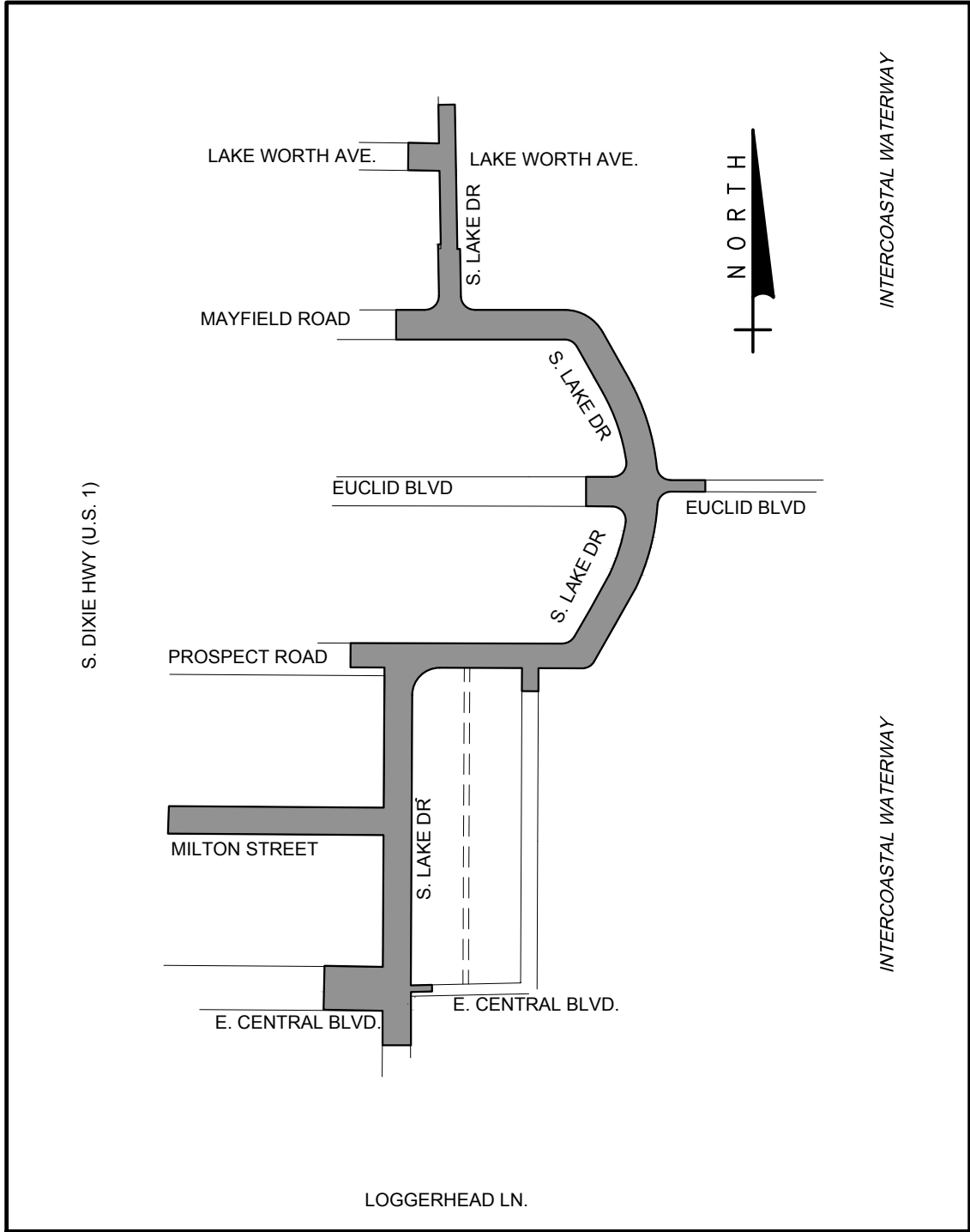


TOWN OF LANTANA SOUTH LAKE DRIVE FORCE MAIN REPLACEMENT

BID SET
AUGUST 2017



SECTION 03, TOWNSHIP 45 SOUTH, RANGE 43 EAST

LOCATION MAP
NTS



TOWN COUNCIL

MAYOR	-	DAVID J. STEWART
VICE MAYOR	-	MALCOLM BALFOUR
VICE MAYOR PRO TEM	-	PHILIP ARIDAS
COUNCIL MEMBER	-	LYNN MOORHOUSE, D.D.S.
COUNCIL MEMBER	-	TOM DERINGER
TOWN MANAGER	-	DEBORAH MANZO
DIRECTOR OF OPERATIONS	-	LINDA BRIEN
ASSISTANT UTILITIES DIRECTOR	-	JERRY DARR

DRAWING LIST

SHEET	DRAWING	TITLE
GENERAL		
1	G-1	TITLE SHEET, LOCATION MAP AND DRAWING LIST
2	G-2	SYMBOLS, LEGEND, SURVEY NOTES, HORIZONTAL
3	G-3	CONTROL DETAIL AND SITE BENCHMARKS GENERAL NOTES, INFORMATION AND KEY MAP
CIVIL		
4	C-1	SOUTH LAKE DRIVE PLAN AND PROFILE – SHEET 1 STATION 300+00 TO STATION 303+20
5	C-2	SOUTH LAKE DRIVE PLAN AND PROFILE – SHEET 2 STATION 303+20 TO STATION 306+96.07
6	C-3	SOUTH LAKE DRIVE PLAN AND PROFILE – SHEET 3 STATION 36+00 TO STATION 40+20
7	C-4	SOUTH LAKE DRIVE PLAN AND PROFILE – SHEET 4 STATION 40+20 TO STATION 44+20
8	C-5	SOUTH LAKE DRIVE PLAN AND PROFILE – SHEET 5 STATION 44+20 TO STATION 46+80
9	C-6	SOUTH LAKE DRIVE PLAN AND PROFILE – SHEET 6 STATION 46+80 TO STATION 50+00
10	C-7	SOUTH LAKE DRIVE PLAN AND PROFILE – SHEET 7 STATION 500+00 TO STATION 504+00
11	C-8	MILTON STREET PLAN AND PROFILE – SHEET 8 STATION 100+00 TO STATION 103+74.60
DETAILS		
12	D-1	STANDARD DETAILS – SHEET 1 OF 4
13	D-2	STANDARD DETAILS – SHEET 2 OF 4
14	D-3	STANDARD DETAILS – SHEET 3 OF 4
15	D-4	STANDARD DETAILS – SHEET 4 OF 4

FOR INFORMATION REGARDING THIS PROJECT, CONTACT:

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TITLE SHEET, LOCATION
MAP AND DRAWING LIST

SHEET: 1 of 15

DRAWING: G-1

Acad Version : R20.1s (LMS Tech) User Name : 76bddd Date/Time : Mon, 28 Aug 2017 - 2:54pm Current Plotstyle : ByColor Path Name : I:\WestPalmBeach\LAN\T\161866-S 1.3th WM_Lake Dr - RM CAD\Lake Drive FM Working Folder\1856G02.dwg Layout Tab: G-2

SURVEYOR'S REPORT

TYPE OF SURVEY:

TOPOGRAPHIC SURVEY
SOUTH LAKE DRIVE, TOWN OF LANTANA, PALM BEACH COUNTY, FLORIDA

SURVEY PREPARED BY:

COMPASS POINT SURVEYORS, PL., 3195 NORTH POWERLINE ROAD, STREET SUITE #112, POMPAÑO BEACH, FLORIDA 33069, OFFICE: 954-332-8181

MAP OF SURVEY:

THE MAP AND REPORT ARE NOT FULL AND COMPLETE WITHOUT THE OTHER.
SEE MAP OF SURVEY SHEET 01 OF 08 THRU SHEET 08 OF 08.

LEGAL DESCRIPTION:

NOT APPLICABLE.

ACCURACY:

1. ALL MEASUREMENTS, DISTANCES, ELEVATIONS AND FEATURES WERE PERFORMED IN STRICT ACCORDANCE WITH THE STANDARDS OF PRACTICE SET FORTH IN CHAPTER 5J-17 FLORIDA ADMINISTRATIVE CODE.

2. METHODS FOR ALL CONTROL MEASUREMENTS WERE MADE WITH A TRANSIT AND STEEL TAPE, OR DEVICES WITH EQUIVALENT OR HIGHER DEGREES OF ACCURACY.

3. THE ACCURACY STANDARD USED FOR THIS SURVEY, AS CLASSIFIED IN THE STANDARDS PRACTICE 5J-17 F.A.C., IS "COMMERCIAL HIGH RISK". THE MINIMUM RELATIVE DISTANCE ACCURACY FOR THIS TYPE OF SURVEY IS 1 FOOT IN 10,000 FEET. THIS SURVEY IS BASED ON REPETITIVE RTK GPS AND ROBOTIC TOTAL STATION OBSERVATIONS ON MULTIPLE PROJECT HORIZONTAL AND VERTICAL CONTROL POINTS TO OBTAIN A REDUNDANCY OF MEASUREMENT. HORIZONTAL AND VERTICAL CLOSURE ACHIEVED, EXCEED THE MINIMUM ACCURACY REQUIREMENTS FOR THIS SURVEY.

DATA SOURCES:

1. THE FOLLOWING PLATS, ALL OF THE PUBLIC RECORDS OF PALM BEACH COUNTY, FLORIDA, WERE UTILIZED IN THE PREPARATION OF THIS SURVEY.

2. PLAT BOOK 5, PAGE 13; "PINWOOD PARK ADD"; PLAT BOOK 9, PAGE 48, "LAKESIDE POINT"; PLAT BOOK 9, PAGE 64, "LAKESIDE POINT ADDITION TO LANTANA"; PLAT BOOK 13, PAGE 25, "GREYNOLDS HIGHLANDS No.1" AND PLAT BOOK 23, PAGES 191, "LAKE COVE".

3. MULTIREOLUTION SEAMLESS IMAGES (MRSID), DOWNLOADED FROM LAND BOUNDARY INFORMATION SYSTEM (LABINS) WWW.LABINS.ORG, WERE UTILIZED IN THE PREPARATION OF THIS SURVEY.

4. GEOGRAPHIC INFORMATION SYSTEM (GIS) IMAGES DOWNLOADED FROM PALM BEACH COUNTY PROPERTY APPRAISER (PBCPA) <http://www.co.palm-beach.fl.us/papa/> WERE UTILIZED IN THE PREPARATION OF THIS SURVEY.

5. ELEVATIONS SHOWN HEREON ARE IN FEET AND REFERENCED TO NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD29). BENCHMARKS OF ORIGIN: PALM BEACH COUNTY BENCHMARK "J 402". BENCHMARK "J 402" IS A NATIONAL GEODETIC SURVEY STAINLESS STEEL ROD IN A SLEEVE ENCASED IN A PIPE FLUSH WITH THE GROUND AND STAMPED "J 402". AT THE INTERSECTION OF THE FLORIDA EAST COAST RAILROAD AND OCEAN AVENUE, 1 FOOT NORTH OF A WITNESS POST. ELEVATION = 7.00 (NAVD88) AND 8.51 (NGVD29). "NAVD88" REFERS TO THE NORTH AMERICAN VERTICAL DATUM OF 1988.

6. BEARINGS AND COORDINATES SHOWN HERE ON AND ON THE MAP OF SURVEY ARE IN FEET AND REFERENCED TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, FLORIDA EAST ZONE, NATIONAL GEODETIC SURVEY (NGS) NORTH AMERICAN DATUM (NAD) OF 1983/1990, UTILIZING THE LENGEMAN GPS RTK NETWORK. PARENT CONTROL STATION: BEARINGS BASED ON A BEARING OF SOUTH 33°04'15" EAST BETWEEN PALM BEACH COUNTY HORIZONTAL CONTROL MONUMENTS "JUDGE" AND "FOCEAN". (SEE SHEET 02 OF 08 FOR GRAPHICAL DEPICTION)

7. BY GRAPHIC PLOTTING ONLY, THE SUBJECT PROPERTY LIES WITHIN ZONE A7, AS SHOWN ON THE FLOOD INSURANCE RATE MAP COMMUNITY PANEL NUMBER 120214 0001 C, MAP REVISED: OCTOBER 15, 1982.

8. ALL SUBSURFACE LOCATIONS DEPICTED HEREON ARE AS MARKED OUT IN THE FIELD BY OTHERS, UNDER "SUNSHINE STATE ONE CALL" TICKET NUMBERS 095602511 AND 145600257. COMPASS POINT SURVEYORS, PL ASSUMES NO LIABILITY AS TO THE ACCURACY OF THE SUBSURFACE LOCATIONS AS MARKED OUT BY OTHERS.

LIMITATIONS:

1. PURPOSE OF SURVEY: LOCATE SELECTED NATURAL AND ARTIFICIAL FEATURES OF A PART OF THE EARTH'S SURFACE TO DETERMINE HORIZONTAL AND VERTICAL SPATIAL RELATIONS TO BE UTILIZED FOR THE PURPOSE OF DESIGN. SURVEY LIMITS ESTABLISHED BY CLIENT AND DO NOT CORRESPOND WITH BOUNDARY OR RIGHT-OF-WAY LINES.

2. LAST FIELD DATE OF SURVEY: 06/11/16, AS REFERENCED IN FIELD BOOK 289, PAGE 49.

3. THIS IS NOT A BOUNDARY SURVEY. NO LIMITS OF OWNERSHIP OR RIGHTS-OF-WAY HAVE BEEN ESTABLISHED IN THE FIELD. NO TITLE OPINIONS OR ABSTRACTS HAVE BEEN PROVIDED TO OUR OFFICE. LINES SHOWN HEREON ARE FOR GRAPHICAL PURPOSES ONLY AND MAY VARY FROM ACTUAL OCCUPATION LIMITS ON THE GROUND. BOUNDARY MONUMENTATION HAS NEITHER BEEN RECOVERED NOR SET IN THE CONDUCT OF THIS SURVEY.

4. PRINTED DIMENSIONS SHOWN HEREON SUPERSEDE SCALED DIMENSIONS. ITEMS AND SYMBOLS SHOWN MAYBE BE DRAWN OUT OF SCALE FOR PURPOSES OF CLARITY.

5. USE OF THIS SURVEY BY ANYONE OTHER THAN THOSE PREPARED FOR OR CERTIFIED TO, WILL BE THE RE-USERS SOLE RISK WITHOUT LIABILITY TO THE SURVEYOR.

6. SHOWN ANYWHERE ON THIS SURVEY, THE WORD "CERTIFY" IS UNDERSTOOD TO BE AN EXPRESSION OF A PROFESSIONAL OPINION BASED UPON THE SURVEYOR'S BEST KNOWLEDGE, INFORMATION AND BELIEF, AND THAT IT CONSTITUTES NEITHER A GUARANTEE NOR A WARRANTY.

PREPARED FOR AND CERTIFIED TO:

MATHEWS CONSULTING, INC.
477 S. ROSEMARY AVE., SUITE 330
WEST PALM BEACH, FL 33401
TEL: (561) 655-6175

SURVEYOR AND MAPPER IN RESPONSIBLE CHARGE:

SCOTT A. REID
PROFESSIONAL SURVEYOR AND MAPPER
LICENSE NUMBER LS 6528
STATE OF FLORIDA
TEL: (954) 332-8181

SURVEY LEGEND:

ASPH	ASPHALT	FDOT	FLORIDA DEPARTMENT OF TRANSPORTATION	PRM	PERMANENT REFERENCE MARKER
A.E.	ANCHOR EASEMENT	FPL	FLORIDA POWER AND LIGHT	PVC	POLYVINYL CHLORIDE
A.P.	ASPHALT PATCH	FF	FINISH FLOOR ELEVATION	R	RADIUS
BPP	BLACK PLASTIC PIPE	FND	FOUND	R/C	ROD AND CAP
BST	BELLSOUTH TELEPHONE	FM	FORCE MAIN	RCP	REINFORCED CONCRETE PIPE
C/L	CENTERLINE	HH	HAND HOLE	R/W	RIGHT OF WAY
C	CALCULATED	HDPE	HIGH DENSITY POLYETHYLENE	RWM	RIGHT OF WAY MAP
CLF	CHAIN LINK FENCE	INV	INVERT	RLS	REGISTERED LAND SURVEYOR
CLP	CONCRETE LIGHT POLE	IRC	IRON ROD & CAP	STA	STATION
CMP	CORRUGATED METAL PIPE	L	LENGTH	SWK	CONCRETE SIDEWALK
CMU	CONCRETE MASONRY UNIT	LF	LINEAR FEET	SWL	SWALED
CONC	CONCRETE	LSA	LANDSCAPE AREA	TOB	TOP OF BANK
CP	CONCRETE PIPE	MP	METAL PIPE	TOS	TOE OF SLOPE
D	CENTRAL ANGLE	N/A	NOT ACCESSIBLE	T.O.N.	TOP OF NUT
D.E.	DRAINAGE EASEMENT	N/D	NAIL AND DISK	T.O.P.	TOP OF PIPE
DIP	DUCTILE IRON PIPE	OHL	OVERHEAD LINE	T.O.W.	TOP OF WALL
DEP	DEPRESSED (CURB)	O.R.P.	OFFICIAL RECORD BOOK	TYP	TYPICAL
EL	ELEVATION	P.B.	PLAT BOOK	U.E.	UTILITY EASEMENT
EP	EDGE OF PAVEMENT	P.E.	PLANTING EASEMENT	UNK	UNKNOWN
ERCP	ELLIPTICAL REINFORCED CONCRETE PIPE	PG	PAGE	VERT	VERTICAL
ESMT	EASEMENT	PP	PLASTIC PIPE	V.G.	VALLEY GUTTER
		PK	PARKER-KALON BRAND	VCP	VITRIFIED CLAY PIPE
				WPP	WOOD POWER POLE

SURVEY SYMBOL LEGEND:

	DIAMETER		CATCH BASIN		AIR RELEASE VALVE
	ELECTRIC OUTLET		RED FLAG		COMMUNICATION MANHOLE
	BACK FLOW PREVENTER		WHITE FLAG		ELECTRICAL MANHOLE
	WATER METER		BLUE FLAG		UNKNOWN TYPE MANHOLE
	IRRIGATION VALVE		YELLOW FLAG		DECORATIVE MAILBOX
	SANITARY VALVE		ORANGE FLAG		SANITARY MANHOLE
	WATER VALVE		GREEN FLAG		STORM MANHOLE
	SPIGOT		BLUE PAINT MARKS		LIMITS OF LANDSCAPING
	SIGN		RED PAINT MARKS		LIMITS OF TREE CANOPY
	OVERHEAD UTILITY WIRE		GREEN PAINT MARKS		BUSH/HEDGE
	EXISTING ELEVATION		ORANGE PAINT MARKS		CLEAN OUT
	FIRE HYDRANT		PURPLE PAINT MARKS		GUY WIRE ANCHOR
	FIRE DEPT. CONNECTION		WHITE PAINT MARKS		SITE BENCHMARK
	WOOD UTILITY POLE		YELLOW PAINT MARKS		
	CONCRETE POWER POLE		SPRINKLER HEAD		
	GROUND LIGHT		LIGHT POST		
	WOOD POLE STREET LIGHT		MAILBOX		
	CONC POLE STREET LIGHT		GUY POLE		
	METAL POLE STREET LIGHT		CONCRETE SIGNAL POLE		
	FIBER OPTIC MARKER		TRASH CAN		
	ELECTRIC METER		MONITORING WELL		
	ELECTRIC HANDHOLD		ELECTRICAL PANEL		
	UNKNOWN HANDHOLD		TRAFFIC HANDHOLD		
	CABLE/TV HANDHOLD		GAS TEST BOX		
	ELECTRIC BOX		UNKNOWN RISER BOX		
	IRRIGATION CONTROL VALVE		CONCRETE UTILITY POLE		
	IN CONC. BOX		CABLE PEDESTAL		
	PARKING METER		DOUBLE WATER METER		
	RECLAIMED WATER VALVE		WATER WELL		
	KEY PAD		ANTENNA		
	ELECTRIC TRANSFORMER		FOUND IRON ROD		
	CURB INLET		FOUND IRON ROD & CAP		
	WOOD POST		FOUND OPEN PIPE		
	TELEPHONE PULLBOX		TELEPHONE MARKER		
	FOUND NAIL & DISK				
	FOUND DRILL HOLE				
	FOUND X-CUT				

SURVEY TREE LEGEND:

00° - ACACIA	00° - UNKNOWN	00° - CITRUS	00° - PAPAYA
00° - PALM SPECIES	00° - BOTTLEBRUSH	00° - CACTUS	00° - CYPRESS
00° - BANANA	00° - MAPLE	00° - MANGO	00° - GUMBO-LIMBO
00° - FICUS	00° - MAHOGANY	00° - HEDGE	00° - SCHEFFLERA
00° - SEAGRAPE	00° - OAK	00° - BUSH	00° - PINE
00° - PLANT			

NOTE: VERIFICATION OF TREE SPECIES SHOULD BE CONDUCTED BY A PROFESSIONAL ENGAGED IN THE FIELD OF NATURAL SCIENCE.

