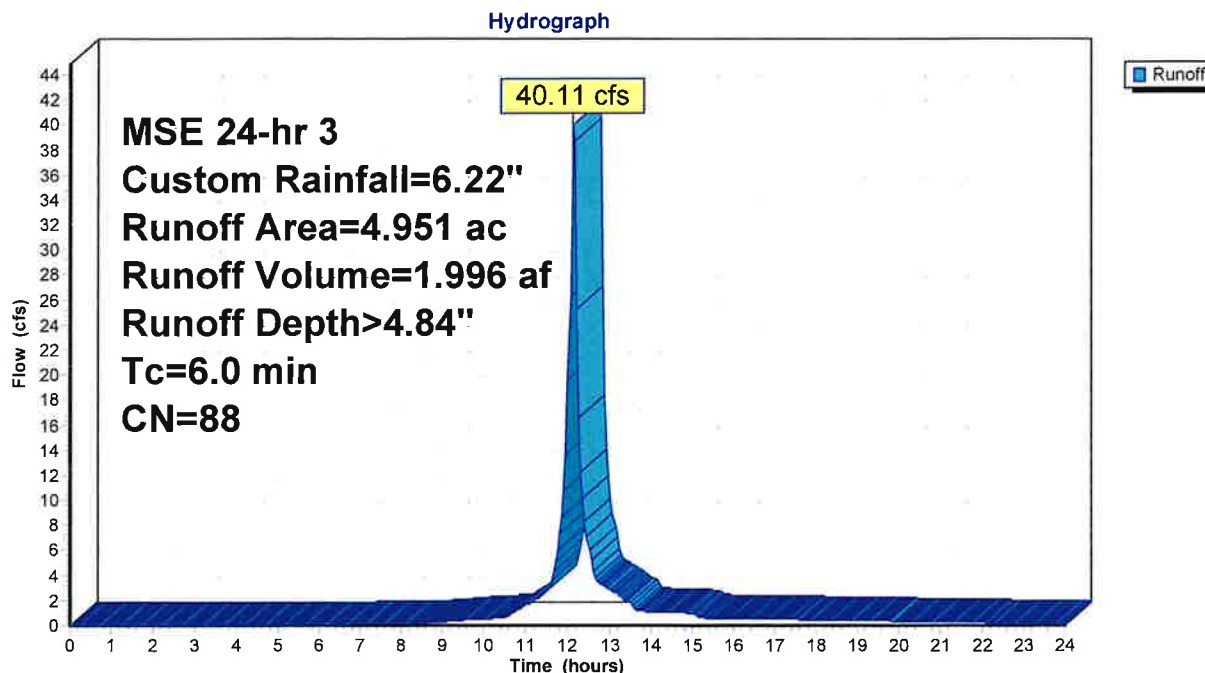
Runoff = 40.11 cfs @ 12.13 hrs, Volume= 1.996 af, Depth> 4.84"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 Custom Rainfall=6.22"

Area (ac)	CN	Description
* 1.236	98	Bldg Roof, HSG C
* 1.619	98	Paved parking, HSG C
2.096	74	>75% Grass cover, Good, HSG C
4.951	88	Weighted Average
2.096		42.33% Pervious Area
2.855		57.67% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MIN TC

Subcatchment 1S: SUBCATCHMENT 1: TO BIO-RETENTION BASIN #1



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Summary for Subcatchment 2S: SUBCATCHMENT 2: TO STORMWATER POND #2

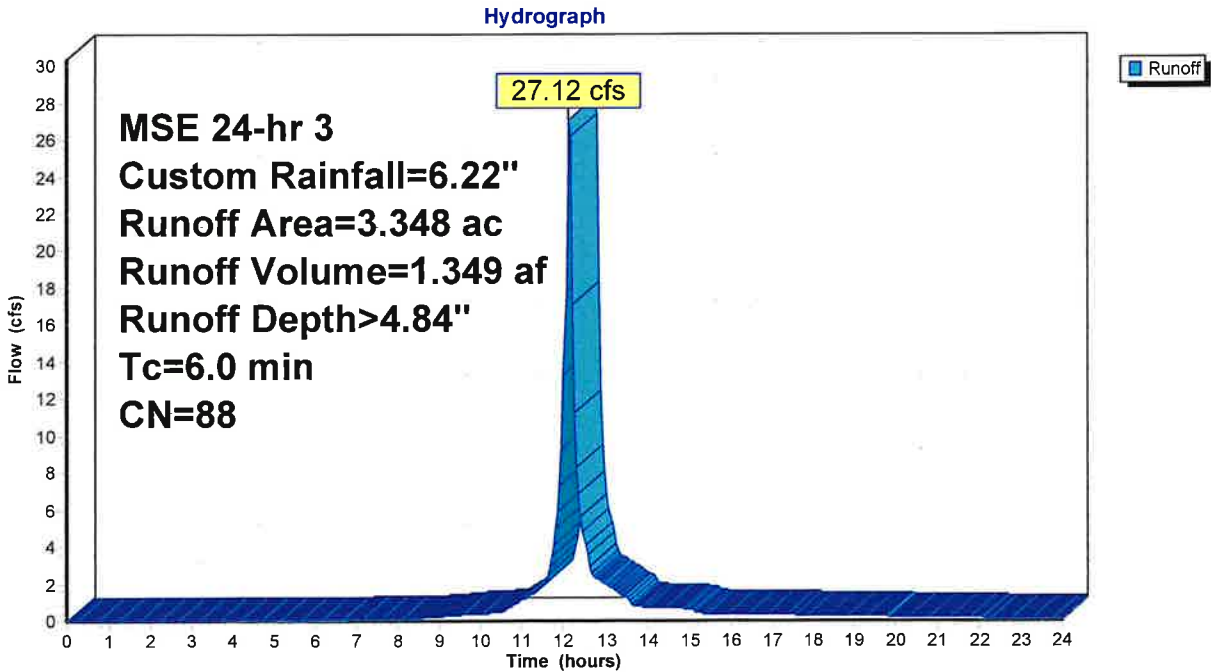
Runoff = 27.12 cfs @ 12.13 hrs, Volume= 1.349 af, Depth> 4.84"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 Custom Rainfall=6.22"

Area (ac)	CN	Description
0.895	98	Roofs, HSG C
1.343	74	>75% Grass cover, Good, HSG C
0.905	98	Paved parking, HSG C
0.205	98	Water Surface, HSG C
3.348	88	Weighted Average
1.343		40.11% Pervious Area
2.005		59.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, MIN TC

Subcatchment 2S: SUBCATCHMENT 2: TO STORMWATER POND #2



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Summary for Subcatchment 3S: SUBCATCHMENT 3: TO BIO-RETENTION BASIN #3

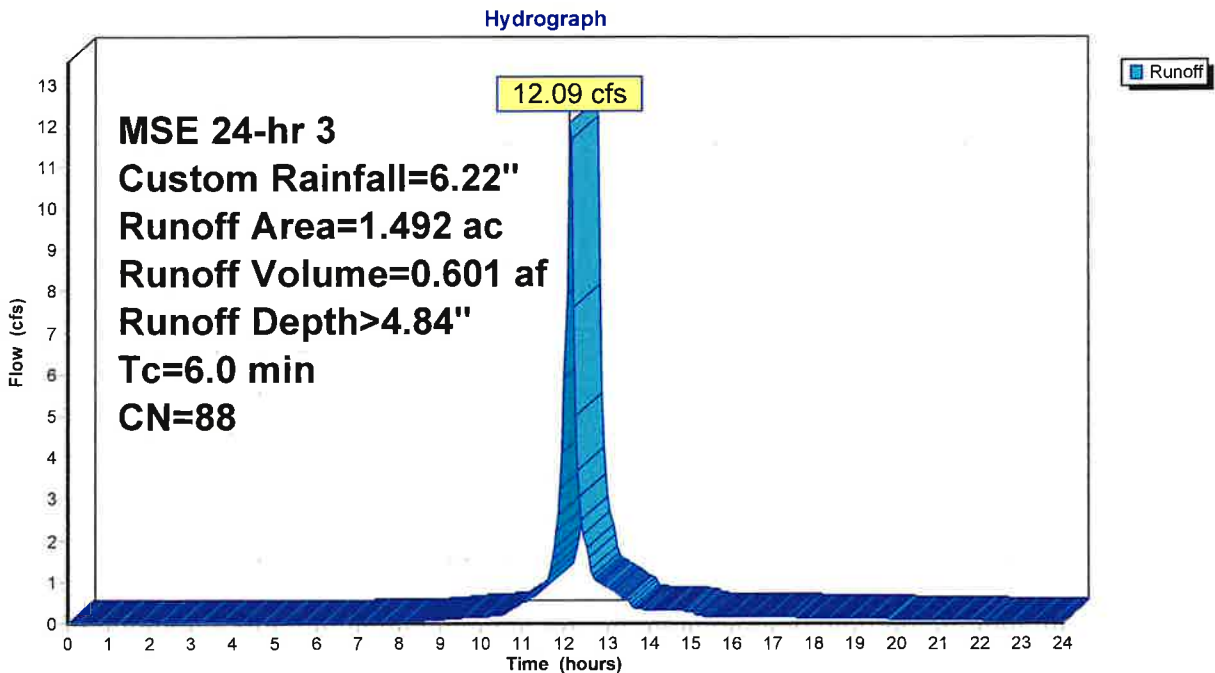
Runoff = 12.09 cfs @ 12.13 hrs, Volume= 0.601 af, Depth> 4.84"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 Custom Rainfall=6.22"

Area (ac)	CN	Description
* 0.503	98	Paved parking, HSG C
0.625	74	>75% Grass cover, Good, HSG C
0.364	98	Roofs, HSG C
1.492	88	Weighted Average
0.625		41.89% Pervious Area
0.867		58.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Min TC

Subcatchment 3S: SUBCATCHMENT 3: TO BIO-RETENTION BASIN #3



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MSE 24-hr 3 Custom Rainfall=6.22"

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Summary for Subcatchment 4S: SUBCATCHMENT 4: UNDETAINED

Runoff = 10.93 cfs @ 12.13 hrs, Volume= 0.520 af, Depth> 3.98"

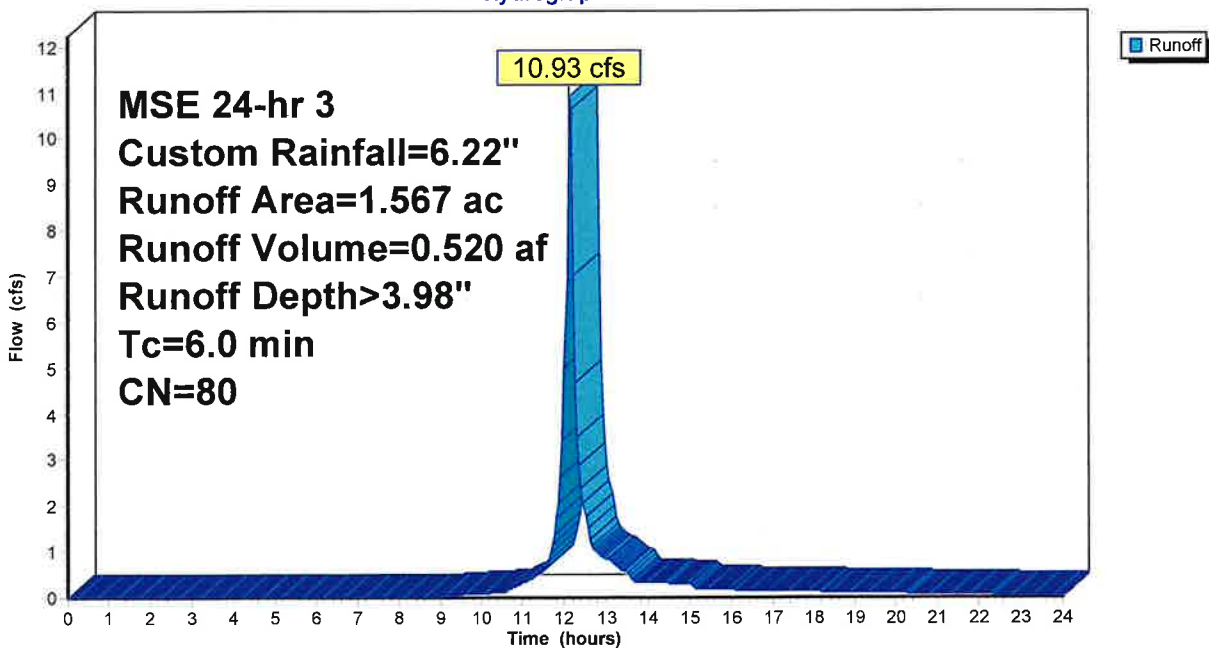
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 Custom Rainfall=6.22"

Area (ac)	CN	Description
* 0.279	98	Paved parking, HSG B
1.185	74	>75% Grass cover, Good, HSG C
0.103	98	Roofs, HSG C
1.567	80	Weighted Average
1.185		75.62% Pervious Area
0.382		24.38% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					Direct Entry, Min TC

Subcatchment 4S: SUBCATCHMENT 4: UNDETAINED

Hydrograph



CJE2364R0

MSE 24-hr 3 Custom Rainfall=6.22"

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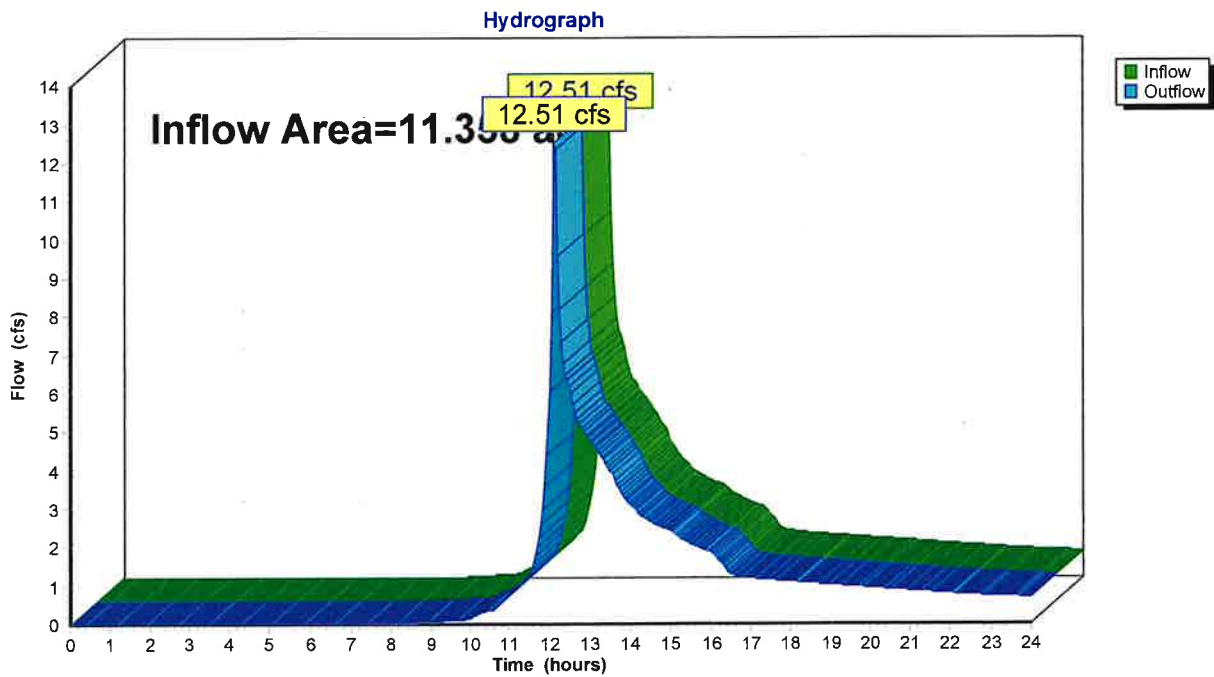
Summary for Reach 1R: TOTAL RUNOFF

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 11.358 ac, 53.79% Impervious, Inflow Depth > 2.24" for Custom event
Inflow = 12.51 cfs @ 12.14 hrs, Volume= 2.121 af
Outflow = 12.51 cfs @ 12.14 hrs, Volume= 2.121 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Reach 1R: TOTAL RUNOFF



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MSE 24-hr 3 Custom Rainfall=6.22"

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Summary for Pond 1BR: BIO-RETENTION BASIN #1

Inflow Area = 4.951 ac, 57.67% Impervious, Inflow Depth > 4.84" for Custom event
 Inflow = 40.11 cfs @ 12.13 hrs, Volume= 1.996 af
 Outflow = 0.51 cfs @ 16.67 hrs, Volume= 0.483 af, Atten= 99%, Lag= 272.5 min
 Primary = 0.51 cfs @ 16.67 hrs, Volume= 0.483 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 840.80' @ 16.67 hrs Surf.Area= 35,297 sf Storage= 71,180 cf

Plug-Flow detention time= 421.3 min calculated for 0.483 af (24% of inflow)
 Center-of-Mass det. time= 310.5 min (1,087.5 - 777.1)

Volume	Invert	Avail.Storage	Storage Description
#1	836.00'	143,934 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
836.00	22,316	0.0	0	0
836.01	22,316	33.0	74	74
837.00	22,316	33.0	7,291	7,364
837.01	22,316	27.0	60	7,425
838.99	22,316	27.0	11,930	19,355
839.00	22,316	100.0	223	19,578
840.00	29,313	100.0	25,815	45,392
841.00	36,810	100.0	33,062	78,454
842.00	45,695	100.0	41,253	119,706
842.50	51,216	100.0	24,228	143,934

Device	Routing	Invert	Outlet Devices
#1	Primary	837.00'	10.0" Round Culvert L= 31.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 837.00' / 836.50' S= 0.0161 '/' Cc= 0.900 n= 0.011, Flow Area= 0.55 sf
#2	Device 1	837.50'	6.0" Round Culvert L= 550.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 837.50' / 837.00' S= 0.0009 '/' Cc= 0.900 n= 0.011, Flow Area= 0.20 sf
#3	Device 2	837.00'	1.630 in/hr Exfiltration over Surface area above 837.00' Excluded Surface area = 22,316 sf
#4	Device 1	840.00'	1.0" Vert. Orifice/Grate C= 0.600
#5	Device 1	841.50'	24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#6	Secondary	842.00'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

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MSE 24-hr 3 Custom Rainfall=6.22"

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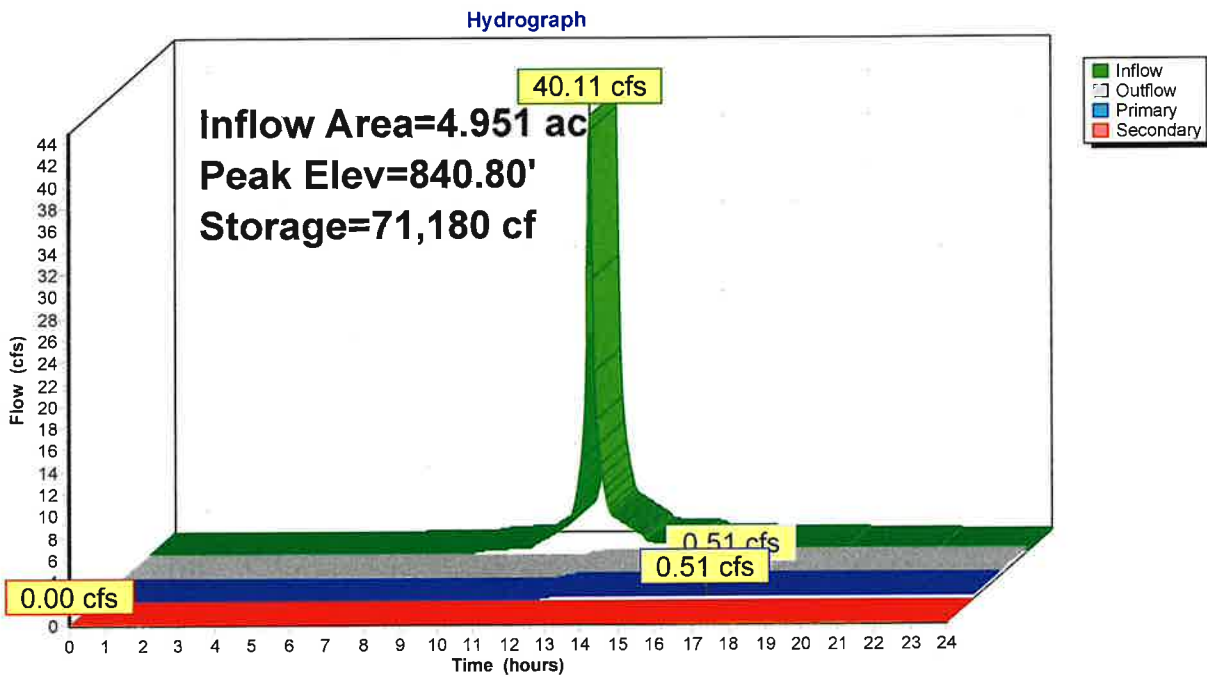
Primary OutFlow Max=0.51 cfs @ 16.67 hrs HW=840.80' TW=0.00' (Dynamic Tailwater)

- 1=Culvert (Passes 0.51 cfs of 4.83 cfs potential flow)
- 2=Culvert (Passes 0.49 cfs of 0.50 cfs potential flow)
- 3=Exfiltration (Exfiltration Controls 0.49 cfs)
- 4=Orifice/Grate (Orifice Controls 0.02 cfs @ 4.19 fps)
- 5=Orifice/Grate (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=836.00' TW=0.00' (Dynamic Tailwater)

- 6=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 1BR: BIO-RETENTION BASIN #1



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MSE 24-hr 3 Custom Rainfall=6.22"

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Summary for Pond 2P: STORMWATER POND #2

Inflow Area = 3.348 ac, 59.89% Impervious, Inflow Depth > 4.84" for Custom event
 Inflow = 27.12 cfs @ 12.13 hrs, Volume= 1.349 af
 Outflow = 2.07 cfs @ 12.93 hrs, Volume= 0.538 af, Atten= 92%, Lag= 48.1 min
 Primary = 2.07 cfs @ 12.93 hrs, Volume= 0.538 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 840.95' @ 12.93 hrs Surf.Area= 19,270 sf Storage= 39,605 cf

Plug-Flow detention time= 241.5 min calculated for 0.538 af (40% of inflow)
 Center-of-Mass det. time= 152.8 min (929.9 - 777.1)

Volume	Invert	Avail.Storage	Storage Description
#1	838.00'	61,695 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
838.00	8,920	0	0
839.00	11,375	10,148	10,148
840.00	14,920	13,148	23,295
841.00	19,480	17,200	40,495
842.00	22,920	21,200	61,695

Device	Routing	Invert	Outlet Devices
#1	Primary	838.00'	12.0" Round Culvert L= 33.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 838.00' / 837.00' S= 0.0303 '/ Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	838.00'	2.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	840.75'	24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#4	Secondary	841.10'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=2.07 cfs @ 12.93 hrs HW=840.95' TW=0.00' (Dynamic Tailwater)
 1=Culvert (Passes 2.07 cfs of 5.92 cfs potential flow)
 2=Orifice/Grate (Orifice Controls 0.18 cfs @ 8.16 fps)
 3=Orifice/Grate (Weir Controls 1.89 cfs @ 1.48 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=838.00' TW=0.00' (Dynamic Tailwater)
 4=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

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MSE 24-hr 3 Custom Rainfall=6.22"

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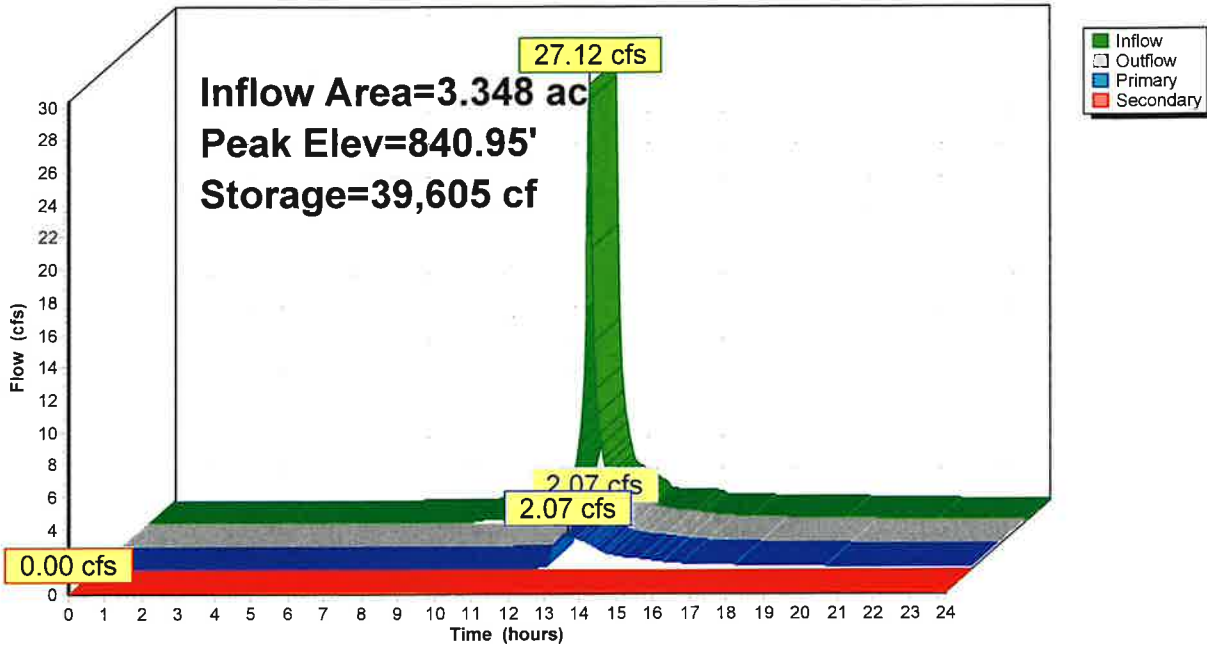
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Pond 2P: STORMWATER POND #2

Hydrograph



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Summary for Pond 3BR: BIO-RETENTION BASIN #3

Inflow Area = 1.492 ac, 58.11% Impervious, Inflow Depth > 4.84" for Custom event
 Inflow = 12.09 cfs @ 12.13 hrs, Volume= 0.601 af
 Outflow = 3.37 cfs @ 12.33 hrs, Volume= 0.581 af, Atten= 72%, Lag= 11.9 min
 Primary = 3.37 cfs @ 12.33 hrs, Volume= 0.581 af
 Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 840.95' @ 12.33 hrs Surf.Area= 9,114 sf Storage= 10,792 cf

Plug-Flow detention time= 80.5 min calculated for 0.581 af (97% of inflow)
 Center-of-Mass det. time= 62.4 min (839.4 - 777.1)

Volume	Invert	Avail.Storage	Storage Description	
#1	836.00'	22,288 cf	Custom Stage Data (Prismatic) Listed below (Recalc)	
Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
836.00	1,815	0.0	0	0
836.01	1,815	33.0	6	6
837.00	1,815	33.0	593	599
837.01	1,815	27.0	5	604
838.99	1,815	27.0	970	1,574
839.00	1,815	100.0	18	1,592
840.00	4,033	100.0	2,924	4,516
841.00	9,355	100.0	6,694	11,210
842.00	12,800	100.0	11,078	22,288

Device	Routing	Invert	Outlet Devices
#1	Primary	837.00'	10.0" Round Culvert L= 60.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 837.00' / 832.50' S= 0.0750 '/ Cc= 0.900 n= 0.011, Flow Area= 0.55 sf
#2	Device 1	837.50'	6.0" Round Culvert L= 100.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 837.50' / 837.00' S= 0.0050 '/ Cc= 0.900 n= 0.011, Flow Area= 0.20 sf
#3	Device 1	840.00'	4.0" Vert. Orifice/Grate C= 0.600
#4	Device 1	840.75'	24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads
#5	Secondary	841.00'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

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Primary OutFlow Max=3.35 cfs @ 12.33 hrs HW=840.95' TW=0.00' (Dynamic Tailwater)

1=Culvert (Passes 3.35 cfs of 4.94 cfs potential flow)

2=Culvert (Barrel Controls 1.09 cfs @ 5.57 fps)

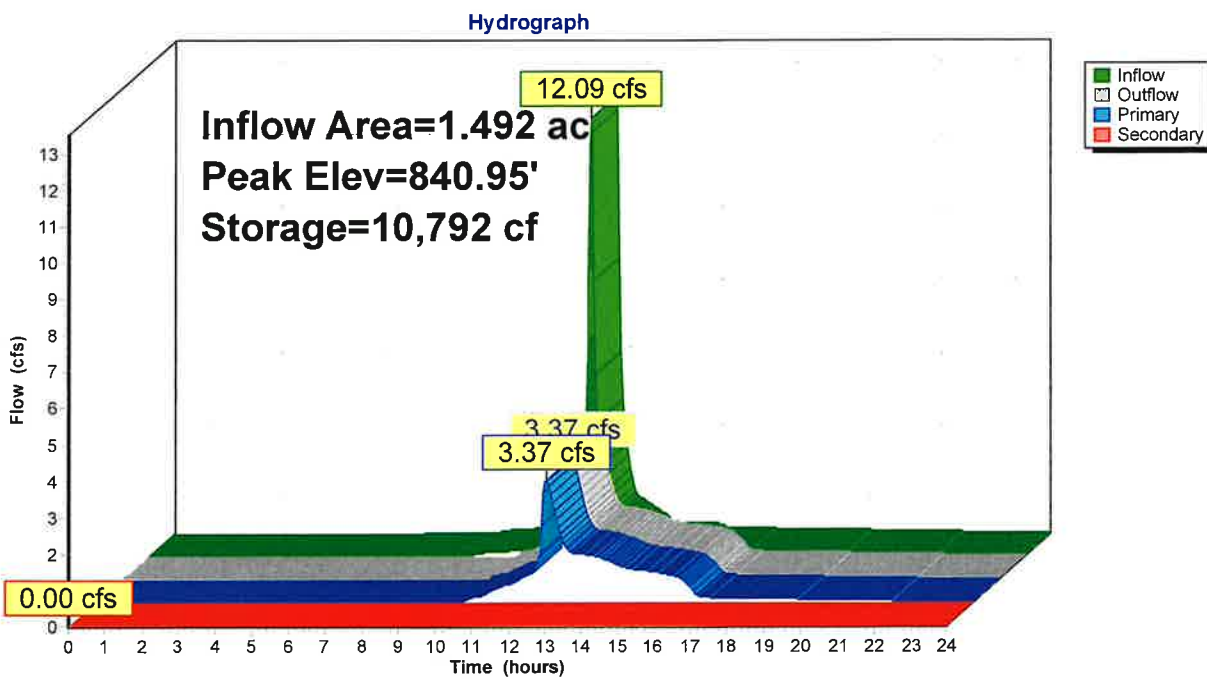
3=Orifice/Grate (Orifice Controls 0.37 cfs @ 4.27 fps)

4=Orifice/Grate (Weir Controls 1.88 cfs @ 1.47 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=836.00' TW=0.00' (Dynamic Tailwater)

5=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 3BR: BIO-RETENTION BASIN #3



Data file name: Z:\WinSLAMM\CJE2364R0.mdb
 WinSLAMM Version 10.5.0
 Rain file name: C:\WinSLAMM Files\Rain Files\WisReg - Madison WI 1981_RAN
 Particulate Solids Concentration file name: C:\WinSLAMM Files\10.1 WI_AVG01.pscx
 Runoff Coefficient file name: C:\WinSLAMM Files\WI_SL06 Dec06.rsvx
 Residential Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
 Institutional Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
 Commercial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
 Industrial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
 Other Urban Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
 Freeway Street Delivery file name: C:\WinSLAMM Files\Freeway Dec06.std
 Apply Street Delivery Files to Adjust the After Event Load Street Dirt Mass Balance: False
 Pollutant Relative Concentration file name: C:\WinSLAMM Files\WI_GEO03.ppdX
 Source Area PSD and Peak to Average Flow Ratio File: C:\WinSLAMM Files\NURP Source Area PSD Files.csv
 Cost Data file name:
 Seed for random number generator: -42
 Study period starting date: 01/01/81 Study period ending date: 12/31/81
 Start of Winter Season: 12/02 End of Winter Season: 03/12
 Date: 07-10-2024 Time: 09:12:42
 Site information:

LU# 1 - Residential: Subcatchment 3: To Bioretention Basin #3 Total area (ac): 1.492
 1 - Roofs 1: 0.364 ac. Pitched Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 13 - Paved Parking 1: 0.503 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 45 - Large Landscaped Areas 1: 0.625 ac. Normal Silty PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 2 - Residential: Subcatchment 2: To Stormwater Pond #1 Total area (ac): 3.348
 1 - Roofs 1: 0.895 ac. Pitched Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 13 - Paved Parking 1: 0.905 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 45 - Large Landscaped Areas 1: 1.343 ac. Normal Silty PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 70 - Water Body Areas: 0.205 ac. PSD File: Source Area PSD File:

LU# 3 - Residential: Subcatchment 1: To Bioretention Basin #1 Total area (ac): 4.951
 1 - Roofs 1: 1.236 ac. Pitched Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 13 - Paved Parking 1: 1.619 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 45 - Large Landscaped Areas 1: 2.096 ac. Normal Silty PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

LU# 4 - Residential: Subcatchment 4: Undetained Total area (ac): 1.567
 1 - Roofs 1: 0.103 ac. Pitched Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 13 - Paved Parking 1: 0.279 ac. Connected PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz
 45 - Large Landscaped Areas 1: 1.185 ac. Normal Silty PSD File: C:\WinSLAMM Files\NURP.cpz Source Area PSD File: C:\WinSLAMM Files\NURP.cpz

Control Practice 1: Biofilter CP# 1 (DS) - Bioretention Basin #3

1. Top area (square feet) = 12800
 2. Bottom area (square feet) = 1815
 3. Depth (ft): 5.5
 4. Biofilter width (ft) - for Cost Purposes Only: 10
 5. Infiltration rate (in/hr) = 0
 6. Random infiltration rate generation? No
 7. Infiltration rate fraction (side): 1
 8. Infiltration rate fraction (bottom): 1
 9. Depth of biofilter that is rock filled (ft) 1
 10. Porosity of rock filled volume = 0.33
 11. Engineered soil infiltration rate: 1.63
 12. Engineered soil depth (ft) = 2
 13. Engineered soil porosity = 0.27
 14. Percent solids reduction due to flow through engineered soil = 80
 15. Biofilter peak to average flow ratio = 3.8
 16. Number of biofiltration control devices = 1
 17. Particle size distribution file: Not needed - calculated by program
 18. Initial water surface elevation (ft): 0
- Soil Data Soil Type Fraction in Eng. Soil
 User-Defined Media Type 1.000
- Biofilter Outlet/Discharge Characteristics:
- Outlet type: Broad Crested Weir
1. Weir crest length (ft): 10
 2. Weir crest width (ft): 10
 3. Height of datum to bottom of weir opening: 5
- Outlet type: Surface Discharge Pipe
1. Surface discharge pipe outlet diameter (ft): 0.33
 2. Pipe invert elevation above datum (ft): 4
 3. Number of surface pipe outlets: 1
- Outlet type: Drain Tile/Underdrain
1. Underdrain outlet diameter (ft): 0.5
 2. Invert elevation above datum (ft): 1
 3. Number of underdrain outlets: 1

Control Practice 2: Biofilter CP# 2 (DS) - Bioretention Basin #1

1. Top area (square feet) = 51216
2. Bottom area (square feet) = 22316
3. Depth (ft): 6.5
4. Biofilter width (ft) - for Cost Purposes Only: 10
5. Infiltration rate (in/hr) = 0
6. Random infiltration rate generation? No
7. Infiltration rate fraction (side): 1
8. Infiltration rate fraction (bottom): 1
9. Depth of biofilter that is rock filled (ft) 1
10. Porosity of rock filled volume = 0.33
11. Engineered soil infiltration rate: 1.63
12. Engineered soil depth (ft) = 2
13. Engineered soil porosity = 0.27
14. Percent solids reduction due to flow through engineered soil = 80
15. Biofilter peak to average flow ratio = 3.8
16. Number of biofiltration control devices = 1
17. Particle size distribution file: Not needed - calculated by program
18. Initial water surface elevation (ft): 0

Soil Data Soil Type Fraction in Eng. Soil

User-Defined Media Type 1.000

Biofilter Outlet/Discharge Characteristics:

Outlet type: Broad Crested Weir

1. Weir crest length (ft): 10
2. Weir crest width (ft): 10
3. Height of datum to bottom of weir opening: 6

Outlet type: Surface Discharge Pipe

1. Surface discharge pipe outlet diameter (ft): 0.08
2. Pipe invert elevation above datum (ft): 4
3. Number of surface pipe outlets: 1

Outlet type: Drain Tile/Underdrain

1. Underdrain outlet diameter (ft): 0.5
2. Invert elevation above datum (ft): 1
3. Number of underdrain outlets: 1

Control Practice 3: Filter Strip CP# 1 (DS) - DS Filter Strips # 1

Total drainage area (acres) = 1.567
 Fraction of drainage area served by filter strips (ac) = 0.90
 Total filter strip width (ft) = 1200.0
 Effective flow length (ft) = 20
 Infiltration rate (in/hr) = 0.150
 Typical longitudinal slope (ft./ft.) = 0.250
 Typical grass height (in) = 4.0
 Swale retardance factor = D
 Use stochastic analysis to determine infiltration rate: False
 Infiltration rate coefficient of variation (COV) = 0.00
 Particle size distribution file name: Not needed - calculated by program
 Surface Clogging Load (lbs/sf) = 3.50

SLAMM for Windows Version 10.5.0
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Data file name: Z:\WinSLAMM\CJE2364R0.mdb
 WinSLAMM Version 10.5.0
 Rain file name: C:\WinSLAMM Files\Rain Files\WisReg - Madison WI 1981.RAN
 Particulate Solids Concentration file name: C:\WinSLAMM Files\w10.1 WI_AVG01.pscx
 Runoff Coefficient file name: C:\WinSLAMM Files\WI_SL06 Dec06.rsvx
 Pollutant Relative Concentration file name: C:\WinSLAMM Files\WI_GEO03.ppd
 Residential Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
 Institutional Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
 Commercial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
 Industrial Street Delivery file name: C:\WinSLAMM Files\WI_Com Inst Indust Dec06.std
 Other Urban Street Delivery file name: C:\WinSLAMM Files\WI_Res and Other Urban Dec06.std
 Freeway Street Delivery file name: C:\WinSLAMM Files\Freeway Dec06.std
 Apply Street Delivery Files to Adjust the After Event Load Street Dirt Mass Balance: False
 Source Area PSD and Peak to Average Flow Ratio File: C:\WinSLAMM Files\NURP Source Area PSD Files.csv
 Cost Data file name:
 Seed for random number generator: -42
 Study period starting date: 01/01/81 Study period ending date: 12/31/81
 Start of Winter Season: 12/02 End of Winter Season: 03/12
 Model Run Start Date: 01/01/81 Model Run End Date: 12/31/81
 Date of run: 07-10-2024 Time of run: 09:11:11
 Total Area Modeled (acres): 11.358
 Years in Model Run: 1.00

	Runoff Volume (cu ft)	Percent Runoff Volume Reduction	Particulate Solids Conc. (mg/L)	Particulate Solids Yield (lbs)	Percent Particulate Solids Reduction
Total of all Land Uses without Controls:	554361	-	88.96	3079	-
Outfall Total with Controls:	521014	6.02%	16.08	523.1	83.01%
Annualized Total After Outfall Controls:	522446			524.5	

Biofilter # 1 is expected to clog in 8.73 years.. Percent Solids Reduction due to Engineered Media = 80
 Biofilter # 2 is expected to clog in 31.4 years.. Percent Solids Reduction due to Engineered Media = 80

Storm Water Practice Maintenance Plan

This exhibit explains the basic function of each of the storm water practices for the Whitewater Multi-Family Development and prescribes the minimum maintenance requirements to remain compliant with this Agreement. The maintenance activities listed below are aimed to ensure these practices continue serving their intended functions in perpetuity. The list of activities is not all inclusive, but rather indicates the minimum type of maintenance that can be expected for this particular site.

STORMWATER POND – WET DETENTION BASIN

System Description:

The wet detention basin is designed to trap 80% of sediment in runoff and maintain pre-development downstream peak flows. The site runoff will either sheet drain to the pond or be captured in inlets and conveyed through a series of stormwater pipes to the basin's forebay. The basin has one forebay located at the low end of a grass swale. In addition to runoff conveyance, the grass swale also allows filtration of pollutants, especially from smaller storms. The forebay is 4 feet deep. The forebay will trap coarse sediments in runoff, such as road sands, thus reducing maintenance of the main basin. The main pool will trap the finer suspended sediment. To do this, the pond size, water level and outlet structures must be maintained as specified in this Agreement.

Minimum Maintenance Requirements:

To ensure the proper long-term function of the storm water management practices described above, the following activities must be completed:

1. All outlet pipes must be checked monthly to ensure there is no blockage from floating debris or ice, especially the trash rack in front of the 3-inch orifice and the trash rack on the outlet structure in the main basin. Any blockage must be removed immediately.
2. Grass swales shall be preserved to allow free flowing of surface runoff in accordance with approved grading plans. No buildings or other structures are allowed in these areas. No grading or filling is allowed that may interrupt flows in any way.
3. Grass swales, inlets and outlets must be checked after heavy rains (minimum of annually) for signs of erosion. Any eroding areas must be repaired immediately to prevent premature sediment build-up in the downstream forebay or basin. Erosion matting is recommended for repairing grassed areas.
4. NO trees are to be planted or allowed to grow on the earthen berms. Tree root systems can reduce soil compaction and cause berm failure. The berms must be inspected annually and any woody vegetation removed.
5. Invasive plant and animal species shall be managed in compliance with Wisconsin Administrative Code Chapter NR 40. This may require eradication of invasive species in some cases.
6. If the permanent pool falls below the safety shelf, a review shall be performed to determine whether the cause is liner leakage or an insufficient water budget. If the cause is leakage, the liner shall be repaired. Leakage due to muskrat burrows may require removal of the animals, repair of the liner with clay, and

- embedding wire mesh in the liner to deter further burrowing. If the permanent pool cannot be sustained at the design elevation, benching of the safety shelf may be necessary.
7. If floating algae or weed growth becomes a nuisance (decay odors, etc.), it must be removed from the basin or the forebay and deposited where it cannot drain back into the basin. Removal of the vegetation from the water reduces regrowth the following season (by harvesting the nutrients). Wetland vegetation must be maintained along the waters edge for safety and pollutant removal purposes.
 8. If mosquitoes become a nuisance, the use of mosquito larvicide containing naturally-occurring Bti soil bacteria is recommended.
 9. When sediment in the forebay or the basin has accumulated to an elevation of three feet below the outlet elevation, it must be removed. All removed sediment must be placed in an appropriate upland disposal site and stabilized (grass cover) to prevent sediment from washing back into the basin. The forebays will likely need sediment removal first. Failure to remove sediment from the forebays will cause resuspension of previously trapped sediments and increase downstream deposition.
 10. No grading or filling of the basin or berm other than for sediment removal is allowed, unless otherwise approved by the City of Whitewater.
 11. Periodic mowing of the grass swales will encourage vigorous grass cover and allow better inspections for erosion. Waiting until after August 1 will avoid disturbing nesting wildlife. Mowing around the basin or the forebay may attract nuisance populations of geese to the property and is not necessary or recommended.
 12. Any other repair or maintenance needed to ensure the continued function of the storm water practices or as ordered by the City of Whitewater under the provisions listed on page 1 of this Agreement.
 13. Aerators/Fountains – If an aerator or fountain is desired for visual and other aesthetic effects (aerators designed to mix the contents of the pond are prohibited) they must meet all of the items below:
 - i. Use an aerator/fountain that does not have a depth of influence that extends into the sediment storage depth (i.e. more than three feet below the normal water surface).
 - ii. If the water surface drops due to drought or leakage, the aerator / fountain may not be operated until the water rises enough for the depth of influence to be above the sediment storage layer. Therefore, if the depth of influence of the aerator / fountain is two feet, the water surface must be within one foot or less of the lowest pond outlet.
 - iii. Provide an automatic shut-off of the aerator/fountain as the pond starts to rise during a storm event. The aerator/fountain must remain off while the pond depth returns to the permanent pool elevation and, further, shall remain off for an additional 48 hours, as required for the design micron particle size to settle to below the draw depth of the pump.
 - iv. Configure the pump intake to draw water primarily from a horizontal plane so as to minimize the creation of a circulatory pattern from bottom to top throughout the pond

BIORETENTION BASIN

System Description:

The storm water management facility includes a bioretention basin. The basin is designed to reduce peak flows and reduce runoff total suspended solids (TSS) from the site by intercepting the runoff and allowing it to seep (infiltrate) into the engineered soil layer and through the perforated under-drain pipe. To function correctly, the bioretention basin size, depth, outlet manhole and under-drain pipe must be maintained as specified in this Agreement.

Minimum Maintenance Requirements:

To ensure the proper function of the bioretention basin, the following list of maintenance activities are required to be performed by the owner or authorized qualified representative:

1. A minimum of 70% soil cover made up of plants must be maintained on the bioretention basin bottom. The basin sides shall be a turf grass. Maintain plants and grasses per qualified landscape contractor recommendations.
2. Seasonal (early spring) inspection of the soil surface for the presence of sodium accumulation due to the introduction of chlorides for winter maintenance of the parking lot should occur. It is also recommended that the soil be flushed with 1" of clean water 3-4 times each spring. Consider reducing sodium/salting or use sodium alternatives.
3. The basin and all components (outlet manhole, outlet pipe, vegetation and spillway) should be inspected after each heavy rain of 1.5" or more. If the basin is not draining properly (within 72 hours), further inspection may be required by persons with expertise in storm water management and/or soils.
4. If basin is not draining, the 6" drain tile should be cleared of any blockages or obstructions. Clear blockages in the underdrain pipe, if present through the underdrain cleanout. Expose the stone and soil immediately around the pipe, clear blockages and replace per approved design. Also examine outlet orifice through the dual treated planks within the pond outlet manhole. Remove any sediment accumulated within the manhole and orifice.

5. If soil testing shows that the soil surface has become crusted, sealed or compacted, Engineered soil should be replaced. Expose 6” drain tile and verify it is clear of obstructions. Remove and replace engineered soil per WDNR specifications. Replace bioretention plantings per approved Landscape Plan for the project.
6. If sedimentation is determined to be causing the failure, the accumulated sediment must be removed and the area replanted in accordance with the approved Landscape Plan for the project. Sediment removed shall be deposited offsite at an appropriate soil disposal facility.
7. All outlet pipes, other flow control devices within the basin outlet manhole must be kept free of debris. Any blockage must be removed immediately.
8. Any eroding areas must be repaired immediately to prevent premature sediment build-up in the system. Erosion matting is recommended for repairing grassed areas.
9. Heavy equipment and vehicles must be kept off of the bottom and side slopes of bioretention basin to prevent soil compaction. Soil compaction will reduce infiltration and may cause failure of the basin, resulting in ponding and possible growth of wetland plants.
10. No unauthorized trees are to be planted or allowed to grow on the earthen berms or bottom of the basin. On the berms, tree root systems can reduce soil compaction and cause berm failure. On the basin bottom, trees may shade out the native grasses. Woody vegetation must be removed.
11. Check for invasive species growth and remove per species specific recommended practices.
12. No grading or filling of the basin or berms other than for sediment removal is allowed.
13. Inspections should be performed per City requirements. An inspection form must be completed and documented by a qualified person that represents the Owner. Any needed maintenance must be documented and scheduled for immediate repair. All repairs must be documented, preferably with photographs.
14. Snow shall not be dumped directly onto the conditioned planting bed.
15. See chart below for maintenance activity and frequency:

Activity	Frequency
Water Plants	As necessary
Water as	As needed after
Re-mulch	As needed
Treat	As needed
Inspect soil	Monthly
Remove	Monthly
Add	Once per year

Conditional Use Permit Application

Conditional Use Permit Application

City of Whitewater

312 W. Whitewater Street
P.O. Box 178
Whitewater, WI 53190
262-473-0540
www.whitewater-wi.gov

NOTICE:

The Plan Commission meetings are scheduled at 6:00 p.m. on the 2nd Monday of the month. All complete plans must be in by 4:00 p.m. four weeks prior to the meeting.

Address of Property*

Moraine View Pkwy & Jakes Way

City*

Whitewater

State*

WI

Zip Code*

53190

Owner's First Name*

Edwin

Owner's Last Name*

Kowalski

Applicant's First Name*

Kory

Applicant's Last Name*

Krieser

Mailing Address*

W308N6194 Shore Acres Rd

City*

Hartland

State*

WI

Zip Code*

53029

Phone Number*

4145885510

Fax Number

Email Address*

kory@krieserinc.com

Existing and Proposed Uses:

Current Use of Property*

Agriculture

Zoning District*

R-3 Multifamily

Proposed Use:*

Multifamily

Conditions

The City of Whitewater Zoning Ordinance authorizes the Plan Commission to place conditions on approved conditional uses. "Conditions" such as landscaping, architectural design, type of construction, construction commencement and completion dates, sureties, lighting, fencing, plantation, deed restrictions, highway access restrictions, increased yards or parking requirements may be affected. "Conditional Uses" may be subject to time limits or requirements for periodic review by staff.

APPLICATION REQUIRMENTS

THE FOLLOWING INFORMATION MUST BE SUBMITTED IN ORDER TO CONSIDER THE APPLICATION COMPLETE:

1. Statement of use, including type of business with number of employees by shift.
2. Scaled plot plan with north arrow, showing proposed site and all site dimensions.
3. All buildings and structures; location, height, materials and building elevations.
4. Lighting plan; including location, height, materials and building elevations.
5. Elevation drawings or illustrations indicating the architectural treatment of all proposed buildings and structures.
6. Off-street parking; locations, layout, dimensions, circulation, landscaped areas, total number of stalls, elevation, curb and gutter.
7. Access; pedestrian, vehicular, service. Points of ingress and egress.
8. Loading ; location, dimensions, number of spaces internal circulation.
9. Landscaping: including location, size and type of all proposed planting materials.
10. Floor plans: of all proposed buildings and structures, including square footage.
11. Signage: Location, height, dimensions, color, materials, lighting and copy area.
12. Grading/draining plan of proposed site.
13. Waste disposal facilities; storage facilities for storage of trash and waste materials.
14. Outdoor storage, where permitted in the district; type, location, height of screening devices.

**One (1) full size, Fifteen (15) 11.x17, and One (1) Electronic Copy (include color where possible) site plan copies, drawn to scale and dimensioned.

STANDARDS FOR REVIEW AND APPROVAL

The Plan and Architectural Commission shall use the following standards when reviewing applications for conditional uses. The applicant is required to fill out the following items and explain how the proposed conditional use will meet the standard for approval.

Standards

That the establishment, maintenance, or operation of the Conditional Use will not create a nuisance for neighboring uses or substantially reduce value of other property. Applicant's explanation:*

The proposed use is similar to neighboring properties.

That utilites, access roads, parking, drainage, landscaping and other necessary site improvements are being provided. Applicant's explanation:*

Yes, please see the fully engineering civil plans.

That the conditional use conforms to all applicable regulations of the district in which it is located, unless otherwise specifically exempted by this ordinance. Applicant's explanations: *

The proposed use conforms to all application regulations in the district. The condition use is being sought to construct a building greater than four (4) units.

That the conditional use conforms to the purpose and intent of the City Master Plan. Applicant's explanation:*

The proposed development provides quality housing options for residents as suggested in the City's Comprehensive plan.

**** Refer to Chapter 19.66 of the City of Whitewater Municipal code, entitled CONDITIONAL USES, for more information.**

Applicant's Signature*

Date

Kory Krieser

7/12/2024

Plot Plan Upload

EC-0-23-116.pdf

Plan Upload

2024.07.12 Whitewater - Submittal Set (1).pdf

Lighting Plan Upload

No file chosen

Landscape Plan Upload

CJE2364R3-Civil Set (1).pdf

File Upload

CJE2364R0 - SWMP (1).pdf

File Upload

No file chosen

TO BE COMPLETED BY THE NEIGHBORHOOD SERVICES DEPARTMENT

1. Application was filed and the paid at least four weeks prior to the meeting. \$100.00 fee

Public Comments may also be submitted in person or in writing to City Staff.

At the conclusion of the Public Hearing, the Plan Commission will make a decision.

ACTION TAKEN



Tips for Minimizing Development Review Costs-A Guide for Applicants

The City of Whitewater assigns its consultant cost associated with reviewing development proposals to the applicant requesting development approval. These costs can vary based on a number of factors. Many of these factors can at least be partially controlled by the applicant for development review. The City recognizes that we are in a time when the need to control costs is at the forefront of everyone's minds. The following guide is intended to assist applicants for City development approvals understand what they can do to manage and minimize the costs associated with review of their application. The tips included in this guide will almost always result in a less costly and quicker review of an application.

MEET WITH NEIGHBORHOOD SERVICES DEPARTMENT BEFORE SUBMITTING AN APPLICATION

If you are planning on submitting an application for development review, one of the first things you should do is have a discussion with the City's Neighborhood Department. This can be accomplished either by dropping by the Neighborhood Services Department counter at City Hall, or by making an appointment with the Neighborhood Services Director. Before you make significant investments in your project, The Department can help you understand the feasibility of your proposal, what City plans and ordinances will apply, what type of review process will be required, and how to prepare a complete application.

SUBMIT A COMPLETE AND THOROUGH APPLICATION

One of the most important things you can do to make your review process less costly to you is to submit a complete, thorough, and well-organized application in accordance with City ordinance requirements. The City has checklists to help you make sure your application is complete. To help you prepare an application that has the right level of detail and information, assume that the people reviewing the application have never seen your property before, have no prior understanding of what you are proposing, and don't necessarily understand the reasons for your request.

FOR MORE COMPLEX OR TECHNICAL TYPES OF PROJECTS, STRONGLY CONSIDER WORKING WITH AN EXPERIENCED PROFESSIONAL TO HELP PREPARE YOUR PLANS

Experienced professional engineers, land planners, architects, surveyors, and landscape architects should be quiet familiar with standard developmental review processes and expectations. They are also generally capable of preparing high-quality plans that will ultimately require less time (i.e., less cost for you) for City's planning and engineering consultants to review, saving you money in the long run. Any project that includes significant site grading, stormwater management, or utility work; significant landscaping; or significant building remodeling or expansion generally requires professionals in the associated fields to help out.

FOR SIMPLER PROJECTS, SUBMIT THOROUGH, LEGIBLE, AND ACCURATE PLANS

For less complicated proposals, it is certainly acceptable to prepare plans yourself rather than paying to have them prepared by a professional. However, keep in mind that even though the project may be less complex, the City's staff and planning consultant still need to ensure that your proposal meets all City requirements. Therefore, such plans must be prepared with care. Regardless of the complexity, all site, building and floor plans should:

1. Be drawn to be recognized scale and indicate what the scale is (e.g. 1 inch=40 feet).
2. Include titles and dates on all submitted documents in case pieces of your application get separated.
3. Include clear and legible labels that identify streets, existing and proposed buildings, parking areas, and other site improvements.
4. Indicate what the property and improvements look like today versus what is being proposed for the future.
5. Accurately represent and label the dimensions of all lot lines, setbacks, pavement/parking areas, building heights , and any other pertinent project features.
6. Indicate the colors and materials of all existing and proposed site/building improvements. Including color photos with your application is one inexpensive and accurate way to show the current conditions of the site. Color catalog pages or paint chips can be included to show the appearance of proposed signs, light fixtures, fences, retaining walls, landscaping features, building materials or other similar improvements.

SUBMIT YOUR APPLICATION WELL IN ADVANCE OF THE PLAN AND ARCHITECTURAL REVIEW COMMISSION MEETING

The city normally requires that a complete application be submitted four (4) weeks in advance of the Commission meeting when it will be considered. For simple submittals not requiring a public hearing, this may be reduced to two (2) weeks in advance. The further in advance you can submit your application, the better for you and everyone involved in reviewing the project. Additional review time may give the City's planning consultant and staff an opportunity to address those issues before the Plan and Architectural Review Commission meeting. Be sure to provide reliable contact information on your application form and be available to respond to such questions or requests in a timely manner.

FOR MORE COMPLEX PROJECTS, SUBMIT YOUR PROJECT CONCEPTUAL REVIEW

A conceptual review can be accomplished in several ways depending on the nature of your project and your desired outcomes.

1. Preliminary plans may be submitted to City staff and the planning consultant for a quick informal review. This will allow you to gauge initial reactions to your proposal and help you identify key issues;
2. You may request a sit-down meeting with the Neighborhood Services Director and or Planning consultant to review and more thoroughly discuss your proposal; and/or
3. You can ask to be placed on a Plan and Architectural Review Commission meeting agenda to present and discuss preliminary plans with the Commission and gauge its reaction before formally submitting your development review application.

Overall, conceptual reviews almost always save time, money, stress, and frustration in the long run for everyone involved. For this reason, the City will absorb up to \$200 in consultant review costs for conceptual review of each project.

HOLD A NEIGHBORHOOD MEETING FOR LARGER AND POTENTIALLY MORE CONTROVERSIAL PROJECTS

If you believe your project falls into one or both of these two categories (City staff can help you decide), one way to help the formal development review process go more smoothly is to host a meeting for neighbors and any other interested members of the community. This would happen before any Plan and Architectural Review Commission meeting and often before you even submit a formal development review application.

A neighborhood meeting will give you an opportunity to describe your proposal, respond to questions and concerns, and generally address issues in an environment that is less formal and potentially less emotional than a Plan and Architectural Review Commission meeting. Neighborhood meetings can help you build support for your project, understand other's perspectives on your proposal, clarify misunderstandings, and modify the project and alleviate public concerns before the Plan and Architectural Review Commission meetings. Please notify the City Neighborhood Services Director of your neighborhood meeting date, time and place; make sure all neighbors are fully aware (City staff can provide you a mailing list at no charge); and document the outcomes of the meeting to include with your application.

TYPICAL CITY PLANNING CONSULTANT DEVELOPMENT REVIEW COSTS

The City often utilizes assistance from a planning consultant to analyze requests for land development approvals against City plans and ordinances and assist the City's Plan and Architectural Review Commission and City Council on decision making. Because it is the applicant who is generating the need for the service, the City's policy is to assign most consultant costs associated with such review to the applicant, as opposed to asking general taxpayer to cover these costs.

The development review costs provided below represent the planning consultant's range of costs associated with each particular type of development review. This usually involves some initial analysis of the application well before the public meeting date, communication with the applicant at that time if there are key issues to resolve before the meeting, further analysis and preparation of a written report the week before the meeting, meeting attendance, and sometimes minor follow-up after the meeting. Cost vary depending on a wide range of factors, including the type of application, completeness and clarity of the development application, the size and complexity of the proposed development, the degree of cooperation from the applicant for further information, and the level of community interest. The City has a guide called "Tips for Minimizing Your Development Review Costs" with Information on how the applicant can help control costs.

Type of development review being requested and planning consultant review cost range

Minor Site/Building Plan (e.g., minor addition to building, parking lot expansion, small apartment, downtown building alterations)

- When land use is a permitted use in the zoning district and for minor downtown building alterations-up to \$600
- When use also requires a conditional use permit, and for major downtown building alterations-\$700-\$1,500

Major Site/Building Plan (e.g., new gas station/convenience store, new restaurant, supermarket, larger apartments, industrial building)

- When land use is a permitted use in the zoning district-\$700-\$2,000
- When land use also requires a conditional use permit- \$1,600-\$12,000

Conditional Use Permit with no Site plan Review (e.g., home occupation, sale of liquor request, substitution of use in existing building)

- Up to \$600

Rezoning

- Standard (not PCD) zoning district-\$700-\$2,000
- Planned Community Development zoning district, assuming complete GDP & SIP application submitted at same time-\$2,100-\$12,000

Land Division

- Land Survey Map-up to \$300
- Subdivision Plat- \$1,500-\$3,000
- Plat (does not include any development agreement time)-\$50-\$1,500

Annexation

- Typically between \$200-\$400

****Note: The City also retains a separate engineering consultant, who is typically involved in larger projects requiring storm water management plans, major utility work, or complex parking or road access plans. engineering costs are not included above, but will be assigned to the development review applicant. The consultant planner and engineer closely coordinate their reviews to control costs.**

Cost Recovery Certificate and Agreement

The City may retain the services of professional consultants (including planners, engineers, architects, attorneys, environmental specialists, and recreation specialists) to assist in the City's review of an application for development review coming before the Plan and Architectural Review Commission, Board of Zoning Appeals and/or Common Council. In fact most applications require some level of review by the City's planning consultant. City of Whitewater staff shall retain sole discretion in determining when and to what extent it is necessary to involve a professional consultant in the review of an application.

The submittal of an application or petition for development review by an applicant shall be construed as an agreement to pay for such professional review services associated with the application or petition. The City may apply the charges for these services to the applicant and/or property owner in accordance with this agreement. The City may delay acceptance of an application or petition (considering it incomplete), or may delay final action or approval of the associated proposal, until the applicant pays such fees or the specified percentage thereof. Development review fees that are assigned to the applicant, but that are not actually paid, may then be imposed by the City as a special charge on the affected property.

SECTION A: BACKGROUND INFORMATION-to be completed by the Applicant/Property Owner

Applicant's First Name*

Kory

Last Name*

Krieser

Applicant's Mailing Address

W308N6194 Shore Acres Rd

City*

Hartland

State*

WI

Zip Code*

53029

Applicant's Phone Number*

4145885510

Fax Number

Applicant's Email Address*

kory@krieserinc.com

Project Information

Name/Description of Development*

128 Unit Multifamily Development

Address of Development Site*

Moraine View Pkwy & Jakes Way

Property Owner Information (if different from applicant):

Property Owner's First Name

Edwin

Last Name

Kowalski

Property Owner's Mailing Address

13502 E. Townline Rd.

City

Whitewater

State

WI

Zip Code

53190

SECTION B: APPLICANT/PROPERTY OWNER COST OBLIGATIONS. To be filled out by the Neighborhood Services Department

Under this agreement, the applicant shall be responsible for the costs indicated below. In the event the applicant fails to pay such costs, the responsibility shall pass to the property owner, if different. Costs may exceed those agreed to herein only by mutual agreement of the applicant, property owner and City. If and when the City believes that actual costs incurred will exceed those listed below, for reasons not anticipated at the time of the application or under the control of the City administration or consultants, the Neighborhood Services Director or his agent shall notify the applicant and property owner for their approval to exceed such initially agreed costs. If the applicant and property owner do not approve such additional costs, the City may, as permitted by law, consider the application withdrawn and/or suspend or terminate further review and consideration of the development application. In such case, the applicant and property owner shall be responsible for all cost incurred up until that time.

