



## CITY COUNCIL MEETING

October 04, 2023 at 6:30 PM

City Council Chambers, 16 Colomba Rd.

DeBary, Florida 32713

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### AMENDED AGENDA

(Amended to correct item No. 2)

#### CALL TO ORDER

Invocation

Flag Salute

#### ROLL CALL

**PUBLIC PARTICIPATION:** For any items **NOT ON THE AGENDA**, citizen comments are limited to three (3) minutes per speaker. For items **ON THE AGENDA**, citizen comments are limited to five (5) minutes per speaker. Speakers will be called when the item is introduced for discussion.

#### APPROVAL OF MINUTES

- [1.](#) Regular City Council Meeting September 6, 2023

#### ADDITIONS, DELETIONS OR AMENDMENTS TO THE AGENDA

#### PRESENTATIONS

Volusia League of Cities, Mayor Lois Paritsky, City of Ponce Inlet

#### PUBLIC HEARINGS

- [2.](#) City Manager is requesting City Council approve the first reading of Ordinance No. 11-2023, Declaring and Implementing a Temporary Development Moratorium.

#### GROWTH MANAGEMENT AND DEVELOPMENT

- [3.](#) The Applicant, Charles Gray, has requested a Development Order Extension for the Canterwood Assisted Living Facility project.
- [4.](#) Staff is requesting City Council approve the contract with Nue Urban Concepts to review the Southwest Sector Mobility Plan and Mobility Fees.

#### COUNCIL MEMBER REPORTS / COMMUNICATIONS

Member Reports/ Communications

- Mayor and Council Members
- City Manager
- City Attorney

#### DATE OF UPCOMING MEETING / WORKSHOP

Special City Council Meeting October 18, 2023, 6:30 p.m.

#### ADJOURN

If any person decides to appeal any decision made by the City Council with respect to any matter considered at this meeting or hearing he/she will need a record of the proceedings, and for such purpose he/she may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based (FS 286.0105).

Individuals with disabilities needing assistance to participate in any of these proceedings should contact the City Clerk at least three (3) working days in advance of the meeting date and time at (386) 668-2040.





## CITY COUNCIL MEETING

September 06, 2023 at 6:30 PM

City Council Chambers, 16 Colomba Rd.

DeBary, Florida 32713

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### MINUTES

**CALL TO ORDER:** Mayor Chasez called the meeting to order at 6:30 p.m.

**ROLL CALL:** Mayor Chasez, Vice-Mayor Butlien, and Council Members Pappalardo, Sell and Stevenson are present.

Others present: Carmen Rosamonda, City Manager; Kurt Ardaman, City Attorney; Elizabeth Bauer, Finance Director; Annette Hatch, City Clerk; David Rodriguez, Information Technology Technician; and, Shari Simmans, Economic Development & Government Affairs Director.

**PUBLIC PARTICIPATION:** For any items **NOT ON THE AGENDA**, citizen comments are limited to three (3) minutes per speaker. For items **ON THE AGENDA**, citizen comments are limited to five (5) minutes per speaker. Speakers will be called when the item is introduced for discussion.

Howard Gates addressed Council.

**APPROVAL OF MINUTES:** Motion by Council Member Stevenson to approve the minutes from the Regular City Council Meeting August 2, 2023, and the Special City Council Meeting August 23, 2023. Seconded by Vice-Mayor Butlien. Motion passed unanimously.

**ADDITIONS, DELETIONS OR AMENDMENTS TO THE AGENDA:** None.

**PRESENTATIONS:** Ms. Rachel Hazel, Deputy Superintendent Volusia County Schools, highlighted some of the programs and legislative updates in the school district. Mr. Angel Gomez, Communications & Legislative Affairs Director, was not able to attend.

#### **NEW BUSINESS:**

City Manager is requesting the City Council to adopt Resolution No. 2023-10 to set the tentative millage rate of 2.9247 for the collection of ad valorem taxes for fiscal year 2023-2024. This tentative millage rate of 2.9247 is 7.65% higher than the rolled-back rate of 2.7168.

City Manager is requesting the City Council adopt Resolution No. 2023-11 to approve the tentative annual operating budget for fiscal year 2023-2024.

City Manager gave a presentation on both items which included major projects, operational expenses, law enforcement and fire services.

No one addressed Council.

City Attorney read Resolution No. 2023-10 and Resolution No. 2023-11 into the record.

Motion by Vice-Mayor Butlien to adopt Resolution No. 2023-10 to set the tentative millage rate. Seconded by Council Member Pappalardo. Motion passed unanimously.

Motion by Council Member Stevenson to adopt Resolution No. 2023-11, approving the tentative annual operating budget. Seconded by Council Member Pappalardo. Motion passed unanimously.

City Manager is requesting City Council approve the Central Florida Community Pet Clinic's Memorandum of Understanding for veterinary services related to DeBary's TNR Program.

City Manager reviewed the 3-year agreement.

No one addressed Council.

Motion by Council Member Stevenson to approve the Central Florida Community Pet Clinic's Memorandum of Understanding. Seconded by Council Member Sell. Motion passed unanimously.

City Manager is requesting City Council award the Request for Qualifications Bid for Lobbying Services to Ballard Partners, Inc.

Staff reviewed the RFQ process and timeline.

No one addressed Council.

Motion by Vice-Mayor Butlien to award the lobbying services contract to Ballard Partners and allow the City Manager to finalize and execute the contract. Seconded by Council Member Pappalardo. Motion passed unanimously.

Staff requests City Council adopt Resolution No. 2023-19, establishing a Hometown Heroes Committee.

City Attorney read the Resolution into the record.

Staff discussed the committee's purpose and responsibilities.

Dorothy Pehowic addressed Council.

Motion by Vice-Mayor Butlien to adopt Resolution No. 2023-19. Seconded by Council Member Sell. Motion passed unanimously.

City Manager is requesting City Council affirm Resolution No. 2023-18, Declaration of State of General Emergency due to Hurricane Idalia.

City Attorney read the Resolution into the record.

City Manager explained the emergency nature of the resolution and authority granted by the Charter due to an emergency.

No one addressed Council.

Motion by Vice-Mayor Butlien to affirm Resolution No. 2023-18. Seconded by Council Member Stevenson. Motion passed unanimously.

Staff is requesting City Council approve Resolution No. 2023-20, modifying the Florida Department of Transportation's Joint Participation Agreement reducing project scope of connector trail.

City Attorney read the Resolution into the record.

City Manager explained the grant requirements and trail modifications.

No one addressed Council.

Motion by Vice-Mayor Butlien to approve Resolution No. 2023-20. Seconded by Council Member Pappalardo. Motion passed unanimously.

#### **COUNCIL MEMBER REPORTS / COMMUNICATIONS**

Member Reports/ Communications

- A. Mayor and Council Members
- B. City Manager
- C. City Attorney

**DATE OF UPCOMING MEETING / WORKSHOP:** Special City Council Meeting September 20, 2023, 6:30 p.m.

**ADJOURN:** The meeting was adjourned at 8:26 p.m.

**APPROVED:**

**CITY COUNCIL  
CITY OF DEBARY, FLORIDA**

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**Karen Chasez, Mayor**

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**Annette Hatch, CMC, City Clerk**



## City Council Meeting City of DeBary AGENDA ITEM

<b>Subject:</b> Ordinance 11-2023; Declaring and Implementing a Temporary Development Moratorium	<b>Attachments:</b> <input checked="" type="checkbox"/> Ordinance
<b>From:</b> Carmen Rosamonda, City Manager	<input type="checkbox"/> Resolution
<b>Meeting Hearing Date</b> October 4, 2023	<input type="checkbox"/> Supporting Documents/ Contracts
	<input type="checkbox"/> Other

### REQUEST

City Manager is requesting City Council approve Ordinance 11-2023 on first reading, Declaring and Implementing a Temporary Development Moratorium.

### PURPOSE

The purpose of the Ordinance is to provide adequate time to finalize and implement the City's new Land Development Code.

### CONSIDERATIONS

- The City entered into a contract on April 22, 2020, to begin rewriting its Land Development Code.
- Due to turnover in Growth Management Directors, COVID, and change in vendors (S.M. & E. was purchased by Inspire Placemaking), the City experienced delays. The City received its first completed draft on September 14, 2023.
- During the development stage, the City must consider various state and local land regulation changes to build in necessary processes to accommodate such changes.
- Staff, in addition to making various changes, will be conducting various workshops with the City Council and citizens to gain feedback on the Codes.
- The time allocated to the moratorium is the estimated time to get these critical tasks completed.
- The Ordinance provides for a citywide moratorium, except for the Transit Oriented District (TOD) for all development which has not filed an application with the City.
- The City conducted a moratorium for the TOD District only in 2020 and revised regulations accordingly.

### COST/FUNDING

N/A

**RECOMMENDATION**

It is recommended that the City Council approve Ordinance 11-2023 on first reading, Declaring and Implementing a Temporary Development Moratorium.

**IMPLEMENTATION**

Immediately upon adoption on second reading projected to be conducted on October 18, 2023.

**ATTACHMENTS**

Ordinance 11-2023

**ORDINANCE NO. 11-2023**

**AN ORDINANCE OF THE CITY OF DEBARY, FLORIDA, DECLARING AND IMPLEMENTING A TEMPORARY DEVELOPMENT MORATORIUM FOR A PERIOD OF 9 MONTHS ON THE ACCEPTANCE, PROCESSING, AND CONSIDERATION OF APPLICATIONS FOR DEVELOPMENT ORDERS AND APPROVALS FOR CERTAIN PROPOSED DEVELOPMENTS AND PROJECTS WITHIN AND THROUGHOUT THE JURISDICTIONAL BOUNDARIES OF THE CITY, EXCEPTING AND EXCLUDING DEVELOPMENTS AND PROJECTS WITHIN THE CITY'S TRANSIT ORIENTED DEVELOPMENT OVERLAY DISTRICT, WHICH DISTRICT CONSISTS OF APPROXIMATELY 261 ACRES AND IS LOCATED SOUTH OF DIRKSEN ROAD ON THE EAST AND THE WEST SIDES OF U.S. HIGHWAY 17-92 RUNNING TO APPROXIMATELY 210 FEET SOUTH OF BUCKLEY DRIVE; AND PROVIDING FOR NON-CODIFICATION, CONFLICTS, SEVERABILITY, AND AN EFFECTIVE DATE.**

WHEREAS, the City of DeBary ("City"), as provided in section 2(b), Article VIII of the Florida Constitution and chapters 163 and 166, Florida Statutes, enjoys all home rule authority, police power, land development and zoning authority, governmental and proprietary powers necessary to conduct municipal government and perform municipal functions, and the City may exercise any power for municipal purposes, except as expressly prohibited by law; and

WHEREAS, the City recently studied, analyzed, drafted, and adopted land development regulations and standards relating to multifamily developments located within its transit oriented development overlay district the boundaries and area of which are shown on the attached Exhibit "A" ("TOD Area") to require commercial and mixed-use components for multifamily developments and projects and to provide enhanced standards and requirements for multi-family developments; and

WHEREAS, the City has spent the approximately last two years evaluating, and working with consultants in evaluating needed changes to the City's Land Development Code for development within the City; and

WHEREAS, based on the work of the City's planning department and City consultants and in order to utilize new best practices from other jurisdictions and concepts from private industry, changes to the City's Land Development Code are being evaluated; and

WHEREAS, the changes to the City's development regulations are intended to encourage, promote and allow the best possible development of properties within the City to ensure the

compatible and complimentary integration of uses through good planning, performance standards and professional planning methods and procedures, all while ensuring that property owners' and developers' rights to use and develop their property are preserved;

WHEREAS, the new amendments to the City's Land Development Code are expected to constitute the most significant substantive change to the Land Development Code since the City's incorporation in 1993 and are expected to include "form based codes" that will change the way the City reviews and approves development applications;

WHEREAS, such changes will also better accommodate and integrate several newer, recently enacted ordinances, including the City's ordinances pertaining to mobile food service vehicles, storage facilities, and back-yard chickens;

WHEREAS, the City finds and determines that multifamily and other developments outside and abutting the City's TOD Area impact not only the TOD Area but the existing and future residents, businesses, visitors, developments, roads, sewer, water and other uses and infrastructure outside the TOD Area throughout the City in a way that requires careful consideration and necessary changes to the Land Development Code; and

WHEREAS, in order to protect the health, safety and welfare of its citizens, property owners, and businesses for the development and redevelopment of property located in all areas of the City including, without limitation, those areas within and outside the TOD Area, additional and updated land development regulations and standards for developments throughout the City are required; and

WHEREAS, once the City staff completes its evaluation of multifamily and other uses and developments including, without limitation, commercial and mixed-use components and enhanced standards and requirements for developments throughout the remainder of the City's jurisdiction, City staff will prepare and process a proposed ordinance amending the City Land Development standards affecting development regulations for multifamily and other developments and projects throughout the remainder of the City outside the TOD Area;

WHEREAS, City staff recommends, and the City Council agrees, that a 9 month moratorium on certain development applications for all properties located outside the City's TOD area is required in order to provide additional time to analyze, review, consider, modify, and plan the process of adoption and implementation of the anticipated changes to the City's Land Development Code;

WHEREAS, the City desires to place the public and all parties on notice that the City is considering such land development regulation amendments and creating a temporary moratorium

on the acceptance, processing, and consideration of applications for development orders and approvals concerning properties located outside the City's TOD Area; and

WHEREAS, the City, in good faith, determines that this Ordinance is in the best interest of the City and its residents, businesses, and property owners, and promotes the health, safety, and welfare of the public as the creation of standards and requirements relating to commercial and multi-use components for multifamily and other development and redevelopment and enhanced standards and requirements for multifamily and other developments will improve aesthetics, increase property values, decrease road trips required and reduce traffic congestion, make multifamily and other projects more desirable to commercial and non-commercial tenants, increase walkability and pedestrian traffic, protect against blight and decay, and otherwise realize the City's vision for enhanced compatible and complimentary multifamily and other development within the City, and protect the well-being of the citizens, businesses, and property owners.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF DEBARY AS FOLLOWS:

SECTION 1. Intent. The above recitals are hereby adopted as the legislative intent and purpose of this Ordinance and as the City Council's legislative findings.

SECTION 2. Moratorium. The City hereby places a temporary moratorium (*i.e.*, suspension) on the acceptance, processing, and consideration of all applications for development orders and approvals of development permits for all properties proposing development located within the City, excluding those properties and developments located within the TOD Area. This temporary moratorium shall be for a period of nine (9) months following adoption of this ordinance at its second reading, unless terminated earlier by the City Council. Provided however, building permit applications for existing single family platted developments, non-residential developments for which preliminary or final site plans have been approved, and for the interior modification of existing multifamily structures and developments are excepted from such temporary moratorium. Furthermore, formal applications for development orders or development permits submitted prior to the first advertisement of this Ordinance by newspaper publication are exempt from the effect of this moratorium. For the purposes of this Ordinance, a formal application is defined as a complete PUD application submitted to the City following the conclusion of a pre-application meeting conducted pursuant to § 3-108 of the City's Land Development Code. Pursuant to this Ordinance, the terms "development order" and "development permit" mean the same as defined in section 163.3164, Florida Statutes. The moratorium established by this Ordinance may be extended or terminated early by adoption of an ordinance or resolution of the City Council.

SECTION 3. Non-Codification. Given the temporary nature and effect of this Ordinance, it is the intent of the City Council that this Ordinance may not be codified.



SECTION 4. Severability. If any section, subsection, sentence, clause, phrase, word or provision of this Ordinance is for any reason held invalid or unconstitutional by any court of competent jurisdiction, whether for substantive, procedural, or any other reason, such portion shall be deemed a separate, distinct and independent provision, and such holding shall not affect the validity of the remaining portions of this Ordinance.

SECTION 5. Conflicts. In the event of a conflict or conflicts between this Ordinance and any other ordinance or provision of law, this Ordinance controls to the extent of the conflict, as allowable under the law.

SECTION 6. Effective Date. This Ordinance will become effective immediately upon adoption by the City Council of the City of DeBary, Florida.

**APPROVED** on first reading on \_\_\_\_ day of \_\_\_\_\_ 2023.

**ADOPTED** at the second reading on \_\_\_\_ day of \_\_\_\_\_ 2023.

**CITY COUNCIL  
City of DeBary**

\_\_\_\_\_  
Karen Chasez, Mayor

Attest:

\_\_\_\_\_  
Annette Hatch, CMC, City Clerk

Date: \_\_\_\_\_

SEAL:



**City Council Meeting  
City of DeBary  
AGENDA ITEM**

<b>Subject:</b> Canterwood Assisted Living Facility Development Order Extension	<b>Attachments:</b> <input type="checkbox"/> Ordinance <input type="checkbox"/> Resolution <input type="checkbox"/> Supporting Documents/ Contracts <input checked="" type="checkbox"/> Other
<b>From:</b> Steven E. Bapp, AICP Growth Management Director	
<b>Meeting Hearing Date</b> October 4, 2023	

**REQUEST**

The Applicant, Charles Gray, has requested a Development Order Extension for the Canterwood Assisted Living Facility project.

**PURPOSE**

On September 1, 2023, the Applicant submitted their request within the 90-day expiration window and is therefore eligible to request that the City Council extend their Development Order again for a period of 360 days.

**CONSIDERATIONS**

On October 2, 2018, a Final Site Plan (Engineering Plans) Development Order was issued for the Canterwood Assisted Living Facility. The project site is located north of Dirksen Drive and east of US 17-92, between Memorial Park and the Circle K gas station. The project consists of a three story Assisted Living Facility that is approximately 122,000 square feet in size and 120 beds/rooms, and includes a passive recreation area and walking trail that will connect into Memorial Park to the east.

Section 4-25 of the Land Development Code determines a Development Order shall remain valid for a period of 360 days from the date of issuance. Section 4-25 further provides that the period of 90 days before and 90 days after the expiration of this Development Order, the developer may request an extension from the City Council. The code does not limit the number of extensions the City Council may grant for a project.

On February 5, 2020, the City Council granted an extension for this Final Development Order through September 26, 2021. On September 1, 2021, the City Council granted a second conditional extension for this Final Development Order through August 29, 2022. On October 19, 2022, the Council granted a third conditional extension for this Final Development Order through October 23, 2023.

**COST/FUNDING**

N/A

## **RECOMMENDATION**

Staff recommends the City Council approve the extension request for the Canterwood Final Site Plan Development Order for an additional 360 days.

## **IMPLEMENTATION**

The applicant would need to begin moving forward with the project and meeting the conditions described on the Development Order.

## **ATTACHMENTS**

- Engineering Plans
- Issued Development Orders
- Applicant cover letter



# CONSTRUCTION PLANS FOR CANTERWOOD MANOR AT DEBARY

(ORIGINAL PLAN SUBMITTAL: FEBRUARY 2, 2018)  
(REVISED PLAN SUBMITTAL: AUGUST 6, 2018)

## SITE DATA

PROPERTY LOCATION: 32 DIRKSEN ROAD, DEBARY, FLORIDA 32713  
PARCEL ID No.: 03-19-30-00-00-0240

OVERALL SITE AREA: 7.888± ACRES  
PROJECT DEVELOPED AREA: 5.631± ACRES

EXISTING FUTURE LAND USE: C/R, COMMERCIAL RETAIL

EXISTING ZONING: BPUD  
EXISTING USE: RESIDENTIAL

PROPOSED USE:  
3-STORY ASSISTED CONGREGATE LIVING AND MEMORY CARE FACILITY  
120 BEDS/ROOMS ALF  
122,322 S.F. OVERALL FACILITY (40,774 SF/STORY)

BUILDING HEIGHT:  
MAXIMUM & PROPOSED: 40 FEET (WITH AN ADDITIONAL 5 FOOT  
PARAPET ALLOWANCE FOR MECHANICAL  
SCREENING AND ARCHITECTURAL STYLIZATION  
(MAX 3 STORIES)

## PROPOSED DEVELOPMENT:

40,774 SF	16.62%	PROPOSED BUILDING (FOOTPRINT)
74,234 SF	30.26%	IMPERVIOUS SURFACES(PAVEMENT, SIDEWALK, STABILIZATION ETC.)
7,412 SF	3.03%	WATER FEATURE
122,420 SF	49.91%	TOTAL IMPERVIOUS AREA
15,798 SF	6.44%	DRY STORM WATER POND
107,087 SF	43.65%	PERVIOUS AREA (OPEN SPACE)
245,305 SF	100.00%	DEVELOPED ACREAGE TOTAL (5.631 AC)

FLOOR AREA RATIO:  
MAXIMUM FAR: 0.50  
PROPOSED FAR: 0.4987 (40,774 SF X THREE STORIES / SITE AREA 245,305 SF)

## PARKING

1 SPACE PER 4 BEDS AND 1 SPACE PER EMPLOYEE  
AND/OR VISITING DOCTORS ON LARGEST SHIFT  
PARKING REQUIRED ASSISTED LIVING FACILITY (120 BEDS/4 + 30 EMPLOYEES + 3 VISITING DOCTORS) 63 SPACES  
TOTAL PARKING REQUIRED 63 SPACES  
SPACES REQUIRED TO BE RESERVED FOR HANDICAP 3 SPACES

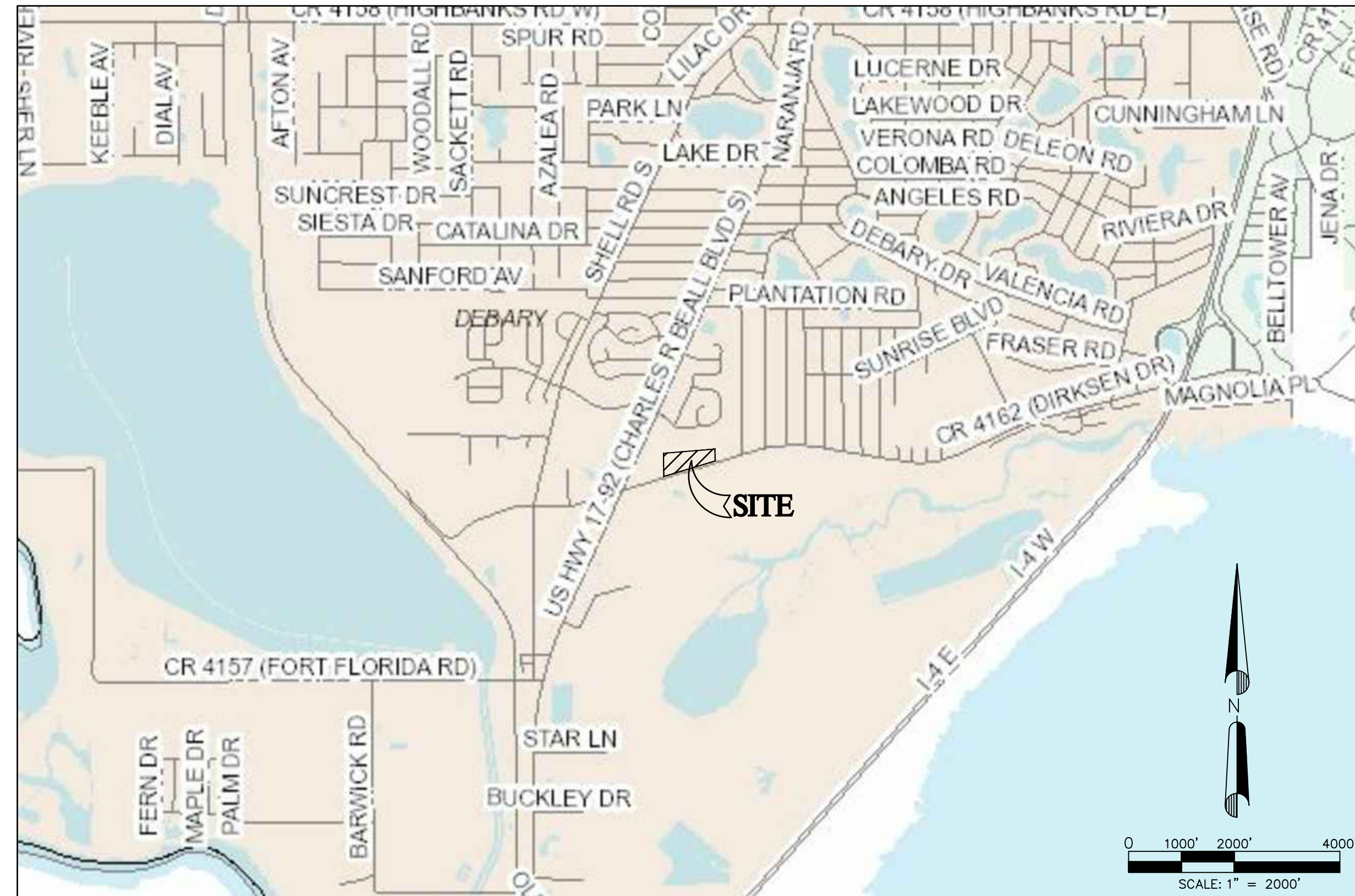
PARKING PROVIDED  
STANDARD PARKING SPACES 75 SPACES  
HANDICAP PARKING 5 SPACES  
TOTAL PARKING PROVIDED 80 SPACES

BUILDING SETBACKS (REQUIRED)		BUILDING SETBACKS (PROPOSED)	
FRONT (DIRKSEN DRIVE)	35'	FRONT (DIRKSEN DRIVE)	51.7'
SIDE (EAST)	10'	SIDE (EAST)	160.2'
SIDE (WEST)	10'	SIDE (WEST)	413'
REAR (NORTH)	35'	REAR (NORTH)	59.2'

BUFFER YARDS (REQUIRED)		BUFFER YARDS (PROPOSED)	
FRONT (DIRKSEN DRIVE)	10'	FRONT (DIRKSEN DRIVE)	10'
SIDE (EAST)	10'	SIDE (EAST)	10'
SIDE (WEST)	10'	SIDE (WEST)	10'
REAR (NORTH)	35'	REAR (NORTH)	35'

## UTILITY PROVIDERS

POTABLE WATER: VOLUSIA COUNTY  
WASTEWATER: VOLUSIA COUNTY



VICINITY MAP

## APPLICANT:

MJM ASSOCIATES, LLC  
1030 N. ORANGE AVENUE  
ORLANDO, FLORIDA 32801  
CONTACT: JOEL HASS  
PH: (407) 718-0546  
EMAIL: jhass@mjmassocllc.com

## OWNER:

J. CHARLES & SANDRA H. GRAY  
263 BAYOU CIRCLE  
DEBARY, FLORIDA 32713  
CONTACT: CHARLES GRAY  
PH: (407) 843-8880  
EMAIL: Charlie.Gray@gray-robinson.com

## DEVELOPER:

GREEN LEAF DEVELOPMENT, LLC  
1344 HARDY AVENUE  
ORLANDO, FL 32803  
CONTACT: GREG HUDAK, PE  
PH: (407) 492-6833  
EMAIL: ghudak@hudakengineering.com

## ARCHITECT:

HASKELL  
111 RIVERSIDE AVENUE  
JACKSONVILLE, FLORIDA 32202  
PH: (904) 791-4500

## ENGINEER:

HUDAK ENGINEERING, INC.  
1344 HARDY AVENUE  
ORLANDO, FL 32803  
CONTACT: GREG HUDAK, PE  
PH: (407) 492-6833  
EMAIL: ghudak@hudakengineering.com

## LANDSCAPE ARCHITECT:

LANDSCAPE DYNAMICS, INC.  
PO BOX 2852  
WINTER PARK, FLORIDA 32790-2852  
CONTACT: RANDY BUCHANAN, RLA  
PH: (407) 579-1811  
EMAIL: randy@landscapedynamics.com

## SURVEYOR:

HARTLEY SURVEYING, INC.  
283 TIGER LILLY COURT  
ALTAMONTE SPRINGS, FLORIDA 32714  
CONTACT: JEFF L. HARTLEY, PSM  
PH: (407) 383-6978  
EMAIL: jhartley@cf.rr.com

## LEGAL DESCRIPTION

LEGAL DESCRIPTION - ALTKEY 2465077

THE EAST 125 FEET OF THE WEST 375 FEET OF LOT 3, LYING NORTH OF DIRKSEN DRIVE, ASSESSOR'S SUBDIVISION OF THE SOUTHWEST 1/4 OF SECTION 3, TOWNSHIP 19 SOUTH, RANGE 30 EAST, ACCORDING TO MAP IN MAP BOOK 3, PAGE 3

LEGAL DESCRIPTION - ALTKEY 2465093

THE EAST 200 FEET OF THE WEST 575 FEET OF LOT 3, LYING NORTH OF DIRKSEN DRIVE, ASSESSOR'S SUBDIVISION OF THE SOUTHWEST 1/4 OF SECTION 3, TOWNSHIP 19 SOUTH, RANGE 30 EAST, ACCORDING TO MAP IN MAP BOOK 3, PAGE 3

LEGAL DESCRIPTION - ALTKEY 5444686

THE WEST 250 FEET OF LOT 3, LYING NORTH OF DIRKSEN DRIVE, ASSESSOR'S SUBDIVISION OF THE SOUTHWEST 1/4 OF SECTION 3, TOWNSHIP 19 SOUTH, RANGE 30 EAST, ACCORDING TO MAP IN MAP BOOK 3, PAGE 3

LEGAL DESCRIPTION - ALTKEY 5444694

THE EAST 394.69 FEET OF THE WEST 969.69 FEET LYING NORTH OF COUNTY ROAD, OF LOT 3, ASSESSOR'S SUBDIVISION OF THE SOUTHWEST 1/4 OF SECTION 3, TOWNSHIP 19 SOUTH, RANGE 30 EAST, ACCORDING TO MAP IN MAP BOOK 3, PAGE 3

LEGAL DESCRIPTION - ALTKEY 5892174

A PARCEL OF LAND LYING IN SECTION 3, TOWNSHIP 19 SOUTH, RANGE 30 EAST, VOLUSIA COUNTY, FLORIDA AND BEING A PART OF TRACTS "C" AND "D" OF "PARKVIEW SUBDIVISION" AS RECORDED IN MAP BOOK 45, PAGES 97 & 98, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA, AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS: BEGINNING AT THE SOUTHWEST CORNER OF SAID TRACT "C" ALSO KNOWN AS THE SOUTHWEST CORNER OF THE NORTHWEST 1/4 OF SAID SECTION 3, RUN THENCE N 00°57'25" W ALONG THE WEST LINE OF SAID TRACT "C" ALSO KNOWN AS THE WEST LINE OF SAID NORTHWEST 1/4 A DISTANCE 40.99 FEET; RUN THENCE N 79°34'39" E ALONG THE SOUTHERLY LINE OF A 260.0 FOOT WIDE FLORIDA POWER COMMISSION EASEMENT PER OFFICIAL RECORDS BOOK 1745, PAGE 1655, PUBLIC RECORDS OF VOLUSIA COUNTY, FLORIDA, A DISTANCE OF 952.20 FEET; RUN THENCE S 01°50'30" E A DISTANCE OF 141.95 FEET; RUN THENCE S 85°39'41" W ALONG THE SOUTHERLY LINE OF SAID TRACTS "C" AND "D" ALSO KNOWN AS THE SOUTH LINE OF THE SOUTHWEST 1/4 OF THE NORTHWEST 1/4 OF SAID SECTION 3, A DISTANCE OF 943.17 FEET TO THE POINT OF BEGINNING.

## INDEX OF SHEETS

SHEET No.	SHEET TITLE
C-1	COVER SHEET
C-2	GENERAL NOTES
C-3	STORMWATER POLLUTION PREVENTION PLAN
C-4	PRE-DEVELOPMENT DRAINAGE MAP
C-5	POST-DEVELOPMENT DRAINAGE MAP
C-6	SITE GEOMETRY PLAN
C-7	DRAINAGE SYSTEM PLAN
C-8	PAVING & GRADING PLAN (1 OF 2)
C-9	PAVING & GRADING PLAN (2 OF 2)
C-10	SITE CROSS SECTIONS
C-11	UTILITY PLAN (SANITARY SEWER SERVICE)
C-11A	UTILITY PLAN (POTABLE WATER AND FIRE SERVICE)
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C-13	UTILITY DETAILS
C-14	STANDARD DETAILS
C-15	LIFT STATION PLAN
C-16	DIRKSEN DRIVE RIGHT-OF-WAY IMPROVEMENT PLAN
C-17	DIRKSEN DRIVE CROSS SECTIONS
TM-1	TREE MITIGATION PLAN
L-1	LANDSCAPE PLAN
L-2	* LANDSCAPE DETAILS
IR-1	IRRIGATION PLAN
IR-2	IRRIGATION DETAILS
H-1	HARDSCAPE PLAN
*	BOUNDARY & TOPOGRAPHIC SURVEY
*	PHOTOMETRIC/LIGHTING PLAN
	ATTACHED

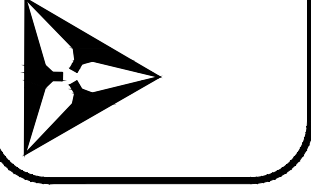
DATE	REVISIONS:

DRAWN BY	SMV	GDH	GDH	GDH
DESIGN BY				
CHECKED BY				
APPROVED BY				

GREG HUDAK  
PE # 54684

CANTERWOOD MANOR AT DEBARY  
CITY OF DEBARY, FLORIDA

HUDAK ENGINEERING, INC.  
CIVIL ENGINEERING & LAND DEVELOPMENT DESIGN SERVICES  
CERTIFICATE OF AUTHORIZATION #9388  
1344 HARDY AVENUE, ORLANDO, FL 32803  
PHONE: (407) 492-6833  
EMAIL: ghudak@hudakengineering.com



DATE:  
JANUARY 2018

SHEET No.  
**C-1**  
1 of 17



**CLEARING, EXCAVATING, GRADING AND PAVING GENERAL NOTES**

- FOR IDENTIFICATION OF CONTRACTUAL AGREEMENTS, THE SET OF DRAWINGS IS DATED JANUARY 2018. ANY REVISIONS THEREAFTER WILL BE NOTED AND DATED ON THE AFFECTED DRAWING(S).
- UNLESS OTHERWISE NOTED ON THE PLANS, THE CONTRACTOR SHALL USE THE GEOMETRY PROVIDED ON THE CONSTRUCTION PLANS. BENCHMARK INFORMATION AS SHOWN ON THE SURVEY PLAN HAS BEEN OBTAINED BY SURVEYOR. ANY DISCREPANCIES BETWEEN FIELD MEASUREMENTS AND CONSTRUCTION PLAN INFORMATION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.
- THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ON THE PLANS HAVE BEEN DETERMINED FROM THE BEST INFORMATION AVAILABLE AND ARE GIVEN FOR THE CONVENIENCE OF THE CONTRACTOR. THE ENGINEER WILL FIELD VERIFY THE UTILITIES TO THE BEST OF HIS ABILITY, HOWEVER ALL UTILITIES SHOULD BE FIELD VERIFIED BY THE CONTRACTOR. THE CONTRACTOR SHALL EXERCISE CAUTION WHEN CROSSING AN UNDERGROUND UTILITY, WHETHER SHOWN ON THE PLANS OR LOCATED BY THE UTILITY COMPANY. ALL UTILITIES THAT INTERFERE WITH THE PROPOSED ON SITE CONSTRUCTION SHALL BE RELOCATED BY THE RESPECTIVE UTILITY COMPANY. THE CONTRACTOR SHALL COOPERATE WITH THEM DURING RELOCATION OPERATIONS, ANY DELAY OR INCONVENIENCE CAUSED TO THE CONTRACTOR BY THE RELOCATION OF VARIOUS UTILITIES SHALL BE INCIDENTAL TO THE CONTRACTOR, AND NO EXTRA COMPENSATION WILL BE ALLOWED.
- SSOCOF**  
FLORIDA LAW (F.S. 553.851) AND (F.S. 556) SSOCOF 1-800-432-4770 SUNSHINE STATE ONE CALL OF FLORIDA) PROTECTION OF UNDERGROUND PIPELINES MANDATES THAT "NO EXCAVATOR SHALL COMMENCE OR PERFORM ANY EXCAVATION IN ANY PUBLIC OR PRIVATE STREET, ALLEY, RIGHT-OF-WAY DEDICATED TO THE PUBLIC USE, OR GAS UTILITY EASEMENT WITHOUT FIRST OBTAINING INFORMATION CONCERNING THE POSSIBLE LOCATION OF GAS PIPELINES IN THE AREA OF THE PROPOSED EXCAVATION. THIS INCLUDES ANY OPERATION UTILIZING HAND TOOLS OR POWER TOOLS WHICH MOVES OR REMOVES ANY STRUCTURE, EARTH, ROCK OR OTHER MASS OF MATERIAL BY SUCH METHODS AS DIGGING, BACKFILLING, DEMOLITION, GRADING, DITCHING, DRILLING, BORING, AND CABLE PLOWING. THE EXCAVATOR MUST NOTIFY THE GAS UTILITY A MINIMUM OF 48 HOURS AND A MAXIMUM OF 5 DAYS PRIOR TO EXCAVATING (EXCLUDING SATURDAYS, SUNDAYS, AND LEGAL HOLIDAYS).
- TRENCH SAFETY**  
CONTRACTOR SHALL COMPLY WITH OSHA TRENCH SAFETY STANDARDS 29 C.F.R., S. 926.650, SUBPART P, AND ALL SUBSEQUENT REVISIONS OR UPDATES ADOPTED BY THE DEPARTMENT OF LABOR AND EMPLOYMENT SECURITY AND WITH SECTION 553.62, FLORIDA STATUTES.
- THE BOUNDARY, TOPOGRAPHIC SURVEY, AND EXISTING CONDITIONS INFORMATION HAS BEEN PROVIDED TO THE OWNER BY HARTLEY SURVEYING, INC. THE ENGINEER ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE SURVEY INFORMATION PROVIDED.
- GEOTECHNICAL INFORMATION, INCLUDING WATER TABLE ELEVATIONS AND SITE PREPARATION RECOMMENDATIONS, HAVE BEEN FURNISHED TO THE OWNER AND ENGINEER BY CAVIN GEOTECHNICAL & ENVIRONMENTAL, LLC. THE CONTRACTOR IS DIRECTED TO OBTAIN COPIES OF THE REPORT AND COMPLY WITH ALL RECOMMENDATION THEREIN.
- THE CONTRACTOR IS DIRECTED TO OBTAIN A COPY OF ALL PERMITS INCLUDING PERMITS ISSUED BY THE WATER MANAGEMENT DISTRICT, THE CITY AND FDEP, IF APPLICABLE. THE CONTRACTOR SHALL ABIDE BY ALL PERMIT CONDITIONS.
- THE CONTRACTOR SHALL RECOGNIZE AND ABIDE BY ALL OSHA EXCAVATION SAFETY STANDARDS, INCLUDING THE FLORIDA TRENCH SAFETY ACT (90-96, LAWS OF FLORIDA). ANY MATERIAL, CONSTRUCTION METHODS, OR MATERIAL COST TO COMPLY WITH THESE LAWS SHALL BE INCIDENTAL TO THE CONTRACT.
- NO VIBRATORY ROLLERS OR OTHER SIMILAR EQUIPMENT THAT COULD DAMAGE ADJACENT BUILDINGS OR RESIDENCES SHALL BE USED ON THIS PROJECT. THE CONTRACTOR SHALL REFER TO THE GEOTECHNICAL REPORT FOR INSTRUCTIONS AND SHALL CONFER WITH THE GEOTECHNICAL ENGINEER, AND OWNER TO DETERMINE WHAT METHODS OF COMPACTION ARE SATISFACTORY. IF REPORTS OF DAMAGE TO ADJACENT PROPERTIES ARE RECEIVED, THE CONTRACTOR SHALL STOP WORK IMMEDIATELY UNTIL THE OWNER INVESTIGATE THE CLAIM AND PROVIDE INSTRUCTIONS.
- CLEAN SAND SUITABLE FOR FILL SHALL BE USED AS DIRECTED BY THE GEOTECHNICAL REPORT. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVAL OF ALL UNSUITABLE FILL MATERIALS FROM THE SITE.
- PRIOR TO SUBMITTING A BID, THE CONTRACTOR SHALL VISIT AND INSPECT THE SITE TO FAMILIARIZE HIMSELF WITH EXISTING CONDITIONS WHICH MAY AFFECT HIS BID.
- THE CONTRACTOR SHALL BASE HIS BID ON HIS OWN ESTIMATE OF QUANTITIES, INCLUDING PIPE LENGTHS, PAVEMENT QUANTITIES, AND EXCAVATION AND BACKFILL QUANTITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY IMPORT BORROW FILL NEEDED, AND FOR REMOVAL AND DISPOSAL OF EXCESS OR UNSUITABLE MATERIALS.
- THE LIMITS OF DISTURBANCE HAVE BEEN PROVIDED TO THE CONTRACTOR ON THE CONSTRUCTION PLANS. UNLESS OTHERWISE DIRECTED BY THE OWNER OR ENGINEER, THE CONTRACTOR IS EXPECTED TO CONTAIN ALL CONSTRUCTION ACTIVITIES WITHIN THESE LIMITS. AT NO TIME SHALL THE CONTRACTOR DISTURB WETLAND AREAS, IF ANY, OUTSIDE THE SILT FENCE. THE CONTRACTOR SHALL NOT DISTURB SURROUNDING PROPERTIES OR TRAVEL ON SURROUNDING PROPERTIES WITHOUT WRITTEN CONSENT FROM THE PROPERTY OWNER. ANY REPAIR OR RECONSTRUCTION OF WETLAND OR OTHER DAMAGED AREAS IN SURROUNDING PROPERTIES SHALL BE REPAIRED BY THE CONTRACTOR IMMEDIATELY. ALL COSTS FOR REPAIRS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND NO EXTRA COMPENSATION SHALL BE PROVIDED.
- ALL TREES, BRUSH AND ORGANIC MATERIAL LOCATED FROM THIS SITE SHALL BE DISPOSED OF OFFSITE AT A PERMITTED LANDFILL OR DISPOSAL SITE.
- ALL AREAS TO RECEIVE FILL, WHETHER OPEN AREA, UNDER PAVEMENT OR STRUCTURES, SHALL FIRST BE STRIPPED OF ORGANIC MATERIAL BEFORE FILLING IS COMMENCED. FILL SHALL BE PLACED IN 12" LIFTS AND COMPACTED TO 98% MAXIMUM DENSITY IN AREAS UNDER PAVEMENT AND AROUND ALL STRUCTURES. THE CONTRACTOR IS DIRECTED TO OBTAIN A COPY OF THE SOIL REPORT AND AND COMPLY WITH ALL RECOMMENDATIONS THEREIN.
- THE CONTRACTOR SHALL BE EXPECTED, AT THE END OF EACH DAY, TO HAVE THE SITE GRADED IN SUCH A WAY AS TO NOT CAUSE ANY ADVERSE IMPACT FORM RUNOFF OR SILTATION TO ANY ADJACENT PROPERTIES. SILTATION BARRIERS SHALL BE MAINTAINED AND REPAIRED IF REQUIRED AT THE END OF EACH WORKING DAY. GRADING SHOWN ON THESE PLANS ARE PROVIDED TO THE CONTRACTOR TO EXPRESS THE GENERAL GRADING INTENT OF THE PROJECT. SMOOTH TRANSITIONS SHALL BE PROVIDED BETWEEN CONTOURS OR SPOT ELEVATIONS AS SHOWN ON THE PLANS TO ACCOMPLISH THE GRADING INTENT. ALL SLOPES SHALL BE STABILIZED IMMEDIATELY AFTER FINAL GRADING HAS BEEN COMPLETED. CONTRACTOR SHALL NOTIFY OWNER AND ENGINEER PRIOR TO DEMOBILIZATION OF GRADING EQUIPMENT TO DETERMINE THAT THE GRADING INTENT HAS BEEN ACHIEVED.
- ALL PAVING SURFACES SHALL BE GRADED TO DRAIN POSITIVELY IN THE DIRECTION GENERALLY SHOWN BY THE FLOW ARROWS OR TYPICAL SECTION. NO PUDDLING OR "BIRD BATH" WILL BE ACCEPTED IN THE PAVEMENT AREAS. PAVED SURFACES SHALL ALSO BE GRADED TO PROVIDE A SMOOTH DRIVING SURFACE FOR VEHICLES WITH NO SHARP BREAKS IN GRADE AND NO UNUSUALLY STEEP OR REVERSE CROSS SLOPES. APPROACHES TO INTERSECTIONS AND ENTRANCE AND EXIT FLOW LINE GRADES TO INTERSECTIONS AND ENTRANCE AND EXIT FLOW LINE GRADES TO INTERSECTIONS WILL BE DETERMINED IN THE FIELD AND ADJUSTMENTS MAY BE NECESSARY TO ACCOMPLISH THAT PURPOSE. THE CONTRACTOR IS RESPONSIBLE TO ACCOMPLISH THIS PURPOSE. ANY APPARENT DISCREPANCIES BETWEEN THE FLOW ARROWS AND SLOPES OR SPOT ELEVATIONS SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER FOR EXPLANATION AND/OR CLARIFICATION.
- MATERIALS AND METHODS FOR STORM DRAINAGE CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LOCAL MUNICIPALITY CODES AND/OR THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 1991, OR LATEST REVISION THEREOF, AND SUPPLEMENTAL SPECIFICATIONS THERETO. REINFORCED CONCRETE PIPE (RCP) SHALL BE CLASS III WITH RUBBER GASKET JOINTS, UNLESS OTHERWISE NOTED ON THE PLANS. ALL F.D.O.T., "C", "D", "E" AND "F" INLETS SHALL BE EQUIPPED WITH STEEL RETICULIN GRATE AND LIFTING CHAINS PER F.D.O.T. STANDARDS, WHERE APPROPRIATE. YARD INLETS MAY BE EQUIPPED WITH CAST IRON GRATES, IF THEY ARE NOT SUBJECT TO TRAFFIC. INLET WALL THICKNESS SHALL BE PER F.D.O.T.
- MATERIALS AND CONSTRUCTION METHODS FOR PAVEMENT CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY STANDARDS AND THE LATEST EDITION OF THE F.D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AND SUPPLEMENTAL SPECIFICATIONS THERETO; AND IN ACCORDANCE WITH CITY STANDARDS AND SPECIFICATIONS.
- THE CONTRACTOR SHALL SOD SIDE SLOPES OF POND AND SEED POND BOTTOM.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE VARIOUS GRADING, DRAINAGE AND PAVING WORK TO ACCOMPLISH THE PROPER FUNCTIONING OF THE SITE IMPROVEMENTS TO PREVENT WATER FROM PONDING OR STANDING ON SIDEWALK OR PAVEMENT AREAS. SOD SHALL BE INSTALLED 0.2" BELOW THE EDGE OF ADJACENT PAVEMENT OR SIDEWALK.
- SHOP DRAWINGS AND CERTIFICATIONS FOR ALL STORM DRAINAGE MATERIALS AND STRUCTURES ARE TO BE SUBMITTED AND APPROVED BY THE OWNERS REPRESENTATIVE OR ENGINEER PRIOR TO ORDERING THE MATERIAL REQUIRED FOR CONSTRUCTION.
- ALL STORM WATER PIPES 24 INCHES OR MORE IN DIAMETER WHICH DISCHARGE INTO DRY RETENTION BASIN AREAS SHALL BE CHILD PROOFED WITH GRATES AS DESIGNATED IN F.D.O.T. INDEX 273. MAXIMUM OPENING BETWEEN BARS SHALL BE 4". OUTFALLS TO DRY RETENTION BASINS SHALL BE EQUIPPED WITH ENERGY DISSIPATORS OR SPLASH PADS AS SHOWN ON THE DETAIL SHEETS.
- REPAIR AND REPLACEMENT OF ALL PRIVATE AND PUBLIC PROPERTY AFFECTED BY THIS WORK SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN EXISTED BEFORE COMMENCING CONSTRUCTION.
- SIDEWALKS ARE TO BE CONSTRUCTED IN THE AREAS SHOWN ON THE CONSTRUCTION PLANS. THE SIDEWALK SHALL BE CONSTRUCTED OF 4" THICK CONCRETE WITH A 28-DAY COMPRESSION STRENGTH OF 3000 PSI. JOINTS SHALL BE EITHER TOOLED OR SAW CUT AT EVERY A DISTANCE EQUAL TO THE WIDTH OF THE SIDEWALK.
- CURBING SHALL BE CONSTRUCTED WHERE NOTED ON THE CONSTRUCTION PLANS. CONCRETE FOR CURBS SHALL BE A F.L.A. DEPARTMENT OF TRANSPORTATION CLASS "1" CONCRETE WITH A 28-DAY COMPRESSION STRENGTH OF 3000 PSI. ALL CURBS SHALL HAVE SAW CUT CONTRACTION JOINTS AND SHALL BE CONSTRUCTED AT INTERVALS NOT TO EXCEED 5' - 0" ON CENTER. CONSTRUCTION OF CURBS SHALL BE IN CONFORMANCE WITH F.D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (LATEST EDITION) SECTION 520 AND DETAILS PROVIDED ON THE CONSTRUCTION PLANS.
- CONTRACTOR TO SAW-CUT AREAS WHERE PAVEMENT OR CURBING OR CONCRETE, ETC. IS TO BE REMOVED.
- AT LEAST TWO WEEKS PRIOR TO FINAL COMPLETION, THE CONTRACTOR SHALL FURNISH THE ENGINEER COPIES OF AS-BUILT PLANS OF THE ENTIRE SITE DELINEATING ALL CHANGES, IF ANY, TO THESE CONSTRUCTION PLANS. THE AS-BUILT PLANS COULD BE PROVIDED AS "RED-LINED" SET WITH A STATEMENT OF VERIFICATION OR BY A REGISTERED SURVEYOR.
- ALL STORMWATER PIPE JOINTS WILL BE WRAPPED WITH FILTER FABRIC REGARDLESS OF MATERIAL.
- ALL WORK SHALL CONFORM TO THE LATEST VOLUSIA COUNTY UTILITY & STREET SPECIFICATIONS.

**SANITARY SEWER AND WATER SYSTEM NOTES:**

- ALL PVC PRESSURE SYSTEMS SHALL BE LOCATED WITH METAL WIRE ACCORDING TO THE VOLUSIA COUNTY STANDARD DETAIL FOR MARKING A PRESSURIZED MAIN.
- A MINIMUM THREE (3) FOOT COVER SHALL BE MAINTAINED OVER ALL PROPOSED UTILITY LINES.
- ALL PVC PIPE SHALL COMFORM TO ASTM 1785 & ASTM 2241.

**WATER DISTRIBUTION NOTES:**

- ALL P.V.C. WATER MAINS SHALL BE IN ACCORDANCE WITH AWWA STD. C900, MIN. WORKING PRESSURE OF 150 P.S.I. AND A DIMENSION RATIO (DR) OF 18.
- ALL DUCTILE IRON WATER MAINS SHALL BE IN ACCORDANCE WITH ANSI/AWWA A21.51/C151 CLASS 50 PIPE.
- HYDROSTATIC AND LEAKAGE TESTING SHALL BE PERFORMED ON ALL NEWLY INSTALLED WATER MAINS AND APPURTENANCES. THE TEST SHALL BE IN ACCORDANCE WITH AWWA C600 OR M23 AS APPLICABLE.
- THE WATER SYSTEM SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA C651.
- ALL P.V.C. PIPE MUST BEAR THE NSF LOGO FOR POTABLE WATER USE.

**PIPE SPECIFICATIONS:**

**PVC PIPE**  
ALL PVC PIPE OF NOMINAL DIAMETER SIX (6) THROUGH TWELVE (12) INCHES SHALL BE MANUFACTURED IN ACCORDANCE WITH AWWA C900, LATEST EDITION. THE PVC PIPE SHALL HAVE A MINIMUM WORKING PRESSURE RATING OF 150 PSI AND SHALL HAVE A DIMENSION RATION (DR) OF 18. PIPE SHALL BE THE SAME O.D. AS DUCTILE IRON PIPE. PVC PIPE OF NOMINAL DIAMETER FOR (4) INCHES SHALL BE POLYUBUTING.

**MARKINGS**

ALL PVC PIPE USED FOR POTABLE WATER USE WILL BEAR THE NSF LOGO.

**DISINFECTION**

BEFORE THE POTABLE WATER SYSTEM IS PLACED IN SERVICE, ALL WATER MAINS SHALL BE CHLORINATED IN ACCORDANCE WITH THE VOLUSIA COUNTY STANDARDS AND SPECIFICATIONS, AND THE PROCEDURES OUTLINED IN AWWA C-651 STANDARD PROCEDURE FOR DISINFECTING WATER MAINS.

**PRESSURE TESTS**

ALL NEWLY-INSTALLED WATER DISTRIBUTION PIPE AND APPURTENANCES SHALL HAVE HYDROSTATIC TESTS CONDUCTED ON THEM. THE TESTS SHALL BE PRESSURE TESTS AND LEAKAGE TESTS DONE IN ACCORDANCE WITH VOLUSIA COUNTY STANDARDS AND SPECIFICATIONS, ALSO COVERING ALL PROVISIONS OF AWWA C600.

**Utility Separation - Vertical Clearance**

- Where water and gravity sanitary sewer mains cross with less than 12 inches vertical clearance, or the sanitary sewer main is above the water main, then the sanitary sewer will be 20 feet, centered on the point of crossing, of either:
  - A. ductile iron pipe and hydrostatically pressure tested, or;
  - B. concrete encased vitrified clay; or
  - C. PVC pipe upgraded to water main standards and pressure tested.
- Where water mains and storm sewer pipes cross with less than 12 inches vertical clearance, or the storm main is above the water main, then the water main shall be 20 feet of ductile iron pipe centered on the point of crossing.

**Utility Separation - Horizontal Separation**

- When a water main parallels a gravity sanitary sewer main, a separation (measured edge to edge) of at least ten feet should be maintained. Where this separation is not met, one of the following must occur:
  - A. the water main is laid in a separate trench or on an undisturbed earth shelf located on one side of the sewer at such an elevation that the bottom of the water main is at least 12 inches above the top of the sewer, or;
  - B. if both sanitary sewer and potable water mains are proposed and the above (A) is not met, the sanitary sewer pipes shall be upgraded to the equivalent pipe material as the water main and pressure tested.
  - C. if the sanitary sewer is existing and the potable water main is proposed, the water main shall, at a minimum, be upgraded to ductile iron pipe, constructed in separate trenches, laid at a higher elevation than the sanitary sewer, and utilize staggered joints.
- Where water mains parallel storm sewer pipes with less than 10 feet horizontal clearance, the water main shall be AWWA C150/C151 ductile iron in those locations.
- Separation requirements of 10 feet horizontal and 12 inches vertical clearance between force mains and potable water mains must be maintained unless approved in advance by the Department.
- Where water mains and unrestricted access reuse pipes cross with less than 12 inches vertical clearance or 3 feet horizontal clearance, the unrestricted access reuse main shall be upgraded and hydrostatically tested in the same manner as gravity sanitary sewer mains (see A. above).
- Separation requirements between potable water mains and any type of reuse mains other than unrestricted access reuse is 10 feet horizontal and 12 inches vertical clearance, with mitigation allowed when approved in advance by the Department.

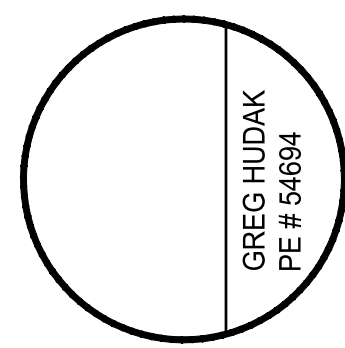
**NOTES:**

- ALL SITE AND UTILITY CONSTRUCTION SHALL CONFORM TO THE VOLUSIA COUNTY ENGINEERING STANDARDS MANUAL, LAND DEVELOPMENT CODE AND COUNTY DETAILS.
- IF THERE ARE ANY CONFLICTS BETWEEN THE COUNTY STANDARDS AND STANDARDS IN THE GENERAL NOTES, THE MOST STRINGENT STANDARD SHALL BE FOLLOWED.
- STORM DRAINAGE STRUCTURES AND PIPES INSTALLED FOR THIS PROJECT SHALL BE INSPECTED AND ACCEPTED BY THE ENGINEER OF RECORD AND THE CITY ENGINEER PRIOR TO FINAL PAVING OR SURFACE RESTORATION. PRIOR TO FINAL ACCEPTANCE, STORM PIPES INSTALLED FOR THIS PROJECT SHALL BE INSPECTED USING A CLOSED-CIRCUIT TELEVISION (CCTV) CAMERA. THE CCTV INSPECTION SHALL BE COMPLETED BY A FIRM WITH PERSONNEL THAT SPECIALIZES IN THIS TYPE OF WORK AND MUST BE APPROVED BY THE ENGINEER OF RECORD BEFORE FINAL ACCEPTANCE OF THE PROJECT.

**GENERAL NOTES**

DATE	REVISIONS:

DRAWN BY	SMV
DESIGN BY	GDH
CHECKED BY	GDH
APPROVED BY	GDH



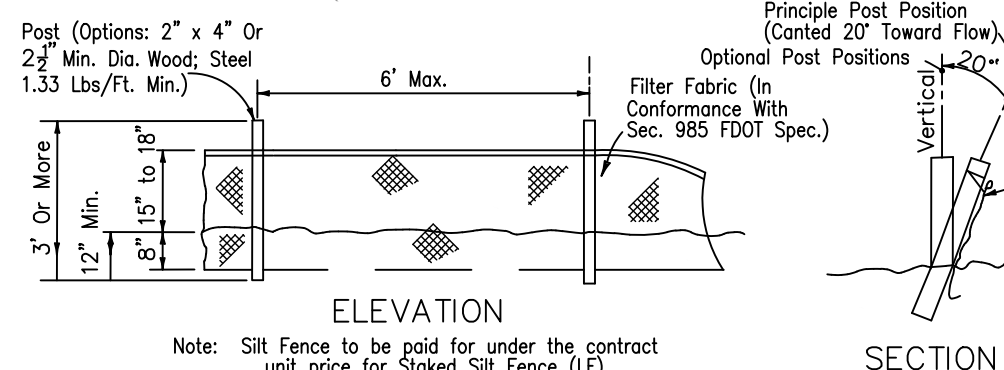
**CANTERWOOD MANOR AT DEBARY**  
CITY OF DEBARY, FLORIDA

**HUDAK ENGINEERING, INC.**  
CIVIL ENGINEERING & LAND DEVELOPMENT DESIGN SERVICES  
CERTIFICATE OF AUTHORIZATION #9388  
1344 HARDY AVENUE, ORLANDO, FL 32803  
PHONE: (407) 462-4833  
EMAIL: ghudak@hudakengineering.com

DATE:  
**JANUARY 2018**

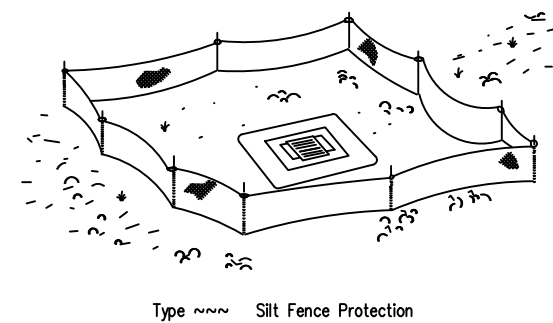
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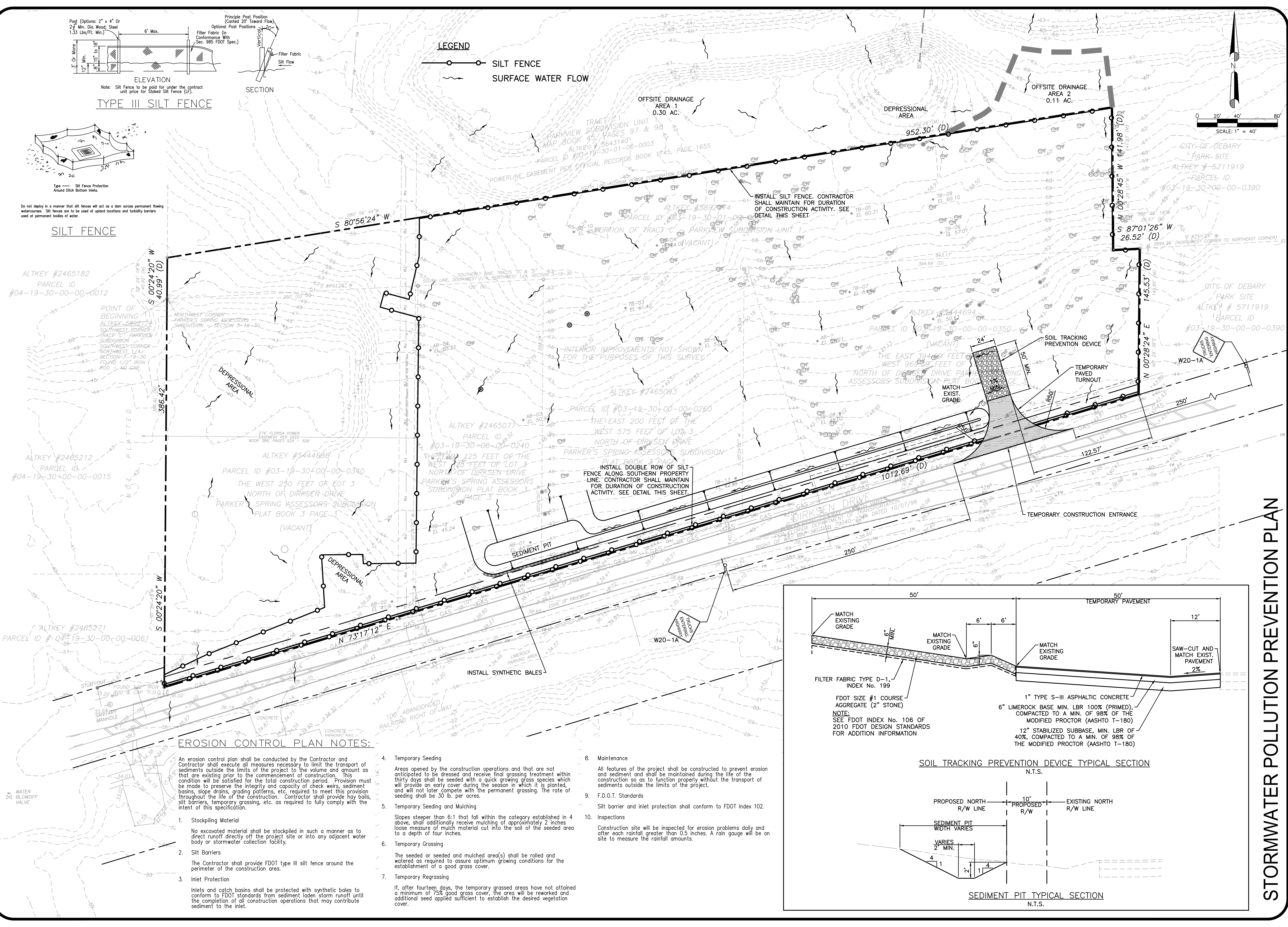
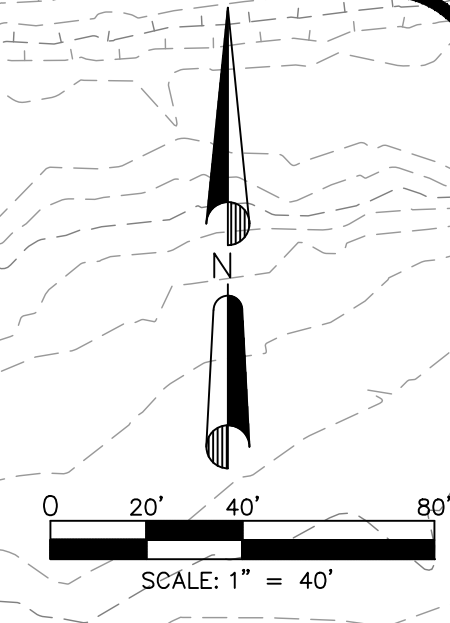
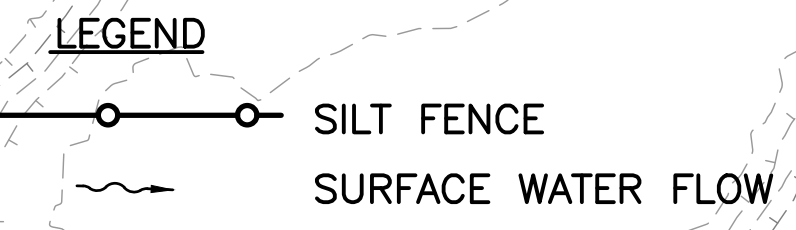
Note: Silt Fence to be paid for under the contract unit price for Staked Silt Fence (LF)

TYPE III SILT FENCE



Do not deploy in a manner that silt fences will act as a dam across permanent flowing watercourses. Silt fences are to be used at upland locations and turbidity barriers used at permanent bodies of water.

