

WATERMAIN CONSTRUCTION PLANS
FOR

ORANGE GROVE BOULEVARD
HANCOCK BRIDGE PARKWAY TO PONDELLA ROAD

PART OF SECTION 9, AND 16, TOWNSHIP 44 SOUTH, RANGE 24 EAST
NORTH FORT MYERS, LEE COUNTY, FLORIDA

LEE COUNTY COMMISSIONERS

DISTRICT 1. JOHN E. MANNING
DISTRICT 2. CECIL L. PENDERGRASS
DISTRICT 3. LARRY KIKER
DISTRICT 4. BRIAN HAMMAN
DISTRICT 5. FRANK MANN

COUNTY MANAGER

ROGER DESJARLAIS

DIRECTOR OF PUBLIC WORKS

DOUG MEURER

DIRECTOR OF UTILITIES

PAMELA KEYES, P.E.

PERMIT REQUIREMENTS

AGENCY	STATUS	NOTES
LEE COUNTY DEVELOPMENT ORDER	PENDING	-
FLORIDA DEPARTMENT OF HEALTH	PENDING	-
F.D.O.T. CONNECTION PERMIT	N/A	-
F.D.O.T. DRAINAGE CONNECTION PERMIT	N/A	-
F.D.O.T. UTILITY PERMIT	N/A	-
ARMY CORPS OF ENGINEERS	N/A	-
F.D.E.P. NOTICE OF INTENT	PENDING	-

NOTE: CONTRACTOR MUST OBTAIN AND KEEP ON FILE A COPY OF ALL PERMITS
REQUIRED PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITY

DESIGN TEAM

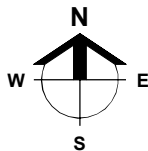
PROJECT ENGINEER	PROJECT MANAGEMENT
WESLEY S. KAYNE, P.E.	CHRIS VAN BUSKIRK
DESIGN ENGINEER	PROJECT SURVEYOR
WESLEY S. KAYNE, P.E.	SCOTT A. WHEELER, PSM
LEAD DESIGN TECHNICIAN	SITE PLANNING
JAN BILDZUKEWICZ	N/A
DESIGN STAFF	LAND PLANNING
JAN BILDZUKEWICZ	N/A
QUALITY CONTROL	RECORD DRAWINGS
CHRIS VAN BUSKIRK	PENDING

THESE PLANS MAY HAVE BEEN MODIFIED IN SIZE BY REPRODUCTION.
THIS MUST BE CONSIDERED WHEN OBTAINING SCALED DATA.

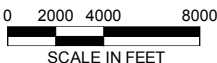
ALL DIMENSIONS ARE IN FEET.



PROJECT
LOCATION



LOCATION MAP



SCALE IN FEET



INDEX OF DRAWINGS

SHEET	DESCRIPTION	DRAWING NAME
C1.0	COVER SHEET AND LOCATION MAP	- 23513A01.DWG
C2.0	STANDARD NOTES	- 23513A02.DWG
C3.0	AERIAL PHOTOGRAPH AND EXISTING CONDITIONS	- 23513A06.DWG
C4.0	MASTER UTILITY PLAN, KEY SHEET, AND NOTES	A,C 23513A12.DWG
C5.0	TYPICAL SECTIONS	- 23513A18.DWG
C6.0-C6.9	PLAN AND PROFILES - ORANGE GROVE BOULEVARD	A,B,C 23513A30.DWG
C7.0-C7.9	CROSS SECTIONS - ORANGE GROVE BOULEVARD	- 23513A35.DWG
C8.0-C8.1	UTILITY CONNECTION DETAILS	A,C, 23513A40.DWG
C9.0	TYPICAL CONSTRUCTION DETAILS	- 23513A44.DWG
C10.0-C10.2	GROUTING AND REMOVAL PLAN - ORANGE GROVE BOULEVARD	A 23513A45.DWG
C11.0	EROSION CONTROL DETAILS	- 23513A50.DWG
C12.0-12.1	STORMWATER POLLUTION PREVENTION PLAN	A,C 23513A52.DWG
C13.0-C13.2	LEE COUNTY UTILITY DETAILS	- 23513A70.DWG

THIS IS TO CERTIFY THAT THESE PLANS AND THE ASSOCIATED CONSTRUCTION PROJECT ARE IN SUBSTANTIAL
COMPLIANCE WITH THE LEE COUNTY LAND DEVELOPMENT CODE WITH THE EXCEPTION OF THE FOLLOWING
DEVIATIONS WHICH HAVE BEEN APPROVED BY THE DIRECTOR OF PUBLIC WORKS:

WESLEY S. KAYNE, P.E. FL. P.E. LICENSE NO. 80507 DATE
ENGINEER OF RECORD

DEVELOPMENT ORDER APPROVED:
PUBLIC WORKS ADMINISTRATION

DOUG MEURER DATE
DIRECTOR OF PUBLIC WORKS

PLAN STATUS

100% PLAN SUBMITTAL
2018-02-23

Barraco
and Associates, Inc.

CIVIL ENGINEERING - LAND SURVEYING
LAND PLANNING - LANDSCAPE DESIGN

www.barraco.net

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FLORIDA CERTIFICATES OF AUTHORIZATION
ENGINEERING 7995 - SURVEYING LB-6940

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PROJECT DESCRIPTION

ORANGE GROVE
BOULEVARD
WATERMAIN

HANCOCK BRIDGE PARKWAY
TO PONDELLA ROAD

PART OF SECTION 9, AND 16,
TOWNSHIP 44 SOUTH, RANGE 24
FORT MYERS, LEE COUNTY, FLORIDA

ENGINEER OF RECORD

WESLEY S. KAYNE, P.E., FOR THE FIRM
FLORIDA P.E. NO. 80507 - WESK@BARRACO.NET

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FILE NAME: 23513A01.DWG

LOCATION: J:\23513\DWG\DO

PLOT DATE: MON, 2-26-2018 - 9:34 AM

PLOT BY: WES KAYNE

CROSS REFERENCED DRAWINGS

MASTER = BAI-COVER-1.DWG

PLAN REVISIONS

PLAN STATUS

100% PLAN SUBMITTAL
2018-02-23

COVER SHEET
AND
LOCATION MAP

PROJECT / FILE NO.

23513

SHEET NUMBER

C1.0

GENERAL NOTES:

NOTE: SEE ADDITIONAL NOTES ON SUBSEQUENT PLAN SHEETS WHICH ARE SPECIFIC TO THIS PROJECT. IN THE EVENT OF A CONFLICT, UTILIZE NOTES ON THE PLAN SHEETS.

1.

THESE PLANS HAVE BEEN PREPARED IN ACCORDANCE WITH AND ARE GOVERNED BY THE LATEST EDITIONS OF THE F.D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, F.D.O.T. DESIGN STANDARDS AND APPLICABLE DESIGN STANDARDS MODIFICATIONS FOUND AT <http://www.dot.state.fl.us/rddesign> AND ALL LOCAL CODES.
2.

ANY DEVIATIONS FROM THE PLANS AND / OR SPECIFICATIONS MUST BE APPROVED IN ADVANCE BY THE OWNER, ENGINEER AND APPROPRIATE REGULATORY AGENCY.
3.

ALL CONSTRUCTION SHALL COMPLY WITH THE LATEST VERSIONS OF THE AMERICANS WITH DISABILITIES ACT (A.D.A.), THE FLORIDA FIRE CODE AND THE FLORIDA ACCESSIBILITY CODE FOR BUILDING CONSTRUCTION (F.A.C.B.C.).
4.

SIDEWALKS ARE DESIGNED AND INTENDED FOR PEDESTRIAN TRAFFIC ONLY. ALL SIDEWALKS AND CURB CUTS SHALL BE IN ACCORDANCE WITH F.D.O.T. INDEX 304 AND SHALL INCLUDE DETECTABLE WARNING SURFACES. VALLEY GUTTER ADJACENT TO SIDEWALK CROSSING CUTS SHALL DEVIATE FROM STANDARD DETAIL BY NOT EXCEEDING 12:1 SLOPES.
5.

THE CONTRACTOR SHALL NOTIFY THE ENGINEER, OWNER'S REPRESENTATIVE AND APPROPRIATE AGENCY A MINIMUM OF 72 HOURS PRIOR TO ALL INSPECTIONS REQUIRED.
6.

THE CONTRACTOR SHALL NOTIFY THE OWNER AND CONTACT ALL UTILITY COMPANIES FOR LOCATIONS OF EXISTING UTILITIES A MINIMUM OF 72 HOURS PRIOR TO COMMENCING CONSTRUCTION. CONTRACTOR SHALL DETERMINE IF UTILITIES OTHER THAN THOSE SHOWN ON THESE PLANS EXIST. THE LOCATION OF EXISTING UTILITIES, PAVEMENT, VEGETATION AND OTHER IMPROVEMENTS ARE APPROXIMATE ONLY. THE EXACT SIZES, ELEVATIONS AND LOCATIONS SHALL BE VERIFIED BY THE CONTRACTOR IN THE FIELD PRIOR TO COMMENCING CONSTRUCTION OR ORDERING MATERIALS. CONTRACTOR SHALL NOTIFY ENGINEER / OWNER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION. COST ASSOCIATED WITH UTILITY LOCATING IS CONSIDERED INCIDENTAL TO THE PROJECT AND NO ADDITIONAL COMPENSATION SHALL BE ALLOWED.
7.

ANY PUBLIC LAND CORNER OR BENCHMARK WITHIN THE LIMITS OF CONSTRUCTION IS TO BE PROTECTED AND IF IN DANGER OF BEING DESTROYED MUST BE PROPERLY REFERENCED AND REPLACED AT THE COMPLETION OF CONSTRUCTION BY THE CONTRACTOR.
8.

EXISTING IMPROVEMENTS SHALL REMAIN UNLESS NOTED OTHERWISE, AND SHALL BE RESTORED TO A CONDITION EQUIVALENT TO THAT WHICH EXISTED PRIOR TO COMMENCING CONSTRUCTION, AT NO ADDITIONAL COST TO THE OWNER. EXISTING OFF-SITE DRAINAGE PATTERNS SHALL BE MAINTAINED DURING CONSTRUCTION.
9.

THE CONTRACTOR SHALL OBTAIN ANY CLEARING, VEGETATION REMOVAL OR RIGHT-OF-WAY PERMITS REQUIRED FOR THIS PROJECT. ALL DEBRIS SHALL BE REMOVED FROM SITE AND PROPERLY DISPOSED OF.
10.

CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC AND USAGE OF THE EXISTING STREETS ADJACENT TO THE PROJECT. ALL TRAFFIC MAINTENANCE CONTROL SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE FLORIDA MANUAL OF TRAFFIC CONTROL AND SAFE PRACTICES FOR STREET CONSTRUCTION, MAINTENANCE, AND UTILITY OPERATIONS. CONTRACTOR SHALL ASSURE THAT ALL TRAFFIC CONTROL DEVICES MEET ACCEPTABLE STANDARDS AS OUTLINED IN THE LATEST EDITION OF THE AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA's) "QUALITY STANDARDS FOR WORK ZONE TRAFFIC CONTROL DEVICES", AND SHALL IMMEDIATELY REPAIR, REPLACE OR CLEAN DAMAGED, DEFACED OR DIRTY DEVICES. TRAFFIC CONTROL OPERATION PROCEDURES SHALL BE SUBMITTED TO OWNER FOR APPROVAL PRIOR TO BEGINNING CONSTRUCTION. ANY IMPACTS TO TRAFFIC FLOW SHALL BE COORDINATED WITH AND APPROVED BY THE APPROPRIATE LOCAL AGENCY.
11.

CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION. ANY DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO THE ENGINEER AND OWNER'S REPRESENTATIVE.
12.

THE LOCATIONS OF PROPOSED DRAINAGE STRUCTURES AND UTILITY LINES MAY BE FIELD ADJUSTED TO PRESERVE EXISTING VEGETATION AS APPROVED IN ADVANCE BY THE ENGINEER. UNDERGROUND CONTRACTOR SHALL MINIMIZE THE WORK AREA AND WIDTH OF TRENCHES TO AVOID DISTURBANCES OF NATURAL VEGETATION. EXERCISE CARE TO PROTECT THE ROOTS OF TREES TO REMAIN. WITHIN THE BRANCH SPREAD OF SUCH TREES, PERFORM ALL TRENCHING BY HAND. OPEN THE TRENCH ONLY WHEN UTILITIES CAN BE INSTALLED IMMEDIATELY. PRUNE INJURED ROOTS CLEANLY AND BACKFILL AS SOON AS POSSIBLE. SPOIL FROM TRENCHES SHALL BE PLACED ONLY ON PREVIOUSLY CLEARED AREAS OR AS DIRECTED BY THE OWNER. CONTRACTOR SHALL NOT REMOVE OR DISTURB ANY TREES AND/OR SHRUBS WITHOUT PRIOR APPROVAL BY OWNER.
13.

INSTALLATION OF SUBSURFACE CONSTRUCTION, INCLUDING BUT NOT LIMITED TO WATER, SEWER AND IRRIGATION LINES, PUBLIC UTILITIES AND STORM DRAINAGE IS REQUIRED PRIOR TO COMPACTION OF THE ROADWAY SUBGRADE.
14.

SUBGRADE AND LIMEROCK BASE COURSES (ROADS, DRIVEWAYS, AND SIDEWALK) TO BE COMPACTED TO 98% MINIMUM OF THE MAXIMUM DRY DENSITY AS SPECIFIED BY AASHTO T-180 TESTING. CONTRACTOR SHALL PROVIDE THE ENGINEER SATISFACTORY DENSITY TESTS FOR SUBGRADE AND LIMEROCK PRIOR TO PAYMENT OR FINAL ACCEPTANCE. EXCESS ROAD BASE AND COMPACTED SOIL SHALL BE REMOVED FROM ALL LANDSCAPE AREAS PRIOR TO FINAL GRADING. UTILITY TRENCHES SHALL BE COMPACTED TO 95% MINIMUM OF THE MAXIMUM DRY DENSITY AS SPECIFIED BY AASHTO-99. ALL GEOTECHNICAL TESTING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. NO SEPARATE PAYMENT SHALL BE MADE FOR GEOTECHNICAL TESTING.
15.

SWALE ELEVATIONS SHOWN ARE TO TOP OF SOD. CONTRACTOR TO ADJUST SWALE GRADING ACCORDINGLY. ALL UNPAVED AREAS SHALL BE GRADED TO DRAIN TO THE DRAINAGE SYSTEM TO PREVENT STANDING WATER. YARD DRAINS MAY BE ADDED IN GREEN AREAS AS NECESSARY AT THE DIRECTION OF THE ENGINEER, AND SHALL HAVE PEDESTRIAN-SAFE GRATES MEETING THE REQUIREMENTS OF H-20 LOADING.
16.

CASING AND/OR CONDUIT SHALL HAVE A MINIMUM OF 30" COVER, EXTEND 5' BEYOND THE EDGE OF PAVEMENT, BACK OF CURB AND/OR SIDEWALK AT EACH END, AND ENDS SHALL BE SEALED AND DENOTED WITH MARKING TAPE.
17.

THE CONTRACTOR IS REQUIRED TO ADJUST ALL EXISTING AND PROPOSED VALVE BOXES, MANHOLE RIMS, GRATES AND OTHER IMPROVEMENTS AS REQUIRED TO MATCH THE FINAL GRADE.
18.

CONTRACTOR SHALL NOTIFY THE ENGINEER 24 HOURS PRIOR TO PLACING SOD ON AREAS THAT REQUIRE CRITICAL MINIMUM OR MAXIMUM ELEVATIONS IN ORDER FOR ENGINEER TO VERIFY SUCH
- ELEVATIONS. THE OBLIGATION TO ACHIEVE MINIMUM ELEVATIONS REMAINS WITH THE CONTRACTOR.
19.

SOD A 12" STRIP ADJACENT TO ALL PAVEMENT PER F.D.O.T. REQUIREMENTS. SOD ALL UNPAVED DISTURBED AREAS WITHIN F.D.O.T. RIGHT OF WAY.

20.

THE CONTRACTOR SHALL REMOVE ALL UNSUITABLE MATERIAL ENCOUNTERED FROM FILL AREAS PRIOR TO PLACEMENT OF FILL, AND SUCH MATERIAL SHALL BE STOCKPILED OR REMOVED AS DIRECTED BY OWNER. CONTRACTOR SHALL BE REQUIRED TO PROVIDE SUITABLE BACK FILL MATERIAL AS NEEDED FOR UTILITY BACK FILL ETC. AS IN ACCORDANCE WITH THE SPECIFICATIONS.

21.

ALL COMPONENTS OF THE POTABLE WATER SYSTEM SHALL BE IN CONFORMANCE WITH AMERICAN NATIONAL STANDARDS INSTITUTE / NSF INTERNATIONAL STANDARD 61. ALL COMPONENTS, INSTALLATION AND TESTING OF THE POTABLE WATER SYSTEM SHALL BE IN ACCORDANCE WITH ALL A.W.W.A. APPLICABLE STANDARDS.

22.

NO VEGETATION OR OTHER OBSTRUCTIONS SHALL BE PLACED SO AS TO BLOCK ACCESS OR LINE OF SIGHT TO FIRE HYDRANTS, F.D.C, P.I.V, ETC. IN ACCORDANCE WITH LOCAL FIRE JURISDICTION AND / OR AS SHOWN IN DETAILS.

23.

SEPARATE PERMITS MAY BE REQUIRED FOR ANY DEDICATED FIRE LINE. UNDERGROUND FIRE LINES MUST MEET REQUIREMENT OF NFPA 24.

24.

THE CONTRACTOR SHALL RESTORE ALL PAVING DISTURBED DURING CONSTRUCTION TO MATCH ORIGINAL CONDITION. NO SEPARATE PAYMENT WILL BE MADE FOR THESE ITEMS UNLESS SPECIFICALLY INCLUDED IN THE BID TABULATION OR OUTLINED IN THE SPECIFICATIONS.

25.

EROSION AND SEDIMENT CONTROL FACILITIES SHALL BE INSTALLED PRIOR TO PERFORMING ANY EXCAVATION IN ANY AREA AND SHALL BE MAINTAINED DURING WORK AND REMOVED WHEN WORK IS COMPLETED. SEE EROSION CONTROL DETAILS FOR ADDITIONAL INFORMATION, IF APPLICABLE.

26.

LIMITS OF CONSTRUCTION SHALL BE CONFINED TO THE EXISTING RIGHTS-OF-WAYS AND EASEMENTS SHOWN ON THE PLANS.

27.

CONTRACTOR SHALL RECONSTRUCT ALL DRAINAGE DITCHES AND SWALES DISTURBED BY CONSTRUCTION ACTIVITIES TO THEIR ORIGINAL GRADE AND LOCATION.

28.

THE CONTRACTOR SHALL AT ALL TIMES PROVIDE AND MAINTAIN AMPLE MEANS AND EQUIPMENT WITH WHICH TO REMOVE AND PROPERLY DISPOSE OF ANY WATER ENTERING THE EXCAVATION OR OTHER PARTS OF THE WORK AND KEEP ALL EXCAVATIONS DRY UNTIL SUCH TIME AS PIPE LAYING AND GRADING IS COMPLETED AND STRUCTURES TO BE BUILT THEREIN ARE COMPLETED. NO WATER SHALL BE ALLOWED TO RISE AROUND THE PIPE IN OPEN TRENCHES NOR SHALL IT BE ALLOWED TO RISE OVER MASONRY UNTIL THE CONCRETE OR MORTAR HAS SET. ALL WATER PUMPED OR DRAINED FROM THE SITE SHALL BE DISPOSED OF IN SUCH A MANNER AS TO PREVENT SILTATION AND EROSION TO ADJACENT PROPERTY OR OTHER CONSTRUCTION. IF REQUIRED THE CONTRACTOR SHALL BE REQUIRED TO OBTAIN ANY LOCAL, STATE OR FEDERAL PERMITS REQUIRED FOR DEWATERING. NO OFFSITE DISCHARGE IS PERMITTED UNLESS SPECIFICALLY ALLOWED IN DEWATERING PERMIT.

29.

CONTRACTOR SHALL PROTECT OR REMOVE AND REINSTALL ALL SIGNS AND MAIL BOXES WITHIN THE RIGHT-OF-WAY OR EASEMENT LIMITS.

30.

CONTRACTOR SHALL PROVIDE 48 HOURS MINIMUM ADVANCE NOTICE OF ALL UTILITY SHUT DOWNS AND TIE-INS TO THE ENGINEER, THE PUBLIC INVOLVEMENT CONSULTANT (IF APPLICABLE) AND THE UTILITY COMPANY.

31.

ROADWAY LANE CLOSURES, DRIVEWAY CLOSURES, POTABLE WATERMAIN AND FORCEMAIN SHUT DOWNS MAY BE REQUIRED TO OCCUR AT NIGHT OR EARLY MORNING HOURS. NO ADDITIONAL COMPENSATION SHALL BE PROVIDED FOR REQUIRED NIGHT WORK.

32.

IN THE EVENT OF UNSCHEDULED WATERMAIN SHUT DOWNS (BREAKS) THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER, THE PUBLIC INVOLVEMENT CONSULTANT (IF APPLICABLE) AND THE UTILITY COMPANY TO DETERMINE THE AFFECTED AREA FOR "BOIL WATER NOTICES". THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL THE NECESSARY REPAIRS AND REQUIRED BACTERIOLOGICAL TESTS NECESSARY TO RETURN THE SYSTEM TO ITS NORMAL OPERATING CONDITION. NO ADDITIONAL COMPENSATION WILL BE MADE FOR ACCIDENTAL BREAKS, REPAIRS AND TESTING.

33.

CONTRACTOR SHALL MAINTAIN REASONABLE ACCESS TO EXISTING BUSINESSES AND RESIDENCES AT ALL TIMES. IN THE EVENT OF A DRIVEWAY CLOSURE, THE CONTRACTOR SHALL PROVIDE A "BUSINESS ACCESS" SIGN AT THE AVAILABLE ACCESS POINT UNTIL SUCH TIME THAT ALL ORIGINAL ACCESS POINTS ARE REOPENED.

34.

ALL DRIVEWAYS WITHIN THE COUNTY RIGHT OF WAY SHALL BE CLASS 1 (3000 PSI AT 28 DAYS) AND 6" THICK.

35.

ALL SIDEWALKS PROPOSED AS PART OF THIS PROJECT SHALL BE CLASS 1 (3000 PSI AT 28 DAYS), 5' WIDE, AND 6" THICK.

QUANTITIES AND PAYMENT:

1.

CONTRACTOR SHALL REFER TO THE BID TABULATION AND PROJECT TECHNICAL SPECIFICATIONS FOR NOTES REGARDING THE METHOD OF PAYMENT FOR SPECIFIC PAY ITEMS.

2.

DIRECTIONAL BORE CASING AND CARRIER PIPE WILL BE PAID BASED ON QUANTITY PROVIDED IN PLANS AND BID TABULATION. NO ADDITIONAL PAYMENT SHALL BE MADE DUE TO CONTRACTOR MEANS AND METHODS, EQUIPMENT CAPABILITIES OR PRESENCE OF ROCK. DURING THE BID, THE CONTRACTOR SHALL ANALYZE THE DIRECTIONAL BORE LENGTHS TO DETERMINE FEASIBILITY BASED UPON SITE CONDITIONS, MEANS AND METHODS, EQUIPMENT TO BE USED, AND THE PRESENCE OF ROCK. NO ADDITIONAL PAYMENTS SHALL BE MADE FOR EXTENSIONS BEYOND PLAN AND BID LENGTHS.

SIGNING AND PAVEMENT MARKING NOTES:

1.

ALL SIGNING AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITIONS OF THE F.D.O.T. STANDARDS FOR ROAD AND BRIDGE CONSTRUCTION, THE F.D.O.T DESIGN STANDARDS INDEX, THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.) AND ALL APPLICABLE LOCAL STANDARDS. UTILIZATION OF THE 2009 M.U.T.C.D. SHALL BE IN ACCORDANCE WITH F.D.O.T. POLICY.

2.

DURING CONSTRUCTION, THE CONTRACTOR SHALL COMPLY WITH THE LATEST EDITIONS OF THE "STATE OF FLORIDA MANUAL OF TRAFFIC CONTROL AND SAFE PRACTICES FOR STREET AND HIGHWAY CONSTRUCTION, MAINTENANCE, AND UTILITY OPERATIONS" AND WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND WITH ALL OTHER GOVERNING SAFETY REGULATIONS.

3.

MATCH EXISTING PAVEMENT MARKINGS AT EXISTING ROADS. ALL EXISTING PAVEMENT MARKINGS THAT ARE IN CONFLICT WITH PROPOSED MARKINGS SHALL BE REMOVED BY HYDRO-BLASTING. EXISTING SIGNS SHALL REMAIN UNLESS NOTED OTHERWISE.

4.

ALL STOP SIGN LOCATIONS SHALL INCLUDE A 24" THERMOPLASTIC WHITE STOP BAR.

5.

ALL ROADWAY SIGNING AND PAVEMENT MARKINGS, STREET NAME SIGNS, ETC. (EXCLUDING PROJECT IDENTIFICATION SIGNING) ARE TO BE INCLUDED IN THE LUMP SUM PRICE FOR SIGNING AND MARKING UNLESS A DETAILED BID QUANTITY BREAKDOWN IS PROVIDED.

6.

ANY EXISTING SIGN TO REMAIN THAT IS RELOCATED OR DISTURBED DURING CONSTRUCTION SHALL BE RESET TO CURRENT F.D.O.T. STANDARD INDEXES 11860 AND 17302 FOR HEIGHT, OFFSET AND METHOD OF INSTALLATION. ANY SIGNS DAMAGED BY CONTRACTOR SHALL BE REPLACED AT THE EXPENSE OF THE CONTRACTOR.

7.

ALL SIGNS THAT ARE EMBEDDED IN CONCRETE OR ASPHALT SHALL BE INSTALLED IN A F.D.O.T. APPROVED PIPE SLEEVE.

Barraco and Associates, Inc.

CIVIL ENGINEERING - LAND SURVEYING
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FLORIDA CERTIFICATES OF AUTHORIZATION
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WWW.LEEGOV.COM/UTILITIES

PROJECT DESCRIPTION

ORANGE GROVE BOULEVARD WATERMAIN

HANCOCK BRIDGE PARKWAY
TO PONDELLA ROAD

PART OF SECTION 9, AND 16,
TOWNSHIP 44 SOUTH, RANGE 24
FORT MYERS, LEE COUNTY, FLORIDA

ENGINEER OF RECORD

WESLEY S. KAYNE, P.E., FOR THE FIRM
FLORIDA P.E. NO. 80507 - WESK@BARRACO.NET

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FILE NAME:	23513A02.DWG
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PLOT BY:	WES KAYNE

CROSS REFERENCED DRAWINGS

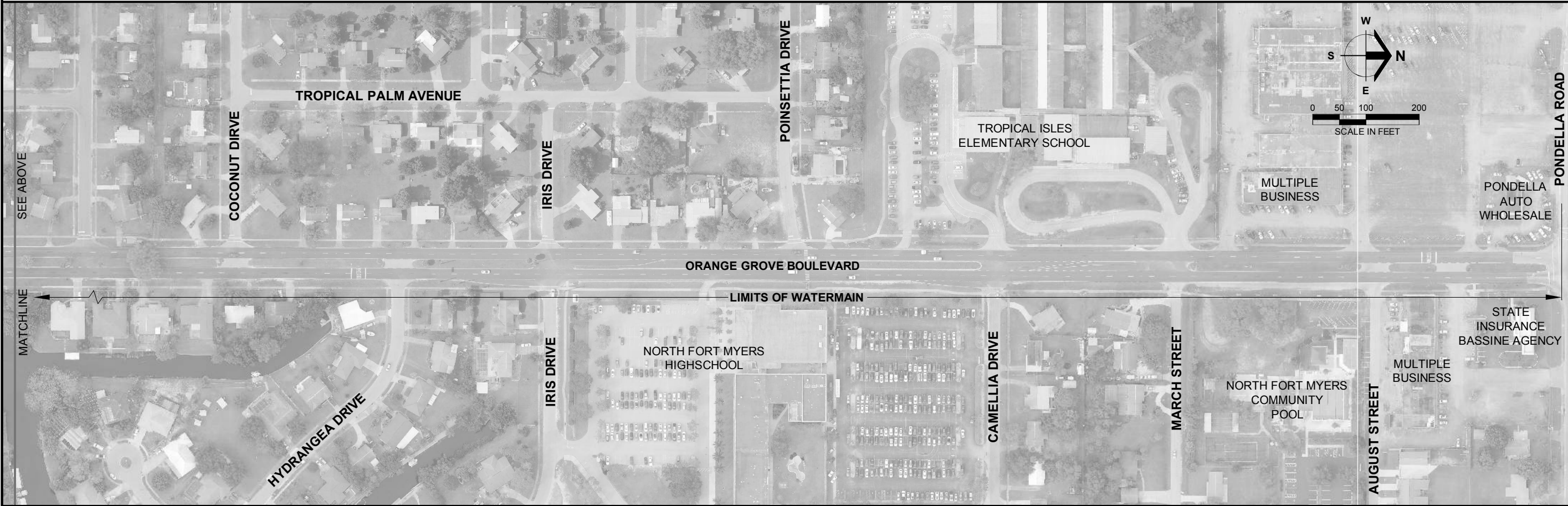
PLAN REVISIONS

PLAN STATUS

100% PLAN SUBMITTAL
2018-02-23

STANDARD NOTES

PROJECT / FILE NO.	SHEET NUMBER
23513	C2.0



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and Associates, Inc.


CIVIL ENGINEERING - LAND SURVEYING
LAND PLANNING - LANDSCAPE DESIGN

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FLORIDA CERTIFICATES OF AUTHORIZATION
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LEE COUNTY

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PROJECT DESCRIPTION

ORANGE GROVE BOULEVARD WATERMAIN

HANCOCK BRIDGE PARKWAY
TO PONDELLA ROAD

PART OF SECTION 9, AND 16,
TOWNSHIP 44 SOUTH, RANGE 24
FORT MYERS, LEE COUNTY, FLORIDA

ENGINEER OF RECORD

WESLEY S. KAYNE, P.E., FOR THE FIRM
FLORIDA P.E. NO. 80507 - WESK@BARRACO.NET

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FILE NAME: 23513A06.DWG

LOCATION: J:\23513\DWG\DWG

PLOT DATE: MON, 2-26-2018 - 9:35 AM

PLOT BY: WES KAYNE

CROSS REFERENCED DRAWINGS

PLAN REVISIONS

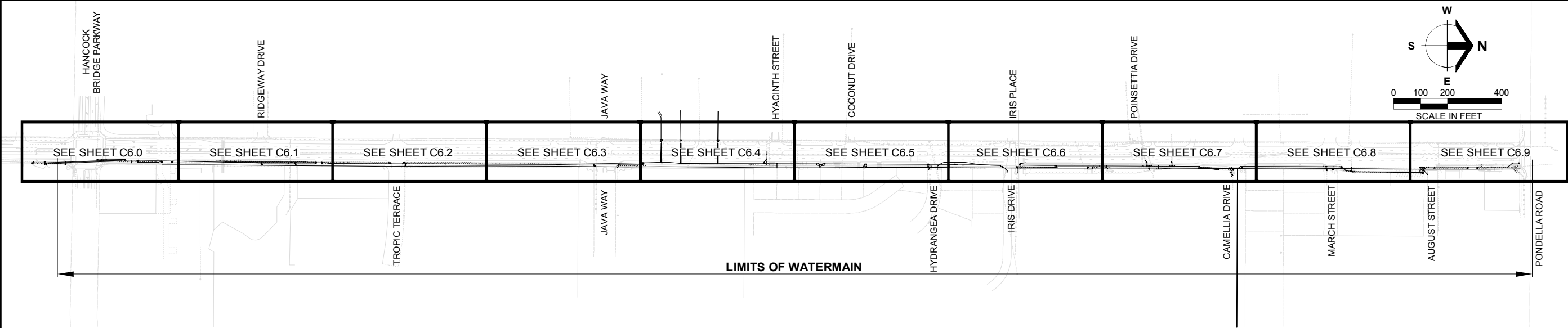
PLAN STATUS

100% PLAN SUBMITTAL
2018-02-23

**AERIAL PHOTOGRAPH
AND EXISTING
CONDITIONS**

PROJECT / FILE NO.
23513

SHEET NUMBER
C3.0



UTILITIES PROVIDING SERVICE:

WATER AND SEWER

LEE COUNTY UTILITIES
1500 MONROE ST.
FORT MYERS, FL 33901
PHONE (239) 533-8160
TELEPHONE

CENTURYLINK TELEPHONE CO.
5100 DANIELS PARKWAY #300
FORT MYERS, FL 33912
PHONE (239) 590-0440

ELECTRIC

L.C.E.C.
4980 BAYLINE DRIVE
NORTH FORT MYERS, FL 33917
PHONE (239) 995-2121

FIRE CONTROL DISTRICT

NORTH FORT MYERS FIRE CONTROL DISTRICT
2900 TRAIL DAIRY CIRCLE
NORTH FORT MYERS, FL 33917
PHONE (239) 997-8654

GAS

TECO PEOPLE'S GAS
5901 ENTERPRISE PARKWAY
FORT MYERS, FL 33905
PHONE (239) 832-6747

SOLID WASTE

WASTE PRO USA
13110 RIEKENBACKER PKWY.
FORT MYERS, FL 33913
PHONE (239) 337-0800

IRRIGATION WATER

IRRIGATION SHALL BE PROVIDED BY L.C.D.O.T.
1500 MONROE ST.
FORT MYERS, FL 33901
PHONE (239) 533-8109

CABLE TELEVISION:

COMCAST
12641 CORPORATE LAKES DRIVE
FORT MYERS, FL 33913
PHONE (239) 908-6571

UTILITY LOCATING SERVICE

SUNSHINE STATE ONE CALL CENTER
PHONE 811
(MINIMUM 48 HOURS NOTICE REQUIRED)

FIBER NETS FP&L

15834 WINKLER ROAD
FORT MYERS, FL 33908
PHONE (866)-553-4237

GENERAL PROJECT NOTES:

- ELEVATIONS REFER TO NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
- SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% AND THE LONGITUDINAL SLOPE SHALL NOT EXCEED 5%, INCLUDING SIDEWALK CROSSINGS AT DRIVEWAYS.
- PROPOSED VALVES, BLOW-OFFS AND OTHER UTILITY APPURTENANCES SHALL NOT BE LOCATED WITHIN PROPOSED OR EXISTING SIDEWALKS UNLESS SPECIFICALLY APPROVED BY LEE COUNTY UTILITIES.
- THE MINIMUM DEPTH OF COVER FOR ALL BURIED PIPE SHALL BE 30 INCHES, 36 INCHES UNDER PAVEMENT WITH A MAXIMUM DEPTH OF 48 INCHES.
- ALL EXISTING MAINS TO BE TAKEN OUT OF SERVICE SHALL BE GROUTED IN PLACE UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL REFERENCE LEE COUNTY SPECIFICATIONS AND LEE COUNTY WATER AND SEWER EXTENSION POLICY FOR ADDITIONAL REQUIREMENTS.
- WHERE TRACER WIRE DOES NOT PROVIDE ACCURATE SIGNAL FOR LOCATION OF EXISTING WATERMAIN OR FORCEMAIN PIPE SOFT DIG HOLE EVERY 100 FEET TO LOCATE PIPE.
- BETWEEN AIR RELEASE VALVES THERE SHALL BE NO HIGH POINTS IN PIPE. CONTRACTOR SHALL ADJUST PIPE DEPTH OF COVER AS NECESSARY TO MEET THIS REQUIREMENT.
- ALL DISTURBED AREAS SHALL RECEIVE SOD UPON COMPLETION OF CONSTRUCTION.
- PAVEMENT AND SIDEWALK DAMAGED BEYOND THE LIMITS SHOWN SHALL BE REPAIRED BY THE CONTRACTOR. REPAIRS SHALL INCORPORATE THE ENTIRE LENGTH OF DAMAGE FOR THE FULL WIDTH OF A TRAVEL LANE. NO ADDITIONAL COMPENSATION SHALL BE MADE.
- DRIVEWAY AND SIDEWALK REPLACEMENT SHALL BE FROM EDGE OF PAVEMENT / CONCRETE TO THE NEAREST EXPANSION JOINT OR RIGHT-OF-WAY LINE, WHICHEVER IS CLOSEST TO INSTALLED UTILITY.
- TREES THAT ARE REPLACED IN-KIND SHALL BE PLACED AT THE DIRECTION OF THE ENGINEER, BUT SHALL NOT BE PLANTED DIRECTLY OVER THE NEWLY INSTALLED UTILITY.
- HORIZONTAL DIRECTIONAL DRILL GEOMETRY OF 13° ENTRANCE AND EXIT ANGLES AND 450' BENDING RADIUS SHOWN FOR REFERENCE ONLY. VERTICAL AND HORIZONTAL CLEARANCES SHALL BE STRICTLY OBSERVED. THE CONTRACTOR MAY ADJUST THE ENTRY AND EXIT ANGLES AND RADIUS OF CURVATURE AS REQUIRED BASED ON FIELD CONDITIONS ENCOUNTERED AT THE TIME OF CONSTRUCTION AND THE CAPABILITIES OF THE EQUIPMENT UTILIZED. ANY MODIFICATIONS SHALL BE COORDINATED WITH THE OWNER AND ENGINEER PRIOR TO CONSTRUCTION.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONSTRUCT HORIZONTAL AND VERTICAL TRANSITION OF WATERMAINS USING NO MORE THAN 75% OF THE MAXIMUM ALLOWABLE DEFLECTION RECOMMENDED BY THE PIPE MANUFACTURER. SHOP DRAWINGS SHALL BE FURNISHED TO THE ENGINEER FOR APPROVAL OF ALL PIPE CONNECTIONS, TRANSITIONS, ETC. PRIOR TO FABRICATION OR DELIVERY TO JOB SITE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ANY WASTEWATER SPILLS THAT OCCUR DURING CONSTRUCTION AND FOR ASSOCIATED MONETARY FINES FROM STATE REGULATORY AGENCIES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ALL WASTE MATERIAL TO INCLUDE EXCESS SPOILS, DRILLING FLUID, DEMOLITION DEBRIS AND ROCK. CONTRACTOR SHALL TRANSPORT AND DISPOSE OF ALL MATERIAL AT AN OFF-SITE FACILITY MEETING ALL LOCAL, STATE AND FEDERAL REQUIREMENTS.
- CONTRACTOR TO COORDINATE BRACING, PROTECTION AND OR RELOCATION OF EXISTING UTILITIES WITH THE UTILITY OWNER. ANY COST ASSOCIATED WITH THESE UTILITIES IS CONSIDERED INCIDENTAL TO THE PIPE INSTALLATION AND SHALL BE BORNE BY THE CONTRACTOR. NO ADDITIONAL COMPENSATION SHALL BE MADE.
- ALL EXISTING MAINS WHICH ARE TO BE REPLACED AS PART OF THIS PROJECT SHALL BE REMOVED WHERE PRACTICAL. ANY EXISTING MAINS NOT DEPICTED IN THESE PLANS