A. Application fee

B. Expected planning consultant review cost

C. Total cost expected of application (A+B)

D. 25% of total cost due at time of application:

Project likely to incur additional engineering or other consultant review costs?

-- Select One --

Balance of costs

The balance of the applicant's costs, not due at time of application, shall be payable upon applicant receipt of one or more itemized invoices from the City. If the application fee plus actual planning and engineering consultant review costs end up being less than the 25% charged to the applicant at the time of application, the City shall refund the difference to the applicant.

SECTION C: AGREEMENT EXECUTION -to be completed by the Applicant and Property Owner

The undersigned applicant and property owner agree to reimburse the City for all costs directly or indirectly associated with the consideration of the applicant's proposal as indicated in this agreement, with 25% of such costs payable at the time of application and the remainder of such costs payable upon receipt of one or more invoices from the City following the execution of development review services associated with the application.

Signature of Applicant/Petitioner*

Date

Kory Krieser

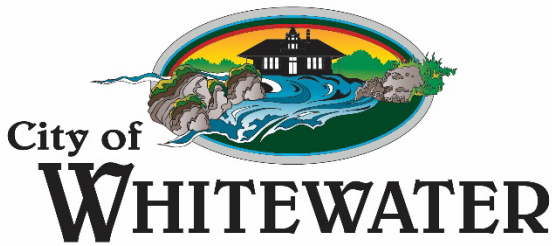
7/12/2024

Signature of Property Owner (if different)

Date

Edwin Kowalski

7/12/2024



Neighborhood Services
Department
*Planning, Zoning, Code
Enforcement, GIS
and Building
Inspections*
www.whitewater-wi.gov
Telephone: (262) 473-0540

NOTICE OF PUBLIC HEARING

TO ALL INTERESTED PARTIES:

A meeting of the PLAN AND ARCHITECTURAL REVIEW COMMISSION of the City of Whitewater will be held at the Municipal Building, Community Room, located at 312 W. Whitewater Street on the 12th day of August at 6:00 p.m. to hold a public hearing for a Conditional Use Permit and Site Plan Review for a 128 Unit 16 Building Multifamily Building for Tax Parcel # /WPB 00044 legal description:

LOT 44 WALTON'S PINE BLUFF AS RECORDED IN CAB D SLIDE 2 WCR. LOCATED IN SE 1/4 & SW 1/4 OF SE 1/4 SEC 3 T4N R15E. 494717 SQ FT CITY OF WHITEWATER OIMITS /A3186-3 & /A3186-3A

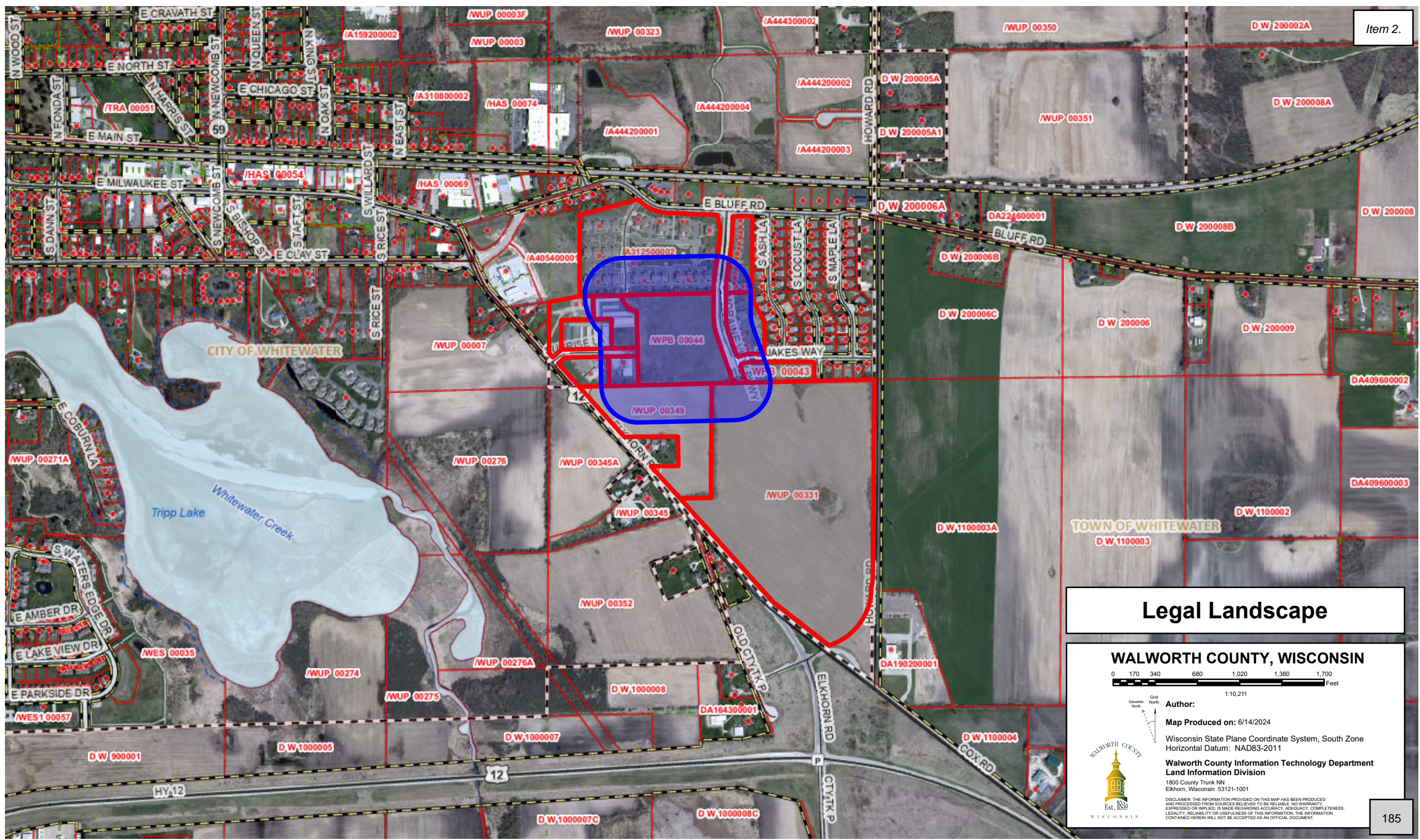
for Chris Slater.

The Proposal is on file in the Neighborhoods Services Office located at 312 W. Whitewater Street and is open to public inspection during office hours Monday through Friday, 8:00 a.m. to 4:30 p.m.

This meeting is open to the public. COMMENTS FOR, OR AGAINST THE PROPOSED PROJECT MAY BE SUBMITTED IN PERSON OR IN WRITING.

For information, call (262) 473-0540

Llana Dostie, Neighborhood Services Administrative Assistant



Legal Landscape

WALWORTH COUNTY, WISCONSIN

0 170 340 680 1,020 1,360 1,700
Feet

1:10,211

Geoid North
Grid North

Author:
Map Produced on: 6/14/2024
Wisconsin State Plane Coordinate System, South Zone
Horizontal Datum: NAD83-2011

**Walworth County Information Technology Department
Land Information Division**
1800 County Trunk NN
Elkhorn, Wisconsin 53121-1001

DISCLAIMER: THE INFORMATION PROVIDED ON THIS MAP HAS BEEN PRODUCED AND PROCESSED FROM SOURCES BELIEVED TO BE RELIABLE. NO WARRANTY, EXPRESSED OR IMPLIED, IS MADE REGARDING ACCURACY, ADEQUACY, COMPLETENESS, LEGALITY, RELIABILITY OR USEFULNESS OF THIS INFORMATION. THE INFORMATION CONTAINED HEREIN WILL NOT BE ACCEPTED AS AN OFFICIAL DOCUMENT.

BLUFF RIDGE APARTMENTS LLC
DECKER PROPERTIES INC
250 N SUNNY SLOPE RD STE 290
BROOKFIELD, WI 53005

RR WALTON & COMPANY LTD
1005 W MAIN ST STE C
WHITEWATER, WI 53190

WHITEWATER SELF-STORAGE
C/O JEFF SEEFELT
1506 BEECHWOOD CIR
MIDDLETON, WI 53562

PAUL S MOERER
JODI L MOERER
1270 E JAKES WAY 2
WHITEWATER, WI 53190

ROSE N AWUOR
1270 JAKES WAY UT 4
WHITEWATER, WI 53190-9000

NICHOLAS R PUPP
1270 E JAKES WAY #6
WHITEWATER, WI 53190-9000

RR WALTON & COMPANY LTD
1005 W MAIN ST
STE C
WHITEWATER, WI 53190-9000

JAMES M VANDER MEULEN
CYNTHIA A VANDER MEULEN
1270 E JAKES WAY BLDG 3 UT 10
WHITEWATER, WI 53190-9000

AMANDA M PAYTON
1270 E JAKES WAY #12
WHITEWATER, WI 53190-9000

BRIAN ZELLMER
MAUREEN ZELLMER
1270 E JAKES WAY #14
WHITEWATER, WI 53190-9000

MAX R WALTON
1270 E JAKES WAY UT 13
WHITEWATER, WI 53190-9000

KWANGSEOG AHN
WOONKYUNG AHN
1270 E JAKES WAY, UT 11
WHITEWATER, WI 53190-9000

NANCY BOYER
1270 JAKES WAY BLDG 5 UT 9
WHITEWATER, WI 53190-9000

JOHN R PASSELLA
DAWN K PASSELLA
41 PARK VIEW LN
HAWTHORNE WOODS, IL 60047

RR WALTON & COMPANY LTD
1005 W MAIN ST
STE C
WHITEWATER, WI 53190-9000

ARBEN KASA
1270 E JAKES WAY UT 3
WHITEWATER, WI 53190-9000

NIKKI L AMUNDSON
1270 E JAKES WAY UT 1
WHITEWATER, WI 53190-9000

BRENDA K VOLK
1277 E BLUFF RD
UT #1
WHITEWATER, WI 53190-9000

ERIKA MARTIN
1277 E BLUFF RD UT 2
WHITEWATER, WI 53190-9000

KARIN A FERRELL
1277 E BLUFF RD UT 3
WHITEWATER, WI 53190-9000

SAM STRITZEL
1277 E BLUFF RD UT 4
WHITEWATER, WI 53190-9000

DAVID W JONES
REBECCA L JONES
1277 E BLUFF RD UT #5
WHITEWATER, WI 53190-9000

DARRELL D NOVY
W5697 RIDGE RD
ELKHORN, WI 53121

KATHLEEN F DITTNER
1277 E BLUFF RD #7
WHITEWATER, WI 53190-9000

ANNETTE C POSH
1277 E BLUFF RD #8
WHITEWATER, WI 53190-9000

J JESUS CERNA-SANCHEZ
MARIA SANTOS-SERNA
1277 E BLUFF RD #9
WHITEWATER, WI 53190-9000

ANGEL VALADEZ
MARIA G VALADEZ
2218 W LYNDAL ST
CHICAGO, IL 60647

DONALD J QUASS
GAYLE M QUASS
1277 E BLUFF RD
UT 11
WHITEWATER, WI 53190

MARTHA DOWNING
1277 E BLUFF DR #12
WHITEWATER, WI 53190-9000

LISA E SCHAAL
1277 E BLUFF RD UT 13
WHITEWATER, WI 53190-9000

JESSICA ISLAS
1277 E BLUFF RD UT 14
WHITEWATER, WI 53190-9000

ELIZABETH M BONUSO
1277 E BLUFF RD
UT #15
WHITEWATER, WI 53190

MICHAEL B KRAHN
1277 E BLUFF RD #16
WHITEWATER, WI 53190

CITY OF WHITEWATER TRUST
312 W WHITEWATER ST
WHITEWATER, WI 53190-9000

EDWIN L KOWALSKI TRUST
RUTH H KOWALSKI TRUST
13502 E TOWNLINE RD
WHITEWATER, WI 53190

JOAN DEMPSEY TRUST
135 W GENEVA ST
ELKHORN, WI 53121-2100

RILEY VENTURES LLC
1005 W MAIN STE C
WHITEWATER, WI 53190

WHITEWATER SELF STORAGE LLP
C/O JEFF SEEFELDT
1506 BEECHWOOD CIR
MIDDLETON, WI 53562

PETE'S TIRE SERVICE INC
W8285 SUNRISE LN
WHITEWATER, WI 53190

JA PROPERTY INVESTMENTS OF WHITEWATER
20085 W RUSTIC RIDGE DR
NEW BERLIN, WI 53146

RR WALTON & COMPANY LTD
1005 W MAIN ST STE C
WHITEWATER, WI 53190

MEMORANDUM

To: City of Whitewater Plan and Architectural Review

Commission

From: Allison Schwark, Zoning

Administrator

Date: August 12, 2024

Re: Conditional Use Permit

Summary of Request	
Requested Approvals:	Conditional Use Permit for WIRELESS TELECOMMUNICATIONS FACILITIES AND UNDERGROUND TRENCHING IN C-1 OVERLAY DISTRICT
Location:	1002 S Janesville Street
Current Land Use:	Landscape Supply Company
Proposed Land Use:	Same use with added Telecommunication facility
Current Zoning:	B-3
Proposed Zoning:	N/A
Future Land Use, Comprehensive Plan:	Highway Commercial

The purpose of Section 19.55 is as follows:

- A. Mitigate the potential for adverse visual impacts caused by wireless telecommunications facilities through design and siting standards.
- B. Ensure that a business environment characterized by high service quality, competition and nondiscrimination prevails with regard to wireless telecommunication services in a manner consistent with the Federal Telecommunications Act of 1996.
- C. Establish a clear process for obtaining necessary permits for wireless telecommunications facilities that adequately protect the interests of the citizens of the city while minimizing the burden of compliance to service providers.
- D. Protect environmentally and aesthetically sensitive areas of the city by restricting the design, height, location and operation of wireless telecommunications facilities in these areas, and by promoting their disguise, camouflage, screening or other design treatments intended to minimize their obtrusiveness.

E. Encourage use of multiple-antenna alternative support structures such as buildings and water towers as an alternative to stand-alone, single-use, single-provider structures, and require good faith attempts for co-location of facilities.

Site Plan Review

The applicant is requesting a Conditional Use Permit for a Wireless Telecommunication Facility to be placed at 1002 S Janesville Street. The proposed mobile service facility will consist of a 195'-0" tall self-supporting tower within a 75'-0" x 75'-0" lease area. The proposed mobile service support structure is intended to fill in coverage gaps and improve AT&T wireless internet service in the eastern area of the City of Whitewater to provide adequate space for AT&T to deploy FirstNet, the first nationwide communications network dedicated for first responders. The proposed tower will be erected, owned, and managed by Tillman Infrastructure, and AT&T Mobility will locate its antennas on the tower and its equipment in the compound upon completion. The facility is unstaffed and will only require service technicians, in a pick-up/van sized vehicle, to visit the site approximately once per month after the facility is completed.

C-1 Shoreland Wetland Overlay:



Currently the property has areas where the C-1 Shoreland Wetland Overlay is present.

The C-1 shoreland wetland overlay district is intended to preserve, protect, and enhance the ponds, streams, and wetland areas within the shoreland jurisdiction of the city. The preservation, protection, and enhancement of these areas will serve to maintain safe and healthful conditions; maintain and improve water quality, both ground and surface; prevent flood damage; control stormwater runoff; protect stream banks from erosion; protect groundwater recharge and discharge areas; protect wildlife habitat; protect native plant communities; avoid the location of structures on soils which are generally not suitable for use; and protect the water-based recreation resources of

the city.

The following uses are conditional uses in the C-1 shoreland wetland district and may be permitted as specified. The city plan commission shall transmit a copy of each application for a conditional use in the C-1 shoreland wetland district to the Wisconsin Department of Natural Resources (DNR) at least ten days prior to the public hearing. Final action on the application shall not be taken for thirty days or until the DNR has made its recommendation, whichever comes first. A copy of all C-1 shoreland wetland district conditional use permits shall be transmitted to the DNR within ten days following the decision:

- D. The construction and maintenance of electric, gas, telephone, water and sewer transmission and distribution lines, and related facilities, provided that:
 - 1. The transmission and distribution lines and related facilities cannot as a practical matter be located outside the conservancy district; and
 - 2. Any filling, draining, dredging, ditching, or excavating that is done must be necessary for the construction or maintenance of the utility and must be done in a manner designed to minimize flooding and other adverse impacts upon the natural functions of the conservancy area.

The proposed site plan now depicts the C-1 overlay area, and where they will be trenching through it.

DNR Mapped Wetland:



19.55.050 - Required application submittal information.

All items have been received and reviewed, and the project generally conforms to the requirements of our municipal ordinance and regulations.

19.55.060 - Co-location and use of alternative support structures.

The co-location report has been provided to the City of Whitewater and has been reviewed as a part of the submittal.

The following question has been asked to the applicant: There is a co-location area available on top of the City water tower, why is this location not sufficient or suitable, as it is within the radius and range of the co-location report?

19.55.070 - Structural, design and aesthetic standards.

Design:

The submittal has been reviewed, and the site plan is now in full compliance with all requirements of our City ordinance.

Setback:

The minimum setback of a new wireless telecommunications facility from all property lines and principal buildings on the site shall equal the height of the wireless telecommunications facility, including the height of any alternative support structure. A reduced setback below this minimum may be considered by the plan and architectural review commission based on submittal of a structural engineering analysis demonstrating that the facility would not pose a threat to the public, existing principal buildings, or adjacent properties in the event of failure. All wireless telecommunications support facilities shall be set back from property lines the same distance as required for principal buildings in the zoning district.

State Statute Sec 66.0404 on mobile tower siting regulations requires the following setback requirements:

(4e) SETBACK REQUIREMENTS.

(a) Notwithstanding sub. (4) (r), and subject to the provisions of this subsection, a political subdivision may enact an ordinance imposing setback requirements related to the placement of a mobile service support structure that applies to new construction or the substantial modification of facilities and support structures, as described in sub. (2).

(b) A setback requirement may apply only to a mobile service support structure that is constructed on or adjacent to a parcel of land that is subject to a zoning ordinance that permits single-family residential use on that parcel. A setback requirement does not apply to an existing or new utility pole, or wireless support structure in a right-of-way that supports a small wireless facility, if the pole or facility meets the height limitations in s. 66.0414 (2) (e) 2. and 3.

(c) The setback requirement under par. (b) for a mobile service support structure on a parcel shall be measured from the lot lines of other adjacent and nonadjacent parcels for which single-family residential use is a permitted use under a zoning ordinance.

(d) A setback requirement must be based on the height of the proposed mobile service support structure, and the setback requirement may not be a distance that is greater than the height of the proposed structure.

The proposed tower setbacks, and location to property lines and adjacent properties are generally acceptable due to the structural engineering fall report, and the limited adjacent residential property.

Landscaping and Fencing:

The site including the wireless telecommunications facility shall be attractively landscaped, with particular emphasis on landscaping near buildings, tower foundations, and driveways. New vegetation for screening purposes shall be a minimum of five feet in height upon planting and shall be located on the outside of any required fencing. The base of all freestanding wireless telecommunications facilities shall be enclosed with security fencing, unless the applicant provides other acceptable improvements designed to secure the base of the facility (tower) from public access.

The plans have been reviewed and are generally in compliance with the following, however it is recommended that landscaping be added around the fence, due to proximity to other buildings.

Planner's Recommendations

- 1) Staff recommends the PARC **APPROVE** the Conditional Use Permit for a wireless telecommunications facility with trenching in the C-1 overlay with the following conditions:
 - A. Any wireless telecommunications facility not continuously operating for a period of twelve months shall be considered abandoned and shall be removed (along with its wireless telecommunication support facilities) within ninety days of receiving an order to remove from the zoning administrator. The cost of removal and site restoration shall be borne entirely by the permit holder. In the event that the permit holder fails to remove the facility, the city may cash the required performance bond and remove the facility and all support facilities itself.
 - B. All wireless telecommunications facilities granted site plan or conditional use permit approval after the effective date of this chapter shall remain in compliance with approved plans, conditions of approval, the provisions of this chapter as they existed at the time of permit approval, and applicable standards of Sections 19.63.100 and 19.66.050. The permit holder shall be responsible for the continued maintenance and/or replacement of all buildings, fencing, landscaping and other site improvements.
 - C. The permit holder for all wireless telecommunications facilities granted conditional use permit approval after the effective date of this chapter shall file an annual report with the zoning administrator demonstrating continued compliance with approved plans, conditions of approval, the provisions of this chapter as they existed at the time of permit approval, and the standards of Sections 19.63.100 and 19.66.050. The petitioner shall also demonstrate that the term of any performance bond or liability insurance policy required under Section 19.55.050 shall remain in effect for at least

- two years from the date the annual report is submitted. Such report shall be filed within thirty days of the original month of conditional use permit approval.
- D. Failure to comply with the above requirements shall be grounds for revocation of permit, penalties, or both.
 - E. The property owner/tenant shall be responsible for obtaining all applicable building permits.
 - F. Any other conditions stipulated by the PARC



Item 3.
10700 W. Higgins Rd., Ste. 100,
Rosemont, IL 60018
847 608-6300 Office
847 608-1299 Fax
www.lcctelecom.com

July 10th, 2024

VIA E-MAIL to: mcodeenforcement@gmail.com

Allison Schwark
Code Enforcement
City of Whitewater
312 W. Whitewater Street
Whitewater, WI 53190

RE: Amendment to Conditional Use Permit Request for Wireless Telecommunications Facility
Site Address: 1002 S. Janesville Street
Amendment to Include Construction of Utilities in C-1 Shoreland Overlay

Dear Ms. Schwark:

LCC Telecom Services on behalf of Tillman Infrastructure LLC requests to amend the application for a Conditional Use for a Wireless Telecommunications Facility at the above-referenced address to include the construction of utilities within a portion of the C-1 Shoreland District Overlay on the property.

Per Section 19.45.030(D) of the City of Whitewater Code of Ordinances, the construction and maintenance of electric, gas, telephone, water, and sewer transmission and distribution lines, and related facilities may be allowed as a Conditional Use within the C-1 Shoreland Wetland Overlay District of the City of Whitewater provided that:

1. The transmission and distribution lines and related facilities cannot as a practical matter be located outside the conservancy district; and
2. Any filling, draining, dredging, ditching, or excavating that is done must be necessary for the construction or maintenance of the utility, and must be done in a manner designed to minimize flooding and other adverse impacts upon the natural functions of the conservancy area.

The property at 1002 S. Janesville Street is currently zoned Highway Commercial and Light Industrial (B-3) and the construction of utilities is proposed entirely within the existing gravel parking lot at the facility. As a practical matter, it is not feasible to run these utilities aboveground due to the current use of the property, which includes traffic and turnaround of large trucks. Trenching at the proposed location results in the least land disturbance and impact upon the existing use of the property. All filling, draining, dredging, ditching, or excavating will be done within the existing parking area and will be done in a manner designed to minimize flooding and other adverse impacts upon the natural functions of the conservancy area.

Please find attached to this request:

- Copy of email communications with the Wisconsin Department of Natural Resources noting no impact on DNR-identified wetlands at this location
- Copy of site plan identifying trenching location for construction of utilities
- Site sketch showing approximate location of impact on C-1 Conservancy Overlay

Tillman Infrastructure, LLC requests that this Amendment to Conditional Use Permit Request be attached to and made part of the Conditional Use Permit Application for the Wireless Telecommunications Facility at this property submitted on April 19, 2024.

Item 3.

If the City of Whitewater has any additional requirements in order to process this request, please do not hesitate to reach out to me at your earliest convenience.



Regards,




John Burchfield
Senior Project Manager - Zoning
10700 W Higgins Rd. Suite 240
Rosemont, IL 60018
Cell: (224) 803-6451
Fax: (847) 608-1299

Copy of email communications with the Wisconsin Department of Natural Resources noting no impact on identified wetlands at this location

Item 3.

 Matthews, Weston K - DNR <weston.matthews@wisconsin.gov>
To:  John Burchfield


Wed 6/26/2024 12:36 PM

 This sender weston.matthews@wisconsin.gov is from outside your organization.

Block sender

Hi John –

Thank you for reply, information, and confirmation. Since the total disturbance is less than 1 acre, the project will not require a DNR stormwater erosion control permit. The DNR's previous determination is also still valid; based on the information presented from the environmental vendor and the information available through online resources (DNR SWDV, lidar, Google Earth, etc.), the project doesn't appear to trigger the need for a DNR GP3 (utility waterway/wetland permit).

Let me know if you have any other questions related to the project.

Thanks again,

We are committed to service excellence.

Visit our survey at <http://dnr.wi.gov/customersurvey> to evaluate how I did.

Weston Matthews

Pronouns: He/Him/His

Phone: 608-228-9164

weston.matthews@wisconsin.gov

From: John Burchfield <JBurchfield@lcctelecom.com>
Sent: Wednesday, June 26, 2024 12:16 PM
To: Matthews, Weston K - DNR <weston.matthews@wisconsin.gov>
Subject: Re: Wetland Question in Whitewater, WI - Tillman Cell Tower TI-OPP-29018

CAUTION: This email originated from outside the organization.

Do not click links or open attachments unless you recognize the sender and know the content is safe.

Wes,

Total disturbance is approximately 24,000 square feet (rounded up from a surveyed 5,625 sq. ft. for the lease area and 17,808 sq. ft. for the access easement). Actual disturbance likely to be less since we're not trenching in or grading all 17,808 sq. ft. of the access easement.

I have attached a copy of the referenced Rev D Lease Exhibit for reference. The Lease Exhibit referred to is from 01.22.24, which is a more preliminary site sketch than the Rev B construction drawings dated 03.06.24 provided to you and to the City of Whitewater.

Very Respectfully,

John Burchfield

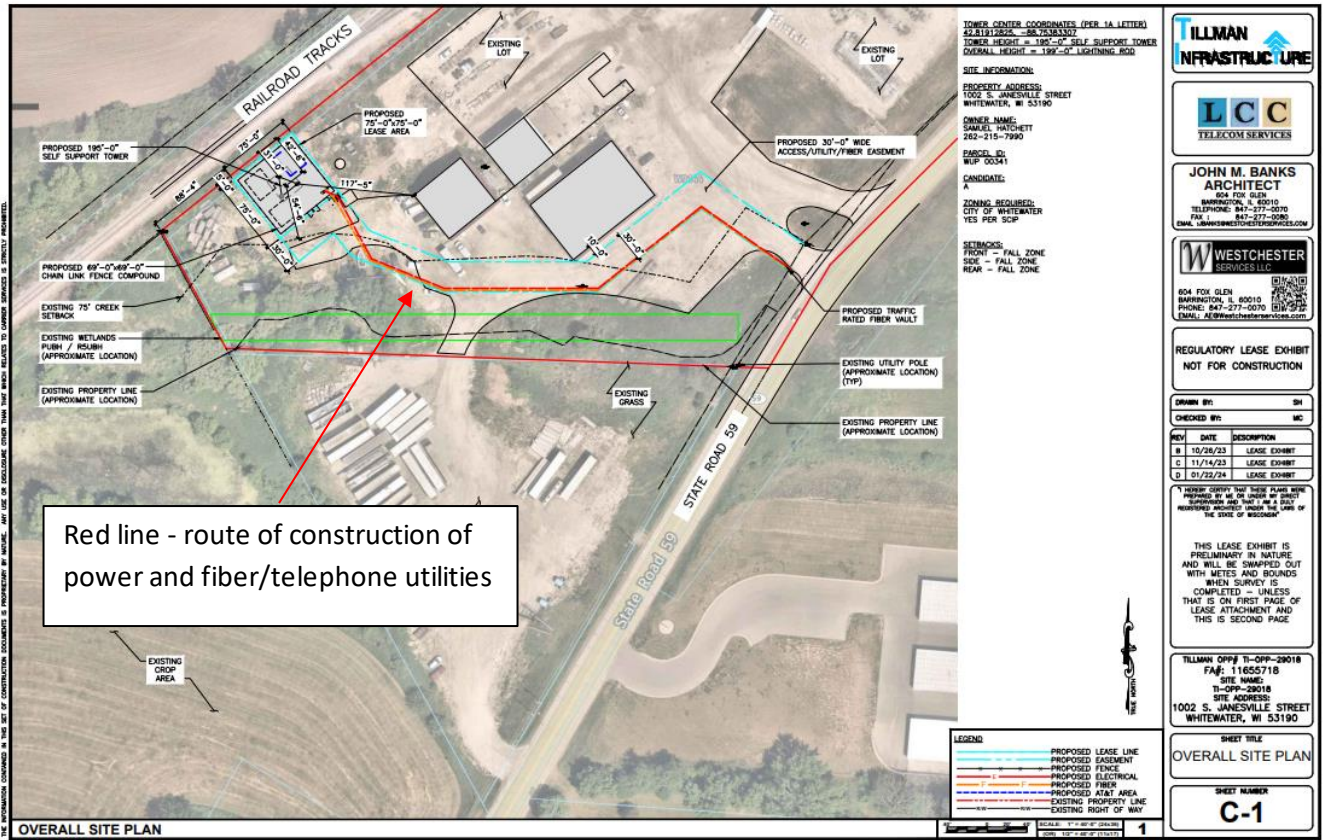
Sr. Project Manager - Zoning



10700 W Higgins Rd. Suite 240

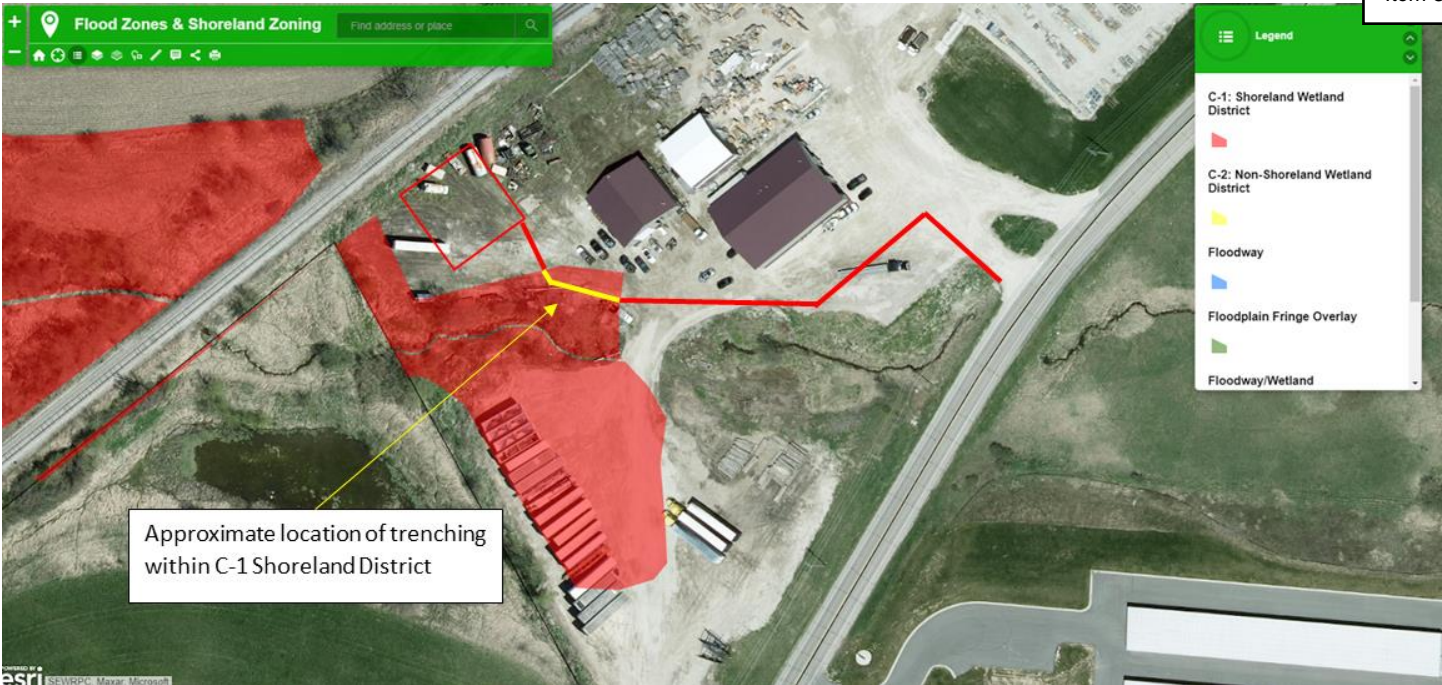
Rosemont, IL 60018

Item 3.



Site sketch showing approximate location of impact on C-1 Conservancy Overlay

Item 3.



THE INFORMATION CONTAINED IN THIS SET OF CONSTRUCTION DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO CARRIER SERVICES IS STRICTLY PROHIBITED.

TILLMAN INFRASTRUCTURE

TILLMAN OPP NUMBER: TI-OPP-29018
SITE NAME: WHITEWATER
SITE ADDRESS: 1002 S JANESVILLE STREET
WHITEWATER, WI 53190
PARCEL ID: WUP 00341
FA#: 11655718

CONSTRUCTION APPROVAL	
TILLMAN SITE ACQUISITION MANAGER: _____	DATE: _____
TILLMAN CONSTRUCTION MANAGER: _____	DATE: _____
RF PROJECT MANAGER: _____	DATE: _____
PROJECT MANAGER: _____	DATE: _____



WESTCHESTER SERVICES LLC
 WI FIRM 4897-11
 604 FOX GLEN
 BARRINGTON, IL 60010
 PHONE: 847-277-0070
 EMAIL: AE@Westchesterservices.com

JOHN M. BANKS ARCHITECT
 604 FOX GLEN
 BARRINGTON, IL 60010
 TELEPHONE: 847-277-0070
 FAX : 847-277-0080
 EMAIL : JBANKS@WESTCHESTERSERVICES.COM

DRAWN BY: DWM
CHECKED BY: MC

REV	DATE	DESCRIPTION
A	03/04/24	PRELIMINARY CD
B	03/06/24	PRELIMINARY CD

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED ARCHITECT UNDER THE LAWS OF THE STATE OF WISCONSIN

TILLMAN OPP# TI-OPP-29018
SITE NAME: WHITEWATER
SITE ADDRESS:
1002 S JANESVILLE STREET
WHITEWATER, WI 53190
FA#: 11655718
FAA STUDY #: 2024-AGL-23880E

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1 201

SITE INFORMATION

SITE ADDRESS:	1002 S JANESVILLE STREET WHITEWATER, WI 53190
LATITUDE (NAD 83):	42°49'08.8617" N (42.81912825)
LONGITUDE (NADV 88):	88°45'13.7991" W (-88.75383307)
GROUND ELEVATION:	850.37' (AMSL)
FAA STUDY #:	2024-AGL-2388-OE
JURISDICTION:	THE CITY OF WHITEWATER
JURISDICTION CONTACT:	GREG NOLL 312 W WHITEWATER STREET, WHITEWATER, WI 53190 920-675-9062 municipalzoningandinspection@gmail.com
PARCEL/MAP NUMBER:	WUP 00341
LANDLORD OWNER:	HATCHETT ENTERPRISES LLC 262-215-7990
TOWER OWNER:	TILLMAN INFRASTRUCTURE 152 W. 57TH STREET NEW YORK, NEW YORK 10019
STRUCTURE TYPE:	SELF SUPPORT TOWER
STRUCTURE HEIGHT:	195'-0" (AGL)
POWER SUPPLIER:	WE ENERGIES PHONE NUMBER: 800-714-7777
FIBER SUPPLIER:	TBD PHONE NUMBER: TBD

PROJECT TEAM

APPLICANT:	TILLMAN INFRASTRUCTURE 152 W. 57TH STREET NEW YORK, NEW YORK 10019
PROJECT MANAGEMENT FIRM:	LCC TELECOM SERVICES 10700 HIGGINS ROAD, SUITE 240 ROSEMONT, IL 60018 (847) 608-6300
ARCHITECT ENGINEERING:	JOHN M. BANKS 604 FOX GLEN BARRINGTON, IL 60010 CONTACT: JOHN M. BANKS PHONE: (847) 277-0070 EMAIL: JBANKS@WESTCHESTERSERVICES.COM

VICINITY MAP



DRIVING DIRECTIONS



CODE COMPLIANCE

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE LATEST EDITIONS OF THE FOLLOWING CODES.

- 2023 WISCONSIN STATE BUILDING CODE
- 2023 WISCONSIN STATE ELECTRICAL CODE
- 2023 WISCONSIN STATE MECHANICAL CODE
- 2023 WISCONSIN STATE PLUMBING CODE
- 2023 WISCONSIN STATE FIRE CODE
- AMERICAN CONCRETE INSTITUTE
- AMERICAN INSTITUTE OF STEEL CONSTRUCTION
- MANUAL OF STEEL CONSTRUCTION 13TH EDITION
- ANSITIA-222-H
- TIA 607
- INSTITUTE FOR ELECTRICAL & ELECTRONICS ENGINEERING 81
- IEEE C2 NATIONAL ELECTRIC SAFETY CODE
- LATEST EDITION
- TELECORDIA GR-1275

DRAWING INDEX

T-1	TITLE SHEET
B-1	SITE SURVEY
C-1	OVERALL SITE PLAN
C-2	ENLARGED SITE PLAN
C-3	ELEVATION
C-4	CONSTRUCTION DETAILS
C-5	FENCE DETAILS
C-5.1	FENCE DETAILS
C-6	SITE SIGNAGE
C-7	GRADING PLAN
C-8	EROSION CONTROL DETAILS
E-1	UTILITY PLAN
E-2	ENLARGED UTILITY PLAN
E-3	ELECTRICAL DIAGRAM
G-1	GROUNDING PLAN & DETAILS
G-2	GROUNDING PLAN AND RISER DIAGRAM

DRAWING SCALE

THESE DRAWINGS ARE SCALED TO FULL SIZE AT 22"x34" AND HALF SIZE AT 11"x17". CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE DESIGNER / ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR MATERIAL ORDERS OR BE RESPONSIBLE FOR THE SAME. CONTRACTOR SHALL USE BEST MANAGEMENT PRACTICE TO PREVENT STORM WATER POLLUTION DURING CONSTRUCTION.

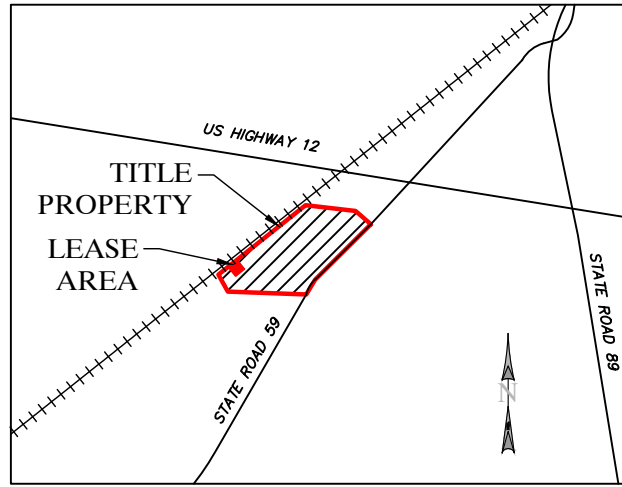
SCOPE OF WORK

- THIS PROJECT CONSISTS OF :
- CONSTRUCTION OF A NEW UNMANNED TELECOMMUNICATIONS FACILITY
 - SITE WORK: NEW TOWER, UNMANNED EQUIPMENT CABINET ON PLATFORM, AND UTILITY INSTALLATIONS

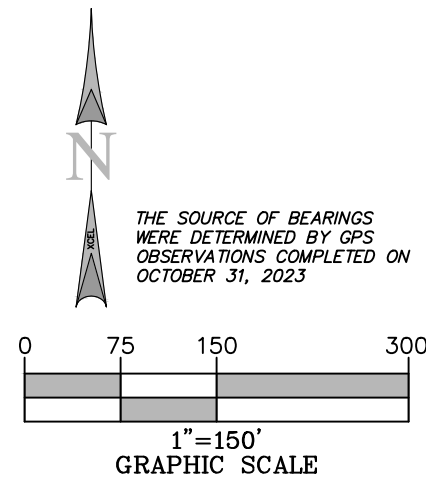


**Know what's below.
Call before you dig.**

TO OBTAIN LOCATION OF PARTICIPANTS UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN, CALL LOCAL STATE ONE CALL
 TOLL FREE: 1-800-242-8511 OR
 www.diggershotline.com
 WISCONSIN STATUTE REQUIRES MIN OF 2 WORKING DAYS NOTICE BEFORE YOU EXCAVATE



VICINITY MAP
NOT TO SCALE



*** FAA COORDINATE POINT**

NAD 83
LATITUDE: 42°49'08.8617" (42.81912825)
LONGITUDE: -88°45'13.7991" (-88.75383307)
NAVD88
ELEVATIONS: 850.37± AMSL

TEMPORARY BENCHMARK

LATITUDE: 42°49'07.8707" (42.81885298)
LONGITUDE: -88°45'09.8384" (-88.75273289)
ELEVATION: 845.76'
LOCATION: SET IRON ROD

GLOBAL POSITIONING SYSTEMS NOTE

1. RANDOM TRAVERSE CONTROL MONUMENTS WERE SET USING GPS METHODS. A PORTION OF THE TOPOGRAPHY AND FOUND BOUNDARY MONUMENTS WERE ALSO LOCATED USING GPS METHODS.
2. THE TYPE OF GPS UTILIZES AS NETWORK ADJUSTED REAL TIME KINEMATIC (TOPCON VRS NETWORK), WISCONSIN COUNTY SYSTEMS: WALWORTH COUNTY, US FOOT.
3. TOPCON HIPER SR RECEIVERS WERE USED TO PERFORM THE SURVEY.

GENERAL NOTES

NO SEARCH OF PUBLIC RECORDS HAS BEEN COMPLETED BY XCEL CONSULTANTS TO DETERMINE ANY DEFECTS AND/OR AMBIGUITIES IN THE TITLE OF THE PARENT PARCEL.

THIS SURVEY IS FOR THE PROPOSED LEASE AREA AND THE PROPOSED EASEMENTS ONLY, AND ONLY A PARTIAL BOUNDARY SURVEY OF THE PARENT PARCEL HAS BEEN PERFORMED.

THIS PLAT IS NOT INTENDED FOR LAND TRANSFER.

THIS PROPERTY IS SUBJECT TO ANY RECORDED EASEMENTS AND/OR RIGHTS OF WAY SHOWN HEREON OR NOT.

THIS SURVEY WAS COMPLETED WITH THE AID OF TITLE WORK PREPARED BY WESTCOR LAND TITLE INSURANCE COMPANY, COMMITMENT DATE OF AUGUST 10, 2023, BEING FILE/COMMITMENT NO. TIL-159404-C, FOR THE SUBJECT PROPERTY, TO DETERMINE THE IMPACTS OF EXISTING TITLE EXCEPTIONS.

PREPARED FOR:

WESTCHESTER SERVICES LLC
604 FOX GLEN
BARRINGTON, IL 60010
TELEPHONE: 847.277.0070
FAX: 847.277.0080
ae@westchesterservices.com

PREPARED FOR:

TILLMAN INFRASTRUCTURE

SURVEYED BY:

XCEL Consultants
120 10TH AVENUE EAST, SUITE 3
MILAN, IL 61264
(O) 309-787-9988
(F) 309-756-5540
(E) XCEL@XCELCONSULTANTSINC.COM

XCEL PROJECT NUMBER: 234903

SITE SURVEY

REV.	DATE	DESCRIPTION

SITE INFORMATION:
WHITewater

1002 S JANESVILLE STREET
WHITewater, WI 53190
WALWORTH COUNTY

TAX PARCEL NUMBER:
/WUP 00341

PROPERTY OWNER:
HATCHETT ENTERPRISES LLC
1002 S JANESVILLE STREET
WHITewater, WI 53190

SITE NUMBER:
TI-OPP-29018

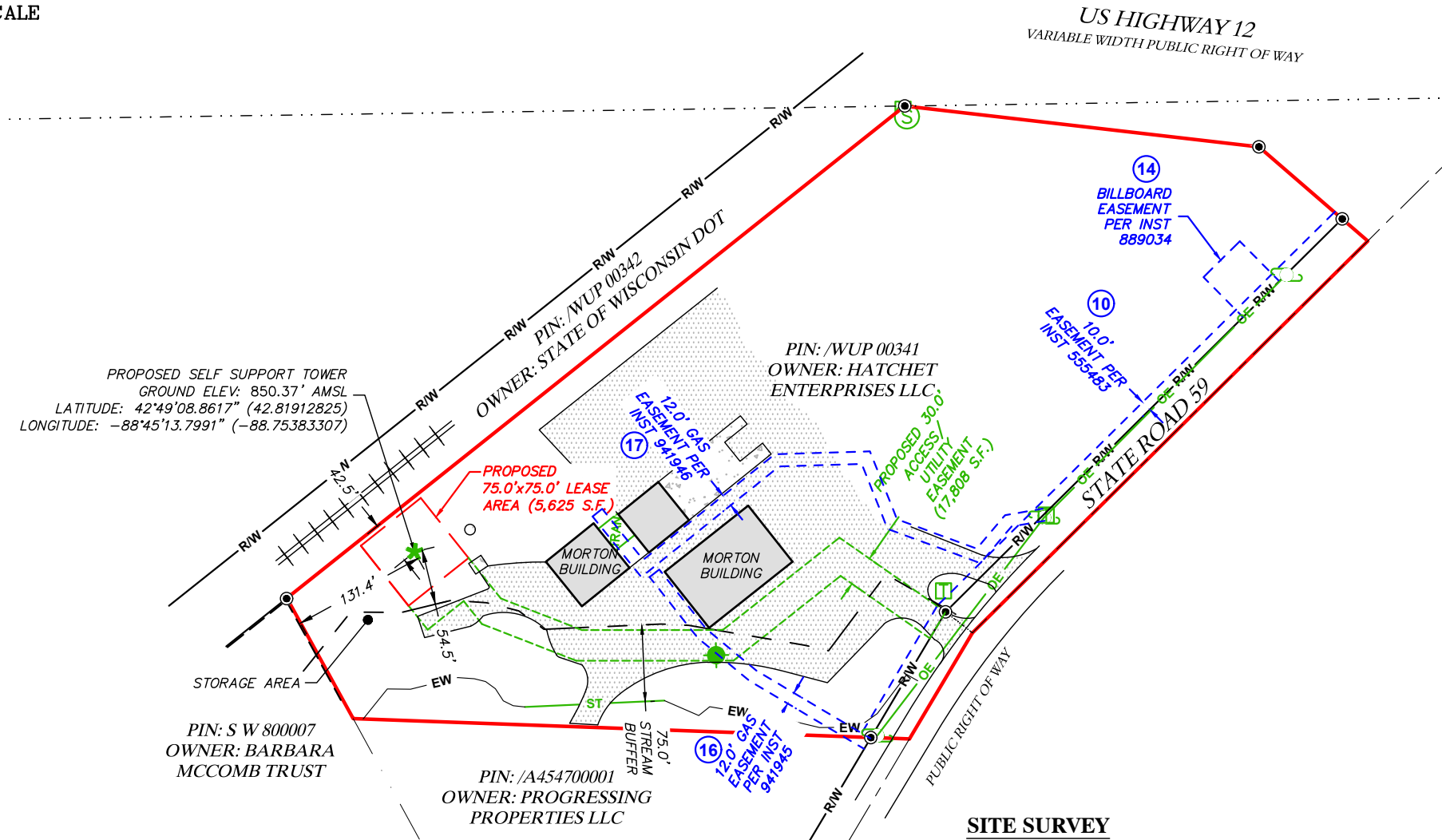
DRAWN BY: KJM
CHECKED BY: BCH
SURVEY DATE: 10/31/2023
PLAT DATE: XX

SHEET TITLE:
SITE SURVEY
THIS DOES NOT REPRESENT A
BOUNDARY SURVEY OF THE
PARENT PARCEL

SHEET NUMBER:
B-1

LEGEND

	PROPERTY LINE
	ADJACENT PROPERTY LINE
	LEASE LINE
	ACCESS/UTILITY EASEMENT
	RIGHT OF WAY LINE
	SURVEY TIE LINE
	CONTOURS
	STREAM BUFFER
	EASEMENT LINE
	EXISTING STREAM CENTERLINE
	BUILDING
	MISC. FENCE
	STORM DRAIN LINE
	OVERHEAD ELECTRIC LINE CENTERLINE
	BENCHMARK
	FOUND MONUMENT
	UTILITY POLE
	TELEPHONE PEDESTAL
	SANITARY MANHOLE
	TRANSFORMER
	POINT OF BEGINNING
	POINT OF COMMENCEMENT
	CENTERLINE OF TOWER LOCATION
	MEASURED & RECORD
	SQUARE FEET



I, DAN J. KUEHL, A WISCONSIN PROFESSIONAL LAND SURVEYOR, CERTIFY THAT THE INFORMATION SHOWN HEREON WAS COMPILED USING DATA FROM AN ACTUAL FIELD SURVEY MADE UNDER MY DIRECT SUPERVISION AND THAT THE FIELD SURVEY AND THE COMPILATION OF INFORMATION SHOWN HEREIN WERE CONDUCTED IN ACCORDANCE WITH THE WISCONSIN MINIMUM STANDARDS OF PRACTICE.

Dan J. Kuehl
FEBRUARY 5, 2024

DAN J. KUEHL
LICENSE NUMBER 3104-8
MY LICENSE RENEWAL DATE IS JANUARY 31, 2026
SHEETS COVERED BY THIS SEAL B-1, B-1.1, B-1.2, AND B-1.3

PREPARED FOR:
WESTCHESTER SERVICES LLC
 604 FOX GLEN
 BARRINGTON, IL 60010
 TELEPHONE: 847.277.0070
 FAX: 847.277.0080
 ae@westchesterservices.com

PREPARED FOR:
TILLMAN INFRASTRUCTURE

SURVEYED BY:
XCEL Consultants
 120 10TH AVENUE EAST, SUITE 3
 MILAN, IL 61264
 (O) 309-787-9988
 (F) 309-756-5540
 (E) XCEL@XCELCONSULTANTSINC.COM

XCEL PROJECT NUMBER: 234903

SITE SURVEY		
REV.	DATE	DESCRIPTION

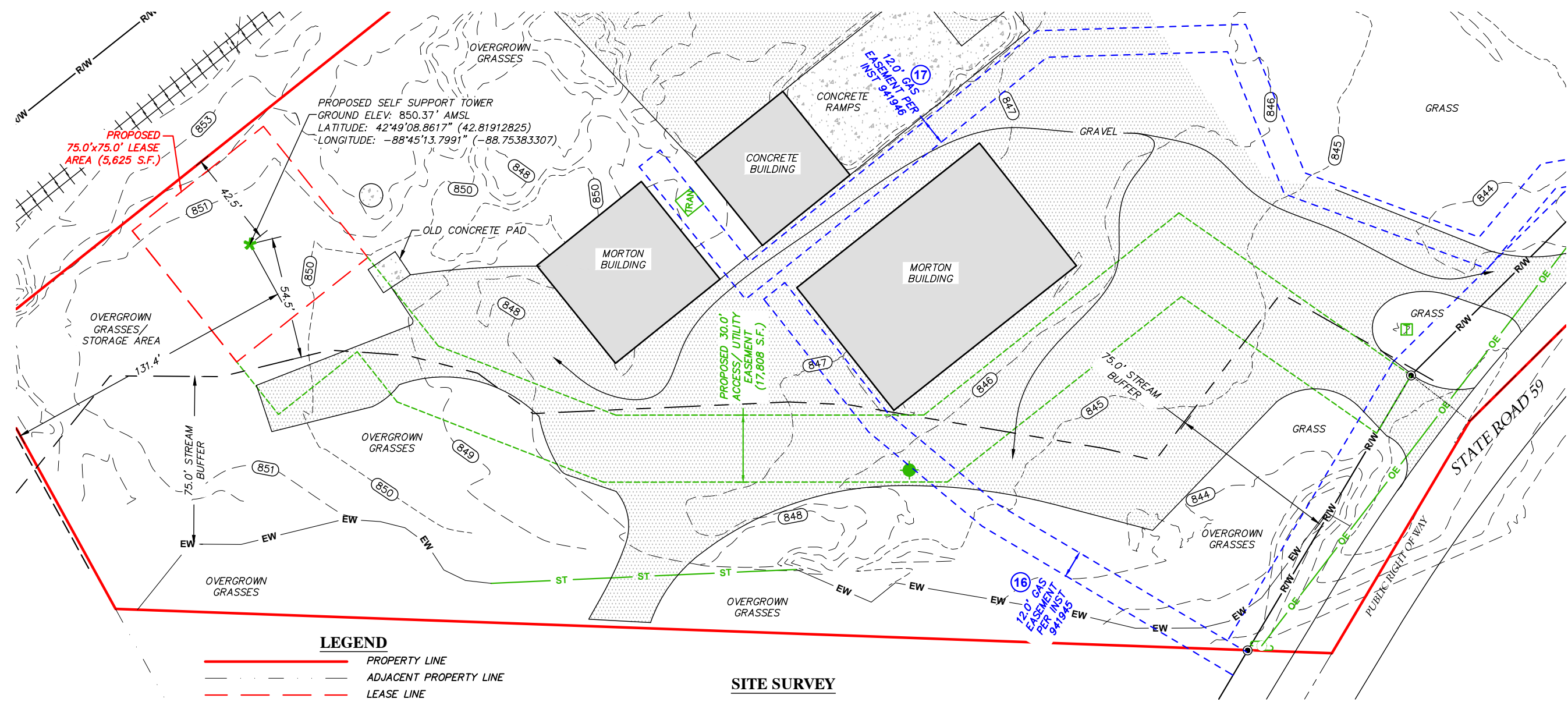
SITE INFORMATION:
WHITewater
 1002 S JANESVILLE STREET
 WHITewater, WI 53190
 WALWORTH COUNTY
 TAX PARCEL NUMBER:
 /WUP 00341
 PROPERTY OWNER:
 HATCHETT ENTERPRISES LLC
 1002 S JANESVILLE STREET
 WHITewater, WI 53190

SITE NUMBER:
 TI-OPP-29018

DRAWN BY: KJM
 CHECKED BY: BCH
 SURVEY DATE: 10/31/2023
 PLAT DATE: XX

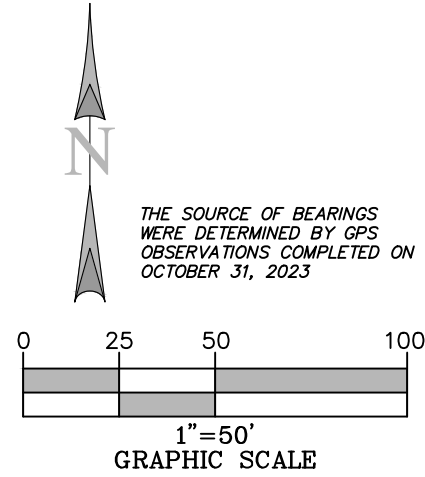
SHEET TITLE:
SITE SURVEY
 THIS DOES NOT REPRESENT A
 BOUNDARY SURVEY OF THE
 PARENT PARCEL

SHEET NUMBER:
B-1.1



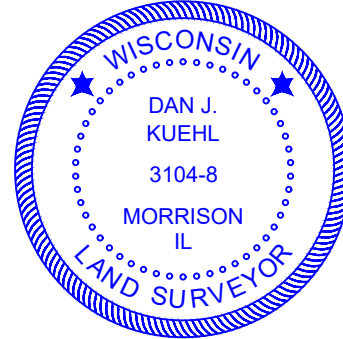
- LEGEND**
- PROPERTY LINE
 - - - - - ADJACENT PROPERTY LINE
 - - - - - LEASE LINE
 - - - - - ACCESS/UTILITY EASEMENT
 - RW RIGHT OF WAY LINE
 - - - - - SURVEY TIE LINE
 - - - - - CONTOURS
 - - - - - STREAM BUFFER
 - - - - - EASEMENT LINE
 - EW EXISTING STREAM CENTERLINE
 - BUILDING
 - - - - - MISC. FENCE
 - ST STORM DRAIN LINE
 - OE OVERHEAD ELECTRIC LINE CENTERLINE
 - BENCHMARK
 - FOUND MONUMENT
 - UTILITY POLE
 - TELEPHONE PEDESTAL
 - SANITARY MANHOLE
 - TRANSFORMER
 - POB POINT OF BEGINNING
 - POC POINT OF COMMENCEMENT
 - * (M&R) CENTERLINE OF TOWER LOCATION MEASURED & RECORD
 - * S.F. SQUARE FEET

SITE SURVEY



*** FAA COORDINATE POINT**
 NAD 83
 LATITUDE: 42°49'08.8617" (42.81912825)
 LONGITUDE: -88°45'13.7991" (-88.75383307)
 NAVD88
 ELEVATIONS: 850.37± AMSL

● TEMPORARY BENCHMARK
 LATITUDE: 42°49'07.8707" (42.81885298)
 LONGITUDE: -88°45'09.8384" (-88.75273289)
 ELEVATION: 845.76'
 LOCATION: SET IRON ROD



I, DAN J. KUEHL, A WISCONSIN PROFESSIONAL LAND SURVEYOR, CERTIFY THAT THE INFORMATION SHOWN HEREON WAS COMPILED USING DATA FROM AN ACTUAL FIELD SURVEY MADE UNDER MY DIRECT SUPERVISION AND THAT THE FIELD SURVEY AND THE COMPILATION OF INFORMATION SHOWN HEREIN WERE CONDUCTED IN ACCORDANCE WITH THE WISCONSIN MINIMUM STANDARDS OF PRACTICE.

Dan J. Kuehl
 FEBRUARY 5, 2024

DAN J. KUEHL
 LICENSE NUMBER 3104-8
 MY LICENSE RENEWAL DATE IS JANUARY 31, 2026
 SHEETS COVERED BY THIS SEAL B-1, B-1.1, B-1.2, AND B-1.3

PREPARED FOR:
WESTCHESTER SERVICES LLC
 604 FOX GLEN
 BARRINGTON, IL 60010
 TELEPHONE: 847.277.0070
 FAX : 847.277.0080
 ae@westchesterservices.com

PREPARED FOR:
TILLMAN INFRASTRUCTURE

SURVEYED BY:
XCEL Consultants
 120 10TH AVENUE EAST, SUITE 3
 MILAN, IL 61264
 (O) 309-787-9988
 (F) 309-756-5540
 (E) XCEL@XCELCONSULTANTSINC.COM

XCEL PROJECT NUMBER: 234903

SITE SURVEY

REV.	DATE	DESCRIPTION

SITE INFORMATION:
WHITEWATER
 1002 S JANESVILLE STREET
 WHITEWATER, WI 53190
 WALWORTH COUNTY
 TAX PARCEL NUMBER:
 /WUP 00341
 PROPERTY OWNER:
 HATCHETT ENTERPRISES LLC
 1002 S JANESVILLE STREET
 WHITEWATER, WI 53190

SITE NUMBER:
 TI-OPP-29018

DRAWN BY: KJM
 CHECKED BY: BCH
 SURVEY DATE: 10/31/2023
 PLAT DATE: XX

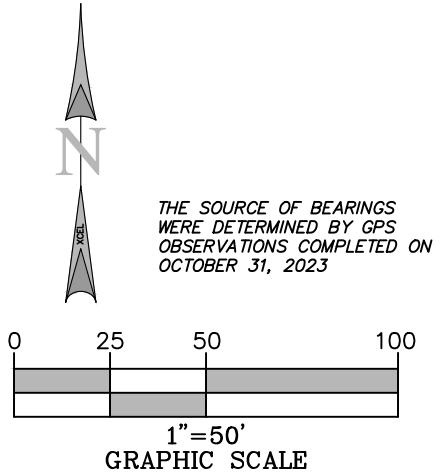
SHEET TITLE:
SITE SURVEY
 THIS DOES NOT REPRESENT A
 BOUNDARY SURVEY OF THE
 PARENT PARCEL

SHEET NUMBER:
B-1.2



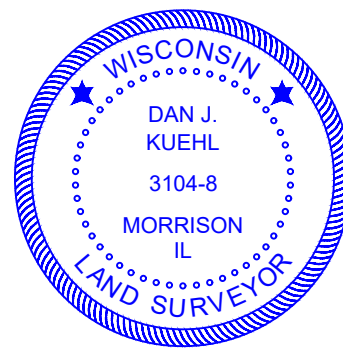
AERIAL SURVEY

AERIAL PER XCEL FLOWN DRONE
 ON OCTOBER 31, 2023



LEGEND

	PROPERTY LINE
	LEASE AREA
	ACCESS/UTILITY EASEMENT
	CONTOURS
	CENTERLINE OF TOWER LOCATION



I, DAN J. KUEHL, A WISCONSIN PROFESSIONAL LAND SURVEYOR, CERTIFY THAT THE INFORMATION SHOWN HEREON WAS COMPILED USING DATA FROM AN ACTUAL FIELD SURVEY MADE UNDER MY DIRECT SUPERVISION AND THAT THE FIELD SURVEY AND THE COMPILATION OF INFORMATION SHOWN HEREIN WERE CONDUCTED IN ACCORDANCE WITH THE WISCONSIN MINIMUM STANDARDS OF PRACTICE.

