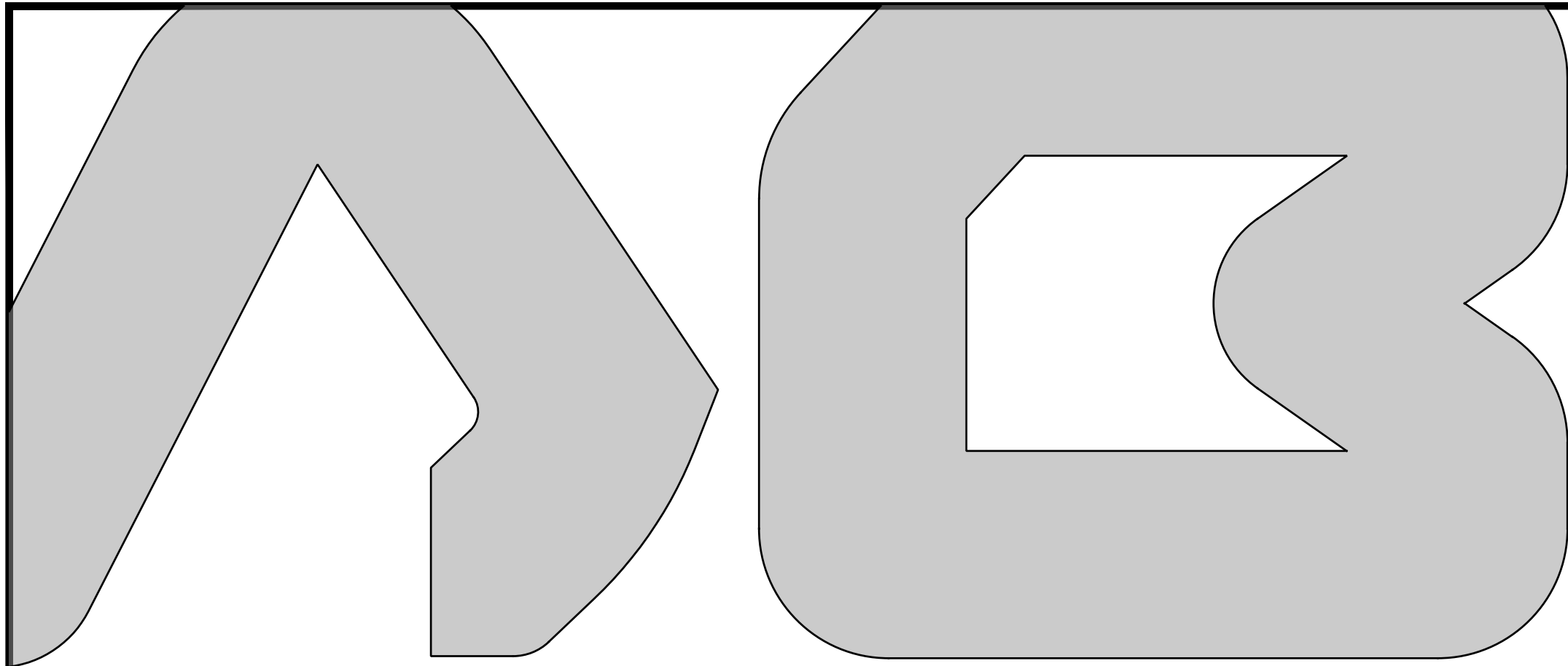




CRYSTAL LAKE VISTA

CIVIL SITE CONSTRUCTION PLANS

65 SINGLE FAMILY LOTS

MYRTLE LAKE AVE
FRUITLAND PARK, FL

REVISIONS		
No.	DESCRIPTION	DATE
-	-	-

LEGAL DESCRIPTION

THAT PART OF THE NORTH 1/2 OF THE SOUTHEAST 1/4 OF SECTION 8, TOWNSHIP 19 SOUTH, RANGE 24 EAST, IN LAKE COUNTY, FLORIDA, BOUNDED AND DESCRIBED AS FOLLOWS:

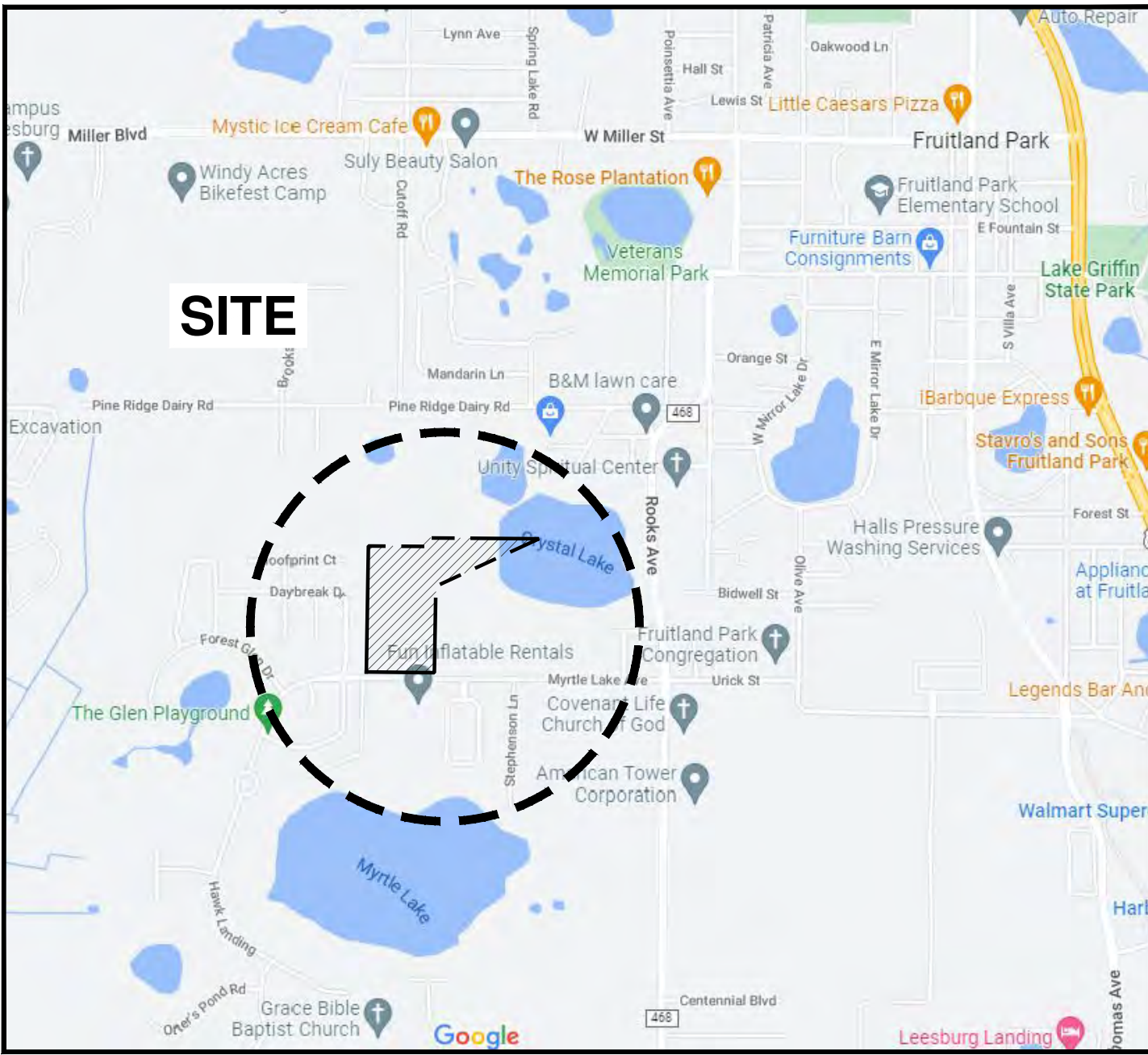
COMMENCE AT THE SOUTHEAST CORNER OF THE NORTHEAST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 8, TOWNSHIP 19 SOUTH, RANGE 24 EAST, AND RUN NORTH 89°20'05" WEST ALONG THE NORTH 1/2 OF THE SOUTHEAST 1/4 OF SAID SECTION 8, A DISTANCE OF 988.35 FEET; THENCE NORTH 00°59'55" EAST 25.00 FEET TO A POINT ON THE NORTH RIGHT-OF-WAY LINE OF MYRTLE LAKE AVENUE AND THE POINT OF BEGINNING OF THIS DESCRIPTION; FROM SAID POINT OF BEGINNING RUN NORTH 89°20'05" WEST ALONG THE NORTH RIGHT-OF-WAY LINE OF MYRTLE LAKE AVENUE 658.92 FEET TO A POINT ON THE WEST LINE OF THE EAST 1/4 OF THE NORTHWEST 1/4 OF THE SOUTHEAST 1/4 OF SAID SECTION 8; THENCE NORTH 00°57'00" EAST ALONG THE WEST LINE OF THE EAST 1/4 OF THE NORTHWEST 1/4 OF THE SOUTHEAST 1/4, A DISTANCE OF 1,219.46 FEET TO A POINT THAT IS SOUTH 00°57'00" WEST 82.20 FEET FROM THE NORTHWEST CORNER OF THE EAST 1/4 OF THE NORTHWEST 1/4 OF THE SOUTHEAST 1/4 OF SAID SECTION 8; THENCE SOUTH 89°34'30" EAST PARALLEL WITH THE NORTH LINE OF THE SOUTHEAST 1/4 OF SAID SECTION 8 A DISTANCE OF 529.99 FEET; THENCE NORTH 00°53'13" EAST 82.20 FEET TO A POINT ON THE NORTH LINE OF THE SOUTHEAST 1/4 OF SAID SECTION 8; THENCE SOUTH 89°34'30" EAST ALONG THE NORTH LINE OF THE SOUTHEAST 1/4 A DISTANCE OF 1,120.29 FEET TO THE NORTHEAST CORNER OF THE NORTHEAST 1/4 OF THE SOUTHEAST 1/4 OF SAID SECTION 8; THENCE SOUTH 65°13'49" WEST, 1,099.42 FEET; THENCE SOUTH 00°59'55" WEST 836.39 FEET TO THE POINT OF BEGINNING.

AREA = 24.02 AC

INDEX OF DRAWINGS	
SHT. NO.	DWG. NO. & SHEET TITLE
1	C-0.0_TITLE SHEET
2	C-0.1_GENERAL NOTES & DETAILS
3	C-1.1_PRE DEVELOPMENT & DEMOLITION PLAN
4	C-1.2_POST DEVELOPMENT PLAN
5	C-1.3_WETLAND IMPACTS
6	C-2.0_HORIZONTAL CONTROL PLAN & SIGNAGE PLAN
7	C-2.1_SITE PLAN
8	C-2.2_SITE DETAILS
9	C-3.0_PAVING, GRADING & DRAINAGE PLAN
10	C-3.1_STORM STRUCTURE TABLES
11	C-3.2_POND DETAILS
12	C-3.3_GRADING & DRAINAGE DETAILS
13	C-4.0_STORMWATER POLLUTION PREVENTION PLAN
14	C-4.1_EROSION CONTROL DETAILS
15	C-5.0_UTILITY PLAN
16	C-5.1_UTILITY DETAILS
17	C-5.2_UTILITY DETAILS
18	C-5.3_LIFT STATION DETAILS
19	C-5.4_FORCEMAIN PLAN & PROFILE
20	C-6.0_STREET PROFILES
21	C-6.1_STREET PROFILES
22	C-7.0_LANDSCAPING PLAN
23	C-7.1_LANDSCAPING DETAILS
24	C-8.0_IMPROVEMENTS TO COUNTY RD
25	C-8.1_COUNTY RD GRADING

DRAWINGS BY OTHERS (SEPARATE SET)

- SURVEYS (BOUNDARY, TOPO, WETLAND, OTHERS)



LOCATION MAP

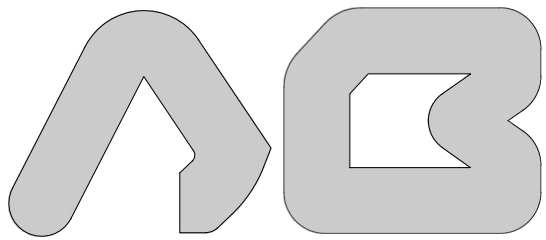
SCALE: 1" = 1,500'



VICINITY MAP

SCALE: 1" = 400'

CONSULTANT:



A&B Engineering Consultants, P.A.

Civil Engineering
Land Planning
Project Management
Inspections

Certificate of
Authorization:
No. 27697

4914 E Longboat Blvd
Tampa, FL 33615

Tel : 727-698-9513
angel@ancompanies.com
www.anbcompanies.com

OWNER:

CRYSTAL LAKE LAND HOLDINGS LLC

114 Sleepy Hollow Rd
Leesburg, FL 34748
drerichcoe@aol.com

UTILITY PROVIDERS:

SEWER / WATER	CITY OF FRUITLAND PARK 202 W BERCKMAN ST, FRUITLAND PARK, FL 34731 (352) 360-6795
ELECTRIC	CITY OF LEESBURG - ELECTRIC DEPT 2010 GRIFFIN RD, LEESBURG FL 34748 (352) 728-9786
STORM / DRAINAGE	ST JOHNS RIVER WATER MANAGEMENT DISTRICT 2501 S. BINION RD, APOPKA FL 32703 (407) 659-4800
GAS	N/A . .
CABLE	----- ----- -----

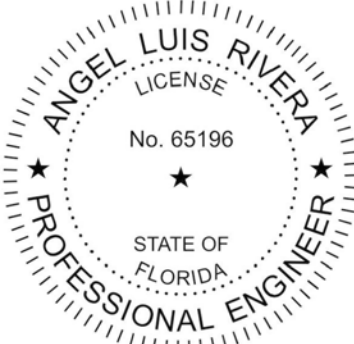
CALL 48 HOURS
BEFORE YOU DIG

IT'S THE LAW!
DIAL 811

SUNSHINE STATE ONE CALL OF FLORIDA, INC.



This item has been digitally signed and sealed by Angel L. Rivera, State of Florida Professional Engineer License No. 65196, on the date adjacent to the seal. Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.



SIGNED DATE

ANGEL L. RIVERA, PE

LIC. NO. 65196

5.15.25

DRAWING No.
C-0.0

SHEET No.

1

OF

25

SHEETS

1

2

3

4

5

6

FRUITLAND PARK NOTES:

1.

A PRE-CONSTRUCTION MEETING WITH THE PUBLIC WORKS DIRECTOR, IS REQUIRED PRIOR TO COMMENCING ANY CONSTRUCTION ACTIVITIES. THE PRE-CONSTRUCTION MEETING CANNOT BE SCHEDULED UNTIL ALL REQUIRED PERMITS (LOCAL, STATE & FEDERAL) HAVE BEEN ISSUED.

2.

PLEASE BE ADVISED THAT ANY CONSTRUCTION ACTIVITIES THAT DISTURB (INCLUDES CLEARING, GRADING AND EXCAVATION) ONE (1) ACRE OR MORE OF LAND (TOTAL PLAN OF DEVELOPMENT) THAT MAY RESULT IN A STORMWATER DISCHARGE TO WATERS OF THE STATE, OR MUNICIPAL SEPARATE STORM SYSTEM WILL REQUIRE COVERAGE UNDER A FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION (FDEP) NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORMWATER PERMIT, INCLUDING A STORMWATER POLLUTION PREVENTION PLAN. INFORMATION ABOUT NPDES STORMWATER PROGRAM CAN BE OBTAINED BY CALLING THE FDEP NPDES STORMWATER PROGRAM AT (850) 245-7552 OR VISITING THEIR WEBSITE AT: www.dep.state.fl.us/water/stormwater/npdes/.

3.

UPON COMPLETION OF THE LAND DEVELOPMENT CONSTRUCTION, A PROFESSIONAL ENGINEER SHALL PROVIDE A CERTIFICATION TO THE CITY THAT THE PROJECT COMPLIES WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL/GEOLOGICAL ENGINEERING REPORT.

4.

CONSTRUCTION OF SITE IMPROVEMENTS & UTILITIES SHALL MEET THE CITY LAND DEVELOPMENT CODE AND STANDARD CONSTRUCTION SPECIFICATIONS.

APPLICABLE CODES:

1.

AS APPLICABLE, ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF:

A.

FRUITLAND PARK LAND DEVELOPMENT CODE (IN EFFECT AT THE TIME THE PLANS WERE PREPARED).

B.

FRUITLAND PARK TECHNICAL STANDARDS AND SPECIFICATIONS.

C.

FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY, TRAFFIC AND DRAINAGE DESIGN STANDARDS/MANUALS.

D.

FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

E.

ALL OTHER APPLICABLE CODES AND ORDINANCES.

GENERAL NOTES:

1.

NO CONSTRUCTION SHALL BEGIN UNLESS THE REQUIRED PERMITS ARE OBTAINED.

2.

CONTRACTOR MUST MAINTAIN ON SITE A COPY OF ALL REQUIRED PERMITS, AS WELL AS A FULL SET OF APPROVED PLANS.

3.

THE CONTRACTOR SHALL NOT ENTER UPON, OR IN ANY WAY ALTER, THE WETLAND AREAS THAT ARE DESIGNATED TO REMAIN. ALL WORK IN THE VICINITY OF OPEN WATER AND/OR WETLANDS IS TO BE PERFORMED IN COMPLIANCE WITH THE ENVIRONMENTAL PERMITS FOR THE SITE. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY FINE RESULTING FROM HIS VIOLATION OF PERMIT CONDITIONS.

4.

CONTRACTOR IS RESPONSIBLE FOR REPAIR AND REPLACEMENT OF INFRASTRUCTURE / FACILITIES WITHIN THE RIGHT-OF-WAY THAT ARE DAMAGED DURING CONSTRUCTION ACTIVITY.

5.

IF, DURING CONSTRUCTION ACTIVITIES, ANY EVIDENCE OF THE PRESENCE OF STATE AND FEDERALLY PROTECTED PLANT AND/OR ANIMAL SPECIES ARE DISCOVERED, WORK SHALL COME TO AN IMMEDIATE STOP AND THE GOVERNING AUTHORITY SHALL BE NOTIFIED WITHIN TWO WORKING DAYS.

6.

ALL WORK PERFORMED SHALL COMPLY WITH ALL APPLICABLE REGULATIONS AND ORDINANCES OF THE VARIOUS GOVERNMENT AGENCIES HAVING JURISDICTION OVER THE WORK PERFORMED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PENALTIES/FINES LEVIED DUE TO WORK THAT IS NOT IN ACCORDANCE WITH PERMIT CONDITIONS.

7.

WHEN BURNING IS PERMITTED, THE BURNING SHALL OCCUR DURING OPTIMAL WEATHER CONDITIONS THAT ALLOW FOR THE VERTICAL EVACUATION OF SMOKE FROM THE SITE. NO BURNING OF VEGETATION SHALL OCCUR WITHOUT THE NECESSARY PERMIT. PERMIT TO BE OBTAINED BY THE CONTRACTOR.

8.

THE CONTRACTOR IS RESPONSIBLE FOR A SECURE AND CLEAN SITE AT ALL TIMES, UTILIZING ALL CITY, COUNTY AND FDOT STANDARDS.

9.

CONTRACTOR SHALL MAINTAIN ALL WORK UNTIL FINAL ACCEPTANCE BY GOVERNING AUTHORITIES AND OWNER.

10.

THE CONTRACTOR SHALL PROVIDE ALL SHEETING, SHORING AND BRACING REQUIRED TO MEET THE REQUIREMENTS OF THE "TRENCH SAFETY ACT" AND TO PROTECT ADJACENT STRUCTURES OR TO MINIMIZE TRENCH WIDTH. WHERE A SEPARATE PAY ITEM IS NOT PROVIDED, THE COST FOR ALL SHEETING, SHORING AND BRACING REQUIRED SHALL BE INCLUDED IN THE CONTRACT PRICE FOR MOBILIZATION.

11.

ALL PRODUCT INSTALLATION SHALL BE PER MANUFACTURER'S SPECIFICATIONS, OR BY THE LOCAL REGULATORY AGENCIES' SPECIFICATIONS, WHICHEVER IS MORE STRINGENT.

PAVING, GRADING AND DRAINAGE NOTES:

1.

CONTRACTOR SHALL CONTACT THE GOVERNING AUTHORITY TO OBTAIN COMPACTION, INSPECTION AND CERTIFICATIONS REQUIREMENTS.

2.

ALL EARTHWORK, PLACEMENT OF FILL AND PAVEMENT PREPARATION TO CONFORM TO THE MORE STRICT OF THE CITY/COUNTY LDC, TECHNICAL STANDARDS AND THE GEOTECHNICAL REPORT.

3.

ALL FILL SHALL BE CLEAN, FREE OF DEBRIS AND TOXIC OR DELETERIOUS SUBSTANCES.

4.

DURING LAND ALTERATION AND CONSTRUCTION ACTIVITIES, IT SHALL BE UNLAWFUL TO REMOVE VEGETATION BY GRUBBING OR TO PLACE SOIL DEPOSITS, DEBRIS, SOLVENTS, CONSTRUCTION MATERIAL, MACHINERY OR OTHER EQUIPMENT OF ANY KIND WITHIN THE DRIPLINE OF A TREE REMAINING ON SITE UNLESS APPROVED BY THE GOVERNING AUTHORITIES.

5.

ALL STORM DRAIN STRUCTURES TO CONFORM THE "FLORIDA DEPARTMENT OF TRANSPORTATION DESIGN STANDARDS FOR CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM" MANUAL LATEST EDITION. ALL STORM PIPES SHALL HAVE FILTER FABRIC WRAP ON GROUTED CONNECTION TO STRUCTURE (AT JOINT) PER FDOT INDEX 425-001.

6.

ALL PROPOSED STORM GRATES, RING & COVERS AND SANITARY SEWER RING & COVERS TO MEET H-20 LOADING RATING. ALL STORM GRATES TO BE HOT DIPPED GALVANIZED RETICULINE STEEL GRATES. ALL EXISTING STRUCTURES TO BE MODIFIED AS REQUIRED TO MEET H-20 LOAD RATING AND ADJUSTED TO MEET PROPOSED GRADE.

7.

ALL SWALES SHALL BE SODDED IF NOT NOTED ON PLANS/DETAILS.

8.

STORM SEWER PIPELINES WILL NOT BE INSTALLED PRIOR TO PLACEMENT AND ALIGNMENT OF INLET STRUCTURES.

9.

ALL FIRST FLOOR ELEVATIONS (FFE) SHALL BE A MINIMUM OF ONE (1) FOOT ABOVE BASE FLOOD ELEVATION UNLESS OTHERWISE SPECIFIED.

10.

WHERE FILL IS PROPOSED, IT SHALL BE PLACED IN COMPLIANCE WITH THE GEOTECHNICAL/GEOLOGICAL ENGINEERING REPORT RECOMMENDATIONS (INCLUDING ANY LIFT DEPTHS RECOMMENDED) AND COMPACTED TO A MINIMUM REQUIRED BY THE GOVERNMENT AUTHORITY OR AS PER GEOTECHNICAL REPORT, WHICHEVER IS GREATER. DENSITY TESTS TO CONFIRM COMPACTION SHALL BE REQUIRED WITHIN THE BUILDING PAD AREA BEFORE THE NEXT LIFT IS PLACED.

11.

ALL EXCAVATIONS SHALL MEET OSHA REQUIREMENTS.

12.

UTILIZE FDOT INDEX 120-002, 120-001 AND 160-001 FOR DETAILS REGARDING ALLOWABLE EARTHWORK OPERATIONS AND MATERIALS.

13.

EXISTING DRAINAGE STRUCTURES AND PIPES WITHIN THE LIMITS OF CONSTRUCTION SHALL BE REMOVED UNLESS OTHERWISE NOTED TO REMAIN. SOME EXISTING PIPES ARE TO BE PROPERLY CONNECTED TO PROPOSED DRAINAGE STRUCTURES (SEE PLANS FOR LOCATIONS).

14.

EXCESS MATERIAL REMAINING AFTER MEETING PROJECT GRADING REQUIREMENTS SHALL BE HAULED OFF THE SITE AND PROPERLY DISPOSED OF BY THE CONTRACTOR.

15.

ALL DRAINAGE STRUCTURES AND STORMWATER FACILITIES SHALL BE CLEANED PRIOR TO ACCEPTANCE OF CONTRACT. COST TO BE INCLUDED IN THE COST OF ALL ITEMS.

MAINTENANCE OF TRAFFIC (MOT) NOTES:

1.

THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE GOVERNING AGENCY (CITY/ COUNTY OR FDOT) THEIR MOT REQUIREMENTS ESTABLISHED DURING THE PRECONSTRUCTION MEETING. LANE CLOSURE TIMES AND OTHERS DETAILS SHALL BE ADDRESSED DURING SAID MEETING.

2.

THE CONTRACTOR SHALL ADHERE TO THE REQUIREMENTS SET FORTH IN "THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) LATEST EDITION, SERIES 102-XXX OF THE FDOT STANDARDS PLANS (LATEST EDITION) AND SECTION 102 OF THE STANDARD SPECIFICATIONS AT ALL TIMES. OTHER MOT INDEXES MAY APPLY BESIDES THE ONES REFERENCED ON THESE PLANS.

3.

ALL EXISTING PAVEMENT MARKINGS, WHICH CONFLICT WITH THE TRAFFIC CONTROL PLAN DURING A CONSTRUCTION PHASE SHALL BE REMOVED OR TEMPORARILY RELOCATED AS NECESSARY PRIOR TO THE DIVERSION OF TRAFFIC AND THE COMMENCEMENT OF CONSTRUCTION. THE REMOVAL OF EXISTING PAVEMENT MARKINGS THAT ARE TO BE PERMANENTLY REMOVED MUST BE COMPLETED BY MILLING AND RESURFACING.

4.

THE CONTRACTOR SHALL USE THE MUTCD TO DETERMINE THE APPROPRIATE COLOR FOR CONSTRUCTION SIGNS AND REQUIRED MOUNTING/SUPPORT; FLAGS AND WARNING LIGHTS REQUIREMENTS. ALL TRAFFIC CONTROL DEVICES, MATERIALS AND INSTALLATION SHALL BE FDOT APPROVED.

5.

MINIMUM LANE WIDTHS SHALL BE NO LESS THAN EXISTING LANE WIDTHS OR AS INDICATED ON PLANS.

6.

BARRICADES, CONES AND DRUMS SHALL NOT BE INTERMIXED IN LATERAL TRANSITIONS.

7.

EXISTING ACCESS TO ALL PROPERTIES SHALL BE MAINTAINED AT ALL TIMES.

8.

EXISTING DRAINAGE SYSTEMS MUST BE MAINTAINED UNTIL THE NEW SYSTEM IS CONSTRUCTED AND FUNCTIONAL. TEMPORARY SWALES, CULVERTS, PIPES, PLUMBING, ETC. ARE TO BE CONSTRUCTED WITHIN THE RIGHT OF WAY AS REQUIRED. REFER TO THE FDOT DRAINAGE HANDBOOK FOR TEMPORARY DRAINAGE DESIGN.

9.

ALL TEMPORARY PAVEMENT MARKINGS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 102 OF THE FDOT STANDARD SPECIFICATIONS. ALL MARKINGS SHALL BE REFLECTORIZED AND SHALL BE PROVIDED AS SOON AS POSSIBLE AT THE END OF EACH DAYS PAVING OPERATIONS, PRIOR TO OPENING TO TRAFFIC.

10.

UNLESS OTHERWISE SPECIFIED, THE CROSS SLOPE FOR ALL TEMPORARY PAVEMENT WHICH ABUTS EXISTING OR NEW PAVEMENT SHALL MATCH THE CROSS SLOPE OF THE ABUTTING PAVEMENT. CROSS SLOPE TRANSITIONS SHALL CONFORM TO FDOT INDEX 000-511. THE CONTRACTOR SHALL ENSURE ADEQUATE DRAINAGE OF ALL TEMPORARY PAVEMENT.

11.

MATERIALS AND EQUIPMENT WHICH ARE STORED AND/OR STOCKPILED SHALL BE KEPT OUTSIDE OF THE CLEAR ZONE DURING ALL PHASES OF CONSTRUCTION.

12.

THE CONTRACTOR SHALL NOTIFY ALL LOCAL LAW ENFORCEMENT AGENCIES A MINIMUM OF 48 HOURS PRIOR TO A LANE CLOSURE THAT WILL EXCEED ONE (1) HOUR. ONLY ONE LANE IN EACH DIRECTION MAY BE CLOSED AT ANY ONE TIME.

13.

ANY WORK REQUIRING LANE CLOSURES SHALL BE COMPLETED AS SOON AS POSSIBLE AND THE LANES REOPENED TO TRAFFIC WITH PROPER PAVEMENT MARKINGS AND WARNING DEVICES IN PLACE.

14.

NO LANE CLOSURE WILL BE ALLOWED WITHOUT ABSOLUTE ASSURANCE THAT THE PRIME AND SUBCONTRACTORS HAVE PLANNED THE OPERATIONS TO ACHIEVE REOPENING ACCORDING TO THESE REQUIREMENTS AND TO THE SATISFACTION OF THE GOVERNING AGENCY.

15.

AT THE DISCRETION OF THE GOVERNING AGENCY, IF A LANE CLOSURE CAUSES EXTENDED CONGESTION OR DELAY, THE CONTRACTOR SHALL REOPEN THE CLOSED LANE(S) UNTIL SUCH TIME AS TRAFFIC FLOW HAS RETURNED TO AN ACCEPTABLE LEVEL.

16.

ALL EXISTING PAVEMENT MARKINGS, OUTSIDE THE LIMITS OF CONSTRUCTION, THAT ARE ALTERED OR DAMAGED AS DETERMINED BY THE GOVERNING AGENCY, SHALL BE REPLACED UPON COMPLETION OF THE PROJECT.

17.

EXISTING SIGNS SHALL BE MAINTAINED AND/OR RELOCATED DURING CONSTRUCTION UNTIL PROPOSED SIGNS ARE INSTALLED.

18.

THE CONTRACTOR SHALL INSTALL EROSION CONTROL MEASURES PRIOR TO THE BEGINNING OF CONSTRUCTION.

19.

TRAFFIC SHALL BE MAINTAINED ON PAVED SURFACES AT ALL TIMES.

20.

TRAFFIC CONDITIONS, ACCIDENTS AND OTHER UNFORESEEN EMERGENCY CONDITIONS MAY REQUIRE THE GOVERNING AGENCY TO RESTRICT OR REMOVE LANE CLOSURES OR CHANNELIZATIONS. THE CONTRACTOR SHALL RESPOND AND PROVIDE ADJUSTMENTS AS DIRECTED WITHOUT DELAY UNDER THESE CONDITIONS. THE CONTRACTOR SHALL ALSO RESPOND WITHIN 30 MINUTES UPON NOTIFICATION BY THE GOVERNING AGENCY TO ANY REQUESTS FOR CORRECTION, IMPROVEMENT OR MODIFICATION TO THE TRAFFIC CONTROL PLAN AND/OR DEVICES.

21.

INSPECTION AND ACCEPTANCE:

A.

UPON COMPLETION OF THE INSTALLATION OF THE TRAFFIC CONTROL DEVICES, THE CONTRACTOR SHALL CALL THE GOVERNING AGENCY ENGINEERING INSPECTIONS DIVISION FOR AN INSPECTION.

B.

NO ROADWAY SHALL BE OPEN TO THE PUBLIC UNTIL ALL TRAFFIC CONTROL DEVICES HAVE BEEN INSPECTED AND ACCEPTED BY THE GOVERNING AGENCY.

GEOLOGIC HAZARD NOTES:

SHOULD ANY NOTICEABLE SOIL SLUMPING OR SINKHOLE FORMATION BECOME EVIDENT, THE APPLICANT/DEVELOPER SHALL IMMEDIATELY NOTIFY THE GOVERNING AUTHORITIES, AND ADOPT ONE OR MORE OF THE FOLLOWING PROCEDURES AS DETERMINED TO BE APPROPRIATE BY SAID AUTHORITIES:

1.

IF THE SLUMPING OR SINKHOLE FORMATION BECOMES EVIDENT BEFORE OR DURING CONSTRUCTION ACTIVITIES, STOP ALL WORK (EXCEPT FOR MITIGATION ACTIVITIES) IN THE AFFECTED AREA AND REMAIN STOPPED UNTIL THE GOVERNING AUTHORITY APPROVE RESUMING CONSTRUCTION ACTIVITIES.

2.

TAKE IMMEDIATE MEASURES TO ENSURE NO SURFACE WATER DRAINS INTO THE AFFECTED AREAS.

3.

HAVE A GEOTECHNICAL ENGINEER VISUALLY INSPECT THE AFFECTED AREA.

4.

EXCAVATE AND BACKFILL OR GROUT AS REQUIRED TO FILL THE AFFECTED AREA AND PREVENT FURTHER SUBSIDENCE.

5.

USE SOIL REINFORCEMENT MATERIALS IN THE BACKFILLING OPERATION, WHEN APPROPRIATE.

6.

IF THE AFFECTED AREA IS IN THE VICINITY OF A WATER-RETENTION AREA, MAINTAIN A MINIMUM DISTANCE OF TWO FEET FROM THE BOTTOM OF THE RETENTION POND TO THE SURFACE OF THE LIME-ROCK OR KARST CONNECTION. RELOCATE THE RETENTION AREA IF NECESSARY.