- WHICH ARE UNCOVERED DURING CONSTRUCTION SHALL BE REMOVED OR GROUTED IN PLACE, AS DIRECTED BY THE ENGINEER OF RECORD, ONCE PROPOSED REPLACEMENT MAIN IS PUT INTO SERVICE.
- ALL ASBESTOS CONCRETE PIPE TO BE REMOVED AND DISPOSED OF SHALL BE PERFORMED BY A CONTRACTOR LICENSED AND CERTIFIED TO DO SO AND SHALL BE DONE IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REGULATIONS, INCLUDING, BUT NOT LIMITED TO, THOSE OF F.D.E.P., O.S.H.A., AND F.D.O.T.
 - REQUIRED CONSTRUCTION STAKING BY A LICENSED STATE OF FLORIDA P.S.M. SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. COST OF CONSTRUCTION STAKING SHALL BE PAID FOR UNDER MISC. BID TABULATION ITEMS, AND NO ADDITIONAL PAYMENT SHALL BE MADE FOR THIS SERVICE.
 - IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO MAINTAIN CONTINUOUS OPERATION OF ALL TRAFFIC SIGNALS, STREET LIGHTING, IRRIGATION SYSTEMS, DRAINAGE SYSTEMS, AND ANY OTHER ABOVE GROUND OR UNDERGROUND UTILITIES WITHIN THE CONSTRUCTION LIMITS OR FACILITIES AFFECTED BY CONSTRUCTION.
 - IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO MAINTAIN PEDESTRIAN ACCESS WITHIN THE CONSTRUCTION LIMITS. IF NOT FEASIBLE DUE TO SAFETY CONCERNS, AND UPON APPROVAL, THE CONTRACTOR MAY PROVIDE PROPER SIGNAGE AND CONTROLS TO CLOSE LIMITED SIDEWALKS WITHIN THE RIGHT-OF-WAY. CLOSURE SHALL BE AT THE COST OF THE CONTRACTOR AND DETOURS MUST BE PROVIDED TO DIRECT AND RE-DIRECT PEDESTRIAN PATTERNS AT CONTROLLED INTERSECTIONS.
 - IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO OBTAIN STILL PHOTOS AND VIDEO TAPING OF THE ENTIRE PROJECT LIMITS OF ALL EXISTING AND NEAR FACILITIES WITHIN THE CONSTRUCTION WORK AREA. COPIES OF THE COMPLETE REPORT SHALL BE REQUIRED PRIOR TO THE START OF CONSTRUCTION.
 - ALL REMOVED FIRE HYDRANTS TO BE RETURNED TO L.C.U.
 - CONTRACTOR SHALL REPLACE ALL IMPACTED STRIPING WITH THERMOPLASTIC STRIPING AND MARKINGS IN ACCORDANCE WITH F.D.O.T. SPECIFICATIONS. PAYMENT SHALL BE MADE BASED ON LUMP SUM PAY ITEM ESTABLISHED IN CONTRACT DOCUMENTS.
 - CONTRACTOR SHALL INSTALL ADA DETECTABLE WARNING MATS AT ALL LOCATIONS INDICATED WITHIN THE DESIGN PLANS AND SIDEWALK CONNECTIONS IMPACTED DUE TO CONSTRUCTION. DETECTABLE WARNING DEVICES MUST BE ANCHORED AND INSET IN CONCRETE.
 - EXISTING UTILITIES, DRAINAGE, AND FEATURES DEPICTED IN THIS PLAN SET ARE BASED ON A COMBINATION OF THE BEST AVAILABLE INFORMATION, SURVEY DATA, LEE COUNTY UTILITY RECORD DRAWINGS, AND AERIAL INTERPRETATION.
 - CONTRACTOR TO VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL EXISTING UTILITIES, DRAINAGE, FEATURES, STRUCTURES, AND APPURTENANCES PRIOR TO COMMENCEMENT OF CONSTRUCTION.
 - CONTRACTOR TO VERIFY MATERIAL TYPE AND SIZES OF ALL EXISTING WATERMAIN TO CONNECT TO THE PROPOSED WATERMAIN PRIOR TO COMMENCEMENT OF CONSTRUCTION.
 - CONTRACTOR SHALL UTILIZE HYMAX ADAPTER COUPLING OR APPROVED EQUAL AT ALL CONNECTIONS TO EXISTING ASBESTOS CONCRETE WATERMAIN.
 - CONTRACTOR TO REPLACE ANY TRAFFIC LOOPS IMPACTED AS A RESULT OF CONSTRUCTION. NO ADDITIONAL COMPENSATION SHALL BE MADE.
 - PROPOSED FITTINGS ON PRESSURIZED MAINS ARE PLACED AS SHOWN AT BENDS. ADDITIONAL BENDS MAY BE REQUIRED TO BEND MAINS AS SHOWN. IF ANY ADDITIONAL BENDS ARE INSTALLED, CONTRACTOR TO INSTALL LOCATE PIPES FOR LOCATION ON RECORD DRAWINGS.
 - PROPOSED TEE FITTINGS MAY BE ROLLED 45° IN ORDER TO ACCOMMODATE DEFLECTION BENEATH ADJACENT EXISTING UTILITIES. CONTRACTOR TO INSTALL CONDUIT AND INDICATE ROLLED TEE FOR LOCATION ON RECORD DRAWINGS.

- CONTRACTOR SHALL PROVIDE LOCATE STAND PIPES FOR SURVEY LOCATES. LOCATES ARE REQUIRED FOR ALL FITTINGS, ALL CHANGES IN ELEVATION AND DIRECTION, AND EVERY 100' ALONG THE INSTALLED WATERMAIN TO BE SHOWN ON RECORD DRAWINGS AT THE COMPLETION OF CONSTRUCTION.
- ALL PROPOSED H.D.P.E. PIPE SHALL BE DUCTILE IRON PIPE SIZE (D.I.P.S.)
- CONTRACTOR TO CONNECT EXISTING WATER METERS TO NEWLY INSTALLED MAIN USING LIKE-SIZED POLY SERVICE TUBING.

MAINTENANCE OF TRAFFIC:

THESE NOTES ARE FOR WORK IN LEE COUNTY DEPARTMENT OF TRANSPORTATION (LCDOT) RIGHT-OF-WAYS ONLY.

- MAINTENANCE OF TRAFFIC (M.O.T.) PLANS ARE REQUIRED TO BE SUBMITTED BY THE CONTRACTOR FOR VEHICULAR AND PEDESTRIAN TRAFFIC. THIS PLAN SHOULD BE SUBMITTED AND APPROVED BY THE L.C.D.O.T. AT LEAST 14 DAYS PRIOR TO MOBILIZATION. M.O.T. PLANS SHALL INCLUDE, BUT NOT LIMITED TO, DETAILS OF ALLOWED LANE CLOSURES, PEDESTRIAN ACCESS CLOSURES, AND HOURS OF OPERATION.
- ACCESS FOR LOCAL TRAFFIC WITH DESTINATIONS WITHIN THE PROJECT LIMITS SHALL BE MAINTAINED. IF DURING CONSTRUCTION ACCESS FOR LOCAL TRAFFIC IS CHANGED, THE CONTRACTOR SHALL NOTIFY THE L.C.D.O.T. A MINIMUM OF THREE (3) WORKING DAYS IN ADVANCE. IF DURING CONSTRUCTION ROAD CLOSURES ARE REQUIRED AND APPROVED BY LEE COUNTY, THE CONTRACTOR SHALL NOTIFY THE L.C.D.O.T. A MINIMUM OF FIVE (5) WORKING DAYS IN ADVANCE.
- PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL FURNISH, ERECT AND MAINTAIN ALL BARRICADES, WARNING SIGNS, AND MARKINGS FOR HAZARDS AND THE CONTROL OF TRAFFIC, IN REASONABLE CONFORMITY WITH THE U.S. DEPARTMENT OF TRANSPORTATION MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, OR AS DIRECTED BY THE L.C.D.O.T., SUCH AS TO EFFECTIVELY PREVENT ACCIDENTS IN ALL PLACES WHERE THE WORK CAUSES OBSTRUCTION TO THE NORMAL TRAFFIC PATTERN OR CONSTITUTES IN ANY WAY A HAZARD TO THE PUBLIC.
- THE CONTRACTOR SHALL COORDINATE AND OBTAIN APPROVAL FOR ALL LANE CLOSURES WITHIN LEE COUNTY RIGHT-OF-WAYS WITH L.C.D.O.T. A MINIMUM OF 14 DAYS PRIOR TO THE REQUIRED CLOSINGS.

SUBSURFACE INVESTIGATION:

- SOIL BORING RECORDS WERE OBTAINED FOR THE PROJECT BY GFA INTERNATIONAL. THE REPORTS WERE GENERATED ONLY FOR THE ENGINEER'S USE IN DESIGN. THE REPORT IS INCLUDED IN THE BID DOCUMENTS AS A COURTESY, BUT IS NOT A WARRANTY OR GUARANTEE OF SUBSURFACE CONDITIONS.
- BIDDERS SHOULD VISIT THE SITE AND ACQUAINT THEMSELVES WITH ALL EXISTING CONDITIONS. PRIOR TO BIDDING, BIDDERS MAY MAKE THEIR OWN SUBSURFACE INVESTIGATIONS (AS APPROVED BY THE COUNTY) TO SATISFY THEMSELVES AS TO SITE AND SUBSURFACE CONDITIONS, BUT ALL SUCH INVESTIGATIONS SHALL BE PERFORMED UNDER TIME SCHEDULES AND ARRANGEMENTS APPROVED IN ADVANCE BY THE OWNER.
- ALL COSTS OF ROCK EXCAVATION SHALL BE INCLUDED IN THE APPROPRIATE ITEMS OF WORK CONTAINED WITHIN THE CONTRACT. NO EXTRA COMPENSATION OR TIME EXTENSION WILL BE ALLOWED FOR ADDITIONAL WORK DIRECTLY OR INDIRECTLY ASSOCIATED WITH THE PRESENCE, SPLITTING, EXCAVATING, CRUSHING, DISPOSAL, REPLACEMENT OF DISPLACED VOLUME OF EXTRACTED ROCK WITH FILL MATERIAL OR SPECIAL HANDLING OF ROCK.

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LEE COUNTY

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PROJECT DESCRIPTION

ORANGE GROVE BOULEVARD WATERMAIN

HANCOCK BRIDGE PARKWAY
TO PONDELLA ROAD

PART OF SECTION 9, AND 16,
TOWNSHIP 44 SOUTH, RANGE 24
FORT MYERS, LEE COUNTY, FLORIDA

ENGINEER OF RECORD

WESLEY S. KAYNE, P.E., FOR THE FIRM
FLORIDA P.E. NO. 80507 - WESK@BARRACO.NET

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LOCATION: J:\23513\DWG\DOI

PLOT DATE: MON, 2-26-2018 - 9:35 AM

PLOT BY: WES KAYNE

CROSS REFERENCED DRAWINGS

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SURVEY = 23513S00.DWG

PLAN REVISIONS

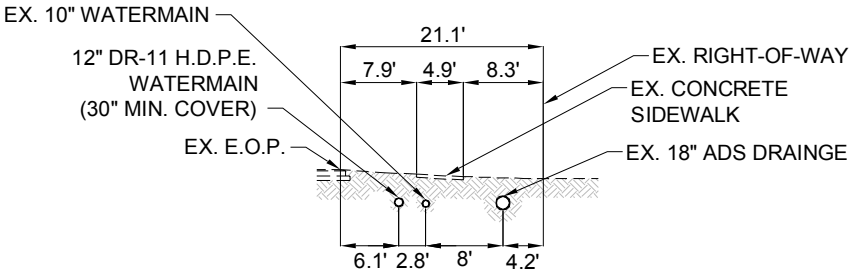
PLAN STATUS

100% PLAN SUBMITTAL
2018-02-23

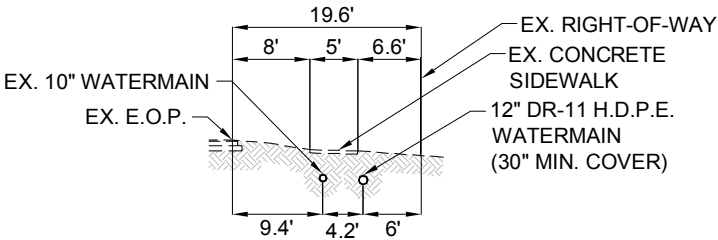
MASTER UTILITY PLAN, KEY SHEET, AND NOTES

PROJECT / FILE NO. **23513**

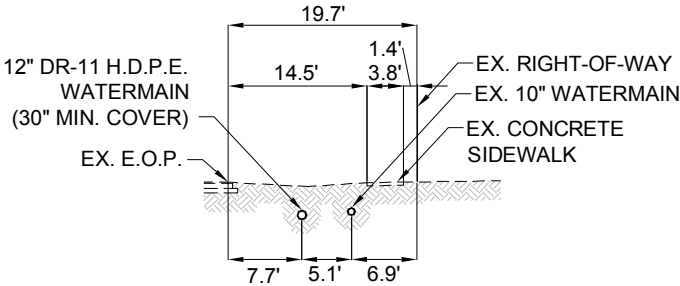
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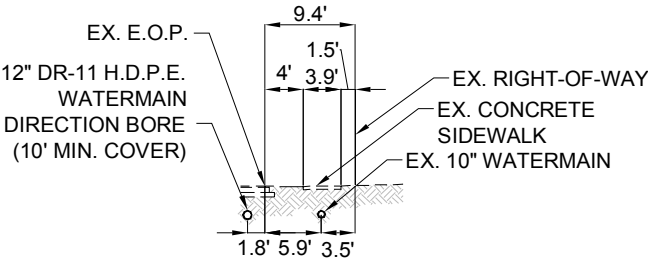
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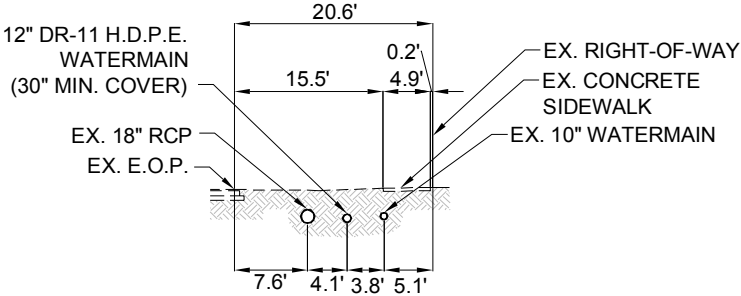
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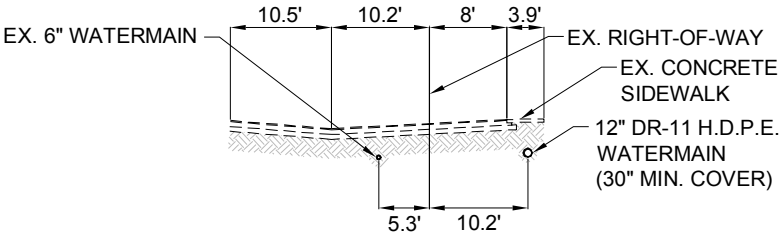
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STA: 136+00



STA: 143+00



STA: 150+00

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PROJECT DESCRIPTION

ORANGE GROVE
BOULEVARD
WATERMAIN

HANCOCK BRIDGE PARKWAY
TO PONDELLA ROAD

PART OF SECTION 9, AND 16,
TOWNSHIP 44 SOUTH, RANGE 24
FORT MYERS, LEE COUNTY, FLORIDA

ENGINEER OF RECORD

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CROSS REFERENCED DRAWINGS

PLAN REVISIONS

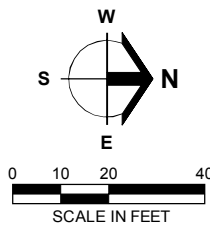
PLAN STATUS

100% PLAN SUBMITTAL
2018-02-23

TYPICAL
SECTIONS

PROJECT / FILE NO.	SHEET NUMBER
23513	C5.0

SEE SHEET C8.0 FOR
WATERMAIN CONNECTION
AT GOLF CLUB DRIVE



EX. 10" DIP FORCEMAIN

EX. 6" FORCEMAIN

APPROXIMATE LOCATION
OF BURIED TELECOM (TYP.)

EX. 10" AC WATERMAIN

EX. 10" DIP FORCEMAIN

EX. 8" PVC FORCEMAIN

- EXIST. SIDEWALK / CONC. DRIVEWAY (6" THICK WITHIN ROW)
- FULL DEPTH OPEN CUT (FLOWABLE FILL)
- MILL AND RESURFACE
- REMOVE AND REPLACE SIDEWALK
- REMOVE AND REPLACE CURBING
- ADA DETECTABLE WARNING DEVICE (FDOT INDEX 304)

EX. 8" AC WATERMAIN

CONNECT EX. WATER SERVICE
TO EX. 12" PVC WATERMAIN

EX. 100' R/W

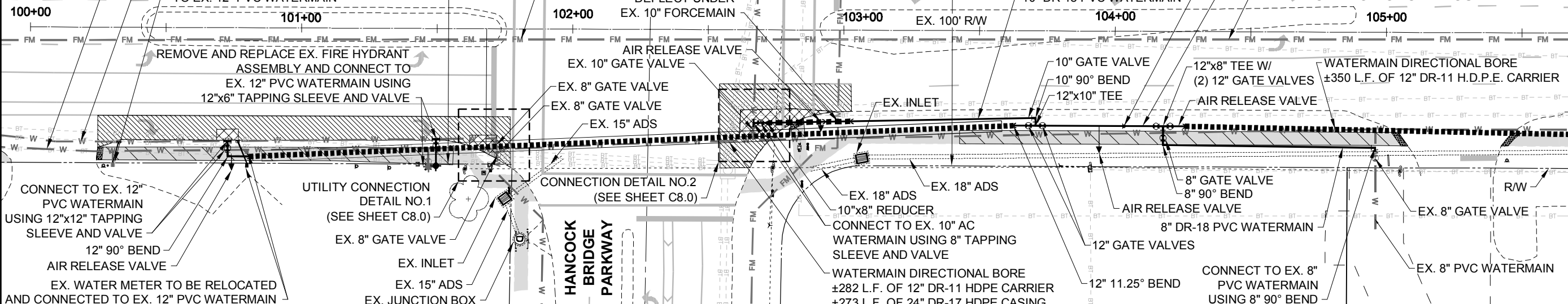
EX. 18" H.D.P.E.
FORCEMAIN

33 L.F. OF CL-250
D.I.P. WATERMAIN
DEFLECT UNDER
EX. 10" FORCEMAIN

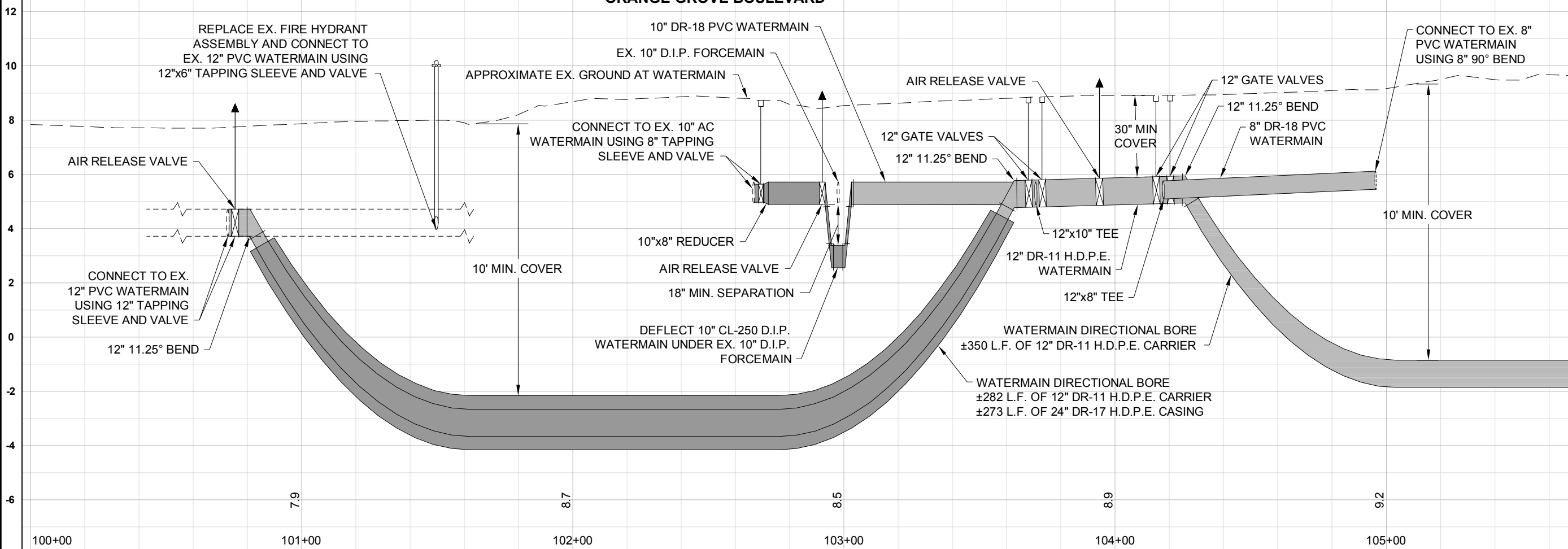
EX. SIGN TO BE RELOCATED

12" DR-11 H.D.P.E. WATERMAIN
EX. 16" FORCEMAIN

ORANGE GROVE BOULEVARD



ORANGE GROVE BOULEVARD



SEE SHEET C6.1

MATCH LINE

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PROJECT DESCRIPTION
ORANGE GROVE BOULEVARD WATERMAIN
HANCOCK BRIDGE PARKWAY
TO PONDELLA ROAD
PART OF SECTION 9, AND 16,
TOWNSHIP 44 SOUTH, RANGE 24
FORT MYERS, LEE COUNTY, FLORIDA

ENGINEER OF RECORD
WESLEY S. KAYNE, P.E., FOR THE FIRM
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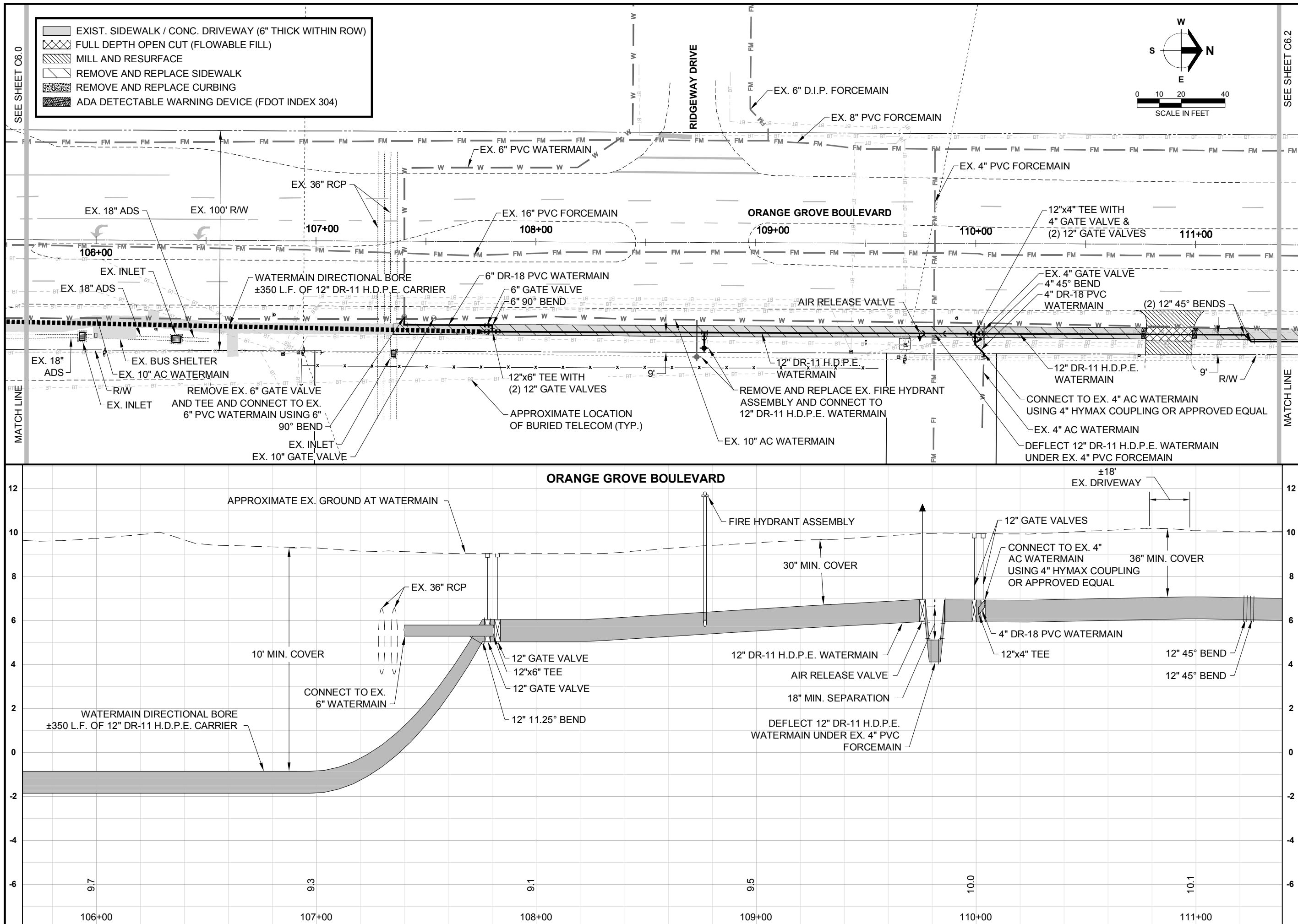
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PROFILE =	23513A00P.DWG
SURVEY =	23513S00.DWG

PLAN REVISIONS	

PLAN STATUS	
100% PLAN SUBMITTAL	2018-02-23

PLAN AND PROFILE
ORANGE GROVE BLVD.
STA: 100+00 TO 105+69

PROJECT / FILE NO.	SHEET NUMBER
23513	C6.0



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ENGINEER OF RECORD

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PROFILE = 23513A00P.DWG

SURVEY = 23513S00.DWG

PLAN REVISIONS

NO.	DESCRIPTION

PLAN STATUS

100% PLAN SUBMITTAL
2018-02-23

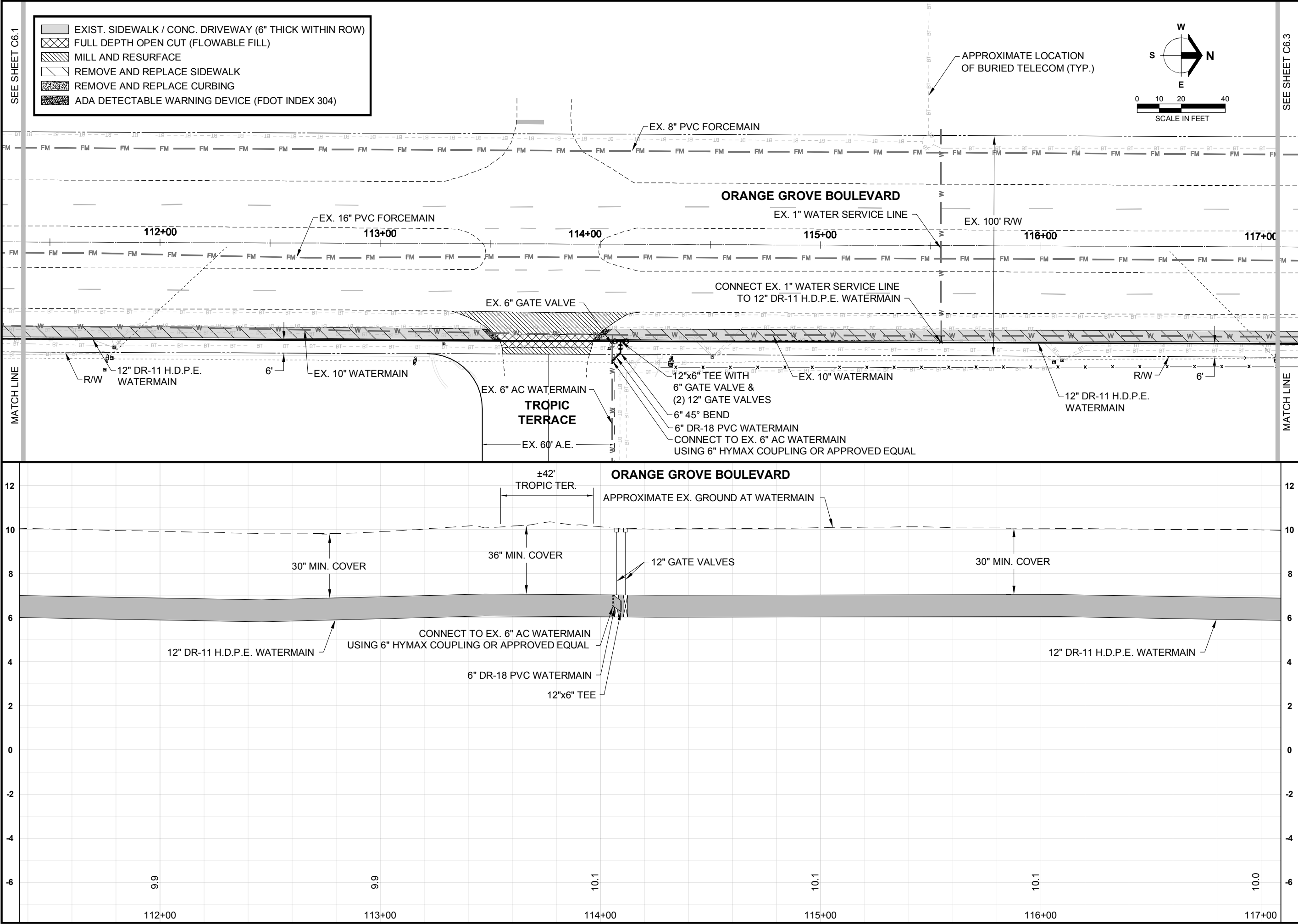
**PLAN AND PROFILE
ORANGE GROVE BLVD.
STA: 105+69 TO 110+39**

PROJECT / FILE NO.

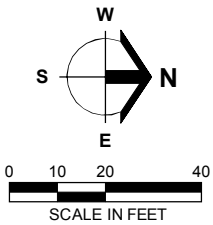
23513

SHEET NUMBER

C6.1



- EXIST. SIDEWALK / CONC. DRIVEWAY (6" THICK WITHIN ROW)
- FULL DEPTH OPEN CUT (FLOWABLE FILL)
- MILL AND RESURFACE
- REMOVE AND REPLACE SIDEWALK
- REMOVE AND REPLACE CURBING
- ADA DETECTABLE WARNING DEVICE (FDOT INDEX 304)



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PROJECT DESCRIPTION

ORANGE GROVE BOULEVARD WATERMAIN

HANCOCK BRIDGE PARKWAY
TO PONDELLA ROAD

PART OF SECTION 9, AND 16,
TOWNSHIP 44 SOUTH, RANGE 24
FORT MYERS, LEE COUNTY, FLORIDA

ENGINEER OF RECORD

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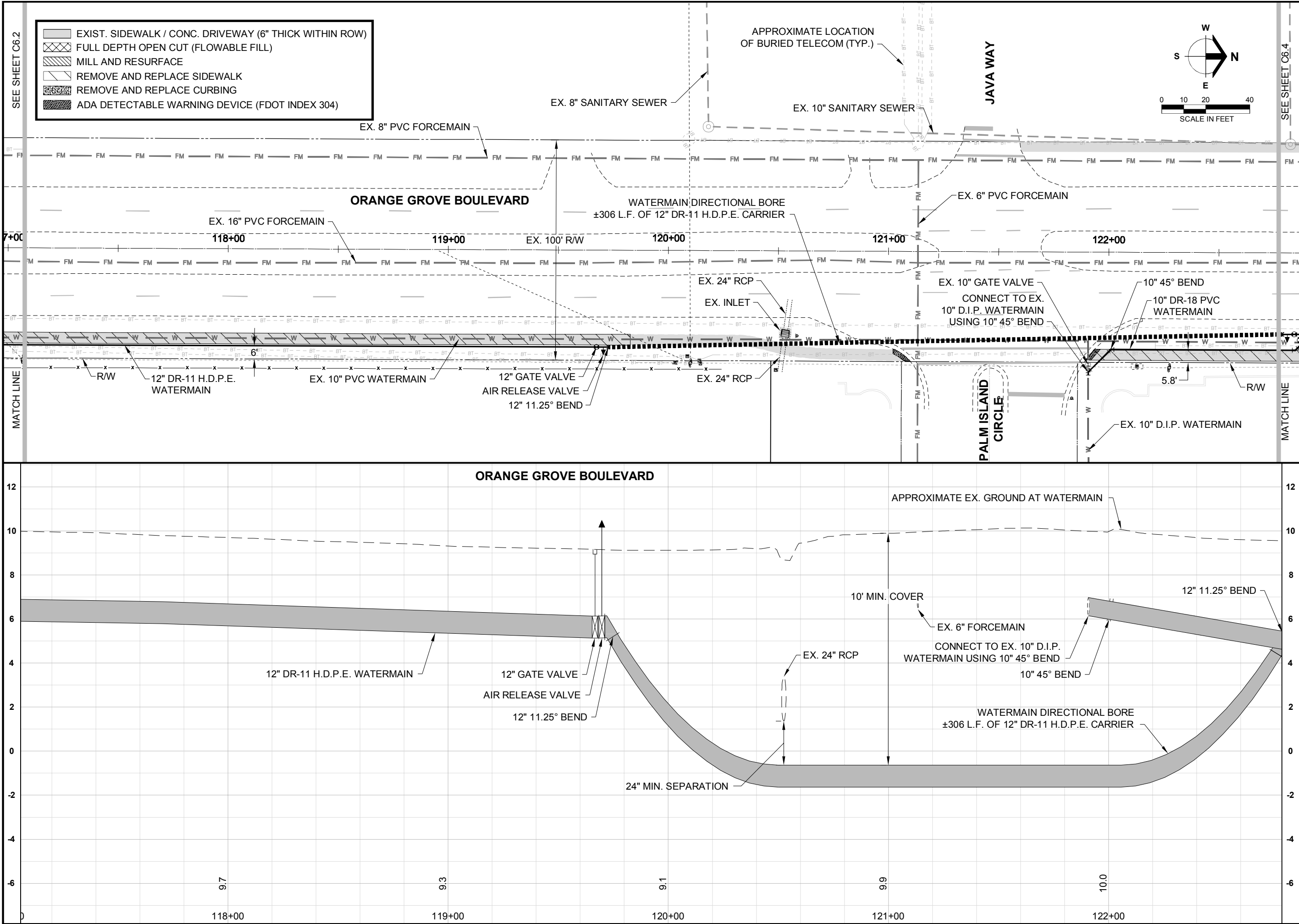
PLAN REVISIONS	

PLAN STATUS

100% PLAN SUBMITTAL
2018-02-23

PLAN AND PROFILE
ORANGE GROVE BLVD.
STA: 110+39 TO 117+12

PROJECT / FILE NO.	SHEET NUMBER
23513	C6.2



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PROJECT DESCRIPTION

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HANCOCK BRIDGE PARKWAY
TO PONDELLA ROAD
PART OF SECTION 9, AND 16,
TOWNSHIP 44 SOUTH, RANGE 24
FORT MYERS, LEE COUNTY, FLORIDA

ENGINEER OF RECORD
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LOCATION: J:\23513\DWG\DO

PLOT DATE: MON, 2-26-2018 - 9:37 AM

PLOT BY: WES KAYNE

CROSS REFERENCED DRAWINGS

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SURVEY = 23513S00.DWG

PLAN REVISIONS

PLAN STATUS

100% PLAN SUBMITTAL
2018-02-23

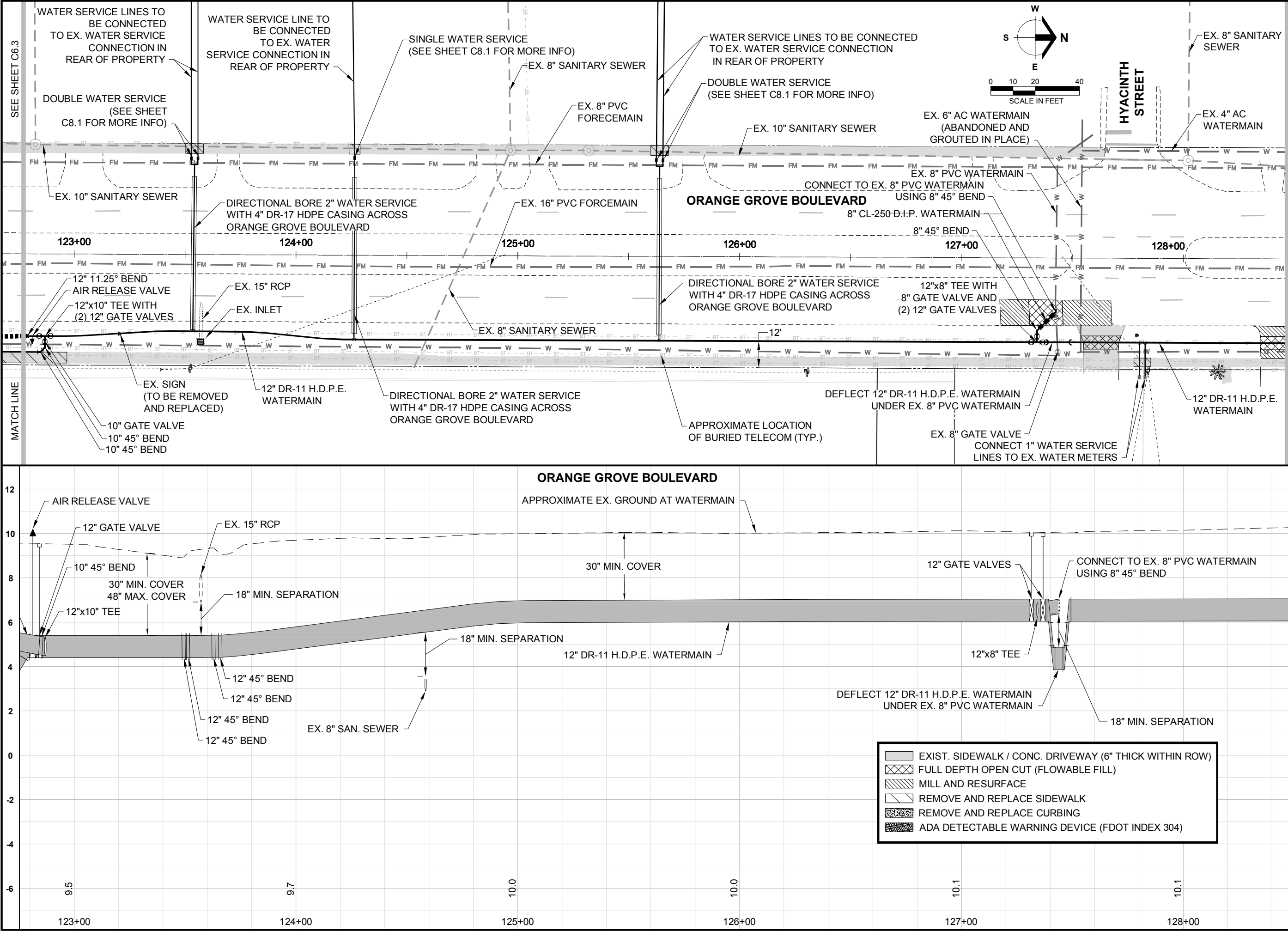
**PLAN AND PROFILE
ORANGE GROVE BLVD.
STA: 117+12 TO 122+78**

PROJECT / FILE NO.