Dan J. Kuehl
 FEBRUARY 5, 2024

DAN J. KUEHL
 LICENSE NUMBER 3104-8
 MY LICENSE RENEWAL DATE IS JANAUARY 31, 2026
 SHEETS COVERED BY THIS SEAL B-1, B-1.1, B-1.2, AND B-1.3

PREPARED FOR:
WESTCHESTER SERVICES LLC
 604 FOX GLEN
 BARRINGTON, IL 60010
 TELEPHONE: 847.277.0070
 FAX : 847.277.0080
 ae@westchesterservices.com

PREPARED FOR:
TILLMAN INFRASTRUCTURE

SURVEYED BY:

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 MILAN, IL 61264
 (C) 309-787-9988
 (F) 309-756-5540
 (E) XCEL@XCELCONSULTANTSINC.COM

XCEL PROJECT NUMBER: 234903

SITE SURVEY		
REV.	DATE	DESCRIPTION

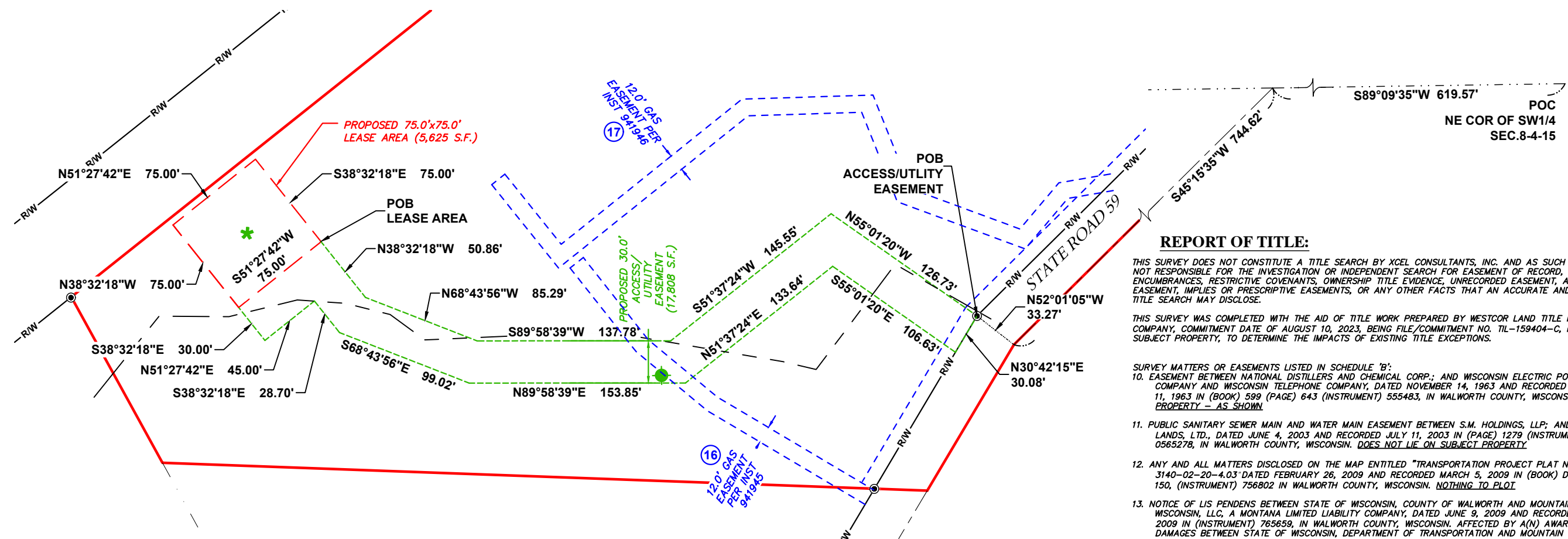
SITE INFORMATION:
WHITEWATER
 1002 S JANESVILLE STREET
 WHITEWATER, WI 53190
 WALWORTH COUNTY
 TAX PARCEL NUMBER:
 /WUP 00341
 PROPERTY OWNER:
 HATCHETT ENTERPRISES LLC
 1002 S JANESVILLE STREET
 WHITEWATER, WI 53190

SITE NUMBER: TI-OPP-29018

DRAWN BY: KJM
 CHECKED BY: BCH
 SURVEY DATE: 10/31/2023
 PLAT DATE: XX

SHEET TITLE:
SITE SURVEY
 THIS DOES NOT REPRESENT A
 BOUNDARY SURVEY OF THE
 PARENT PARCEL

SHEET NUMBER: B-1.3



REPORT OF TITLE:
 THIS SURVEY DOES NOT CONSTITUTE A TITLE SEARCH BY XCEL CONSULTANTS, INC. AND AS SUCH WE ARE NOT RESPONSIBLE FOR THE INVESTIGATION OR INDEPENDENT SEARCH FOR EASEMENT OF RECORD, ENCUMBRANCES, RESTRICTIVE COVENANTS, OWNERSHIP TITLE EVIDENCE, UNRECORDED EASEMENT, AUGMENTING EASEMENT, IMPLIED OR PRESCRIPTIVE EASEMENTS, OR ANY OTHER FACTS THAT AN ACCURATE AND CURRENT TITLE SEARCH MAY DISCLOSE.
 THIS SURVEY WAS COMPLETED WITH THE AID OF TITLE WORK PREPARED BY WESTCOR LAND TITLE INSURANCE COMPANY, COMMITMENT DATE OF AUGUST 10, 2023, BEING FILE/COMMITMENT NO. TIL-159404-C, FOR THE SUBJECT PROPERTY, TO DETERMINE THE IMPACTS OF EXISTING TITLE EXCEPTIONS.

- SURVEY MATTERS OR EASEMENTS LISTED IN SCHEDULE 'B':
- EASEMENT BETWEEN NATIONAL DISTILLERS AND CHEMICAL CORP.; AND WISCONSIN ELECTRIC POWER COMPANY AND WISCONSIN TELEPHONE COMPANY, DATED NOVEMBER 14, 1963 AND RECORDED DECEMBER 11, 1963 IN (BOOK) 599 (PAGE) 643 (INSTRUMENT) 555483, IN WALWORTH COUNTY, WISCONSIN. LIES ON PROPERTY - AS SHOWN.
 - PUBLIC SANITARY SEWER MAIN AND WATER MAIN EASEMENT BETWEEN S.M. HOLDINGS, LLP; AND HOFFMANN LANDS, LTD., DATED JUNE 4, 2003 AND RECORDED JULY 11, 2003 IN (PAGE) 1279 (INSTRUMENT) 0565278, IN WALWORTH COUNTY, WISCONSIN. DOES NOT LIE ON SUBJECT PROPERTY.
 - ANY AND ALL MATTERS DISCLOSED ON THE MAP ENTITLED "TRANSPORTATION PROJECT PLAT NO: 3140-02-20-4.03" DATED FEBRUARY 26, 2009 AND RECORDED MARCH 5, 2009 IN (BOOK) D (PAGE) 150, (INSTRUMENT) 756802 IN WALWORTH COUNTY, WISCONSIN. NOTHING TO PLOT.
 - NOTICE OF LIS PENDENS BETWEEN STATE OF WISCONSIN, COUNTY OF WALWORTH AND MOUNTAIN WEST OF WISCONSIN, LLC, A MONTANA LIMITED LIABILITY COMPANY, DATED JUNE 9, 2009 AND RECORDED JUNE 11, 2009 IN (INSTRUMENT) 765659, IN WALWORTH COUNTY, WISCONSIN. AFFECTED BY A(N) AWARD OF DAMAGES BETWEEN STATE OF WISCONSIN, DEPARTMENT OF TRANSPORTATION AND MOUNTAIN WEST OF WISCONSIN, LLC, A MONTANA LIMITED LIABILITY COMPANY; MOUNTAIN WEST BANK, N.A., DATED JULY 2, 2009 AND RECORDED JULY 6, 2009 IN (INSTRUMENT) 767729, IN WALWORTH COUNTY, WISCONSIN. NOTHING TO PLOT.
 - GRANT OF EASEMENT BETWEEN MOUNTAIN WEST BANK, NA; AND TLC PROPERTIES, INC., A LOUISIANA CORPORATION, DATED JULY 21, 2014 AND RECORDED JULY 31, 2014 IN (INSTRUMENT) 889034, IN WALWORTH COUNTY, WISCONSIN. LIES ON PROPERTY - AS SHOWN.
 - ANY AND ALL MATTERS DISCLOSED ON THE MAP ENTITLED "CERTIFIED SURVEY MAP NO. 4547" DATED JULY 14, 2014 AND RECORDED SEPTEMBER 3, 2014 IN (BOOK) 29 (PAGE) 352, (INSTRUMENT) 890758 IN WALWORTH COUNTY, WISCONSIN. NOT ON SUBJECT PROPERTY - NOTHING TO PLOT.
 - DISTRIBUTION EASEMENT GAS BETWEEN PROGRESSING PROPERTIES, LLC; AND WISCONSIN ELECTRIC POWER COMPANY, A WISCONSIN CORPORATION DOING BUSINESS AS WE ENERGIES, DATED OCTOBER 7, 2016 AND RECORDED FEBRUARY 23, 2017 IN (INSTRUMENT) 941945, IN WALWORTH COUNTY, WISCONSIN. LIES ON PROPERTY - CROSSES PROPOSED ACCESS/UTILITY EASEMENT- AS SHOWN.
 - DISTRIBUTION EASEMENT UNDERGROUND BETWEEN PROGRESSING PROPERTIES, LLC; AND WISCONSIN ELECTRIC POWER COMPANY, A WISCONSIN CORPORATION DOING BUSINESS AS WE ENERGIES, DATED OCTOBER 7, 2016 AND RECORDED FEBRUARY 23, 2017 IN (INSTRUMENT) 941946, IN WALWORTH COUNTY, WISCONSIN. LIES ON PROPERTY - AS SHOWN.

PROPOSED LEASE AREA:
 A PART OF THE N1/2 OF THE SW1/4 OF SECTION 8, TOWN 4 NORTH, RANGE 15 EAST, WITHIN THE CITY OF WHITEWATER, WALWORTH COUNTY, WISCONSIN, MORE PARTICULARLY DESCRIBED AS: COMMENCING AT THE NW CORNER OF THE SAID SW1/4 OF SECTION 8; THENCE S89°09'35"W, ALONG THE NORTH LINE OF THE SAID SW1/4, 619.57 FEET TO THE CENTER LINE OF STATE ROAD 59; THENCE S45°15'35"W, ALONG THE SAID CENTER LINE, 744.62 FEET; THENCE N52°01'05"W, 33.27 FEET TO THE WEST LINE OF SAID STATE ROAD 59; THENCE N55°01'20"W, 126.73 FEET; THENCE S51°37'24"W, 145.55 FEET; THENCE S89°58'39"W, 137.78 FEET; THENCE N68°43'56"W, 85.29 FEET; THENCE N38°32'18"W, 50.86 FEET TO THE POINT OF BEGINNING FOR THE LEASE AREA HEREIN INTENDED TO BE DESCRIBED; THENCE S51°27'42"W, 75.00 FEET; THENCE N38°32'18"W, 75.00 FEET; THENCE N51°27'42"E, 75.00 FEET; THENCE S38°32'18"E, 75.00 FEET TO THE POINT OF BEGINNING, CONTAINING 5,625 SQUARE FEET.

PROPOSED ACCESS/UTILITY EASEMENT:
 A PART OF THE N1/2 OF THE SW1/4 OF SECTION 8, TOWN 4 NORTH, RANGE 15 EAST, WITHIN THE CITY OF WHITEWATER, WALWORTH COUNTY, WISCONSIN, MORE PARTICULARLY DESCRIBED AS: COMMENCING AT THE NW CORNER OF THE SAID SW1/4 OF SECTION 8; THENCE S89°09'35"W, ALONG THE NORTH LINE OF THE SAID SW1/4, 619.57 FEET TO THE CENTER LINE OF STATE ROAD 59; THENCE S45°15'35"W, ALONG THE SAID CENTER LINE, 744.62 FEET; THENCE N52°01'05"W, 33.27 FEET TO THE WEST LINE OF SAID STATE ROAD 59 AND BEING THE POINT OF BEGINNING FOR THE EASEMENT HEREIN INTENDED TO BE DESCRIBED; THENCE N55°01'20"W, 126.73 FEET; THENCE S51°37'24"W, 145.55 FEET; THENCE S89°58'39"W, 137.78 FEET; THENCE N68°43'56"W, 85.29 FEET; THENCE N38°32'18"W, 50.86 FEET TO THE SE CORNER OF THE PROPOSED LEASE AREA; THENCE S51°27'42"W, ALONG THE SOUTHEASTERLY LINE OF PROPOSED LEASE AREA, 75.00 FEET; THENCE S38°32'18"E, 30.00 FEET; THENCE N51°27'42"E, 45.00 FEET; THENCE S38°32'18"E, 28.70 FEET; THENCE S68°43'56"E, 99.02 FEET; THENCE N89°58'39"E, 153.85 FEET; THENCE N51°37'24"E, 133.64 FEET; THENCE S55°01'20"E, 106.63 FEET TO THE SAID WEST LINE OF STATE ROAD 59; THENCE N30°42'15"E, ALONG THE SAID WEST LINE OF STATE ROAD 59, 30.08 FEET TO THE POINT OF BEGINNING, CONTAINING 17,808 SQUARE FEET.

PARENT PARCEL, LEGAL DESCRIPTION (NOT FIELD SURVEYED) PER TITLE

THE FOLLOWING DESCRIBED REAL ESTATE, TOGETHER WITH THE RENTS, PROFITS, FIXTURES AND OTHER APPURTENANT INTERESTS, IN WALWORTH COUNTY, STATE OF WISCONSIN:
 PARCEL 1:
 A PARCEL OF LAND LOCATED IN THE SOUTHWEST 1/4 OF SECTION 8, TOWN 4 NORTH, RANGE 15 EAST OF THE CITY OF WHITEWATER, WALWORTH COUNTY, WISCONSIN, DESCRIBED AS FOLLOWS, TO-WIT:
 COMMENCING AT THE MIDDLE 1/4 SECTION CORNER OF SAID SECTION 8; THENCE WEST ALONG THE EAST-WEST 1/4 SECTION LINE 619.72 FEET TO THE CENTER LINE OF STATE TRUNK HIGHWAY NO. 59, WHICH POINT IS THE PLACE OF BEGINNING; THENCE WEST ALONG THE EAST-WEST 1/4 SECTION LINE 291.155 FEET TO A POINT; THENCE SOUTHEASTERLY TO A POINT ON THE CENTER LINE OF SAID STATE TRUNK HIGHWAY NO. 59 WHICH POINT IS 200 FEET SOUTHWESTERLY, AS MEASURED ALONG THE SOUTHERLY LINE OF SAID RAILROAD RIGHT OF WAY, FROM THE PLACE OF BEGINNING; THENCE SOUTH 49° 47' WEST ALONG THE SOUTHERLY LINE OF SAID RAILROAD RIGHT OF WAY 200 FEET TO THE PLACE OF BEGINNING.


ALSO A TRIANGULAR-SHAPED PARCEL OF LAND LOCATED IN THE NORTHWEST 1/4 OF SECTION 8, TOWN 4 NORTH, RANGE 15 EAST OF THE CITY OF WHITEWATER, WALWORTH COUNTY, WISCONSIN, DESCRIBED AS FOLLOWS, TO-WIT:
 COMMENCING AT THE MIDDLE 1/4 SECTION CORNER OF SAID SECTION 8; THENCE WEST ALONG THE EAST-WEST 1/4 SECTION LINE 1214.03 FEET TO THE SOUTHERLY LINE OF THE C. M. ST. P. & P. RAILROAD RIGHT OF WAY; WHICH POINT IS THE PLACE OF BEGINNING; THENCE EAST ALONG SAID EAST-WEST 1/4 SECTION LINE 291.155 FEET TO A POINT; THENCE NORTHWESTERLY TO A POINT ON THE SOUTHERLY LINE OF SAID RAILROAD RIGHT OF WAY WHICH POINT IS 200 FEET NORTHEASTERLY, AS MEASURED ALONG THE SOUTHERLY LINE OF SAID RAILROAD RIGHT OF WAY, FROM THE PLACE OF BEGINNING; THENCE SOUTH 49° 47' WEST ALONG THE SOUTHERLY LINE OF SAID RAILROAD RIGHT OF WAY 200 FEET TO THE PLACE OF BEGINNING.

EXCEPTING THEREFROM A TRIANGULAR-SHAPED PARCEL OF LAND LOCATED IN THE SOUTHWEST 1/4 OF SECTION 8, TOWN 4 NORTH, RANGE 15 EAST OF THE CITY OF WHITEWATER, WALWORTH COUNTY, WISCONSIN, DESCRIBED AS FOLLOWS, TO-WIT: COMMENCING AT THE MIDDLE 1/4 SECTION CORNER OF SAID SECTION 8; THENCE WEST ALONG THE EAST-WEST 1/4 SECTION LINE 619.72 FEET TO THE CENTER LINE OF STATE TRUNK HIGHWAY NO. 59, WHICH POINT IS THE PLACE OF BEGINNING; THENCE WEST ALONG SAID EAST-WEST 1/4 SECTION LINE 297.155 FEET TO A POINT; THENCE SOUTHEASTERLY TO A POINT ON THE CENTER LINE OF SAID STATE TRUNK HIGHWAY NO. 59 WHICH POINT IS 200 FEET SOUTHWESTERLY, AS MEASURED ALONG THE CENTER LINE OF SAID HIGHWAY, FROM THE PLACE OF BEGINNING; THENCE NORTH 43° 35' EAST ALONG THE CENTER LINE OF SAID HIGHWAY 200 FEET TO THE PLACE OF BEGINNING.

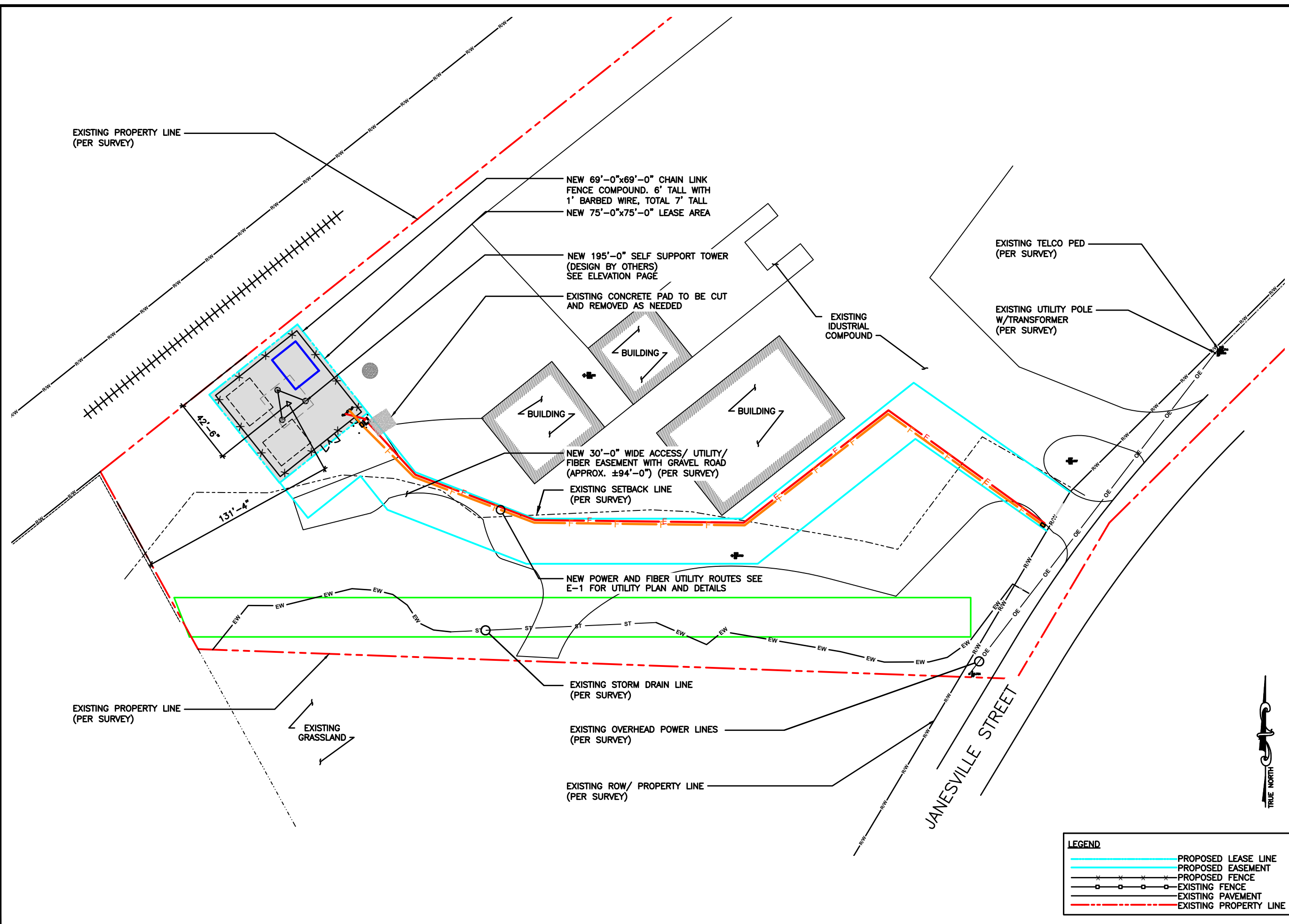
FURTHER EXCEPTING LANDS CONVEYED TO THE STATE OF WISCONSIN BY DEED RECORDED AUGUST 28, 2001, AS DOCUMENT NO. 481415.
 FURTHER EXCEPTING LANDS CONVEYED TO THE STATE OF WISCONSIN, DEPARTMENT OF TRANSPORTATION UNDER AN AWARD OF DAMAGES RECORDED JULY 6, 2009, AS DOCUMENT NO. 767729.
 FURTHER EXCEPTING ALL THAT PORTION THEREOF AS IS SET FORTH IN CERTIFIED SURVEY MAP NO. 4547 RECORDED IN VOLUME 29 OF CERTIFIED SURVEYS ON PAGE 352 AS DOCUMENT NO. 890758, BEING A CERTIFIED SURVEY MAP OF PART OF THE NORTHWEST 1/4 OF THE SOUTHWEST 1/4 AND THE NORTHEAST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 8, TOWN 4 NORTH, RANGE 15 EAST, CITY OF WHITEWATER, WALWORTH COUNTY, WISCONSIN.

PARCEL ID: /WUP 00341
 THIS BEING THE SAME PROPERTY CONVEYED TO HATCHETT ENTERPRISES, LLC, A WISCONSIN LIMITED LIABILITY COMPANY FROM PROGRESSING PROPERTIES, LLC, A WISCONSIN LIMITED LIABILITY COMPANY IN A DEED DATED MAY 2, 2022 AND RECORDED MAY 4, 2022 AS INSTRUMENT NO. 1061224, IN WALWORTH COUNTY, WI.



I, DAN J. KUEHL, A WISCONSIN PROFESSIONAL LAND SURVEYOR, CERTIFY THAT THE INFORMATION SHOWN HEREON WAS COMPILED USING DATA FROM AN ACTUAL FIELD SURVEY MADE UNDER MY DIRECT SUPERVISION AND THAT THE FIELD SURVEY AND THE COMPILATION OF INFORMATION SHOWN HEREIN WERE CONDUCTED IN ACCORDANCE WITH THE WISCONSIN MINIMUM STANDARDS OF PRACTICE.

 DAN J. KUEHL
 LICENSE NUMBER 3104-8
 MY LICENSE RENEWAL DATE IS JANUARY 31, 2026
 SHEETS COVERED BY THIS SEAL B-1, B-1.1, B-1.2, AND B-1.3
 FEBRUARY 5, 2024

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LEGEND

	PROPOSED LEASE LINE
	PROPOSED EASEMENT
	PROPOSED FENCE
	EXISTING FENCE
	EXISTING PAVEMENT
	EXISTING PROPERTY LINE

SCALE: 1" = 20'-0" (24x36)
(OR) 1/2" = 20'-0" (11x17)

OVERALL SITE PLAN

TILLMAN INFRASTRUCTURE Item 3.



LCC TELECOM SERVICES

WESTCHESTER SERVICES LLC
 WI FIRM 4897-11
 604 FOX GLEN
 BARRINGTON, IL 60010
 PHONE: 847-277-0070
 EMAIL: AE@Westchesterservices.com

JOHN M. BANKS ARCHITECT
 604 FOX GLEN
 BARRINGTON, IL 60010
 TELEPHONE: 847-277-0070
 FAX: 847-277-0080
 EMAIL: JBANKS@WESTCHESTERSERVICES.COM

DRAWN BY: DWM
CHECKED BY: MC

REV	DATE	DESCRIPTION
A	03/04/24	PRELIMINARY CD
B	03/06/24	PRELIMINARY CD

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED ARCHITECT UNDER THE LAWS OF THE STATE OF WISCONSIN

TILLMAN OPP# TI-OPP-20018
 SITE NAME: WHITWATER
 SITE ADDRESS:
 1002 S JANESVILLE STREET
 WHITWATER, WI 53190
 FA#: 11655718
 FAA STUDY #: 2024-AGL-23880E

SHEET TITLE
 OVERALL SITE PLAN

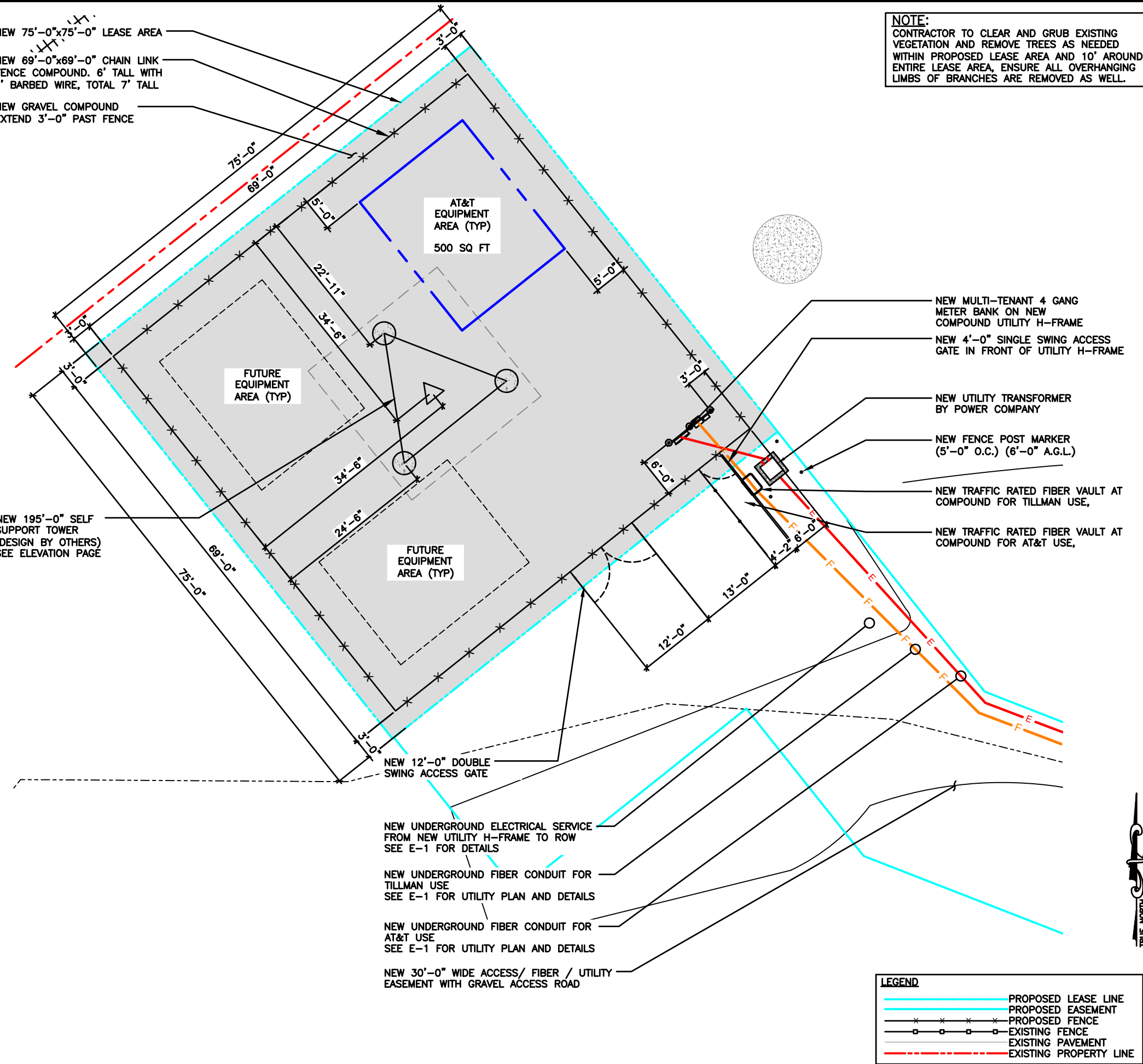
SHEET NUMBER
C-1 206

GENERAL NOTES

- ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWINGS.
- THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES ORDINANCES, LAWS AND REGULATIONS OF ALL MUNICIPALITIES, UTILITIES COMPANY OR OTHER PUBLIC AUTHORITIES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS THAT MAY BE REQUIRED BY ANY FEDERAL, STATE, COUNTY OR MUNICIPAL AUTHORITIES.
- THE CONTRACTOR SHALL NOTIFY THE TILLMAN CONSTRUCTION MANAGER, IN WRITING, OF ANY CONFLICTS, ERRORS OR OMISSIONS PRIOR TO THE SUBMISSION OF BIDS OR PERFORMANCE OF WORK. MINOR OMISSIONS OR ERRORS IN THE BID DOCUMENTS SHALL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR THE OVERALL INTENT OF THESE DRAWINGS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING SITE IMPROVEMENTS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED AS A RESULT OF CONSTRUCTION OF THIS FACILITY.
- THE SCOPE OF WORK FOR THIS PROJECT SHALL INCLUDE PROVIDING ALL MATERIALS, EQUIPMENT AND LABOR REQUIRED TO COMPLETE THIS PROJECT. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- THE CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO SUBMITTING A BID TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- CONTRACTOR SHALL MAKE A UTILITY "ONE CALL" TO LOCATE ALL UTILITIES AND NOTIFY UNDERGROUND FACILITIES PROTECTIVE ORGANIZATION AT PRIOR TO EXCAVATION AT SITE.
- ANY UNDERGROUND UTILITIES OR STRUCTURES THAT EXIST BENEATH THE PROJECT AREA, CONTRACTOR MUST LOCATE IT AND CONTACT THE APPLICANT & THE OWNER'S REPRESENTATIVE.
- NO SIGNIFICANT NOISE, SMOKE, DUST, OR ODOR WILL RESULT FROM THIS FACILITY.
- THE FACILITY IS UNMANNED AND NOT INTENDED FOR HUMAN HABITATION (NO HANDICAP ACCESS REQUIRED).
- THE FACILITY IS UNMANNED AND DOES NOT REQUIRE POTABLE WATER OR SANITARY SERVICE.
- POWER TO THE FACILITY WILL BE MONITORED BY A SEPARATE METER.
- THERE ARE NO COMMERCIAL SIGNS PROPOSED FOR THIS INSTALLATION.
- NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.
- THE SUBGRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
MAXIMUM SOIL LIFTS:
JUMPING JACK - 3"
CROWS FOOT TRENCH ROLLER - 6"
HOE OPERATED VIBRATORY PLATE - 8"
WHEELED VIBRATORY SOIL COMPACTOR - 12"
*LIFT HEIGHTS MAY NEED TO BE ADJUSTED DEPENDING ON SOIL TYPES AND MOISTURE CONTENT.
- ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY UTILITY OWNER. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR PIER DRILLING AROUND OR NEAR UTILITIES.
- THE AREAS DISTURBED DUE TO CONSTRUCTION ACTIVITY SHALL BE GRADED AND RESTORED PER CODE/LANDLORD REQUIREMENTS (REFER TO GRADING PLAN).
- CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL, AND COORDINATED WITH THE MUNICIPALITY.
- UTILITY WARNING TAPE SHALL BE PLACED ABOVE ALL NEW CONDUITS AT MAX 18" DEPTH BELOW GRADE.

NEW 75'-0"x75'-0" LEASE AREA
 NEW 69'-0"x69'-0" CHAIN LINK FENCE COMPOUND. 6' TALL WITH 1' BARBED WIRE, TOTAL 7' TALL
 NEW GRAVEL COMPOUND EXTEND 3'-0" PAST FENCE

NEW 195'-0" SELF SUPPORT TOWER (DESIGN BY OTHERS) SEE ELEVATION PAGE



NOTE:
 CONTRACTOR TO CLEAR AND GRUB EXISTING VEGETATION AND REMOVE TREES AS NEEDED WITHIN PROPOSED LEASE AREA AND 10' AROUND ENTIRE LEASE AREA, ENSURE ALL OVERHANGING LIMBS OF BRANCHES ARE REMOVED AS WELL.

LEGEND

- PROPOSED LEASE LINE
- PROPOSED EASEMENT
- PROPOSED FENCE
- EXISTING FENCE
- EXISTING PAVEMENT
- EXISTING PROPERTY LINE

SCALE: 1/8" = 1'-0" (24x36)
 (OR) 1/16" = 1'-0" (11x17)

TILLMAN INFRASTRUCTURE Item 3.



WESTCHESTER SERVICES LLC
 WI FIRM 4897-11
 604 FOX GLEN
 BARRINGTON, IL 60010
 PHONE: 847-277-0070
 EMAIL: AE@Westchesterservices.com

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 BARRINGTON, IL 60010
 TELEPHONE: 847-277-0070
 FAX: 847-277-0080
 EMAIL: JBANKS@WESTCHESTERSERVICES.COM

DRAWN BY: DWM
CHECKED BY: MC

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TILLMAN OPP# TI-OPP-29018
 SITE NAME: WHITEWATER
 SITE ADDRESS:
 1002 S JANESVILLE STREET
 WHITEWATER, WI 53190
 FA#: 11655718
 FAA STUDY #: 2024-AGL-23880E

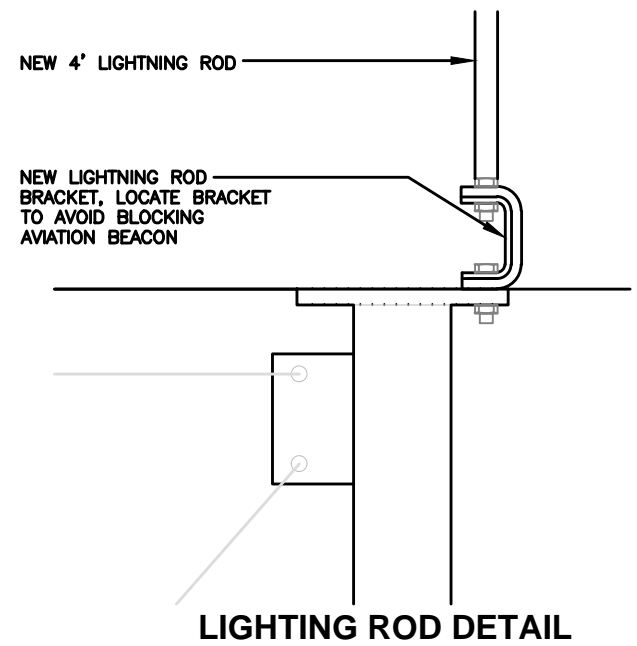
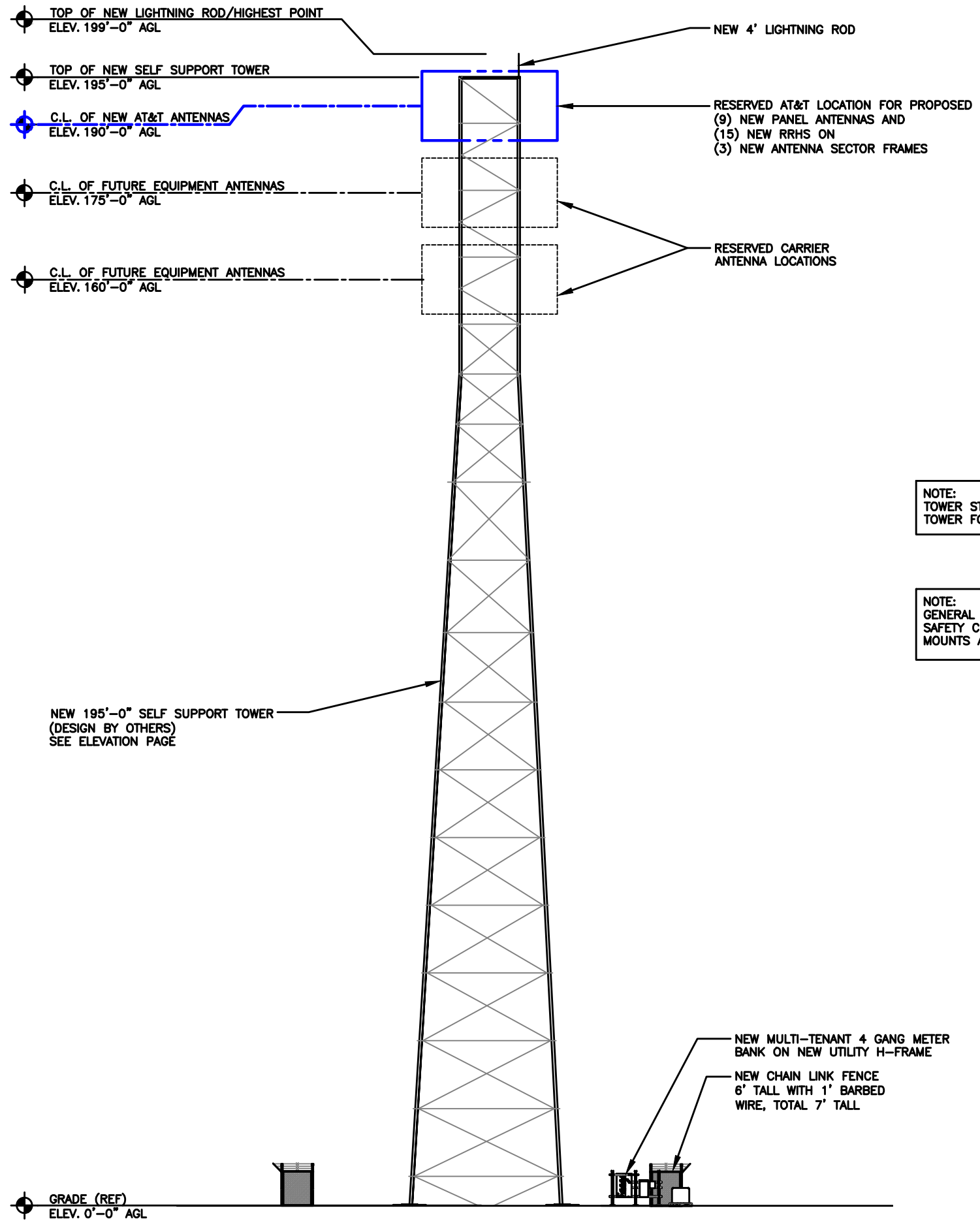
SHEET TITLE
 ENLARGED SITE PLAN

SHEET NUMBER
 C-2 207

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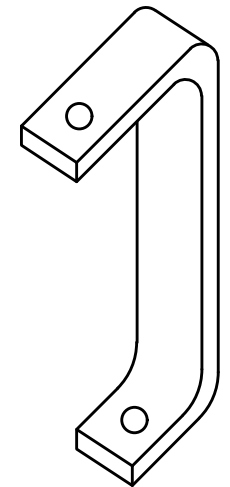
ENLARGED SITE PLAN

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NOTE:
 TOWER STRUCTURAL ANALYSIS AND DESIGN BY OTHERS
 TOWER FOUNDATION ANALYSIS AND DESIGN BY OTHERS

NOTE:
 GENERAL CONTRACTOR SHALL MAKE SURE
 SAFETY CLIMB IS 100% FREE OF CABLES AND
 MOUNTS AFTER INSTALL IS COMPLETE.



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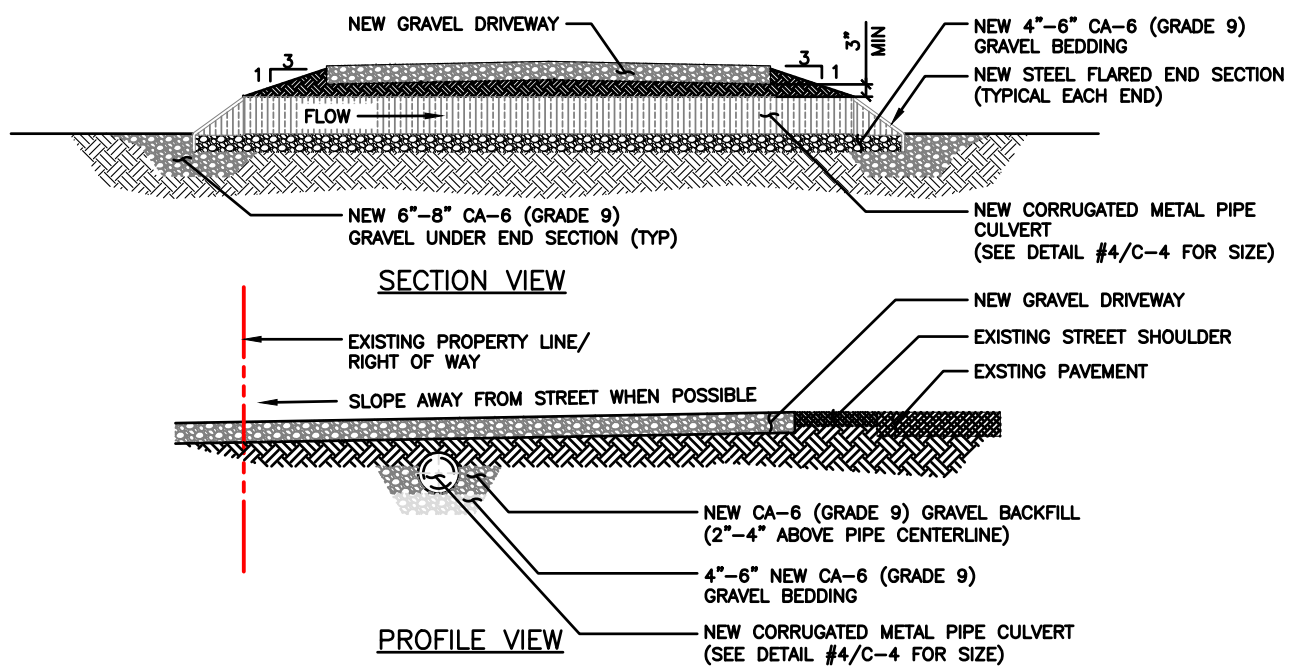
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 SITE NAME: WHITEWATER
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 WHITEWATER, WI 53190
 FAX: 11655718
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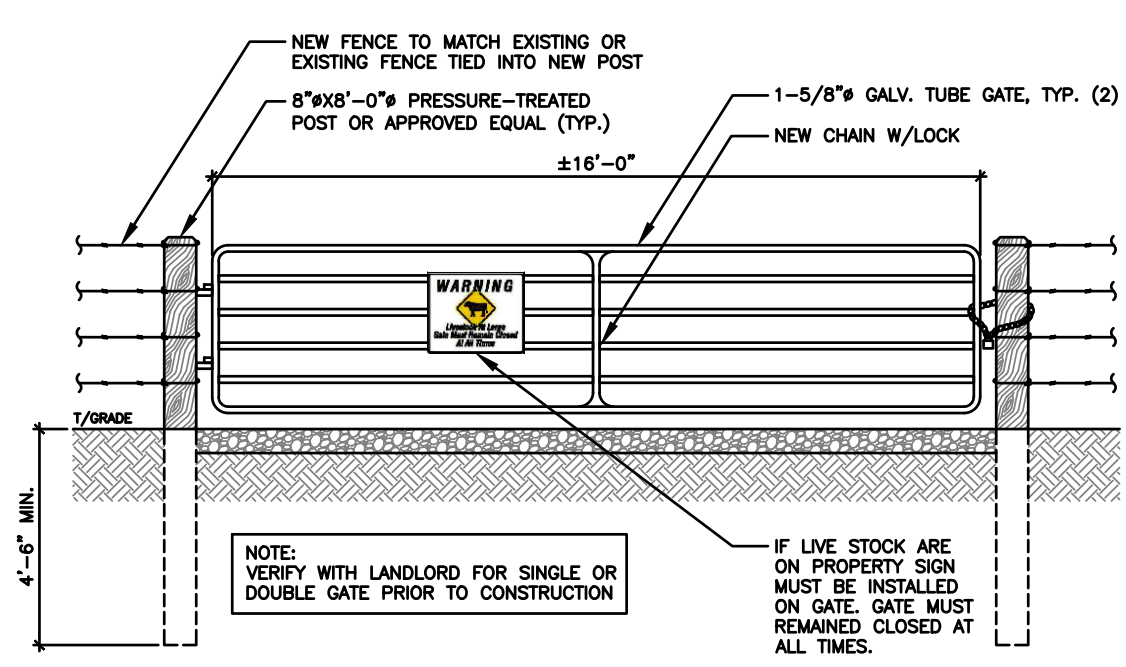
SHEET TITLE
ELEVATION

SHEET NUMBER
C-3

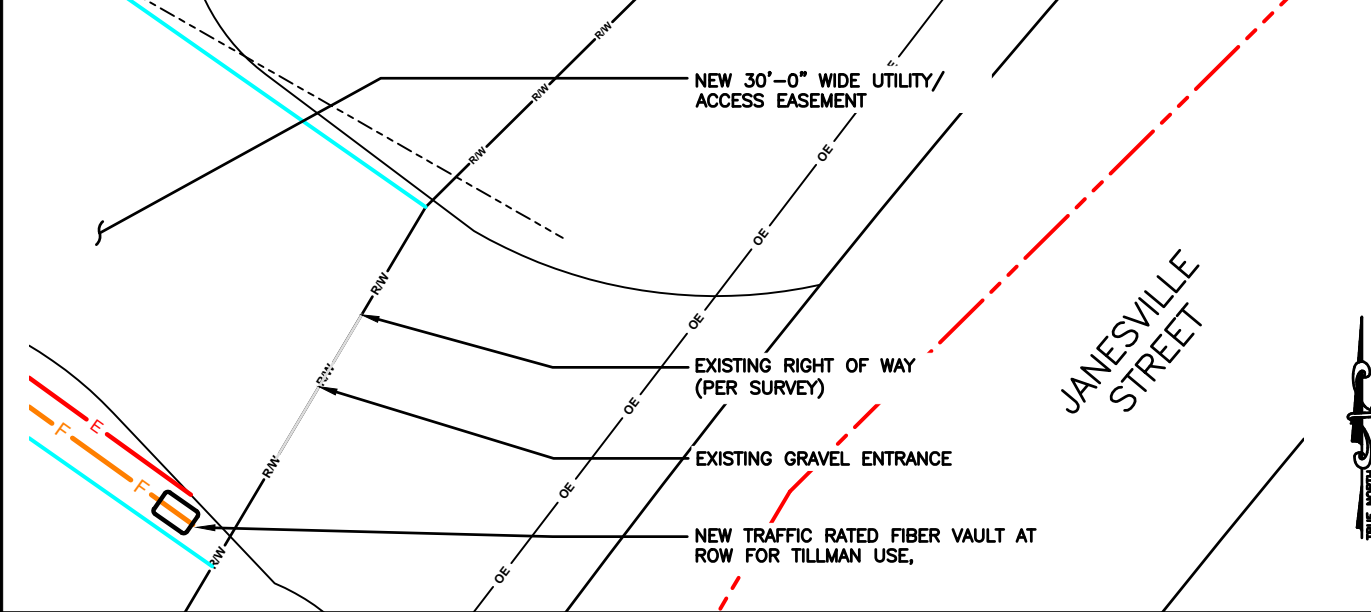
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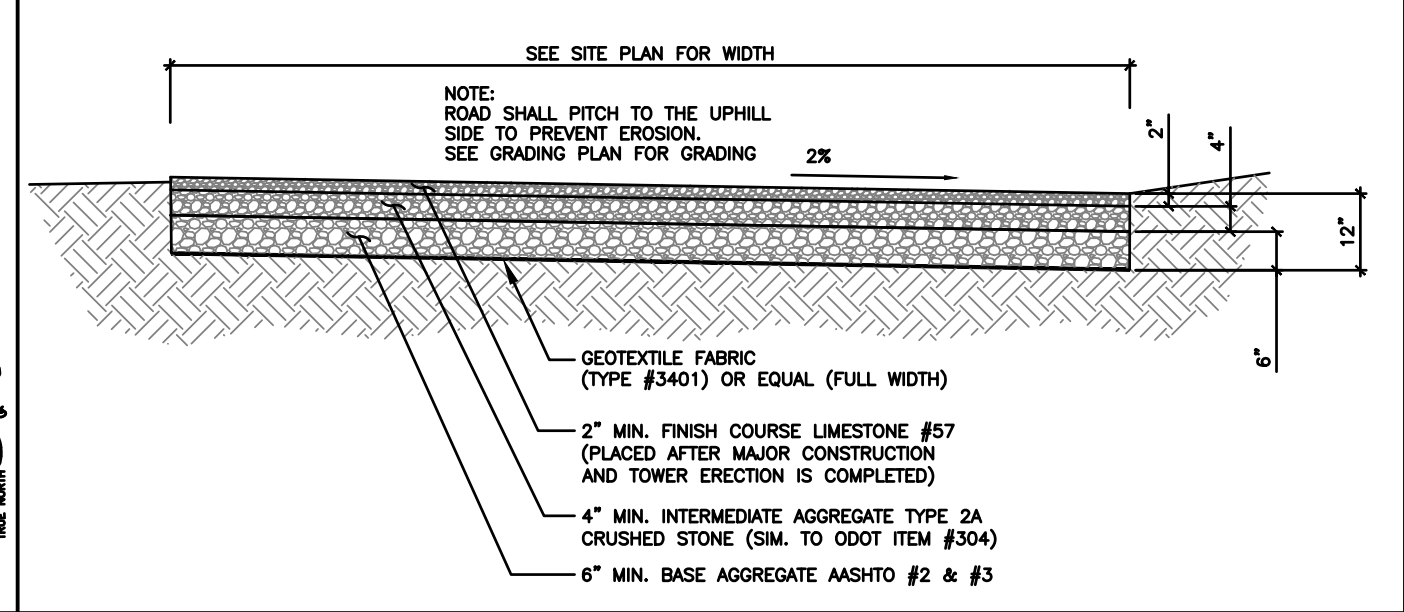
CULVERT DETAIL (IF REQUIRED) SCALE N.T.S. **6**



CATTLE/ STREET GATE DETAIL (IF REQUIRED) SCALE N.T.S. **5**



ACCESS DRIVEWAY @ STREET DETAIL SCALE N.T.S. **4**



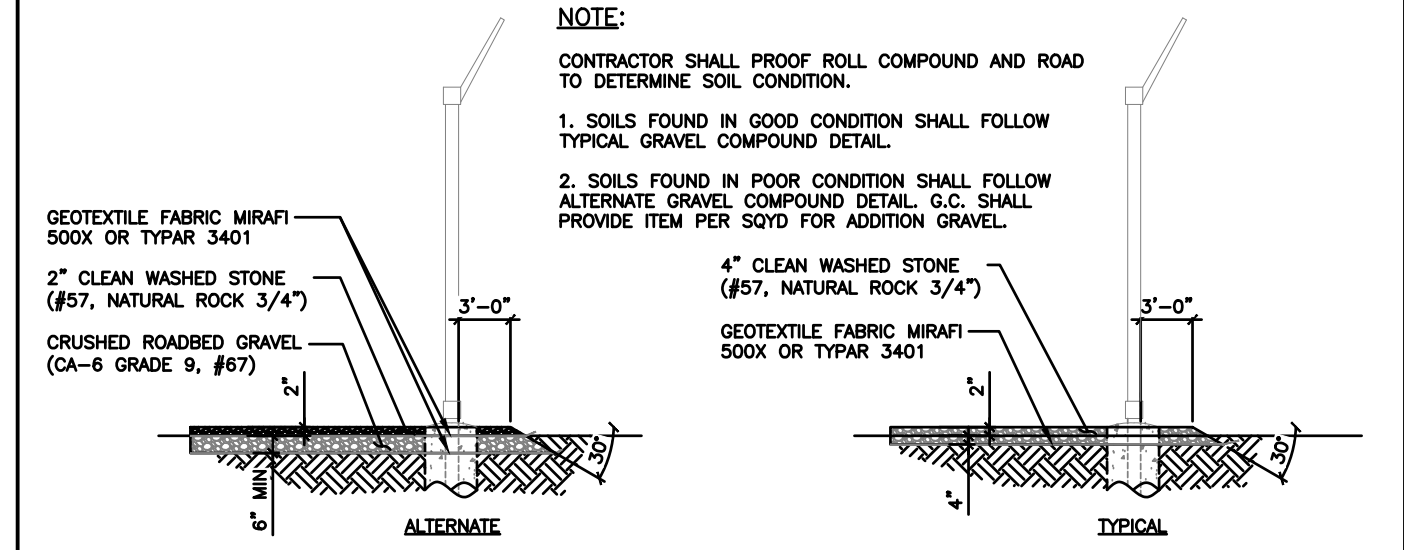
ACCESS DRIVE DETAIL SCALE N.T.S. **3**

ASPHALT APRON- (IF REQUIRED)
 8" OF 304 AGGREGATE STONE (2 LIFTS)
 4" OF 404 BITUMINOUS ASPHALT (2 LIFTS)

CONCRETE APRON- (IF REQUIRED)
 CLASS C CONCRETE IS REQUIRED FROM EDGE OF PAVEMENT TO R/W. THE SLAB MUST BE 5" THICK. ONE INCH EXPANSION MATERIAL REQUIRED AGAINST ANY EXISTING CONCRETE. NO MORE THAN 2% CALCIUM CHLORIDE ADDED TO MIX. NO MORE THAN 2 GALLONS OF WATER PER CUBIC YARD ADDED TO MIX AT THE BEGINNING OF LOAD. NO WATER SPRAY ON MIX AFTER MATERIAL IS PLACED IN FORMS. NO MORE THAN A 5" SLUMP IN THE CONCRETE MIX.

NOTE: TILLMAN GC TO VERIFY WITH DRIVEWAY PERMIT/JURISDICTION

DRIVEWAY APRON NOTES SCALE N.T.S. **2**



GRAVEL COMPOUND DETAIL SCALE N.T.S. **1**

TILLMAN INFRASTRUCTURE Item 3.

LCC TELECOM SERVICES

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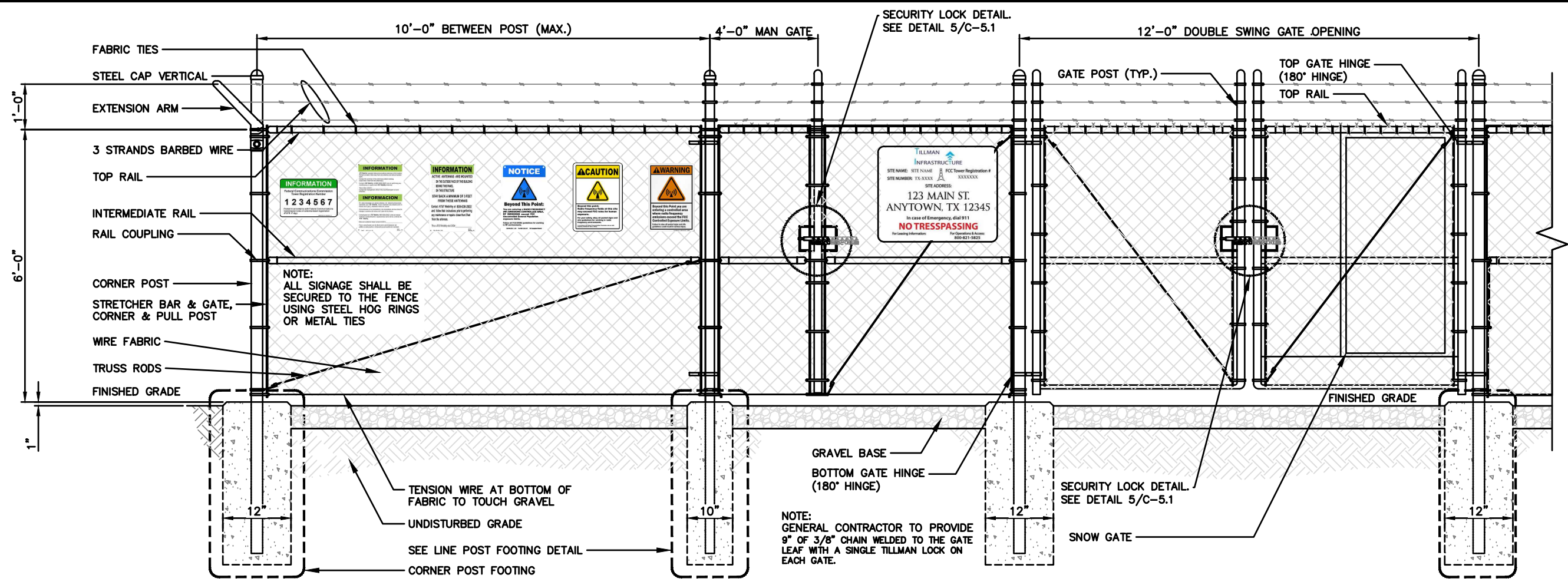
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TILLMAN OPP# TI-OPP-20018
 SITE NAME: WHITEWATER
 SITE ADDRESS:
 1002 S JANESVILLE STREET
 WHITEWATER, WI 53190
 FA#: 11655718
 FAA STUDY #: 2024-AGL-23880E

SHEET TITLE
CONSTRUCTION DETAILS

SHEET NUMBER
C-4 209

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NOTE:
ALL SIGNAGE SHALL BE
SECURED TO THE FENCE
USING STEEL HOG RINGS
OR METAL TIES

NOTE:
GENERAL CONTRACTOR TO PROVIDE
9" OF 3/8" CHAIN WELDED TO THE GATE
LEAF WITH A SINGLE TILLMAN LOCK ON
EACH GATE.

COMPOUND FENCING DETAIL

SCALE
N.T.S. **2**

TILLMAN Item 3.
INFRASTRUCTURE



LCC
TELECOM SERVICES

WESTCHESTER
SERVICES LLC

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DRAWN BY: **DWM**
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TILLMAN OPP# **TI-OPP-20018**
SITE NAME: **WHITWATER**
SITE ADDRESS:
**1002 S JANESVILLE STREET
WHITWATER, WI 53190**
FA#: **11655718**
FAA STUDY #: **2024-AGL-23880E**

SHEET TITLE
**FENCE
DETAILS**

SHEET NUMBER
C-5 210

NOT USED

SCALE
N.T.S. **1**

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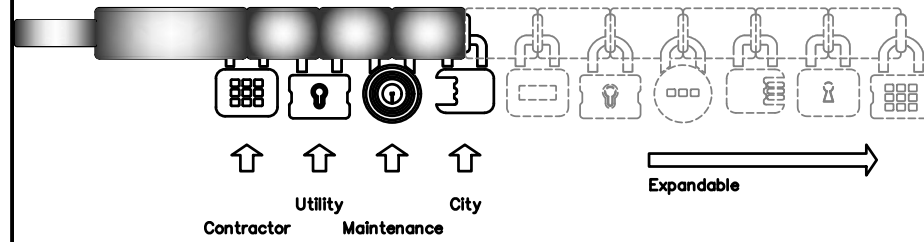
WOVEN WIRE FENCE NOTES:

(INSTALL FENCING PER ASTM F-567)
(SWING GATES PER ASTM F-900)

1. GATE POSTS, CORNER, TERMINAL OR PULL POSTS SHALL BE 2 7/8" DIA. SCHEDULE 40 FOR GATE WIDTHS UP THROUGH 6 FEET OR 12 FEET FOR DOUBLE SWING GATE PER ASTM-F1083.
2. LINE POSTS: 2 3/8" DIA. SCHEDULE 40 PIPE PER ASTM-F1083
3. GATE FRAME: 1 1/2" DIA. SCHEDULE 40 PIPE PER ASTM-F1083
4. TOP RAIL AND BRACE RAIL: 1 1/4" SCHEDULE 40 PIPE PER ASTM-F1083
5. FABRIC: 9 GA. CORE WIRE SIZE 2" MESH, CONFORMING TO ASTM-A392 CLASS 1
6. TIE WIRE: MINIMUM 11 GA. GALVANIZED STEEL. INSTALL A SINGLE WRAP TIE WIRE AT POSTS AND RAILS AT MAX. 24" INTERVALS. INSTALL HOG RINGS ON TENSION WIRE AT 24" INTERVALS
7. TENSION WIRE: 7 GA. GALVANIZED STEEL
8. BARBED WIRE: 3 STRANDS OF DOUBLE STRAND 12-1/2 GAUGE TWISTED WIRE, 4 POINT BARBS SPACED ON APPROXIMATELY 5" CENTERS
9. LOCAL ORDINANCE FORR BARB WIRE PERMIT SHALL GOVERN INSTALLATION
10. HEIGHT = 6' VERTICAL + 1' BARBED WIRE VERTICAL DIMENSION
11. ALL WORK SHALL CONFORM WITH THE PROJECT SPECIFICATIONS

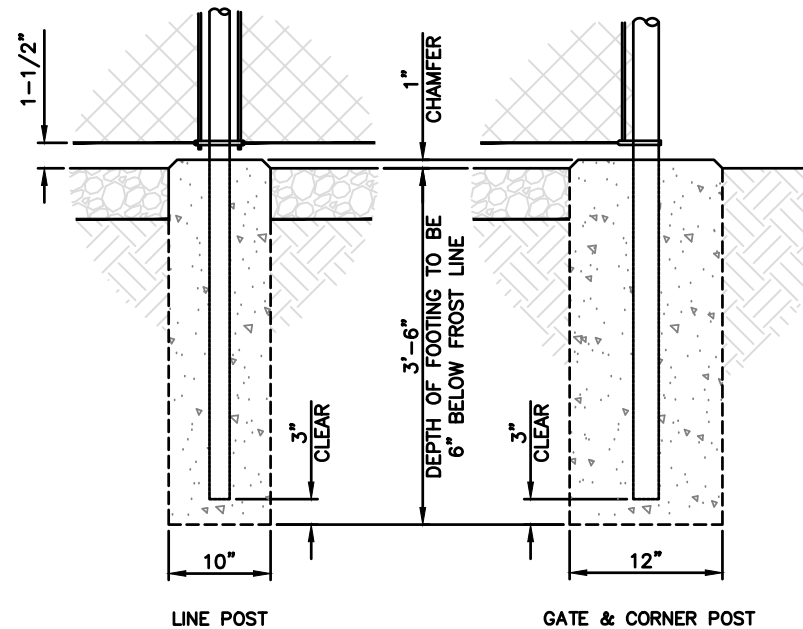
NOTE:
GENERAL CONTRACTOR TO PROVIDE (2) NEW LOCKS FOR MAIN GATE AND MAN GATE. COORDINATE COMBINATION WITH TILLMAN CONSTRUCTION MANAGER.