SURVEY PREPARED BY:



3195 N. POWERLINE RD., SUITE 112, POMPAÑO BEACH, FL 33069 - PH. 954.332.8181 - LB No.: 7535

SITE BENCHMARKS (NAVD 29):

BENCHMARK NO. 01
SET 3/8" IRON ROD & RED CAP
"CPS LB 7535"
STA: 300+98.85, 18.57 LEFT
N: 816363.10
E: 966133.73
BM EL.: 6.79'

BENCHMARK NO. 02
SET 3/8" IRON ROD & RED CAP
"CPS LB 7535"
STA: 303+91.79, 12.92 LEFT
N: 816941.95
E: 966141.36
BM EL.: 7.79'

BENCHMARK NO. 03
SET 3/8" IRON ROD & RED CAP
"CPS LB 7535"
STA: 39+52.65, 17.26 RIGHT
N: 817545.57
E: 966412.57
BM EL.: 5.89'

BENCHMARK NO. 04
SET 3/8" IRON ROD & RED CAP
"CPS LB 7535"
STA: 43+74.27, 20.56 LEFT
N: 817284.84
E: 966579.99
BM EL.: 4.28'

BENCHMARK NO. 05
SET PK NAIL & METAL DISK
"CPS LB 7535"
STA: 49+08.06, 16.42 LEFT
N: 817545.57
E: 966250.40
BM EL.: 7.23'

BENCHMARK NO. 06
SET PK NAIL & METAL DISK
"CPS LB 7535"
STA: 503+31.77, 15.19 LEFT
N: 817885.39
E: 966229.74
BM EL.: 7.77'

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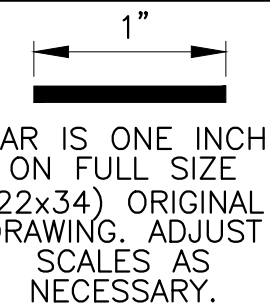
DESIGNED: <u>C.K.M.</u>
DRAWN: <u>J.A.J./F.R.C.</u>
CHECKED: <u>D.L.M./A.C.</u>
APPROVED: <u>D.L.M.</u>

DAVID L. MATHEWS, P.E.
No. 48242



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VERIFY SCALE



ENGINEER NO.: 1856

CLIENT

PROJECT NO.: _____

CAD REF.: 1856G02

TOWN OF LANTANA
SOUTH LAKE DRIVE
FORCE MAIN REPLACEMENT

SYMBOLS, LEGEND, SURVEY NOTES,
HORIZONTAL CONTROL DETAIL
AND SITE BENCHMARKS

DATE: AUGUST 2017

SHEET: 2 of 15

DRAWING: G-2

BIDDING

Acad Version : R20.1s (LMS Tech) User Name : 766ddp Date/Time : Mon, 28 Aug 2017 - 2:54pm Current Plotstyle : ByColor Layout Tab: G-3 Path Name : I:\WestPalmBeach\LAN\161856-S 1.3h WM_Lake Dr FM CAD\Lake Drive FM Working Folder\1856G03.dwg

GENERAL NOTES

- ALL CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF TOWN OF LANTANA, PALM BEACH COUNTY ROADWAY DEPARTMENT, FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION, PALM BEACH COUNTY HEALTH DEPARTMENT AND NATIONAL CODES WHERE APPLICABLE.
- ALL CONSTRUCTION SHALL BE DONE IN A SAFE MANNER, SPECIFICALLY, THE RULES AND REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES SHALL BE STRICTLY OBSERVED.
- ALL CONSTRUCTION SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE AGENCIES HAVING JURISDICTION OVER THE R/W WHERE THE PROJECT IS CONSTRUCTED.
- MAINTENANCE OF TRAFFIC (MOT) PLANS SHALL MEET THE REQUIREMENTS OF SECTION 102 OF THE FDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND THE REQUIREMENTS OF THE TOWN OF LANTANA AS FURTHER DEFINED IN THE SPECIFICATIONS OF THESE CONTRACT DOCUMENTS.
- CONTRACTOR SHALL PREPARE AND SUBMIT M.O.T. PLANS TO TOWN OF LANTANA AND PALM BEACH COUNTY FOR REVIEW AND APPROVAL FOR WORK TO BE DONE WITHIN THE PUBLIC RIGHT-OF-WAYS.
- CONTRACTOR SHALL MAINTAIN ACCESS TO PRIVATE PROPERTY AT ALL TIMES.
- LOCATIONS OF EXISTING FACILITIES AS SHOWN ON CONSTRUCTION DRAWINGS ARE APPROXIMATE AND ARE DRAWN FROM AVAILABLE RECORDS. THE TOWN AND THEIR CONSULTANTS ASSUMES NO RESPONSIBILITY FOR THE ACCURACY OF THE FACILITIES SHOWN NOR FOR ANY FACILITY NOT SHOWN. THE CONTRACTOR SHALL LOCATE OR EXPOSE ALL UTILITIES WITHIN THE PROPOSED WORK AREAS AND AT CRITICAL LOCATIONS TO VERIFY UTILITY LOCATIONS AND PIPE LAYING SCHEDULES.
- CONTRACTOR SHALL OBTAIN THE SERVICES OF SUNSHINE STATE ONE CALL OF FLORIDA, INC. AS REQUIRED BY FLORIDA STATUTES (1-800-432-4770).
- COVER SHALL BE A MINIMUM OF 2.5 FEET (TYPICAL) UNLESS APPROVED BY THE TOWN.
- ALL DELETERIOUS MATERIAL SHALL BE PROPERLY DISPOSED OF BY THE CONTRACTOR AT HIS EXPENSE.
- IF UPON EXCAVATION, AN EXISTING UTILITY IS FOUND TO BE IN CONFLICT WITH THE PROPOSED CONSTRUCTION OR TO BE OF A SIZE OR MATERIAL DIFFERENT FROM THAT SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER'S ENGINEER.
- CONTRACTOR SHALL BE RESPONSIBLE FOR DAMAGE TO ANY EXISTING UTILITIES.
- ALL OPEN TRENCHES AND HOLES SHALL BE PROPERLY MARKED AND BARRICADED TO ASSURE THE SAFETY OF BOTH VEHICULAR AND PEDESTRIAN TRAFFIC.
- ALLOWABLE OPEN TRENCH AT END OF DAY SHALL NOT EXCEED 10 FEET AND SHALL BE PROPERLY COVERED WITH STEEL PLATE. TEMPORARY ASPHALT SHALL BE INSTALLED PRIOR TO END OF DAY ON ALL ROAD CROSSINGS. NO OVERNIGHT LANE CLOSURES WILL BE ALLOWED.
- CONTRACTOR SHALL PLACE ELECTRONIC TAPE MARKER (ETM) OVER ALL PIPING, VALVES AND FITTINGS.
- CONTRACTOR SHALL UTILIZE BEST CONSTRUCTION METHODS AND DEVICES AS INDICATED IN FDOT INDEX 100 THRU 105 WHERE NECESSARY IN ORDER TO COMPLY WITH ALL STATE, LOCAL AND NPDES WATER QUALITY STANDARDS.
- CONTRACTOR IS RESPONSIBLE FOR NOTIFYING HOME OWNERS CONCERNING THE REMOVAL OF LANDSCAPING WITHIN THE RIGHT-OF-WAY OF THE ALIGNMENT OF THE PROPOSED RAW WATER MAIN. THE CONTRACTOR SHALL BE ALLOWED TO REMOVE AND DISPOSE OF TREES IF GIVEN WRITTEN PERMISSION BY THE OWNER OF THE RESIDENTIAL PROPERTY.
- CONTRACTOR SHALL REPLACE ALL PAVEMENT MARKINGS AND TRAFFIC SIGNAL LOOPS REMOVED DURING CONSTRUCTION.
- EXISTING TRAFFIC SIGNS TO BE RESET PER FDOT STANDARDS.
- VALVE BOXES SHOWN ARE APPROXIMATE, CONTRACTOR SHALL ADJUST VALVE BOXES AS REQUIRED TO MEET FINAL GRADES.
- CONTRACTOR SHALL PERFORM ALL WORK NECESSARY TO LOCATE, EXCAVATE AND PREPARE FOR CONNECTIONS TO THE EXISTING SYSTEMS ALL AS SHOWN ON THE DRAWINGS.
- STATIONS SHOWN ON THE DRAWINGS ARE STATIONS BASED ON THE ESTABLISHED BASELINE AND SHALL NOT BE CONSIDERED AS DISTANCES OR AS A MEASURE OF THE LINEAR FOOTAGE OF PIPE TO BE INSTALLED.
- ALL AREAS SHOWN TO BE OVERLAYED AS A RESULT OF OPEN CUT OPERATIONS, WILL BE MILLED PRIOR TO RESURFACING.
- A VIDEO TAPE SHALL BE MADE OF THE ENTIRE CONSTRUCTION AREA. THE TAPE SHALL DOCUMENT THE CONDITIONS OF ALL ADJACENT PROPERTY, FENCES, DRIVEWAYS, IRRIGATION, MAIL BOXES AND OTHER SUCH FEATURES. PARTICULAR ATTENTION SHOULD BE PAID TO ITEMS BROKEN OR IN DISREPAIR PRIOR TO CONSTRUCTION, SUCH THAT THERE WILL BE FULL UNDERSTANDING OF THE REQUIREMENTS FOR RESTORATION AFTER CONSTRUCTION IS COMPLETED.
- PROJECT SITE SAFETY:
 - THE ENGINEER/OWNER OR THEIR EMPLOYEES HAVE NO AUTHORITY TO EXERCISE ANY CONTROL OVER THE CONTRACTOR, ANY SUB-CONTRACTOR OR OTHER ENTITY OR THEIR EMPLOYEES IN CONNECTION WITH THEIR WORK OR ANY JOB SITE HEALTH OR SAFETY PRECAUTIONS.
 - THE CONTRACTOR IS SOLELY RESPONSIBLE FOR JOB SITE SAFETY, AND WARRANTS THAT THIS INTENT IS MADE EVIDENT BY THE AGREEMENT BETWEEN OWNER AND CONTRACTOR.
 - ALL EXISTING OVERHEAD AND UNDERGROUND UTILITIES SHOWN ON THESE DRAWINGS OR ENCOUNTERED THROUGH THE PROGRESSION OF WORK AT THIS PROJECT SITE ARE ASSUMED TO BE LIVE, CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS WHEN WORKING AROUND EXISTING OVERHEAD OR UNDERGROUND UTILITIES.

GENERAL INFORMATION

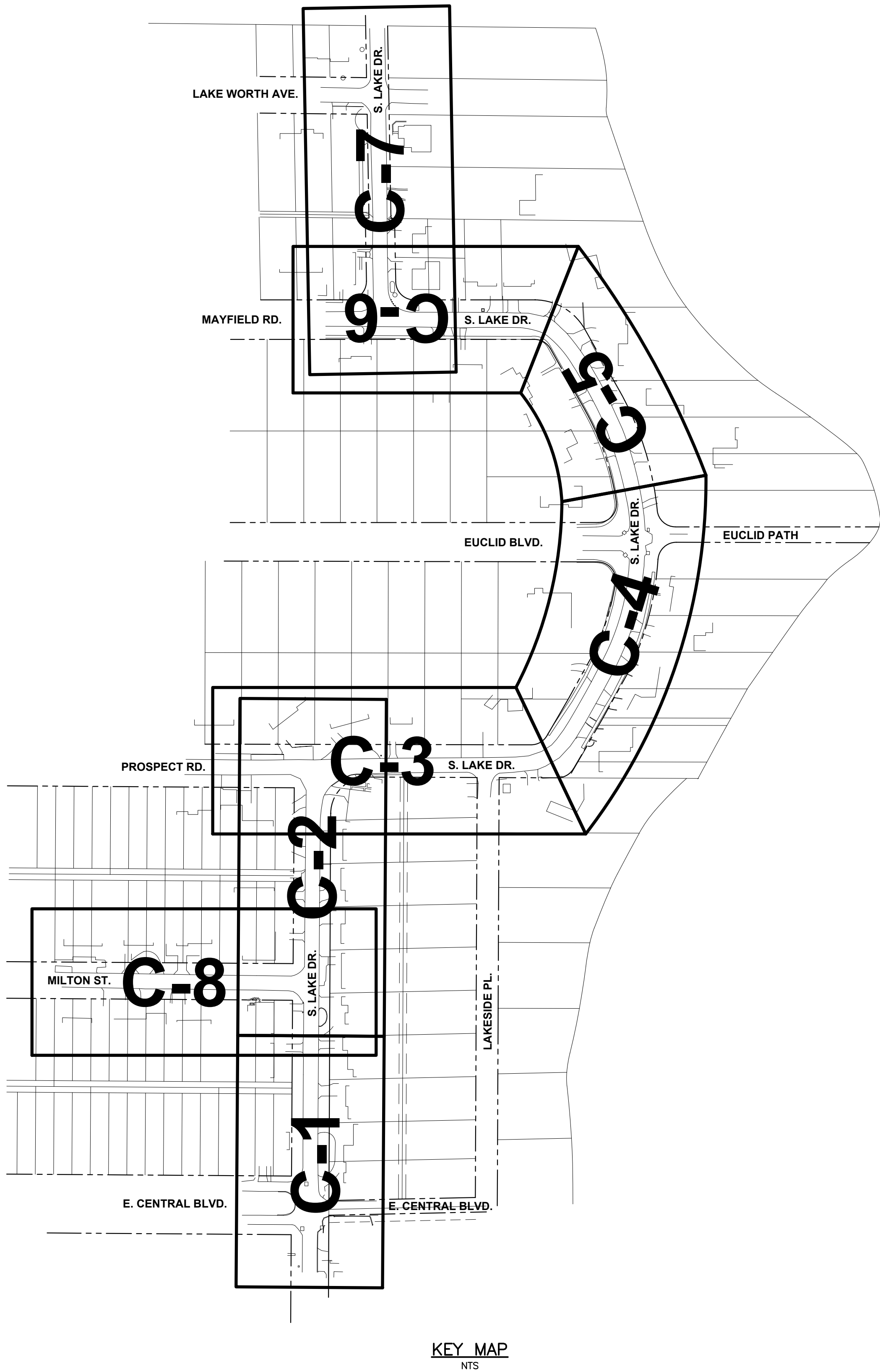
- BELLSOUTH TELEPHONE, FLORIDA POWER AND LIGHT, CABLE TV, GAS, ETC. ARE TAKEN FROM FIELD INSPECTIONS AND SKETCHES PROVIDED BY UTILITIES AND ARE SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. THE CONTRACTOR SHALL CONTACT ALL UTILITY OWNERS AND CONFIRM LOCATIONS OF UTILITIES NO LESS THAN 48 HOURS BEFORE BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL ACCURATELY LOCATE AND UNCOVER ALL EXISTING UTILITIES BEFORE BEGINNING CONSTRUCTION WHERE CROSSING OR PARALLELING OF EXISTING UTILITIES OCCUR. ANY DAMAGE RESULTING FROM THE CONTRACTORS OPERATION SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE.

CONSTRUCTION SEQUENCE

- TRAFFIC IS TO BE MAINTAINED AT ALL TIMES. ACCESS TO PRIVATE PROPERTIES SHALL BE MAINTAINED AT ALL TIMES. NO STREET IS TO BE CLOSED FOR A PERIOD OF MORE THAN FOUR HOURS; LOCAL TRAFFIC SHALL BE MAINTAINED.

EROSION CONTROL NOTES:

- ALL EXISTING & PROPOSED STORM SEWER INLET GRATES TO BE COVERED WITH FILTER FABRIC DURING CONSTRUCTION.
- CUT AND FILL SLOPES TO BE CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SILT FENCES TO BE USED WHERE NECESSARY.
- CONSTRUCTION VEHICLE ACCESS ROUTES SHALL BE SWEEPED CLEAN OF SEDIMENT, CONCRETE AND OTHER CONSTRUCTION MATERIALS AS NEEDED.
- ALL BERMS, DIKES AND SPOIL PILES SUBJECT TO EROSION MUST BE STABILIZED OR CONTAINED TO PREVENT EROSION AND RUNOFF FROM THE PROJECT.



INTRACOASTAL WATERWAY

INTRACOASTAL WATERWAY



BIDDING

NO.	DATE	ISSUED FOR	APRV'D BY	DESIGNED: C.K.M.
				DRAWN: J.A.J./F.R.C.
				CHECKED: D.L.M./A.C.
				APPROVED: D.L.M.

DAVID L. MATHEWS, P.E.
No. 48242

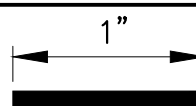
MATHEWS
CONSULTING



a BAXTER & WOODMAN company

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Phone: 561-655-6175 • Fax: 561-655-6179
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VERIFY SCALE



BAR IS ONE INCH
ON FULL SIZE
(22x34) ORIGINAL
DRAWING. ADJUST
SCALES AS
NECESSARY.