SILT FENCE



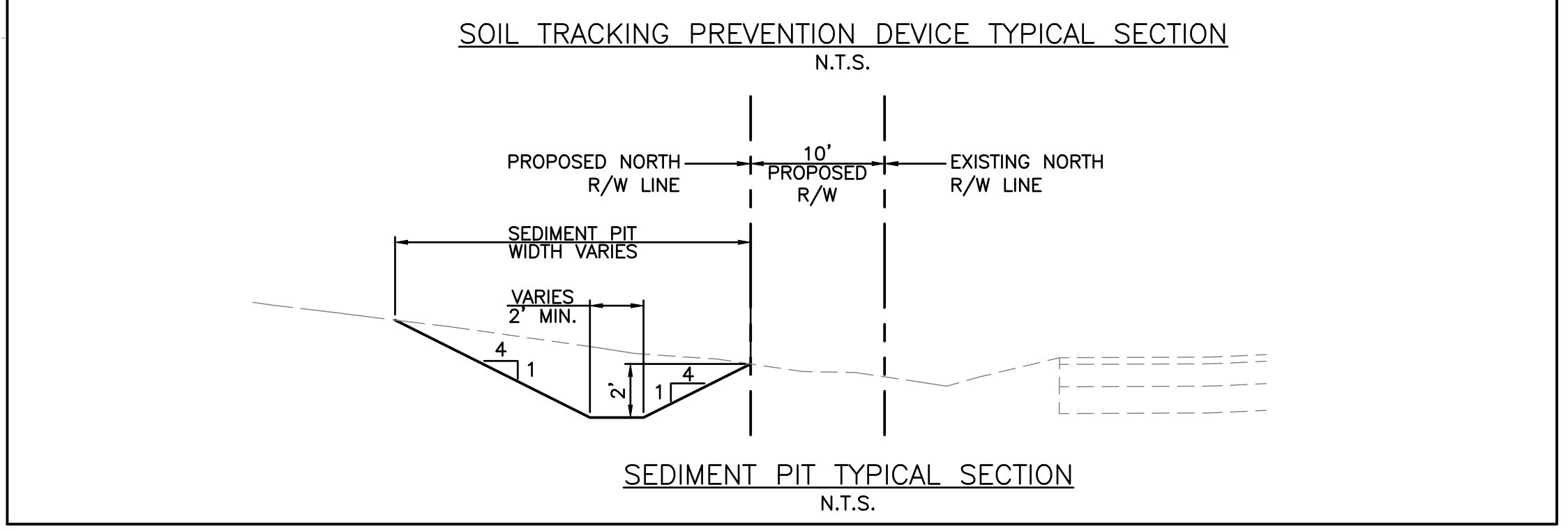
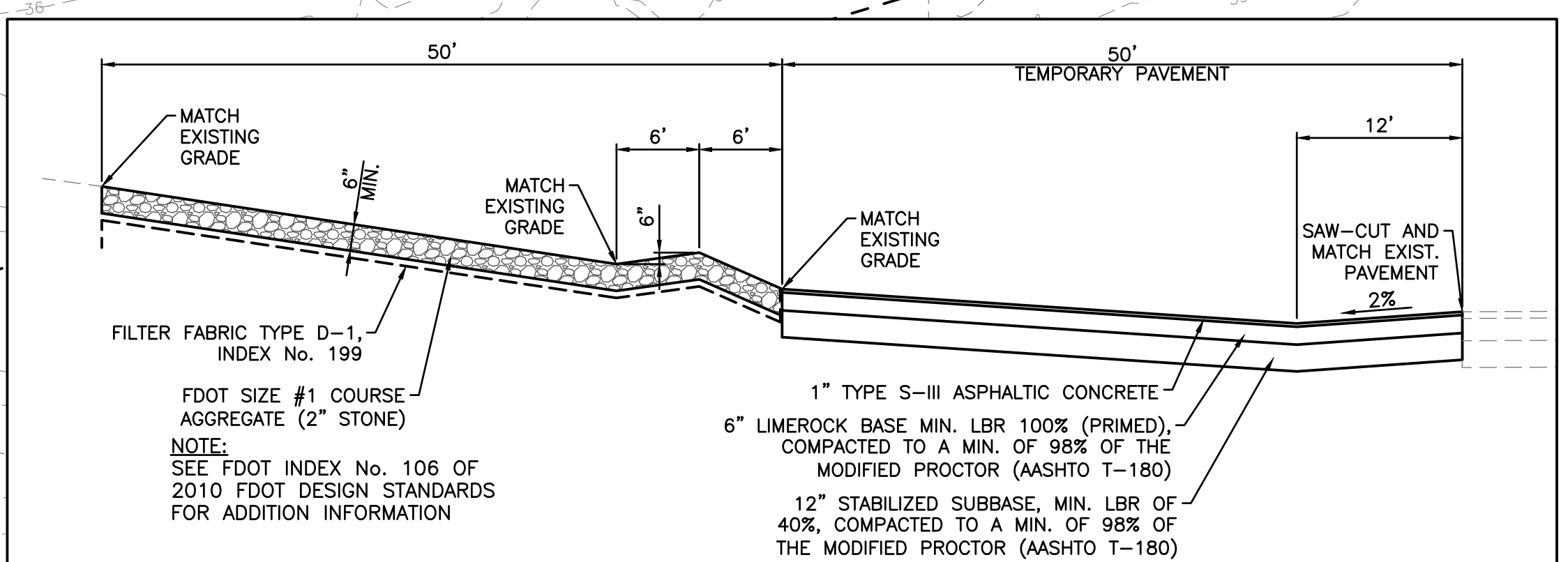
**EROSION CONTROL PLAN NOTES:**

An erosion control plan shall be conducted by the Contractor and Contractor shall execute all measures necessary to limit the transport of sediments outside the limits of the project to the volume and amount that are existing prior to the commencement of construction. This condition will be satisfied for the total construction period. Provision must be made to preserve the integrity and capacity of check weirs, sediment basins, slope drains, grading patterns, etc. required to meet this provision throughout the life of the construction. Contractor shall provide hay bales, silt barriers, temporary grassing, etc. as required to fully comply with the intent of this specification.

- Stockpiling Material**  
No excavated material shall be stockpiled in such a manner as to direct runoff directly off the project site or into any adjacent water body or stormwater collection facility.
- Silt Barriers**  
The Contractor shall provide FDOT type III silt fence around the perimeter of the construction area.
- Inlet Protection**  
Inlets and catch basins shall be protected with synthetic bales to conform to FDOT standards from sediment laden storm runoff until the completion of all construction operations that may contribute sediment to the inlet.

- Temporary Seeding**  
Areas opened by the construction operations and that are not anticipated to be dressed and receive final grassing treatment within thirty days shall be seeded with a quick growing grass species which will provide an early cover during the season in which it is planted, and will not later compete with the permanent grassing. The rate of seeding shall be 30 lb. per acre.
- Temporary Seeding and Mulching**  
Slopes steeper than 6:1 that fall within the category established in 4 above, shall additionally receive mulching of approximately 2 inches loose measure of mulch material cut into the soil of the seeded area to a depth of four inches.
- Temporary Grassing**  
The seeded or seeded and mulched area(s) shall be rolled and watered as required to assure optimum growing conditions for the establishment of a good grass cover.
- Temporary Regrassing**  
If, after fourteen days, the temporary grassed areas have not attained a minimum of 75% good grass cover, the area will be reworked and additional seed applied sufficient to establish the desired vegetation cover.

- Maintenance**  
All features of the project shall be constructed to prevent erosion and sediment and shall be maintained during the life of the construction so as to function properly without the transport of sediments outside the limits of the project.
- F.D.O.T. Standards**  
Silt barrier and inlet protection shall conform to FDOT Index 102.
- Inspections**  
Construction site will be inspected for erosion problems daily and after each rainfall greater than 0.5 inches. A rain gauge will be on site to measure the rainfall amounts.



REVISIONS:

NO.	DATE	DESCRIPTION

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY

GREG HUDAK  
PE # 54684

CANTERWOOD MANOR AT DEBARY  
CITY OF DEBARY, FLORIDA

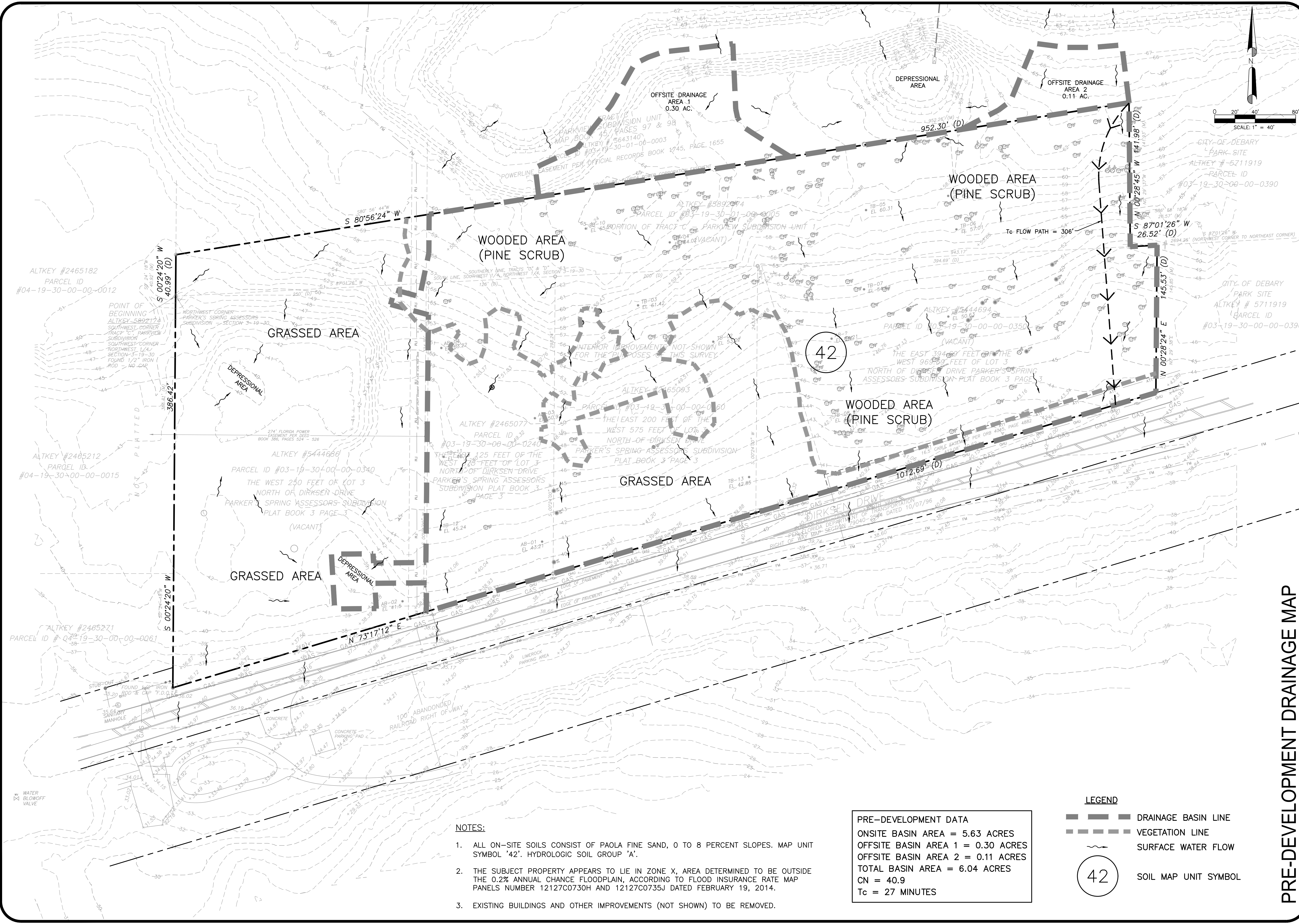
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DATE:  
**JANUARY 2018**

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STORMWATER POLLUTION PREVENTION PLAN





**NOTES:**

1. ALL ON-SITE SOILS CONSIST OF PAOLA FINE SAND, 0 TO 8 PERCENT SLOPES. MAP UNIT SYMBOL '42'. HYDROLOGIC SOIL GROUP 'A'.
2. THE SUBJECT PROPERTY APPEARS TO LIE IN ZONE X, AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN, ACCORDING TO FLOOD INSURANCE RATE MAP PANELS NUMBER 12127C0730H AND 12127C0735J DATED FEBRUARY 19, 2014.
3. EXISTING BUILDINGS AND OTHER IMPROVEMENTS (NOT SHOWN) TO BE REMOVED.

**PRE-DEVELOPMENT DATA**  
 ONSITE BASIN AREA = 5.63 ACRES  
 OFFSITE BASIN AREA 1 = 0.30 ACRES  
 OFFSITE BASIN AREA 2 = 0.11 ACRES  
 TOTAL BASIN AREA = 6.04 ACRES  
 CN = 40.9  
 Tc = 27 MINUTES

**LEGEND**

- DRAINAGE BASIN LINE
- VEGETATION LINE
- SURFACE WATER FLOW
- SOIL MAP UNIT SYMBOL

**REVISIONS:**

DATE	BY	DESCRIPTION

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY

GREG HUDAK  
PE # 54684

**CANTERWOOD MANOR AT DEBARY**  
CITY OF DEBARY, FLORIDA

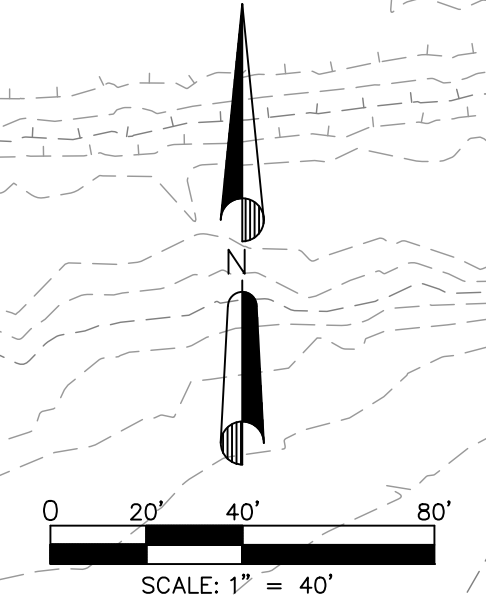
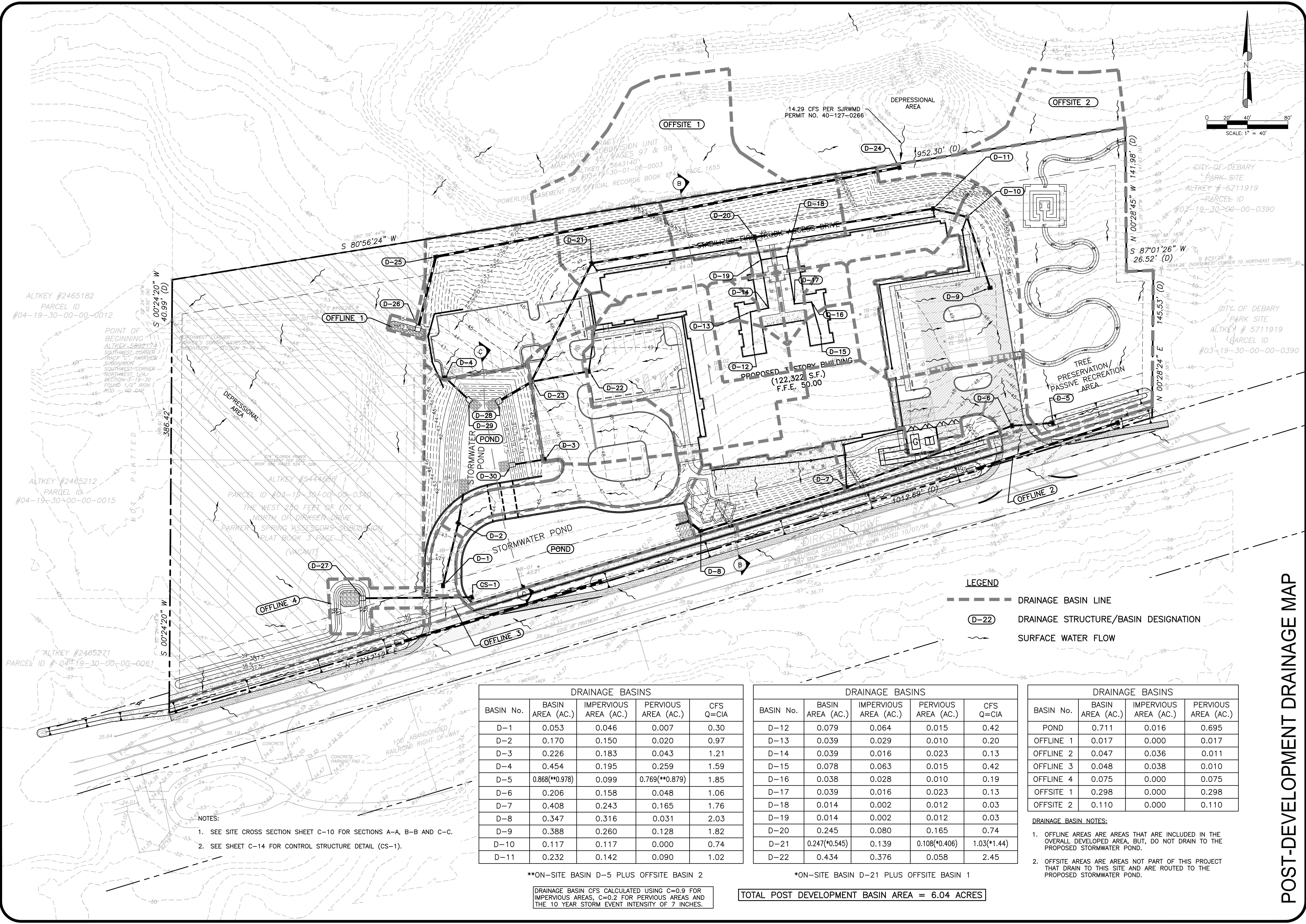
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DATE: **JANUARY 2018**

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**PRE-DEVELOPMENT DRAINAGE MAP**





- LEGEND**
- DRAINAGE BASIN LINE
  - (D-22) DRAINAGE STRUCTURE/BASIN DESIGNATION
  - ~ SURFACE WATER FLOW

- NOTES:**
- SEE SITE CROSS SECTION SHEET C-10 FOR SECTIONS A-A, B-B AND C-C.
  - SEE SHEET C-14 FOR CONTROL STRUCTURE DETAIL (CS-1).

DRAINAGE BASINS				
BASIN No.	BASIN AREA (AC.)	IMPERVIOUS AREA (AC.)	PERVIOUS AREA (AC.)	CFS Q=CIA
D-1	0.053	0.046	0.007	0.30
D-2	0.170	0.150	0.020	0.97
D-3	0.226	0.183	0.043	1.21
D-4	0.454	0.195	0.259	1.59
D-5	0.868(*0.978)	0.099	0.769(*0.879)	1.85
D-6	0.206	0.158	0.048	1.06
D-7	0.408	0.243	0.165	1.76
D-8	0.347	0.316	0.031	2.03
D-9	0.388	0.260	0.128	1.82
D-10	0.117	0.117	0.000	0.74
D-11	0.232	0.142	0.090	1.02

\*\*ON-SITE BASIN D-5 PLUS OFFSITE BASIN 2

DRAINAGE BASINS				
BASIN No.	BASIN AREA (AC.)	IMPERVIOUS AREA (AC.)	PERVIOUS AREA (AC.)	CFS Q=CIA
D-12	0.079	0.064	0.015	0.42
D-13	0.039	0.029	0.010	0.20
D-14	0.039	0.016	0.023	0.13
D-15	0.078	0.063	0.015	0.42
D-16	0.038	0.028	0.010	0.19
D-17	0.039	0.016	0.023	0.13
D-18	0.014	0.002	0.012	0.03
D-19	0.014	0.002	0.012	0.03
D-20	0.245	0.080	0.165	0.74
D-21	0.247(*0.545)	0.139	0.108(*0.406)	1.03(*1.44)
D-22	0.434	0.376	0.058	2.45

\*ON-SITE BASIN D-21 PLUS OFFSITE BASIN 1

DRAINAGE BASINS				
BASIN No.	BASIN AREA (AC.)	IMPERVIOUS AREA (AC.)	PERVIOUS AREA (AC.)	CFS Q=CIA
POND	0.711	0.016	0.695	
OFFLINE 1	0.017	0.000	0.017	
OFFLINE 2	0.047	0.036	0.011	
OFFLINE 3	0.048	0.038	0.010	
OFFLINE 4	0.075	0.000	0.075	
OFFSITE 1	0.298	0.000	0.298	
OFFSITE 2	0.110	0.000	0.110	

- DRAINAGE BASIN NOTES:**
- OFFLINE AREAS ARE AREAS THAT ARE INCLUDED IN THE OVERALL DEVELOPED AREA, BUT, DO NOT DRAIN TO THE PROPOSED STORMWATER POND.
  - OFFSITE AREAS ARE AREAS NOT PART OF THIS PROJECT THAT DRAIN TO THIS SITE AND ARE ROUTED TO THE PROPOSED STORMWATER POND.

TOTAL POST DEVELOPMENT BASIN AREA = 6.04 ACRES

DRAINAGE BASIN CFS CALCULATED USING C=0.9 FOR IMPERVIOUS AREAS, C=0.2 FOR PERVIOUS AREAS AND THE 10 YEAR STORM EVENT INTENSITY OF 7 INCHES.

REVISIONS:

DATE	BY	DESCRIPTION

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY
SML	GDH	GDH	GDH

GREG HUDAK  
PE # 54684

CANTERWOOD MANOR AT DEBARY  
CITY OF DEBARY, FLORIDA

**HUDAK ENGINEERING, INC.**  
CIVIL ENGINEERING & LAND DEVELOPMENT DESIGN SERVICES  
CERTIFICATE OF AUTHORIZATION #9388  
1344 HARDY AVENUE, ORLANDO, FL 32803  
PHONE: (407) 462-8833  
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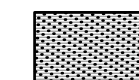
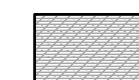

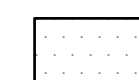
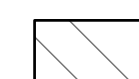

DATE:  
**JANUARY 2018**

SHEET NO.  
**C-5**  
5 of 17

POST-DEVELOPMENT DRAINAGE MAP

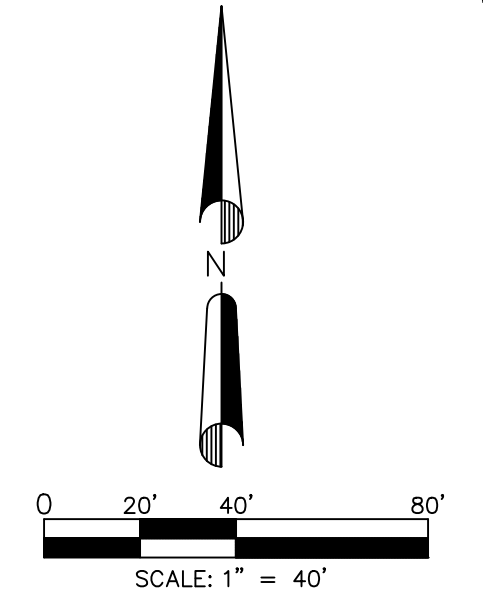


**LEGEND**

-  STANDARD ASPHALT PAVEMENT (SEE SECTION ON SHEET C-14).
-  VOLUSIA COUNTY ASPHALT PAVEMENT (SEE SECTION ON SHEET C-17).
-  HEAVY DUTY ASPHALT PAVEMENT (SEE SECTION ON SHEET C-14).
-  STABILIZED FIRE TRUCK ACCESS DRIVE (SEE SECTION ON SHEET C-14).
-  TREE PRESERVATION/PASSIVE RECREATION AREA.
-  UNDISTURBED AREA.
-  REMOVE EXISTING STRIPING

**WAIVER NOTE:**

CITY OF DEBARY HAS GRANTED A WAIVER FROM A REQUIRED MASONRY BUFFER WALL (E.G. LDC SEC. 5-4 PROVISION OF BUFFER YARDS AND SCREENING) DUE TO NATURALLY OCCURRING TOPOGRAPHIC SCREENING.



CITY OF DEBARY  
PARK SITE  
ALTKEY # 5711919  
PARCEL ID  
#03-19-30-00-00-0390

10' SETBACK/  
BUFFER

CITY OF DEBARY  
PARK SITE  
ALTKEY # 5711919  
PARCEL ID  
#03-19-30-00-00-0390

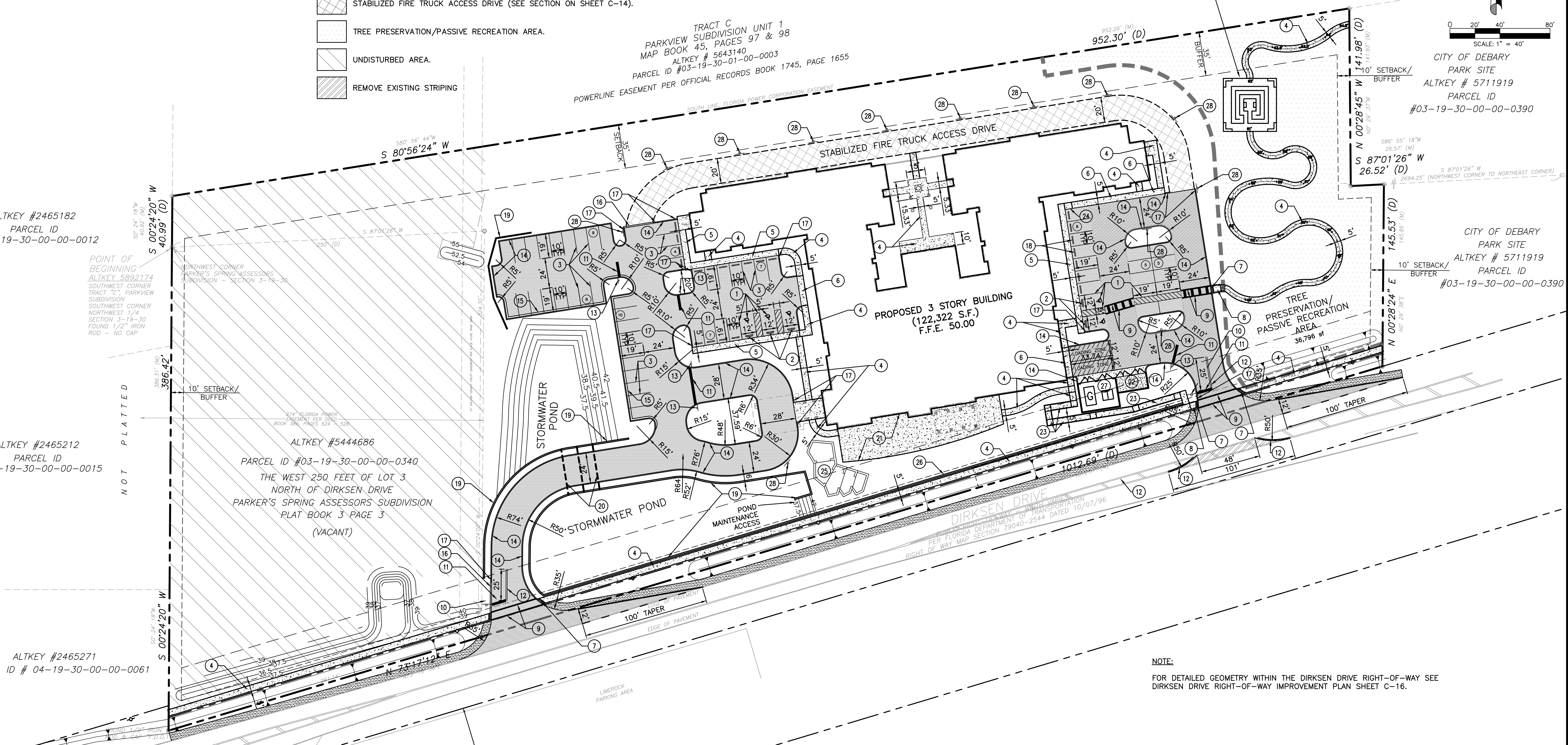
TRACT C  
PARKVIEW SUBDIVISION UNIT 1  
MAP BOOK 45, PAGES 97 & 98  
ALTKEY # 5643140  
PARCEL ID #03-19-30-01-00-0003  
POWERLINE EASEMENT PER OFFICIAL RECORDS BOOK 1745, PAGE 1655

ALTKEY #2465182  
PARCEL ID  
#04-19-30-00-00-0012

ALTKEY #2465212  
PARCEL ID  
#04-19-30-00-00-0015

ALTKEY #2465271  
PARCEL ID # 04-19-30-00-00-0061

ALTKEY #5444686  
PARCEL ID #03-19-30-00-00-0340  
THE WEST 250 FEET OF LOT 3  
NORTH OF DIRKSEN DRIVE  
PARKER'S SPRING ASSESSORS SUBDIVISION  
PLAT BOOK 3 PAGE 3  
(VACANT)



**NOTE:**  
FOR DETAILED GEOMETRY WITHIN THE DIRKSEN DRIVE RIGHT-OF-WAY SEE DIRKSEN DRIVE RIGHT-OF-WAY IMPROVEMENT PLAN SHEET C-16.

**KEYED NOTES**

- 1 ACCESSIBLE PARKING STRIPING (TYP.), SEE DETAIL ON SHEET C-14.
- 2 ACCESSIBLE PARKING SIGN (TYP.), SEE DETAIL ON SHEET C-14.
- 3 PARKING STALL STRIPING (TYP.), SEE DETAIL ON SHEET C-14.
- 4 CONCRETE SIDEWALK, SEE DETAIL ON SHEET C-14.
- 5 MONOLITHIC CONCRETE SIDEWALK AND CURB (FLUSH W/PAVEMENT), SEE DETAIL ON SHEET C-14.
- 6 MONOLITHIC CONCRETE SIDEWALK AND CURB (6" ABOVE PAVEMENT), SEE DETAIL ON SHEET C-14.
- 7 INSTALL DETECTABLE WARNING PER FDOT INDEX No. 304.
- 8 CONSTRUCT PUBLIC SIDEWALK RAMP PER FDOT INDEX No. 304.
- 9 WHITE THERMOPLASTIC CROSSWALK PER FDOT INDEX No. 17346.
- 10 36" HIGH INTENSITY STOP SIGN.
- 11 24" WIDE THERMOPLASTIC STOP BAR.
- 12 6" DOUBLE YELLOW THERMOPLASTIC.
- 13 24" HIGH INTENSITY STOP SIGN.
- 14 TYPE 'D' CONCRETE CURB, SEE DETAIL ON SHEET C-14.

**KEYED NOTES**

- 15 TYPE 'F' CONCRETE CURB & GUTTER, SEE DETAIL ON SHEET C-14.
- 16 12" CONCRETE RIBBON CURB, SEE DETAIL ON SHEET C-14.
- 17 3" TRANSITION CURB FROM 6" HIGH TO FLUSH WITH PAVEMENT.
- 18 WHEEL STOP (TYP.).
- 19 RETAINING WALL TOPPED WITH DECORATIVE FENCE (DESIGN BY OTHERS).
- 20 2-12' WIDE X 4' HIGH X 37' LONG BOX CULVERTS FDOT INDEX 289, 291 & 293 OR APPROVED EQUAL (DESIGN BY OTHERS).
- 21 PATIO (SEE ARCHITECTURAL PLANS).
- 22 DOUBLE DUMPSTER PAD, MATCH BUILDING DESIGN ELEMENTS (SEE ARCHITECTURAL PLANS).
- 23 CONCRETE SIDEWALK RAMP WITH HANDRAILS PER FDOT INDEX No.'S 304, 310 & 870.
- 24 6' TRANSITION PAVEMENT FROM 6" BELOW SIDEWALK TO FLUSH WITH SIDEWALK.
- 25 CASCADING WATER FEATURE (DESIGN BY OTHERS).
- 26 RETAINING (DESIGN BY OTHERS).
- 27 GENERATOR ENCLOSURE, MATCH BUILDING DESIGN ELEMENTS (SEE ARCHITECTURAL PLANS).
- 28 FIRE LANE MARKING SIGN, SEE DETAIL ON SHEET C-14.

REVISIONS:

DATE	BY	DESCRIPTION

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY

GREG HUDAK  
PE # 54684

CANTERWOOD MANOR AT DEBARY  
CITY OF DEBARY, FLORIDA

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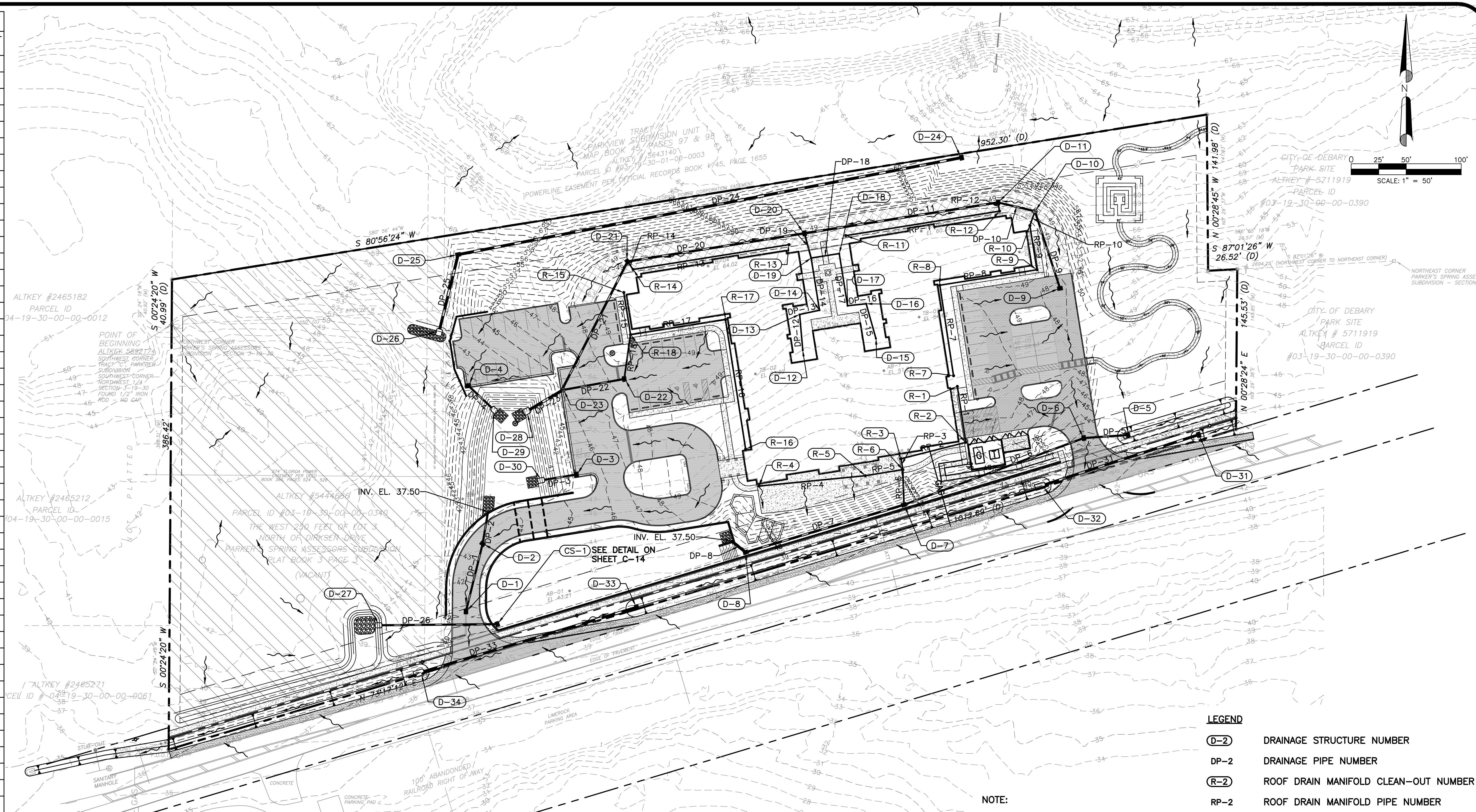
DATE:  
**JANUARY 2018**

SHEET NO.  
**C-6**  
6 of 17

**SITE GEOMETRY PLAN**



DRAINAGE PIPE TABLE					
PIPE No.	SIZE	LENGTH	AS-BUILT LENGTH	SLOPE	AS-BUILT SLOPE
DP-1	15" RCP	63'		0.50%	
DP-2	15" RCP	30'		0.50%	
DP-3	15" RCP	30'		0.50%	
DP-4	15" RCP	31'		0.50%	
DP-5	15" RCP	40'		0.50%	
DP-6	15" RCP	174'		0.51%	
DP-7	18" RCP	150'		0.42%	
DP-8	24" RCP	17'		0.32%	
DP-9	15" RCP	74'		0.50%	
DP-10	15" HDPE	34'		0.49%	
DP-11	18" HDPE	178'		0.50%	
DP-12	8" PVC	33'		1.01%	
DP-13	8" PVC	18'		1.03%	
DP-14	8" PVC	48'		1.06%	
DP-15	8" PVC	33'		1.01%	
DP-16	8" PVC	17'		1.00%	
DP-17	8" PVC	48'		1.00%	
DP-18	8" PVC	26'		1.01%	
DP-19	10" PVC	23'		1.03%	
DP-20	18" HDPE	163'		0.50%	
DP-21	18" RCP	129'		0.50%	
DP-22	15" RCP	55'		0.50%	
DP-23	24" RCP	37'		0.50%	
DP-24	24" HDPE	466'		0.22%	
DP-25	24" HDPE	72'		0.22%	
DP-26	15" RCP	107'		0.93%	
DP-31	14"X23" ERCP	150'		0.30%	
DP-33	14"X23" ERCP	205'		0.30%	
RP-1	8" PVC	51'		1.00%	
RP-2	8" PVC	61'		1.00%	
RP-3	8" PVC	10'		1.00%	
RP-4	8" PVC	97'		2.80%	
RP-5	8" PVC	34'		2.93%	
RP-6	10" PVC	32'		14.36%	
RP-7	8" PVC	83'		1.14%	
RP-8	8" PVC	89'		1.00%	
RP-9	8" PVC	41'		1.01%	
RP-10	8" PVC	14'		1.01%	
RP-11	8" PVC	141'		1.00%	
RP-12	8" PVC	8'		1.00%	
RP-13	8" PVC	144'		1.00%	
RP-14	8" PVC	9'		1.02%	
RP-15	8" PVC	39'		1.01%	
RP-16	8" PVC	119'		1.50%	
RP-17	10" PVC	87'		1.00%	
RP-18	10" PVC	41'		1.84%	



- LEGEND**
- D-2 DRAINAGE STRUCTURE NUMBER
  - DP-2 DRAINAGE PIPE NUMBER
  - R-2 ROOF DRAIN MANIFOLD CLEAN-OUT NUMBER
  - RP-2 ROOF DRAIN MANIFOLD PIPE NUMBER
  - SURFACE WATER FLOW

NOTE:  
SEE ARCHITECTURAL PLANS FOR ROOF DRAIN LOCATION AND SIZES.

DRAINAGE STRUCTURE TABLE					
STRUCTURE No.	STRUCTURE TYPE	GRATE OR TOP EL.	GRATE OR TOP EL. AS-BUILT	INV. EL.	INV. EL. AS-BUILT
CS-1	CONTROL STRUCTURE	41.50		37.50(W)(15" RCP)	
D-1	TYPE C INLET	40.75		37.97(N)(15" RCP)	
D-2	TYPE C INLET	43.07		37.65(S)(15" RCP) 37.65(N)(15" RCP)	
D-3	TYPE C INLET	44.99		37.65(W)(15" RCP)	
D-4	TYPE C INLET	41.53		37.66(SE)(15" RCP)	
D-5	TYPE C INLET	41.65		39.27(W)(15" RCP)	
D-6	TYPE C INLET	42.61		39.07(E)(15" RCP) 39.07(W)(15" RCP)	
D-7	TYPE C INLET	41.50		38.19(E)(15" RCP) 38.50(N)(10" PVC) 38.19(W)(18" RCP)	
D-8	TYPE C INLET	41.51		37.55(E)(18" RCP) 37.55(NW)(24" RCP)	
D-9	TYPE C INLET	47.66		44.14(N)(15" RCP)	
D-10	TYPE P-8 M.H.	48.76		43.77(S)(15" RCP) 44.19(S)(8" PVC) 43.77(W)(15" HDPE)	
D-11	TYPE C INLET	48.61		43.60(E)(15" HDPE) 45.07(S)(8" PVC) 43.60(W)(18" HDPE)	
D-12	12" YARD DRAIN	50.00		46.60(N)(8" PVC)	
D-13	12" YARD DRAIN	50.00		46.27(S)(8" PVC) 46.27(E)(8" PVC)	

DRAINAGE STRUCTURE TABLE					
STRUCTURE No.	STRUCTURE TYPE	GRATE OR TOP EL.	GRATE OR TOP EL. AS-BUILT	INV. EL.	INV. EL. AS-BUILT
D-14	12" YARD DRAIN	50.00		46.08(W)(8" PVC) 46.08(N)(8" PVC)	
D-15	12" YARD DRAIN	50.00		46.81(N)(8" PVC)	
D-16	12" YARD DRAIN	50.00		46.48(S)(8" PVC) 46.48(W)(8" PVC)	
D-17	12" YARD DRAIN	50.00		46.31(E)(8" PVC) 46.31(N)(8" PVC)	
D-18	12" YARD DRAIN	50.00		45.83(S)(8" PVC) 45.83(W)(8" PVC)	
D-19	12" YARD DRAIN	50.00		45.57(S)(8" PVC) 45.57(E)(8" PVC) 45.40(N)(10" PVC)	
D-20	TYPE C INLET	48.61		42.71(E)(18" HDPE) 45.16(S)(10" PVC) 42.46(W)(18" HDPE)	
D-21	TYPE C INLET	48.69		41.65(E)(18" HDPE) 45.00(SE)(8" PVC) 38.33(SW)(18" RCP)	
D-22	TYPE C INLET	48.24		43.87(N)(10" PVC) 37.96(W)(15" RCP)	
D-23	TYPE P-8 M.H.	46.08		37.69(NE)(18" RCP) 37.69(E)(15" RCP) 37.69(SW)(24" RCP)	
D-24	TYPE C INLET	59.50		53.68(W)(24" HDPE)	

DRAINAGE STRUCTURE TABLE					
STRUCTURE No.	STRUCTURE TYPE	GRATE OR TOP EL.	GRATE OR TOP EL. AS-BUILT	INV. EL.	INV. EL. AS-BUILT
D-25	TYPE D INLET	56.01		52.66(E)(24" HDPE) 52.66(S)(24" HDPE)	
D-26	24" M.E.S.	55.15		52.50(N)(24" HDPE)	
D-27	15" M.E.S.	37.94		36.50(E)(15" RCP)	
D-28	24" M.E.S.	39.75		37.50(NE)(24" RCP)	
D-29	15" M.E.S.	38.94		37.50(NW)(15" RCP)	
D-30	15" M.E.S.	38.94		37.50(E)(15" RCP)	
D-31	TYPE C INLET	41.75		38.66(W)(14"X23" ERCP)	
D-32	14"X23" MES	39.71		38.21(E)(14"X23" ERCP)	
D-33	TYPE C INLET	37.70		35.26(W)(14"X23" ERCP)	
D-34	14"X23" MES	36.14		34.64(E)(14"X23" ERCP)	
R-1	6" CLEAN-OUT	49.82		44.31(S)(8" PVC)	
R-2	6" CLEAN-OUT	49.90		43.80(N)(8" PVC) 43.80(W)(8" PVC)	
R-3	6" CLEAN-OUT	49.84		43.19(E)(8" PVC) 43.19(S)(8" PVC)	
R-4	6" CLEAN-OUT	49.94		46.82(E)(8" PVC)	
R-5	6" CLEAN-OUT	49.85		44.10(W)(8" PVC) 44.10(E)(8" PVC)	
R-6	6" CLEAN-OUT	49.80		43.09(N)(8" PVC) 43.09(W)(8" PVC) 43.09(S)(10" PVC)	

DRAINAGE STRUCTURE TABLE					
STRUCTURE No.	STRUCTURE TYPE	GRATE OR TOP EL.	GRATE OR TOP EL. AS-BUILT	INV. EL.	INV. EL. AS-BUILT
R-7	6" CLEAN-OUT	49.48		46.58(N)(8" PVC)	
R-8	6" CLEAN-OUT	49.50		45.63(S)(8" PVC) 45.63(E)(8" PVC)	
R-9	6" CLEAN-OUT	49.54		44.74(W)(8" PVC) 44.74(N)(8" PVC)	
R-10	6" CLEAN-OUT	49.66		44.33(S)(8" PVC) 44.33(N)(8" PVC)	
R-11	6" CLEAN-OUT	49.40		46.56(E)(8" PVC)	
R-12	6" CLEAN-OUT	49.32		45.15(W)(8" PVC) 45.15(N)(8" PVC)	
R-13	6" CLEAN-OUT	49.36		46.52(W)(8" PVC)	
R-14	6" CLEAN-OUT	49.35		45.09(E)(8" PVC) 45.09(NW)(8" PVC)	
R-15	6" CLEAN-OUT	49.58		46.90(S)(8" PVC)	
R-16	6" CLEAN-OUT	49.50		47.28(N)(8" PVC)	
R-17	6" CLEAN-OUT	49.50		45.49(S)(8" PVC) 45.49(W)(10" PVC)	
R-18	6" CLEAN-OUT	49.52		46.51(N)(8" PVC) 44.62(E)(10" PVC) 44.62(S)(10" PVC)	

DRAINAGE SYSTEM PLAN

REVISIONS:	
DATE	

DRAWN BY	SML
DESIGN BY	GDH
CHECKED BY	GDH
APPROVED BY	GDH

GREG HUDAK  
PE # 54684

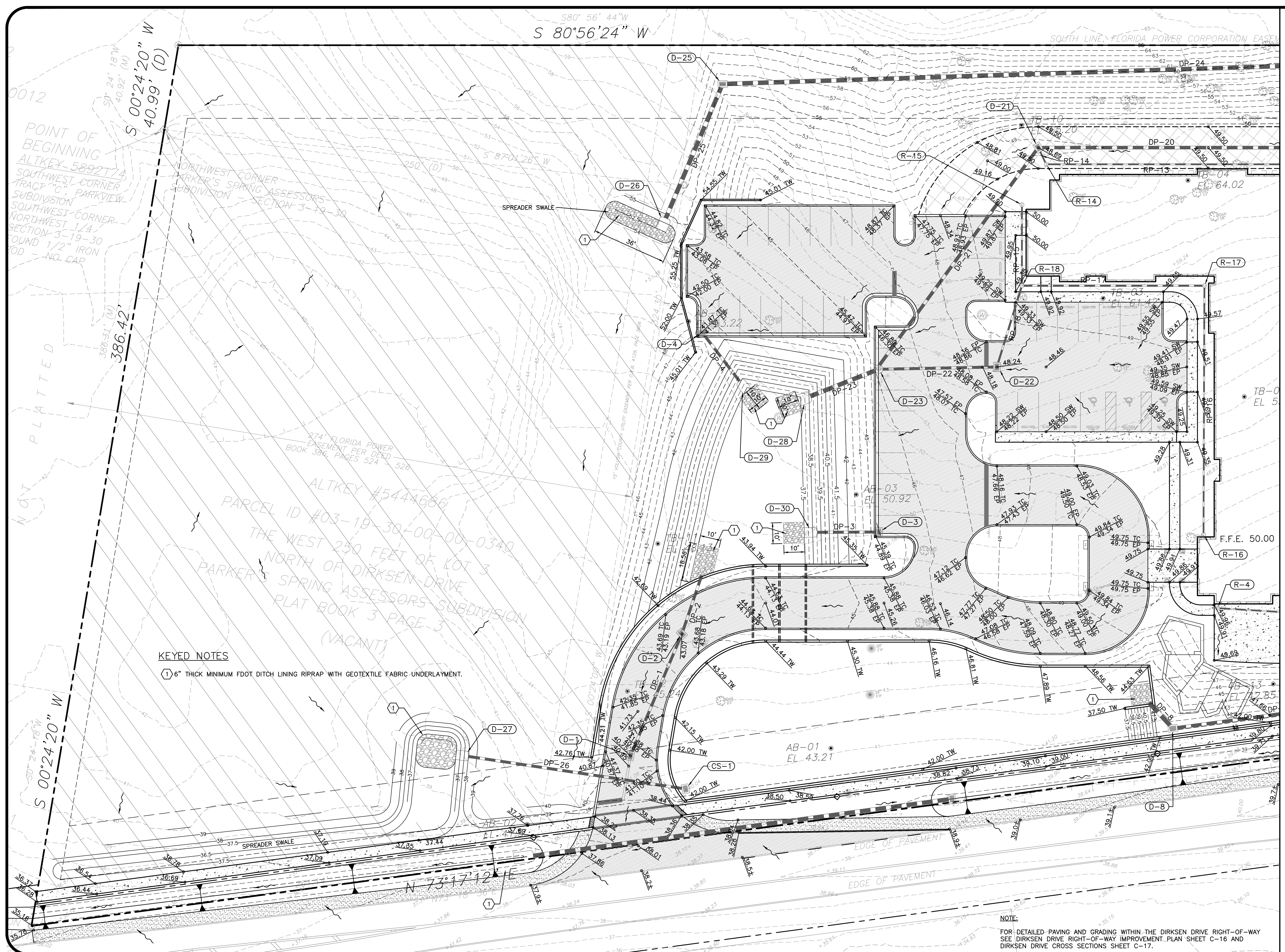
CANTERWOOD MANOR AT DEBARY  
CITY OF DEBARY, FLORIDA

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CERTIFICATE OF AUTHORIZATION #9388  
1344 HARDY AVENUE, ORLANDO, FL 32833  
PHONE: (407) 462-8833  
EMAIL: ghudak@hudakengineering.com

DATE:  
**JANUARY 2018**

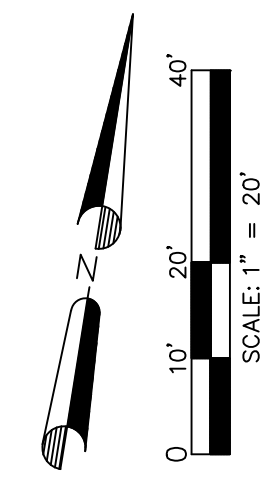
SHEET NO.  
**C-7**  
7 17





MATCHLINE SEE SHEET C-9 FOR CONTINUATION

PAVING & GRADING PLAN (1 OF 2)



SHEET NO.  
**C-8**  
8 of 17

DATE:  
**JANUARY 2018**

**HUDAK ENGINEERING, INC.**  
 CIVIL ENGINEERING & LAND DEVELOPMENT DESIGN SERVICES  
 CERTIFICATE OF AUTHORIZATION #9388  
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 EMAIL: ghudak@hudakengineering.com

**CANTERWOOD MANOR AT DEBARY**  
 CITY OF DEBARY, FLORIDA

GREG HUDAK  
 PE # 54634

APPROVED BY	GDH

CHECKED BY	GDH

DESIGN BY	GDH

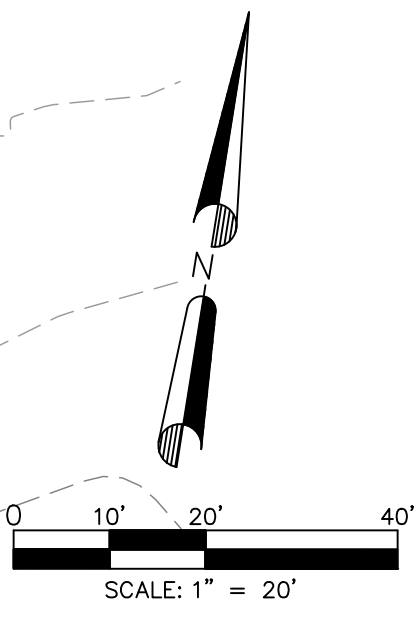
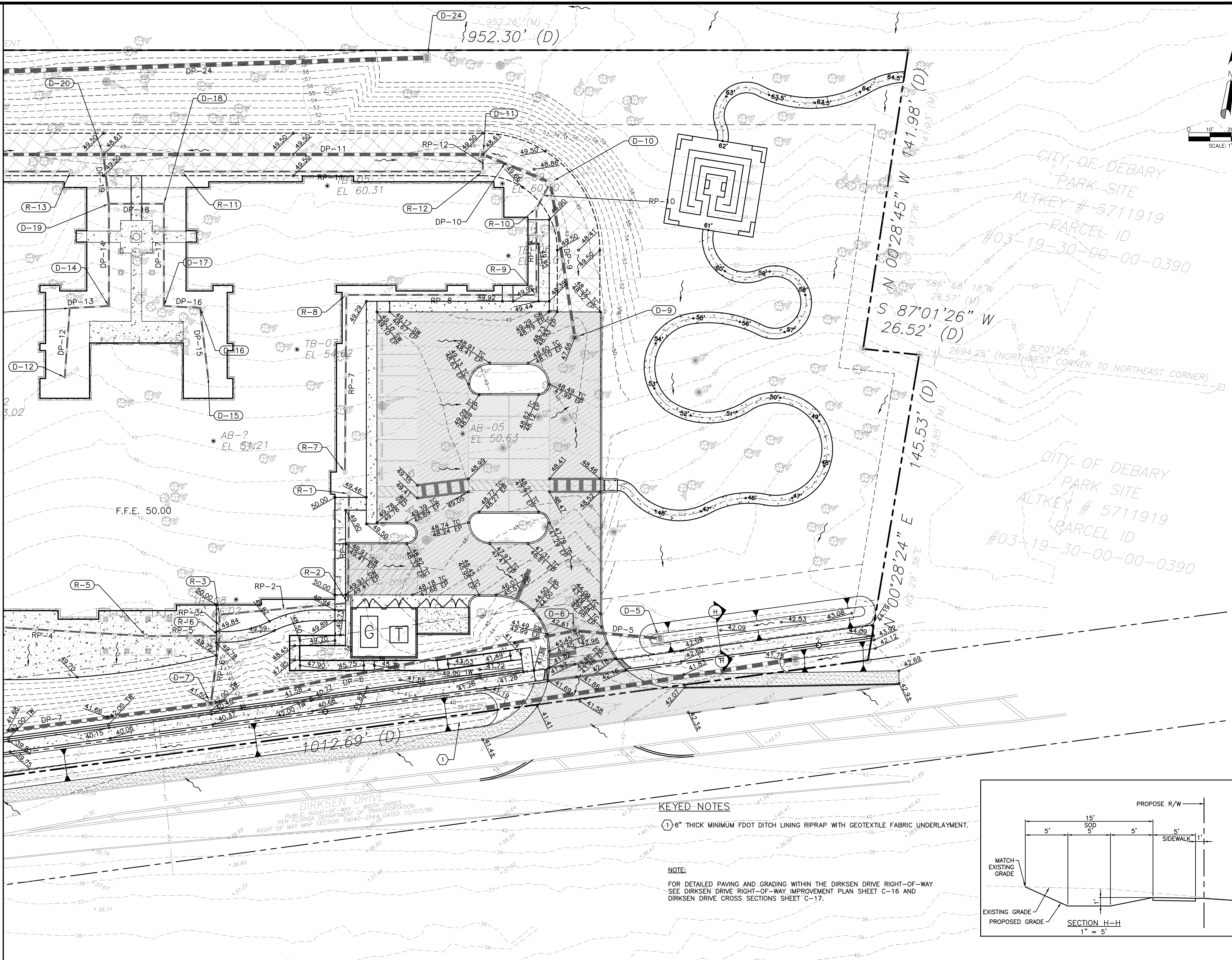
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REVISIONS:	DATE

NOTE:  
 FOR DETAILED PAVING AND GRADING WITHIN THE DIRKSEN DRIVE RIGHT-OF-WAY  
 SEE DIRKSEN DRIVE RIGHT-OF-WAY IMPROVEMENT PLAN SHEET C-16 AND  
 DIRKSEN DRIVE CROSS SECTIONS SHEET C-17.



MATCHLINE SEE SHEET C-8 FOR CONTINUATION



CITY OF DEBARY  
PARK SITE  
ALTKEY # 5711919  
PARCEL ID  
#03-19-30-00-00-0390

CITY OF DEBARY  
PARK SITE  
ALTKEY # 5711919  
PARCEL ID  
#03-19-30-00-00-0390

952.26' (M)  
952.30' (D)

62'  
61'

N 00°28'45" W 141.98' (D)  
N 01°29'37" W 141.93' (M)

S 87°01'26" W 26.52' (D)  
S 87°01'26" W 26.57' (M)

2694.25' (NORTHWEST CORNER TO NORTHEAST CORNER)

145.53' (D)  
144.85' (M)

N 00°28'24" E 145.53' (D)  
N 01°29'38" E 144.85' (M)

F.F.E. 50.00

AB-? EL 51.21

AB-05 FL 50.63

TB-07 EL 54.62

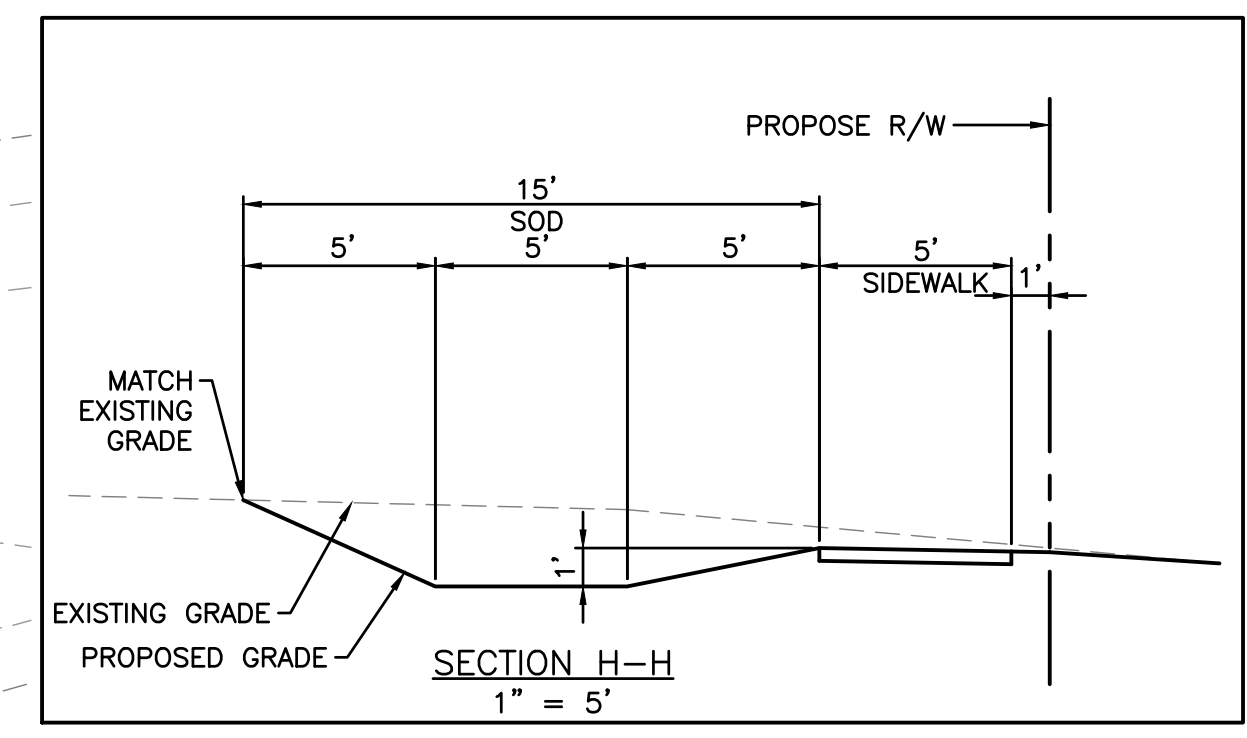
1012.69' (D)

DIRKSEN DRIVE  
PUBLIC RIGHT-OF-WAY - WIDTH VARIES  
PER FLORIDA DEPARTMENT OF TRANSPORTATION  
RIGHT OF WAY MAP SECTION 79040-2544, DATED 10/07/96

**KEYED NOTES**

① 6" THICK MINIMUM FDOT DITCH LINING RIPRAP WITH GEOTEXTILE FABRIC UNDERLAYMENT.

**NOTE:**  
FOR DETAILED PAVING AND GRADING WITHIN THE DIRKSEN DRIVE RIGHT-OF-WAY  
SEE DIRKSEN DRIVE RIGHT-OF-WAY IMPROVEMENT PLAN SHEET C-16 AND  
DIRKSEN DRIVE CROSS SECTIONS SHEET C-17.



REVISIONS:

DATE	DESCRIPTION

DRAWN BY	SMV	GDH
DESIGN BY	GDH	GDH
CHECKED BY	GDH	GDH
APPROVED BY	GDH	GDH

GREG HUDAK  
PE # 54634

**CANTERWOOD MANOR AT DEBARY**  
CITY OF DEBARY, FLORIDA

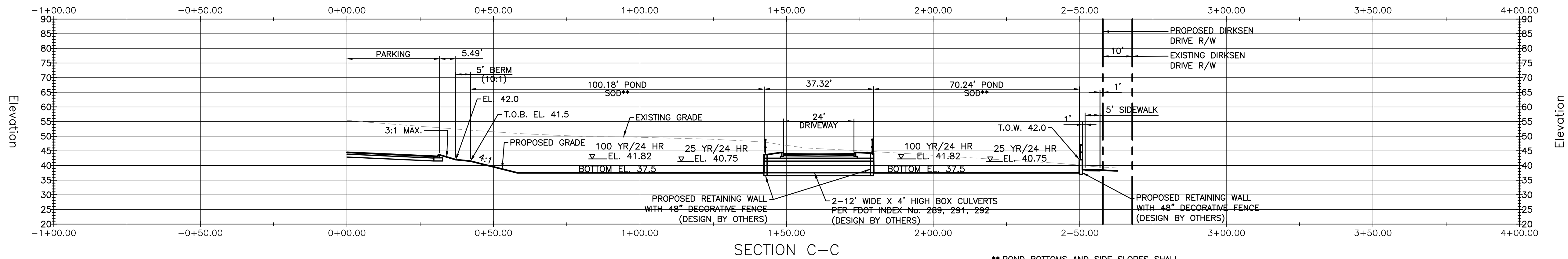
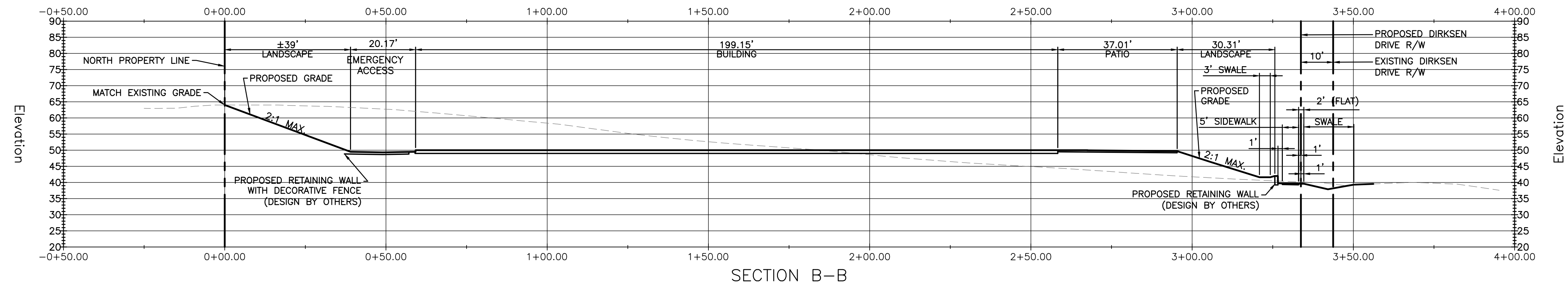
**HUDAK ENGINEERING, INC.**  
CIVIL ENGINEERING & LAND DEVELOPMENT DESIGN SERVICES  
CERTIFICATE OF AUTHORIZATION #9388  
1344 HARDY AVENUE, ORLANDO, FL 32803  
PHONE: (407) 462-8833  
EMAIL: ghudak@hudakengineering.com

DATE:  
**JANUARY 2018**

SHEET NO.  
**C-9**  
9 of 17

**PAVING & GRADING PLAN (2 OF 2)**

SECTION A-A  
OMITTED

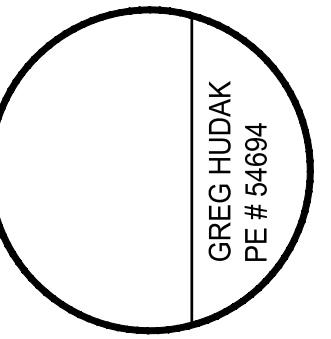


\*\* POND BOTTOMS AND SIDE SLOPES SHALL BE SODDED WITH SAND GROWN SOD (NOT MUCK GROWN SOD).