TILLMAN STANDARD REQUIRES 9" OF 3/8" CHAIN WELDED TO GATE LEAF WITH A SINGLE TILLMAN LOCK ON EACH GATE.



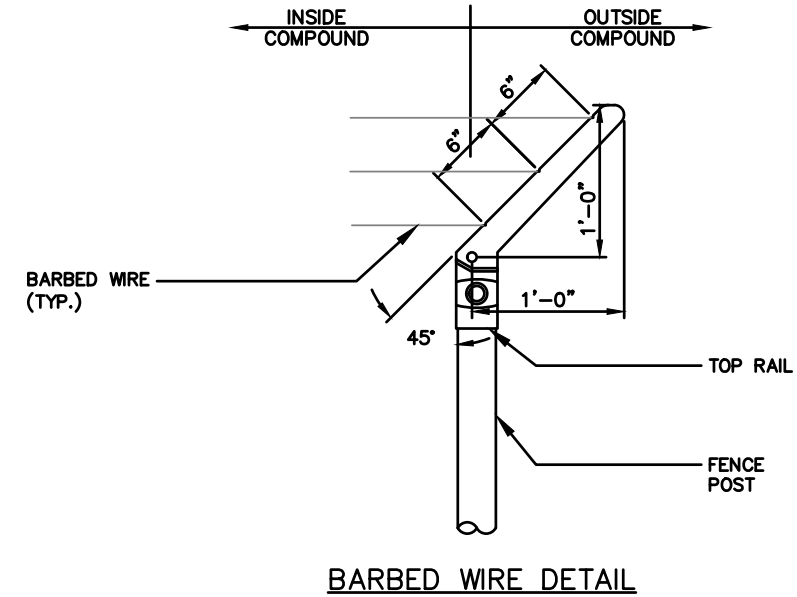
STYMIE LOCKING SYSTEM DETAIL

SCALE
N.T.S. **5**



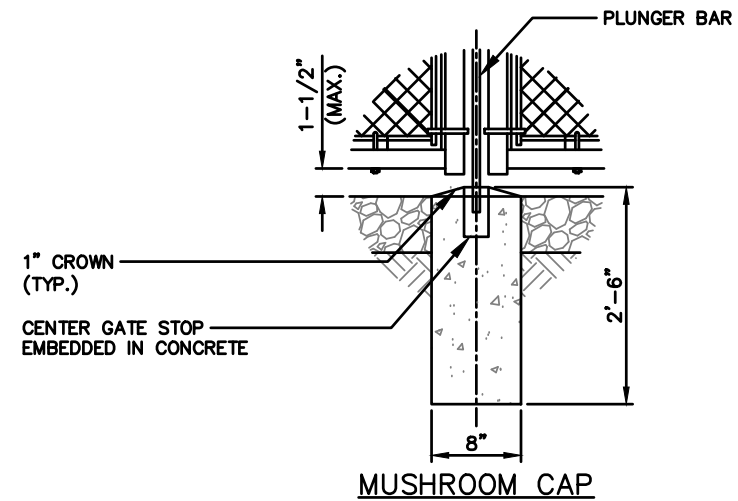
POST FOOTING DETAIL

SCALE
N.T.S. **2**



ANTI-CLIMB BARBED WIRE DETAIL

SCALE
N.T.S. **4**



GATE STOP DETAILS

SCALE
N.T.S. **1**

FENCING NOTES

SCALE
N.T.S. **3**

TILLMAN Item 3.
INFRASTRUCTURE



LCC
TELECOM SERVICES

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SITE NAME: **WHITWATER**
SITE ADDRESS:
1002 S JANESVILLE STREET
WHITWATER, WI 53190
FA#: **11655718**
FAA STUDY #: **2024-AGL-23880E**

SHEET TITLE
FENCE DETAILS

SHEET NUMBER
C-5.1 211

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WHITE BACKGROUND, RED/BLACK LETTERING
 MOUNTING LOCATION: SHELTER OR TENANT IMPROVEMENT ROOM DOOR.
 IF OUTDOOR CABINET SITE PLACE ON END CABINET CLOSEST TO SITE ACCESS POINT.
 PLACE ON GENERATOR.
 QUANTITY: 1 TO 2

SIGNAGE NOTES:

1. SIGNS SHALL BE FABRICATED FROM CORROSION RESISTANT PRESSED METAL & PAINTED WITH LONG LASTING UV RESISTANT COATING.
2. SIGNS (EXCEPT WHERE NOTED OTHERWISE) SHALL BE MOUNTED TO THE TOWER, GATE & FENCE USING A MINIMUM OF 9 GAUGE ALUMINUM WIRE, HOG RINGS (FENCE) OR BRACKETS, WHERE NECESSARY. BRACKETS SHALL BE OF SIMILAR METAL AS THE STRUCTURE TO AVOID GALVANIC CORROSION.
3. ADDITIONAL E911 ADDRESS & FCC REGISTRATION SIGNS SHALL BE MOUNTED AT EACH ACCESS ROAD GATE LEADING TO THE COMPOUND AS WELL AS THE COMPOUND GATE ITSELF.
4. SIGNS NEED NOT BE PLACED IF ACCURATE AND APPROPRIATE SIGNAGE ALREADY EXISTS.

WHITE/GREEN BACKGROUND, WHITE/BLACK LETTERING
 MOUNTING LOCATION: GATE & BASE OF TOWER
 QUANTITY: 2

INFORMATION

- ACTIVE ANTENNAS ARE MOUNTED ON THE OUTSIDE FACE OF THIS BUILDING
- BEHIND THIS PANEL
- ON THIS STRUCTURE

STAY BACK A MINIMUM OF 3 FEET FROM THESE ANTENNAS

Contact AT&T Mobility at 800-638-2822 and follow their instructions prior to performing any maintenance or repairs closer than 3 feet from the antennas.

This is AT&T Mobility site USID# _____

WHITE/GREEN BACKGROUND, WHITE/BLACK LETTERING
 MOUNTING LOCATION: GATE & BASE OF TOWER
 QUANTITY: 2



WESTCHESTER SERVICES LLC
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 FAX: 11655718
 FAA STUDY #: 2024-AGL-23880E

SHEET TITLE
SITE SIGNAGE

SHEET NUMBER
C-6 212

PROPERTY OF TILLMAN INFRASTRUCTURE

SCALE N.T.S. **7**

FCC REGISTRATION SIGN

SCALE N.T.S. **6**

RF EXPOSURE INFORMATION SIGN

SCALE N.T.S. **5**

WHITE/GREEN BACKGROUND, WHITE/BLACK LETTERING
 MOUNTING LOCATION: GATE & BASE OF TOWER
 QUANTITY: 2

WHITE/BLUE BACKGROUND, WHITE/BLACK LETTERING
 MOUNTING LOCATION: GATE & BASE OF TOWER
 QUANTITY: 1

WHITE/YELLOW BACKGROUND, WHITE/BLACK LETTERING
 MOUNTING LOCATION: GATE & BASE OF TOWER
 QUANTITY: 1

WHITE/ORANGE BACKGROUND, WHITE/BLACK LETTERING
 MOUNTING LOCATION: GATE & BASE OF TOWER
 QUANTITY: 1

RF EXPOSURE INFORMATION SIGN

SCALE N.T.S. **4**

RF EXPOSURE NOTICE SIGN

SCALE N.T.S. **3**

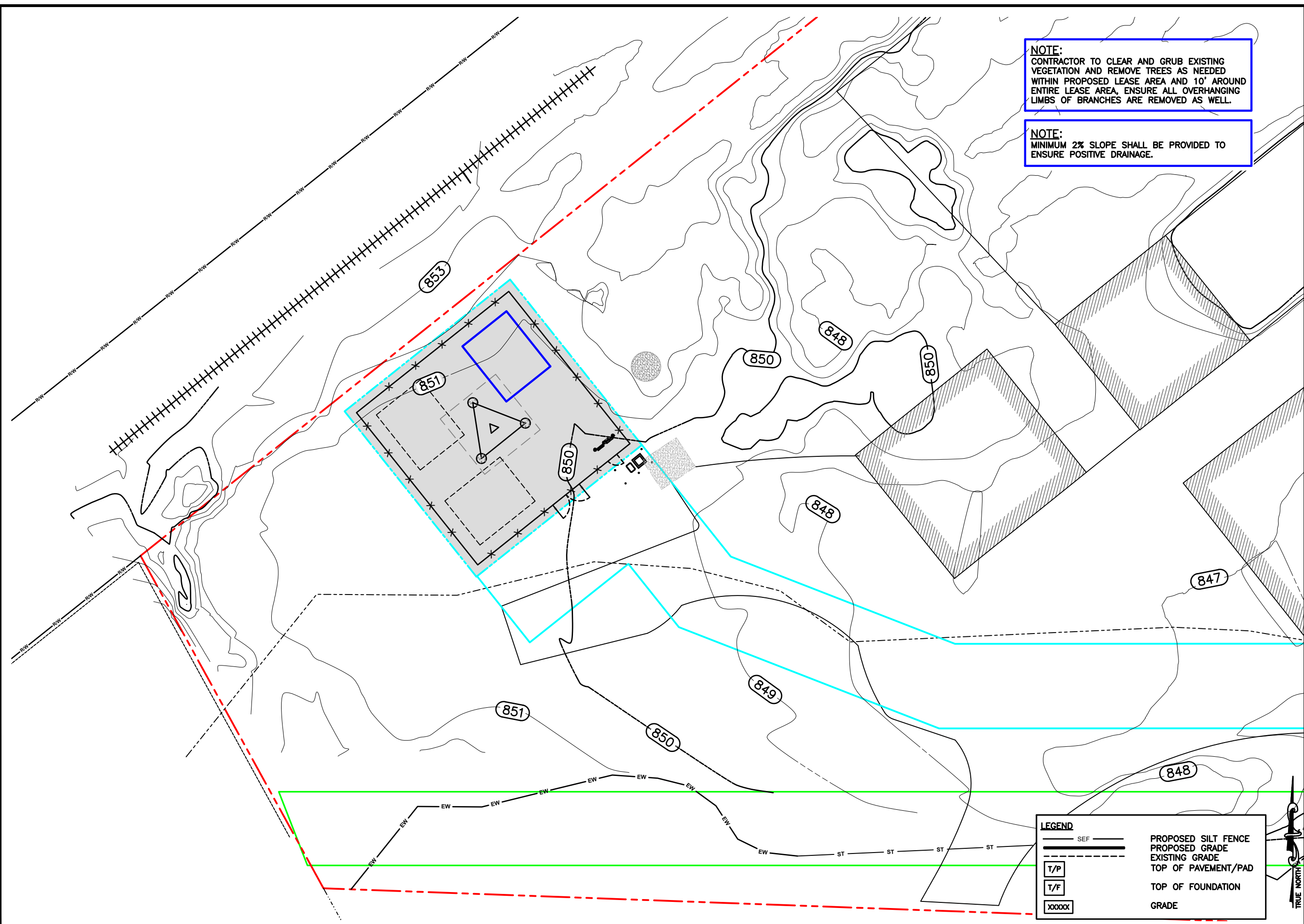
RF EXPOSURE CAUTION SIGN

SCALE N.T.S. **2**

RF EXPOSURE WARNING SIGN

SCALE N.T.S. **1**

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NOTE:
CONTRACTOR TO CLEAR AND GRUB EXISTING VEGETATION AND REMOVE TREES AS NEEDED WITHIN PROPOSED LEASE AREA AND 10' AROUND ENTIRE LEASE AREA, ENSURE ALL OVERHANGING LIMBS OF BRANCHES ARE REMOVED AS WELL.

NOTE:
MINIMUM 2% SLOPE SHALL BE PROVIDED TO ENSURE POSITIVE DRAINAGE.



WESTCHESTER SERVICES LLC
WI FIRM 4897-11
604 FOX GLEN
BARRINGTON, IL 60010
PHONE: 847-277-0070
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TELEPHONE: 847-277-0070
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EMAIL: JBANKS@WESTCHESTERSERVICES.COM

DRAWN BY: DWM
CHECKED BY: MC

REV	DATE	DESCRIPTION
A	03/04/24	PRELIMINARY CD
B	03/06/24	PRELIMINARY CD

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED ARCHITECT UNDER THE LAWS OF THE STATE OF WISCONSIN

TILLMAN OPP# TI-OPP-20018
SITE NAME: WHITEWATER
SITE ADDRESS:
1002 S JANESVILLE STREET
WHITEWATER, WI 53190
FA#: 11655718
FAA STUDY #: 2024-AGL-23880E

SHEET TITLE
GRADING PLAN

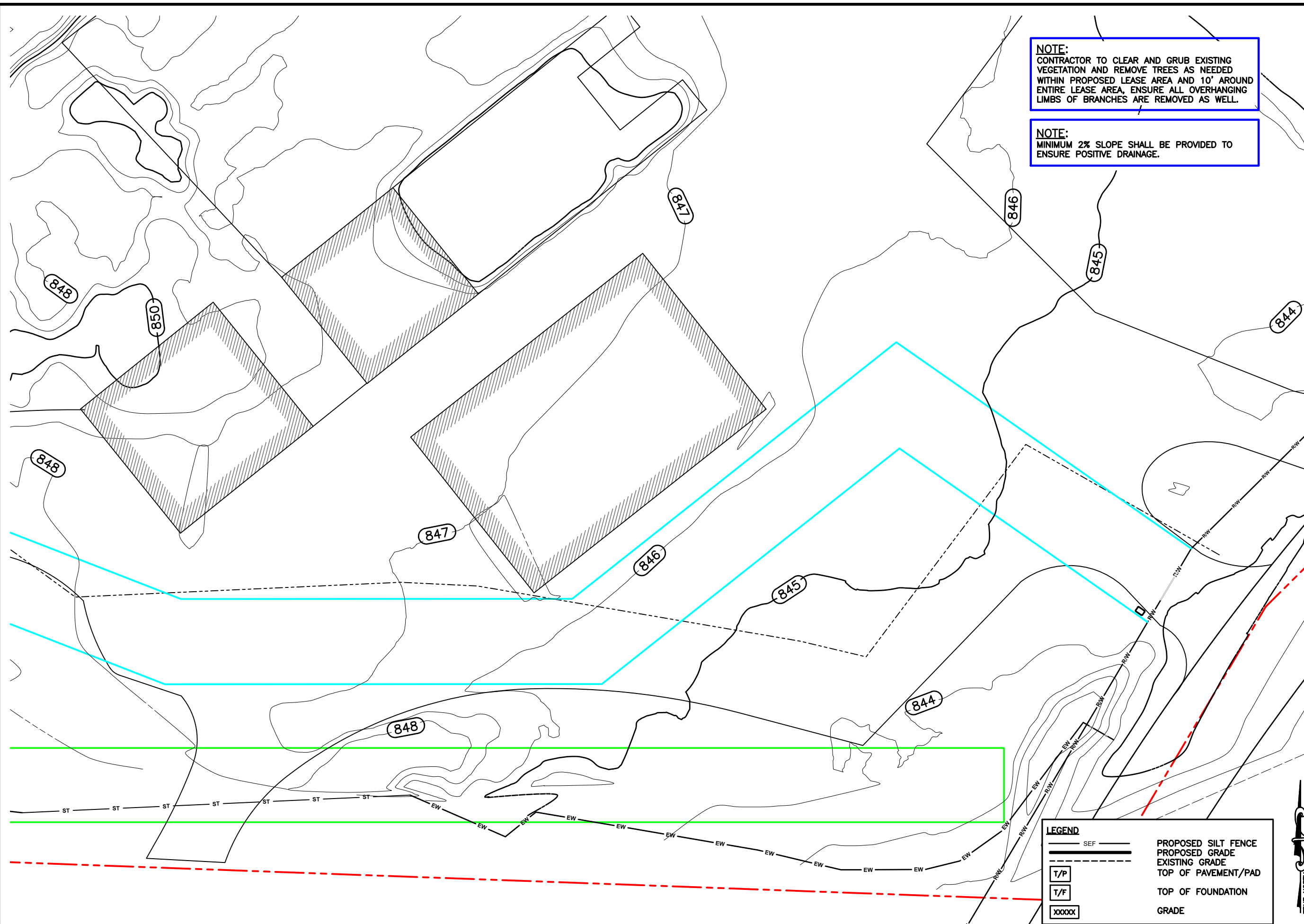
SHEET NUMBER
C-7 213

LEGEND

	PROPOSED SILT FENCE
	PROPOSED GRADE
	EXISTING GRADE
	TOP OF PAVEMENT/PAD
	TOP OF FOUNDATION
	GRADE

0 4' 8' 16'
SCALE: 1/16" = 1'-0" (24x36)
(OR) 1/32" = 1'-0" (11x17)

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WHITEWATER, WI 53190
FA#: 11655718
FAA STUDY #: 2024-AGL-23880E

SHEET TITLE
GRADING PLAN

SHEET NUMBER
C-7.1 214

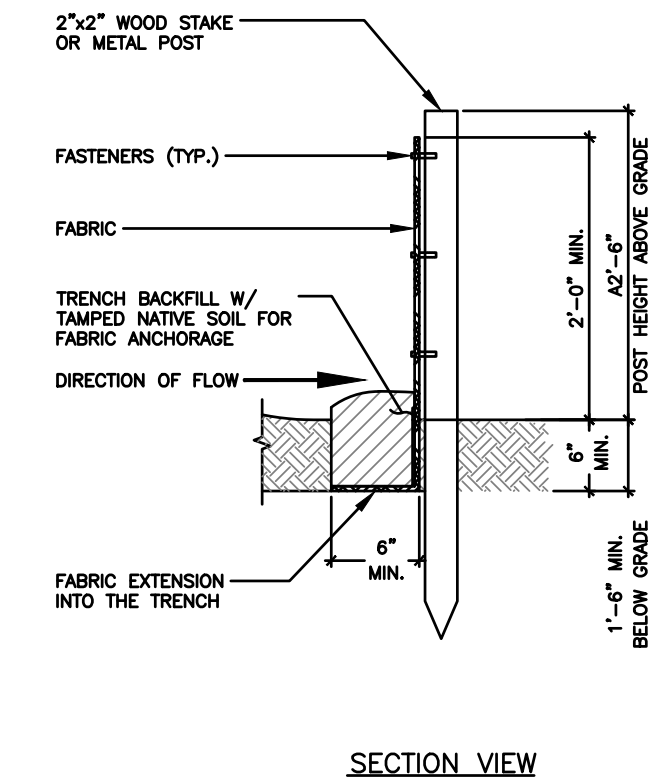
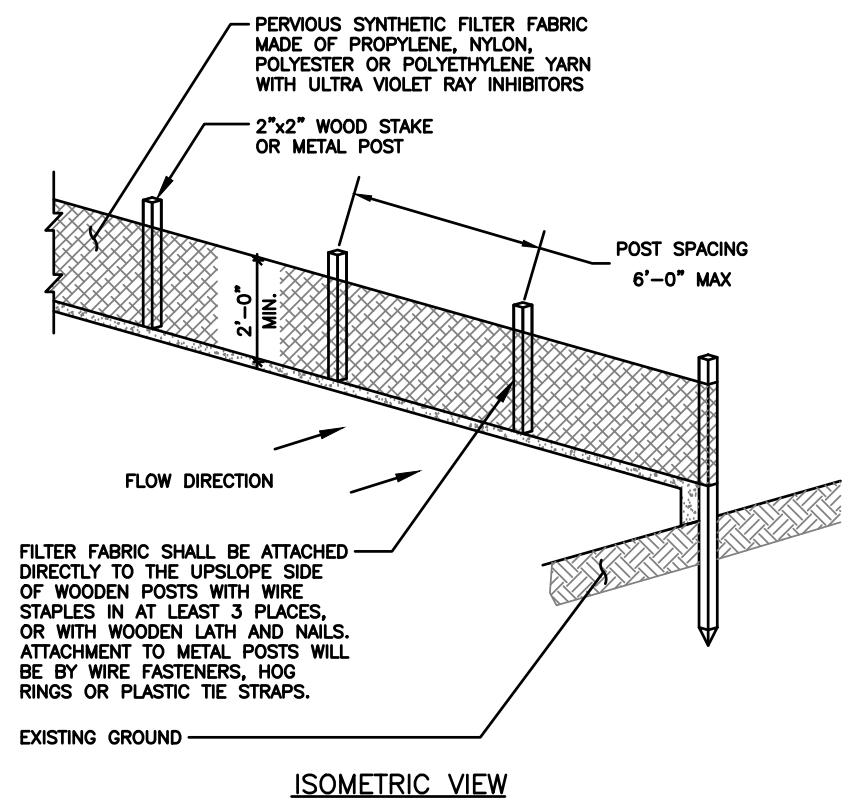
LEGEND

- SEF PROPOSED SILT FENCE
- PROPOSED GRADE
- EXISTING GRADE
- T/P TOP OF PAVEMENT/PAD
- T/F TOP OF FOUNDATION
- XXXXX GRADE

0 4' 8' 16' SCALE: 1/16" = 1'-0" (24x36)
(OR) 1/32" = 1'-0" (11x17)

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- ALL VEGETATIVE AND STRUCTURAL EROSION CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE APPLICABLE STATE ADOPTED "PROCEDURES AND STANDARDS FOR URBAN SOIL EROSION AND SEDIMENTATION CONTROL" AND THE "STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL" OF THE STATE ENVIRONMENTAL PROTECTION AGENCY.
- A SOIL EROSION CONTROL FENCE SHALL BE INSTALLED BEFORE DISTURBING THE GROUND AND SHALL BE PROVIDED AS SHOWN ON THE PLAN. THE CONDITION OF THE FENCE SHALL BE INSPECTED REGULARLY AND AFTER EVERY RAINSTORM THAT MIGHT PRODUCE RUNOFF. DAMAGED OR DETERIORATED ITEMS SHALL BE REPLACED AND MAINTAINED IN AN EFFECTIVE CONDITION
- SOIL EROSION CONTROL MEASURES SHALL BE INCLUDED IN CONTRACTOR BID AND PRICING
- THE ENTIRE SITE SHALL BE GRADED SO THAT NO STORM WATER RUNOFF AND LIKEWISE SOIL SEDIMENT CAN FLOW UNRESTRICTED FROM THE SITE
- ALL INLETS, STRUCTURES, PIPES, SWALES, AND ROADS SHALL BE KEPT CLEAN AND FREE OF DIRT AND SILT
- MAINTAIN SOIL EROSION CONTROL MEASURES THROUGH THE DURATION OF THIS PROJECT
- SEDIMENT DEPOSITS SHALL BE REMOVED WHEN REACHING ONE HALF THE HEIGHT OF THE BARRIER
- ALL SOIL EROSION CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL ALL DISTURBED EARTH HAS BEEN PAVED OR VEGETATED
- ANY EXCESS TOPSOIL THAT IS TO BE STOCKPILED FOR A PERIOD LONGER THAN 2 WEEKS SHALL BE PROTECTED BY EXCAVATING A TRENCH COMPLETELY AROUND THE STOCKPILE TO PREVENT THE ESCAPE OF SOIL MATERIAL THROUGH STORM WATER RUNOFF. STOCKPILES THAT ARE TO REMAIN LONGER THAN 14 DAYS SHALL BE SEEDED WITH AN APPROPRIATE GROUND COVER
- TO PREVENT SOIL FROM LEAVING THE SITE ON CONSTRUCTION VEHICLE WHEELS, TEMPORARY GRAVEL ROADS AT WORK ENTRANCES SHALL BE CONSTRUCTED AND SHALL EXTEND INTO JOB SITE. THE EXISTING PAVEMENT SURFACES SHALL BE INSPECTED DAILY FOR SOIL DEBRIS AND SHALL BE CLEANED WHEN NECESSARY
- FINAL RESTORATION SHALL BE COMPLETED PRIOR TO CLOSEOUT, PROVIDING 6" OF TOPSOIL RAKED TO A UNIFORM SURFACE.
- SOIL EROSION CONTROL MEASURES SHALL BE REMOVED AND PROPERLY DISPOSED OF WHEN PROJECT IS COMPLETED

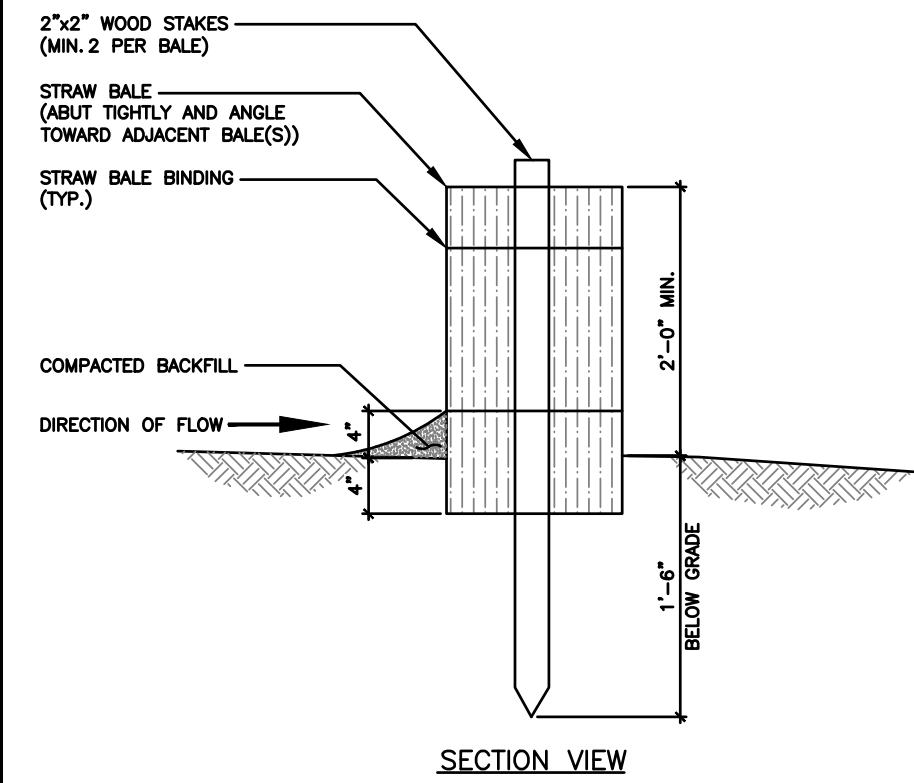


SOIL EROSION & SEDIMENT CONTROL NOTES

SCALE N.T.S. 4

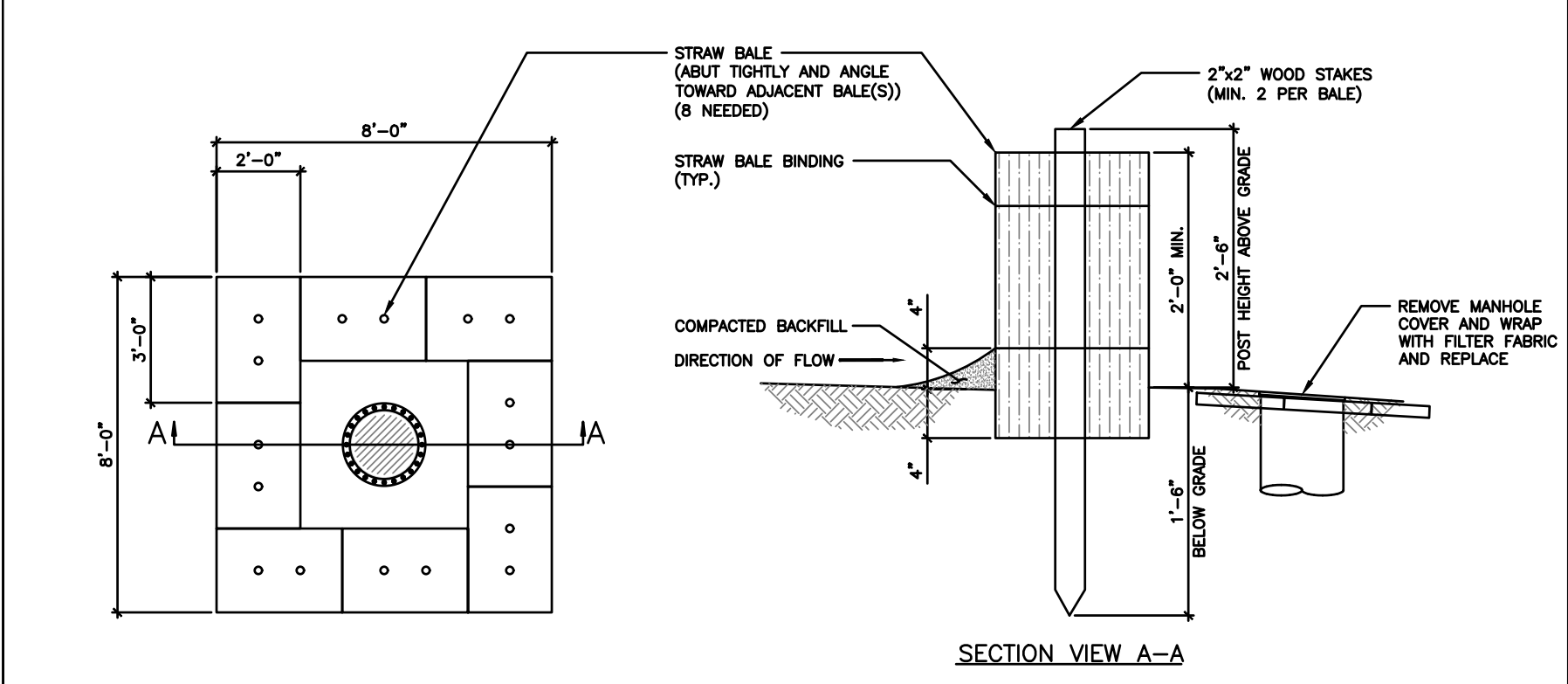
EROSION CONTROL - SILT FENCE

SCALE N.T.S. 2



EROSION CONTROL - STRAW BALE (OPTIONAL)

SCALE N.T.S. 3



EROSION CONTROL - STRAW BALE AT STORM INLET MANHOLE (IF NEEDED SEE PLANS)

SCALE N.T.S. 1

TILLMAN INFRASTRUCTURE Item 3.

LCC TELECOM SERVICES

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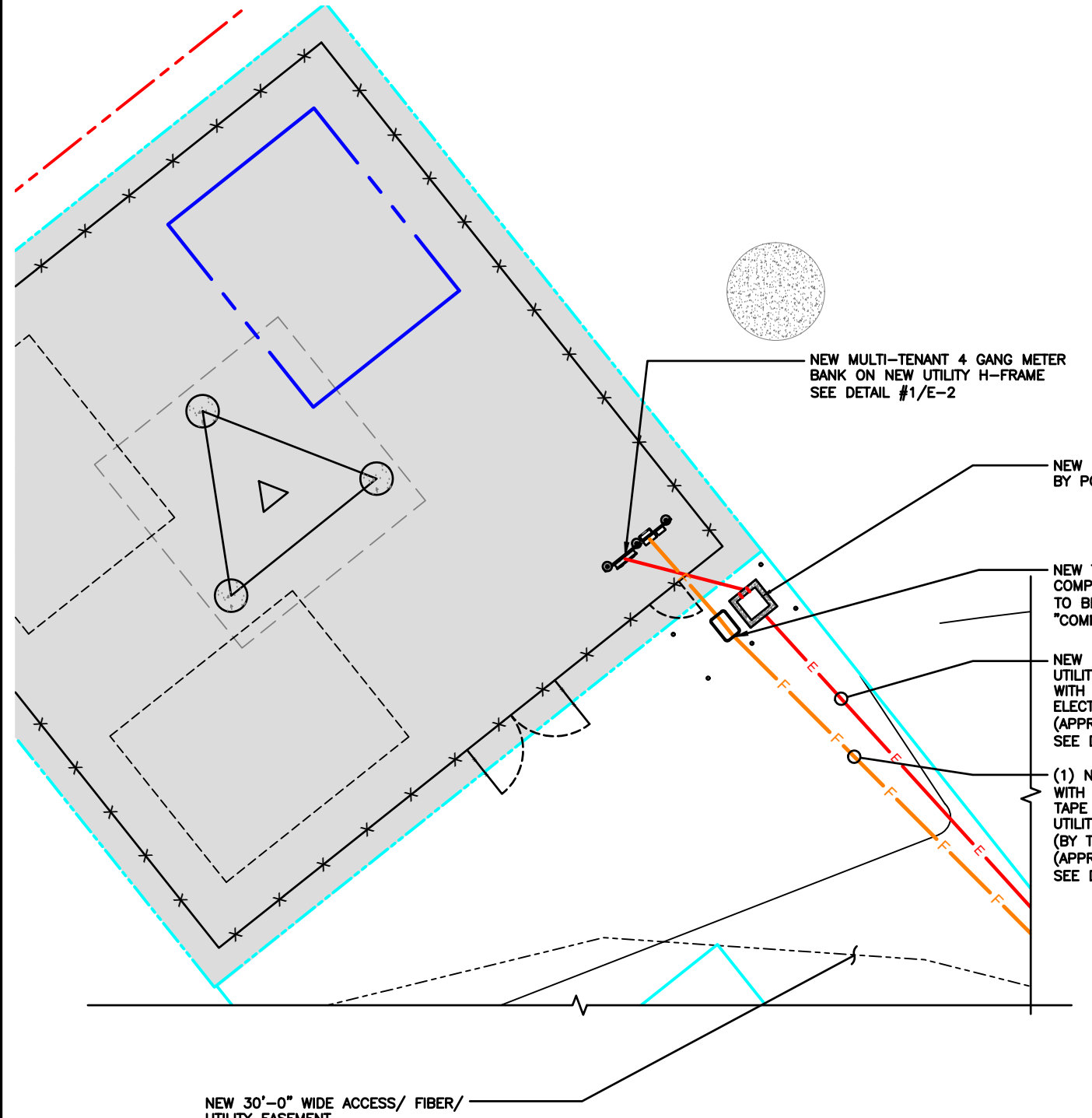
SHEET TITLE
EROSION CONTROL DETAILS

SHEET NUMBER
C-8 215

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NOTE:
 FIBER HANDHOLE REQUIRED EVERY 500' MAXIMUM.
 POWER HANDHOLE REQUIRED EVERY 300' MAXIMUM.
 GENERAL CONTRACTOR SHALL VERIFY AND CONFIRM
 ADDITIONAL REQUIREMENTS WITH LOCAL JURISDICTION
 PRIOR TO INSTALLATION.

NOTE:
 EXACT SOURCE AND ROUTING OF POWER AND FIBER
 TO BE DETERMINED UPON COORDINATION WITH POWER
 AND FIBER COMPANIES. GENERAL CONTRACTOR TO
 CONFIRM & OBTAIN COPY OF THE UTILITY
 COORDINATION WITH TILLMAN CONSTRUCTION MANAGER
 PRIOR TO INSTALLATION



NEW MULTI-TENANT 4 GANG METER
 BANK ON NEW UTILITY H-FRAME
 SEE DETAIL #1/E-2

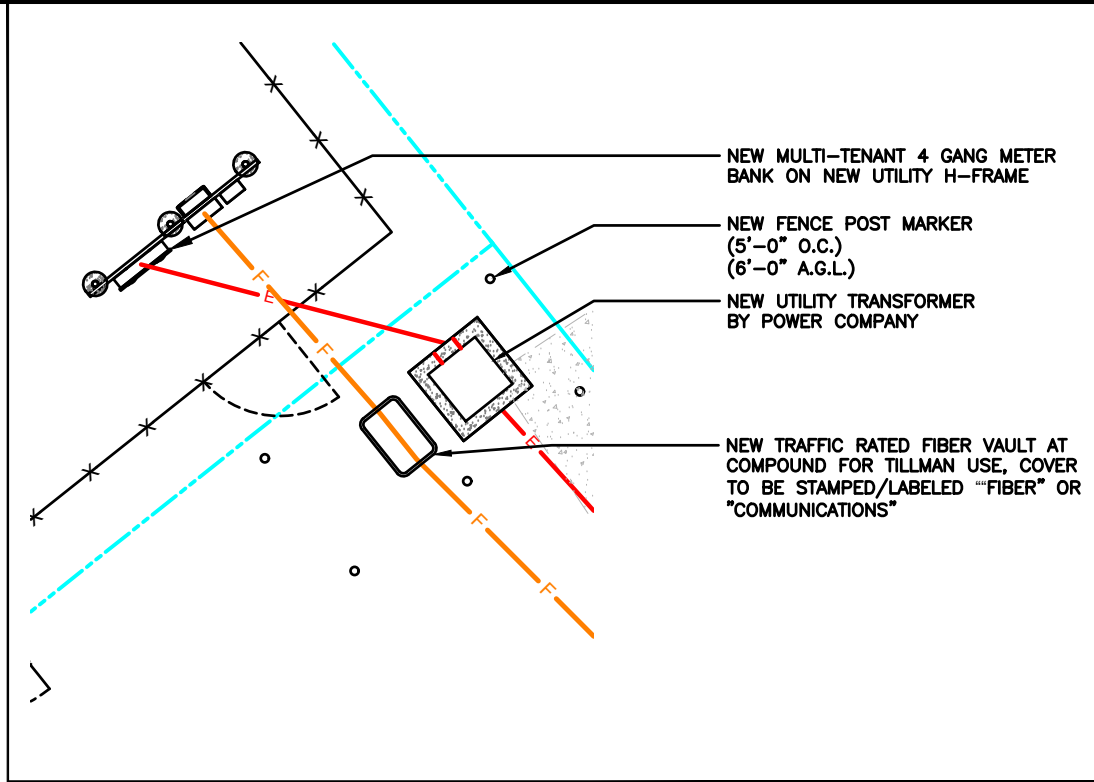
NEW UTILITY TRANSFORMER
 BY POWER COMPANY

NEW TRAFFIC RATED FIBER VAULT AT
 COMPOUND FOR TILLMAN USE, COVER
 TO BE STAMPED/LABELED "FIBER" OR
 "COMMUNICATIONS"

NEW ELECTRICAL SERVICE FROM NEW
 UTILITY H-FRAME TO ROW, COORDINATE
 WITH LOCAL UTILITY COMPANY FOR
 ELECTRICAL SERVICE REQUIREMENTS
 (APPROX. ±580')
 SEE DETAIL #2/E-3

(1) NEW 4" UNDERGROUND CONDUITS
 WITH (3) 1-1/4" INNERDUCT AND MULE
 TAPE FOR NEW FIBER SERVICE FROM
 UTILITY H-FRAME TO HAND HOLE AT ROW
 (BY TILLMAN CONTRACTOR)
 (APPROX. ±575')
 SEE DETAIL #2/E-3

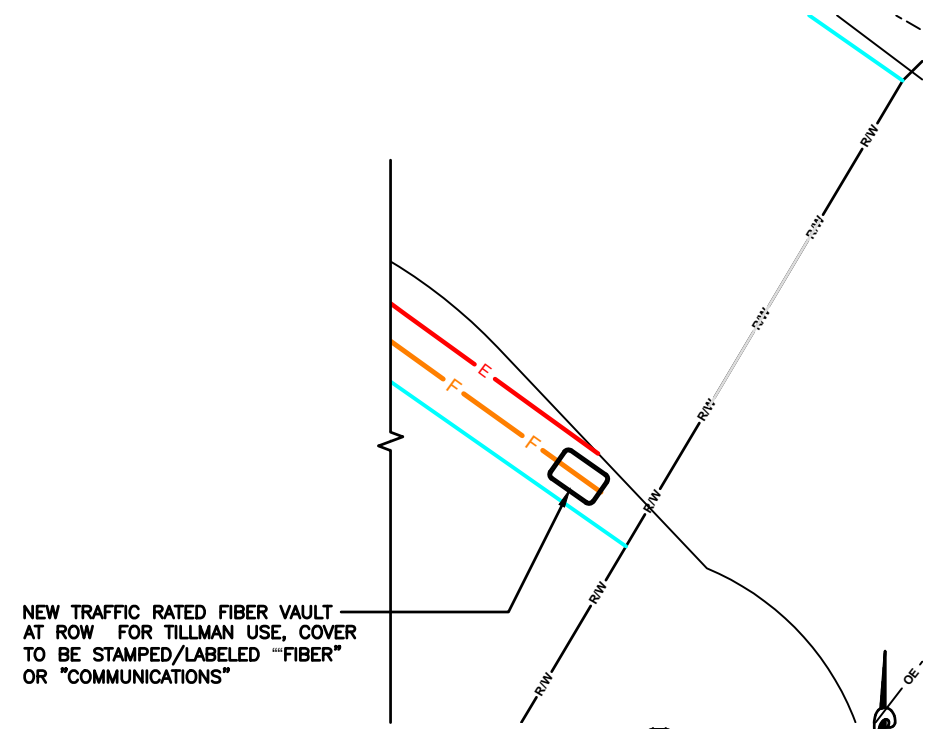
NEW 30'-0" WIDE ACCESS/ FIBER/
 UTILITY EASEMENT



ENLARGED VIEW OF H-FRAME

SCALE
 N.T.S. **2**

FIBER ROUTE FROM THE ROW TO COMPOUND SHALL
 BE OWNED BY TILLMAN AND VAULTS SHALL BE
 LABELED "FIBER" OR "TELECOMMUNICATIONS" TO AVOID
 CONFUSION BETWEEN CARRIERS AND PROVIDERS.
 A SECOND CONDUIT CAN BE PROVIDED FROM ROW
 MMP TO CARRIER LEASE AREA BY CARRIER



Know what's below.
 Call before you dig.



UTILITY PLAN

SCALE: 1/4" = 1'-0" (24x36)
 (OR) 1/8" = 1'-0" (11x17)

1

TILLMAN Item 3.
INFRASTRUCTURE



LCC
 TELECOM SERVICES

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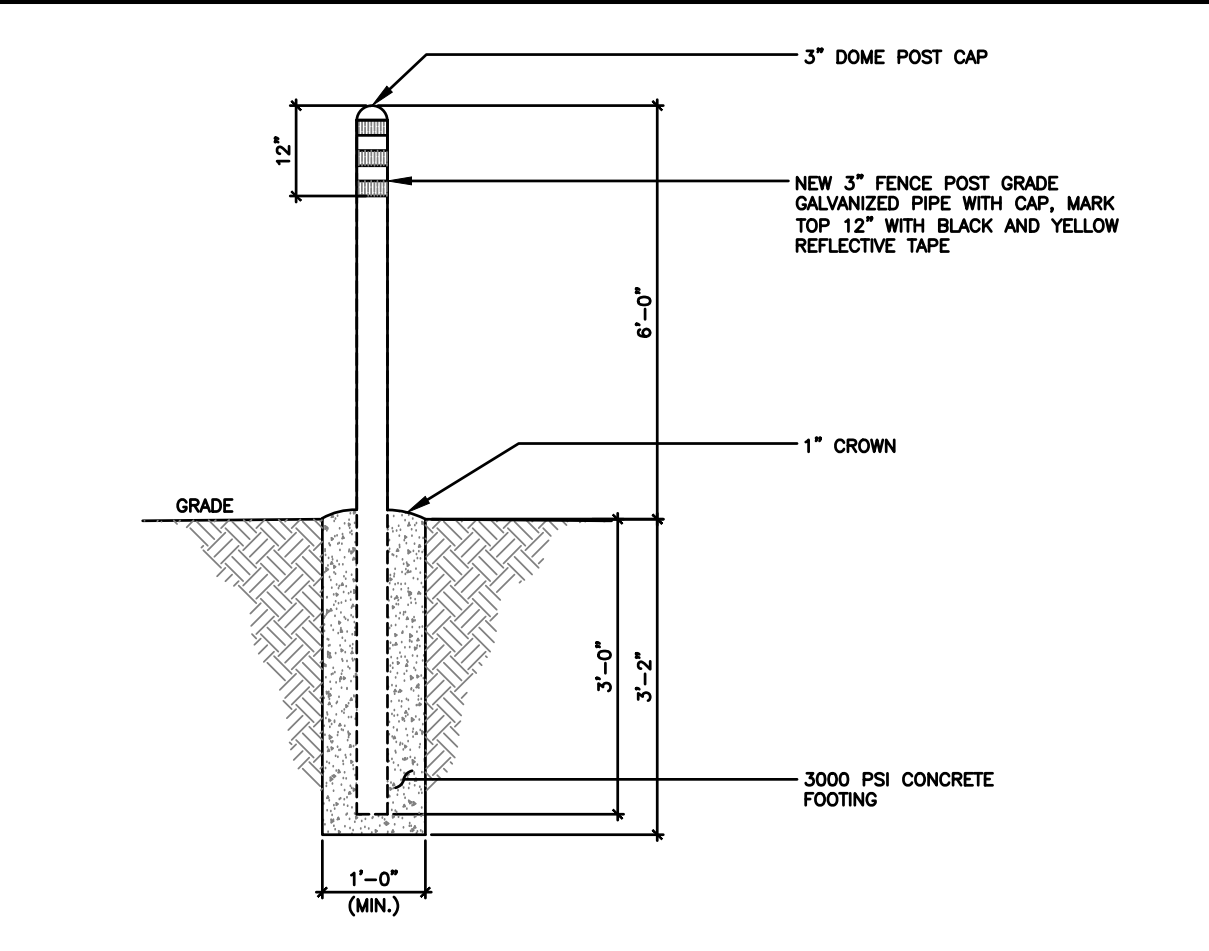
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 FA#: **11655718**
 FAA STUDY #: **2024-AGL-23880E**

SHEET TITLE
UTILITY PLAN

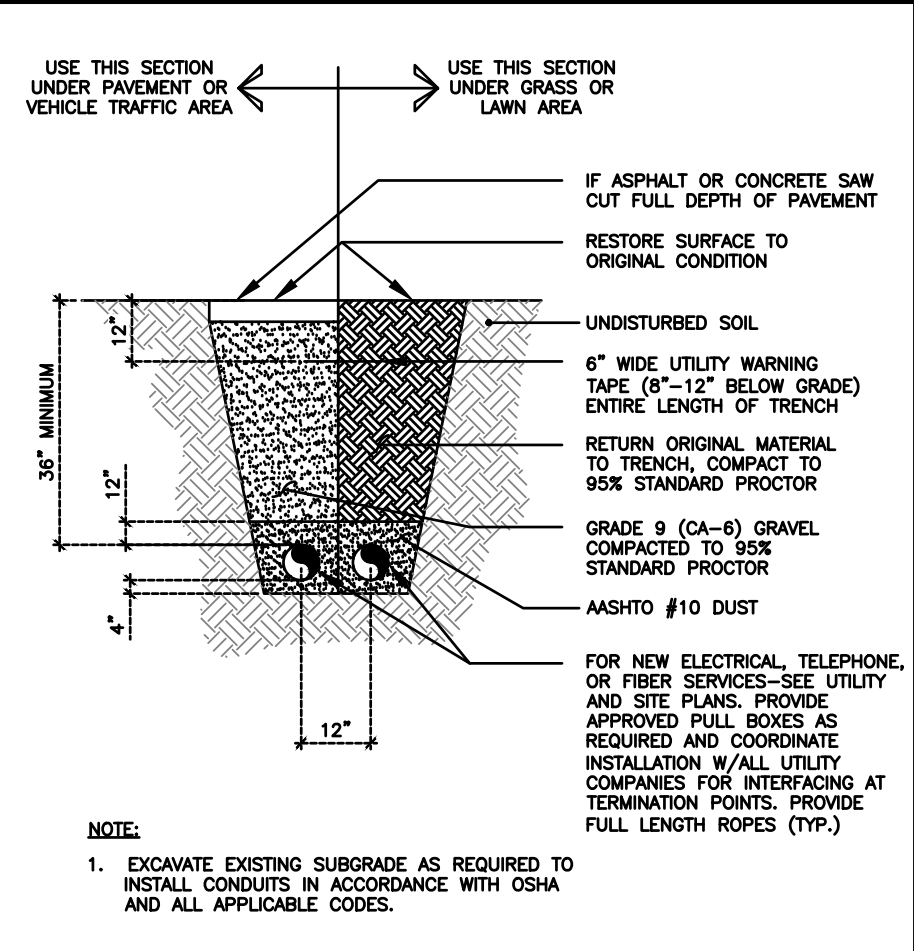
SHEET NUMBER
E-1 216

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1. SUBMITTAL OF BID INDICATES THAT THE CONTRACTOR IS COGNIZANT OF ALL JOB SITE CONDITIONS AND WORK TO BE PERFORMED UNDER THIS CONTRACT.
2. CONTRACTOR SHALL PERFORM ALL VERIFICATIONS, OBSERVATION TESTS, AND EXAMINATION WORK PRIOR TO ORDERING OF ANY EQUIPMENT AND THE ACTUAL CONSTRUCTION. CONTRACTOR SHALL ISSUE A WRITTEN NOTICE OF ALL FINDINGS TO THE PROJECT MANAGER LISTING ALL MALFUNCTIONS, FAULTY EQUIPMENT AND DISCREPANCIES.
3. VERIFY HEIGHTS WITH PROJECT MANAGER PRIOR TO INSTALLATION.
4. THESE PLANS ARE DIAGRAMMATIC ONLY, FOLLOW AS CLOSELY AS POSSIBLE.
5. CONTRACTOR SHALL COORDINATE ALL WORK BETWEEN TRADES AND ALL OTHER SCHEDULING AND PROVISIONARY CIRCUMSTANCES SURROUNDING THE PROJECT.
6. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, INSURANCE, EQUIPMENT, INSTALLATION CONSTRUCTION TOOLS, TRANSPORTATION, ETC., FOR COMPLETE AND FUNCTIONALLY OPERATING SYSTEMS ENERGIZED AND READY FOR USE THROUGHOUT AS INDICATED ON DRAWINGS, AS SPECIFIED HEREIN AND/OR AS OTHERWISE REQUIRED.
7. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND IN PERFECT CONDITION WHEN INSTALLED AND SHALL BE OF THE BEST GRADE AND OF THE SAME MANUFACTURER THROUGHOUT FOR EACH CLASS OR GROUP OF EQUIPMENT. ELECTRICAL MATERIALS SHALL BE LISTED AND APPROVED BY UNDERWRITER'S LABORATORIES AND SHALL BEAR THE INSPECTION LABEL "J" WHERE SUBJECT TO SUCH APPROVAL. MATERIALS SHALL MEET WITH APPROVAL OF ALL GOVERNING BODIES HAVING JURISDICTION OVER THE CONSTRUCTION. MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH ALL CURRENT APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA AND NBFU. ALL MATERIALS AND EQUIPMENT SHALL BE APPROVED FOR THEIR INTENDED USE AND LOCATION.
8. ALL WORK SHALL COMPLY WITH ALL APPLICABLE GOVERNING STATE, COUNTY AND CITY CODES AND OSHA, NFPA, NEC & ASHRAE REQUIREMENTS.
9. ENTIRE JOB SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER THE DATE OF JOB ACCEPTANCE. ALL WORK, MATERIAL AND EQUIPMENT FOUND TO BE FAULTY DURING THAT PERIOD SHALL BE CORRECTED AT ONCE, UPON WRITTEN NOTIFICATION, AT THE EXPENSE OF THE CONTRACTOR.
10. PROPERLY SEAL ALL PENETRATIONS. PROVIDE UL LISTED FIRE-STOPS WHERE PENETRATIONS ARE MADE THROUGH FIRE-RATED ASSEMBLIES. WATER-TIGHT USING SILICONE SEALANT.
11. DELIVER ALL BROCHURES, OPERATING MANUALS, CATALOGS AND SHOP DRAWINGS TO THE PROJECT MANAGER AT JOB COMPLETION. PROVIDE MAINTENANCE MANUALS FOR MECHANICAL EQUIPMENT. AFFIX MAINTENANCE LABELS TO MECHANICAL EQUIPMENT.
12. ALL CONDUCTORS SHALL BE COPPER. MINIMUM CONDUCTOR SIZE SHALL BE #12 AWG., UNLESS OTHERWISE NOTED. CONDUCTORS SHALL BE TYPE THHW, RATED IN ACCORDANCE WITH NEC 110-14(C).
13. ALL CIRCUIT BREAKERS, FUSES AND ELECTRICAL EQUIPMENT SHALL HAVE AN INTERRUPTING RATING NOT LESS THE MAXIMUM INTERRUPTING CURRENT TO WHICH THEY MAY BE SUBJECTED.
14. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE; ARTICLES 250 & 810 AND THE UTILITY COMPANY STANDARDS.
15. CONDUIT:
 - A. RIGID CONDUIT SHALL BE U.L. LABEL GALVANIZED ZINC COATED WITH ZINC INTERIOR AND SHALL BE USED WHEN INSTALLED IN OR UNDER CONCRETE SLABS, IN CONTACT WITH THE EARTH, UNDER PUBLIC ROADWAYS, IN MASONRY WALLS OR EXPOSED ON BUILDING EXTERIOR. RIGID CONDUIT IN CONTACT WITH EARTH SHALL BE 1/2 LAPPED WRAPPED WITH HUNTS WRAP PROCESS NO. 3.
 - B. ELECTRICAL METALLIC TUBING SHALL HAVE U.L. LABEL, FITTINGS SHALL BE GLAND RING COMPRESSION TYPE. EMT SHALL BE USED ONLY FOR INTERIOR RUNS.
 - C. LIQUID-TIGHT FLEXIBLE METAL CONDUIT SHALL BE U.L. LISTED AND SHALL BE USED AT FINAL CONNECTIONS TO MECHANICAL EQUIPMENT & RECTIFIERS AND WHERE PERMITTED BY CODE. ALL CONDUIT IN EXCESS OF SIX FEET IN LENGTH SHALL CONTAIN A FULL-SIZE GROUND CONDUCTOR.
 - D. CONDUIT RUNS SHALL BE SURFACE MOUNTED ON CEILINGS OR WALLS UNLESS NOTED OTHERWISE. ALL CONDUIT SHALL RUN PARALLEL OR PERPENDICULAR TO WALLS, FLOOR, CEILING, OR BEAMS. VERIFY EXACT ROUTING OF ALL EXPOSED CONDUIT WITH THE PROJECT MANAGER PRIOR TO INSTALLING.
 - E. PVC CONDUIT MAY BE PROVIDED ONLY WHERE SHOWN, OR IN UNDERGROUND INSTALLATIONS. PROVIDE UV-RESISTANT CONDUIT WHERE EXPOSED TO THE ATMOSPHERE. PROVIDE GROUND CONDUCTOR IN ALL PVC RUNS; EXCEPT WHERE PERMITTED BY CODE TO OMIT.
17. ALL ELECTRICAL EQUIPMENT SHALL BE LABELED WITH PERMANENT ENGRAVED PLASTIC LABELS. BACKGROUND SHALL BE BLACK WITH WHITE LETTERS; EXCEPT AS REQUIRED BY CODE TO FOLLOW A DIFFERENT SCHEME.
18. UPON COMPLETION OF WORK, CONDUCT CONTINUITY, SHORT CIRCUIT, AND FALL OF POTENTIAL GROUNDING TESTS FOR APPROVAL. SUBMIT TEST REPORTS TO PROJECT MANAGER. GROUNDING SYSTEM RESISTANCE SHALL NOT EXCEED 5 OHMS. IF THE RESISTANCE VALUE IS EXCEEDED, NOTIFY THE PROJECT MANAGER FOR FURTHER INSTRUCTION ON METHODS FOR REDUCING THE RESISTANCE VALUE.
19. CLEAN PREMISES OF ALL DEBRIS RESULTING FROM WORK AND LEAVE WORK IN A COMPLETE AND UNDAMAGED CONDITION. LEGALLY DISPOSE OF ALL REMOVED, UNUSED AND EXCESS MATERIAL GENERATED BY THE WORK OF THIS CONTRACT. DELIVER ITEMS INDICATED ON THE DRAWINGS TO THE OWNER IN GOOD CONDITION. OBTAIN SIGNED RECEIPT UPON DELIVERY.
20. COORDINATE WITH UTILITY COMPANY FOR CONNECTION OF TEMPORARY AND PERMANENT POWER TO THE SITE. THE TEMPORARY POWER AND ALL HOOKUP COSTS SHALL BE PAID BY THE CONTRACTOR.
21. VERIFY ALL EXISTING CIRCUITRY PRIOR TO REMOVAL AND NEW WORK. MAINTAIN POWER TO ALL OTHER AREAS & CIRCUITS NOT SCHEDULED FOR REMOVAL.
22. RED LINED AS-BUILT PLANS SHALL BE PROVIDED TO THE CONSTRUCTION MANAGER.

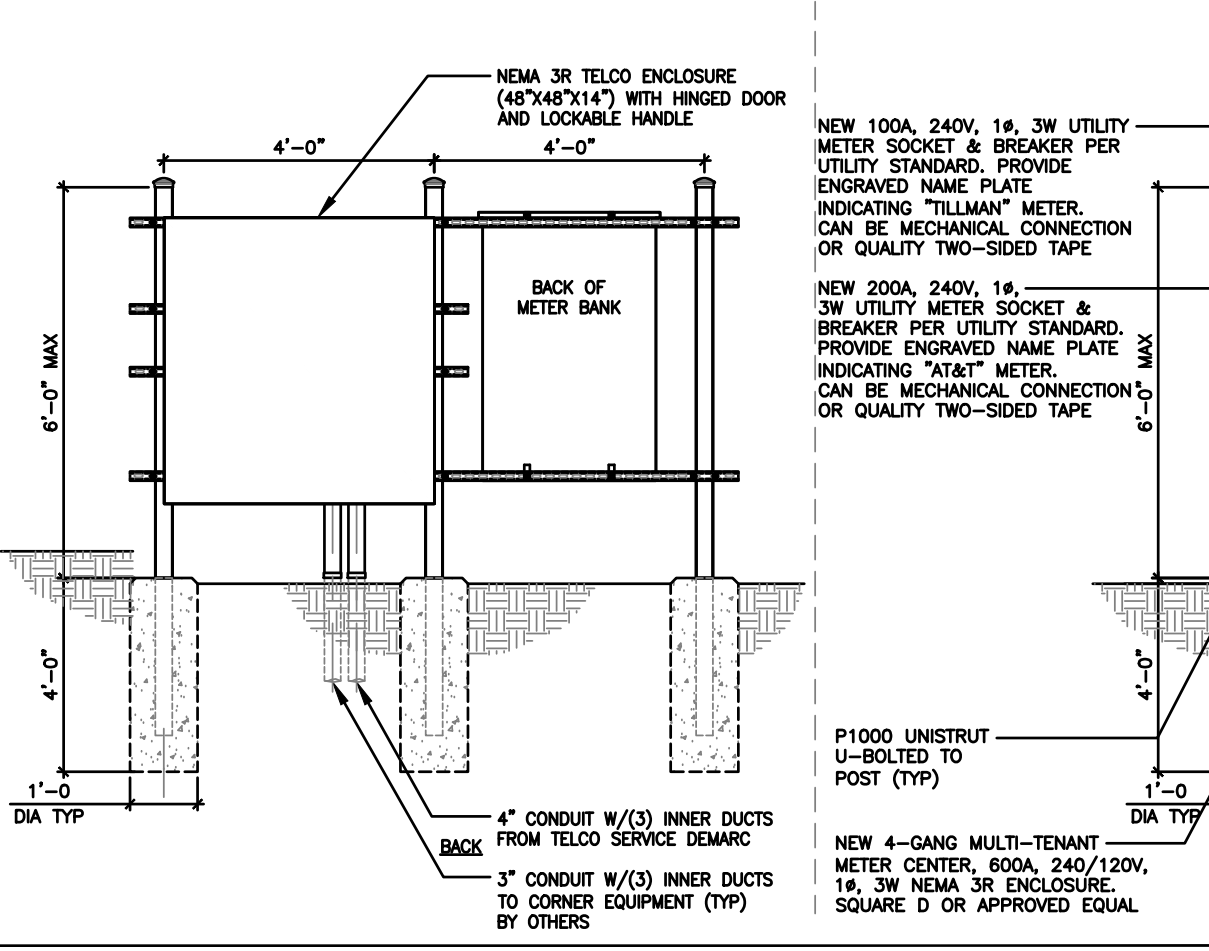


FENCE POST MARKER DETAIL SCALE N.T.S. **3**



TYPICAL TRENCH DETAIL SCALE N.T.S. **2**

17. ALL ELECTRICAL EQUIPMENT SHALL BE LABELED WITH PERMANENT ENGRAVED PLASTIC LABELS. BACKGROUND SHALL BE BLACK WITH WHITE LETTERS; EXCEPT AS REQUIRED BY CODE TO FOLLOW A DIFFERENT SCHEME.
18. UPON COMPLETION OF WORK, CONDUCT CONTINUITY, SHORT CIRCUIT, AND FALL OF POTENTIAL GROUNDING TESTS FOR APPROVAL. SUBMIT TEST REPORTS TO PROJECT MANAGER. GROUNDING SYSTEM RESISTANCE SHALL NOT EXCEED 5 OHMS. IF THE RESISTANCE VALUE IS EXCEEDED, NOTIFY THE PROJECT MANAGER FOR FURTHER INSTRUCTION ON METHODS FOR REDUCING THE RESISTANCE VALUE.
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UTILITY FRAME DETAIL SCALE N.T.S. **1**

ELECTRICAL NOTES **4**

TILLMAN INFRASTRUCTURE Item 3.