7.

DISCHARGE OF STORM-WATER INTO DEPRESSIONS WITH DIRECT OR DEMONSTRATED HYDROLOGIC CONNECTION TO THE FLORIDAN AQUIFER SHALL BE PROHIBITED.

HISTORIC RESOURCES NOTES:

1.

IF PREHISTORIC OR HISTORIC ARTIFACTS, SUCH AS POTTERY OR CERAMICS, PROJECTILE POINTS, DUGOUT CANOES, METAL IMPLEMENTS, HISTORIC BUILDING MATERIALS, OR ANY OTHER PHYSICAL REMAINS THAT COULD BE ASSOCIATED WITH NATIVE AMERICAN, EARLY EUROPEAN, OR AMERICAN SETTLEMENT ARE ENCOUNTERED AT ANY TIME WITHIN THE PROJECT SITE AREA, THE PERMITTED PROJECT SHALL CEASE ALL ACTIVITIES INVOLVING SUBSURFACE DISTURBANCE IN THE VICINITY OF THE DISCOVERY. THE APPLICANT SHALL CONTACT THE FLORIDA DEPARTMENT OF STATE, DIVISION OF HISTORICAL RESOURCES, COMPLIANCE REVIEW SECTION AT (850)-245-6333. PROJECT ACTIVITIES SHALL NOT RESUME WITHOUT VERBAL AND/OR WRITTEN AUTHORIZATION. IN THE EVENT THAT UNMARKED HUMAN REMAINS ARE ENCOUNTERED DURING PERMITTED ACTIVITIES, ALL WORK SHALL STOP IMMEDIATELY AND THE PROPER AUTHORITIES NOTIFIED IN ACCORDANCE WITH SECTION 872.05, FLORIDA STATUTES.

AS-BUILT NOTES:

GENERAL NOTES:

1.

ALL AS-BUILT INFORMATION SHALL BE FROM A LICENSED LAND LAND SURVEYOR, AND SHALL BE CERTIFIED TO BOTH A&B ENGINEERING CONSULTANTS PA AND THE DEVELOPER. THIS AS-BUILT INFORMATION SHALL BE LEGIBLE AND PROVIDED IN BOTH SIGNED/SEALED PRINTS AND IN DIGITAL COPY. ALL AS-BUILT DATA SHALL BE ON THE SAME COORDINATE SYSTEM AND BENCHMARK DATUM AS THE CONSTRUCTION PLANS. THE INFORMATION PROVIDED SHALL BE ACCEPTABLE TO THE UTILITY COMPANY, THE WATER MANAGEMENT DISTRICT AND THE REVIEWING GOVERNMENT AGENCY.

2.

AS-BUILT MINIMUM REQUIREMENTS LISTED ON THIS SHEET ARE TYPICAL ONLY. CONTRACTOR MUST COORDINATE WITH REVIEWING AGENCIES FOR ALL OF THEIR AS-BUILT REQUIREMENTS PRIOR TO COMMENCING CONSTRUCTION.

3.

ANY CHANGES TO THE DESIGN MUST BE CONSULTED WITH THE ENGINEER, PRIOR TO THE CHANGE, AND THE SHALL BE INCLUDED ON THE AS-BUILT DWGS.

4.

A&B ENGINEERING CONSULTANTS PA WILL PROVIDE A DIGITAL COPY OF THE CONSTRUCTION PLANS TO THE CONTRACTOR UPON COMPLETION OF THE CONSTRUCTION PHASE FOR USE IN PREPARING THE AS-BUILT PLANS. DIGITAL FILES WILL NOT BE PROVIDED FOR CONSTRUCTION LAYOUT. THE CONTRACTOR OR SURVEYOR IS ENCOURAGED TO MEET WITH A&B ENGINEERING CONSULTANTS PA TO DISCUSS THE AS-BUILT REQUIREMENTS. AS A MINIMUM, THE AS-BUILT INFORMATION SHALL INCLUDED ALL UTILITY AND DRAINAGE INFORMATION NOTED.

MINIMUM DRAINAGE AS-BUILT REQUIREMENTS

5.

OUTFALL ELEVATIONS INCLUDING GRATE ELEVATION, WEIR ELEVATION AND WIDTH, ORIFICE SIZE AND INVERT, PIPE INVERT, SKIMMER TOP AND BOTTOM ELEVATIONS.

6.

DRAINAGE PONDS WITH DIMENSIONS OR COORDINATES OF POND, TOP OF POND/WALL ELEVATIONS AND BOTTOM OF POND ELEVATIONS. ELEVATIONS SHALL ALSO BE PROVIDED AT CHANGE OF GRADES AND VISIBLE LOW POINTS ALONG THE TOP OF BERM. POND LOCATIONS SHALL BE PROVIDED WHERE COORDINATE ARE PROVIDED ON THE CONSTRUCTION PLANS. SUFFICIENT INFORMATION SHALL BE PROVIDED FOR THE ENGINEER TO MAKE A DETERMINATION OF THE CONSTRUCTED SYSTEM IS IN COMPLIANCE WITH THE PERMITTED PROJECT.

7.

SWALE LOCATION WITH ELEVATION AT LOCATIONS WHERE ELEVATIONS ARE NOTED ON CONSTRUCTION PLANS.

8.

STORM DRAIN STRUCTURES, TOP & INVERT.

9.

PIPE MATERIALS IF DIFFERENT THAN CONSTRUCTION PLANS.

GRADING AS-BUILT REQUIREMENTS

10.

IF SINGLE FAMILY RESIDENTIAL LOTS: LOT GRADING WITH ELEVATIONS AT LOCATIONS NOTED ON THE PLANS TO SHOW THAT LOT DRAINAGE FLOWS IN THE DIRECTION SHOW ON PLANS. IF TOWNHOMES OR APARTMENTS: ELEVATIONS OF 4 OPPOSITE BUILDING CORNERS AND FINISHED FLOOR ELEVATIONS.

MINIMUM UTILITY AS-BUILT REQUIREMENTS

11.

ALL UTILITY FITTINGS, BENDS, TEES, VALVES, HYDRANTS, ETC. (USING STATE PLANE COORDINATES)

12.

ALL WATER AND SEWER SERVICES SHALL BE LOCATED

13.

DETAILS OF JACK + BORE WITH CONSTRUCTED PIPE LENGTH, CASING L

14.

LIFT STATION DIMENSIONS AND ELEVATIONS.

15.

LENGTH OF ALL RESTRAINTS.

16.

SAMPLE POINT LOCATIONS.

17.

HORIZONTAL AND VERTICAL CLEARANCES AT PIPE CROSSINGS.

18.

MANHOLE RIM ELEVATION, INVERTS AND DIRECTION OF FLOW.

ENGINEER OF RECORD CERTIFICATION

AS-BUILT/RECORD DRAWINGS, AND CERTIFICATION OF COMPLETION SHALL BE SUBMITTED, SIGNED, SEALED, AND DATED BY THE ENGINEER OF RECORD. AS-BUILT/RECORD DRAWINGS SHALL INDICATE ANY DEPARTURES FROM THE APPROVED PLANS DURING CONSTRUCTION.

GENERAL UTILITY DETAILS:

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

OTHER PIPE

STORM SEWER
STORMWATER FORCE MAIN,
RECLAIMED WATER (2)

HORIZONTAL SEPARATION

WATER MAIN

3 FT. MINIMUM

CROSSINGS (1)

WATER MAIN

12 INCHES IS THE MINIMUM, EXCEPT FOR GRAVITY SEWER, THEN 6 INCHES IS THE MINIMUM AND 12 INCHES IS PREFERRED

JOINT SPACING @ CROSSINGS (FULL JOINT CENTERED)

WATER MAIN

ALTERNATE 3 FT. MINIMUM

VACUUM SANITARY SEWER

WATER MAIN

10 FT. PREFERRED
3 FT. MINIMUM

HORIZONTAL SEPARATION

WATER MAIN

10 FT. PREFERRED
3 FT. MINIMUM

CROSSINGS (1)

WATER MAIN

12 INCHES PREFERRED 6 INCHES MINIMUM

JOINT SPACING @ CROSSINGS (FULL JOINT CENTERED)

WATER MAIN

ALTERNATE 3 FT. MINIMUM

GRAVITY OR PRESSURE
SANITARY SEWER
SANITARY SEWER FORCE MAIN,
RECLAIMED WATER (4)

WATER MAIN

10 FT. PREFERRED
6 FT. MINIMUM (3)

HORIZONTAL SEPARATION

WATER MAIN

10 FT. PREFERRED
6 FT. MINIMUM (3)

CROSSINGS (1)

WATER MAIN

12 INCHES IS THE MINIMUM, EXCEPT FOR GRAVITY SEWER, THEN 6 INCHES IS THE MINIMUM AND 12 INCHES IS PREFERRED

JOINT SPACING @ CROSSINGS (FULL JOINT CENTERED)

WATER MAIN

ALTERNATE 6 FT. MINIMUM

ON-SITE SEWAGE TREATMENT & DISPOSAL SYSTEM

WATER MAIN

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.

RECLAIMED WATER REGULATED UNDER PART III OF CHAPTER 62-610, F. A. C.

3.

3 FT. FOR GRAVITY SANITARY SEWER WHERE THE BOTTOM OF THE WATER MAIN IS LAID 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.

5.

THIS DETAILS AND INFORMATION IS FOR GENERAL REFERENCE ONLY, PLEASE REFER TO RULE 62-555.314 F.A.C. FOR ADDITIONAL CONSTRUCTION REQUIREMENTS.

PROPOSED UTILITY WITH 3' OF COVER

SEE TABLE

PROPOSED UTILITY

SEE TABLE

BEND WITH RESTRAINT (TYP)

NOTE:
INSTALL 45° BENDS AS NECESSARY TO ACHIEVE A MINIMUM VERTICAL SEPARATION. CONTRACTOR MAY DEFLECT PIPE IN LIEU OF BENDS.

TYPICAL PIPE CROSSING DETAIL

N.T.S.

BEGIN DEFLECTION

DEFLECT PER MANUFACTURERS RECOMMENDATIONS IN LIEU OF FITTINGS

0.5'

0.5'

R.O.W.

FM OR WATERMAIN

3' TYP.

INLET

CROSSING DETAIL A

N.T.S.

ANGULAR DEFLECTION:

NOTE: NO DEFLECTION SHALL BE ALLOWED AT THE JOINT. PIPE CURVATURE SHOULD BE ACCOMPLISHED BY BENDING THE PIPE RATHER THAN DEFLECTING THE JOINTS. THE BENT PIPE IS ASSUMED TO FORM A TRUE ARC, I.E. THE PIPE IS CURVED UNIFORMLY THROUGHOUT ITS LENGTH AS FOLLOWS:

PIPE SIZE (INCHES)

MINIMUM ALLOWABLE RADIUS (FEET)

4

100'

6

150'

8

200'

10

250'

12

300'

*VERIFY WITH PIPE MANUFACTURER

WASTEWATER LATERAL MINIMUM SLOPE
(FBC Plumbing Table 704.1)

SIZE (IN)

MINIMUM SLOPE (IN/FT)

2-1/2 OR LESS

1/4

3 TO 6

1/8

8 OR LARGER

1/16

1

2

3

4

5

6

E

D

C

B

A

FRUITLAND PARK NOTES:

1.

A PRE-CONSTRUCTION MEETING WITH THE PUBLIC WORKS DIRECTOR, IS REQUIRED PRIOR TO COMMENCING ANY CONSTRUCTION ACTIVITIES. THE PRE-CONSTRUCTION MEETING CANNOT BE SCHEDULED UNTIL ALL REQUIRED PERMITS (LOCAL, STATE & FEDERAL) HAVE BEEN ISSUED.

2.

PLEASE BE ADVISED THAT ANY CONSTRUCTION ACTIVITIES THAT DISTURB (INCLUDES CLEARING, GRADING AND EXCAVATION) ONE (1) ACRE OR MORE OF LAND (TOTAL PLAN OF DEVELOPMENT) THAT MAY RESULT IN A STORMWATER DISCHARGE TO WATERS OF THE STATE, OR MUNICIPAL SEPARATE STORM SYSTEM WILL REQUIRE COVERAGE UNDER A FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION (FDEP) NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORMWATER PERMIT, INCLUDING A STORMWATER POLLUTION PREVENTION PLAN. INFORMATION ABOUT NPDES STORMWATER PROGRAM CAN BE OBTAINED BY CALLING THE FDEP NPDES STORMWATER PROGRAM AT (850) 245-7552 OR VISITING THEIR WEBSITE AT: www.dep.state.fl.us/water/stormwater/npdes/.

3.

UPON COMPLETION OF THE LAND DEVELOPMENT CONSTRUCTION, A PROFESSIONAL ENGINEER SHALL PROVIDE A CERTIFICATION TO THE CITY THAT THE PROJECT COMPLIES WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL/GEOLOGICAL ENGINEERING REPORT.

4.

CONSTRUCTION OF SITE IMPROVEMENTS & UTILITIES SHALL MEET THE CITY LAND DEVELOPMENT CODE AND STANDARD CONSTRUCTION SPECIFICATIONS.

APPLICABLE CODES:

1.

AS APPLICABLE, ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF:

A.

FRUITLAND PARK LAND DEVELOPMENT CODE (IN EFFECT AT THE TIME THE PLANS WERE PREPARED).

B.

FRUITLAND PARK TECHNICAL STANDARDS AND SPECIFICATIONS.

C.

FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY, TRAFFIC AND DRAINAGE DESIGN STANDARDS/MANUALS.

D.

FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

E.

ALL OTHER APPLICABLE CODES AND ORDINANCES.

GENERAL NOTES:

1.

NO CONSTRUCTION SHALL BEGIN UNLESS THE REQUIRED PERMITS ARE OBTAINED.

2.

CONTRACTOR MUST MAINTAIN ON SITE A COPY OF ALL REQUIRED PERMITS, AS WELL AS A FULL SET OF APPROVED PLANS.

3.

THE CONTRACTOR SHALL NOT ENTER UPON, OR IN ANY WAY ALTER, THE WETLAND AREAS THAT ARE DESIGNATED TO REMAIN. ALL WORK IN THE VICINITY OF OPEN WATER AND/OR WETLANDS IS TO BE PERFORMED IN COMPLIANCE WITH THE ENVIRONMENTAL PERMITS FOR THE SITE. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY FINE RESULTING FROM HIS VIOLATION OF PERMIT CONDITIONS.

4.

CONTRACTOR IS RESPONSIBLE FOR REPAIR AND REPLACEMENT OF INFRASTRUCTURE / FACILITIES WITHIN THE RIGHT-OF-WAY THAT ARE DAMAGED DURING CONSTRUCTION ACTIVITY.

5.

IF, DURING CONSTRUCTION ACTIVITIES, ANY EVIDENCE OF THE PRESENCE OF STATE AND FEDERALLY PROTECTED PLANT AND/OR ANIMAL SPECIES ARE DISCOVERED, WORK SHALL COME TO AN IMMEDIATE STOP AND THE GOVERNING AUTHORITY SHALL BE NOTIFIED WITHIN TWO WORKING DAYS.

6.

ALL WORK PERFORMED SHALL COMPLY WITH ALL APPLICABLE REGULATIONS AND ORDINANCES OF THE VARIOUS GOVERNMENT AGENCIES HAVING JURISDICTION OVER THE WORK PERFORMED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PENALTIES/FINES LEVIED DUE TO WORK THAT IS NOT IN ACCORDANCE WITH PERMIT CONDITIONS.

7.

WHEN BURNING IS PERMITTED, THE BURNING SHALL OCCUR DURING OPTIMAL WEATHER CONDITIONS THAT ALLOW FOR THE VERTICAL EVACUATION OF SMOKE FROM THE SITE. NO BURNING OF VEGETATION SHALL OCCUR WITHOUT THE NECESSARY PERMIT. PERMIT TO BE OBTAINED BY THE CONTRACTOR.

8.

THE CONTRACTOR IS RESPONSIBLE FOR A SECURE AND CLEAN SITE AT ALL TIMES, UTILIZING ALL CITY, COUNTY AND FDOT STANDARDS.

9.

CONTRACTOR SHALL MAINTAIN ALL WORK UNTIL FINAL ACCEPTANCE BY GOVERNING AUTHORITIES AND OWNER.

10.

THE CONTRACTOR SHALL PROVIDE ALL SHEETING, SHORING AND BRACING REQUIRED TO MEET THE REQUIREMENTS OF THE "TRENCH SAFETY ACT" AND TO PROTECT ADJACENT STRUCTURES OR TO MINIMIZE TRENCH WIDTH. WHERE A SEPARATE PAY ITEM IS NOT PROVIDED, THE COST FOR ALL SHEETING, SHORING AND BRACING REQUIRED SHALL BE INCLUDED IN THE CONTRACT PRICE FOR MOBILIZATION.

11.

ALL PRODUCT INSTALLATION SHALL BE PER MANUFACTURER'S SPECIFICATIONS, OR BY THE LOCAL REGULATORY AGENCIES' SPECIFICATIONS, WHICHEVER IS MORE STRINGENT.

PAVING, GRADING AND DRAINAGE NOTES:

1.

CONTRACTOR SHALL CONTACT THE GOVERNING AUTHORITY TO OBTAIN COMPACTION, INSPECTION AND CERTIFICATIONS REQUIREMENTS.

2.

ALL EARTHWORK, PLACEMENT OF FILL AND PAVEMENT PREPARATION TO CONFORM TO THE MORE STRICT OF THE CITY/COUNTY LDC, TECHNICAL STANDARDS AND THE GEOTECHNICAL REPORT.

3.

ALL FILL SHALL BE CLEAN, FREE OF DEBRIS AND TOXIC OR DELETERIOUS SUBSTANCES.

4.

DURING LAND ALTERATION AND CONSTRUCTION ACTIVITIES, IT SHALL BE UNLAWFUL TO REMOVE VEGETATION BY GRUBBING OR TO PLACE SOIL DEPOSITS, DEBRIS, SOLVENTS, CONSTRUCTION MATERIAL, MACHINERY OR OTHER EQUIPMENT OF ANY KIND WITHIN THE DRIPLINE OF A TREE REMAINING ON SITE UNLESS APPROVED BY THE GOVERNING AUTHORITIES.

5.

ALL STORM DRAIN STRUCTURES TO CONFORM THE "FLORIDA DEPARTMENT OF TRANSPORTATION DESIGN STANDARDS FOR CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS ON THE STATE HIGHWAY SYSTEM" MANUAL LATEST EDITION. ALL STORM PIPES SHALL HAVE FILTER FABRIC WRAP ON GROUTED CONNECTION TO STRUCTURE (AT JOINT) PER FDOT INDEX 425-001.

6.

ALL PROPOSED STORM GRATES, RING & COVERS AND SANITARY SEWER RING & COVERS TO MEET H-20 LOADING RATING. ALL STORM GRATES TO BE HOT DIPPED GALVANIZED RETICULINE STEEL GRATES. ALL EXISTING STRUCTURES TO BE MODIFIED AS REQUIRED TO MEET H-20 LOAD RATING AND ADJUSTED TO MEET PROPOSED GRADE.

7.

ALL SWALES SHALL BE SODDED IF NOT NOTED ON PLANS/DETAILS.

8.

STORM SEWER PIPELINES WILL NOT BE INSTALLED PRIOR TO PLACEMENT AND ALIGNMENT OF INLET STRUCTURES.

9.

ALL FIRST FLOOR ELEVATIONS (FFE) SHALL BE A MINIMUM OF ONE (1) FOOT ABOVE BASE FLOOD ELEVATION UNLESS OTHERWISE SPECIFIED.

10.

WHERE FILL IS PROPOSED, IT SHALL BE PLACED IN COMPLIANCE WITH THE GEOTECHNICAL/GEOLOGICAL ENGINEERING REPORT RECOMMENDATIONS (INCLUDING ANY LIFT DEPTHS RECOMMENDED) AND COMPACTED TO A MINIMUM REQUIRED BY THE GOVERNMENT AUTHORITY OR AS PER GEOTECHNICAL REPORT, WHICHEVER IS GREATER. DENSITY TESTS TO CONFIRM COMPACTION SHALL BE REQUIRED WITHIN THE BUILDING PAD AREA BEFORE THE NEXT LIFT IS PLACED.

11.

ALL EXCAVATIONS SHALL MEET OSHA REQUIREMENTS.

12.

UTILIZE FDOT INDEX 120-002, 120-001 AND 160-001 FOR DETAILS REGARDING ALLOWABLE EARTHWORK OPERATIONS AND MATERIALS.

13.

EXISTING DRAINAGE STRUCTURES AND PIPES WITHIN THE LIMITS OF CONSTRUCTION SHALL BE REMOVED UNLESS OTHERWISE NOTED TO REMAIN. SOME EXISTING PIPES ARE TO BE PROPERLY CONNECTED TO PROPOSED DRAINAGE STRUCTURES (SEE PLANS FOR LOCATIONS).

14.

EXCESS MATERIAL REMAINING AFTER MEETING PROJECT GRADING REQUIREMENTS SHALL BE HAULED OFF THE SITE AND PROPERLY DISPOSED OF BY THE CONTRACTOR.

15.

ALL DRAINAGE STRUCTURES AND STORMWATER FACILITIES SHALL BE CLEANED PRIOR TO ACCEPTANCE OF CONTRACT. COST TO BE INCLUDED IN THE COST OF ALL ITEMS.

MAINTENANCE OF TRAFFIC (MOT) NOTES:

1.

THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE GOVERNING AGENCY (CITY/ COUNTY OR FDOT) THEIR MOT REQUIREMENTS ESTABLISHED DURING THE PRECONSTRUCTION MEETING. LANE CLOSURE TIMES AND OTHERS DETAILS SHALL BE ADDRESSED DURING SAID MEETING.

2.

THE CONTRACTOR SHALL ADHERE TO THE REQUIREMENTS SET FORTH IN "THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) LATEST EDITION, SERIES 102-XXX OF THE FDOT STANDARDS PLANS (LATEST EDITION) AND SECTION 102 OF THE STANDARD SPECIFICATIONS AT ALL TIMES. OTHER MOT INDEXES MAY APPLY BESIDES THE ONES REFERENCED ON THESE PLANS.

3.

ALL EXISTING PAVEMENT MARKINGS, WHICH CONFLICT WITH THE TRAFFIC CONTROL PLAN DURING A CONSTRUCTION PHASE SHALL BE REMOVED OR TEMPORARILY RELOCATED AS NECESSARY PRIOR TO THE DIVERSION OF TRAFFIC AND THE COMMENCEMENT OF CONSTRUCTION. THE REMOVAL OF EXISTING PAVEMENT MARKINGS THAT ARE TO BE PERMANENTLY REMOVED MUST BE COMPLETED BY MILLING AND RESURFACING.

4.

THE CONTRACTOR SHALL USE THE MUTCD TO DETERMINE THE APPROPRIATE COLOR FOR CONSTRUCTION SIGNS AND REQUIRED MOUNTING/SUPPORT; FLAGS AND WARNING LIGHTS REQUIREMENTS. ALL TRAFFIC CONTROL DEVICES, MATERIALS AND INSTALLATION SHALL BE FDOT APPROVED.

5.

MINIMUM LANE WIDTHS SHALL BE NO LESS THAN EXISTING LANE WIDTHS OR AS INDICATED ON PLANS.

6.

BARRICADES, CONES AND DRUMS SHALL NOT BE INTERMIXED IN LATERAL TRANSITIONS.

7.

EXISTING ACCESS TO ALL PROPERTIES SHALL BE MAINTAINED AT ALL TIMES.

8.

EXISTING DRAINAGE SYSTEMS MUST BE MAINTAINED UNTIL THE NEW SYSTEM IS CONSTRUCTED AND FUNCTIONAL. TEMPORARY SWALES, CULVERTS, PIPES, PLUMBING, ETC. ARE TO BE CONSTRUCTED WITHIN THE RIGHT OF WAY AS REQUIRED. REFER TO THE FDOT DRAINAGE HANDBOOK FOR TEMPORARY DRAINAGE DESIGN.

9.

ALL TEMPORARY PAVEMENT MARKINGS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 102 OF THE FDOT STANDARD SPECIFICATIONS. ALL MARKINGS SHALL BE REFLECTORIZED AND SHALL BE PROVIDED AS SOON AS POSSIBLE AT THE END OF EACH DAYS PAVING OPERATIONS, PRIOR TO OPENING TO TRAFFIC.

10.

UNLESS OTHERWISE SPECIFIED, THE CROSS SLOPE FOR ALL TEMPORARY PAVEMENT WHICH ABUTS EXISTING OR NEW PAVEMENT SHALL MATCH THE CROSS SLOPE OF THE ABUTTING PAVEMENT. CROSS SLOPE TRANSITIONS SHALL CONFORM TO FDOT INDEX 000-511. THE CONTRACTOR SHALL ENSURE ADEQUATE DRAINAGE OF ALL TEMPORARY PAVEMENT.

11.

MATERIALS AND EQUIPMENT WHICH ARE STORED AND/OR STOCKPILED SHALL BE KEPT OUTSIDE OF THE CLEAR ZONE DURING ALL PHASES OF CONSTRUCTION.

12.

THE CONTRACTOR SHALL NOTIFY ALL LOCAL LAW ENFORCEMENT AGENCIES A MINIMUM OF 48 HOURS PRIOR TO A LANE CLOSURE THAT WILL EXCEED ONE (1) HOUR. ONLY ONE LANE IN EACH DIRECTION MAY BE CLOSED AT ANY ONE TIME.

13.

ANY WORK REQUIRING LANE CLOSURES SHALL BE COMPLETED AS SOON AS POSSIBLE AND THE LANES REOPENED TO TRAFFIC WITH PROPER PAVEMENT MARKINGS AND WARNING DEVICES IN PLACE.

14.

NO LANE CLOSURE WILL BE ALLOWED WITHOUT ABSOLUTE ASSURANCE THAT THE PRIME AND SUBCONTRACTORS HAVE PLANNED THE OPERATIONS TO ACHIEVE REOPENING ACCORDING TO THESE REQUIREMENTS AND TO THE SATISFACTION OF THE GOVERNING AGENCY.

15.

AT THE DISCRETION OF THE GOVERNING AGENCY, IF A LANE CLOSURE CAUSES EXTENDED CONGESTION OR DELAY, THE CONTRACTOR SHALL REOPEN THE CLOSED LANE(S) UNTIL SUCH TIME AS TRAFFIC FLOW HAS RETURNED TO AN ACCEPTABLE LEVEL.

16.

ALL EXISTING PAVEMENT MARKINGS, OUTSIDE THE LIMITS OF CONSTRUCTION, THAT ARE ALTERED OR DAMAGED AS DETERMINED BY THE GOVERNING AGENCY, SHALL BE REPLACED UPON COMPLETION OF THE PROJECT.

17.

EXISTING SIGNS SHALL BE MAINTAINED AND/OR RELOCATED DURING CONSTRUCTION UNTIL PROPOSED SIGNS ARE INSTALLED.

18.

THE CONTRACTOR SHALL INSTALL EROSION CONTROL MEASURES PRIOR TO THE BEGINNING OF CONSTRUCTION.

19.

TRAFFIC SHALL BE MAINTAINED ON PAVED SURFACES AT ALL TIMES.

20.

TRAFFIC CONDITIONS, ACCIDENTS AND OTHER UNFORESEEN EMERGENCY CONDITIONS MAY REQUIRE THE GOVERNING AGENCY TO RESTRICT OR REMOVE LANE CLOSURES OR CHANNELIZATIONS. THE CONTRACTOR SHALL RESPOND AND PROVIDE ADJUSTMENTS AS DIRECTED WITHOUT DELAY UNDER THESE CONDITIONS. THE CONTRACTOR SHALL ALSO RESPOND WITHIN 30 MINUTES UPON NOTIFICATION BY THE GOVERNING AGENCY TO ANY REQUESTS FOR CORRECTION, IMPROVEMENT OR MODIFICATION TO THE TRAFFIC CONTROL PLAN AND/OR DEVICES.

21.

INSPECTION AND ACCEPTANCE:

A.

UPON COMPLETION OF THE INSTALLATION OF THE TRAFFIC CONTROL DEVICES, THE CONTRACTOR SHALL CALL THE GOVERNING AGENCY ENGINEERING INSPECTIONS DIVISION FOR AN INSPECTION.

B.

NO ROADWAY SHALL BE OPEN TO THE PUBLIC UNTIL ALL TRAFFIC CONTROL DEVICES HAVE BEEN INSPECTED AND ACCEPTED BY THE GOVERNING AGENCY.

GEOLOGIC HAZARD NOTES:

SHOULD ANY NOTICEABLE SOIL SLUMPING OR SINKHOLE FORMATION BECOME EVIDENT, THE APPLICANT/DEVELOPER SHALL IMMEDIATELY NOTIFY THE GOVERNING AUTHORITIES, AND ADOPT ONE OR MORE OF THE FOLLOWING PROCEDURES AS DETERMINED TO BE APPROPRIATE BY SAID AUTHORITIES:

1.

IF THE SLUMPING OR SINKHOLE FORMATION BECOMES EVIDENT BEFORE OR DURING CONSTRUCTION ACTIVITIES, STOP ALL WORK (EXCEPT FOR MITIGATION ACTIVITIES) IN THE AFFECTED AREA AND REMAIN STOPPED UNTIL THE GOVERNING AUTHORITY APPROVE RESUMING CONSTRUCTION ACTIVITIES.

2.

TAKE IMMEDIATE MEASURES TO ENSURE NO SURFACE WATER DRAINS INTO THE AFFECTED AREAS.

3.

HAVE A GEOTECHNICAL ENGINEER VISUALLY INSPECT THE AFFECTED AREA.

4.

EXCAVATE AND BACKFILL OR GROUT AS REQUIRED TO FILL THE AFFECTED AREA AND PREVENT FURTHER SUBSIDENCE.

5.

USE SOIL REINFORCEMENT MATERIALS IN THE BACKFILLING OPERATION, WHEN APPROPRIATE.

6.

IF THE AFFECTED AREA IS IN THE VICINITY OF A WATER-RETENTION AREA, MAINTAIN A MINIMUM DISTANCE OF TWO FEET FROM THE BOTTOM OF THE RETENTION POND TO THE SURFACE OF THE LIME-ROCK OR KARST CONNECTION. RELOCATE THE RETENTION AREA IF NECESSARY.

7.

DISCHARGE OF STORM-WATER INTO DEPRESSIONS WITH DIRECT OR DEMONSTRATED HYDROLOGIC CONNECTION TO THE FLORIDAN AQUIFER SHALL BE PROHIBITED.

HISTORIC RESOURCES NOTES:

1.

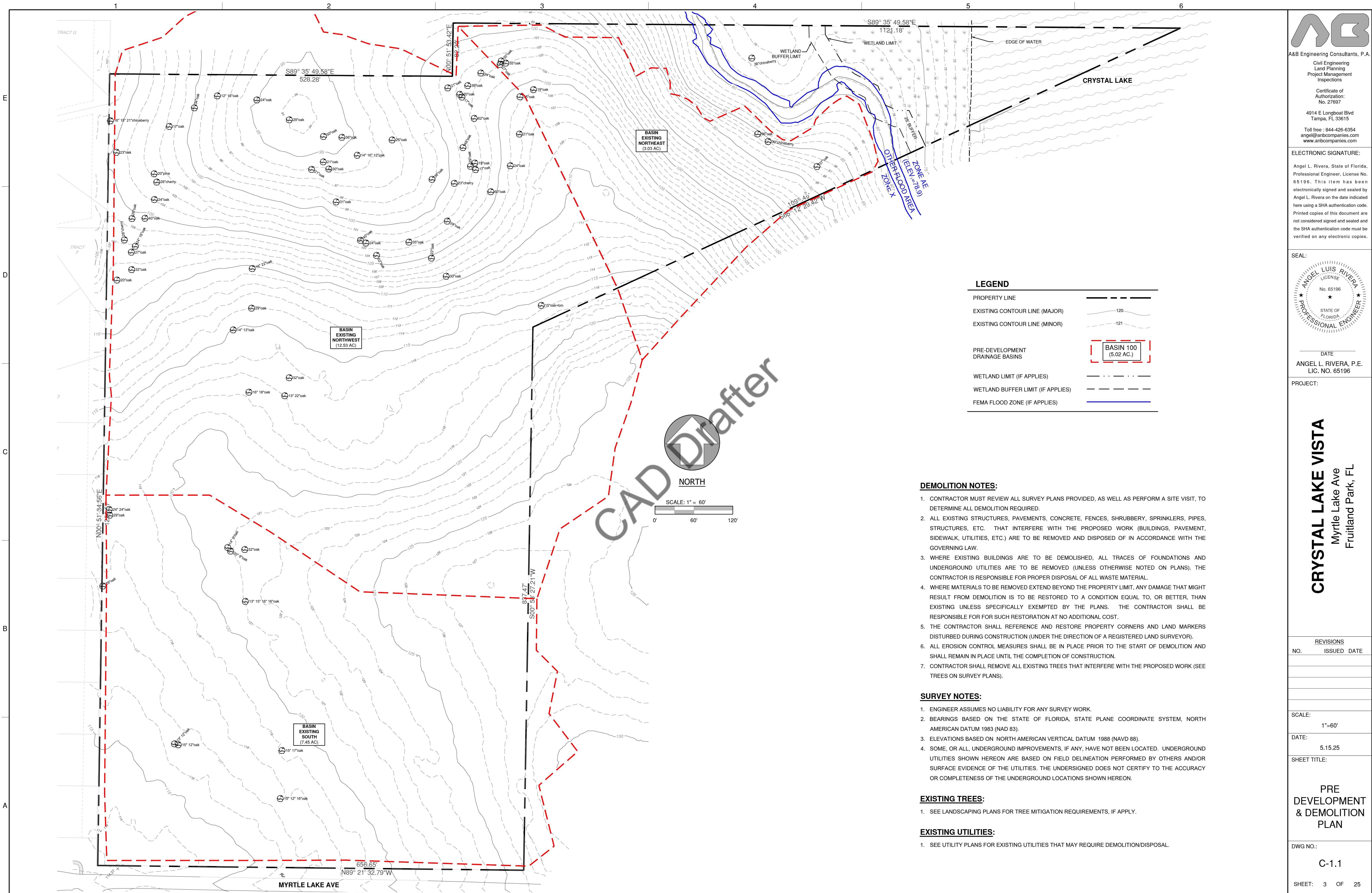
IF PREHISTORIC OR HISTORIC ARTIFACTS, SUCH AS POTTERY OR CERAMICS, PROJECTILE POINTS, DUGOUT CANOES, METAL IMPLEMENTS, HISTORIC BUILDING MATERIALS, OR ANY OTHER PHYSICAL REMAINS THAT COULD BE ASSOCIATED WITH NATIVE AMERICAN, EARLY EUROPEAN, OR AMERICAN SETTLEMENT ARE ENCOUNTERED AT ANY TIME WITHIN THE PROJECT SITE AREA, THE PERMITTED PROJECT SHALL CEASE ALL ACTIVITIES INVOLVING SUBSURFACE DISTURBANCE IN THE VICINITY OF THE DISCOVERY. THE APPLICANT SHALL CONTACT THE FLORIDA DEPARTMENT OF STATE, DIVISION OF HISTORICAL RESOURCES, COMPLIANCE REVIEW SECTION AT (850)-245-6333. PROJECT ACTIVITIES SHALL NOT RESUME WITHOUT VERBAL AND/OR WRITTEN AUTHORIZATION. IN THE EVENT THAT UNMARKED HUMAN REMAINS ARE ENCOUNTERED DURING PERMITTED ACTIVITIES, ALL WORK SHALL STOP IMMEDIATELY AND THE PROPER AUTHORITIES NOTIFIED IN ACCORDANCE WITH SECTION 872.05, FLORIDA STATUTES.