SITE CROSS SECTIONS

DATE	REVISIONS:

DRAWN BY	SML
DESIGN BY	GDH
CHECKED BY	GDH
APPROVED BY	GDH



CANTERWOOD MANOR AT DEBARY  
CITY OF DEBARY, FLORIDA

**HUDAK ENGINEERING, INC.**  
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 1344 HARDY AVENUE, ORLANDO, FL 32803  
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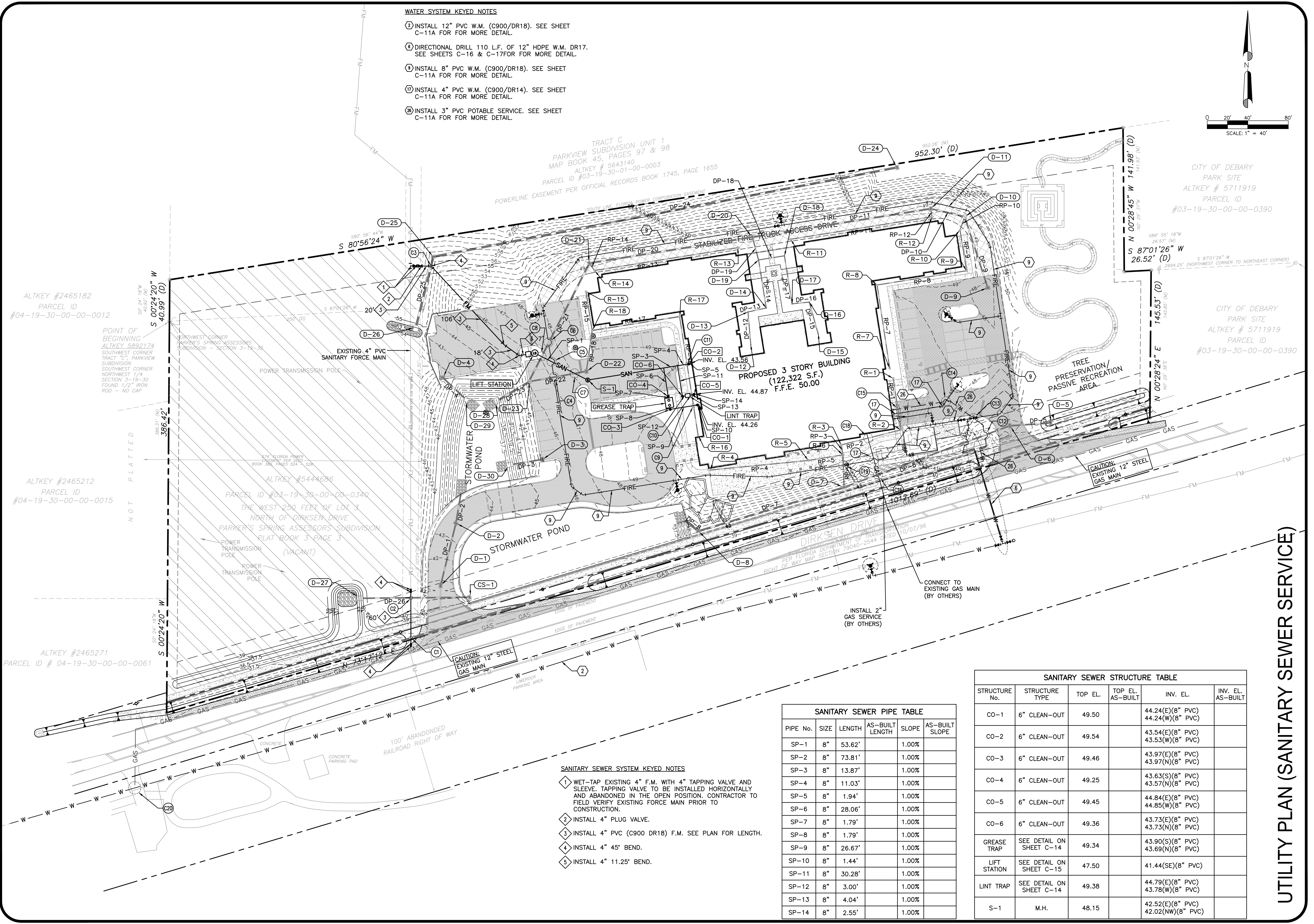
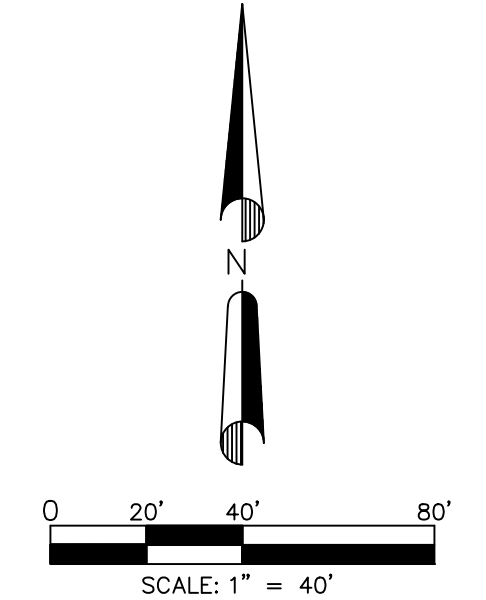
DATE:  
JANUARY 2018

SHEET NO.  
**C-10**  
10 of 17



**WATER SYSTEM KEYED NOTES**

- ① INSTALL 12" PVC W.M. (C900/DR18). SEE SHEET C-11A FOR MORE DETAIL.
- ② DIRECTIONAL DRILL 110 L.F. OF 12" HDPE W.M. DR17. SEE SHEETS C-16 & C-17 FOR MORE DETAIL.
- ③ INSTALL 8" PVC W.M. (C900/DR18). SEE SHEET C-11A FOR MORE DETAIL.
- ④ INSTALL 4" PVC W.M. (C900/DR14). SEE SHEET C-11A FOR MORE DETAIL.
- ⑤ INSTALL 3" PVC POTABLE SERVICE. SEE SHEET C-11A FOR MORE DETAIL.



**SANITARY SEWER SYSTEM KEYED NOTES**

- ① WET-TAP EXISTING 4" F.M. WITH 4" TAPPING VALVE AND SLEEVE. TAPPING VALVE TO BE INSTALLED HORIZONTALLY AND ABANDONED IN THE OPEN POSITION. CONTRACTOR TO FIELD VERIFY EXISTING FORCE MAIN PRIOR TO CONSTRUCTION.
- ② INSTALL 4" PLUG VALVE.
- ③ INSTALL 4" PVC (C900 DR18) F.M. SEE PLAN FOR LENGTH.
- ④ INSTALL 4" 45° BEND.
- ⑤ INSTALL 4" 11.25' BEND.

**SANITARY SEWER PIPE TABLE**

PIPE No.	SIZE	LENGTH	AS-BUILT LENGTH	SLOPE	AS-BUILT SLOPE
SP-1	8"	53.62'		1.00%	
SP-2	8"	73.81'		1.00%	
SP-3	8"	13.87'		1.00%	
SP-4	8"	11.03'		1.00%	
SP-5	8"	1.94'		1.00%	
SP-6	8"	28.06'		1.00%	
SP-7	8"	1.79'		1.00%	
SP-8	8"	1.79'		1.00%	
SP-9	8"	26.67'		1.00%	
SP-10	8"	1.44'		1.00%	
SP-11	8"	30.28'		1.00%	
SP-12	8"	3.00'		1.00%	
SP-13	8"	4.04'		1.00%	
SP-14	8"	2.55'		1.00%	

**SANITARY SEWER STRUCTURE TABLE**

STRUCTURE No.	STRUCTURE TYPE	TOP EL.	TOP EL. AS-BUILT	INV. EL.	INV. EL. AS-BUILT
CO-1	6" CLEAN-OUT	49.50		44.24(E)(8" PVC) 44.24(W)(8" PVC)	
CO-2	6" CLEAN-OUT	49.54		43.54(E)(8" PVC) 43.53(W)(8" PVC)	
CO-3	6" CLEAN-OUT	49.46		43.97(E)(8" PVC) 43.97(N)(8" PVC)	
CO-4	6" CLEAN-OUT	49.25		43.63(S)(8" PVC) 43.57(N)(8" PVC)	
CO-5	6" CLEAN-OUT	49.45		44.84(E)(8" PVC) 44.85(W)(8" PVC)	
CO-6	6" CLEAN-OUT	49.36		43.73(E)(8" PVC) 43.73(N)(8" PVC)	
GREASE TRAP	SEE DETAIL ON SHEET C-14	49.34		43.90(S)(8" PVC) 43.69(N)(8" PVC)	
LIFT STATION	SEE DETAIL ON SHEET C-15	47.50		41.44(SE)(8" PVC)	
LINT TRAP	SEE DETAIL ON SHEET C-14	49.38		44.79(E)(8" PVC) 43.78(W)(8" PVC)	
S-1	M.H.	48.15		42.52(E)(8" PVC) 42.02(NW)(8" PVC)	

**UTILITY PLAN (SANITARY SEWER SERVICE)**

REVISIONS:
DATE

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY
SML	GDH	GDH	GDH

GREG HUDAK  
PE # 54634

**CANTERWOOD MANOR AT DEBARY**  
CITY OF DEBARY, FLORIDA

**HUDAK ENGINEERING, INC.**  
CIVIL ENGINEERING & LAND DEVELOPMENT DESIGN SERVICES  
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DATE:  
**JANUARY 2018**

SHEET NO.  
**C-11**  
11 of 17



**WATER SYSTEM KEYED NOTES**

- ① REMOVE EXISTING BLOW-OFF AND CONNECT TO EXISTING 12" DIP W.M.
- ② INSTALL 12" PVC W.M. (C900/DR18). SEE PLAN FOR LENGTH.
- ③ INSTALL 12" TEE.
- ④ INSTALL 12" GATE VALVE.
- ⑤ INSTALL 2" BLOW-OFF.
- ⑥ DIRECTIONAL DRILL 110 L.F. OF 12" HDPE W.M. DR17.
- ⑦ INSTALL 12" DOUBLE DETECTOR CHECK VALVE ASSEMBLY (SEE DETAIL SHEET C-13).
- ⑧ INSTALL 12"x8" REDUCER.
- ⑨ INSTALL 8" PVC W.M. (C900/DR18). SEE PLAN FOR LENGTH.
- ⑩ INSTALL 8" 45° BEND.
- ⑪ INSTALL 8" TEE.
- ⑫ INSTALL 8"x6" REDUCER.
- ⑬ INSTALL FIRE HYDRANT ASSEMBLY.
- ⑭ INSTALL 8" 22.5° BEND.

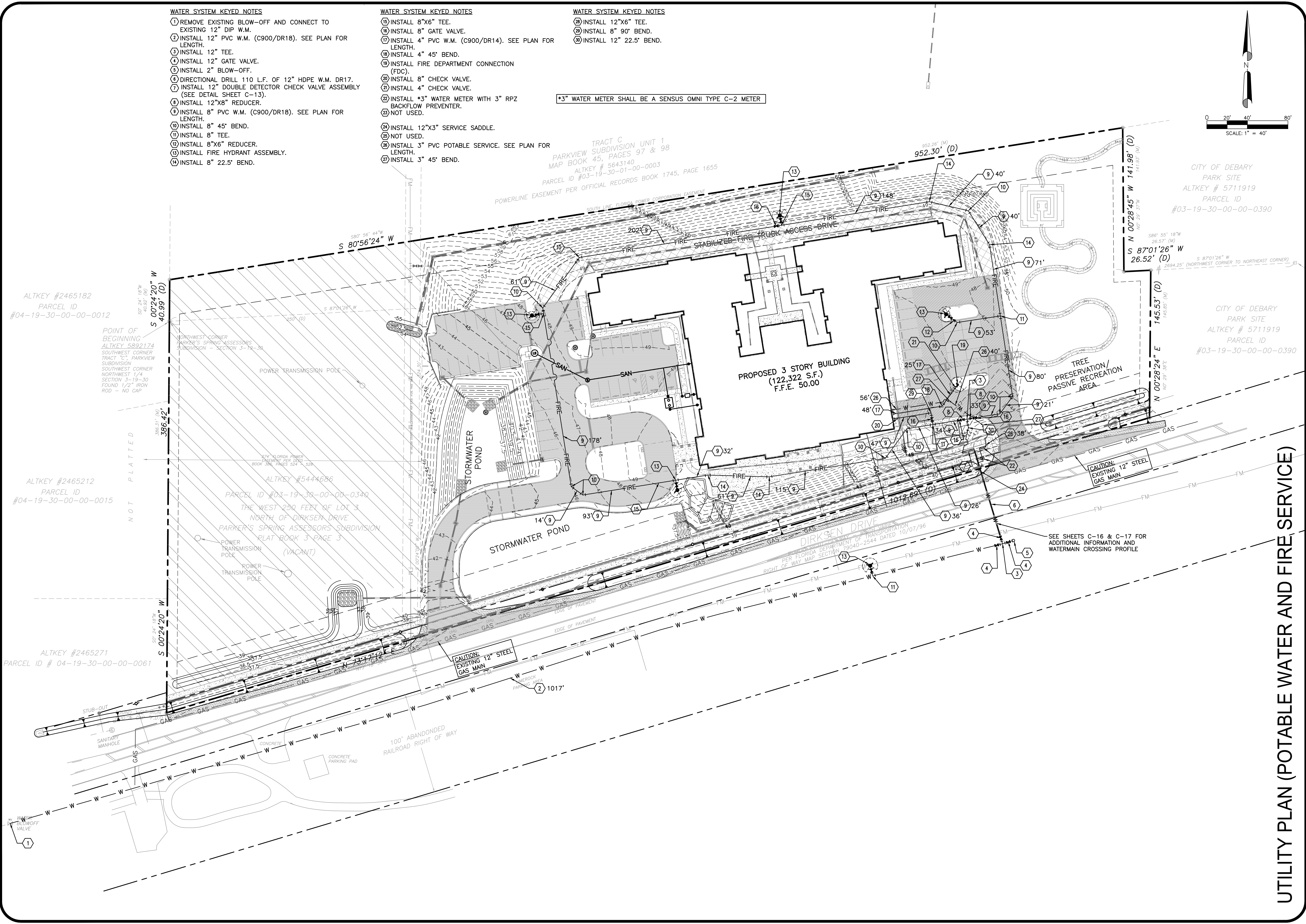
**WATER SYSTEM KEYED NOTES**

- ⑮ INSTALL 8"x6" TEE.
- ⑯ INSTALL 8" GATE VALVE.
- ⑰ INSTALL 4" PVC W.M. (C900/DR14). SEE PLAN FOR LENGTH.
- ⑱ INSTALL 4" 45° BEND.
- ⑲ INSTALL FIRE DEPARTMENT CONNECTION (FDC).
- ⑳ INSTALL 8" CHECK VALVE.
- ㉑ INSTALL 4" CHECK VALVE.
- ㉒ INSTALL 3" WATER METER WITH 3" RPZ BACKFLOW PREVENTER.
- ㉓ NOT USED.
- ㉔ INSTALL 12"x3" SERVICE SADDLE.
- ㉕ NOT USED.
- ㉖ INSTALL 3" PVC POTABLE SERVICE. SEE PLAN FOR LENGTH.
- ㉗ INSTALL 3" 45° BEND.

**WATER SYSTEM KEYED NOTES**

- ㉘ INSTALL 12"x6" TEE.
- ㉙ INSTALL 8" 90° BEND.
- ㉚ INSTALL 12" 22.5° BEND.

\*3" WATER METER SHALL BE A SENSUS OMNI TYPE C-2 METER



**UTILITY PLAN (POTABLE WATER AND FIRE SERVICE)**

REVISIONS:

DATE	DESCRIPTION

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY
SML	GDH	GDH	GDH

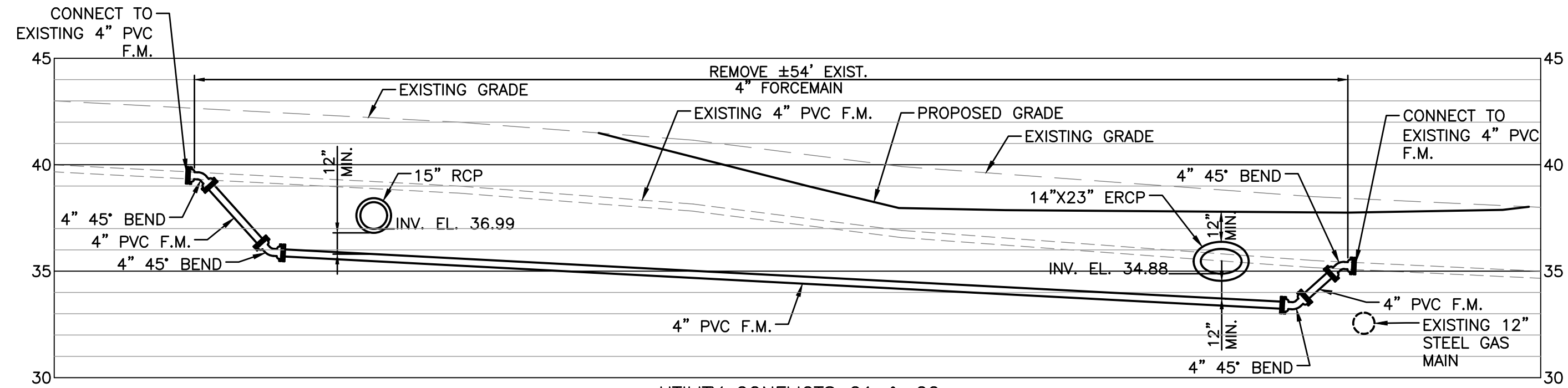
GREG HUDAK  
PE # 54684

**CANTERWOOD MANOR AT DEBARY**  
CITY OF DEBARY, FLORIDA

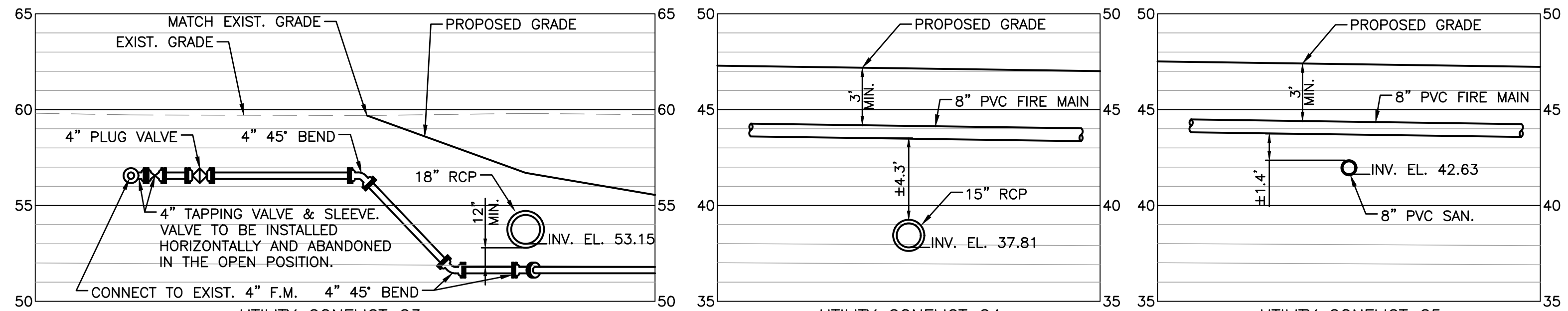
**HUDAK ENGINEERING, INC.**  
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CERTIFICATE OF AUTHORIZATION #9388  
1344 HARDY AVENUE, ORLANDO, FL 32803  
PHONE: (407) 462-6833  
EMAIL: ghudak@hudakengineering.com

DATE:  
**JANUARY 2018**

SHEET NO.  
**C-11A**  
11A of 17



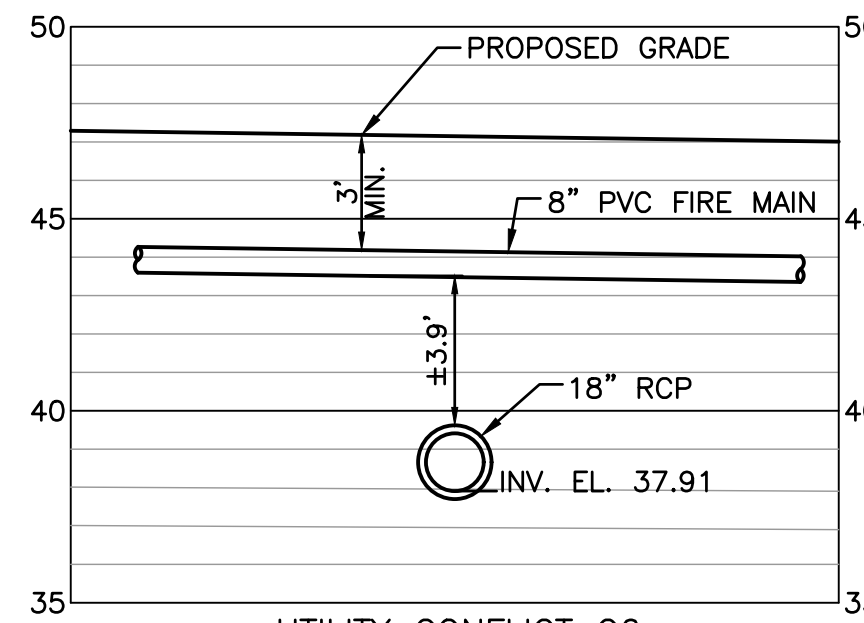
UTILITY CONFLICTS C1 & C2  
1" = 5'



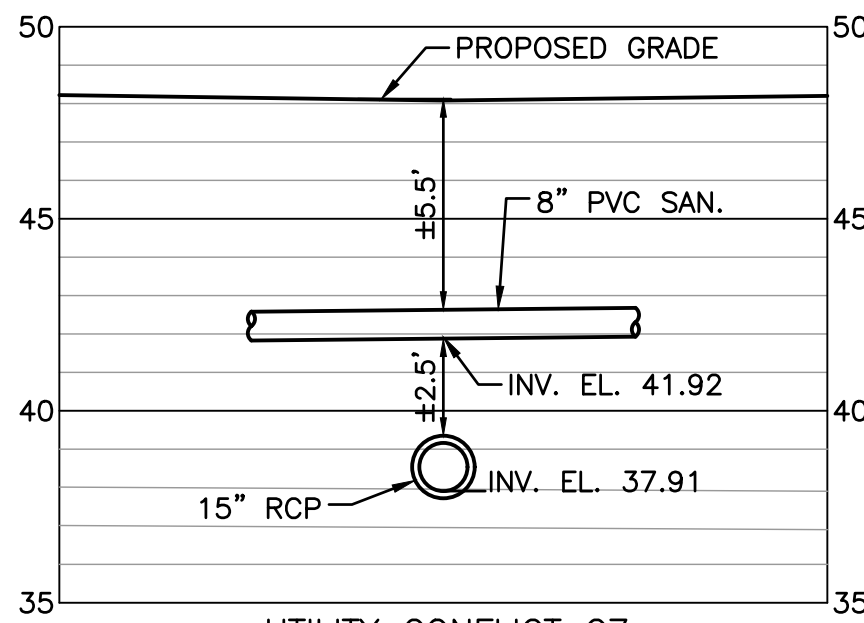
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1" = 5'

UTILITY CONFLICT C4  
1" = 5'

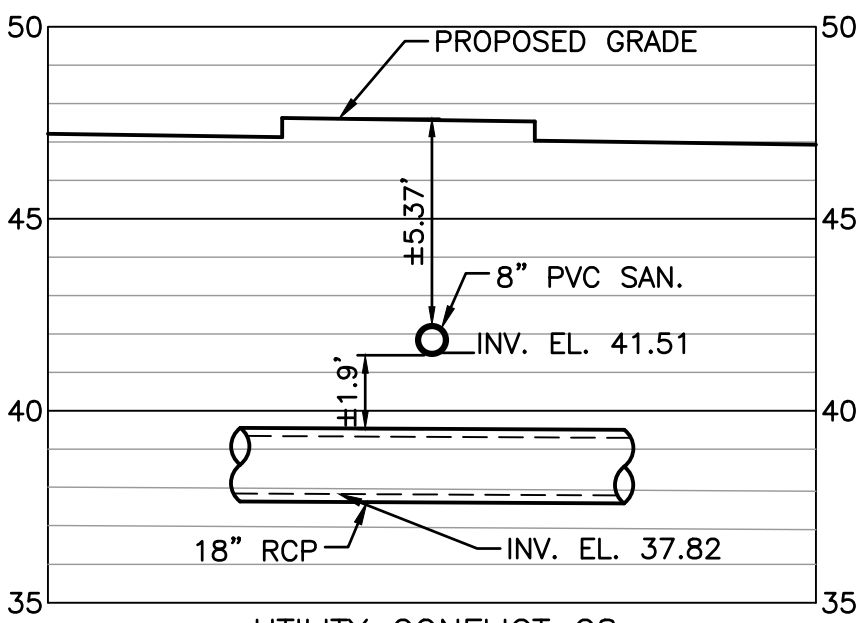
UTILITY CONFLICT C5  
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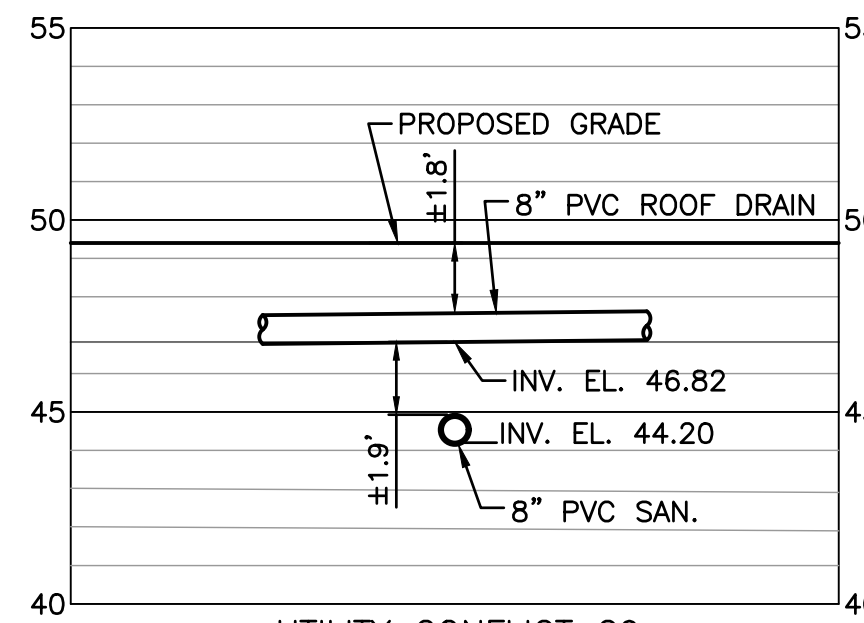
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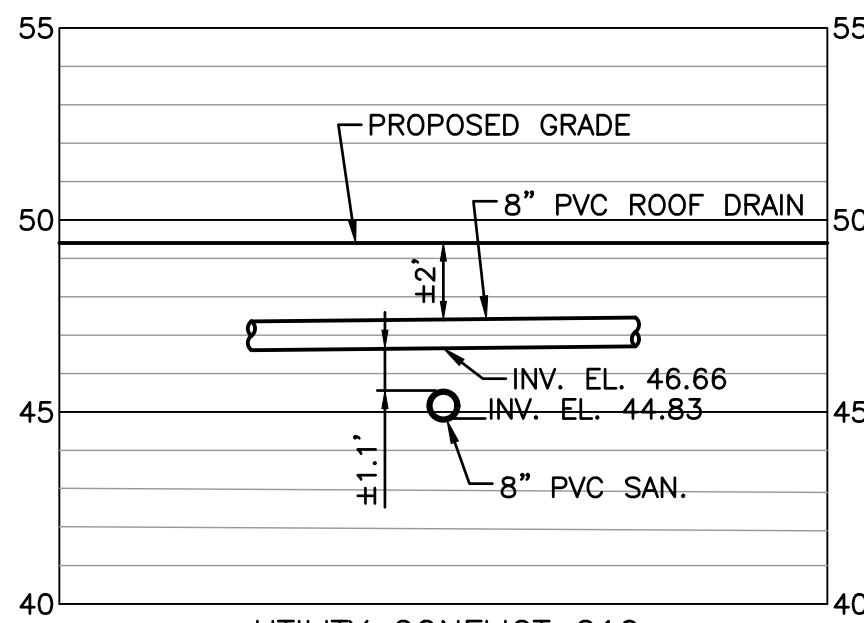
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1" = 5'



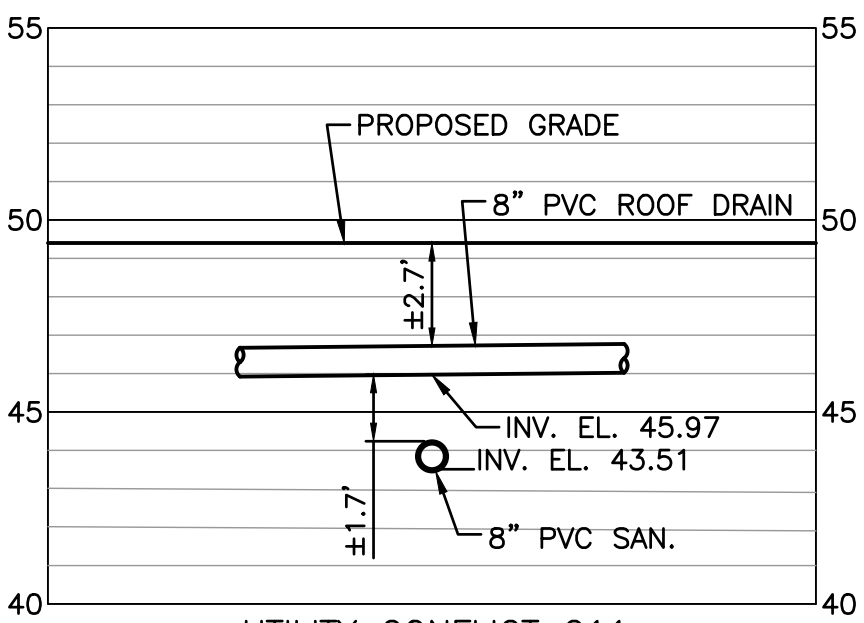
UTILITY CONFLICT C8  
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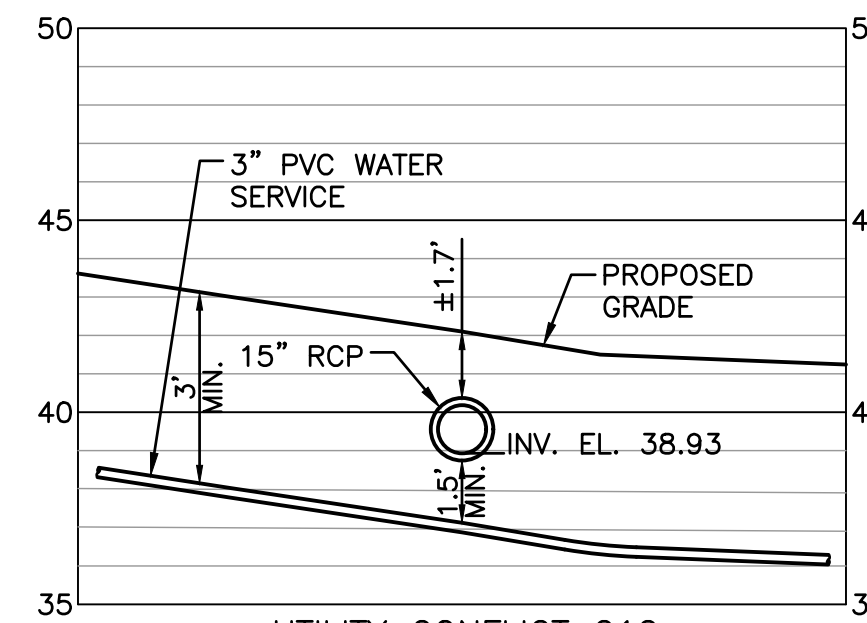
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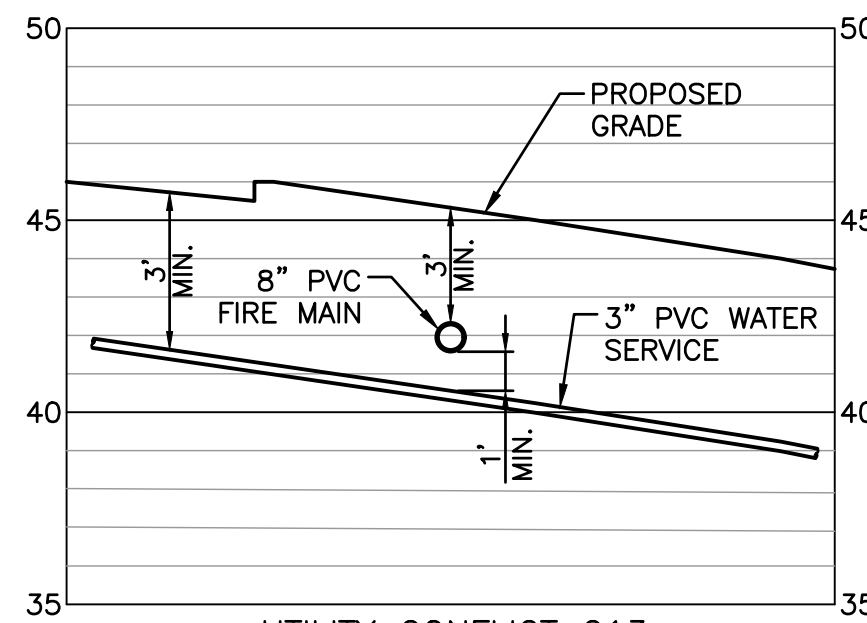
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1" = 5'



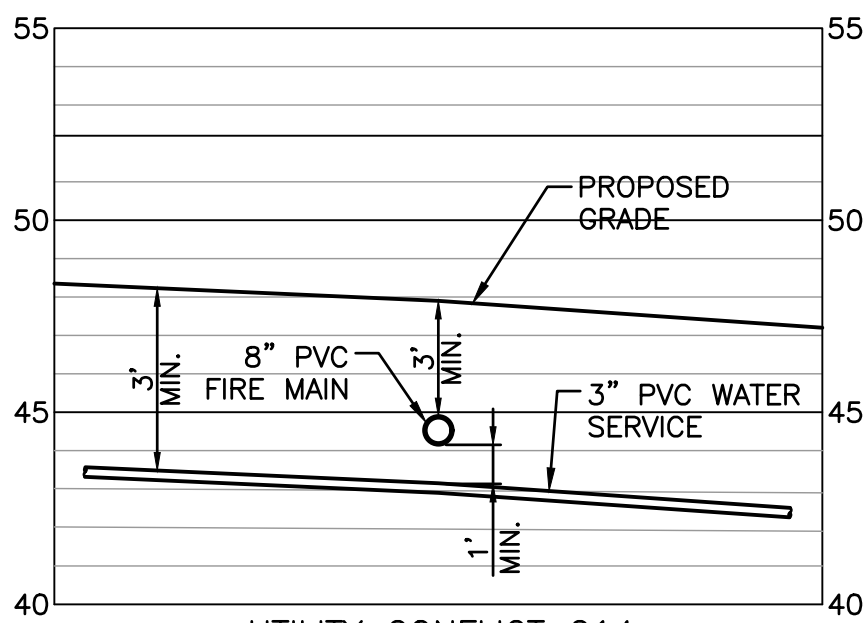
UTILITY CONFLICT C11  
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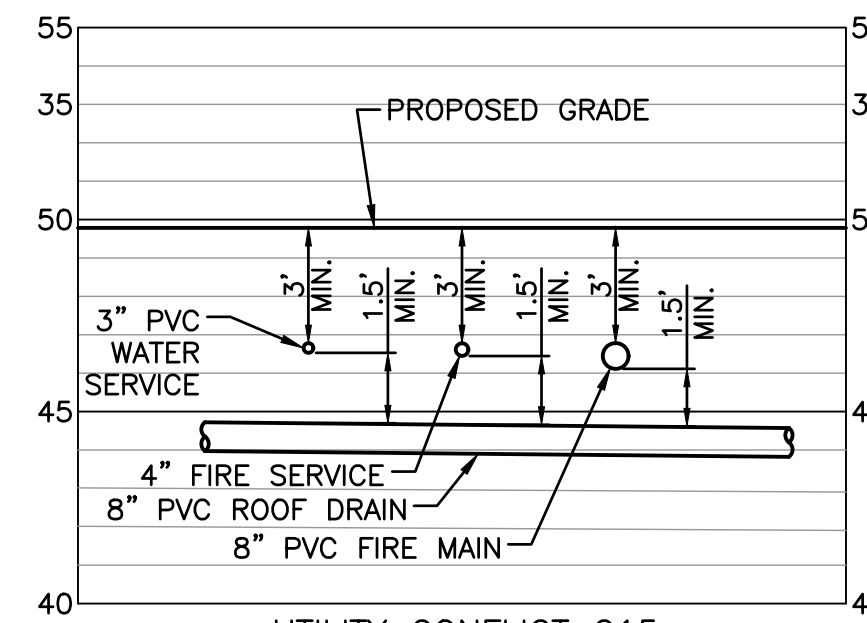
UTILITY CONFLICT C12  
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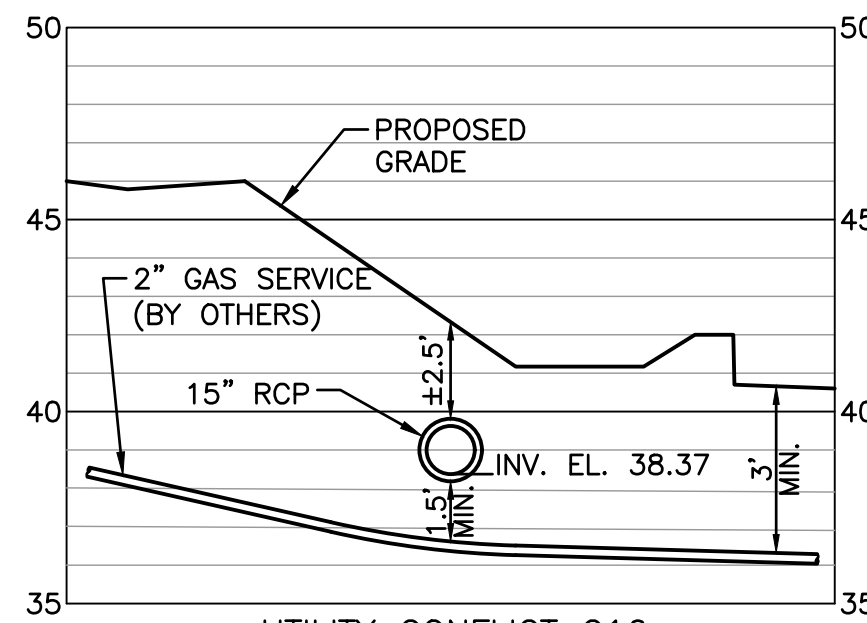
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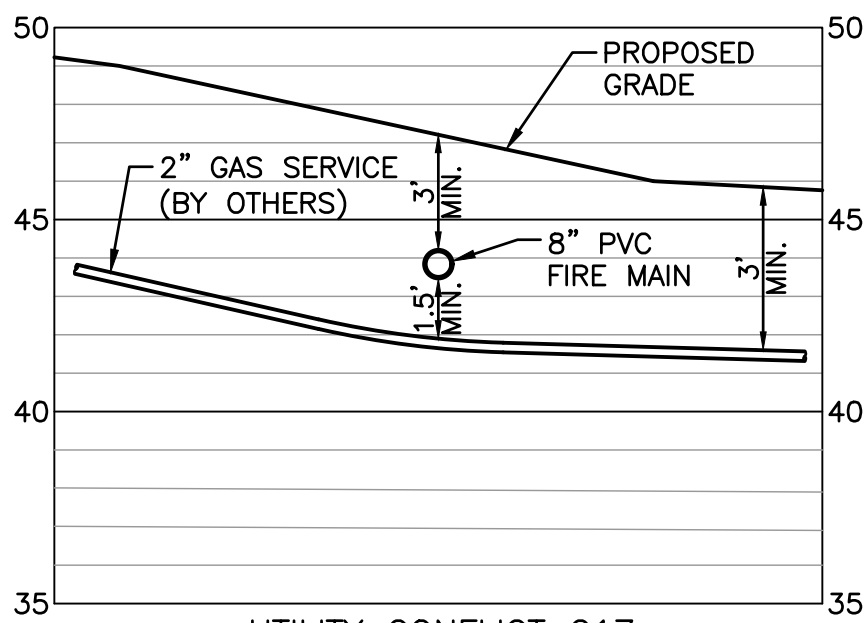
UTILITY CONFLICT C14  
1" = 5'



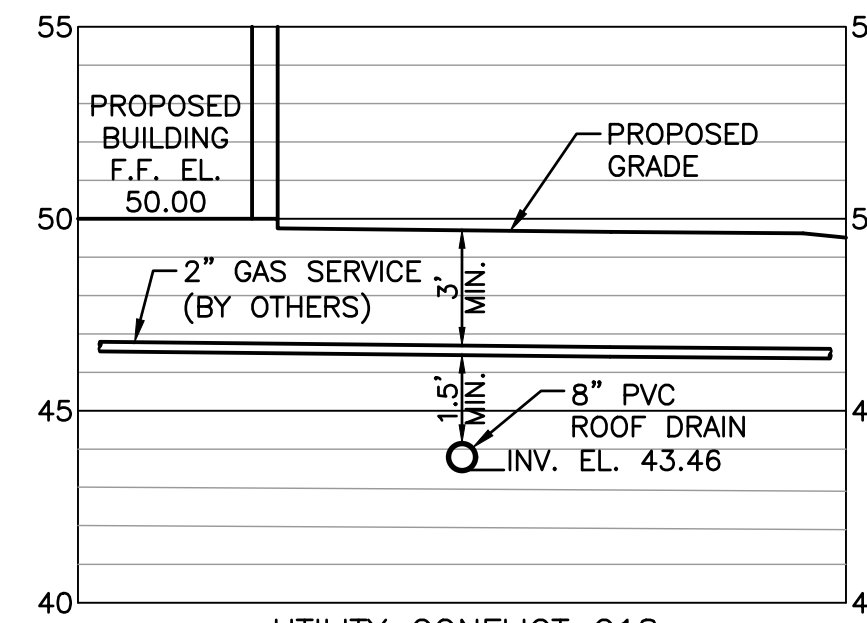
UTILITY CONFLICT C15  
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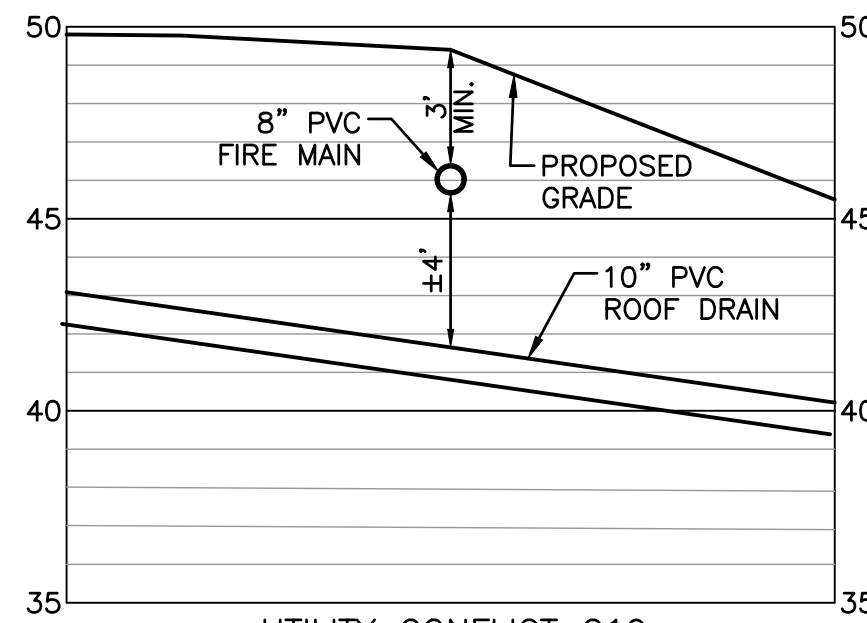
UTILITY CONFLICT C16  
1" = 5'



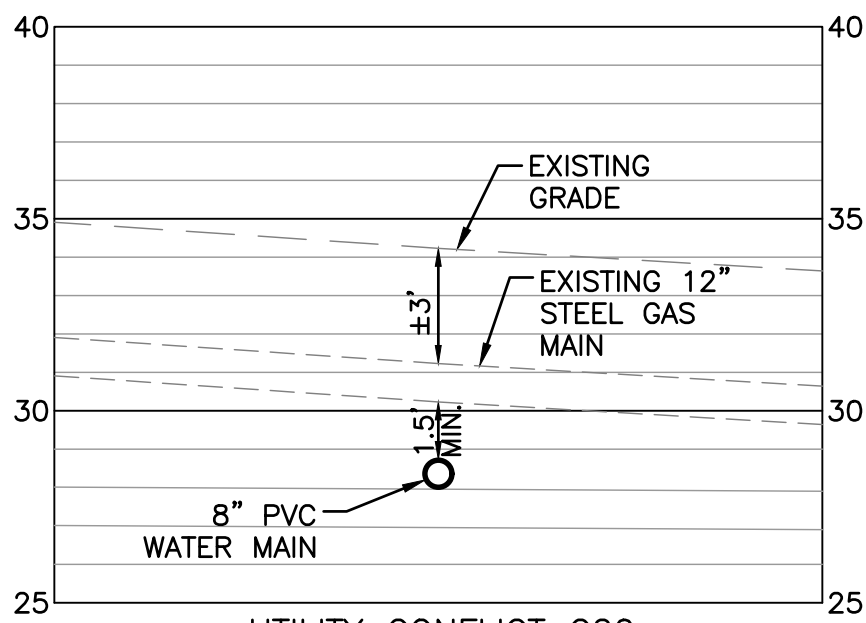
UTILITY CONFLICT C17  
1" = 5'



UTILITY CONFLICT C18  
1" = 5'



UTILITY CONFLICT C19  
1" = 5'



UTILITY CONFLICT C20  
1" = 5'

DATE	REVISIONS:

DRAWN BY	SMV
DESIGN BY	GDH
CHECKED BY	GDH
APPROVED BY	GDH

GREG HUDAK  
PE # 54684

CANTERWOOD MANOR AT DEBARY  
CITY OF DEBARY, FLORIDA

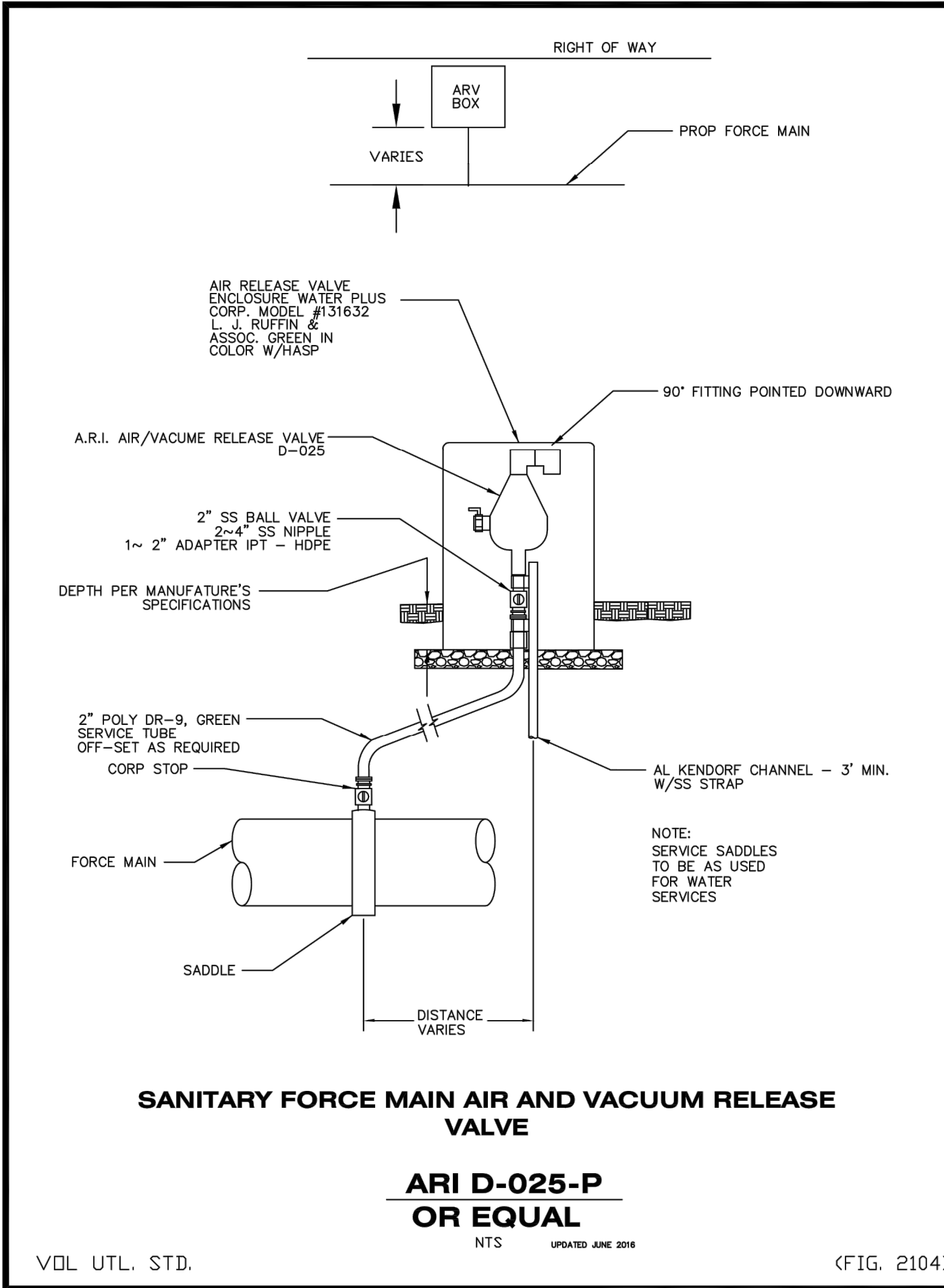
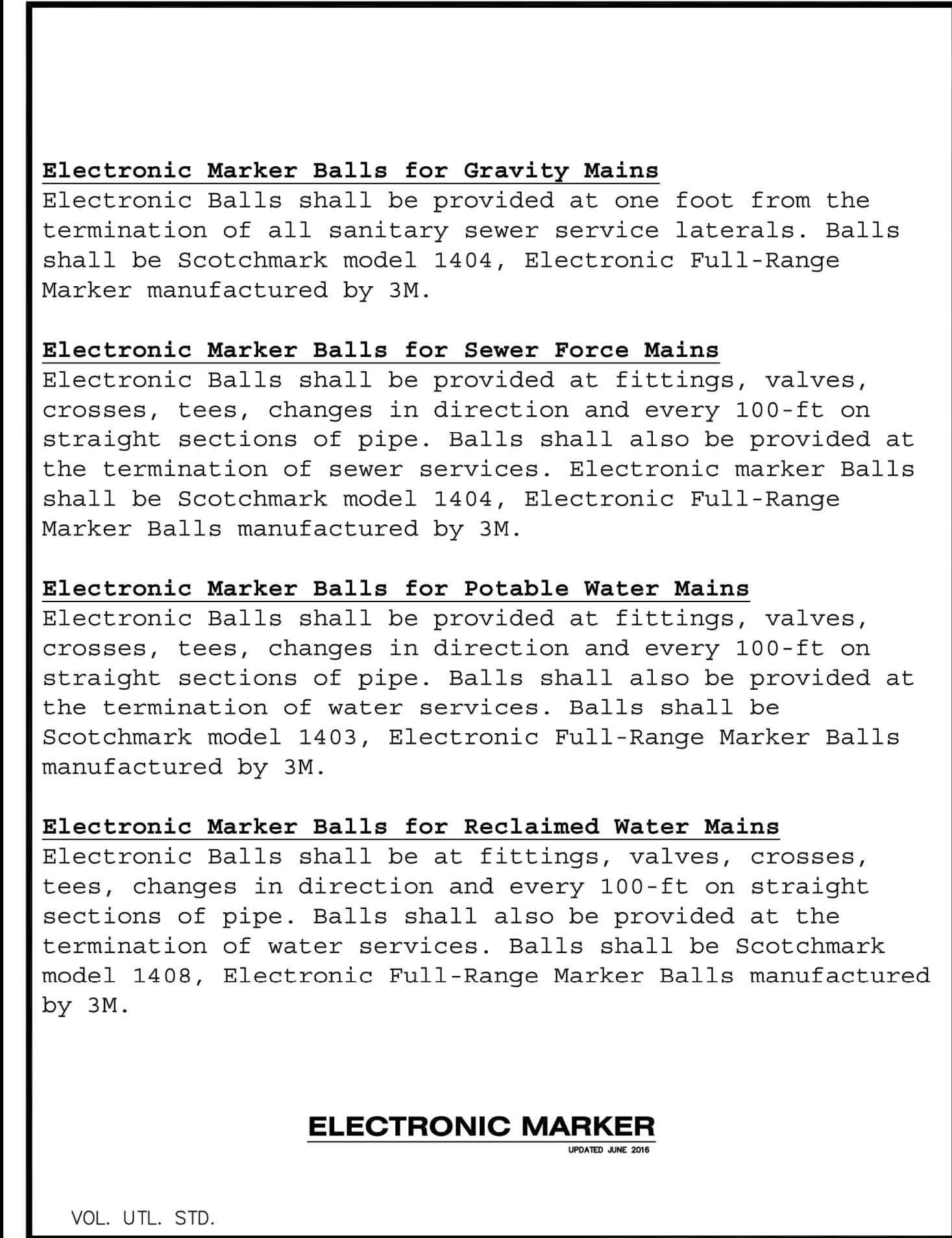
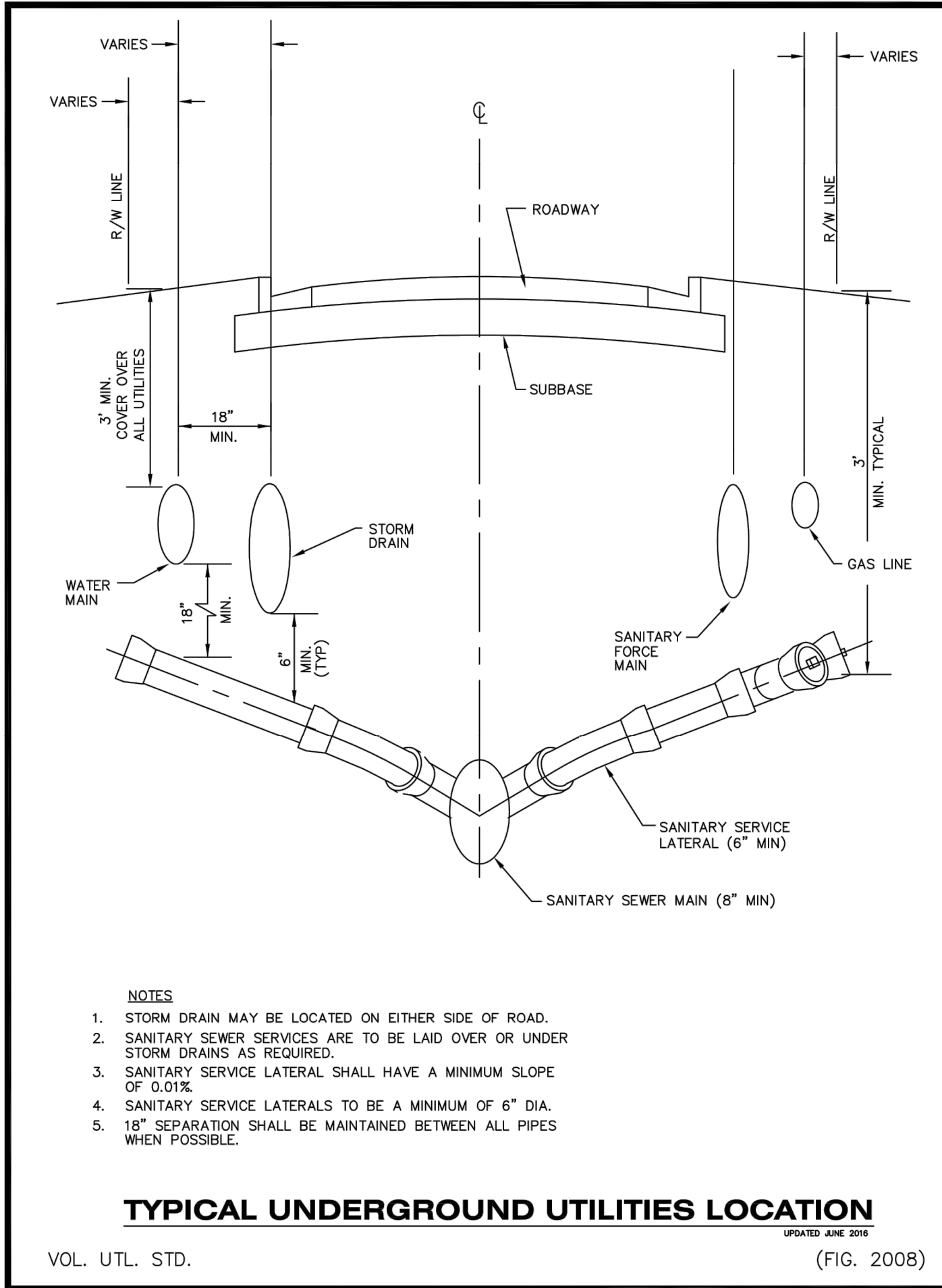
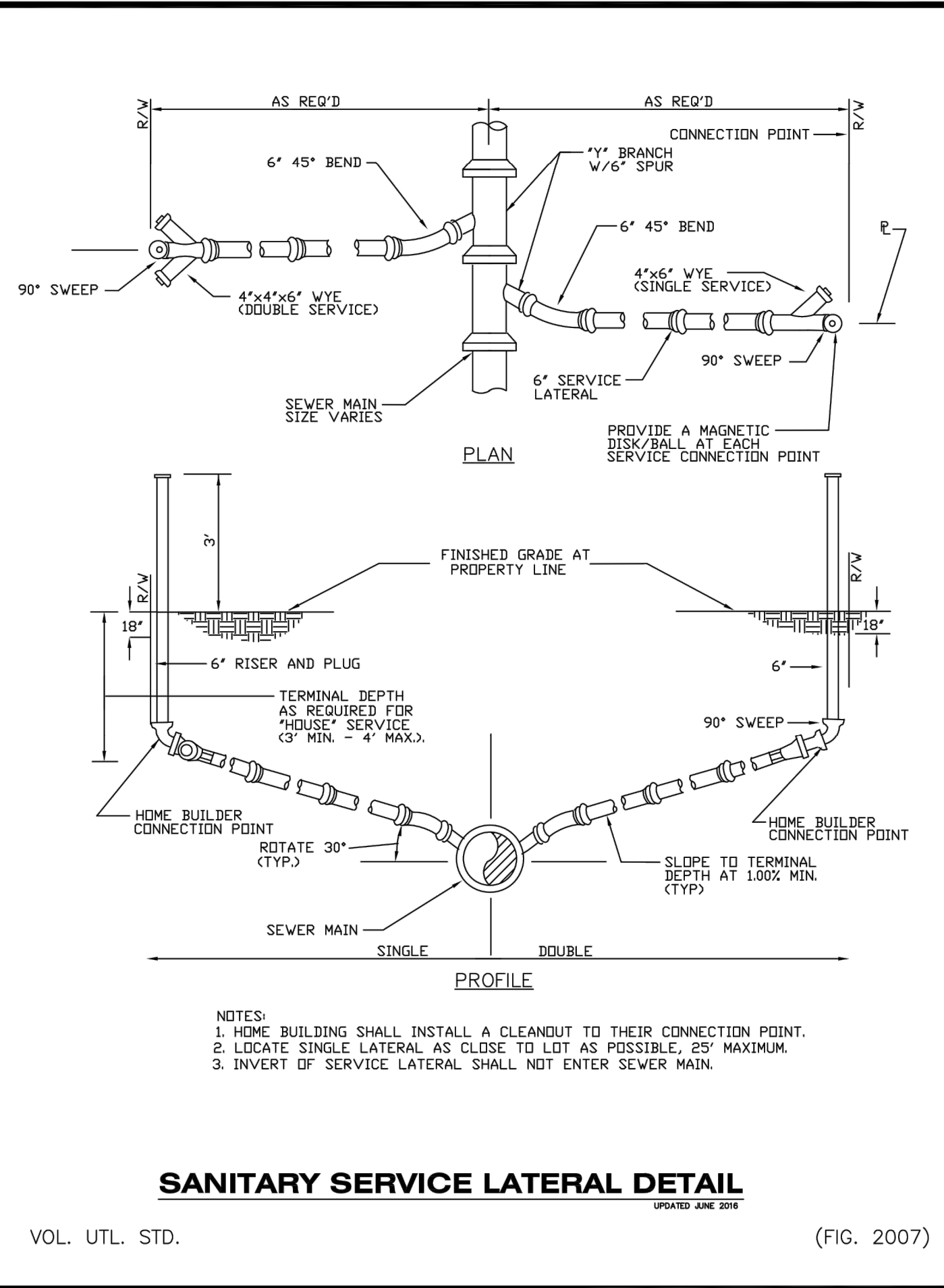
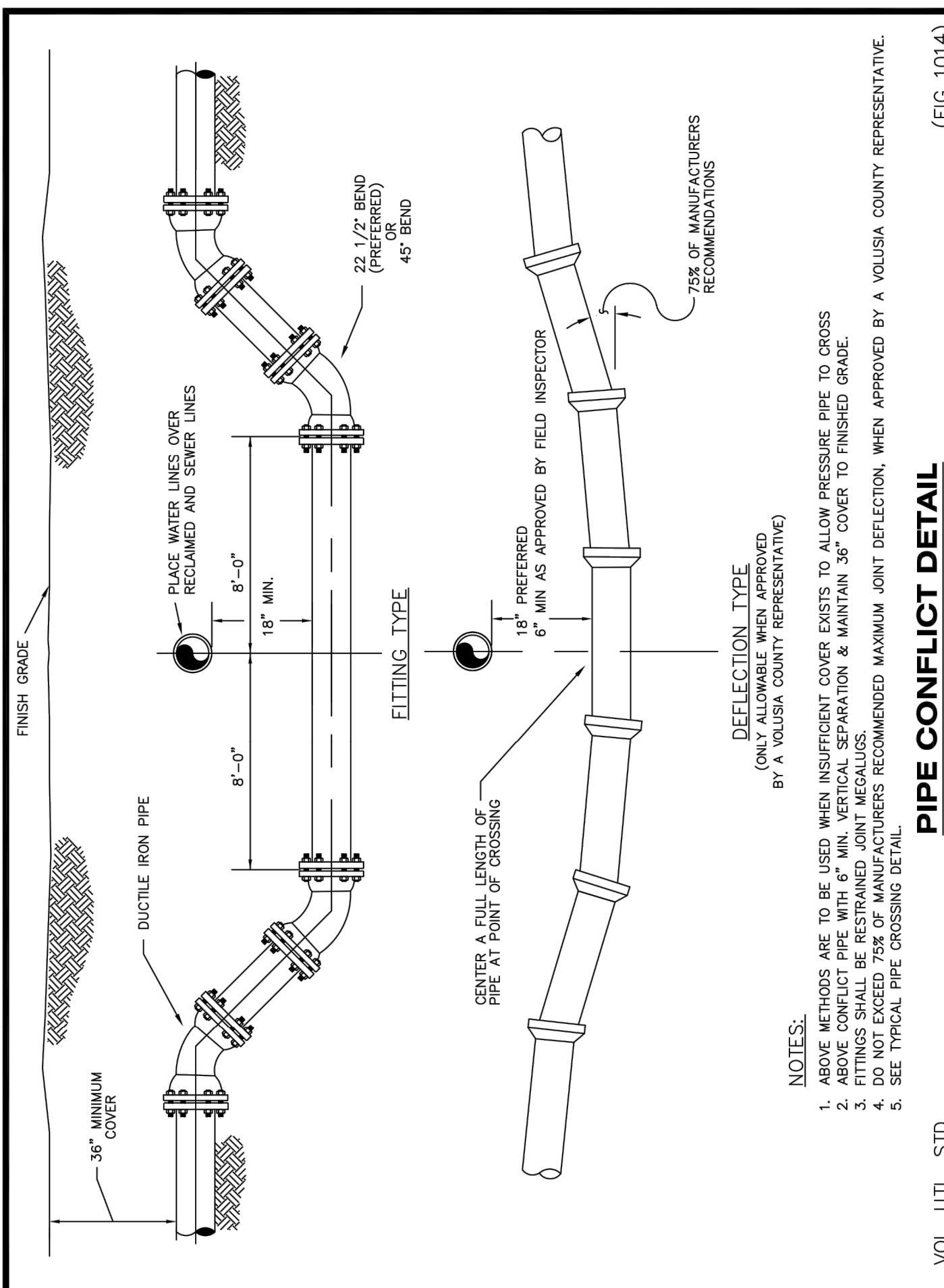
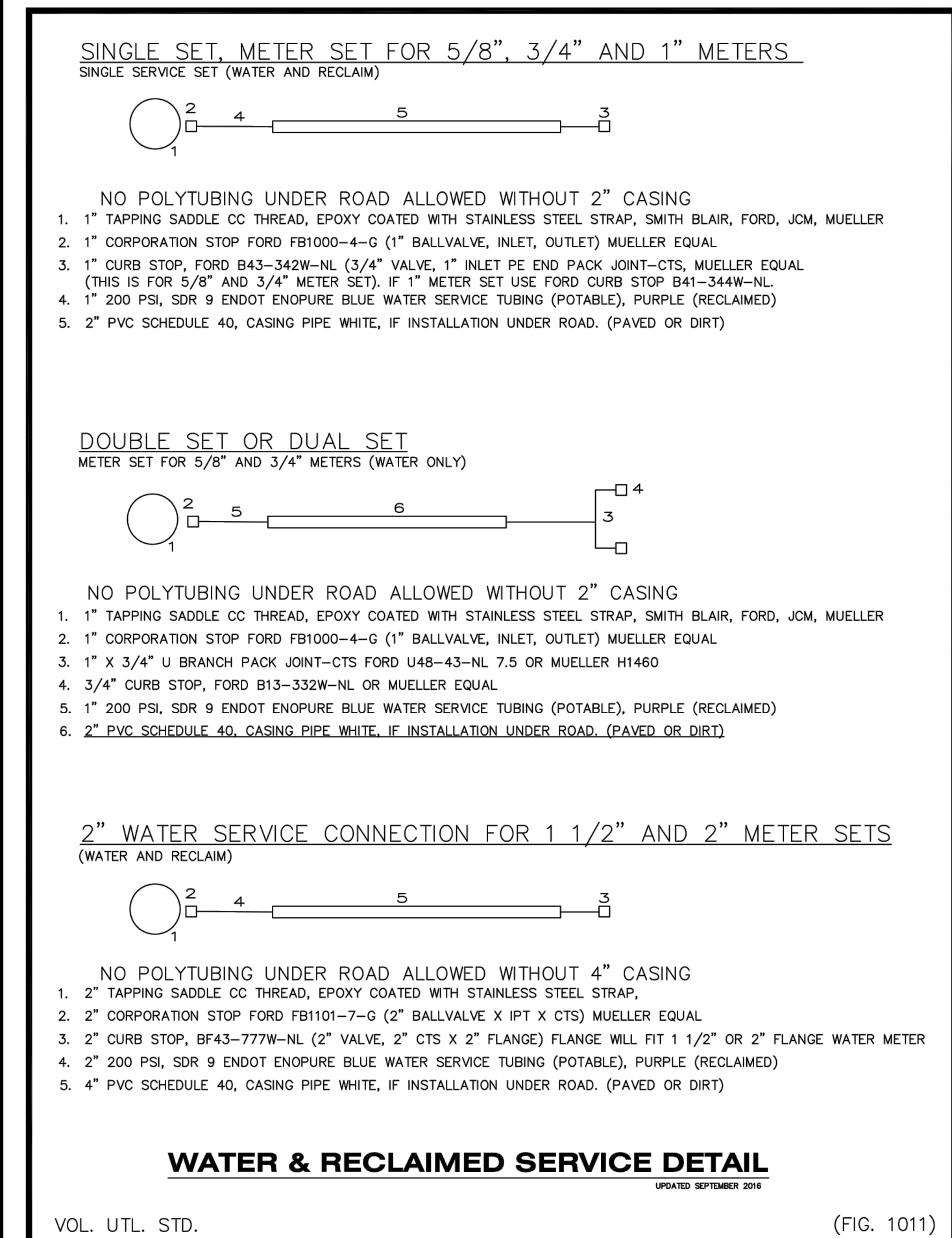
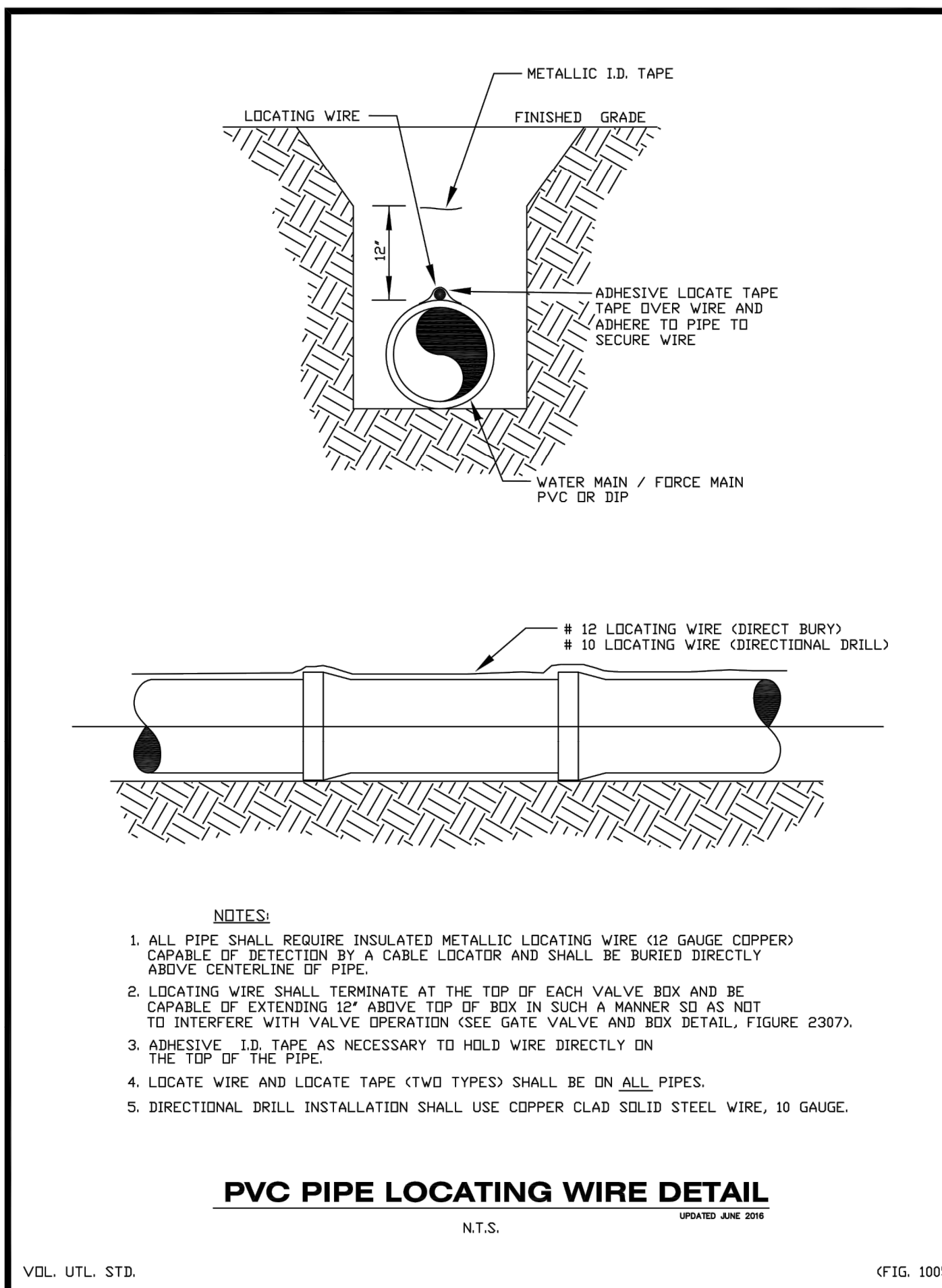
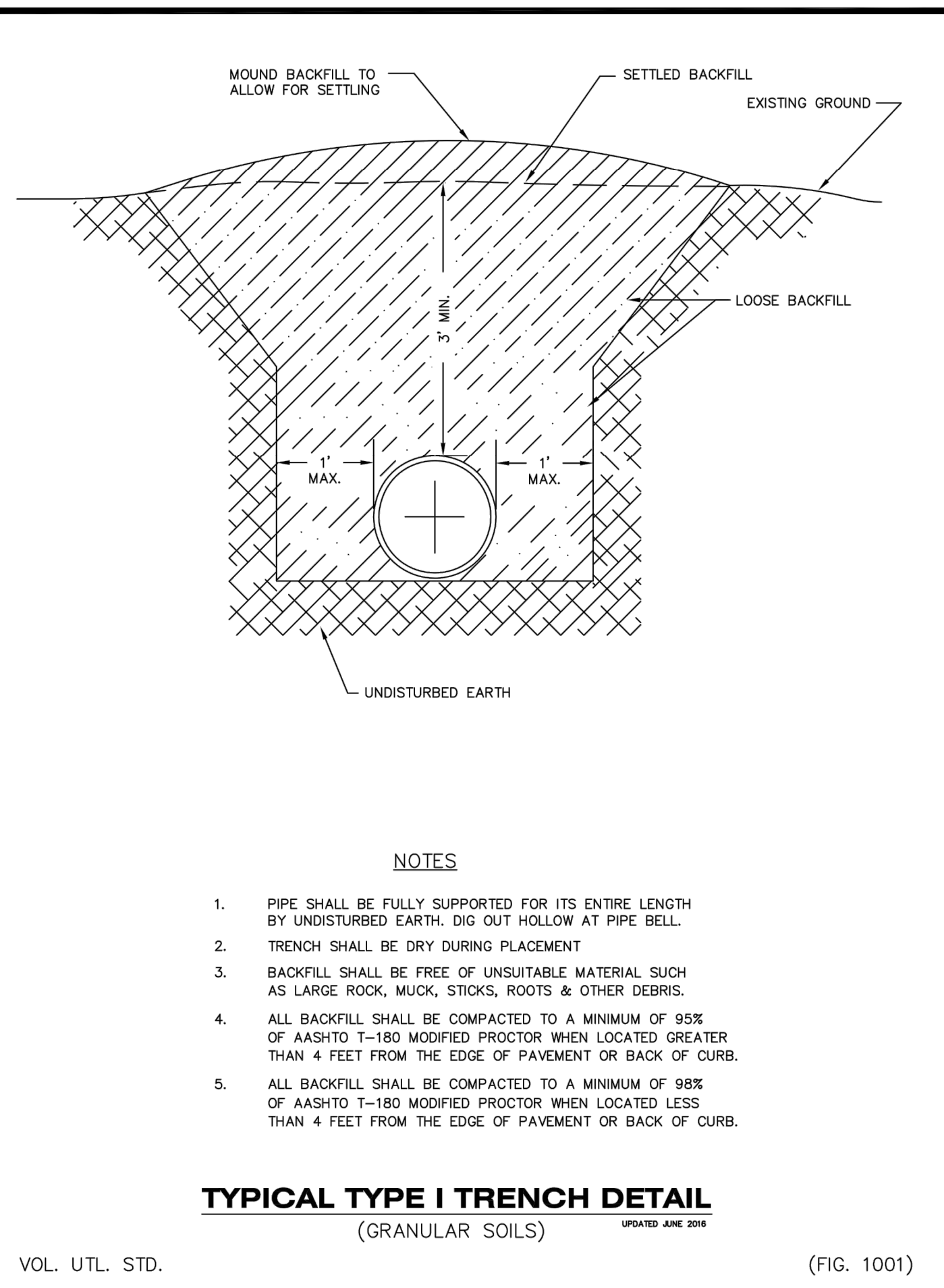
HUDAK ENGINEERING, INC.  
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EMAIL: ghudak@hudakengineering.com