SHEET NUMBER

23513

C6.3



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ENGINEERING 7995 - SURVEYING LB-6940

PREPARED FOR

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LEE COUNTY

1500 MONROE STREET
FORT MYERS, FLORIDA 33901
PHONE (239) 533-8181
FAX (239) 485-8845
WWW.LEEGOV.COM/UTILITIES

PROJECT DESCRIPTION

ORANGE GROVE BOULEVARD WATERMAIN

HANCOCK BRIDGE PARKWAY
TO PONDELLA ROAD

PART OF SECTION 9, AND 16,
TOWNSHIP 44 SOUTH, RANGE 24
FORT MYERS, LEE COUNTY, FLORIDA

ENGINEER OF RECORD
WESLEY S. KAYNE, P.E., FOR THE FIRM
FLORIDA P.E. NO. 80507 - WESK@BARRACO.NET

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PLOT BY: WES KAYNE

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PLAN REVISIONS

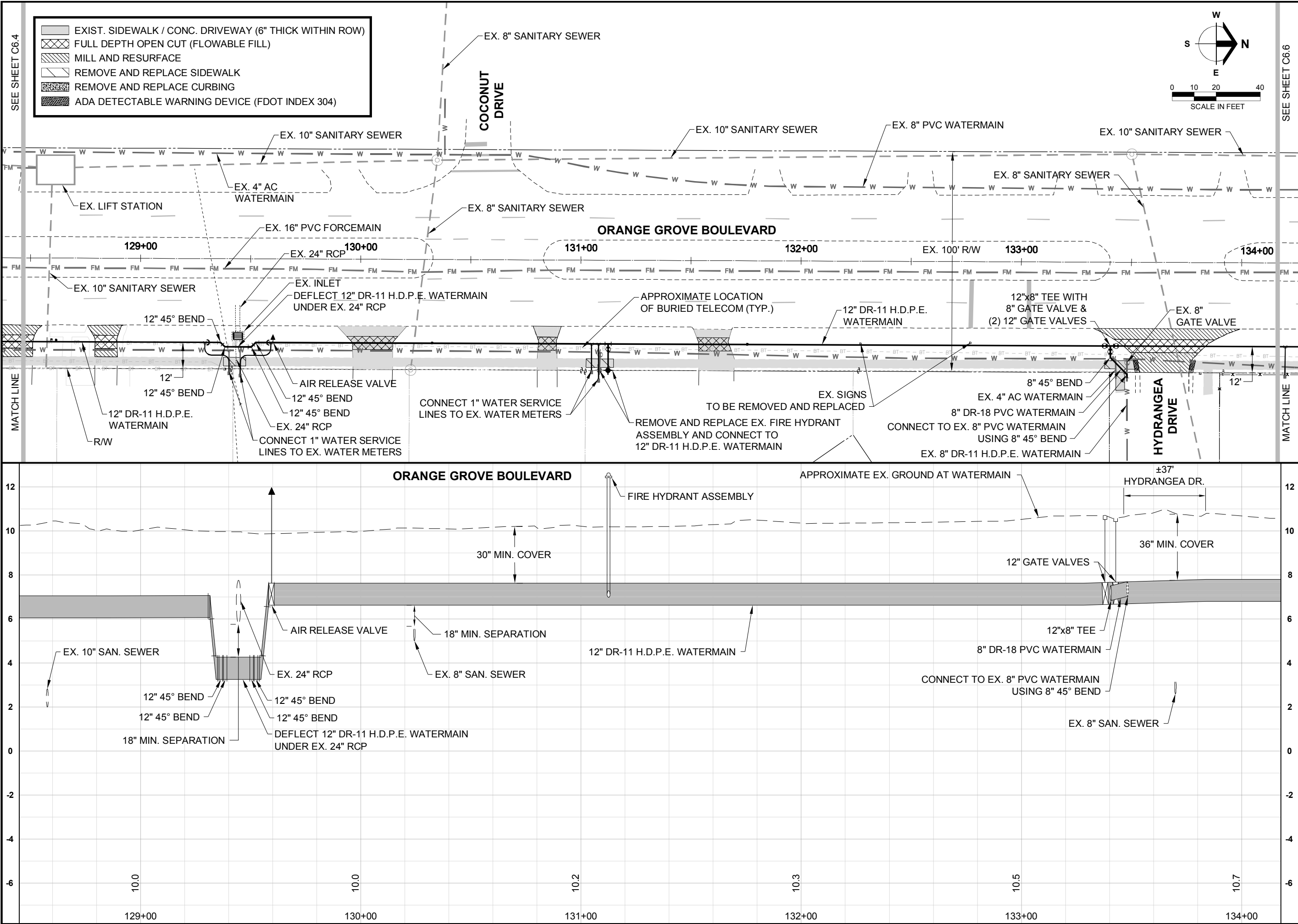
NO.	DESCRIPTION

PLAN STATUS

100% PLAN SUBMITTAL
2018-02-23

PLAN AND PROFILE
ORANGE GROVE BLVD.
STA: 122+78 TO 128+48

PROJECT / FILE NO.	SHEET NUMBER
23513	C6.4



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LEE COUNTY

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FORT MYERS, FLORIDA 33901
PHONE (239) 533-8181
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PROJECT DESCRIPTION

ORANGE GROVE BOULEVARD WATERMAIN

HANCOCK BRIDGE PARKWAY
TO PONDELLA ROAD

PART OF SECTION 9, AND 16,
TOWNSHIP 44 SOUTH, RANGE 24
FORT MYERS, LEE COUNTY, FLORIDA

ENGINEER OF RECORD
WESLEY S. KAYNE, P.E., FOR THE FIRM
FLORIDA P.E. NO. 80507 - WSK@BARRACO.NET

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PLOT BY: WES KAYNE

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SURVEY = 23513S00.DWG

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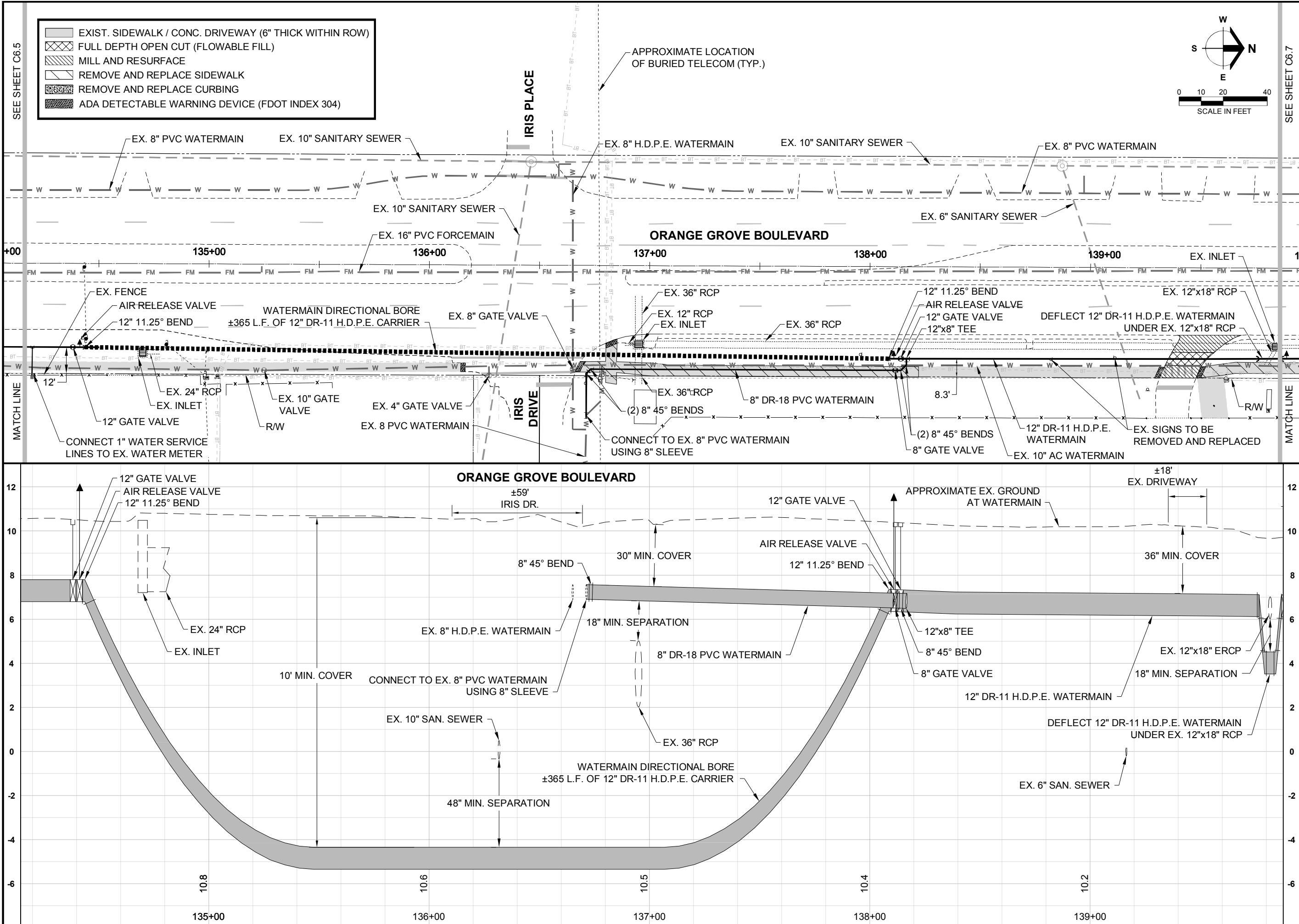
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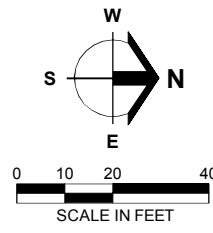
100% PLAN SUBMITTAL
2018-02-23

PLAN AND PROFILE
ORANGE GROVE BLVD.
STA: 128+48 TO 134+19

PROJECT / FILE NO.	SHEET NUMBER
23513	C6.5



- EXIST. SIDEWALK / CONC. DRIVEWAY (6" THICK WITHIN ROW)
- FULL DEPTH OPEN CUT (FLOWABLE FILL)
- MILL AND RESURFACE
- REMOVE AND REPLACE SIDEWALK
- REMOVE AND REPLACE CURBING
- ADA DETECTABLE WARNING DEVICE (FDOT INDEX 304)



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PROJECT DESCRIPTION

ORANGE GROVE BOULEVARD WATERMAIN

HANCOCK BRIDGE PARKWAY
TO PONDELLA ROAD

PART OF SECTION 9, AND 16,
TOWNSHIP 44 SOUTH, RANGE 24
FORT MYERS, LEE COUNTY, FLORIDA

ENGINEER OF RECORD

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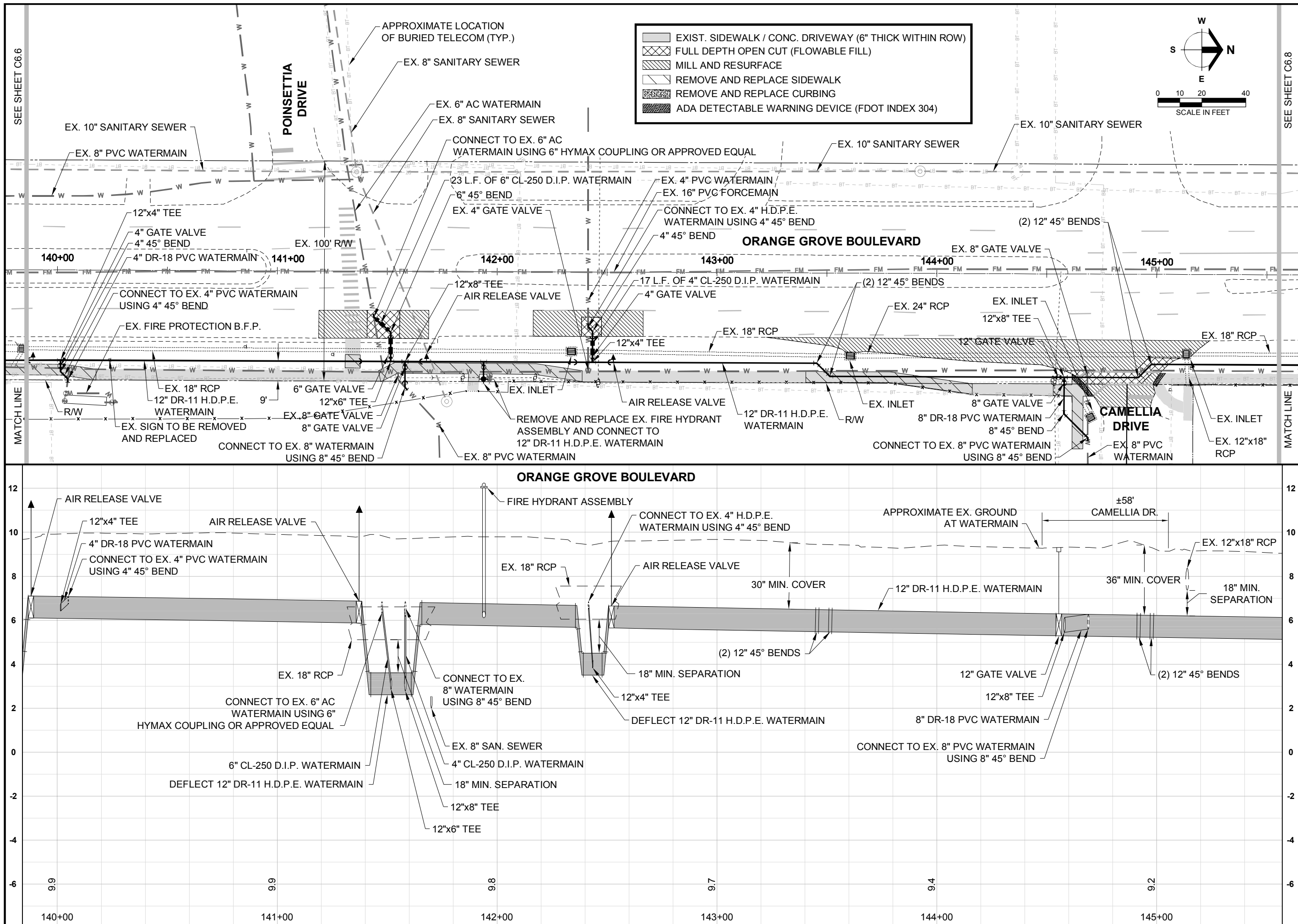
PLAN REVISIONS	

PLAN STATUS

100% PLAN SUBMITTAL
2018-02-23

**PLAN AND PROFILE
ORANGE GROVE BLVD.
STA: 134+19 TO 139+87**

PROJECT / FILE NO.	SHEET NUMBER
23513	C6.6



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FORT MYERS, FLORIDA 33901
PHONE (239) 533-8181
FAX (239) 485-8845
WWW.LEEGOV.COM/UTILITIES

PROJECT DESCRIPTION

ORANGE GROVE BOULEVARD WATERMAIN
HANCOCK BRIDGE PARKWAY
TO PONDELLA ROAD
PART OF SECTION 9, AND 16,
TOWNSHIP 44 SOUTH, RANGE 24
FORT MYERS, LEE COUNTY, FLORIDA

ENGINEER OF RECORD
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PLOT DATE: MON, 2-26-2018 - 9:30 AM
PLOT BY: WES KAYNE

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SURVEY = 23513S00.DWG

PLAN REVISIONS

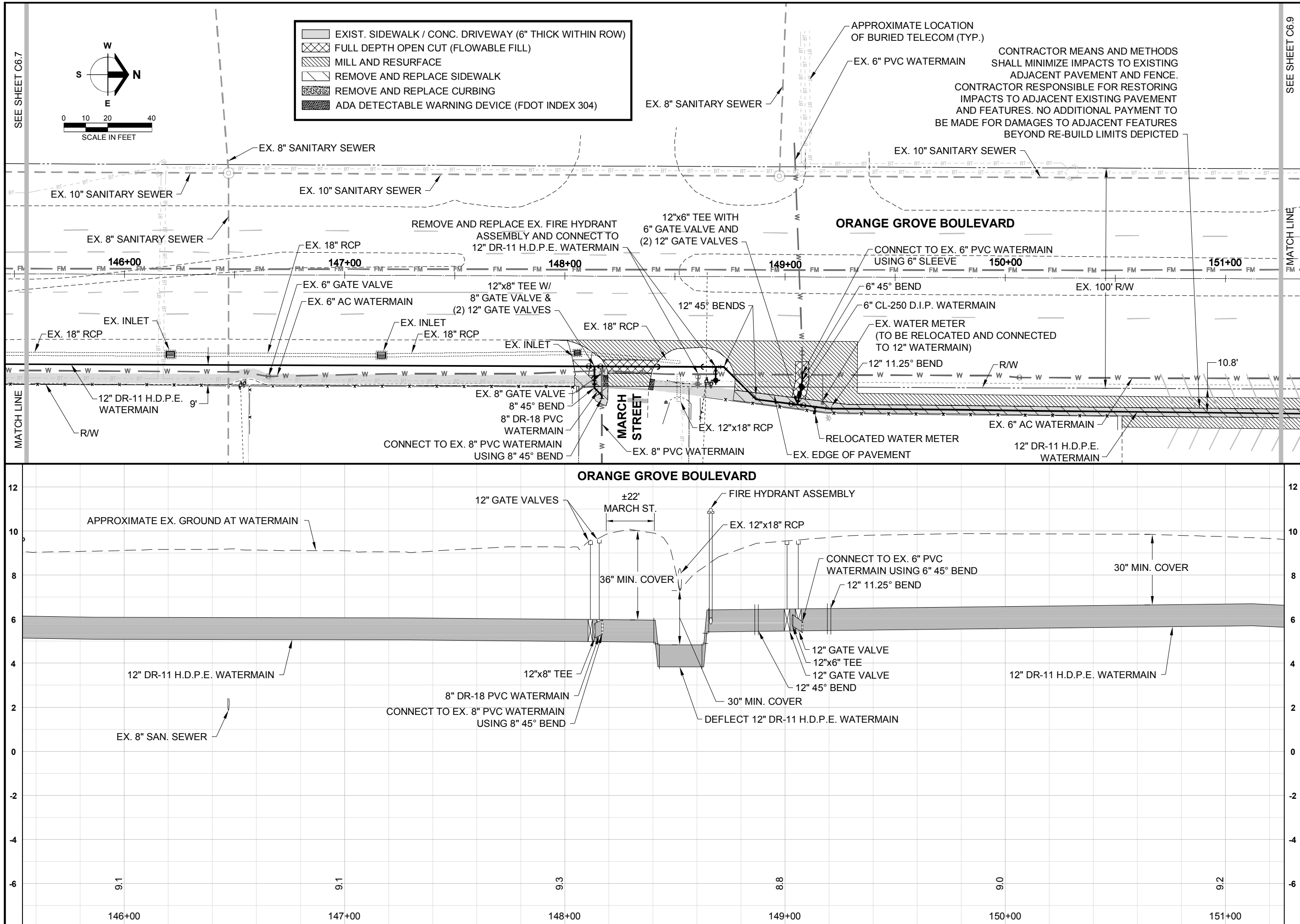
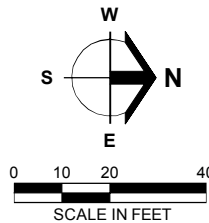
PLAN STATUS
100% PLAN SUBMITTAL
2018-02-23

PLAN AND PROFILE
ORANGE GROVE BLVD.
STA: 139+87 TO 145+56

PROJECT / FILE NO.
23513

SHEET NUMBER
C6.7

- EXIST. SIDEWALK / CONC. DRIVEWAY (6" THICK WITHIN ROW)
- FULL DEPTH OPEN CUT (FLOWABLE FILL)
- MILL AND RESURFACE
- REMOVE AND REPLACE SIDEWALK
- REMOVE AND REPLACE CURBING
- ADA DETECTABLE WARNING DEVICE (FDOT INDEX 304)



SEE SHEET C6.7

MATCH LINE

PROJECT DESCRIPTION

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LAND PLANNING - LANDSCAPE DESIGN
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Fort Myers, Florida 33902-2800
Phone (239) 461-3170
Fax (239) 461-3169
FLORIDA CERTIFICATES OF AUTHORIZATION
ENGINEERING 7995 - SURVEYING LB-6940

PREPARED FOR

UTILITIES
LEE COUNTY

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FORT MYERS, FLORIDA 33901
PHONE (239) 533-8181
FAX (239) 485-8845
WWW.LEEGOV.COM/UTILITIES

ORANGE GROVE BOULEVARD WATERMAIN

HANCOCK BRIDGE PARKWAY
TO PONDELLA ROAD
PART OF SECTION 9, AND 16,
TOWNSHIP 44 SOUTH, RANGE 24
FORT MYERS, LEE COUNTY, FLORIDA

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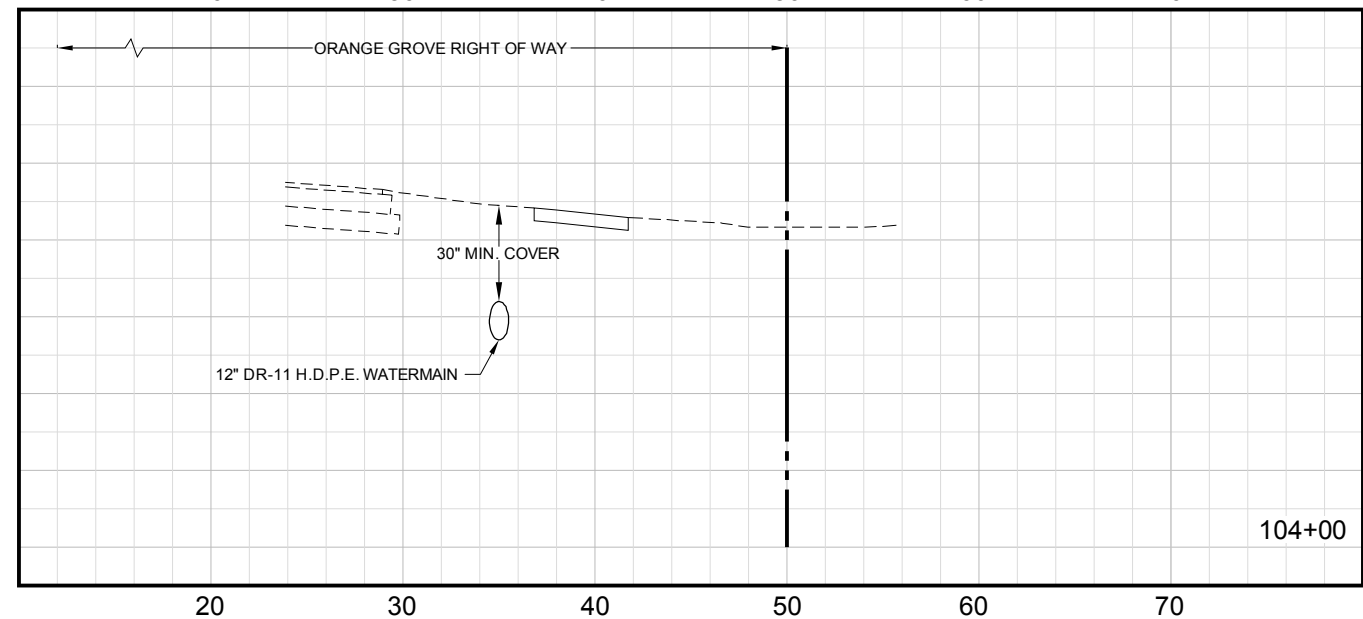
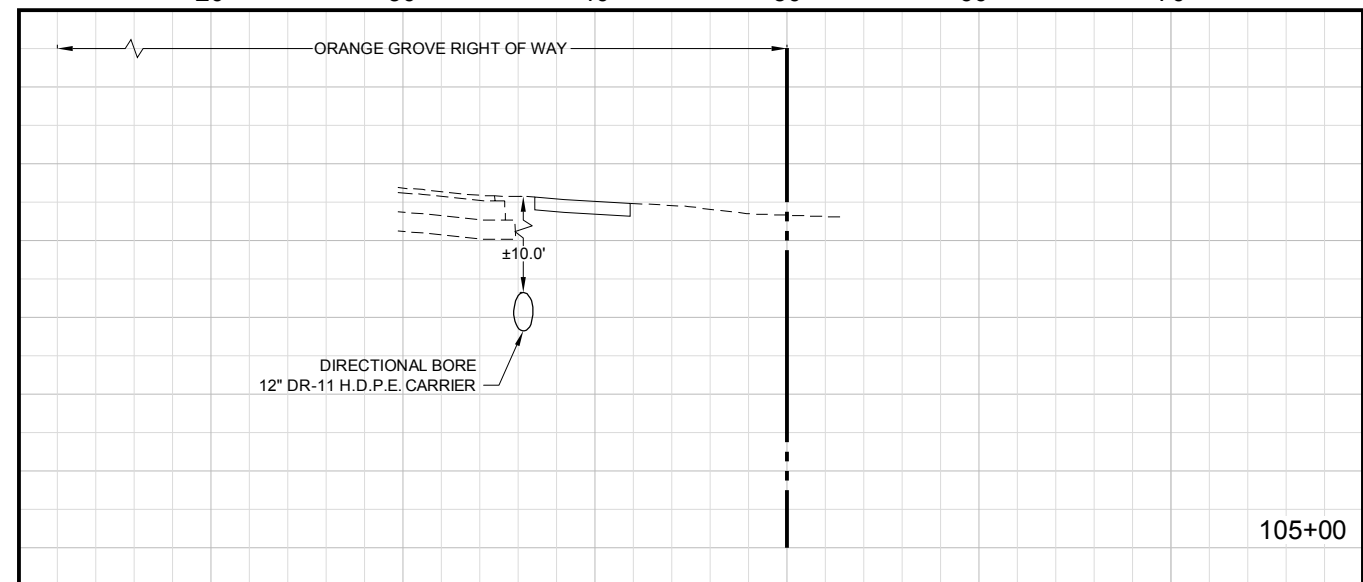
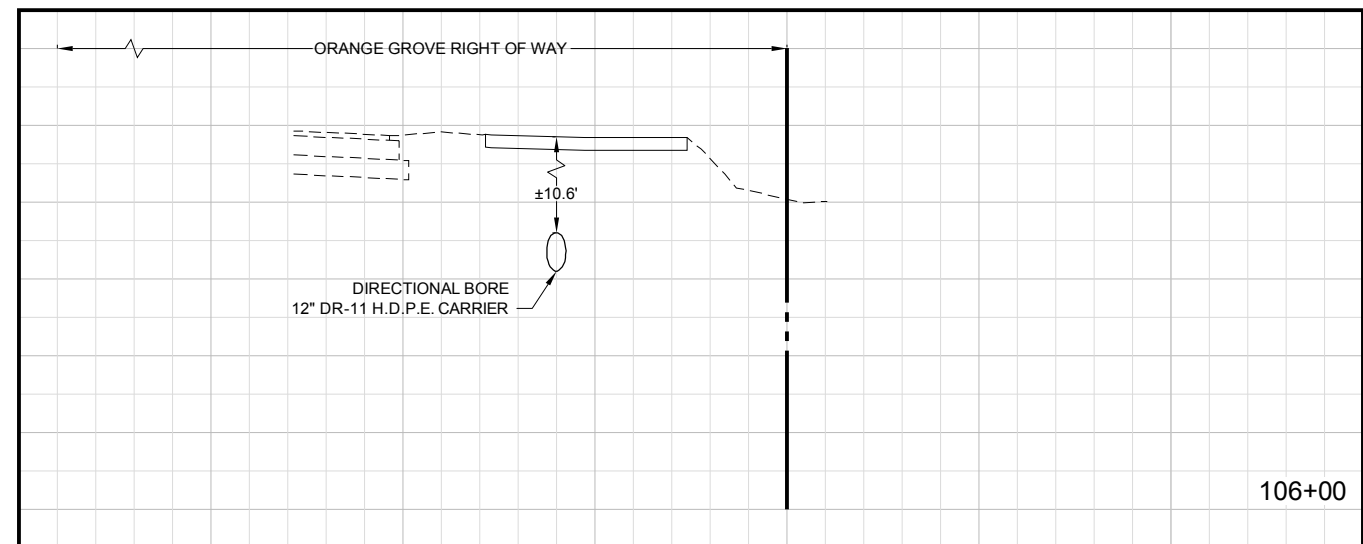
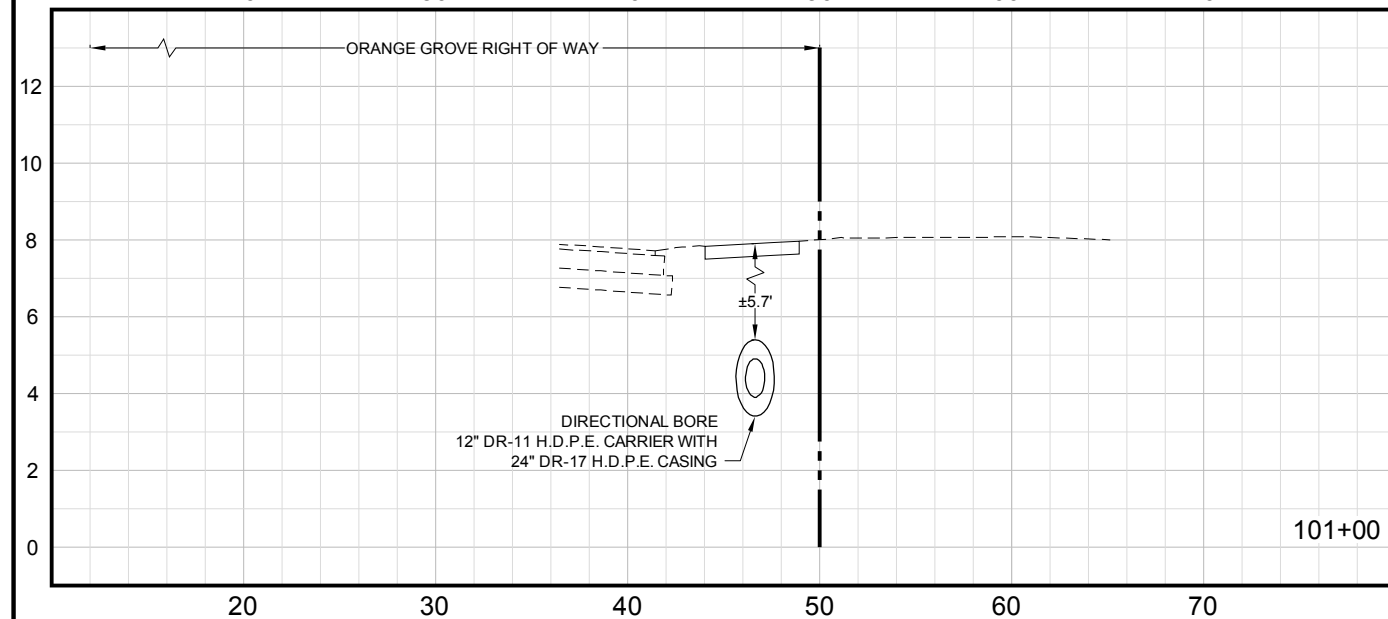
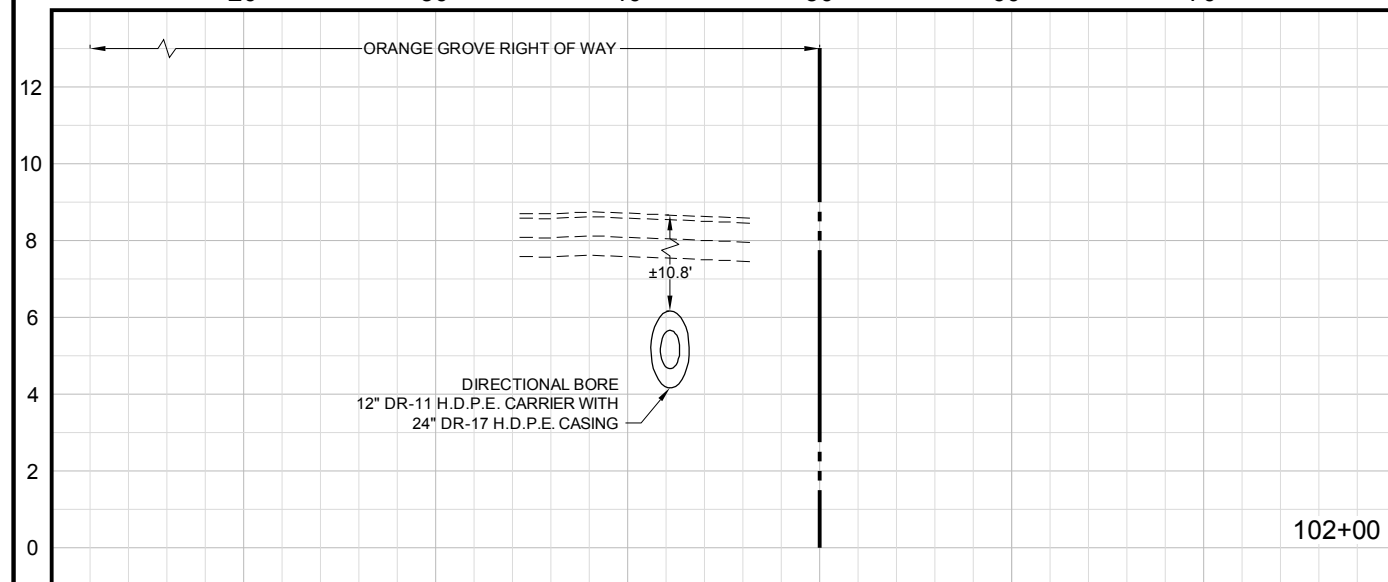
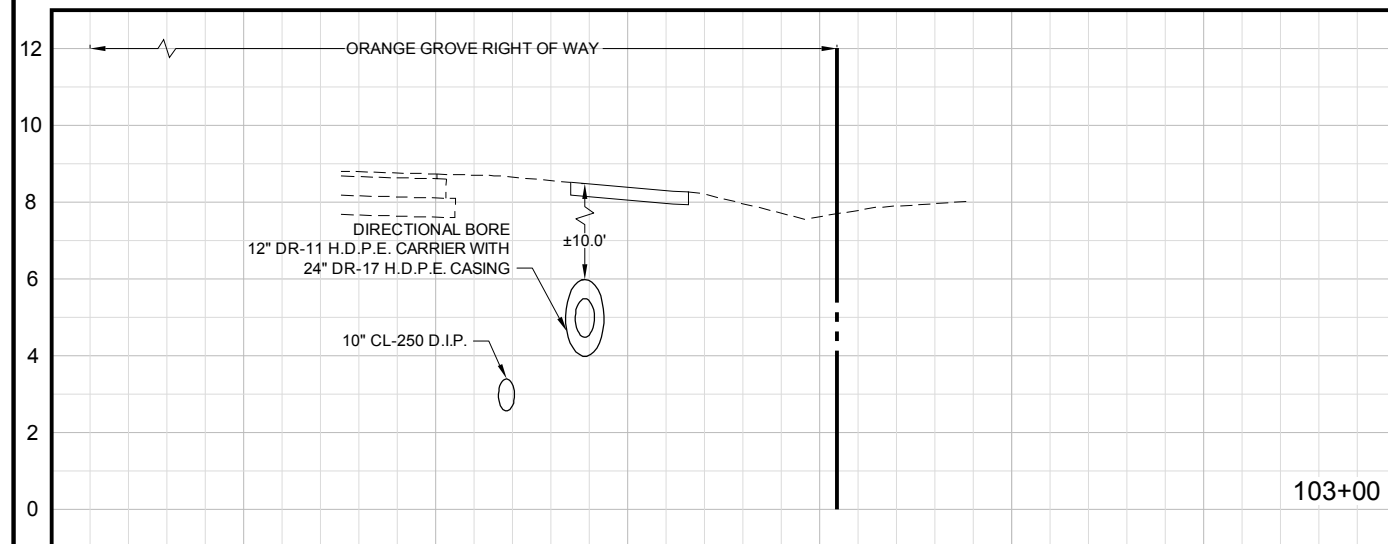
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SURVEY =	23513S00.DWG