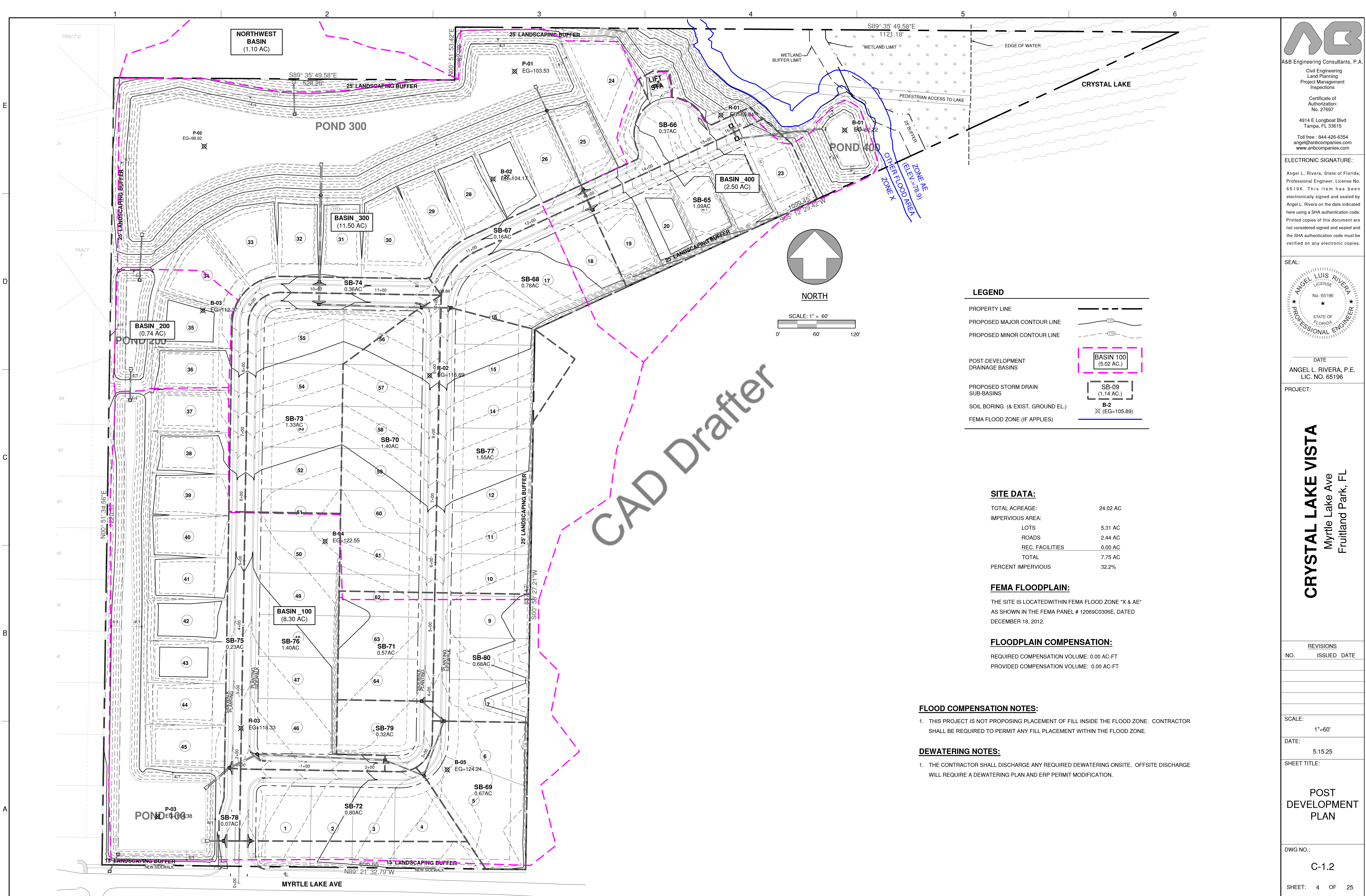
AS-BUILT NOTES:

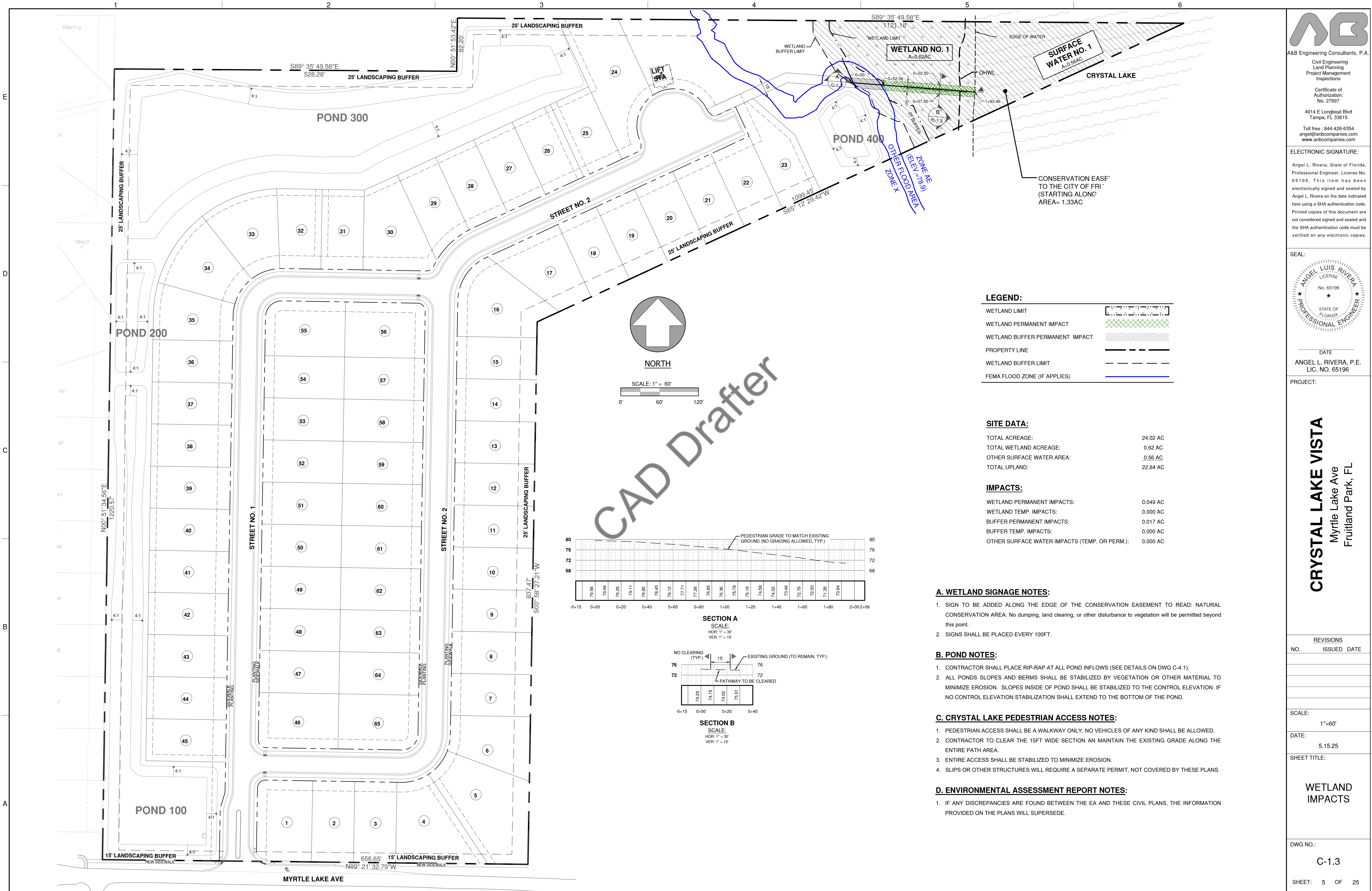
GENERAL NOTES:

1.

ALL AS-BUILT INFORMATION SHALL BE FROM A LICENSED LAND LAND SURVEYOR, AND SHALL BE CERTIFIED TO BOTH A&B ENGINEERING CONSULTANTS PA AND THE DEVELOPER. THIS AS-BUILT INFORMATION SHALL BE LEGIBLE AND PROVIDED IN BOTH SIGNED/SEALED PRINTS AND IN DIGITAL COPY. ALL AS-BUILT DATA SHALL BE ON THE SAME COORDINATE SYSTEM AND BENCHMARK DATUM AS THE CONSTRUCTION PLANS. THE INFORMATION PROVIDED SHALL BE ACCEPTABLE TO THE UTILITY COMPANY, THE WATER MANAGEMENT DISTRICT AND THE REVIEWING







A&B Engineering Consultants, P.A.

Civil Engineering
Land Planning
Project Management
Inspections

Certificate of Authorization:
No. 27697

4914 E Longboat Blvd
Tampa, FL 33615

Toll free : 844-426-6354
angel@anbcompanies.com
www.anbcompanies.com

ELECTRONIC SIGNATURE:

Angel L. Rivera, State of Florida,
Professional Engineer, License No.
65196. This item has been
electronically signed and sealed by
Angel L. Rivera on the date indicated
here using a SHA authentication code.
Printed copies of this document are
not considered signed and sealed and
the SHA authentication code must be
verified on any electronic copies.

SEAL:

ANGEL LUIS RIVERA
LICENSE
No. 65196
STATE OF FLORIDA
PROFESSIONAL ENGINEER

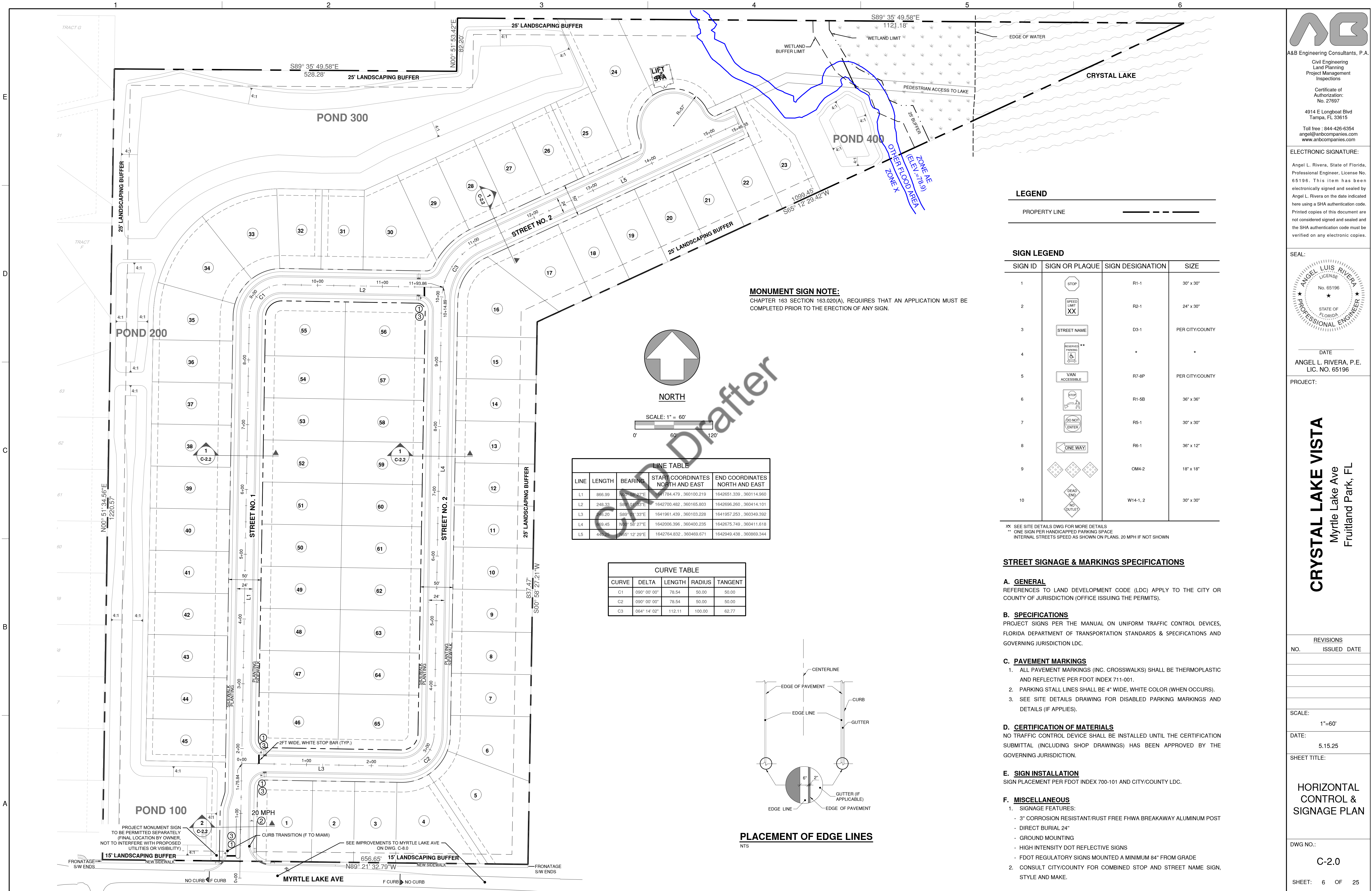
DATE

ANGEL L. RIVERA, P.E.
LIC. NO. 65196

PROJECT:

CRYSTAL LAKE VISTA
Myrtle Lake Ave
Fruitland Park, FL

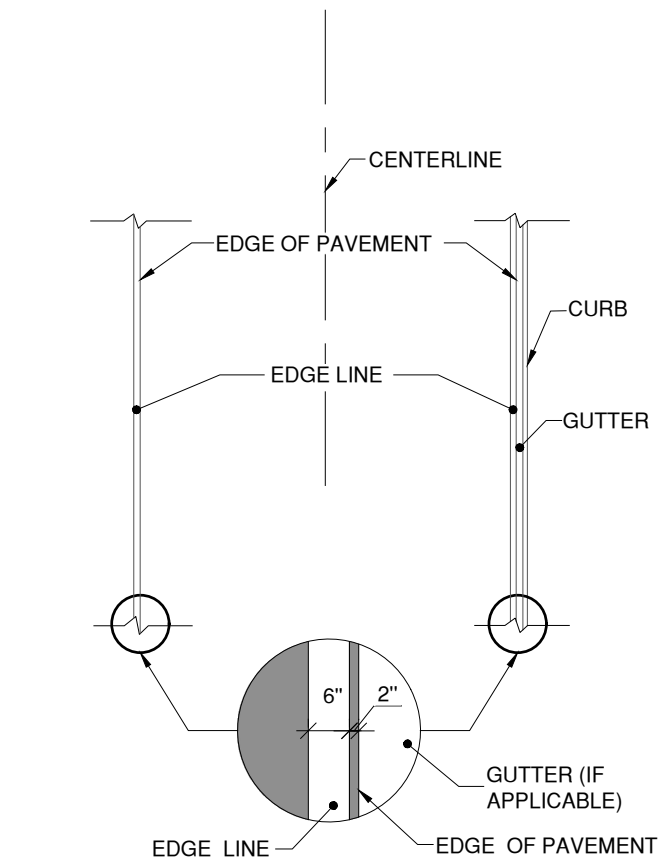
REVISIONS		
NO.	ISSUED	DATE
SCALE:		
1"=60'		
DATE:		
5.15.25		
SHEET TITLE:		
WETLAND IMPACTS		
DWG NO.:		
C-1.3		
SHEET: 5 OF 25		



MONUMENT SIGN NOTE:
CHAPTER 163 SECTION 163.020(A), REQUIRES THAT AN APPLICATION MUST BE COMPLETED PRIOR TO THE ERECTION OF ANY SIGN.

LINE TABLE				
LINE	LENGTH	BEARING	START COORDINATES NORTH AND EAST	END COORDINATES NORTH AND EAST
L1	866.09	N00° 58' 27"E	1641784.479 , 360100.219	1642651.339 , 360114.960
L2	248.33	S89° 01' 03"E	1642700.482 , 360165.803	1642696.260 , 360414.101
L3	366.20	S09° 01' 33"E	1641961.439 , 360103.228	1641957.253 , 360349.392
L4	669.45	N00° 55' 27"E	1642006.396 , 360400.235	1642675.749 , 360411.618
L5	470.05	S65° 12' 29"E	1642764.832 , 360469.671	1642949.438 , 360869.344

CURVE TABLE				
CURVE	DELTA	LENGTH	RADIUS	TANGENT
C1	99° 00' 00"	78.54	50.00	50.00
C2	99° 00' 00"	78.54	50.00	50.00
C3	064° 14' 02"	112.11	100.00	62.77



PLACEMENT OF EDGE LINES

LEGEND

PROPERTY LINE

SIGN LEGEND

SIGN ID	SIGN OR PLAQUE	SIGN DESIGNATION	SIZE
1	STOP	R1-1	30" x 30"
2	SPEED LIMIT XX	R2-1	24" x 30"
3	STREET NAME	D3-1	PER CITY/COUNTY
4	RESERVED PARKING	*	*
5	VAN ACCESSIBLE	R7-8P	PER CITY/COUNTY
6	STOP	R1-5B	36" x 36"
7	DO NOT ENTER	R5-1	30" x 30"
8	ONE WAY	R6-1	36" x 12"
9	ROAD NARROWS	OM4-2	18" x 18"
10	HEAD END	W14-1, 2	30" x 30"

XX SEE SITE DETAILS DWG FOR MORE DETAILS
** ONE SIGN PER HANDICAPPED PARKING SPACE
INTERNAL STREETS SPEED AS SHOWN ON PLANS. 20 MPH IF NOT SHOWN

STREET SIGNAGE & MARKINGS SPECIFICATIONS

A. GENERAL

REFERENCES TO LAND DEVELOPMENT CODE (LDC) APPLY TO THE CITY OR COUNTY OF JURISDICTION (OFFICE ISSUING THE PERMITS).

B. SPECIFICATIONS

PROJECT SIGNS PER THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, FLORIDA DEPARTMENT OF TRANSPORTATION STANDARDS & SPECIFICATIONS AND GOVERNING JURISDICTION LDC.

C. PAVEMENT MARKINGS

- ALL PAVEMENT MARKINGS (INC. CROSSWALKS) SHALL BE THERMOPLASTIC AND REFLECTIVE PER FDOT INDEX 711-001.
- PARKING STALL LINES SHALL BE 4" WIDE, WHITE COLOR (WHEN OCCURS).
- SEE SITE DETAILS DRAWING FOR DISABLED PARKING MARKINGS AND DETAILS (IF APPLIES).

D. CERTIFICATION OF MATERIALS

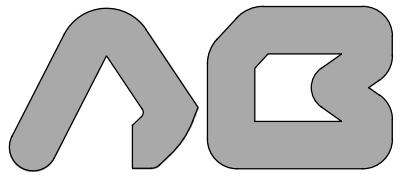
NO TRAFFIC CONTROL DEVICE SHALL BE INSTALLED UNTIL THE CERTIFICATION SUBMITTAL (INCLUDING SHOP DRAWINGS) HAS BEEN APPROVED BY THE GOVERNING JURISDICTION.

E. SIGN INSTALLATION

SIGN PLACEMENT PER FDOT INDEX 700-101 AND CITY/COUNTY LDC.

F. MISCELLANEOUS

- SIGNAGE FEATURES:
 - 3" CORROSION RESISTANT/RUST FREE FHWA BREAKAWAY ALUMINUM POST
 - DIRECT BURIAL 24"
 - GROUND MOUNTING
 - HIGH INTENSITY DOT REFLECTIVE SIGNS
 - FDOT REGULATORY SIGNS MOUNTED A MINIMUM 84" FROM GRADE
- CONSULT CITY/COUNTY FOR COMBINED STOP AND STREET NAME SIGN, STYLE AND MAKE.



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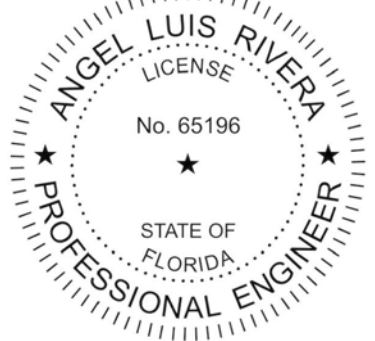
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Toll free : 844-426-6354
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ANGEL L. RIVERA, P.E.
LIC. NO. 65196

PROJECT:

CRYSTAL LAKE VISTA
Myrtle Lake Ave
Fruitland Park, FL

REVISIONS
NO. ISSUED DATE

SCALE:

1"=60'

DATE:

5.15.25

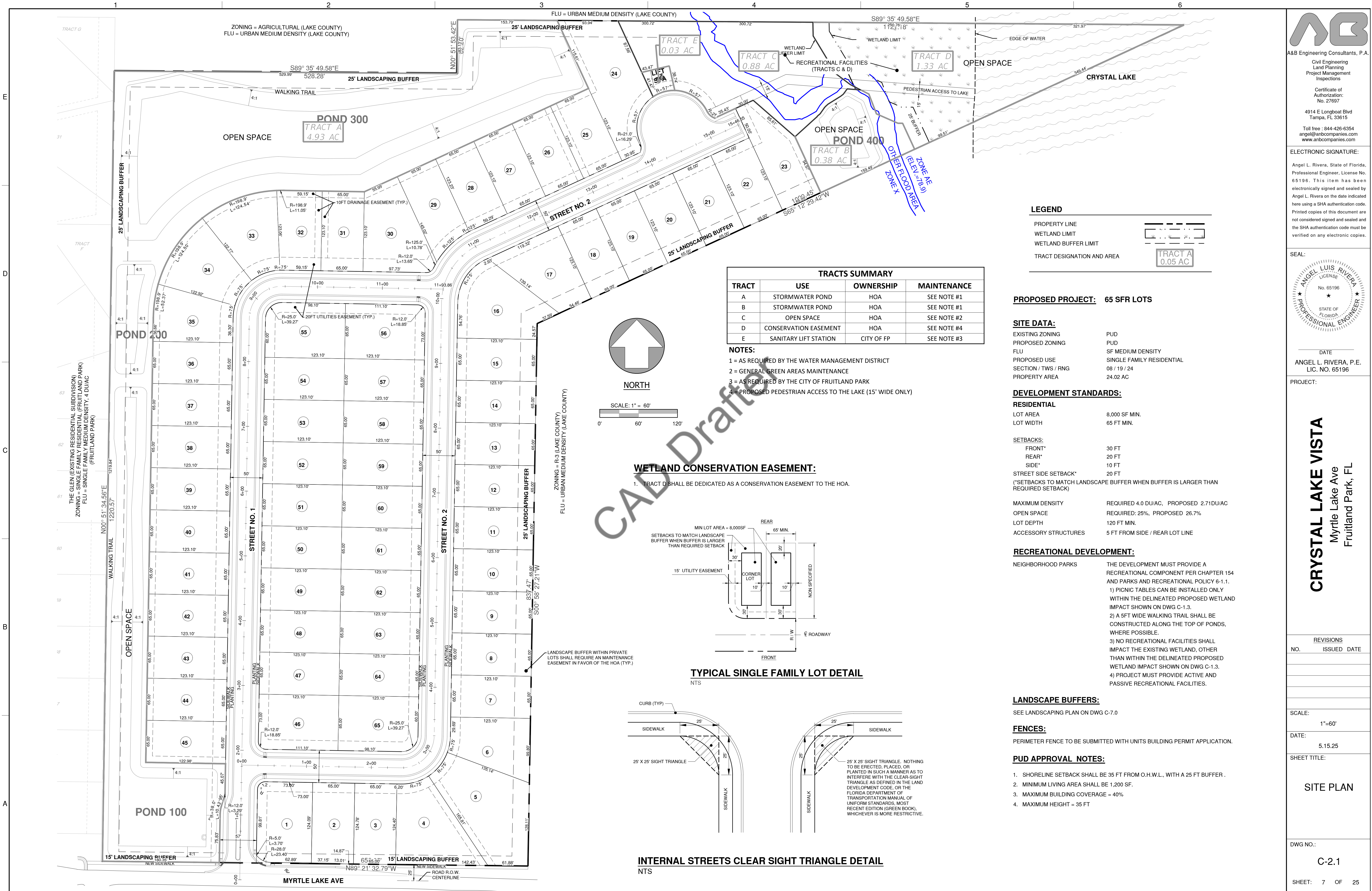
SHEET TITLE:

**HORIZONTAL
CONTROL &
SIGNAGE PLAN**

DWG NO.:

C-2.0

SHEET: 6 OF 25



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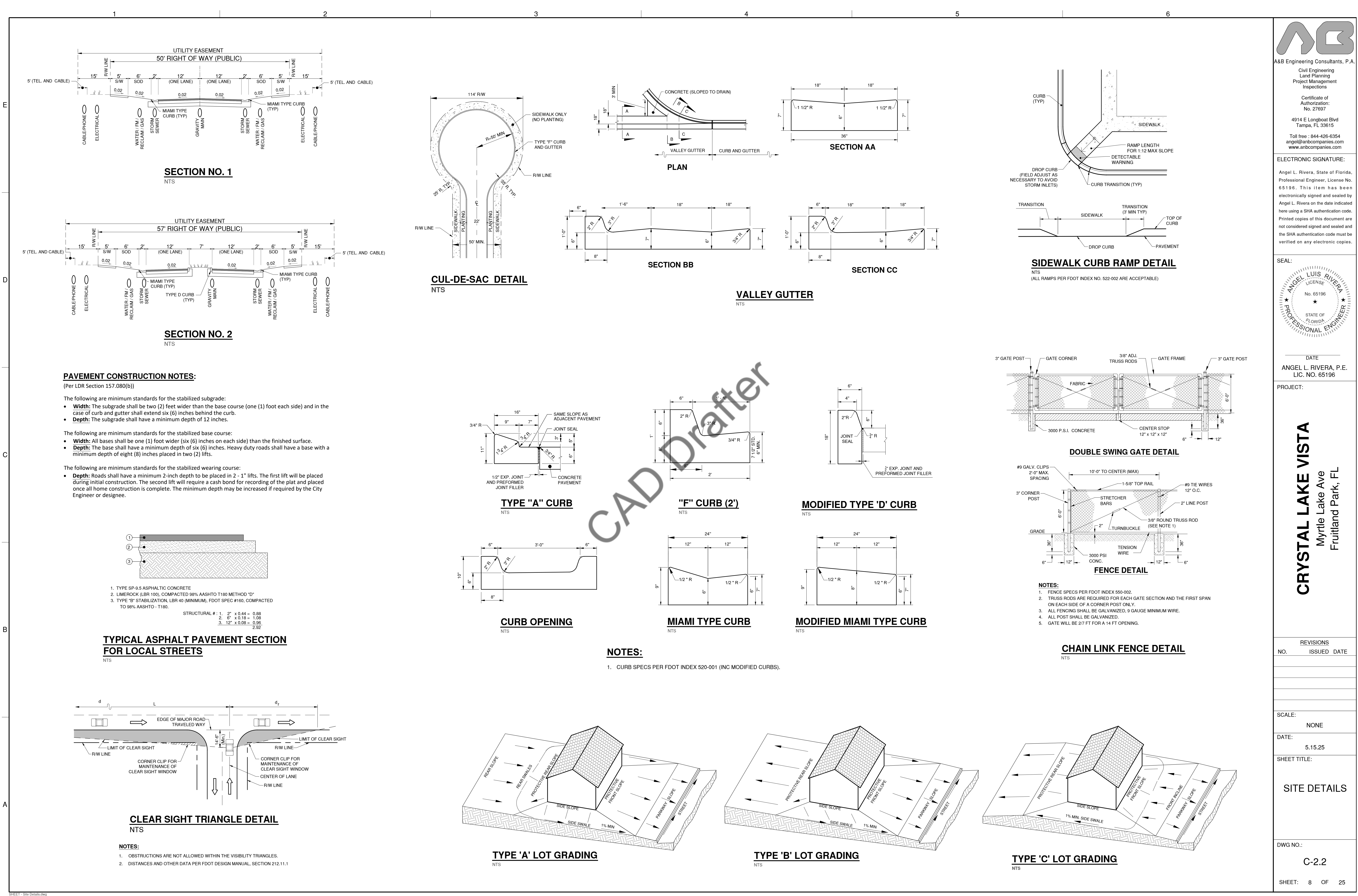
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CRYSTAL LAKE VISTA
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NO.	ISSUED	DATE