DATE:  
JANUARY 2018

SHEET NO.  
**C-11B**  
11B of 17

UTILITY CONFLICTS PLAN





REVISIONS:

DATE	BY	DESCRIPTION

DRAWN BY	SML
DESIGN BY	GDH
CHECKED BY	GDH
APPROVED BY	GDH

GREG HUDAK  
PE # 54634

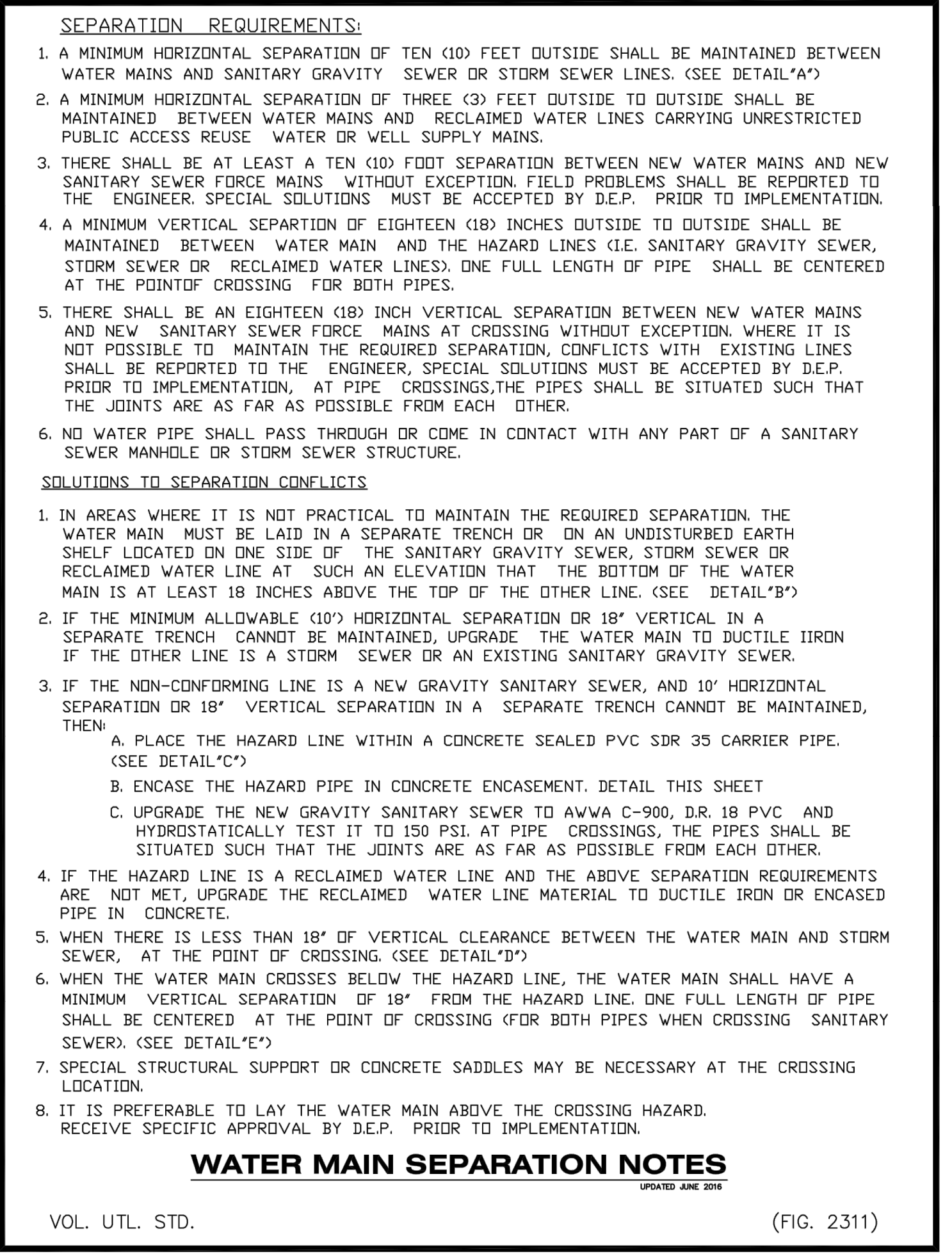
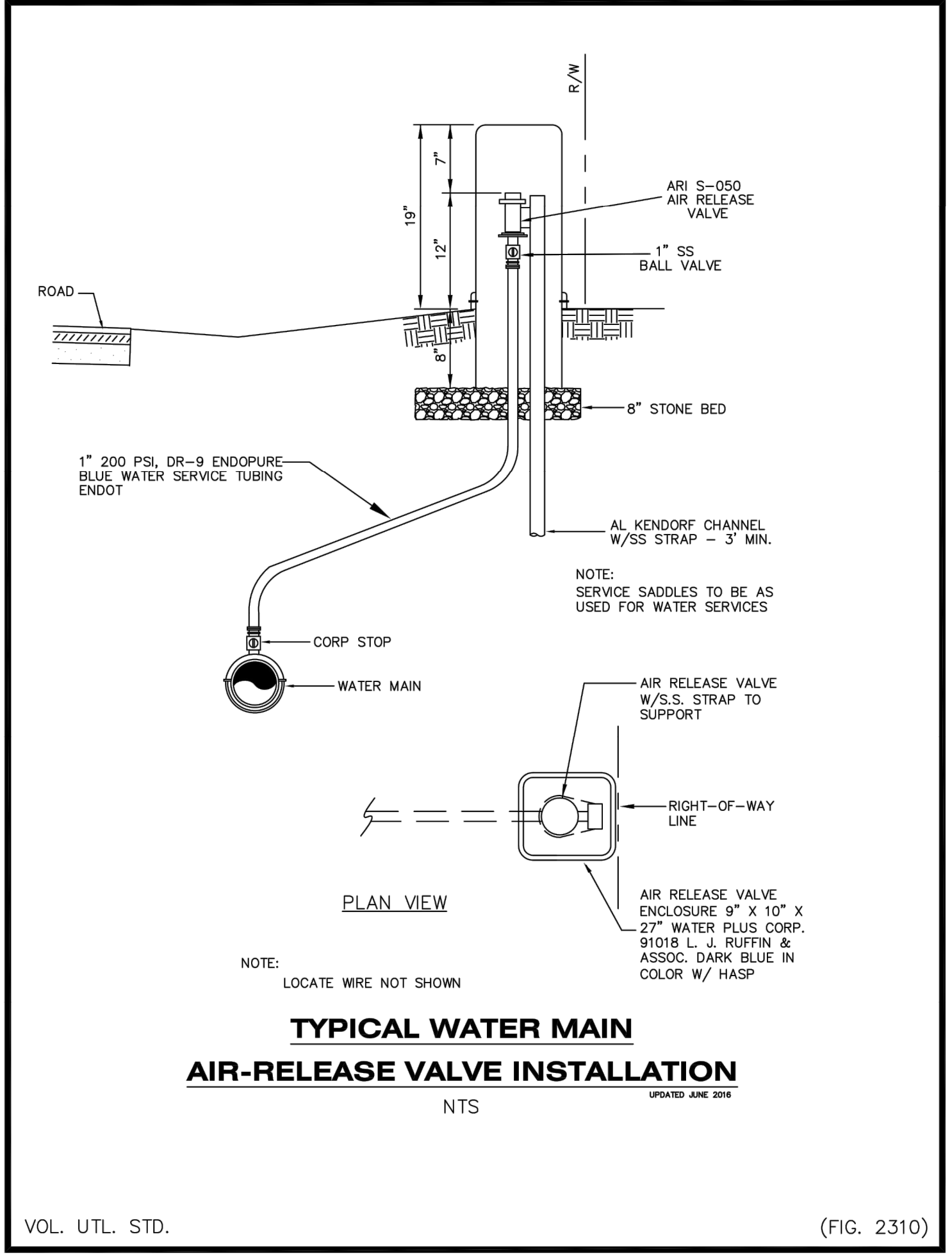
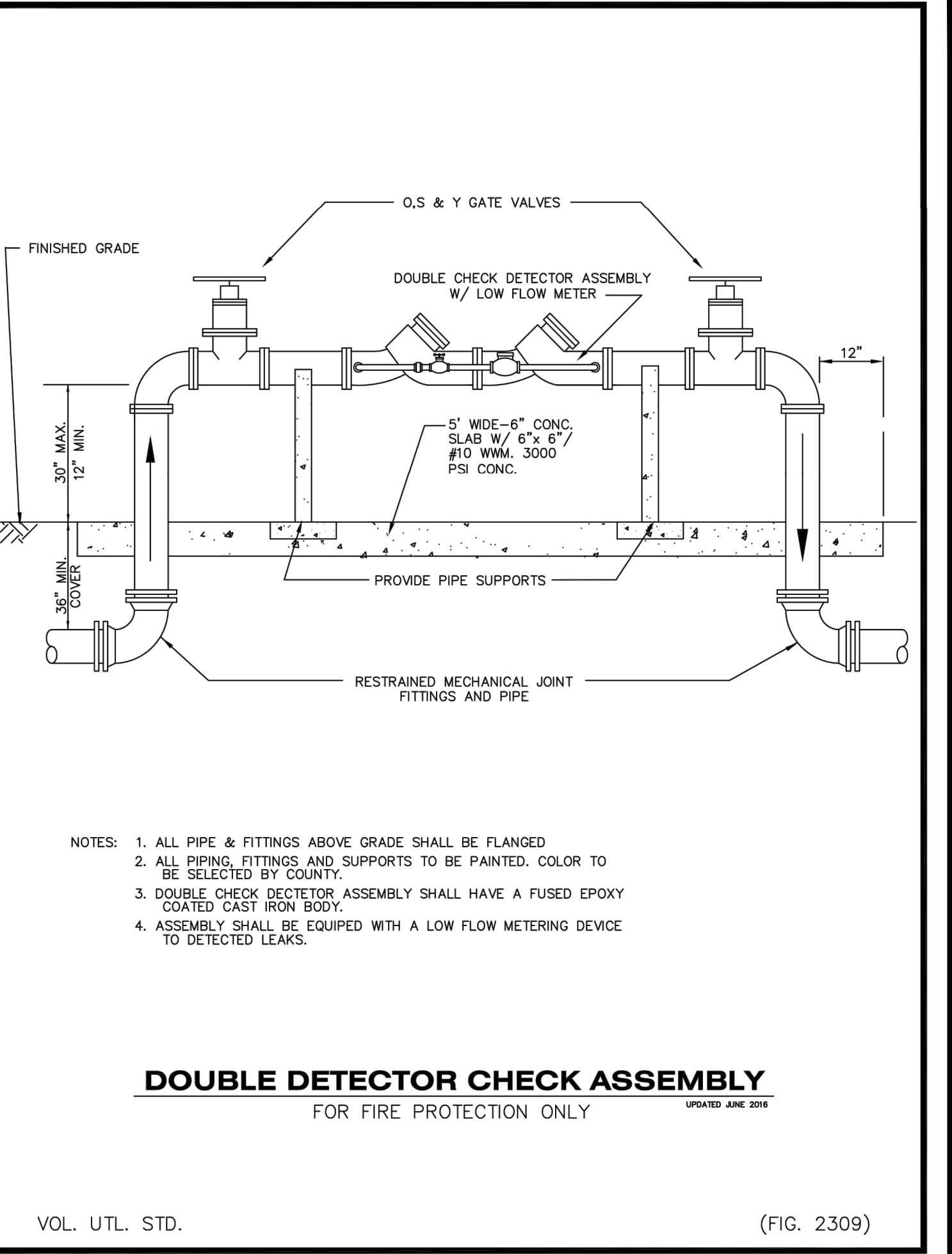
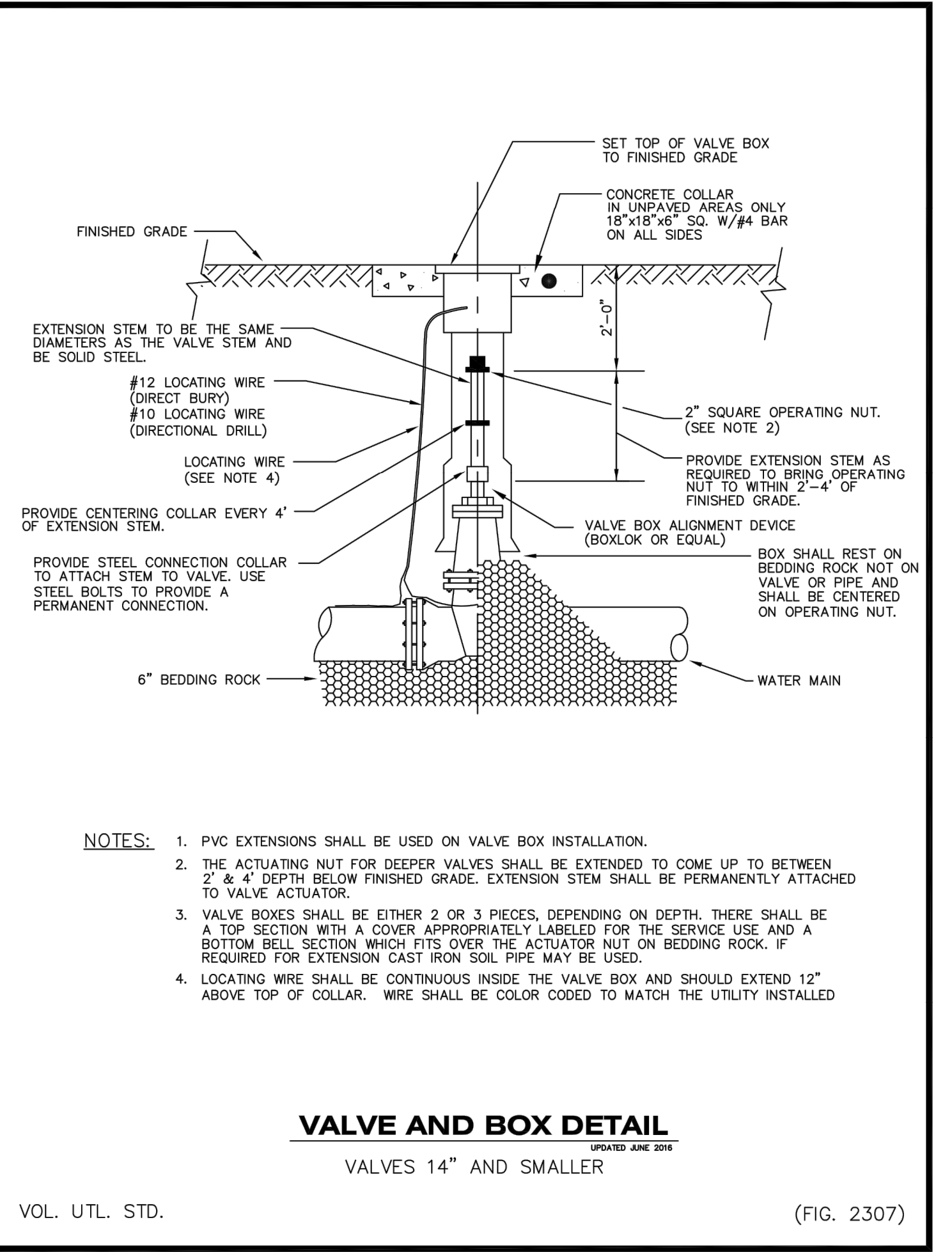
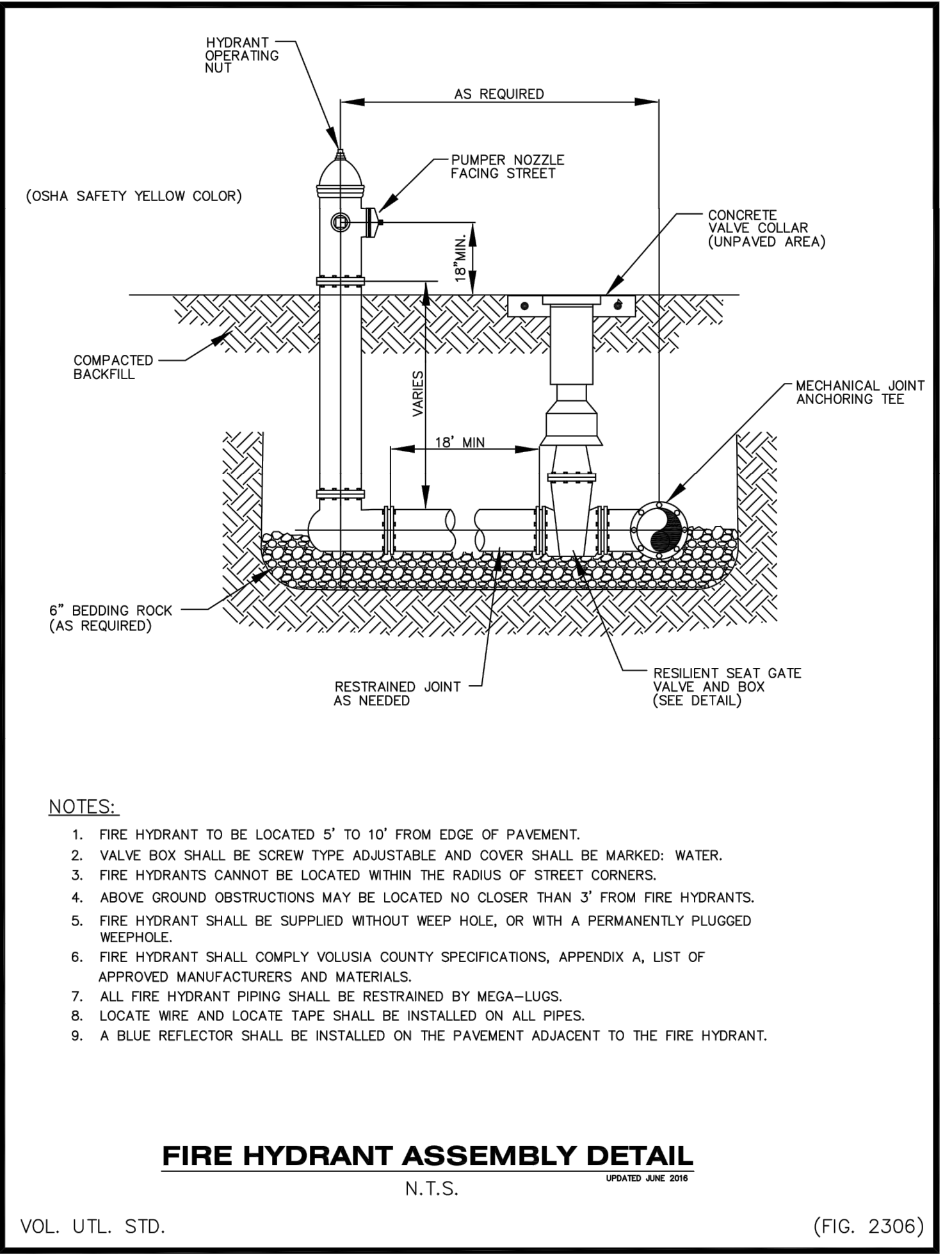
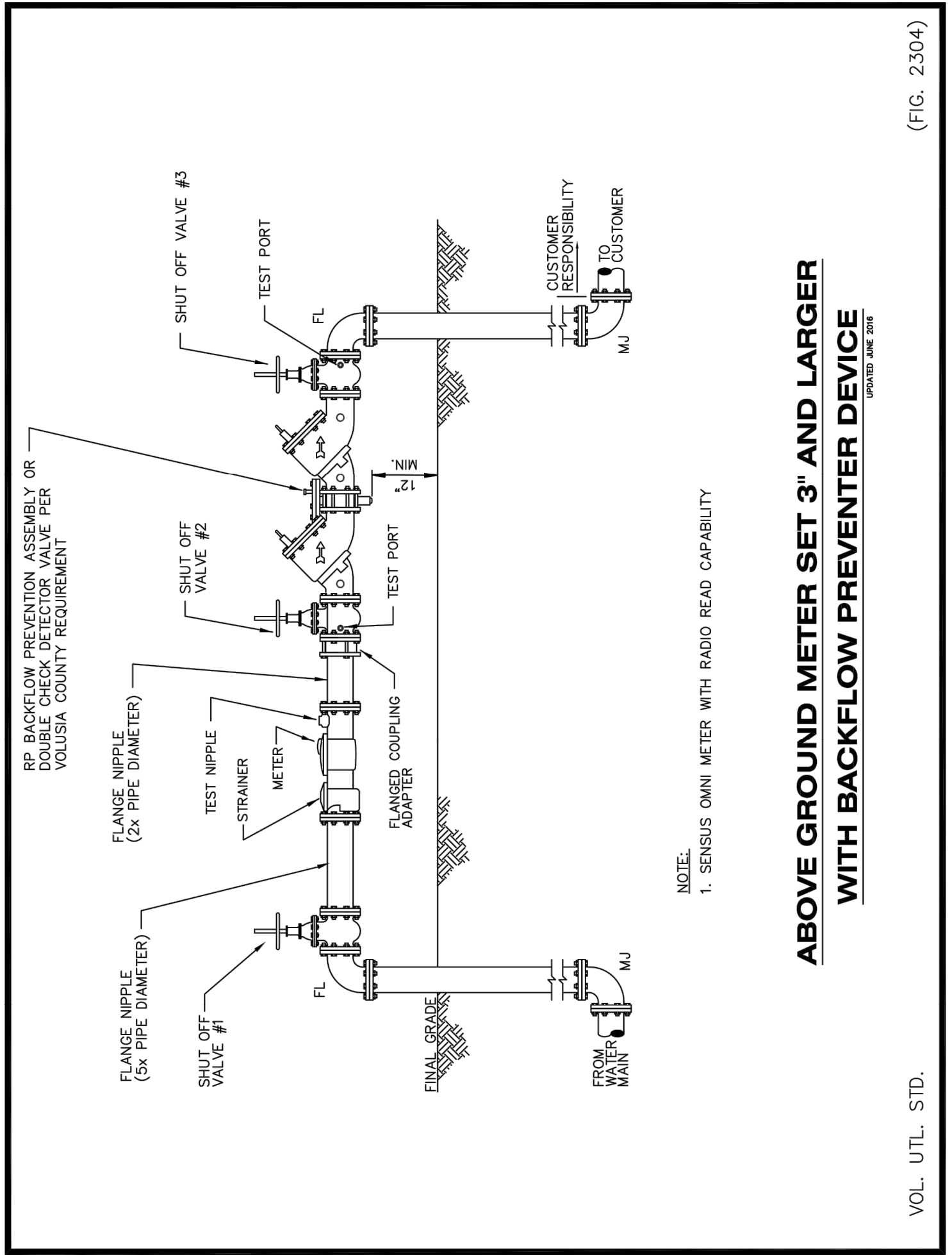
CANTERWOOD MANOR AT DEBARY  
CITY OF DEBARY, FLORIDA

**HUDAK ENGINEERING, INC.**  
CIVIL ENGINEERING & LAND DEVELOPMENT DESIGN SERVICES  
CERTIFICATE OF AUTHORIZATION #9388  
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EMAIL: ghudak@hudakengineering.com

DATE:  
**JANUARY 2018**

SHEET NO.  
**C-12**  
12 of 17

UTILITY DETAILS



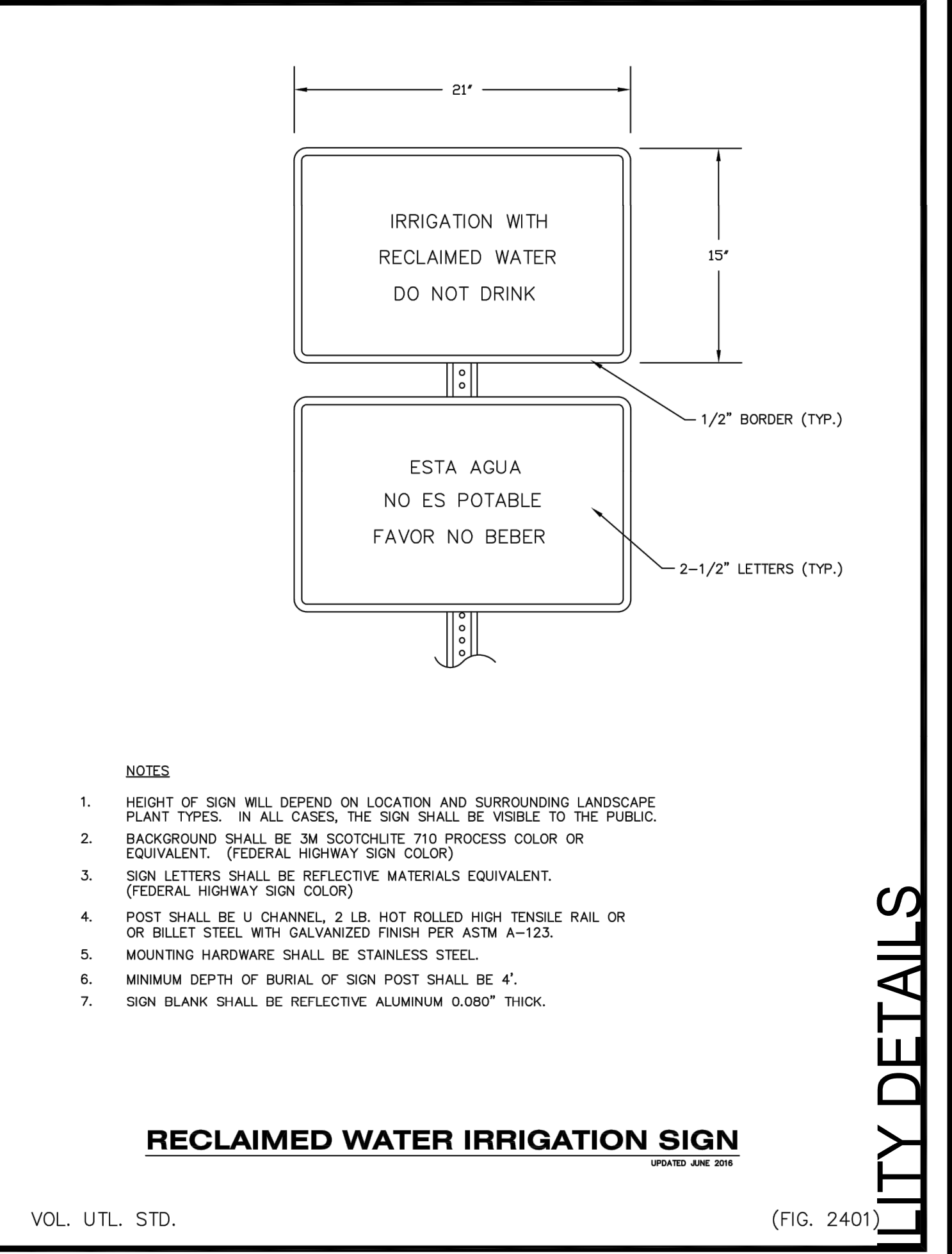
**LOCATION OF PUBLIC WATER SYSTEM MAINS IN ACCORDANCE WITH F.A.C. RULE 62-555.314**  
UPDATED JUNE 2016

OTHER PIPE	HORIZONTAL SEPARATION	CROSSINGS (1)	JOINT SPACING @ CROSSINGS (FULL JOINT CENTERED)
STORM SEWER, STORMWATER FORCE MAIN, RECLAIMED WATER (2)	3 FT MINIMUM	12 INCHES MINIMUM, 18 INCHES MAXIMUM, 18 INCHES IS PREFERRED	ALTERNATE 3 FT. MINIMUM
VACUUM SANITARY SEWER	10 FT. MINIMUM 3 FT. MINIMUM	12 INCHES MINIMUM, 18 INCHES MAXIMUM, 18 INCHES IS PREFERRED	ALTERNATE 3 FT. MINIMUM
GRAVITY OR PRESSURE SANITARY SEWER FORCE MAIN, RECLAIMED WATER (4)	10 FT. MINIMUM 6 FT. MINIMUM (3)	12 INCHES MINIMUM, 18 INCHES MAXIMUM, 18 INCHES IS PREFERRED	ALTERNATE 4 FT. MINIMUM
ON-SITE SEWAGE TREATMENT & DISPOSAL SYSTEM	10 FT. MINIMUM		

1. WATER MAIN SHOULD CROSS ABOVE OTHER PIPE, WHEN WATER MAIN MUST BE BELOW OTHER PIPE, THE MINIMUM SEPARATION IS 12 INCHES.  
2. 3 FT. FOR GRAVITY SANITARY SEWER, WHERE THE BOTTOM OF THE WATER MAIN IS LAD AT LEAST 6 INCHES ABOVE THE TOP OF THE GRAVITY SANITARY SEWER.  
3. 6 FT. FOR GRAVITY SANITARY SEWER, WHERE THE BOTTOM OF THE WATER MAIN IS LAD AT LEAST 6 INCHES ABOVE THE TOP OF THE GRAVITY SANITARY SEWER.  
4. RECLAIMED WATER NOT REGULATED UNDER PART III OF CHAPTER 62-610, F.A.C.

**WATER MAIN SEPARATION DETAIL**  
UPDATED JUNE 2016

VOL. UTL. STD. (FIG. 2312)



REVISIONS:

DATE	BY	DESCRIPTION

DRAWN BY	SMV
DESIGN BY	GDH
CHECKED BY	GDH
APPROVED BY	GDH

GREG HUDAK  
PE # 54634

**CANTERWOOD MANOR AT DEBARY**  
CITY OF DEBARY, FLORIDA

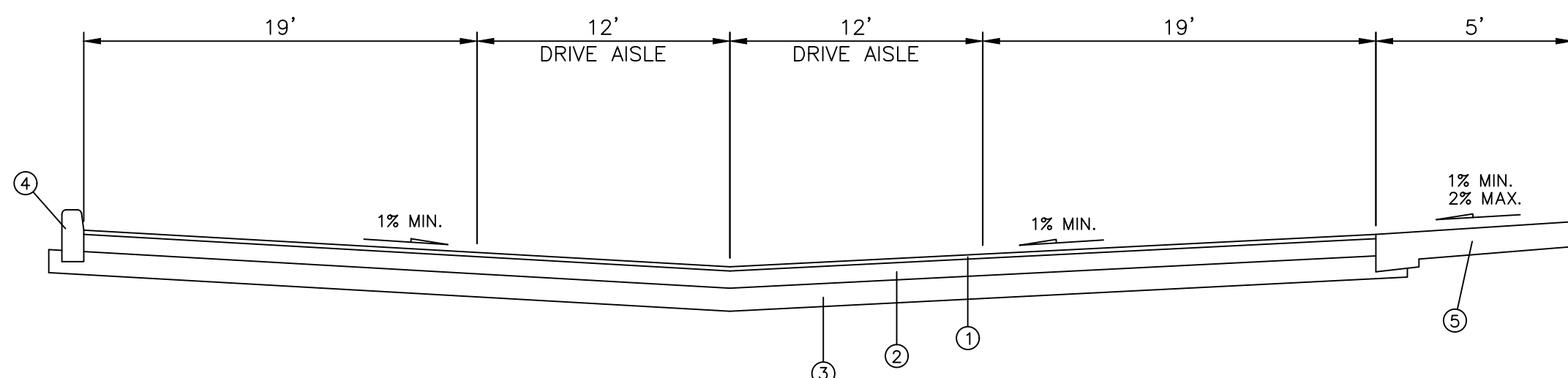
**HUDAK ENGINEERING, INC.**  
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DATE:  
**JANUARY 2018**

SHEET NO.  
**C-13**  
13 of 17

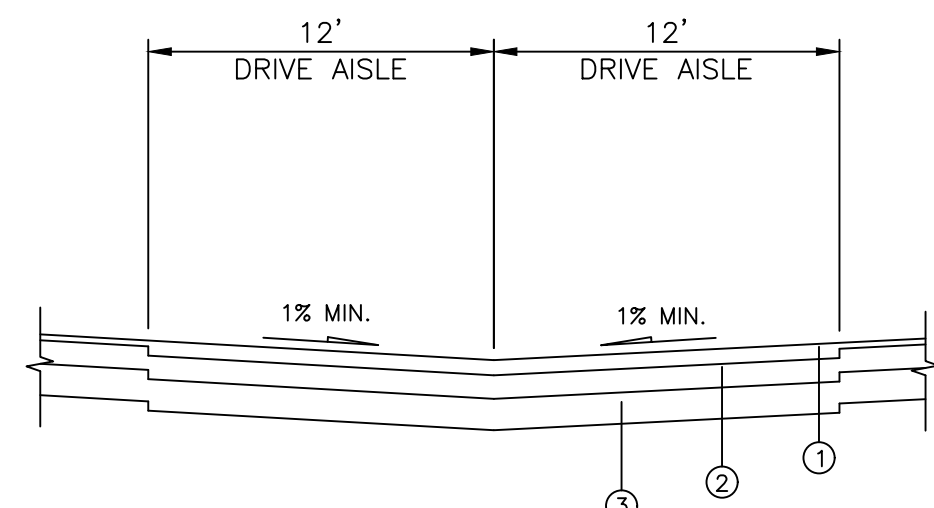
**UTILITY DETAILS**





- ① 1 1/2" TYPE S-III ASPHALTIC CONCRETE
- ② 6" LIMEROCK BASE MIN. LBR 100% (PRIMED), COMPACTED TO A MIN. OF 98% OF THE MODIFIED PROCTOR (AASHTO T-180)
- ③ 12" STABILIZED SUBBASE, MIN. LBR OF 40%, COMPACTED TO A MIN. OF 98% OF THE MODIFIED PROCTOR (AASHTO T-180)
- ④ FDOT TYPE 'D' CONCRETE CURB
- ⑤ MONOLITHIC SIDEWALK

TYPICAL ASPHALT PAVEMENT SECTION  
N.T.S.



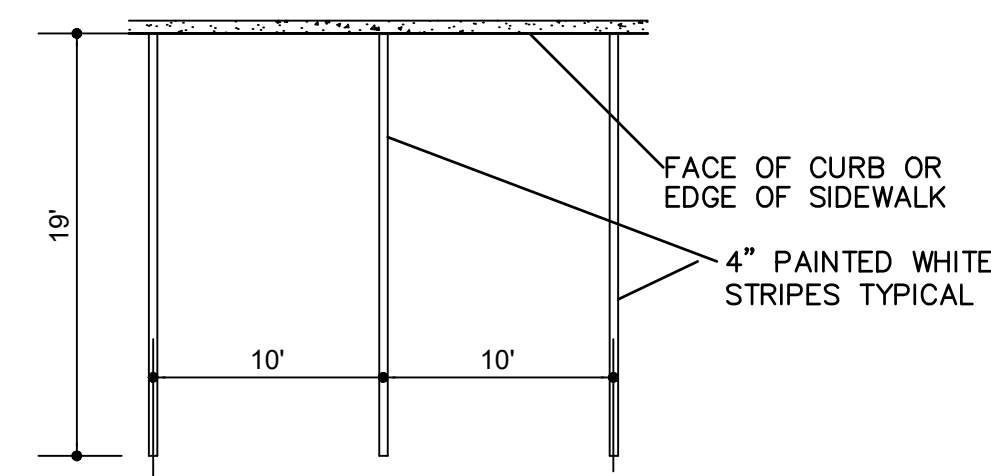
- ① 1 1/2" TYPE S-III ASPHALTIC CONCRETE
- ② 8" LIMEROCK BASE MIN. LBR 100% (PRIMED), COMPACTED TO A MIN. OF 98% OF THE MODIFIED PROCTOR (AASHTO T-180)
- ③ 12" STABILIZED SUBBASE, MIN. LBR OF 40%, COMPACTED TO A MIN. OF 98% OF THE MODIFIED PROCTOR (AASHTO T-180)

HEAVY DUTY ASPHALT PAVEMENT SECTION  
N.T.S.

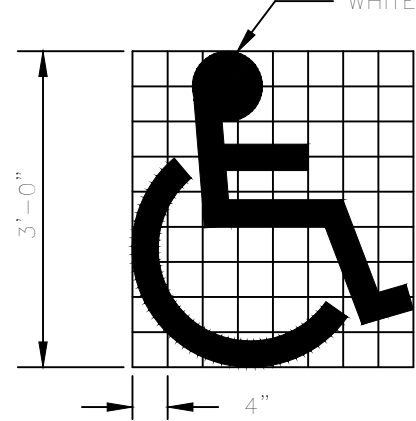
- NOTES:
1. ALL LETTERS ARE 1" SERIES "C", PER MUTCO.
  2. TOP PORTION OF SIGN SHALL HAVE REFLECTORIZED (ENGINEERING GRADE) BLUE BACKGROUND WITH WHITE REFLECTORIZED LEGEND AND BORDER.
  3. BOTTOM PORTION OF SIGN SHALL HAVE A REFLECTORIZED (ENGINEERING GRADE) WHITE BACKGROUND WITH BLACK OPAQUE LEGEND & BORDER.
  4. ONE (1) SIGN REQUIRED FOR EACH PARKING SPACE.
  5. INSTALLATION HEIGHT OF SIGN SHALL COMPLY WITH CHAPTER 11 OF THE FLORIDA BUILDING CODE 2001.



FTP-25  
HANDICAPPED PARKING SIGN PER F.D.O.T. INDEX 17355

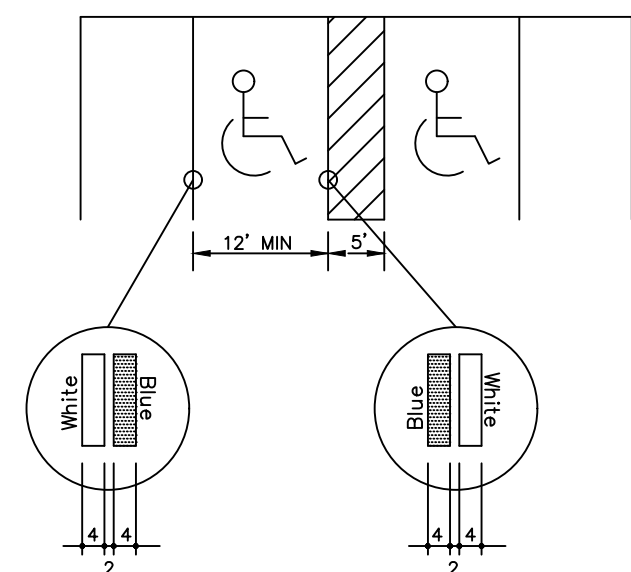


STANDARD PARKING STALL STRIPING DETAIL  
N.T.S.

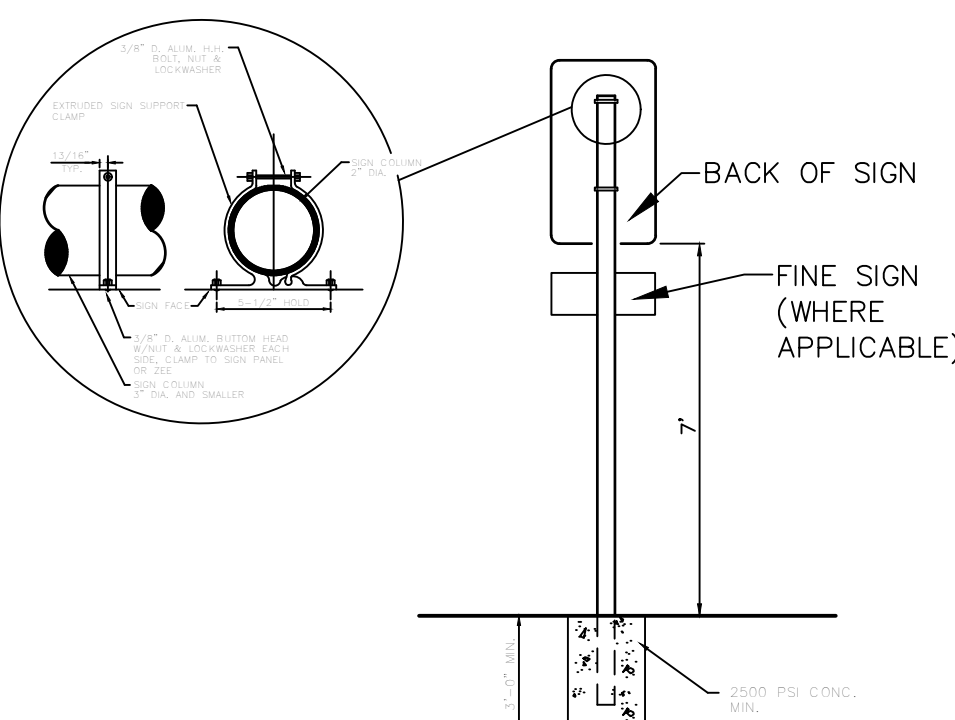


HANDICAPPED PAVEMENT SYMBOL

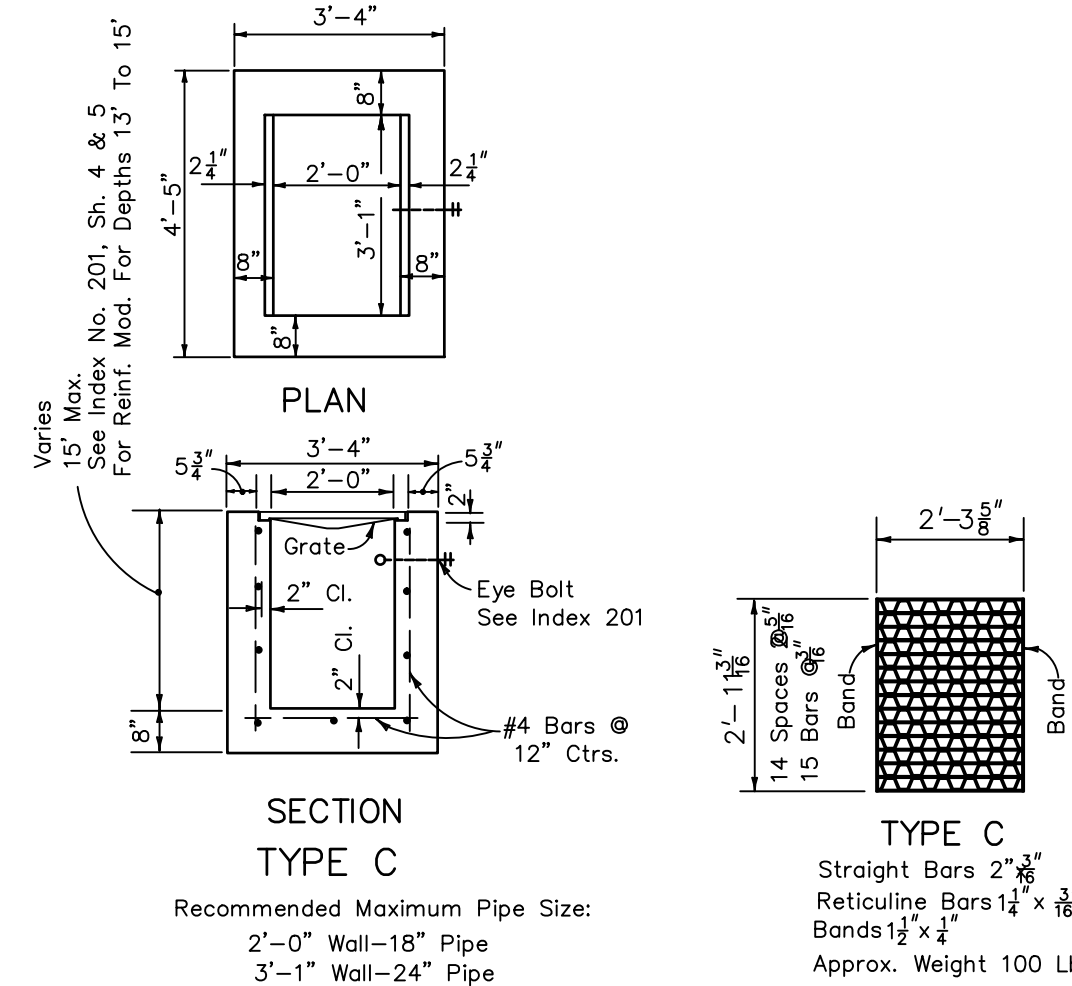
HANDICAPPED PARKING MARKINGS



HANDICAP STRIPING DETAIL  
N.T.S.



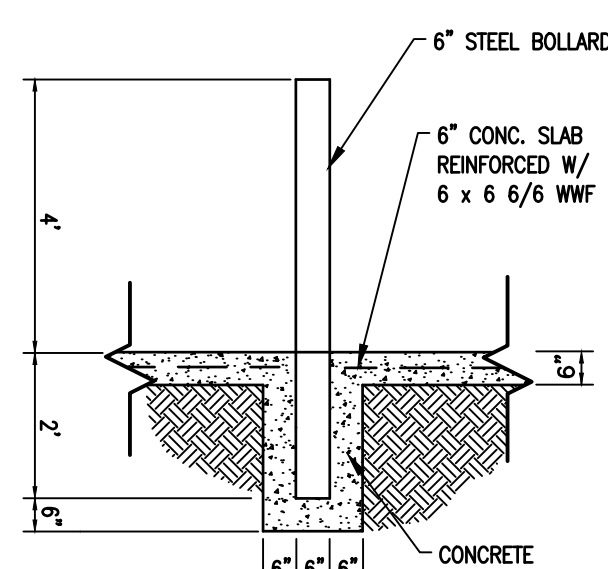
SIGN POST DETAIL  
N.T.S.



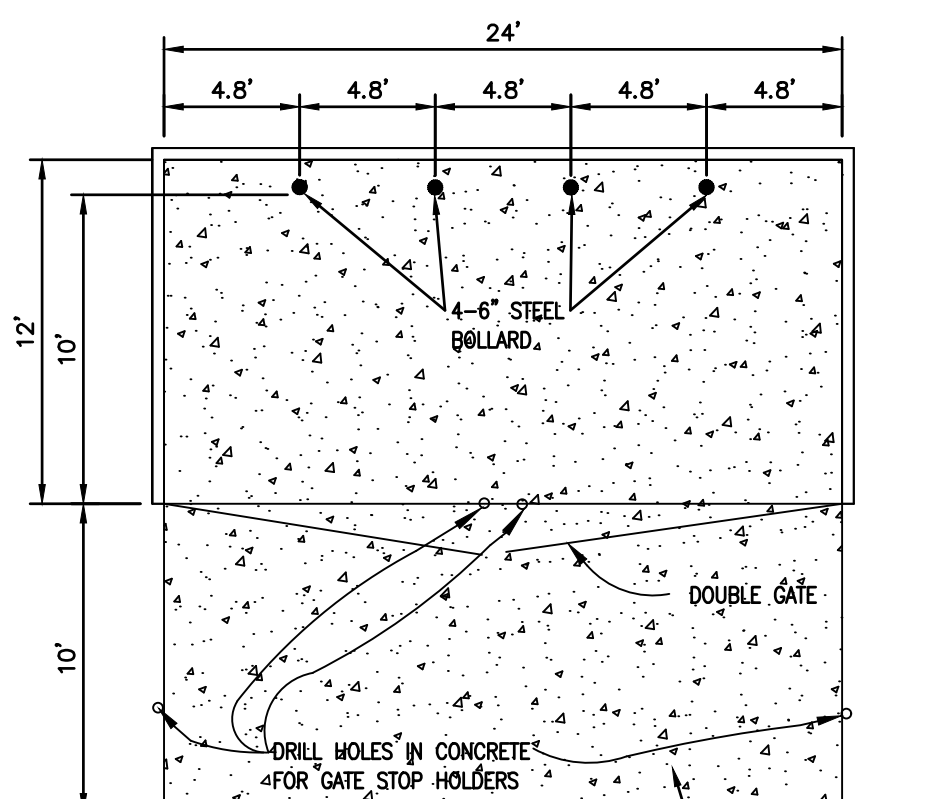
INLETS STEEL GRATES  
GENERAL NOTES

1. These inlets are suitable for bicycle and pedestrian areas and are to be used in ditches, medians and other areas subject to infrequent traffic loadings but are not to be placed in areas subject to any heavy wheel loads.
2. Inlets subject to minimal debris should be constructed without slots. Where debris is a problem inlets should be constructed with slots. Slotted inlets located within roadway clear zones and in areas accessible to pedestrians shall have traversable slots. The traversable slot modification is not adaptable to inlet Type H. Slots may be constructed at either or both ends as shown on plans.
3. Steel grates are to be used on all inlets where bicycle traffic is anticipated. Steel grates are to be used on all inlets with traversable slots. Either cast iron or steel grates may be used on inlets without slots where bicycle traffic is not anticipated. Either cast iron or steel grates may be used on all inlets with non-traversable slots. Subject to the selection described above, when Alternate G grate is specified in the plans, either the steel grate, hot dipped galvanized after fabrication, or the cast iron grate may be used, unless the plans stipulate the particular type.
4. Recommended maximum pipe sizes shown are for concrete pipe. Pipe sizes larger than those recommended must be checked for fit.
5. All exposed corners and edges of concrete are to be chamfered 1/4".
6. Pavement to be used on inlets without slots and inlets with non-traversable slots only when called for in the plans, but required on all traversable slot inlets. Cost to be included in contract unit price for inlets. Quantities shown are for information only.
7. Traversable slots constructed in existing inlets shall be paid for as inlets partial, and shall include the cost for slot openings, paving and any required replacement grates.
8. Sodding to be used on all inlets not located in paved areas and paid for under contract unit price for Sodding SY.
9. For supplementary details see Index No. 201.

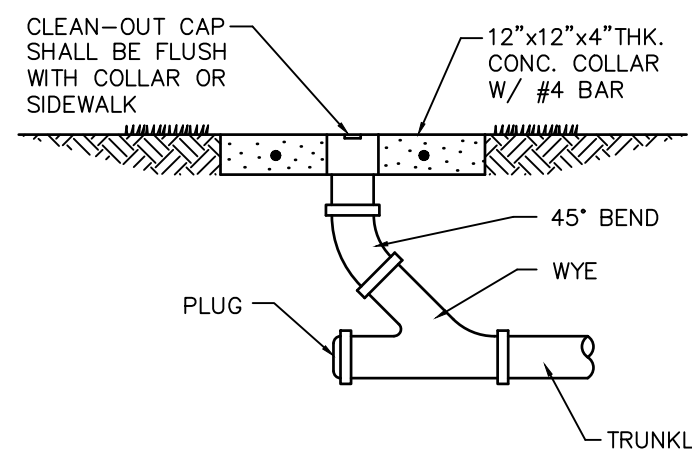
DITCH BOTTOM INLET  
TYPE C



BOLLARD DETAIL  
N.T.S.



WALLS: 6 FEET HIGH BE CONSTRUCTION OF CONCRETE BLOCK AND FINISHED TO MATCH BUILDING CONSTRUCTION. SEE ARCHITECTURAL PLANS FOR DETAILS.  
GATE: DOUBLE LOOKABLE GATE SHALL METAL AND PAINTED BLACK.  
DUMPSTER PAD / ENCLOSURE  
N.T.S.