PLAN REVISIONS	

PLAN STATUS	
100% PLAN SUBMITTAL	2018-02-23

PLAN AND PROFILE
ORANGE GROVE BLVD.
STA: 145+56 TO 151+27

PROJECT / FILE NO.	SHEET NUMBER
23513	C6.8



1500 MONROE STREET
FORT MYERS, FLORIDA 33901
PHONE (239) 533-8181
FAX (239) 485-8845

WWW.LEE GOV.COM/UTILITIES

PROJECT DESCRIPTION

ORANGE GROVE
BOULEVARD
WATERMAIN

HANCOCK BRIDGE PARKWAY
TO PONDELLA ROAD

PART OF SECTION 9, AND 16,
TOWNSHIP 44 SOUTH, RANGE 24
FORT MYERS, LEE COUNTY, FLORIDA

ENGINEER OF RECORD

WESLEY S. KAYNE, P.E., FOR THE FIRM
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BL O T BY	WES KAYNE
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CROSS REFERENCED DRAWINGS

PLAN REVISIONS

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PLAN STATUS

100% PLAN SUBMITTAL
2018-02-23

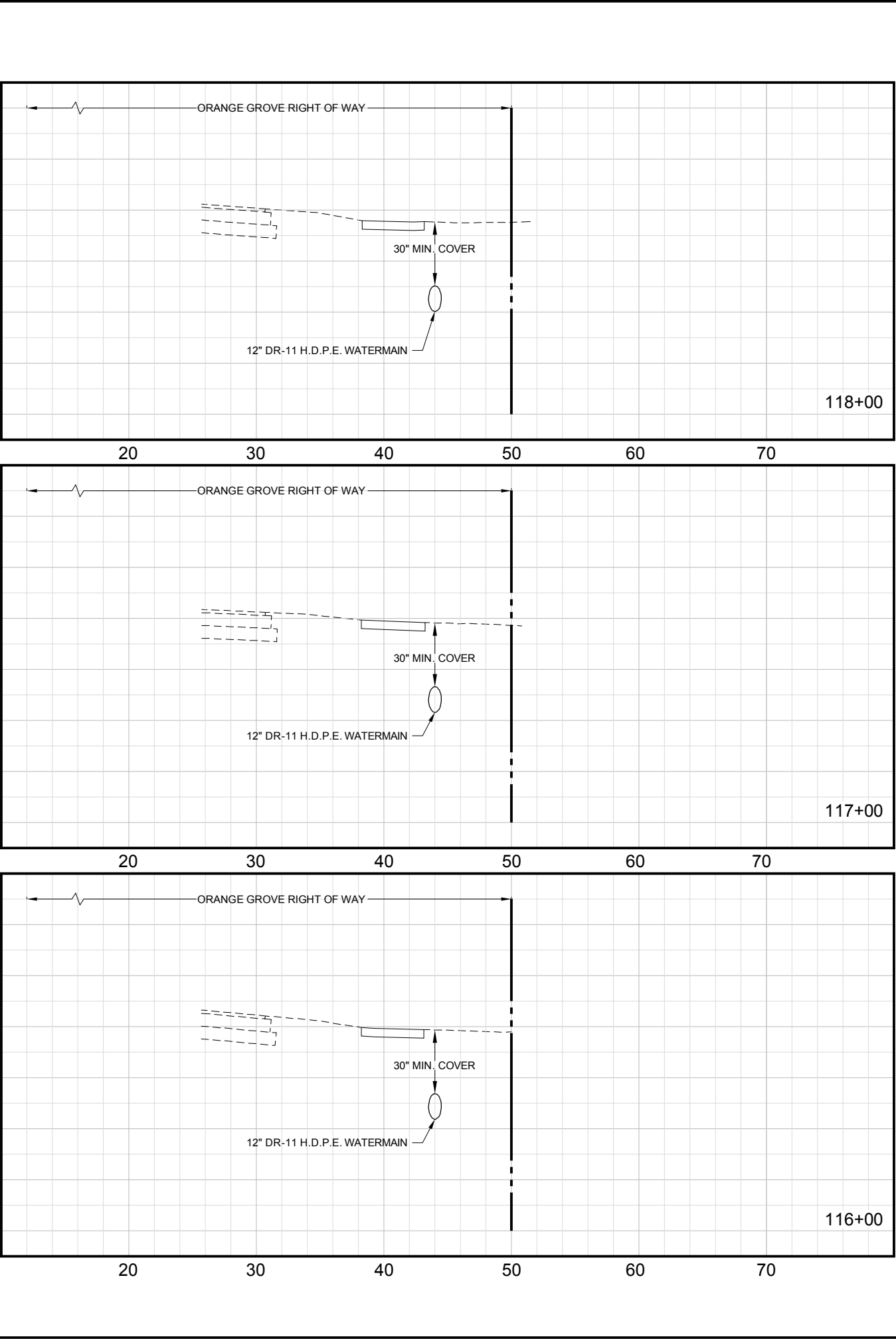
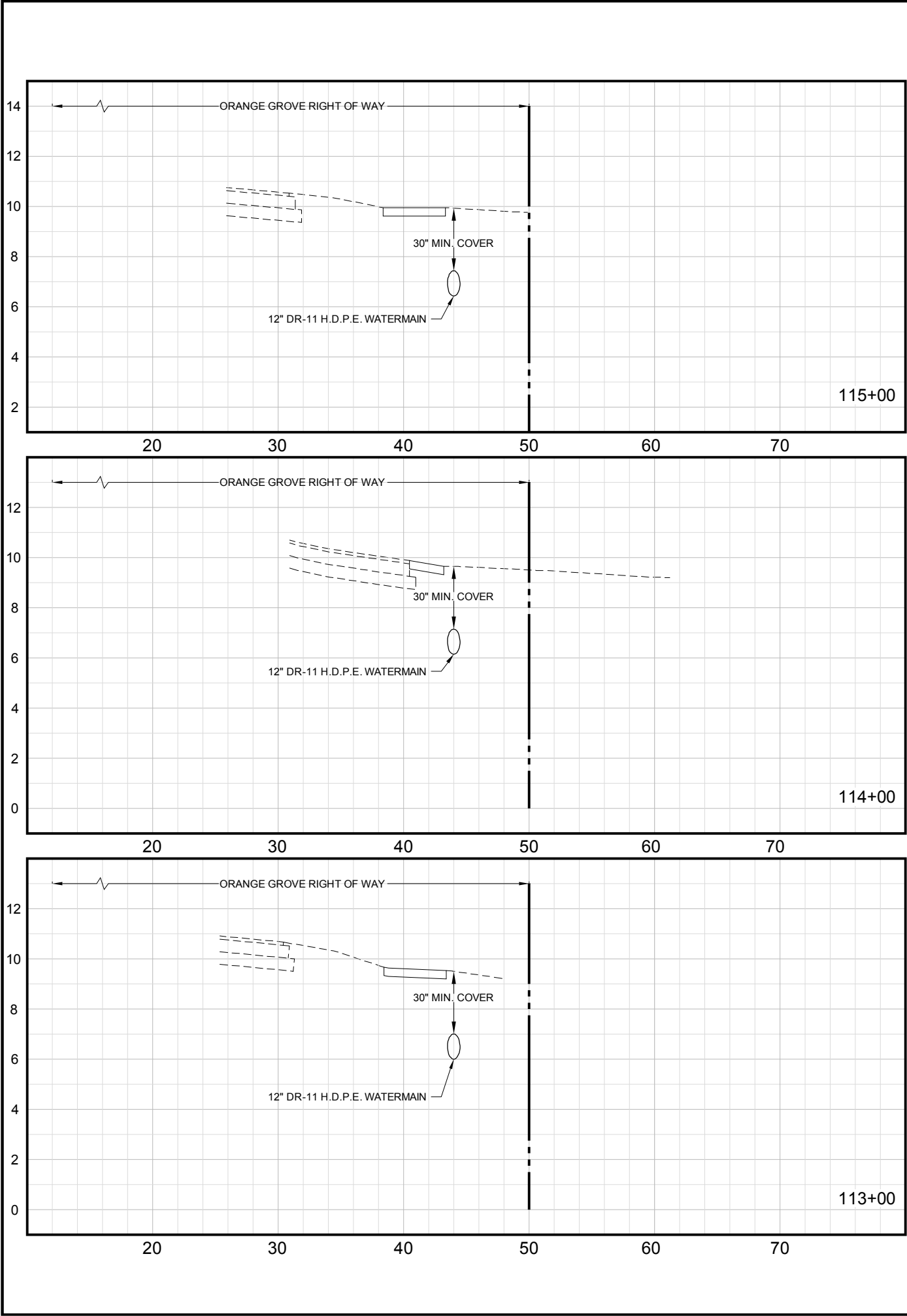
CROSS SECTIONS
ORANGE GROVE
BOULEVARD

PROJECT / FILE NO.	
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23513

SHEET NUMBER

C7.0



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ENGINEERING 7995 - SURVEYING LB-6940

PREPARED FOR

 **UTILITIES**
LEE COUNTY

1500 MONROE STREET
FORT MYERS, FLORIDA 33901
PHONE (239) 533-8181
FAX (239) 485-8845

WWW.LEEGOV.COM/UTILITIES

PROJECT DESCRIPTION

**ORANGE GROVE
BOULEVARD
WATERMAIN**

HANCOCK BRIDGE PARKWAY
TO PONDELLA ROAD

PART OF SECTION 9, AND 16,
TOWNSHIP 44 SOUTH, RANGE 24
FORT MYERS, LEE COUNTY, FLORIDA

ENGINEER OF RECORD

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PLOT BY: WES KAYNE

CROSS REFERENCED DRAWINGS

PLAN REVISIONS

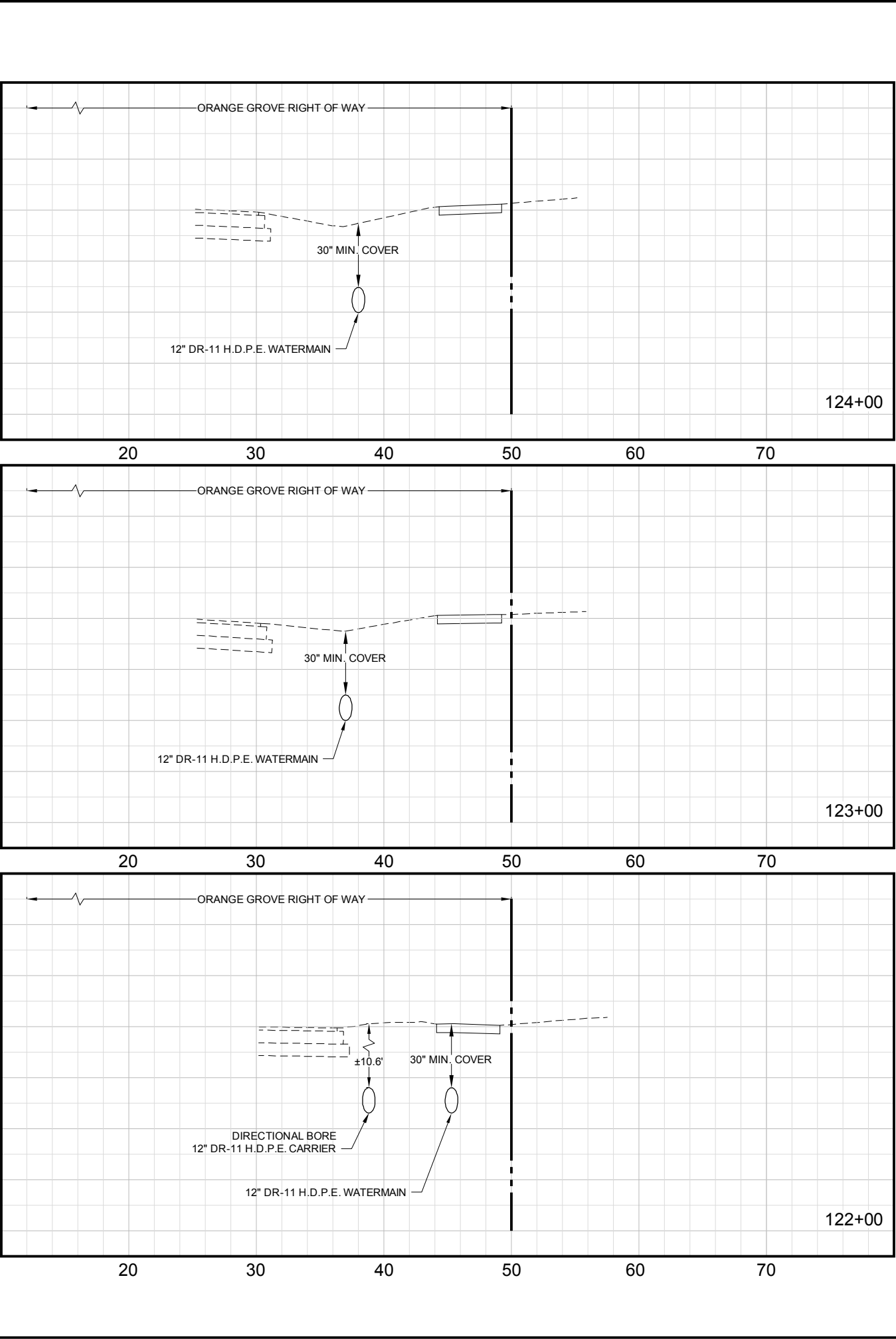
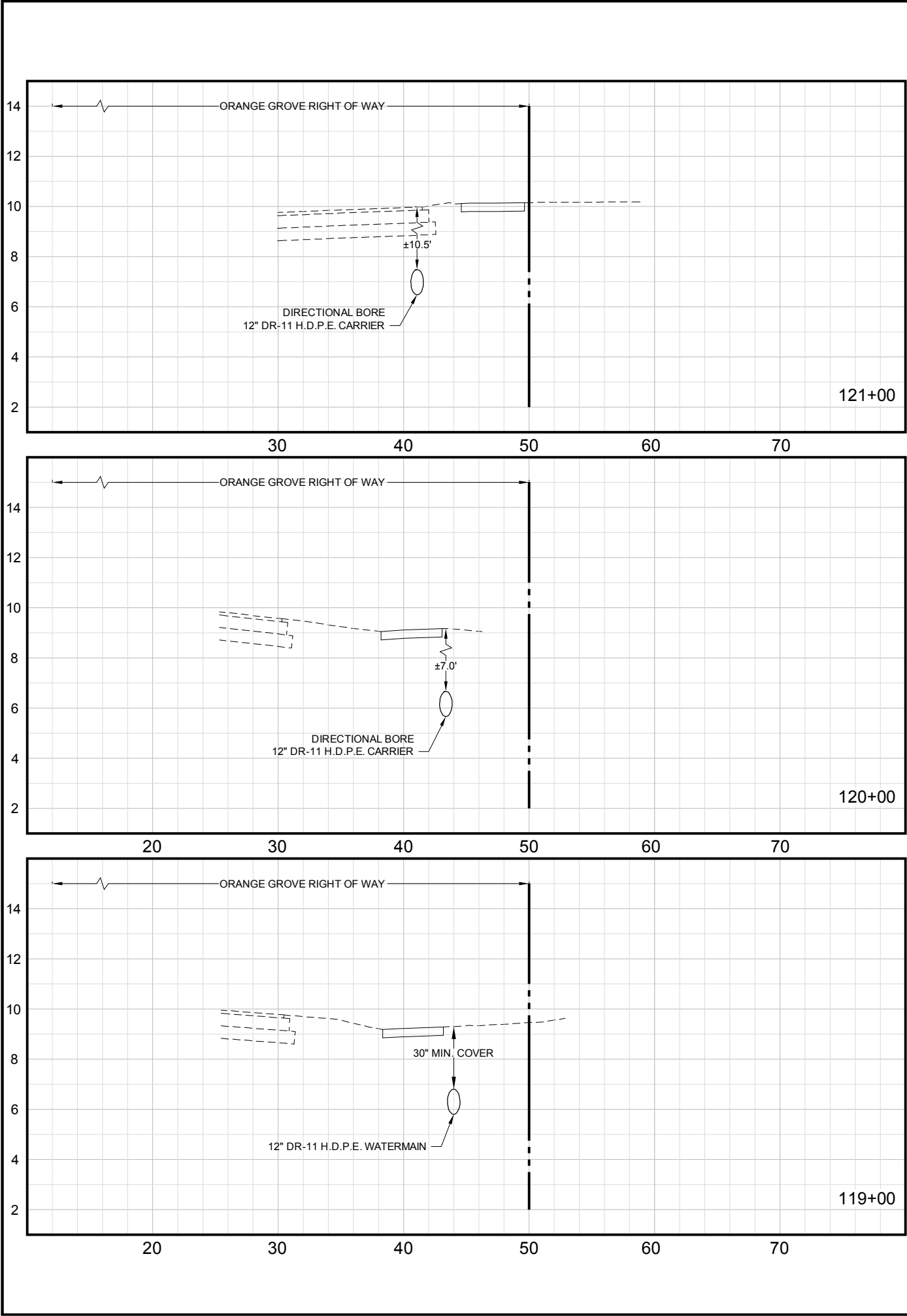
PLAN STATUS

100% PLAN SUBMITTAL
2018-02-23

CROSS SECTIONS
ORANGE GROVE
BOULEVARD

PROJECT / FILE NO.
23513

SHEET NUMBER
C7.2



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1500 MONROE STREET
FORT MYERS, FLORIDA 33901
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PROJECT DESCRIPTION
ORANGE GROVE BOULEVARD WATERMAIN
HANCOCK BRIDGE PARKWAY TO PONDELLA ROAD
PART OF SECTION 9, AND 16, TOWNSHIP 44 SOUTH, RANGE 24 FORT MYERS, LEE COUNTY, FLORIDA
ENGINEER OF RECORD
WESLEY S. KAYNE, P.E., FOR THE FIRM
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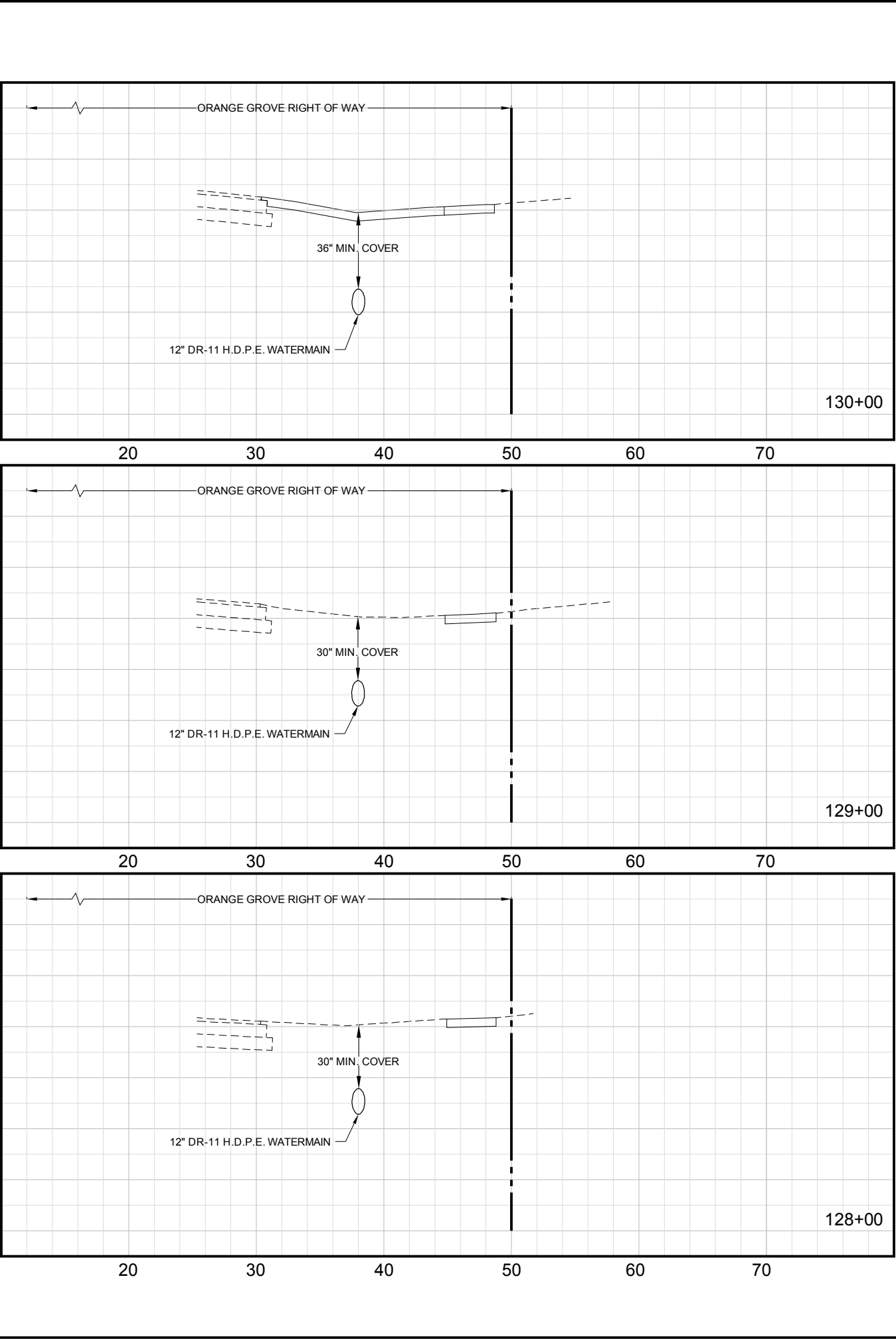
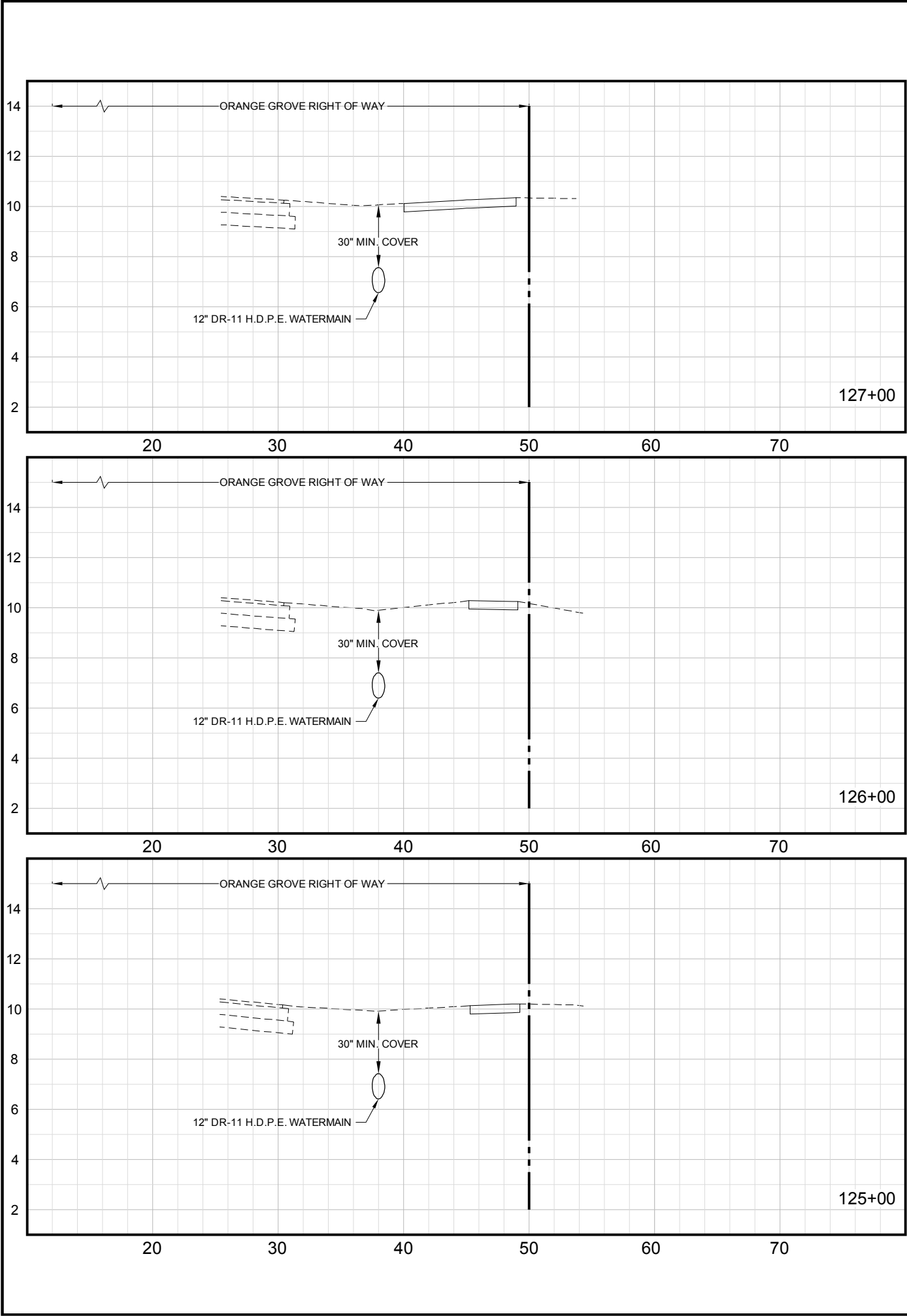
PLAN REVISIONS

PLAN STATUS
100% PLAN SUBMITTAL
2018-02-23

CROSS SECTIONS
ORANGE GROVE BOULEVARD

PROJECT / FILE NO.
23513

SHEET NUMBER
C7.3



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PROJECT DESCRIPTION

**ORANGE GROVE
BOULEVARD
WATERMAIN**

HANCOCK BRIDGE PARKWAY
TO PONDELLA ROAD

PART OF SECTION 9, AND 16,
TOWNSHIP 44 SOUTH, RANGE 24
FORT MYERS, LEE COUNTY, FLORIDA

ENGINEER OF RECORD

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PLOT DATE: MON, 2-26-2018 - 9:41 AM

PLOT BY: WES KAYNE

CROSS REFERENCED DRAWINGS

PLAN REVISIONS

PLAN STATUS

100% PLAN SUBMITTAL
2018-02-23

**CROSS SECTIONS
ORANGE GROVE
BOULEVARD**

PROJECT / FILE NO.
23513

SHEET NUMBER
C7.4



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ORANGE GROVE

HANCOCK BRIDGE PARKWAY

PART OF SECTION 9, AND 16.

ENGINEER OF RECORD

1000

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APPROVED BY	23513A35.DWG
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DETAILS	23513A35.DWG
NOTES	23513A35.DWG
REFERENCES	23513A35.DWG
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PLAN REVISIONS	