SITE PLAN
DWG NO.:
C-2.1
SHEET: 7 OF 25



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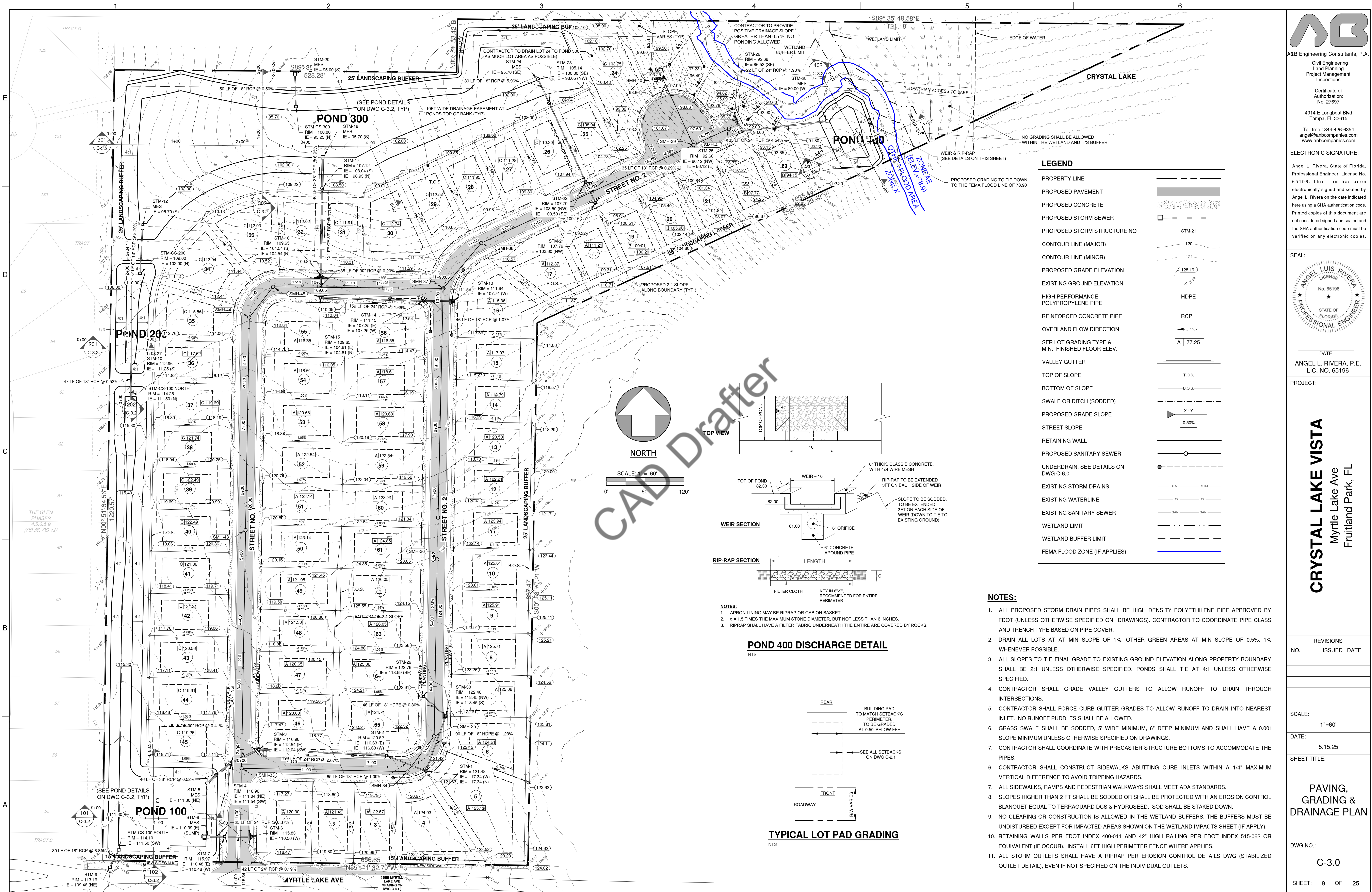
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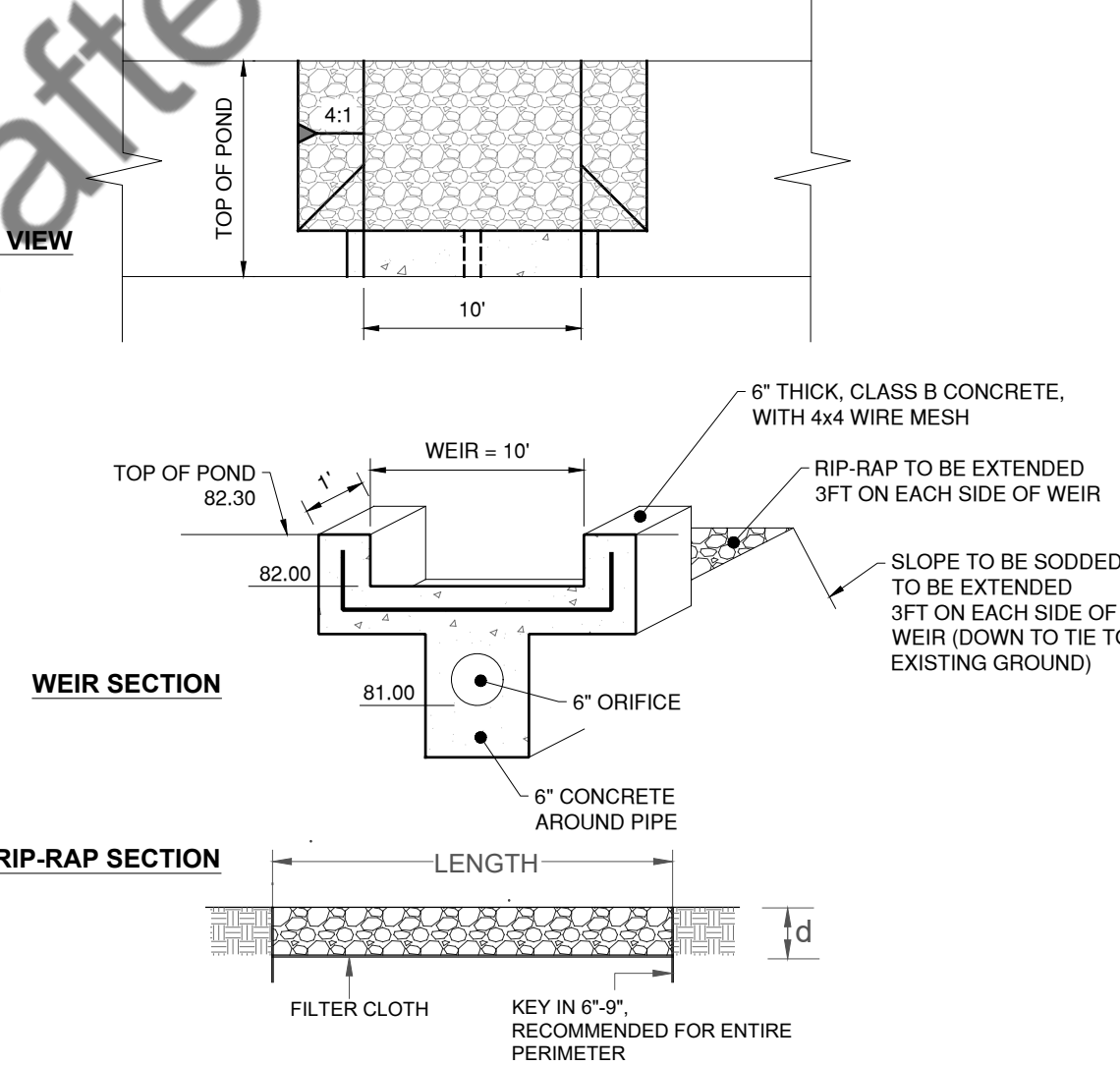
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Fruitland Park, FL

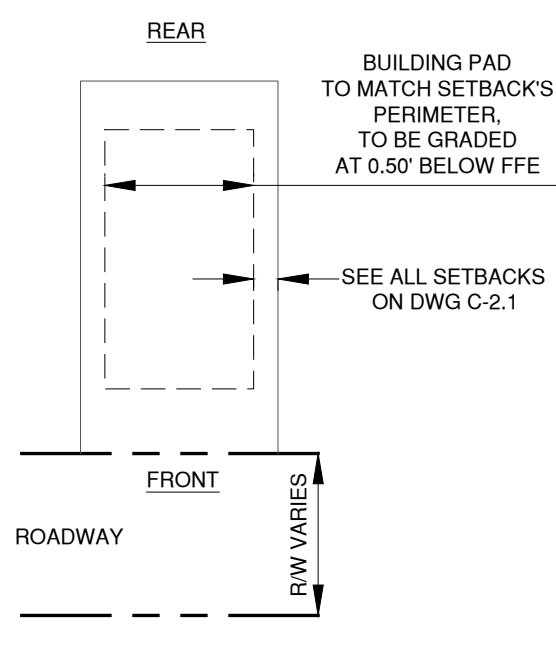


LEGEND	
PROPERTY LINE	---
PROPOSED PAVEMENT	▬
PROPOSED CONCRETE	▬
PROPOSED STORM SEWER	▬
PROPOSED STORM STRUCTURE NO	STM-21
CONTOUR LINE (MAJOR)	120
CONTOUR LINE (MINOR)	121
PROPOSED GRADE ELEVATION	128.19
EXISTING GROUND ELEVATION	X 73.99
HIGH PERFORMANCE POLYPROPYLENE PIPE	HDPE
REINFORCED CONCRETE PIPE	RCP
OVERLAND FLOW DIRECTION	→
SFR LOT GRADING TYPE & MIN. FINISHED FLOOR ELEV.	A 77.25
VALLEY GUTTER	▬
TOP OF SLOPE	T.O.S.
BOTTOM OF SLOPE	B.O.S.
SWALE OR DITCH (SODDED)	▬
PROPOSED GRADE SLOPE	X:Y
STREET SLOPE	-0.50%
RETAINING WALL	▬
PROPOSED SANITARY SEWER	▬
UNDERDRAIN, SEE DETAILS ON DWG C-6.0	▬
EXISTING STORM DRAINS	STM STM
EXISTING WATERLINE	W W
EXISTING SANITARY SEWER	SAN SAN
WETLAND LIMIT	---
WETLAND BUFFER LIMIT	---
FEMA FLOOD ZONE (IF APPLIES)	---



- NOTES:
- APRON LINING MAY BE RIPRAP OR GABION BASKET.
 - d = 1.5 TIMES THE MAXIMUM STONE DIAMETER, BUT NOT LESS THAN 6 INCHES.
 - RIPRAP SHALL HAVE A FILTER FABRIC UNDERNEATH THE ENTIRE AREA COVERED BY ROCKS.

POND 400 DISCHARGE DETAIL
NTS



TYPICAL LOT PAD GRADING
NTS

- NOTES:
- ALL PROPOSED STORM DRAIN PIPES SHALL BE HIGH DENSITY POLYETHYLENE PIPE APPROVED BY FDOT (UNLESS OTHERWISE SPECIFIED ON DRAWINGS). CONTRACTOR TO COORDINATE PIPE CLASS AND TRENCH TYPE BASED ON PIPE COVER.
 - DRAIN ALL LOTS AT MIN SLOPE OF 1%, OTHER GREEN AREAS AT MIN SLOPE OF 0.5%, 1% WHENEVER POSSIBLE.
 - ALL SLOPES TO TIE FINAL GRADE TO EXISTING GROUND ELEVATION ALONG PROPERTY BOUNDARY SHALL BE 2:1 UNLESS OTHERWISE SPECIFIED. PONDS SHALL TIE AT 4:1 UNLESS OTHERWISE SPECIFIED.
 - CONTRACTOR SHALL GRADE VALLEY GUTTERS TO ALLOW RUNOFF TO DRAIN THROUGH INTERSECTIONS.
 - CONTRACTOR SHALL FORCE CURB GUTTER GRADES TO ALLOW RUNOFF TO DRAIN INTO NEAREST INLET. NO RUNOFF PUDDLES SHALL BE ALLOWED.
 - GRASS SWALE SHALL BE SODDED, 5' WIDE MINIMUM, 6" DEEP MINIMUM AND SHALL HAVE A 0.001 SLOPE MINIMUM UNLESS OTHERWISE SPECIFIED ON DRAWINGS.
 - CONTRACTOR SHALL COORDINATE WITH PRECASTER STRUCTURE BOTTOMS TO ACCOMMODATE THE PIPES.
 - CONTRACTOR SHALL CONSTRUCT SIDEWALKS ABUTTING CURB INLETS WITHIN A 1/4" MAXIMUM VERTICAL DIFFERENCE TO AVOID TRIPPING HAZARDS.
 - ALL SIDEWALKS, RAMPS AND PEDESTRIAN WALKWAYS SHALL MEET ADA STANDARDS.
 - SLOPES HIGHER THAN 2 FT SHALL BE SODDED OR SHALL BE PROTECTED WITH AN EROSION CONTROL BLANKET EQUAL TO TERRAGUARD DCS & HYDROSEED. SOD SHALL BE STAKED DOWN.
 - NO CLEARING OR CONSTRUCTION IS ALLOWED IN THE WETLAND BUFFERS. THE BUFFERS MUST BE UNDISTURBED EXCEPT FOR IMPACTED AREAS SHOWN ON THE WETLAND IMPACTS SHEET (IF APPLY).
 - RETAINING WALLS PER FDOT INDEX 400-011 AND 42" HIGH RAILING PER FDOT INDEX 515-062 OR EQUIVALENT (IF OCCUR). INSTALL 6FT HIGH PERIMETER FENCE WHERE APPLIES.
 - ALL STORM OUTLETS SHALL HAVE A RIPRAP PER EROSION CONTROL DETAILS DWG (STABILIZED OUTLET DETAIL), EVEN IF NOT SPECIFIED ON THE INDIVIDUAL OUTLETS.

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Myrtle Lake Ave
Fruitland Park, FL

REVISIONS	
NO.	ISSUED DATE

SCALE:
1"=60'

DATE:
5.15.25

SHEET TITLE:
PAVING,
GRADING &
DRAINAGE PLAN

DWG NO.:
C-3.0

SHEET: 9 OF 25

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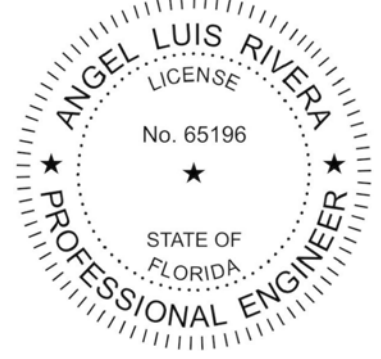
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CRYSTAL LAKE VISTA

Myrtle Lake Ave
Fruitland Park, FL

REVISIONS	
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SCALE:

 $1''=60'$

DATE:

5.15.25

SHEET TITLE:

STORM STRUCTURE TABLES

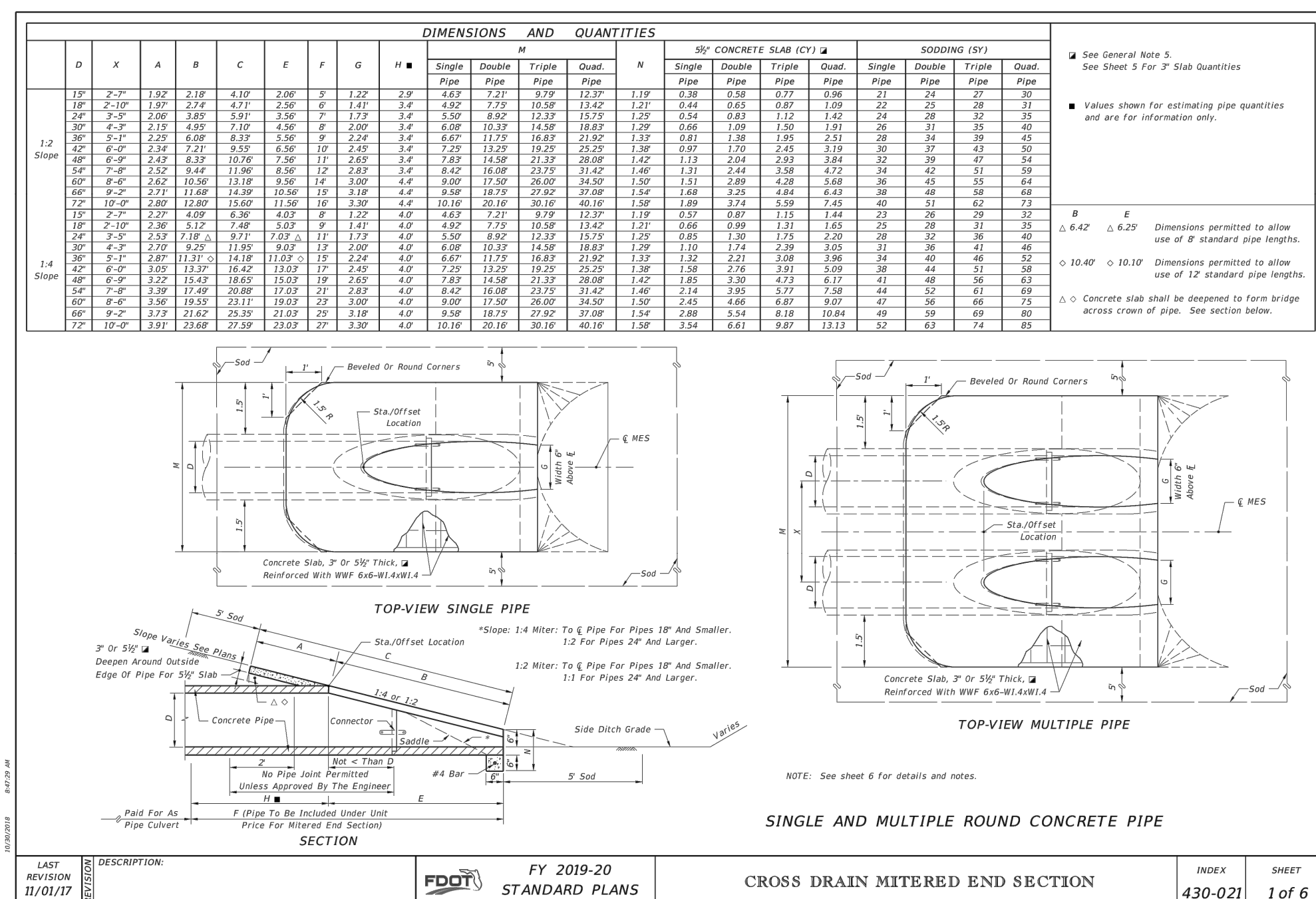
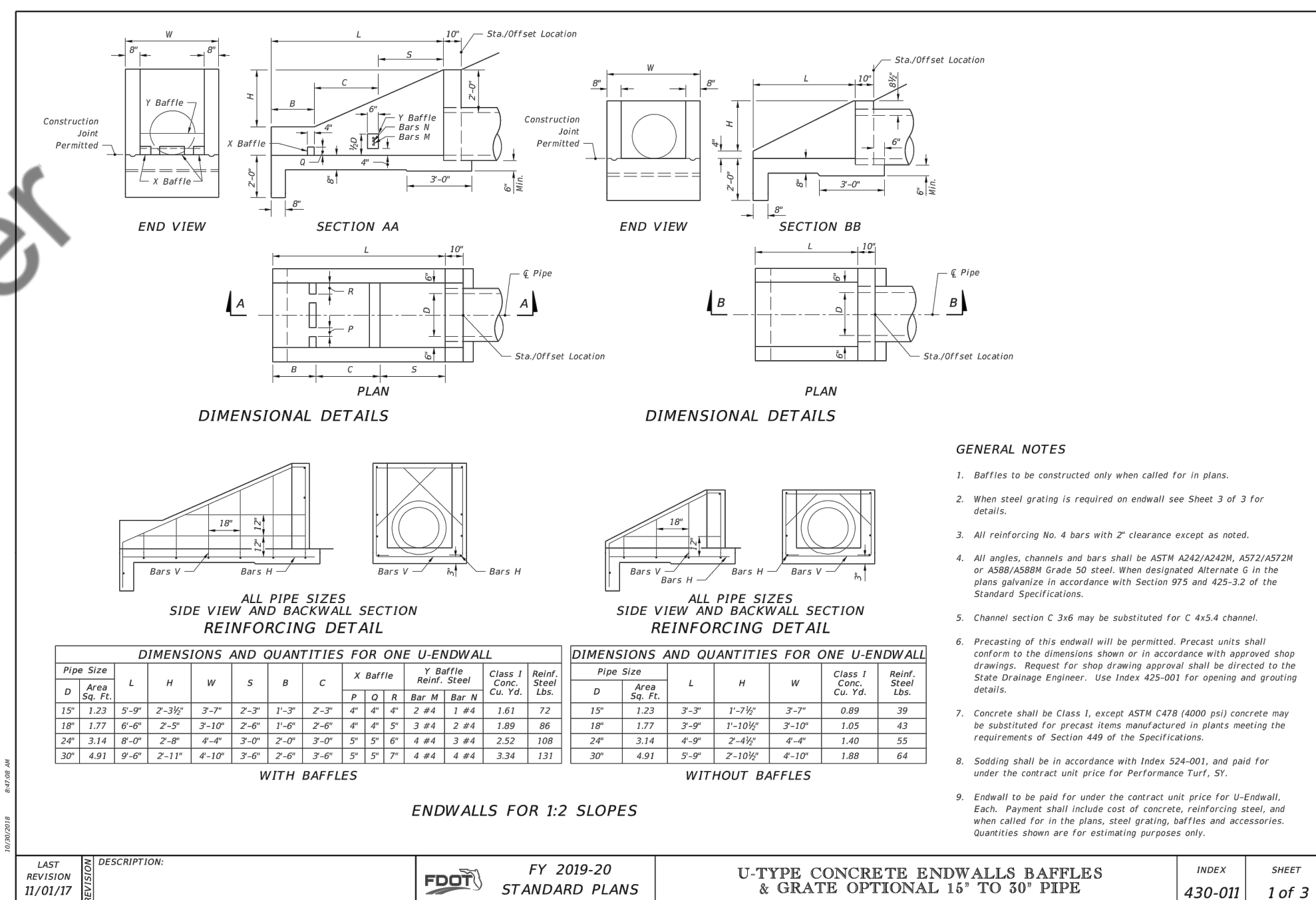
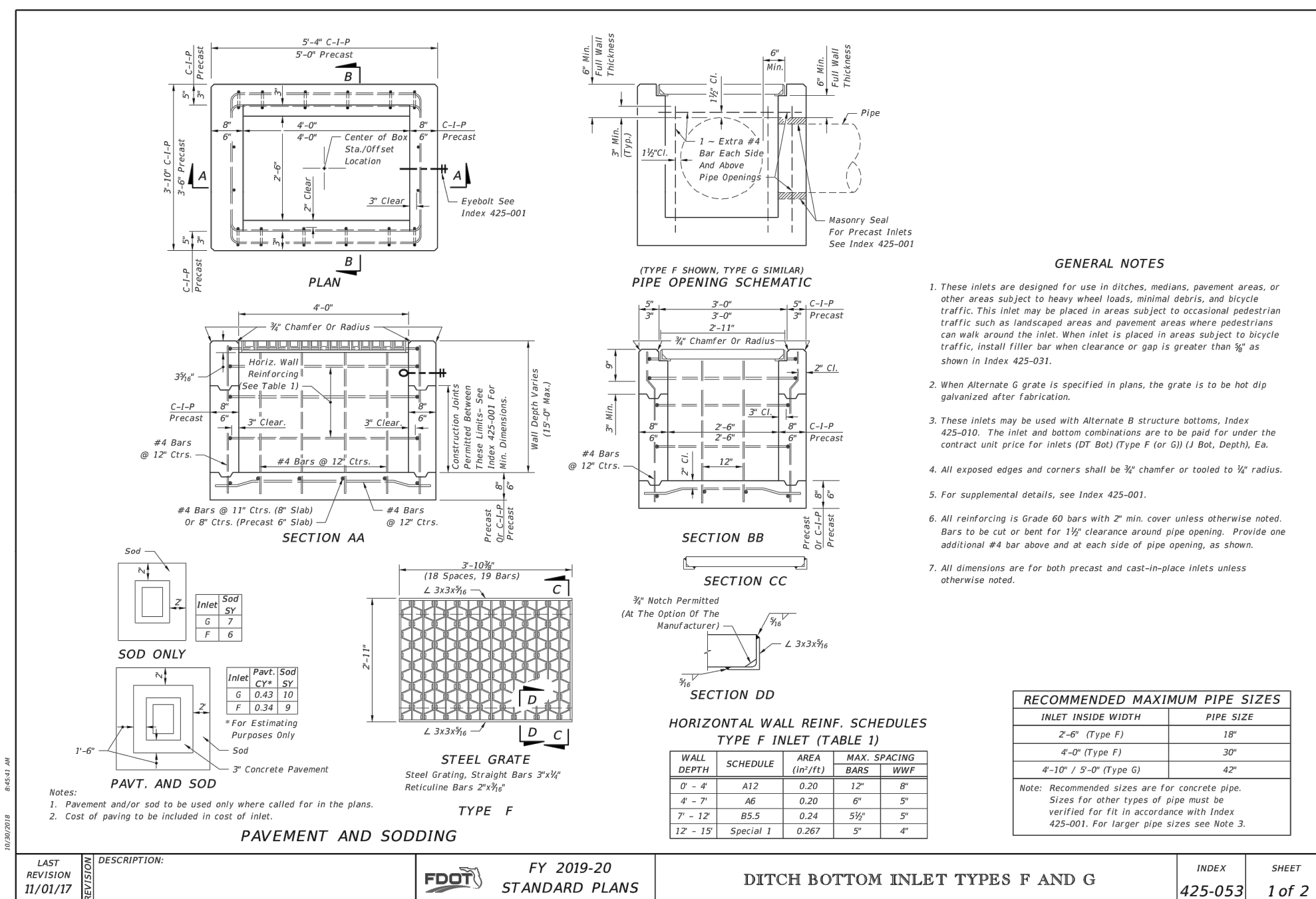
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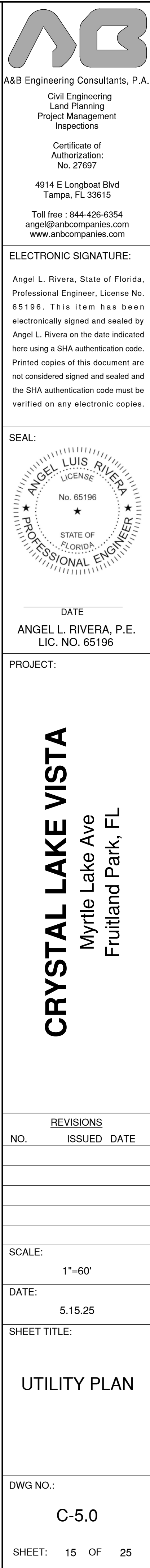
C-3.1

SHEET: 10 OF 25

DRAINAGE STRUCTURE TABLE				
STRUCTURE NAME	STRUCTURE DESCRIPTION	NORTHING EASTING	RIM/GRATE ELEVATION	PIPE INVERT
CS-300	Index No. 425-052 - Ditch Bottom Inlet - Type D	N:1642976.77 E:360186.83	100.80	INV OUT=95.25 N 18" RCP
CS-200	Index No. 425-052 - Ditch Bottom Inlet - Type D	N:1642719.56 E:359946.57	109.00	INV OUT=102.00 N 18" RCP
CS-100 SOUTH	Index No. 425-052 - Ditch Bottom Inlet - Type D	N:1641829.51 E:359913.39	114.10	INV OUT=111.50 SW 18" RCP
CS-100 NORTH	Index No. 425-052 - Ditch Bottom Inlet - Type D	N:1642533.51 E:359931.73	114.25	INV OUT=111.50 N 18" RCP
1	Index No. 425-020 - Curb Inlet Type 3 (Left) with Rectangular Bottom	N:1641951.10 E:360387.37	121.48	INV IN=117.34 N 18" HDPE INV OUT=117.34 W 18" RCP
2	Index No. 425-020 - Curb Inlet Type 3 (Right) with Rectangular Bottom	N:1641975.18 E:360326.92	120.52	INV IN=116.63 E 18" RCP INV OUT=116.63 W 24" RCP
3	Index No. 425-020 - Curb Inlet Type 2 with Rectangular Bottom	N:1641984.37 E:360129.26	116.98	INV IN=112.54 E 24" RCP INV OUT=112.04 SW 30" RCP
4	Index No. 425-020 - Curb Inlet Type 2 with Rectangular Bottom	N:1641963.36 E:360085.75	116.96	INV IN=111.84 NE 30" RCP INV OUT=111.54 SW 36" RCP
5	Index No. 430-021 - Cross Drain MES with 1:4 Slope - Single Round Conc. Pipe	N:1641933.36 E:360050.97	114.23	INV IN=111.30 NE 36" RCP
6	Index No. 425-020 - Curb Inlet Type 2 with Rectangular Bottom	N:1641849.88 E:360118.84	115.83	INV OUT=110.56 W 24" RCP
7	Index No. 425-020 - Curb Inlet Type 2 with Rectangular Bottom	N:1641850.00 E:360076.79	115.97	INV IN=110.48 E 24" RCP INV OUT=110.48 W 24" RCP
8	Index No. 430-021 - Cross Drain MES with 1:4 Slope - Single Round Conc. Pipe	N:1641849.88 E:360052.23	111.66	INV IN=110.39 E 24" RCP
9	Index No. 425-052 - Ditch Bottom Inlet - Type D	N:1641802.86 E:359900.10	113.16	INV IN=109.46 NE 18" RCP
10	Index No. 430-021 - Cross Drain MES with 1:4 Slope - Single Round Conc. Pipe	N:1642580.39 E:359932.97	112.96	INV IN=111.25 S 18" RCP
12	Index No. 430-021 - Cross Drain MES with 1:4 Slope - Single Round Conc. Pipe	N:1642791.15 E:359950.22	97.41	INV IN=95.70 S 18" RCP
13	Index No. 425-020 - Curb Inlet Type 3 (Right) with Rectangular Bottom	N:1642676.63 E:360429.19	111.94	INV OUT=107.74 W 18" RCP
14	Index No. 425-020 - Curb Inlet Type 3 (Right) with Rectangular Bottom	N:1642676.91 E:360383.60	111.15	INV IN=107.25 E 18" RCP INV OUT=107.25 W 24" RCP
15	Index No. 425-020 - Curb Inlet Type 2 with Rectangular Bottom	N:1642681.97 E:360224.64	109.65	INV IN=104.61 E 24" RCP INV OUT=104.61 N 30" RCP
16	Index No. 425-020 - Curb Inlet Type 2 with Rectangular Bottom	N:1642716.99 E:360225.24	109.65	INV IN=104.54 S 30" RCP INV OUT=104.54 N 36" RCP
17	Index No. 425-001 - Type 8 Manhole (Eccentric Cone with 1 or 2-Piece Cover, Round Structure Bottom)	N:1642851.03 E:360227.52	107.12	INV IN=103.04 S 36" RCP INV OUT=98.93 N 36" RCP

DRAINAGE STRUCTURE TABLE				
STRUCTURE NAME	STRUCTURE DESCRIPTION	NORTHING EASTING	RIM/GRATE ELEVATION	PIPE INVERT
18	Index No. 430-021 - Cross Drain MES with 1:4 Slope - Single Round Conc. Pipe	N:1642897.49 E:360228.23	98.80	INV IN=95.70 S 36" RCP
20	Index No. 430-021 - Cross Drain MES with 1:4 Slope - Single Round Conc. Pipe	N:1643026.25 E:360185.47	96.71	INV IN=95.00 S 18" RCP
21	Index No. 425-020 - Curb Inlet Type 2 with Rectangular Bottom	N:1642828.32 E:360648.85	107.79	INV OUT=103.60 NW 18" RCP
22	Index No. 425-020 - Curb Inlet Type 2 with Rectangular Bottom	N:1642860.10 E:360634.17	107.79	INV IN=103.50 SE 18" RCP INV OUT=103.50 NW 18" RCP
23	Index No. 425-001 - Type 8 Manhole (Eccentric Cone with 1 or 2-Piece Cover, Round Structure Bottom)	N:1642982.25 E:360577.75	105.14	INV IN=100.80 SE 18" RCP INV OUT=98.05 NW 18" RCP
24	Index No. 430-021 - Cross Drain MES with 1:4 Slope - Single Round Conc. Pipe	N:1643018.06 E:360561.23	97.41	INV IN=95.70 SE 18" RCP
25	Index No. 425-053 - Ditch Bottom Inlet - Type G with Rectangular Bottom	N:1642938.92 E:360872.33	92.68	INV IN=86.12 NW 24" RCP INV OUT=86.12 E 24" RCP
26	Index No. 425-053 - Ditch Bottom Inlet - Type G with Rectangular Bottom	N:1642958.59 E:360863.42	92.68	INV OUT=86.53 SE 24" RCP
28	Index No. 430-021 - Cross Drain MES with 1:4 Slope - Single Round Conc. Pipe	N:1642954.42 E:361006.22	83.33	INV IN=80.00 W 24" RCP
29	Index No. 425-020 - Curb Inlet Type 3 (Right) with Rectangular Bottom	N:1642066.68 E:360383.76	122.76	INV OUT=118.59 SE 18" HDPE
30	Index No. 425-020 - Curb Inlet Type 3 (Left) with Rectangular Bottom	N:1642035.79 E:360418.25	122.46	INV IN=118.45 NW 18" HDPE INV OUT=118.45 S 18" HDPE



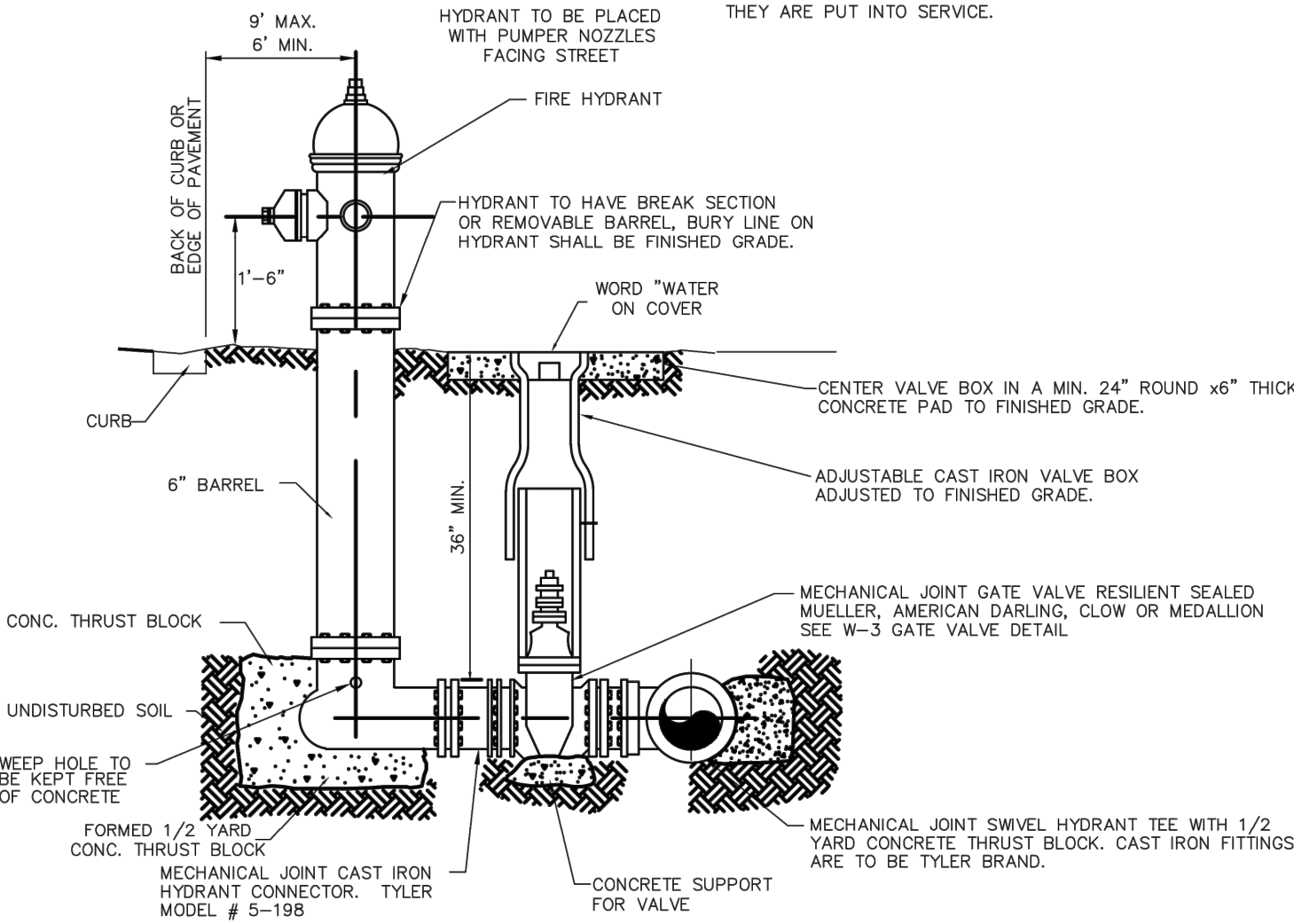


GENERAL WATER NOTES

1. WATER SYSTEM SHALL BE INSTALLED IN STRICT ACCORDANCE WITH ALL LOCAL CODES AND REGULATIONS, CLEANED, DISINFECTED AND BACTERIOLOGICALLY CLEARED FOR SERVICE IN ACCORDANCE WITH THE LATEST AWWA STANDARDS AND CHAPTER 62-555 FLORIDA ADMINISTRATIVE CODE.
2. ALL PIPING SHALL BEAR THE "NSP" SEAL FOR POTABLE WATER.
3. WATER MAINS SHALL BE PVC CONFORMING TO AWWA C-900, DR 18 FOR PIPE SIZES 4"-12". PIPES 14" OR LARGER SHALL BE AWWA C-905, DR 18. ALL COUPLINGS, COMPOUNDS, SOLVENTS, LUBRICANTS AND PIPE PREPARATION, FOR LAYING, SHALL BE IN ACCORDANCE WITH THE PIPE MANUFACTURERS LATEST RECOMMENDATIONS.
4. DEPTH OF WATER LINES TO BE MINIMUM 36" BELOW FINISHED GRADE.
5. WATER MAINS TO BE LOCATED 5' FROM BACK OF CURB OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
6. ALL PIPING CLEARANCES SHALL BE IN ACCORDANCE WITH CHAPTER 62-555.314, F.A.C., AND APPROVED BY THE CITY.
7. ALL WATER MAINS UNDER PAVEMENT SHALL BE DUCTILE IRON AND SHALL EXTEND 5' BEYOND THE BACK OF CURB, OR DIRECTIONAL BORES, WHICH SHALL BE SDR-11 HDPE.
8. ALL SLEEVES UNDER PAVEMENT SHALL EXTEND 5' BEYOND THE BACK OF CURB.
9. LOCATION OF ALL WATER AND SEWER CONNECTIONS SHALL BE STAMPED INTO THE CONCRETE CURB OF THE ROADWAY USING AND "S" FOR SEWER, "W" FOR WATER, AND "R" FOR RECLAIMED WATER. STAMPS SHALL THEN BE PAINTED OVER BY A 3 INCH CIRCLE USING BLUE FOR DOMESTIC WATER, GREEN FOR SEWER, AND PURPLE FOR RECLAIMED WATER.
10. ANYWHERE CONCRETE THRUST BLOCKS ARE PROVIDED THERE SHALL BE A PHYSICAL SEPARATION BETWEEN PIPING COMPONENTS BY PLACING POLY SHEETING BETWEEN THE PIPE COMPONENTS AND THE CONCRETE.