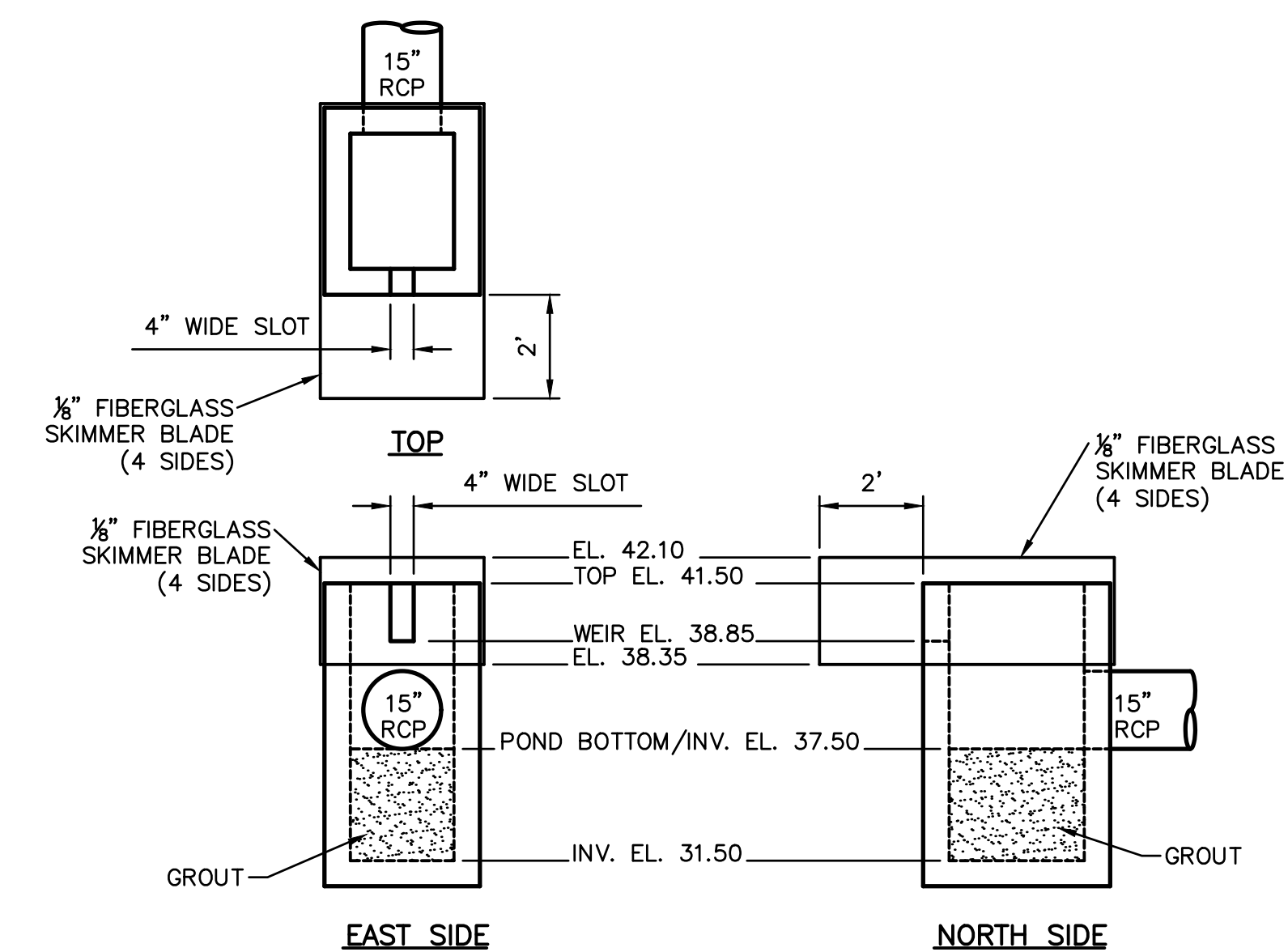
TYPICAL CLEAN-OUT



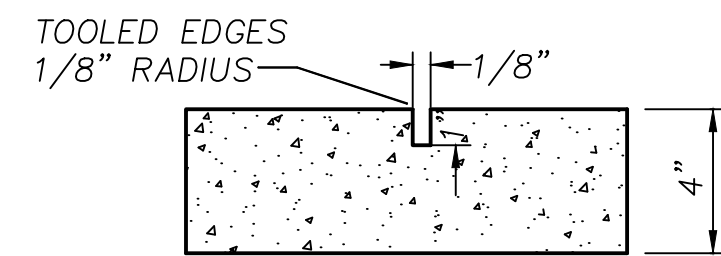
NO PARKING FIRE LANE  
N.T.S.

- NOTES:
1. FIRE LANE MARKING SIGN PER FLORIDA FIRE PREVENTION CODE 6, CHAPTER 18, SECTION 18.2.3.5.3
  2. SEE SIGN POST DETAIL TIS SHEET

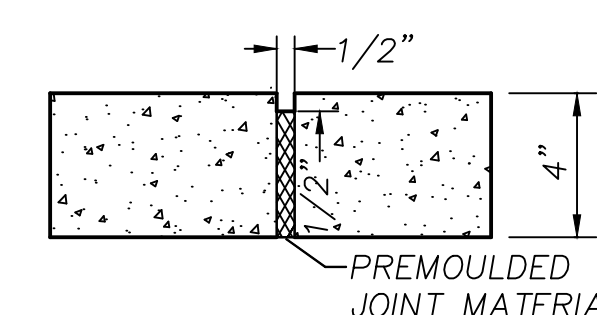
FIRE LANE MARKING SIGN  
N.T.S.



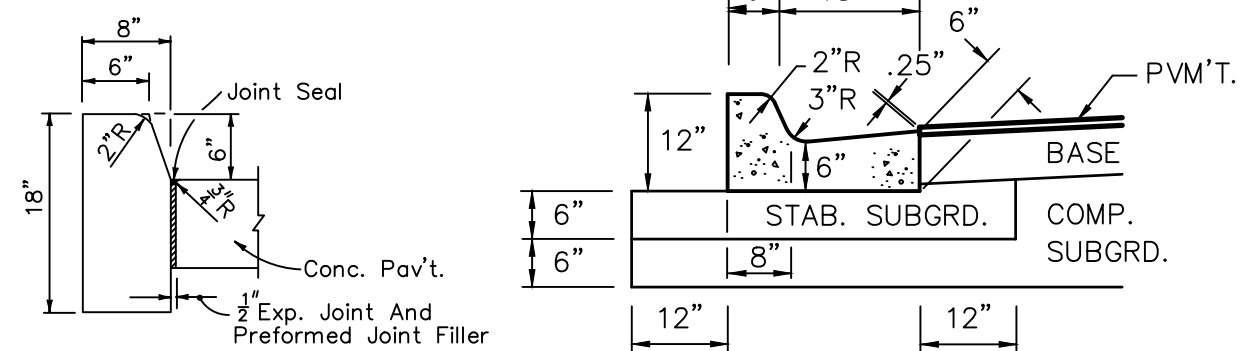
CONTROL STRUCTURE  
DBI TYPE 'C'  
FDOT INDEX #232 & 240  
N.T.S.



CONTRACTION JOINT  
N.T.S.



EXPANSION JOINT  
N.T.S.  
CONCRETE JOINT DETAIL  
N.T.S.



TYPE D STD. CONC. 2' CURB & GUTTER

GENERAL NOTES

1. For curb, gutter, and curb and gutter provide contraction joints at 10' centers (max.). Contraction joints adjacent to concrete pavement on tangents and flat curves are to match the pavement joints, with intermediate joints not to exceed 10' centers. Curb, gutter and curb & gutter expansion joints shall be located in accordance with Section 520 of the standard specifications.
2. Ends of vertical curbs shall transition from full to zero heights in 3 feet.

CONC. CURB DETAILS

APPLICATION GUIDELINES FOR DITCH BOTTOM AND MEDIAN INLETS

INDEX NO.	TYPE	LOCATION	CAPACITY (CFS)						SAFETY			DEBRIS TOLERANCE	PIPE SIZE LIMITATION	OTHER DESIGN CONSIDERATIONS	
			GRATE ONLY		GRATE WITH SINGLE STD. SLOT		GRATE WITH SINGLE TRAN. SLOT		TRAFFIC	PEDESTRIAN	BICYCLE				
			Flow Condition	Flow Condition	Flow Condition	Flow Condition	A	B							
230	A	Limited Access Facilities	7	4	NA	NA	NA	NA	Heavy Wheel Loads	No	No	Good	2'-0" / 3'-1"	18" / 24"	
231	B	Limited Access Facilities	16	6	NA	NA	NA	NA	Heavy Wheel Loads	No	No	Excellent	3'-0" / 4'-2"	30" / 36"	
232	C	*Outside CZ	5	4	II	8	7	5	Infrequent Traffic	Yes	Yes	Poor*	2'-0" / 3'-1"	18" / 24"	* See Note 4. For back of sidewalk location see Index No. 282
	D	*Outside CZ	14	6	27	15	20	8	Infrequent Traffic	Yes	Yes	Poor*	3'-1" / 4'-1"	24" / 36"	* See Note 4.
	E	*Outside CZ	10	6	19	13	14	7	Infrequent Traffic	Yes	Yes	Poor*	3'-0" / 4'-5"	24" / 42"	* See Note 4.
	H	Outside CZ	15	7	24	14	NA	NA	Infrequent Traffic	Yes	Yes	Poor*	3'-0" / 7'-8"	66" OR 2' 30"	* See Note 4.
233	F	Inside CZ	9	5	NA	NA	NA	NA	Heavy Wheel Loads	Yes	Yes	Poor	2'-0" / 4'-0"	18" / 36"	
	G	Inside CZ	23	7	NA	NA	NA	NA	Heavy Wheel Loads	Yes	Yes	Poor	4'-4" / 5'-0"	36" / 42"	
234	J	Inside CZ	9	4	NA	NA	NA	NA	Heavy Wheel Loads	Yes	No	Fair	2'-0" / 4'-0"	24" / 36"	
235	K	Outside CZ	NA	NA	NA	NA	NA	NA	NA	NA	NA	Good	3'-8"	36"	Debris buildup may occur on Type B fencing.

GENERAL NOTES

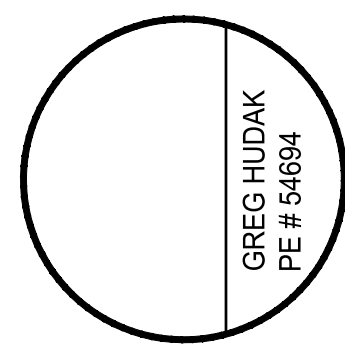
1. All inlets must be selected to satisfy hydraulic suitability, with proper consideration given to safety and economics.
  2. CZ denotes clear zones, formerly CRA, denoting clear recovery area.
  3. Alternate G grates should be specified when in salt water environments.
  4. Inlets without slots or inlets with traversable slots may be located within the clear zones, Inlets C, D and E capacity and debris tolerance may be increased by the addition of a slot. Slotted inlets located within roadway clear zones and in areas accessible to pedestrians shall have traversable slots. Traversable slots are not adaptable to Inlet Type H.
  5. Special slope slopes require plan details.
  6. Pipe size limitations are based on circular Class III, B Wall, Concrete Pipe. Elliptical pipe and corrugated pipe are to be checked for fit in accordance with Index No. 201. Metal pipe sizes should be reviewed using 24" x 1" corrugation up through 30" and 3" x 1" corrugation for larger sizes.
  7. The capacity values shown are approximate and are intended as a guide to assist in describing relative performance. Inlets are assumed to be in a sag condition (No Down Flow). The effects of vortex flow have not been considered. Inlet control is assumed. The Designer must verify the outlet conditions and design assumptions before accepting the capacity values shown. Outlet constraints are likely to control with minimum pipe sizes.
- Flow Condition A - Orifice Flow Conditions  
1. Grates are 50% blocked with 3" of water depth above the grate.  
2. Slots are 25% blocked.  
3. Orifice Equation: Q = 0.67 A √gh
- Flow Condition B - Weir Flow Conditions  
1. A 3" head above the top of the inlet is assumed.  
2. The effective weir length is assumed to be equal to the inlet perimeter with no obstruction for the grate or debris.  
3. For inlets with slots, the effective head for the side of the inlet with the slot is 10" for slotted slots and 60" for traversable slots. The slot is assumed to be 25% blocked. In some instances the flow will be in orifice conditions into the slot.  
4. Weir Equation: Q = 3.0 Lh<sup>1.5</sup>

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION ROAD DESIGN			
Project No.	Sheet No.	Date	Scale
10-1-1-1	229	10/1/11	1" = 10'

STANDARD DETAILS

REVISIONS:
DATE

DRAWN BY	DESIGN BY	CHECKED BY	APPROVED BY
SML	GDH	GDH	GDH



CANTERWOOD MANOR AT DEBARY  
CITY OF DEBARY, FLORIDA

HUDAK ENGINEERING, INC.  
CIVIL ENGINEERING & LAND DEVELOPMENT DESIGN SERVICES  
CERTIFICATE OF AUTHORIZATION #9388  
1344 HARDY AVENUE, ORLANDO, FL 32803  
PHONE: (407) 462-6833  
EMAIL: ghudak@hudakengineering.com

DATE:  
JANUARY 2018

SHEET NO.  
C-14  
14 of 17



# RILEY & Company, Inc. (H-20 LP)

## w/ BATTERY BACK-UP FOR AUDIO AND VISUAL ALARMS & RILEY & COMPANY GUARD PRO II MONITORING SYSTEM & MOTOR SOFT-STARTS

SCOPE: Supply one complete H-20 GP Pre-Fab Lift Station, per design.  
Pumps shall be capable of grinding and pumping domestic & commercial sewage.  
Complete system shall be supplied by:

RILEY & Company, Inc.  
Sanford, FL 32773 (Ph. 407-265-9963)

NO SUBSTITUTIONS - NO ALTERNATES

**FIBERGLASS WETWELL MUST BE WARRANTED FOR A MINIMUM OF 20 YEARS.**

The H-20 Load Rated Fiberglass Wetwell Must Be Manufactured By L.F. Manufacturing, Giddings, Texas, Which Includes A Written 20 Yr. Warranty

Certification of the wetwell H-20 load rating must be supplied with submittals. H-20 certification must be signed and sealed by an engineer registered in the State of Florida.

After the H-20 load rated wetwell has been installed, the ASTM Certification Number and Serial Tracking Number must be visible.

### PUMPS: (3 YR. WARRANTY)

Submersible pumps shall be HOMA Model AV432. The pumps shall be installed in the H-20 LP FRP wetwell utilizing a dual slide rail system. The pumps shall be capable of pumping materials normally found in domestic and commercial sewage and pass a minimum of 3" solids.

Stator winding shall be open type with Class F insulation and shall be heat-shrink fitted into the stator housing. The use of pins, bolts, or other fastening devices is not acceptable.

A heat sensor thermostat shall be attached to the top end of the motor winding and shall be connected in series with the magnetic contactor coil in the control panel to stop motor if winding temperature exceeds 140 C., but shall automatically reset when the winding temperature returns to normal. Two heat sensor thermostats shall be used on three phase motors.

The pump motor grinder shaft shall be AISI 430F SS threaded to take the pump impeller and the grinder impeller.

Upper & lower mechanical seals shall be Silicon Carbide vs Silicon Carbide.

### DUPLEX CONTROL PANEL: (3 YR. WARRANTY)

To insure complete unit and warranty responsibility the electrical control panel must be manufactured and built by the pump supplier. The pump supplier must be a TUV (UL508A CERTIFIED) manufacturing facility, with a minimum of 5 years history in the manufacturing of electrical control panels.

The (NEMA 4X) MARINE QUALITY ALUMINUM ENCLOSURE shall be a minimum of (30" high x 30" wide x 10" deep) with 3 point draw latches.

The enclosure shall have external mounting feet to allow for wall mounting.

The following components shall be mounted through the enclosure:

- 1- ea. Red Alarm Beacon (Light)
- 1- ea. Alarm Horn
- 1- ea. Generator Receptacle w/ weatherproof cover
- 1- ea. Alarm Silence Pushbutton

The back panel shall be fabricated from .125, 5052-H32 marine alloy aluminum. All components shall be mounted by machined stainless steel screws.

The following components shall be mounted to back panel:

- 1- ea. RILEY & COMPANY Guard Pro II Monitoring System
- 1- ea. Motor Soft-Starts
- 2- ea. Motor Contactors
- 1- ea. Volt Monitor (Single Phase) Phase Monitor (Three Phase)
- 1- ea. Control Transformer (480 Volt Only)
- 1- ea. Silence Relay
- 1- ea. Duplex Alternator
- 1- ea. Model RCBB5AH Battery Back-Up w/ Smart Charger
- 20- ea. Terminals For Field Connections
- 6- ea. Terminals For Motor Connections (Single Phase Only)
- 3- ea. Grounding Lugs

The inner door shall be fabricated from .080, 5052-H32 marine alloy aluminum. The inner door shall have a continuous aluminum piano hinge.

The following components shall be mounted through the inner door:

- 1- ea. Main Circuit Breaker
- 1- ea. Emergency Circuit Breaker
- 1- ea. Mechanical Interlock For Emergency And Main Breakers
- 2- ea. Short Circuit Protectors
- 1- ea. Control Circuit Breaker
- 2- ea. Seal Failure Indicator Lights
- 1- ea. Hand-Off-Auto Selector Switches
- 2- ea. Pump Run Pilot Lights
- 1- ea. Power On Pilot Light
- 2- ea. Elapse Time Meters (Non-Resetable)
- 1- ea. GFI Duplex Convenience Outlet

**RILEY & COMPANY, INC. / GUARD PRO II MONITORING SYSTEM:**  
The GUARD PRO II offers a remote control and maintenance solution which allows you to create a decentralized system or monitor and control devices. With the GUARD PRO II upto eight (8) different lift station inputs can be monitored and upto four (4) outputs can be controlled remotely.  
The GUARD PRO II can also notify upto eight (8) different recipients via sms text, cell phone or e-mail .

PUMP DATA		ELEVATIONS	
PRIMARY PUMP CAPACITY	120 GPM	TOP OF WETWELL	47.50
PRIMARY TDH	90 'TDH	INLET INVERT	41.44
PUMP MANUFACTURER	HOMA	HIGH LEVEL ALARM (HLA)	41.00
PUMP MODEL #	AV432	2nd PUMP ON (LAG)	40.50
R.P.M.	3450	1st PUMP ON (LEAD)	39.50
HORSEPOWER	30	PUMPS OFF (OFF)	38.50
ELECTRICAL/ VOLTS / PHASE	460V/3	BOTTOM OF WETWELL	35.50
PUMP DISCHARGE SIZE	4"	WETWELL DIAMETER	48"

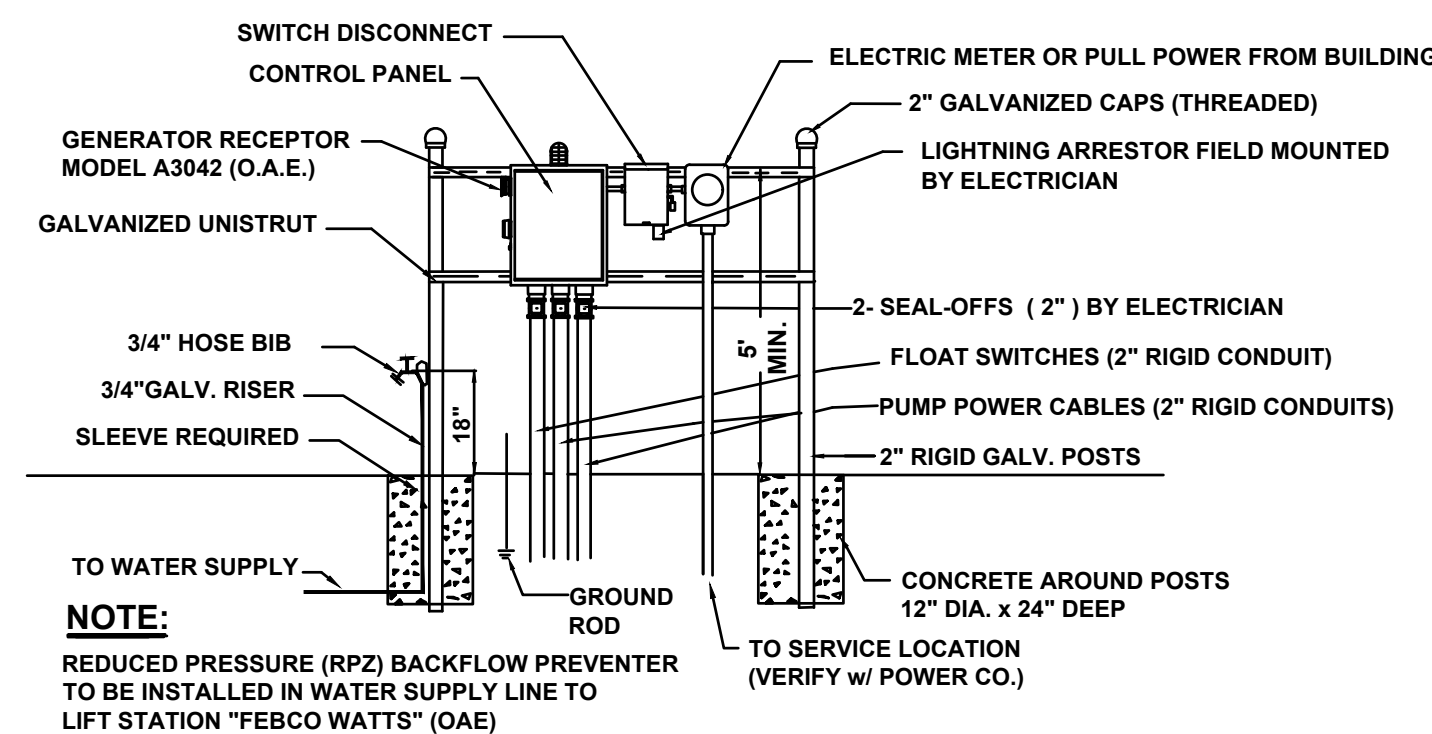
### LIFT STATION WILL BE PRIVATELY OWNED AND MAINTAINED.

**EXECUTION:**  
Installation shall be in strict accordance with the manufacturer's recommendations in the locations shown on the drawing.

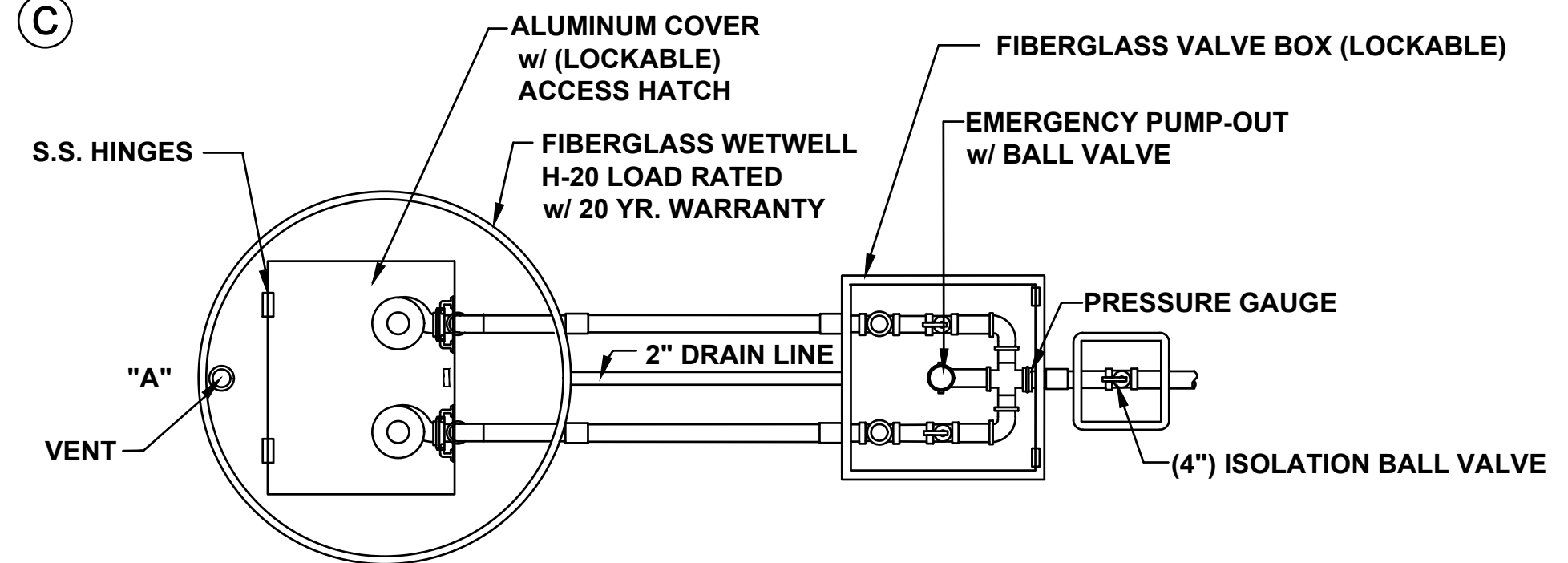
**INSPECTION & TESTING:** A factory representative shall be provide for a one (1) time start-up and shall have complete knowledge of the proper operation and maintenance of complete system.  
Megger the motors. The pump motors shall be megged out prior to the start-up to ensure that the insulation of the pump motor/cable is intact.  
The pump controls and pumps shall be checked for mechanical reliability and proper operation.

### \* ELECTRICIAN NOTES:

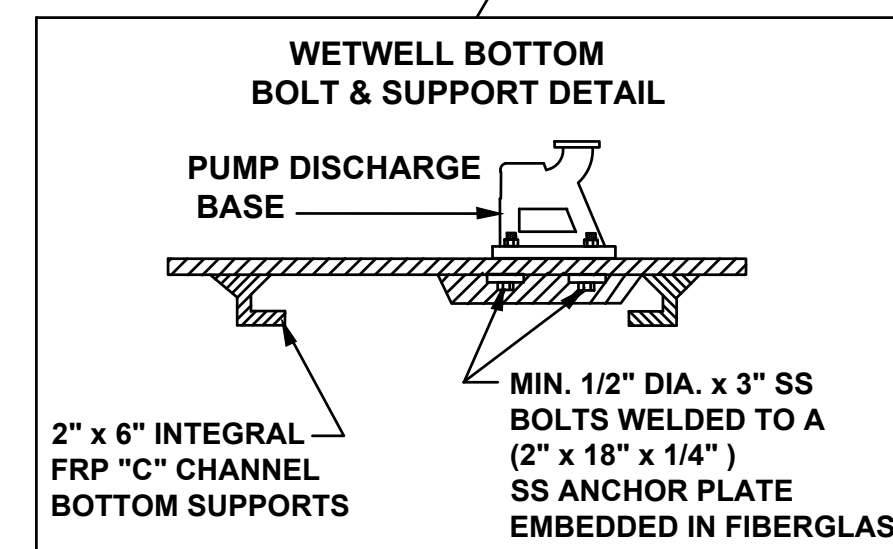
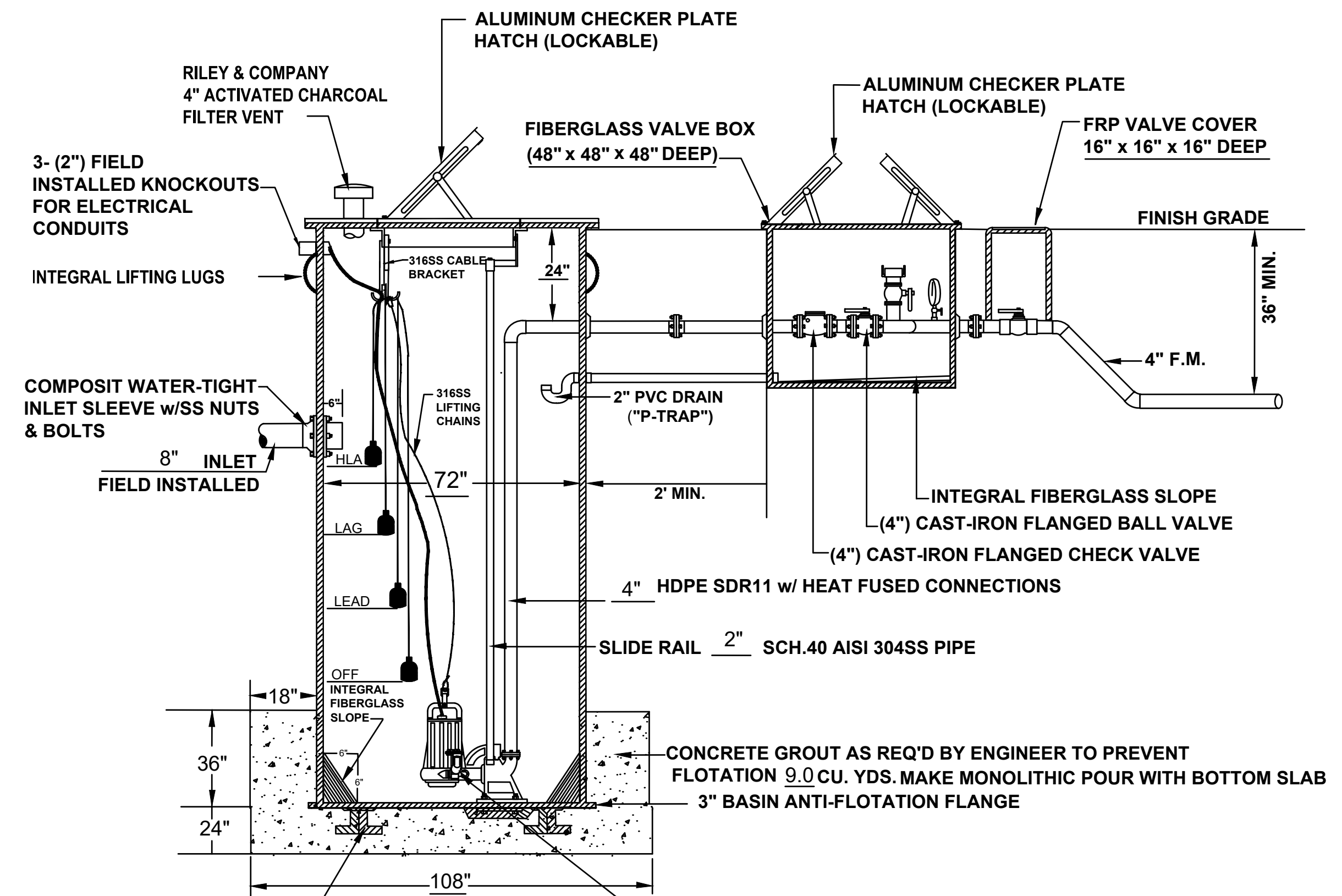
1. DRAWING NOT TO SCALE
2. ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH LOCAL CODES
3. ELECTRICIAN SHALL SEAL OFF CONDUIT RUNS
4. ELECTRICIAN TO MOUNT LIGHTNING ARRESTOR AT SWITCH DISCONNECT
5. CONTRACTOR SHALL VERIFY POWER SOURCE PRIOR TO ORDERING EQUIPMENT
6. NEUTRAL TO BE SUPPLIED FOR 230V-3 PHASE OR 230V-SINGLE PHASE POWER.



### ELECTRICAL RISER FOR ILLUSTRATION PURPOSES ONLY



NOTE: PUMP CONTROL PANEL SHALL BE LOCATED 3 FEET FROM WETWELL PERIMETER AT POINT "A"



**MODEL RC0194 FLUSH VALVE**  
WHEN THE PUMP STARTS, THE VALVE OPENS FOR APPROXIMATELY 10-30 SECONDS, SHOOTING OUT A POWERFUL JET STREAM THAT FLUSHES ALL SOLIDS INTO SUSPENSION, READY TO BE PUMPED AWAY. BECAUSE THE FLUSHING SEQUENCE IS AN INTEGRAL PART OF THE PUMPING CYCLE, FLUSHING OCCURS EVERY TIME THE PUMP STARTS. THIS REDUCES GREASE AND SOLIDS BUILD-UP AND REDUCES UNPLEASANT ODORS.

RILEY & CO. / H-20 LP 01-29-18

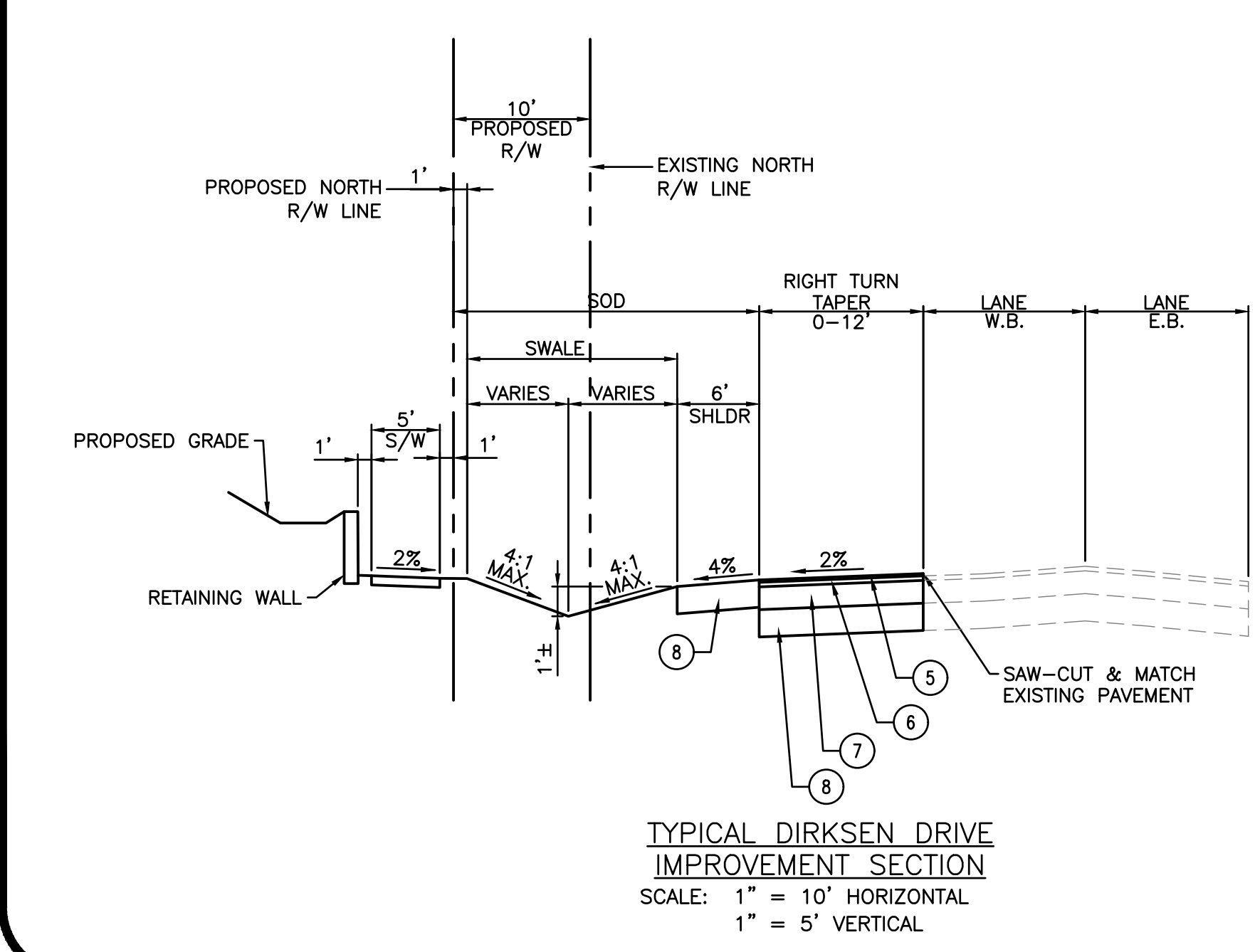
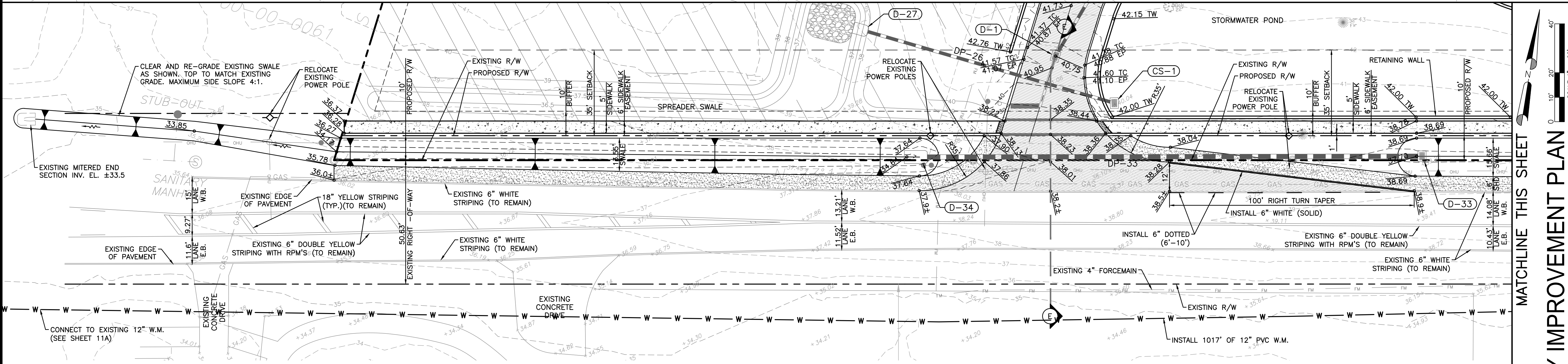
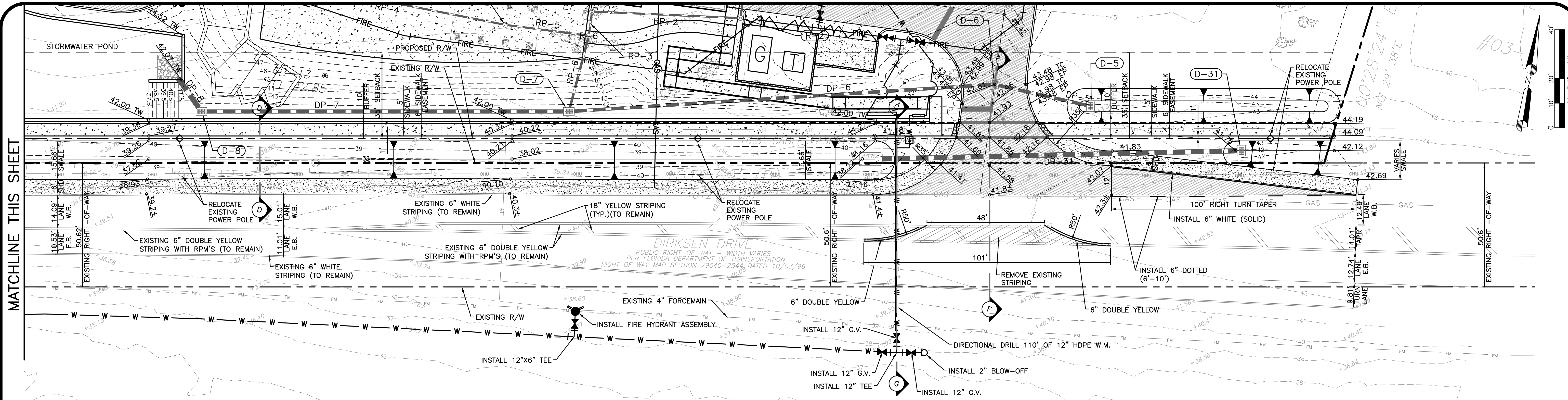
REVISIONS	BY

RILEY & Company, Inc.  
5491 Benchmark Lane  
Sanford, FL 32773  
PH. 407-265-9963

CANTERWOOD MANOR ALF

DRAWN
CHECKED
DATE
SCALE
JOB NO.





**LEGEND**

[Pattern]	STANDARD ASPHALT PAVEMENT (SEE SECTION ON SHEET C-14).
[Pattern]	VOLUSIA COUNTY ASPHALT PAVEMENT (SEE SECTION ON SHEET C-17).
[Pattern]	HEAVY DUTY ASPHALT PAVEMENT (SEE SECTION ON SHEET C-14).

- NOTES:**
- SEE SHEET 17 FOR CROSS SECTIONS D, E, F & G.
  - SEE DRAINAGE SYSTEM PLAN SHEET 7 DRAINAGE STRUCTURE AND PIPE INFORMATION.
  - SEE SITE GEOMETRY PLAN SHEET 6 FOR ADDITIONAL GEOMETRY.
  - CONTRACTOR SHALL COORDINATE POWER POLE RELOCATION WITHIN DIRKSEN DRIVE WITH DUKE ENERGY.
  - CONTRACTOR SHALL FIELD VERIFY EXISTING UTILITY HORIZONTAL AND VERTICAL LOCATIONS AT ALL POINTS OF CONNECTION AND CONFLICTS PRIOR TO CONSTRUCTION.
- PAVEMENT SPECIFICATIONS**
- 1 1/2" TYPE S-III ASPHALTIC CONCRETE
  - 6" LIMEROCK BASE MIN. LBR 100% (PRIMED), COMPACTED TO A MIN. OF 98% OF THE MODIFIED PROCTOR (AASHTO T-180)
  - 8" LIMEROCK BASE MIN. LBR 100% (PRIMED), COMPACTED TO A MIN. OF 98% OF THE MODIFIED PROCTOR (AASHTO T-180)
  - 12" STABILIZED SUBBASE, MIN. LBR OF 40%, COMPACTED TO A MIN. OF 98% OF THE MODIFIED PROCTOR (AASHTO T-180)
  - MINIMUM 1" FDOT FRICTION COURSE TYPE FC-9.5 (TRAFFIC LEVEL C) ASPHALT @ MAX. 20% RECYCLED MATERIALS
  - MINIMUM 2" FDOT SUPERPAVE STRUCTURE COURSE TYPE SP-12.5 (TRAFFIC LEVEL C) ASPHALT @ MAX. 30% RECYCLED MATERIALS
  - 10" LIMEROCK OR OTHER APPROVED BASE GROUP 9 COMPACTED TO A 98% MAXIMUM DRY DENSITY PER AASHTO T-180 AND CONSTRUCTED IN TWO LIFTS
  - 12" STABILIZED SUB-GRADE LBR 40 COMPACTED TO A 98% MAXIMUM DRY DENSITY PER AASHTO T-180

- VOLUSIA COUNTY USE PERMIT NOTES**
- Notify Volusia County Development Engineering Division at (386) 736-5926 a minimum of 24 hours prior to the start of construction. Failure of the permittee to obtain the appropriate inspections prior to proceeding with work shall not relieve the permittee from reexcavation or other measures necessary for the inspection of work.
  - Volusia County Traffic Engineering (386) 736-5968 is not a member of Sunshine One Call. When requesting locates, please provide a minimum advanced notification of two (2) business days prior to proposed work.
  - Coordination with Volusia County Traffic Operations (386) 239-6535 is required with a minimum advanced notice of seven (7) days prior to any sidewalk, lane or road closure (including flagging operations).
  - Operations within the County right-of-way shall normally be conducted 7:00 am to 7:00 pm, Monday through Friday. Any deviation from these hours requires prior approval from the County Development Engineer. Emergency repairs are excluded from this time restriction.
  - All existing sidewalks within County right-of-way shall either remain open or be provided a temporary walkway in accordance with the current version of Florida Department of Transportation Standard Index No. 600. Any damage to sidewalks shall be repaired and/or replaced in like kind by the contractor. New sidewalks and sections through driveways must be at a 1.5% cross slope and 2% maximum cross slope per ADA standards.
  - Driving or staging of construction vehicles or materials is not permitted within the County right-of-way or on pedestrian walkways and paths. There shall be no overnight construction vehicle related parking, construction material placement or storage of any kind permitted within the County right-of-way.
  - No trench or excavation shall be left open or unattended overnight, unless approved by the County Development Engineering Inspector. Excavations shall meet the Drop off Protection Requirements of the latest FDOT Design Standard Index No. 600.
  - Restoration shall be required for any damage to sidewalks, curbs, or other existing structures in the right-of-way. All disturbed areas within the County right of way shall be re-graded and sodded. Seed and mulch is not an acceptable alternative to sodding.

MATCHLINE THIS SHEET

MATCHLINE THIS SHEET

**DIRKSEN DRIVE RIGHT-OF-WAY IMPROVEMENT PLAN**

**REVISIONS:**

DATE	BY	DESCRIPTION

DRAWN BY	SMV

DESIGN BY	GDH

CHECKED BY	GDH

APPROVED BY	GDH

GREG HUDAK  
PE # 54684

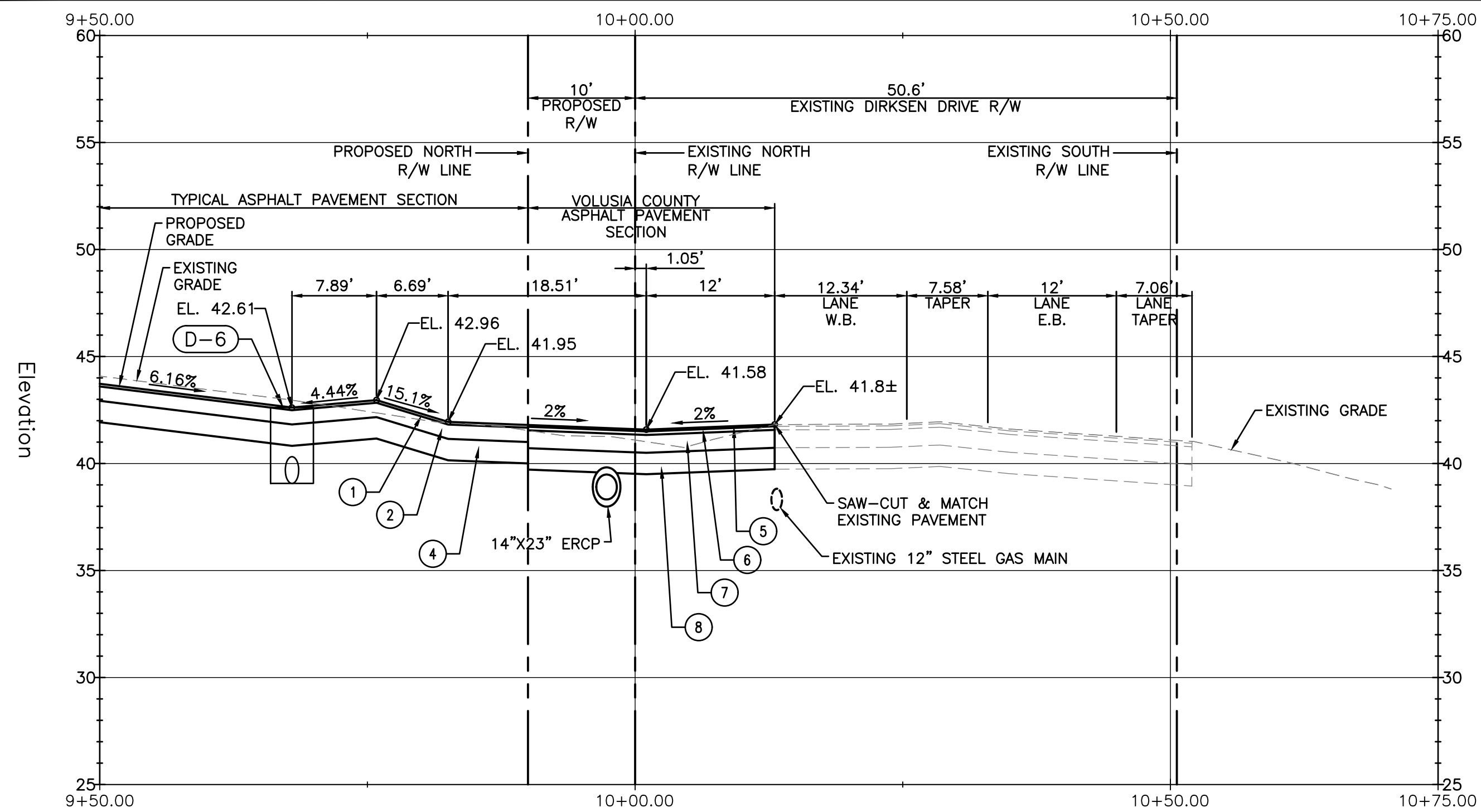
**CANTERWOOD MANOR AT DEBARY**  
CITY OF DEBARY, FLORIDA

**HUDAK ENGINEERING, INC.**  
CIVIL ENGINEERING & LAND DEVELOPMENT DESIGN SERVICES  
CERTIFICATE OF AUTHORIZATION #9388  
1344 HARDY AVENUE, ORLANDO, FL 32833  
PHONE: (407) 462-8833  
EMAIL: ghudak@hudakengineering.com

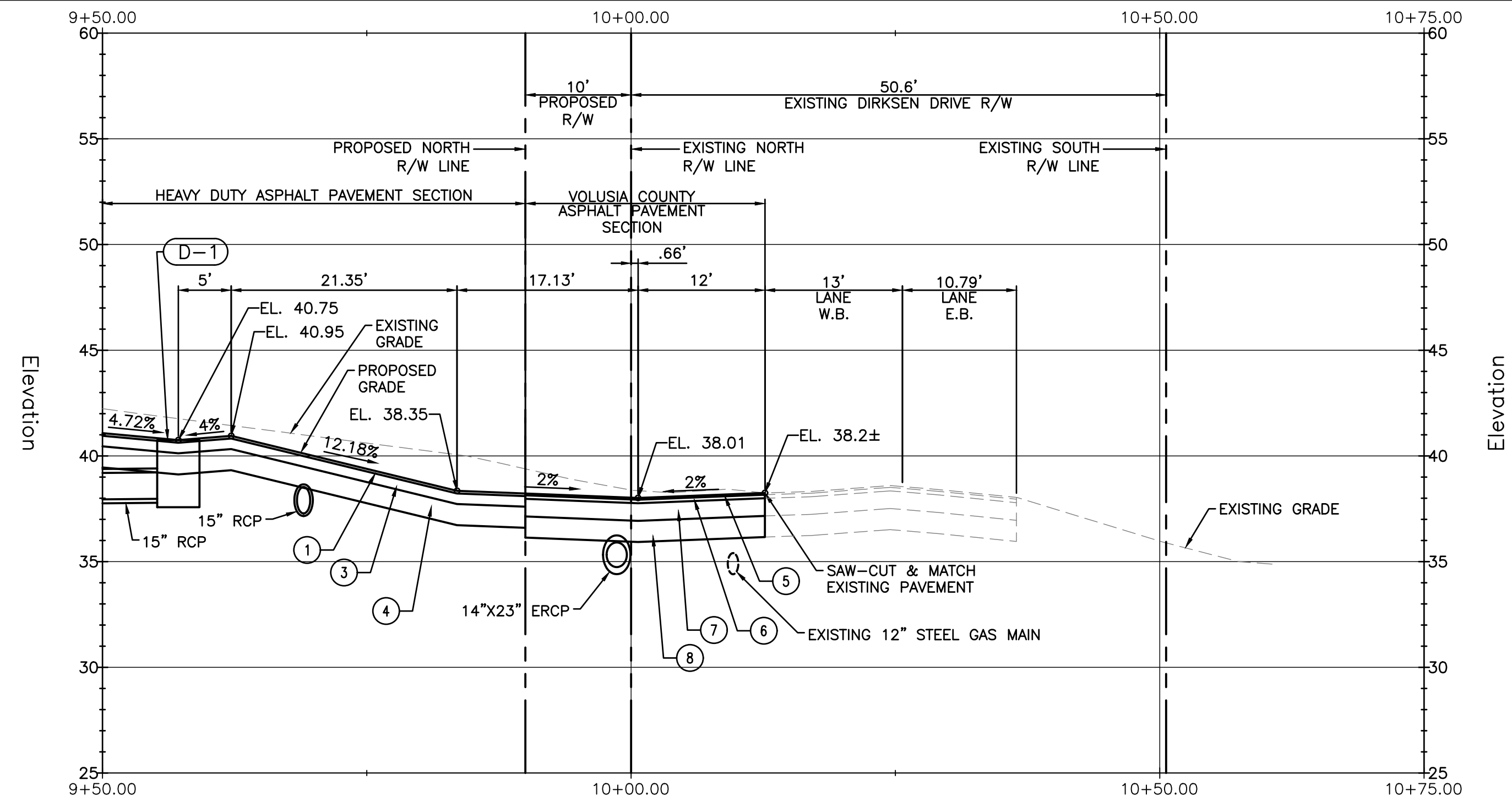
DATE:  
**JANUARY 2018**

SHEET NO.  
**C-16**  
16 of 17

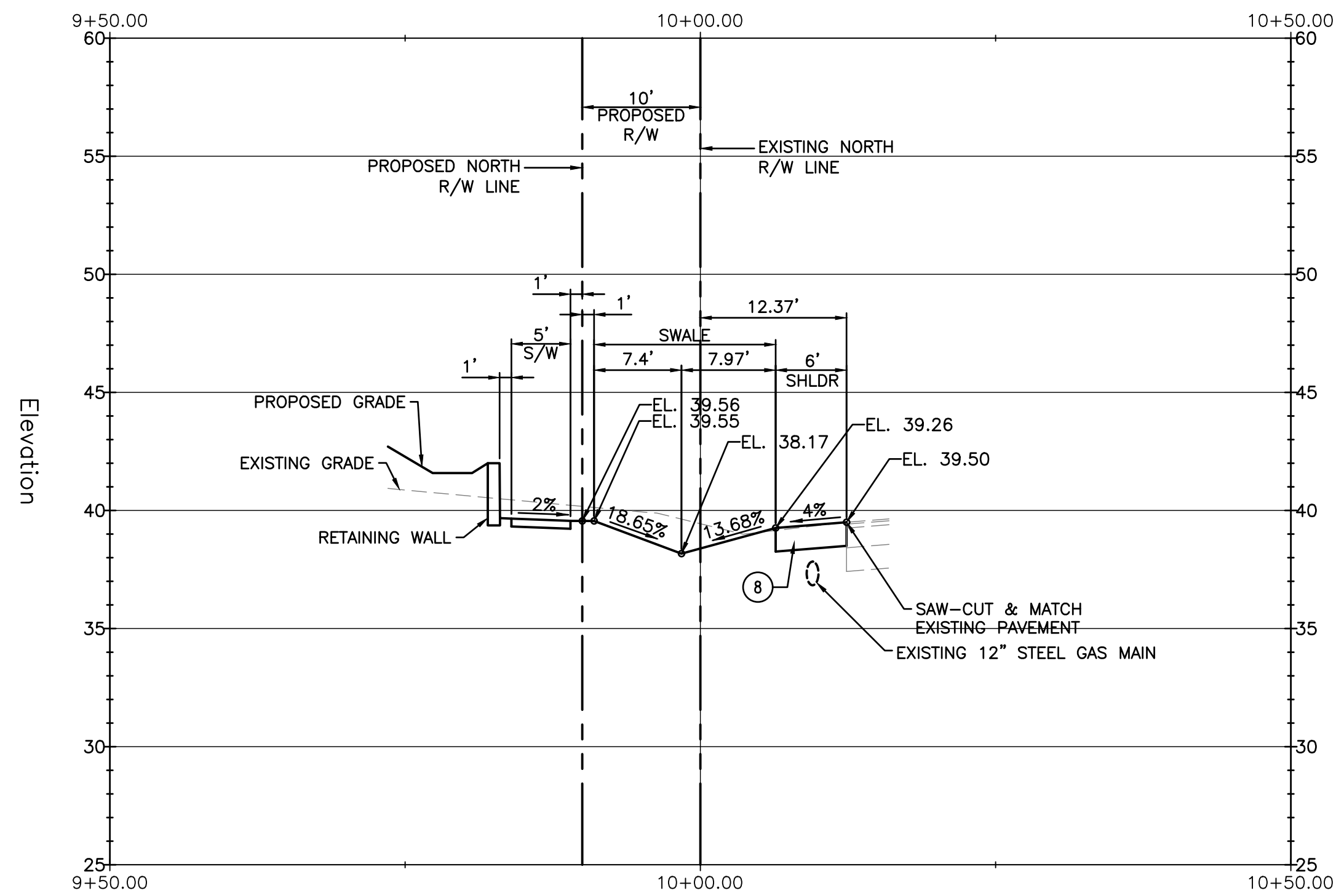




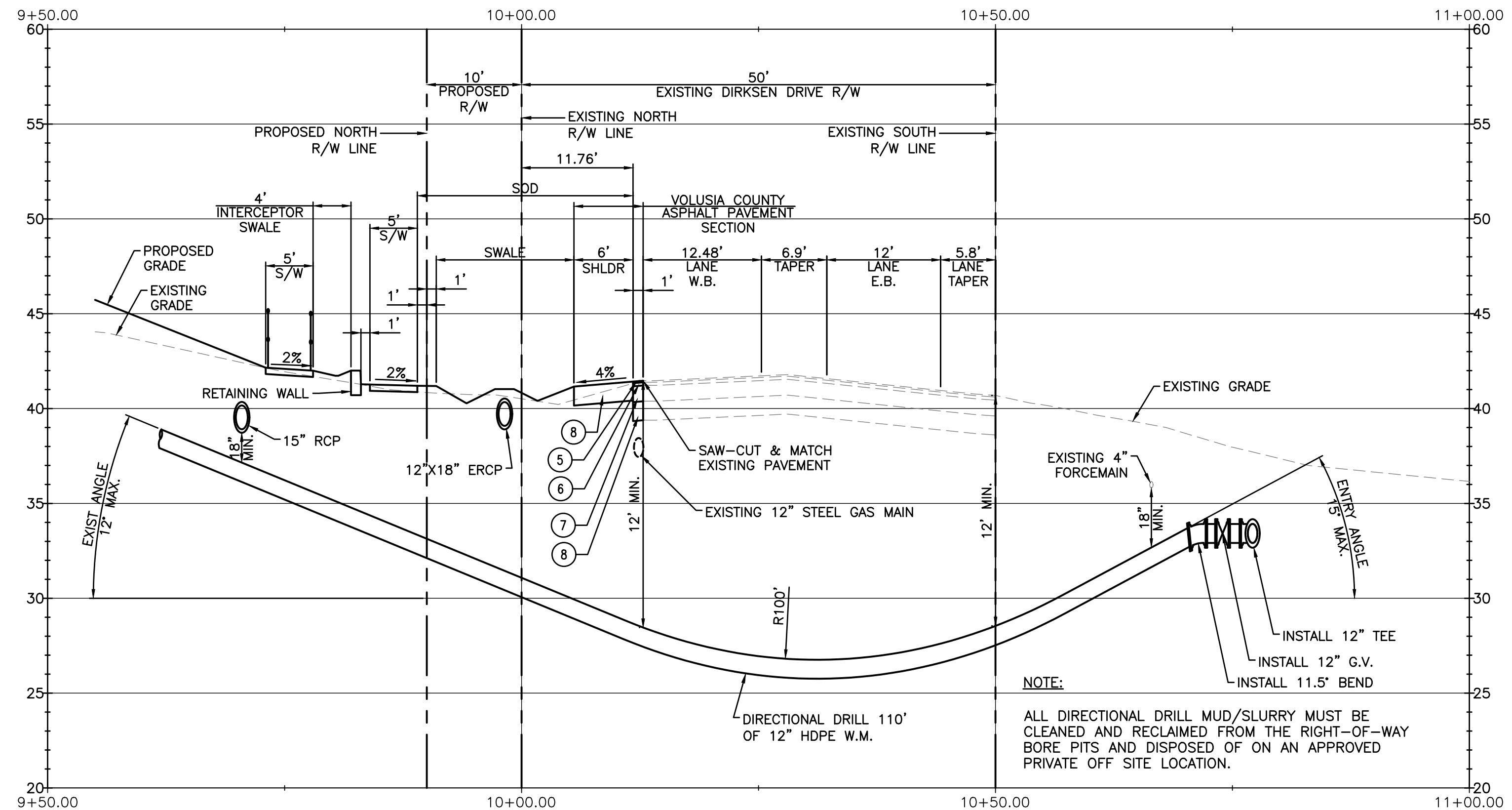
**EAST DRIVE PROFILE**  
SECTION F-F  
SCALE: 1" = 10' HORIZONTAL  
1" = 5' VERTICAL



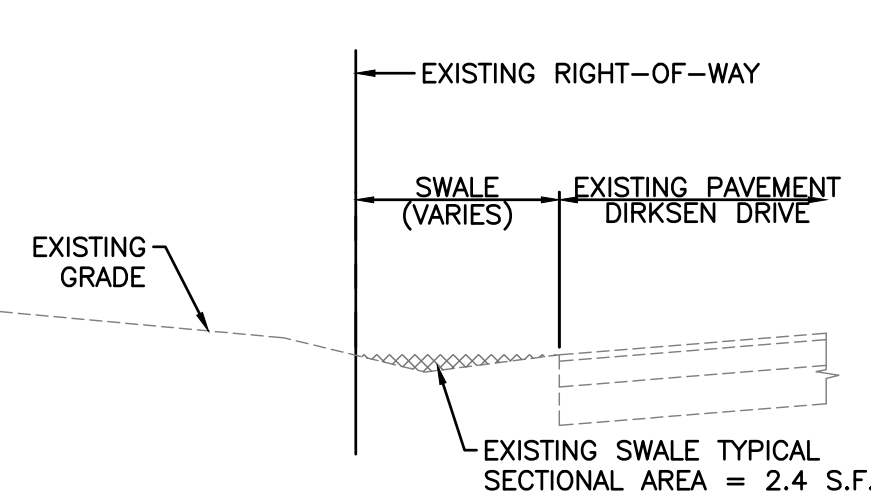
**WEST DRIVE PROFILE**  
SECTION F-F  
SCALE: 1" = 10' HORIZONTAL  
1" = 5' VERTICAL



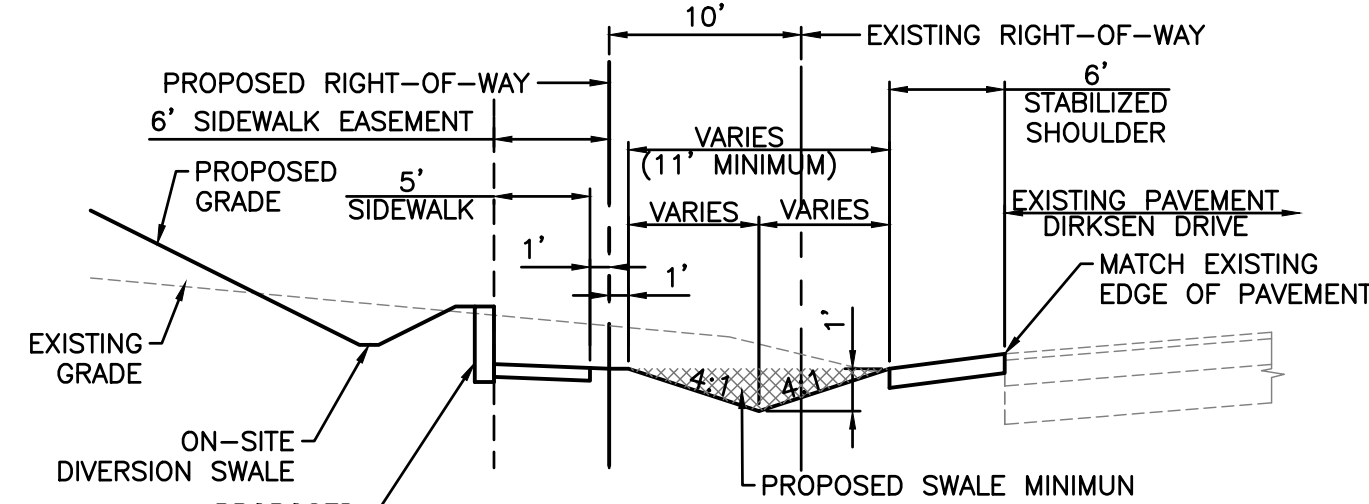
**SECTION D-D**  
SCALE: 1" = 10' HORIZONTAL  
1" = 5' VERTICAL