PLAN STATUS

100% PLAN SUBMITTAL
2018-02-22

2010-02-29

CROSS SECTIONS

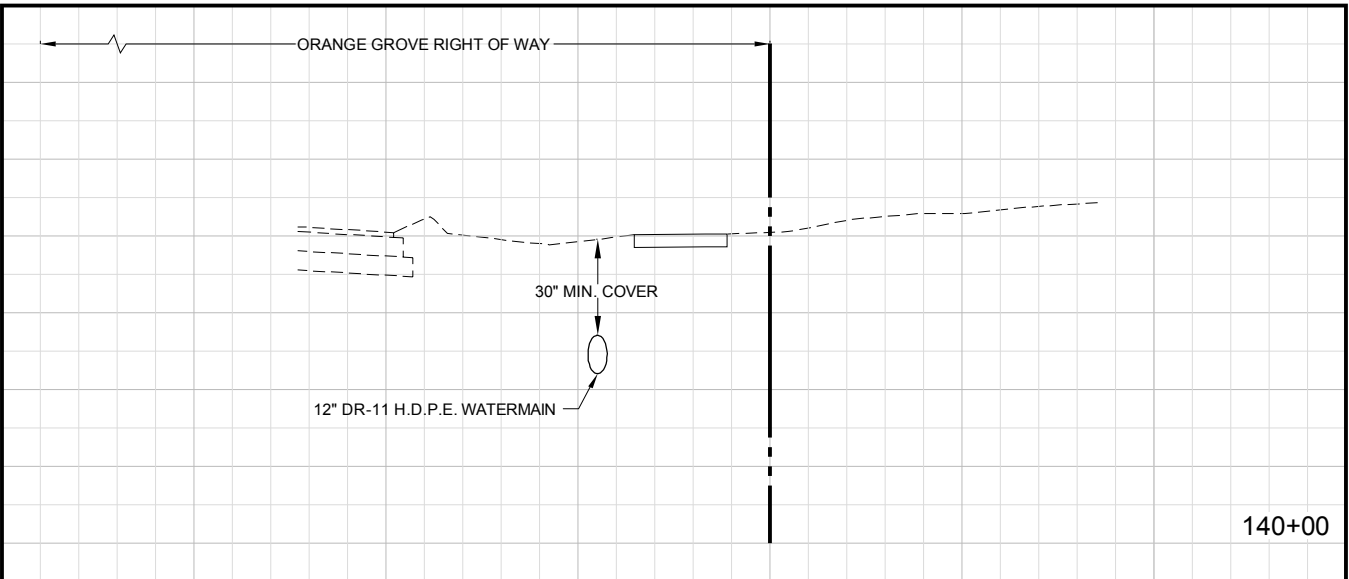
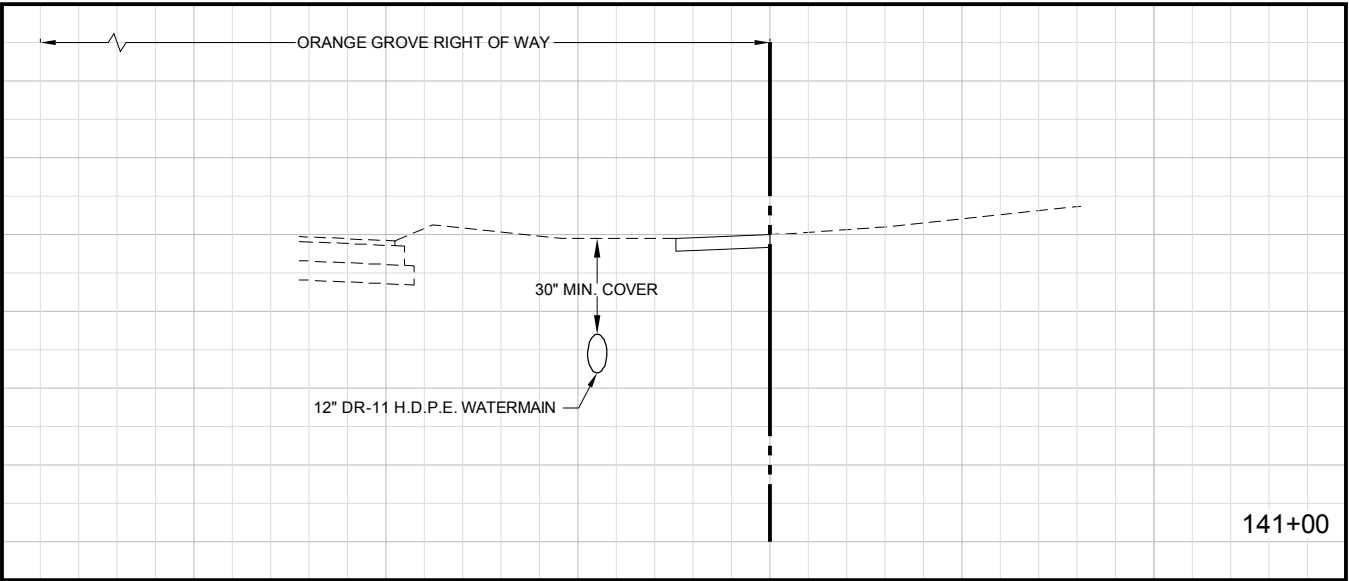
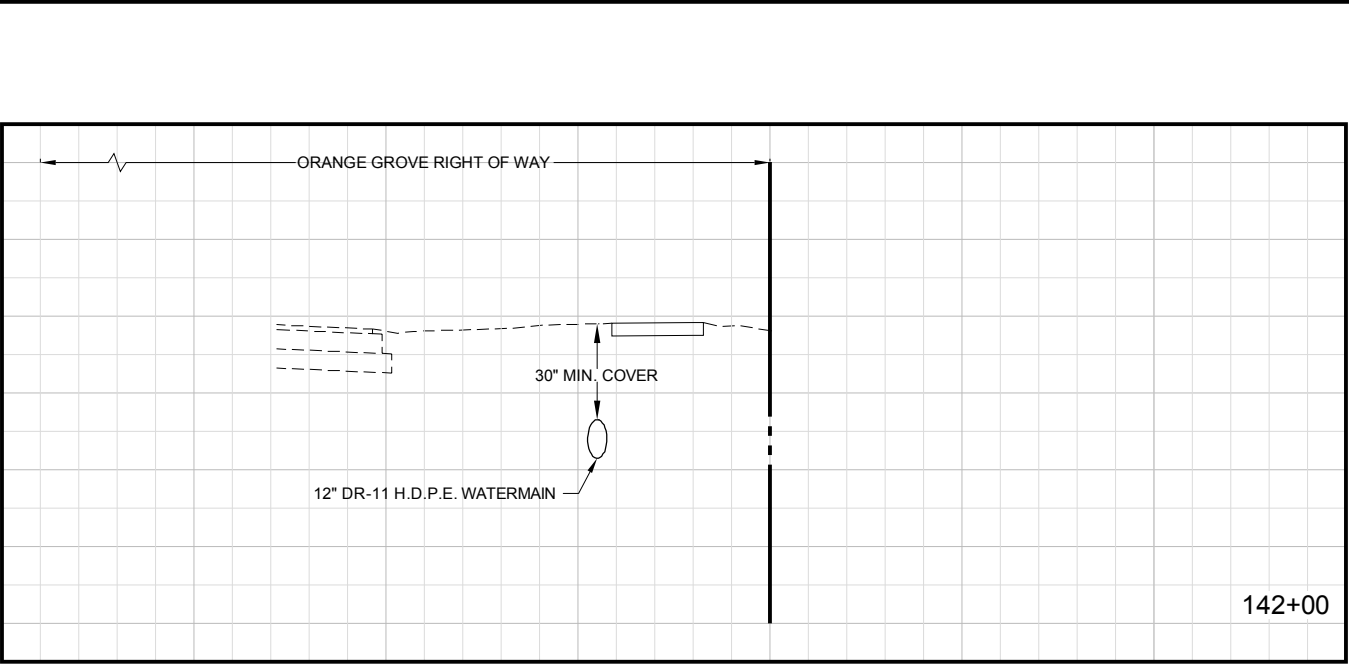
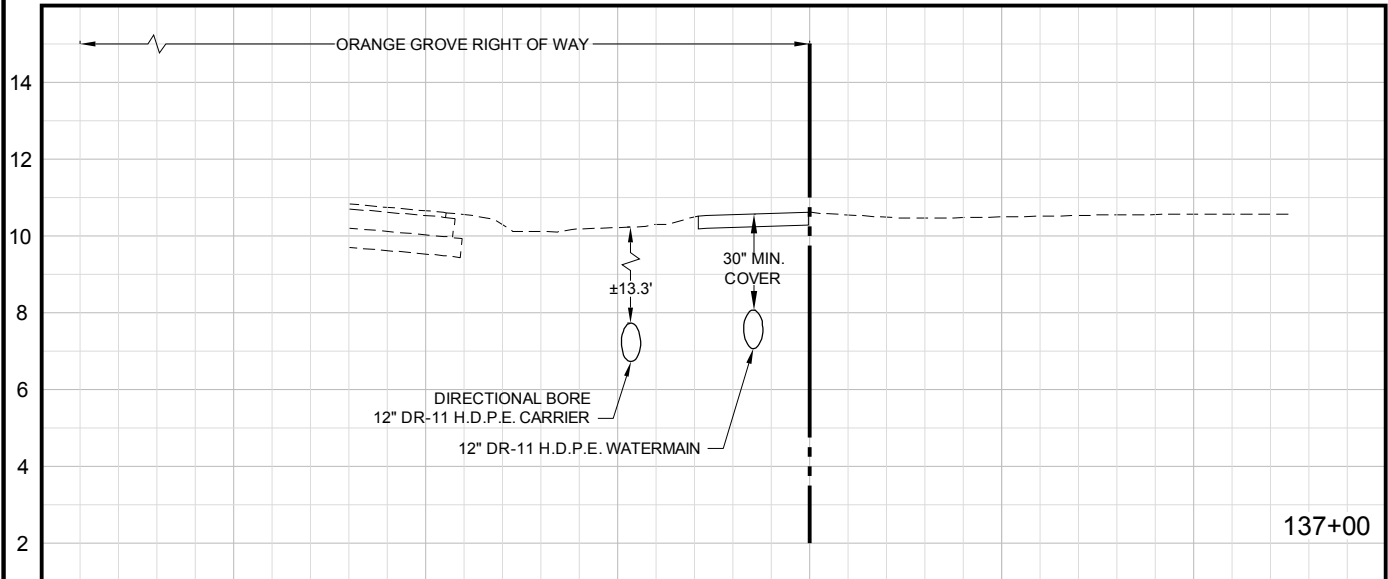
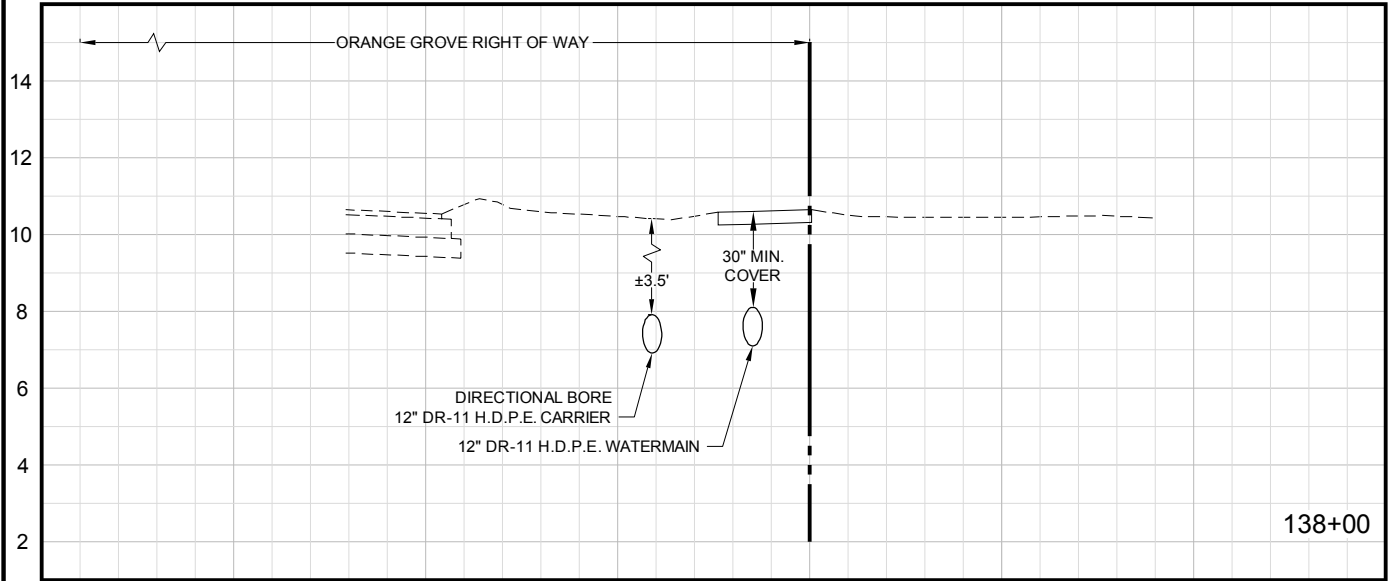
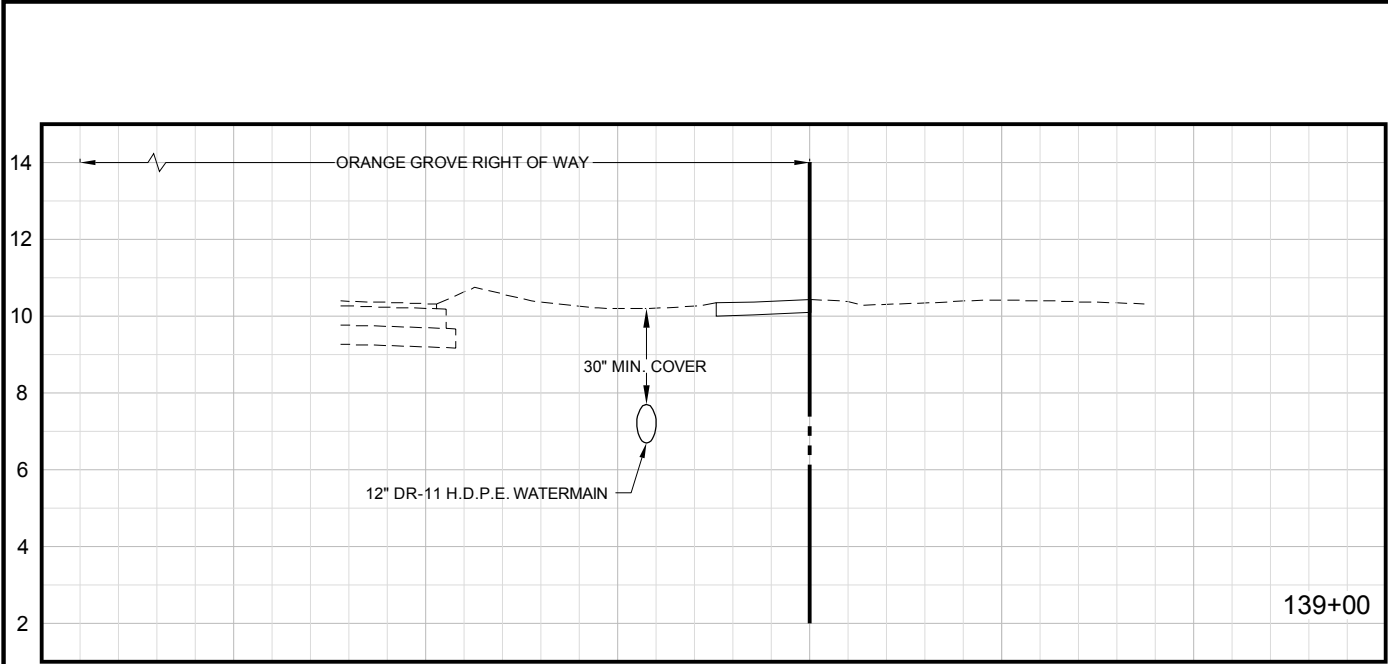
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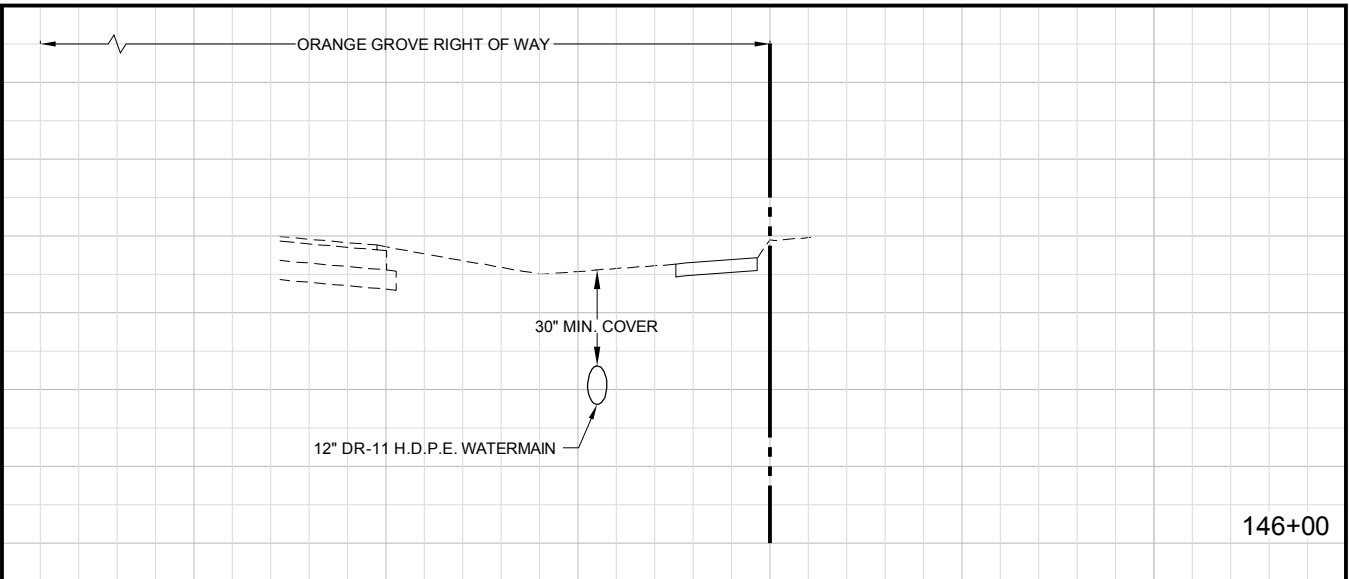
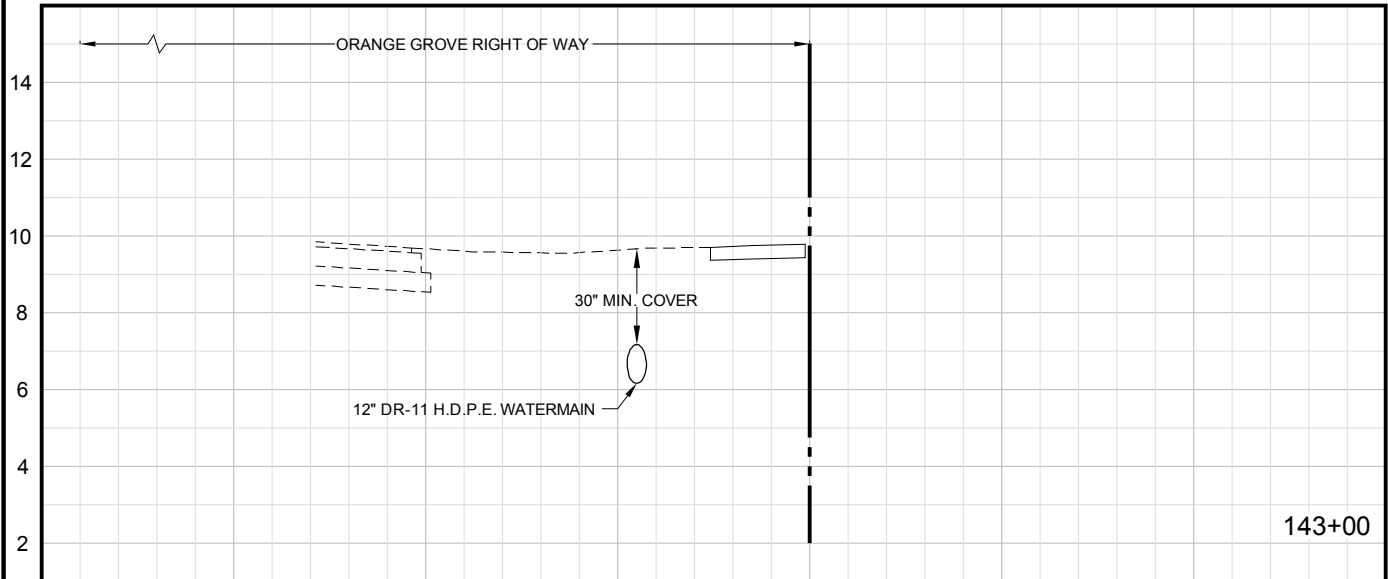
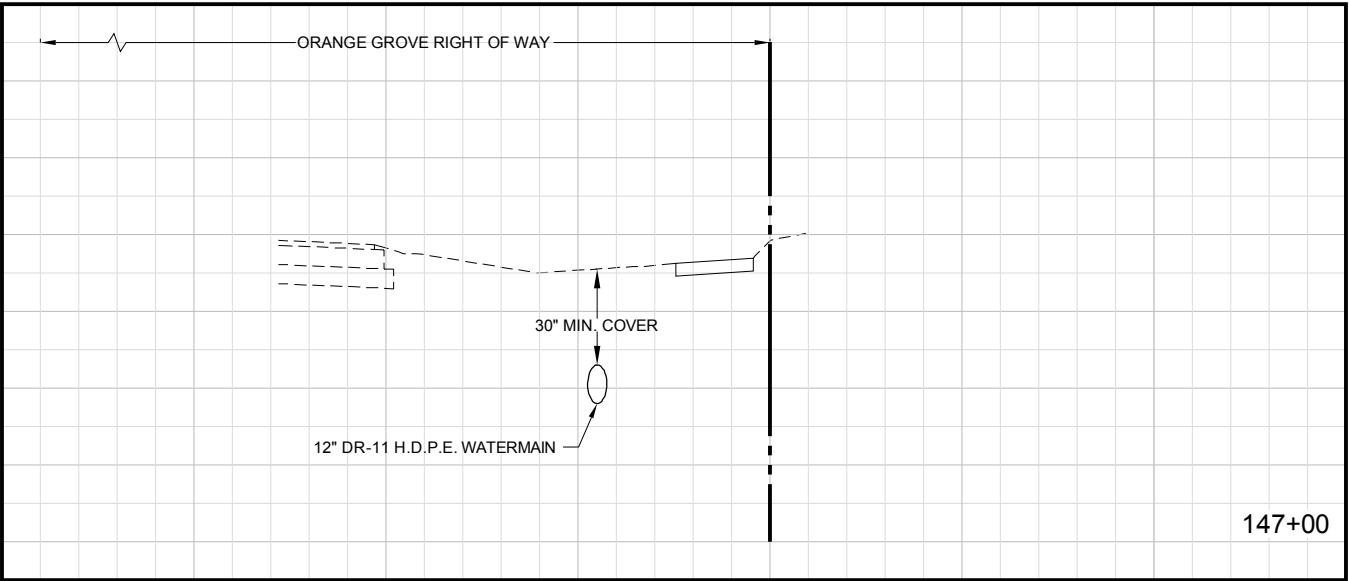
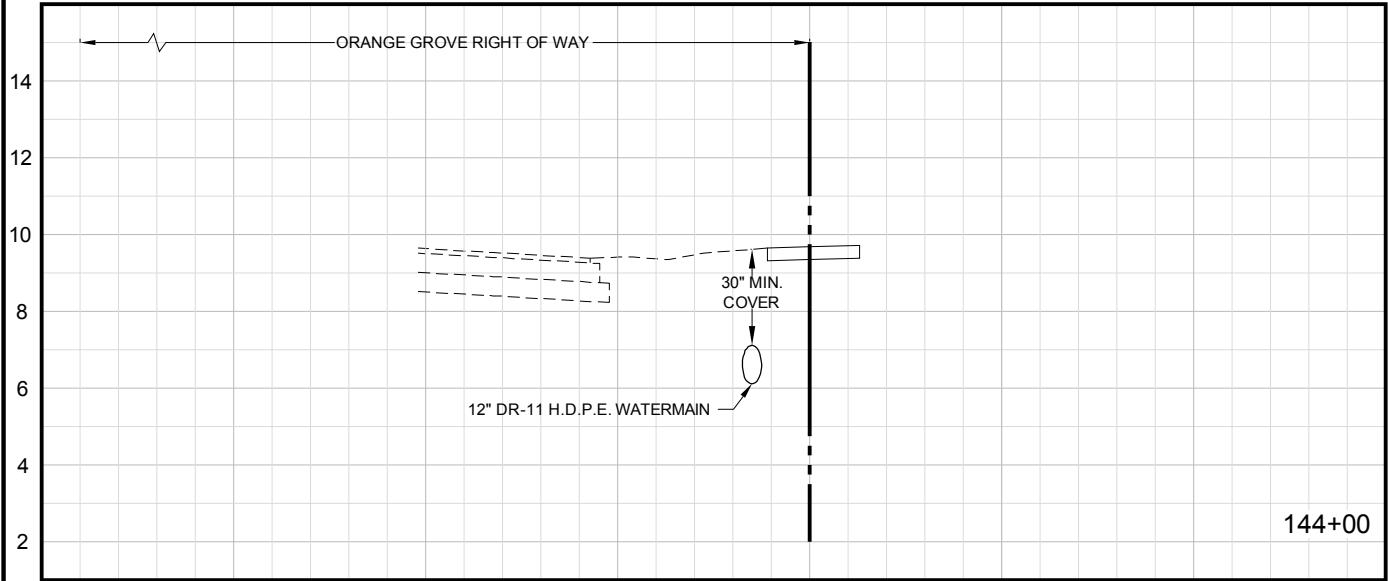
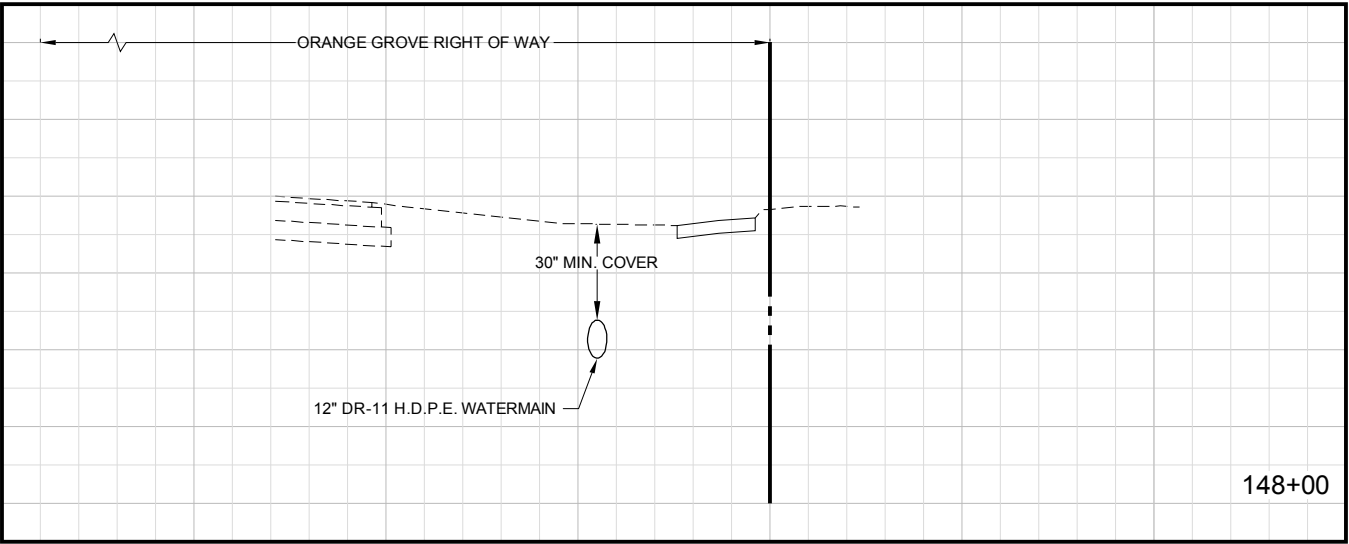
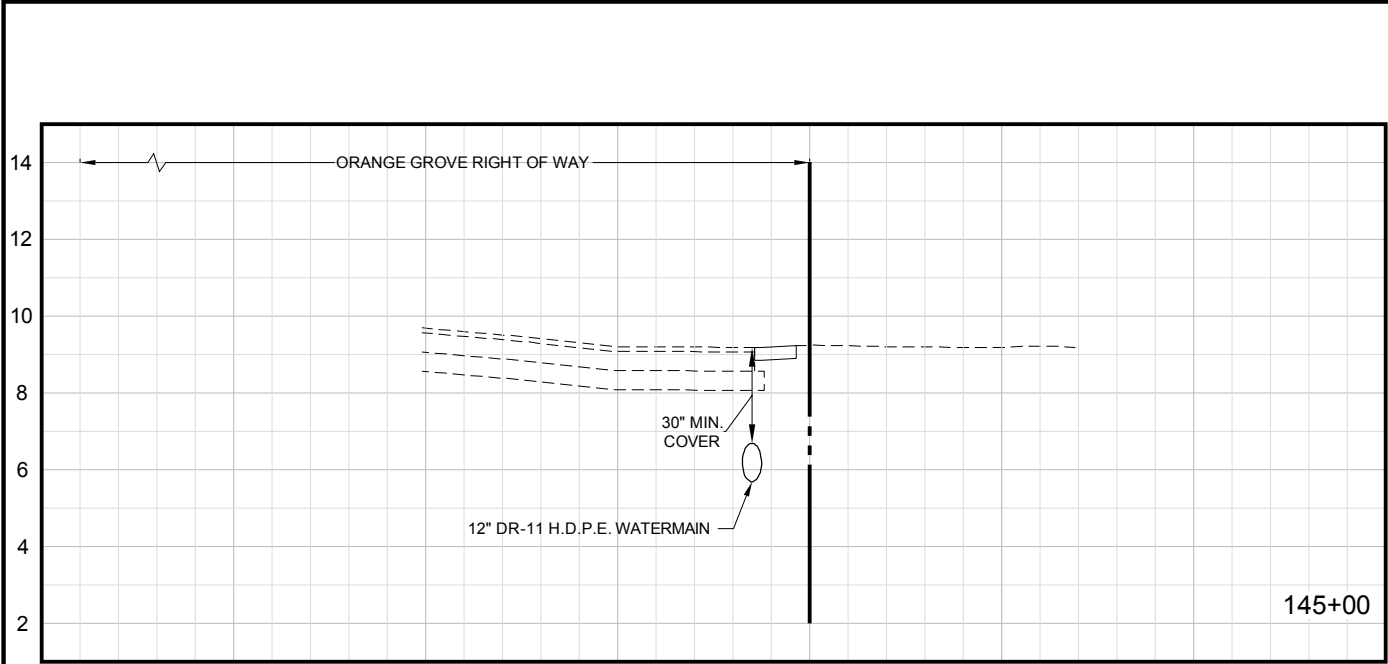
BOULEVARD