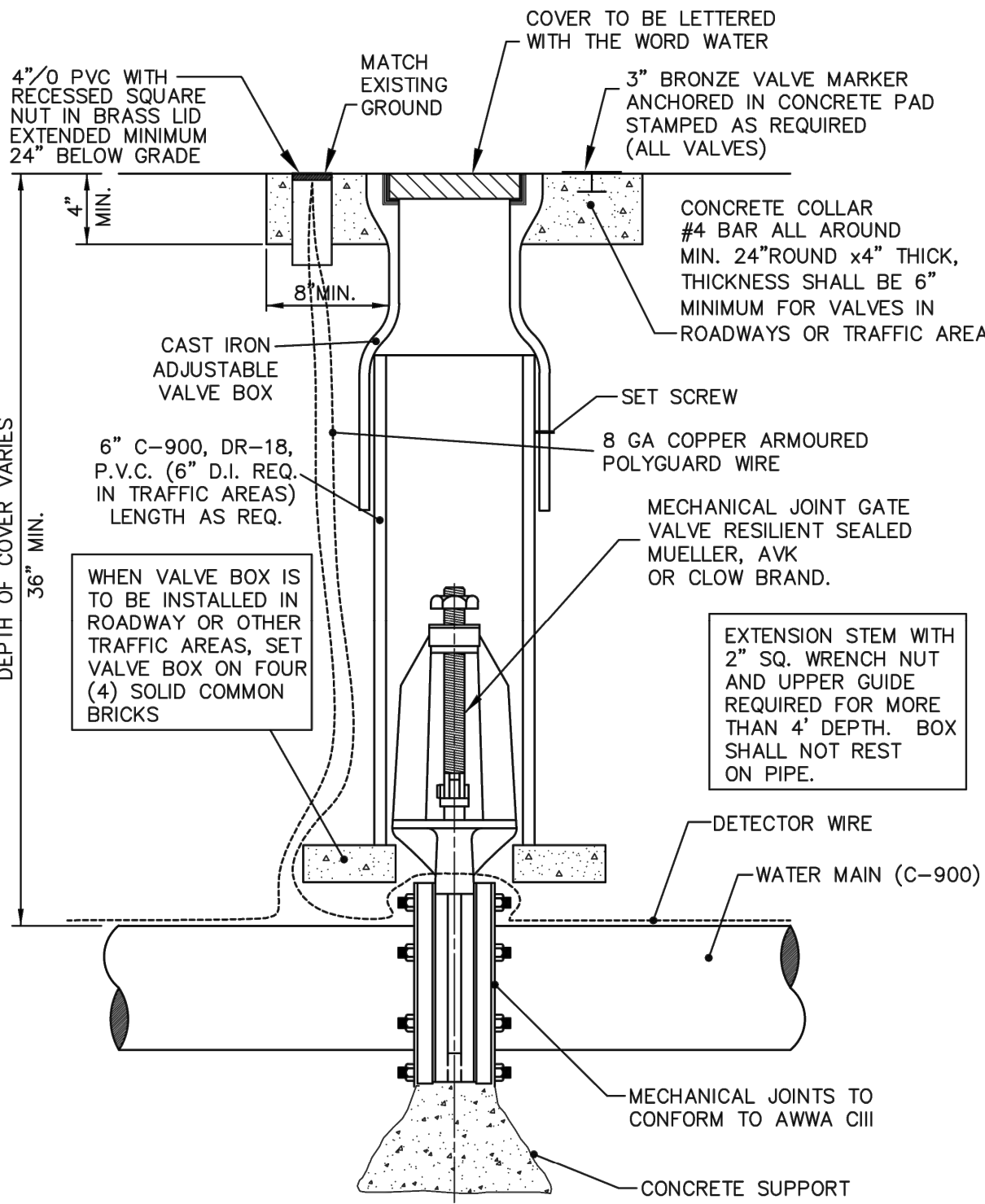
SPECIFICATIONS

1. AWWA SPECIFICATIONS C-502
2. TWO 2-1/2" HOSE NOZZLE DISCHARGE
3. ONE 4-1/2" PUMPER NOZZLE DISCHARGE
4. ONE 1-1/2" OPERATING NUT, LEFT
5. APPLY TWO COATS OF SHERMAN WILLIAMS PRO INDUSTRIAL (INDUSTRIAL ENAMEL ALKYD) SAFETY RED (SHERWIN WILLIAMS #B54R1038) FOR ALL HYDRANTS (FACTORY COATED RED IS ACCEPTABLE)
6. HYDRANTS SHALL BE FLOW TESTED BY CONTRACTOR. COORDINATE WITH CITY ENGINEER FOR TESTING PROCEDURES.
7. ALL HYDRANTS SHALL BE EQUIPPED WITH GRADE-LOK FITTINGS TO ALLOW FOR ELEVATION ADJUSTMENTS.
8. ALL HYDRANTS SHALL BE : MUELLER CENTURION 250
9. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY RISERS NEEDED TO BRING BASE OF HYDRANT TO FINISHED GRADE.
10. BONNET AND NOZZLE CAPS SHALL BE PAINTED WITH 2 COATS OF SHERWIN WILLIAMS PRO INDUSTRIAL (INDUSTRIAL ENAMEL ALKYD)-COLOR BASED ON HYDRANT FLOW CHART BELOW:
BLUE-1500 GPM OR GREATER (SHERWIN WILLIAMS BASE #B54T104 COLOR CODE 4086)
GREEN-1000 GPM-1499 GPM (SHERWIN WILLIAMS BASE #B54T104 COLOR CODE 4085)
ORANGE-500 GPM 999 (SHERWIN WILLIAMS BASE #B54E1039)
RED-499 GPM OR LESS (SHERWIN WILLIAMS BASE #B54R1038)
11. ALL FIRE HYDRANTS YET TO BE APPROVED OR IN SERVICE SHALL BE TAGGED AS OUT OF SERVICE UNTIL SUCH TIME THEY ARE PUT INTO SERVICE.



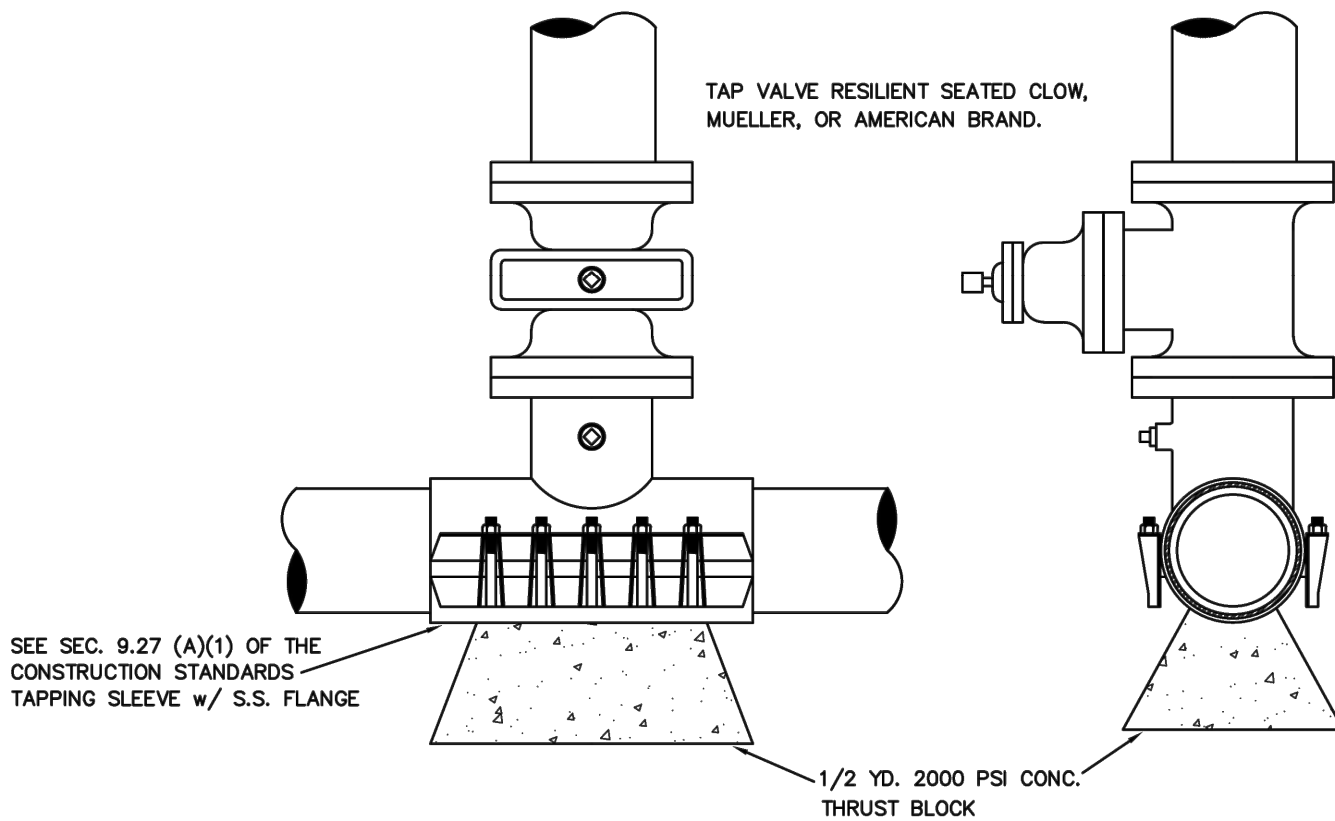
FIRE HYDRANT WITH VALVE

NOT TO SCALE
(STANDARD FIRE HYDRANT ASSEMBLY)



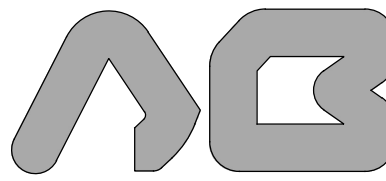
GATE VALVE & BOX

NOT TO SCALE



WET TAP SLEEVE & TAP VALVE

NOT TO SCALE



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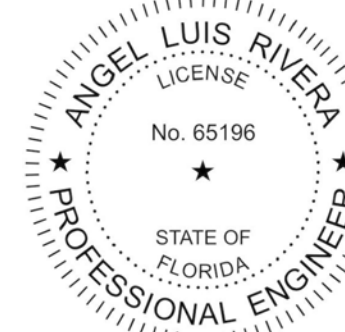
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REVISIONS

NO. ISSUED DATE

SCALE:

NONE

DATE:

5.15.25

SHEET TITLE:

UTILITY
DETAILS

DWG NO.:

C-5.1

SHEET: 16 OF 25

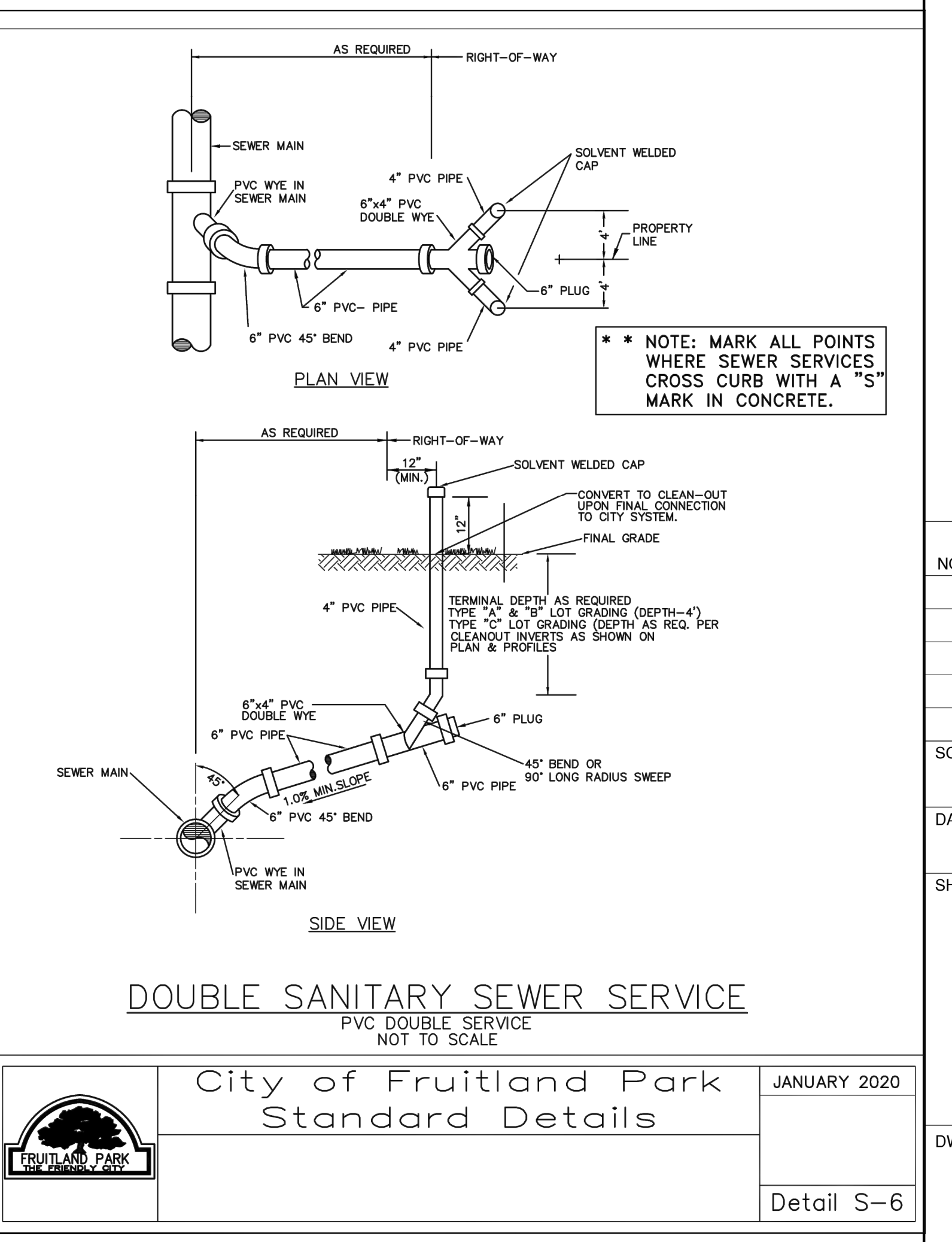
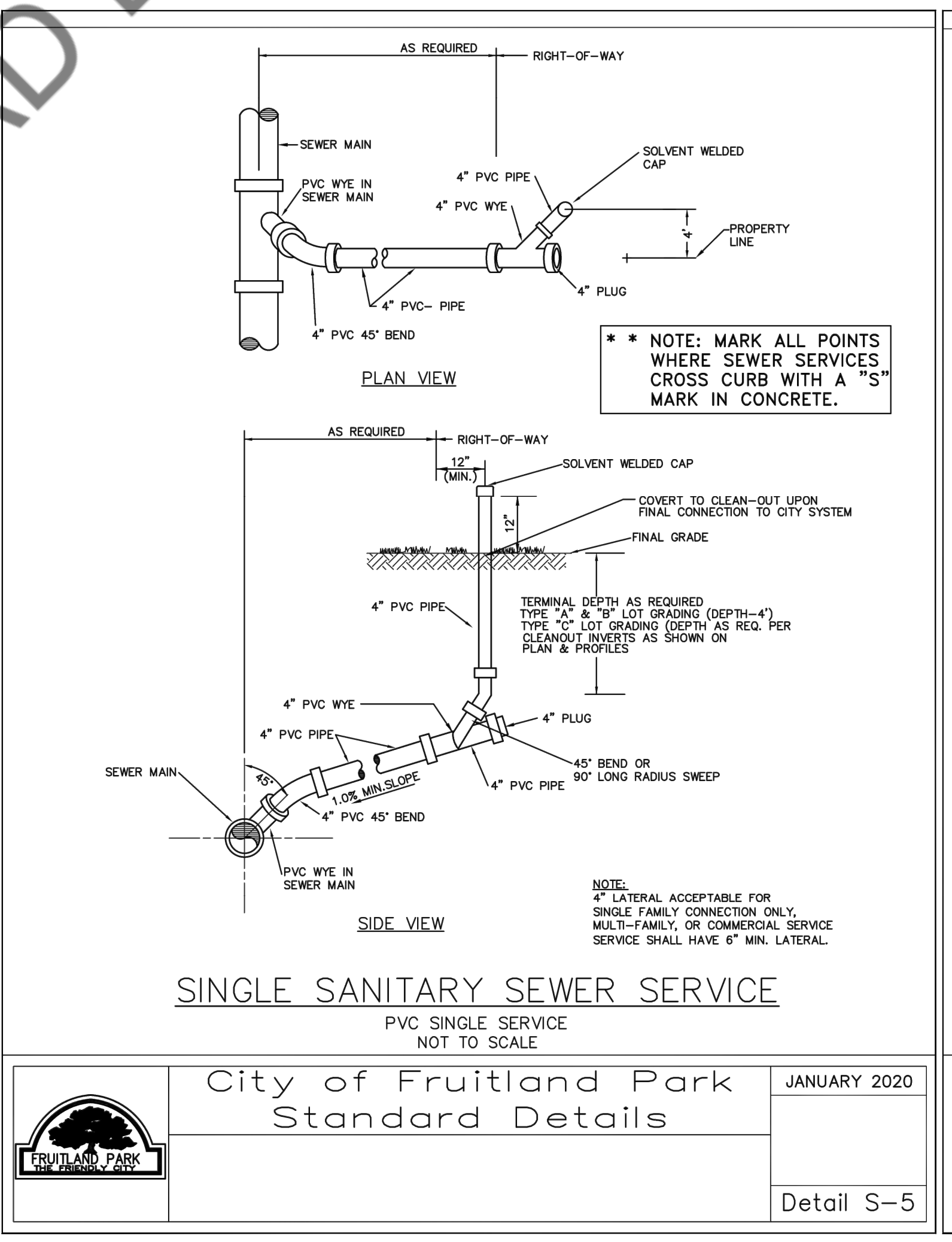
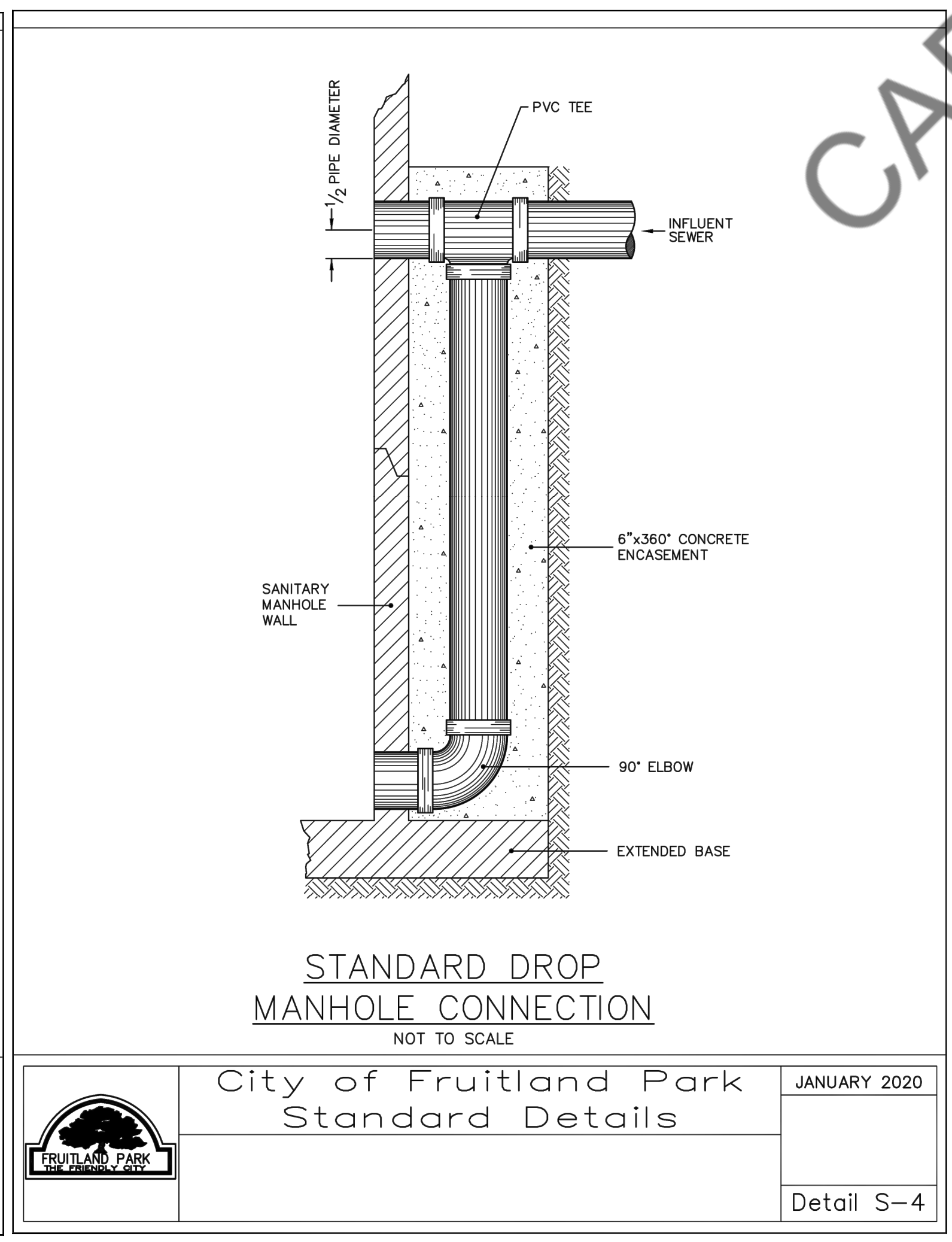
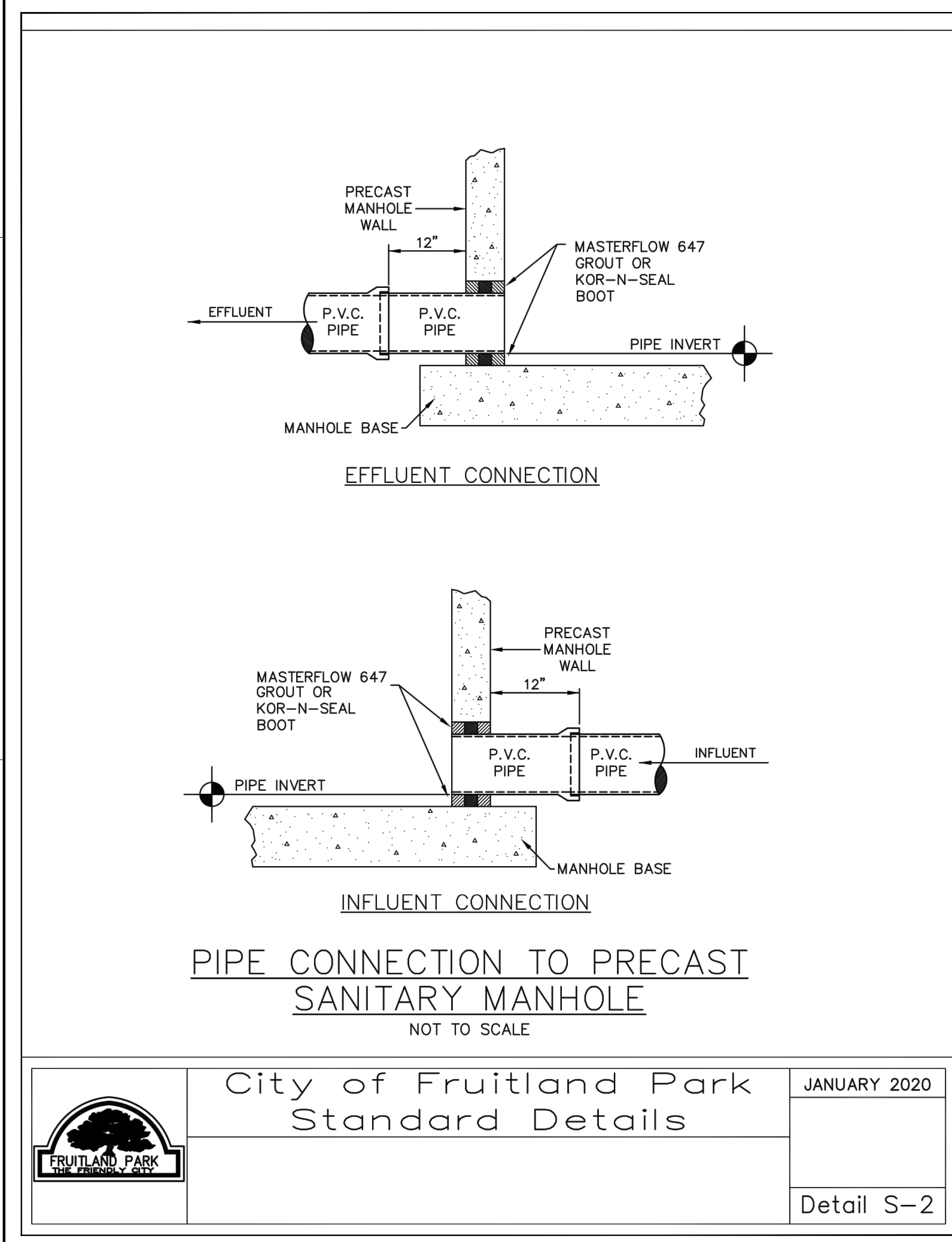
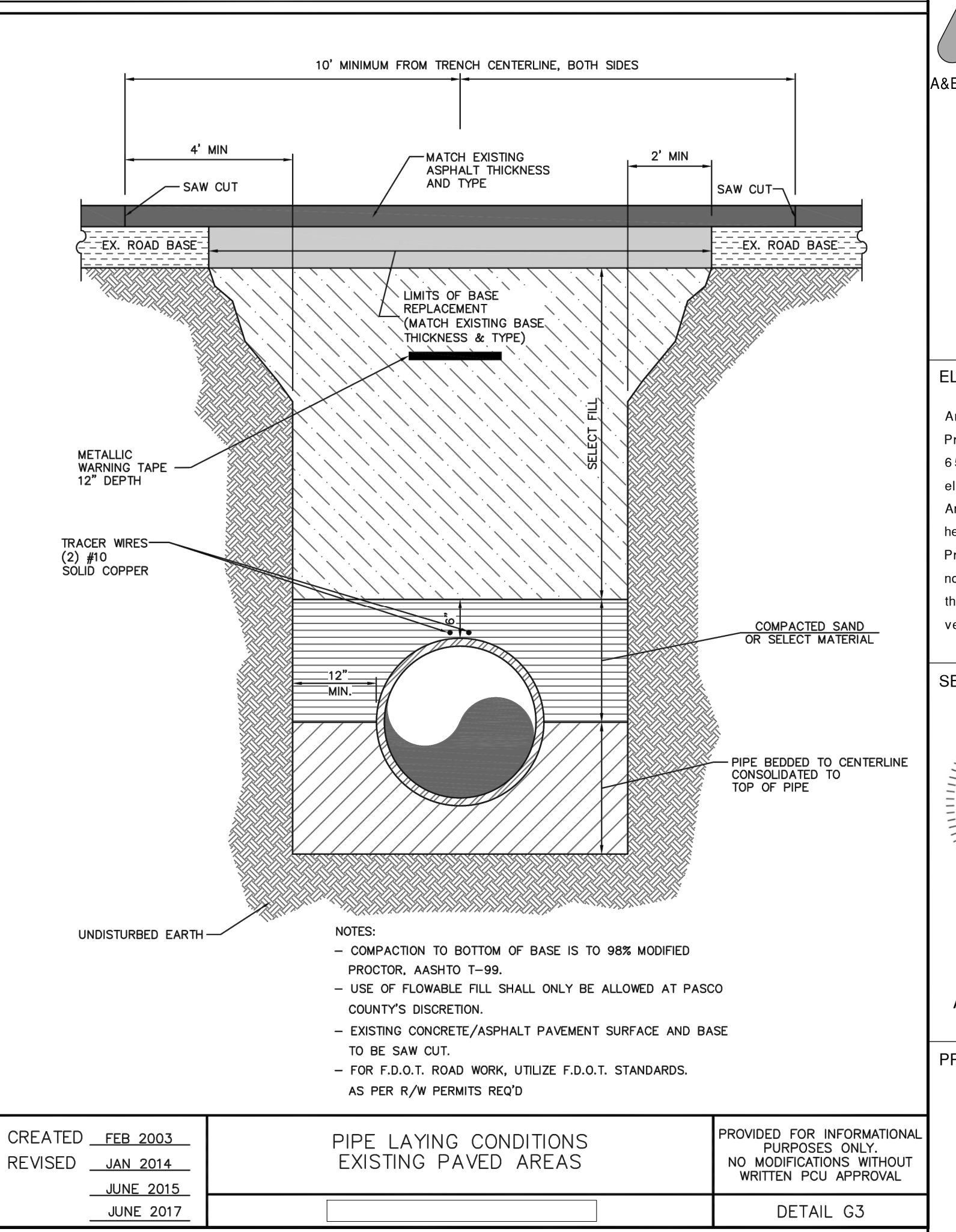
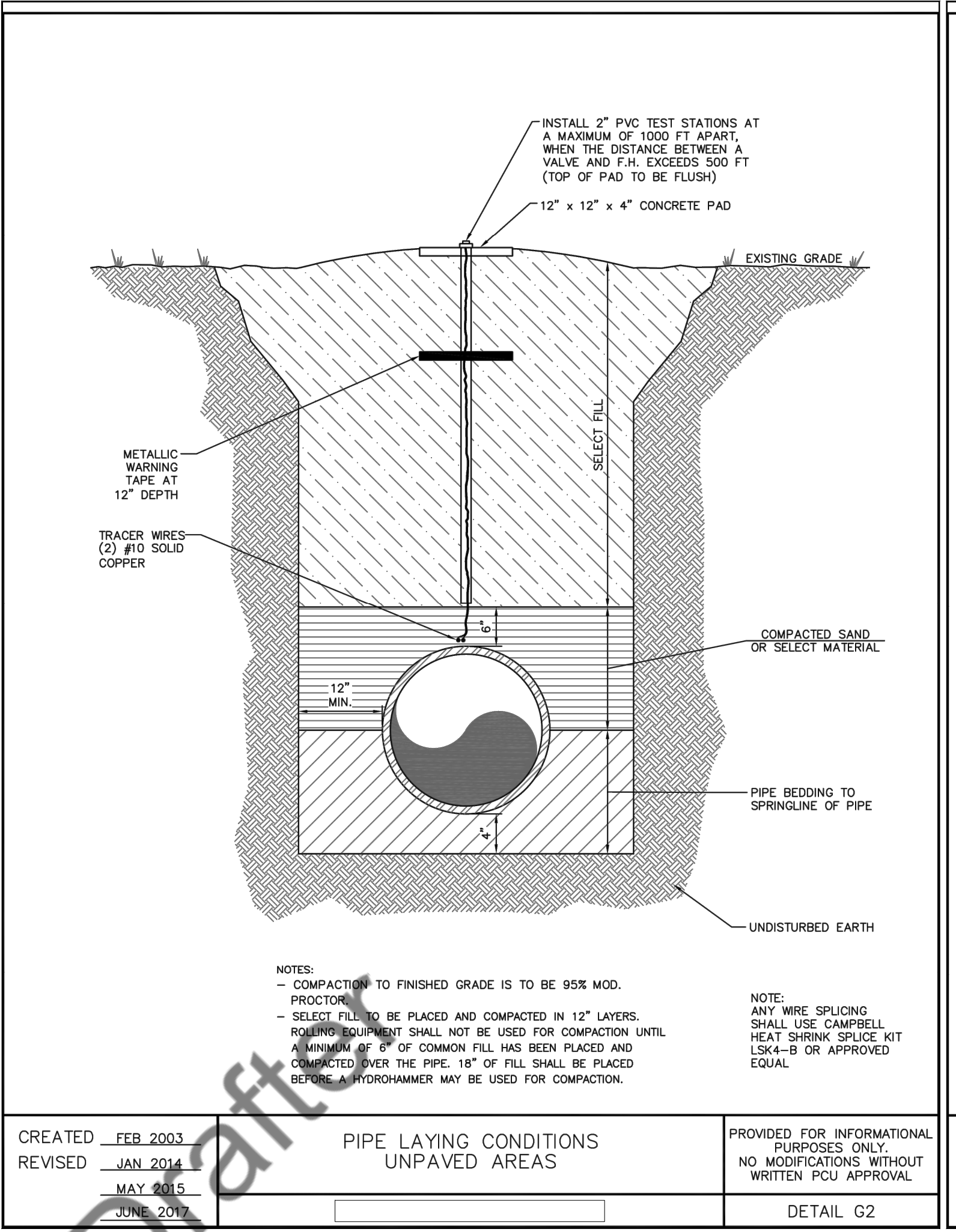
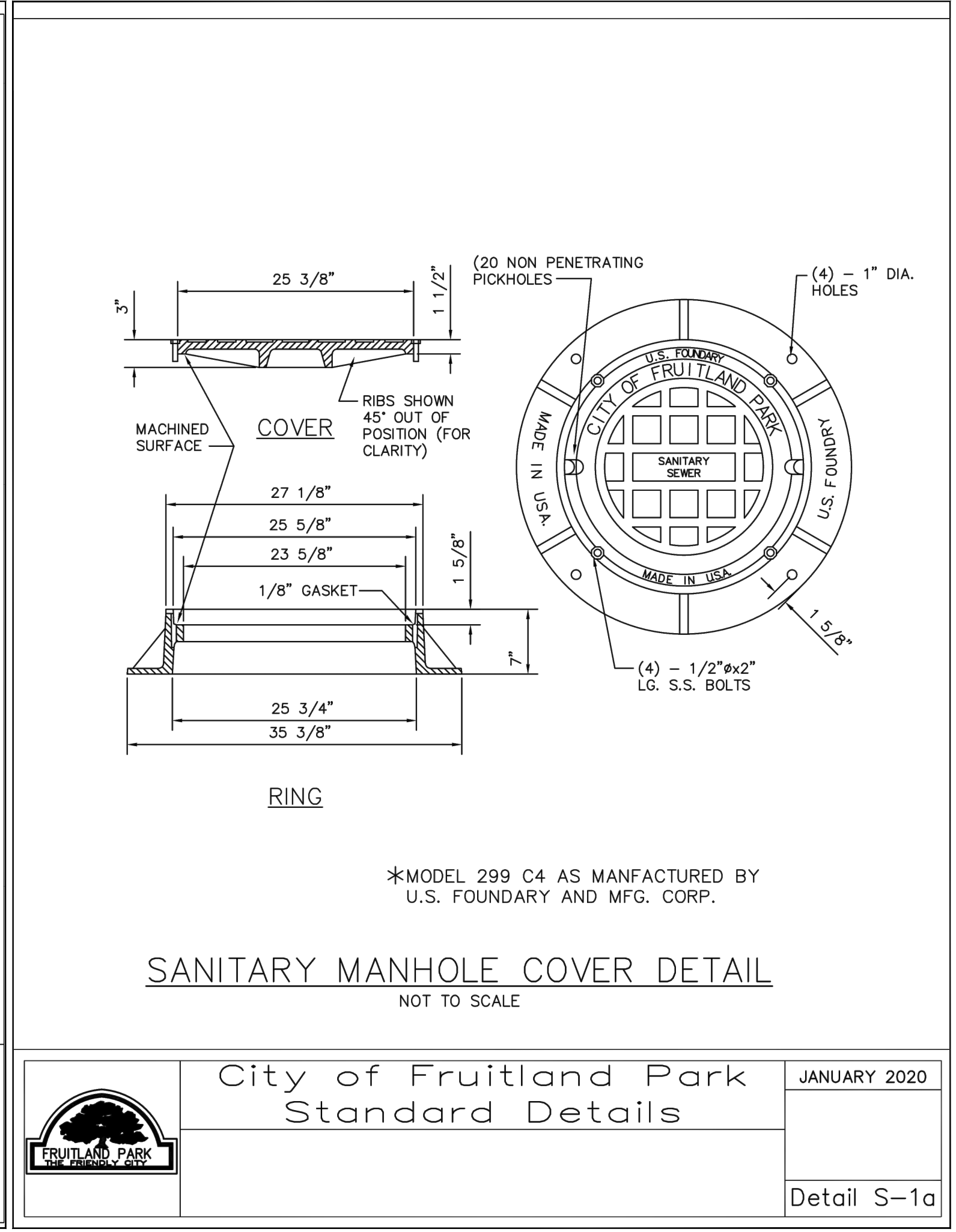
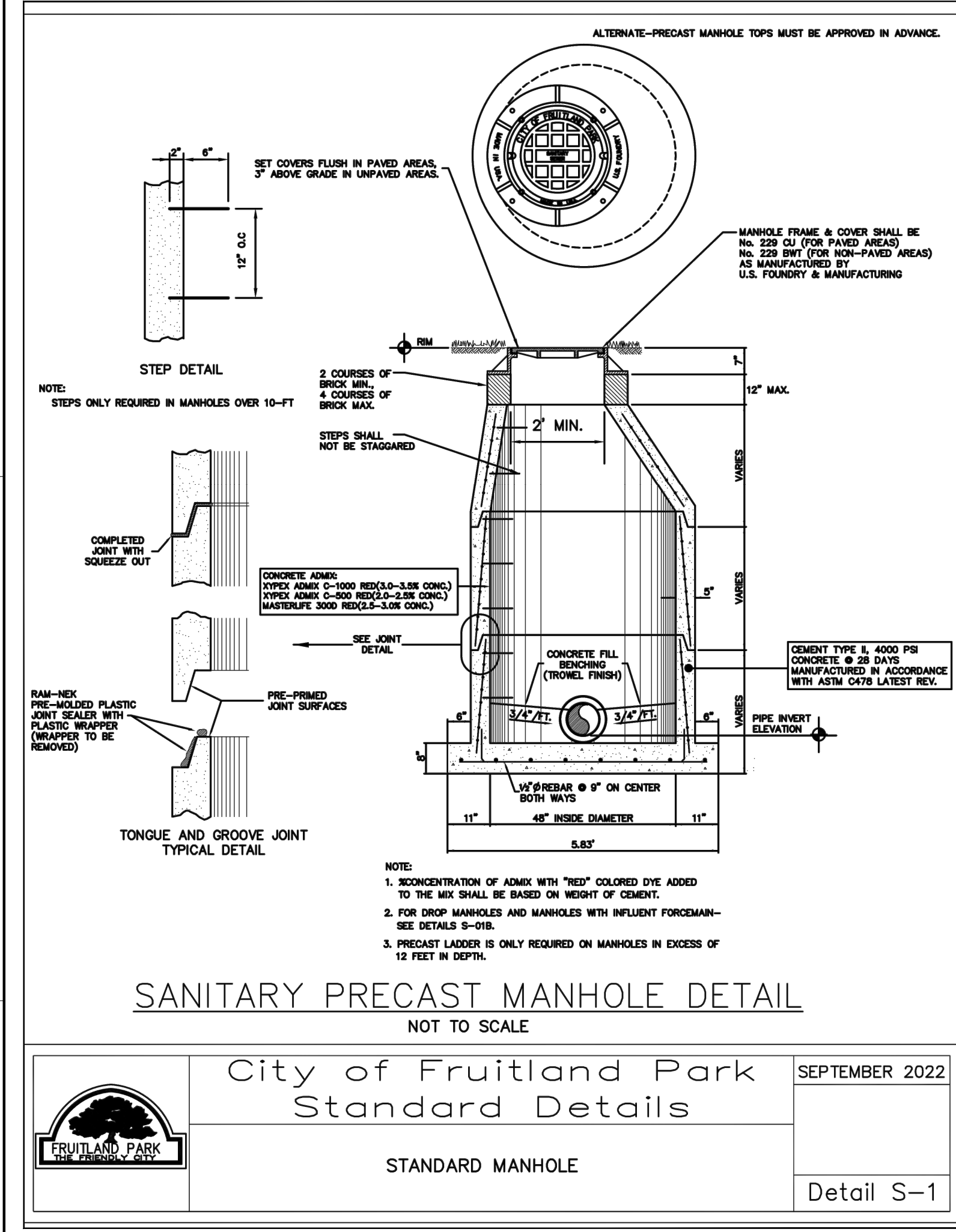
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Land Planning
Project Management
Inspections