ENGINEER NO.: 1856

CLIENT
PROJECT NO.: _____

CAD REF.: 1856G03

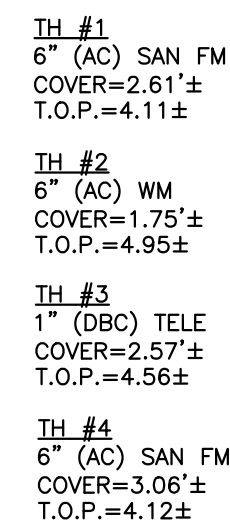
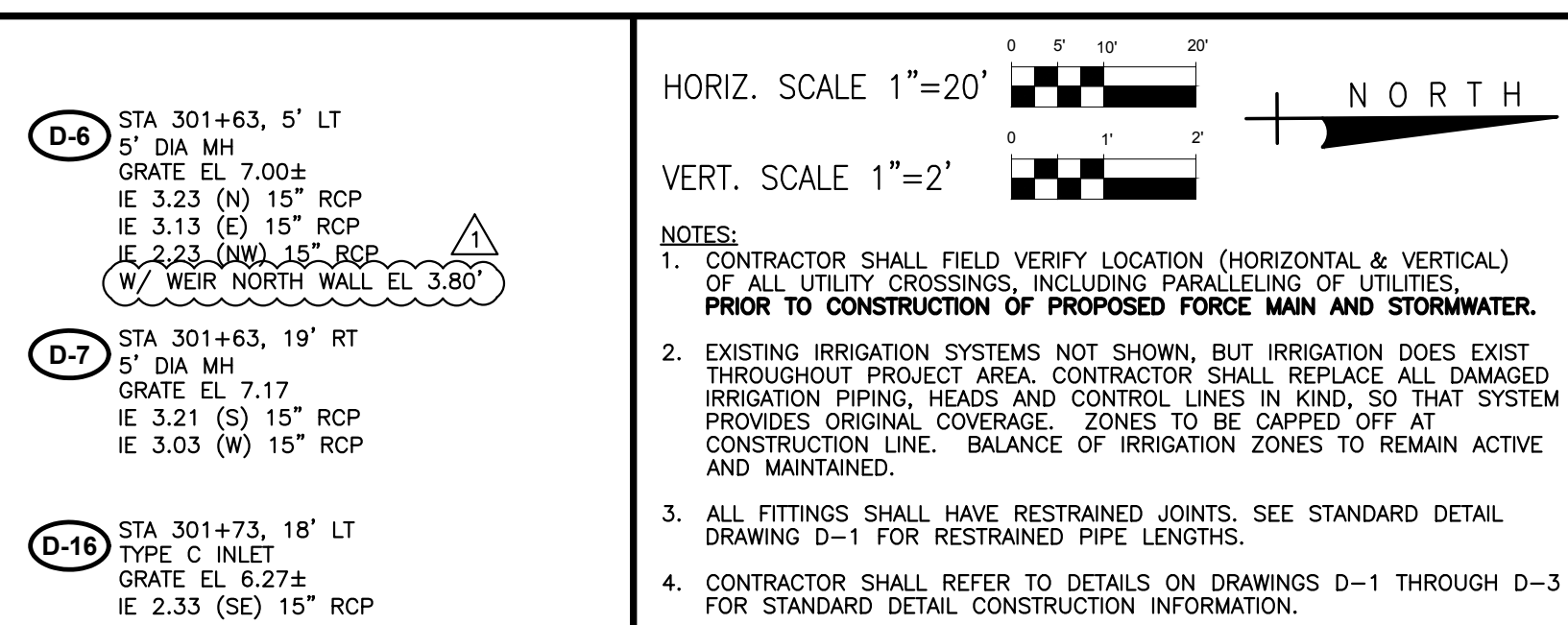
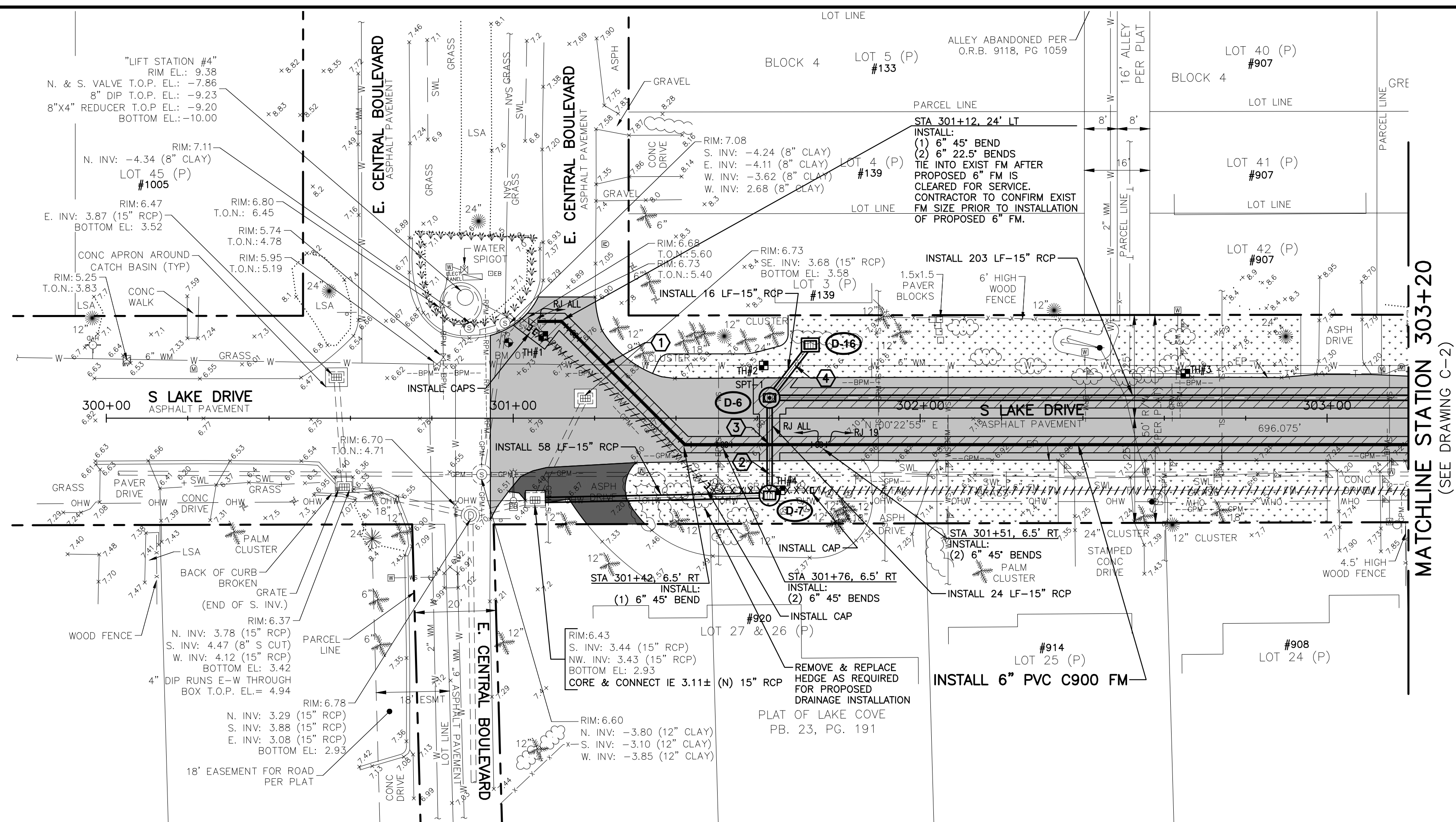
TOWN OF LANTANA
SOUTH LAKE DRIVE
FORCE MAIN REPLACEMENT

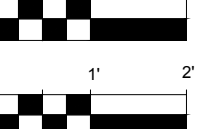
GENERAL NOTES, INFORMATION AND KEY MAP

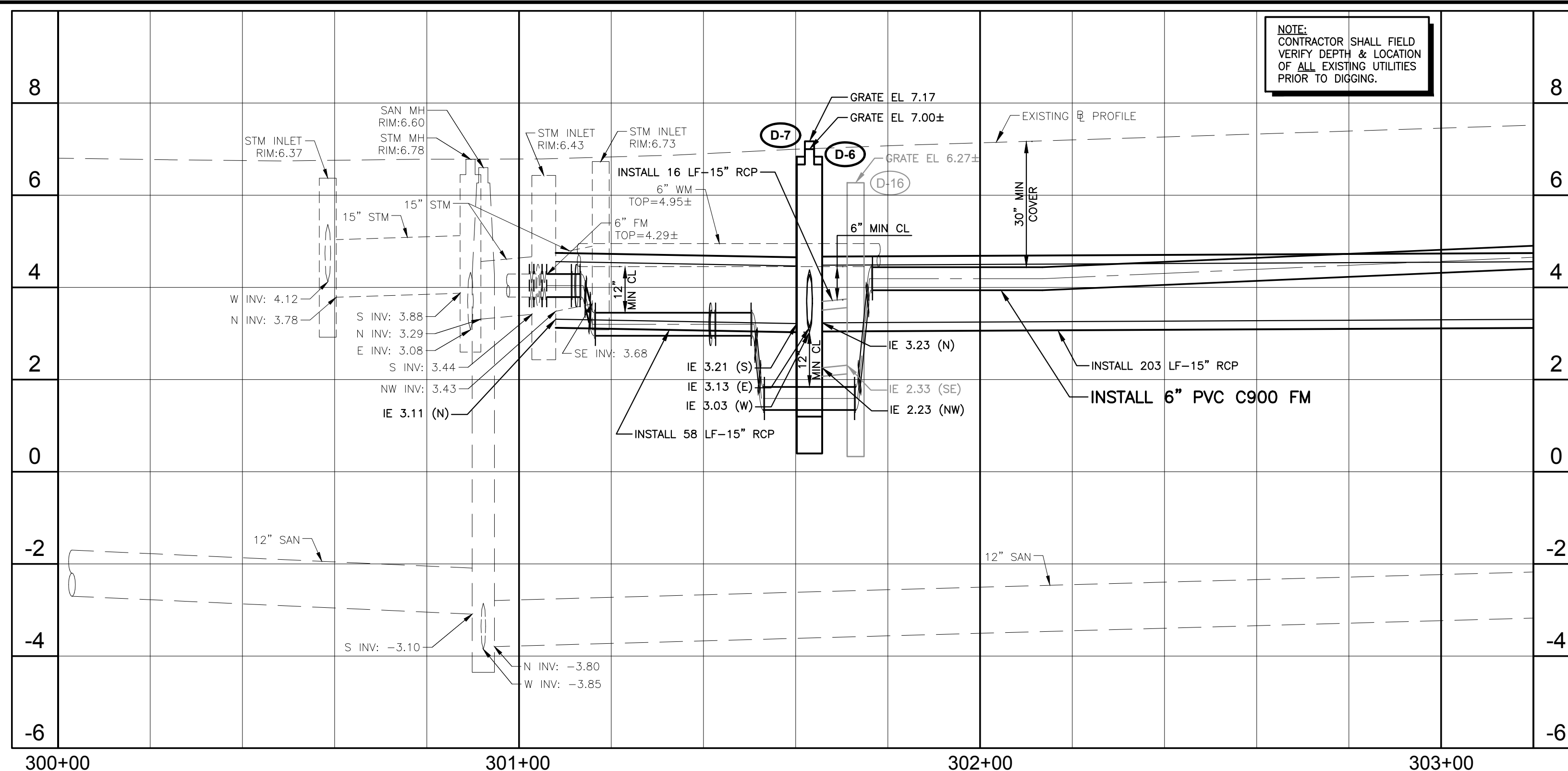
DATE: AUGUST 2017

SHEET: 3 of 15

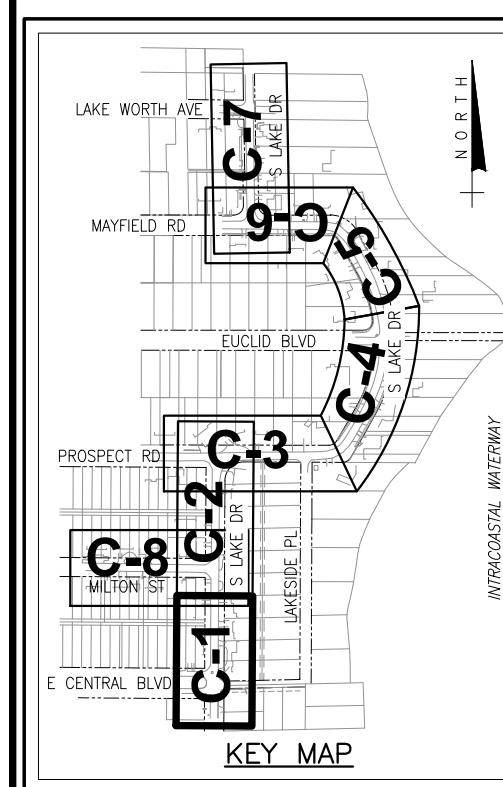
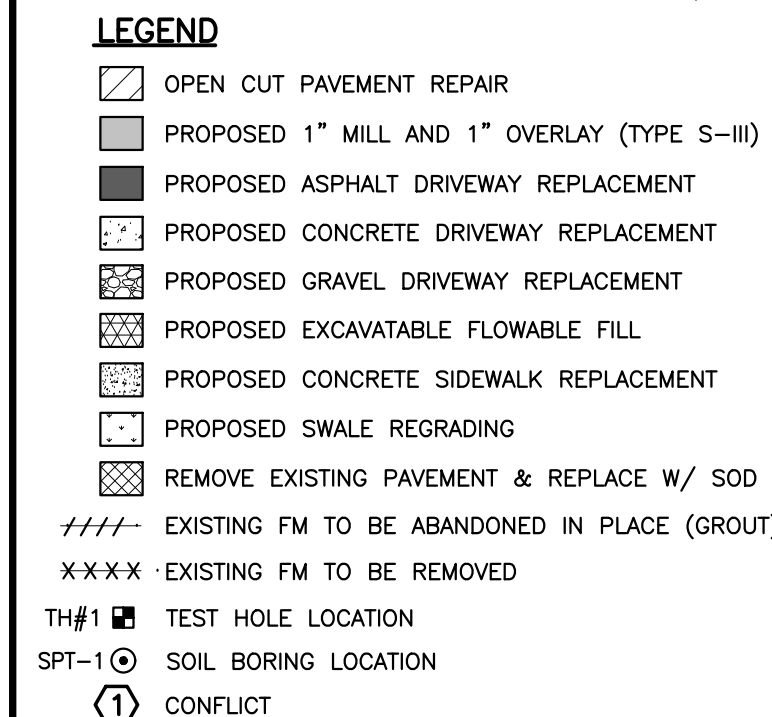
DRAWING: G-3



- HORIZ. SCALE 1"=20'  NORTH 
- VERT. SCALE 1"=2' 
- NOTES:
1. CONTRACTOR SHALL FIELD VERIFY LOCATION (HORIZONTAL & VERTICAL) OF ALL UTILITY CROSSINGS, INCLUDING PARALLELING OF UTILITIES. **PRIOR TO CONSTRUCTION OF PROPOSED FORCE MAIN AND STORMWATER.**
 2. EXISTING IRRIGATION SYSTEMS NOT SHOWN, BUT IRRIGATION DOES EXIST THROUGHOUT PROJECT AREA. CONTRACTOR SHALL REPLACE ALL DAMAGED IRRIGATION PIPING, HEADS AND CONTROL LINES IN KIND, SO THAT SYSTEM PROVIDES ORIGINAL COVERAGE. ZONES TO BE CAPPED OFF AT CONSTRUCTION LINE. BALANCE OF IRRIGATION ZONES TO REMAIN ACTIVE AND MAINTAINED.
 3. ALL FITTINGS SHALL HAVE RESTRAINED JOINTS. SEE STANDARD DETAIL DRAWING D-1 FOR RESTRAINED PIPE LENGTHS.
 4. CONTRACTOR SHALL REFER TO DETAILS ON DRAWINGS D-1 THROUGH D-3 FOR STANDARD DETAIL CONSTRUCTION INFORMATION.
 5. ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE RESTORED IN KIND.
 6. IN AREAS OF UNDERGROUND UTILITIES CONTRACTOR SHALL HAND-DIG AS NECESSARY TO AVOID DAMAGING EXISTING UTILITIES. CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY DAMAGED UTILITIES AS A RESULT OF CONSTRUCTION ACTIVITIES **(THIS IS A NON-PAY ITEM).**
 7. CONTRACTOR SHALL REMOVE AND REPLACE IN KIND ALL LANDSCAPE DISTURBED WITHIN THE RIGHT-OF-WAY THAT CONFLICTS WITH THE PROPOSED IMPROVEMENTS.
 8. WATER SERVICE LINES/METERS SHALL CROSS OVER GRAVITY SEWER AND STORMWATER FACILITIES WITH MINIMUM 6" CLEARANCE.
 9. ALL WATER SERVICES SHALL BE MOLED UNDER EXISTING ROADWAYS AND DRIVEWAYS
 10. NO EXCAVATED MATERIAL SHALL BE CAST ON THE STREETS, DRIVEWAYS OR SIDEWALKS. EXCAVATED MATERIAL SHALL BE PLACED IN A DUMP TRUCK IMMEDIATELY UPON EXCAVATION AND HAULED AWAY.
 11. DRAWINGS ARE BASED ON NGVD OF 1929.
 12. WHEN CROSSING UNDERNEATH EXISTING AC WATER MAIN, CONTRACTOR SHALL SUPPORT THE EXISTING AC WATER MAIN AS NECESSARY.
 13. CONTRACTOR SHALL LOCATE AND OBTAIN ELEVATIONS OF ALL SANITARY SEWER LATERALS THAT CROSS THE PROPOSED FORCE MAIN. IF EXISTING SEWER SERVICE LATERAL IS DAMAGED BY CONTRACTOR, REPAIR USING FERNOCO COUPLINGS AND PVC SDR-18 OR HDPE PIPING **(THIS IS A NON-PAY ITEM).**
 14. ALL FITTINGS SHALL BE RESTRAINED JOINTS. SEE STANDARD DETAIL SHEET D-1.
 15. CONTRACTOR IS REQUIRED TO PROVIDE ALL SHEETING AND SHORING ACTIVITIES AS REQUIRED DUE TO CONSTRUCTION ACTIVITIES TO PROTECT ALL EXISTING UTILITIES, POWER POLES, ETC.
 16. CONTRACTOR TO PROVIDE DETAILED PLAN(S) FOR PUTTING PROPOSED FORCE MAIN INTO OPERATION AND FOR DECOMMISSIONING EXISTING FORCE MAIN.
 17. EXISTING WATER SERVICE LINES AND SANITARY SEWER LATERALS ARE SHOWN IN PLAN VIEW ONLY AND ARE APPROXIMATE LOCATIONS.
 18. CONTRACTOR SHALL LOCATE ALL EXISTING WATER SERVICE LINES PRIOR TO DIGGING. CONTRACTOR SHALL REPAIR ANY WATER SERVICE LINES DAMAGED DURING CONSTRUCTION IMMEDIATELY **(THIS IS A NON-PAY ITEM).**
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 20. SOD AND SWALE BOTH SIDES OF THE STREET AS INDICATED ON THE PLAN DRAWING. SOD AND SWALE WORK SHALL BE LIMITED TO THOSE AREAS WHERE EXISTING LANDSCAPING AND TREES WOULD NOT BE DAMAGED (I.E. SWALE AROUND LANDSCAPING, FIRE HYDRANT, ETC.)