PROJECT / FILE NO.	SHEET NUMBER

23513	C7.5
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**ORANGE GROVE
BOULEVARD
WATERMAIN**

HANCOCK BRIDGE PARKWAY
TO PONDELLA ROAD

PART OF SECTION 9, AND 16,
TOWNSHIP 44 SOUTH, RANGE 24
FORT MYERS, LEE COUNTY, FLORIDA

WESLEY S. KAYNE, P.E., FOR THE FIRM
FLORIDA P.E. NO. 80507 - WESK@BARRACO.NET

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LOCATION: J:\23513\DWG\DWG

PLOT DATE: MON, 2-26-2018 - 9:42 AM

PLOT BY: WES KAYNE

CROSS REFERENCED DRAWINGS

PLAN REVISIONS

PLAN STATUS

100% PLAN SUBMITTAL
2018-02-23

**CROSS SECTIONS
ORANGE GROVE
BOULEVARD**

**ORANGE GROVE
BOULEVARD
WATERMAIN**

HANCOCK BRIDGE PARKWAY
TO PONDELLA ROAD

PART OF SECTION 9, AND 16,
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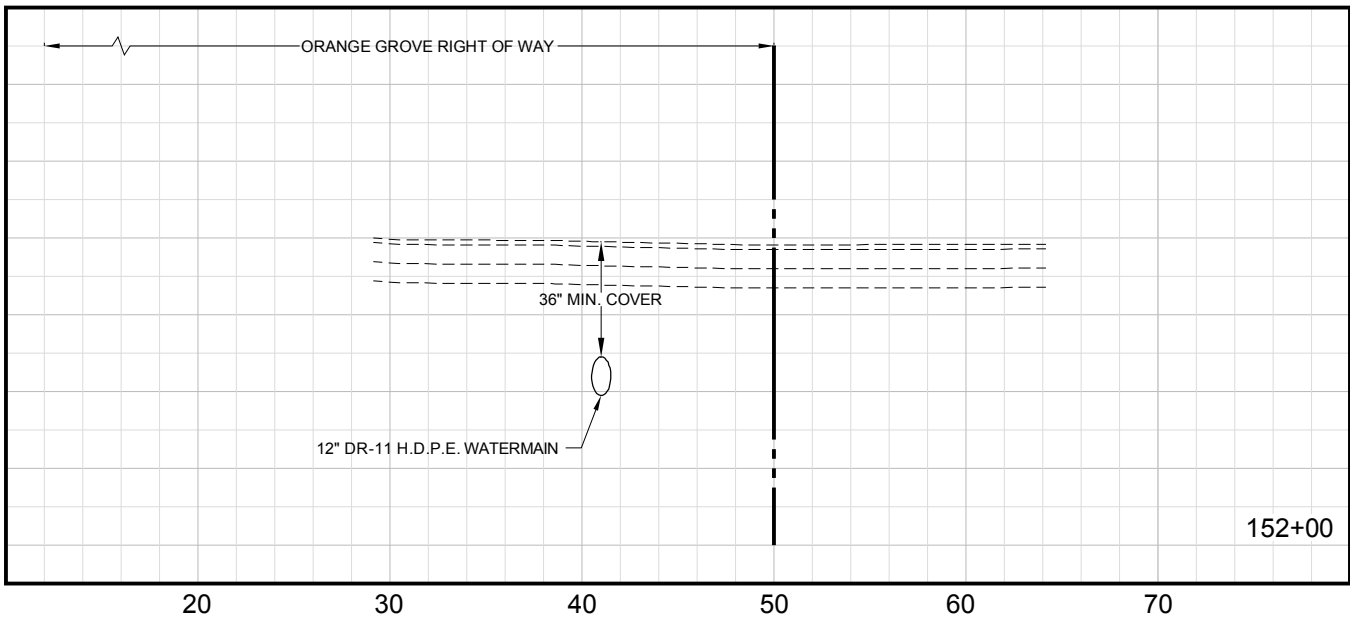
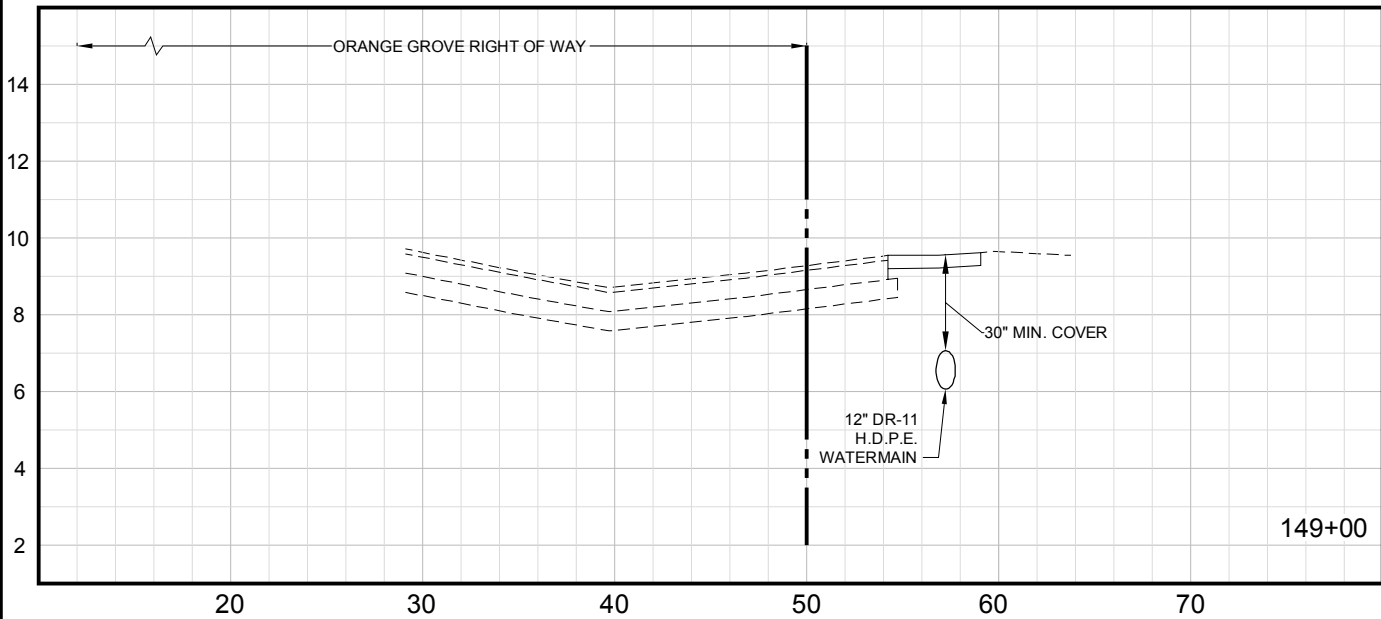
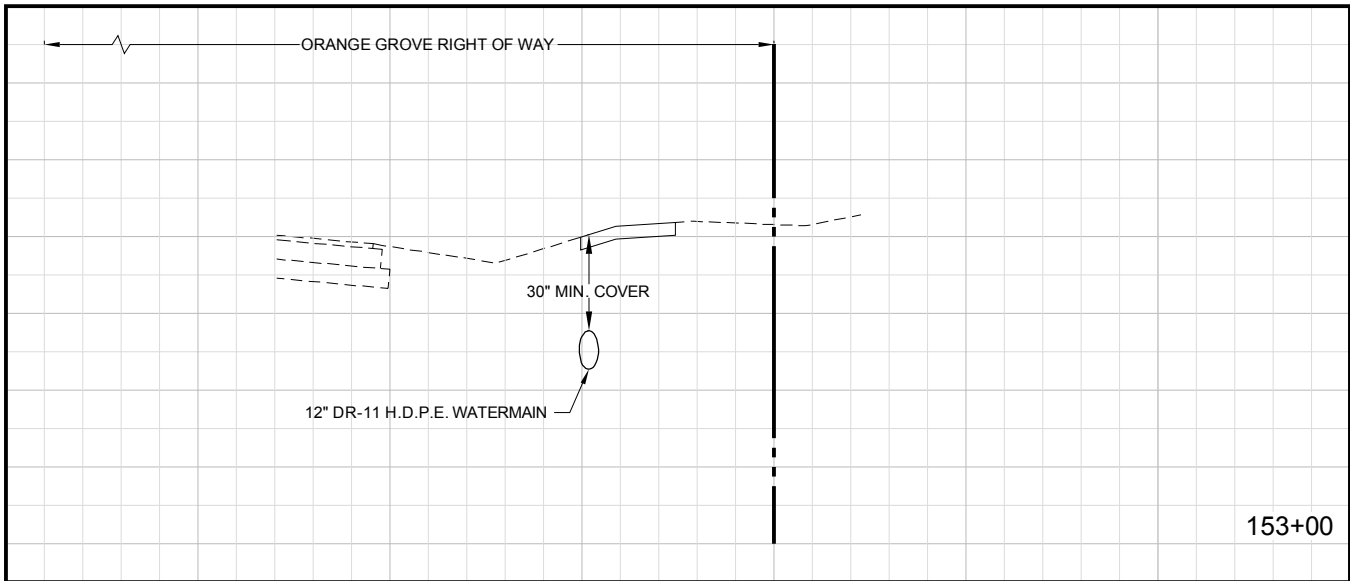
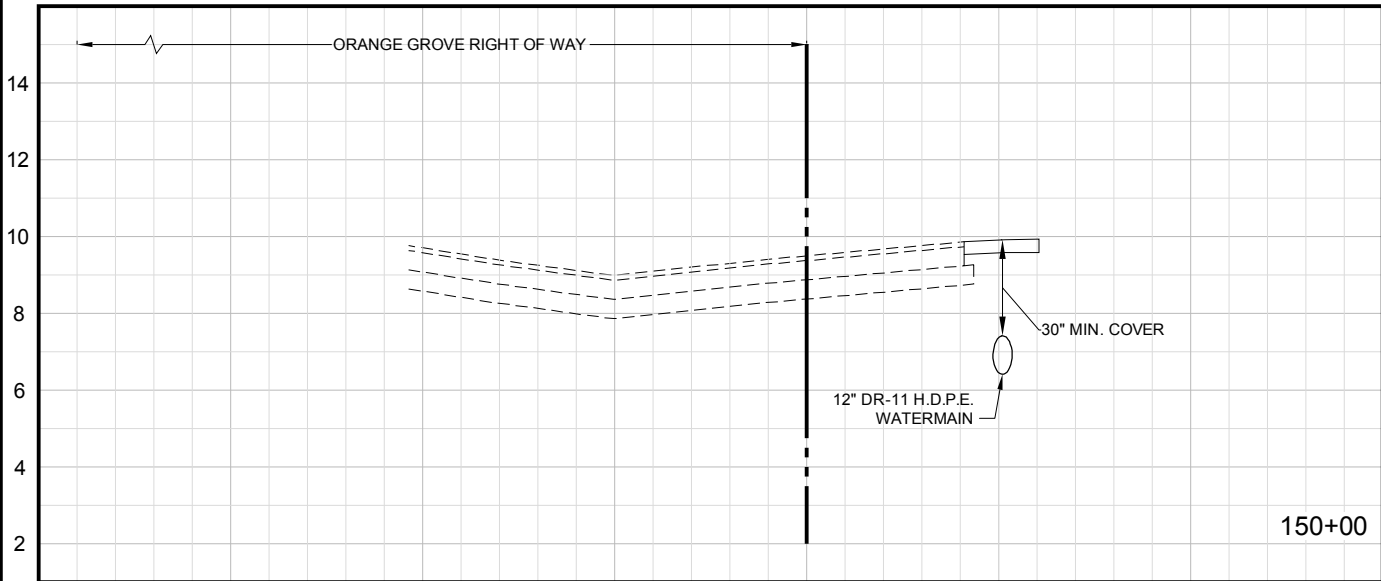
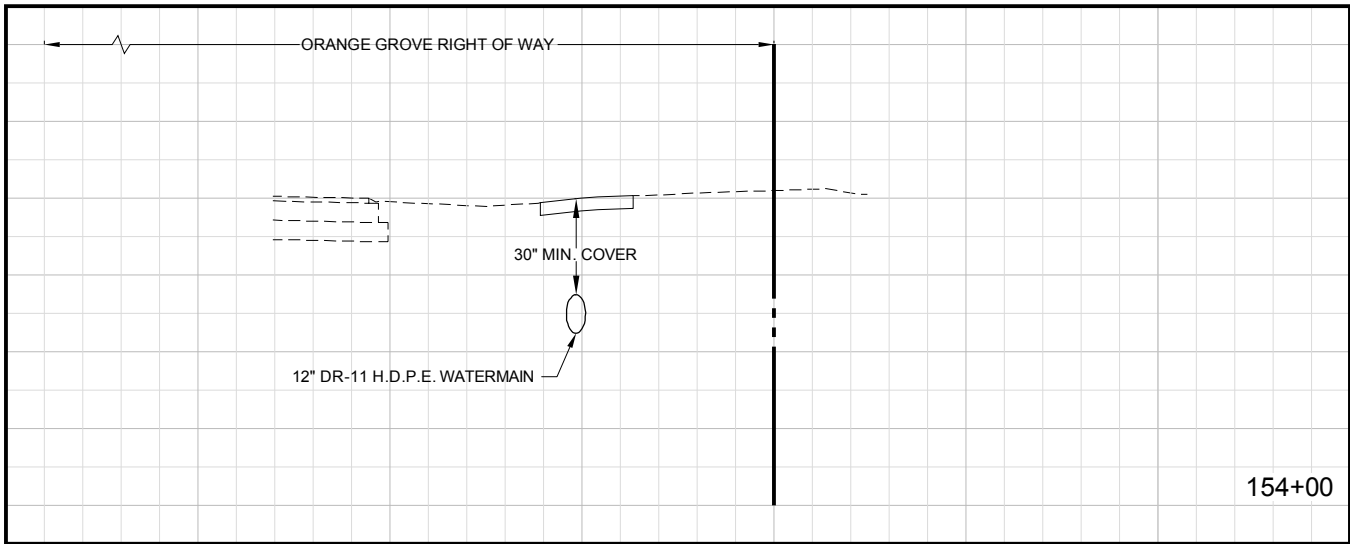
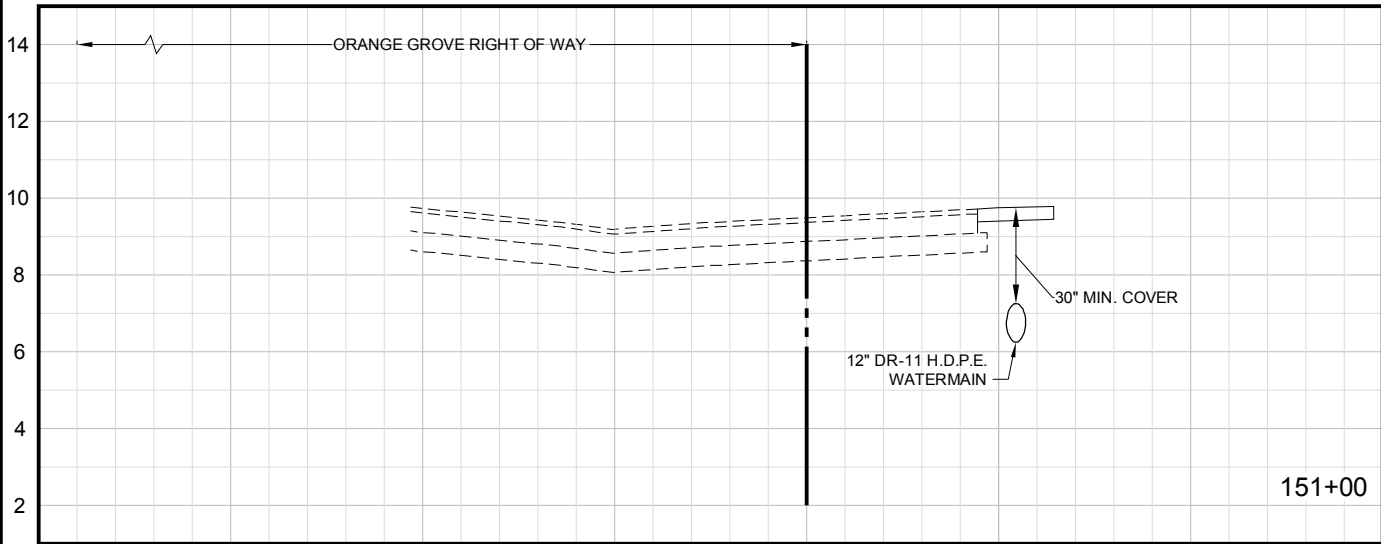
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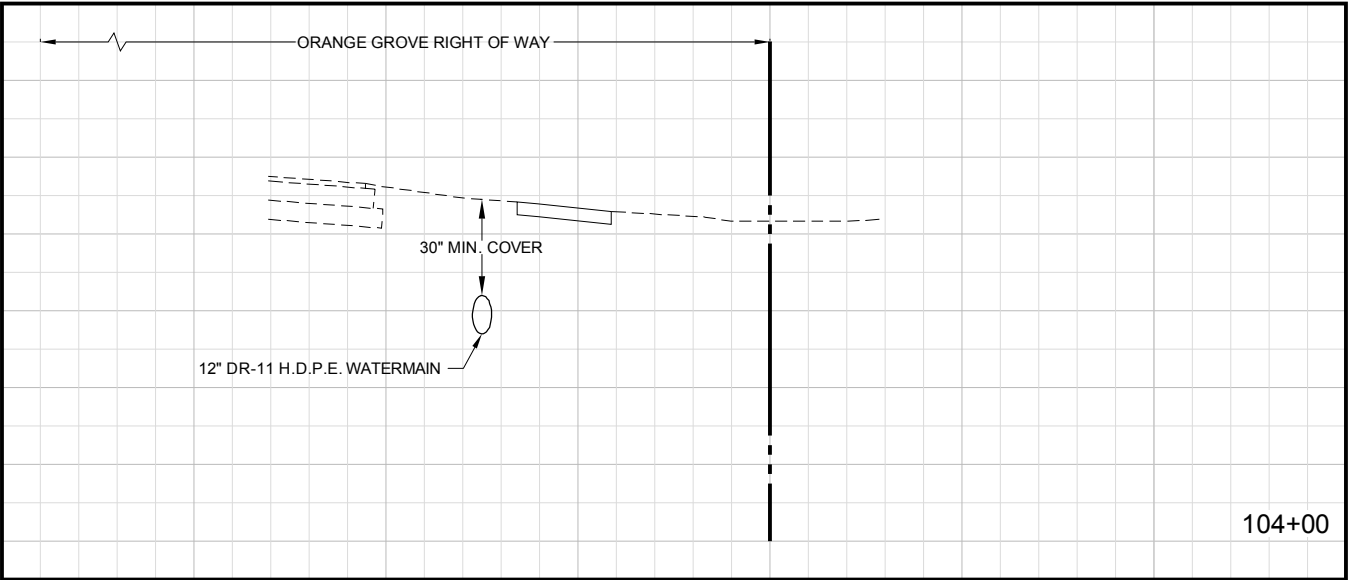
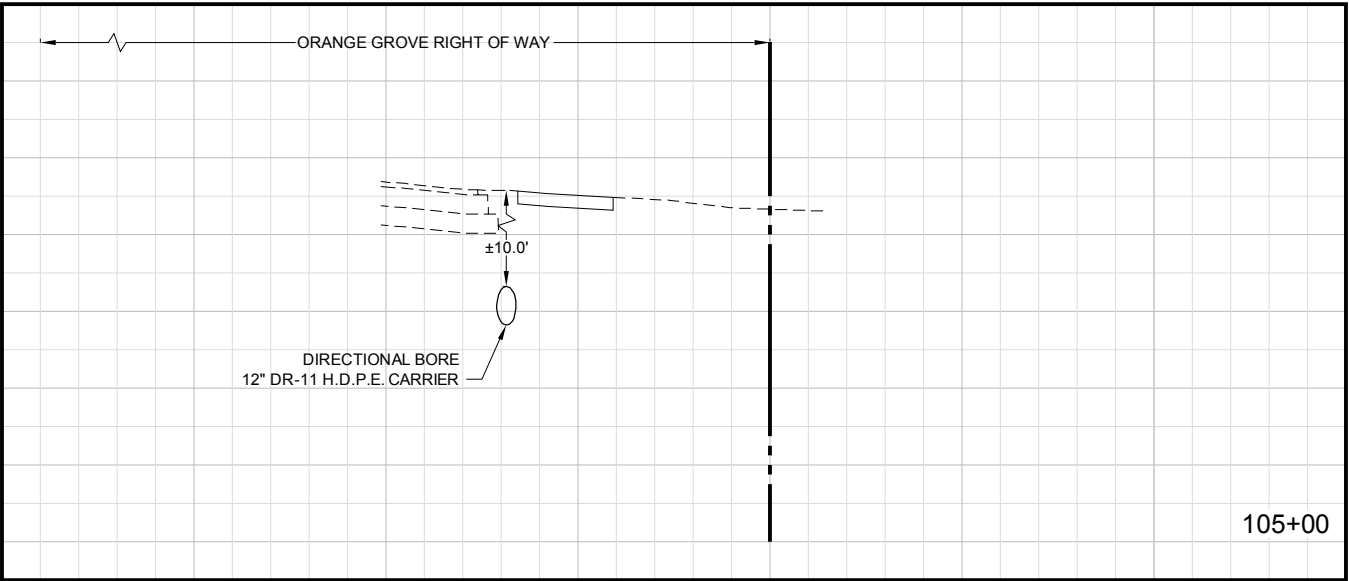
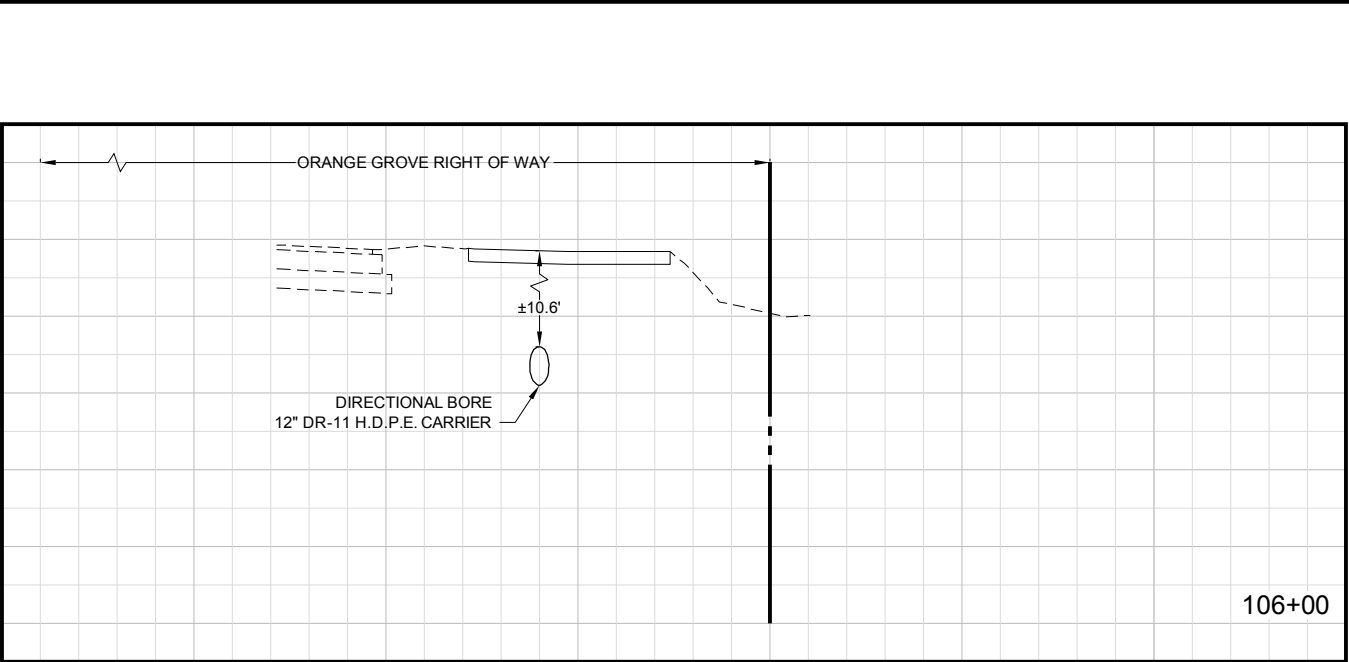
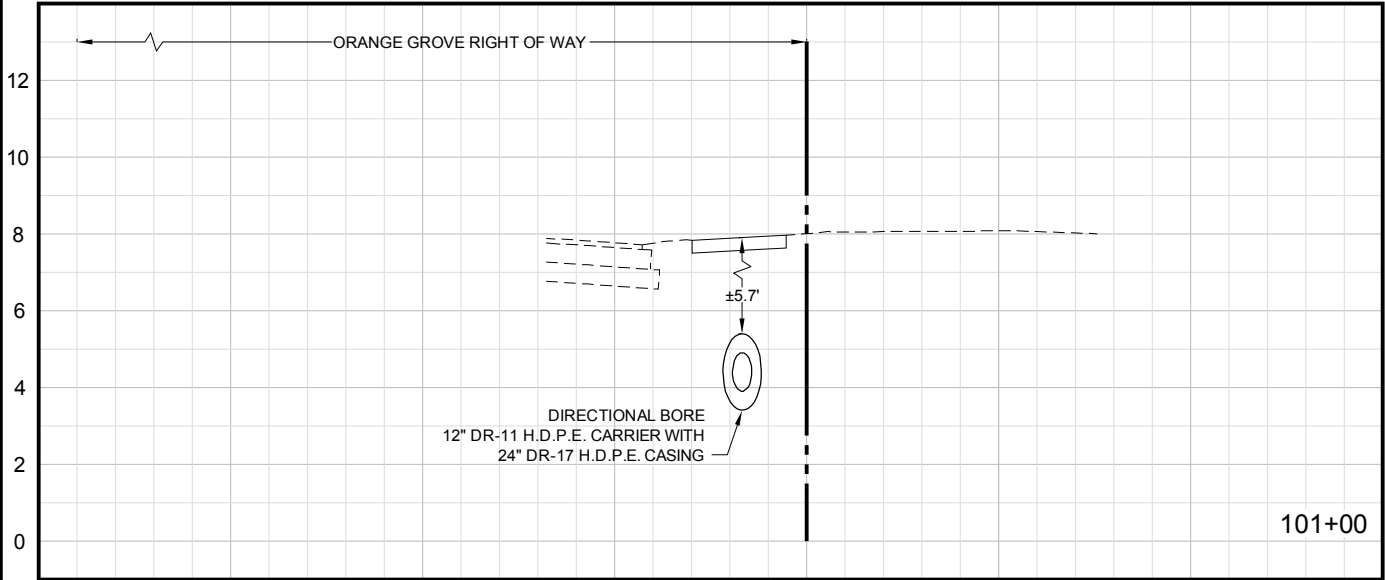
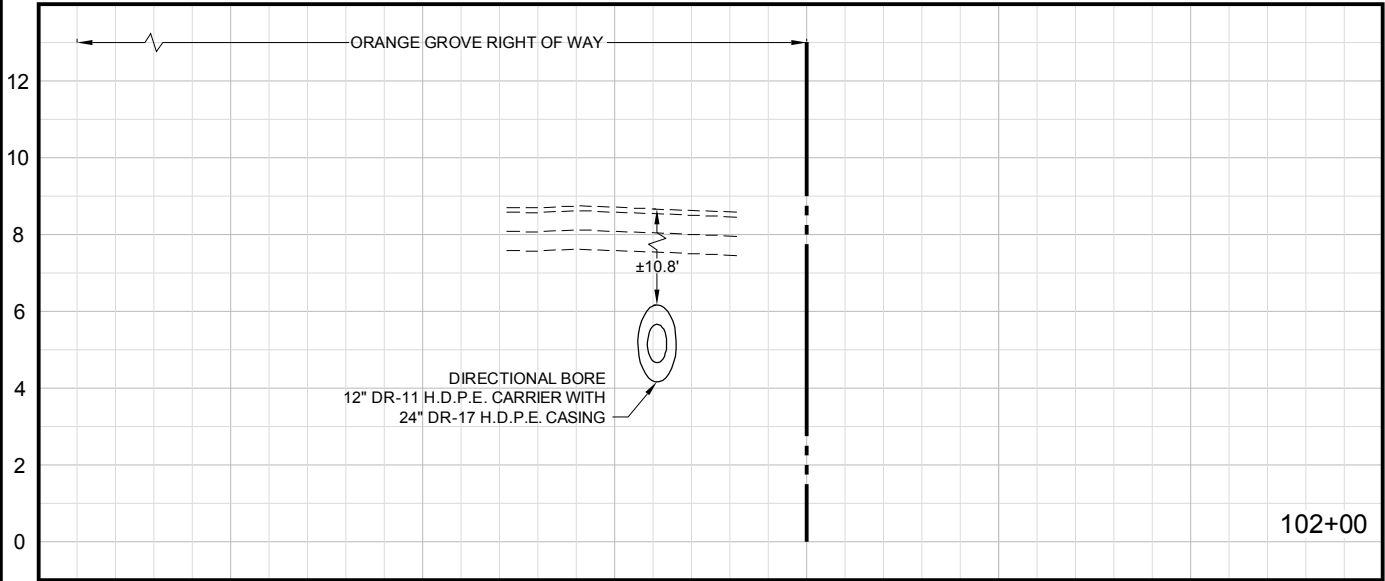
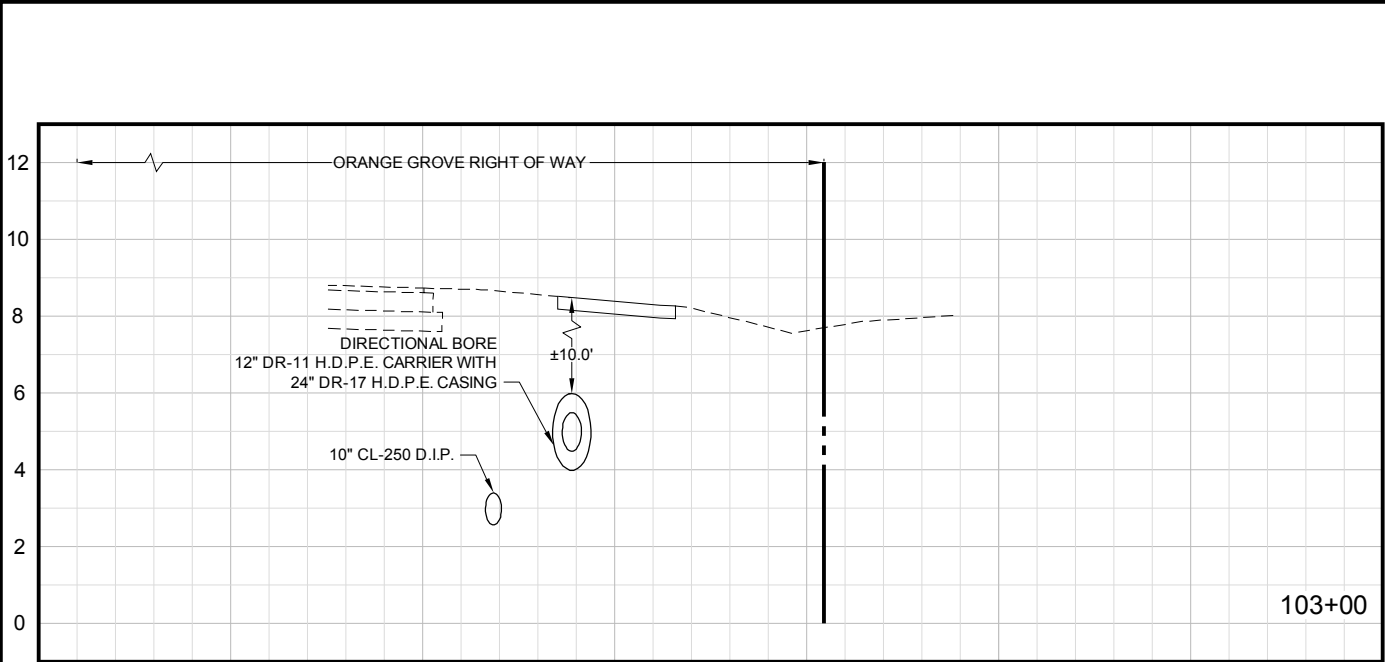
PLAN REVISIONS

PLAN STATUS

100% PLAN SUBMITTAL
2018-02-23

**CROSS SECTIONS
ORANGE GROVE
BOULEVARD**





**ORANGE GROVE
BOULEVARD
WATERMAIN**

HANCOCK BRIDGE PARKWAY
TO PONDELLA ROAD

PART OF SECTION 9, AND 16,
TOWNSHIP 44 SOUTH, RANGE 24
FORT MYERS, LEE COUNTY, FLORIDA

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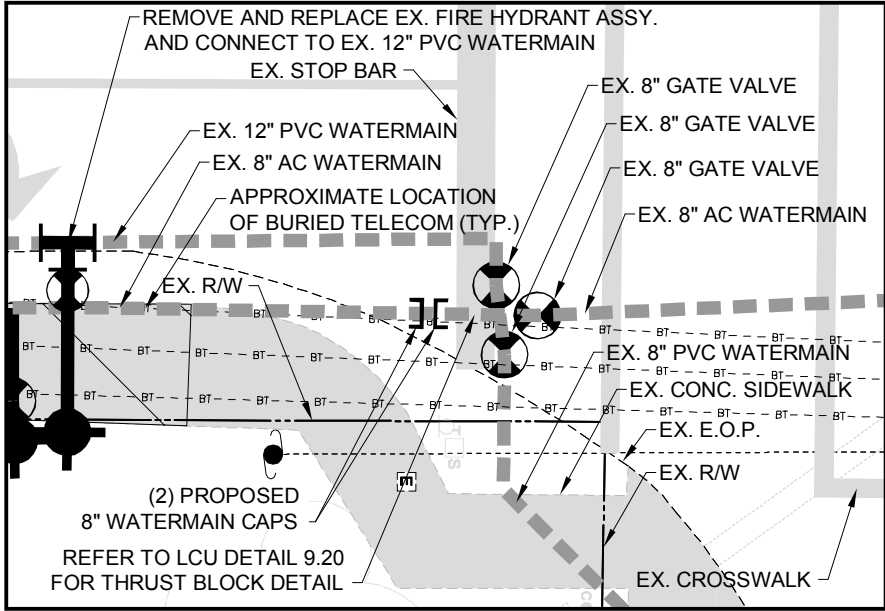
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PLAN REVISIONS

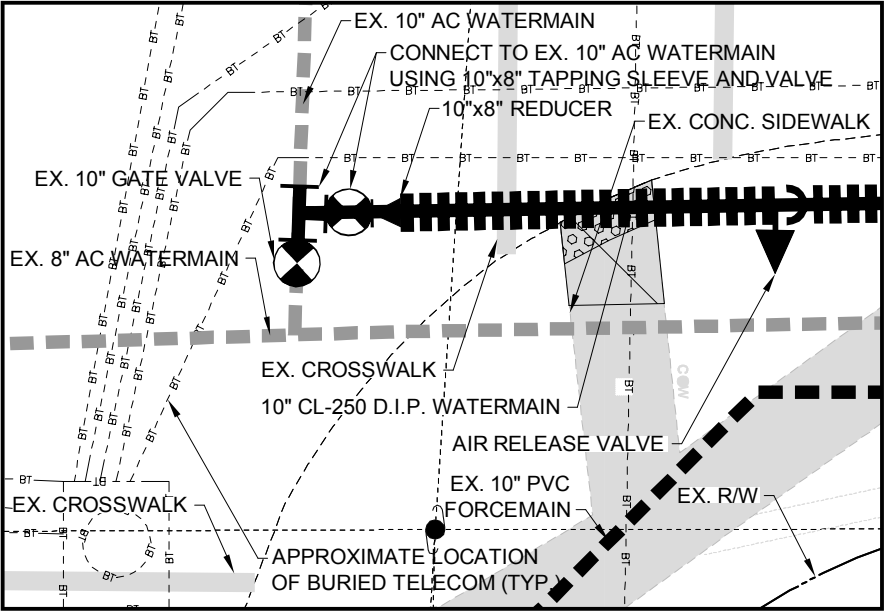
PLAN STATUS

100% PLAN SUBMITTAL
2018-02-23

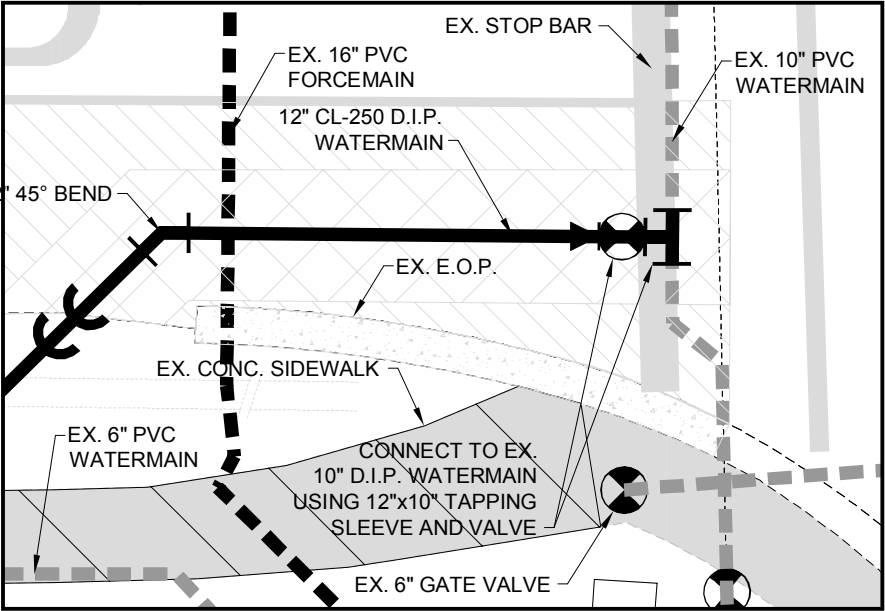
**CROSS SECTIONS
ORANGE GROVE
BOULEVARD**



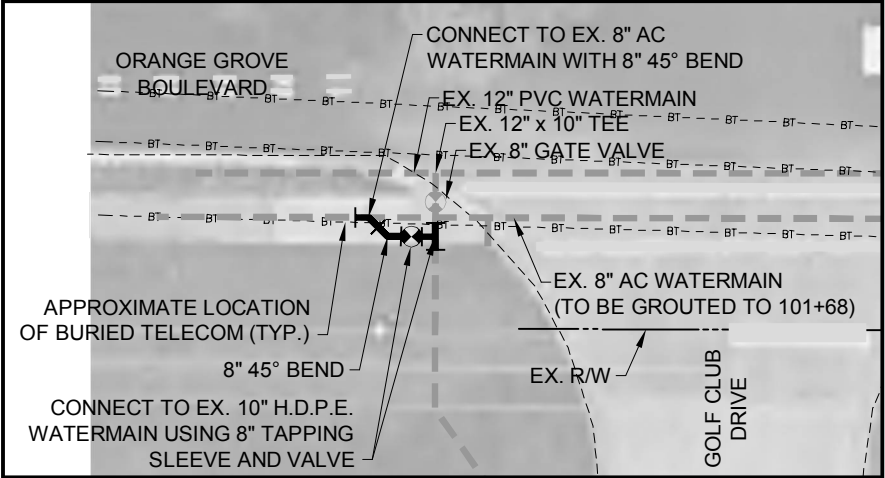
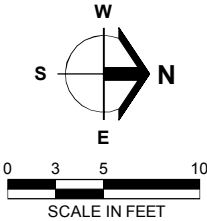
UTILITY CONNECTION DETAIL NO.1



UTILITY CONNECTION DETAIL NO.2



UTILITY CONNECTION DETAIL NO.3



UTILITY CONNECTION DETAIL GOLF CLUB DRIVE

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ORANGE GROVE
BOULEVARD
WATERMAIN

HANCOCK BRIDGE PARKWAY
TO PONDELLA ROAD

PART OF SECTION 9, AND 16,
TOWNSHIP 44 SOUTH, RANGE 24
FORT MYERS, LEE COUNTY, FLORIDA

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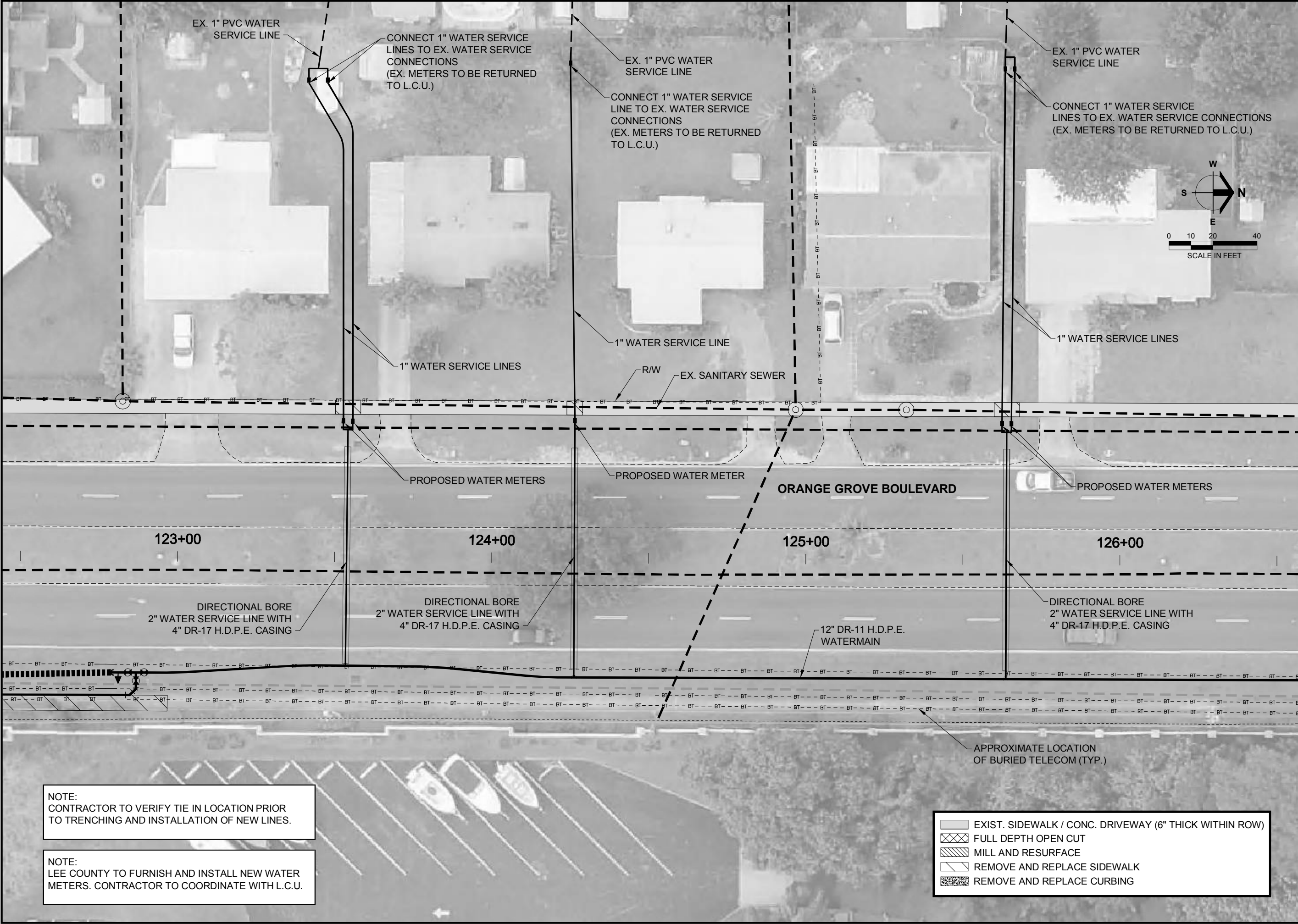
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BASEPLAN = 23513A00.DWG
SURVEY = 23513S00.DWG

PLAN REVISIONS

PLAN STATUS
100% PLAN SUBMITTAL 2018-02-23

UTILITY
CONNECTION
DETAILS

PROJECT / FILE NO.	SHEET NUMBER
23513	C8.0



NOTE:
CONTRACTOR TO VERIFY TIE IN LOCATION PRIOR
TO TRENCHING AND INSTALLATION OF NEW LINES.

NOTE:
LEE COUNTY TO FURNISH AND INSTALL NEW WATER
METERS. CONTRACTOR TO COORDINATE WITH L.C.U.

- EXIST. SIDEWALK / CONC. DRIVEWAY (6" THICK WITHIN ROW)
- FULL DEPTH OPEN CUT
- MILL AND RESURFACE
- REMOVE AND REPLACE SIDEWALK
- REMOVE AND REPLACE CURBING

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PROJECT DESCRIPTION

**ORANGE GROVE
BOULEVARD
WATERMAIN**

HANCOCK BRIDGE PARKWAY
TO PONDELLA ROAD

PART OF SECTION 9, AND 16,
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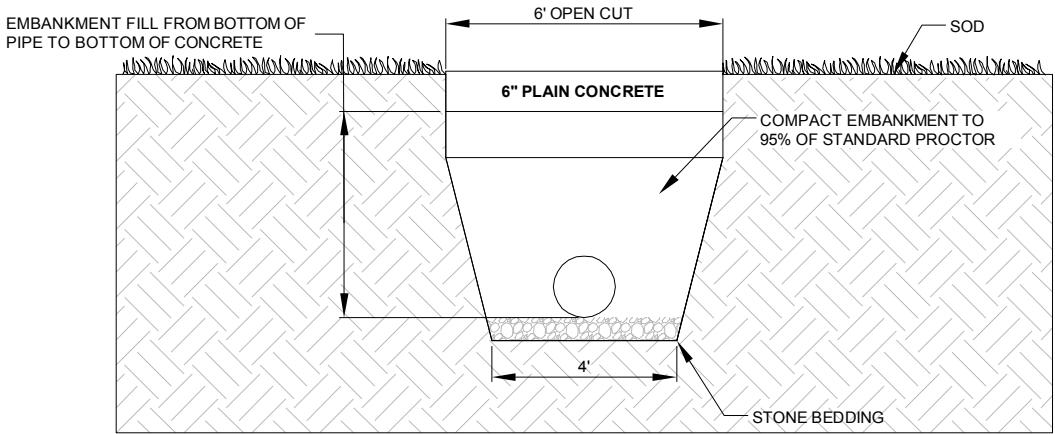
PLAN REVISIONS	

PLAN STATUS

100% PLAN SUBMITTAL
2018-02-23

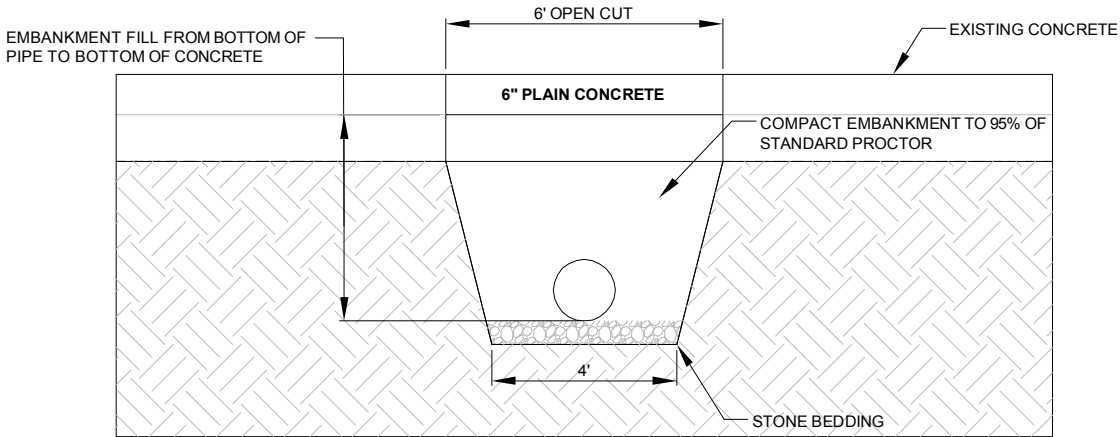
UTILITY
CONNECTION
DETAILS

PROJECT / FILE NO.	SHEET NUMBER
23513	C8.1



SIDEWALK OPEN CUT SECTION
(EMBANKMENT FILL WITH PLAIN CONCRETE)

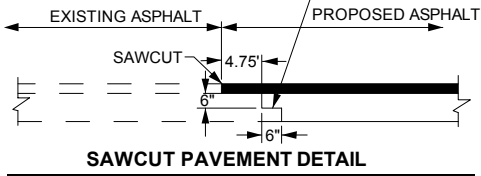
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DRIVE WAY OPEN CUT SECTION
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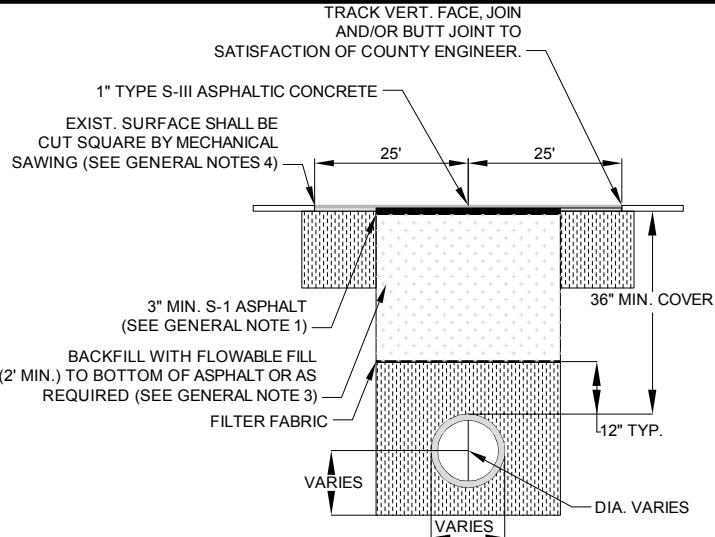
N.T.S.

SCARIFY AND REWORK EXISTING BASEROCK TO BLEND WITH NEW BASEROCK & COMPACT TO A MIN. 98% OF MAX. DRY DENSITY PER AASHTO T-180



SAWCUT PAVEMENT DETAIL

N.T.S.

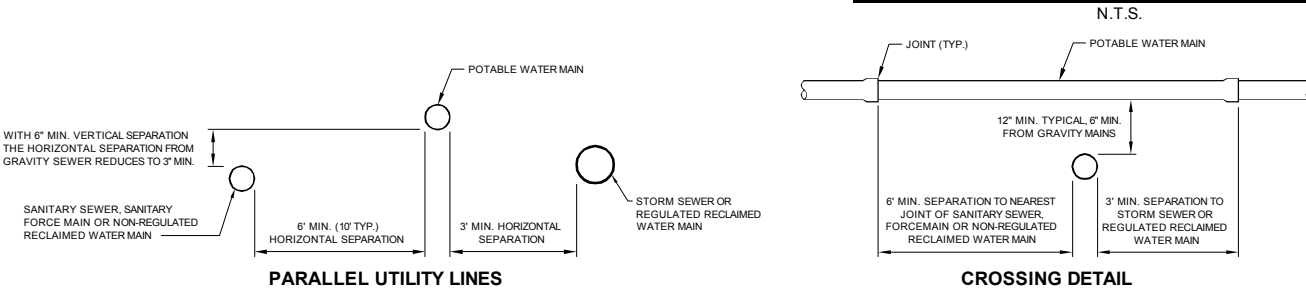


OVERLAY WITH 1" S-3 ASPHALT OR MATCH EXISTING, 25 FEET IN EACH DIRECTION WITH 2' W x 3/4" DEEP MILLED BUTT JOINT AT EACH END.