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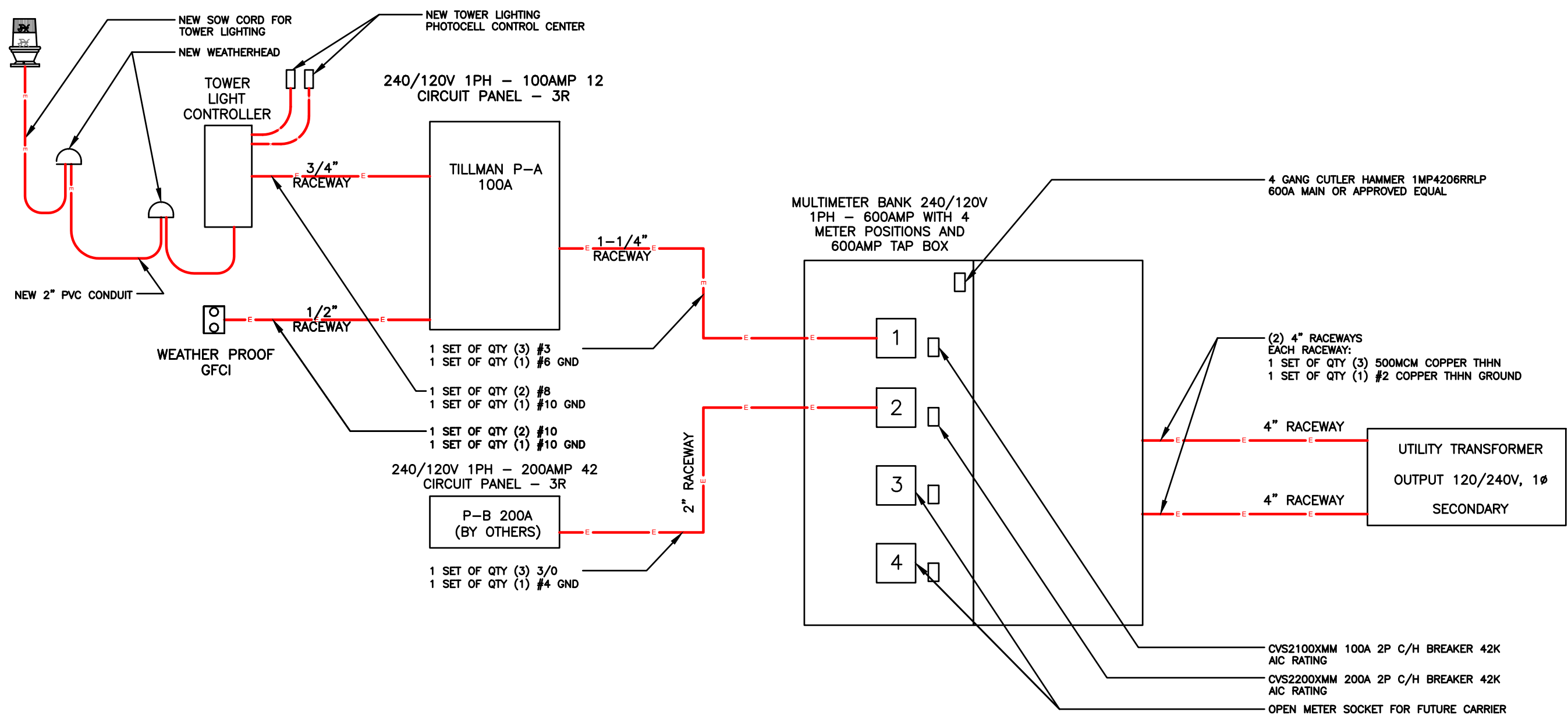
SHEET NUMBER
E-2 217

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METER POSITION 1 - TILLMAN LOAD CENTER (P-A)																								
LOAD			LOAD PER PHASE (VA)		WIRE COLOR	LOADS CONTINUOUS	LOADS NON-CONTINUOUS	LOADS SUB-PANEL	WIRE SIZE	GROUNDING WIRE SIZE	TRIP	TRIP	GROUNDING WIRE SIZE	WIRE SIZE	LOADS SUB-PANEL	LOADS NON-CONTINUOUS	LOADS CONTINUOUS	WIRE COLOR	LOAD PER PHASE (VA)		LOAD			
DESCRIPTION	QTY.	UNIT V.A.	A	B															A	B	UNIT V.A.	QTY.	DESCRIPTION	
1	GFCI RECEPTACLES	1	600	600	BLK		X		10	10	20							BLK				1	SPARE	2
3	TOWER LIGHT	1	1600	1600	RED	X			8	10	20							RED				1	SPARE	4
5	TOWER LIGHT	1	1600	1600	BLK	X			8	10	20							BLK				1	SPARE	6
7	SPARE	1			RED													RED				1	SPARE	8
9	SPARE	1			BLK													BLK				1	SPARE	10
11	SPARE	1			RED													RED				1	SPARE	12
SUBTOTAL CONTINUOUS			1600	1600														SUBTOTAL CONTINUOUS		TOTAL AMPS CONTINUOUS x 1.25	4000			
SUBTOTAL NON-CONTINUOUS			600	-														SUBTOTAL NON-CONTINUOUS		TOTAL AMPS NON-CONTINUOUS	600			
SUBTOTAL SUB-PANEL																		SUBTOTAL SUB-PANEL		TOTAL AMPS SUB-PANEL	4600			
PANEL DESIGNATION: ELECTRICAL PANEL (PA)																TOTAL KVA		4.60						
MAIN LUGS: N/A			MAIN BREAKER: 100 AMP																BRANCH BREAKER TYPE: SIEMENS - BL					
VOLTAGE: 120/240			CYCLE: 60			PHASE: 1			WIRES: 3			MAIN COPPER BUS: 100 AMPS			NEUTRAL: 100 AMPS			TOTAL AMPS		19.16				

TILLMAN P - A PANEL SCHEDULE

2



ELECTRICAL SINGLE LINE DIAGRAM

1

TILLMAN INFRASTRUCTURE Item 3.



LCC TELECOM SERVICES

WESTCHESTER SERVICES LLC
 WI FIRM 4897-11
 604 FOX GLEN BARRINGTON, IL 60010
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DRAWN BY:	DWM	
CHECKED BY:	MC	
REV	DATE	DESCRIPTION
A	03/04/24	PRELIMINARY CD
B	03/06/24	PRELIMINARY CD

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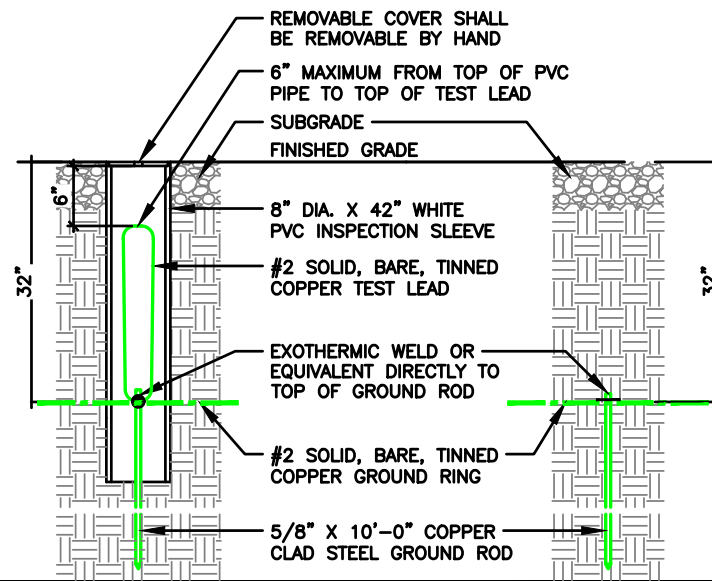
TILLMAN OPP# TI-OPP-20018
SITE NAME: WHITEWATER
SITE ADDRESS:
1002 S JANESVILLE STREET
WHITEWATER, WI 53190
FA#: 11655718
FAA STUDY #: 2024-AGL-23880E

SHEET TITLE
ELECTRICAL DIAGRAM

SHEET NUMBER
E-3 218

GROUNDING NOTES:

- GROUNDING SHALL COMPLY WITH ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE.
- ALL GROUNDING DEVICES SHALL BE U.L. APPROVED OR LISTED FOR THEIR INTENDED USE.
- ALL WIRES SHALL BE AWG THHN/THWN COPPER UNLESS NOTED OTHERWISE.
- GROUNDING CONNECTIONS TO GROUND RODS, GROUND RING WIRE, TOWER BASE AND FENCE POSTS SHALL BE EXOTHERMIC ("CADWELDS") UNLESS NOTED OTHERWISE. CLEAN SURFACES TO SHINY METAL. WHERE GROUND WIRES ARE CADWELDED TO GALVANIZED SURFACES, SPRAY CADWELD WITH GALVANIZING PAINT.
- GROUNDING CONNECTIONS TO GROUND BARS ARE TO BE TWO-HOLE BRASS MECHANICAL CONNECTORS WITH STAINLESS STEEL HARDWARE (INCLUDING SCREW SET) CLEAN GROUND BAR TO SHINY METAL. AFTER MECHANICAL CONNECTION, TREAT WITH PROTECTIVE ANTIOXIDANT COATING.
- GROUND COAXIAL CABLE SHIELDS AT BOTH ENDS WITH MANUFACTURER'S GROUNDING KITS.
- ROUTE GROUNDING CONDUCTORS THE SHORTEST AND STRAIGHTEST PATH POSSIBLE. BEND GROUNDING LEADS WITH A MINIMUM 12" RADIUS.
- INSTALL #2 AWG GREEN-INSULATED STRANDED WIRE FOR ABOVE GRADE GROUNDING AND #2 BARE TINNED COPPER WIRE FOR BELOW GRADE GROUNDING UNLESS OTHERWISE NOTED.
- REFER TO GROUNDING PLAN FOR GROUND BAR LOCATIONS. GROUNDING CONNECTIONS SHALL BE EXOTHERMIC TYPE ("CADWELDS") TO ANTENNA MOUNTS AND GROUND RING. REMAINING GROUNDING CONNECTIONS SHALL BE COMPRESSION FITTINGS. CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO-HOLE LUGS.
- THE GROUND ELECTRODE SYSTEM SHALL CONSIST OF DRIVEN GROUND RODS POSITION ACCORDING TO GROUNDING PLAN. THE GROUND RODS SHALL BE 5/8"x10'-0" COPPER CLAD STEEL INTERCONNECTED WITH #2 BARE TINNED COPPER WIRE BURIED 36" BELOW GRADE. BURY GROUND RODS A MAXIMUM OF 15' APART, AND A MINIMUM OF 8' APART.
- IF ROCK IS ENCOUNTERED GROUND RODS SHALL BE PLACED AT AN OBLIQUE ANGLE NOT TO EXCEED 45°.
- EXOTHERMIC WELDS SHALL BE MADE IN ACCORDANCE WITH ERICO PRODUCTS BULLETIN A-AT.
- CONSTRUCTION OF GROUND RING AND CONNECTIONS TO EXISTING GROUND RING SYSTEM SHALL BE DOCUMENTED WITH PHOTOGRAPHS PRIOR TO BACKFILLING SITE. PROVIDE PHOTOS TO THE AT&T WIRELESS CONSTRUCTION MANAGER.
- ALL GROUND LEADS EXCEPT THOSE TO THE EQUIPMENT ARE TO BE #2 BARE TINNED COPPER WIRE. ALL EXTERIOR GROUND BARS TINNED COPPER.
- PRIOR TO INSTALLING LUGS ON GROUND WIRES, APPLY THOMAS & BETTS KOPR-SHIELD (TM OF JET LUBE INC.). PRIOR TO BOLTING GROUND WIRE LUGS TO GROUND BARS, APPLY KOPR-SHIELD OR EQUAL.
- ENGAGE AN INDEPENDENT ELECTRICAL TESTING FIRM TO TEST AND VERIFY THAT IMPEDANCE DOES NOT EXCEED FIVE OHMS TO GROUND BY MEANS OF "FALL OF POTENTIAL TEST". TEST SHALL BE WITNESSED BY A METROPCS REPRESENTATIVE, AND RECORDED ON THE "GROUND RESISTANCE TEST" FORM.
- WHERE BARE COPPER GROUND WIRES ARE ROUTED FROM ANY CONNECTION ABOVE GRADE TO GROUND RING, INSTALL WIRE IN LIQUID TIGHT CONDUITS, A MINIMUM 6" ABOVE AND BELOW GRADE/ GRAVEL SURFACE.
- PREPARE ALL BONDING SURFACES FOR GROUNDING CONNECTIONS BY REMOVING ALL PAINT AND CORROSION DOWN TO SHINY METAL. FOLLOWING CONNECTION, APPLY APPROPRIATE ANTI-OXIDIZATION PAINT.
- ANY SITE WHERE THE EQUIPMENT (BTS, CABLE BRIDGE, PPC, GENERATOR, ETC.) IS LOCATED WITHIN 6 FEET OF METAL FENCING, THE GROUND RING SHALL BE BONDED TO THE NEAREST FENCE POST USING (3) RUNS OF #2 BARE TINNED COPPER WIRE.



GROUND WELL, ROD, AND TEST WELL DETAIL

NOTE:
A LARGER CONDUCTOR SHALL BE REQUIRED IN AREAS HIGHLY PRONE TO LIGHTNING AND/OR AREAS W/HIGHLY ACIDIC SOIL

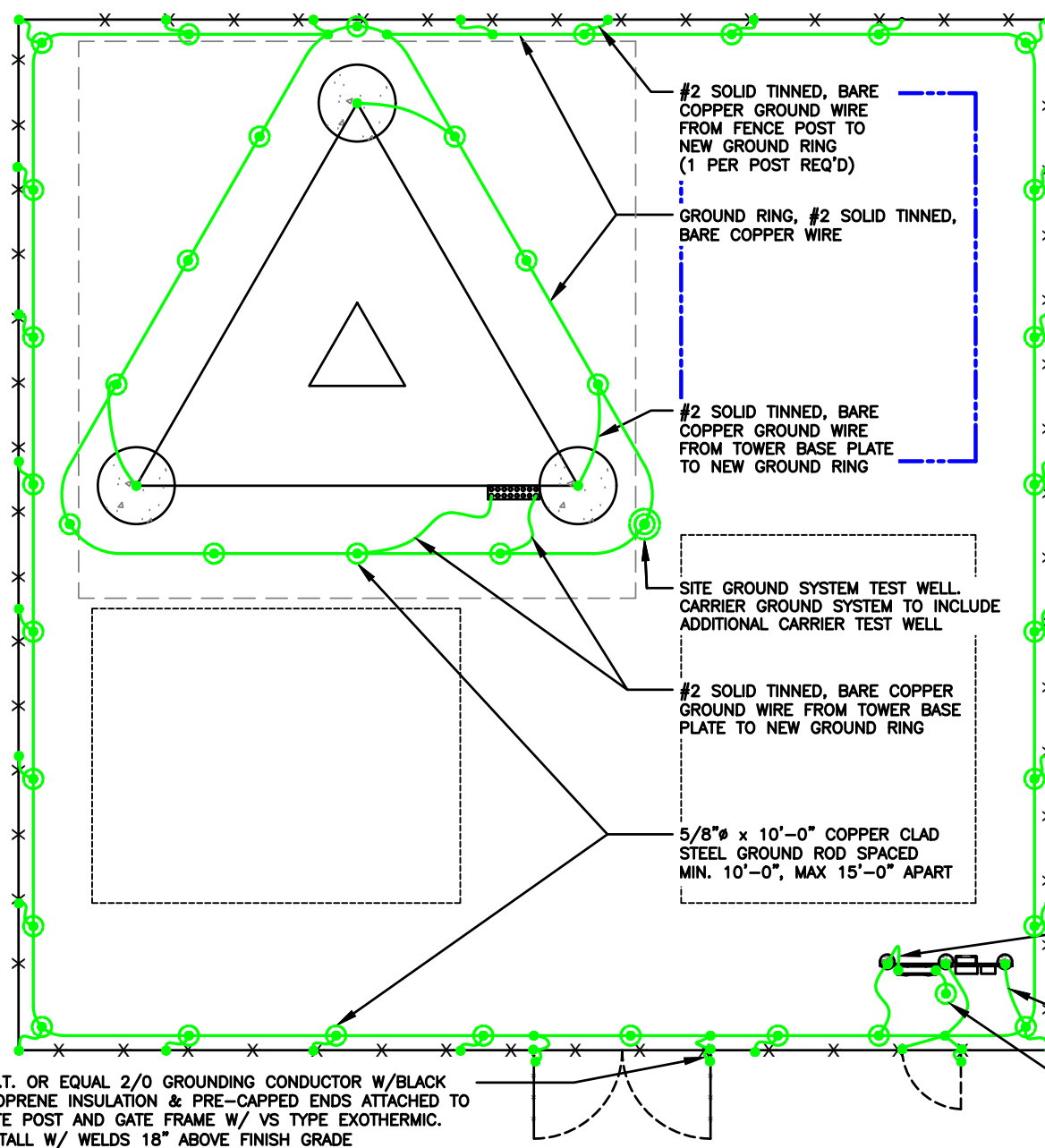
NOTE:
GROUND RODS MAY BE COPPER CLAD STEEL OR SOLID COPPER

NOTE:
GROUND RODS SHALL HAVE A RECOMMENDED SPACING TWICE THE LENGTH OF THE ROD

NOTE:
SEE RESISTIVITY REPORT FOR VERIFICATION AS AVAILABLE

NOTE:
GROUND RODS INSTALLED WITHIN CLOSE PROXIMITY TO TOWER OR WHEN SOIL IS AT OR BELOW 2,000 OHM-CM, SHALL BE GALVANIZED TO PREVENT GALVANIC CORROSION OF TOWER

SCALE
N.T.S. **2**



NOTE:
GROUNDING TO BE INSTALLED WITHIN 2'-0" OF FENCE LINE WHENEVER POSSIBLE

GROUNDING LEGEND

- MECHANICAL CONNECTION
- COMPRESSION FITTING CONNECTION
- EXOTHERMIC WELD CONNECTION
- 5/8"x10' COPPER-CLAD STEEL GROUND ROD
- 5/8"x10' COPPER-CLAD STEEL GROUND ROD WITH INSPECTION WELL
- NEW GROUND WIRING
- EXISTING GROUND WIRING
- TINNED COPPER GROUND BAR
- COLLECTOR GROUND BAR
- MAIN GROUND BAR

NOTE:
SEE COMPOUND PLAN FOR COMPOUND ORIENTATION, UTILITY H-FRAME, GATE AND TOWER LOCATION.

NOTE:
REFER TO SPECIFIC CARRIER EQUIPMENT GROUNDING PLAN FOR NEW CARRIER EQUIPMENT GROUNDING.

NOTE:
OBJECTIVE:

- RING AROUND TOWER WITH ALL TOWER LEGS GROUNDED, MONOPOLE SHALL HAVE AT LEAST TWO GROUNDS TO EARTH.
- CONNECTION TO FENCE POSTS AT ALL CORNERS OR CHANGES IN FENCE DIRECTION GREATER THE 45°.
- CONNECTIONS TO EACH SIDE OF ANY GATE POSTS.
- CONNECTIONS TO UTILITY H-FRAME.
- INSTALL ENOUGH GROUND RODS TO ENSURE 5 OHMS OR LESS RESISTANCE.

A.L.T. OR EQUAL 2/0 GROUNDING CONDUCTOR W/BLACK NEOPRENE INSULATION & PRE-CAPPED ENDS ATTACHED TO GATE POST AND GATE FRAME W/ VS TYPE EXOTHERMIC. INSTALL W/ WELDS 18" ABOVE FINISH GRADE

GROUNDING NOTES SCALE N.T.S. **3**

GROUNDING PLAN AND DETAILS

SCALE N.T.S. **1**

TILLMAN INFRASTRUCTURE Item 3.

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SITE NAME: **WHITWATER**
SITE ADDRESS:
1002 S JANESVILLE STREET
WHITWATER, WI 53190
FA#: **11655718**
FAA STUDY #: **2024-AGL-23880E**

SHEET TITLE
GROUNDING PLAN & DETAILS

SHEET NUMBER
G-1 219

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WHITEWATER, WI 53190
FA#: 11655718
FAA STUDY #: 2024-AGL-23880E

SHEET TITLE
GROUNDING PLAN & RISER DIAGRAM

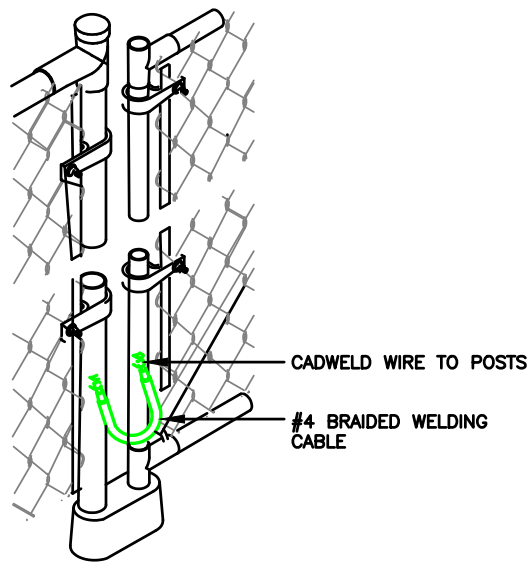
SHEET NUMBER

G-2

220

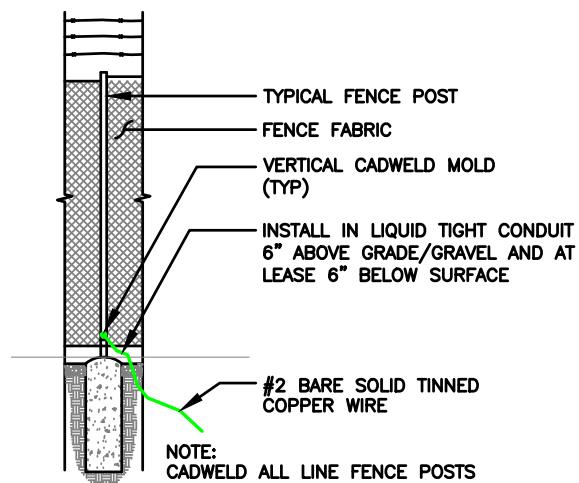
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SCALE
N.T.S. **2**



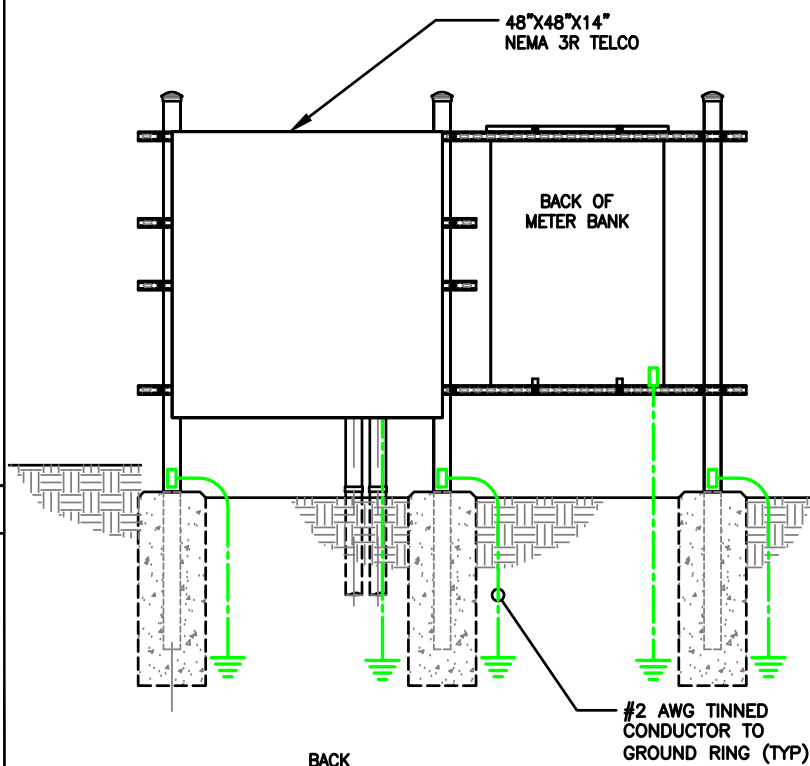
GATE GROUNDING DETAIL

SCALE
N.T.S. **4**



TYPICAL FENCE POST GROUNDING

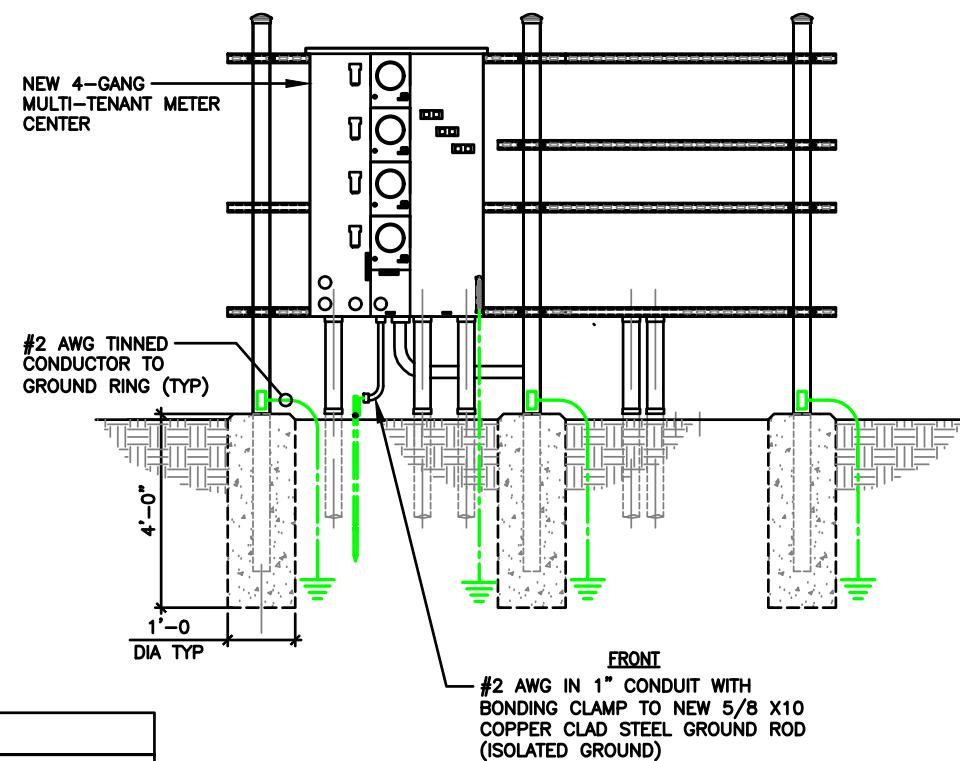
SCALE
N.T.S. **3**



GROUNDING LEGEND

	MECHANICAL CONNECTION		PROPOSED GROUND WIRING
	COMPRESSION FITTING CONNECTION		EXISTING GROUND WIRING
	EXOTHERMIC WELD CONNECTION		TINNED COPPER GROUND BAR
	5/8"x10' COPPER-CLAD STEEL GROUND ROD	CGB	COLLECTOR GROUND BAR
	5/8"x10' COPPER-CLAD STEEL GROUND ROD WITH INSPECTION WELL	MGB	MAIN GROUND BAR

H-FRAME GROUNDING

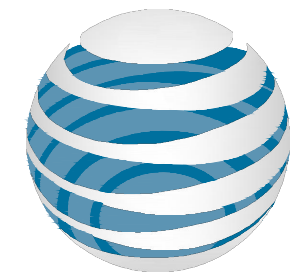
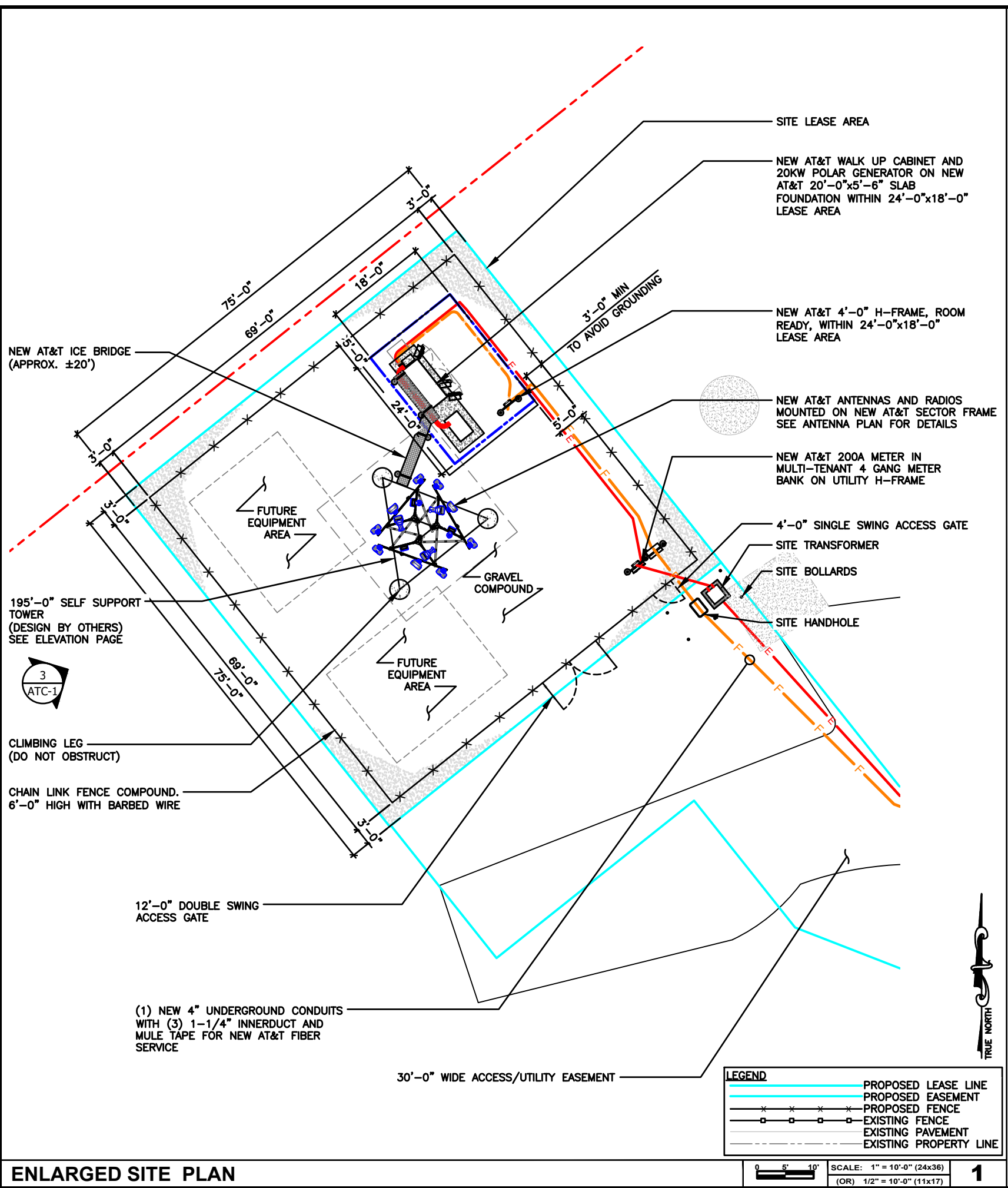


NOTE:

2 BOLT MECHANICAL LUG CONNECTION AT ALL EQUIPMENT GROUND POINT: ADD NON OX COMPOUND

SCALE
N.T.S. **1**

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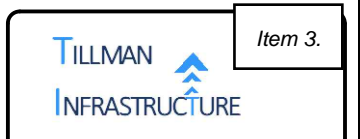
AT&T

AT&T SITE NUMBER: WI2696
AT&T SITE NAME: WHITEWATER
FA CODE: 11655718
SITE ADDRESS: 1002 S JANESVILLE STREET
WHITEWATER, WI 53190
TILLMAN SITE # TI-OPP-29018

SITE INFORMATION			
SITE ADDRESS:	1002 S JANESVILLE STREET WHITEWATER, WI 53190	LANDLORD OWNER:	HATCHETT ENTERPRISES LLC 1002 S JANESVILLE STREET WHITEWATER, WI 53190
LATITUDE (NAD 83):	42°49'08.8617"N (42.81912825°)	TOWER OWNER:	TILLMAN INFRASTRUCTURE 152 W. 57TH STREET NEW YORK, NEW YORK 10011
LONGITUDE (NAD 83):	88°45'13.7991"W (-88.75383307°)	STRUCTURE TYPE:	SELF SUPPORT TOWER
GROUND ELEVATION:	850.37' (AMSL)	STRUCTURE HEIGHT:	195'-0" (AGL)
JURISDICTION:	THE CITY OF WHITEWATER	TILLMAN SITE #:	TI-OPP-29018
ZONING:	N/A		
PARCEL/MAP NUMBER:	WUP 00341		

PROJECT TEAM	DRAWING INDEX
APPLICANT: TILLMAN INFRASTRUCTURE 152 W. 57TH STREET NEW YORK, NEW YORK 10019	AT-T-1 TITLE SHEET & OVERALL SITE PLAN AT-C-1 ELEVATION, ANTENNA PLAN AND SCHEDULE AT-C-2 WALK UP CABINET PAD DETAILS AT-C-2.1 WALK UP CABINET PAD DETAILS AT-C-3 CONSTRUCTION DETAILS AT-C-4 RRR, ANTENNA AND EQUIPMENT SPECIFICATIONS AT-E-1 ENLARGED UTILITY PLAN AT-E-2 ELECTRICAL PANEL SCHEDULE, DIAGRAM AND NOTES AT-E-3 DC/FIBER SYSTEM DIAGRAM AT-E-4 DC WIRING DIAGRAM AT-G-1 GROUNDING PLAN AND RISER DIAGRAM AT-G-2 GROUNDING DETAILS & NOTES
PROJECT MANAGEMENT FIRM: LCC TELECOM SERVICES 10700 HIGGINS ROAD, SUITE 240 ROSEMONT, IL 60018 (847) 608-6300	
ARCHITECT ENGINEERING: JOHN M. BANKS 604 FOX GLEN BARRINGTON, IL 60010 CONTACT: JOHN M. BANKS PHONE: (847) 277-0070 EMAIL: JBANKS@WESTCHESTERSERVICES.COM	

CODE COMPLIANCE
ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE LATEST EDITIONS OF THE FOLLOWING CODES.
<ul style="list-style-type: none"> 2023 WISCONSIN STATE BUILDING CODE 2023 WISCONSIN STATE ELECTRICAL CODE 2023 WISCONSIN STATE MECHANICAL CODE 2023 WISCONSIN STATE PLUMBING CODE 2023 WISCONSIN STATE FIRE CODE AMERICAN CONCRETE INSTITUTE AMERICAN INSTITUTE OF STEEL CONSTRUCTION MANUAL OF STEEL CONSTRUCTION 13TH EDITION ANSI/TIA-222-H TIA 607 INSTITUTE FOR ELECTRICAL & ELECTRONICS ENGINEERING 81 IEEE C2 NATIONAL ELECTRIC SAFETY CODE LATEST EDITION TELECORDIA GR-1275



WESTCHESTER SERVICES LLC

WI FIRM 4897-11

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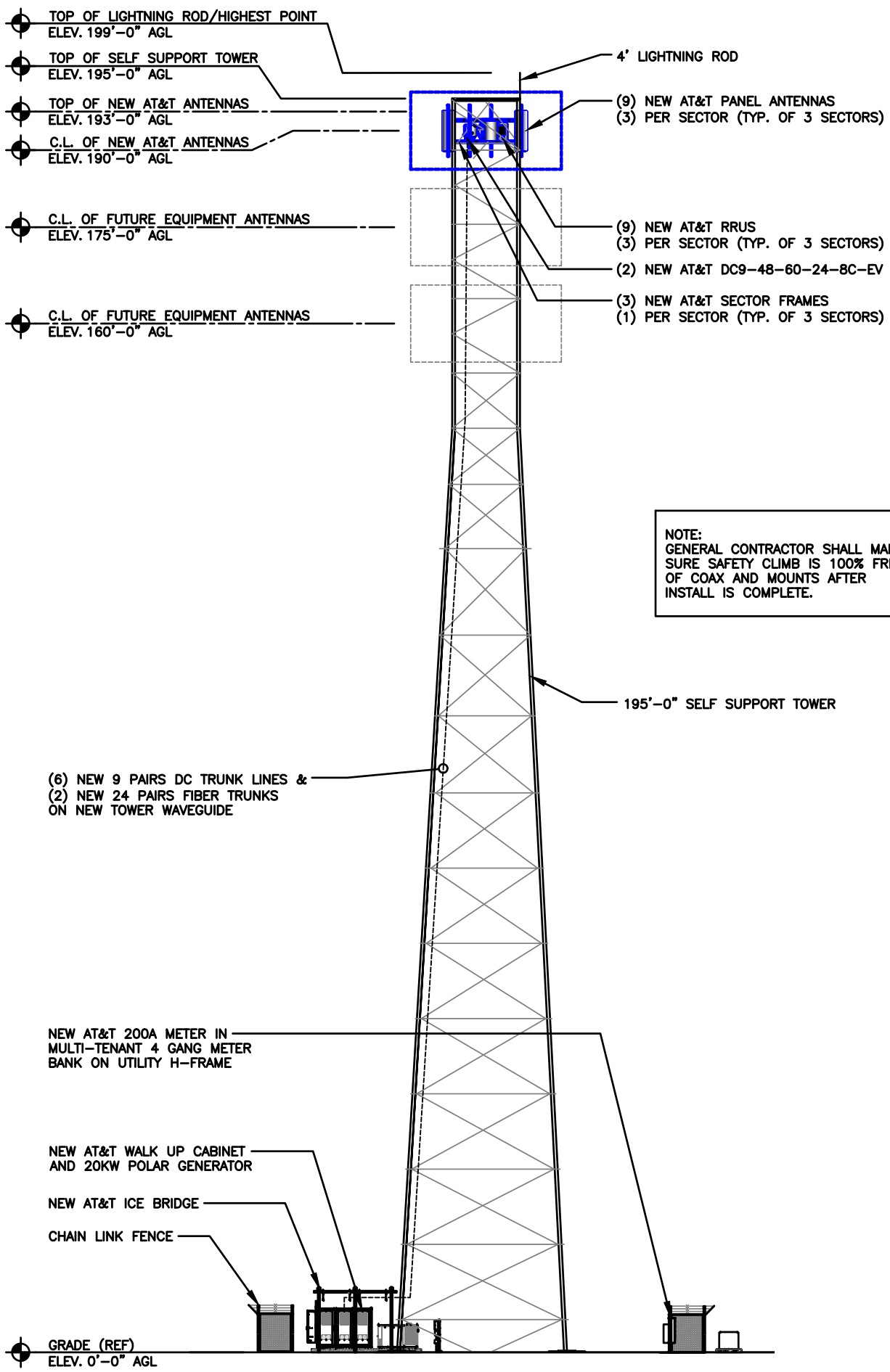
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SHEET TITLE
TITLE SHEET & OVERALL SITE PLAN

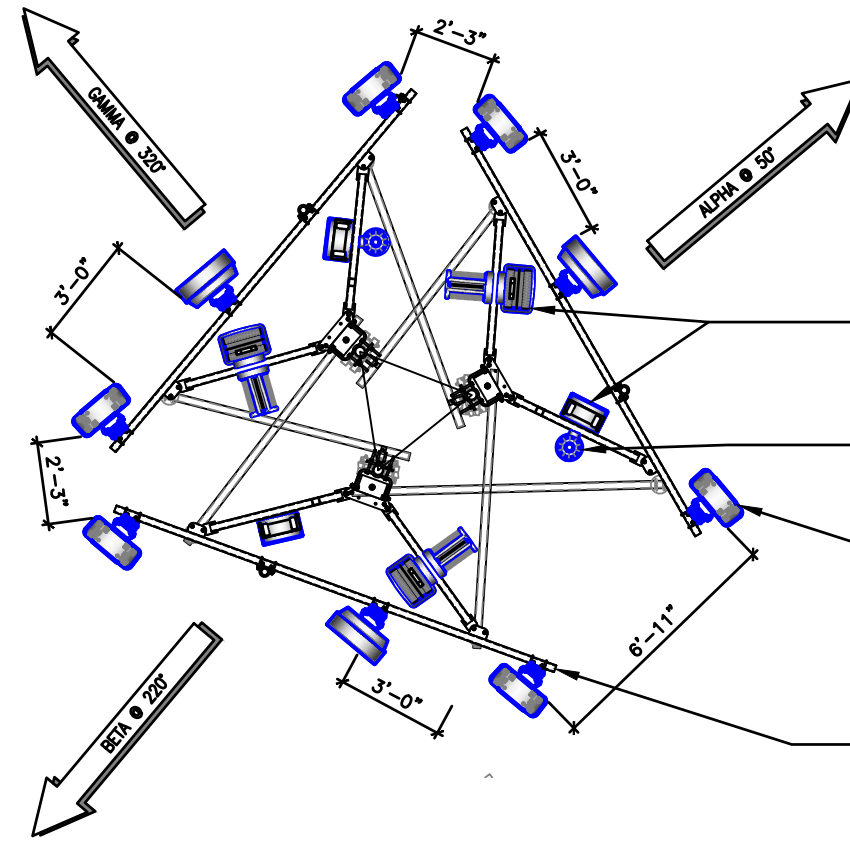
SHEET NUMBER
AT-T-1
 221

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ELEVATION

SCALE
N.T.S. **3**



NOTE:
ALL RADIOS MUST BE INSTALLED ON ANTENNA SECTOR FRAME ARM. DO NOT INSTALL DIRECTLY BEHIND ANTENNA.

ANTENNA LAYOUT (SELF SUPPORT)

SCALE
N.T.S. **2**

ANTENNA AND RRUH SCHEDULE BASED ON AT&T RFDS DATED: 04/24/23

SECTOR	ANTENNA	TECH	ANTENNA @ HEIGHT	AZIMUTH	RRU MODEL
ALPHA	COMMSCOPE ANTENNAS NNH4-65B-R6H4	LTE 700 5G 850 LTE 1900 5G 1900 5G AWS LTE AWS	190'-0"±	50°	RRUS 4449 B5/B12 RRUS 8843 B2/B66A
	ERICSSON AIR 6449 B77D	5G CBAND	190'-0"±	50°	-
	EMPTY	-	-	-	-
BETA	COMMSCOPE ANTENNAS NNH4-65B-R6H4	LTE 700	190'-0"±	50°	RRUS 4478 B14
	COMMSCOPE ANTENNAS NNH4-65B-R6H4	LTE 700 5G 850 LTE 1900 5G 1900 5G AWS LTE AWS	190'-0"±	220°	RRUS 4449 B5/B12 RRUS 8843 B2/B66A
	ERICSSON AIR 6449 B77D	5G CBAND	190'-0"±	220°	-
GAMMA	COMMSCOPE ANTENNAS NNH4-65B-R6H4	LTE 700 5G 850 LTE 1900 5G 1900 5G AWS LTE AWS	190'-0"±	320°	RRUS 4449 B5/B12 RRUS 8843 B2/B66A
	ERICSSON AIR 6449 B77D	5G CBAND	190'-0"±	320°	-
	COMMSCOPE ANTENNAS NNH4-65B-R6H4	-	190'-0"±	320°	RRUS 4478 B14

CABLE COUNT

QUANTITY	CABLE TYPE
6	6 CONDUCTOR (3 PR) 3/4" DC CABLE
2	36 FIBER (24 PR) 10MM FIBER
2	DC9 SQUIDS

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FAA STUDY #: 2024-AGL-23880E

SHEET TITLE
ELEVATION, ANT.
PLAN & SCHEDULE

SHEET NUMBER
AT-C-1 222

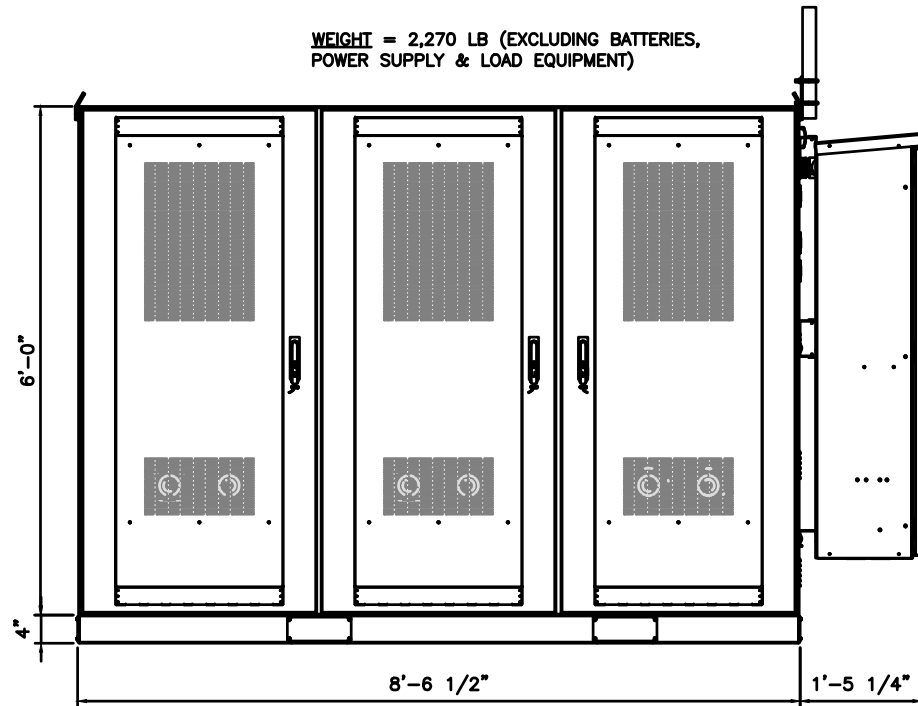
ANTENNA AND RRUH SCHEDULE

SCALE
N.T.S. **1**

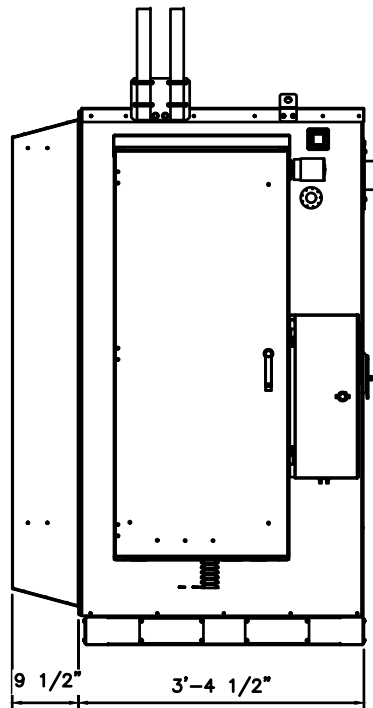


DRAWN BY: DWM
CHECKED BY: MC

WEIGHT = 2,270 LB (EXCLUDING BATTERIES, POWER SUPPLY & LOAD EQUIPMENT)



FRONT VIEW



SIDE VIEW

NOTE:
ALL CONDUIT FROM BELOW GRADE TO ABOVE GRADE
MUST INCLUDE FROST SLEEVES TO PREVENT FROST
DAMAGE TO CONDUIT OR EQUIPMENT.

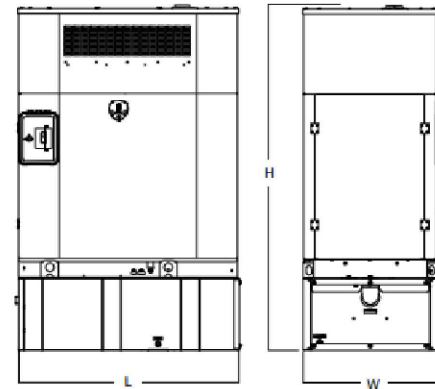
SDC020 | 2.2L | 20 kW

INDUSTRIAL DIESEL GENERATOR SET

EPA Certified Stationary Emergency



DIMENSIONS AND WEIGHTS*



COMPACT VARIANT

Run Time - Hours	Usable Capacity - Gal (L)	L x W x H - in (mm)	Weight - lbs (kg)
No Tank	-	56.0 (1,422) x 34.5 (876) x 68.9 (1,749)	1,465 (664)
31.9	51 (193)	56.0 (1,422) x 34.5 (876) x 87.3 (2,215)	1,914 (868)
64.4	103 (390)	56.0 (1,422) x 34.5 (876) x 99.1 (2,515)	2,090 (948)

GENERAC 20KW NEQ.53187

OPERATING DATA

POWER RATINGS

	Standby
Single-Phase 120/240 VAC @1.0pf	20 kW, 20 kVA Amps: 83
Three-Phase 120/208 VAC @0.8pf	20 kW, 25 kVA Amps: 70
Three-Phase 120/240 VAC @0.8pf	20 kW, 25 kVA Amps: 60
Three-Phase 277/480 VAC @0.8pf	20 kW, 25 kVA Amps: 30

MOTOR STARTING CAPABILITIES (skVA)

skVA vs. Voltage Dip					
120/240 VAC 1Ø	30%	277/480 VAC 3Ø	30%	208/240 VAC 3Ø	30%
A0035044N26	50	K0035124Y26	68	K0035124Y26	50

FUEL CONSUMPTION RATES*

Fuel Pump Lift- ft (m)	Diesel - gph (Lph)	
	Percent Load	Standby
3 (1)	25%	0.6 (2.1)
	50%	0.9 (3.5)
	75%	1.3 (4.8)
	100%	1.6 (6.2)
Total Fuel Pump Flow (Combustion + Return) - gph (Lph)	16.6 (63)	

* Fuel supply installation must accommodate fuel consumption rates at 100% load.

COOLING

	Standby
Air Flow (Fan Air Flow Across Radiator) - Compact	cfm (m³/min) 1,653 (46.8)
Coolant Flow	gpm (Lpm) 15.5 (58.7)
Coolant System Capacity	gal (L) 4.2 (16.0)
Heat Rejection to Coolant	BTU/hr (kW) 76,090 (22.3)
Inlet Air	cfm (m³/min) 1,714 (48.5)
Maximum Operating Ambient Temperature	°F (°C) 120 (50)
Maximum Operating Ambient Temperature (Before Derate)	See Bulletin No. 0199280SSD
Maximum Additional Radiator Backpressure	in H ₂ O (kPa) 0.5 (0.12)

COMBUSTION AIR REQUIREMENTS

Standby	
Flow at Rated Power - cfm (m³/min)	61.4 (1.7)

ENGINE

	Standby
Rated Engine Speed	RPM 1,800
Horsepower at Rated kW**	hp 32.5
Piston Speed	ft/min (m/min) 1,182 (360)
BMEP	psi (kPa) 105.8 (729.4)

EXHAUST

	Standby
Exhaust Flow (Rated Output)	cfm (m³/min) 160.4 (4.5)
Maximum Allowable Backpressure	inHg (kPa) 40.9 (138.5)
Exhaust Temperature (Rated Output)	°F (°C) 950 (510)

** Refer to "Emissions Data Sheet" for maximum bHP for EPA and SCAQMD permitting purposes.



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EXPIRE DATE: 06/30/25

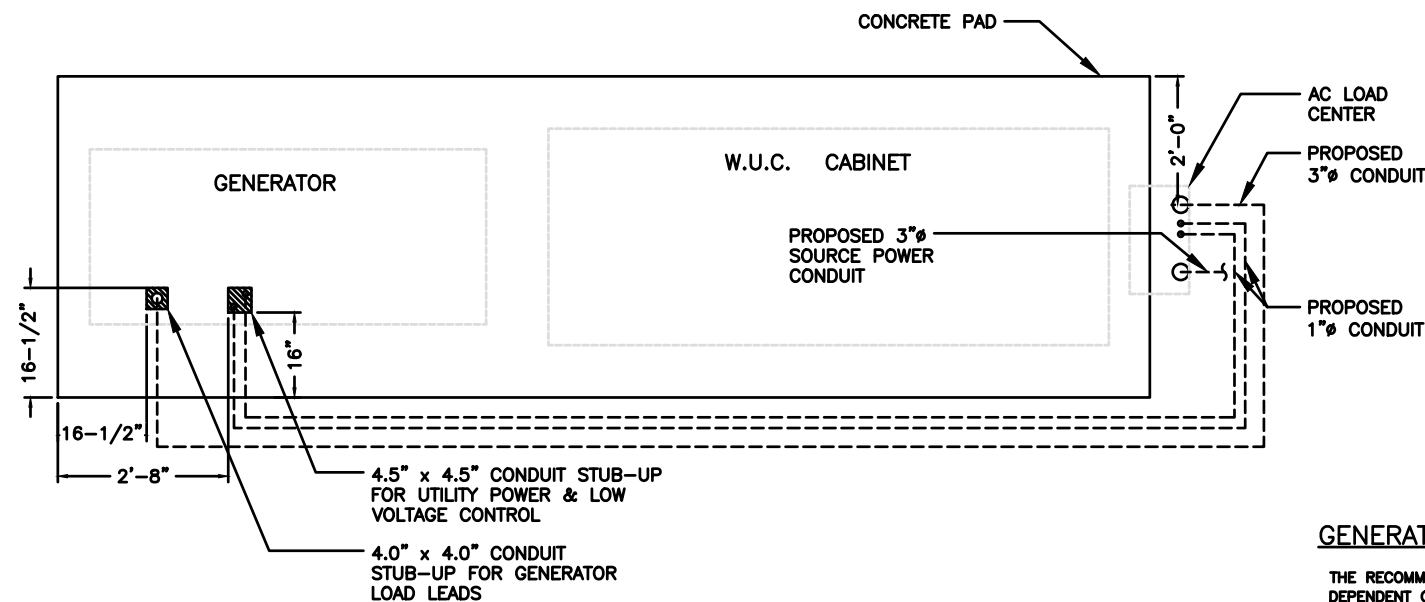
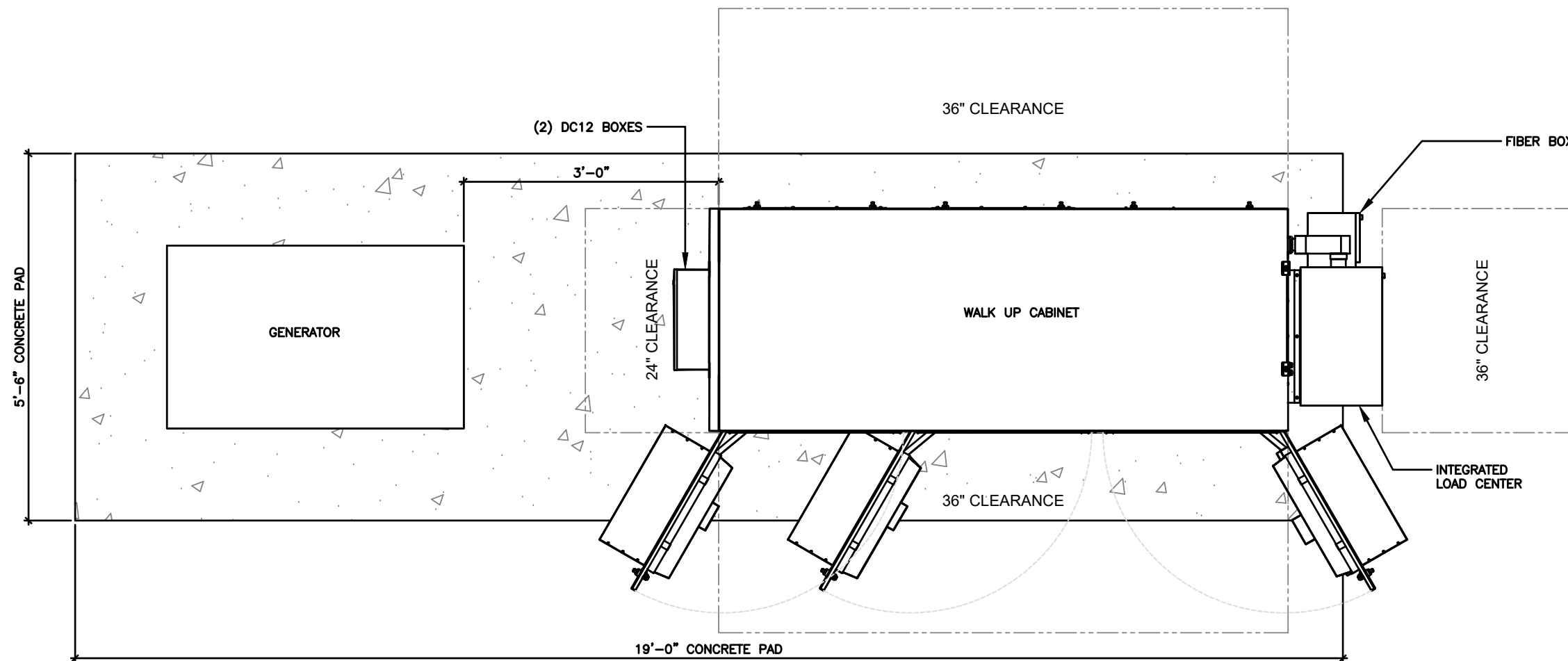
AT&T SITE # W12696
AT&T SITE NAME: WHITEWATER
FA # 11655718
SITE ADDRESS:
1002 S JANESVILLE STREET
WHITEWATER, WI 53190
FAA STUDY #: 2024-AGL-23880E

SHEET TITLE
**WALK UP CABINET
PAD DETAILS**

SHEET NUMBER
AT-C-2 223

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NOTE:
ALL CONDUIT FROM BELOW GRADE TO ABOVE GRADE MUST INCLUDE FROST SLEEVES TO PREVENT FROST DAMAGE TO CONDUIT OR EQUIPMENT.

GENERATOR INSTALLATION GUIDELINES:

- 1) EXHAUST IS AIMED AWAY FROM OR PARALLEL TO THE STRUCTURE.
- 2) EXHAUST IS NOT DIRECTED AT PLAY AREAS, PATIOS OR OTHER AREAS WHERE PEOPLE CONGREGATE.
- 3) THE NEAREST WINDOW, VENT, DOOR OR SIMILAR STRUCTURE OPENING IS AT LEAST 5 FEET FROM THE EXHAUST END OF THE SET.
- 4) SET HAS PROPER OFFSET FROM STRUCTURE.
- 5) WINDOWS & DOORS ON ADJACENT WALLS ARE CLOSED.
- 6) FURNACE AND OTHER SIMILAR INTAKES ARE AT LEAST 10 FEET FROM EXHAUST END OF SET.
- 7) 12" THICK CONCRETE PAD EXTENDING 6" BEYOND GENSET ON ALL SIDES.
- 8) WEED BARRIER & GRAVEL BED TO EXTEND 4 FT. FROM EXHAUST OUTLET. NO PLANTS, SHRUBS OR OTHER COMBUSTIBLES ALLOWED IN GRAVEL AREA.
- 9) SENSITIVE PLANTS, PATIO FURNITURE, ETC. ARE AT LEAST 8 FEET FROM EXHAUST END OF SET.
- 10) REFER TO OWNERS MANUAL FOR OTHER INSTALLATION CONSTRAINTS.

GENERATOR NOTES:

THE RECOMMENDED DISTANCE FROM A STRUCTURE IS DEPENDENT ON STATE AND LOCAL CODES. NFPA 37 (STANDARDS FOR THE INSTALLATION AND USE OF STATIONARY COMBUSTION ENGINES AND GAS TURBINES) STATES THIS DISTANCE SHOULD BE AT LEAST 5 FEET FROM A COMBUSTIBLE MATERIAL. FOR IN STALLATIONS NEAR NON-COMBUSTIBLE MATERIAL BE SURE TO LEAVE A MINIMUM DISTANCE OF 3 FEET TO ENSURE PROPER GENERATOR COOLING.

TILLMAN INFRASTRUCTURE Item 3.

AT&T mobility corp.

LCC TELECOM SERVICES

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DRAWN BY: DWM
CHECKED BY: MC

REV	DATE	DESCRIPTION
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B	03/06/24	PRELIMINARY CD

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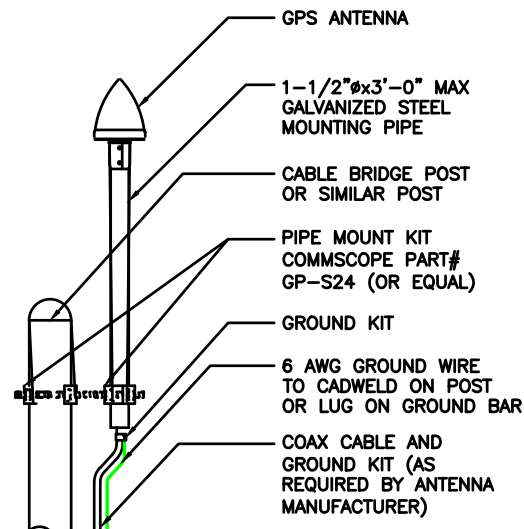
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FAA STUDY #: 2024-AGL-23880E

SHEET TITLE
WALK UP CABINET
PAD DETAILS

SHEET NUMBER
AT-C-2 224

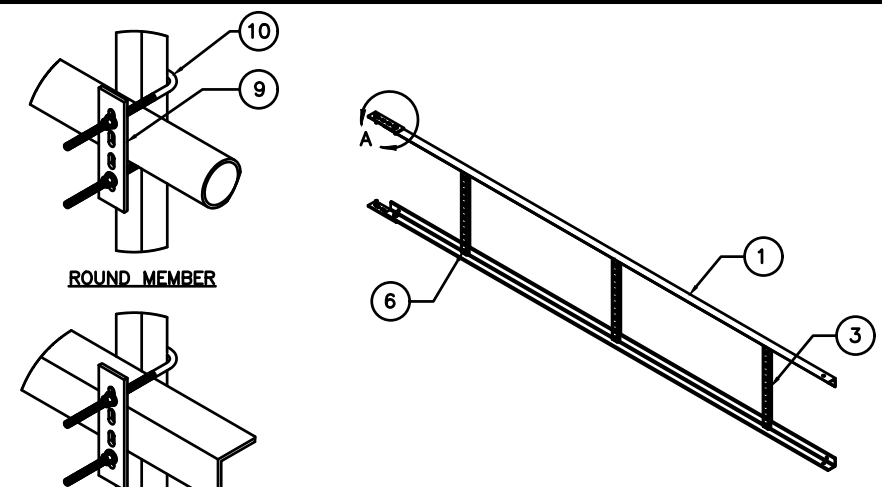
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GPS ANTENNA DETAIL

SCALE
N.T.S.