- 1 CONFLICT**
6" FM CROSSES UNDER 6" WM
6" WM BOP EL = 4.45±
CLEARANCE = 12 INCHES
- 2 CAUTION**
15" STM CROSSES OVER 12" SAN
15" STM BOP EL = 2.84±
6" FM TOP EL = $-12.60 \pm$
CLEARANCE = 5.44 FEET
- 3 CAUTION**
6" FM CROSSES UNDER 15" STM
15" STM BOP EL = 2.84±
6" FM TOP EL = 1.84±
CLEARANCE = 12 INCHES
- 4 CONFLICT**
15" STM CROSSES UNDER 6" WM
6" WM BOP EL = 4.45±
15" STM TOP EL = 3.73±
CLEARANCE = 9 INCHES



NO.	DATE	ISSUED FOR	APRVD BY	DESIGNED: <u>C.K.M.</u>
	05/17/17	REV. PER SFWMD COMMENTS	M.R.T.	DRAWN: <u>J.A.J./F.R.C.</u>
				CHECKED: <u>D.L.M./A.C.</u>
				APPROVED: <u>D.L.M.</u>

MATHEWS CONSULTING *M*
a **BAXTER & WOODMAN** company

477 S. Rosemary Avenue, Suite 330, West Palm Beach, Florida 33401
Phone: 561-655-6175 • Fax: 561-655-6179
www.baxterwoodman.com EB-31795

VERIFY SCALE

1"

BAR IS ONE INCH ON FULL SIZE (22x34) ORIGINAL DRAWING. ADJUST SCALES AS NECESSARY.

ENGINEER NO.: 1856P&
CLIENT
PROJECT NO.: _____
CAD REF.: 1856P&

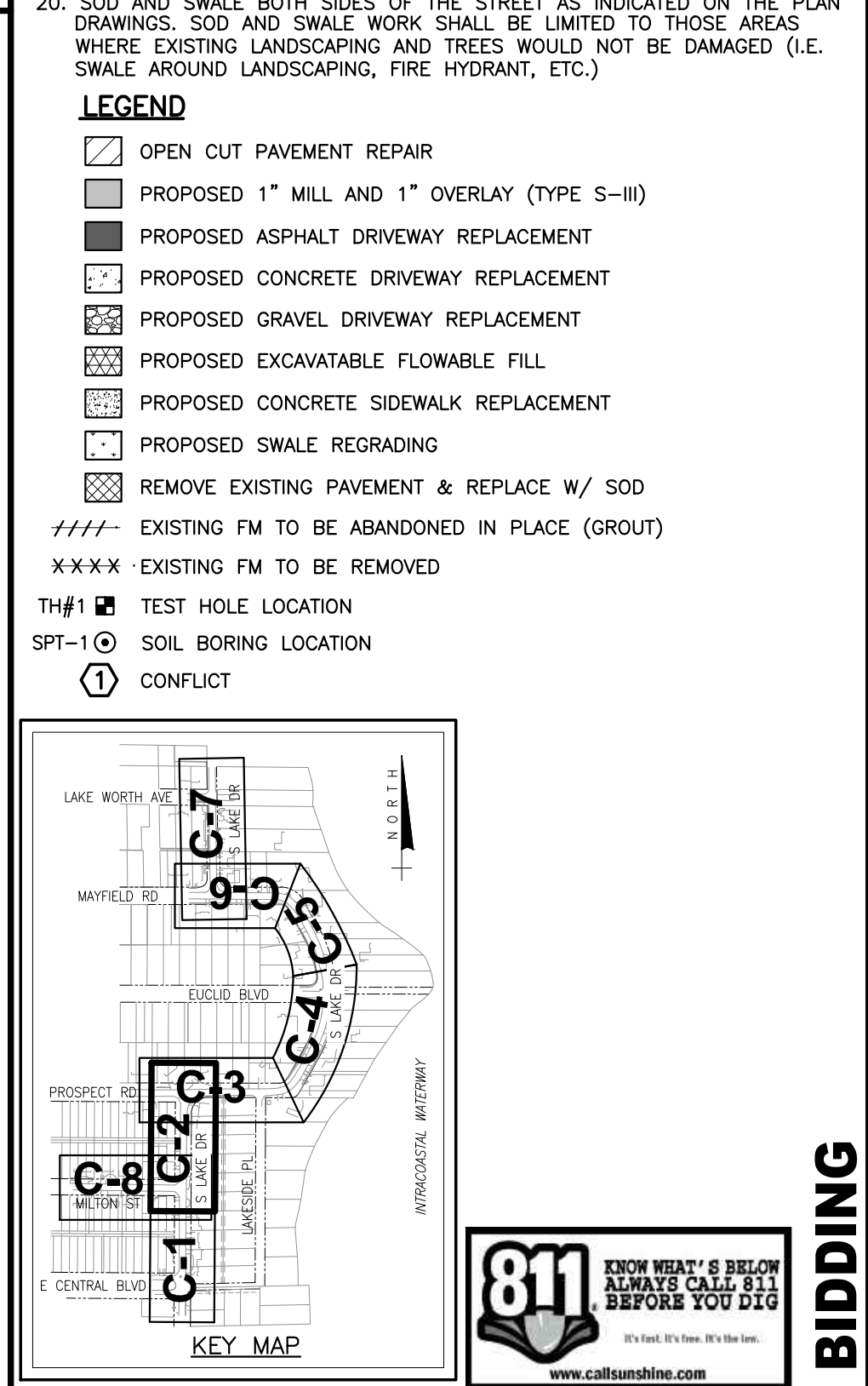
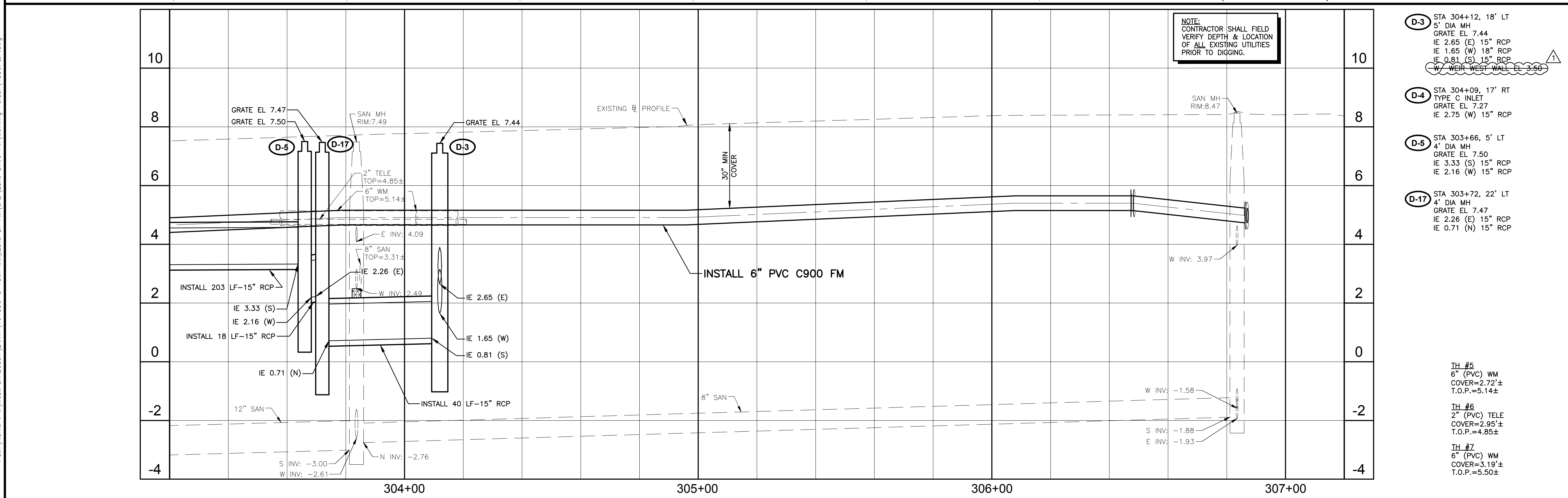
TOWN OF LANTANA
SOUTH LAKE DRIVE
FORCE MAIN REPLACEMENT

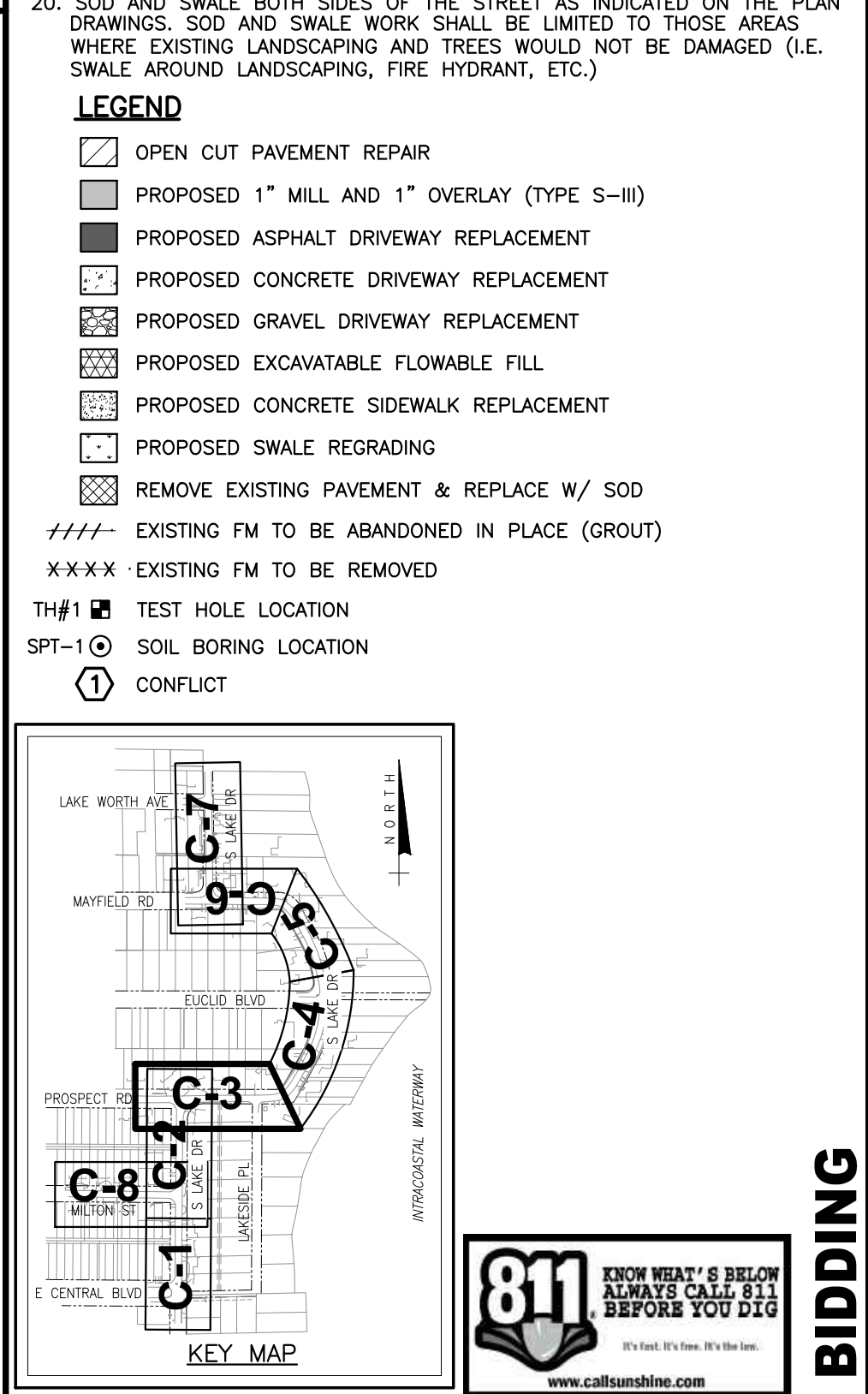
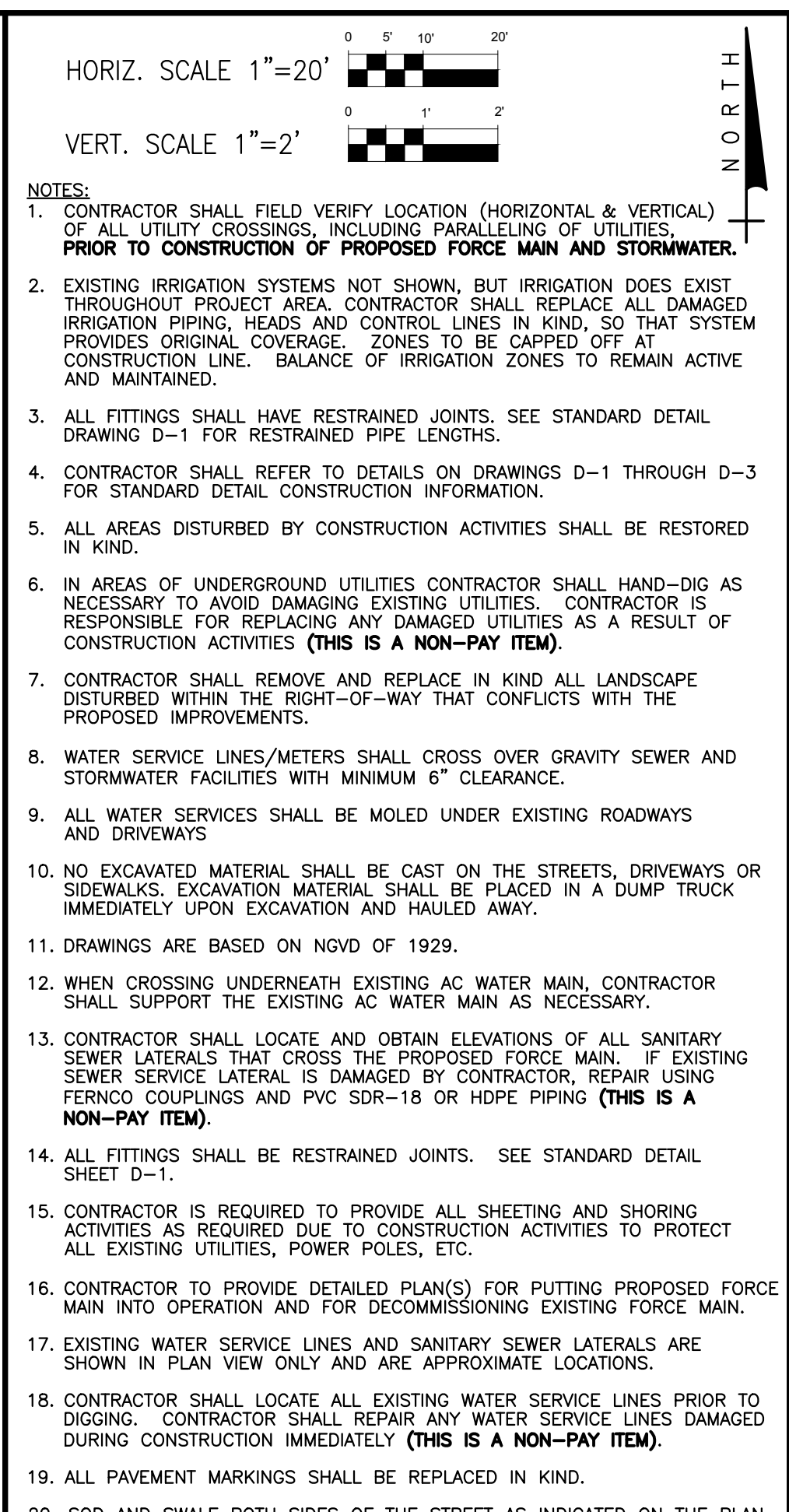
SOUTH LAKE DRIVE
PLAN AND PROFILE – SHEET 1
STATION 300+00 TO STATION 303+20