**WATER MAIN PROFILE**  
SECTION G-G  
SCALE: 1" = 10' HORIZONTAL  
1" = 5' VERTICAL



**EXISTING DIRKSEN DRIVE**  
TYPICAL SWALE SECTION  
SCALE: 1" = 10' HORIZONTAL  
1" = 5' VERTICAL



**PROPOSED DIRKSEN DRIVE**  
TYPICAL SWALE SECTION  
SCALE: 1" = 10' HORIZONTAL  
1" = 5' VERTICAL

**PAVEMENT SPECIFICATIONS**

- ① 1 1/2" TYPE S-III ASPHALTIC CONCRETE
- ② 6" LIMEROCK BASE MIN. LBR 100% (PRIMED), COMPACTED TO A MIN. OF 98% OF THE MODIFIED PROCTOR (AASHTO T-180)
- ③ 8" LIMEROCK BASE MIN. LBR 100% (PRIMED), COMPACTED TO A MIN. OF 98% OF THE MODIFIED PROCTOR (AASHTO T-180)
- ④ 12" STABILIZED SUBBASE, MIN. LBR OF 40%, COMPACTED TO A MIN. OF 98% OF THE MODIFIED PROCTOR (AASHTO T-180)
- ⑤ MINIMUM 1" FDOT FRICTION COURSE TYPE FC-9.5 (TRAFFIC LEVEL C) ASPHALT @ MAX. 20% RECYCLED MATERIALS
- ⑥ MINIMUM 2" FDOT SUPERPAVE STRUCTURE COURSE TYPE SP-12.5 (TRAFFIC LEVEL C) ASPHALT @ MAX. 30% RECYCLED MATERIALS
- ⑦ 10" LIMEROCK OR OTHER APPROVED BASE GROUP 9 COMPACTED TO A 98% MAXIMUM DRY DENSITY PER AASHTO T-180 AND CONSTRUCTED IN TWO LIFTS
- ⑧ 12" STABILIZED SUB-GRADE LBR 40 COMPACTED TO A 98% MAXIMUM DRY DENSITY PER AASHTO T-180

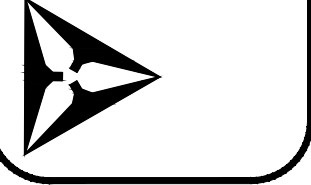
DATE	REVISIONS:

DRAWN BY	SMV
DESIGN BY	GDH
CHECKED BY	GDH
APPROVED BY	GDH

GREG HUDAK  
PE # 54634

**CANTERWOOD MANOR AT DEBARY**  
CITY OF DEBARY, FLORIDA

**HUDAK ENGINEERING, INC.**  
CIVIL ENGINEERING & LAND DEVELOPMENT DESIGN SERVICES  
CERTIFICATE OF AUTHORIZATION #9388  
1344 HARDY AVENUE, ORLANDO, FL 32803  
PHONE: (407) 462-8833  
EMAIL: ghudak@hudakengineering.com

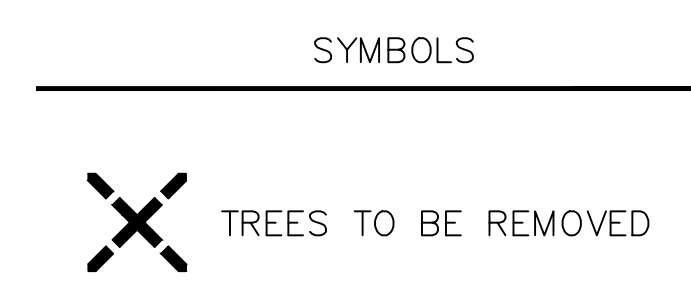
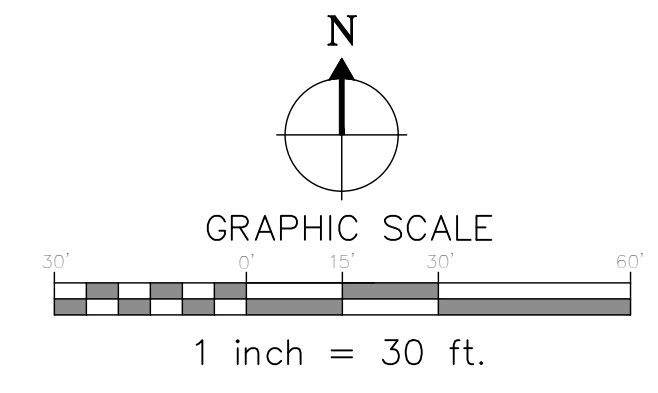


DATE:  
**JANUARY 2018**

SHEET NO.  
**C-17**  
17 of 17

**DIRKSEN DRIVE CROSS SECTIONS**

TRACT C  
 PARKVIEW SUBDIVISION UNIT 1  
 MAP BOOK 45, PAGES 97 & 98  
 ALTKEY # 5643140  
 PARCEL ID #03-19-30-01-00-0003  
 POWERLINE EASEMENT PER OFFICIAL RECORDS BOOK 1745, PAGE 1655



Existing trees to be Saved

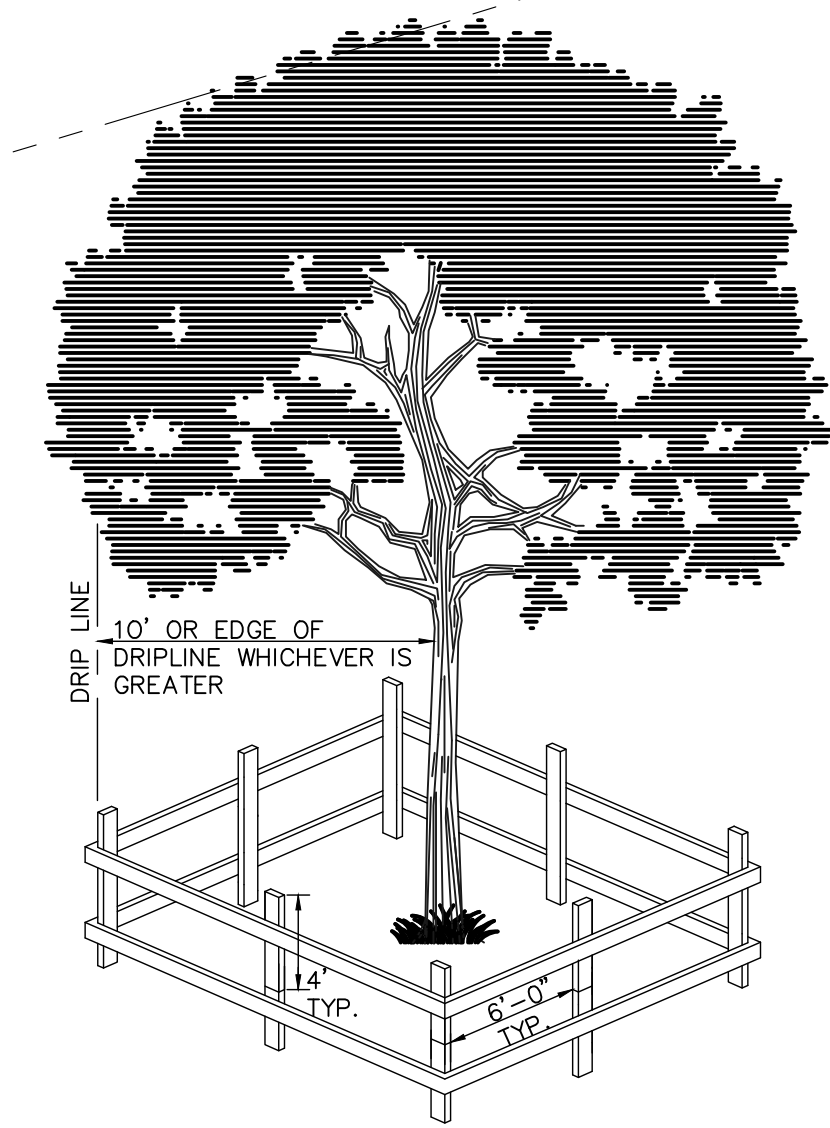
TYPE	COUNT	SIZE	INCHES
Magnolia	1	10"	10
Oak	9	10"	90
Oak	14	7"	98
Oak	2	6"	12
Oak	1	22"	22
Oak	3	11"	33
Oak	3	9"	27
Oak	4	8"	32
Oak	9	12"	108
PINE	2	10"	20
	48		452

Existing Trees to be Removed

TYPE	COUNT	SIZE	INCHES
Camphor	1	40"	40
Fir	1	30"	30
Fir	1	32"	32
Fir	1	40"	40
Magnolia	1	8"	8
Magnolia	2	6"	12
Oak	3	15"	45
Oak	2	28"	56
Oak	7	6"	42
Oak	1	11"	11
Oak	2	21"	42
Oak	2	22"	44
Oak	1	24"	24
Oak	1	36"	36
Oak	1	30"	30
Oak	8	13"	104
Oak	12	9"	108
Oak	13	7"	91
Oak	17	12"	204
Oak	5	18"	90
Oak	2	16"	32
Oak	16	8"	128
Oak	3	20"	60
Oak	25	10"	250
Oak	9	14"	126
PINE	1	8"	8
PINE	2	6"	12
PINE	2	10"	20
PINE	1	13"	13
	143		1738

**NOTE:**  
 City Standards for Tree Protection are required during development and construction activities as listed within LDC Sec. 5-95

**NOTE:**  
 Tree preservation area to be 15% of developed area.  
 Developed area = 245,304 sf. (100%)  
 Preservation area = 36,796 sf. (15%)



1 TYPICAL TREE PROTECTION DETAIL  
 TM-1 SCALE= N.T.S.

**NOTE:**  
 Posts shall be used as protective barriers to the roots and trunk of every tree on the parcel being developed. The posts shall be placed at points not closer than three-quarters (3/4) the radius of the drip-line of the protected tree, unless the structure has been permitted by Planning, Zoning & Development Department to be erected within the drip-line of a tree with a wide canopy. Each section of the barrier shall be clearly visible (flagged with brightly colored plastic tape or other markers). No attachments or wires other than those with protective or non-damaging nature shall be attached to any tree.

IF LESS THAN 24"x36" SHEET HAS BEEN REDUCED, ADJUST THE SCALE TO THE DRAWING ACCORDINGLY.

LANDSCAPE ARCHITECT  
 Robert R. Buchanan LA0000932

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 OWNERS OF UNDERGROUND  
 FACILITIES NO LESS THAN TWO  
 (2) DAYS PRIOR TO EXCAVATION

MJM Associates  
 1030 N. Orange Avenue  
 Suite 200  
 Orlando, FL 32801

**LANDSCAPE**  
**dynamics**  
 LANDSCAPE ARCHITECTS AND PLANNERS

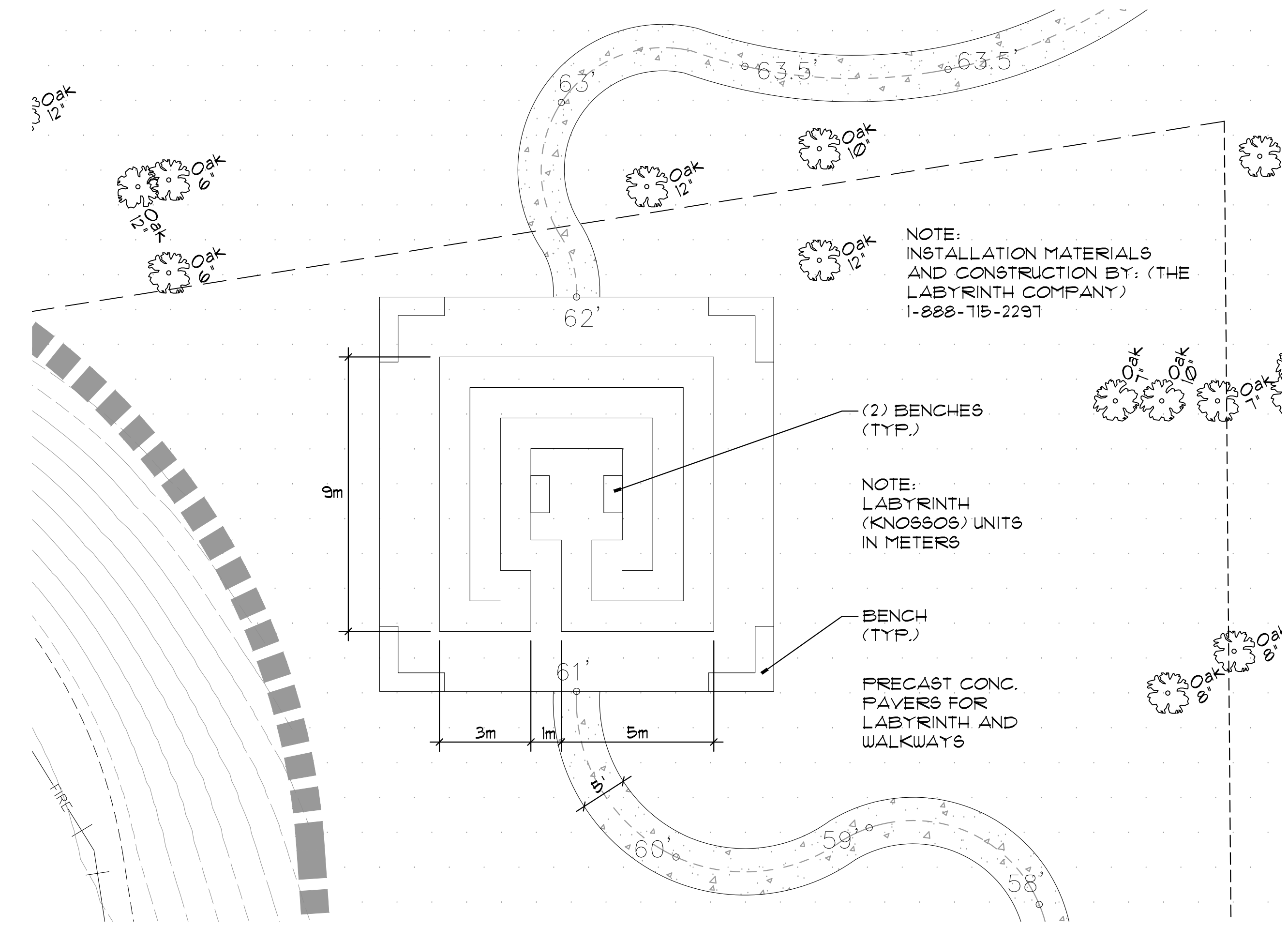
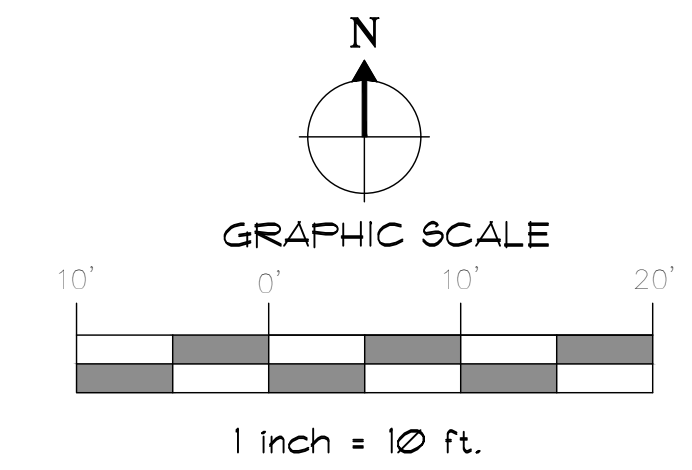
**Tree Mitigation Plan**  
 Canterwood at DeBary ALF/MC  
 DeBary, Florida

REVISIONS  
 1/7/18 Comments  
 2/7/18 Landscape Upgrade  
 3/1/18  
 4/1/18  
 5/1/18  
 6/1/18  
 7/1/18

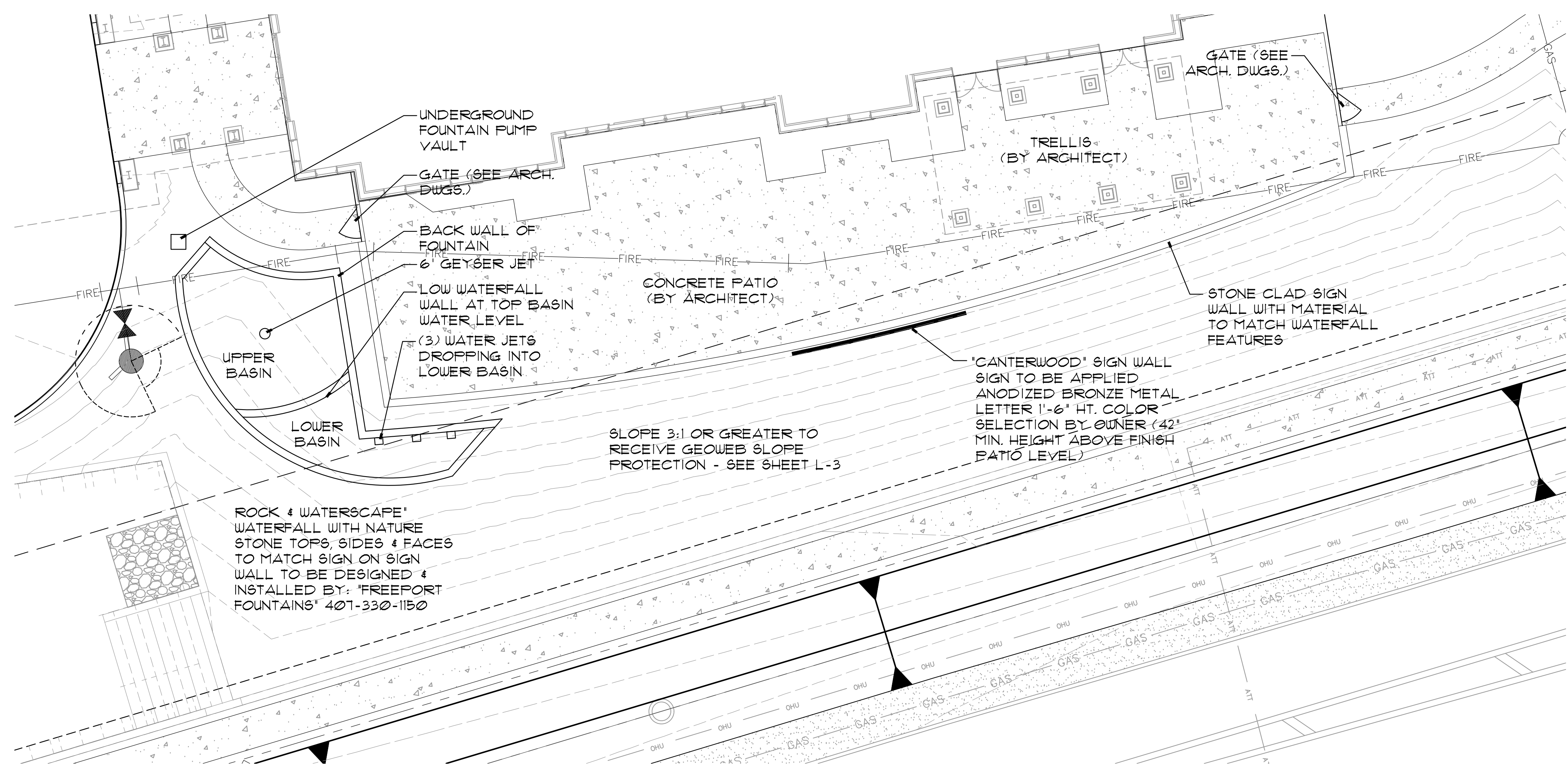
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 JOB NUMBER: 17-027  
 DRAWN BY: BEB  
 FILE: TREE MITIGATION  
 SCALE: 1:30

**TM-1**





1 KNOSSOS LABYRINTH HARDSCAPE FEATURE ENLARGEMENT  
H-1 SCALE= 1 : 10



2 WATERSCAPE FEATURE ENLARGEMENT  
H-1 SCALE= 1 : 10

**NOTE:**  
CONSTRUCTION OF SIDEWALKS OR PAVEMENT INTO THE SIDEWALK TRUST FUND ARE REQUIRED PER LDC SEC. 4-26(1)

IF LESS THAN 24"x36" SHEET HAS BEEN REDUCED. ADJUST THE SCALE TO THE DRAWING ACCORDINGLY.

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Robert R. Buchanan LA0000932  
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Orlando, FL 32801

**LANDSCAPE DYNAMICS**  
LANDSCAPE ARCHITECTS AND PLANNERS

**Hardscape plan**  
Canterwood at DeBary ALF/MC  
DeBary, Florida

P.O. BOX 2852 - Winter Park, Florida 32790-2852 - Phone: 407-279-8811 - Email: randy@landscape-dynamics.com

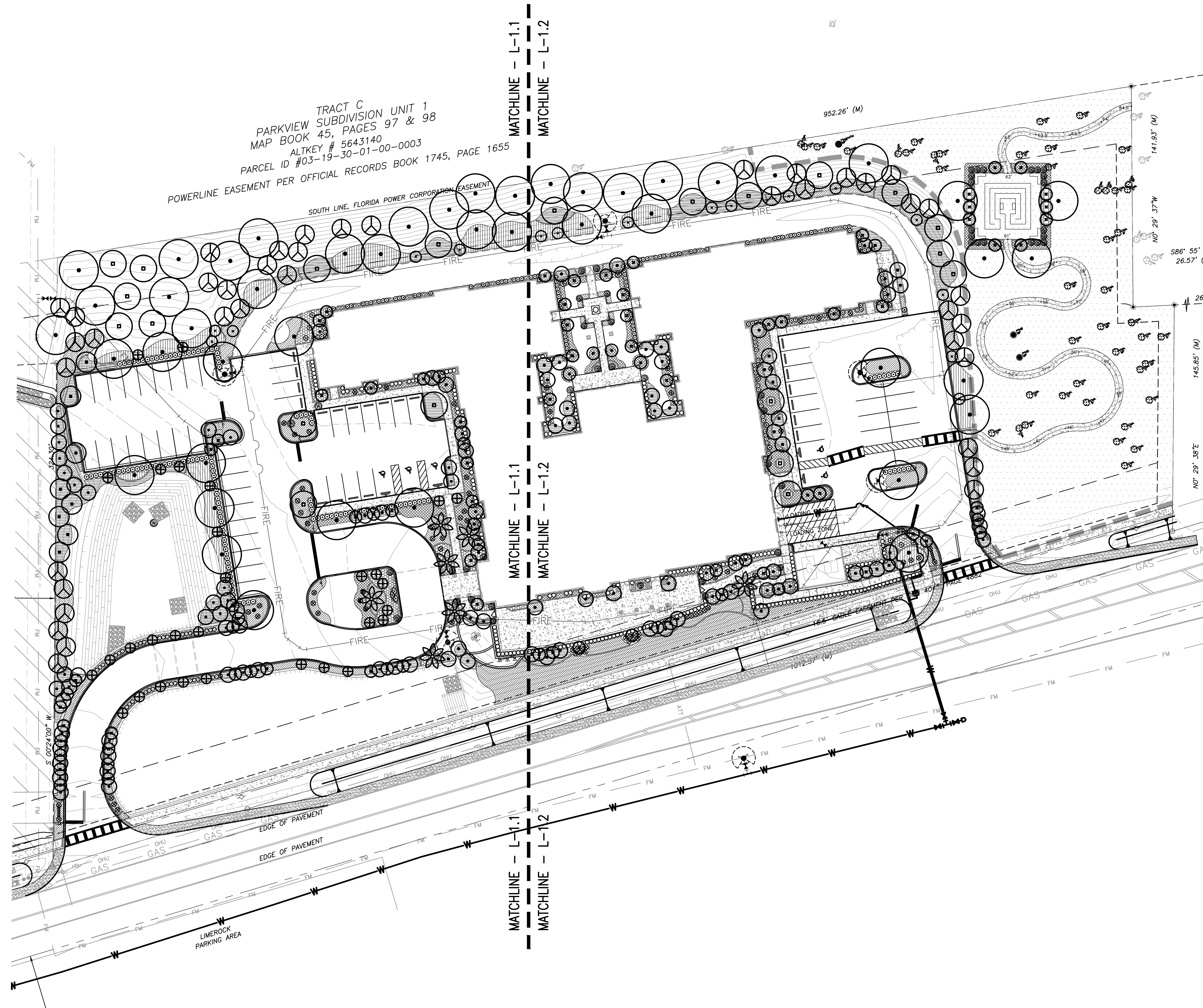
REVISIONS
1) 7/15/18 Comments
2) 7/15/18 Landscape Upgrades
3)
4)
5)
6)
7)
8)

DATE: 06-05-17  
JOB NUMBER: 17-027  
DRAWN BY: RBG  
FILE: HARDSCAPE  
SCALE: 1" = 10'

**H-1**



IF LESS THAN 24"x36" SHEET HAS BEEN REDUCED, ADJUST THE SCALE TO THE DRAWING ACCORDINGLY.



TRACT C  
PARKVIEW SUBDIVISION UNIT 1  
MAP BOOK 45, PAGES 97 & 98  
ALTKEY # 5643140  
PARCEL ID #03-19-30-01-00-0003  
POWERLINE EASEMENT PER OFFICIAL RECORDS BOOK 1745, PAGE 1655

Overall Plant List - Canterwood at DeBary

CNT	SYM	BOTANICAL	COMMON	SPECIFICATIONS
<b>Trees</b>				
48	EC	Eugenia compacta	Conical Topiary	6' ht., 2-2.5' spr.
30	IVS	Ilex xNellie R. Stevens'	Nellie R. Stevens Holly	8' ht., 3-4' spr.
88	LJ	Ligustrum japonicum	Ligustrum	6-8' ht., 6-8' spr.
21	MG	Magnolia grandiflora	Southern Magnolia	10-12' ht., 4-5' spr.
8	MV	Magnolia virginiana	Sweetbay Magnolia	8-10' ht., 4-5' spr.
40	FE	Pinus elliptii	Slash Pine	10-12' ht., 4-5' spr.
7	FS	Phoenix sylvestris	Sylvester Palm	8' c.t. diamond cut
46	QV	Quercus virginiana	Live Oak	12-14' ht., 5-6' spr.
43	SP	Sabal palmetto	Cabbage Palm	8-16' c.t.
60	TF	Trachycarpus fortunei	Windmill Palm	8-16' c.t.
4	MGL	Magnolia grandiflora 'Little Gem'	Little Gem Magnolia	6' ht., 2.5' spr.
16	MC	Myrica cerifera	Wax Myrtle	6-8' ht., 6-8' spr.
<b>Shrubs &amp; Groundcover</b>				
170	IP	Illicium parviflorum	Yellow Anise	24-30' ht. x 18-24' spr., 30' o.c.
151	MF	Myrcianthes fragrans	Simpson's Stopper	24-30' ht. x 18-24' spr., 36' o.c.
351	FM	Podocarpus macrophyllus	Podocarpus	24-30' ht. x 18-24' spr., 30' o.c.
387	JF	Juniperus davurica 'Parsons'	Parsons Juniper	1 gal., full, 30' o.c.
406	LMA	LANTANA camara 'Anne Marie'	Anne Marie Lantana	1 gal., full, 24' o.c.
859	MC2	Muhlenbergia capillaris	Red Muhly Grass	1 gal., full, 36' o.c.
183	SR	Serenca repens	Scrub Palmetto	3 gal., full, 48' o.c.
716	VOW	Viburnum obovatum 'Mrs. Schiller's Delight'	Walter's Viburnum	1 gal., full, 30' o.c.
1131	TAT	Trachelospermum asiaticum 'Tricolor'	Tricolor Dwarf Jasmine	1 gal., full, 24' o.c.
588	GS	Gelsemium sempervirens	Carolina Jessamine	1 gal., full, 24' o.c.
67	ZI	Zamia integrifolia	Coontie	3 gal., as shown
2	LS	Lonicera sempervirens	Honeysuckle	3 gal., as shown
4	HP	Hamella patens	Firebush	3 gal., as shown
3	SR2	Strelitzia reginae	Orange Bird of Paradise	15 gal., as shown
<b>Sod &amp; Mulch</b>				
	MULCH		Mini Pine Bark/Pine Straw	3' Depth
	SOD	Zoysia japonica	Zoysia Grass	solid sod, weed free, count by contractor
	AUG	Stenotaphrum secundatum 'Palmetto'	Palmetto St. Augustine	solid sod, weed free, count by contractor
	BAH	Paspalum notatum	Bahia Sod	solid sod, weed free, count by contractor

WILDFLOWER PLANTING NOTE:

SEE SHEET L-3 FOR WILDFLOWER PLANTING DETAIL AND SPECIFICATIONS

NOTES:

- 1) PLAN DESIGNED PER SECTIONS 5-9 TO 5-12 OF THIS CODE.
- 2) A PERMANENT UNDERGROUND IRRIGATION SYSTEM SHALL BE PROVIDED FOR ALL LANDSCAPE AREAS.
- 3) ALL PLANT MATERIAL TO BE FLORIDA FRIENDLY AND FLORIDA GRADE #1 OR BETTER.
- 4) SOD ALL DISTURBED AREAS.
- 5) CONTINUED MAINTENANCE OF THE COMMON OPEN SPACE AREAS AND FACILITIES IS REQUIRED PER LDC SEC. 4-62 (CX2X1)
- 6) SLOPES 3:1 OR GREATER TO RECEIVE GEOWEB SLOPE PROTECTION. SEE SHEET L-3.

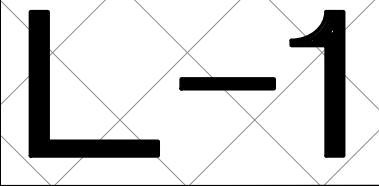
LANDSCAPE ARCHITECT:  
Robert R. Buchanon LA0000932  
FLORIDA LANDSCAPE ARCHITECTS BOARD  
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EXCISE TAX TO NOTIFY  
FACILITIES NO. LESS THAN TWO  
DAYS BEFORE TO BE EXAMINED

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Orlando, FL 32801



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REVISIONS  
1) 7/18/15 Comments  
2) 7/18/15 Landscape Upgrade  
3) 7/18/15  
4) 7/18/15  
5) 7/18/15  
6) 7/18/15  
7) 7/18/15

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JOB NUMBER: 17-027  
DRAWN BY: BEB  
FILE: LANDSCAPE  
SCALE: 1" = 40'





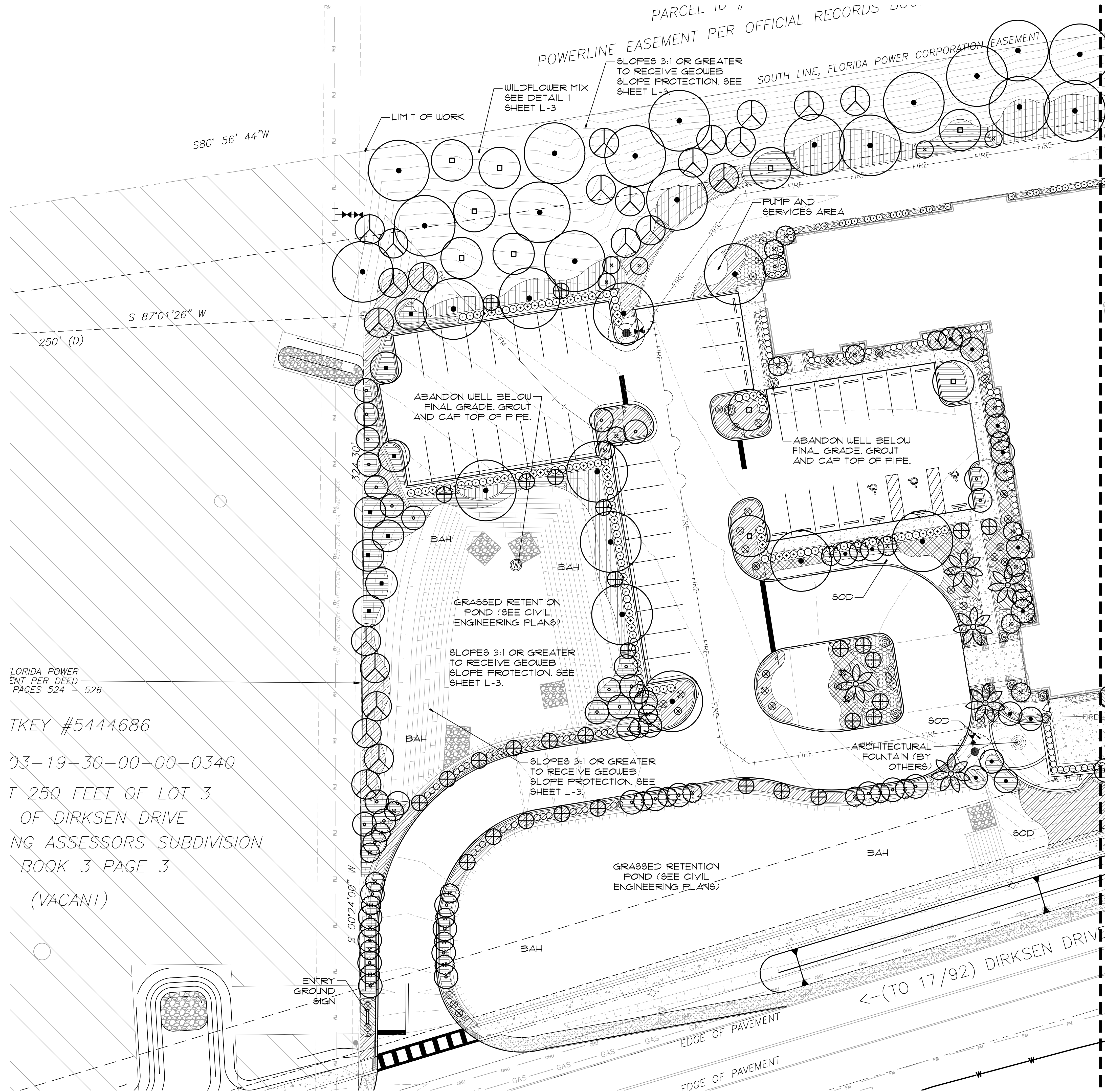
IF LESS THAN 24"x36" SHEET HAS BEEN REDUCED, ADJUST THE SCALE TO THE DRAWING ACCORDINGLY.

FLORIDA POWER CORPORATION EASEMENT PER DEED PAGES 524 - 526

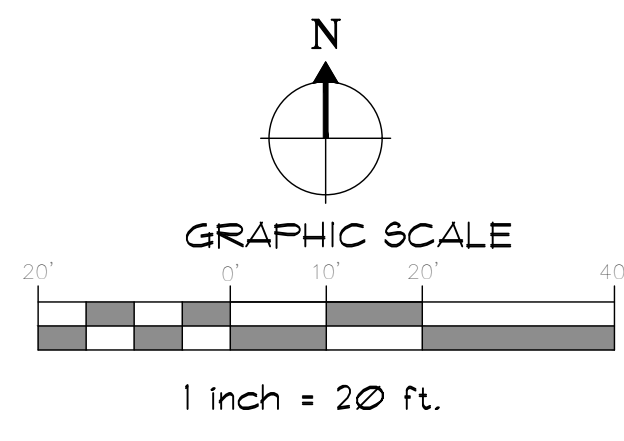
TKEY #5444686

03-19-30-00-00-0340

250 FEET OF LOT 3 OF DIRKSEN DRIVE NG ASSESSORS SUBDIVISION BOOK 3 PAGE 3 (VACANT)



PLANT SYMBOLS	
<b>TREES</b>	
(Symbol)	EC
(Symbol)	IVS
(Symbol)	LJ
(Symbol)	MG
(Symbol)	MV
(Symbol)	PE
(Symbol)	PS
(Symbol)	QV
(Symbol)	SP
(Symbol)	TF
(Symbol)	MGL
(Symbol)	MC
<b>SHRUBS</b>	
(Symbol)	TF
(Symbol)	TF
(Symbol)	TF
(Symbol)	ZI
(Symbol)	L6
(Symbol)	SR
<b>GROUNDCOVERS</b>	
(Symbol)	JF
(Symbol)	LMA
(Symbol)	MC
(Symbol)	SR
(Symbol)	VOW
(Symbol)	TAT
(Symbol)	GS



LANDSCAPE ARCHITECT:  
Robert R. Buchanan LA0000932

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**Landscape Plan**  
Canterwood at DeBary ALF/MC  
DeBary, Florida

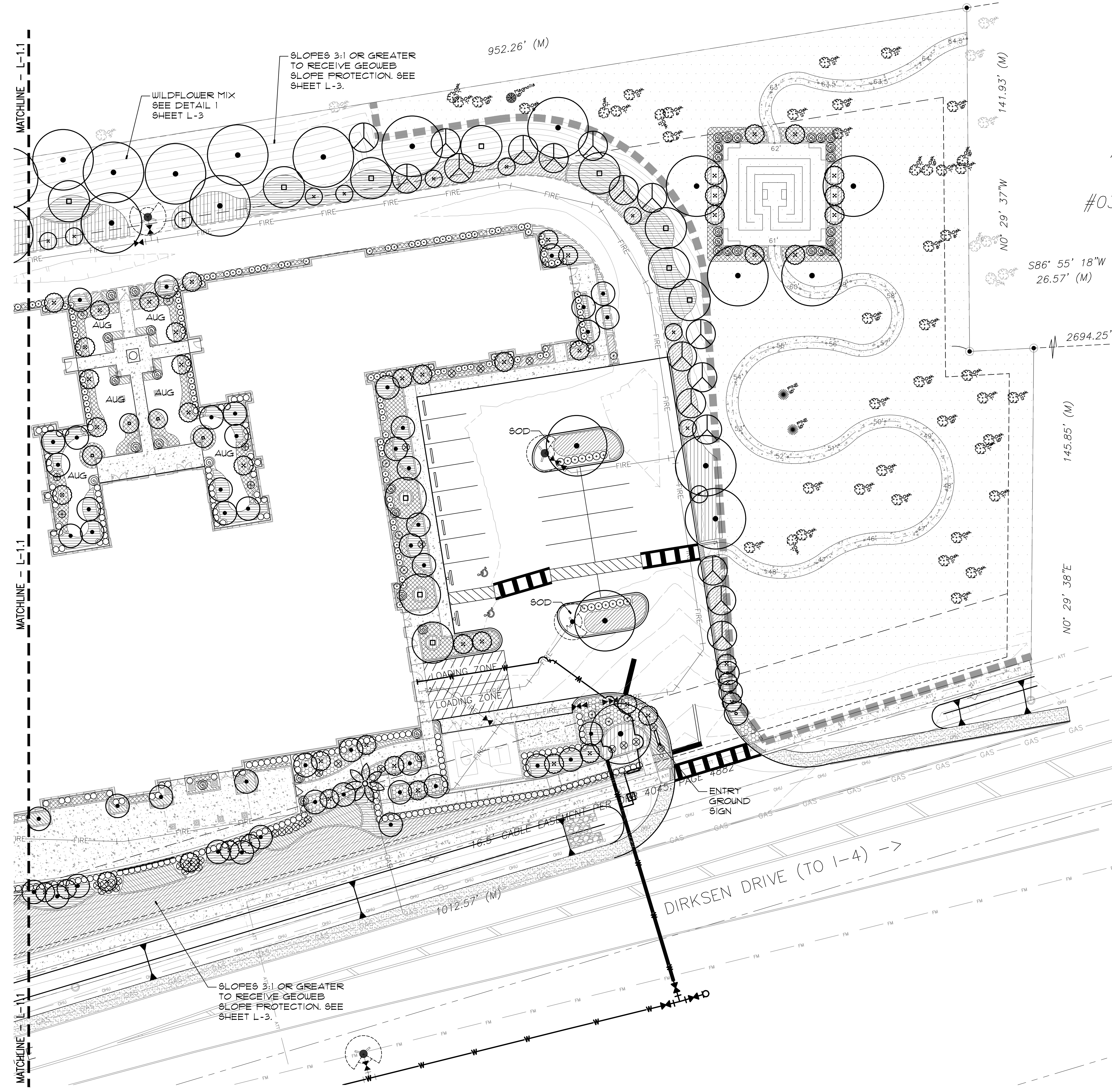
REVISIONS  
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2 7/15/16 Landscape Upgrade  
3 7/15/16  
4 7/15/16  
5 7/15/16  
6 7/15/16  
7 7/15/16

DATE: 06-05-17  
JOB NUMBER: 17-027  
DRAWN BY: RBG  
FILE: LANDSCAPE  
SCALE: 1" = 20'

**L-11**



IF LESS THAN 24"x36" SHEET HAS BEEN REDUCED, ADJUST THE SCALE TO THE DRAWING ACCORDINGLY.



PLANT SYMBOLS

TREES	
⊙	EC
⊕	IVS
⊗	LJ
□	MG
■	MV
⊗	FE
⊗	FB
●	QV
○	SP
○	TF
○	MGL
⊗	TC
SHRUBS	
⊕	TF
⊕	TF
⊕	TF
⊕	ZI
⊕	L6
⊕	SR
GROUNDCOVERS	
▨	JP
▨	LMA
▨	MC
▨	SR
▨	VOW
▨	TAT
▨	GS

LANDSCAPE ARCHITECT  
Robert R. Buchanan LA0000932

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UTILITIES NO LESS THAN TWO  
BUSINESS PRECEDING EXCAVATION

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**DYNAMICS**  
CONSULTANTS ARCHITECTS & PLANNERS  
LANDSCAPE ARCHITECTS AND PLANNERS

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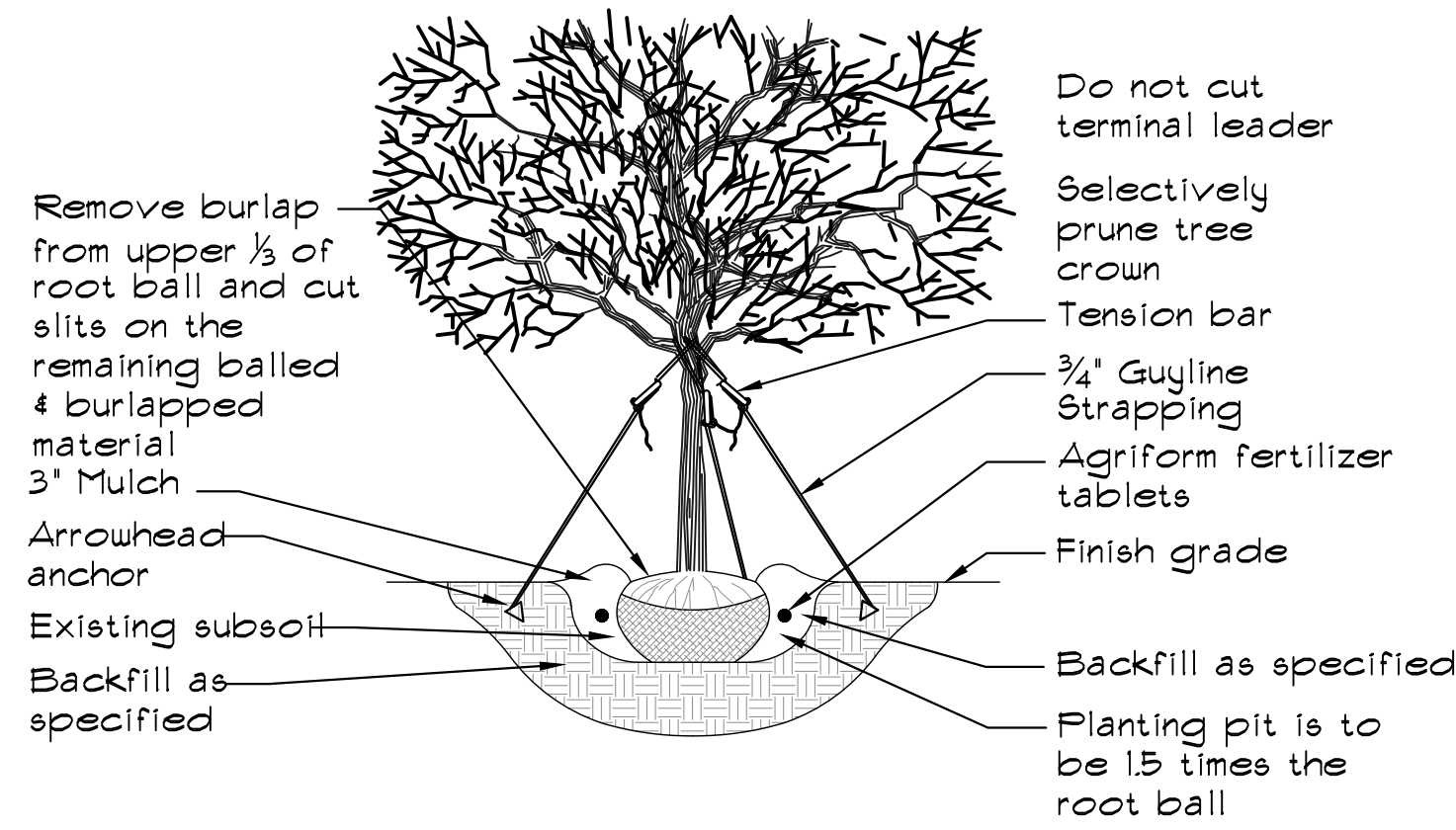
**Landscape Plan**  
Canterwood at DeBary ALF/MC  
DeBary, Florida

REVISIONS  
1. 7/18/15 Comments  
2. 7/18/15 Landscape Upgrades  
3. 7/18/15  
4. 7/18/15  
5. 7/18/15  
6. 7/18/15  
7. 7/18/15  
8. 7/18/15

DATE: 06-05-17  
JOB NUMBER: 17-027  
DRAWN BY: RBG  
FILE: LANDSCAPE  
SCALE: 1" = 20'

**L-12**

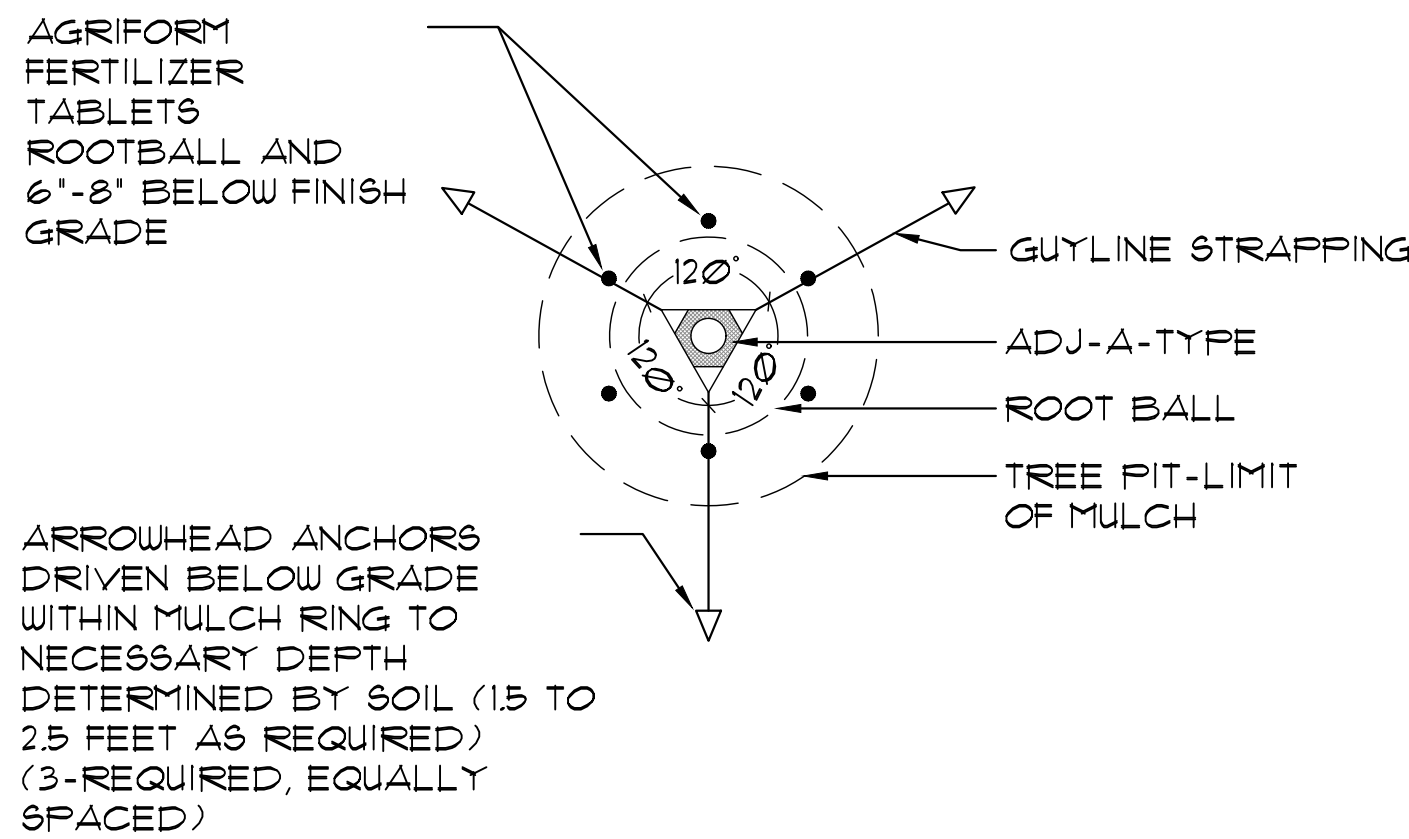




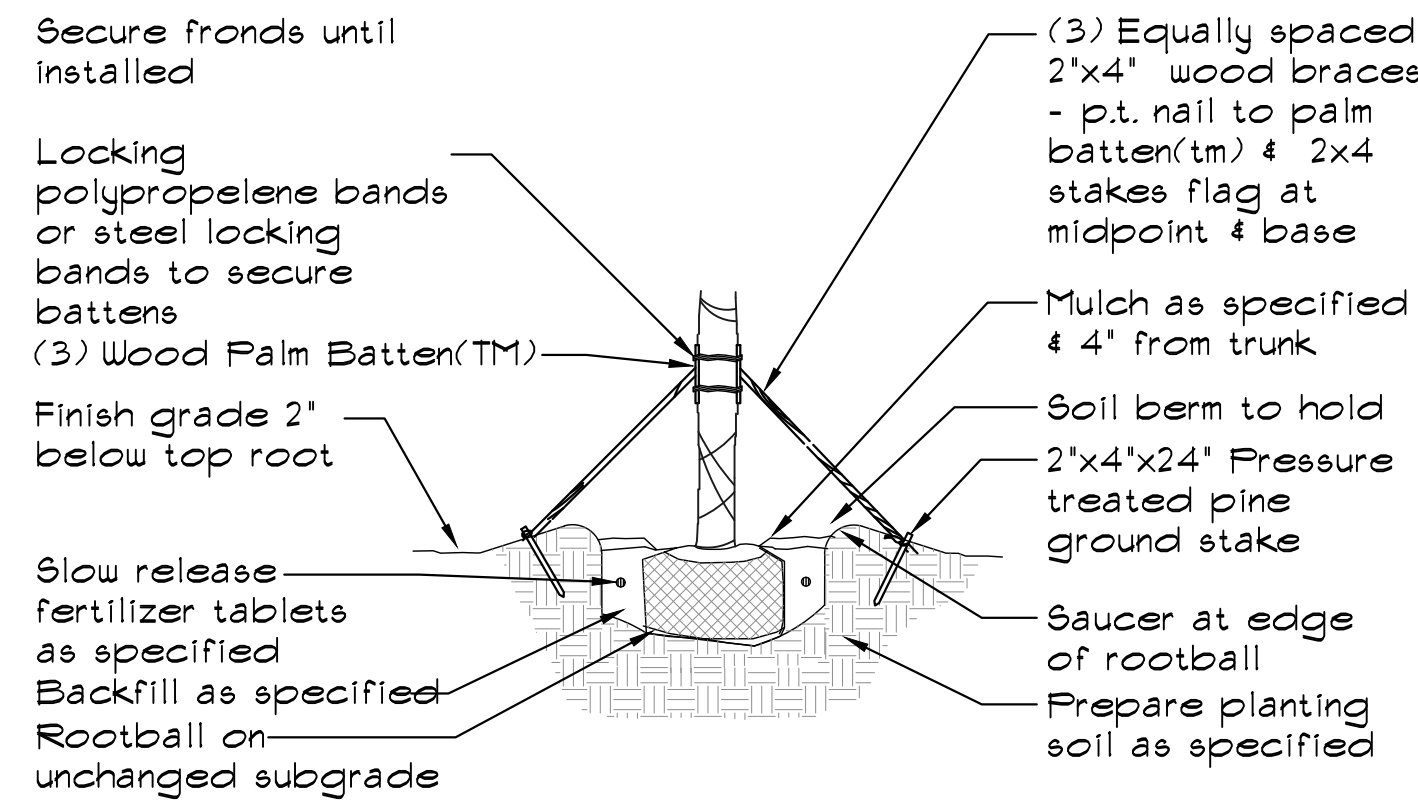
**PRO20:**  
For up to 2' Caliper Trees  
(3) ARBORGUY™ Guylines 3/4" x 12' = 600 lb test Black or Green, UV resistant, polypropylene strapping  
(3) 'Tool-Free' Tension Bars™  
(3) Arrowhead \*Anchors (4" x 3-3/4")

**PRO40:**  
For up to 4' Caliper Trees  
(3) ARBORGUY™ Guylines 1"x12' = 600 lb test, Black or Green, UV resistant polypropylene strapping  
(3) 'Tool-Free' Tension Bars™  
(3) Arrowhead Anchors (4-3/4"x3-3/4")

**1** ARBORGUY PRO20/PRO40 STAKING AND PLANTING DETAIL  
L-2 SCALE= N.T.S.



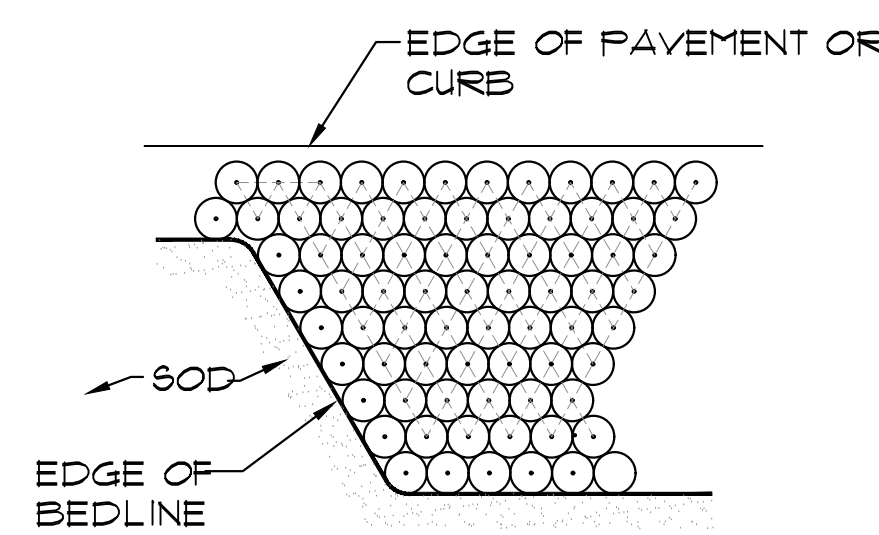
**3** TREE STAKING DETAIL  
L-2 SCALE= N.T.S.



**PBKM (Metal Bands)**  
(3) 1 1/2"x3 1/2"x12" (2x4 wood) battens with 5 layers of burlap backing and (4) staple guides for banding, pre-notched (to accept 2"x4"x8' support braces)  
(2) 44' plated carbon steel bands with tensioning and locking screw / clamp

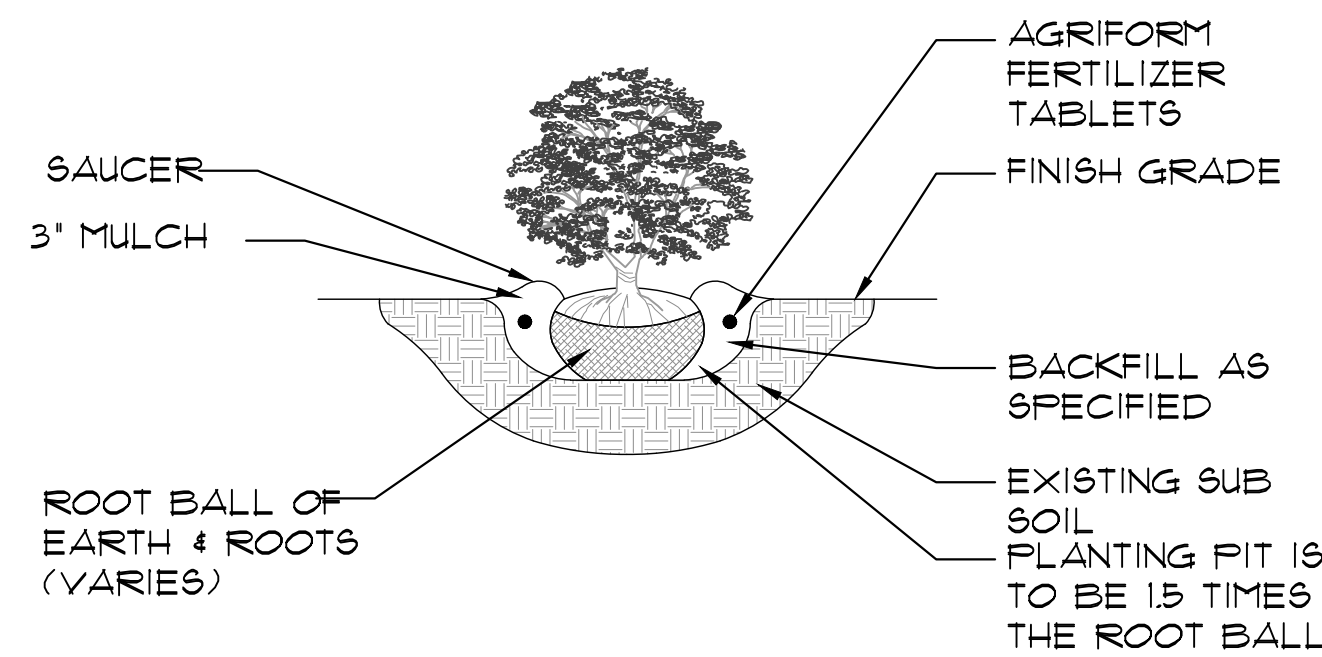
**PBKC (Polypropylene Bands)**  
(3) 1 1/2"x3 1/2"x12" (2x4 wood) battens with 5 layers of burlap backing and (4) staple guides for banding, pre-notched (to accept 2"x4"x8' support braces)  
(2) 8'x1', 600 lb test webbing bands with metal spring locking clamps

**2** ARBORGUY PALM BATTEN DETAIL  
L-2 SCALE= N.T.S.

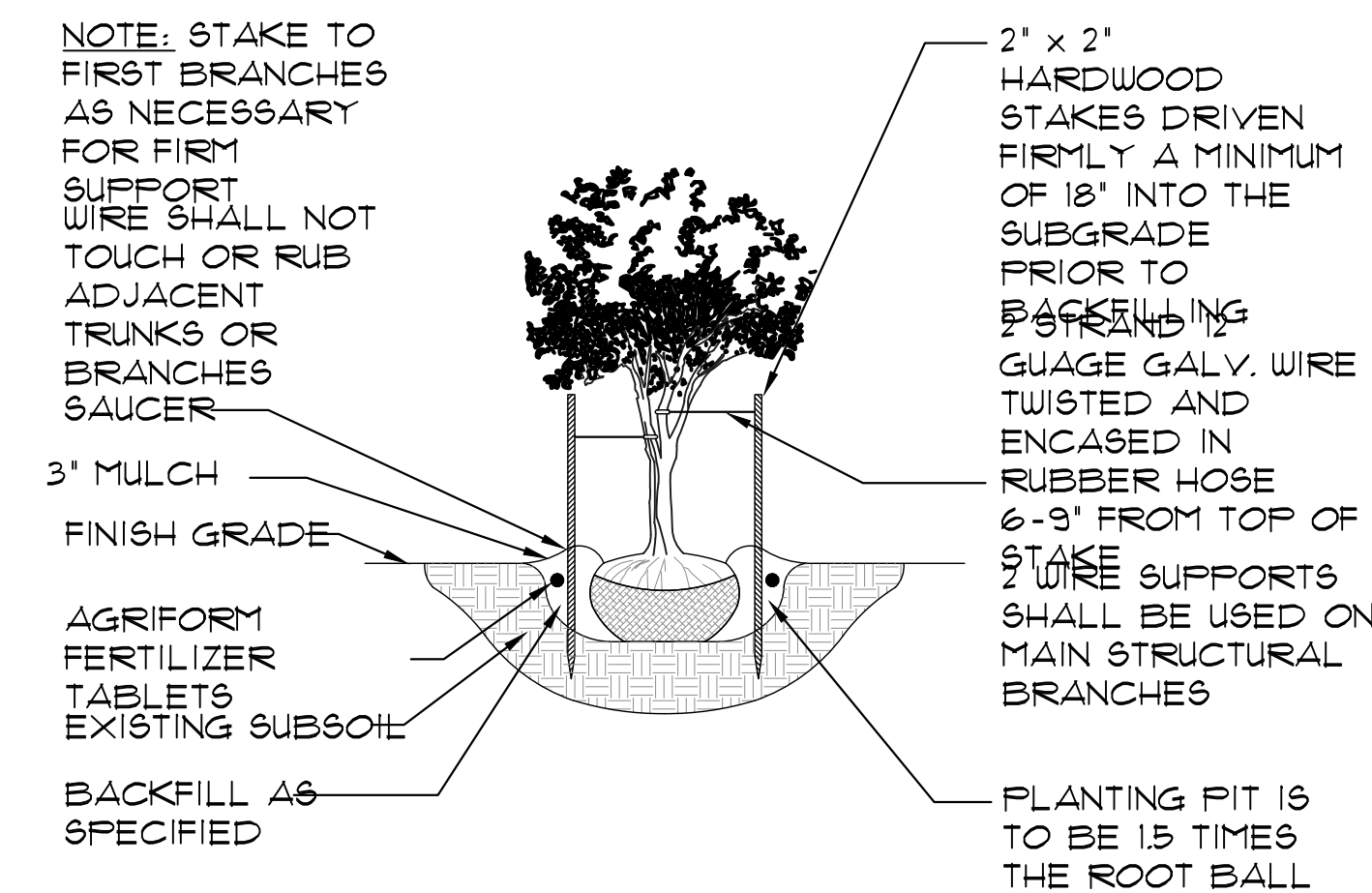


NOTE: FORM EDGE OF BED, THEN FILL IN BED AT TRIANGULAR SPACING AS SPECIFIED ON PLANT LIST.

**4** TYPICAL SPACING DETAIL  
L-2 SCALE= N.T.S.



**5** TYPICAL SHRUB/GROUNDCOVER PLANTING DETAIL  
L-2 SCALE= N.T.S.



**6** MULTI-TRUNK SPACING DETAIL  
L-2 SCALE= N.T.S.

**GENERAL LANDSCAPE NOTES:**

Failure to notify Landscape Architect of plan, detail, or specification discrepancies prior to construction, makes contractor responsible for all costs incurred for construction charges, not the owner or his representative (Landscape Dynamics Construction Co. Inc.) The Owner must maintain the height of all plants within the 'Line-Of-Site' triangle area to a height of no greater than 24' above grade for shrubs and groundcover, and tree branching no lower than 72' above finish grade, to ensure clear site line views toward traffic at road and driveway intersections. Landscape Dynamics Construction Co. Inc., is not responsible for continued maintenance of such plant material. The owner, leasing company and/or the landscape maintenance company accepts full responsibility for these maintenance requirements.