5

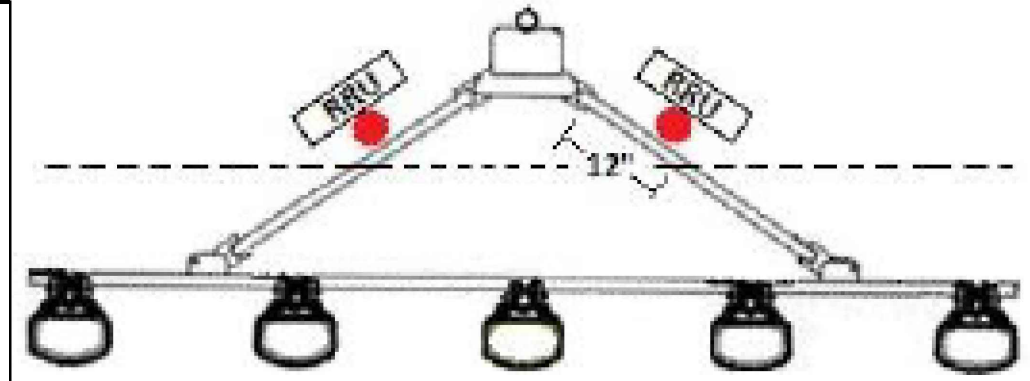


ITEM	PART NO.	DESCRIPTION	QTY.	WEIGHT
1	CL20.01	20" ANGLE SIDE RAIL	2	49.38 LBS
2	CL0620UH	HARDWARE KIT (ITEMS 3-10)	1	-
3	CL06R.01	20" LADDER RUNG	6	1.69 LBS
4	CL20H	HARDWARE KIT (ITEMS 5-7)	1	-
5	HKCLU.02	BACKING PLATE	2	0.95 LBS
6	GB-03145	3/8" X 1-1/2" GALV BOLT KIT	16	0.07 LBS
7	GW-03	3/8" GALV FLAT WASHER	4	0.01 LBS
8	HKCLU	LADDER HARDWARE KIT (ITEMS 9-10)	2	-
9	HKCLU.02	BACKING PLATE	4	0.95 LBS
10	JB-8K	8" GALV J-BOLT	8	0.36 LBS

CABLE LADDER DETAIL SABRE # C20128021DP

SCALE
N.T.S.

3

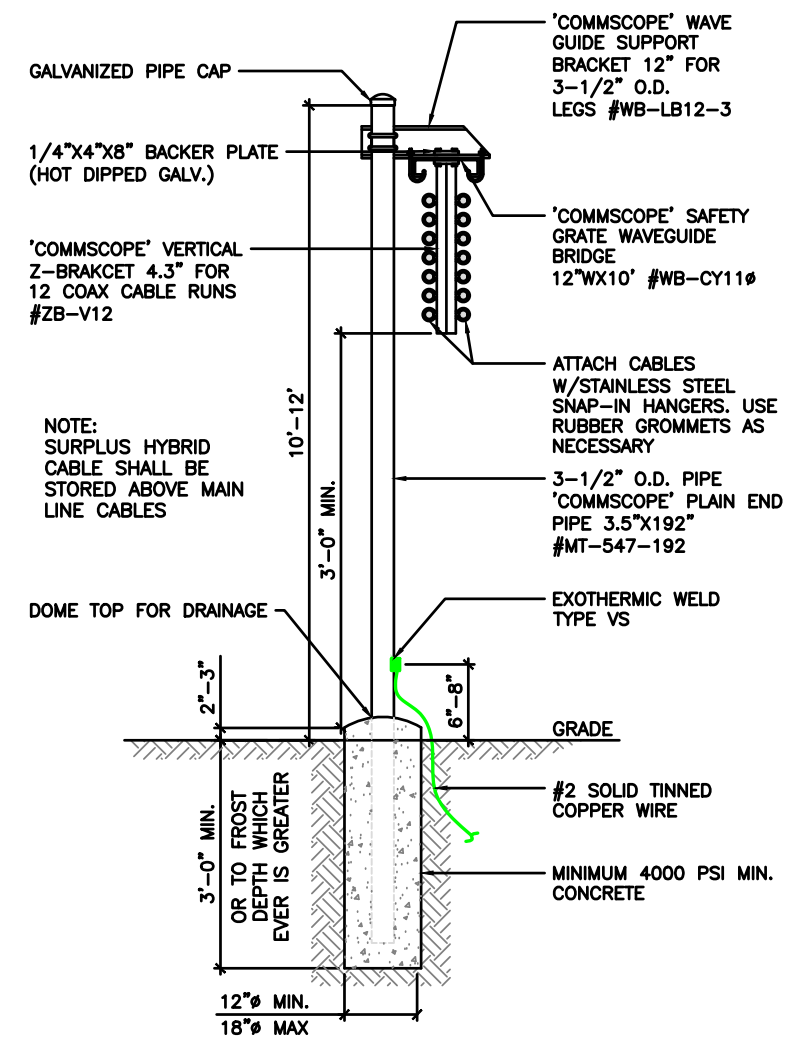


NOTE:
FIGURE 1: A SECTOR FRAME IS SHOWN WITH A MAST PIPE (RED) ATTACHED TO THE UPPER AND LOWER STANDOFF ARMS, USING CROSSOVER PLATES. THE MAST PIPE, USED AS AN RRU MOUNTING PIPE, IS WITHIN 12 INCHES OF THE CONNECTION POINT TO THE LEG (NOT TO SCALE). FOR MEASUREMENT PURPOSES, THE CONNECTION POINT IS CONSIDERED TO BEGIN WHERE THE STANDOFF ARM MEETS THE CONNECTION ASSEMBLY.

RRH MOUNTING DETAIL

SCALE
N.T.S.

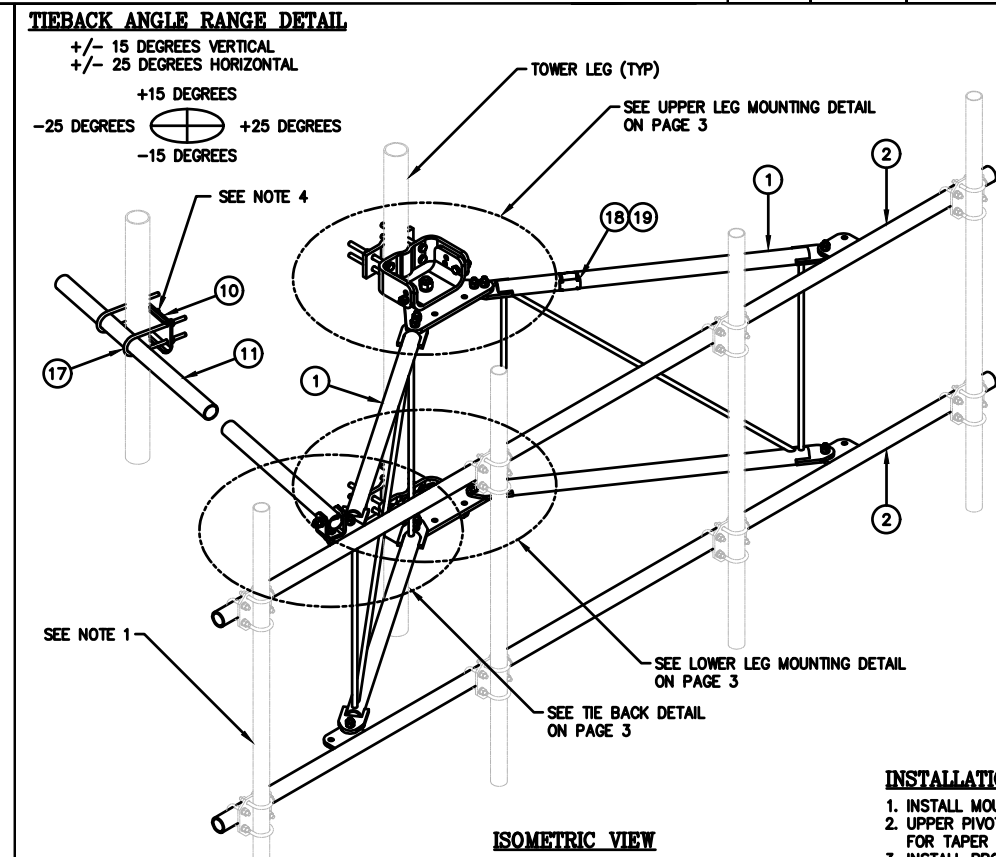
2



ICE BRIDGE DETAIL

SCALE
N.T.S.

4



NOTES:
1. MOUNTING PIPES & CROSSOVER PLATE KITS MUST BE PURCHASED SEPARATELY.
2. QUANTITIES SHOWN IN LISTS OF MATERIAL ARE FOR ONE (1) V-BOOM ONLY.
3. THIS V-BOOM WILL MOUNT TO THE FOLLOWING: 1 1/2" TO 5 9/16" ROUND LEG.
4. TIEBACK MUST BE CONNECTED TO A RIGID MEMBER THAT PROVIDES ADEQUATE SUPPORT WITHIN THE LIMITS NOTED ABOVE IN THE TIEBACK ANGLE RANGE DETAIL UNLESS APPROVED BY THE ENGINEER OF RECORD.

ANTENNA FRAME DETAIL (FOR REFERENCE ONLY)

C10857001C 12' HD V-BOOM ASSEMBLY W/TIEBACK				
ITEM	QTY.	PART NO.	DESCRIPTION	WEIGHT
1.	2	CW01222	WELDMENT, STANDOFF ARM	126
2.	2	CW01223	WELDMENT, FACE PIPE	147
3.	2	CS03109	PLATE, ROTATING	34
4.	1	CS03110	PLATE, PIVOTING (UPPER)	16
5.	1	CS03111	PLATE, LEG CLAMP (UPPER)	17
6.	1	CS03112	PLATE, PIVOTING (LOWER)	14
7.	1	CS03113	PLATE, LEG CLAMP (LOWER)	17
8.	2	CS03114	PLATE, LEG CLAMP (BACK)	14
9.	1	CS00098	PLATE, TIE BACK SWIVEL	3
10.	1	CS03285	PLATE, TIE BACK CLAMP	4
11.	1	CS03333	PIPE, TIE BACK	38
12.	2	C40026073	BOLT ASSEMBLY, 1" X 3 A325	4
13.	8	C40140004	BOLT ASSEMBLY, 5/8" X 8 A307	13
14.	1	C40026033	BOLT ASSEMBLY, 5/8" X 4 1/2 A325	1
15.	12	C40026025	BOLT ASSEMBLY, 5/8" X 2 1/2 A325	6
16.	5	C40026024	BOLT ASSEMBLY, 5/8" X 2 1/4 A325	3
17.	2	C40034183	U-BOLT ASSEMBLY, 1/2" X 2 15/16 C-C	3
18.	1	Z30992001	MOUNT CLASSIFICATION TAG C10857001C	1
19.	2	C40062103	STAINLESS STEEL SELF-LOCKING CABLE TIE	1
TOTAL WEIGHT				462

PACKAGING NOTE
CK00386 INCLUDES ITEMS 1, 3, 4, 5, 6, 7, 12 & 15 (8 QTY)
CK00387-HDW INCLUDES ITEMS 8, 9, 10, 13, 14, 15 (4 QTY), 16, 17, 18 & 19
CK00387-STL INCLUDES ITEMS 2 & 11

INSTALLATION NOTES:
1. INSTALL MOUNT TO TOWER AS SHOWN, SO THAT WELDED STANDOFF DIAGONAL IS SLOPING DOWNWARD FROM TOWER END TO FACE PIPE END.
2. UPPER PIVOTING PLATE (ITEM 4) HAS THREE HOLES ON EACH SIDE AND UPPER LEG CLAMP PLATE (ITEM 5) HAS TWO HOLES ON EACH SIDE FOR TAPER ADJUSTMENT.
3. INSTALL PRODUCT EXACTLY AS SHOWN IN DRAWING, WITH ALL BOLTS FACING UPWARDS.

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS INCLUDE FINISHES AND ARE IN INCHES		MATERIAL:	
TOLERANCES: FRACTIONS ± 1/16"		TOLERANCES DO NOT APPLY TO RAW MATERIAL	
ANGLES ± 1/2 DEG.			
DECIMALS ± .010"			
Sabre Industries Towers and Poles			
CONFIDENTIAL			
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REV	DATE	DESCRIPTION	
4	08/11/17	TIEBACK ANGLE RANGE DETAIL	
3	10/29/16	INSTALLATION NOTES	
2	08/05/16	INSTALLATION NOTES	
1	01/21/16	TIEBACK ANGLE RANGE DETAIL	

12' HD V-BOOM ASSEMBLY W/TIEBACK (3' STANDOFF) W/NO ANTENNA MOUNTING PIPES			
DATE	12/22/15	SIZE	B
DRAWN BY	WRF	DRAWING NO.	C10857001C
CHECKED BY	EK	REV	4
SCALE	None	PAGE	1 OF 3
SCALE	N.T.S.		1



Item 3.



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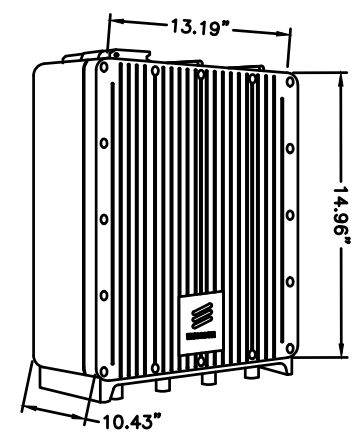
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SITE ADDRESS:
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WHITEWATER, WI 53190
FAA STUDY #: 2024-AGL-23880E

SHEET TITLE
CONSTRUCTION DETAILS

SHEET NUMBER
AT-C-225

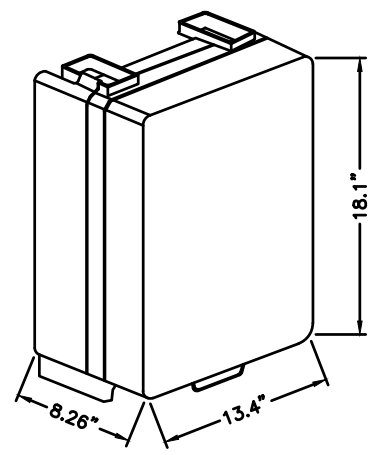
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MANUFACTURER: ERICSSON
 MODEL NO.: RRUS 4449 B5/B12
 WEIGHT: 73.0 LBS
 CONNECTOR TYPE: 4.3-10 FEMALE



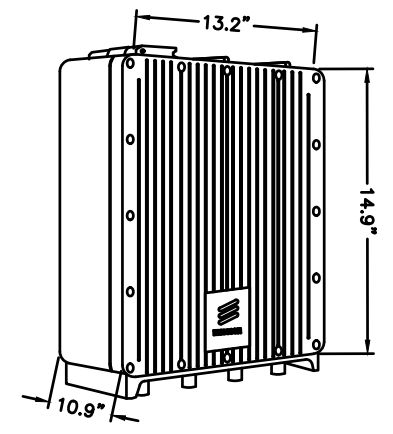
REMOTE RADIO HEAD DETAIL 7

MANUFACTURER: ERICSSON
 MODEL NO.: RRUS 4478 B14
 WEIGHT: 59.4 LBS
 CONNECTOR TYPE: 4.3-10 FEMALE



REMOTE RADIO HEAD DETAIL 6

MANUFACTURER: ERICSSON
 MODEL NO.: RRUS 8843 B2/B66a
 WEIGHT: 72.0 LBS
 CONNECTOR TYPE: 4.3-10 FEMALE



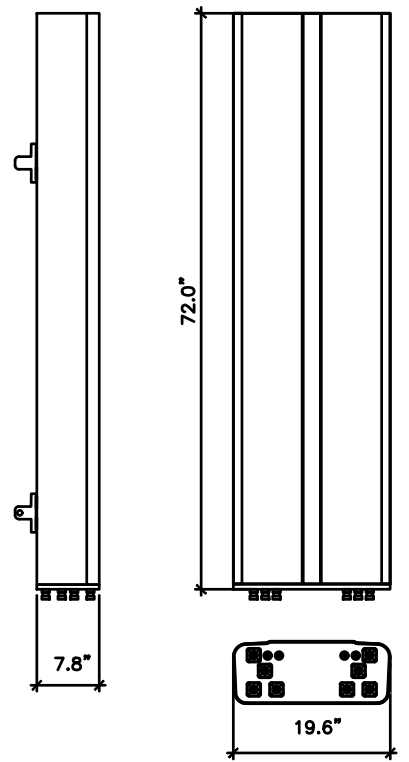
REMOTE RADIO HEAD DETAIL 5

GENERAL LABELING REQUIREMENTS

1. USE ENGRAVED PHENOLIC LABELS, P-TOUCH (OR EQUIVALENT) LABELS (MUST USE HEAVY ADHESIVE LABELS), OR OTHER MARKET APPROVED LABEL SYSTEM
2. OUTDOOR LABELS MUST BE RATED FOR UV EXPOSURE, BE FADE RESISTANT AND SUITED FOR OUTDOOR SERVICE (WATERPROOF)
3. LABEL TEXT
 - ARIAL FONT
 - MIN. WITH 1/2"
 - TEXT IS TO BE SINGLE LINE AND AS LARGE AS WILL FIT ON LABEL
4. P-TOUCH TYPE LABELS SHOULD BE "STRONG ADHESIVE" TYPE AND BE WHITE WITH BLACK TEXT
5. PHENOLIC LABELS NEED TO BE BLACK WITH ENGRAVED WHITE LETTERING
6. LABELS MUST BE PRINTED OR ENGRAVED NOT HANDWRITTEN

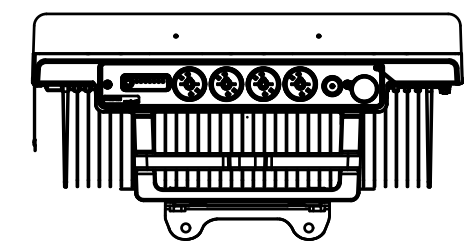
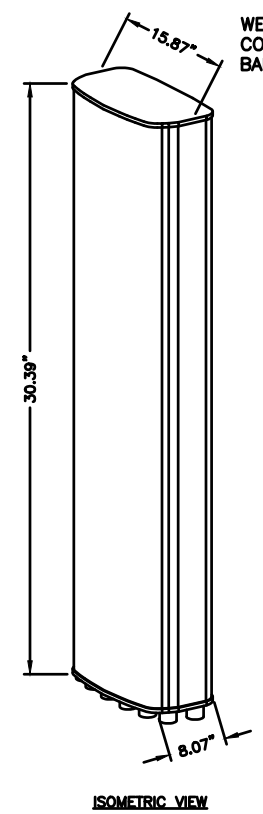
LABEL NOTES

COMMSCOPE ANTENNAS NNH4-65B-R6
 DIMENSIONS, HXWXD: 72.0"x19.6"x7.8"
 SURVIVAL WIND SPEED: >150 MPH
 WEIGHT, WITHOUT MOUNTING: 82.0 LBS. (37.2 kg)
 CONNECTOR POSITION: BOTTOM



ANTENNA DETAIL 4

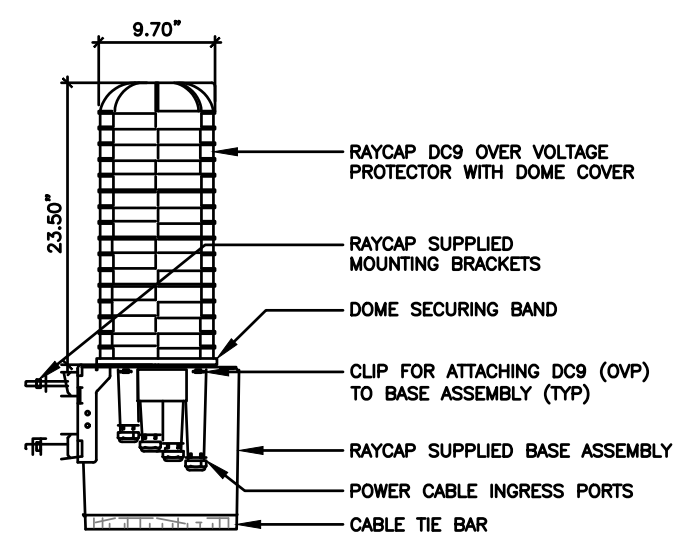
ERICSSON AIR ANTENNA 6449_B77D
 DIMENSIONS, HXWXD: 30.4"x15"x18"
 SURVIVAL WIND SPEED: >150 MPH
 WEIGHT, WITHOUT MOUNTING: 81.6 LBS.
 CONNECTOR POSITION: BOTTOM
 BAND: MULTI



ISOMETRIC VIEW

BOTTOM VIEW

C BAND ANTENNA DETAIL 2



RAYCAP DC9-48-60-24-8C-EV (SQUID) 3

TILLMAN INFRASTRUCTURE Item 3.

AT&T mobility corp.

LCC TELECOM SERVICES

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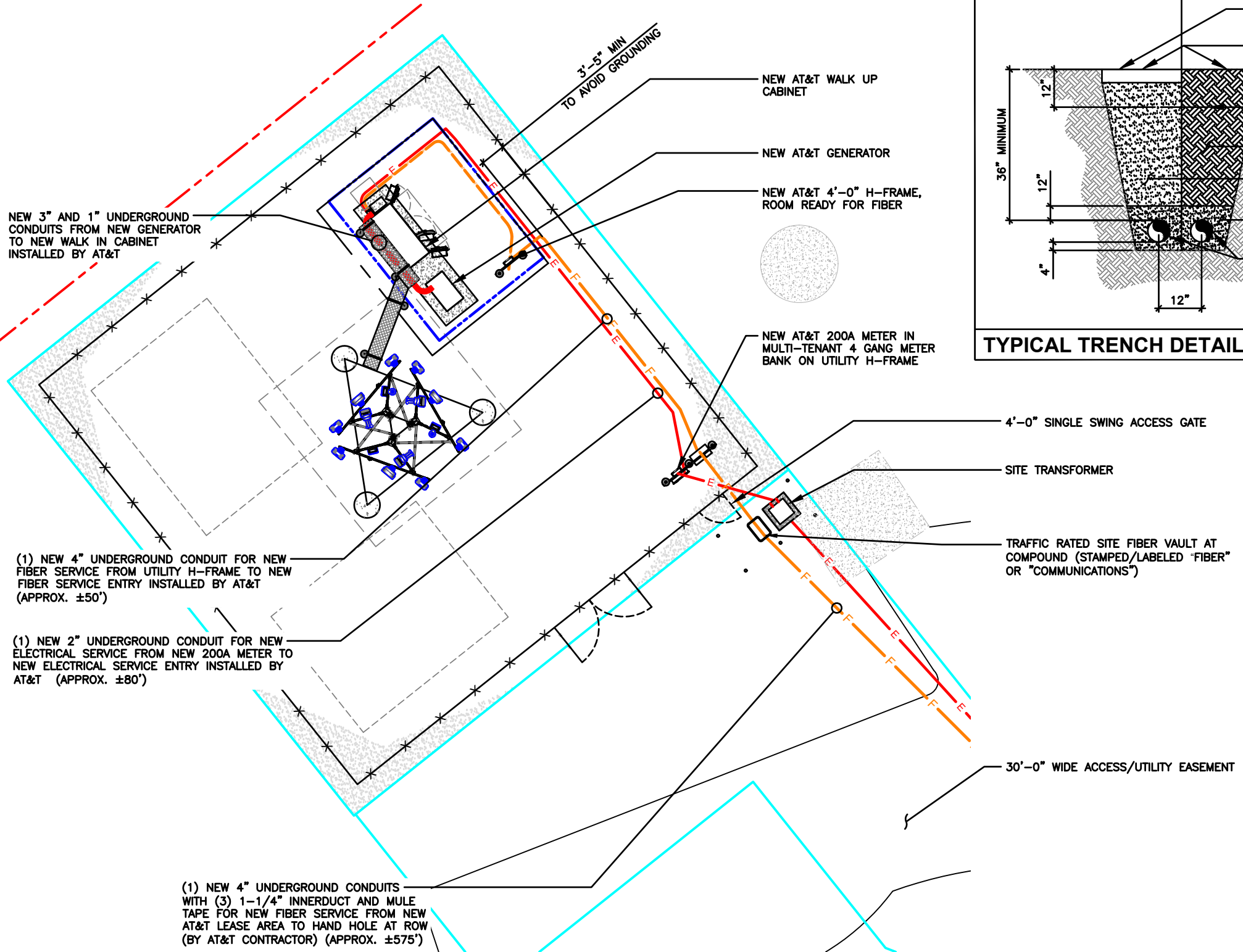
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 FA # 11655718
 SITE ADDRESS:
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 WHITEWATER, WI 53190
 FAA STUDY #: 2024-AGL-23880E

SHEET TITLE
RRH, ANTENNA & EQUIPMENT SPECS.

SHEET NUMBER
AT-C-4 226

NOTE:
ALL CONDUIT FROM BELOW GRADE TO ABOVE GRADE MUST INCLUDE FROST SLEEVES TO PREVENT FROST DAMAGE TO CONDUIT OR EQUIPMENT.



NEW 3" AND 1" UNDERGROUND CONDUITS FROM NEW GENERATOR TO NEW WALK IN CABINET INSTALLED BY AT&T

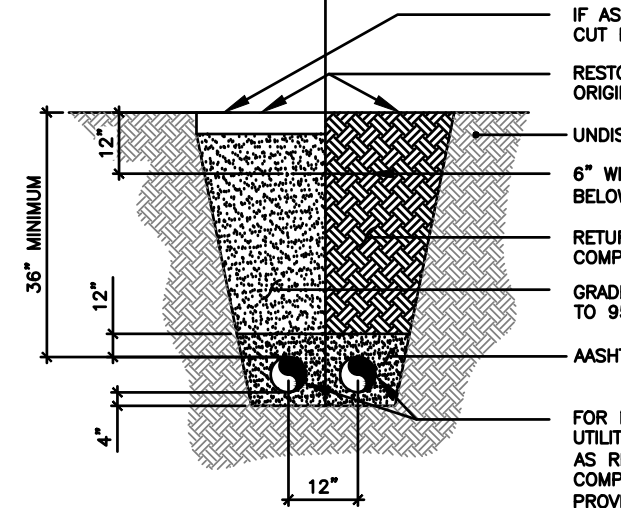
(1) NEW 4" UNDERGROUND CONDUIT FOR NEW FIBER SERVICE FROM UTILITY H-FRAME TO NEW FIBER SERVICE ENTRY INSTALLED BY AT&T (APPROX. ±50')

(1) NEW 2" UNDERGROUND CONDUIT FOR NEW ELECTRICAL SERVICE FROM NEW 200A METER TO NEW ELECTRICAL SERVICE ENTRY INSTALLED BY AT&T (APPROX. ±80')

(1) NEW 4" UNDERGROUND CONDUITS WITH (3) 1-1/4" INNERDUCT AND MULE TAPE FOR NEW FIBER SERVICE FROM NEW AT&T LEASE AREA TO HAND HOLE AT ROW (BY AT&T CONTRACTOR) (APPROX. ±575')

USE THIS SECTION UNDER PAVEMENT OR VEHICLE TRAFFIC AREA

USE THIS SECTION UNDER GRASS OR LAWN AREA



TYPICAL TRENCH DETAIL

SCALE
N.T.S. **2**

NOTE:
1. EXCAVATE EXISTING SUBGRADE AS REQUIRED TO INSTALL CONDUITS IN ACCORDANCE WITH OSHA AND ALL APPLICABLE CODES.

IF ASPHALT OR CONCRETE SAW CUT FULL DEPTH OF PAVEMENT
RESTORE SURFACE TO ORIGINAL CONDITION
UNDISTURBED SOIL
6" WIDE UTILITY WARNING TAPE (8"-12" BELOW GRADE) ENTIRE LENGTH OF TRENCH
RETURN ORIGINAL MATERIAL TO TRENCH, COMPACT TO 95% STANDARD PROCTOR
GRADE 9 (CA-6) GRAVEL COMPACTED TO 95% STANDARD PROCTOR
AASHTO #10 DUST

FOR NEW ELECTRICAL, TELEPHONE, OR FIBER SERVICES—SEE UTILITY AND SITE PLANS. PROVIDE APPROVED PULL BOXES AS REQUIRED AND COORDINATE INSTALLATION W/ALL UTILITY COMPANIES FOR INTERFACING AT TERMINATION POINTS. PROVIDE FULL LENGTH ROPES (TYP.)

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ENLARGED UTILITY PLAN



Know what's below.
Call before you dig.

LEGEND

- PROPOSED LEASE LINE
- PROPOSED EASEMENT
- PROPOSED FENCE
- EXISTING FENCE
- EXISTING PAVEMENT
- EXISTING PROPERTY LINE

SCALE: 1/8" = 1'-0" (24x36)
(OR) 1/16" = 1'-0" (11x17)



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SHEET TITLE
ENLARGED
UTILITY PLAN

SHEET NUMBER
AT-E-1
227

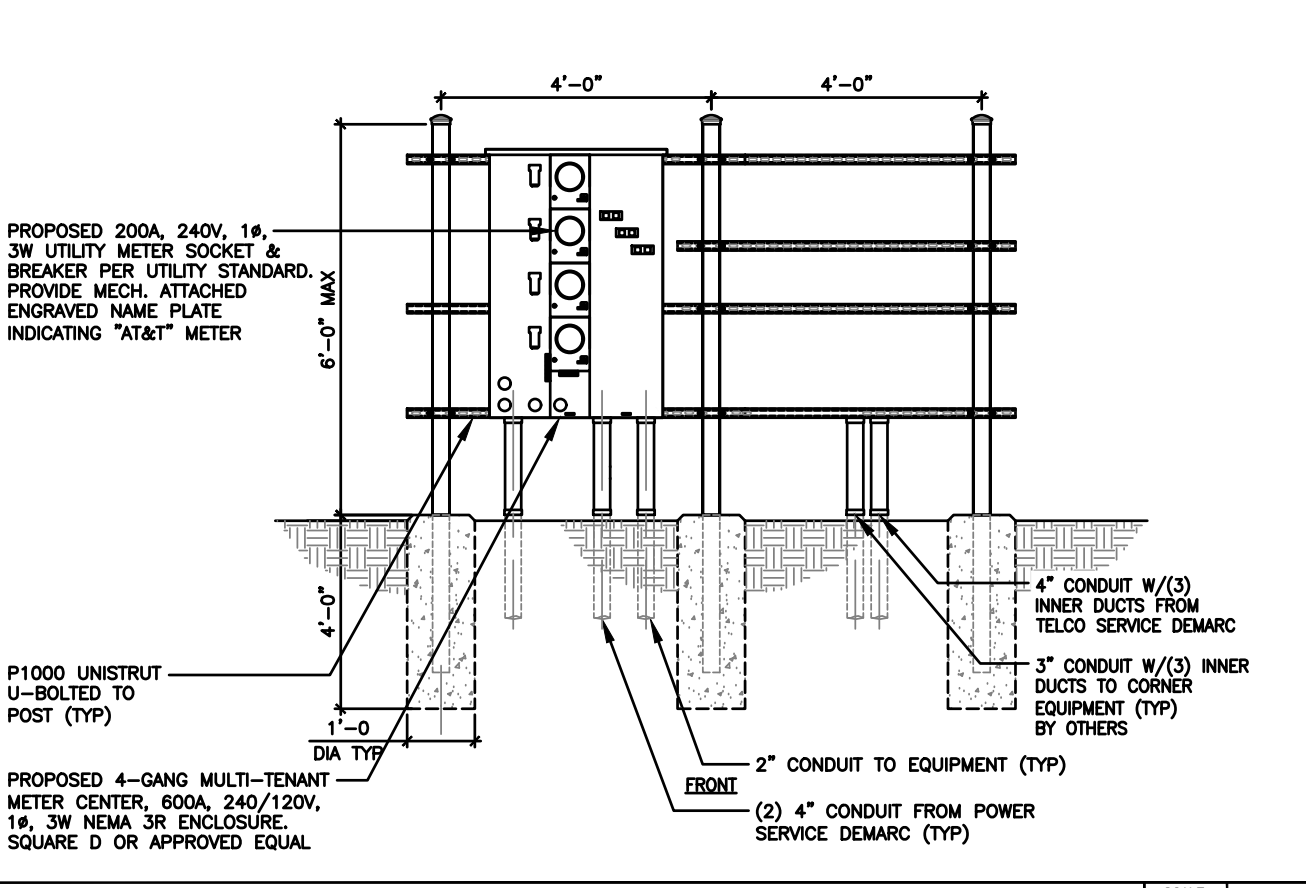
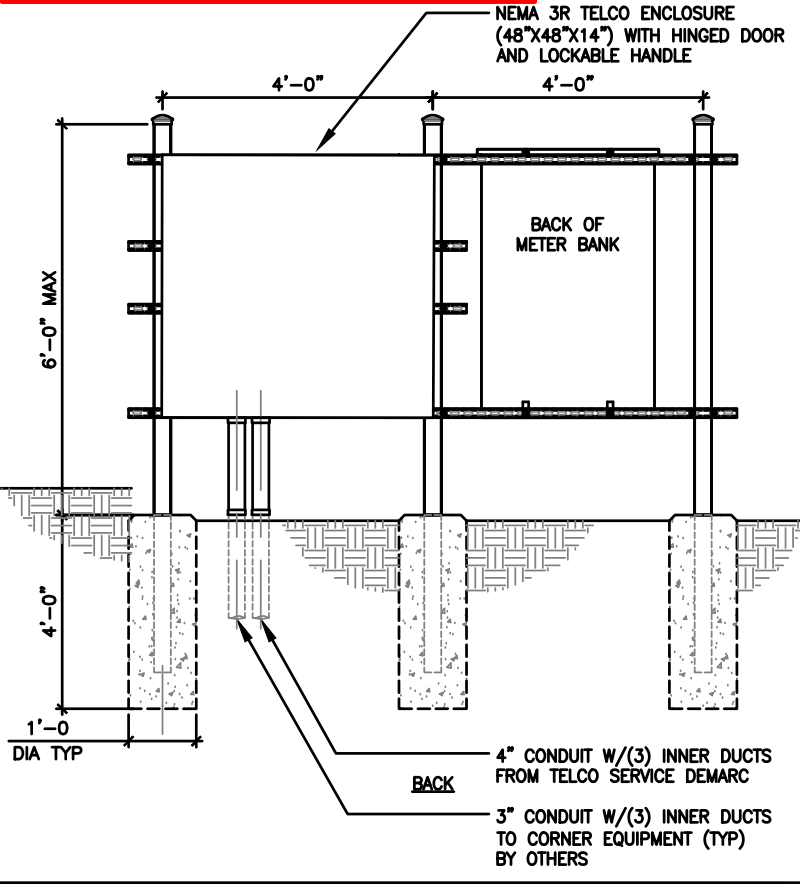
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1. SUBMITTAL OF BID INDICATES THAT THE CONTRACTOR IS COGNIZANT OF ALL JOB SITE CONDITIONS AND WORK TO BE PERFORMED UNDER THIS CONTRACT.
2. CONTRACTOR SHALL PERFORM ALL VERIFICATIONS, OBSERVATION TESTS, AND EXAMINATION WORK PRIOR TO ORDERING OF ANY EQUIPMENT AND THE ACTUAL CONSTRUCTION. CONTRACTOR SHALL ISSUE A WRITTEN NOTICE OF ALL FINDINGS TO THE PROJECT MANAGER LISTING ALL MALFUNCTIONS, FAULTY EQUIPMENT AND DISCREPANCIES.
3. VERIFY HEIGHTS WITH PROJECT MANAGER PRIOR TO INSTALLATION.
4. THESE PLANS ARE DIAGRAMMATIC ONLY, FOLLOW AS CLOSELY AS POSSIBLE.
5. CONTRACTOR SHALL COORDINATE ALL WORK BETWEEN TRADES AND ALL OTHER SCHEDULING AND PROVISIONARY CIRCUMSTANCES SURROUNDING THE PROJECT.
6. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, INSURANCE, EQUIPMENT, INSTALLATION CONSTRUCTION TOOLS, TRANSPORTATION, ETC., FOR COMPLETE AND FUNCTIONALLY OPERATING SYSTEMS ENERGIZED AND READY FOR USE THROUGHOUT AS INDICATED ON DRAWINGS, AS SPECIFIED HEREIN AND/OR AS OTHERWISE REQUIRED.
7. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND IN PERFECT CONDITION WHEN INSTALLED AND SHALL BE OF THE BEST GRADE AND OF THE SAME MANUFACTURER THROUGHOUT FOR EACH CLASS OR GROUP OF EQUIPMENT. ELECTRICAL MATERIALS SHALL BE LISTED AND APPROVED BY UNDERWRITER'S LABORATORIES AND SHALL BEAR THE INSPECTION LABEL "J" WHERE SUBJECT TO SUCH APPROVAL. MATERIALS SHALL MEET WITH APPROVAL OF ALL GOVERNING BODIES HAVING JURISDICTION OVER THE CONSTRUCTION. MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH ALL CURRENT APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA AND NBFU. ALL MATERIALS AND EQUIPMENT SHALL BE APPROVED FOR THEIR INTENDED USE AND LOCATION.
8. ALL WORK SHALL COMPLY WITH ALL APPLICABLE GOVERNING STATE, COUNTY AND CITY CODES AND OSHA, NFPA, NEC & ASHRAE REQUIREMENTS.
9. ENTIRE JOB SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER THE DATE OF JOB ACCEPTANCE. ALL WORK, MATERIAL AND EQUIPMENT FOUND TO BE FAULTY DURING THAT PERIOD SHALL BE CORRECTED AT ONCE, UPON WRITTEN NOTIFICATION, AT THE EXPENSE OF THE CONTRACTOR.
10. PROPERLY SEAL ALL PENETRATIONS. PROVIDE UL LISTED FIRE-STOPS WHERE PENETRATIONS ARE MADE THROUGH FIRE-RATED ASSEMBLIES. WATER-TIGHT USING SILICONE SEALANT.
11. DELIVER ALL BROCHURES, OPERATING MANUALS, CATALOGS AND SHOP DRAWINGS TO THE PROJECT MANAGER AT JOB COMPLETION. PROVIDE MAINTENANCE MANUALS FOR MECHANICAL EQUIPMENT. AFFIX MAINTENANCE LABELS TO MECHANICAL EQUIPMENT.
12. ALL CONDUCTORS SHALL BE COPPER. MINIMUM CONDUCTOR SIZE SHALL BE #12 AWG., UNLESS OTHERWISE NOTED. CONDUCTORS SHALL BE TYPE THHW, RATED IN ACCORDANCE WITH NEC 110-14(C).
13. ALL CIRCUIT BREAKERS, FUSES AND ELECTRICAL EQUIPMENT SHALL HAVE AN INTERRUPTING RATING NOT LESS THE MAXIMUM INTERRUPTING CURRENT TO WHICH THEY MAY BE SUBJECTED.
14. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE; ARTICLES 250 & 810 AND THE UTILITY COMPANY STANDARDS.
15. CONDUIT:
 - A. RIGID CONDUIT SHALL BE U.L. LABEL GALVANIZED ZINC COATED WITH ZINC INTERIOR AND SHALL BE USED WHEN INSTALLED IN OR UNDER CONCRETE SLABS, IN CONTACT WITH THE EARTH, UNDER PUBLIC ROADWAYS, IN MASONRY WALLS OR EXPOSED ON BUILDING EXTERIOR. RIGID CONDUIT IN CONTACT WITH EARTH SHALL BE 1/2 LAPPED WRAPPED WITH HUNTS WRAP PROCESS NO. 3.
 - B. ELECTRICAL METALLIC TUBING SHALL HAVE U.L. LABEL, FITTINGS SHALL BE GLAND RING COMPRESSION TYPE. EMT SHALL BE USED ONLY FOR INTERIOR RUNS.
 - C. LIQUID-TIGHT FLEXIBLE METAL CONDUIT SHALL BE U.L. LISTED AND SHALL BE USED AT FINAL CONNECTIONS TO MECHANICAL EQUIPMENT & RECTIFIERS AND WHERE PERMITTED BY CODE. ALL CONDUIT IN EXCESS OF SIX FEET IN LENGTH SHALL CONTAIN A FULL-SIZE GROUND CONDUCTOR.
 - D. CONDUIT RUNS SHALL BE SURFACE MOUNTED ON CEILINGS OR WALLS UNLESS NOTED OTHERWISE. ALL CONDUIT SHALL RUN PARALLEL OR PERPENDICULAR TO WALLS, FLOOR, CEILING, OR BEAMS. VERIFY EXACT ROUTING OF ALL EXPOSED CONDUIT WITH THE PROJECT MANAGER PRIOR TO INSTALLING.
 - E. PVC CONDUIT MAY BE PROVIDED ONLY WHERE SHOWN, OR IN UNDERGROUND INSTALLATIONS. PROVIDE UV-RESISTANT CONDUIT WHERE EXPOSED TO THE ATMOSPHERE. PROVIDE GROUND CONDUCTOR IN ALL PVC RUNS; EXCEPT WHERE PERMITTED BY CODE TO OMIT.
17. ALL ELECTRICAL EQUIPMENT SHALL BE LABELED WITH PERMANENT ENGRAVED PLASTIC LABELS. BACKGROUND SHALL BE BLACK WITH WHITE LETTERS; EXCEPT AS REQUIRED BY CODE TO FOLLOW A DIFFERENT SCHEME.
18. UPON COMPLETION OF WORK, CONDUCT CONTINUITY, SHORT CIRCUIT, AND FALL OF POTENTIAL GROUNDING TESTS FOR APPROVAL. SUBMIT TEST REPORTS TO PROJECT MANAGER. GROUNDING SYSTEM RESISTANCE SHALL NOT EXCEED 5 OHMS. IF THE RESISTANCE VALUE IS EXCEEDED, NOTIFY THE PROJECT MANAGER FOR FURTHER INSTRUCTION ON METHODS FOR REDUCING THE RESISTANCE VALUE.
19. CLEAN PREMISES OF ALL DEBRIS RESULTING FROM WORK AND LEAVE WORK IN A COMPLETE AND UNDAMAGED CONDITION. LEGALLY DISPOSE OF ALL REMOVED, UNUSED AND EXCESS MATERIAL GENERATED BY THE WORK OF THIS CONTRACT. DELIVER ITEMS INDICATED ON THE DRAWINGS TO THE OWNER IN GOOD CONDITION. OBTAIN SIGNED RECEIPT UPON DELIVERY.
20. COORDINATE WITH UTILITY COMPANY FOR CONNECTION OF TEMPORARY AND PERMANENT POWER TO THE SITE. THE TEMPORARY POWER AND ALL HOOKUP COSTS SHALL BE PAID BY THE CONTRACTOR.
21. VERIFY ALL EXISTING CIRCUITRY PRIOR TO REMOVAL AND NEW WORK. MAINTAIN POWER TO ALL OTHER AREAS & CIRCUITS NOT SCHEDULED FOR REMOVAL.
22. RED LINED AS-BUILT PLANS SHALL BE PROVIDED TO THE CONSTRUCTION MANAGER.

METER POSITION 2 - AT&T INTEGRATED LOAD CENTER																					
LOAD			LOAD PER PHASE (VA)						LOAD PER PHASE (VA)						LOAD						
			PHASE		WIRE COLOR	LOADS CONTINUOUS	LOADS NON-CONTINUOUS	LOADS SUB-PANEL	WIRE SIZE	GROUNDING WIRE SIZE	TRIP	PHASE		WIRE COLOR						LOADS CONTINUOUS	LOADS NON-CONTINUOUS
DESCRIPTION	QTY.	UNIT V.A.	A	B								A	B		UNIT V.A.	QTY.	DESCRIPTION				
1	RECTIFIER #1	1	1400	1400	1400	BLK	X												RECTIFIER #5	2	
3		1	1400	1400	1400	RED	X												RECTIFIER #6	4	
5	RECTIFIER #2	1	1400	1400	1400	BLK	X												RECTIFIER #7	6	
7		1	1400	1400	1400	RED	X												RECTIFIER #8	8	
9	RECTIFIER #3	1	1400	1400	1400	BLK	X													10	
11		1	1400	1400	1400	RED	X													12	
13	RECTIFIER #4	1	1400	1400	1400	BLK	X													14	
15		1	1400	1400	1400	RED	X													16	
17						BLK														18	
19						RED	X													20	
21	GFCI RECEPTACLES	1	180	360	360	BLK	X													22	
23	OPTIONAL FIBER BOX RECEPTACLE	1	180	180	180	RED	X													24	
25	BATTERY CHARGER	1	240	240	240	BLK	X													26	
27	SPARE					RED	X													28	
29	SPARE					BLK	X													30	
SUBTOTAL CONTINUOUS				6200	5780																
SUBTOTAL NON-CONTINUOUS																					
SUBTOTAL																					
PANEL DESIGNATION: ELECTRICAL PANEL (ITEM 2)													TOTAL AMPS CONTINUOUS x 1.25		28975						
MAIN LUGS: N/A			MAIN BREAKER: 200 AMP													TOTAL AMPS NON-CONTINUOUS		-			
VOLTAGE: 120/240			CYCLE: 60			PHASE: 1			WIRES: 3			MAIN COPPER BUS: 200 AMPS			NEUTRAL: 200 AMPS			TOTAL KVA		28.97	
																		TOTAL AMPS		120.72	

AT&T P - B PANEL SCHEDULE

NOTE:
ALL CONDUIT FROM BELOW GRADE TO ABOVE GRADE MUST INCLUDE FROST SLEEVES TO PREVENT FROST DAMAGE TO CONDUIT OR EQUIPMENT.



ELECTRICAL NOTES

SCALE N.T.S. **4**

UTILITY FRAME DETAIL

SCALE N.T.S. **1**

TILLMAN INFRASTRUCTURE Item 3.

AT&T mobility corp.

LCC TELECOM SERVICES

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DRAWN BY: DWM
CHECKED BY: MC

REV	DATE	DESCRIPTION
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B	03/06/24	PRELIMINARY CD

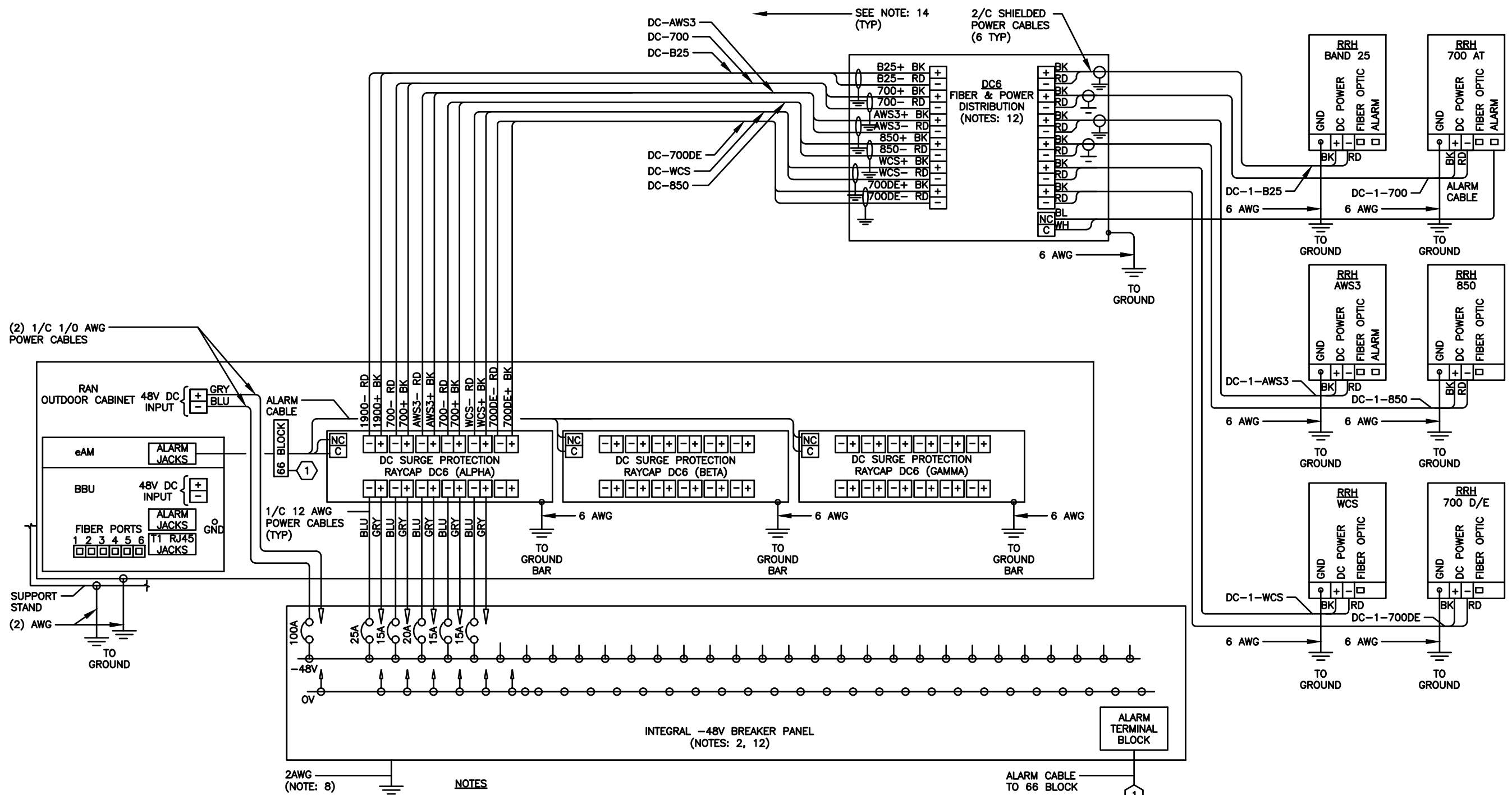
I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED ARCHITECT UNDER THE LAWS OF THE STATE OF WISCONSIN

AT&T SITE # W12696
AT&T SITE NAME: WHITEWATER
FA # 11655718
SITE ADDRESS:
1002 S JANESVILLE STREET
WHITEWATER, WI 53190
FAA STUDY #: 2024-AGL-23880E

SHEET TITLE
ELECTRICAL SCHD., DIA & NOTES

SHEET NUMBER
AT-E-2 228

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- NOTES**
1. LABEL THE DC POWER CABLES AT BOTH ENDS OF EVERY WIRE AND IN ANY PULL BOX IF USED. LABEL SHALL BE DURABLE, SELF ADHESIVE, WRAPPED LONGITUDINALLY ALONG THE CABLE AND STATE THE SECTOR, FREQUENCY BAND AND POLARITY; I.E. "A-AWS+";
 2. INSTALL ON IN AUXILIARY EQUIPMENT CABINET.
 3. CABLE TERMINALS FOR +24V INPUT FEED A, FEED B AND REFERENCE GROUND SHALL BE 2-HOLE: 3/8" ON 1" CENTER.
 4. INSTALL CABLE TERMINALS FOR FEED A AND FEED B RETURN BACK-TO-BACK ON OPPOSITE SIDES OF PAD USING 1-HOLE 3/8" TERMINALS.
 5. CABLE TERMINALS FOR CHASSIS GROUND SHALL BE 2-HOLE, 1/4" ON 5/8" CENTER.
 6. WHEN DISTRIBUTION BOX IS NOT USED, INSTALL 3 RUNS OF (2) 2/C CABLES IN CONDUIT, 1 EACH FROM DC SURGE SHELF TO DC6s.
 7. A JUNCTION BOX IS REQUIRED WHEN FIBER OPTIC CABLES ARE INSTALLED IN CONDUIT AS SCOPED BY MARKET.
 8. CONVERTER REFERENCE GROUND IS NOT REQUIRED WHEN CONVERTER AND 24V DC POWER PLANT ARE ON THE SAME RACK OR ENCLOSURE.
 9. THE BARE GROUND WIRE OF EACH MULTI-CONDUCTOR CABLE AND DRAIN WIRE WHEN A SHIELDED CABLE IS USED, SHALL BE CONNECTED TO THE EQUIPMENT CABINET GROUND BAR.
 10. SEE ALARM BLOCK ASSIGNMENT DETAIL FOR ALARM CABLE CONNECTIONS.
 11. PROVIDE A JUNCTION BOX, AS SCOPED BY MARKET, TO COIL EXCESS DC POWER AND OPTICAL FIBER CABLES (FIBER CALES NOT SHOWN FOR CLARITY)
 12. NOTED EQUIPMENT MAY BE COMMON TO LTE AND UMTS SYSTEMS.
 13. CABLE GROUND WIRE AND SHIELD DRAIN WIRE TO BE LEFT UN-TERMINATED AT RRH.
 14. WHEN AN RRH IS USED INSTEAD OF AN AWS RRH CABLE, LABELS SHOULD REFLECT CORRECT FREQUENCY BAND.

DC WIRING DIAGRAM

SCALE
N.T.S. **1**

TYPICAL PER SECTOR



Item 3.



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DRAWN BY: **DWM**
 CHECKED BY: **MC**

REV	DATE	DESCRIPTION
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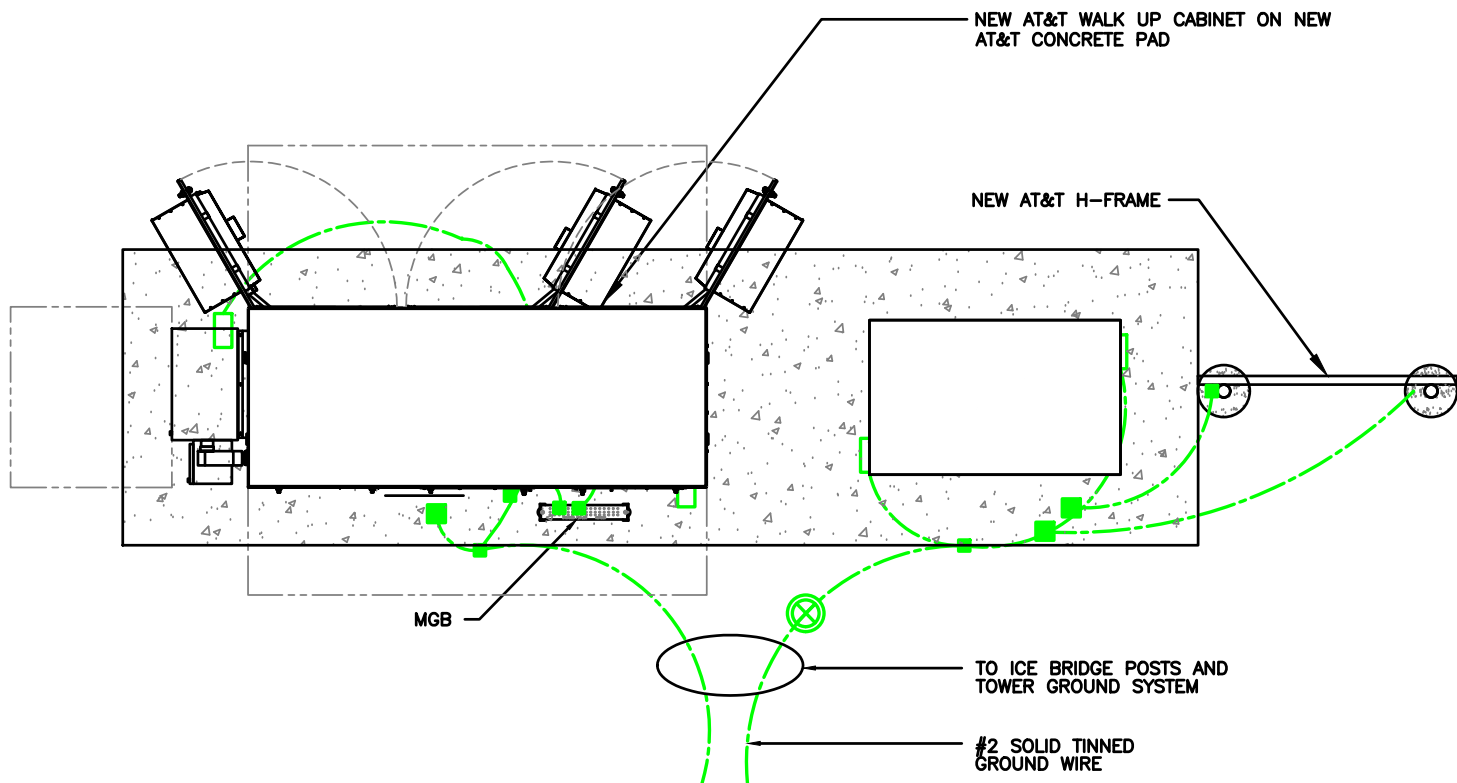
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 AT&T SITE NAME: **WHITWATER**
 FA # **11655718**
 SITE ADDRESS:
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 WHITWATER, WI 53190
 FAA STUDY #: **2024-AGL-23880E**

SHEET TITLE
DC WIRING DIAGRAM

SHEET NUMBER
AT-E-4 230

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GROUNDING LEGEND	
	MECHANICAL CONNECTION
	EXOTHERMIC WELD CONNECTION
	COMPRESSION FITTING CONNECTION
	5/8"x10' COPPER-CLAD STEEL GROUND ROD
	5/8"x10' COPPER-CLAD STEEL GROUND ROD WITH INSPECTION WELL
	PROPOSED GROUND WIRING
	EXISTING GROUND WIRING
	TINNED COPPER GROUND BAR 1/4"x4"x12" OR 1/4"x4"x20"
CGB	COLLECTOR GROUND BAR
MGB	MAIN GROUND BAR

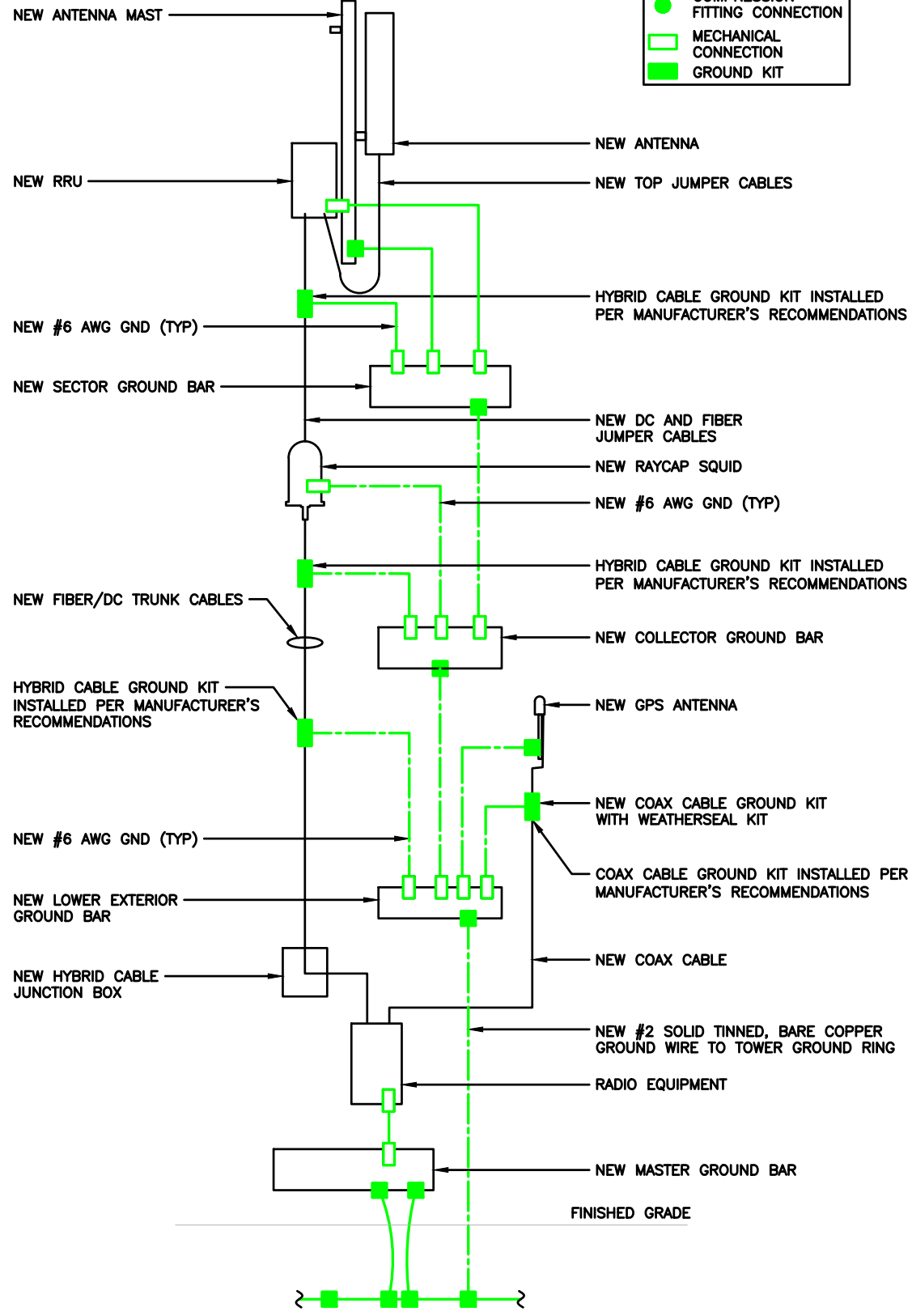


GROUNDING PLAN

SCALE: N.T.S. **2**

NOTE:
GROUND LEAD INSIDE RUBBER GROMMET TO BE ATTACHED WITH X-CROSS ZIP TIES TO BRACKET. DO NOT USE SNAP-IN HANGERS AROUND GROUNDS.

LEGEND	
	EXOTHERMIC WELD CONNECTION
	COMPRESSION FITTING CONNECTION
	MECHANICAL CONNECTION
	GROUND KIT



RISER DIAGRAM

SCALE: N.T.S. **1**



Item 3.