GENERAL NOTES

1. THE LIMITS OF ASPHALT (OVERLAY) REPLACEMENT SHALL BE DETERMINED BY LEE COUNTY.
2. FOR GRAVITY PIPE LINES, MAY USE 1' (FT) ABOVE PIPE.
3. CONTROLLED LOW STRENGTH MATERIALS (CLSM)
4. USING A 3/4" THICK x 2' WIDE BUTT JOINT AT EACH END.
5. COMPACTION 6" LIFTS WITH DENSITIES EVERY 12"

TRENCH RESTORATION DETAIL FOR LEE COUNTY ROADS



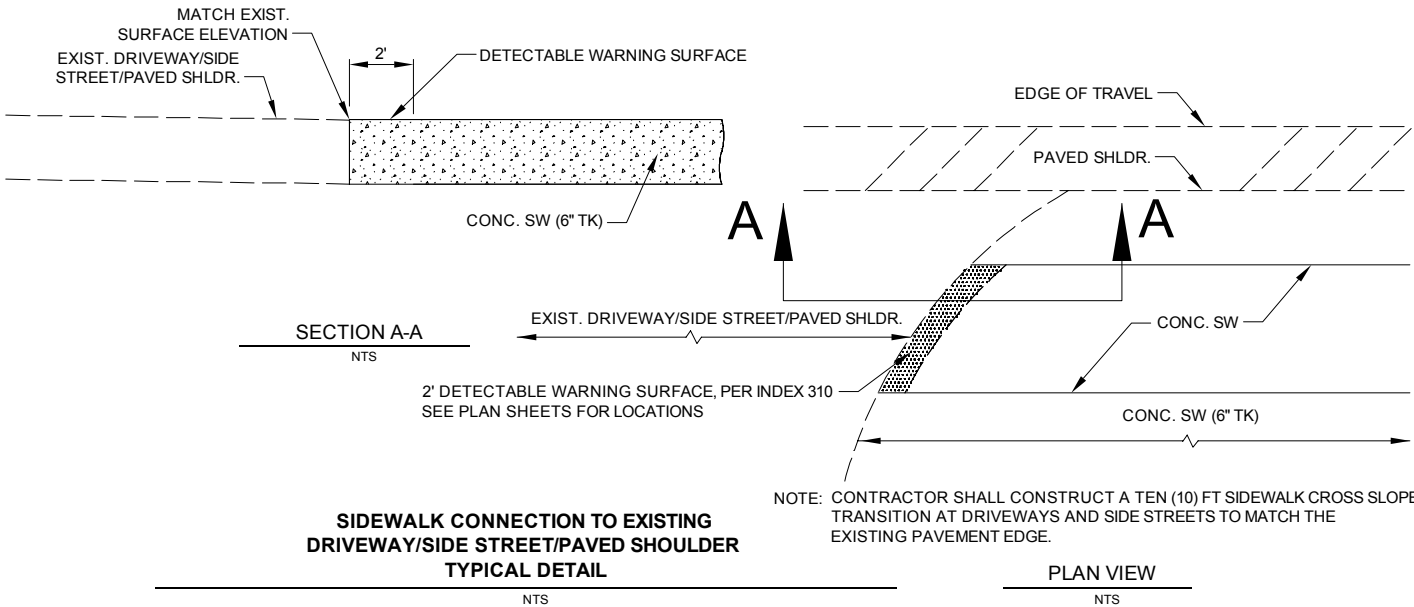
PARALLEL UTILITY LINES

CROSSING DETAIL

UTILITY LOCATION NOTES:

1. THE REFERENCED UTILITY SEPARATIONS ARE IN ACCORDANCE WITH F.A.C. CHAPTER 62-555. SEE UTILITY DETAILS OR SPECIFICATIONS FOR ADDITIONAL SEPARATION REQUIREMENTS OF THE LOCAL UTILITY PROVIDER.
2. WHERE POSSIBLE THE POTABLE WATER MAIN SHALL CROSS ABOVE ANY SANITARY SEWER, FORCEMAIN, STORM SEWER OR RECLAIMED WATER LINES.
3. PREFERABLY ONE FULL LENGTH OF WATER SHALL BE CENTERED AT CROSSING SO THE WATERMAIN JOINTS WILL BE AS FAR AS POSSIBLE FROM THE OTHER PIPELINE.
4. ALL DIMENSIONS ARE TO THE OUTSIDE OF THE PIPE.
5. LOCAL UTILITY AUTHORITY REQUIREMENTS MAY BE MORE RESTRICTIVE.

UTILITY LOCATION DETAIL



SIDEWALK CONNECTION TO EXISTING
DRIVEWAY/SIDE STREET/PAVED SHOULDER
TYPICAL DETAIL

N.T.S.

PLAN VIEW

N.T.S.

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ENGINEERING 7995 - SURVEYING LB-6940

PREPARED FOR

UTILITIES
LEE COUNTY

1500 MONROE STREET
FORT MYERS, FLORIDA 33901
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PROJECT DESCRIPTION

**ORANGE GROVE
BOULEVARD
WATERMAIN**

HANCOCK BRIDGE PARKWAY
TO PONDELLA ROAD

PART OF SECTION 9, AND 16,
TOWNSHIP 44 SOUTH, RANGE 24
FORT MYERS, LEE COUNTY, FLORIDA

ENGINEER OF RECORD

WESLEY S. KAYNE, P.E., FOR THE FIRM
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PLAN REVISIONS

PLAN STATUS

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2018-02-23

**TYPICAL
CONSTRUCTION
DETAILS**

PROJECT / FILE NO.

23513

SHEET NUMBER

C9.0



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PROJECT DESCRIPTION

ORANGE GROVE BOULEVARD WATERMAIN

HANCOCK BRIDGE PARKWAY
TO PONDELLA ROAD

PART OF SECTION 9, AND 16,
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FORT MYERS, LEE COUNTY, FLORIDA

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STUDY FULL-LENGTH SEQUENCES

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PLAN REVISIONS

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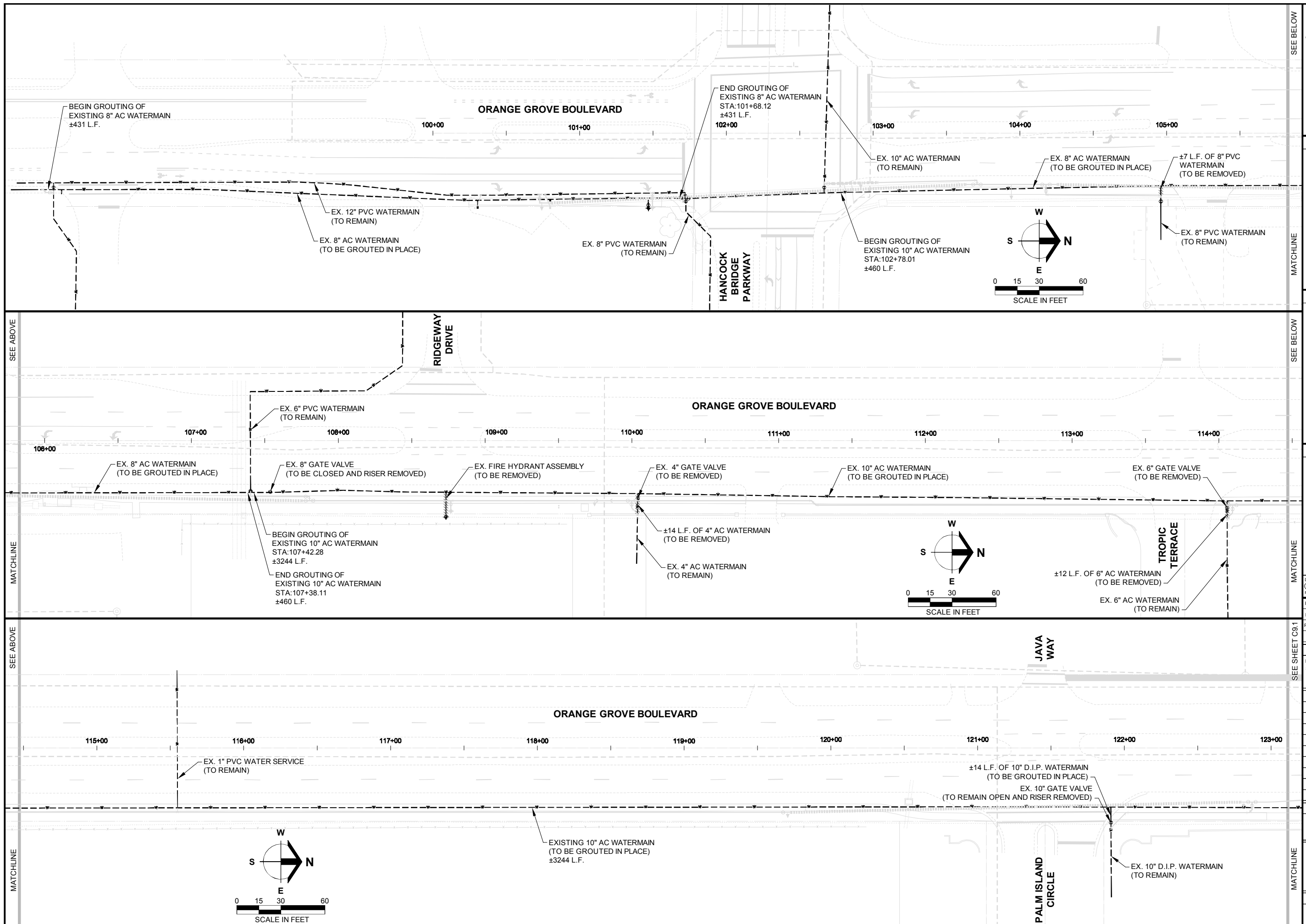
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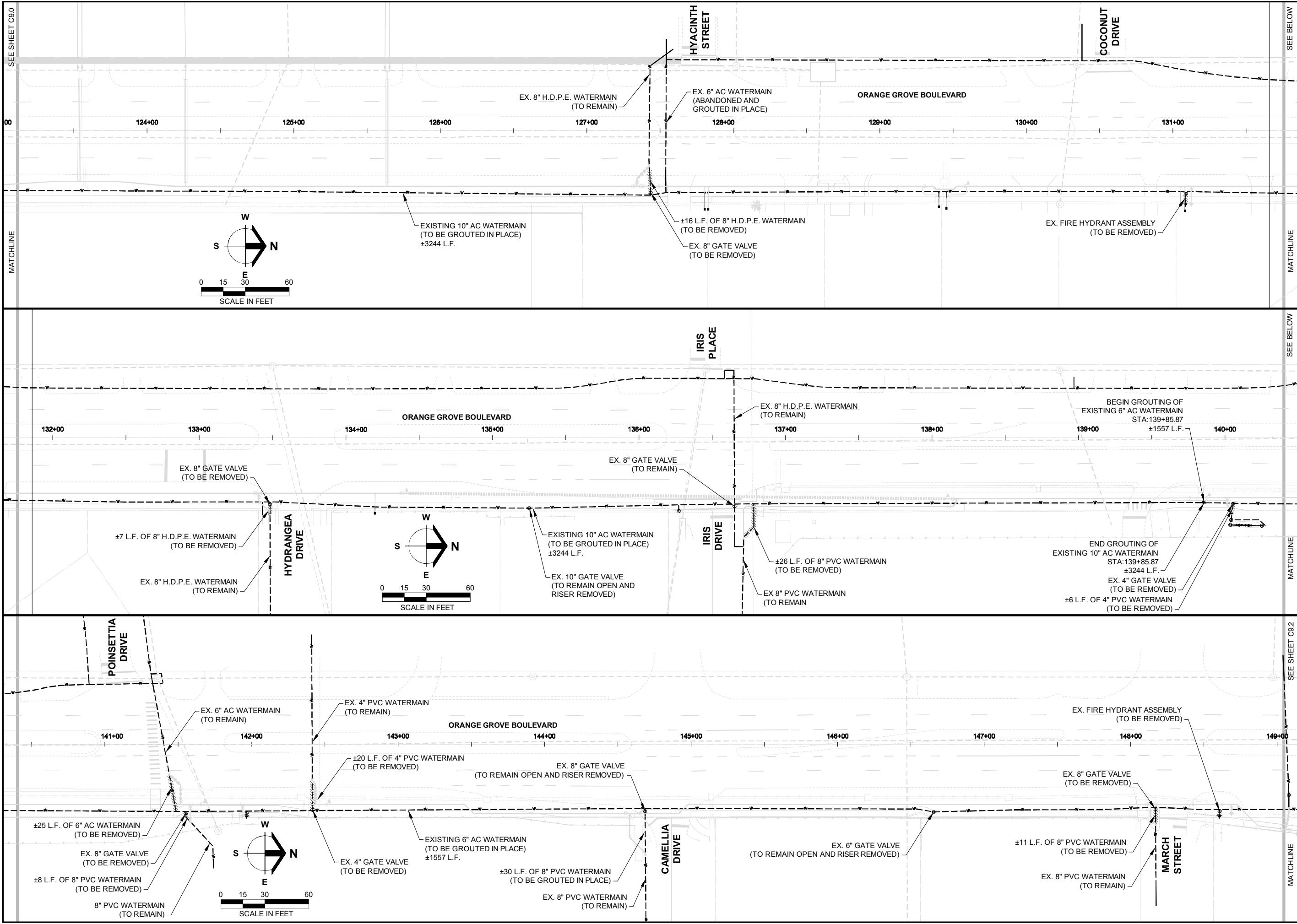
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2018-02-23

GROUTING AND
REMOVAL PLAN
ORANGE GROVE BLVD.

PROJECT / FILE NO.	SHEET NUMBER
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23513	C10.0
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PROJECT DESCRIPTION

ORANGE GROVE BOULEVARD WATERMAIN
HANCOCK BRIDGE PARKWAY
TO PONDELLA ROAD
PART OF SECTION 9, AND 16,
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FORT MYERS, LEE COUNTY, FLORIDA

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PLAN REVISIONS

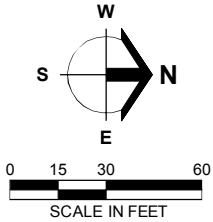
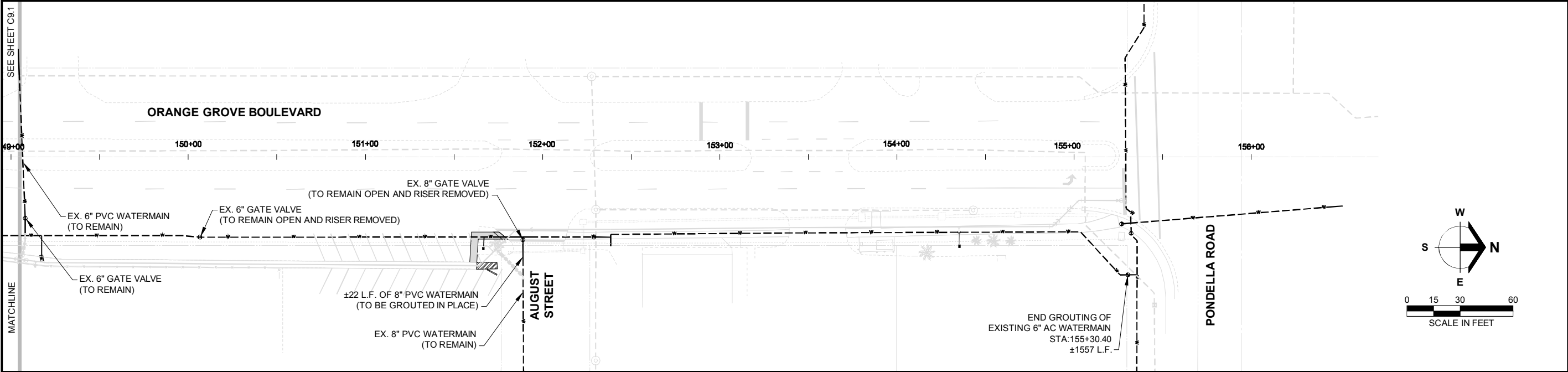
PLAN STATUS

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**GROUTING AND REMOVAL PLAN
ORANGE GROVE BLVD.**

PROJECT / FILE NO.
23513

SHEET NUMBER
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PROJECT DESCRIPTION

ORANGE GROVE BOULEVARD WATERMAIN

HANCOCK BRIDGE PARKWAY
TO PONDELLA ROAD

PART OF SECTION 9, AND 16,
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FORT MYERS, LEE COUNTY, FLORIDA

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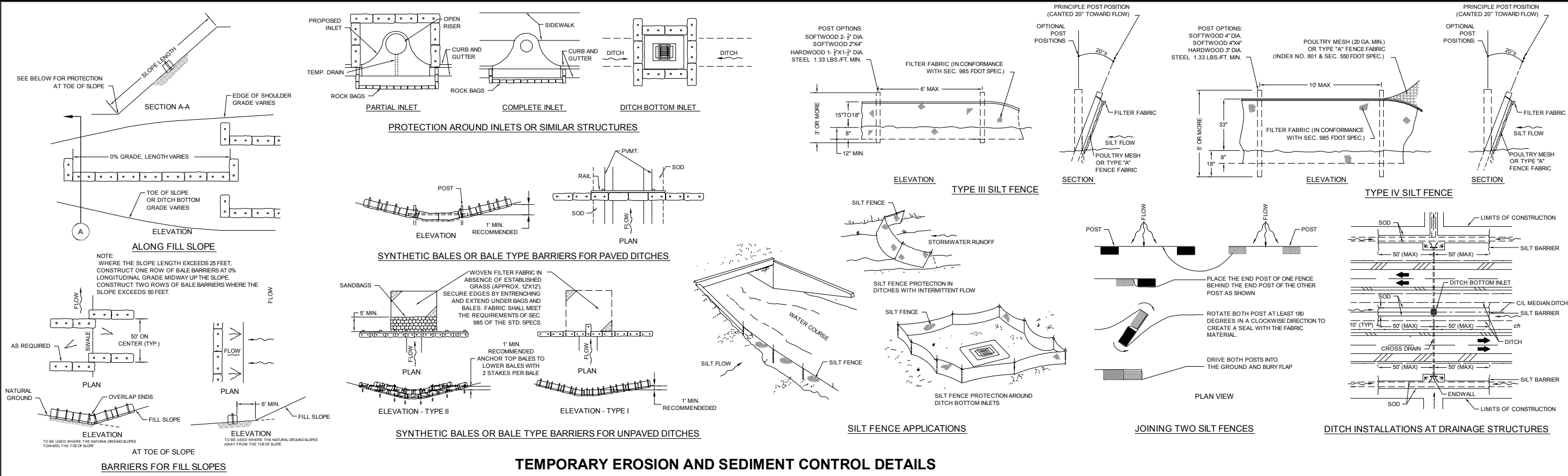
PLAN REVISIONS

PLAN STATUS

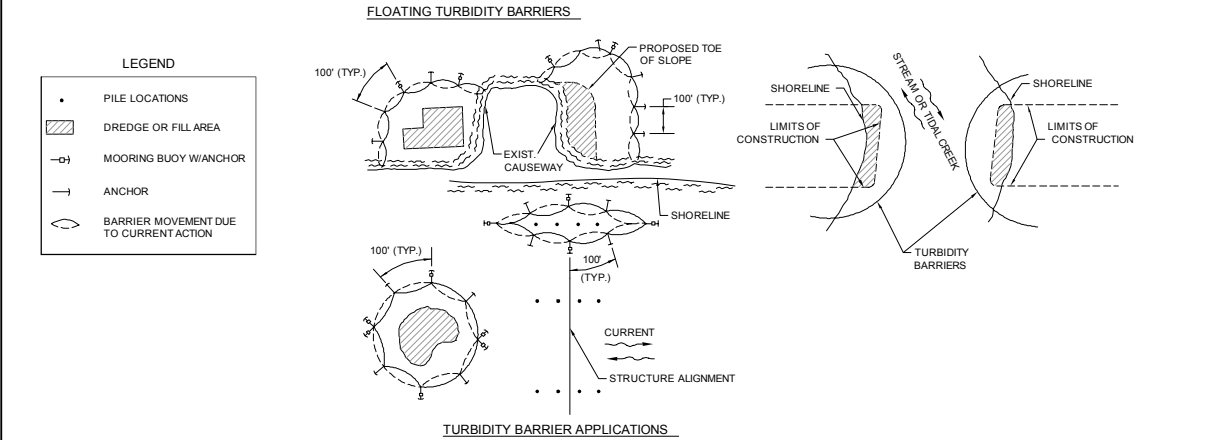
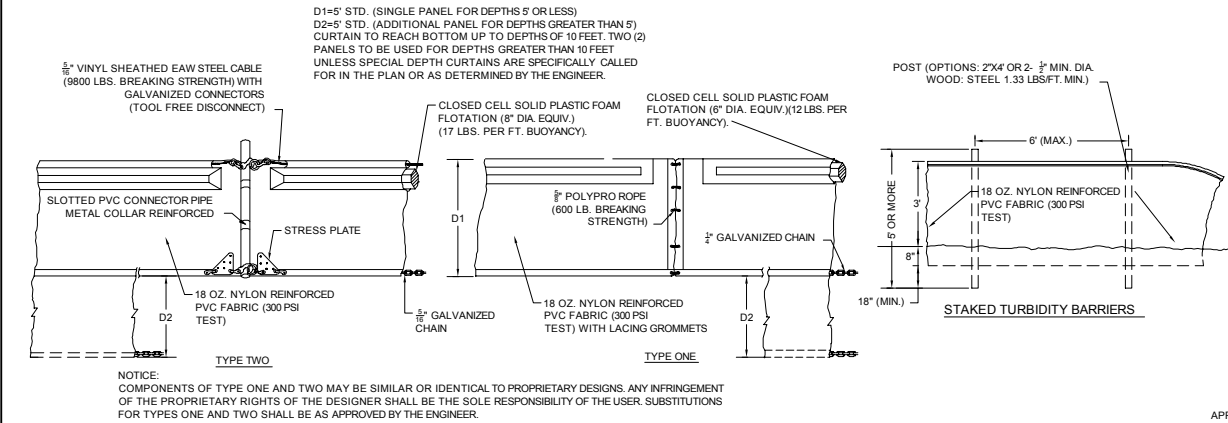
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2018-02-23

GROUTING AND REMOVAL PLAN ORANGE GROVE BLVD.

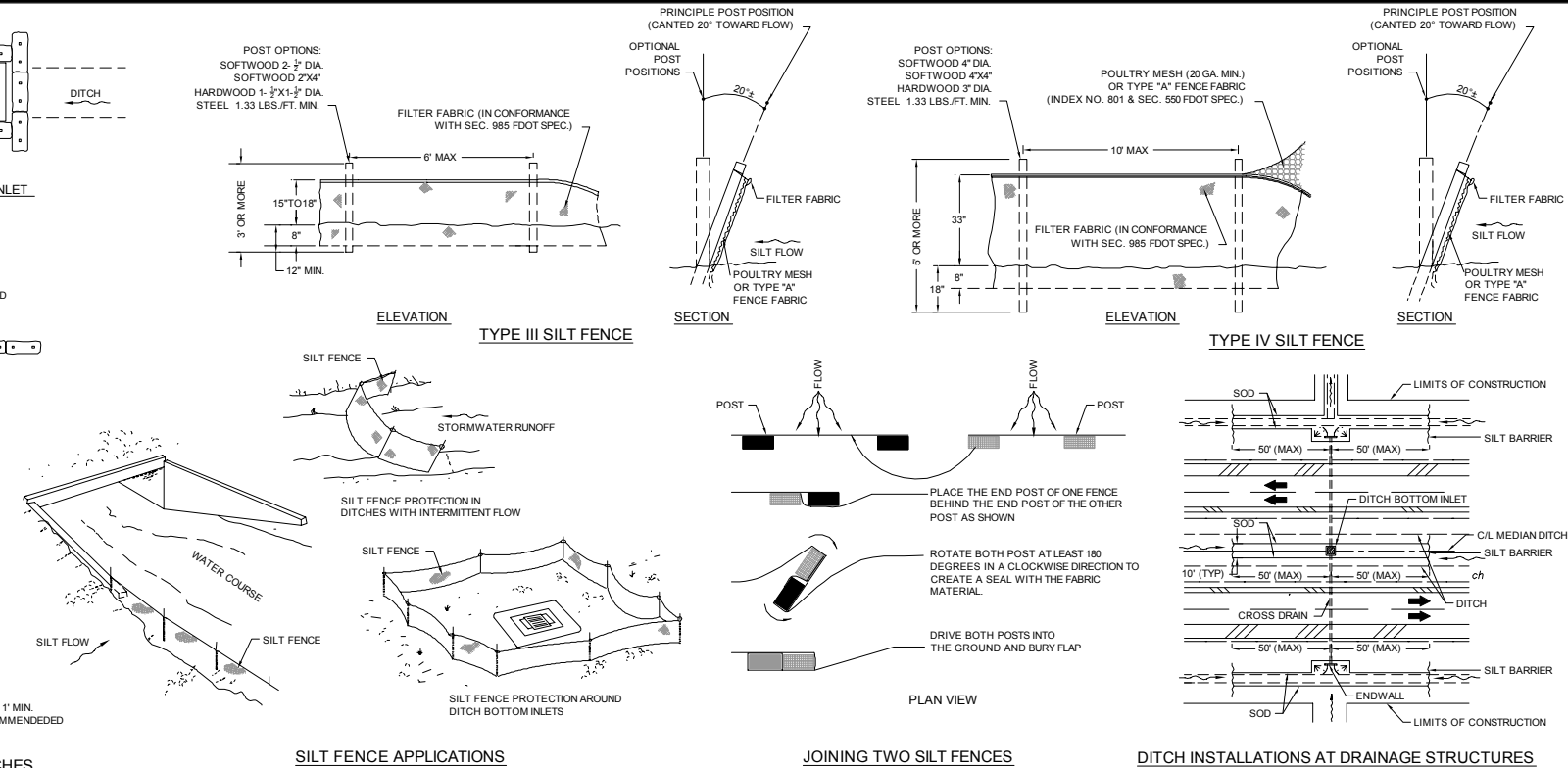
PROJECT / FILE NO.	SHEET NUMBER
23513	C10.2



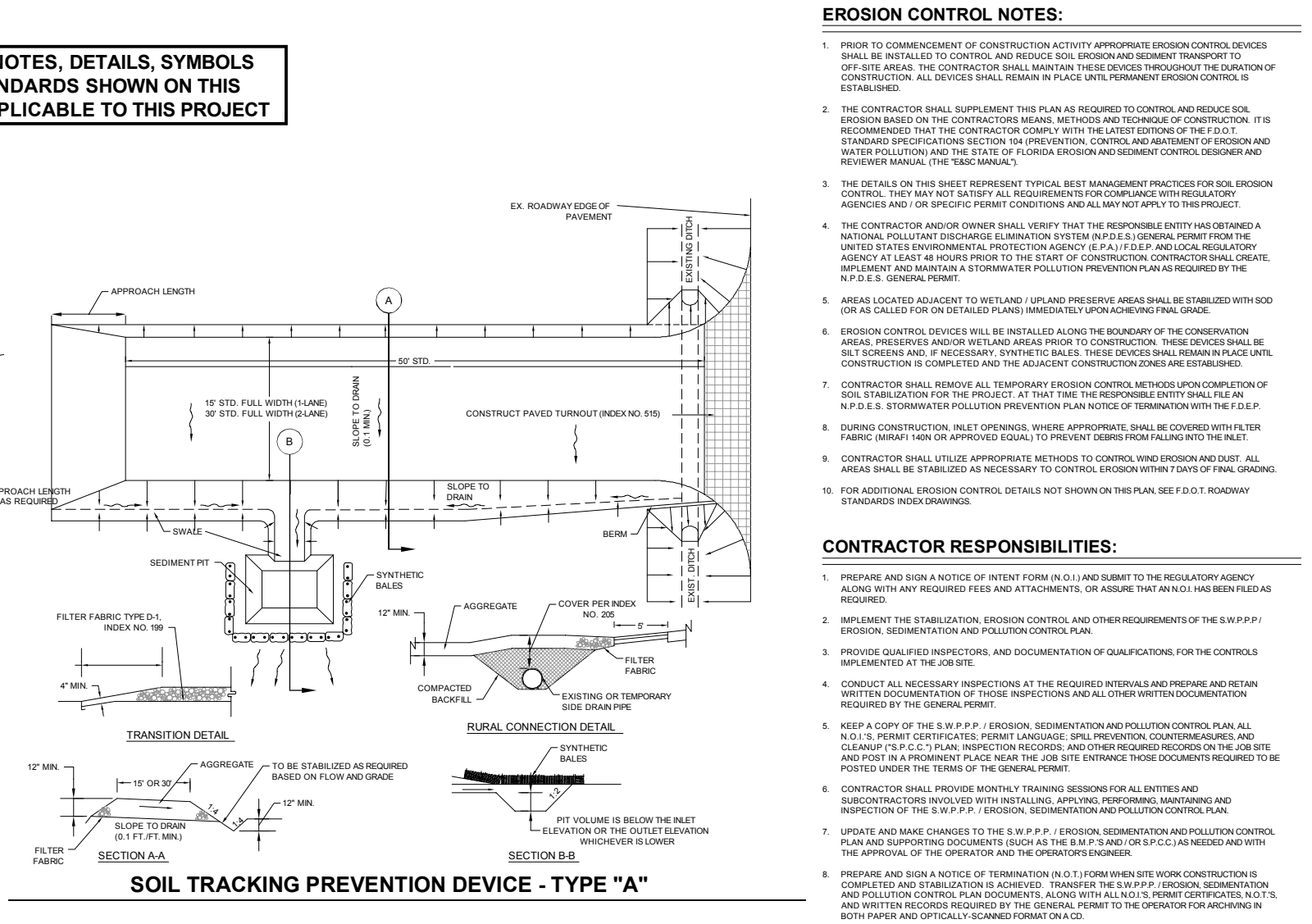
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TURBIDITY BARRIERS



TEMPORARY EROSION AND SEDIMENT CONTROL DETAILS



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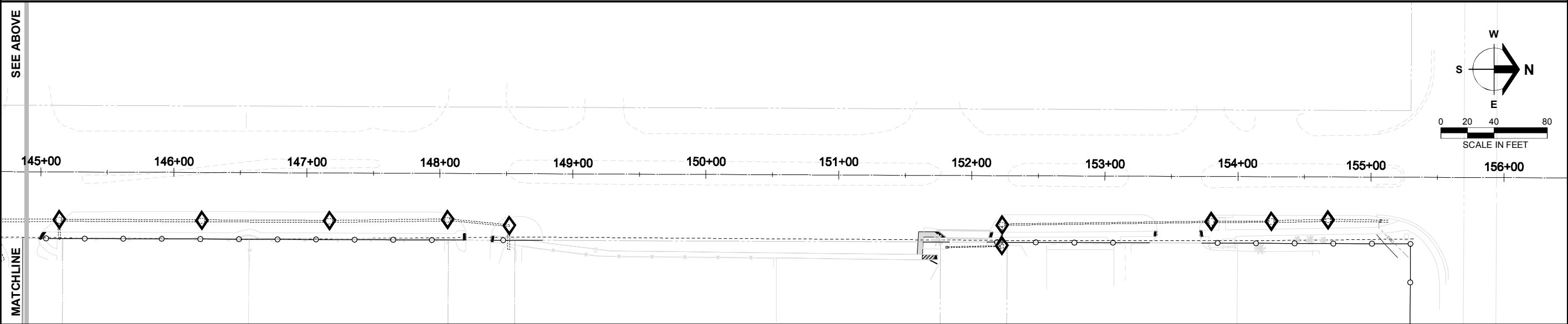
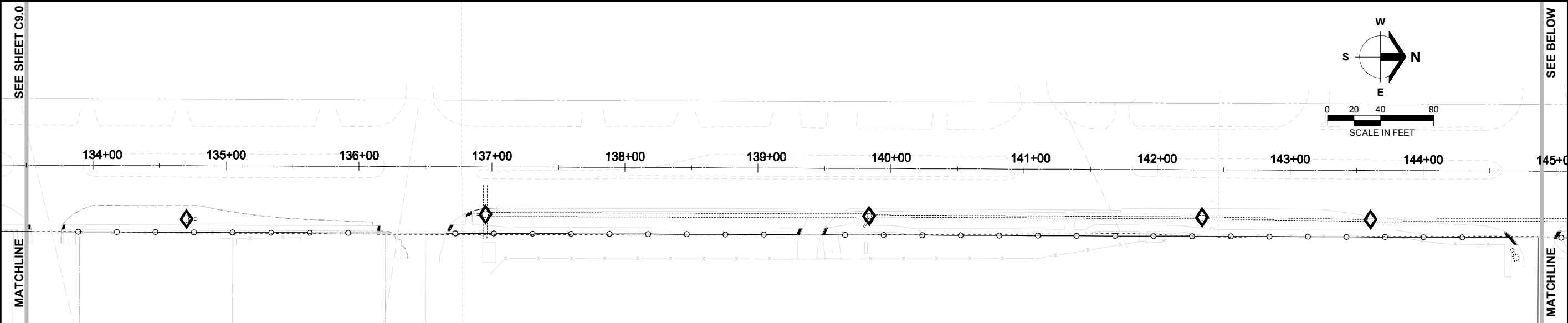
PROJECT DESCRIPTION
ORANGE GROVE BOULEVARD WATERMAIN
HANCOCK BRIDGE PARKWAY
TO PONDELLA ROAD
PART OF SECTION 9, AND 16,
TOWNSHIP 44 SOUTH, RANGE 24
FORT MYERS, LEE COUNTY, FLORIDA

ENGINEER OF RECORD
WESLEY S. KAYNE, P.E., FOR THE FIRM
FLORIDA P.E. NO. 80507 - WESK@BARRACO.NET
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CROSS REFERENCED DRAWINGS
MASTER = BAI-EROSION-2.DWG

PLAN REVISIONS
PLAN STATUS
100% PLAN SUBMITTAL
2018-02-23

EROSION CONTROL DETAILS
PROJECT / FILE NO. **23513**
SHEET NUMBER **C11.0**



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FLORIDA CERTIFICATES OF AUTHORIZATION
ENGINEERING 7995 - SURVEYING LB-6940

PREPARED FOR

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LEE COUNTY

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PROJECT DESCRIPTION

**ORANGE GROVE
BOULEVARD
WATERMAIN**

HANCOCK BRIDGE PARKWAY
TO PONDELLA ROAD

PART OF SECTION 9, AND 16,
TOWNSHIP 44 SOUTH, RANGE 24
FORT MYERS, LEE COUNTY, FLORIDA

ENGINEER OF RECORD

WESLEY S. KAYNE, P.E., FOR THE FIRM
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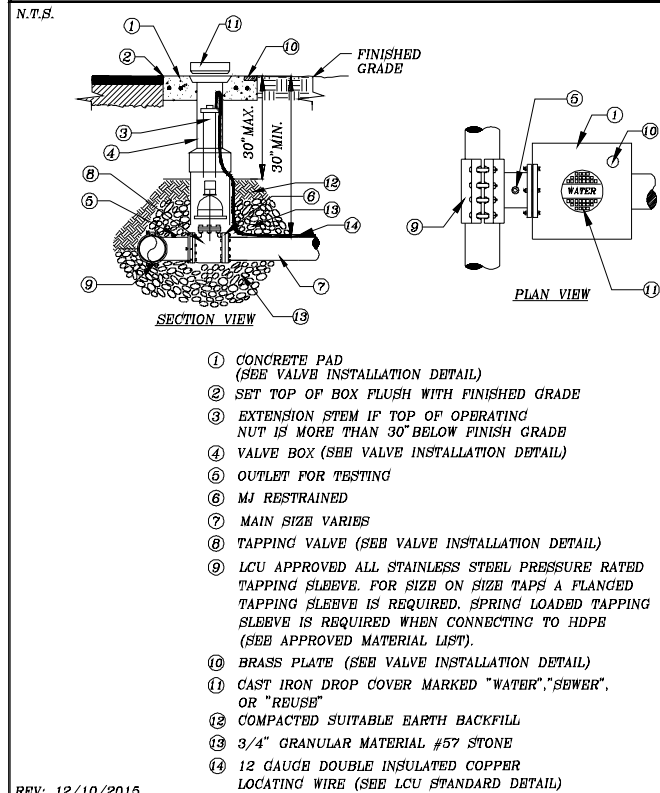
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BASEPLAN = 23513A00.DWG SURVEY = 23513S00.DWG