- Landscape contractor (LC) shall be responsible for all materials and work called for on the landscape plans and in the landscape notes and legend. Plant specifications are minimum acceptable sizes. Plans shall rule if there are any quantity discrepancies between the legend and plans. Final quantity takeoffs are the responsibility of the LC. Notify the Landscape Architect of any discrepancies.
- LC shall comply with all local codes and ordinances and obtain all permits and bonds necessary to construct the project.
- LC shall coordinate their work with other contractors to assure efficient and timely completion of the work.
- LC shall be responsible for supplying all materials, labor, and equipment for the performance of their portion of the work.
- LC to verify all existing grades, dimensions, adequate drainage, suitable planting soil and field conditions and notify owner of discrepancies before proceeding with work. Per FL Statutes, LC to call Sunshine State One (811) 72 hours prior to digging to have all utilities located.
- LC to protect existing utilities, structures, surfaces, and vegetation noted to be saved and be responsible for repair/replacement. Undergound objects/utilities or the accuracy of property lines or information portrayed on surveys or on documents or plans provided by others. Owner or their agent is solely responsible for future maintenance of all plantings to maintain safe visibility within all visibility sight triangles and vehicular use and pedestrian areas within and immediately adjacent to the site.
- Round-Up shall be applied twice at ten day intervals onto all existing vegetation, sod, and groundcover areas that are to be replanted. Extreme care shall be taken to prevent overspray and/or drift onto existing plant material to be saved. Mfr's recommendations shall be followed. Remaining weeds and their roots shall be removed by hand prior to installation of plants. Resprouting weeds and plants are the responsibility of the LC through the one year warranty period.
- All plant materials shall be graded Florida No. 1 or better as outlined under current Grades and Standards for Nursery Plants, Division of Plant Industry, State of Florida, unless otherwise noted. All plants not listed shall conform to a Florida No. 1 or better as to: (1) health and vitality, (2) condition of foliage, (3) root system, (4) freedom from pest or mechanical damage, (5) heavily branched and densely foliated according to the accepted normal shape of the species. LC to obtain written certification from nurseries that plant materials are Florida No. 1 or better. Trees up to 4" caliper measured at 6" above soil line and over 4" caliper at 12" above soil line unless otherwise noted. All specifications to be met or exceeded unless otherwise noted. All rootballs and containers to be free of weeds and their roots.
- Planting soil of Fla. peat mixed 1/2 with clean topsoil for the backfilling of plant pits and beds shall be required only if existing soil is unsuitable for planting and/or contains lime rock or construction debris (to be removed).
- Trees and palms shall be installed so their top main root at the trunk is visible and 2" above finished grade. If root is buried, remove soil from the top of the rootball prior to installation. Do not apply the 1 1/2" of mulch to the top of the rootball until after inspection of each tree or palm.
- Landscape Architect is not responsible for adverse soil or drainage conditions, determining sub-surface soil conditions, underground objects/utilities or the accuracy of property lines or information portrayed on surveys or on documents or plans provided by others. Owner or their agent is solely responsible for future maintenance of all plantings to maintain safe visibility within all visibility sight triangles and vehicular use and pedestrian areas within and immediately adjacent to the site.
- Finished grade prior to mulching or sodding to be 3" below top of adjacent surfaces such as walks, curbs and driveways extending perpendicularly from the surface edge for a minimum distance of 18". See detail.
- All palms, trees, shrubs, and groundcovers shall be fertilized with Agriform 20-10-5 or SierraTabs 16-8-12 planting tablets. One tablet/ 1 gal, 2 tablets/ 3 gal, 3 tablets/ 5 or 7 gal, 4 tablets/ 10 gal and one tablet/ each 1/2' of tree trunk diameter. Application shall be as per the details and mfr's recommendation.
- All planting beds (except for annuals) and trees to receive med. pine bark mulch. Due to environmental concerns, cypress mulch shall NOT be used. All tree rootballs (which require 4 foot wide mulch rings in turf areas) shall be mulched to a maximum 1 1/2" depth (to aid water penetration) following inspection. All other planting beds to receive a 3" depth. Mulch shall not touch trunks or stems or be applied within the crowns of groundcovers or over their branches or foliage. Mulch is to be applied by hand and shall not be "blown in".
- LC to maintain all plant material in a plumb, upright and stable condition. All trees/palms to be guyed/staked as per details.
- LC to remove all bags (unless biodegradable), tags, ties, wires, ropes, stakes and nursery attachments from all plant material.
- LC shall be responsible to keep plant material in a healthy, watered, insect/pest free condition until owner's final acceptance.
- LC to provide a one-year warranty for trees/palms, shrubs, groundcovers, and vines and thirty days for sod. Warranty period shall start with final acceptance by owner. All plant material shall be alive and in satisfactory growth at the end of the warranty period. Replacement plant material shall be warranted for ninety days (sod for thirty days) from replacement date. Warranty shall apply only to material that dies due to poor quality, improper handling, or installation practices. Generally, material transplanted on-site shall not be warranted. Adverse weather conditions shall not apply. Proper watering and maintenance are the owner's responsibility during the warranty period.
- Provide 100% coverage of all landscape areas using automatic underground irrigation system with rain sensor.

IF LESS THAN 24"x36" SHEET HAS BEEN REDUCED, ADJUST THE SCALE TO THE DRAWING ACCORDINGLY.

LANDSCAPE ARCHITECT  
Robert R. Buchanon LA0000932

CALL SUNSHINE 800-475-8111  
IT'S THE LAW IN FLORIDA  
FLORIDA LAW REQUIREMENTS  
EXCAVATORS TO NOTIFY  
OWNERS OF UNDERGROUND  
UTILITIES NO LESS THAN TWO  
(2) WEEKS PRIOR TO EXCAVATION

MJM Associates  
1030 N. Orange Avenue  
Suite 200  
Orlando, FL 32801

LANDSCAPE ARCHITECTS AND PLANNERS  
**Landscape Dynamics**  
CONSULTANTS ARCHITECTS AND PLANNERS

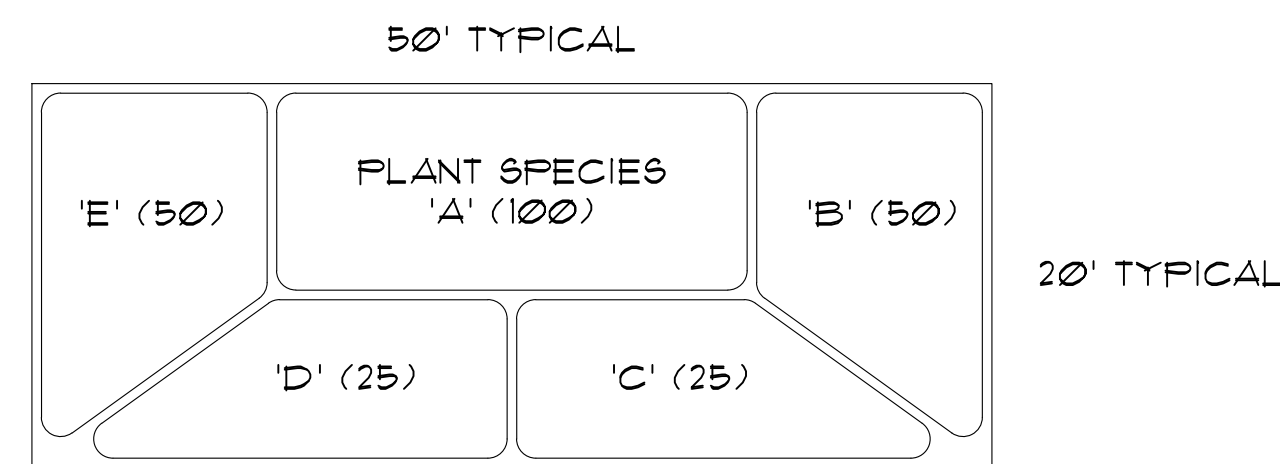
Landscaping Details  
Canterwood at DeBary ALF/MC  
DeBary, Florida

REVISIONS  
1) 7/15/16 Comments  
2) 7/15/16 Landscape Upgrade  
3) 4) 5) 6) 7) 8)

DATE: 06-05-17  
JOB NUMBER: 17-027  
DRAWN BY: BEB  
FILE: LANDSCAPE  
SCALE: N.T.S.

L-2





**1 WILDFLOWER PLANTING DETAIL**  
SCALE= 1:10

Wildflower Plant Species List				
CNT	SYM	BOTANICAL	COMMON	SPECIFICATIONS
	A	<i>Asclepias tuberosa</i>	Butterfly Weed	4" pots, 24" o.c.
	B	<i>Helianthus annuus</i>	Dune Sunflower	4" pots, 24" o.c.
	C	<i>Gaillardia pulchella</i>	Blanket Flower	4" pots, 24" o.c.
	D	<i>Tradescantia virginiana</i>	Blue Spiderwort	4" pots, 24" o.c.
	E	<i>Eragrostis elliottii</i>	Silver Lovegrass	4" pots, 24" o.c.

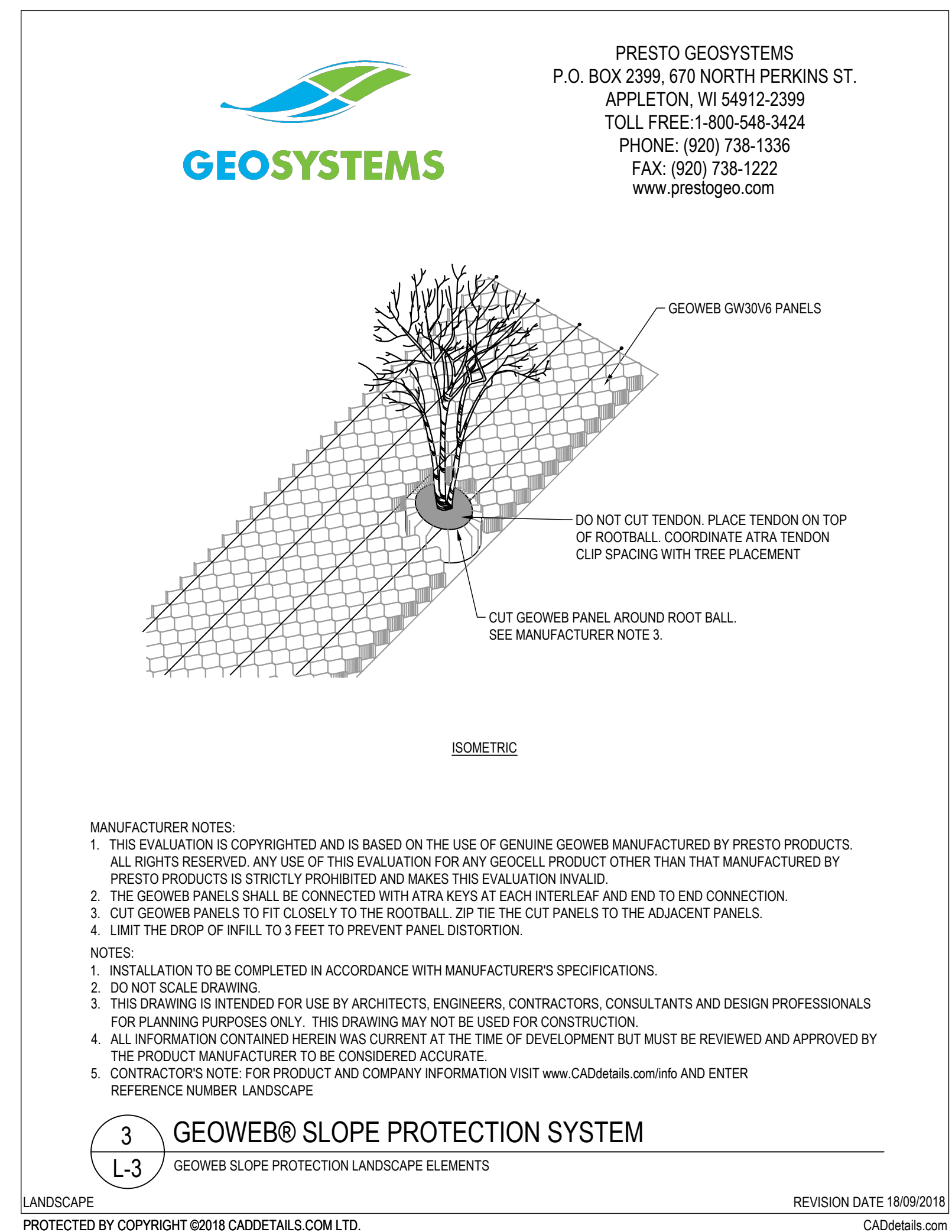
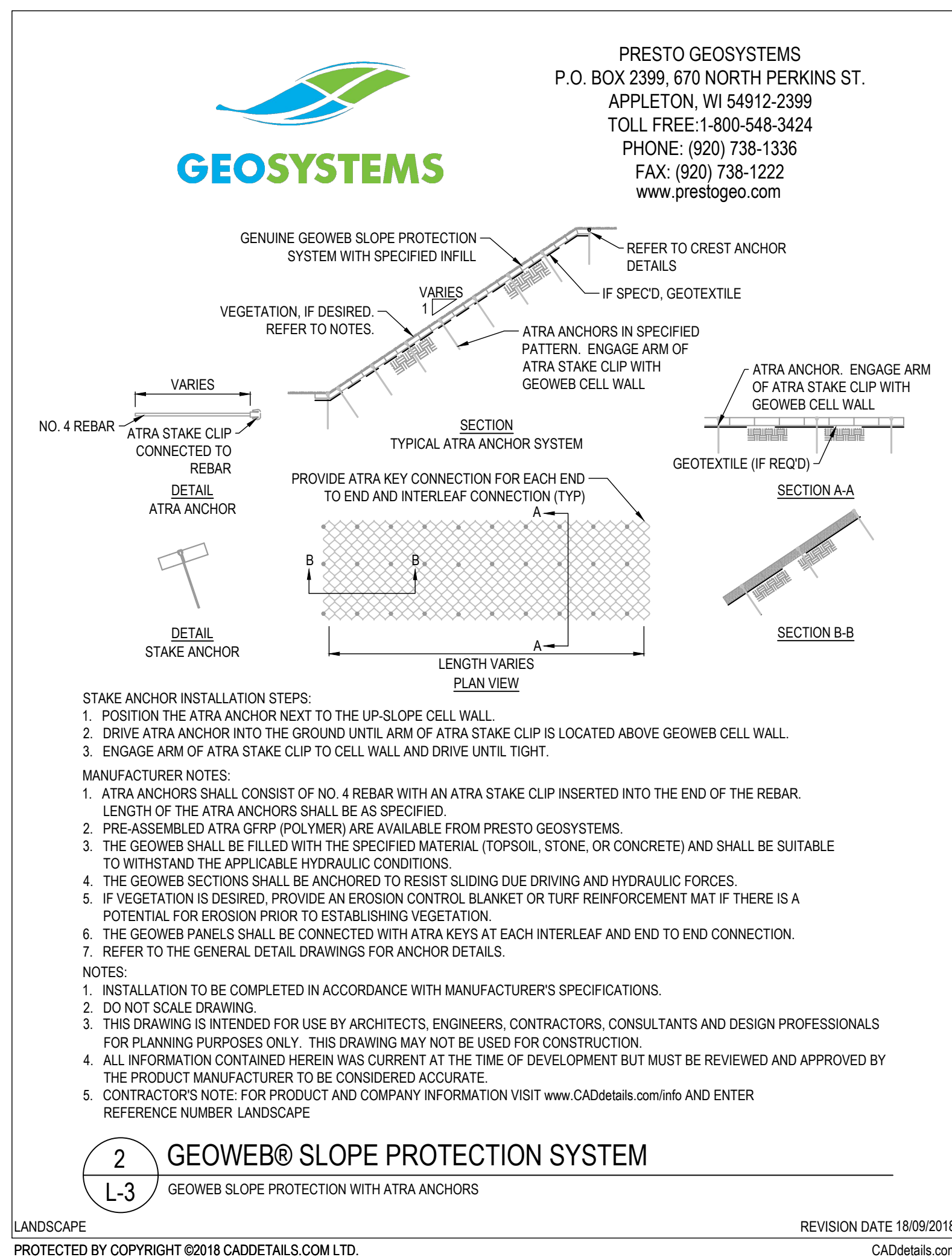
**NOTES:**

INSTALL 4'-6" CLEAN, STERILE TOPSOIL AT DISK OR TILL INTO SOIL AT 4' DEPTH. WATER 1' PRIOR TO WILDFLOWER INSTALLATION.

INSTALL TEMPORARY WATERING SYSTEM (ROTOR/IMPACT) HEAD STYLE TO WATER ENTIRE WILDFLOWER BED AREA.

SEE SHEET IR-1 FOR POINT OF CONNECTION FOR THIS SYSTEM. SUBMIT CUT-SHEETS/SPECS/DETAILS FOR PROPOSED TEMPORARY IRRIGATION SYSTEM INSTALLATION PRIOR TO CONSTRUCTION.

INSTALL PINE STRAW AT 1" DEPTH OVER ENTIRE WILDFLOWER PLANTING AREA. DO NOT COVER INDIVIDUAL PLANTS.



IF LESS THAN 24"x36" SHEET HAS BEEN REDUCED, ADJUST THE SCALE TO THE DRAWING ACCORDINGLY.

LANDSCAPE ARCHITECT:  
Robert R. Buchanan LA0000932

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MJM Associates  
10300 N. Orange Avenue  
Suite 200  
Orlando, FL 32801

LANDSCAPE  
**dynamis**  
CONSULTANTS ARCHITECTS AND PLANNERS

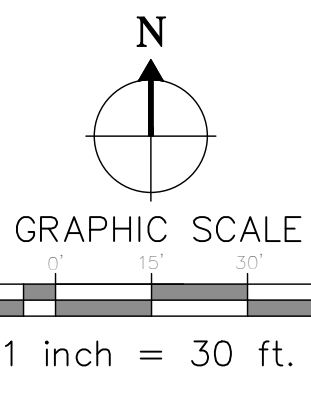
Slope Planting Details  
Canterwood at DeBary ALF/MC  
DeBary, Florida

REVISIONS  
1. 7/15/18 Comments  
2. 7/15/18 Landscape Upgrade  
3. 7/15/18  
4. 7/15/18  
5. 7/15/18  
6. 7/15/18  
7. 7/15/18

DATE: 06-05-17  
JOB NUMBER: 17-027  
DRAWN BY: RBG  
FILE: LANDSCAPE  
SCALE: N.T.S.

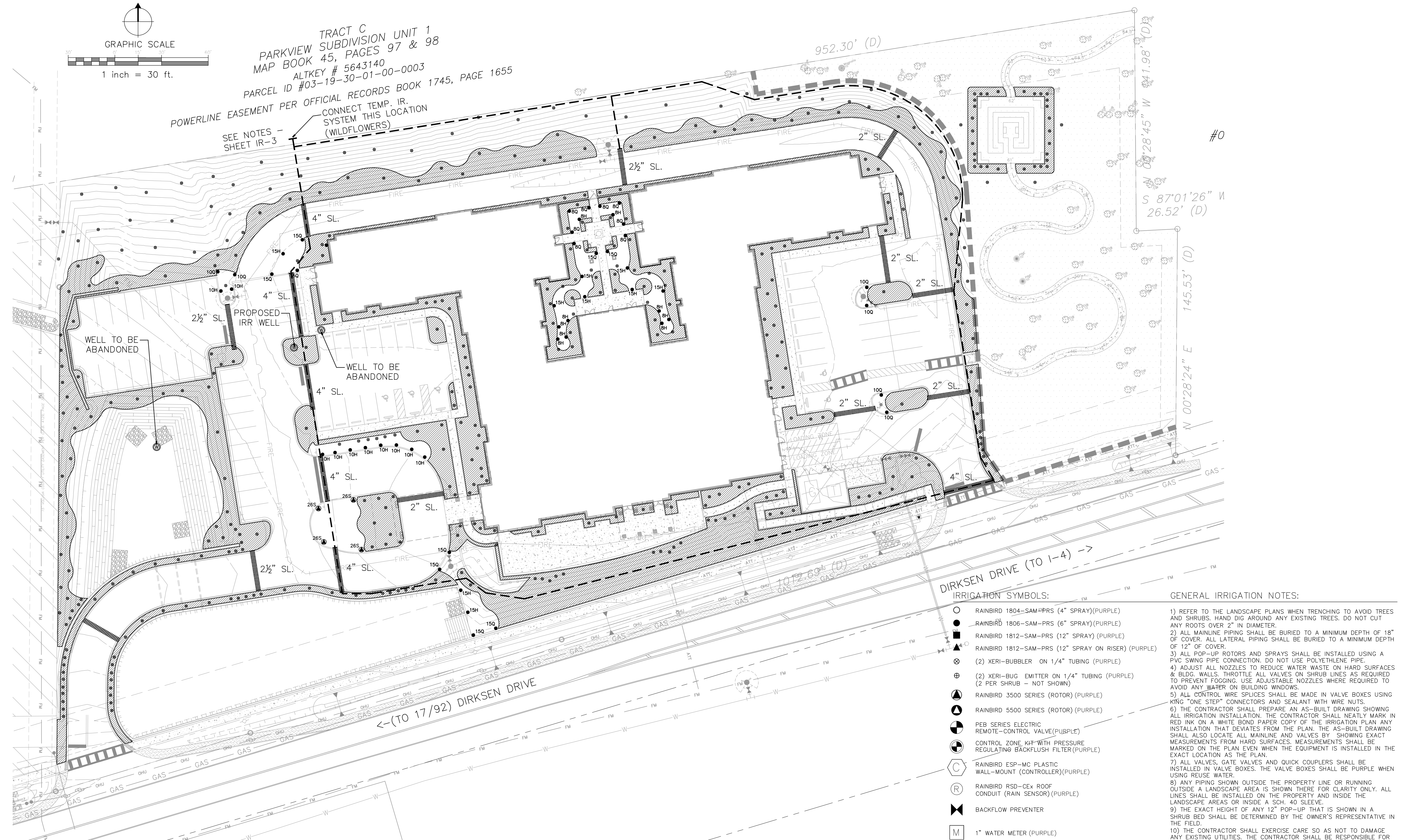
**L-3**





TRACT C  
 PARKVIEW SUBDIVISION UNIT 1  
 MAP BOOK 45, PAGES 97 & 98  
 ALTKEY # 5643140  
 PARCEL ID #03-19-30-01-00-0003  
 POWERLINE EASEMENT PER OFFICIAL RECORDS BOOK 1745, PAGE 1655

CONNECT TEMP. IR.  
 SYSTEM THIS LOCATION  
 (WILDFLOWERS)



**IRRIGATION SYMBOLS:**

- RAINBIRD 1804-SAM-PRS (4" SPRAY)(PURPLE)
- RAINBIRD 1806-SAM-PRS (6" SPRAY)(PURPLE)
- RAINBIRD 1812-SAM-PRS (12" SPRAY) (PURPLE)
- RAINBIRD 1812-SAM-PRS (12" SPRAY ON RISER) (PURPLE)
- (2) XERI-BUBBLER ON 1/4" TUBING (PURPLE)
- (2) XERI-BUG EMITTER ON 1/4" TUBING (PURPLE)
- (2 PER SHRUB - NOT SHOWN)
- RAINBIRD 3500 SERIES (ROTOR) (PURPLE)
- RAINBIRD 5500 SERIES (ROTOR) (PURPLE)
- FEB SERIES ELECTRIC REMOTE-CONTROL VALVE(PURPLE)
- CONTROL ZONE KFT WITH PRESSURE REGULATING BACKFLUSH FILTER(PURPLE)
- RAINBIRD ESP-MC PLASTIC WALL-MOUNT (CONTROLLER)(PURPLE)
- RAINBIRD RSD-CFX ROOF CONDUIT (RAIN SENSOR)(PURPLE)
- X BACKFLOW PREVENTER
- M 1" WATER METER (PURPLE)

- CLASS 200 PVC LATERAL LINE (PURPLE)
- CLASS 200 PVC LATERAL ROTOR LINE (PURPLE)
- POLYETHYLENE TUBING BUBBLER LINE (PURPLE)
- LANDSCAPE DIPLINE TUBING(PURPLE)
- LANDSCAPE DRIP AREA(PURPLE) (TUBING AND EMITTERS 12" O.C.)
- 2" PVC LATERAL MAINLINE (PURPLE)
- PVC SCH 40 SOLVENT WELD SLEEVE PIPE (SL.) - SIZE TO BE DOUBLE THAT OF THE LATERAL LINE (PURPLE)

NOTE: (PIPE TO BE SIZED NOT TO EXCEED A VELOCITY OF 5 FPS / MAX. PSI LOSS IN ZONE LINES NOT TO EXCEED 10% OF OPERATING PSI) MINIMUM PIPE SIZE TO BE 3/4"

**GENERAL IRRIGATION NOTES:**

- 1) REFER TO THE LANDSCAPE PLANS WHEN TRENCHING TO AVOID TREES AND SHRUBS. HAND DIG AROUND ANY EXISTING TREES. DO NOT CUT ANY ROOTS OVER 2" IN DIAMETER.
- 2) ALL MAINLINE PIPING SHALL BE BURIED TO A MINIMUM DEPTH OF 18" OF COVER. ALL LATERAL PIPING SHALL BE BURIED TO A MINIMUM DEPTH OF 12" OF COVER.
- 3) ALL POP-UP ROTORS AND SPRAYS SHALL BE INSTALLED USING A PVC SWING PIPE CONNECTION. DO NOT USE POLYETHYLENE PIPE.
- 4) ADJUST ALL NOZZLES TO REDUCE WATER WASTE ON HARD SURFACES & BLDG. WALLS. THROTTLE ALL VALVES ON SHRUB LINES AS REQUIRED TO PREVENT FOGGING. USE ADJUSTABLE NOZZLES WHERE REQUIRED TO AVOID ANY WATER ON BUILDING WINDOWS.
- 5) ALL CONTROL WIRE SPLICES SHALL BE MADE IN VALVE BOXES USING KING "ONE STEP" CONNECTORS AND SEALANT WITH WIRE NUTS.
- 6) THE CONTRACTOR SHALL PREPARE AN AS-BUILT DRAWING SHOWING ALL IRRIGATION INSTALLATION. THE CONTRACTOR SHALL NEATLY MARK IN RED INK ON A WHITE BOND PAPER COPY OF THE IRRIGATION PLAN ANY INSTALLATION THAT DEVIATES FROM THE PLAN. THE AS-BUILT DRAWING SHALL ALSO LOCATE ALL MAINLINE AND VALVES BY SHOWING EXACT MEASUREMENTS FROM HARD SURFACES. MEASUREMENTS SHALL BE MARKED ON THE PLAN EVEN WHEN THE EQUIPMENT IS INSTALLED IN THE EXACT LOCATION AS THE PLAN.
- 7) ALL VALVES, GATE VALVES AND QUICK COUPLERS SHALL BE INSTALLED IN VALVE BOXES. THE VALVE BOXES SHALL BE PURPLE WHEN USING REUSE WATER.
- 8) ANY PIPING SHOWN OUTSIDE THE PROPERTY LINE OR RUNNING OUTSIDE A LANDSCAPE AREA IS SHOWN THERE FOR CLARITY ONLY. ALL LINES SHALL BE INSTALLED ON THE PROPERTY AND INSIDE THE LANDSCAPE AREAS OR INSIDE A SCH. 40 SLEEVE.
- 9) THE EXACT HEIGHT OF ANY 12" POP-UP THAT IS SHOWN IN A SHRUB BED SHALL BE DETERMINED BY THE OWNER'S REPRESENTATIVE IN THE FIELD.
- 10) THE CONTRACTOR SHALL EXERCISE CARE SO AS NOT TO DAMAGE ANY EXISTING UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE IMMEDIATE REPAIRS AND COST OF ANY DAMAGE CAUSED BY THEIR WORK.
- 11) ALL WORK SHALL BE GUARANTEED FOR ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE AGAINST ALL DEFECTS IN EQUIPMENT AND WORKMANSHIP: (OR AS OUTLINED IN THE WRITTEN SPECIFICATIONS)
- 12) ELECTRICAL SERVICE TO LOCATION OF THE CONTROLLER, WELL OR PUMP SHALL BE PROVIDED TO A JUNCTION BOX OR DISCONNECT AT THE EQUIPMENT LOCATION BY THE ELECTRICAL CONTRACTOR OR BY OWNER WHEN IT IS NOT PART OF THE BID PACKAGE.
- 13) IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SCALE THE PLAN AND CHECK NOZZLE TYPES TO DETERMINE THE CORRECT SPACING OF THE HEADS. THE CONTRACTOR SHALL NOT SPACE THE HEADS FURTHER APART OR USE LESS HEADS THAN SHOWN ON THE PLAN. ANY CHANGES TO THE HEAD SPACING OR LAYOUT, WITHOUT THE CONSENT OF THE LANDSCAPE ARCHITECT OR OWNER, SHALL HOLD THE IRRIGATION CONTRACTOR RESPONSIBLE FOR WARRANTY OF THE PLANTS AND OR SOD IN THESE AREAS.
- 14) IRRIGATION SYSTEM DESIGN REQUIREMENTS: 60 GPM @ A MINIMUM OF 60 PSI AT EACH POINT OF CONNECTION. THE IRRIGATION CONTRACTOR SHALL VERIFY THE AVAILABLE GPM AND PSI PRIOR TO INSTALLATION OF THE SYSTEM.
- 15) 48 HOURS BEFORE DIGGING, CALL 1-800-432-4770 (SUNSHINE STATE ONE CALL CENTER)

**NOTE:**  
 Irrigation System is to be connected to the existing well. See plan Landscape island above for location. The other (2) existing wells are to be grouted and abandoned by Steve Young - Well Driller 407-869-1353

IF LESS THAN 24"x36" SHEET HAS BEEN REDUCED, ADJUST THE SCALE TO THE DRAWING ACCORDINGLY.

LANDSCAPE ARCHITECT:  
 Robert R. Buchanan LA0000932  
 LANDSCAPE DESIGNER/CONTRACTOR: R.C. Longley  
 48 HOURS BEFORE YOU DIG  
 CALL SUNSHINE  
 1-800-432-4770  
 IT'S THE LAW IN FLORIDA  
 FLORIDA LAW REQUIREMENTS:  
 EXCAVATORS TO NOTIFY  
 OWNERS OF UNDERGROUND  
 FACILITIES NO LESS THAN TWO  
 (2) DAYS BEFORE EXCAVATION

MJM Associates  
 1030 N. Orange Avenue  
 Suite 200  
 Orlando, FL 32801

**LANDSCAPE**  
**dynamics**  
 LANDSCAPE ARCHITECTS AND PLANNERS

**Irrigation Plan**  
 Canterwood at DeBary ALF/MC  
 DeBary, Florida

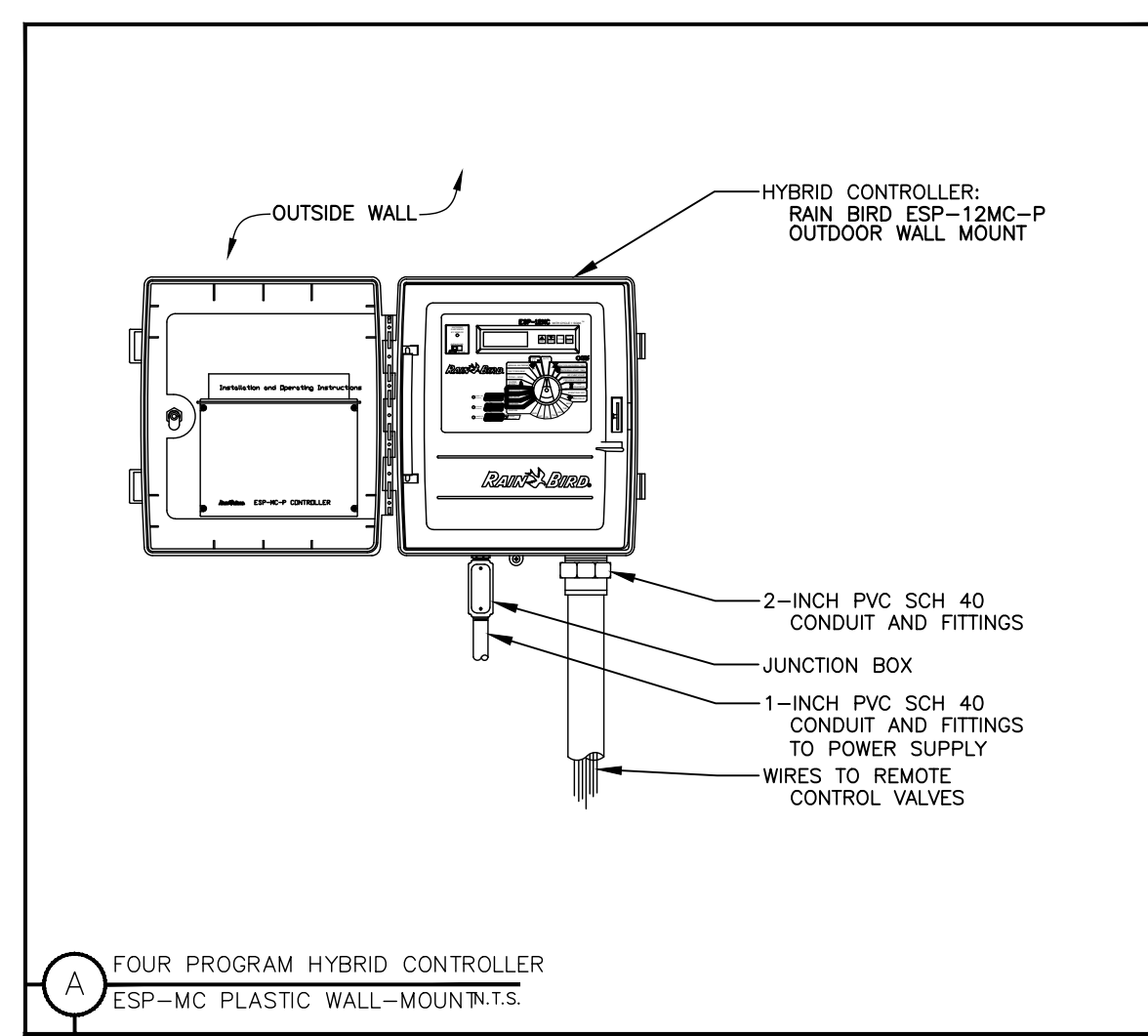
REVISIONS  
 1/7/15 Comments  
 2/10/15 Landscape Upgrade  
 3/4/15  
 4/6/15  
 5/7/15  
 6/7/15

DATE: 06-05-17  
 JOB NUMBER: 17-027  
 DRAWN BY: BEB  
 FILE: IRRIGATION  
 SCALE: 1"=30'

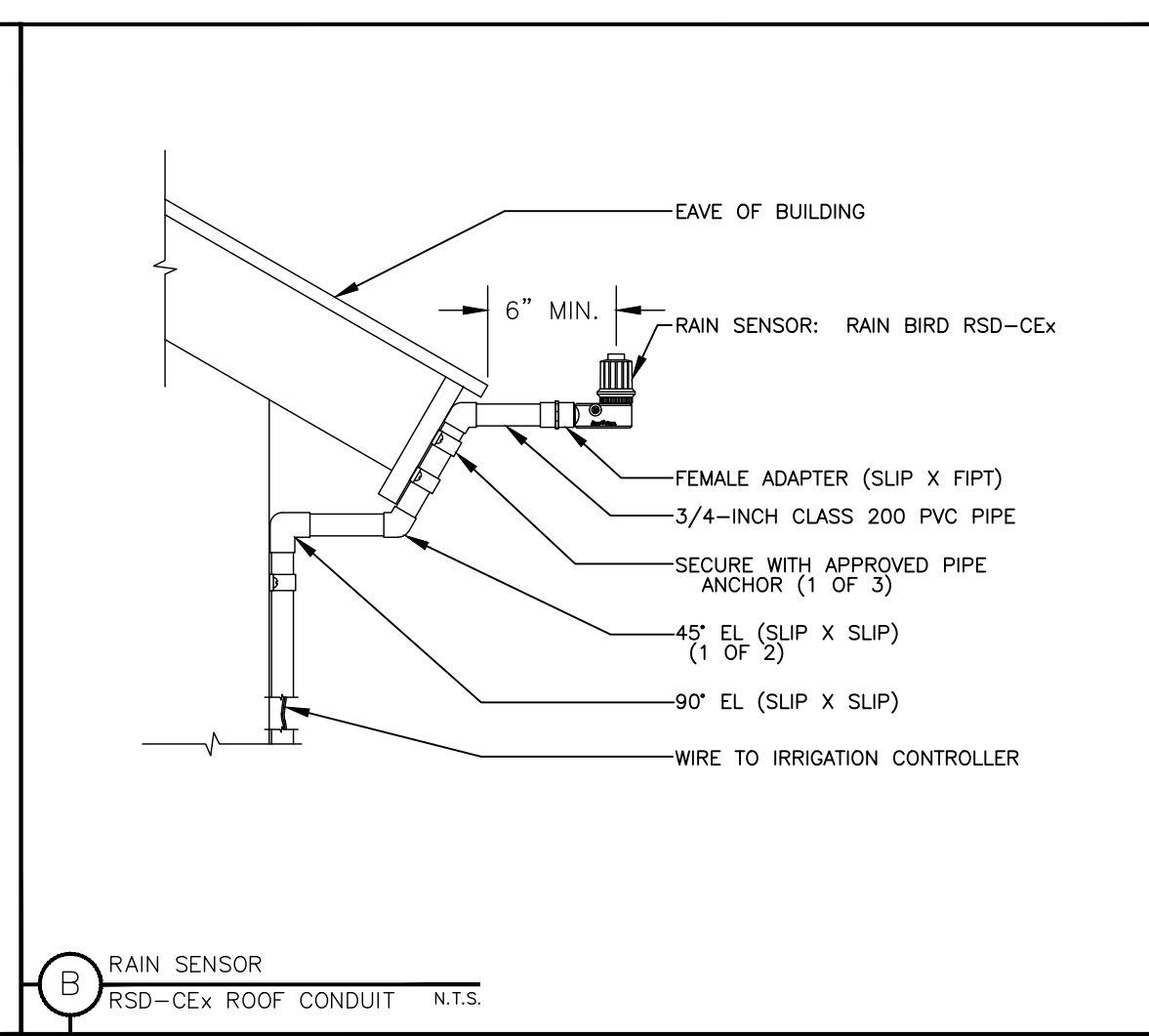
**IR-1**



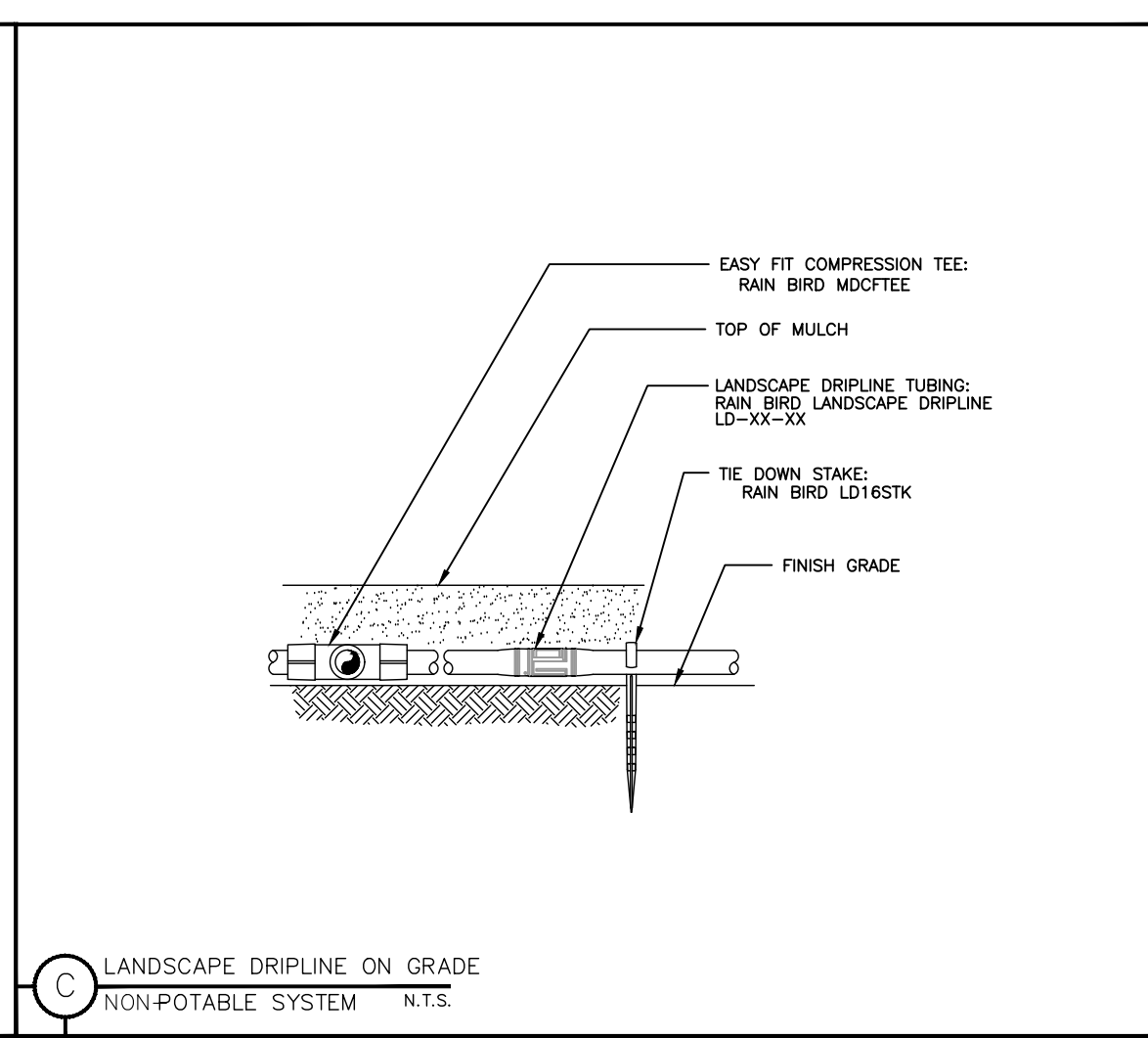
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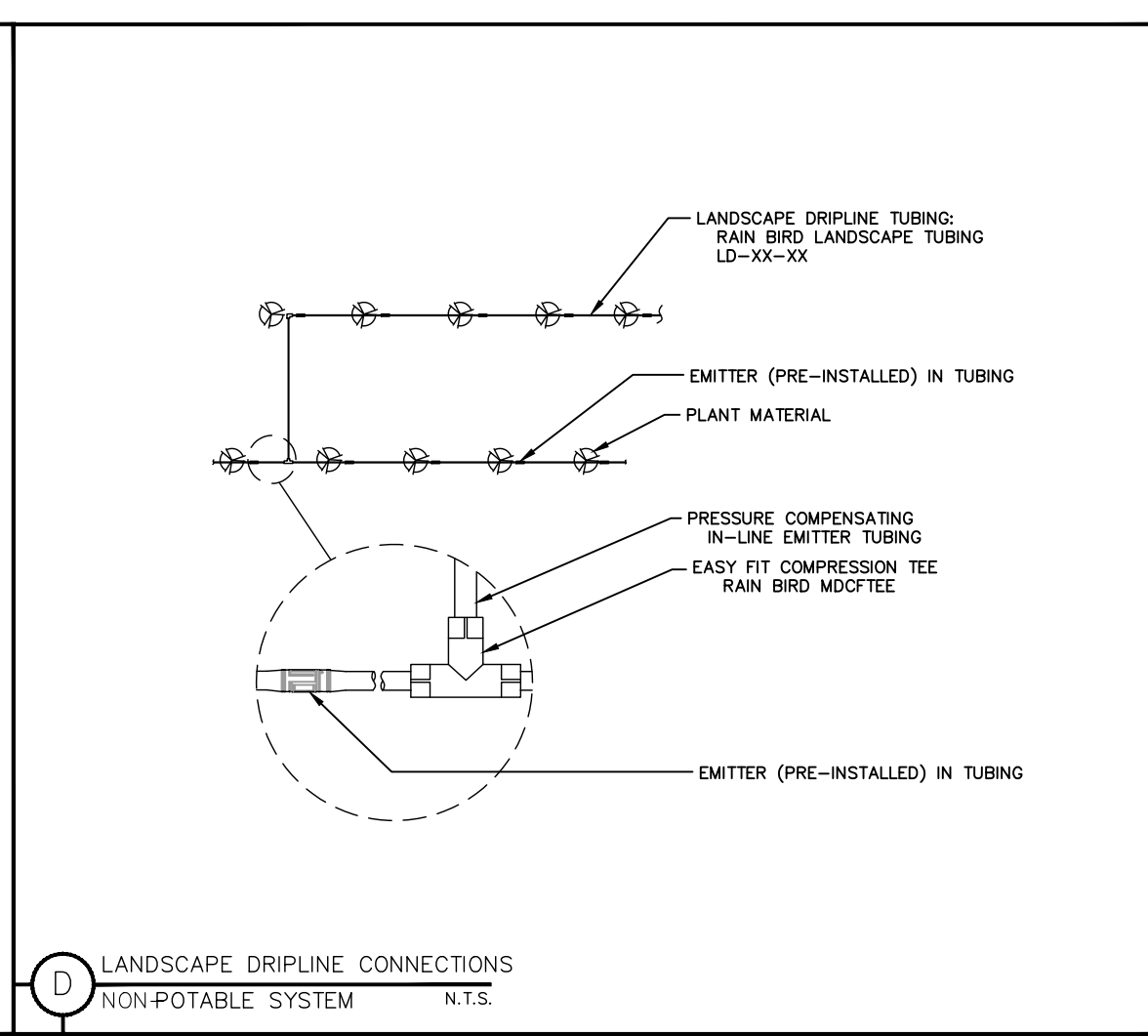
**A** FOUR PROGRAM HYBRID CONTROLLER ESP-MC PLASTIC WALL-MOUNT N.T.S.



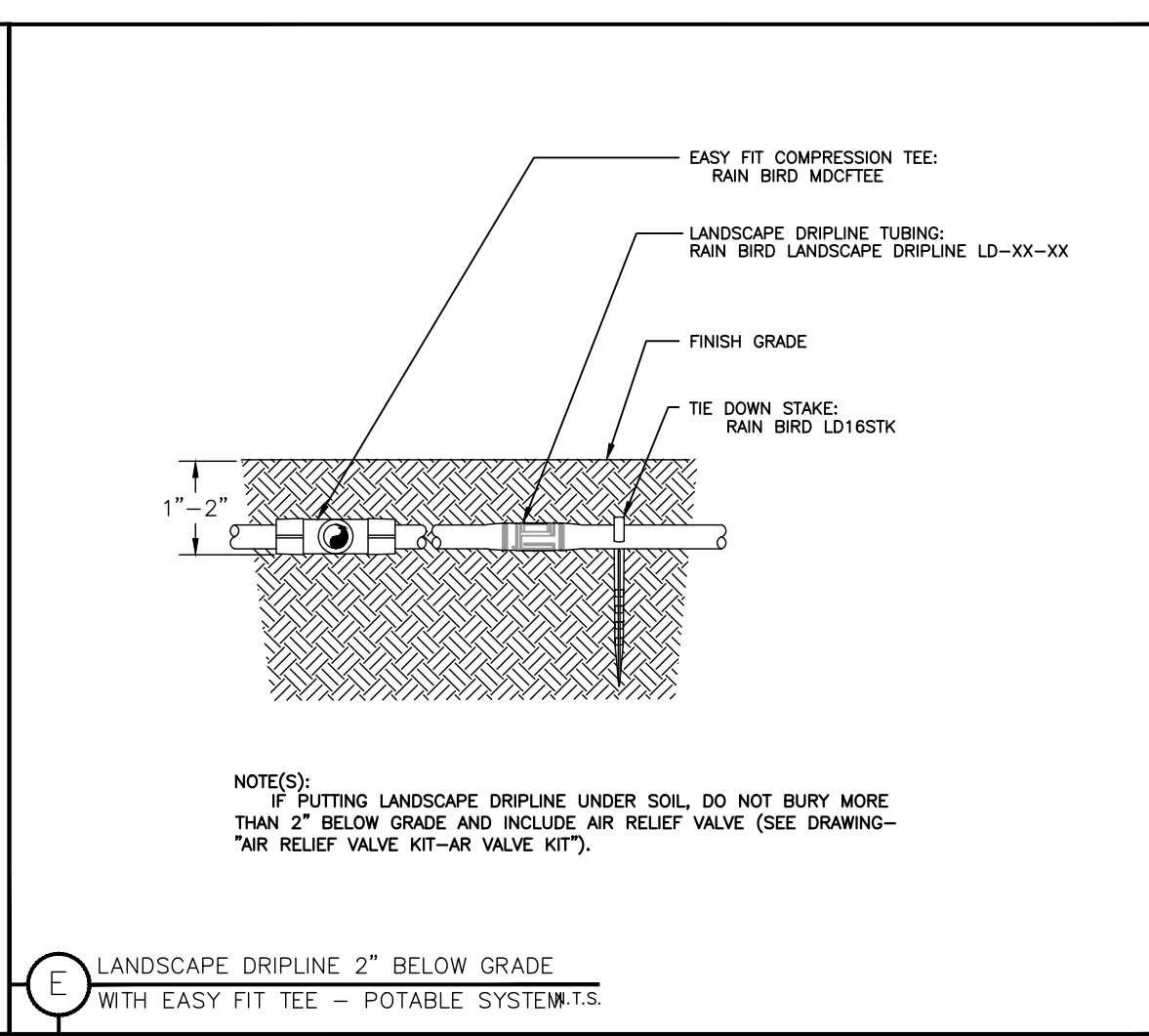
**B** RAIN SENSOR RSD-CEx ROOF CONDUIT N.T.S.



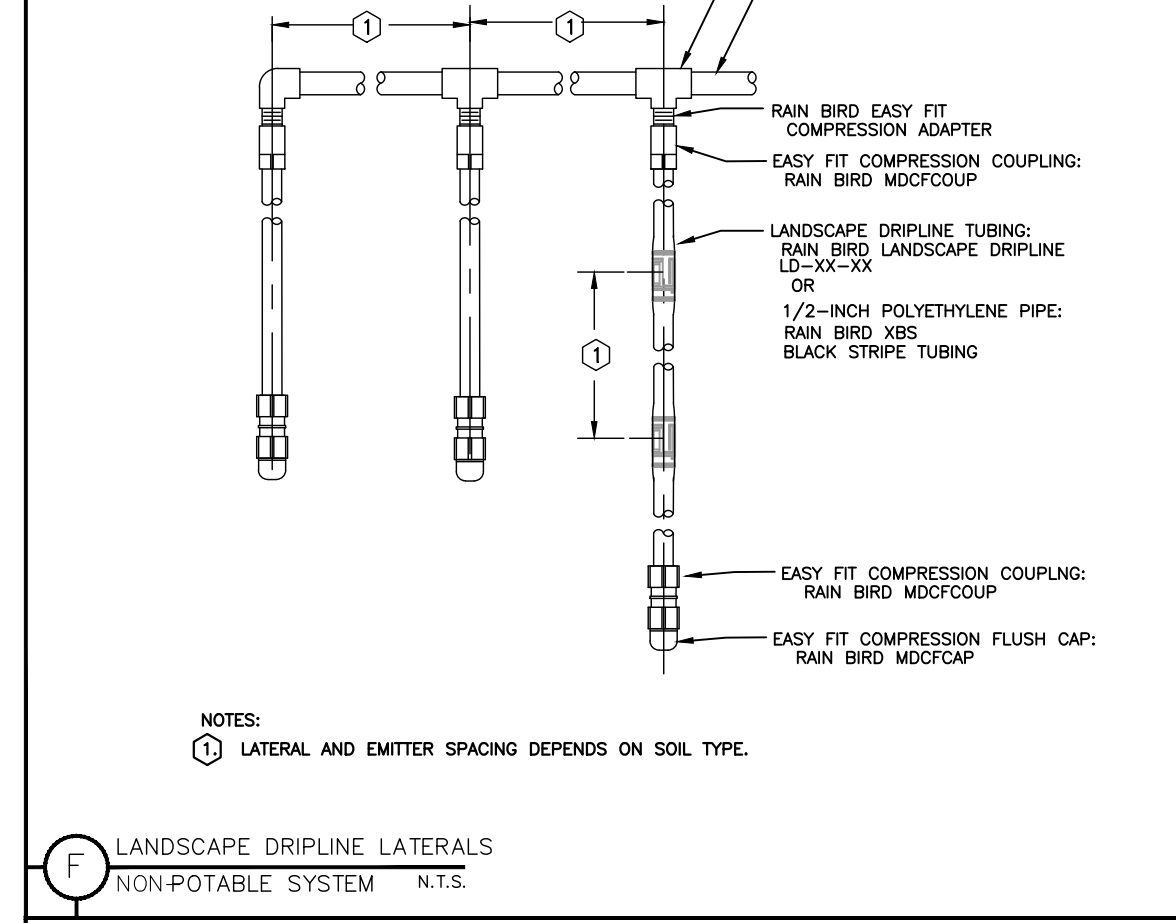
**C** LANDSCAPE DRIPLINE ON GRADE NON-POTABLE SYSTEM N.T.S.



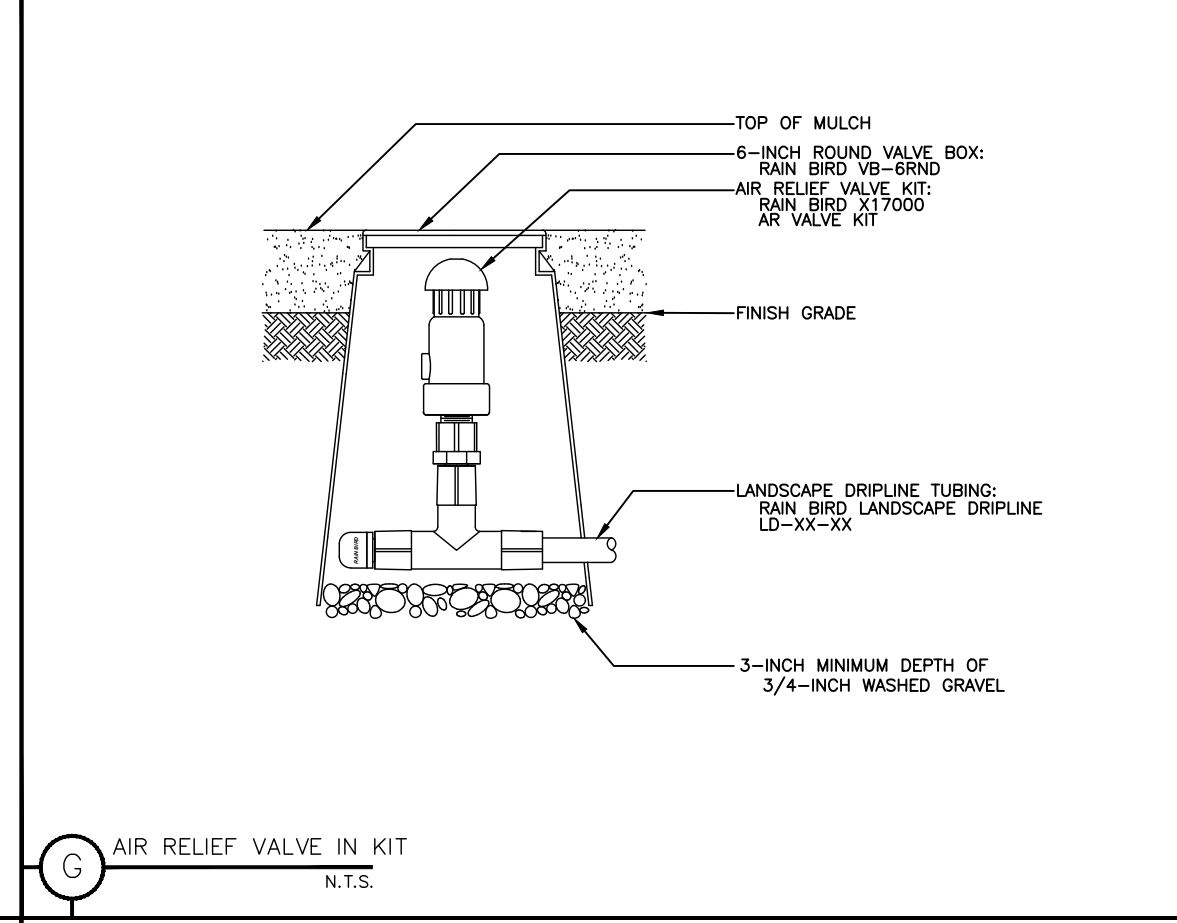
**D** LANDSCAPE DRIPLINE CONNECTIONS NON-POTABLE SYSTEM N.T.S.



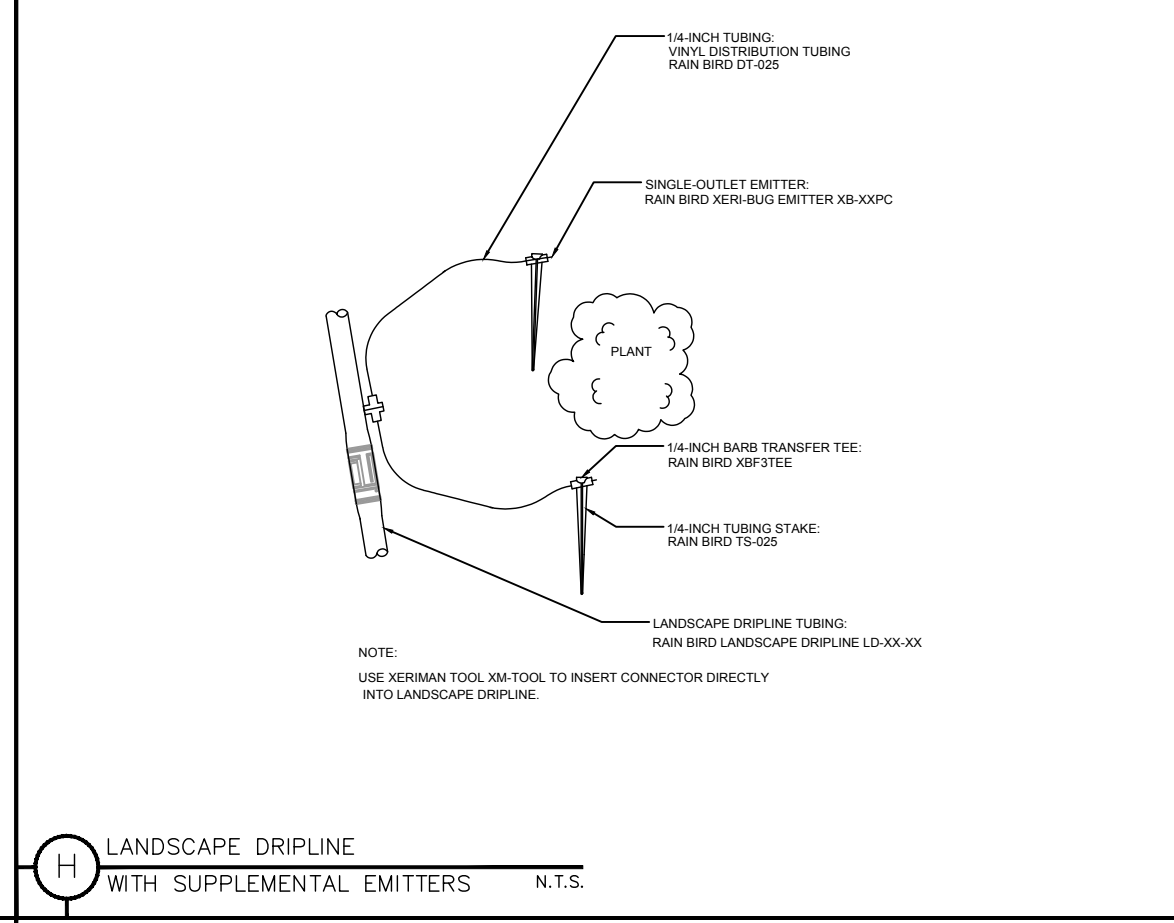
**E** LANDSCAPE DRIPLINE 2' BELOW GRADE WITH EASY FIT TEE - POTABLE SYSTEM T.S.



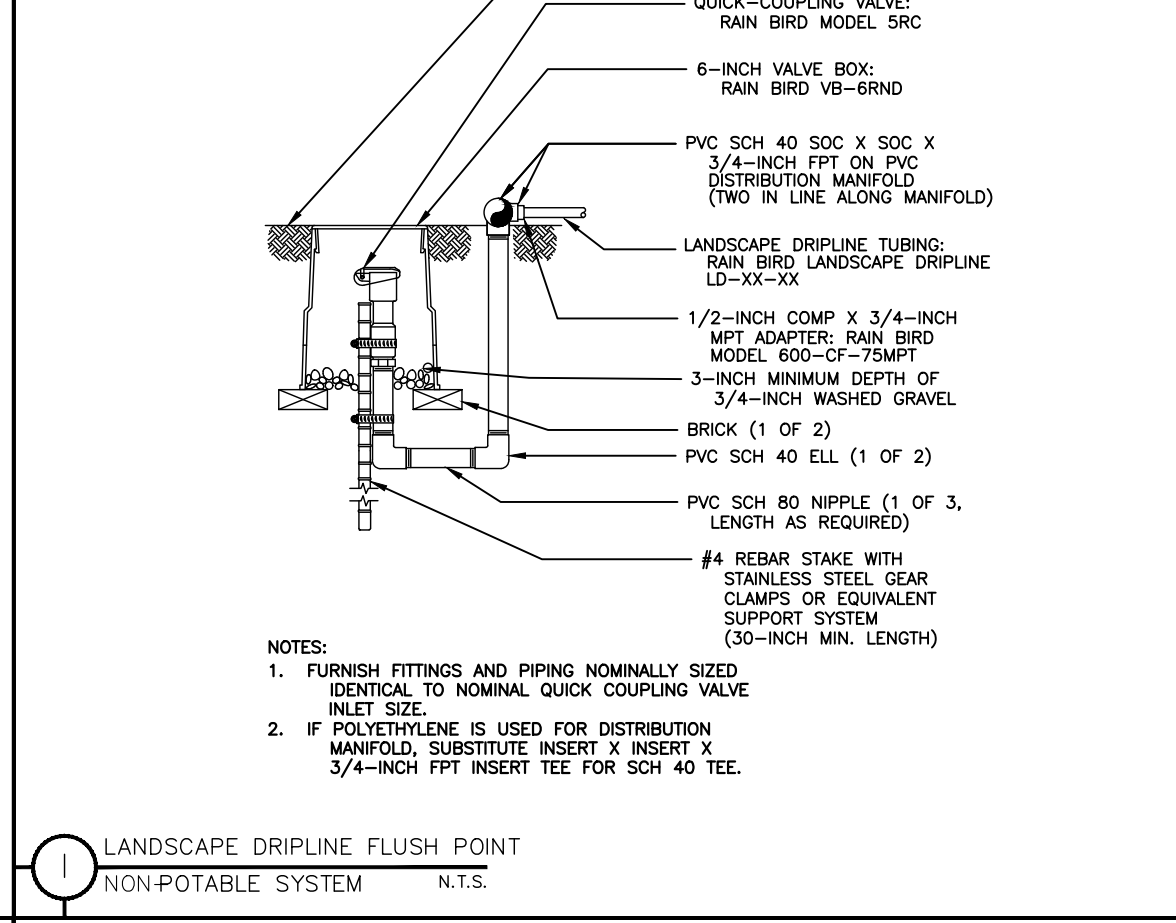
**F** LANDSCAPE DRIPLINE LATERALS NON-POTABLE SYSTEM N.T.S.