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 WHITWATER, WI 53190
 FAA STUDY #: 2024-AGL-23880E

SHEET TITLE
GROUNDING PLAN & RISER DIAGRAM

SHEET NUMBER
AT-G-1 231

GROUNDING NOTES:

- GROUNDING SHALL COMPLY WITH ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE.
- ALL GROUNDING DEVICES SHALL BE U.L. APPROVED OR LISTED FOR THEIR INTENDED USE.
- ALL WIRES SHALL BE AWG THHN/THWN COPPER UNLESS NOTED OTHERWISE.
- GROUNDING CONNECTIONS TO GROUND RODS, GROUND RING WIRE, TOWER BASE AND FENCE POSTS SHALL BE EXOTHERMIC ("CADWELDS") UNLESS NOTED OTHERWISE. CLEAN SURFACES TO SHINY METAL. WHERE GROUND WIRES ARE CADWELDED TO GALVANIZED SURFACES, SPRAY CADWELD WITH GALVANIZING PAINT.
- GROUNDING CONNECTIONS TO GROUND BARS ARE TO BE TWO-HOLE BRASS MECHANICAL CONNECTORS WITH STAINLESS STEEL HARDWARE (INCLUDING SCREW SET) CLEAN GROUND BAR TO SHINY METAL. AFTER MECHANICAL CONNECTION, TREAT WITH PROTECTIVE ANTI-OXIDANT COATING.
- GROUND COAXIAL CABLE SHIELDS AT BOTH ENDS WITH MANUFACTURER'S GROUNDING KITS.
- ROUTE GROUNDING CONDUCTORS THE SHORTEST AND STRAIGHTEST PATH POSSIBLE. BEND GROUNDING LEADS WITH A MINIMUM 12" RADIUS.
- INSTALL #2 AWG GREEN-INSULATED STRANDED WIRE FOR ABOVE GRADE GROUNDING AND #2 BARE TINNED COPPER WIRE FOR BELOW GRADE GROUNDING UNLESS OTHERWISE NOTED.
- REFER TO GROUNDING PLAN FOR GROUND BAR LOCATIONS. GROUNDING CONNECTIONS SHALL BE EXOTHERMIC TYPE ("CADWELDS") TO ANTENNA MOUNTS AND GROUND RING. REMAINING GROUNDING CONNECTIONS SHALL BE COMPRESSION FITTINGS. CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO-HOLE LUGS.
- THE GROUND ELECTRODE SYSTEM SHALL CONSIST OF DRIVEN GROUND RODS POSITION ACCORDING TO GROUNDING PLAN. THE GROUND RODS SHALL BE 5/8"x10'-0" COPPER CLAD STEEL INTERCONNECTED WITH #2 BARE TINNED COPPER WIRE BURIED 36" BELOW GRADE. BURY GROUND RODS A MAXIMUM OF 15' APART, AND A MINIMUM OF 8' APART.
- IF ROCK IS ENCOUNTERED GROUND RODS SHALL BE PLACED AT AN OBLIQUE ANGLE NOT TO EXCEED 45°.
- EXOTHERMIC WELDS SHALL BE MADE IN ACCORDANCE WITH ERICO PRODUCTS BULLETIN A-AT.
- CONSTRUCTION OF GROUND RING AND CONNECTIONS TO EXISTING GROUND RING SYSTEM SHALL BE DOCUMENTED WITH PHOTOGRAPHS PRIOR TO BACKFILLING SITE. PROVIDE PHOTOS TO THE VERIZON WIRELESS CONSTRUCTION MANAGER.
- ALL GROUND LEADS EXCEPT THOSE TO THE EQUIPMENT ARE TO BE #2 BARE TINNED COPPER WIRE. ALL EXTERIOR GROUND BARS TINNED COPPER.
- PRIOR TO INSTALLING LUGS ON GROUND WIRES, APPLY THOMAS & BETTS KOPR-SHIELD (TM OF JET LUBE INC.). PRIOR TO BOLTING GROUND WIRE LUGS TO GROUND BARS, APPLY KOPR-SHIELD OR EQUAL.
- ENGAGE AN INDEPENDENT ELECTRICAL TESTING FIRM TO TEST AND VERIFY THAT IMPEDANCE DOES NOT EXCEED FIVE OHMS TO GROUND BY MEANS OF "FALL OF POTENTIAL TEST". TEST SHALL BE WITNESSED BY A METROPCS REPRESENTATIVE, AND RECORDED ON THE "GROUND RESISTANCE TEST" FORM.
- WHERE BARE COPPER GROUND WIRES ARE ROUTED FROM ANY CONNECTION ABOVE GRADE TO GROUND RING, INSTALL WIRE IN 3/4" PVC SLEEVE, FROM 6" ABOVE AND BELOW GRADE/ GRAVEL AND SEAL TOP WITH SILICONE MATERIAL.
- PREPARE ALL BONDING SURFACES FOR GROUNDING CONNECTIONS BY REMOVING ALL PAINT AND CORROSION DOWN TO SHINY METAL. FOLLOWING CONNECTION, APPLY APPROPRIATE ANTI-OXIDIZATION PAINT.
- ANY SITE WHERE THE EQUIPMENT (BTS, CABLE BRIDGE, PPC, GENERATOR, ETC.) IS LOCATED WITHIN 6 FEET OF METAL FENCING, THE GROUND RING SHALL BE BONDED TO THE NEAREST FENCE POST USING (3) RUNS OF #2 BARE TINNED COPPER WIRE.

CABLE COLOR CODING NOTES:

- SECTOR ORIENTATION/AZIMUTH WILL VARY FROM REGION AND IS SITE SPECIFIC. REFER TO RF REPORT FOR EACH SITE TO DETERMINE THE ANTENNA LOCATION AND FUNCTION OF EACH TOWER SECTOR FACE.
- THE ANTENNA SYSTEM CABLES SHALL BE LABELED WITH VINYL TAPE EXCEPT IN LOCATIONS WHERE ENVIRONMENTAL CONDITIONS CAUSE PHYSICAL DAMAGE, THEN PHYSICAL TAGS ARE PREFERRED.
- THE STANDARD IS BASED ON EIGHT COLORED TAPES - RED, BLUE, GREEN, YELLOW, ORANGE, BROWN, WHITE & VIOLET. THESE TAPES MUST BE 3/4" WIDE & UV RESISTANT SUCH AS SCOTCH 35 VINYL ELECTRICAL COLOR CODING TAPE AND SHOULD BE READILY AVAILABLE TO THE ELECTRICIAN OR SUBCONTRACTOR ON SITE.
- USING COLOR BANDS ON THE CABLES, MARK ALL RF CABLES BY SECTOR AND NUMBER AS SHOWN ON "CABLE MARKING COLOR CONVENTION TABLE".
- WHEN AN EXISTING COAXIAL LINE THAT IS INTENDED TO BE A SHARED LINE BETWEEN GSM/3G AND IS-136 TDMA IS ENCOUNTERED, THE SUBCONTRACTOR SHALL REMOVE THE EXISTING COLOR CODING SCHEME AND REPLACE IT WITH THE COLOR CODING AND TAGGING STANDARD THAT IS OUTLINED IN THE CURRENT VERSION OF ND-00027. IN THE ABSENCE OF AN EXISTING COLOR CODING TAGGING SCHEME, OR WHEN INSTALLING PROPOSED COAXIAL CABLES, THIS GUIDELINE SHALL BE IMPLEMENTED AT THAT SITE REGARDLESS OF TECHNOLOGY.
- ALL COLOR CODE TAPE SHALL BE 3M-35 AND SHALL BE A MINIMUM OR (3) WRAPS OF TAPE AND SHALL BE NEATLY TRIMMED AND SMOOTHED OUT SO AS TO AVOID UNRAVELING.
- ALL COLOR BANDS INSTALLED AT THE TOP OF TOWER SHALL BE A MINIMUM OF 3" WIDE AND SHALL HAVE A MINIMUM OF 3/4" OF SPACE IN BETWEEN EACH COLOR.
- ALL COLOR CODES SHALL BE INSTALLED AS TO ALIGN NEATLY WITH ONE ANOTHER FROM SIDE TO SIDE.
- IF EXISTING CABLES AT THE SITE ALREADY HAVE A COLOR CODING SCHEME AND THEY ARE NOT INTENDED TO BE REUSED OR SHARED WITH THE GSM TECHNOLOGY, THE EXISTING COLOR CODING SCHEME SHALL REMAIN UNTOUCHED.

CABLE MARKING TAGS:

WHEN USING THE ALTERNATIVE LABELING METHOD, EACH RF CABLE SHALL BE IDENTIFIED WITH A METAL ID TAG MADE OF STAINLESS STEEL OR BRASS. THE TAG SHALL BE 1-1/2" IN DIAMETER WITH 1/4" STAMPED LETTERS AND NUMBERS INDICATING THE SECTOR, ANTENNA POSITION AND CABLE NUMBER. ID MARKING LOCATIONS SHOULD BE AS PER "CABLE MARKING LOCATIONS TABLE". THE TAG SHOULD BE ATTACHED WITH CORROSION PROOF WIRE AROUND THE CABLE AT THE SAME LOCATION AS DEFINED ABOVE. THE TAG SHOULD BE LABELED AS SHOWN ON THE "GSM AND UMTS LINE TAG" DETAIL.

CABLE MARKING LOCATIONS TABLE	
NO.	LOCATIONS
1	EACH JUMPER SHALL BE COLOR CODED WITH (1) SET OF 3" WIDE BANDS.
2	EACH MAIN COAX SHALL BE COLOR CODED WITH (1) SET OF 3" WIDE BANDS AT THE TOP JUMPER CONNECTION AND WITH (1) SET OF 3/4" WIDE COLOR BANDS PRIOR TO ENTERING THE BTS OR SHELTER.
3	CABLE ENTRY PORT ON THE INTERIOR OF SHELTER.
4	ALL BOTTOM JUMPERS SHALL BE COLOR CODED WITH (1) SET OF 3/4" WIDE BANDS ON EACH END OF THE BOTTOM JUMPER.
5	ALL BOTTOM JUMPERS SHALL BE COLOR CODED WITH (1) SET OF 3/4" WIDE BANDS ON EACH END OF THE BOTTOM JUMPER.

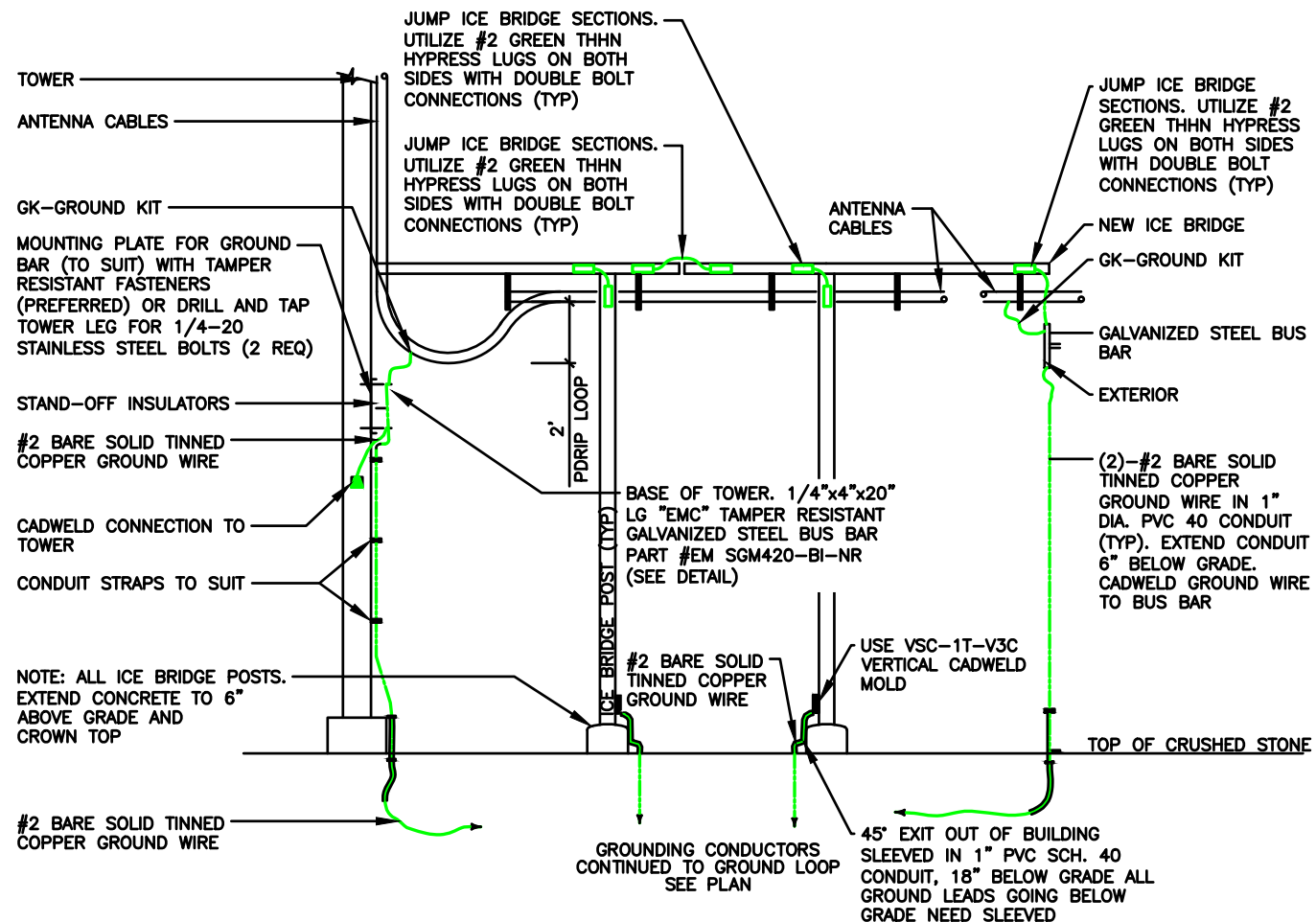
GROUNDING NOTES

SCALE N.T.S. **5**

CABLE COLOR CODING NOTES

SCALE N.T.S. **4**

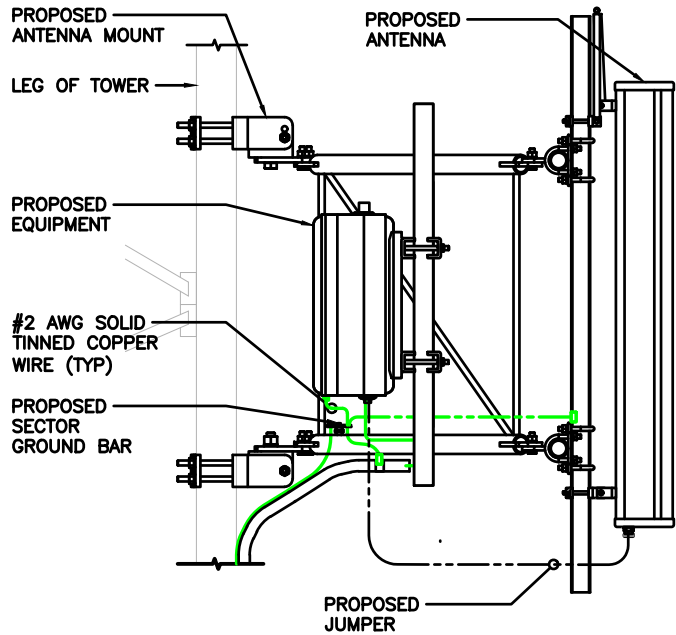
COAXIAL GROUNDING AT ICE BRIDGE



SCALE N.T.S. **1**

ANTENNA & CABLE GROUNDING

SCALE N.T.S. **3**



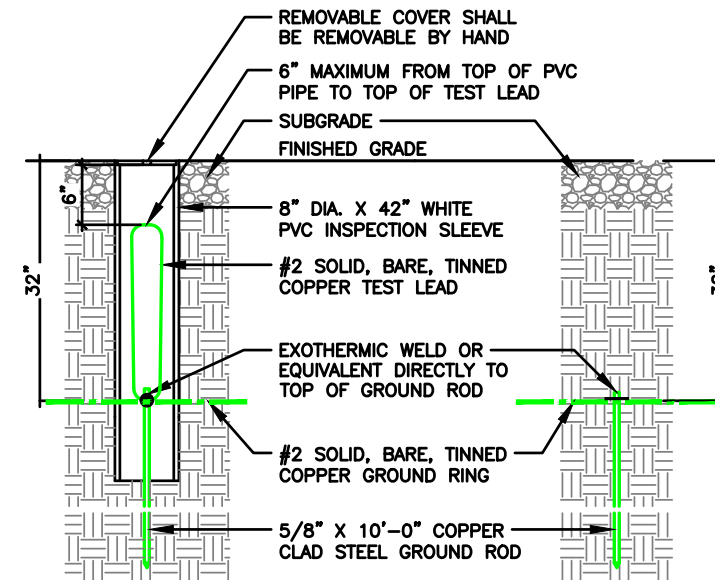
NOTE: SEE RESISTIVITY REPORT FOR VERIFICATION AS AVAILABLE

NOTE: GROUND RODS MAY BE COPPER CLAD STEEL OR SOLID COPPER

NOTE: GROUND RODS SHALL HAVE A RECOMMENDED SPACING TWICE THE LENGTH OF THE ROD

NOTE: A LARGER CONDUCTOR SHALL BE REQUIRED IN AREAS HIGHLY PRONE TO LIGHTNING AND/OR AREAS W/HIGHLY ACIDIC SOIL

NOTE: GROUND RODS INSTALLED WITHIN CLOSE PROXIMITY TO TOWER OR WHEN SOIL IS AT OR BELOW 2,000 OHM-CM, SHALL BE GALVANIZED TO PREVENT GALVANIC CORROSION OF TOWER



GROUND WELL, ROD, AND TEST WELL DETAIL

SCALE N.T.S. **2**

TILLMAN INFRASTRUCTURE Item 3.

AT&T mobility corp.

LCC TELECOM SERVICES

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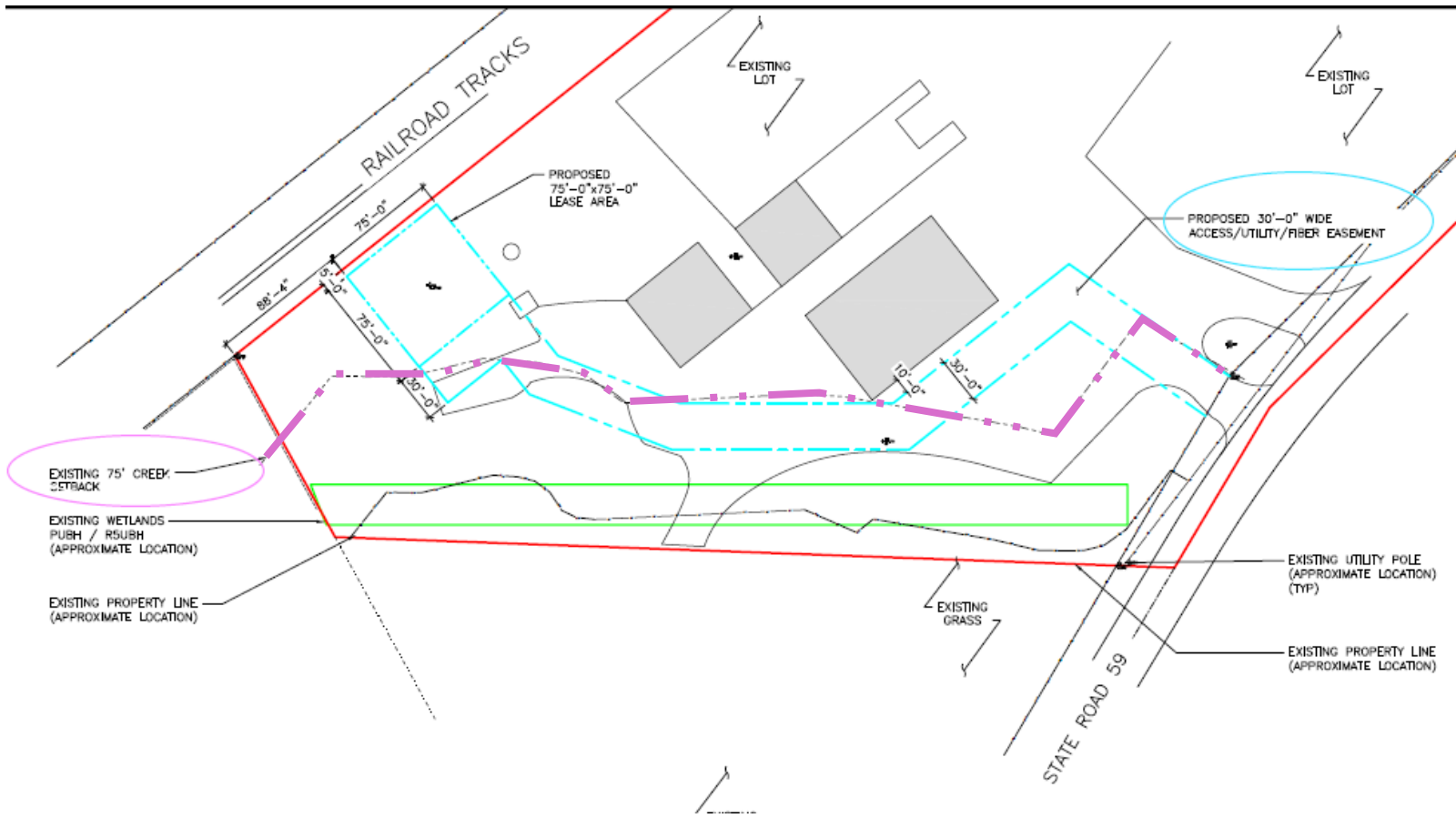
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 WHITWATER, WI 53190
 FAA STUDY #: 2024-AGL-23880E

SHEET TITLE
**GROUNDING
 DETAILS & NOTES**

SHEET NUMBER
AT-G-232

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TOWER CENTER COORDINATES (PER IA LETTER)
42.81912825, -88.75383302
TOWER HEIGHT = 195'-0" SELF SUPPORT TOWER
OVERALL HEIGHT = 199'-0" LIGHTNING ROD

SITE INFORMATION:

PROPERTY ADDRESS:
1002 S. JANESVILLE STREET
WHITEWATER, WI 53190

OWNER NAME:
SAMUEL HATCHETT
262-215-7990

PARCEL ID:
WUP 00341

CANDIDATE:
A

ZONING REQUIRED:
CITY OF WHITEWATER
YES PER SCIP

SETRACKS:
FRONT - FALL ZONE
SIDE - FALL ZONE
REAR - FALL ZONE



**TILLMAN INFRASTRUCTURE LLC
AT&T MOBILITY**



**APPLICATION FOR CONDITIONAL USE PERMIT FOR
THE PROPOSED WIRELESS COMMUNICATIONS FACILITY IN THE CITY
OF WHITEWATER**

AT

**1002 S JANESVILLE ST, WHITEWATER, WI 53190
TILLMAN INFRASTRUCTURE SITE # TI-OPP-29018**

Table of Contents

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- 2. Application Materials**
- 3. Project Narrative**
- 4. Site Data Sheet**
- 5. Completed Land Use Application**
- 6. Legal Description**
- 7. Statement of Compliance with WI State Statute §66.0404**
- 8. Statement of Compliance with Whitewater Ordinances Chapters 19.55 & 19.66**
- 9. Request for Variance from Whitewater Ordinance Section 19.55.070(F)**
- 10. Site Plan**
- 11. Sworn Statement of Carrier - Wis. Stat. § 66.0404(2)(2)(b)(5)**
- 12. Propagation Maps**
- 13. Lease Agreement**
- 14. Tower Removal Bond**
- 15. Certification of Insurance**

Letter of Application

04/19/24

City of Whitewater Plan Commission
312 W. Whitewater Street
P.O. Box 178
Whitewater, WI 53190

RE: Conditional Use Approval Application
Tillman Infrastructure Site Number TI-OPP-29018
1002 S Janesville St, Whitewater, WI 53190 (PIN: WUP 00341)

Dear Commissioners:

Tillman Infrastructure LLC has partnered with AT&T Mobility to construct a new wireless communications facility proposed at the above-referenced location, to be used by AT&T and other wireless carriers. This is a petition for amendment of zoning and an application for a Conditional Use Permit for this proposed telecommunications facility under Wisconsin State Statute section 66.0404 and Chapter 19.55 of the City of Whitewater Code of Ordinances. Additionally, this application requests that the Board of Zoning Appeals grant a variance from Section 19.55.070(F) of the City of Whitewater Code of Ordinances.

The proposed mobile service support structure is intended to fill in coverage gaps and improve AT&T wireless internet service in the eastern area of the City of Whitewater to provide adequate space for AT&T to deploy FirstNet, the first nationwide communications network dedicated for first responders. The proposed structure will consist of a 195'-0" self-support tower, to be located within a 69'-0" x 69'-0" fenced compound located within a 75'-0" x 75'-0" lease area. The proposed tower will be erected, owned, and managed by Tillman Infrastructure, and AT&T Mobility will locate its antennas on the tower and its equipment in the compound upon completion. The facility is unstaffed and will only require service technicians, in a pick-up/van sized vehicle, to visit the site approximately once per month after the facility is completed.

On behalf of Tillman Infrastructure LLC and AT&T Mobility, LCC Telecom Services has submitted all required documentation for the proposed tower in accordance with the City of Whitewater Code of Ordinances and Wisconsin State Statute section 66.0404 for this application to be deemed complete. Should you have any questions, please feel free to contact me. I look forward to working with you during the approval process to provide the residents of Whitewater.

Sincerely,

John Burchfield,
Zoning Project Manager,
LCC Telecom Services
Phone: 224-803-6451
Email: jburchfield@lcctelecom.com

Application Materials

Project Narrative

As an agent for Tillman Infrastructure LLC and AT&T Mobility, LCC Telecom Services, LLC seeks approval for a Conditional Use Permit and any other permits or approvals necessary to install a new wireless communications facility on property located at 1002 S Janesville St in Whitewater. Tillman Infrastructure LLC has an agreement with AT&T Mobility to develop this site for its carrier services. In addition to this carrier, the site will be offered as a shared facility to any other communication carriers that have a need for a facility in this area. AT&T Mobility has acquired the necessary licenses from the Federal Communications Commission (“FCC”) to provide Personal Communications Services (“PCS”) coverage throughout the United States. These licenses include the City of Whitewater

The property on which the telecommunications facility is proposed is zoned Highway Commercial and Light Industrial (B-3). Per Sections 19.33.025(J) and 19.33.030(S) of the Code of Ordinances, a Conditional Use Permit, subject to the requirements of Chapter 19.55, is required for the siting and construction of any new wireless communications facility in the B-3 District.

The proposed wireless communications facility that Tillman Infrastructure LLC would install for AT&T Mobility is necessary to provide uninterrupted PCS services to the residents of Whitewater, including wireless phone service, voice paging, messaging, and wireless internet and broadband data. All registered wireless providers’ technology operates at various radio frequency bands allocated by the FCC as part of their license.

PCS systems operate on a grid system where overlapping cells mesh together, forming a seamless network. No single site can function as a stand-alone entity as each site is interconnected, forming the network. The technical criteria for establishing cell sites are very exacting as to the location and height. The proposed site at 1002 S Janesville St within the geographic area deemed necessary for AT&T Mobility and various other wireless telecommunications providers to provide uninterrupted services. The propagation maps included with this application show the area of coverage need and the coverage provided by this proposed tower.

The proposed wireless communications facility will consist of a 195'-0" tall self-supporting tower within a 100'-0" x 100'-0" lease area. The proposed facility's designated location is within a commercial lot southwest of the intersection of US-12 and WI-59/S Janesville Street. The proposed access to the facility will be through an existing entrance and gravel park lot off of WI-59/S Janesville St.

The facility is unstaffed and will only require service technicians, in a pick-up/van sized vehicle, to visit the site approximately once per month. The site is entirely self-monitored through a sophisticated alarm system which is connected to a main switch station. The system alerts personnel to any equipment malfunction or breach of security. There is no need for additional police or fire support. Additionally, there is no impact on town utilities such as water or sanitation as they are not used at the site. The only utilities used in connection with the mobile service facility are power, fiber optic cable, and land-line telephone.

In accordance with FCC regulations, the mobile service facility will not interfere with any form of communications, including but not limited to, land-line phones, cable and satellite television and radio broadcasts. PCS technology has become a vital part of emergency services, aiding residents and motorists in a variety of situations, thus helping to protect the general public's health, safety and welfare.

The proposed mobile service facility will be designed and constructed to meet all applicable governmental and industry safety standards, such as National Environmental Protection Act ("NEPA") and National Historic Preservation Act ("NHPA"). Tillman Infrastructure LLC and AT&T Mobility will also comply with all FCC and FAA rules and regulations regarding construction requirements and technical standards. Any and all RF emissions are subject to the exclusive jurisdiction of the FCC. Any height, lighting, or marking issues are subject to the exclusive jurisdiction of the FAA.

LCC Telecom Services, on behalf of Tillman Infrastructure LLC and AT&T Mobility, looks forward to working with the City of Whitewater to bring the benefits of the proposed service to the area. The addition of the facility will ensure the best uninterrupted wireless services for the City. This application addresses all standards and satisfies the requirements of the City of Whitewater Zoning Ordinance and follows Wisconsin state statutes.

Site Data Sheet

Applicant:	Tillman Infrastructure LLC 152 West 57 th Street 27 th Floor New York, NY 10019 AT&T Mobility 930 National Parkway Schaumburg, IL 60173
Agent:	John Burchfield LCC Telecom Services 10700 Higgins Road Suite 240 Rosemont, IL 60018
Tower Owner:	Tillman Infrastructure 152 West 57 th Street 27 th Floor New York, NY 10019
Applicant's Interest in the Property:	Leasehold
Property Owner:	Hatchet Enterprises LLC
Address of Property:	1002 S Janesville St, Whitewater, WI 53190
Parcel Number:	WUP 00341
Request:	Application for a Conditional Use Permit, Variance and any other approvals or permits necessary to erect a 195'-0" self-support communications tower to be located within a 100'-0" x 100'-0" lease parcel.

Legal Description

PROPOSED LEASE AREA:

A PART OF THE N1/2 OF THE SW1/4 OF SECTION 8, TOWN 4 NORTH, RANGE 15 EAST, WITHIN THE CITY OF WHITEWATER, WALWORTH COUNTY, WISCONSIN, MORE PARTICULARLY DESCRIBED AS: COMMENCING AT THE NW CORNER OF THE SAID SW1/4 OF SECTION 8; THENCE S89°09'35"W, ALONG THE NORTH LINE OF THE SAID SW1/4, 619.57 FEET TO THE CENTER LINE OF STATE ROAD 59; THENCE S45°15'35"W, ALONG THE SAID CENTER LINE, 744.62 FEET; THENCE N52°01'05"W, 33.27 FEET TO THE WEST LINE OF SAID STATE ROAD 59; THENCE N55°01'20"W, 126.73 FEET; THENCE S51°37'24"W, 145.55 FEET; THENCE S89°58'39"W, 137.78 FEET; THENCE N68°43'56"W, 85.29 FEET; THENCE N38°32'18"W, 50.86 FEET TO THE POINT OF BEGINNING FOR THE LEASE AREA HEREIN INTENDED TO BE DESCRIBED; THENCE S51°27'42"W, 75.00 FEET; THENCE N38°32'18"W, 75.00 FEET; THENCE N51°27'42"E, 75.00 FEET; THENCE S38°32'18"E, 75.00 FEET TO THE POINT OF BEGINNING, CONTAINING 5,825 SQUARE FEET.

PROPOSED ACCESS/UTILITY EASEMENT:

A PART OF THE N1/2 OF THE SW1/4 OF SECTION 8, TOWN 4 NORTH, RANGE 15 EAST, WITHIN THE CITY OF WHITEWATER, WALWORTH COUNTY, WISCONSIN, MORE PARTICULARLY DESCRIBED AS: COMMENCING AT THE NW CORNER OF THE SAID SW1/4 OF SECTION 8; THENCE S89°09'35"W, ALONG THE NORTH LINE OF THE SAID SW1/4, 619.57 FEET TO THE CENTER LINE OF STATE ROAD 59; THENCE S45°15'35"W, ALONG THE SAID CENTER LINE, 744.62 FEET; THENCE N52°01'05"W, 33.27 FEET TO THE WEST LINE OF SAID STATE ROAD 59 AND BEING THE POINT OF BEGINNING FOR THE EASEMENT HEREIN INTENDED TO BE DESCRIBED; THENCE N55°01'20"W, 126.73 FEET; THENCE S51°37'24"W, 145.55 FEET; THENCE S89°58'39"W, 137.78 FEET; THENCE N68°43'56"W, 85.29 FEET; THENCE N38°32'18"W, 50.86 FEET TO THE SE CORNER OF THE PROPOSED LEASE AREA; THENCE S51°27'42"W, ALONG THE SOUTHEASTERLY LINE OF PROPOSED LEASE AREA, 75.00 FEET; THENCE S38°32'18"E, 30.00 FEET; THENCE N51°27'42"E, 45.00 FEET; THENCE S38°32'18"E, 28.70 FEET; THENCE S68°43'56"E, 99.02 FEET; THENCE N89°58'39"E, 153.85 FEET; THENCE N51°37'24"E, 133.64 FEET; THENCE S55°01'20"E, 106.63 FEET TO THE SAID WEST LINE OF STATE ROAD 59; THENCE N30°42'15"E, ALONG THE SAID WEST LINE OF STATE ROAD 59, 30.08 FEET TO THE POINT OF BEGINNING, CONTAINING 17,808 SQUARE FEET.

PARENT PARCEL, LEGAL DESCRIPTION (NOT FIELD SURVEYED) PER TITLE

THE FOLLOWING DESCRIBED REAL ESTATE, TOGETHER WITH THE RENTS, PROFITS, FIXTURES AND OTHER APPURTENANT INTERESTS, IN WALWORTH COUNTY, STATE OF WISCONSIN:

PARCEL 1:

A PARCEL OF LAND LOCATED IN THE SOUTHWEST 1/4 OF SECTION 8, TOWN 4 NORTH, RANGE 15 EAST OF THE CITY OF WHITEWATER, WALWORTH COUNTY, WISCONSIN, DESCRIBED AS FOLLOWS, TO-WIT: COMMENCING AT THE MIDDLE 1/4 SECTION CORNER OF SAID SECTION 8; THENCE WEST ALONG THE EAST-WEST 1/4 SECTION LINE 619.72 FEET TO THE CENTER LINE OF STATE TRUNK HIGHWAY NO. 59, WHICH POINT IS THE PLACE OF BEGINNING; THENCE SOUTH 43° 35' WEST ALONG THE CENTER LINE OF SAID HIGHWAY 743.72 FEET; THENCE SOUTH 28° 59' WEST ALONG THE CENTERLINE OF SAID HIGHWAY 664.31 FEET; THENCE NORTH 30° 29' WEST 690.20 FEET TO THE SOUTHERLY LINE OF THE C.M. ST. P. & P. RAILROAD RIGHT OF WAY; THENCE NORTH 49° 41' EAST ALONG THE RAILROAD RIGHT OF WAY 774.72 FEET TO THE EAST-WEST 1/4 SECTION LINE OF SAID SECTION 8; THENCE EAST ALONG SAID LINE 594.31 FEET TO THE PLACE OF BEGINNING.

ALSO A TRIANGULAR-SHAPED PARCEL OF LAND LOCATED IN THE NORTHWEST 1/4 OF SECTION 8, TOWN 4 NORTH, RANGE 15 EAST OF THE CITY OF WHITEWATER, WALWORTH COUNTY, WISCONSIN, DESCRIBED AS FOLLOWS, TO-WIT:

COMMENCING AT THE MIDDLE 1/4 SECTION CORNER OF SAID SECTION 8; THENCE WEST ALONG THE EAST-WEST 1/4 SECTION LINE 1214.03 FEET TO THE SOUTHERLY LINE OF THE C. M. ST. P. & P. RAILROAD RIGHT OF WAY, WHICH POINT IS THE PLACE OF BEGINNING; THENCE EAST ALONG SAID EAST-WEST 1/4 SECTION LINE 291.155 FEET TO A POINT; THENCE NORTHWESTERLY TO A POINT ON THE SOUTHERLY LINE OF SAID RAILROAD RIGHT OF WAY WHICH POINT IS 200 FEET NORTHEASTERLY, AS MEASURED ALONG THE SOUTHERLY LINE OF SAID RAILROAD RIGHT OF WAY, FROM THE PLACE OF BEGINNING HEREOF; THENCE SOUTH 49° 47' WEST ALONG THE SOUTHERLY LINE OF SAID RAILROAD RIGHT OF WAY 200 FEET TO THE PLACE OF BEGINNING.

EXCEPTING THEREFROM A TRIANGULAR-SHAPED PARCEL OF LAND LOCATED IN THE SOUTHWEST 1/4 OF SECTION 8, TOWN 4 NORTH, RANGE 15 EAST OF THE CITY OF WHITEWATER, WALWORTH COUNTY, WISCONSIN, DESCRIBED AS FOLLOWS, TO-WIT: COMMENCING AT THE MIDDLE 1/4 SECTION CORNER OF SAID SECTION 8; THENCE WEST ALONG THE EAST-WEST 1/4 SECTION LINE 619.72 FEET TO THE CENTER LINE OF STATE TRUNK HIGHWAY NO. 59, WHICH POINT IS THE PLACE OF BEGINNING; THENCE WEST ALONG SAID EAST-WEST 1/4 SECTION LINE 297.155 FEET TO A POINT; THENCE SOUTHEASTERLY TO A POINT ON THE CENTER LINE OF SAID STATE TRUNK HIGHWAY NO. 59 WHICH POINT IS 200 FEET SOUTHWESTERLY, AS MEASURED ALONG THE CENTER LINE OF SAID HIGHWAY, FROM THE PLACE OF BEGINNING HEREOF; THENCE NORTH 43° 35' EAST ALONG THE CENTER LINE OF SAID HIGHWAY 200 FEET TO THE PLACE OF BEGINNING.

FURTHER EXCEPTING LANDS CONVEYED TO THE STATE OF WISCONSIN BY DEED RECORDED AUGUST 28, 2001, AS DOCUMENT NO. 481415.

FURTHER EXCEPTING LANDS CONVEYED TO THE STATE OF WISCONSIN, DEPARTMENT OF TRANSPORTATION UNDER AN AWARD OF DAMAGES RECORDED JULY 6, 2009, AS DOCUMENT NO. 767729.

FURTHER EXCEPTING ALL THAT PORTION THEREOF AS IS SET FORTH IN CERTIFIED SURVEY MAP NO. 4547 RECORDED IN VOLUME 29 OF CERTIFIED SURVEYS ON PAGE 352 AS DOCUMENT NO. 890756, BEING A CERTIFIED SURVEY MAP OF PART OF THE NORTHWEST 1/4 OF THE SOUTHWEST 1/4 AND THE NORTHEAST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 8, TOWN 4 NORTH, RANGE 15 EAST, CITY OF WHITEWATER,

WALWORTH COUNTY, WISCONSIN.

PARCEL ID: /RUP 00341

THIS BEING THE SAME PROPERTY CONVEYED TO HATCHETT ENTERPRISES, LLC, A WISCONSIN LIMITED LIABILITY COMPANY FROM PROGRESSING PROPERTIES, LLC, A WISCONSIN LIMITED LIABILITY COMPANY IN A DEED DATED MAY 2, 2022 AND RECORDED MAY 4, 2022 AS INSTRUMENT NO. 1061224, IN WALWORTH COUNTY, WI.

Statement of Compliance with Wisconsin Statute § 66.0404

Wis. Stat. § 66.0404(2)(2)(b) sets out specific requirements and timelines for applications to construct a new mobile service support structure. Wis. Stat. § 66.0404(2)(2)(b) (1-6) outlines six categories of information that may be required to constitute a complete application for a substantial modification or new site. Here, five of the six categories are required, as the present application is for a new mobile service facility and support structure.

The five categories of information required by Wis. Stat. § 66.0404(2)(2)(b) (1-6) are described below, with the statutory requirement listed in bold, and the required document or information identified or outlined below the requirement.

1. The name and business address of, and the contact individual for, the applicant. Wis. Stat. § 66.0404(2)(2)(b)(1);

The applicant is Tillman Infrastructure. John Burchfield of LCC Telecom Services is the agent of and contact individual for Tillman Infrastructure. His business address is 10700 W Higgins Rd. Suite 240 Rosemont, IL 60018.

2. The location of the proposed or affected support structure. Wis. Stat. § 66.0404(2)(2)(b)(2):

A support structure is defined in Wis. Stat. §66.0404(1)(l) as “a freestanding structure that is designed to support a mobile service facility. In this case, the proposed support structure is a 195’-0” tall self-support lattice tower. The support structure is proposed to be located at 1002 S Janesville St, Whitewater, WI 53190. The support structure will be located within an equipment compound as defined in Wis. Stat. §66.0404(1)(h). This 70’-0” x 70’-0” fenced area is located within a 100’-0” x 100’-0” lease parcel that is part of a larger parent parcel at the above address. The location of the support structure is depicted on the site plans that have been submitted as part of this application.

3. The location of the proposed mobile service facility. Wis. Stat. § 66.0404(2)(2)(b)(3);

A mobile service facility is defined in Wis. Stat. §66.0404(1)(l) as “a set of equipment and network components, including antennas, transmitters, receivers, base stations, power supplies, cabling, and associated equipment, that is necessary to provide mobile service to a discreet geographic area.” In this case, the equipment consists of base station equipment cabinets and generator within a 24’-0” x 16’-0” area, along with antennas, transmitters, receivers, power supplies, cabling and associated equipment. All of the equipment is necessary to operate the facility.

4. If the application is to substantially modify an existing support structure, a construction plan which describes the proposed modifications to the support structure and the equipment and network components, including antennas, transmitters, receivers, base stations, power supplies,

cabling and related equipment associated with the proposed modifications. Wis. Stat. § 66.0404(2)(2)(b)(4).

Wis. Stat. §66.0404(2)(2)(b)(4) applies only to substantial modification applications as defined in Wis. Stat. §66.0404(1)(s). This section applies only to modification of existing sites and not to the construction of a new site. Accordingly, this information is not required for the Tillman's application.

5. A construction plan which describes the proposed mobile service support structure and the equipment and network components, including antennas, transmitters, receivers, base stations, power supplies, cabling, and related equipment to be placed on or around the new mobile service support structure. Wis. Stat. § 66.0404(2)(2)(b)(5);

The construction plan required for a new mobile service support structure and facility under Wis. Stat. §66.0404(2)(2)(b)(4) has been submitted as part of this application. The construction plan includes all of the elements required under the state statute.

6. An explanation as to why the applicant chose the proposed location and why the applicant did not choose collocation, including a sworn statement from an individual who has responsibility over the placement of the mobile service support structure attesting that collocation within the applicant's search ring would not result in the same mobile service functionality, coverage, and capacity; is technically infeasible; or is economically burdensome to the mobile service provider. Wis. Stat. § 66.0404(2)(2)(b)(6).

Wis. Stat. § 66.0404(2)(2)(b)(5) requires a sworn statement in instances where a carrier is unable to collocate its facilities and must construct a new mobile support structure. A sworn statement has been submitted with the attached application attesting that no other structure within the area would result in the same functionality, coverage, or capacity as the proposed mobile support structure.

Statement of Compliance with City of Whitewater Ordinance Chapters 19.55 & 19.66

Per Section 19.55.040 of the City of Whitewater’s Wireless Telecommunications Facilities Ordinance, all new freestanding wireless communication facilities shall require a conditional use permit and meet the standards in Chapters 19.55 and 19.66 in order to obtain approval.

19.55.050 - Required application submittal information.

With the application for plan review or conditional use permit for a wireless telecommunications facility, the petitioner shall submit all information required under [Section 19.63.020](#), along with the following additional information:

A. The identity, legal status, signature and contact information of the carrier, service provider, petitioner, and landowner.

Please see attached site data sheet.

B. FCC license and registration numbers if applicable.

Please see FCC Antenna Registration page below:

ASR Registration Search
Registration 1326923 HELP

[New Search](#) [Return to Results](#) [Printable Page](#) [Reference Copy](#) [Map Registration](#)

Registration Detail			
Reg Number	1326923	Status	Granted
File Number	A1253730	Constructed	
EMI	No	Dismantled	
NEPA			
Antenna Structure			
Structure Type	LTOWER - Lattice Tower		
Location (in NAD83 Coordinates - Convert to NAD27)			
Lat/Long	42-49-50.1 N 088-42-39.2 W	Address	312 Elkhorn Road
City, State	Whitewater, WI		
Zip	53190	County	WALWORTH
Center of AM Array		Position of Tower in Array	
Heights (meters)			
Elevation of Site Above Mean Sea Level		Overall Height Above Ground (AGL)	
253.0		60.7	
Overall Height Above Mean Sea Level		Overall Height Above Ground w/o Appurtenances	
313.7		59.7	
Painting and Lighting Specifications			
None			
FAA Notification			
FAA Study	2023-AGL-19759-OE	FAA Issue Date	09/22/2023
Owner & Contact Information			
FRN	0025969999	Owner Entity Type	Limited Liability Company
Owner			
Tillman Infrastructure, LLC Attention To: Regulatory 152 West 57th Street New York, NY 10019		P: (212)706-1677 F: E: dmstipo@tillmaninfrastructure.com	
Contact			
Attention To: Regulatory 152 West 57th Street New York, NY 10019		P: (212)706-1677 F: E: dmstipo@tillmaninfrastructure.com	

C. A report prepared by a Wisconsin licensed engineer certifying the structural design of the telecommunications facility of a new freestanding wireless telecommunications facility as proposed and its physical ability to accommodate, either initially or at some time in the future, a total of at least three antenna arrays for separate providers.

Please refer to attached site plan showing multiple carrier tower. Applicant is in the business of leasing space on shared towers and all towers constructed are for at least three arrays barring extenuating circumstances. If necessary, Applicant requests that provision of an engineer certified structural design showing capacity for 3 carriers be made a condition of approval.

D. In the case of a leased site, a lease agreement, option or binding lease instrument which does not preclude the lessee from entering into sub-leases on the site at market rates with another co-locating provider(s) and includes the legal description and amount of property lease.

Please find Lease Agreement attached with protected business information redacted.

E. For a proposed wireless telecommunications facility within a one-mile radius of an airport, copies of an affidavit of notification indicating that the airport operator and airport property owner have been notified via certified mail, along with copies of the determination of no hazard from the FAA or any other finds of the Wisconsin State Bureau of Aeronautics, such as they may apply.

Nearest airport is approximately 1.5 miles SW of proposed facility.

F. Proof of a satisfactory level of liability insurance coverage, with the city of Whitewater listed as an additional named insured party.

Please find Certification of Insurance attached.

G. Certified statement and map prepared by a licensed radio frequency engineer showing the coverage area of the proposed facility.

Please see attached Propagation Maps.

H. For a wireless telecommunications facility that requires a conditional use permit, a feasibility analysis that identifies at least three alternative sites, pre-existing freestanding wireless telecommunications facilities, and/or alternative support structures that could technically support a comparable level of service. The intent of this analysis is to present options to minimize the number, size, and adverse environmental impacts of wireless telecommunications facilities. The analysis shall specifically address the potential for co-location on pre-existing freestanding wireless telecommunications facilities and the use of alternative support structures. It shall also explain the rationale for selection of the proposed site in view of the relative merits of the alternatives. Approval of the project is subject to the plan and architectural review commission's determination that the chosen site is more advantageous than any other alternative site that is both technically feasible and available for use. The plan and architectural review commission may choose to independently verify the findings of the analysis at the applicant's expense.

Please see attached feasibility analysis.

I. For a wireless telecommunications facility that requires a conditional use permit, a performance bond in the amount of \$20,000.00 naming the city as obligee, as security for the potential future removal of abandoned or inactivated facilities.

Please see attached Tower Removal Bond.

J. For a wireless telecommunications facility that would be set back from any property line or, principal building a distance less than the height of the facility, including the height of any alternative support structure, an analysis prepared by a licensed structural engineer demonstrating that the facility would not pose a threat to the public, existing principal buildings or adjacent properties in the event of failure.

Please see attached Engineer's Fall Zone Letter

K. The amount and location of any fuel proposed to be stored on site.

Any fuel stored on site will be located in the tank of AT&T's emergency power backup generator and will be approximately 350 gal of diesel fuel, subject to generator specifications.

19.66.050 - Standards for review and approval.

The plan commission shall use the following standards when reviewing applications for conditional use:

A. That the establishment, maintenance, or operation of the conditional use will not create a nuisance for neighboring uses or substantially reduce the values of other property.

With such a small footprint and location in a Highway Commercial and Light Industrial (B-3) zoned area, this facility will have little impact on the use and enjoyment of property in the immediate vicinity for the purposes already permitted, nor will there be an adverse effect on property values within the neighborhood. To the contrary, enhanced wireless communications will have a positive influence on the development and values of businesses in this area.

B. That adequate utilities, access roads, parking drainage, landscaping and other necessary site improvements are being provided.

The proposed wireless communications facility is located in an area that will be adequately served by existing utilities, and will not impose an undue burden on, any of the improvements, facilities, utilities or services provided by public or private agencies serving the subject property. The proposed facility only needs power and fiber which are readily available at this site. Access will be from a private driveway and adequate drainage is available on site. No other public services will be necessary for the proposed facility.

C. That the conditional use conforms to all applicable regulations of the district in which it is located, unless otherwise specifically exempted in this chapter. Where a variance is required, the plan commission may condition its approval on the subsequent approval of the variance.

The application on behalf of Tillman Infrastructure conforms to the applicable regulations of the B-3 Highway Commercial and Light Industrial District. Pursuant to the Whitewater Zoning Ordinance, Sections 19.33.025(J) and 19.33.030(S), wireless telecommunications facilities are listed as a Conditional Use. Per WI State Statute Section 66.0404, telecommunications support structures are available as a conditional use in all zoning districts of all municipalities. The proposed wireless telecommunications facility is designed to conform to all federal, state and local regulations.

D. That the conditional use conforms to the purpose and intent of the city comprehensive plan.

The future land use of the property upon which the proposed facility is to be built is designated as Community Business and is surrounded by Agricultural/Vacant designated land. The provision of wireless services to these locations will be a benefit to existing travel on major local roads and to future development and are in conformity with the comprehensive plan.

E. The conditional use and structures are consistent with sound planning and zoning principles.

Tillman Infrastructure has been sensitive in selecting a site that will minimize the impact on the surrounding property. Its facility will be located on an already highly utilized light industrial parcel in a low-impact area and will not disrupt any future development of other parcels in the area. Due to its location at 1002 S Janesville St, it will not impede the normal and orderly development and improvements of surrounding property for uses permitted in this district. To the contrary, enhanced

wireless communications will have a positive influence on the development of this area. Wireless telecommunications is a critical system in the current world, both for economic and communications use as well as emergency services; therefore, having robust wireless services is essential for the normal and orderly development of the area.

Request for Variance from Whitewater Ordinance Section 19.55.070(F)

Section 19.55.070 of the City of Whitewater Code of Ordinances lists “structural, design, and aesthetic standards” for wireless telecommunications facilities. Applicant respectfully requests a variance from subsection 19.55.070(f):

“Wireless Telecommunications Support Facilities. All wireless telecommunications support facilities shall be located within enclosed buildings or fully screened rooftop locations. Such accessory buildings shall not exceed fifteen feet in height and twelve hundred square feet in area, unless otherwise permitted by the plan and architectural review commission to facilitate co-location. The design and exterior surfacing of all such buildings or rooftop screening structures shall be in harmony with the existing or desired architecture for the area. The exterior walls of all such buildings shall be masonry, stone, stucco, pre-cast, concrete or other similar surface.”

Applicant’s proposed support structures are not designed to be enclosed within a solid structure as required by ordinance. Applicant proposes that, along with the standard required landscaping, the standard equipment cabinets shown in the Site Plan will be in harmony with the existing or desired architecture of the area.

Per Whitewater Ordinance Section 19.72.080, no variance shall be granted unless the Board of Zoning Appeals finds beyond a reasonable doubt that all the following facts and conditions exist:

- A. The particular physical surroundings, shape, or topographical conditions of the specific property involved would result in a particular hardship upon the owner as distinguished from a mere inconvenience, if the strict letter of the regulations were to be carried out;

The supporting equipment used by applicant and its sub-lessor AT&T is designed to be located in an all-weather cabinet. An enclosed building is not necessary and would require special design, construction, and potential permitting concerns that the standard cabinet does not. Additionally, Applicant’s business is leasing space on their tower and within the lease area at the base of the tower for various carriers. An enclosed building would take up additional space within the lease parcel as compared to the standard all-weather cabinet, creating a hardship on Applicant’s use of the parcel.

- B. The conditions upon which the application for a variance is based would not be applicable generally to other property within the same zoning classification;

Properties within the B-3 zoning classification do not generally have wireless telecommunications facilities; therefore, the conditions upon which this variance is based would not be generally applicable to them.

- C. The purpose of the variance is not based exclusively upon a desire for economic or other material gain by the applicant or owner;

In addition to significantly higher costs of construction, construction of Applicant's equipment within an enclosed structure potentially limits the ability of Applicant or its sub-lessors to modify or replace their equipment in the future in order to keep up with technological upgrades. Inability to make such upgrades would result in poorer telecommunications service to residents and others in the area.

D. The hardship is not one that is self-created;

Wireless telecommunications technology is constantly evolving; systems that may have previously been necessary to locate inside of enclosed structures are not necessary to be enclosed. The vast majority of AT&T's sites around the region include the standard all-weather cabinet in this installation, and a custom-built enclosure could slow or prevent future upgrades. Such upgrades in technology are necessary to provide the continuous, high-quality, competitive telecommunications services demanded by the general public.

E. The proposed variance will not impair an adequate supply of light and air to adjacent property or substantially increase the 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 neighborhoods;

The proposed equipment cabinet is approximately 72" tall, smaller and shorter than an enclosed building and will not impair an adequate supply of light and air to adjacent property, increase the danger of fire, nor will it substantially diminish or impair property values within the neighborhood.

F. The proposed variance will not have the effect of permitting a use which is not otherwise permitted in the district;

Wireless telecommunications facilities are permitted by CUP in the B-3 district, along with their supporting equipment. Allowing this variance is a cosmetic variance from an existing use and does not permit a use not otherwise permitted.

G. No variance shall be granted in a floodland district where not in compliance with Section 19.46.070C.4. of this title.

The property is not located in a floodplain.

Site Plan

Sworn Statement of Carrier - Wis. Stat. § 66.0404(2)(2)(b)(5)

Engineer's Fall Zone Letter

Per City of Whitewater Zoning Ordinance Section 19.55.070(D), wireless telecommunications towers must be set back from all property lines equal to the height of the support structure. A reduced setback may be considered on the basis of a structural engineering analysis, which has been attached to this application.

Wisconsin State Statute 66.0505(2)(g) additionally provides that:

g) If an applicant provides a political subdivision with an engineering certification showing that a mobile service support structure, or an existing structure, is designed to collapse within a smaller area than the setback or fall zone area required in a zoning ordinance, that zoning ordinance does not apply to such a structure unless the political subdivision provides the applicant with substantial evidence that the engineering certification is flawed.

Propagation Maps

Lease Agreement

Tower Removal Bond

Certification of Insurance



COLOCATION FEASIBILITY ANALYSIS

To: Tillman Infrastructure
Site Number: 11655718 / TI-OPP-29018
Search Radius: N/A

Date: 4/8/2024
Coordinates: 42.826456, -88.749369
Requested Rad: 160'

Summary Area Review:

No other sites within search area feasible for colocation. No sites outside of search area potentially viable.

Analysis:

AT&T requested a tower capable of supporting a 160' RAD as close as possible to the coordinates 42.826456, -88.749369 in order to meet its coverage objective. Proposed tower is located at 42.81912825, -88.75383307, within 2,930' of coverage objective. There are no existing structures 160' in height within this radius. Therefore, per Wis. Stat. 66.0404(2)(b)(6) there are no alternative structures within the search area that can meet this requirement. This finding is supported by Paragraph 6 of the March 15, 2024 affidavit from Andrew Flowers, Lead Real Estate Manager for AT&T.

City of Whitewater Ordinance 19.55.050 requires an evaluation of three alternative sites, pre-existing freestanding wireless telecommunications facilities, and/or alternative support structures that could technically support a comparable level of service. There are no such alternative sites in the surrounding area. There are no alternative support structures such as water tanks or tall buildings within the search area. There are no pre-existing telecommunications structures within the search area.

Outside of the search area, the three nearest structures of 160' or above are:

ASR Registration Number 1050104:

- 42.811667°, -88.758333°
- 280; guyed mast owned by Wisconsin Electric Power Company
- approximately 1.13 miles southwest of coverage objective
- too distant from coverage objective location to technically support comparable level of service

ASR Registration Number 1326923:

- 42.8306, -88.71101
- 195' proposed self-support tower owned by Tillman Infrastructure
- approximately 2 miles east of coverage objective
- AT&T already planning to colocate on this tower if approved, coverage objective location too distant to technically support comparable level of service

ASR Registration Number 1324313:

- 42.852306, -88.727944
- 220' proposed self-support tower owned by Walworth County, not yet constructed
- approximately 2.18 miles northeast of coverage objective
- too remote, overlapping existing A&T coverage provided by site WIL01196 located on ASR tower 1233524 and site WIL02695 located on ASR Tower 1324313



Zoning Requirements:

City of Whitewater, WI

[Ordinance 19.55.050\(H\):](#)

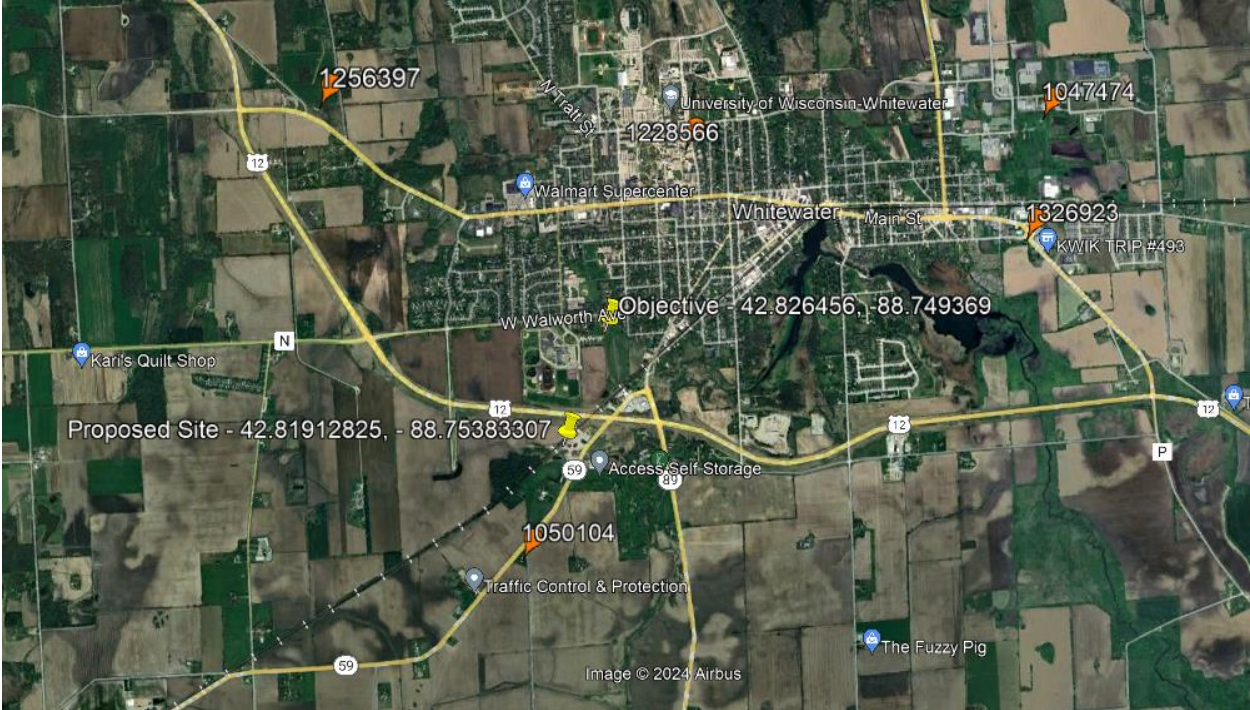
For a wireless telecommunications facility that requires a conditional use permit, a feasibility analysis that identifies at least three alternative sites, pre-existing freestanding wireless telecommunications facilities, and/or alternative support structures that could technically support a comparable level of service. The intent of this analysis is to present options to minimize the number, size, and adverse environmental impacts of wireless telecommunications facilities. The analysis shall specifically address the potential for co-location on pre-existing freestanding wireless telecommunications facilities and the use of alternative support structures. It shall also explain the rationale for selection of the proposed site in view of the relative merits of the alternatives. Approval of the project is subject to the plan and architectural review commission's determination that the chosen site is more advantageous than any other alternative site that is both technically feasible and available for use. The plan and architectural review commission may choose to independently verify the findings of the analysis at the applicant's expense.

State of Wisconsin

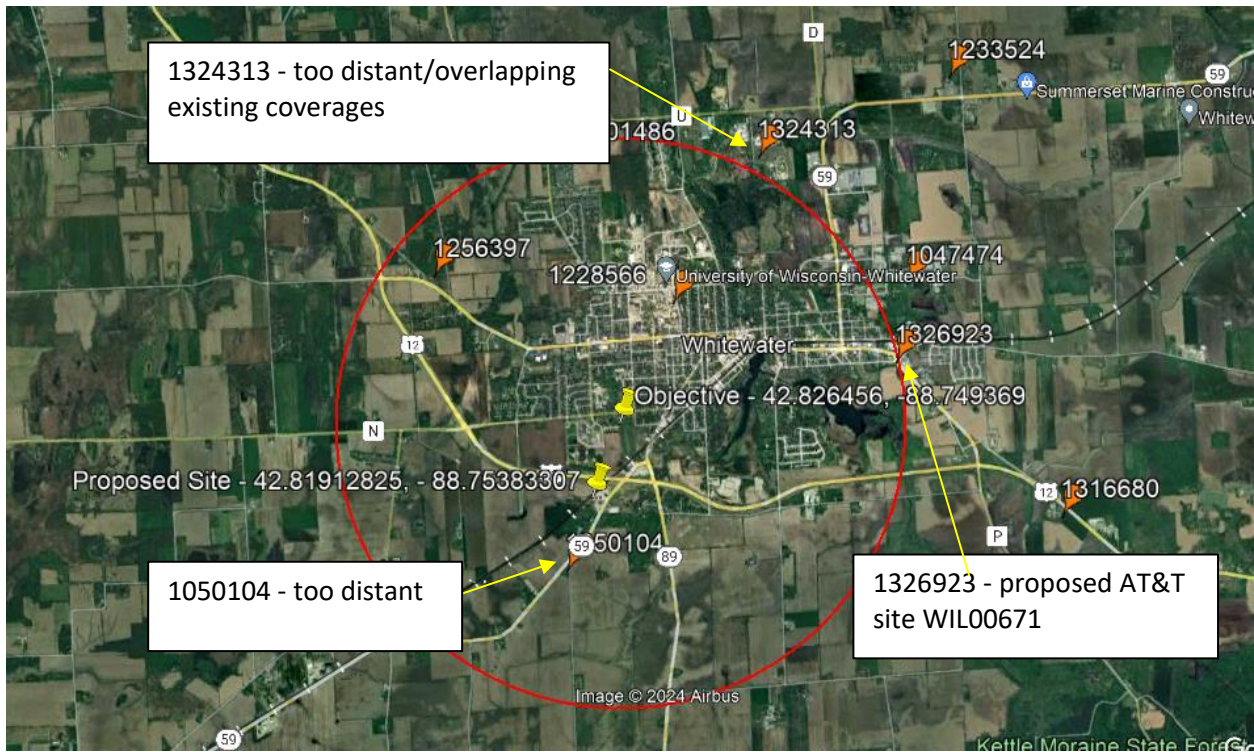
[Wis. Stat. 66.0404\(2\)\(b\)\(6\)](#)

If an application is to construct a new mobile service support structure, an explanation as to why the applicant chose the proposed location and why the applicant did not choose collocation, including a sworn statement from an individual who has responsibility over the placement of the mobile service support structure attesting that collocation within the applicant's search ring would not result in the same mobile service functionality, coverage, and capacity; is technically infeasible; or is economically burdensome to the mobile service provider.