Certificate of Authorization:
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4914 E Longboat Blvd
Tampa, FL 33615

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LICENSE
No. 65196
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

DATE
ANGEL L. RIVERA, P.E.
LIC. NO. 65196

PROJECT:
CRYSTAL LAKE VISTA
Myrtle Lake Ave
Fruitland Park, FL

REVISIONS	
NO.	ISSUED DATE

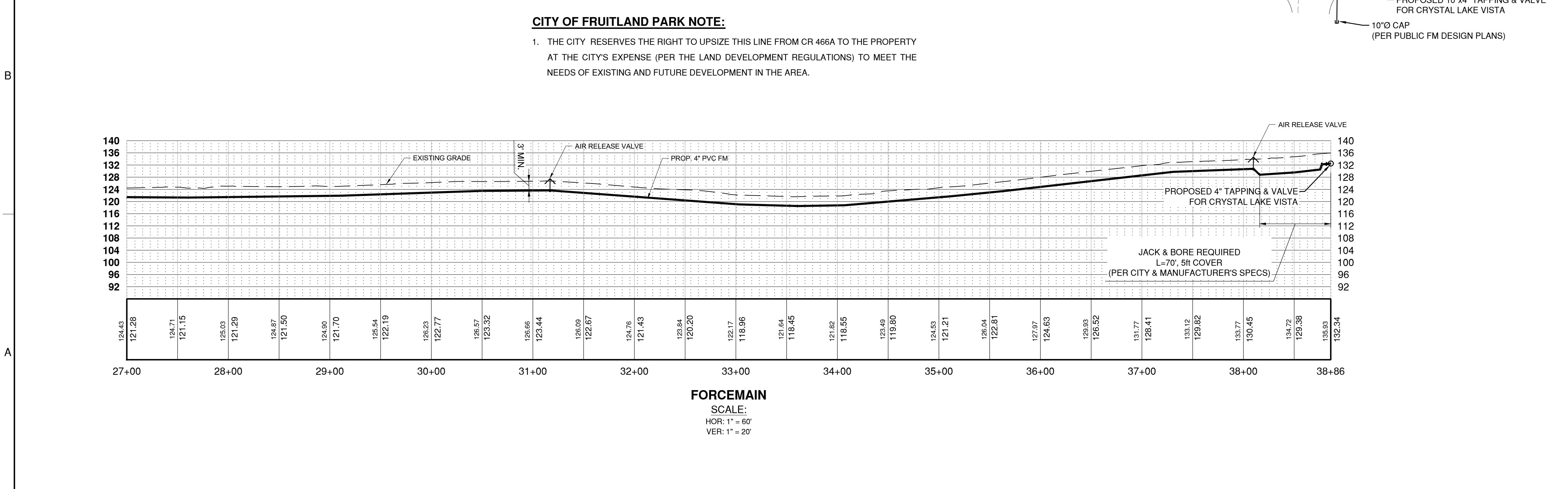
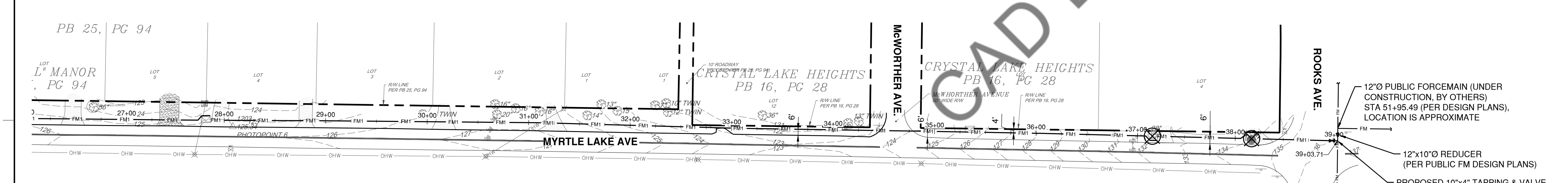
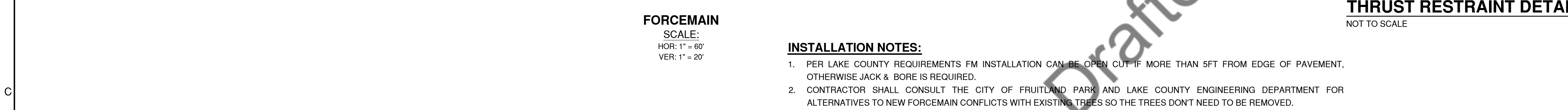
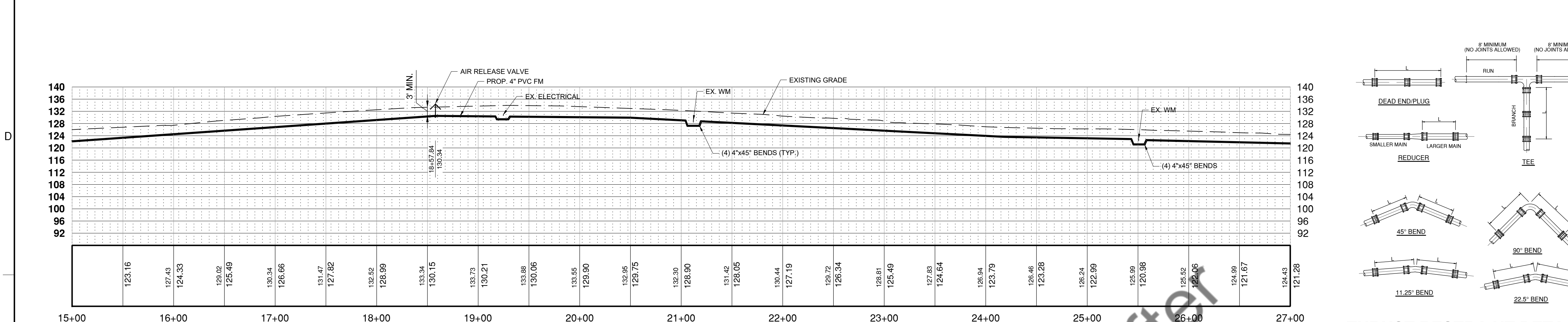
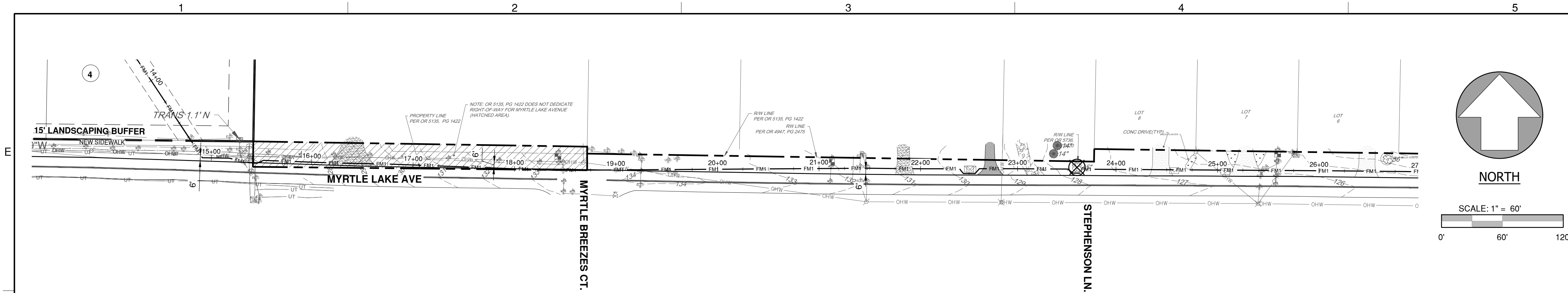
SCALE:
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DATE:
5.15.25

SHEET TITLE:
UTILITY DETAILS

DWG NO.:
C-5.2

SHEET: 17 OF 25



LEGEND	
PROPERTY LINE	---
PROPOSED FORCEMAIN	FM1
EXISTING WATERMAIN	W
EXISTING SANITARY SEWER	SAN
EXISTING STORM SEWER	STM
EXISTING FORCEMAIN	FM
EXISTING COMMUNICATIONS	UT
EXISTING OVERHEAD WIRES	OHW
EXISTING TREE (ROOTS TO BE PROTECTED WHENEVER POSSIBLE)	⊗

Diag	4"	6"	8"	12"	16"	18"	20"	24"	30"
4"	31 (44)								
6"	55 (79)	32 (46)							
8"	94 (134)	79 (113)	57 (82)						
12"		117 (166)	101 (144)	59 (84)					
16"			120 (171)	83 (118)	31 (44)				
18"				104 (149)	58 (83)	31 (44)	58 (83)		
20"				143 (204)	106 (151)	63 (119)	59 (83)		
24"					163 (232)	145 (207)	126 (180)	81 (115)	
30"						181 (258)	145 (207)	80 (114)	
36"							266 (381)	241 (345)	196 (280)
48"									

REDUCER RESTRAINED JOINTS (150 PSI)											
(MINIMUM LINEAR FEET FROM FITTING)											
R/W	BRANCH										
	Diag	4"	6"	8"	12"	16"	18"	20"	24"	30"	36"
	4"	21 (29)									
	6"	10 (15)	38 (54)								
	8"	0 (0)	30 (43)	55 (78)							
	12"	0 (0)	15 (21)	43 (62)	68 (123)						
	16"		0 (0)	30 (43)	79 (111)	116 (165)					
	18"	0 (0)	24 (34)	73 (104)	112 (161)	130 (186)					
	20"	0 (0)	16 (23)	69 (98)	108 (159)	127 (181)	143 (205)				
	24"	0 (0)	1 (2)	58 (83)	102 (148)	120 (172)	128 (179)	170 (243)			
	30"	0 (0)	0 (0)	42 (61)	90 (129)	110 (157)	129 (184)	163 (233)	207 (296)		
	36"	0 (0)	0 (0)	25 (35)	77 (110)	99 (141)	118 (169)	155 (221)	201 (287)	241 (344)	
	48"				48 (66)	73 (104)	96 (136)	136 (194)	186 (266)	229 (328)	

TEE RESTRAINED JOINTS (150 PSI)											
(MINIMUM LINEAR FEET FROM FITTING)											
Diam	4"	6"	8"	12"	16"	18"	20"	24"	30"	36"	48"
CAPPED END	-	-	-	-	-	-	-	-	-	-	-
90° BENDS	42 (60)	59 (85)	77 (110)	108 (155)	138 (198)	153 (216)	166 (238)	194 (277)	231 (330)	265 (379)	325 (465)
45° BENDS	17 (25)	25 (35)	32 (45)	45 (64)	57 (82)	63 (90)	69 (96)	80 (115)	96 (137)	110 (157)	135 (190)
22.5° BENDS	8 (12)	12 (17)	15 (22)	22 (31)	28 (39)	30 (43)	33 (47)	39 (55)	46 (66)	53 (75)	65 (90)
11.25° BENDS	4 (6)	6 (8)	8 (11)	11 (15)	14 (19)	15 (21)	16 (23)	19 (27)	23 (32)	26 (37)	32 (43)
VALVE	-	-	-	-	-	-	-	-	-	-	-
RESTRAINED JOINTS FOR VERTICAL ORIENTED FITTING (450 PSI)											

RESTRAINED JOINTS FOR VERTICALLY ORIENTED FITTINGS (150 PSI)											
(MINIMUM LINEAR FEET FROM FITTING)											
Diag	4"	6"	8"	10"	12"	16"	18"	20"	24"	30"	36"
CAPPED END	42 (60)	59 (85)	77 (110)	106 (155)	138 (198)	153 (216)	166 (238)	194 (277)	231 (330)	265 (379)	325 (465)
90° BENDS	20 (24)	29 (33)	37 (43)	51 (60)	65 (76)	72 (83)	78 (90)	89 (104)	104 (122)	129 (138)	144 (167)
45° BENDS	8 (10)	12 (14)	15 (18)	21 (25)	27 (31)	30 (35)	32 (37)	37 (43)	44 (52)	50 (57)	60 (69)
22.5° BENDS	4 (5)	6 (7)	7 (9)	10 (12)	13 (15)	15 (17)	16 (18)	18 (21)	21 (24)	24 (28)	29 (33)
11.25° BENDS	2 (2)	3 (3)	4 (4)	5 (6)	7 (8)	8 (9)	8 (9)	9 (11)	11 (12)	12 (14)	14 (16)
VALVE	35 (50)	49 (71)	64 (92)	90 (130)	115 (165)	128 (182)	139 (198)	160 (230)	193 (275)	220 (320)	325 (465)

RESTRAINED JOINTS FOR HORIZONTAL FITTINGS (150 PSI)											
(MINIMUM LINEAR FEET FROM FITTING)											
Diag	4"	6"	8"	10"	12"	16"	18"	20"	24"	30"	36"
CAPPED END	42 (60)	59 (85)	77 (110)	106 (155)	138 (198)	153 (216)	166 (238)	194 (277)	231 (330)	265 (379)	325 (465)
90° BENDS	20 (24)	29 (33)	37 (43)	51 (60)	65 (76)	72 (83)	78 (90)	89 (104)	104 (122)	129 (138)	144 (167)
45° BENDS	8 (10)	12 (14)	15 (18)	21 (25)	27 (31)	30 (35)	32 (37)	37 (43)	44 (52)	50 (57)	60 (69)
22.5° BENDS	4 (5)	6 (7)	7 (9)	10 (12)	13 (15)	15 (17)	16 (18)	18 (21)	21 (24)	24 (28)	29 (33)
11.25° BENDS	2 (2)	3 (3)	4 (4)	5 (6)	7 (8)	8 (9)	8 (9)	9 (11)	11 (12)	12 (14)	14 (16)
VALVE	35 (50)	49 (71)	64 (92)	90 (130)	115 (165)	128 (182)	139 (198)	160 (230)	193 (275)	220 (320)	325 (465)

THRUST RESTRAINT DESIGN NOTES

THE PROGRAM "THRUST RESTRAINT" DISTRIBUTED BY THE DUCTILE IRON PIPE RESEARCH ASSOCIATION WAS USED TO CALCULATE THE LENGTH OF RESTRAINED JOINTS BASED ON TYPE 3 STANDARD C150/A21.50 LAYING CONDITIONS FOR DUCTILE IRON PIPE, SANDY/SILTY SOIL, 3.0 FT MIN. COVERAGE OPERATING PRESSURE APPROPRIATE ADJUSTMENTS MUST BE MADE FOR DEVIATIONS FROM THESE ASS. SELECTED COMMON FILL FROM ORIGINAL EXCAVATION, SEE SPECIFICATIONS.

USE OF ALTERNATIVE TYPES OF PIPE BEDDING TO BE DETERMINED IN THE FIELD AS DIRECTED BY THE ENGINEER. FOR COMBINED BENDS FORMING OFFSETS, THE LENGTHS QUOTED SHALL BE DOUBLED AND PROVIDED TO THE CENTROID OF THE OFFSET.

VALVES LOCATED NEAR BENDS OR TEES SHALL TAKE ACCOUNT OF ADDITIONAL PASSIVE SOIL RESISTANCE. WALL SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION, DEWATER AS NECESSARY.

- THRUST RESTRAINT DESIGN NOTES**
- THE PROGRAM "THRUST RESTRAINT" DISTRIBUTED BY THE DUCTILE IRON PIPE RESEARCH ASSOCIATION (DIPRA) WAS USED TO CALCULATE THE LENGTH OF RESTRAINED JOINTS BASED ON TYPE 3 STANDARD ANSI/AWWA C150/A21.50 LAYING CONDITIONS FOR DUCTILE IRON PIPE. SANDY/SILT SOIL 3.0 FT MIN. COVERAGE AND 150PSI OPERATING PRESSURE APPROPRIATE ADJUSTMENTS MUST BE MADE FOR DEVIATIONS FROM THESE ASSUMPTIONS.
 - SELECTED COMMON FILL FROM ORIGINAL EXCAVATION. SEE SPECIFICATIONS.
 - USE OF ALTERNATIVE TYPES OF PIPE BEDDING TO BE DETERMINED IN THE FIELD AS DIRECTED BY THE ENGINEER.
 - FOR COMBINED BENDS FORMING OFFSETS, THE LENGTHS QUOTED SHALL BE DOUBLED AND PROVIDED EACH SIDE OF THE CENTROID OF THE OFFSET.
 - VALVES LOCATED NEAR BENDS OR TEES SHALL TAKE ACCOUNT OF ADDITIONAL PASSIVE SOIL RESISTANCE.
 - WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION, DEWATER AS NECESSARY.
 - EXISTING CONCRETE/ASPHALT SURFACES AND BASE SHALL BE CUT SQUARE WITH CONCRETE SAW, AND REPLACED BY THE CONTRACTOR TO MATCH THE EXISTING CONDITIONS OR BETTER.
 - ALL FITTINGS AND VALVES SHALL BE MECHANICALLY RESTRAINED. IN ADDITION TO THE FITTING BEING RESTRAINED, THE MINIMUM LINEAR FEET TO BE RESTRAINED ON BOTH SIDES OF THE FITTING SHALL BE AS SHOWN IN THE TABLE UNLESS OTHERWISE NOTED. THE RESTRAINED JOINT LENGTH FOR DUCTILE IRON PIPE AS SHOWN. APPROPRIATE ADJUSTMENTS MUST BE MADE FOR PIPE MATERIALS OTHER THAN DUCTILE IRON.
 - IF THE PIPE IS DEFLECTED, THE MAXIMUM ALLOWABLE DEFLECTION SHALL BE 75% OF THE MANUFACTURER'S RECOMMENDED DEFLECTION FOR THE JOINT TYPE USED.
 - RESTRAINED JOINTS IN CARRIER PIPES (JACK AND BORE) SHALL NOT BE INCLUDED IN RESTRAINED LENGTHS. *NUMBERS IN PARENTHESIS REPRESENT LINEAL FEET OF RESTRAINT FOR POLY WRAPPED DIP AND FOR PVC PIPE.