DATE: AUGUST 201

SHEET: 4 of 15

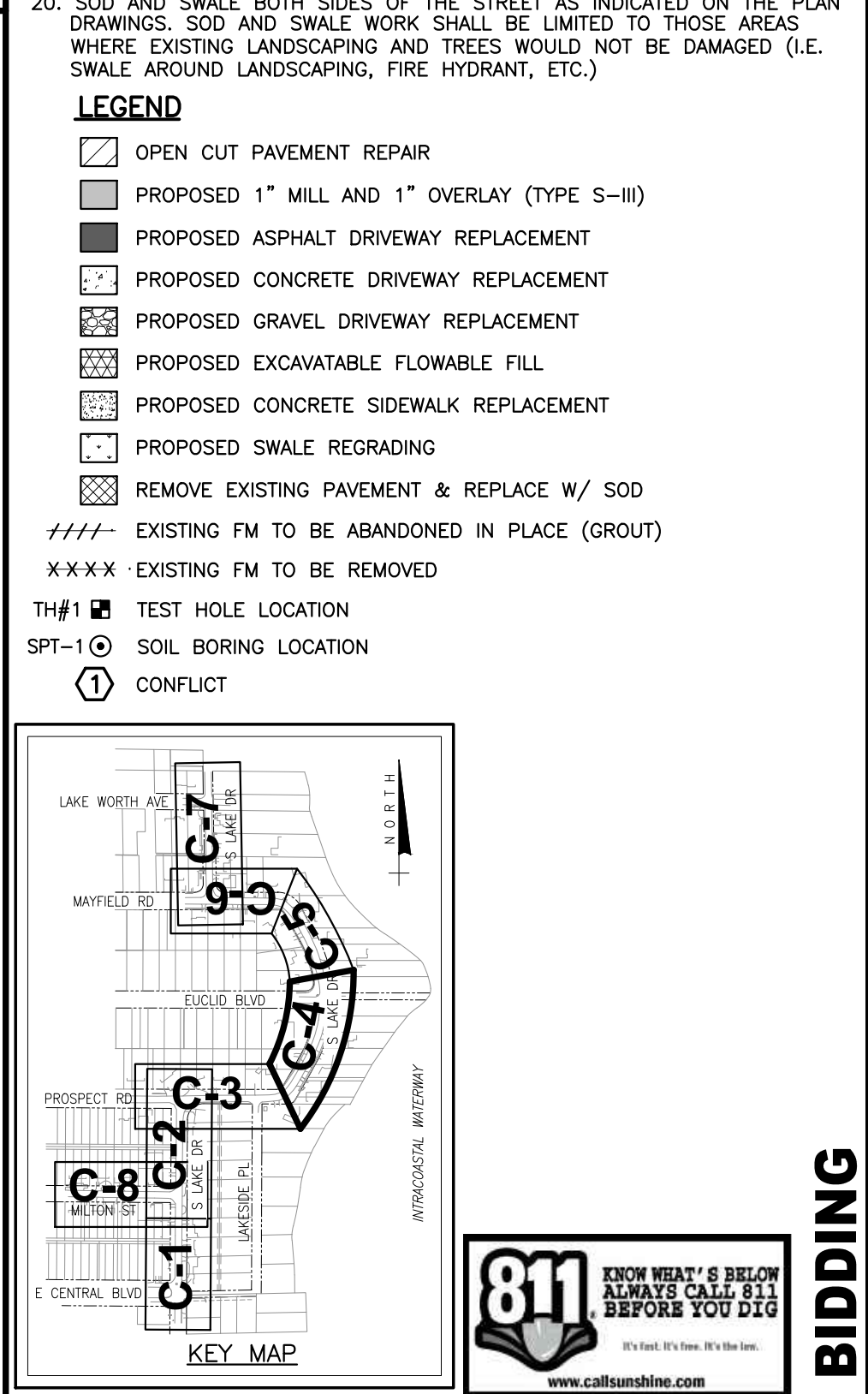
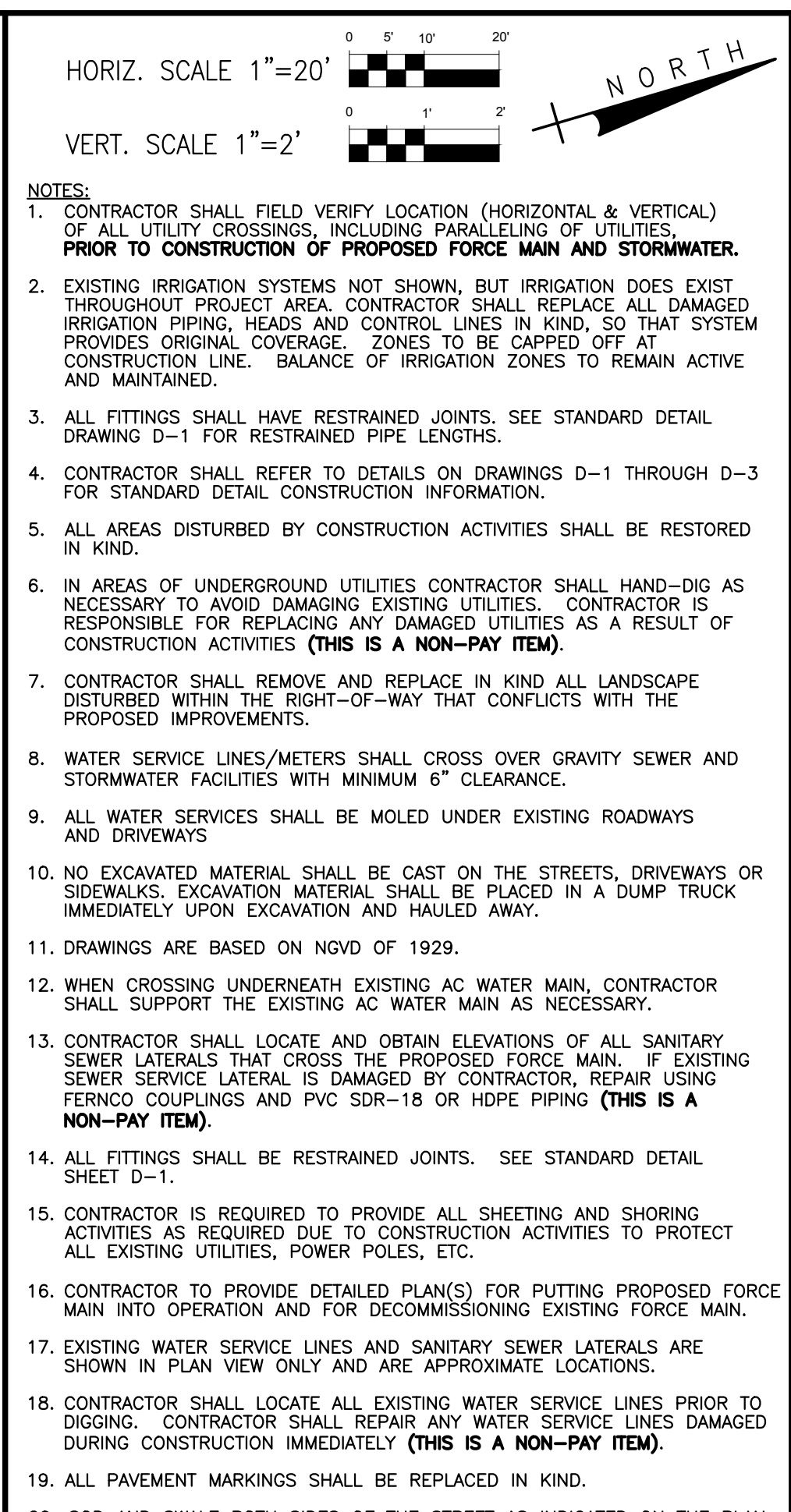
DRAWING: C-1





NO.	DATE	ISSUED FOR	APRV'D BY	DESIGNED: C.K.M.	MATHEWS CONSULTING a BAXTER & WOODMAN company 477 S. Rosemary Avenue, Suite 330, West Palm Beach, Florida 33401 Phone: 561-655-6175 • Fax: 561-655-6179 www.baxterwoodman.com EB-31795	VERIFY SCALE	ENGINEER NO.: 1856	TOWN OF LANTANA SOUTH LAKE DRIVE FORCE MAIN REPLACEMENT	DATE: AUGUST 2017
	05/17/17	REV. PER SFWMD COMMENTS	M.R.T.	DRAWN: J.A.J./F.R.C.			CLIENT		SOUTH LAKE DRIVE PLAN AND PROFILE – SHEET 3 STATION 36+00 TO STATION 40+20
				CHECKED: D.L.M./A.C.		BAR IS ONE INCH ON FULL SIZE (22x34) ORIGINAL DRAWING. ADJUST SCALES AS NECESSARY.	PROJECT NO.:	DRAWING: C-3	
				APPROVED: D.L.M.			CAD REF.: 1856P&P		

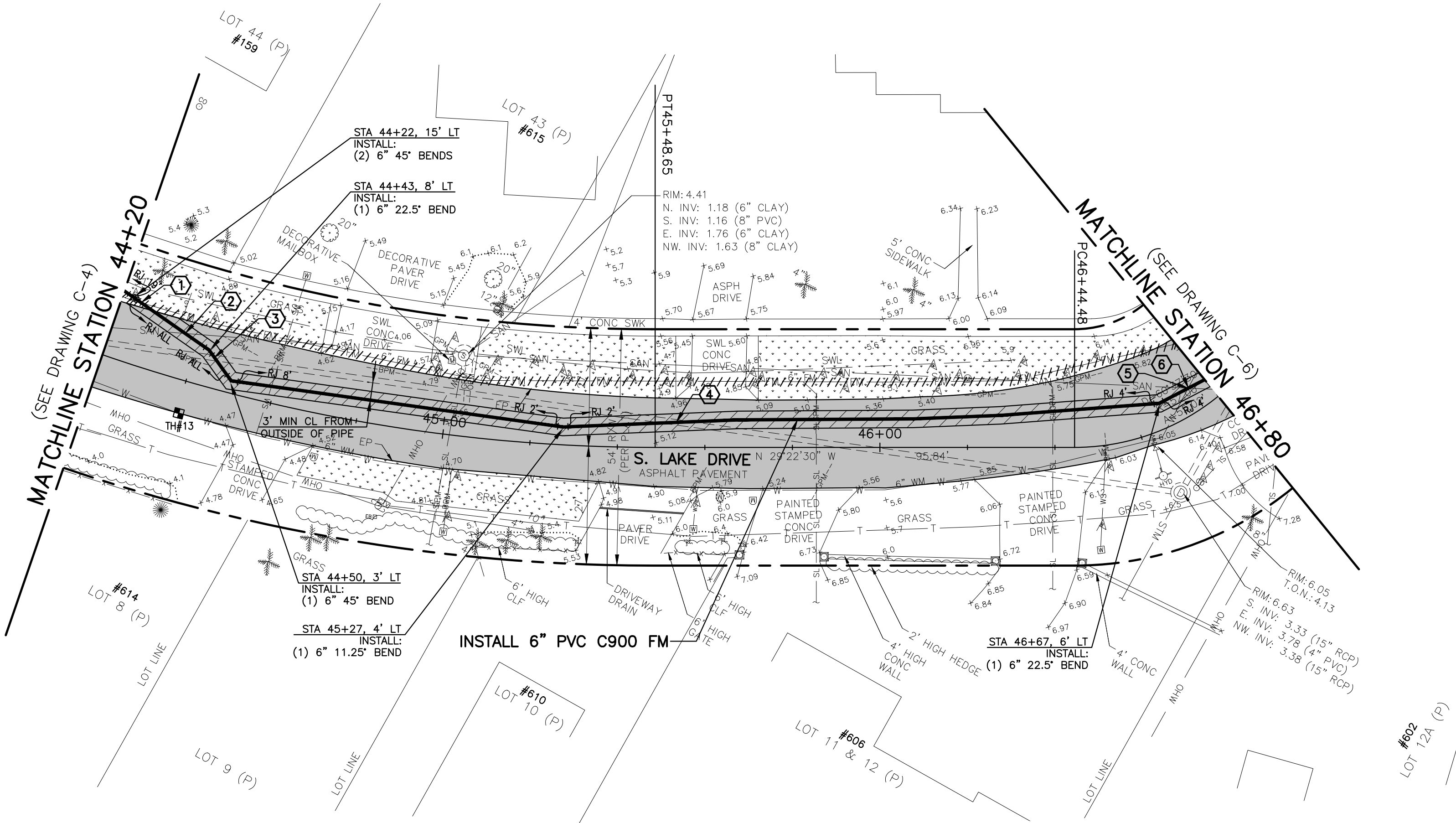
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User Name : 799ddb Path/Name : I:\WestPointDeach\LAMIT\161856-S 13th WW Lake Dr FM\CAD Lake Drive FM\Working Folder\18362&P.dwg



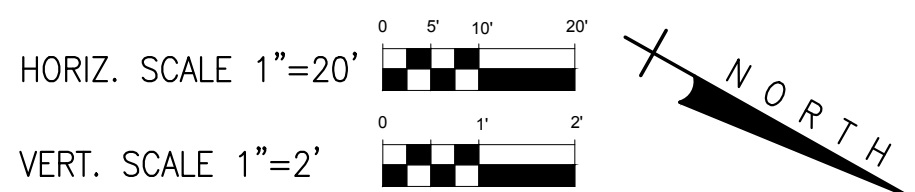
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- ① CAUTION
6" FM CROSSES UNDER EXIST 6" FM
EXIST 6" FM BOP EL = 1.75±
6" FM TOP EL = 0.43±
CLEARANCE = 1.32 FEET
- ② CAUTION
6" FM CROSSES UNDER 8" SAN
8" SAN BOP EL = 0.93±
6" FM TOP EL = 0.43±
CLEARANCE = 6 INCHES
CONTRACTOR SHALL SUPPORT SANITARY
SEWER AND PROVIDE FLOWABLE FILL
BETWEEN PIPES
- ③ CAUTION
6" FM CROSSES UNDER 15" STM
15" STM BOP EL = 2.55±
6" FM TOP EL = 0.43±
CLEARANCE = 2.12 FEET
- ④ CAUTION
6" FM CROSSES UNDER 15" STM
15" STM BOP EL = 2.81±
6" FM TOP EL = 1.54±
CLEARANCE = 1.27 FEET
- ⑤ CONFLICT
6" FM CROSSES UNDER 6" WM
6" WM BOP EL = 3.10±
6" FM TOP EL = 1.54±
CLEARANCE = 1.56 FEET
- ⑥ CAUTION
6" FM CROSSES UNDER 8" SAN
8" SAN BOP EL = 2.04±
6" FM TOP EL = 1.54±
CLEARANCE = 6 INCHES
CONTRACTOR SHALL SUPPORT SANITARY
SEWER AND PROVIDE FLOWABLE FILL
BETWEEN PIPES



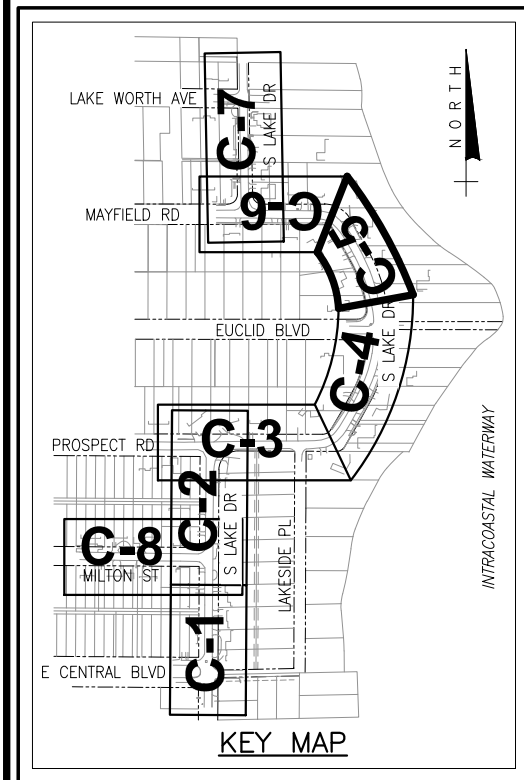
TH #13
6" (AC) WM
COVER=2.61'±
T.O.P.=1.87±



- NOTES:
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LEGEND

- OPEN CUT PAVEMENT REPAIR
- PROPOSED 1" MILL AND 1" OVERLAY (TYPE S-III)
- PROPOSED ASPHALT DRIVEWAY REPLACEMENT
- PROPOSED CONCRETE DRIVEWAY REPLACEMENT
- PROPOSED GRAVEL DRIVEWAY REPLACEMENT
- PROPOSED EXCAVATABLE FLOWABLE FILL
- PROPOSED CONCRETE SIDEWALK REPLACEMENT
- PROPOSED SWALE REGRAIDING
- REMOVE EXISTING PAVEMENT & REPLACE W/ SOD
- EXISTING FM TO BE ABANDONED IN PLACE (GROUT)
- EXISTING FM TO BE REMOVED
- TEST HOLE LOCATION
- SOIL BORING LOCATION
- CONFLICT



BIDDING

NO.	DATE	ISSUED FOR	APRV'D BY	DESIGNED: C.K.M.
				DRAWN: J.A.J./F.R.C.
				CHECKED: D.L.M./A.C.
				APPROVED: D.L.M.

DAVID L. MATHEWS, P.E.
No. 48242

MATHEWS CONSULTING
a BAXTER & WOODMAN company

477 S. Rosemary Avenue, Suite 330, West Palm Beach, Florida 33401
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VERIFY SCALE
1" = 20'
BAR IS ONE INCH ON FULL SIZE (22x34) ORIGINAL DRAWING. ADJUST SCALES AS NECESSARY.

ENGINEER NO.: 1856

CLIENT PROJECT NO.:

CAD REF.: 1856P&P

TOWN OF LANTANA
SOUTH LAKE DRIVE
FORCE MAIN REPLACEMENT

SOUTH LAKE DRIVE
PLAN AND PROFILE - SHEET 5
STATION 44+20 TO STATION 46+80

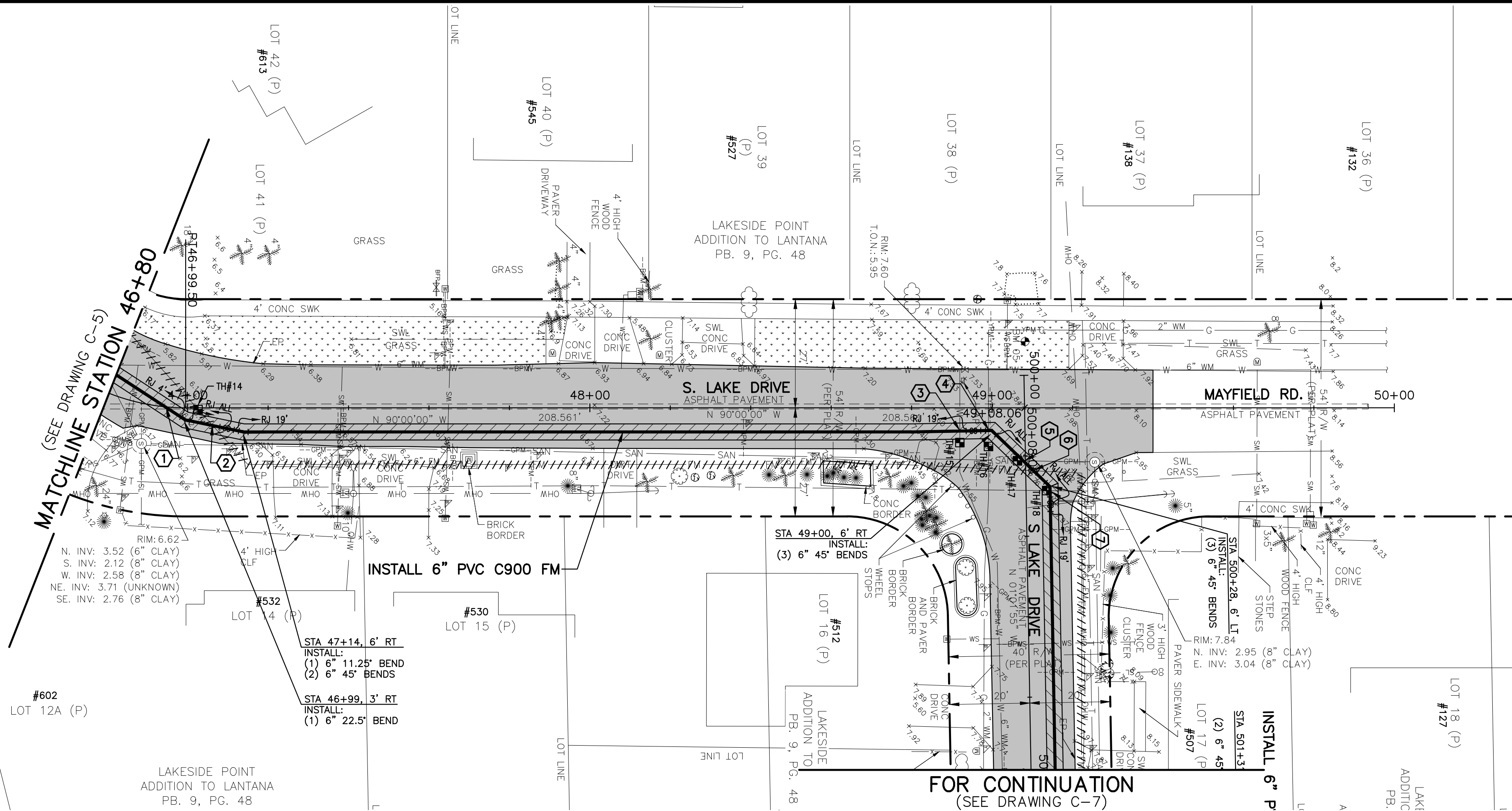
DATE: AUGUST 2017

SHEET: 8 of 15

DRAWING: C-5

Acad Version : R20.1s (LMS Tech) User Name : 766ddp Date/Time : Mon, 28 Aug 2017 - 2:55pm Current Plotstyle : ByColor Layout Tab: C-6 Path Name : I:\WestPalmBeach\LANT\16186-S 13th WM Lake Dr FM CAD\Lake Drive FM Working Folder\1856P&P.dwg