Search Area:



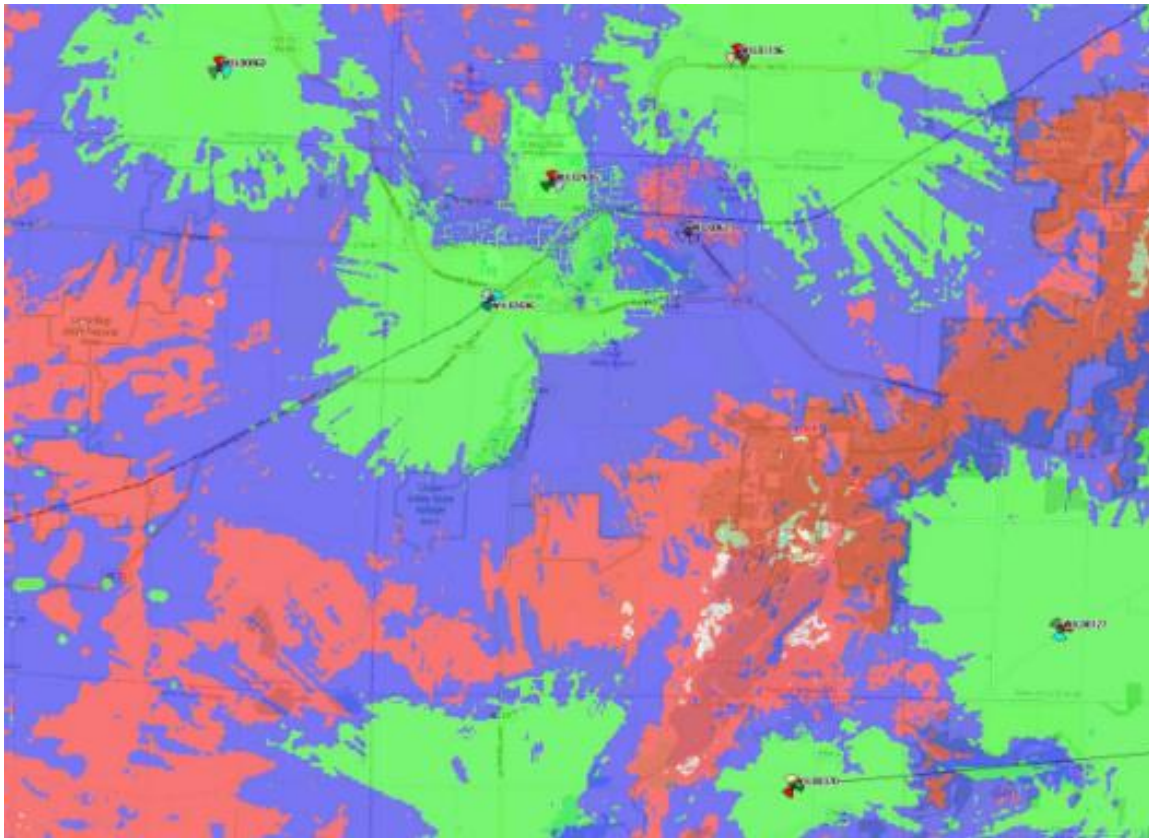
Search Area with ASR Registered Towers (2-mile radius):



Three Closest Potential Alternate Structures:

- ASR 1050104 – does not meet coverage objective
- ASR 1326923 – unconstructed, AT&T already proposed colocation WIL00671 on this site
- ASR 1324313 – unconstructed, overlapping coverage with WIL01196 and WIL02695 and does not meet coverage objective

AT&T Signal Propagation Map (Proposed):



AFFIDAVIT
SWORN STATEMENT OF NEED FOR A NEW MOBILE SERVICE SUPPORT
STRUCTURE IN SUPPORT OF NEW TOWER CONSTRUCTION

STATE OF ILLINOIS
COUNTY OF DuPage

The undersigned, Andrew Flowers, being first duly sworn on oath, deposes and states as follows:

1. My name is Andrew Flowers and I am employed by AT&T Mobility dba New Cingular Wireless PCS, LLC as its Lead Real Estate Manager IL/WI. My job duties include, among other things, responsibility, and oversight of AT&T Mobility's wireless network. This includes oversight of the newly proposed mobile service support structure at the address of 1002 S. Janesville Street, Whitewater, WI 53190 with a property parcel ID number of WUP 00341, and Lat/Long coordinates of 42.81912825, -88.75383307 (the "New Tower Location").

2. This Sworn Statement is made pursuant to Whitewater, WI.

3. I make and submit this Sworn Statement in support of the accompanying application and supplement documents for the request of zoning approval submitted by applicant LCC Telecom, LLC and pursuant to which Tillman Infrastructure, LLC proposes to develop and construct a 195' tall self-support tower, overall structure height 199' with lightning rod attachment, and related telecommunications equipment at the New Tower Location as described above and depicted on the site plans submitted along with the application.

4. Tillman Infrastructure, LLC is in the business of, among other things, developing, constructing, and operating mobile service support structures (a/k/a telecommunications towers or cell towers) and leasing space on those structures and facilities to wireless carriers such as AT&T Mobility. Relevant to the present application, AT&T Mobility and Tillman Infrastructure, LLC desire that Tillman Infrastructure, LLC develop and build the referenced tower and lease space thereupon to AT&T Mobility as part of improving AT&T Mobility's wireless telecommunications network in the area surrounding the New Tower Location.

5. AT&T Mobility is improving and upgrading its network's wireless coverage and capacity in the area surrounding New Tower Location to provide needed improvement to signal strength, in-building penetration, and reliable, high-speed wireless data capability. In order to accomplish these objectives, AT&T Mobility and Tillman Infrastructure, LLC are proposing the new mobile support structure tower and related telecommunications site at the New Tower Location.

6. The proposed mobile service support structure at the New Tower Location is a necessary infrastructure addition and will become an integral part of AT&T Mobility's wireless network. The primary functions of the proposed site are to provide enhanced, reliable wireless coverage and additional capacity which will help ensure seamless wireless data capabilities and connectivity to AT&T Mobility's customers in the area. Without this site, the signal strength and data capacity in the area will not be adequate for a reliable network. As consumption of data services surge, the importance of this site also surges. AT&T Mobility has evaluated the existing structure locations in the surrounding area, and there are no existing towers or other tall structures that could accommodate AT&T Mobility's equipment to achieve substantially similar network functionality, coverage, and capacity. Consequently, because co-locating on no other existing structure would provide the required wireless coverage, signal strength, or data speeds to the coverage objective and intended areas, the proposed new mobile service support structure is necessary to provide the coverage and capacity required for a fully functioning wireless network.

Dated this 15th day of March, 2024.

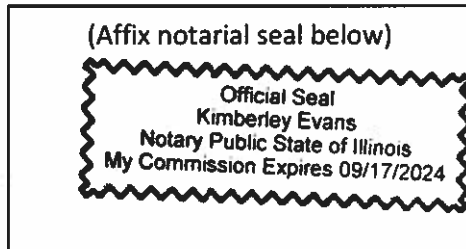


Andrew T. Flowers
Lead Real Estate Manager IL/WI
AT&T Mobility

Subscribed and sworn before me this
15 day of March, 2024.

Kimberley Evans
Notary Public, State of ILLINOIS

My commission expires: 9-17-2024 (date)



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Item 3.

HUSCH BLACKWELL

Jake Remington
Senior Counsel

511 North Broadway, Suite 1100
Milwaukee, WI 53202
Direct: 414.978.5527
Fax: 414.223.5000
Jake.Remington@huschblackwell.com

July 9, 2024

VIA E-MAIL

Allison Schwark
Zoning Administrator
City of Whitewater
312 W. Whitewater Street
Whitewater, WI 53190

Re: Application for Conditional Use Permit for Wireless Telecommunications Facility
Site Address: 1002 S. Janesville Street
Extension of 90-day Timeframe Under Wis. Stat. § 66.0404
Current Deadline: July 19, 2024
New Deadline: August 12, 2024

Dear Ms. Schwark:

With respect to the above-referenced application, state law prescribes that a time period of 90 days from the date the Applicants filed the application, plus the number of days it took the Applicants to respond to a timely notice of incomplete application, if any, for the City to review the application, make a final decision, and provided the applicant of notice of its final decision in writing, unless the time period to act is extended by mutual written agreement between the City and the Applicants. Here, the application was filed on April 19, 2024, and deemed complete 10 days thereafter. Accordingly, the time period under Wis. Stat. § 66.0404 is set to expire on July 19, 2024.

The Applicants understand that additional time is needed for the City to review the application. In an effort to work cooperatively with the City, the Applicants and the City agree to extend the applicable 90-day period of time for the City to act on the application as set forth in this letter. When countersigned, this letter will confirm agreement between the City and the Applicants to extend the applicable time for review under Wis. Stat. § 66.0404 to and including August 12, 2024, which we understand is a regularly scheduled meeting of the City's Plan and Architectural Review Committee. The parties further agree that no limitations period for any claim related to

HUSCH BLACKWELL

Allison Schwark
July 9, 2024
Page 2

the timing of the City's processing the application shall commence to run before August 12, 2024.

To confirm the City's agreement, please countersign below and return this letter to me. Thank you.

Respectfully,


HUSCH BLACKWELL LLP



Jake Remington
Senior Counsel

Agreed:

City of Whitewater, Wisconsin

By: 
Name: Taylor Zeinert, Economic Development Director
Its: _____
Date: 07/12/24

Print

Conditional Use Permit Application - Submission #882

Date Submitted: 4/19/2024

City of Whitewater

312 W. Whitewater Street
P.O. Box 178
Whitewater, WI 53190
262-473-0540
www.whitewater-wi.gov

Conditional Use Permit Application

NOTICE:

The Plan Commission meetings are scheduled at 6:00 p.m. on the 2nd Monday of the month. All complete plans must be in by 4:00 p.m. four weeks prior to the meeting.

Address of Property*

1002 S Janesville St

City*

Whitewater

State*

WI

Zip Code*

53190

Owner's First Name*

Hatchett Enterprises

Owner's Last Name*

LLC

Applicant's First Name*

Tillman Infrastructure

Applicant's Last Name*

LLC

Mailing Address*

152 West 57th Street 27th Floor

City*

New York

State*

NY

Zip Code*

10019

Item 3.

Phone Number*

224-803-6451

Fax Number

847-608-1299

Email Address*

jburchfield@lcctelecom.com

Existing and Proposed Uses:

Current Use of Property*

Warehouse/equipment rental

Zoning District*

B-3 Commercial and Light Industrial

Proposed Use:*

Mobile service facility

Conditions

The City of Whitewater Zoning Ordinance authorizes the Plan Commission to place conditions on approved conditional uses. "Conditions" such as landscaping, architectural design, type of construction, construction commencement and completion dates, sureties, lighting, fencing, plantation, deed restrictions, highway access restrictions, increased yards or parking requirements may be affected. "Conditional Uses" may be subject to time limits or requirements for periodic review by staff.

APPLICATION REQUIREMENTS

THE FOLLOWING INFORMATION MUST BE SUBMITTED IN ORDER TO CONSIDER THE APPLICATION COMPLETE:

1. Statement of use, including type of business with number of employees by shift.
2. Scaled plot plan with north arrow, showing proposed site and all site dimensions.
3. All buildings and structures; location, height, materials and building elevations.
4. Lighting plan; including location, height, materials and building elevations.
5. Elevation drawings or illustrations indicating the architectural treatment of all proposed buildings and structures.
6. Off-street parking; locations, layout, dimensions, circulation, landscaped areas, total number of stalls, elevation, curb and gutter.
7. Access; pedestrian, vehicular, service. Points of ingress and egress.
8. Loading ; location, dimensions, number of spaces internal circulation.
9. Landscaping: including location, size and type of all proposed planting materials.
10. Floor plans: of all proposed buildings and structures, including square footage.
11. Signage: Location, height, dimensions, color, materials, lighting and copy area.
12. Grading/draining plan of proposed site.
13. Waste disposal facilities; storage facilities for storage of trash and waste materials.
14. Outdoor storage, where permitted in the district; type, location, height of screening devices.

**One (1) full size, Fifteen (15) 11.x17, and One (1) Electronic Copy (include color where possible) site plan copies, drawn to scale and dimensioned.

STANDARDS FOR REVIEW AND APPROVAL

The Plan and Architectural Commission shall use the following standards when reviewing applications for conditional uses. The applicant is required to fill out the following items and explain how the proposed conditional use will meet the standard for approval.

Standards

That the establishment, maintenance, or operation of the Conditional Use will not create a nuisance for neighboring uses or substantially reduce value of other property. Applicant's explanation:*

With such a small footprint and location in a Highway Commercial and Light Industrial (B-3) zoned area, this facility will have little impact on the use and enjoyment of property in the immediate vicinity for the purposes already permitted, nor will there be an adverse effect on property values within the neighborhood. To the contrary, enhanced wireless communications will have a positive influence on the development and values of businesses in this area.

That utilities, access roads, parking, drainage, landscaping and other necessary site improvements are being provided. Applicant's explanation:*

The proposed wireless communications facility is located in an area that will be adequately served by existing utilities, and will not impose an undue burden on, any of the improvements, facilities, utilities or services provided by public or private agencies serving the subject property. The proposed facility only needs power and fiber which are readily available at this site. Access will be from a private driveway and adequate drainage is available on site. No other public services will be necessary for the proposed facility.

Item 3.

That the conditional use conforms to all applicable regulations of the district in which it is located, unless otherwise specifically exempted by this ordinance. Applicant's explanations: *

The application on behalf of Tillman Infrastructure conforms to the applicable regulations of the B-3 Highway Commercial and Light Industrial District. Pursuant to the Whitewater Zoning Ordinance, Sections 19.33.025(J) and 19.33.030(S), wireless telecommunications facilities are listed as a Conditional Use. Per WI State Statute Section 66.0404, telecommunications support structures are available as a conditional use in all zoning districts of all municipalities. The proposed wireless telecommunications facility is designed to conform to all federal, state and local regulations.

That the conditional use conforms to the purpose and intent of the City Master Plan. Applicant's explanation:*

The future land use of the property upon which the proposed facility is to be built is designated as Community Business and is surrounded by Agricultural/Vacant designated land. The provision of wireless services to these locations will be a benefit to existing travel on major local roads and to future development and are in conformity with the comprehensive plan.

** Refer to Chapter 19.66 of the City of Whitewater Municipal code, entitled CONDITIONAL USES, for more information.

Applicant's Signature*

Date

John Burchfield

4/19/2024

Plot Plan Upload

1002 S Janesville - Cell Tower - Site Plan.pdf

Plan Upload

1002 S Janesville - Cell Tower - Fall Zone Letter.pdf

Lighting Plan Upload

1002 S Janesville - Cell Tower - Statement of Need.pdf

Landscape Plan Upload

1002 S Janesville - Cell Tower - Feasibility Analysis.pdf

File Upload

1002 S Janesville - Cell Tower - Certification of Insurance.pdf

File Upload

1002 S Janesville - TI-OPP-29018 Exhibit Book - Final 04.19.24.pdf

TO BE COMPLETED BY THE NEIGHBORHOOD SERVICES DEPARTMENT

1. Application was filed and the paid at least four weeks prior to the meeting. \$100.00 fee

Filed on:

[Empty text box for Filed on]

Received by:

[Empty text box for Received by]

Receipt #

[Empty text box for Receipt #]

Application reviewed by staff members

[Empty text box for Application reviewed by staff members]

3. Class 2 Notice published in Official Newspaper on

[Empty text box for Class 2 Notice published in Official Newspaper on]

4. Notices of Public Hearing mailed to property owners on

[Empty text box]

Plan Commission holds the PUBLIC HEARING on

[Empty text box]

Public Comments may also be submitted in person or in writing to City Staff.

At the conclusion of the Public Hearing, the Plan Commission will make a decision.

ACTION TAKEN

Conditional Use Permit: By the Plan and Architectural Review Commission

Granted

Not Granted

CONDITIONS PLACED UPON PERMIT BY PLAN AND ARCHITECTURAL REVIEW COMMISSION:

[Empty text box]

Signature of Plan Commission Chairperson

Date

[Empty signature box]

mm/dd/yyyy



Tips for Minimizing Development Review Costs-A Guide for Applicants

The City of Whitewater assigns its consultant cost associated with reviewing development proposals to the applicant requesting development approval. These costs can vary based on a number of factors. Many of these factors can at least be partially controlled by the applicant for development review. The City recognizes that we are in a time when the need to control costs is at the forefront of everyone's minds. The following guide is intended to assist applicants for City development approvals understand what they can do to manage and minimize the costs associated with review of their application. The tips included in this guide will almost always result in a less costly and quicker review of an application.

MEET WITH NEIGHBORHOOD SERVICES DEPARTMENT BEFORE SUBMITTING AN APPLICATION

If you are planning on submitting an application for development review, one of the first things you should do is have a discussion with the City's Neighborhood Department. This can be accomplished either by dropping by the Neighborhood Services Department counter at City Hall, or by making an appointment with the Neighborhood Services Director. Before you make significant investments in your project, The Department can help you understand the feasibility of your proposal, what City plans and ordinances will apply, what type of review process will be required, and how to prepare a complete application.

SUBMIT A COMPLETE AND THOROUGH APPLICATION

One of the most important things you can do to make your review process less costly to you is to submit a complete, thorough, and well-organized application in accordance with City ordinance requirements. The City has checklists to help you make sure your application is complete. To help you prepare an application that has the right level of detail and information, assume that the people reviewing the application have never seen your property before, have no prior understanding of what you are proposing, and don't necessarily understand the reasons for your request.

FOR MORE COMPLEX OR TECHNICAL TYPES OF PROJECTS, STRONGLY CONSIDER WORKING WITH AN EXPERIENCED PROFESSIONAL TO HELP PREPARE YOUR PLANS

Experienced professional engineers, land planners, architects, surveyors, and landscape architects should be quite familiar with standard developmental review processes and expectations. They are also generally capable of preparing high-quality plans that will ultimately require less time (i.e., less cost for you) for City's planning and engineering consultants to review, saving you money in the long run. Any project that includes significant site grading, stormwater management, or utility work; significant landscaping; or significant building remodeling or expansion generally requires professionals in the associated fields to help out.

FOR SIMPLER PROJECTS, SUBMIT THOROUGH, LEGIBLE, AND ACCURATE PLANS

For less complicated proposals, it is certainly acceptable to prepare plans yourself rather than paying to have them prepared by a professional. However, keep in mind that even though the project may be less complex, the City's staff and planning consultant still need to ensure that your proposal meets all City requirements. Therefore, such plans must be prepared with care. Regardless of the complexity, all site, building and floor plans should:

1. Be drawn to be recognized scale and indicate what the scale is (e.g. 1 inch=40 feet).
2. Include titles and dates on all submitted documents in case pieces of your application get separated.
3. Include clear and legible labels that identify streets, existing and proposed buildings, parking areas, and other site improvements.
4. Indicate what the property and improvements look like today versus what is being proposed for the future.
5. Accurately represent and label the dimensions of all lot lines, setbacks, pavement/parking areas, building heights, and any other pertinent project features.
6. Indicate the colors and materials of all existing and proposed site/building improvements. Including color photos with your application is one inexpensive and accurate way to show the current conditions of the site. Color catalog pages or paint chips can be included to show the appearance of proposed signs, light fixtures, fences, retaining walls, landscaping features, building materials or other similar improvements.

SUBMIT YOUR APPLICATION WELL IN ADVANCE OF THE PLAN AND ARCHITECTURAL REVIEW COMMISSION MEETING

Item 3.

The city normally requires that a complete application be submitted four (4) weeks in advance of the Commission meeting when it will be considered. For simple submittals not requiring a public hearing, this may be reduced to two (2) weeks in advance. The further in advance you can submit your application, the better for you and everyone involved in reviewing the project. Additional review time may give the City's planning consultant and staff an opportunity to address those issues before the Plan and Architectural Review Commission meeting. Be sure to provide reliable contact information on your application form and be available to respond to such questions or requests in a timely manner.

FOR MORE COMPLEX PROJECTS, SUBMIT YOUR PROJECT CONCEPTUAL REVIEW

A conceptual review can be accomplished in several ways depending on the nature of your project and your desired outcomes.

1. Preliminary plans may be submitted to City staff and the planning consultant for a quick informal review. This will allow you to gauge initial reactions to your proposal and help you identify key issues;
2. You may request a sit-down meeting with the Neighborhood Services Director and or Planning consultant to review and more thoroughly discuss your proposal; and/or
3. You can ask to be placed on a Plan and Architectural Review Commission meeting agenda to present and discuss preliminary plans with the Commission and gauge its reaction before formally submitting your development review application.

Overall, conceptual reviews almost always save time, money, stress, and frustration in the long run for everyone involved. For this reason, the City will absorb up to \$200 in consultant review costs for conceptual review of each project.

HOLD A NEIGHBORHOOD MEETING FOR LARGER AND POTENTIALLY MORE CONTROVERSIAL PROJECTS

If you believe your project falls into one or both of these two categories (City staff can help you decide), one way to help the formal development review process go more smoothly is to host a meeting for neighbors and any other interested members of the community. This would happen before any Plan and Architectural Review Commission meeting and often before you even submit a formal development review application.

A neighborhood meeting will give you an opportunity to describe your proposal, respond to questions and concerns, and generally address issues in an environment that is less formal and potentially less emotional than a Plan and Architectural Review Commission meeting. Neighborhood meetings can help you build support for your project, understand other's perspectives on your proposal, clarify misunderstandings, and modify the project and alleviate public concerns before the Plan and Architectural Review Commission meetings. Please notify the City Neighborhood Services Director of your neighborhood meeting date, time and place; make sure all neighbors are fully aware (City staff can provide you a mailing list at no charge); and document the outcomes of the meeting to include with your application.

TYPICAL CITY PLANNING CONSULTANT DEVELOPMENT REVIEW COSTS

The City often utilizes assistance from a planning consultant to analyze requests for land development approvals against City plans and ordinances and assist the City's Plan and Architectural Review Commission and City Council on decision making. Because it is the applicant who is generating the need for the service, the City's policy is to assign most consultant costs associated with such review to the applicant, as opposed to asking general taxpayer to cover these costs.

The development review costs provided below represent the planning consultant's range of costs associated with each particular type of development review. This usually involves some initial analysis of the application well before the public meeting date, communication with the applicant at that time if there are key issues to resolve before the meeting, further analysis and preparation of a written report the week before the meeting, meeting attendance, and sometimes minor follow-up after the meeting. Cost vary depending on a wide range of factors, including the type of application, completeness and clarity of the development application, the size and complexity of the proposed development, the degree of cooperation from the applicant for further information, and the level of community interest. The City has a guide called "Tips for Minimizing Your Development Review Costs" with Information on how the applicant can help control costs.

Type of development review being requested and planning consultant review cost range

Minor Site/Building Plan (e.g., minor addition to building, parking lot expansion, small apartment, downtown building alterations)

- When land use is a permitted use in the zoning district and for minor downtown building alterations-up to \$600
- When use also requires a conditional use permit, and for major downtown building alterations-\$700-\$1,500

Major Site/Building Plan (e.g., new gas station/convenience store, new restaurant, supermarket, larger apartments, industrial building)

- When land use is a permitted use in the zoning district-\$700-\$2,000
- When land use also requires a conditional use permit- \$1,600-\$12,000

Conditional Use Permit with no Site plan Review (e.g., home occupation, sale of liquor request, substitution of use in existing building)

- Up to \$600

Rezoning

- Standard (not PCD) zoning district-\$700-\$2,000
- Planned Community Development zoning district, assuming complete GDP & SIP application submitted at same time-\$2,100-\$12,000

Land Division

- Land Survey Map-up to \$300
- Subdivision Plat- \$1,500-\$3,000
- Plat (does not include any development agreement time)-\$50-\$1,500

Annexation

- Typically between \$200-\$400

****Note:** The City also retains a separate engineering consultant, who is typically involved in larger projects requiring storm water management plans, major utility work, or complex parking or road access plans. engineering costs are not included above, but will be assigned to the development review applicant. The consultant planner and engineer closely coordinate their reviews to control costs.

Cost Recovery Certificate and Agreement

The City may retain the services of professional consultants (including planners, engineers, architects, attorneys, environmental specialists, and recreation specialists) to assist in the City's review of an application for development review coming before the Plan and Architectural Review Commission, Board of Zoning Appeals and/or Common Council. In fact most applications require some level of review by the City's planning consultant. City of Whitewater staff shall retain sole discretion in determining when and to what extent it is necessary to involve a professional consultant in the review of an application.

The submittal of an application or petition for development review by an applicant shall be construed as an agreement to pay for such professional review services associated with the application or petition. The City may apply the charges for these services to the applicant and/or property owner in accordance with this agreement. The City may delay acceptance of an application or petition (considering it incomplete), or may delay final action or approval of the associated proposal, until the applicant pays such fees or the specified percentage thereof. Development review fees that are assigned to the applicant, but that are not actually paid, may then be imposed by the City as a special charge on the affected property.

SECTION A: BACKGROUND INFORMATION-to be completed by the Applicant/Property Owner

Applicant's First Name*

John

Last Name*

Burchfield

Applicant's Mailing Address

10700 W Higgins Rd Suite 240

City*

Rosemont

State*

IL

Zip Code*

60018

Applicant's Phone Number*

224-803-6451

Fax Number

847-608-1299

Applicant's Email Address*

jburchfield@lcctelecom.com

Project Information

Item 3.

Name/Description of Development*

Tillman Infrastructure Tower TI-OPP-29018

Address of Development Site*

1002 S Janesville St

Property Owner Information (if different from applicant):

Property Owner's First Name

Hatchett Enterprises

Last Name

LLC

Property Owner's Mailing Address

1002 S Janesville St

City

Whitewater

State

WI

Zip Code

53190

SECTION B: APPLICANT/PROPERTY OWNER COST OBLIGATIONS. To be filled out by the Neighborhood Services Department

Under this agreement, the applicant shall be responsible for the costs indicated below. In the event the applicant fails to pay such costs, the responsibility shall pass to the property owner, if different. Costs may exceed those agreed to herein only by mutual agreement of the applicant, property owner and City. If and when the City believes that actual costs incurred will exceed those listed below, for reasons not anticipated at the time of the application or under the control of the City administration or consultants, the Neighborhood Services Director or his agent shall notify the applicant and property owner for their approval to exceed such initially agreed costs. If the applicant and property owner do not approve such additional costs, the City may, as permitted by law, consider the application withdrawn and/or suspend or terminate further review and consideration of the development application. In such case, the applicant and property owner shall be responsible for all cost incurred up until that time.

A. Application fee

100

B. Expected planning consultant review cost

1500

C. Total cost expected of application (A+B)

1600

D. 25% of total cost due at time of application:

400

Project likely to incur additional engineering or other consultant review costs?

No

Balance of costs

The balance of the applicant's costs, not due at time of application, shall be payable upon applicant receipt of one or more itemized invoices from the City. If the application fee plus actual planning and engineering consultant review costs end up being less than the 25% charged to the applicant at the time of application, the City shall refund the difference to the applicant.

SECTION C: AGREEMENT EXECUTION -to be completed by the Applicant and Property Owner

The undersigned applicant and property owner agree to reimburse the City for all costs directly or indirectly associated with the consideration of the applicant's proposal as indicated in this agreement, with 25% of such costs payable at the time of application and the remainder of such costs payable upon receipt of one or more invoices from the City following the execution of development review services associated with the application.

Signature of Applicant/Petitioner*

Date

John Burchfield, LCC Telecom Services on behalf of Tillman Infrastructure

4/19/2024

Signature of Property Owner (if different)

Date

John Burchfield, LCC Telecom Services on behalf of Hatchett Enterprises LLC

4/19/2024



Neighborhood Services
Department
*Planning, Zoning, Code
Enforcement, GIS
and Building
Inspections*
www.whitewater-wi.gov
Telephone: (262) 473-0540

NOTICE OF PUBLIC HEARING

TO ALL INTERESTED PARTIES:

A meeting of the PLAN AND ARCHITECTURAL REVIEW COMMISSION of the City of Whitewater will be held at the Municipal Building, Community Room, located at 312 W. Whitewater Street on the 12th day of August at 6:00 p.m. to hold a public hearing for a change in zoning for consideration of a Conditional Use Permit for a new Wireless Telecommunication Facility and 195-foot Free Standing Tower to be located at 1002 S. Janesville Street, Tax Parcel # /WUP 000341 for LLC Telecom Services.

The Proposal is on file in the Neighborhoods Services Office located at 312 W. Whitewater Street and is open to public inspection during office hours Monday through Friday, 8:00 a.m. to 4:30 p.m.

This meeting is open to the public. COMMENTS FOR, OR AGAINST THE PROPOSED PROJECT MAY BE SUBMITTED IN PERSON OR IN WRITING.

For information, call (262) 473-0540

Llana Dostie, Neighborhood Services Administrative Assistant

STATE OF WISCONSIN DEPT OF TRANSPC
PO BOX 7921
MADISON, WI 53707-2100

ACCESS SELF STORAGE LLC
W6365 PIERCE RD
ELKHORN, WI 53121-2100

HATCHETT ENTERPRISES LLC
1002 S JANESVILLE ST
WHITEWATER, WI 53190-9000

Item 3.

HATCHETT ENTERPRISES LLC
9440 E STATE RD 59
MILTON, WI 53563-6300



PARC Agenda Item

Meeting Date: August 12, 2024

Agenda Item: Title 19 Code Repeal

Staff Contact (name, email, phone): Allison Schwark, Zoning Administrator/Code Enforcement

BACKGROUND

(Enter the who, what when, where, why)

Title 19, and Title 20 have previously been amended in the last year by the City of Whitewater Common Council. Title 19, Section 19.51.180 exactly matches Tile 20, Section 20(D)(16), therefore, to avoid any confusion, it has been requested that the two ordinance sections be merged, and one section be removed, so that the ordinance is only located in one location throughout the municipal code.

PREVIOUS ACTIONS – COMMITTEE RECOMMENDATIONS

(Dates, committees, action taken)

Council Action December 2023, January 2024-Ordinance 2080 an ordinance amending 19.51.180 Truck, Trailer, Mobile Home and Equipment Parking Restrictions, and Ordinance 2082 an ordinance amending Title 20 Property Maintenance.

May 21, 2024 first reading.

June 4, 2024 second reading and approval of ordinance amendments.

FINANCIAL IMPACT

(If none, state N/A)

N/A

STAFF RECOMMENDATION

Staff recommends that the City of Whitewater PARC:

1. Recommend approval to the Common Council to adopt an ordinance to repeal section 19.51.180

ATTACHMENT(S) INCLUDED

(If none, state N/A)

Ordinance repealing 19.51.180

AN ORDINANCE REPEALLING SECTION 19.51.180 - TRUCK, TRAILER, MOBILE HOME AND EQUIPMENT PARKING RESTRICTIONS IN THE CITY OF WHITEWATER MUNICIPAL CODE

The Common Council of the City of Whitewater do ordain as follows:

Section 19.51.180 truck, trailer, mobile home and equipment parking restrictions is hereby repealed.

In all residential and commercial districts provided for in the zoning chapter, it is permissible to park or store a recreational vehicle, camper, trailer, watercraft or boat and boat trailer on private property in the following manner:

- (a) Parking is permitted inside any enclosed structure, which otherwise conforms to the zoning requirements of the particular zoning district where located.
- (b) One panel or pickup truck, exceeding three-quarter ton but not exceeding one and one-half tons, shall be permitted;
- (c) Parking is permitted outside in the side yard or rear yard provided it is not nearer than five feet to the lot line and on an improved surface. Improved surface shall mean a surface of concrete, asphalt, paver, treated wood, treated plywood, or other similar material other than grass, such as crushed rock, or other materials, laid over subsoil, which provides a hard parking surface, resists rutting, provides for sufficient water runoff and is graded and drained to dispose of all surface water.
 - 1. An exemption to the five foot setback requirement shall be granted by the Neighborhood Services Department if the parking is approved in writing by the current adjacent property owners in which the recreational vehicle encroaches, and the parking is in accordance with all other requirements set forth.
- (d) The unit shall not extend over the public sidewalk or public right-of-way.
- (e) No unit shall be parked on public streets, highways, intersections, or public land or parking lots for an extended period exceeding 72 hours.
- (f) Parking is permitted only for storage purposes. Recreational vehicles or boats shall not be:
 - 1. Used for dwelling or cooking purposes.
 - 2. Permanently connected to sewer lines, water lines, or electricity. The recreational vehicle may be connected to electricity temporarily for charging batteries and other purposes.
 - 3. Used for storage of goods, materials, or equipment other than those items considered to be part of the unit or essential for its immediate use.
- (g) Notwithstanding the above, camper trailers and boats shall only be permitted to park in front yards for the purposes of active loading, unloading, and servicing, and the use of electricity or propane fuel is permitted when necessary to prepare a recreational vehicle for use.

- (h) The unit shall be owned by the resident on whose property the unit is parked for storage.
- (i) The number of units on any property within City jurisdiction shall not exceed two (2).
- (j) The Neighborhood Services department may issue a permit to a person with a disability allowing a recreational vehicle, camper, trailer, watercraft or boat and boat trailer to be parked in the front yard driveway of their residence from April through November. A person shall be considered a person with a disability if they have been issued a current disabled parking identification permit by the Wisconsin Department of Transportation. In addition, an individual shall be considered a person with a disability if they provide the neighborhood services manager with a statement by a health care specialist verifying that the party needs a front yard parking permit, for a stated period of time, to allow that person reasonable access to their recreational vehicle, camper, trailer, watercraft or boat and boat trailer.

DRAFT



Neighborhood Services
Department
*Planning, Zoning, Code
Enforcement, GIS
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Inspections*
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Telephone: (262) 473-0540

NOTICE OF PUBLIC HEARING

TO ALL INTERESTED PARTIES:

A meeting of the PLAN AND ARCHITECTURAL REVIEW COMMISSION of the City of Whitewater will be held at the Municipal Building, Community Room, located at 312 W. Whitewater Street on the 12th day of August at 6:00 p.m. to hold a public hearing for discussion and recommendation to Common Council to repeal Ordinance 19.51.180 Truck, Trailer, Mobile Home and Equipment Parking Restrictions.

The Proposal is on file in the Neighborhoods Services Office located at 312 W. Whitewater Street and is open to public inspection during office hours Monday through Friday, 8:00 a.m. to 4:30 p.m.

This meeting is open to the public. COMMENTS FOR, OR AGAINST THE PROPOSED PROJECT MAY BE SUBMITTED IN PERSON OR IN WRITING.

For information, call (262) 473-0540

Llana Dostie, Neighborhood Services Administrative Assistant



PARC Agenda Item

Meeting Date:	August 12, 2024
Agenda Item:	Title 19.48.020 Code Amendment
Staff Contact (name, email, phone):	Allison Schwark, Zoning Administrator/Code Enforcement

BACKGROUND
(Enter the who, what when, where, why)

Title 19, Section 19.48.020, shall be amended to include other institutional uses so that parcels can be rezoned to be consistent with the City of Whitewater future land use plan.

Per the City of Whitewater Comprehensive Plan:

Descriptions and Policies for Other Future Land Use Designations

Institutional Description: This future land use designation is intended to accommodate public and semi-public uses, including public and private schools, churches and religious institutions, government facilities, museums, institutions geared to senior citizens, hospitals, public transportation terminals, airports, and similar uses. Some types of smaller institutional uses such as churches and parks may be permitted on lands under other future land use designations. Institutional uses have been shown on Map 5 in areas of the City where these uses existed at the time this Plan was written.

Policies and Programs: The following policies and programs are recommended for this future land use designation in areas on Map 5 where this designation is shown:

- a. Require and review detailed site, building, landscape, utility, signage, lighting, and stormwater management plans before approving any new or expanded institutional use.
- b. Ensure that land use decisions and future growth are consistent with the community facility recommendations in the Utilities and Community Facilities chapter of this Plan and shown on Map 6.
- c. Reserve future sites for major public facilities by identifying these areas on the City’s Official Map.
- d. Amend this Plan as necessary to accommodate future institutional locations, which are difficult to plan for in advance. Some sites identified for Institutional use on the Future Land Use map, may, for whatever reason cease to remain viable for the Institutional use in the future. In such cases, the City will consider some type of Residential use, Neighborhood Business use, or other mixed use compatible with the site’s location. The process for considering such alternative uses will include consideration of an amendment to this Comprehensive Plan, under the procedures described in the Implementation chapter of this Plan.

PREVIOUS ACTIONS – COMMITTEE RECOMMENDATIONS
(Dates, committees, action taken)

PARC Discussion July 8, 2024

FINANCIAL IMPACT
(If none, state N/A)

N/A

STAFF RECOMMENDATION

Staff recommends that the City of Whitewater PARC:

1. Discuss the ordinance amendment to section 19.48.020 to allow for public and semipublic uses, to include public and private schools; churches and religious institutions; government facilities; active recreational parks; museums, hospitals, public transportation terminals, and similar uses.
2. Discuss the ordinance amendment to section 19.48.020 to include proper minimum lot square footage, setback requirements, and parking requirements.

ATTACHMENT(S) INCLUDED

(If none, state N/A)

Redline Ordinance amending 19.48.020
Village of Fontana Example Ordinance
City of Elkhorn Example Ordinance
Current Land Use Map
Future Land Use Map

17.4-19 I-1 institutional district.

The I-1 institutional district is intended to provide specific areas for uses which are under governmental, public utility, or institutional ownership and where the use for public purpose is anticipated to be permanent. This district may provide for schools, places of worship, libraries, museums, and other such uses, as well as their common accessory uses such as auditoriums and play fields. Parks and open space are not primary uses in this district.

(Ord. No. 14-05, §§ 1, 2, 2014.)

Chapter 19.48 I INSTITUTIONAL DISTRICT

19.48.010 Purpose.

The I institutional district is established to provide a community review and approval process for certain institutional uses that have a potential impact on surrounding land uses and/or the city as a whole.

(Ord. No. 1914A, 2-18-2016)

19.48.020 Permitted uses.

Permitted uses in the I district include:

- A. Colleges;
- B. Universities and their associated residential, educational and service facilities, except that new structures and/or exterior remodeling of existing structures which are within one hundred fifty feet of any other zoning district boundary (includes surface parking areas for more than twenty vehicles) shall be a conditional use as indicated below. The uses stated in Section 19.48.030 shall be conditional uses;
- C. The second or greater wireless telecommunication facility located on an alternative support structure already supporting a wireless telecommunications facility or on a pre-existing wireless telecommunications facility, with wireless telecommunications support facilities allowed as permitted accessory uses, all per the requirements of Chapter 19.55.
- D. Public and semipublic uses, to include public and private schools; churches and religious institutions; government facilities; active recreational parks; museums, hospitals, libraries, public transportation terminals, and similar uses.

(Ord. No. 1914A, 2-18-2016)

19.48.030 Conditional uses.

Conditional uses in the I district include:

- A. New structures and/or exterior remodeling or existing structures within one hundred fifty feet of any other zoning district boundary (includes surface parking areas for more than twenty vehicles);
- B. Gymnasiums, sport stadiums, auditoriums, and similar places of general public assembly;
- C. Parking structures and surface parking areas for more than one hundred vehicles;
- D. The first wireless telecommunications facility located on an alternative support structure only, per the requirements of Chapter 19.55;
- E. Fraternity or sorority houses.

(Ord. No. 1914A, 2-18-2016)

19.48.040 Lot area.

Minimum total lot area in the I district is ~~one acre~~ 15,000 square feet.
(Ord. No. 1914A, 2-18-2016)

19.48.050 Lot width.

Minimum lot width in the I district is ~~one hundred twenty feet~~ 80 feet.
(Ord. No. 1914A, 2-18-2016)

19.48.060 Building height.

Maximum building height in the institutional district shall be one hundred feet. Mechanical penthouses shall be excluded from the building height restrictions listed herein if they comply with the following limitations:

- A. Penthouses shall be no taller than the highest floor to floor height in the building.
- B. Penthouses shall be set back from the public street building facade of the building equal to the height of the penthouse.
- C. The penthouse floor area, including vertical circulation spaces leading to the penthouse, shall be no greater than ten percent of the ground floor building footprint.
- D. The maximum building height is also subject to fire safety limitations. The maximum building height may be increased under the provisions of a conditional use permit which will include, but is not limited to, consideration of issues regarding shadows cast by buildings, views, impacts on neighbors, and microclimate.

(Ord. No. 1914A, 2-18-2016)

19.48.070 Yard requirements.

Minimum yard requirements in the I district are:

- A. Any street yard facing any zoning district other than the institutional district shall be no less than twenty-five feet, measured from the right-of-way, or one-half of the total height of the building, whichever is greater. Any street yard within an institutional district facing yards in an institutional district shall not be less than twenty-five feet, measured from the right-of-way. The building setback shall not in any event encroach on the intersection visibility requirements set forth in Whitewater Municipal Code, Section 19.51.010;
- B. Street yard for off-street parking—fifteen feet;
- C. Side yard shall be thirty feet or equal to the height of the structure, whichever is greater;
- D. Rear yard—thirty-five feet or equal to the height of the structure, whichever is greater.
- E. Shore yard, seventy-five feet. All shoreland shall be in compliance with Chapter 19.46 and in addition may require DNR approval.

(Ord. No. 1914A, 2-18-2016)

19.48.080 Number of structures on one lot.

Within the I district, more than one principal structure may be located on a lot (see Section 19.06.150).
(Ord. No. 1914A, 2-18-2016)

Zoning District	Lot Size and Density			Minimum Yard Requirements				Build To Requirement		Maximum Impervious Coverage	Minimum Building Height (feet)	Maximum Building Height (feet)
	Minimum Lot Area (square feet)	Maximum Density (Dwelling Units Per Net Acre)	Lot Width (feet)	Front Yard (feet)	Side Yard (feet)	Corner Side Yard (feet)	Rear Yard (feet)	Front Yard (feet)	Corner Side Yard (feet)			
A-1 Agricultural/ Holding	5 acres	0.2	300'	50'	25'	50'	50'			20%		60'
RS-1 Single-Family Residential	8,000	5.4	80'	25'	10'	25'	25'			40%		35'
RS-2 Rural Single-Family Residential	20,000	2.1	90'	40'	15'	40'	25'			30%		35'
RD-1 Two-Family Residential	9,000 (4,500 per dwelling unit)	9.6	80'	25'	10'	25'	25'			45%		35'
RM-1 Multifamily Residential	n/a	8	80'	25'	10'	25'	25'			70%		35'
RM-2 Multifamily Residential	n/a	16	160'	35'	20'	35'	25'			80%		35'
RM-3 Manufactured Home Park Residential	See Section 17.5-2(11)											
R-4 Residential Only	5 acres No minimum for conditional uses	9.5	50'	25'	10'	25'	25'			50% of net area (excluding wetlands) for residential development		35'

Zoning District	Lot Size and Density			Minimum Yard Requirements				Build To Requirement		Maximum Impervious Coverage	Minimum Building Height (feet)	Maximum Building Height (feet)
	Minimum Lot Area (square feet)	Maximum Density (Dwelling Units Per Net Acre)	Lot Width (feet)	Front Yard (feet)	Side Yard (feet)	Corner Side Yard (feet)	Rear Yard (feet)	Front Yard (feet)	Corner Side Yard (feet)			
R-4 Mixed Use or Nonresidential	No minimum	9.5	50'	10'	10'	25'	25'			60% of net area (excluding wetlands, as defined in section) for mixed-use that is predominantly residential		45'
T-1 Transition	9,000	10.9	80'	10'	10'	10'	25'	20'	20'	70%		35'
B-1 Central Business	3,600	16	40'	0'	0', but if a side yard is provided, it must be at least 8'	0'	25'	15'	15'	100%		50'
B-1 Central Place Overlay	3,600	16	40'	0'	0', but if a side yard is provided, it must be at least 8'	0'	25'	0'	0'	100%	18' (excluding roof)	50'
B-2 Community Business	20,000	n/a	100'	30'	15'	30'	25'			75%		35'
B-3 Neighborhood Business	10,000	n/a	80'	25'	10'	25'	25'			80%		35'
B-4 Office	20,000	n/a	100'	25'	10'	25'	25'			70%		50'

Zoning District	Lot Size and Density			Minimum Yard Requirements				Build To Requirement		Maximum Impervious Coverage	Minimum Building Height (feet)	Maximum Building Height (feet)
	Minimum Lot Area (square feet)	Maximum Density (Dwelling Units Per Net Acre)	Lot Width (feet)	Front Yard (feet)	Side Yard (feet)	Corner Side Yard (feet)	Rear Yard (feet)	Front Yard (feet)	Corner Side Yard (feet)			
B-5 Highway Business	5 acres	n/a	200'	100'	30'	60'	40'			70%		70'
B-6 Commercial Business	20,000	n/a	100'	30'	15'	30'	25'			80%		50'
M-1 Manufacturing	20,000	n/a	100'	30'	15'	30'	25', but 50' where adjacent to residential			80%		45'
M-2 General Manufacturing	20,000	n/a	90'	50'	25'	50'	25', but 50' where adjacent to residential			85%		45'
I-1 Institutional	9,000	n/a	80'	25'	10'	25'	25'			40%		50'
P-1 Park	n/a	n/a	n/a	25'	10'	25'	25'			40%		35'
C-1 Conservancy	See Section 17.4-21											
HPD Historic Preservation Overlay	See Section 17.4-22											
E-1 Employment District	10,000	n/a	50'	30'	10'	30'	15', but 50' where adjacent to residential					

Sec. 18-36. Institutional (IN) District.

- (a) *Description and purpose.* This district is intended to establish and preserve areas for certain public and institutional uses in the Village of Fontana.
- (b) *Principal land uses permitted by right.*
- (1) Existing residential (see subsection 18-55(l)).
 - (2) Passive outdoor recreation (see subsection 18-57(b)).
 - (3) Active outdoor recreation (see subsection 18-57(c)).
 - (4) Public services and utilities (see subsection 18-58(c)).
 - (5) Cultivation (see subsection 18-63(a)).
 - (6) Selective cutting (see subsection 18-63(d)).
 - (7) Minor outdoor food and beverage seating (see subsection 18-56(g)(1)).
- (c) *Principal land uses permitted as conditional use.*
- (1) Group day care center (9+ children) (see subsection 18-56(l)).
 - (2) Reserved.
 - (3) Indoor institutional (see subsection 18-58(a)).
 - (4) Outdoor institutional (see subsection 18-58(b)).
 - (5) Institutional residential (see subsection 18-58(d)).
 - (6) Community living arrangement (1—16+ residents) (see subsection 18-58(e)).
 - (7) Off-site parking (see subsection 18-61(e)).
 - (8) Composting (see subsection 18-62(c)).
 - (9) Reserved.
 - (10) Community garden (see subsection 18-63(h)).
 - (11) Market garden (see subsection 18-63(i)).
 - (12) Major outdoor food and beverage seating (see subsection 18-56(g)(2)).
 - (13) Minor outdoor commercial entertainment (see subsection 18-56(g)(3)).
 - (14) Major outdoor commercial entertainment (see subsection 18-56(g)(4)).
- (d) *Accessory uses permitted by right.*
- (1) Home occupation (see subsection 18-64(a)).
 - (2) Residential garage or shed (see subsection 18-64(i)).
 - (3) Residential recreational facility (see subsection 18-64(j)).
 - (4) On-site parking (see subsection 18-64(l)).
 - (5) Company cafeteria (see subsection 18-64(m)).
 - (6) Company on-site recreation (see subsection 18-64(n)).
 - (7) Stormwater facilities (see subsection 18-64(r)).

- (8) Exterior communications device (see subsection 18-64(s)).
- (9) Tourist rooming house (see subsection 18-64(x)).
- (e) *Accessory uses permitted as conditional use.*
 - (1) Expanded home occupation (see subsection 18-64(b)).
 - (2) Family day care home (4—8 children) (see subsection 18-64(c)).
 - (3) Intermediate day care home (9—15 children) (see subsection 18-64(d)).
 - (4) Small solar energy system (see subsection 18-64(u)).
 - (5) Small wind energy system (see subsection 18-64(v)).
- (f) *Permitted temporary uses.*
 - (1) Temporary farm product sales (see subsection 18-65(a)).
 - (2) Temporary outdoor sales (see subsection 18-65(b)).
 - (3) Temporary outdoor assembly (see subsection 18-65(c)).
 - (4) Temporary storage container (see subsection 18-65(d)).
 - (5) Temporary construction storage (see subsection 18-65(e)).
 - (6) Temporary relocatable building (see subsection 18-65(f)).
 - (7) Garage or estate sale (auction) (see subsection 18-65(g)).
 - (8) Farmer's market (see subsection 18-65(h)).
 - (9) Limited duration special activities and events (see subsection 18-65(i)).
- (g) *Nonconforming situations.* The village has adopted provisions and protections for nonconforming lot, use, structure and/or sites (see article VI).
- (h) *Overlay district requirements.* All lots, uses, structures, and site features within one or more overlay zoning district (see article VII) shall be subject to the regulations of all applicable overlay zoning districts in addition to those of the underlying IN District. Where IN and overlay district requirements conflict, the more restrictive requirements shall prevail.
- (i) *Design standards.* All structures and uses shall comply with applicable design standards of article X, except for any exemptions specifically stated in this chapter or any other agency with jurisdiction.
- (j) *Landscaping regulations.* All land uses in the IN zoning district shall comply with applicable provisions of article XI.
- (k) *Signage regulations.* All signs shall comply with applicable provisions of article XII.
- (l) *Performance standards.* All allowed uses in the IN zoning district shall comply with applicable performance standards of article XIII, except for any exemptions specifically stated in this chapter or any other agency with jurisdiction.
- (m) *Density, intensity and bulk regulations.* Density, intensity and bulk regulations specific to the IN zoning district are detailed in Figure 18-36.

Figure 18-36: Density, Intensity and Bulk Regulations in the IN District

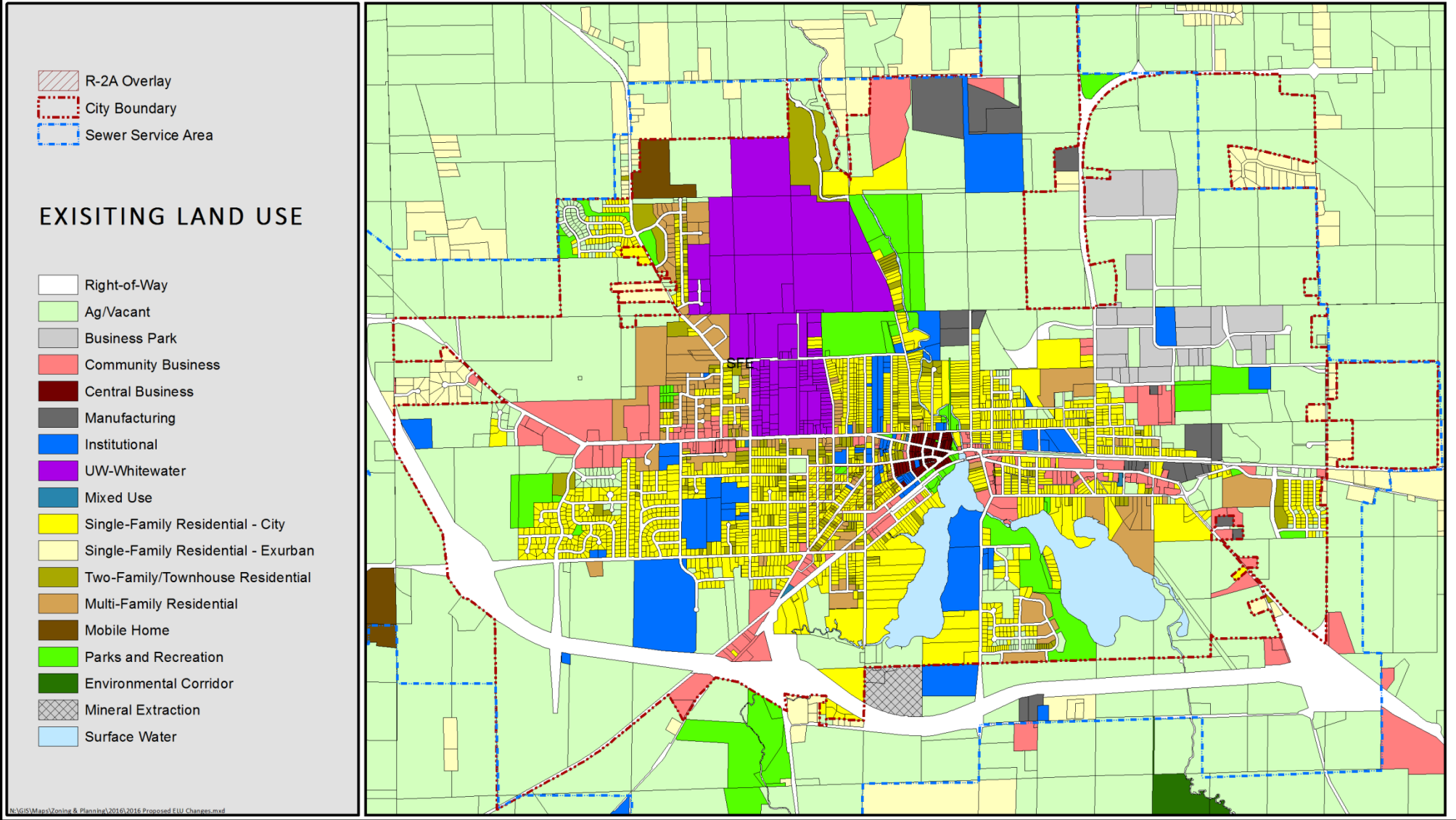
Density and Intensity Requirements	See Article IV for additional requirements
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Minimum Lot Area	20,000 square feet
Maximum Gross Density	8 dwelling units per acre
Maximum Building Coverage	30 percent
Minimum Landscape Surface Ratio	50 percent
Minimum Lot Width	100 feet
Minimum Street Frontage	50 feet
Principal Structure Bulk Requirements	See Article V for additional requirements
Minimum Front or Street Setback	25 feet
Minimum Setbacks from Lakeshore, Navigable Streams, Other Drainageways, Wetlands, Woodlands, Steep Slopes and Village Wells	<ul style="list-style-type: none"> ■ 50 feet for structures existing as of the effective date of this chapter, and all additions to such structures; ■ 75 feet for new structures placed on lots which were vacant as of the effective date of this chapter, and all additions to such structures.
Minimum Interior Side Setback	15 feet
Minimum Rear Setback	25 feet
Minimum Pavement Setback	5 feet (lot line to pavement; excludes driveway entrances)
Maximum Principal Building Height	35 feet
Accessory Structure Requirements	Refer to Subsection 18-52(2) for additional requirements
Setback from Principal Structures	10 feet
Accessory Interior Side and Rear Setback	5 feet (less than 200 square foot structure); 10 feet (at least 200 but less than 600 square foot structure); and for accessory structures 600 square feet or more, said accessory structure shall comply with principle structure setback requirements.
Maximum Accessory Building Height	18 feet

(Ord. No. 090412-02, § 1, 9-4-2012; Ord. No. 03-02-15-01, § 10, 3-2-2015; Ord. No. 061118-02, § 13, 6-11-2018; Ord. No. 110121-02, § 12, 11-1-2021; Ord. No. 120621-03, § 14, 12-6-2021; Ord. No. 050123-02, §§ 9—13, 5-1-2023)

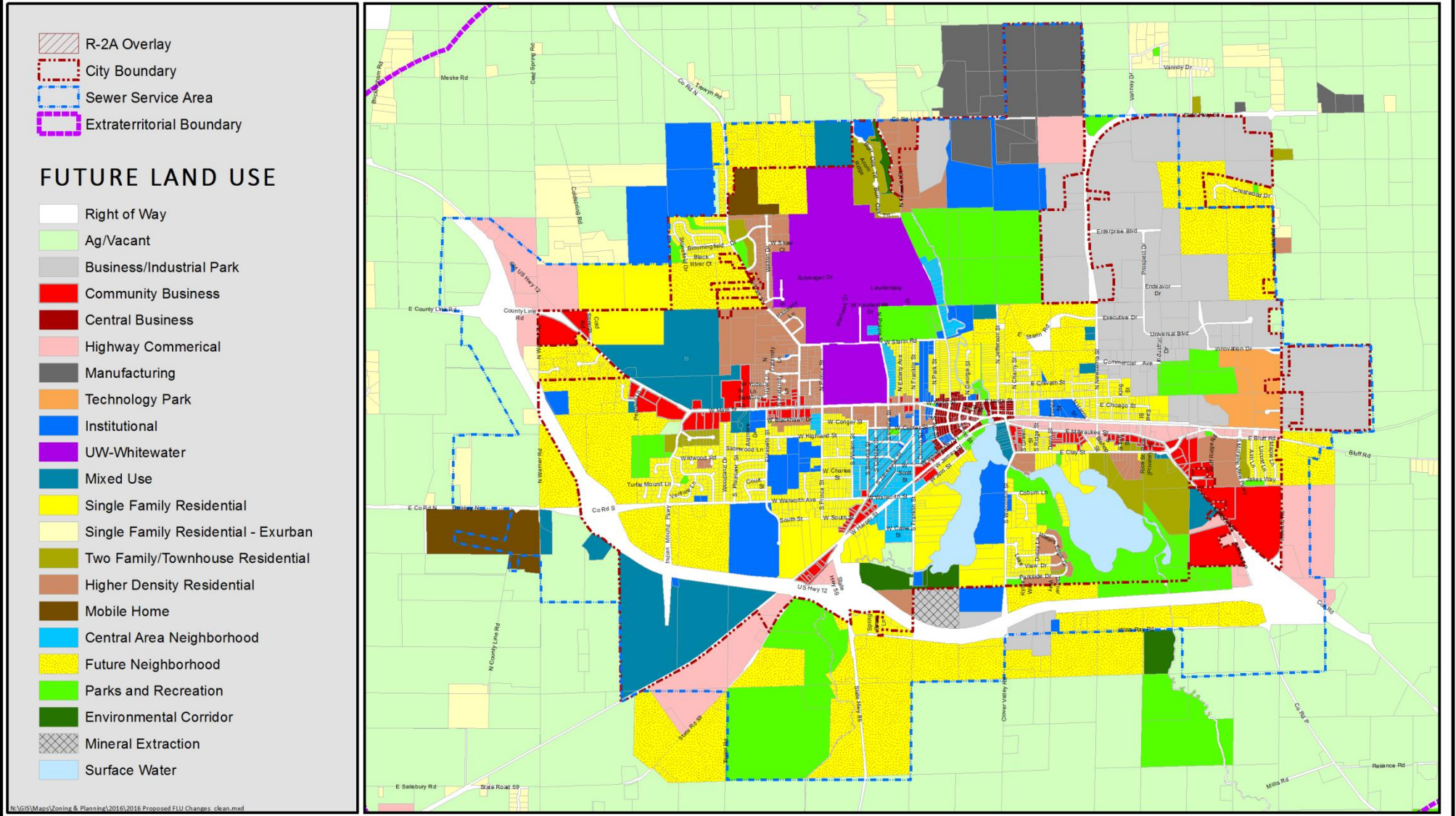
EXISTING LAND USE MAP

CITY OF WHITEWATER



FUTURE LAND USE CHANGES

CITY OF WHITEWATER





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NOTICE OF PUBLIC HEARING

TO ALL INTERESTED PARTIES:

A meeting of the PLAN AND ARCHITECTURAL REVIEW COMMISSION of the City of Whitewater will be held at the Municipal Building, Community Room, located at 312 W. Whitewater Street on the 12th day of August at 6:00 p.m. to hold a public hearing for discussion and recommendation to Common Council to change Zoning Ordinance 19.48.020 Institutional District Permitted Uses to add Libraries, Municipal Buildings, Public and Semi Public Uses.

The Proposal is on file in the Neighborhoods Services Office located at 312 W. Whitewater Street and is open to public inspection during office hours Monday through Friday, 8:00 a.m. to 4:30 p.m.

This meeting is open to the public. COMMENTS FOR, OR AGAINST THE PROPOSED PROJECT MAY BE SUBMITTED IN PERSON OR IN WRITING.

For information, call (262) 473-0540

Llana Dostie, Neighborhood Services Administrative Assistant



PARC Agenda Item

Meeting Date:	August 12, 2024
Agenda Item:	300 Foot Buffer Notice Discussion
Staff Contact (name, email, phone):	Allison Schwark, Zoning Administrator/Code Enforcement

BACKGROUND
(Enter the who, what when, where, why)

Title 19.69.050 -Hearing—Notice to property owners, requires the City to send notice to all property owners within a certain radius of the proposed development, or zoning change. Currently that radius for notice is any parcel within 300 feet of the proposed project or zoning modification. The discussion should be had on whether the PARC feels this is adequate, or if the ordinance should be amended.

PREVIOUS ACTIONS – COMMITTEE RECOMMENDATIONS
(Dates, committees, action taken)

N/A

FINANCIAL IMPACT
(If none, state N/A)

A higher buffer distance will create more postage paid mail.

STAFF RECOMMENDATION

Staff recommends that the City of Whitewater PARC discuss whether they would like to see a higher buffer distance within the ordinance.

ATTACHMENT(S) INCLUDED
(If none, state N/A)

Title 19.69.050 - Hearing—Notice to property owners.

19.69.050 Hearing—Notice to property owners.

Notice of the hearing shall be given to all owners of record of properties abutting and within three hundred feet of the property that is involved in the application, and to other persons who are determined by the zoning administrator to be parties of interest. Unintentional failure to accomplish these notifications shall not invalidate the procedures.

(Ord. No. 1914A, 2-18-2016)