- GENERAL NOTES:**
- SEE GENERAL NOTES ON UTILITY PLAN.
- LANE CLOSURE NOTES:**
- CONTRACTOR IS REQUIRED TO PROVIDE LANE CLOSURE REQUEST TO COUNTY TWO WEEKS PRIOR TO ANTICIPATED WORK COMMENCEMENT (IF APPLIES).
- TYPICAL FDOT M.O.T. INDEXES:**
- 102-600 - GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES
 - 102-601 - TWO-LANE AND MULTILANE ROADWAY, WORK BEYOND THE SHOULDER
 - 102-603 - TWO LANE, TWO WAY, WORK WITHIN THE TRAVEL WAY
 - 102-604 - TWO-LANE, TWO-WAY, INTERSECTION WORK
 - 102-606 - TWO-LANE ROADWAY, LANE CLOSURE USING TEMPORARY TRAFFIC SIGNALS
 - 102-670 - MOTORIST AWARENESS SYSTEM
- (SEE ADDITIONAL MOT GENERAL NOTES ON DWG C-0.1)

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DATE
ANGEL L. RIVERA, P.E.
LIC. NO. 65196

PROJECT:

CRYSTAL LAKE VISTA
Myrtle Lake Ave
Fruitland Park, FL

REVISIONS		
NO.	ISSUED	DATE

SCALE:
AS SHOWN

DATE:
5.15.25

SHEET TITLE:
**FORCEMAIN
PLAN & PROFILE**

DWG NO.:

C-5.4

SHEET: 19 OF 25

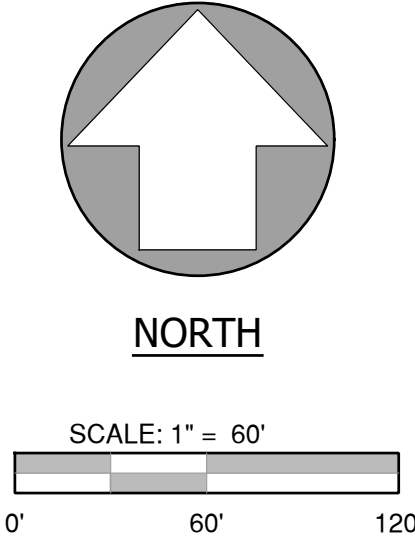
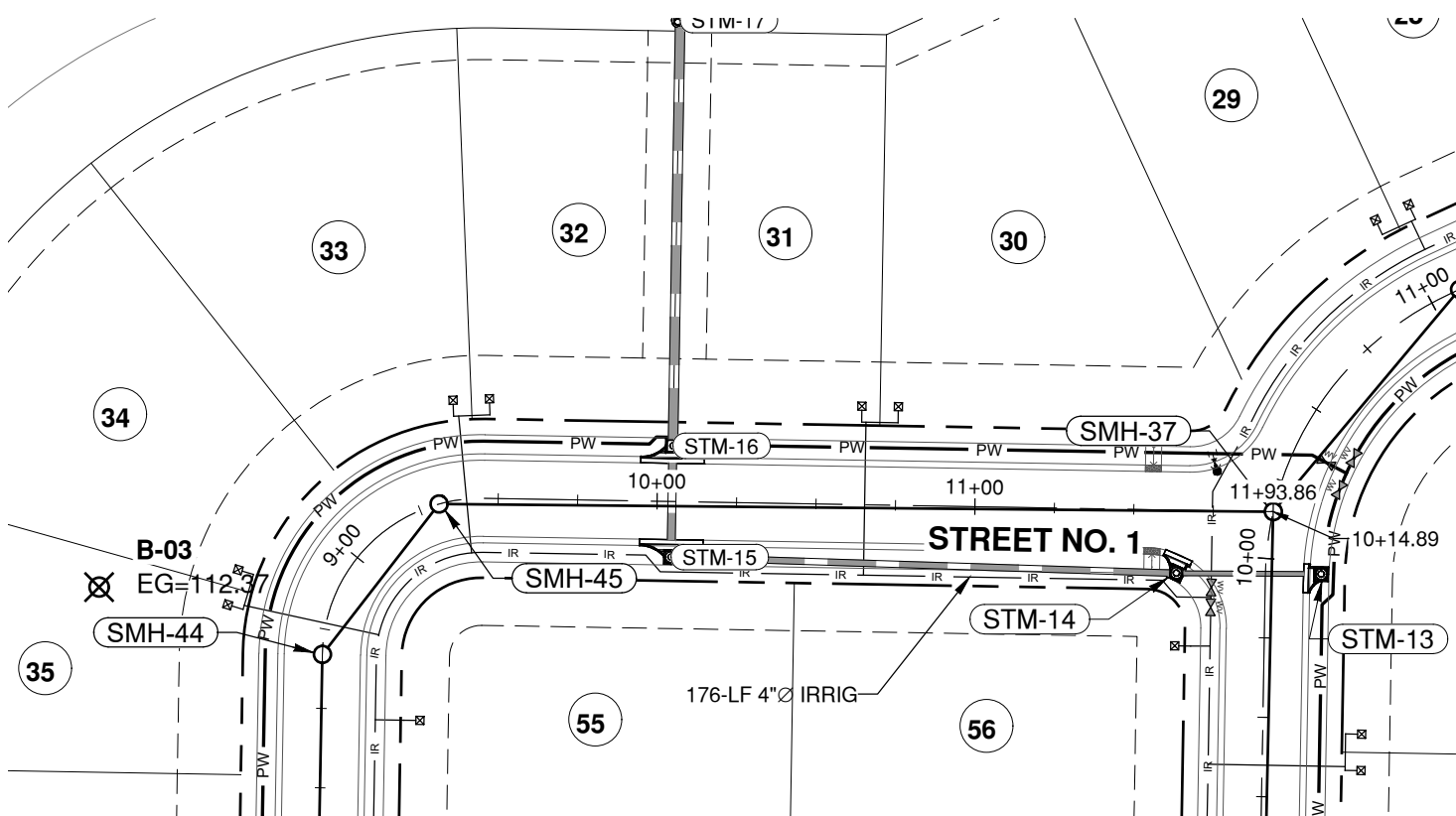
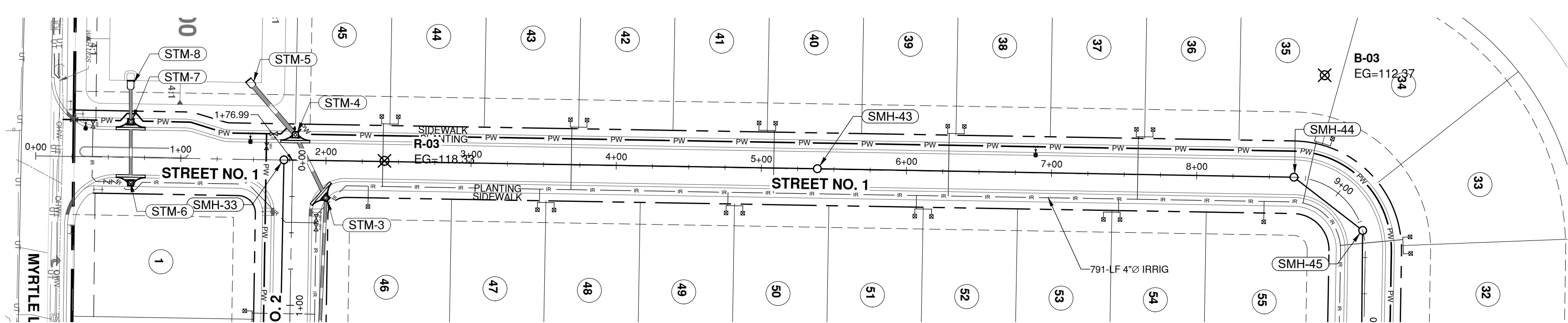
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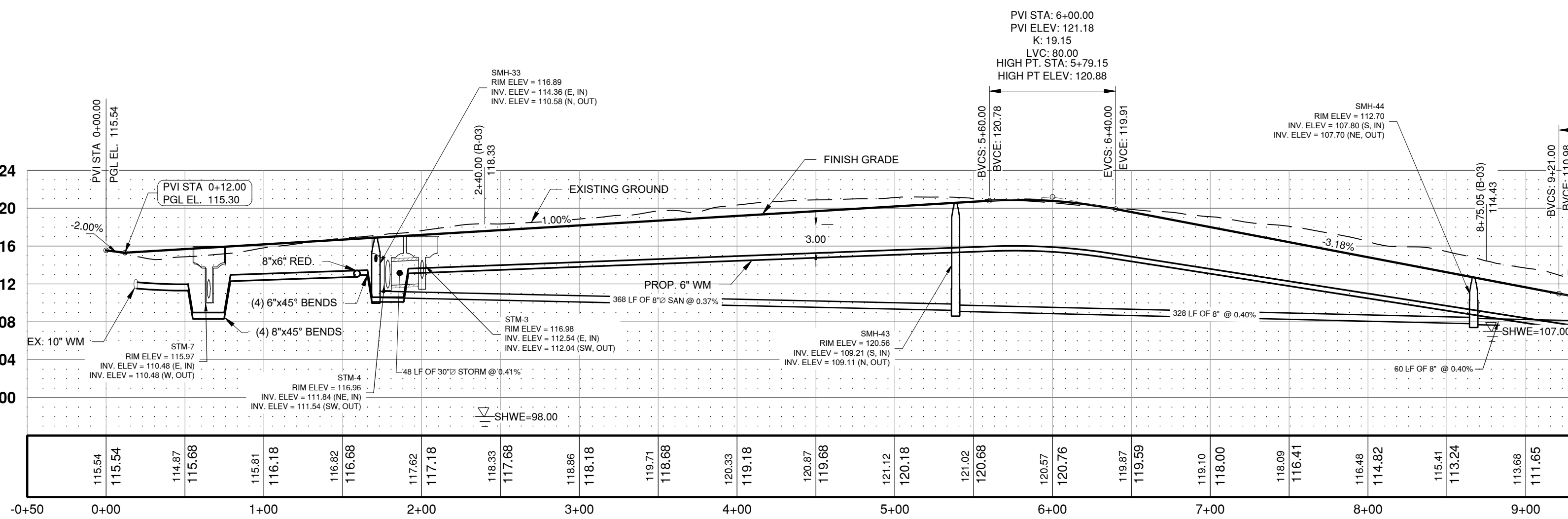
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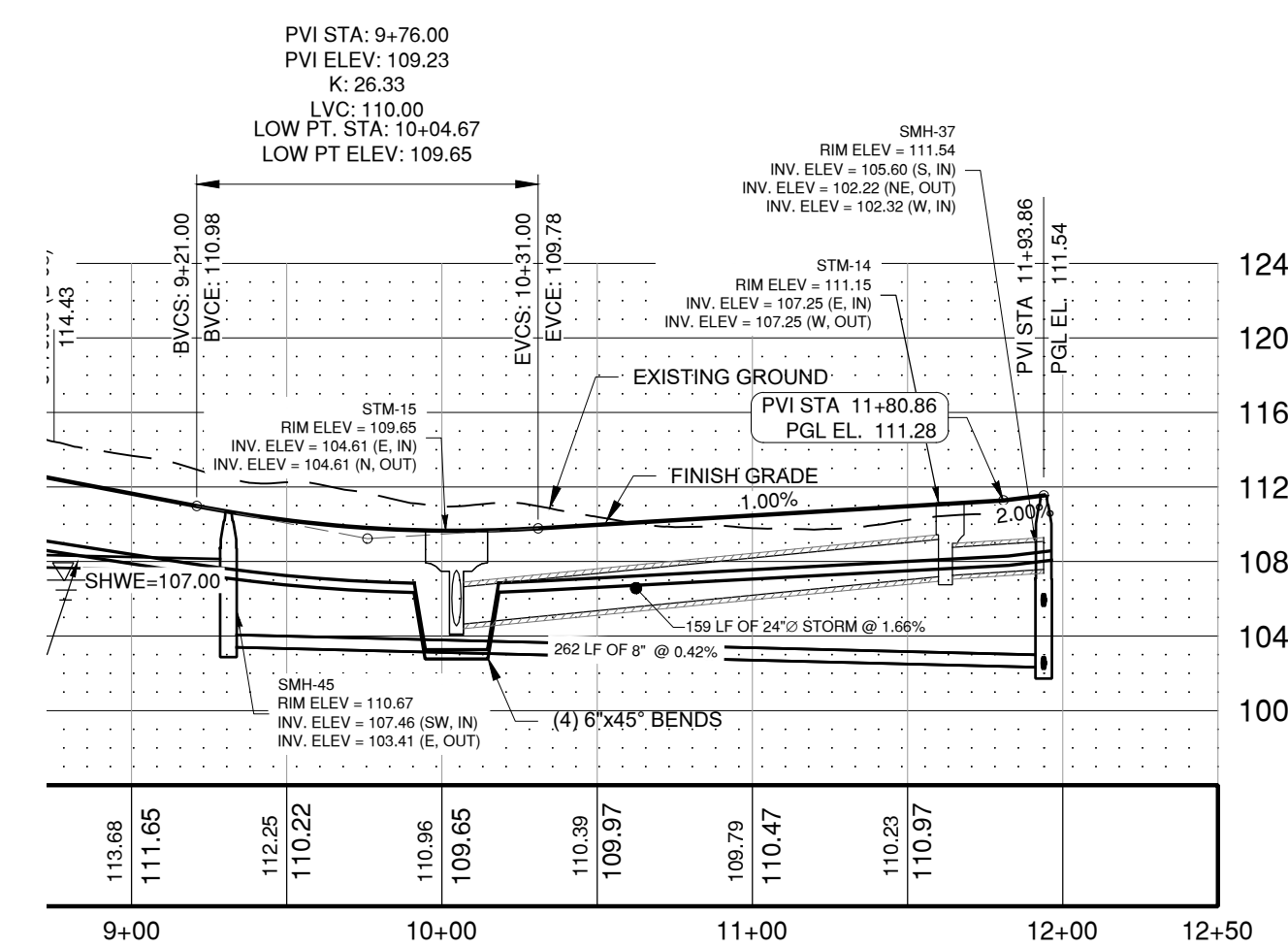
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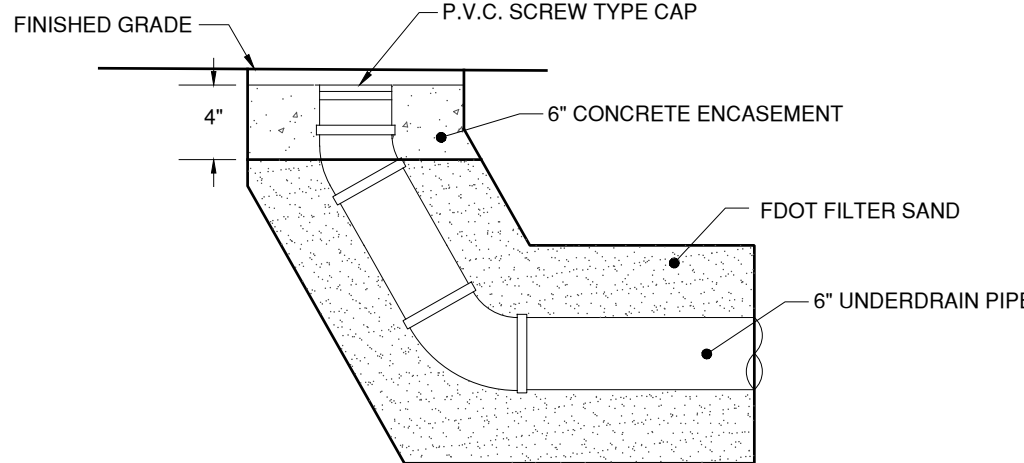
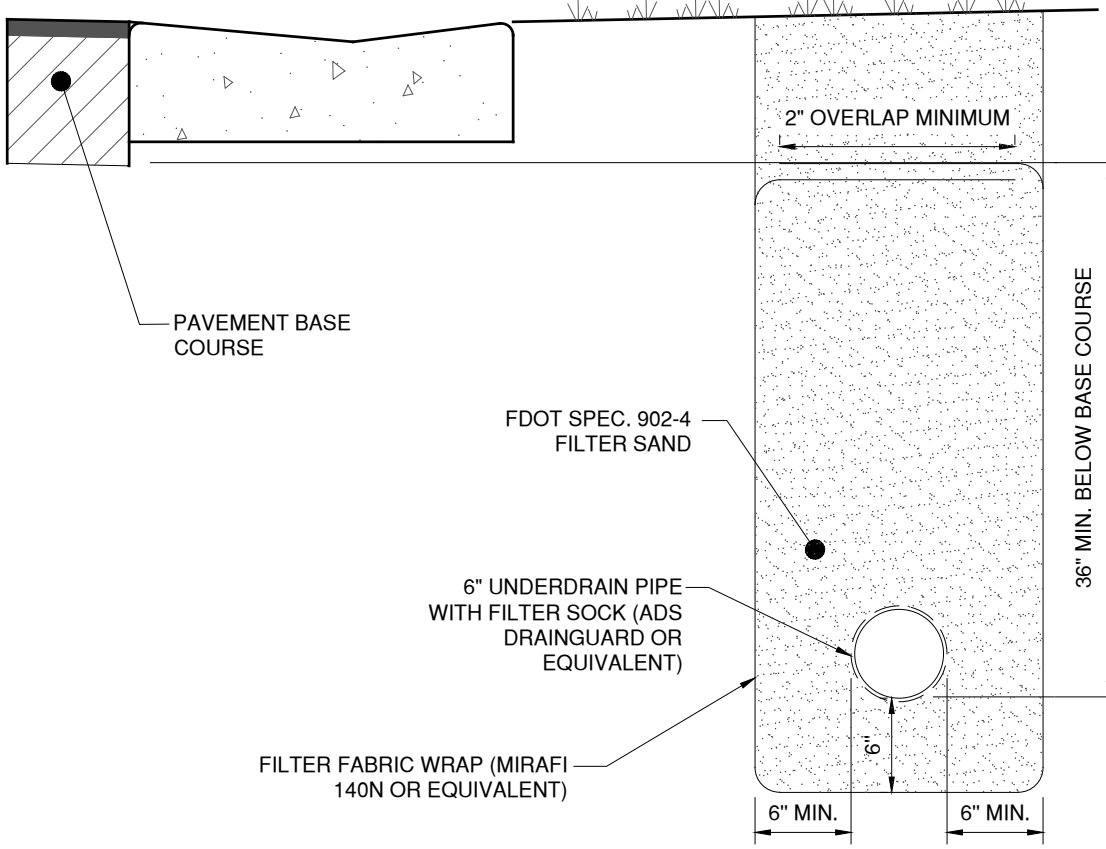
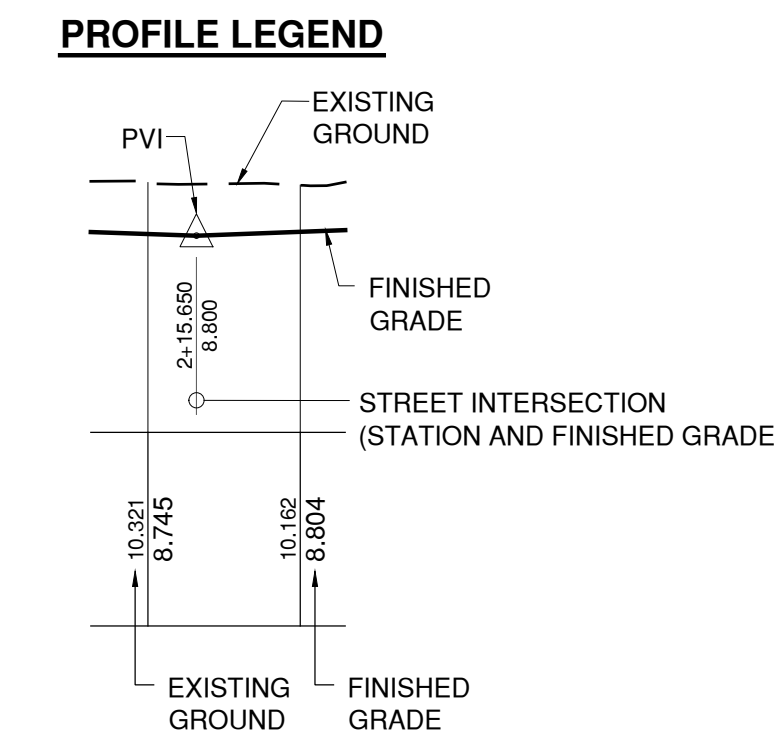
LEGEND	
PROPERTY LINE	---
PROPOSED WATERMAIN	— PW — PW
PROPOSED SANITARY SEWER	— SS — SS
PROPOSED STORM SEWER	— S — S
GEOTECHNICAL BORING	⊗
SEASONAL HIGH WATER ELEV.	SHWE=102.47



STREET NO. 1
SCALE:
HOR: 1" = 60'
VER: 1" = 10'



STREET NO. 1
SCALE:
HOR: 1" = 60'
VER: 1" = 10'



UNDERDRAIN CLEANOUT DETAIL
NOT TO SCALE
(PROVIDE MINIMUM ONE CLEANOUT PER EACH UNDERDRAIN. MAXIMUM CLEANOUT SPACING EVERY 50 FT.)

UNDERDRAIN DETAILS
NOT TO SCALE

- NOTES:**
1. MINIMUM UNDERDRAIN LENGTH SHALL BE 30 FT UNLESS OTHERWISE SPECIFIED ON PLANS.
 2. LOCATE UNDERDRAIN WITHIN 5 FEET OF CURB
 3. WHERE UNDERDRAIN MUST CROSS OTHER UTILITIES, PLACE UNDERDRAIN BENEATH UTILITY.
 4. CONTRACTOR TO NOTIFY ENGINEER IF WATER TABLE IS OBSERVED WITHIN TWO FEET OF ROAD BASE IN AREAS NOT UNDERDRAINED.
 5. UNDERDRAIN INSTALLATION TO BE SUPERVISED BY A GEOTECHNICAL ENGINEER AT ALL TIMES.
 6. UNDERDRAIN INSTALLATION SHALL PROVIDE POSITIVE SLOPE AND DISCHARGE AND THE DOWSTREAM IE. (INLET CONNECTION) SHALL BE ABOVE THE LOWEST PIPE IE.
 7. UNDERDRAINS SHALL BE CONNECTED TO THE NEAREST INLET (THROUGH WALL).

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PROJECT:

CRYSTAL LAKE VISTA
Myrtle Lake Ave
Fruitland Park, FL

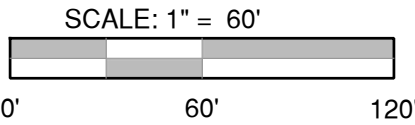
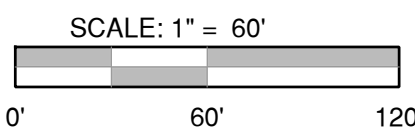
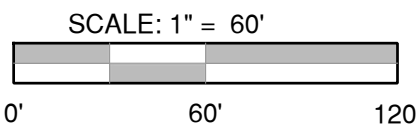
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NO.	ISSUED	DATE

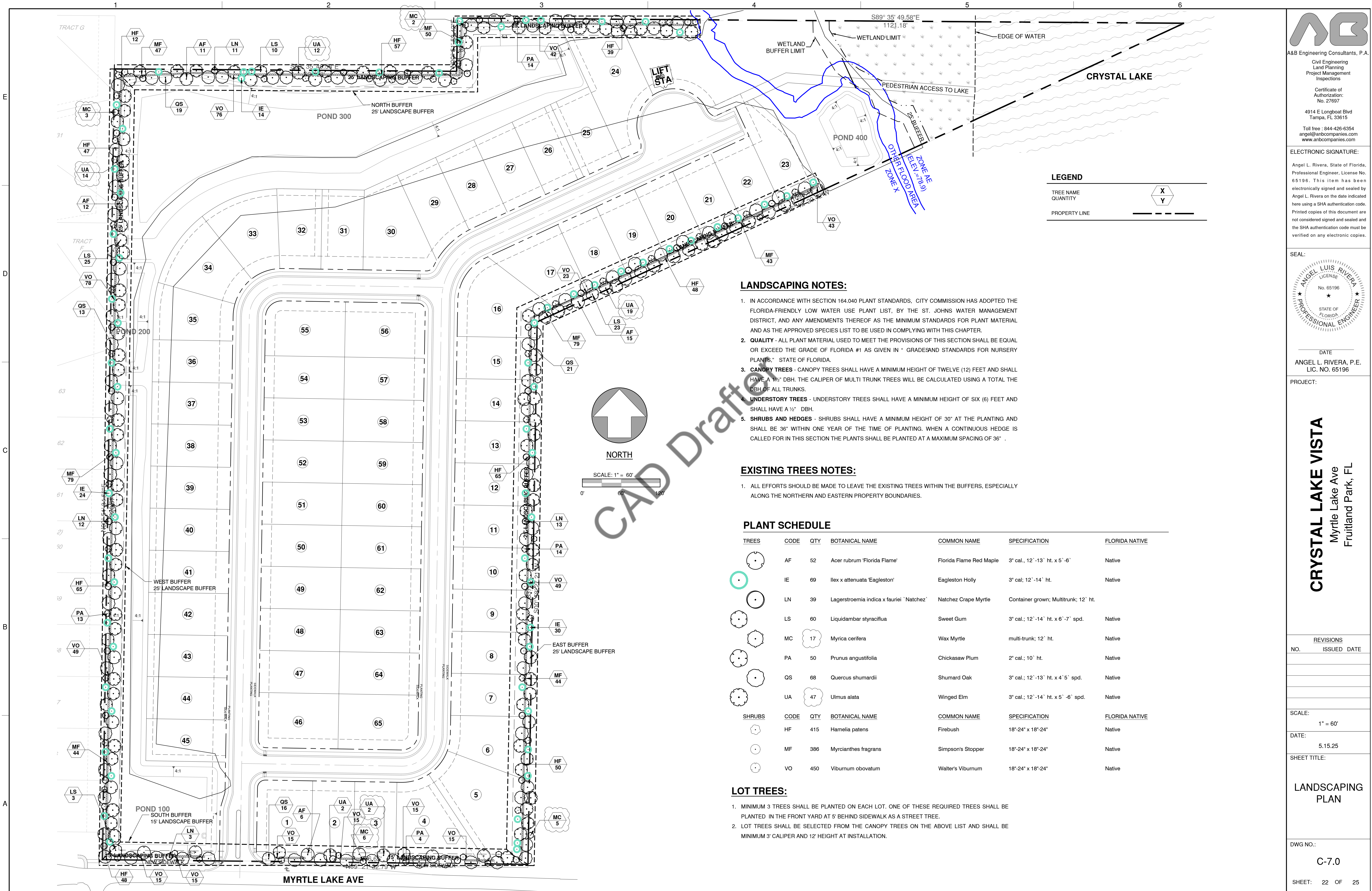
SCALE:
AS SHOWN

DATE:
5.15.25

SHEET TITLE:
**STREET
PROFILES**

DWG NO.:
C-6.0





LANDSCAPING NOTES:

- 1. IN ACCORDANCE WITH SECTION 164.040 PLANT STANDARDS, CITY COMMISSION HAS ADOPTED THE FLORIDA-FRIENDLY LOW WATER USE PLANT LIST, BY THE ST. JOHNS WATER MANAGEMENT DISTRICT, AND ANY AMENDMENTS THEREOF AS THE MINIMUM STANDARDS FOR PLANT MATERIAL AND AS THE APPROVED SPECIES LIST TO BE USED IN COMPLYING WITH THIS CHAPTER.
- 2. **QUALITY** - ALL PLANT MATERIAL USED TO MEET THE PROVISIONS OF THIS SECTION SHALL BE EQUAL OR EXCEED THE GRADE OF FLORIDA #1 AS GIVEN IN " GRADESAND STANDARDS FOR NURSERY PLANTS," STATE OF FLORIDA.
- 3. **CANOPY TREES** - CANOPY TREES SHALL HAVE A MINIMUM HEIGHT OF TWELVE (12) FEET AND SHALL HAVE A 1 1/2" DBH. THE CALIPER OF MULTI TRUNK TREES WILL BE CALCULATED USING A TOTAL THE DBH OF ALL TRUNKS.
- 4. **UNDERSTORY TREES** - UNDERSTORY TREES SHALL HAVE A MINIMUM HEIGHT OF SIX (6) FEET AND SHALL HAVE A 1/2" DBH.
- 5. **SHRUBS AND HEDGES** - SHRUBS SHALL HAVE A MINIMUM HEIGHT OF 30" AT THE PLANTING AND SHALL BE 36" WITHIN ONE YEAR OF THE TIME OF PLANTING. WHEN A CONTINUOUS HEDGE IS CALLED FOR IN THIS SECTION THE PLANTS SHALL BE PLANTED AT A MAXIMUM SPACING OF 36" .

EXISTING TREES NOTES:

- 1. ALL EFFORTS SHOULD BE MADE TO LEAVE THE EXISTING TREES WITHIN THE BUFFERS, ESPECIALLY ALONG THE NORTHERN AND EASTERN PROPERTY BOUNDARIES.

PLANT SCHEDULE

TREES	CODE	QTY	BOTANICAL NAME	COMMON NAME	SPECIFICATION	FLORIDA NATIVE
	AF	52	Acer rubrum 'Florida Flame'	Florida Flame Red Maple	3" cal., 12'-13' ht. x 5'-6'	Native
	IE	69	Ilex x attenuata 'Eagleston'	Eagleston Holly	3" cal.; 12'-14' ht.	Native
	LN	39	Lagerstroemia indica x fauriei 'Natchez'	Natchez Crape Myrtle	Container grown; Multitrunk; 12' ht.	
	LS	60	Liquidambar styraciflua	Sweet Gum	3" cal.; 12'-14' ht. x 6'-7' spd.	Native
	MC	17	Myrica cerifera	Wax Myrtle	multi-trunk; 12' ht.	Native
	PA	50	Prunus angustifolia	Chickasaw Plum	2" cal.; 10' ht.	Native
	QS	68	Quercus shumardii	Shumard Oak	3" cal.; 12'-13' ht. x 4'-5' spd.	Native
	UA	47	Ulmus alata	Winged Elm	3" cal.; 12'-14' ht. x 5'-6' spd.	Native
SHRUBS	CODE	QTY	BOTANICAL NAME	COMMON NAME	SPECIFICATION	FLORIDA NATIVE
	HF	415	Hamelia patens	Firebush	18"-24" x 18"-24"	Native
	MF	388	Myrcianthes fragrans	Simpson's Stopper	18"-24" x 18"-24"	Native
	VO	450	Viburnum obovatum	Walter's Viburnum	18"-24" x 18"-24"	Native

LOT TREES:

- 1. MINIMUM 3 TREES SHALL BE PLANTED ON EACH LOT. ONE OF THESE REQUIRED TREES SHALL BE PLANTED IN THE FRONT YARD AT 5' BEHIND SIDEWALK AS A STREET TREE.
- 2. LOT TREES SHALL BE SELECTED FROM THE CANOPY TREES ON THE ABOVE LIST AND SHALL BE MINIMUM 3" CALIPER AND 12' HEIGHT AT INSTALLATION.

LEGEND

TREE NAME	X
QUANTITY	Y
PROPERTY LINE	---

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PROJECT:

CRYSTAL LAKE VISTA
Myrtle Lake Ave
Fruitland Park, FL

REVISIONS		
NO.	ISSUED	DATE

SCALE:
1" = 60'

DATE:
5.15.25

SHEET TITLE:
LANDSCAPING PLAN

DWG NO.:
C-7.0

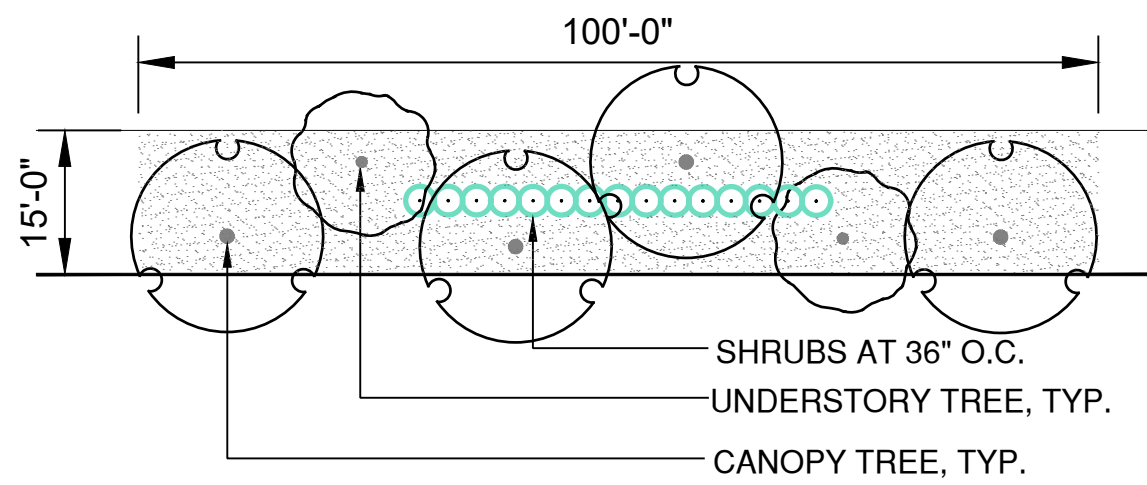
SHEET: 22 OF 25

LDC 164.040 PLANTING STANDARDS

- ALL PLANT MATERIAL SHALL BE EQUAL OR EXCEED FLORIDA #1 STANDARD PER STATE OF FLORIDA "GRADES AND STANDARDS FOR NURSERY STOCK".
- ALL PLANTING REQUIREMENTS SHALL BE MET USING THE PLANT LIST ON THE LANDSCAPE PLAN SHEET.
- ANY TREE OR SHRUB SPECIES SUBSTITUTION REQUIRED BY LIMITED NURSERY AVAILABILITY SHALL BE FLORIDA NATIVE OR FLORIDA FRIENDLY, AND COMPATIBLE WITH CITY OF FRUITLAND PARK APPROVED SPECIES LIST.

LDC 164.030(b) BUFFER REQUIREMENTS

SOUTH BUFFER AT MYRTLE LAKE AVENUE
BUFFER LENGTH= 608 L.F. (ENTRY DRIVE R.O.W. EXCLUDED)



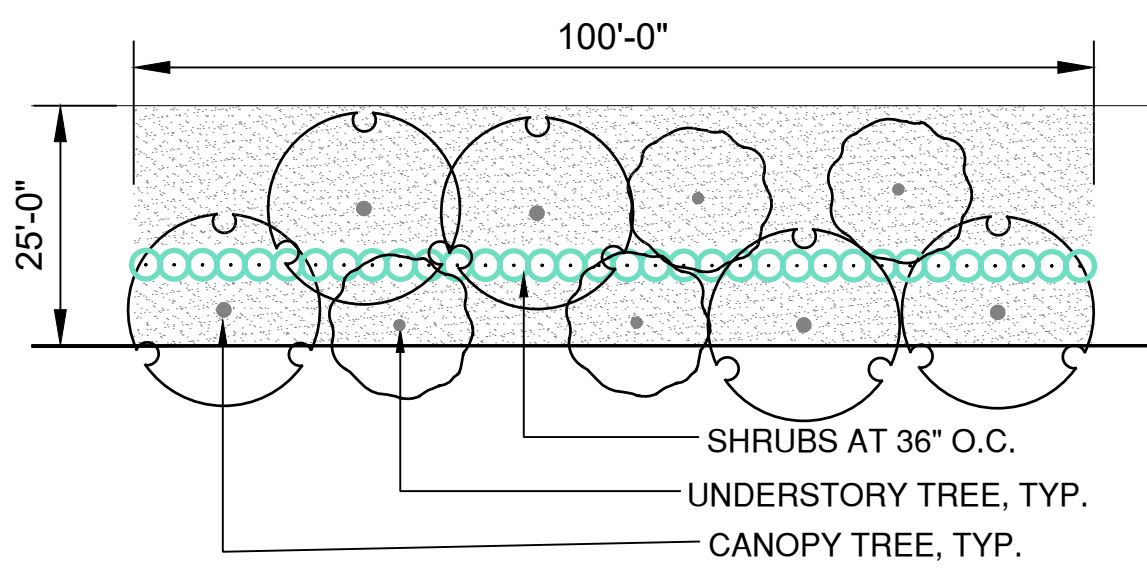
BUFFER PROVIDED:

- (A) WIDTH- 15 FEET
- (B) 4 CANOPY TREES/ 100 L.F. = 24 CANOPY TREES
- (C) 2 ORNAMENTAL TREES/ 100 L.F. = 12 ORNAMENTAL TREES
- (D) 15 SHRUBS= 90 SHRUBS

ALL OTHER BUFFERS

BUFFER LENGTH= 4064 L.F.

WEST BUFFER- 1219 L.F.
NORTH BUFFER-1333 L.F.
EAST BUFFER- 1512 L.F.



BUFFER REQUIREMENT:

- (A) WIDTH- 25 FEET
- (B) 5 CANOPY TREES/ 100 L.F. =203 CANOPY TREES
- (C) 4 ORNAMENTAL TREES/ 100 L.F. = 163 ORNAMENTAL TREES
- (D) 30 SHRUBS= 1219 SHRUBS

BUFFER REQUIREMENTS:

- NO CANOPY TREES TO BE PLANTED WITHIN 12' OF ANY OVERHEAD UTILITY LINE. IN CASE OF CONFLICT , CONTRACTOR TO SUBSTITUTE UNDERSTORY TREE.
- NO CANOPY TREES TO BE PLANTED WITHIN 12' OF ANY UNDERGROUND WATER LINE.