- ① CAUTION
6" FM CROSSES UNDER 15" STM
15" STM BOP EL = 3.21±
6" FM TOP EL = 1.54±
CLEARANCE = 1.67 FEET
- ② CAUTION
6" FM CROSSES UNDER EXIST 6" FM
EXIST 6" FM BOP EL = 3.04±
6" FM TOP EL = 1.54±
CLEARANCE = 1.50 FEET
- ③ CONFLICT
6" FM CROSSES UNDER 6" WM
6" WM BOP EL = 5.39±
6" FM TOP EL = 4.39±
CLEARANCE = 12 INCHES
- ④ CAUTION
6" FM CROSSES UNDER 2" GM
2" GM BOP EL = 6.15±
6" FM TOP EL = 2.48±
CLEARANCE = 3.67 FEET
- ⑤ CAUTION
6" FM CROSSES UNDER 8" SAN
8" SAN BOP EL = 2.98±
6" FM TOP EL = 2.48±
CLEARANCE = 6 INCHES
CONTRACTOR SHALL SUPPORT SANITARY
SEWER AND PROVIDE FLOWABLE FILL
BETWEEN PIPES
- ⑥ CAUTION
6" FM CROSSES UNDER EXIST 6" FM
EXIST 6" FM BOP EL = 4.90±
6" FM TOP EL = 2.48±
CLEARANCE = 2.42 FEET
- ⑦ CAUTION
6" FM CROSSES UNDER 4" TELE
4" TELE BOP EL = 6.15±
6" FM TOP EL = 2.48±
CLEARANCE = 3.67 FEET



TH #14
6" (AC) SAN FM
COVER=2.75'±
T.O.P.=3.54±

TH #15
6" (CI) WM
COVER=1.69'±
T.O.P.=5.89±

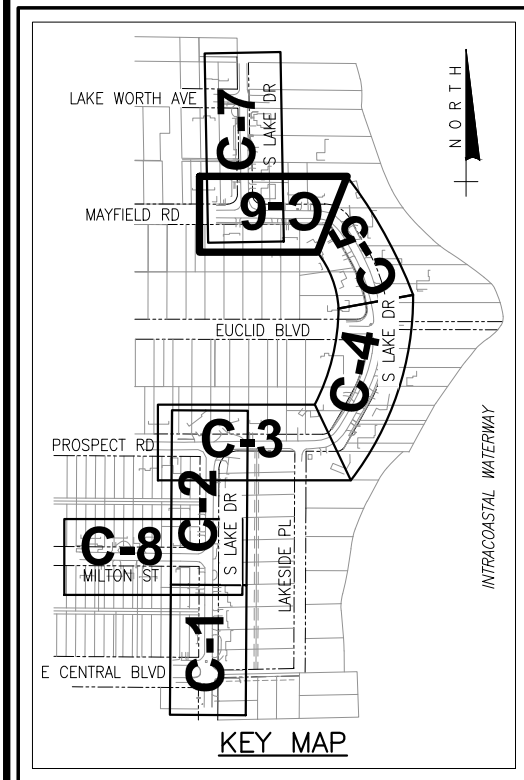
TH #16
2" (STEEL) GAS
COVER=1.32'±
T.O.P.=6.32±

TH #17
8" (CLAY) SAN
COVER=4.15'±
T.O.P.=3.54±

TH #18
4" (PVC) TELE
COVER=1.36'±
T.O.P.=6.48±

- HORIZ. SCALE 1"=20'
- VERT. SCALE 1"=2'
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				DRAWN: J.A.J./F.R.C.
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BAR IS ONE INCH ON FULL SIZE (22x34) ORIGINAL DRAWING. ADJUST SCALES AS NECESSARY.

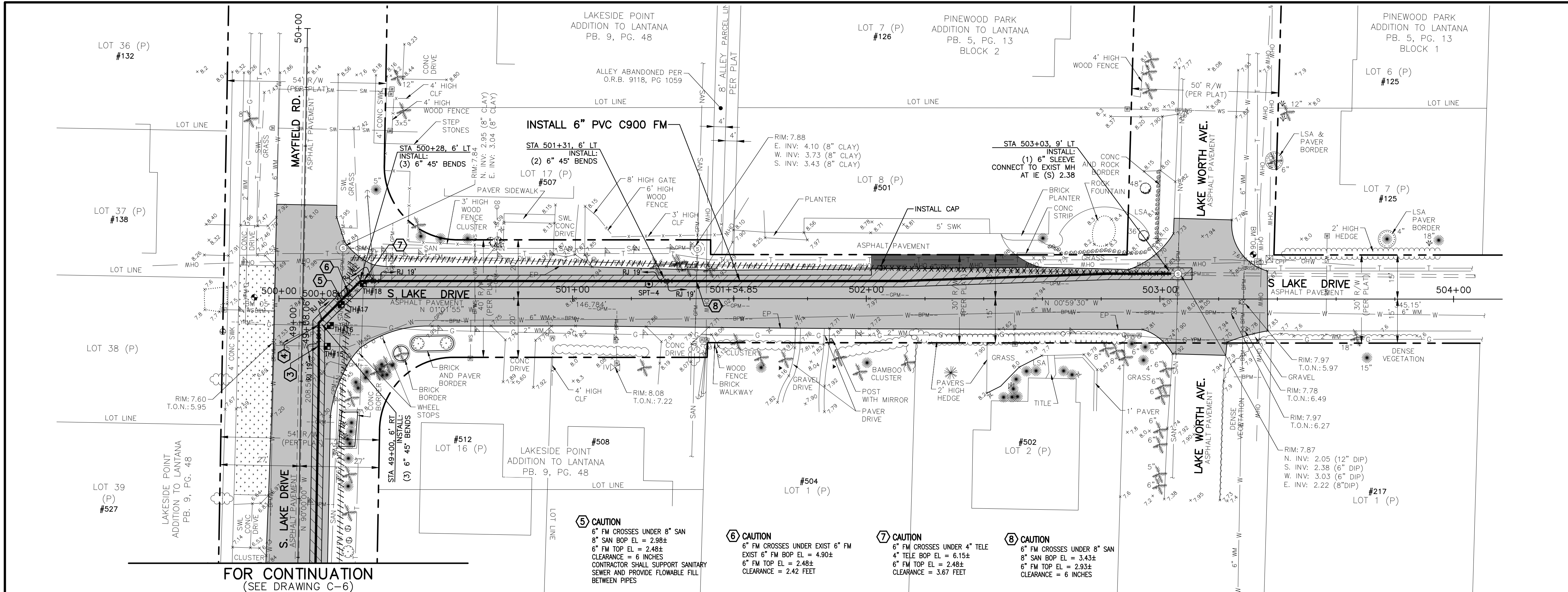
ENGINEER NO.: 1856
CLIENT
PROJECT NO.:
CAD REF.: 1856P&P

TOWN OF LANTANA
SOUTH LAKE DRIVE
FORCE MAIN REPLACEMENT
SOUTH LAKE DRIVE
PLAN AND PROFILE - SHEET 6
STATION 46+80 TO STATION 50+00

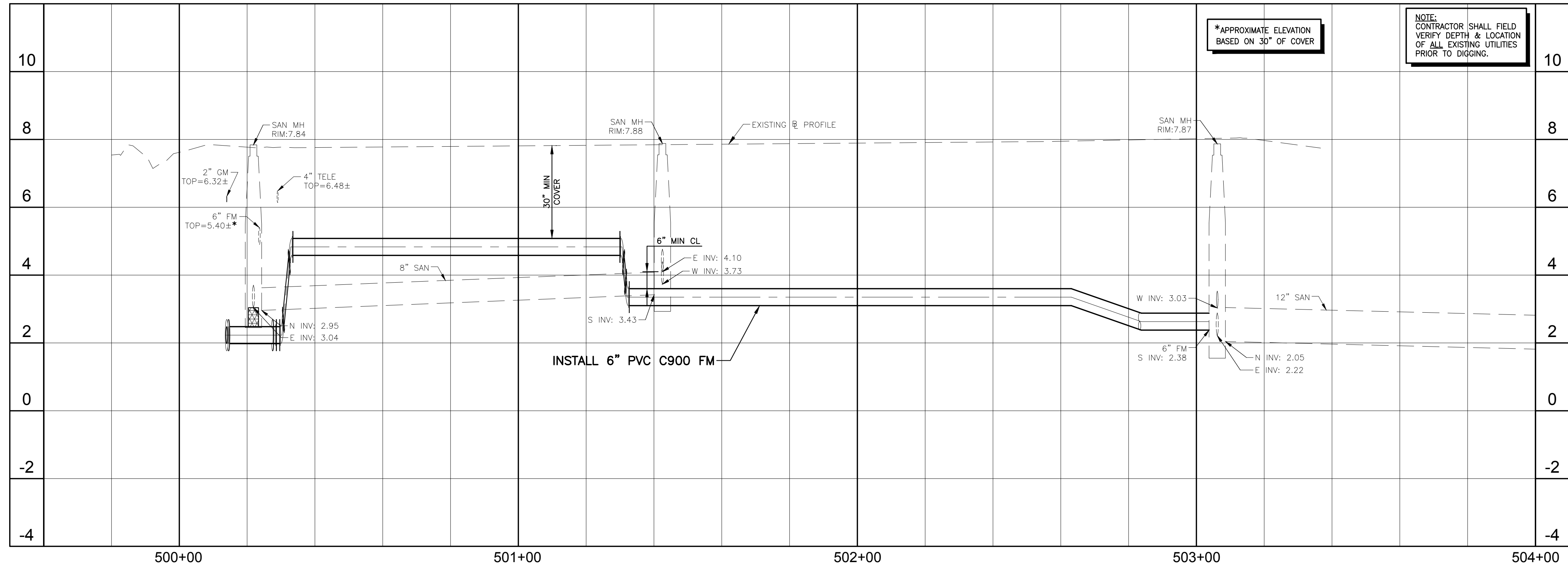
DATE: AUGUST 2017
SHEET: 9 of 15
DRAWING: C-6

BIDDING

Acad Version : R20.1s (LMS Tech) User Name : 766ddp Date/Time : Mon, 28 Aug 2017 - 2:56pm Current Plotstyle : ByColor Layout Tab: C-7 Path Name : I:\WestPalmBeach\LANT\161856-S 13th WM Lake Dr FM CAD\Lake Drive FM Working Folder\1856P&P.dwg



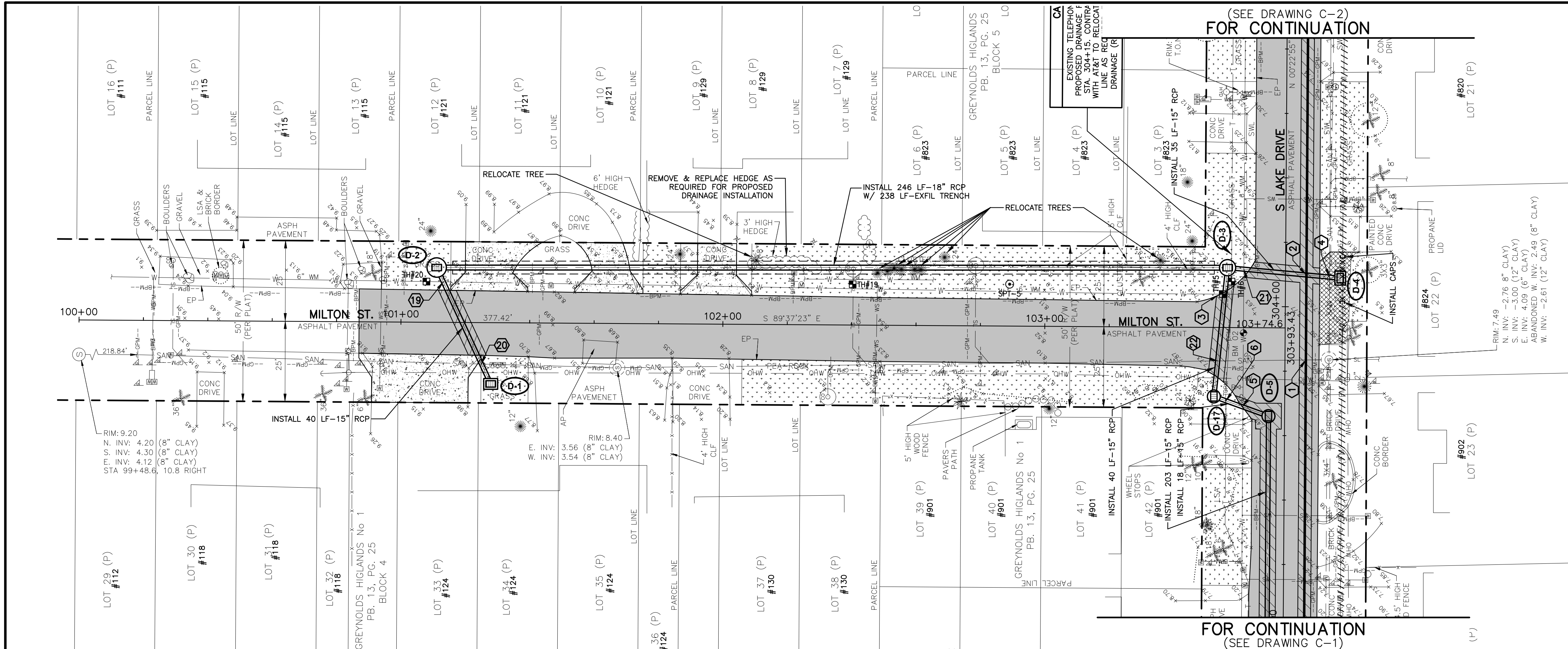
- HORIZ. SCALE 1"=20'
- VERT. SCALE 1"=2'
- NOTES:
- CONTRACTOR SHALL FIELD VERIFY LOCATION (HORIZONTAL & VERTICAL) OF ALL UTILITY CROSSINGS, INCLUDING PARALLELING OF UTILITIES. PRIOR TO CONSTRUCTION OF PROPOSED FORCE MAIN AND STORMWATER.
 - EXISTING IRRIGATION SYSTEMS NOT SHOWN, BUT IRRIGATION DOES EXIST THROUGHOUT PROJECT AREA. CONTRACTOR SHALL REPLACE ALL DAMAGED IRRIGATION PIPING, HEADS AND CONTROL LINES IN KIND, SO THAT SYSTEM PROVIDES ORIGINAL COVERAGE. ZONES TO BE CAPPED OFF AT CONSTRUCTION LINE. BALANCE OF IRRIGATION ZONES TO REMAIN ACTIVE AND MAINTAINED.
 - ALL FITTINGS SHALL HAVE RESTRAINED JOINTS. SEE STANDARD DETAIL DRAWING D-1 FOR RESTRAINED PIPE LENGTHS.
 - CONTRACTOR SHALL REFER TO DETAILS ON DRAWINGS D-1 THROUGH D-3 FOR STANDARD DETAIL CONSTRUCTION INFORMATION.
 - ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE RESTORED IN KIND.
 - IN AREAS OF UNDERGROUND UTILITIES CONTRACTOR SHALL HAND-DIG AS NECESSARY TO AVOID DAMAGING EXISTING UTILITIES. CONTRACTOR IS RESPONSIBLE FOR REPLACING ANY DAMAGED UTILITIES AS A RESULT OF CONSTRUCTION ACTIVITIES (THIS IS A NON-PAY ITEM).
 - CONTRACTOR SHALL REMOVE AND REPLACE IN KIND ALL LANDSCAPE DISTURBED WITHIN THE RIGHT-OF-WAY THAT CONFLICTS WITH THE PROPOSED IMPROVEMENTS.
 - WATER SERVICE LINES/METERS SHALL CROSS OVER GRAVITY SEWER AND STORMWATER FACILITIES WITH MINIMUM 6" CLEARANCE.
 - ALL WATER SERVICES SHALL BE MOLED UNDER EXISTING ROADWAYS AND DRIVEWAYS.
 - NO EXCAVATED MATERIAL SHALL BE CAST ON THE STREETS, DRIVEWAYS OR SIDEWALKS. EXCAVATION MATERIAL SHALL BE PLACED IN A DUMP TRUCK IMMEDIATELY UPON EXCAVATION AND HAULED AWAY.
 - DRAWINGS ARE BASED ON NGVD OF 1929.
 - WHEN CROSSING UNDERNEATH EXISTING AC WATER MAIN, CONTRACTOR SHALL SUPPORT THE EXISTING AC WATER MAIN AS NECESSARY.
 - CONTRACTOR SHALL LOCATE AND OBTAIN ELEVATIONS OF ALL SANITARY SEWER LATERALS THAT CROSS THE PROPOSED FORCE MAIN. IF EXISTING SEWER SERVICE LATERAL IS DAMAGED BY CONTRACTOR, REPAIR USING FERNOCO COUPLINGS AND PVC SDR-18 OR HDPE PIPING (THIS IS A NON-PAY ITEM).
 - ALL FITTINGS SHALL BE RESTRAINED JOINTS. SEE STANDARD DETAIL SHEET D-1.
 - CONTRACTOR IS REQUIRED TO PROVIDE ALL SHEETING AND SHORING ACTIVITIES AS REQUIRED DUE TO CONSTRUCTION ACTIVITIES TO PROTECT ALL EXISTING UTILITIES, POWER POLES, ETC.
 - CONTRACTOR TO PROVIDE DETAILED PLAN(S) FOR PUTTING PROPOSED FORCE MAIN INTO OPERATION AND FOR DECOMMISSIONING EXISTING FORCE MAIN.
 - EXISTING WATER SERVICE LINES AND SANITARY SEWER LATERALS ARE SHOWN IN PLAN VIEW ONLY AND ARE APPROXIMATE LOCATIONS.
 - CONTRACTOR SHALL LOCATE ALL EXISTING WATER SERVICE LINES PRIOR TO DIGGING. CONTRACTOR SHALL REPAIR ANY WATER SERVICE LINES DAMAGED DURING CONSTRUCTION IMMEDIATELY (THIS IS A NON-PAY ITEM).
 - ALL PAVEMENT MARKINGS SHALL BE REPLACED IN KIND.
 - SOD AND SWALE BOTH SIDES OF THE STREET AS INDICATED ON THE PLAN DRAWINGS. SOD AND SWALE WORK SHALL BE LIMITED TO THOSE AREAS WHERE EXISTING LANDSCAPING AND TREES WOULD NOT BE DAMAGED (I.E. SWALE AROUND LANDSCAPING, FIRE HYDRANT, ETC.).
- LEGEND
- OPEN CUT PAVEMENT REPAIR
 - PROPOSED 1" MILL AND 1" OVERLAY (TYPE S-III)
 - PROPOSED ASPHALT DRIVEWAY REPLACEMENT
 - PROPOSED CONCRETE DRIVEWAY REPLACEMENT
 - PROPOSED GRAVEL DRIVEWAY REPLACEMENT
 - PROPOSED EXCAVATABLE FLOWABLE FILL
 - PROPOSED CONCRETE SIDEWALK REPLACEMENT
 - PROPOSED SWALE REGRAVING
 - REMOVE EXISTING PAVEMENT & REPLACE W/ SOD
 - EXISTING FM TO BE ABANDONED IN PLACE (GROUT)
 - EXISTING FM TO BE REMOVED
 - TEST HOLE LOCATION
 - SOIL BORING LOCATION
 - CONFLICT
- KEY MAP