PLAN REVISIONS

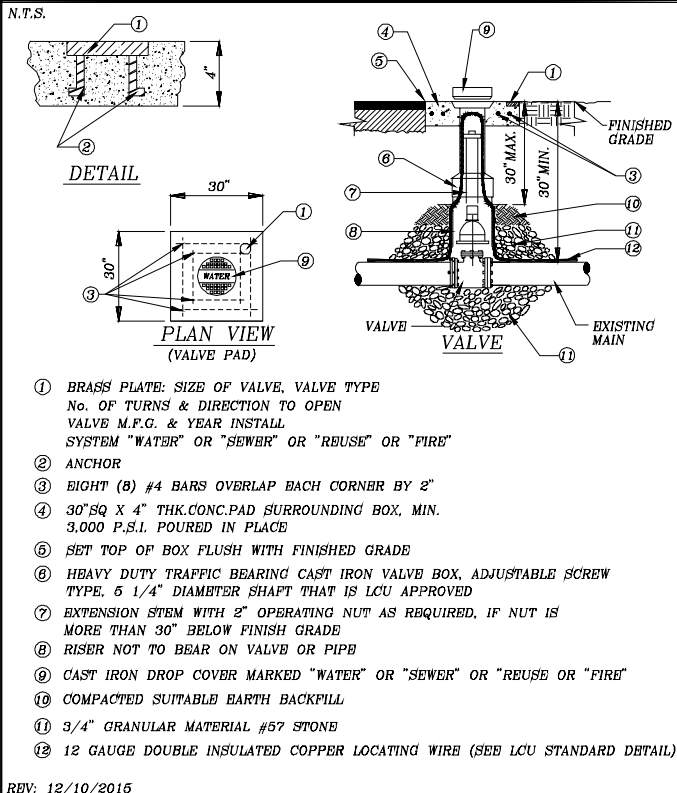
PLAN STATUS
100% PLAN SUBMITTAL 2018-02-23

STORMWATER POLLUTION PREVENTION PLAN	
PROJECT / FILE NO.	SHEET NUMBER
23513	C12.1

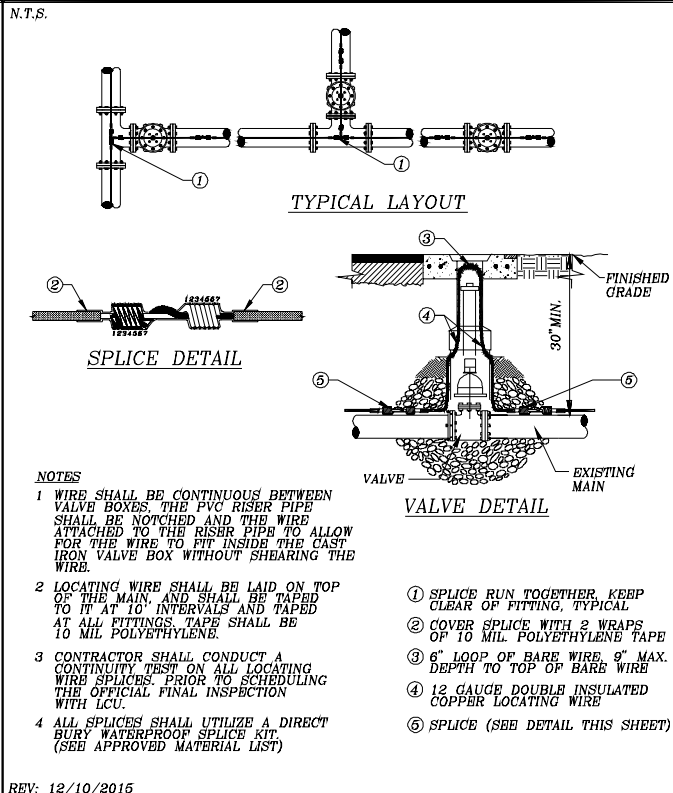
STANDARD DETAIL NO. 6.1
LEE COUNTY UTILITIES
TAPPING SLEEVE AND VALVE



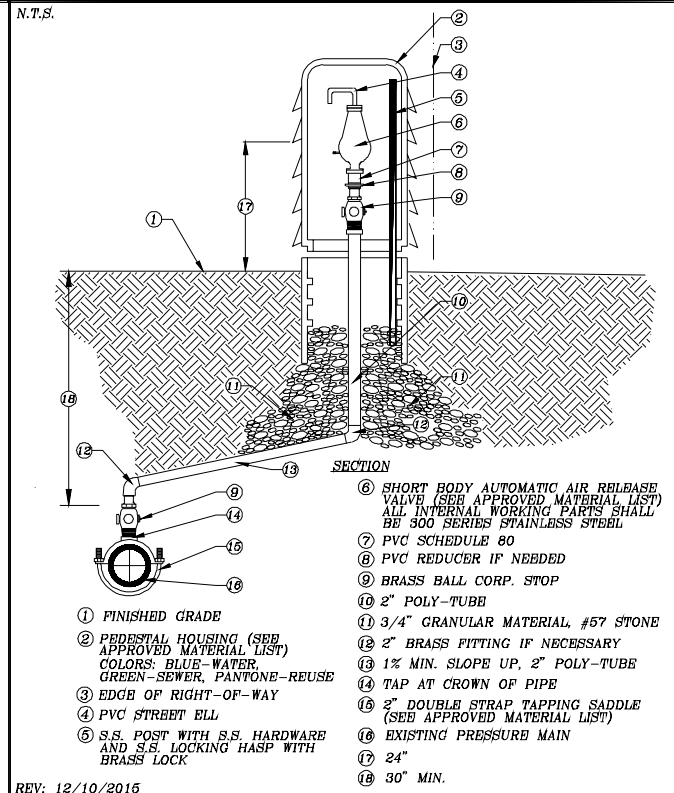
STANDARD DETAIL NO. 6.2
LEE COUNTY UTILITIES
VALVE INSTALLATION



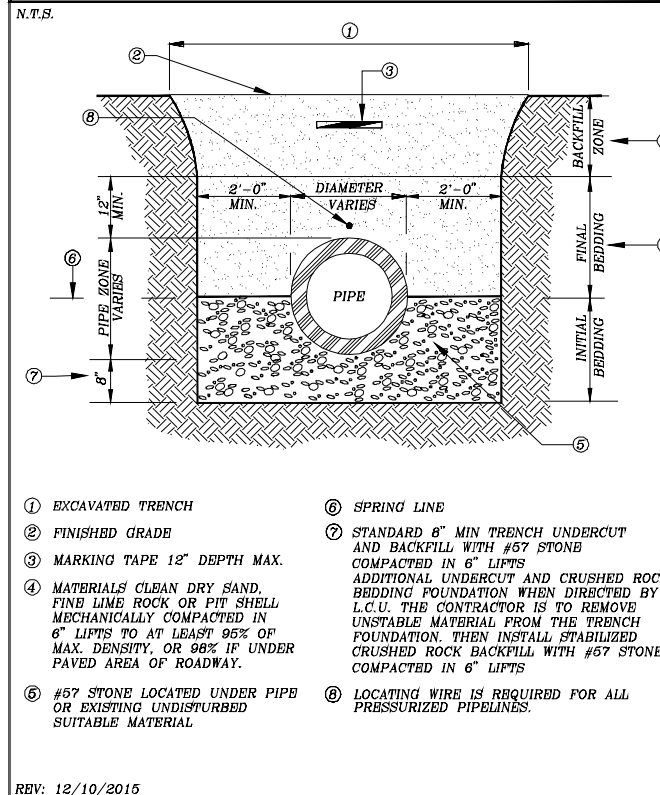
STANDARD DETAIL NO. 6.3
LEE COUNTY UTILITIES
LOCATING WIRE FOR PRESSURE MAINS



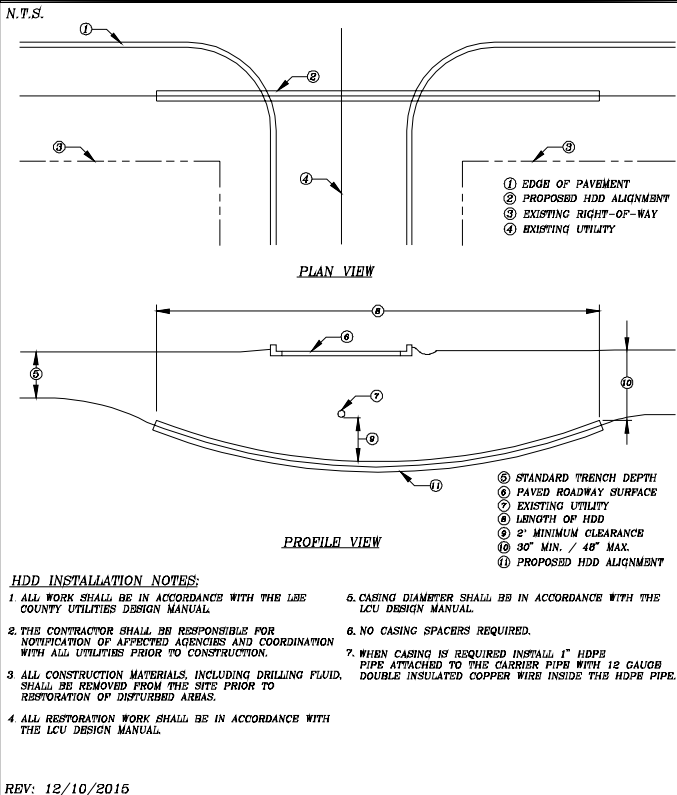
STANDARD DETAIL NO. 6.4
LEE COUNTY UTILITIES
AUTOMATIC AIR RELEASE VALVE



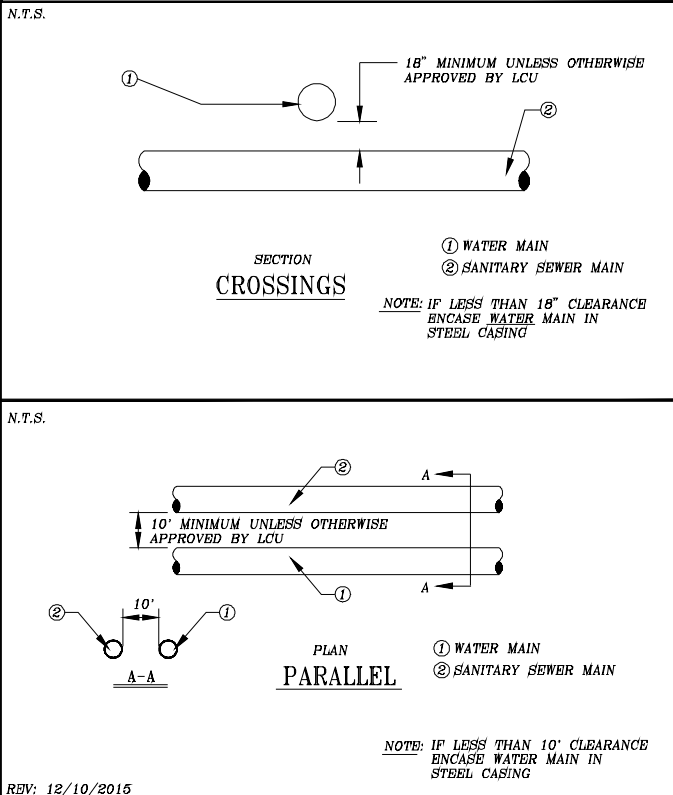
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LEE COUNTY UTILITIES
TRENCH CROSS SECTION



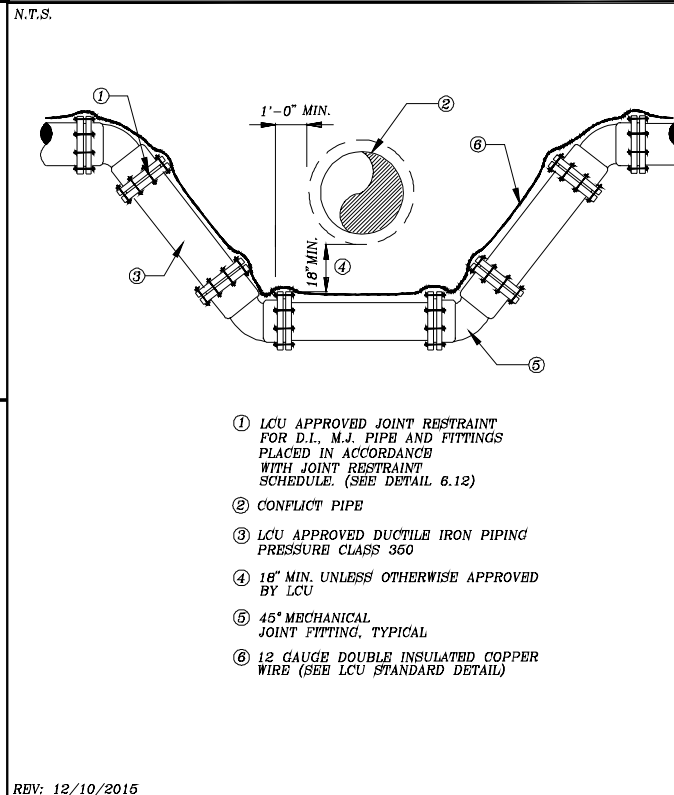
STANDARD DETAIL NO. 6.7
LEE COUNTY UTILITIES
HORIZONTAL DIRECTIONAL DRILL UNDER A ROADWAY



STANDARD DETAIL NO. 6.8
LEE COUNTY UTILITIES
WATER AND SEWER CROSSING DETAIL



STANDARD DETAIL NO. 6.10
LEE COUNTY UTILITIES
WATER PRESSURE LINE VERTICAL OFFSET W/ DUCTILE IRON MJ FITTINGS & PIPE



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PROJECT DESCRIPTION
ORANGE GROVE
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HANCOCK BRIDGE PARKWAY
TO PONDELLA ROAD
PART OF SECTION 9, AND 16,
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FORT MYERS, LEE COUNTY, FLORIDA

ENGINEER OF RECORD
WESLEY S. KAYNE, P.E., FOR THE FIRM
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PLOT BY: WES KAYNE

PLAN REVISIONS	

PLAN STATUS
100% PLAN SUBMITTAL
2018-02-23

LEE COUNTY
UTILITY
DETAILS

PROJECT / FILE NO.	SHEET NUMBER
23063	C13.0

STANDARD DETAIL NO. 6.12
LEE COUNTY UTILITIES
RESTRAINED LENGTH SCHEDULE

N.T.S.

DUCTILE IRON PIPE						
PIPE SIZE (Inches)	MINIMUM RESTRAINED PIPE LENGTH (FEET)				DEAD END	HORIZONTAL TEE
	HORIZONTAL BENDS					
	90°	45°	22-1/2'	11-1/4'		
4	17	7	4	2	29	6
6	23	10	5	2	40	17
8	29	12	6	3	53	29
10	35	14	7	4	63	38
12	41	17	8	4	74	49
16	51	21	11	5	94	68
24	69	29	14	7	131	105
30	81	34	17	8	156	129

PVC PIPE

PIPE SIZE (Inches)	MINIMUM RESTRAINED PIPE LENGTH (FEET)				DEAD END	HORIZONTAL TEE
	HORIZONTAL BENDS					
	90°	45°	22-1/2'	11-1/4'		
4	20	8	4	2	45	8
6	29	12	6	3	63	25
8	36	15	8	4	83	43
10	44	18	9	5	99	58
12	51	21	11	5	116	74
16	63	26	13	7	149	103
24	87	36	18	9	208	158
30	102	42	21	10	248	194

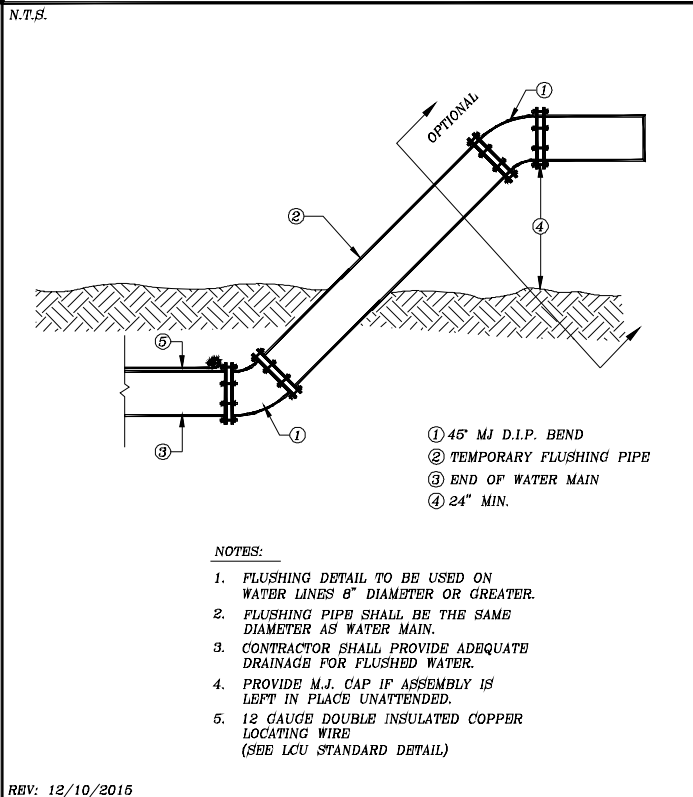
A COMPLETE JOINT RESTRAINING SCHEDULE FOR ALL ENCOUNTERED VERTICAL & HORIZONTAL BENDS, VERTICAL OFFSETS, TEES, AND DEAD ENDS SHALL BE THE RESPONSIBILITY OF THE DESIGN ENGINEER.

LENGTH FIGURES BASED ON FOLLOWING:

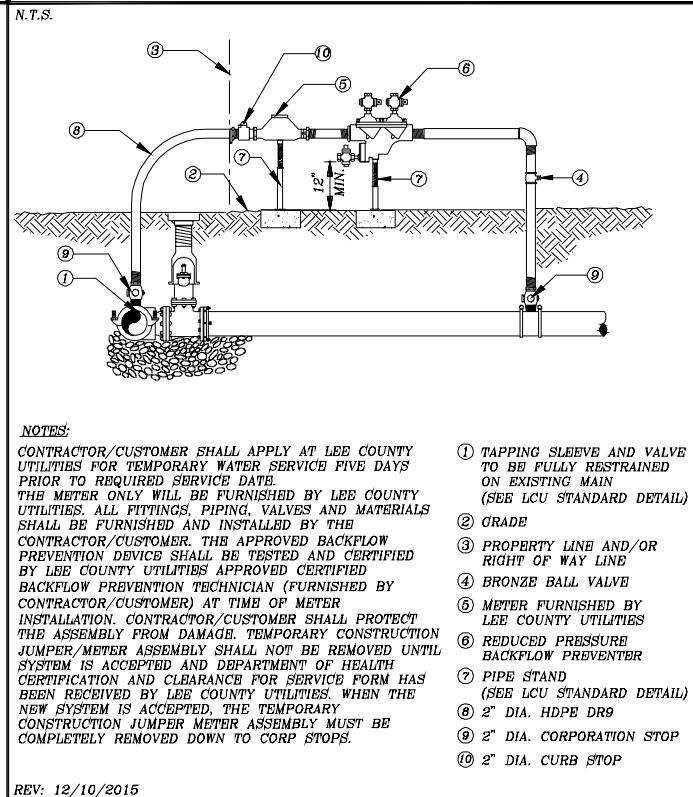
Pressure = 150 psi, PS = 1.5, trench type = 3, 30" cover on Bare pipe, Soil type = GP & SP

REV: 12/10/2015

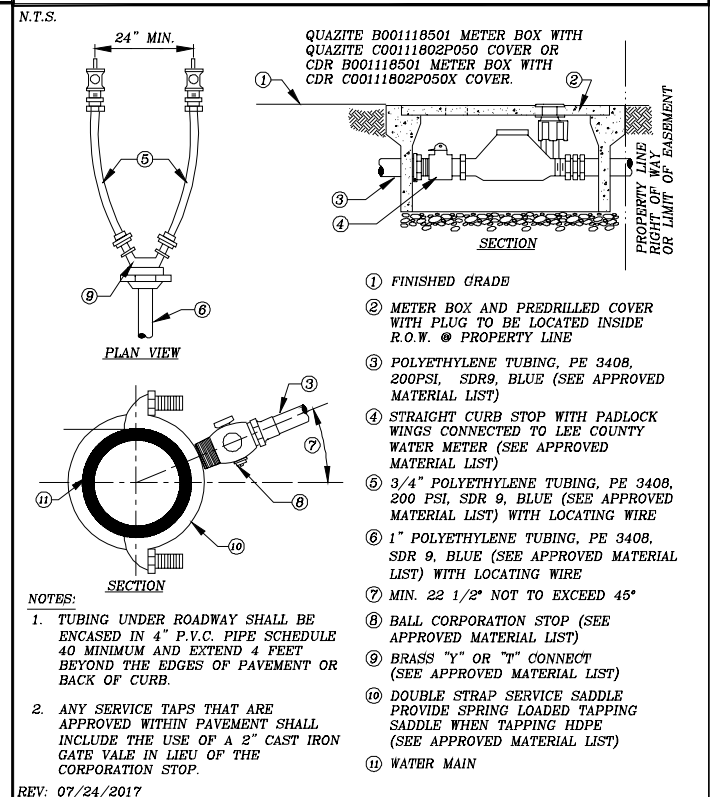
STANDARD DETAIL NO. 6.13
LEE COUNTY UTILITIES
WATER MAIN FLUSHING DETAIL



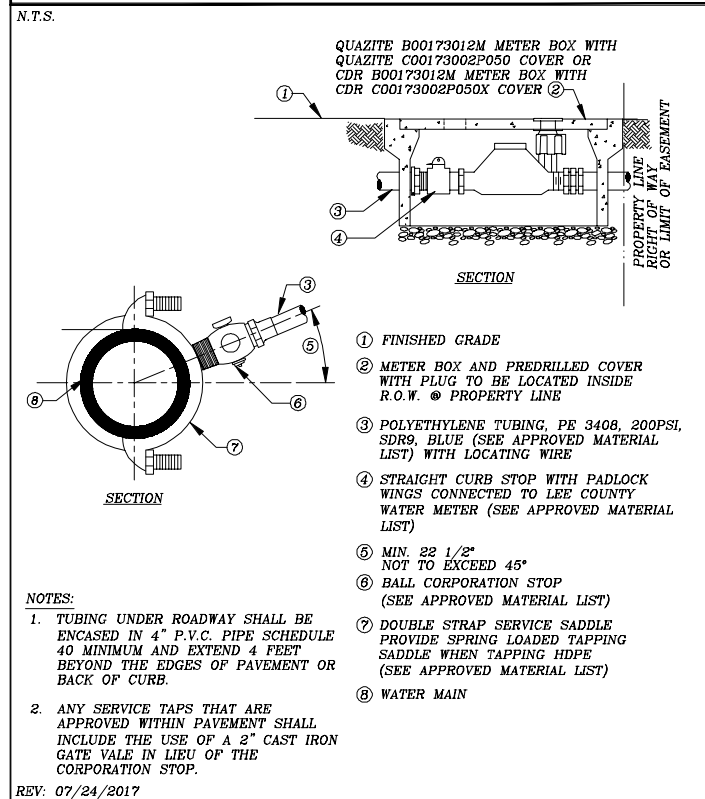
STANDARD DETAIL NO. 6.15
LEE COUNTY UTILITIES
TEMPORARY CONSTRUCTION JUMPER WITH METER



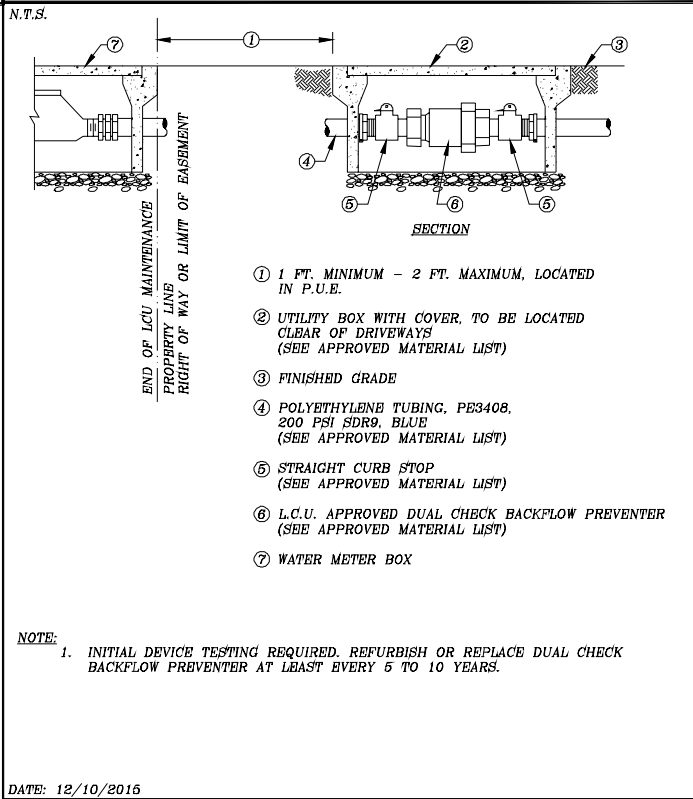
STANDARD DETAIL NO. 6.16
LEE COUNTY UTILITIES
WATER SERVICE INSTALLATION 5/8" THROUGH 1"



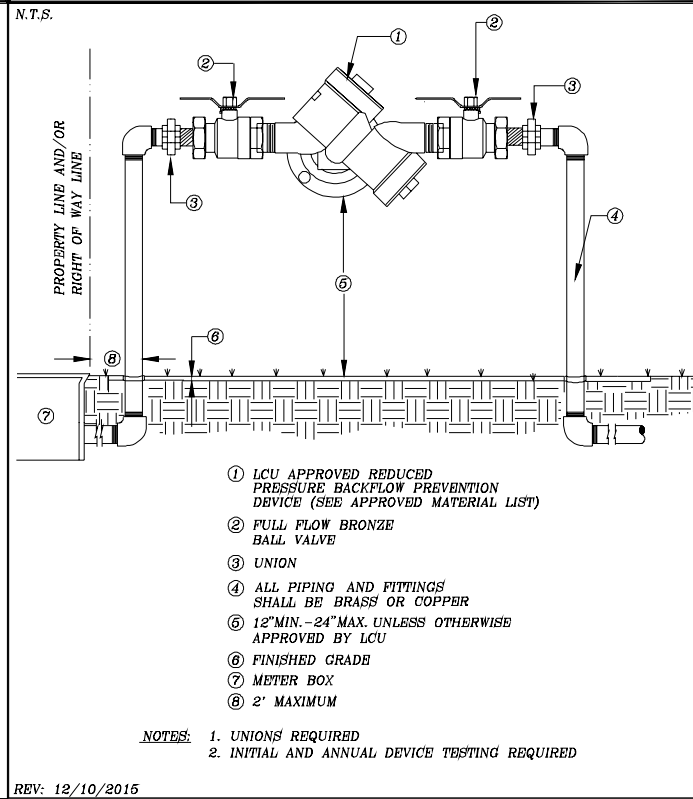
STANDARD DETAIL NO. 6.17
LEE COUNTY UTILITIES
WATER SERVICE INSTALLATION 1-1/2" THROUGH 2"



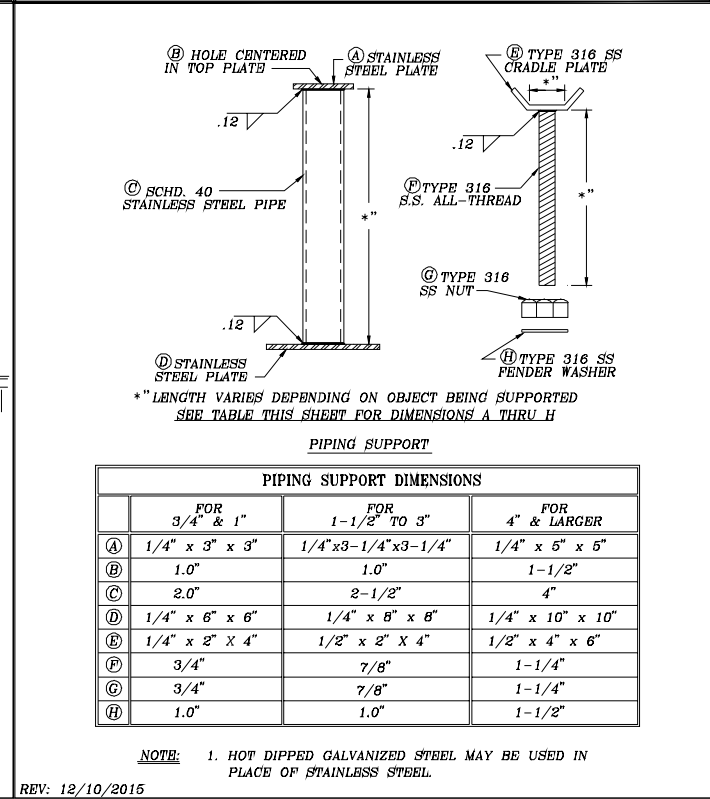
STANDARD DETAIL NO. 6.18
LEE COUNTY UTILITIES
5/8" THROUGH 2" SINGLE FAMILY RESIDENTIAL
CROSS CONNECTION CONTROL ASSEMBLY



STANDARD DETAIL NO. 6.19
LEE COUNTY UTILITIES
3/4" TO 2" CROSS CONNECTION CONTROL ASSEMBLY



STANDARD DETAIL NO. 6.22
LEE COUNTY UTILITIES
PIPING SUPPORT



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FORT MYERS, FLORIDA 33901
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PROJECT DESCRIPTION

ORANGE GROVE BOULEVARD WATERMAIN
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TO PONDELLA ROAD
PART OF SECTION 9, AND 16,
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FORT MYERS, LEE COUNTY, FLORIDA

ENGINEER OF RECORD
WESLEY S. KAYNE, P.E., FOR THE FIRM
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PLOT BY: WES KAYNE

PLAN REVISIONS

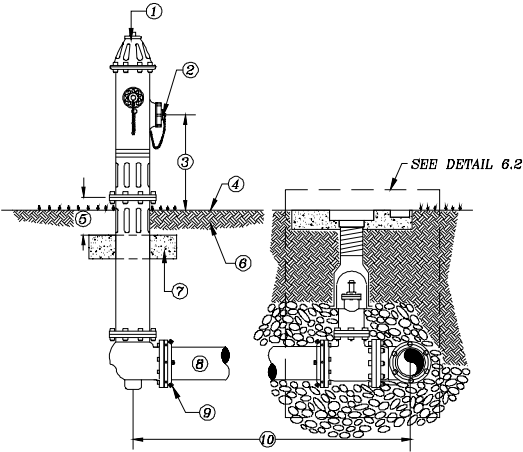
PLAN STATUS
100% PLAN SUBMITTAL
2018-02-23

LEE COUNTY UTILITY DETAILS

PROJECT / FILE NO.	SHEET NUMBER
23063	C13.1

STANDARD DETAIL NO. 6.24
LEE COUNTY UTILITIES
FIRE HYDRANT ASSEMBLY

N.T.S.

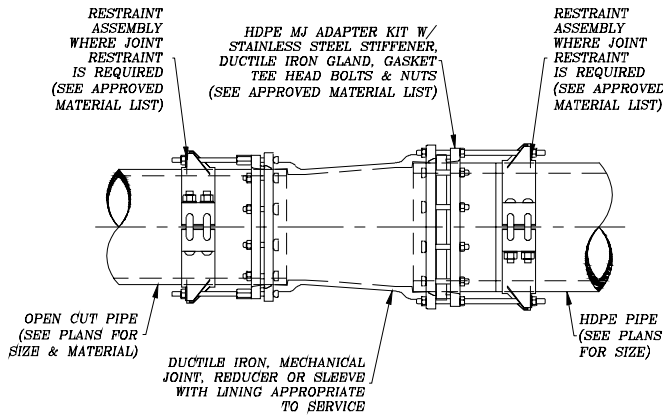


- ① FIRE HYDRANT: STANDARD A.W.W.A. SAFETY YELLOW (SEE APPROVED MATERIAL LIST)
② PUMPER CONNECTION FACING AS PER FIRE DISTRICT RECOMMENDATION
③ 18" MIN. - 24" MAX.
④ FINISHED GRADE
⑤ 6" MIN. CLEARANCE
⑥ COMPACTED FILL
⑦ 30" X 30" X 4" CONCRETE BREAKAWAY CONCRETE PAD, 3000 P.S.I.
⑧ PIPE TO BE D.I.P., PRESSURE CLASS 350
⑨ RESTRAINED JOINTS, FROM HYDRANT TO WATER MAIN
⑩ VARIABLE DISTANCE, IF GREATER THAN 100' A VALVE SHALL BE INSTALLED AT HYDRANT BASE

REV: 12/10/2015

STANDARD DETAIL NO. 6.45
LEE COUNTY UTILITIES
HDPE PIPE TRANSITION CONNECTION

N.T.S.

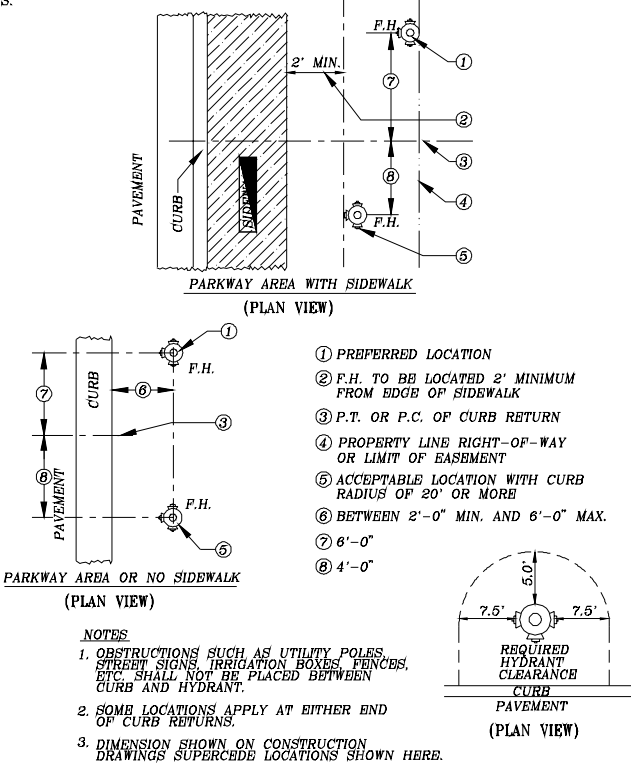


NOTES:

1. PROVIDE JOINT RESTRAINT IF REDUCER/ SLEEVE IS IN ZONE REQUIRING RESTRAINED JOINTS.
2. PROVIDE JOINT RESTRAINT WHERE SHOWN ON PLANS.

STANDARD DETAIL NO. 6.25
LEE COUNTY UTILITIES
FIRE HYDRANT LOCATIONS/CLEARANCE

N.T.S.

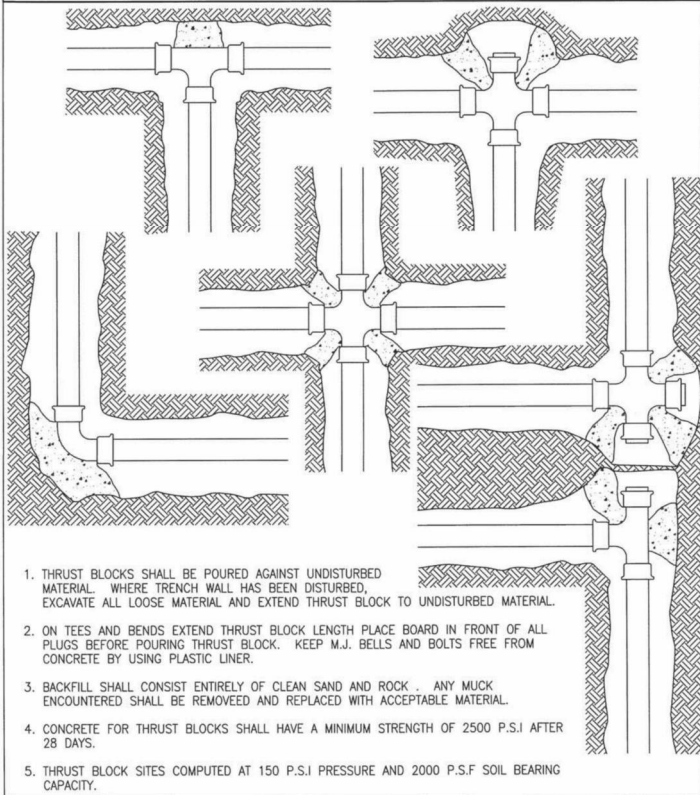


NOTES

1. OBSTRUCTIONS SUCH AS UTILITY POLES, STREET SIGNS, IRRIGATION BOXES, FENCES, ETC. SHALL NOT BE PLACED BETWEEN CURB AND HYDRANT.
2. SOME LOCATIONS APPLY AT EITHER END OF CURB RETURNS.
3. DIMENSION SHOWN ON CONSTRUCTION DRAWINGS SUPERCEDES LOCATIONS SHOWN HERE.

REV: 12/10/2015

STANDARD DETAIL NO. 9.20
LEE COUNTY UTILITIES
THRUST BLOCKING DETAILS



DATE: 02/22/00

S:\UTILS\ENGR\ACAD\DETAILS\20

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PLOT BY: WES KAYNE

PLAN REVISIONS

PLAN STATUS

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LEE COUNTY
UTILITY
DETAILS

PROJECT / FILE NO.

23063

SHEET NUMBER

C13.2