LDC 164.050 TREE REQUIREMENTS

- MINIMUM OF 3 CANOPY TREES REQUIRED FOR EACH SINGLE FAMILY LOT.

TOTAL NUMBER OF LOTS : 65

LOT TREES REQUIRED: 195

LDC 164.070 IRRIGATION

- IRRIGATION TO BE PROVIDED BY PERMANENT IN-GROUND IRRIGATION SYSTEM WITH HEAD TO HEAD COVERAGE, CENTRAL CONTROLLER, RAIN SENSOR AND SEPARATE ZONES FOR TREES, SHRUBS AND TURF.

LDC 164.090 C (6) TREE REPLACEMENT REQUIREMENTS

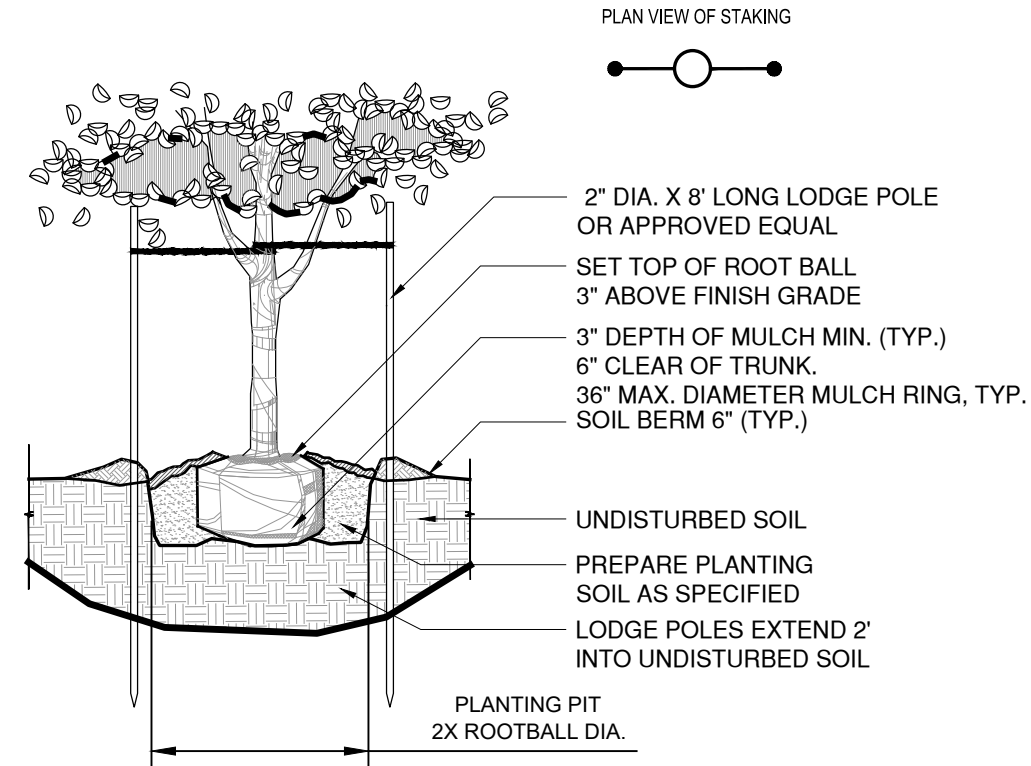
- A. 40% OF TOTAL NUMBER OF TREES REMOVED SHALL BE REPLACED ON SITE.
- TOTAL NUMBER OF TREES REMOVED: 88
TOTAL NUMBER OF TREES TO BE REPLACED : 35
- E. LANDSCAPE CREDIT
REPLACEMENT TREES MAY BE USED TO MEET THE REQUIREMENTS OF THE LANDSCAPE CODE STATED IN SECTION 164.030.
- G. REPLACEMENT SIZE CRITERIA
REPLACEMENT TREES SHALL BE MINIMUM 12' HT. AND 1-1/2" CALIPER.

TREE #	Tree	DISPOSITION	2004 dbh	2022 dbh (17/yr)	Mitigation (in.)
1	Oak	Remove	23	41	16.4
2	Oak	Remove	34	52	20.8
3	Oak	Remove	12	30	12
4	Oak	Remove	16	34	13.6
5	Oak	Remove	24	42	16.8
6	Oak	Remove	29	47	18.8
7	Oak	Remove	50	68	27.2
8	Oak	Remove	36	54	21.6
9	Pine	Remove	20	38	15.2
10	Cherry	Remove	26	44	17.6
11	Oak	Remove	24	42	16.8
12	Oak	Remove	40	58	23.2
13	Cherry	Remove	26	44	17.6
14	Oak	Remove	24	42	16.8
15	Oak	Remove	16	34	13.6
16	Oak	Remove	27	45	18
17	Oak	Remove	32	50	20
18	Oak	Remove	20	38	15.2
19	Oak	Remove	16	34	13.6
20	Oak	Remove	22	40	16
21	Oak	Remove	29	47	18.8
22	Oak	Remove	14	32	12.8
23	Oak	Remove	13	31	12.4
24	Oak	Remove	32	50	20
25	Oak	Remove	16	34	13.6
26	Oak	Remove	18	36	14.4
27	Oak	Remove	15	31	12.4
28	Oak	Remove	15	30	12
29	Oak	Remove	30	42	16.8
30	Oak	Remove	24	42	16.8
31	Oak	Remove	27	47	18.8
32	Oak	Remove	14	32	12.8
33	Oak	Remove	9	27	10.8
34	Oak	Remove	20	38	15.2
35	Oak	Remove	9	27	10.8
36	Oak	Remove	32	50	20
37	Oak	Remove	29	47	18.8
38	Oak	Remove	13	31	12.4
39	Oak	Remove	15	33	13.2
40	Oak	Remove	16	34	13.6
41	Oak	Remove	16	34	13.6
42	Oak	Remove	13	31	12.4
43	Oak	Remove	12	30	12
44	Oak	Remove	15	33	13.2
45	Oak	Remove	12	30	12
46	Oak	Remove	15	33	13.2
47	Oak	Remove	17	35	14
48	Oak	Remove	15	33	13.2
49	Oak	Remove	12	30	12
50	Oak	Remove	16	34	13.6
51	Oak	Remove	30	48	19.2
52	Oak	Remove	35	53	21.2
53	Oak	Remove	27	45	18
54	Oak	Remove	24	42	16.8
55	Oak	Remove	21	39	15.6
56	Oak	Remove	39	57	22.8
57	Oak	Remove	20	38	15.2
58	Oak	Remove	17	35	14
59	Oak	Remove	19	37	14.8
60	Oak	Remove	35	53	21.2
61	Oak	Remove	21	39	15.6
62	Oak	Remove	62	80	32
63	Oak	Remove	21	39	15.6
64	Oak	Remove	21	39	15.6
65	Oak	Remove	30	48	19.2
66	Oak	Remove	14	32	12.8
67	Oak	Remove	16	34	13.6
68	Oak	Remove	12	30	12
69	Oak	Remove	24	42	16.8
70	Oak	Remove	31	49	19.6
71	Oak	Remove	40	58	23.2
72	Oak	Remove	24	42	16.8
73	Oak	Remove	52	70	28
74	Oak	Remove	35	53	21.2
75	Oak	Remove	22	40	16
76	Oak	Remove	24	42	16.8
77	Oak	Remove	30	48	19.2
78	Oak	Remove	60	78	31.2
79	Cherry	Remove	23	41	16.4
80	Oak	Remove	36	54	21.6
81	Oak	Remove	29	47	18.8
82	Oak	Remove	48	66	26.4
83	Oak	Remove	19	37	14.8
84	Oak	Remove	17	35	14
85	Oak	Remove	24	42	16.8
86	Oak	Remove	15	33	13.2
87	Oak	Remove	96	114	45.6
88	Oak	Remove	37	55	22

3785 1514

NOTES:

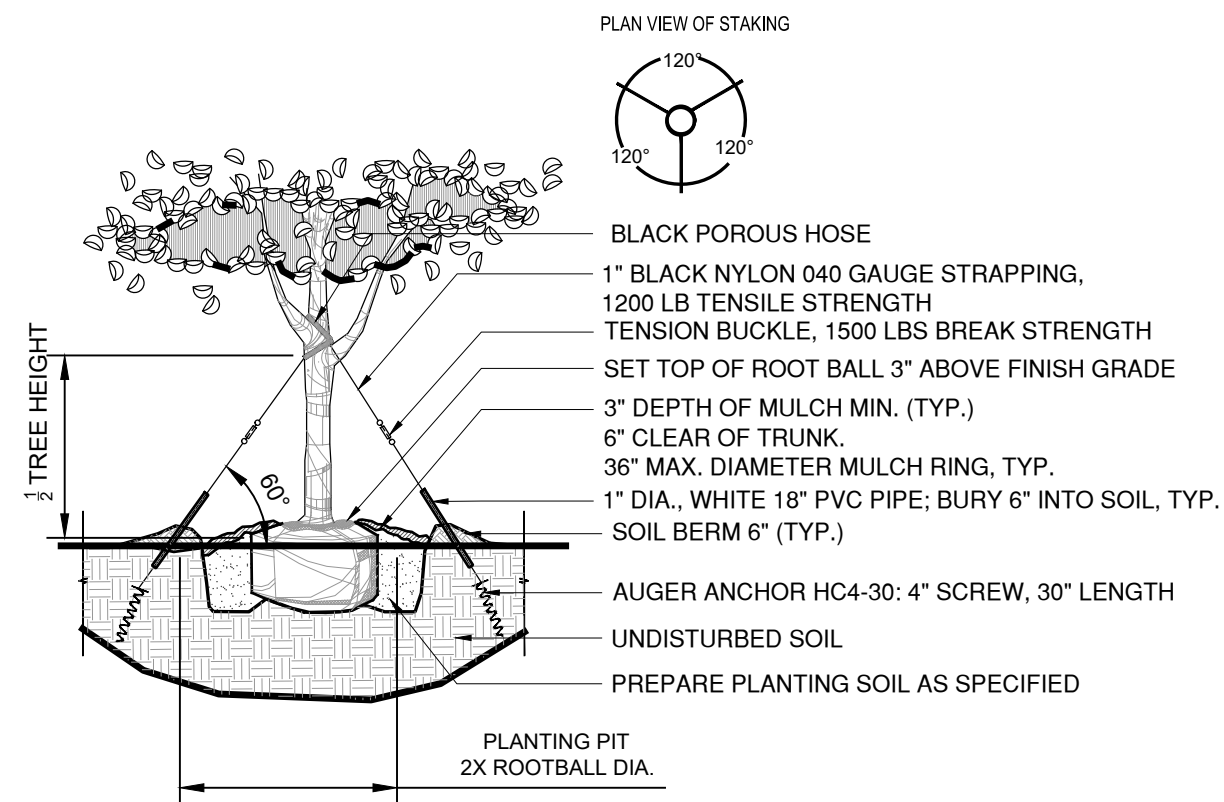
CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION.



UNDERSTORY TREE PLANTING DETAIL

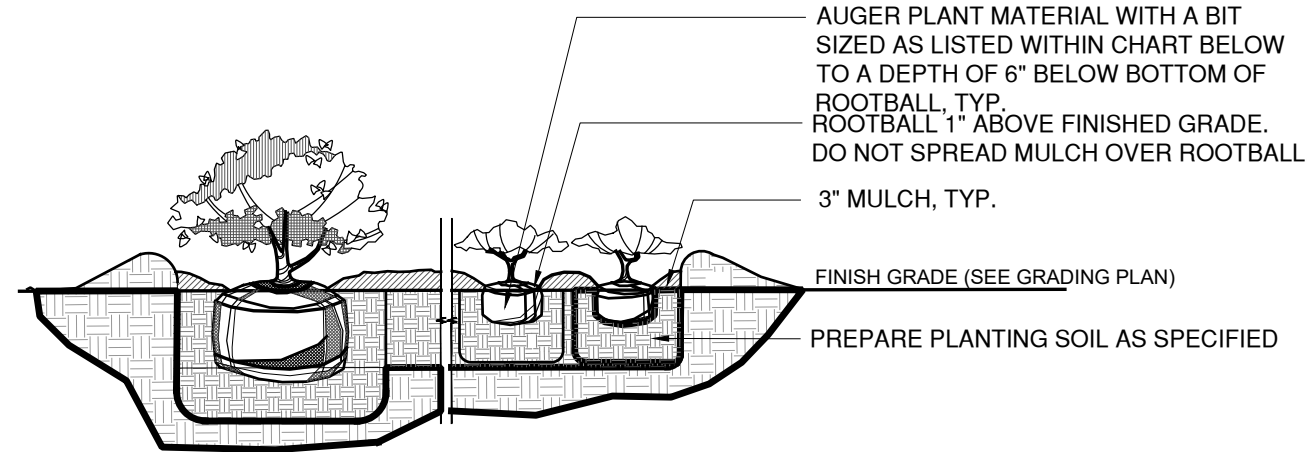
NOTES:

CONTRACTOR SHALL ASSURE PERCOLATION OF ALL PLANTING PITS PRIOR TO INSTALLATION.

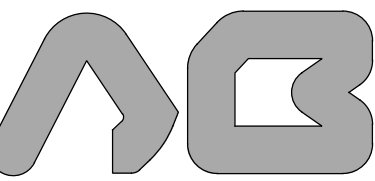


CANOPY TREE PLANTING DETAIL

PLANT MATERIAL SIZE	USE AUGER SIZE
1 GALLON	3 GALLON
3 GALLON	7 GALLON
7 GALLON	15 GALLON
15 GALLON & LARGER	SEE TREE PLANTING DETAILS



SHRUB & GROUNDCOVER PLANTING DETAIL



A&B Engineering Consultants, P.A.

Civil Engineering
Land Planning
Project Management
Inspections

Certificate of
Authorization:
No. 27697

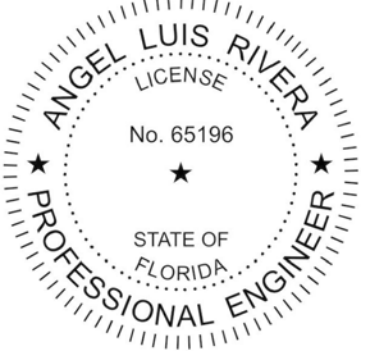
4914 E Longboat Blvd
Tampa, FL 33615

Toll free : 844-426-6354
angel@anbcompanies.com
www.anbcompanies.com

ELECTRONIC SIGNATURE:

Angel L. Rivera, State of Florida,
Professional Engineer, License No.
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DATE

ANGEL L. RIVERA, P.E.
LIC. NO. 65196

PROJECT:

CRYSTAL LAKE VISTA
Myrtle Lake Ave
Fruitland Park, FL

REVISIONS

NO. ISSUED DATE

SCALE:

NTS

DATE:

5.15.25

SHEET TITLE:

LANDSCAPING
DETAILS

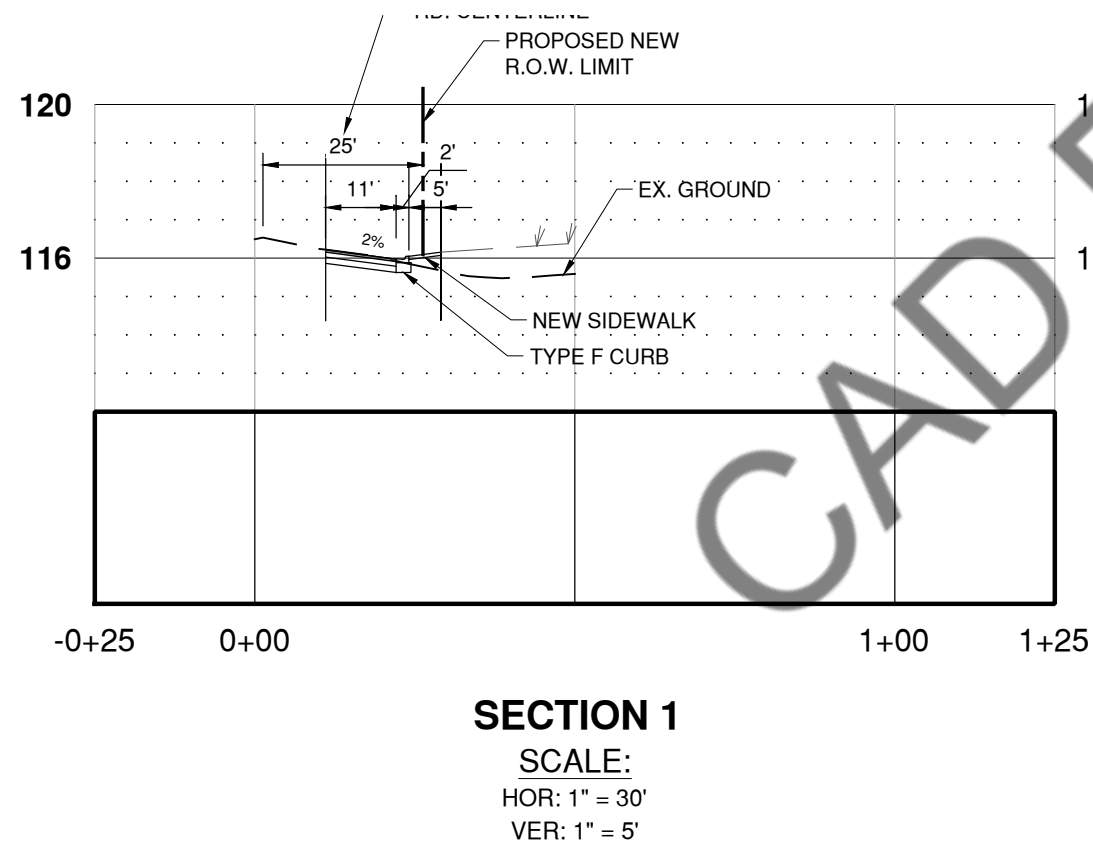
DWG NO.:

C-7.1

SHEET: 23 OF 25

IMPROVEMENTS TO COUNTY RD

A vertical number line with five points labeled A, B, C, D, and E from bottom to top. The points are marked with horizontal tick marks on a vertical line.

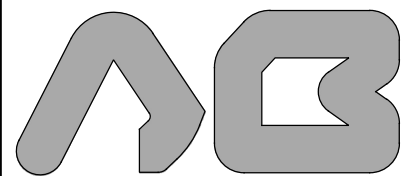


GENERAL NOTES:

- LANE CLOSURE NOTES:**

REFERENCE FDOT M.O.T. INDEXES:

- 102-600 - GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES
102-601 - TWO-LANE AND MULTILANE ROADWAY, WORK BEYOND THE SHOULDER
102-603 - TWO LANE, TWO WAY, WORK WITHIN THE TRAVEL WAY
102-604 - TWO-LANE, TWO-WAY, INTERSECTION WORK
102-606 - TWO-LANE ROADWAY, LANE CLOSURE USING TEMPORARY TRAFFIC SIGNALS
102-670 - MOTORIST AWARENESS SYSTEM
(SEE ADDITIONAL MOT GENERAL NOTES ON DWG C-0.1)



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Inspections

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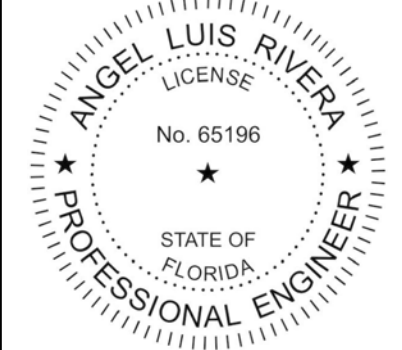
4914 E Longboat Blvd
Tampa, FL 33615

Toll free : 844-426-6354
angel@anbcompanies.com
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SEAL:



DATE

ANGEL L. RIVERA, P.E.
LIC. NO. 65196

PROJECT:

CRYSTAL LAKE VISTA
Myrtle Lake Ave
Fruitland Park, FL

REVISIONS
NO. ISSUED DATE

SCALE:

1"=30'

DATE:

5.15.25

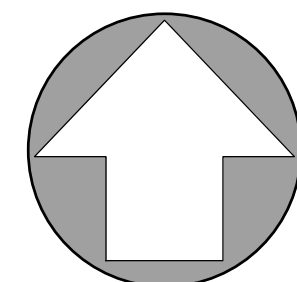
SHEET TITLE:

**COUNTY RD
GRADING**

DWG NO.:

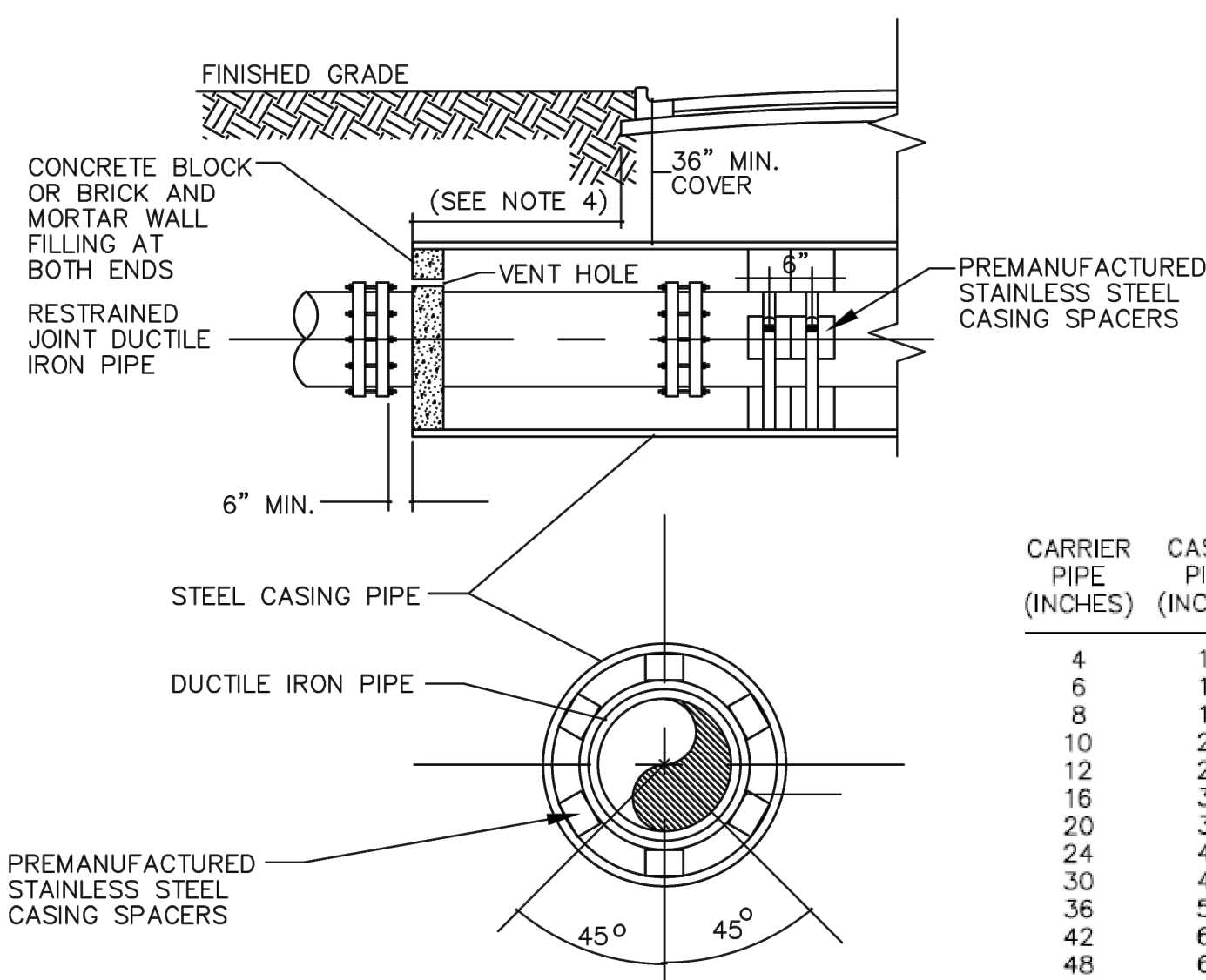
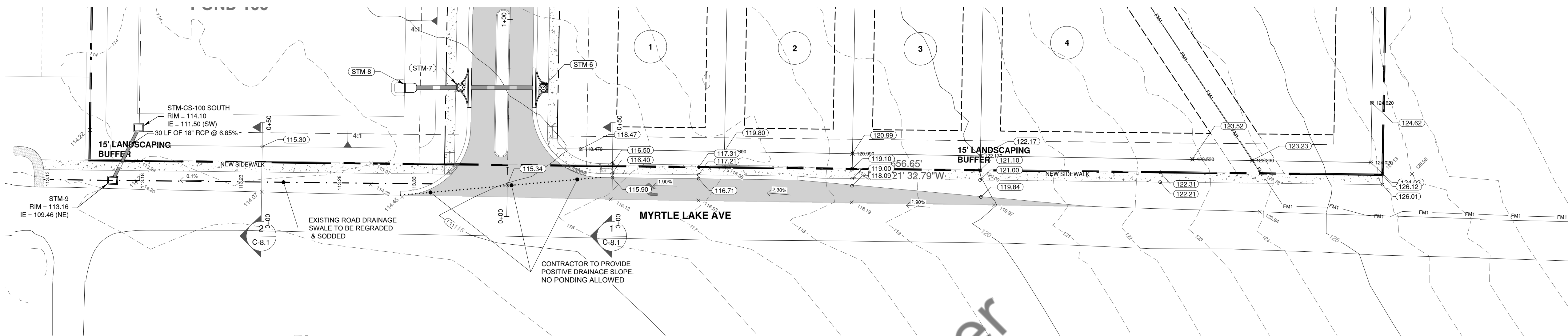
C-8.1

SHEET: 25 OF 25



NORTH

SCALE: 1" = 30'
0' 30' 60'



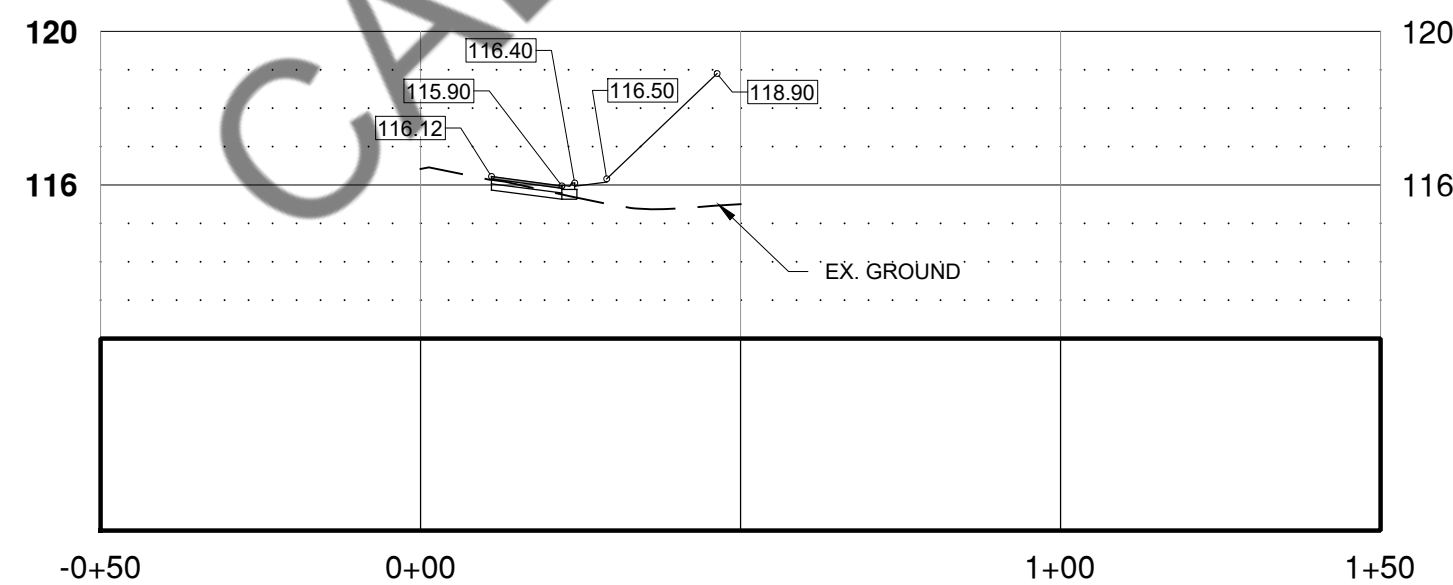
CARRIER PIPE (INCHES)	CASING PIPE (INCHES)	CASING WALL THICKNESS (INCHES)
4	12	5/16
6	16	5/16
8	16	5/16
10	24	3/8
12	24	3/8
16	30	1/2
20	36	1/2
24	42	1/2
30	48	1/2
36	54	5/8
42	60	5/8
48	66	5/8

- WHEN CONSTRUCTION IS WITHIN FDOT JURISDICTION, ADDITIONAL REQUIREMENTS OF THE UTILITY ACCOMMODATION GUIDE SHALL BE MET.
- STAINLESS STEEL CASING SPACERS SHALL BE REQUIRED ON ALL BORE AND JACK INSTALLATIONS.
- LARGER SKIDS SHALL BE REQUIRED FOR PIPE GREATER THAN 24" DIAMETER.
- WHERE PRACTICAL, CASING SHALL EXTEND 10' BEYOND EDGE OF PAVEMENT AND SHALL NOT BE LESS THAN 6' BEYOND EDGE OF PAVEMENT IN ANY CASE. THE CITY MAY REQUIRE LONGER CASING FOR DEEPER BORES.

BORING AND JACKING DETAIL

SCALE: 1/2" = 1'-0"

	City of Fruitland Park Standard Details	JANUARY 2020
		Detail G-7

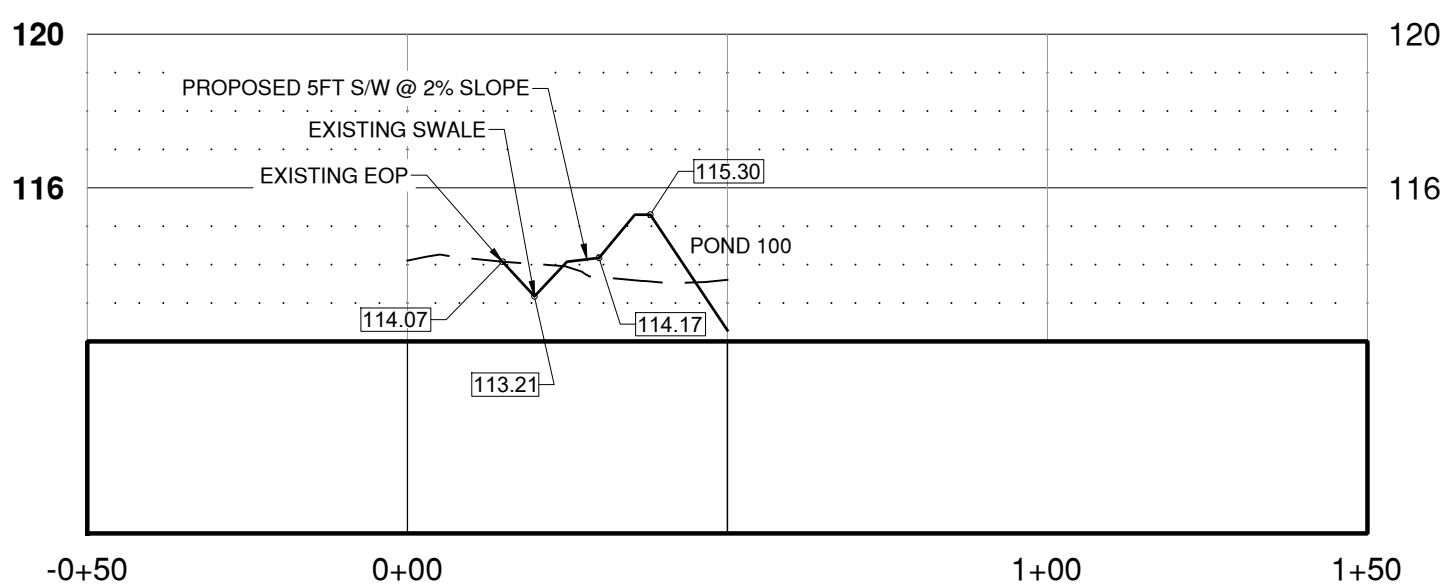


SECTION 1

SCALE:

HOR: 1" = 30'

VER: 1" = 5'



SECTION 2

SCALE:

HOR: 1" = 30'

VER: 1" = 5'

LEGEND

PROPOSED PAVEMENT	
PROPOSED CONCRETE	
PROPERTY LINE	
EXISTING WATERMAIN	
EXISTING COMMUNICATIONS	
EXISTING OVERHEAD WIRES	
EXISTING WATERMAIN	
EXISTING SANITARY SEWER	
EXISTING STORM SEWER	
EXISTING FORCEMAIN	
PROPOSED WATERMAIN	
PROPOSED IRRIGATION	
PROPOSED SANITARY SEWER	
PROPOSED STORM SEWER	
PROPOSED FM	
PROPOSED ELEVATION	
EXISTING ELEVATION	
EXISTING CONTOUR LINE (MAJOR)	
EXISTING CONTOUR LINE (MINOR)	