NO.	DATE	ISSUED FOR	APR'D BY	DESIGNED: C.K.M.	DRAWN: J.A.J./F.R.C.	CHECKED: D.L.M./A.C.	APPROVED: D.L.M.	DAVID L. MATHEWS, P.E. No. 48242	477 S. Rosemary Avenue, Suite 330, West Palm Beach, Florida 33401 Phone: 561-655-6175 Fax: 561-655-6179 www.baxterwoodman.com	VERIFY SCALE 1" = 22'x34' BAR IS ONE INCH ON FULL SIZE (22x34) ORIGINAL DRAWING. ADJUST SCALES AS NECESSARY.	ENGINEER NO.: 1856 CLIENT PROJECT NO.: CAD REF.: 1856P&P	TOWN OF LANTANA SOUTH LAKE DRIVE FORCE MAIN REPLACEMENT SOUTH LAKE DRIVE PLAN AND PROFILE - SHEET 7 STATION 500+00 TO STATION 504+00	DATE: AUGUST 2017 SHEET: 10 of 15 DRAWING: C-7
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BIDDING

Acad Version : R20.1s (LMS Tech) User Name : 760ddp Date/Time : Mon, 28 Aug 2017 - 2:56pm Current Plotstyle : ByColor Layout Tab: C-8 Path Name : I:\WestPalmBeach\LAN\161856-S 13th WM Lake Dr FM CAD\Lake Drive FM Working Folder\1856P&P.dwg



TH #19
4" (PVC) SAN
COVER=2.98'±
T.O.P.=5.28±
2" (STEEL) WM
COVER=2.22'±
T.O.P.=6.04±

TH #20
6" (PVC) WM
COVER=2.21'±
T.O.P.=6.57±

19 CONFLICT
15" STM CROSSES UNDER 6" WM
6" WM BOP EL = 6.07±
15" STM TOP EL = 3.39±
CLEARANCE = 2.78 FEET

20 CAUTION
15" STM CROSSES UNDER 8" SAN
8" SAN BOP EL = 3.61±
15" STM TOP EL = 3.39±
CLEARANCE = 3 INCHES
CONTRACTOR SHALL SUPPORT SANITARY
SEWER AND PROVIDE FLOWABLE FILL
BETWEEN PIPES

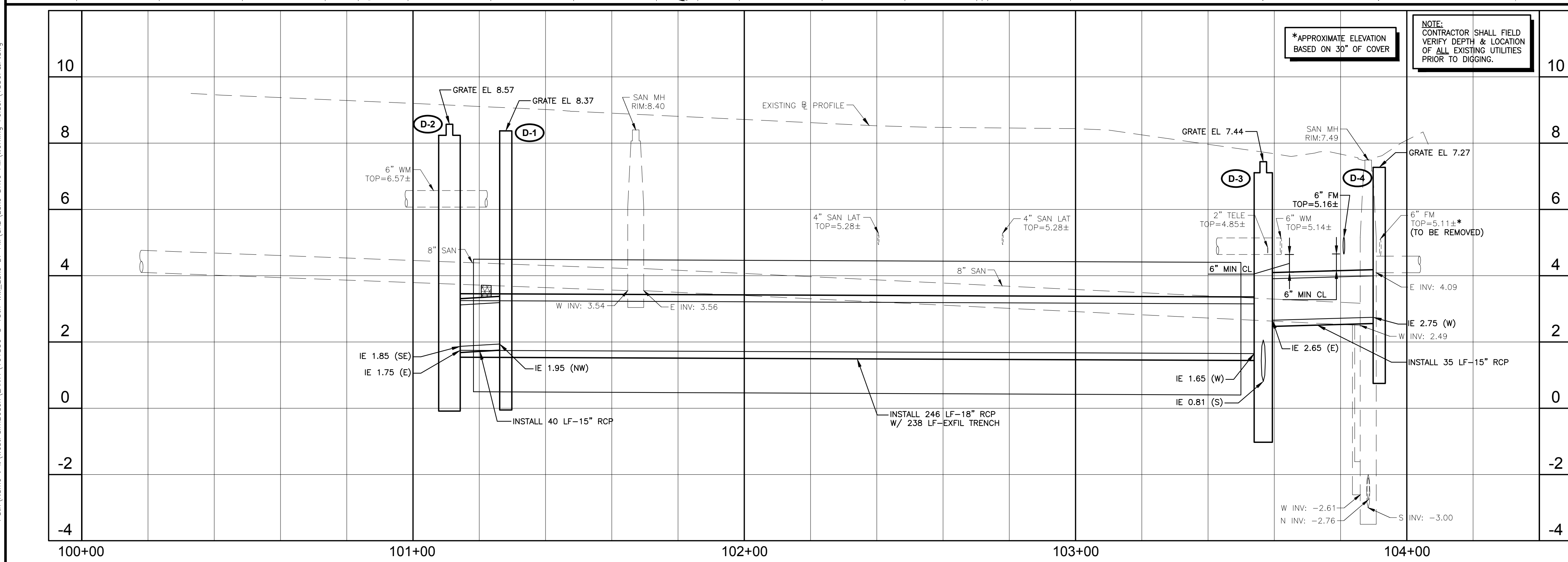
21 CAUTION
15" STM CROSSES UNDER 8" SAN
8" SAN BOP EL = 3.70±
15" STM TOP EL = 3.39±
CLEARANCE = 4 INCHES

HORIZ. SCALE 1"=20'

VERT. SCALE 1"=2'

NOTES:

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*APPROXIMATE ELEVATION
BASED ON 30" OF COVER

NOTE:
CONTRACTOR SHALL FIELD
VERIFY DEPTH & LOCATION
OF ALL EXISTING UTILITIES
PRIOR TO DIGGING.

D-1 STA 101+28, 19' RT
TYPE C INLET
GRATE EL 8.37
IE 1.95 (NW) 15" RCP

D-2 STA 101+11, 17' LT
6" DIA MH
GRATE EL 8.57
IE 1.85 (SE) 15" RCP
IE 1.75 (E) 18" RCP

D-3 STA 304+12, 18' LT
5' DIA MH
GRATE EL 7.44
IE 2.65 (E) 15" RCP
IE 1.65 (W) 18" RCP
IE 0.81 (S) 15" RCP

D-4 STA 304+09, 17' RT
TYPE C INLET
GRATE EL 7.27
IE 2.75 (W) 15" RCP

D-5 STA 303+66, 5' LT
4' DIA MH
GRATE EL 7.50
IE 3.33 (S) 15" RCP
IE 2.16 (W) 15" RCP

D-17 STA 303+72, 22' LT
4' DIA MH
GRATE EL 7.47
IE 2.26 (E) 15" RCP
IE 0.71 (N) 15" RCP

LEGEND

- OPEN CUT PAVEMENT REPAIR
- PROPOSED 1" MILL AND 1" OVERLAY (TYPE S-III)
- PROPOSED ASPHALT DRIVEWAY REPLACEMENT
- PROPOSED CONCRETE DRIVEWAY REPLACEMENT
- PROPOSED GRAVEL DRIVEWAY REPLACEMENT
- PROPOSED EXCAVATABLE FLOWABLE FILL
- PROPOSED CONCRETE SIDEWALK REPLACEMENT
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- REMOVE EXISTING PAVEMENT & REPLACE W/ SOD
- EXISTING FM TO BE ABANDONED IN PLACE (GROUT)
- EXISTING FM TO BE REMOVED
- TEST HOLE LOCATION
- SOIL BORING LOCATION
- CONFLICT

KEY MAP

NO.	DATE	ISSUED FOR	APRV'D BY	DESIGNED:
1	05/17/17	REV. PER SFWM COMMENTS	M.R.T.	C.K.M.
				DRAWN: J.A.J./F.R.C.
				CHECKED: D.L.M./A.C.
				APPROVED: D.L.M.

DAVID L. MATHEWS, P.E.
No. 48242

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Phone: 561-655-6175 Fax: 561-655-6179
www.baxterwoodman.com EB-31795

VERIFY SCALE
1" = 100'
BAR IS ONE INCH ON FULL SIZE (22x34) ORIGINAL DRAWING. ADJUST SCALES AS NECESSARY.

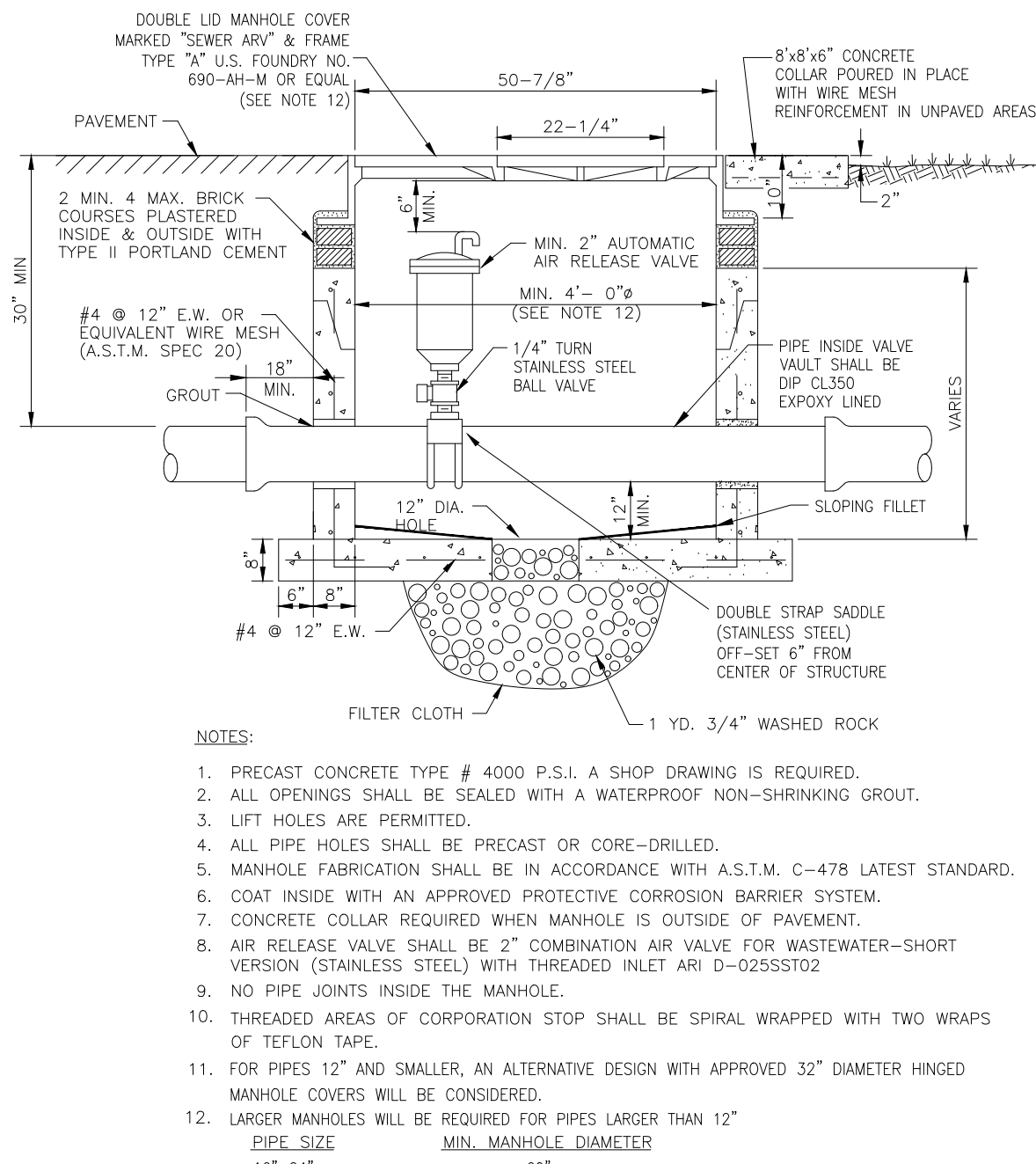
ENGINEER NO.: 1856
CLIENT PROJECT NO.:
CAD REF.: 1856P&P

TOWN OF LANTANA
SOUTH LAKE DRIVE
FORCE MAIN REPLACEMENT
MILTON STREET
PLAN AND PROFILE - SHEET 8
STATION 100+00 TO STATION 103+74.60

DATE: AUGUST 2017
SHEET: 11 of 15
DRAWING: C-8



BIDDING



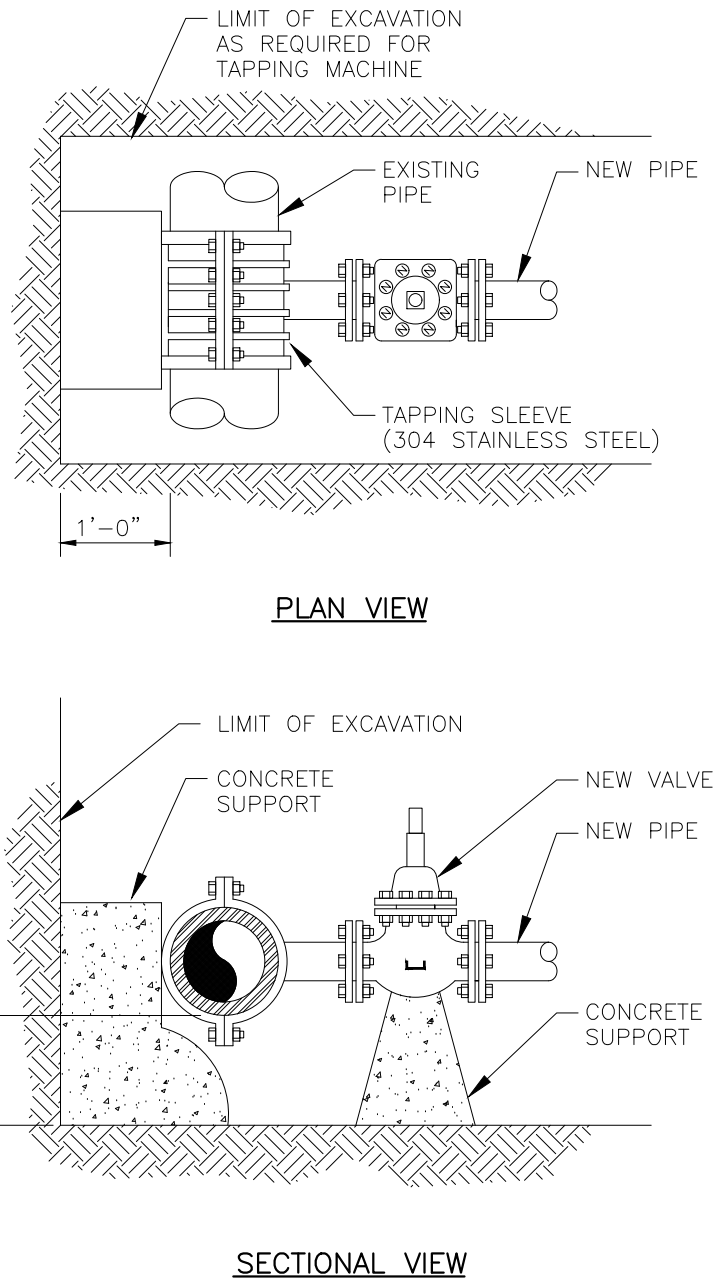
FORCE MAIN AIR RELEASE VALVE AND MANHOLE IN PAVED AREAS AND ROAD R/W
N.T.S.

MIN. LENGTH OF PIPE (FEET) TO BE RESTRAINED
(SOURCES: EBAA IRON RESTRAINT LENGTH CALCULATION PROGRAM FOR PVC PIPE, RELEASE 3.1, AND DIPRA THRUST RESTRAINT FOR DUCTILE IRON PIPE, RELEASE 3.2)

FITTING TYPE		PIPE SIZE												200psi			
		4"	6"	8"	10"	12"	16"	20"	24"	30"	36"	42"	48"				
90° HORIZ. BEND		14	20	25	30	35	45	54	62	98	112	124	135				
45° HORIZ. BEND		6	8	11	13	15	19	22	26	41	46	51	56				
22.5° HORIZ. BEND		3	4	5	6	7	9	11	12	19	22	25	27				
11.25° HORIZ. BEND		1	2	3	3	4	4	5	6	10	11	12	13				
90° VERT. OFFSET	UPPER BEND	29	41	53	64	74	95	115	134	214	246	276	304				
	LOWER BEND	7	10	13	16	19	25	30	35	57	66	74	83				
45° VERT. OFFSET	UPPER BEND	12	19	24	29	34	39	48	56	89	102	114	126				
	LOWER BEND	3	4	6	7	8	10	12	15	23	27	31	34				
22.5° VERT. OFFSET	UPPER BEND	6	9	12	14	17	19	23	27	43	49	55	60				
	LOWER BEND	1	2	4	4	4	5	6	7	11	13	15	16				
11.25° VERT. OFFSET	UPPER BEND	3	4	6	7	8	9	11	13	21	24	27	30				
	LOWER BEND	1	1	1	2	2	2	3	3	6	6	7	8				
PLUG (DEAD END)		32	45	59	70	83	107	129	151	214	246	276	304				
IN-LINE VALVE		32	45	45	45	45	55	65	80	110	125	140	155				
TEE (BRANCH RESTRAINT)	4"x ø	23	-	-	-	-	-	-	-	-	-	-	-				
	6"x ø	21	35	-	-	-	-	-	-	-	-	-	-				
	8"x ø	18	34	47	-	-	-	-	-	-	-	-	-				
	10"x ø	16	32	46	58	-	-	-	-	-	-	-	-				
	12"x ø	13	30	44	57	69	-	-	-	-	-	-	-				
	16"x ø	7	26	41	55	67	90	-	-	-	-	-	-				
	20"x ø	1	21	38	52	65	88	109	-	-	-	-	-				
	24"x ø	1	16	34	49	62	86	108	129	-	-	-	-				
	30"x ø	1	8	28	44	58	83	106	127	208	-	-	-				
	36"x ø	1	1	22	39	54	80	103	124	206	240	-	-				
	42"x ø	1	1	15	33	49	77	100	122	205	239	270	-				
	48"x ø	1	1	7	27	44	73	97	120	203	238	269	298				
REDUCER (LARGER PIPE RESTRAINT)	6"x ø	23	-	-	-	-	-	-	-	-	-	-	-				
	8"x ø	38	25	-	-	-	-	-	-	-	-	-	-				
	10"x ø	57	43	24	-	-	-	-	-	-	-	-	-				
	12"x ø	72	60	44	41	-	-	-	-	-	-	-	-				
	16"x ø	99	90	78	75	45	-	-	-	-	-	-	-				
	20"x ø	123	116	107	105	81	45	-	-	-	-	-	-				
	24"x ø	146	140	132	131	111	82	45	-	-	-	-	-				
	30"x ø	209	204	197	188	177	153	116	75	-	-	-	-				
200psi	36"x ø	243	236	233	226	217	196	168	135	74	-	-	-				
	42"x ø	273	270	265	259	252	234	211	183	133	72	-	-				
	48"x ø	301	298	294	289	283	268	249	226	183	131	71	-				

- NOTES:
1. THE DATA IN THE ABOVE TABLE ARE BASED UPON THE FOLLOWING INSTALLATION CONDITIONS:
SOIL TYPE-SAND TEST PRESSURE-150 PSI/200 PSI DEPTH OF BURY-3'
TRENCH TYPE-3 SAFETY FACTOR-1.5 VERTICAL OFFSET-3'
 2. THE RESTRAINED PIPE LENGTHS APPLY TO DUCTILE IRON AND PVC PIPE.
 3. ALL JOINTS BETWEEN UPPER AND LOWER BENDS SHALL BE RESTRAINED.
 4. RESTRAINED PIPE LENGTHS APPLY TO PIPE ON BOTH SIDES OF VALVES AND FITTINGS.