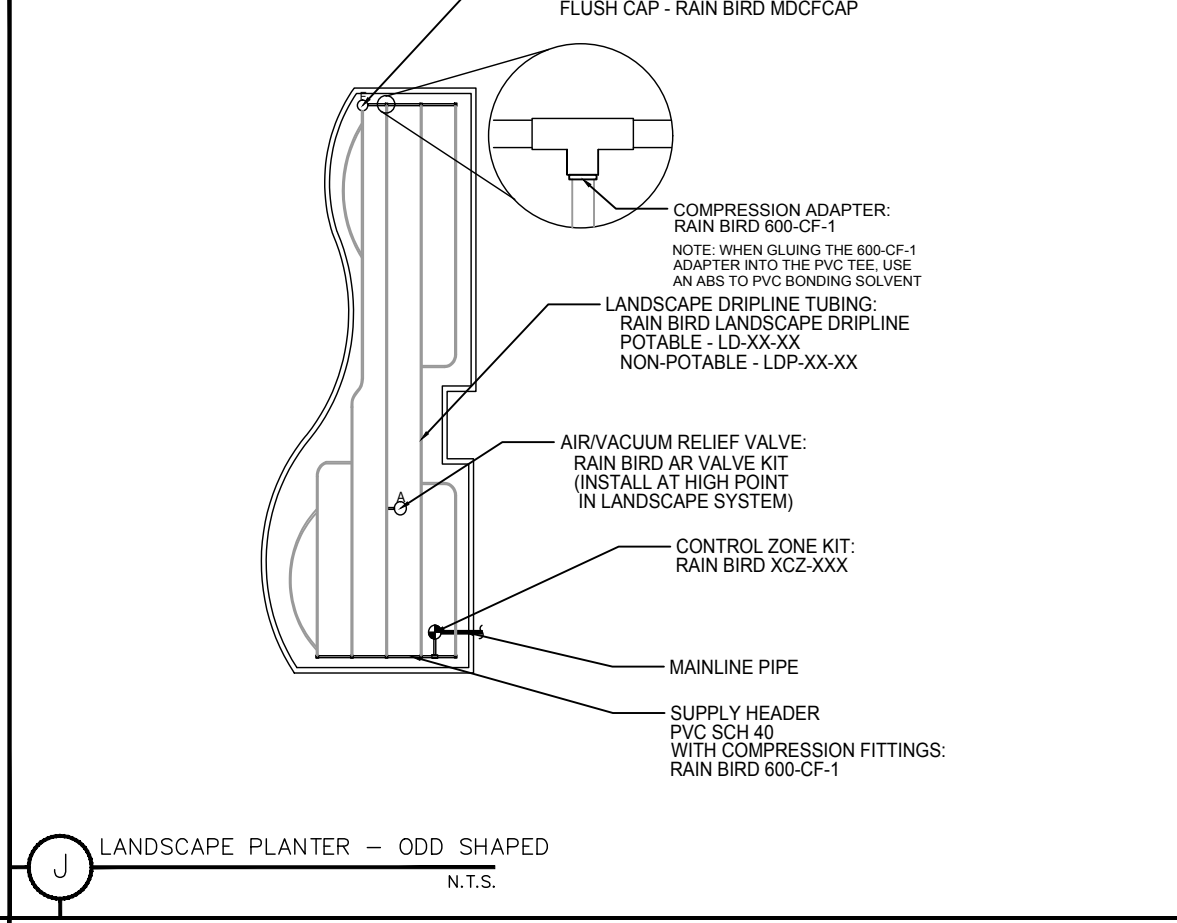
**G** AIR RELIEF VALVE IN KIT N.T.S.



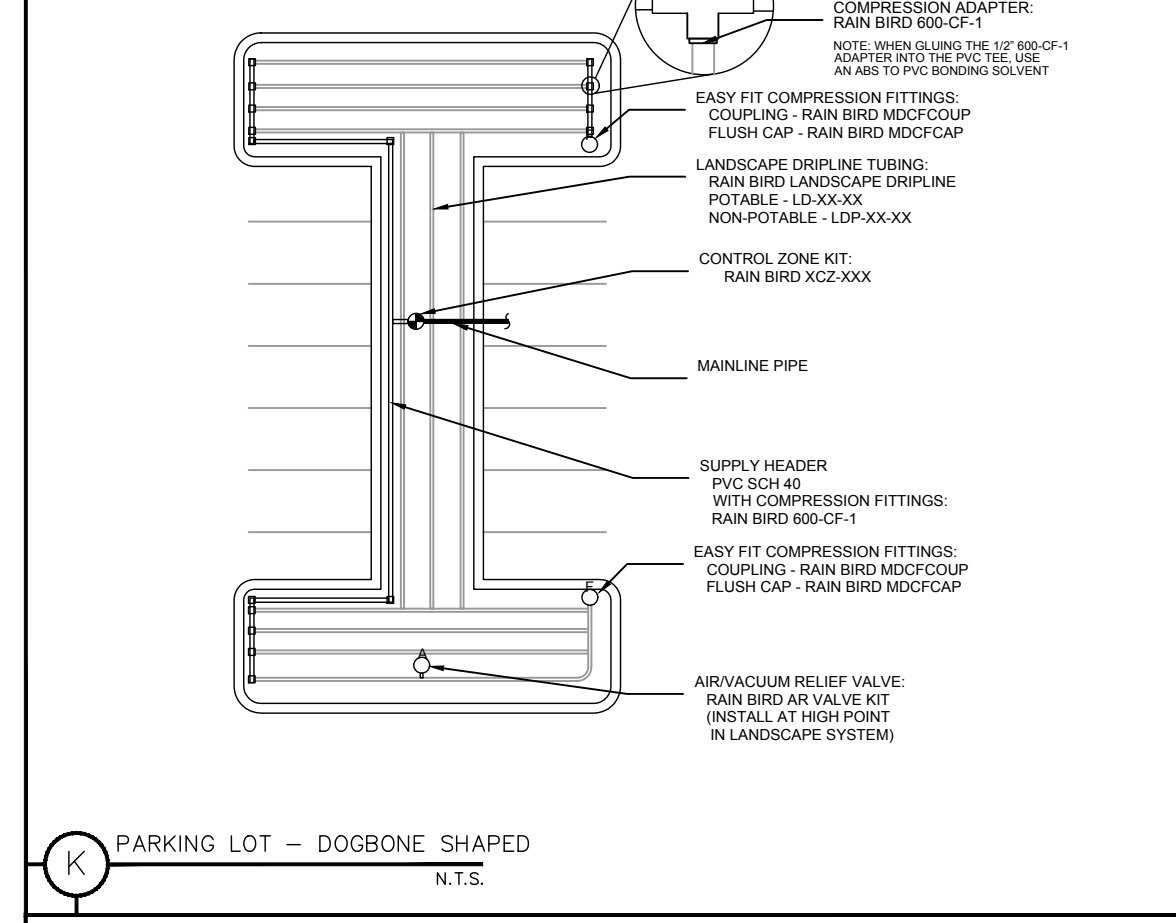
**H** LANDSCAPE DRIPLINE WITH SUPPLEMENTAL EMITTERS N.T.S.



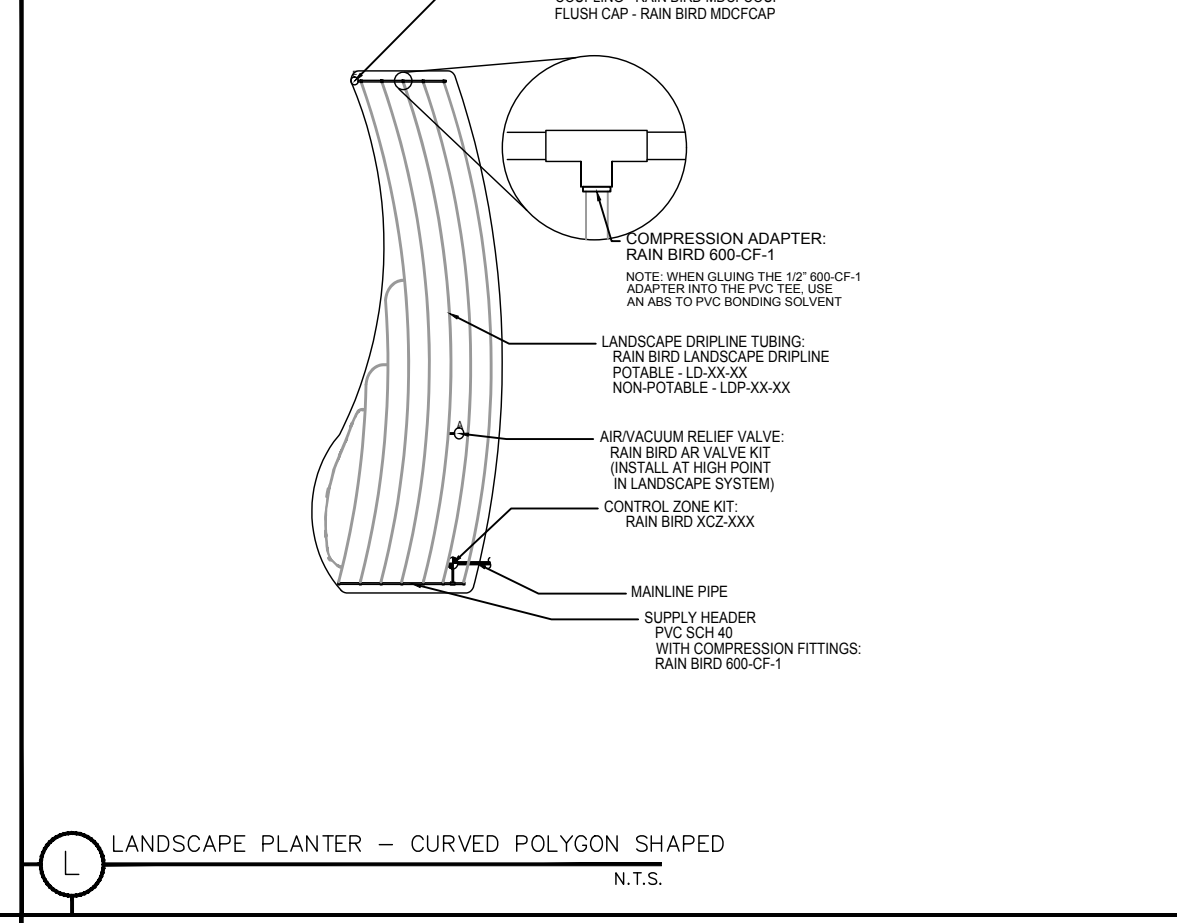
**I** LANDSCAPE DRIPLINE FLUSH POINT NON-POTABLE SYSTEM N.T.S.



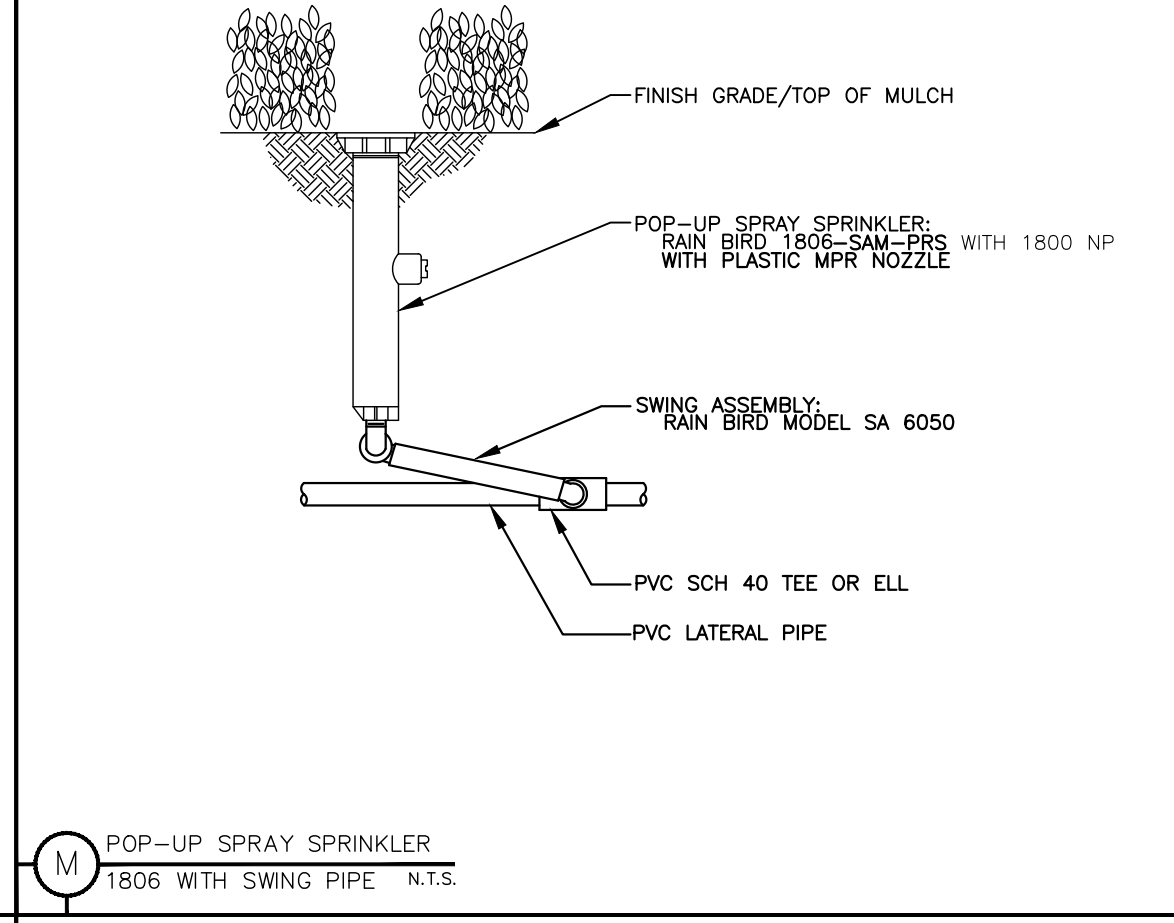
**J** LANDSCAPE PLANTER - ODD SHAPED N.T.S.



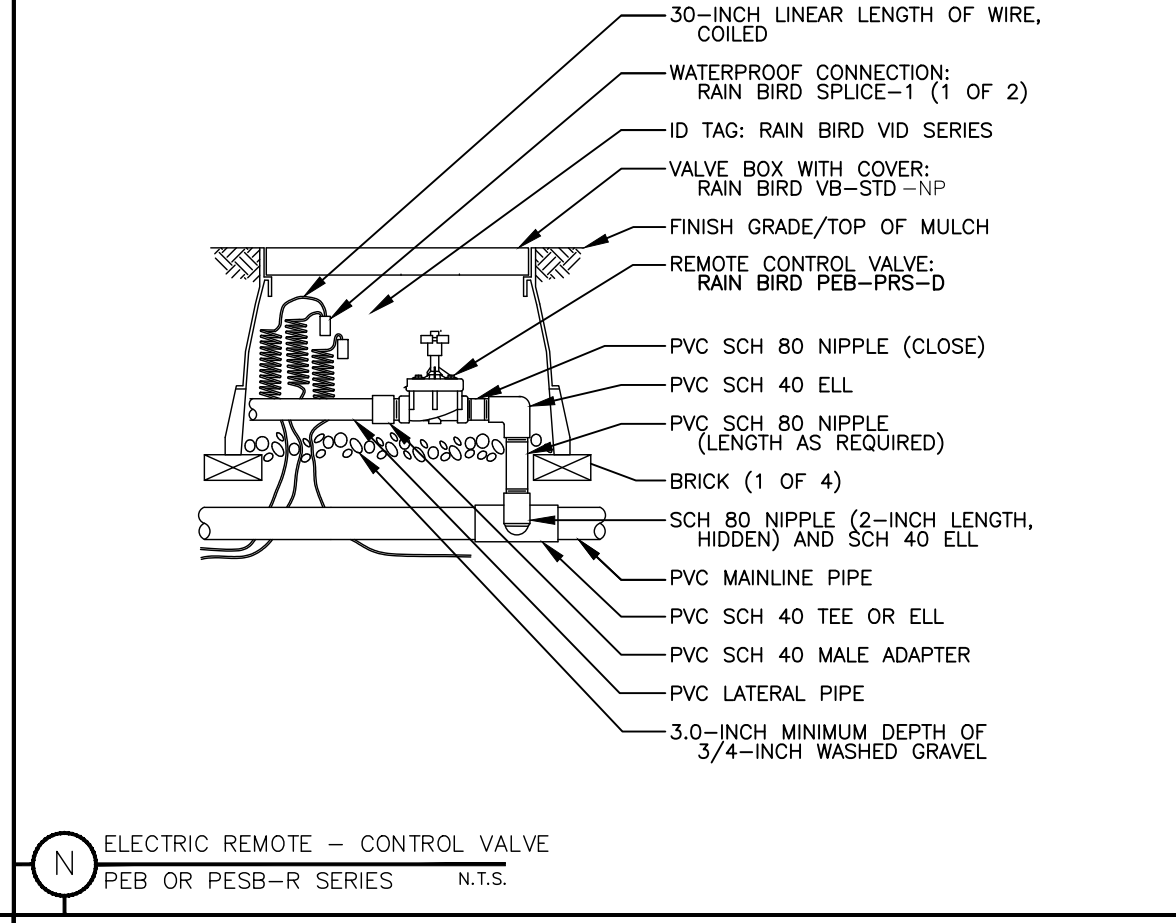
**K** PARKING LOT - DOGBONE SHAPED N.T.S.



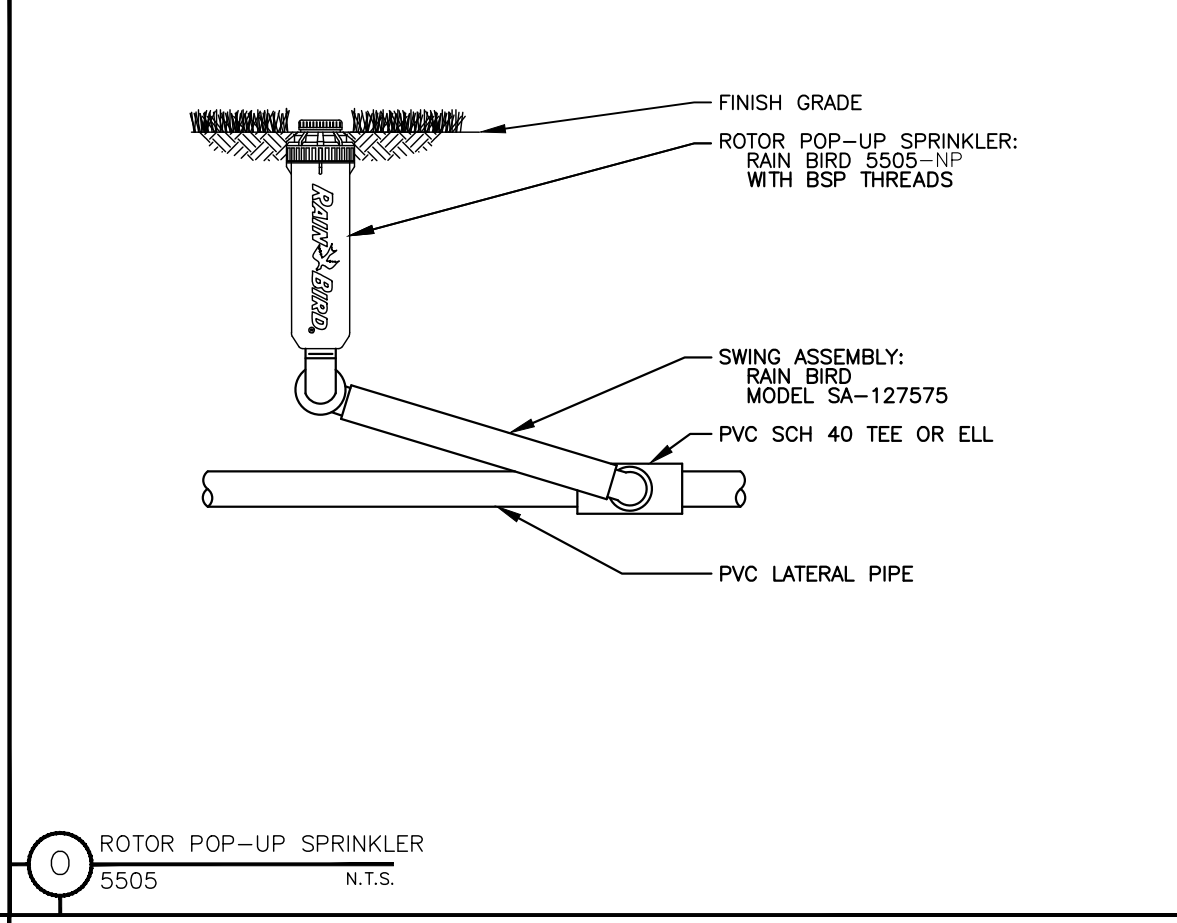
**L** LANDSCAPE PLANTER - CURVED POLYGON SHAPED N.T.S.



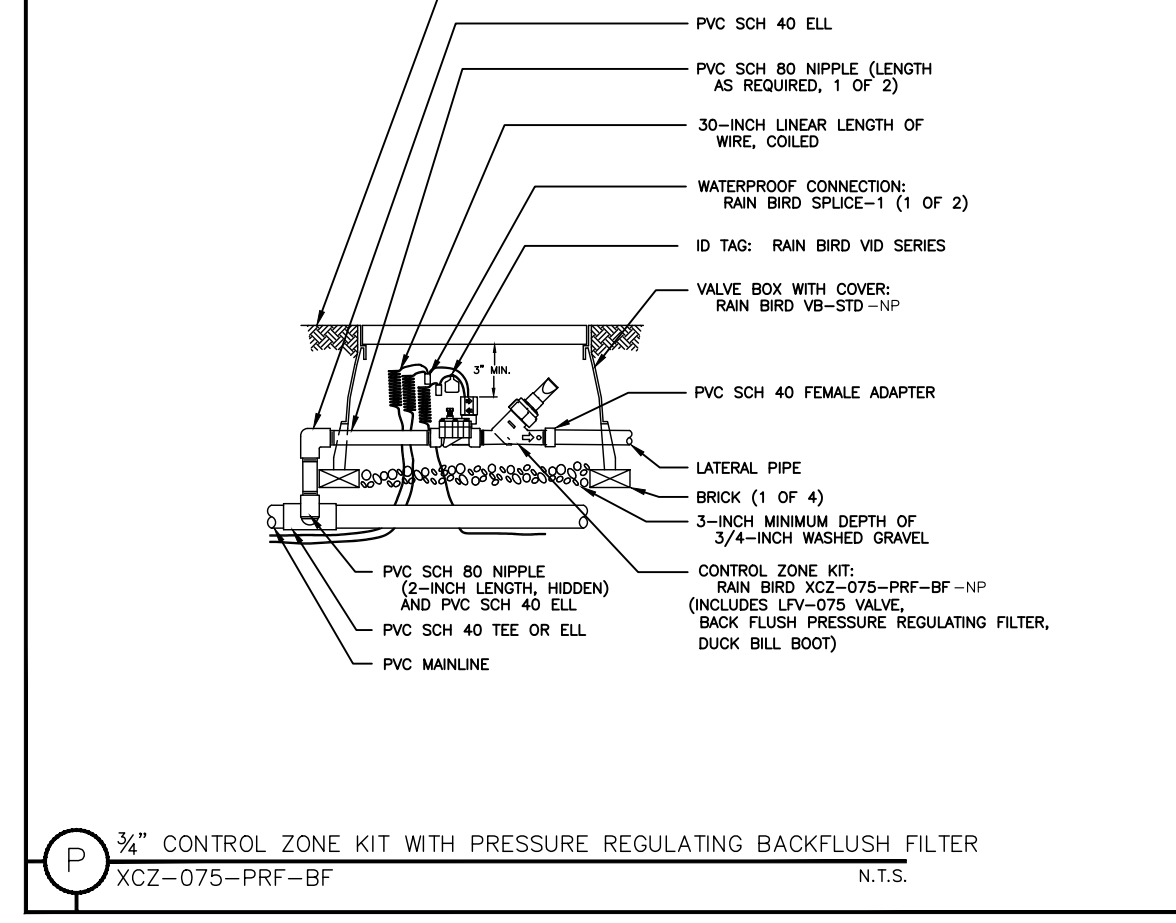
**M** POP-UP SPRAY SPRINKLER 1806 WITH SWING PIPE N.T.S.



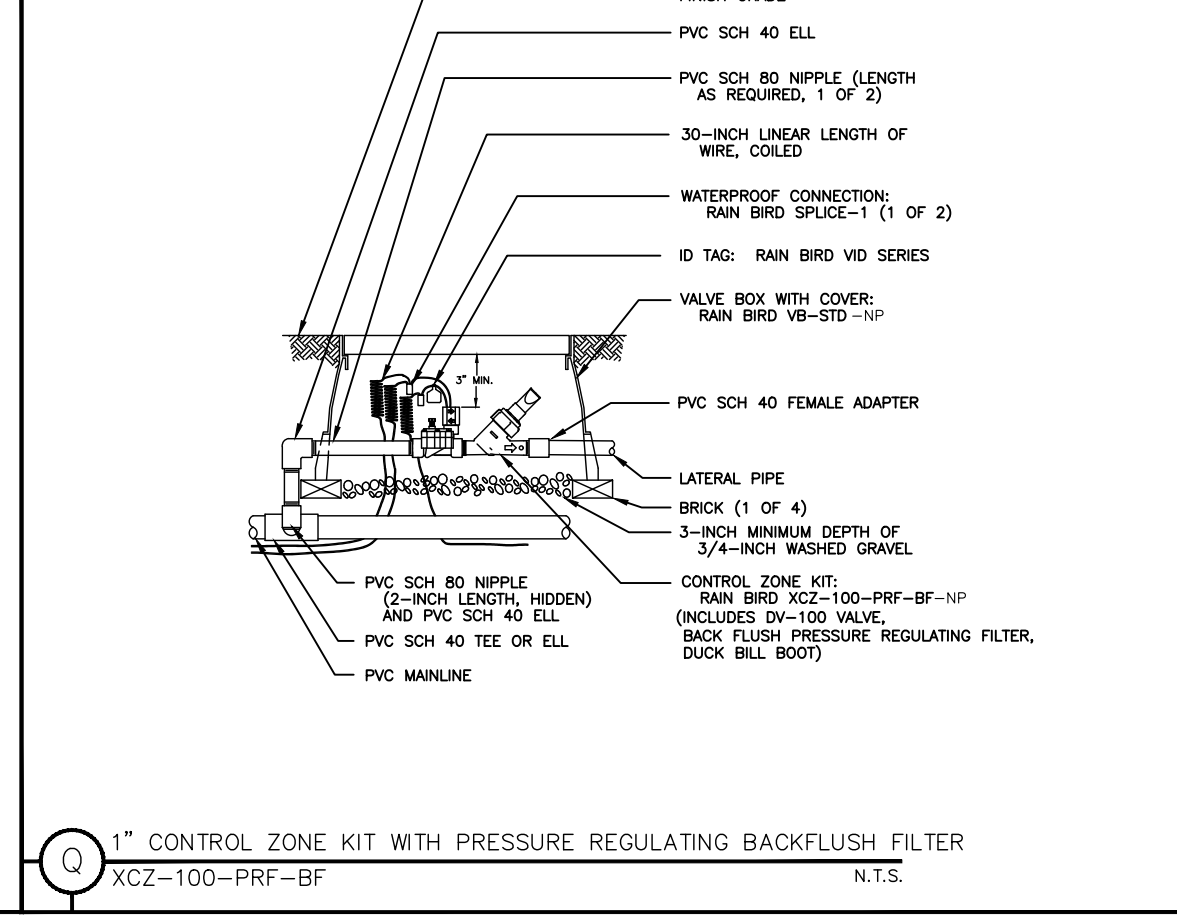
**N** ELECTRIC REMOTE - CONTROL VALVE PEB OR PESB-R SERIES N.T.S.



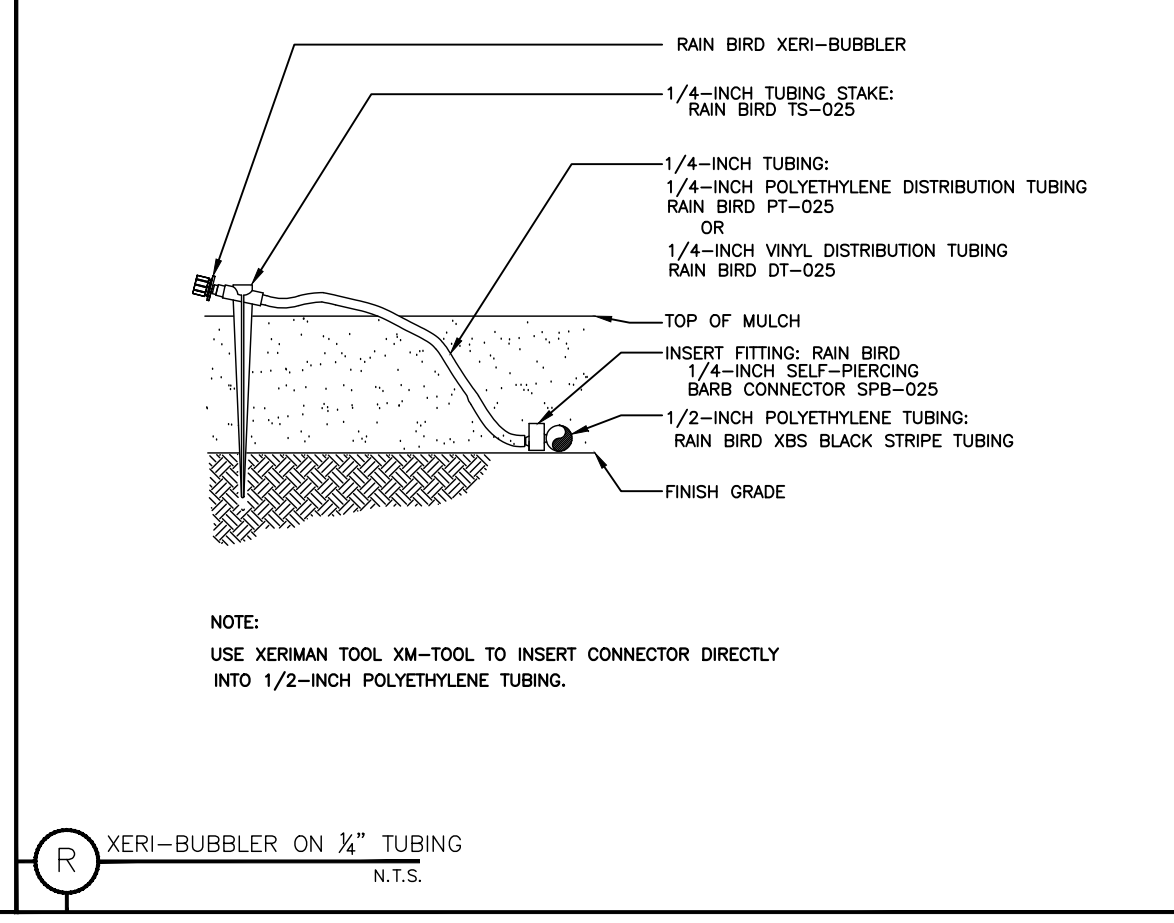
**O** ROTOR POP-UP SPRINKLER 5505 N.T.S.



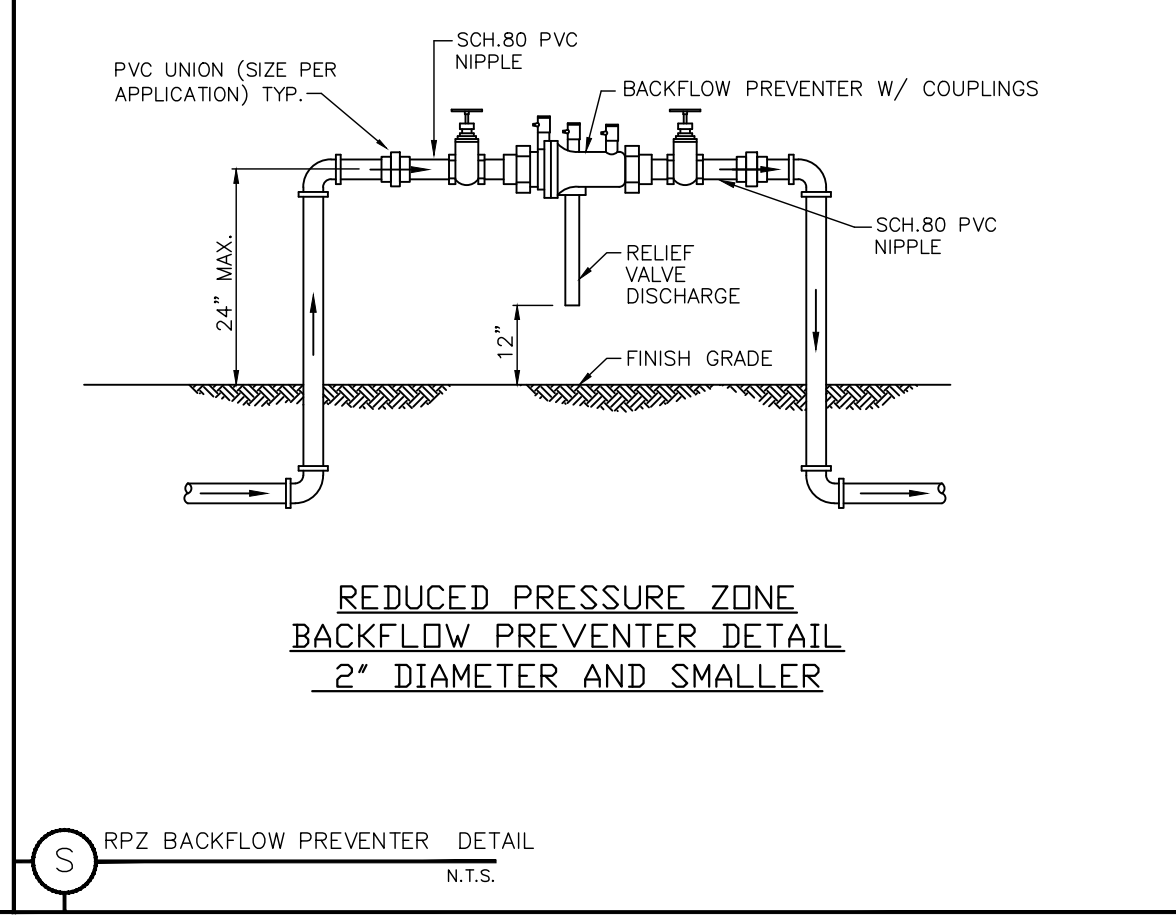
**P** 3/4" CONTROL ZONE KIT WITH PRESSURE REGULATING BACKFLUSH FILTER XZC-075-PRF-BF N.T.S.



**Q** 1" CONTROL ZONE KIT WITH PRESSURE REGULATING BACKFLUSH FILTER XZC-100-PRF-BF N.T.S.



**R** XERI-BUBBLER ON 1/2" TUBING N.T.S.



**S** RPZ BACKFLOW PREVENTER DETAIL N.T.S.

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Robert R. Buchanan LA0000932  
FLORIDA LANDSCAPE ARCHITECTS  
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Orlando, FL 32801

LANDSCAPE  
**Dynamic**  
LANDSCAPE ARCHITECTS AND PLANNERS

DATE: 06-05-17  
JOB NUMBER: 17-027  
DRAWN BY: BEB  
FILE: IRRIGATION  
SCALE: N.T.S.

IR-2





OVERALL BUILDING ELEVATION - SOUTH



OVERALL BUILDING ELEVATION - EAST



OVERALL BUILDING ELEVATION - NORTH



OVERALL BUILDING ELEVATION - WEST





PERSPECTIVE VIEW 1



PERSPECTIVE VIEW 2





PERSPECTIVE VIEW 3



*City of DeBary  
Department of Planning, Zoning & Development  
16 Colomba Road, DeBary, Florida 32713-3264*

October 2, 2018

Joel Hass  
MJM Associates, LLC  
1030 N. Orange Avenue  
Orlando, FL 32801  
(407) 718-0546

J. Charles & Sandra Gray  
263 Bayou Circle  
DeBary, FL 32713  
(407) 843-8880

Re: Canterwood Manor at DeBary Final Site Plan, Case #18-01-FSP-Canterwood;  
Final Site Plan Development Order

Dear Mr. Hass:

This letter is the Final Site Plan Development Order for the above referenced project. This development order authorizes commencement of construction in accordance with the approved construction plans dated August 6<sup>th</sup> 2018. Pursuant to the following findings, the City of DeBary Development Review Committee approved the final site plan providing for the following conditions of approval.

- 1) Please provide an executed agreement to construct the proposed trail to Memorial Park
- 2) Please provide for payment and execution of a Proportionate Fair Share (PFS) agreement with the City of DeBary, for the mitigation of transportation impacts, in the amount of \$28,197.12
- 3) Please provide an executed agreement to convey an easement for the required sidewalk across the property frontage
- 4) Prior to the pre-construction hearing, please submit a check for inspection fees prior to commencement of construction, in the amount of \$7,156.65
- 5) Please submit a gopher tortoise removal after-action report and copies of all associated correspondence with regulating agencies
- 6) Please provide for implementation of Standard Protection Measures for the Eastern Indigo Snake during construction



- 7) In accordance with Section 122-59 county ordinances, you must enter into a utility service agreement (USA) for sewer service before county staff may endorse the FDEP water and wastewater permit applications is advised
- 8) Coordinate with the Volusia County Water and Utility Services Group (Scott Mays, Utility Engineer) to provide for impact fees and two (2) sets of signed and sealed construction plans
- 9) Prior to construction, please provide structural drawings associated with the retaining walls
- 10) The applicant shall have erosion and sediment control procedures and equipment in place as well as any proposed tree protection barricades prior to commencement of construction. Please contact Steve Wood, 386.668.2040 ext. 320, for approval prior to any on-site clearing and/or grading. A NPDES Erosion and Sediment Inspection will be performed by the City
- 11) A pre-construction meeting with the City of DeBary must be held prior to the commencement of construction.
- 12) Prior to the pre-construction meeting, please submit a project construction schedule

In addition to the items listed above, prior to commencement of construction, please provide the following:

- 1) Provide a copy of the Volusia County Water and Utility Services Group (Scott Mays, Utility Engineer) permit for the proposed sanitary sewer system (gravity sewer system, force main, and sanitary sewer lift station).
- 2) Provide a copy of the Volusia County Water and Utility Services Group (Scott Mays, Utility Engineer) permit for the proposed potable water system, as well as the fire water system (if applicable).
- 3) Provide a copy of the FDEP "Notice of Intent" form, as well as the SWPPP document for the City's review.
- 4) Provide a copy of the approved Florida Department of Environmental Protection Department (FDEP) permits to "*Construct a Water Distribution System*" and to "*Construct a Sewage Collection / Transmission System*" prior to the pre-construction meeting.
- 5) Provide a copy of the SJRWMD "*Notice of District Dewatering Activity*" permit (Form No. 40C-2.900(12)).
- 6) Provide a copy of the SJRWMD "*Construction Commencement Notice*" form (Form No. 40C-4.900(3)).

The Building Permit Application process is initiated by submitting the completed application and appropriate plans. The Building Permit Application **must be accompanied** by the approved version of the site plan, and any approved addendum sheets. Copies of the approved version of the plan, signed and sealed have been provided to the City and are available upon request. A copy of the final plan and development order will be provided to the City of DeBary Building Department.


The valid period of this Development Order is 360 days from the date of this letter. If construction has not commenced or is not continuing in good faith to conclusion during this valid period, this Development Order shall expire, unless extended by the DeBary City Council. No construction may commence or continue if this Development Order has expired. During the period of 90 days before and 90 days after the expiration of this Development Order, the developer may request an extension from the City Council.

All plans and construction must be in substantial compliance with this Development Order. Deviations from the approved plans may require submittal of amended plans for review and approval by staff.

No final inspections will be performed by staff until the developer's engineer has certified that all construction has been completed in accordance with this Development Order and the approved plans. That certification must be submitted to the City before the final inspections will be scheduled. Please note additional inspection fees for inspection of site work i.e. stormwater pond may be required.

Please feel free to call me at 386-668-0238 if you have any questions or concerns.

Sincerely,

  
Ron McLemore  
City Manager  
City of DeBary





February 6, 2020

Joel Hass  
MJM Associates, LLC  
1030 N. Orange Avenue  
Orlando, FL 32801  
(407) 718-0546

Re: Canterwood Manor at DeBary Final Site Plan, Case #18-01-FSP-Canterwood and Case # 19-01-DOE-Canterwood; Final Site Plan Development Order Extension.

Dear Mr. Hass:

This letter is the Final Site Plan Development Order for the above referenced project. You requested a Development Order extension, Case Number 19-01-DOE-Canterwood, which was approved by City Council on February 5, 2020. This Development Order extension shall expire on September 26, 2021. The development order authorizes commencement of construction in accordance with the approved construction plans dated August 6<sup>th</sup> 2018. Pursuant to the following findings, the City of DeBary Development Review Committee approved the final site plan providing for the following conditions of approval.

- 1) Please provide an executed agreement to construct the proposed trail to Memorial Park
- 2) Please provide for payment and execution of a Proportionate Fair Share (PFS) agreement with the City of DeBary, for the mitigation of transportation impacts, in the amount of \$28,197.12
- 3) Please provide an executed agreement to convey an easement for the required sidewalk across the property frontage
- 4) Prior to the pre-construction hearing, please submit a check for inspection fees prior to commencement of construction, in the amount of \$7,156.65
- 5) Please submit a gopher tortoise removal after-action report and copies of all associated correspondence with regulating agencies
- 6) Please provide for implementation of Standard Protection Measures for the Eastern Indigo Snake during construction
- 7) In accordance with Section 122-59 county ordinances, you must enter into a utility service agreement (USA) for sewer service before county staff may endorse the FDEP water and wastewater permit applications is advised





- 8) Coordinate with the Volusia County Water and Utility Services Group (Scott Mays, Utility Engineer) to provide for impact fees and two (2) sets of signed and sealed construction plans
- 9) Prior to construction, please provide structural drawings associated with the retaining walls
- 10) The applicant shall have erosion and sediment control procedures and equipment in place as well as any proposed tree protection barricades prior to commencement of construction. Please contact Steve Wood, 386.668.2040 ext. 320, for approval prior to any on-site clearing and/or grading. A NPDES Erosion and Sediment Inspection will be performed by the City
- 11) A pre-construction meeting with the City of DeBary must be held prior to the commencement of construction.
- 12) Prior to the pre-construction meeting, please submit an Engineer's Opinion of Costs for the project site construction, less any potable water, sewer, or reclaim installation. This shall be used to determine inspection fee cost amount per the formula below. Volusia County Utilities shall be responsible for all potable water, sewer, and reclaim infrastructure installation.
- 13) Prior to the pre-construction meeting, please submit a project construction schedule. Please bring payment, by check or money order, to the pre-construction meeting using the following formula to establish the development permit and inspection fee (2.0% of the first \$125,000 of improvements; 1.0% of over \$125,000 up to \$500,000; 0.5% over \$500,000).

In addition to the items listed above, prior to commencement of construction, please provide the following:

- 1) Provide a copy of the Volusia County Water and Utility Services Group (Scott Mays, Utility Engineer) permit for the proposed sanitary sewer system (gravity sewer system, force main, and sanitary sewer lift station).
- 2) Provide a copy of the Volusia County Water and Utility Services Group (Scott Mays, Utility Engineer) permit for the proposed potable water system, as well as the fire water system (if applicable).
- 3) Provide a copy of the FDEP "Notice of Intent" form, as well as the SWPPP document for the City's review.
- 4) Provide a copy of the approved Florida Department of Environmental Protection Department (FDEP) permits to "*Construct a Water Distribution System*" and to "*Construct a Sewage Collection / Transmission System*" prior to the pre-construction meeting.







- 5) Provide a copy of the SJRWMD "*Notice of District Dewatering Activity*" permit (Form No. 40C-2.900(12)).
- 6) Provide a copy of the SJRWMD "*Construction Commencement Notice*" form (Form No. 40C-4.900(3)).

The Building Permit Application process is initiated by submitting the completed application and appropriate plans. The Building Permit Application **must be accompanied** by the approved version of the site plan, and any approved addendum sheets. Copies of the approved version of the plan, signed and sealed have been provided to the City and are available upon request. A copy of the final plan and development order will be provided to the City of DeBary Building Department.

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No final inspections will be performed by staff until the developer's engineer has certified that all construction has been completed in accordance with this Development Order and the approved plans. That certification must be submitted to the City before the final inspections will be scheduled. Please note additional inspection fees for inspection of site work i.e. stormwater pond may be required.

Please feel free to call me at 386-668-0238 if you have any questions or concerns.

Sincerely,

Carmen Rosamonda  
City Manager  
City of DeBary





September 2<sup>nd</sup>, 2021

Joel Hass  
MJM Associates, LLC  
1030 N. Orange Avenue  
Orlando, FL 32801  
(407) 718-0546

Re: Canterwood Manor at DeBary Final Site Plan, Case #18-01-FSP-Canterwood and Case # 21-01-DOE-Canterwood; Final Site Plan Development Order Extension.

Dear Mr. Hass:

This letter is the Final Site Plan Development Order for the above referenced project. You requested a Development Order extension, Case Number 21-01-DOE-Canterwood, which was approved by City Council on September 1<sup>st</sup>, 2021. This Development Order extension shall expire on August 30<sup>th</sup>, 2022. The development order authorizes commencement of construction in accordance with the approved construction plans dated August 6<sup>th</sup> 2018. Pursuant to the following findings, the City of DeBary Development Review Committee approved the final site plan providing for the following conditions of approval.

- 1) Please provide an executed agreement to construct the proposed trail to Memorial Park
- 2) Please provide for payment and execution of a Proportionate Fair Share (PFS) agreement with the City of DeBary, for the mitigation of transportation impacts, in the amount of \$28,197.12
- 3) Please provide an executed agreement to convey an easement for the required sidewalk across the property frontage
- 4) Please submit a gopher tortoise removal after-action report and copies of all associated correspondence with regulating agencies
- 5) Please provide for implementation of Standard Protection Measures for the Eastern Indigo Snake during construction
- 6) In accordance with Section 122-59 county ordinances, you must enter into a utility service agreement (USA) for sewer service before county staff may endorse the FDEP water and wastewater permit applications is advised







- 7) Coordinate with the Volusia County Water and Utility Services Group (Scott Mays, Utility Engineer) to provide for impact fees and two (2) sets of signed and sealed construction plans
- 8) Prior to construction, please provide structural drawings associated with the retaining walls
- 9) The applicant shall have erosion and sediment control procedures and equipment in place as well as any proposed tree protection barricades prior to commencement of construction. Please contact Steve Wood, 386.668.2040 ext. 320, for approval prior to any on-site clearing and/or grading. A NPDES Erosion and Sediment Inspection will be performed by the City
- 10) A pre-construction meeting with the City of DeBary must be held prior to the commencement of construction.
- 11) Prior to the pre-construction meeting, please submit an Engineer's Opinion of Costs for the project site construction, less any potable water, sewer, or reclaim installation. This shall be used to determine inspection fee cost amount per the formula below. Volusia County Utilities shall be responsible for all potable water, sewer, and reclaim infrastructure installation.
- 12) Prior to the pre-construction meeting, please submit a project construction schedule. Please bring payment, by check or money order, to the pre-construction meeting using the following formula to establish the development permit and inspection fee (2.0% of the first \$125,000 of improvements; 1.0% of over \$125,000 up to \$500,000; 0.5% over \$500,000).
- 13) The City is in receipt of the construction inspection fees.

In addition to the items listed above, prior to commencement of construction, please provide the following:

- 1) Provide a copy of the Volusia County Water and Utility Services Group (Scott Mays, Utility Engineer) permit for the proposed sanitary sewer system (gravity sewer system, force main, and sanitary sewer lift station).
- 2) Provide a copy of the Volusia County Water and Utility Services Group (Scott Mays, Utility Engineer) permit for the proposed potable water system, as well as the fire water system (if applicable).
- 3) Provide a copy of the FDEP "Notice of Intent" form, as well as the SWPPP document for the City's review.





- 4) Provide a copy of the approved Florida Department of Environmental Protection Department (FDEP) permits to "*Construct a Water Distribution System*" and to "*Construct a Sewage Collection / Transmission System*" prior to the pre-construction meeting.
- 5) Provide a copy of the SJRWMD "*Notice of District Dewatering Activity*" permit (Form No. 40C-2.900(12)).
- 6) Provide a copy of the SJRWMD "*Construction Commencement Notice*" form (Form No. 40C-4.900(3)).

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Please feel free to call me at 386-668-0238 if you have any questions or concerns.





# CITY of DeBARY

www.debary.org

· THE RIVER CITY ·

Sincerely,



Carmen Rosamonda  
City Manager  
City of DeBary





October 28, 2022

J. Charles Gray  
Gray-Robinson  
301 East Pine Street, Suite 1400  
Orlando, FL 32801  
(407) 843-8880

Re: Canterwood Manor at DeBary Final Site Plan, Case #18-01-FSP-Canterwood and Case # 22-01-DOE-Canterwood; Final Site Plan Development Order Extension.

Dear Mr. Gray:

This letter is the Final Site Plan Development Order for the above referenced project. You requested a Development Order extension, Case Number 22-01-DOE-Canterwood, which was approved by City Council on October 19, 2022. This Development Order extension shall expire on October 23, 2023. The development order authorizes commencement of construction in accordance with the approved construction plans dated August 6<sup>th</sup> 2018. Pursuant to the following findings, the City of DeBary Development Review Committee approved the final site plan providing for the following conditions of approval.

- 1) Please provide an executed agreement to construct the proposed trail to Memorial Park
- 2) Please provide for payment and execution of a Proportionate Fair Share (PFS) agreement with the City of DeBary, for the mitigation of transportation impacts, in the amount of \$28,197.12
- 3) Please provide an executed agreement to convey an easement for the required sidewalk across the property frontage
- 4) Please submit a gopher tortoise removal after-action report and copies of all associated correspondence with regulating agencies
- 5) Please provide for implementation of Standard Protection Measures for the Eastern Indigo Snake during construction
- 6) In accordance with Section 122-59 county ordinances, you must enter into a utility service agreement (USA) for sewer service before county staff may endorse the FDEP water and wastewater permit applications is advised







- 7) Coordinate with the Volusia County Water and Utility Services Group (Scott Mays, Utility Engineer) to provide for impact fees and two (2) sets of signed and sealed construction plans
- 8) Prior to construction, please provide structural drawings associated with the retaining walls
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- 13) The City is in receipt of the construction inspection fees.

In addition to the items listed above, prior to commencement of construction, please provide the following:

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- 3) Provide a copy of the FDEP "Notice of Intent" form, as well as the SWPPP document for the City's review.





4) Provide a copy of the approved Florida Department of Environmental Protection Department (FDEP) permits to "*Construct a Water Distribution System*" and to "*Construct a Sewage Collection / Transmission System*" prior to the pre-construction meeting.

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Please feel free to call me at 386-601-0238 if you have any questions or concerns.

Sincerely,

Carmen Rosamonda  
City Manager  
City of DeBary  
16 Colomba Road, DeBary, FL 32713



CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

**Archived:** Monday, September 25, 2023 11:46:31 AM

**From:** [Greg Hudak](#)

**Sent:** Friday, September 1, 2023 11:37:31 AM

**To:** [Joseph Barker](#)

**Cc:** [Steven Bapp](#); [Charles Gray](#); [rkdunn411@gmail.com](mailto:rkdunn411@gmail.com)

**Subject:** FW: DeBary ALF SDO Extension - Case Number 22-01-DOE-Canterwood

**Importance:** Normal

**Attachments:**

[City of DeBary Site Development Order.pdf](#) 

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Joseph – On behalf of Mr. Gray (Applicant /Owner), would like to request a formal extension of the SDO (attached) for the above-referenced project, as we continue to be in negotiations for the development of this site. Do you need a new final site plan application completed, like what was done previously? Please let me know if there is anything else you require at this time.

Respectfully,

Greg Hudak  
Hudak Engineering, Inc.  
(407) 492-6833





## City Council Meeting City of DeBary AGENDA ITEM

<b>Subject:</b> Land Development Code Amendment Mobility Plan & Fees	<b>Attachments:</b> <input type="checkbox"/> Ordinance <input type="checkbox"/> Resolution <input type="checkbox"/> Supporting Documents/ Contracts <input checked="" type="checkbox"/> Other
<b>From:</b> Steven E. Bapp, AICP Growth Management Director	
<b>Meeting Hearing Date</b> October 4, 2023	

### REQUEST

Staff is requesting City Council approve the contract with Nue Urban Concepts to review the Southwest Sector Mobility Plan and Mobility Fees.

### PURPOSE

To conduct an analysis of the Mobility Plans and Fees, and to recommend any changes should be made to the impact and mobility fee schedules.

### CONSIDERATIONS

#### Background

- A Mobility Plan provides local governments with flexibility to proactively determine how best to meet the specific travel demand needs and desires of its community; unlike transportation concurrency, which is a one size fits all approach only focused on moving cars.
- A Mobility Plan can be used as an effective tool to encourage mixed-use, transit-oriented development, infill and redevelopment and ensure complete streets are designed to promote people walking, bicycling, riding transit, using ride and car sharing services and driving shorter distances.
- Elements of a Mobility Plan include establishment of mobility standards intended to proactively plan for bicycle, pedestrian, transit and road improvements; as opposed to reactively regulating development through transportation concurrency.
- A Mobility Fee is a funding source available to local governments that repurposes revenues away from solely funding road capacity to one that funds multi-modal improvements established in a Mobility Plan.
- The DeBary Southwest Sector Mobility Plan and Mobility Fee were adopted by the City Council on February 19, 2020. The adopted ordinance also directs that at least once every three years, the city manager shall recommend to the DeBary City Council whether any changes should be made to the impact and mobility fee schedules to reflect changes in the factors that affect the fee schedules. The purpose of this review is to analyze the effects of inflation on the actual costs of facilities, to assess potential changes in needs, to assess any changes in the characteristics of land uses, and to ensure that the fee charged to new impact-

generating land development will not exceed its pro rata share for the reasonably anticipated expansion costs of facilities necessitated by its presence.

- The City submitted a scope of work from Nue Urban Concepts, the original author of the Southwest Sector Mobility Plan and Mobility Fee study. The City requested the review of seven tasks in support of the review, which are detailed in the attached proposal:

Task 1 – Project Future Growth

Task 2 – Update Mobility Plan Projects

Task 3 – Revenue Adjustments

Task 4 – Update Mobility Fee Schedule of Uses

Task 5 – Backlog Analysis

Task 6 – Calculate the Mobility Fee

Task 7 – Update Technical Report

### **COST/FUNDING**

The cost of this review is \$ 52,000. This cost will be allocated to the Southwest Sector Mobility Fee Trust Fund reserves.

### **RECOMMENDATION**

It is recommended the City Council approve the contract with Nue Urban Concepts to review the Southwest Sector Mobility Plan and Mobility Fees in the amount of \$52,000.

### **IMPLEMENTATION**

If the City Council approves the contract, City Staff will coordinate with the Vendor. Upon final vendor recommendations, City Staff will bring forward the recommended changes to City Council.

### **ATTACHMENTS**

- Nue Urban Concepts Proposal



August 17<sup>th</sup>, 2023

Steven E. Bapp, AICP  
Growth Management Director  
16 Colomba Road,  
DeBary, FL 32713

**RE: CITY OF DEBARY MOBILITY PLAN & MOBILITY FEE UPDATE**

NUE Urban Concepts (NUC) is pleased to provide a scope of service to update the City of DeBary Mobility Plan and Mobility Fee. NUE Urban Concepts developed a Mobility Plan and Fee for the City in 2019 and assisted with update of its Comprehensive Plan. This scope of service is based on maintaining the existing assessment area for the City's Mobility Fee.

Florida Statute requires mobility fees to be based on the most recent and localized data. Since the mobility fee was last calculated, the following are major data sources that have changed: (1) the 2045 Long Range Transportation Plan was adopted; (2) the regional travel demand model was updated; (3) the ITE Trip Generation Manual was updated to the 11<sup>th</sup> edition; and (4) FDOT adopted new road capacity tables. The following are the required task to update the City's Mobility Plan and Mobility Fee:

**TASK 1 – PROJECT FUTURE GROWTH:** NUE Urban Concepts will evaluate approved and pending development plans within the Mobility Fee Assessment Area. The development data will be used to project future vehicle and person miles of travel for use in the mobility fee calculations.

**The City shall be responsible for providing all approved, pending, and projected development proposals to include a breakdown of residential units, types of units, and the square footage of non-residential uses by type of use (e.g., retail, office, industrial).**

*As an alternative, the 2045 Long Range Transportation Plan (LRTP) could be utilized to obtain base year and future year vehicle miles of travel (VMT) data. The TAZ from the model would be used to obtain population and employment projections to demonstrate future growth and need as required to meet the first part of the dual rational nexus test. The VMT data will be used to calculate a projected increase in person miles of travel (PMT) used to calculate a mobility fee and in the new growth evaluation analysis. Use of the travel demand model would require an updated cost estimate for Task 1.*

**TASK 2 – UPDATE MOBILITY PLAN PROJECTS:** NUE Urban Concepts will coordinate with City Staff to identify updates to the Mobility Plan. The update will include removal of projects that have been constructed, removal of projects that are no longer deemed feasible or needed, and the addition of new projects. Cost estimates will be prepared and the person miles of capacity for each project will be calculated. **The City will provide any recent design, right-of-way or construction cost data for recently constructed City projects. The City will also provide copies of any development agreements or development orders that require construction of infrastructure to be part of the Mobility Plan.**

**TASK 3 – REVENUE ADJUSTMENTS:** NUE Urban Concepts will coordinate with City Staff to identify any revenue sources that have been identified through City, County, Federal, or State sources. NUE Urban Concepts will evaluate the 2045 LRTP to identify cost feasible projects and projected federal and state funding.

**TASK 4 – UPDATE THE MOBILITY FEE SCHEDULE OF USES:** NUE Urban Concepts will evaluate the current mobility fee schedule of uses to identify any necessary changes due to the update of the ITE Trip Generation Manual. NUE Urban Concepts will discuss with City Staff how the current schedule of uses has worked and if there are any changes that City Staff would like to see made to the current schedule of uses. NUE Urban Concepts will also discuss market trends with City Staff to determine if additional updates are needed. NUE Urban Concepts will prepare an updated Mobility Fee schedule based on analysis and feedback.

**TASK 5 – BACKLOG ANALYSIS:** NUE Urban Concepts will conduct a backlog analysis to identify systemwide deficiencies. The analysis will use currently available traffic data from the County and State sources. The City shall provide any recent traffic counts conducted or any recent traffic impact analysis where counts were collected. The analysis will also include updates of road capacity based on the new FDOT 2023 Generalized Capacity Tables.

**TASK 6 – CALCULATE THE MOBILITY FEE:** NUE Urban Concepts will calculate a mobility fee based on the data and analysis from task 1 thru 5. NUE Urban Concepts will update the trip generation of the Mobility Fee schedule based on the ITE Trip Generation Manual 11<sup>th</sup> edition. Person travel demand data will also be updated per the latest National Household Travel Survey Data.

**TASK 7 – UPDATE TECHNICAL REPORT:** NUE Urban Concepts will update the Technical Report to reflect task 1 through 6. The update will also document all data and analysis used in the update of the Mobility Fee. The update will include reference any Comprehensive Plan updates and will update definitions, as necessary. The Technical Report will also reflect the updated Mobility Plan projects and amendments to Florida Statute.



**Deliverables:** Mobility Plan and Mobility Fee Technical Report

**Scope Cost:** The cost per hour is based on a rate of \$200 per hour. Any required meetings, presentations, hearings, assistance with ordinance update, finding of extraordinary circumstance, workshops will require a scope addendum or additional scope billed at the rate of \$200 per hour as these services are not included in this scope of service.

TASK #	TASK	HOURS	COST
1	PROJECT FUTURE GROWTH	35	\$7,000
2	UPDATE MOBILITY PLAN PROJECTS	45	\$9,000
3	REVENUE ADJUSTMENTS	20	\$4,000
4	UPDATE MOBILITY FEE SCHEDULE OF USES	20	\$4,000
5	BACKLOG ANALYSIS	20	\$4,000
6	CALCULATE THE MOBILITY FEE	50	\$10,000
7	UPDATE TECHNICAL REPORT	70	\$14,000
<b>TOTAL</b>			<b>\$52,000</b>

**Schedule:** The mobility fee would take between six (6) and twelve (12) months to develop, starting from the date that a purchase order and notice to proceed is issued.

The following are additional services not addressed in this Scope of Service that the City may wish to consider in the implementation of a mobility fee.

**ADDITIONAL SERVICES NOT COVERED IN SCOPE ON THE FOLLOWING PAGES:**

**MOBILITY FEE ORDINANCE:** NUE Urban Concepts will assist the City with updating the mobility fee ordinance prepared for the final mobility fee analysis. The City shall provide the latest ordinance in a Word document format for editing and updating.

**PUBLIC OUTREACH AND MEETINGS:** This scope includes twenty (20) hours for conference calls or virtual meetings, and a total of three (3) in person meetings consisting of meetings with City Staff, public hearings or workshops. In person meetings, hearings, or workshops are projected at ten (10) hours per meeting to allow for travel, meeting attendance, and preparation for the meetings. of presentations. An additional 20 hours is included for preparation of presentations. Any additional hours will require a scope addendum at the hourly rate specified below. **PLEASE NOTE, ANY FINDING OF EXTRAORDINARY CIRCUMSTANCES REQUIRES TWO PUBLICLY NOTICED WORKSHOPS. THIS MAY REQUIRE ADDITIONAL MEETINGS IF IN PERSON IS REQUIRED OR ADDITIONAL HOURS FOR VIRTUAL WORKSHOPS.**

**DEVELOPMENT OF CROSS-SECTIONS:** The update to the Mobility Plan does not include graphic preparation of cross-sections for mobility plan projects. Request for new cross-sections would be assessed at a rate of \$1,500 per cross-section.

**GEOGRAPHIC INFORMATION SYSTEM FILES:** The scope does not include development of base maps for GIS files for mobility plan projects. NUE Urban Concepts can develop a base map and map final mobility plan projects if requested by the City. NUE Urban Concepts can add Mobility Plan Projects to City GIS centerline files with segments no shorter than between collector or arterial roads. This would require a separate task item.

**CITY REQUESTED MOBILITY PLAN AND MOBILITY FEE CHANGES:** Requested changes to mobility plan projects, the mobility fee schedule, or the technical report shall be assessed at a rate based on the number of changes divided by the overall number of mobility plan projects, the number of land uses on the schedule, the number of tables or formulas in the technical report. This percentage would then be multiplied by the overall cost per task to determine additional scope cost. These are for City requested changes after a draft mobility plan and mobility fee technical report has been submitted to the City. NUE Urban Concepts is responsible for addressing any errors, omissions, or other such necessary changes attributable to NUE Urban Concepts.

**ADDITION OF TASK NOT ADDRESSED BY SCOPE:** A scope addendum shall be required for requested services not addressed in the approved scope of service to ensure all parties concur with the additional task and the associated time and cost to complete the task. Additional task could include meetings with Volusia County or expansion of the Mobility Fee Assessment Area.

**ADMINISTRATIVE SERVICE CHARGES:** To relieve impact to the general fund, local governments frequently develop administrative service charges and fees to administer and implement the mobility fee. Florida Statute requires service charges not exceed the cost to fully administer a mobility fee. NUE Urban Concepts can prepare a report documenting the cost to administer and implement a mobility fee.

**ADMINISTRATIVE PROCEDURES:** To address administration of the Mobility Fee, NUE Urban Concepts will develop administrative procedures to address day-to-day administration and implementation of a mobility fee.



**COMPREHENSIVE PLAN AMENDMENT:** NUE Urban Concepts will prepare updates to goals, objectives and policies in the City’s Comprehensive Plan to reflect update of the Mobility Plan and Mobility Fee. The update will address legal and statutory requirements related to mobility planning.


**LAND DEVELOPMENT REGULATIONS (LDR) UPDATE:** NUE Urban Concepts will prepare updates to requirements and standards in the City’s Land Development Regulations to reflect adoption of a Mobility Plan and Mobility Fee. The update will address potentially conflicting transportation concurrency requirements. The updates will implement and integrate level and quality of service standards, along with other legal and statutory requirements related to mobility planning.

**SITE / MOBILITY IMPACT ANALYSIS REQUIREMENTS:** NUE Urban Concepts will develop thresholds and requirements for site related impact analysis. These requirements address site related turn lanes, traffic control devices, trip generation, driveway design, access management, on-site and off-site multimodal improvements, internal circulation, and parking. While these requirements can be included in Land Development Regulations, they are also provided as separate stand-alone requirements.

**PARKING MANAGEMENT STRATEGIES:** An evaluation of existing parking standards and design requirements will be undertaken. Parking Management Strategies to include shared parking, parking reductions for multimodal offsets, payment in lieu-of parking, and mobility hubs that create a park once environment will be evaluated. Recommendations for revisions to parking standards and design requirements, as well as parking management strategies will be prepared for inclusion in the Land Development Regulations.

Thank you for your consideration of this Scope. Please let me know if have any questions.

Sincerely,

  
Jonathan B. Paul, AICP  
Principal