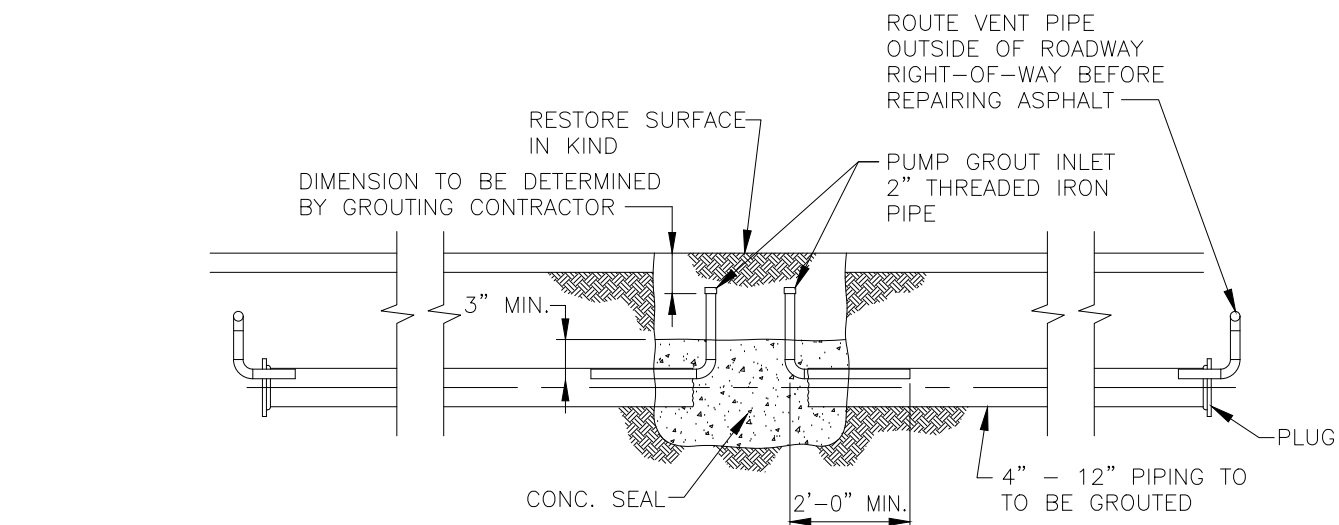
MECHANICAL THRUST RESTRAINT – MINIMUM PIPE LENGTHS



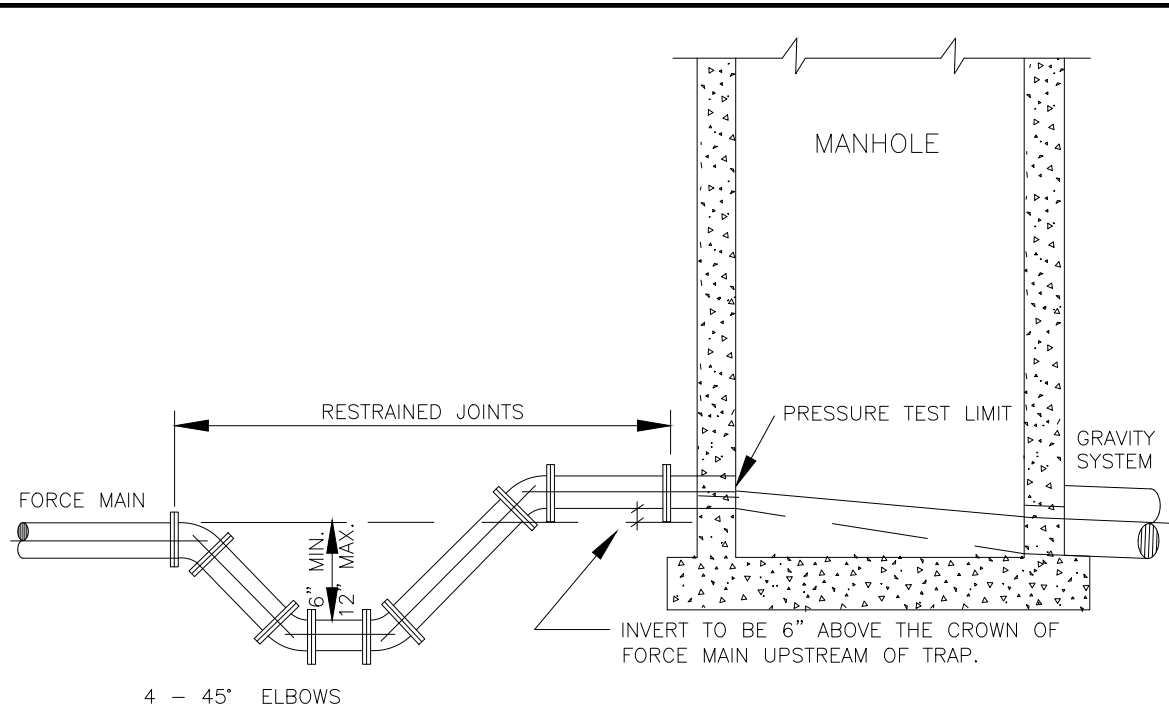
TAPPING SLEEVE AND VALVE
INSTALLATION DETAIL
NOT TO SCALE

- NOTES:
1. UPON COMPLETION OF THE PIPE INSTALLATION FOR ANY SECTION, THE MAINS SHALL BE SWABBED TO REMOVE DIRT AND ANY OTHER FOREIGN MATTER BY ACHIEVING A MINIMUM VELOCITY OF 2.5 FEET PER SECOND IN THE PIPE. TEMPORARY FITTINGS, PIPE, ETC. MAY BE NEEDED TO FACILITATE FLUSHING.
 2. INSTALL A 45° BEND AND ASSOCIATED PIPING AS SHOWN TO DIRECT THE FLUSHING WATER AWAY FROM THE IMMEDIATE WORK AREA AND EXERCISE DUE CARE SO AS TO ENSURE THAT THE WATER USED IN FLUSHING DOES NOT CAUSE A NUISANCE OR INFLECT PROPERTY DAMAGE.
 3. BENDS AND PIPING SHALL BE THE SAME SIZE AS THE LINE TO BE FLUSHED.
 4. PRIOR TO THE ACTUAL LINE FLUSHING OPERATION, THE CONTRACTOR SHALL PROPERLY NOTIFY THE DEPARTMENT INSPECTOR OF SUCH INTENDED WATER USE.
 5. NO EXISTING VALVES SHALL BE TURNED ON OR OFF, EXCEPT BY AUTHORIZED DEPARTMENT PERSONNEL.
 6. FLUSHING SHALL NOT BE ACCOMPLISHED WITHOUT THE ACTUAL PRESENCE OF THE DEPARTMENT INSPECTOR.
 7. AFTER THE LINE UNDER CONSTRUCTION HAS BEEN SUCCESSFULLY FLUSHED THE CONTRACTOR SHALL REMOVE THE TEMPORARY PIPING ARRANGEMENT AND PROCEED WITH THE REMAINING CONSTRUCTION AS SPECIFIED.
 8. THERE MAY BE SPECIAL REQUIREMENTS FOR FLUSHING PIPE LARGER THAN 12" DIAMETER

CLEANING FLUSHING PROCEDURE



PIPE GROUTING DETAIL
N.T.S.



- NOTES:
1. FORCE MAIN TO ENTER MANHOLE AS CLOSE AS POSSIBLE TO 180° TO GRAVITY OUTLET.
 2. THE INVERT LEVEL OF FORCE MAIN AT POINT OF ENTRY SHALL BE 6" ABOVE INVERT OF MANHOLE.
 3. USE TWO 45° ELBOWS PAST TRAP IF ELEVATION DROP IS REQUIRED TO ENTER MANHOLE.
 4. FLOW CHANNEL REQUIRED.
 5. MANHOLE WALL TO BE LINED WITH CAST-IN HOPE LINER. REFER TO SPECIFICATIONS.
- FORCE MAIN ENTERING MANHOLE**

DESIGNED: C.K.M.

DRAWN: J.A.J./F.R.C.

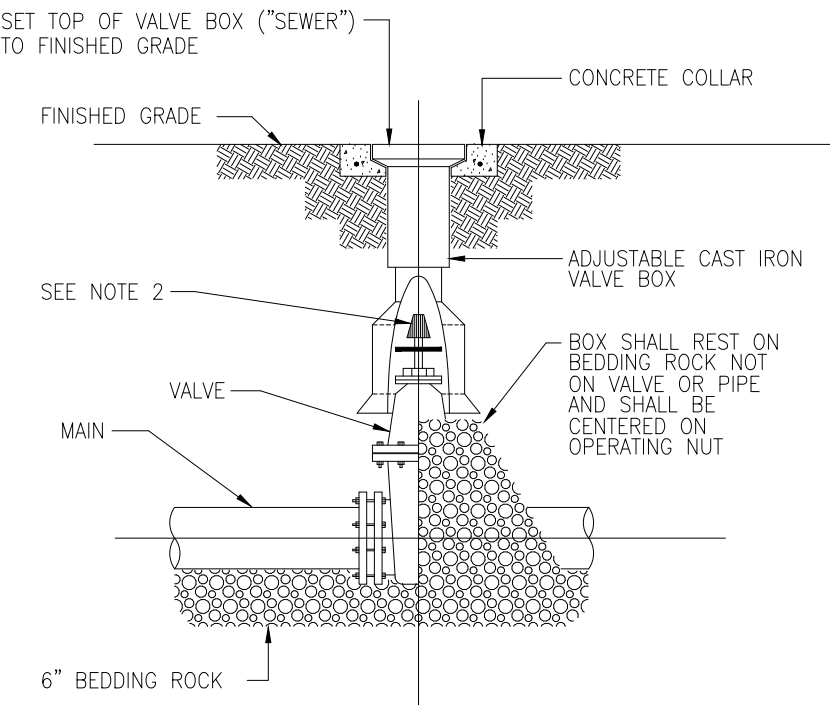
CHECKED: D.L.M./A.C.

APPROVED: D.L.M.

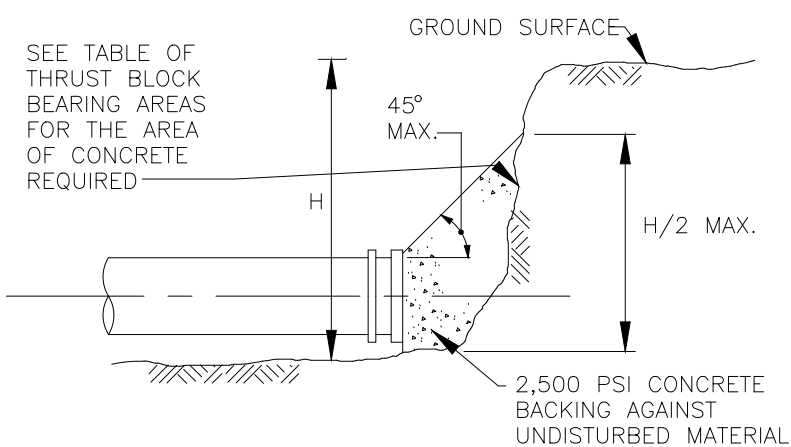
DAVID L. MATHEWS, P.E.
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PLUG VALVE



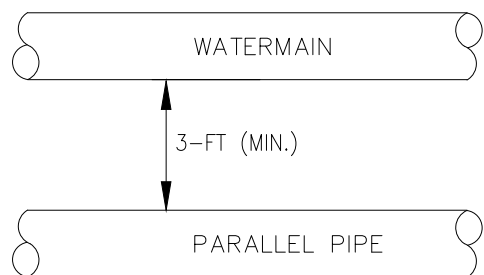
- NOTES:
1. PVC EXTENSIONS SHALL NOT BE USED ON VALVE BOX INSTALLATION.
 2. THE ACTUATING NUT FOR DEEPER VALVES SHALL BE EXTENDED TO COME UP TO 4 FOOT DEPTH BELOW FINISHED GRADE.



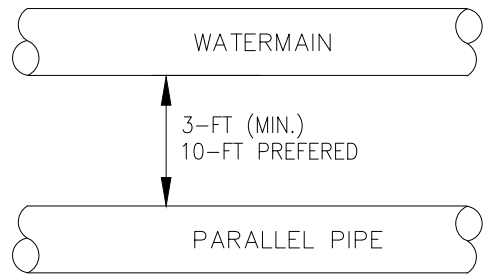
PIPE	THRUST BLOCK AREA REQ'D	PIPE	THRUST BLOCK AREA REQ'D
4"	2.0 SQ. FT.	20"	37.0 SQ. FT.
6"	4.0 SQ. FT.	24"	53.0 SQ. FT.
8"	6.6 SQ. FT.	27"	80.0 SQ. FT.
10"	10.0 SQ. FT.	30"	98.0 SQ. FT.
12"	14.0 SQ. FT.	36"	127.0 SQ. FT.
14"	18.6 SQ. FT.		
16"	24.0 SQ. FT.		
18"	30.0 SQ. FT.		

1. THRUST BLOCKS SHALL BE FORMED AND POURED AGAINST UNDISTURBED SOIL. KEEP "I" BOLTS CLEAR OF CONCRETE, WRAPPED IN VISQUEEN FOR FUTURE ACCESS, WITH A MINIMUM OF 12" THICKNESS BETWEEN THE FITTING AND THE SOIL.
2. BEFORE POURING, PLUGS SHALL BE WRAPPED WITH VISQUEEN AND A BOARD PLACED IN FRONT.
3. CONCRETE SHALL BE 2500 P.S.I. MINIMUM. (28 DAY STRENGTH).

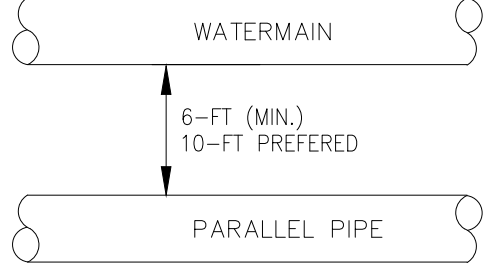
CONCRETE THRUST BLOCK AT PLUG DETAIL
N.T.S.



CASE #1
WATER MAIN PARALLEL TO STORM WATER DRAIN, STORM WATER FORCEMAIN, AND RECLAIMED WATER (PART III OF F.A.C. 62-610).



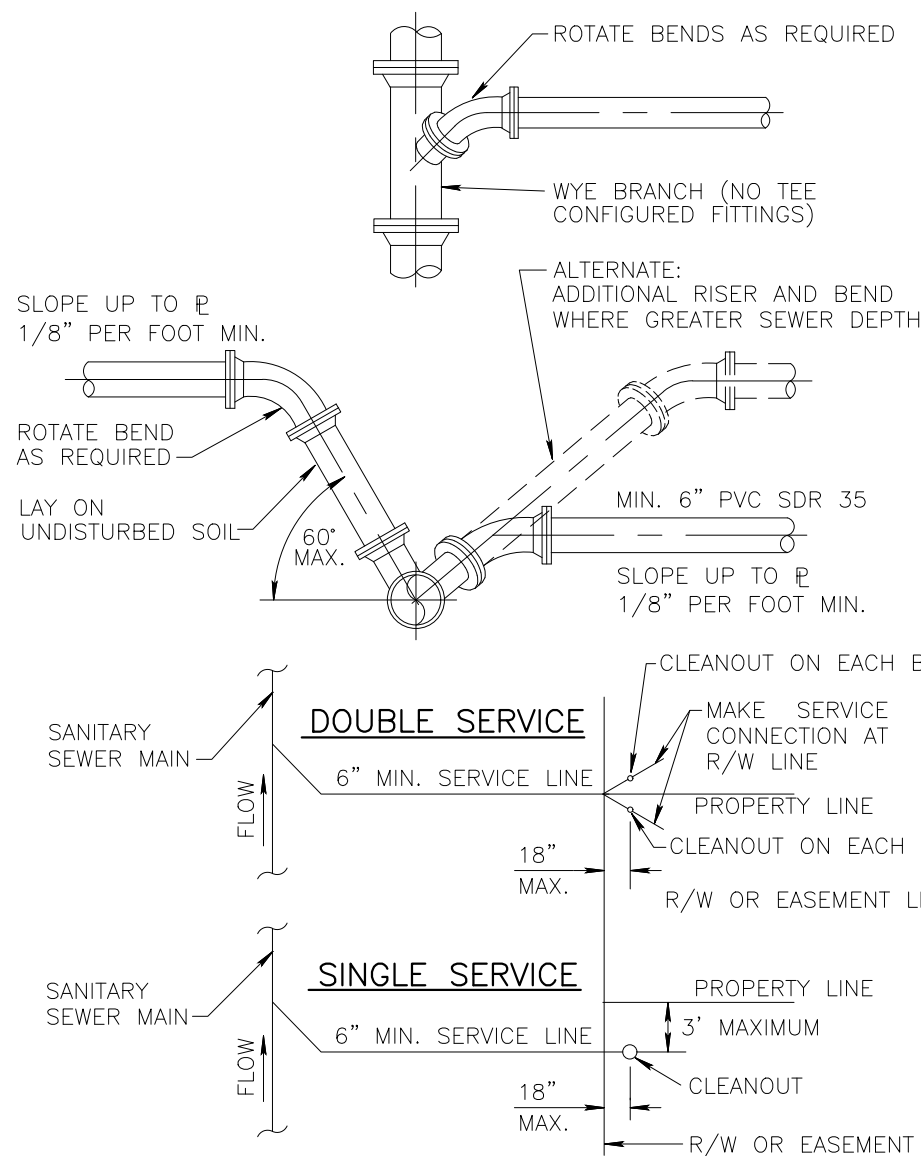
CASE #2
WATER MAIN PARALLEL TO VACUUM SEWER.



CASE #3
WATER MAIN PARALLEL TO GRAVITY SEWER AND WASTEWATER FORCEMAIN.

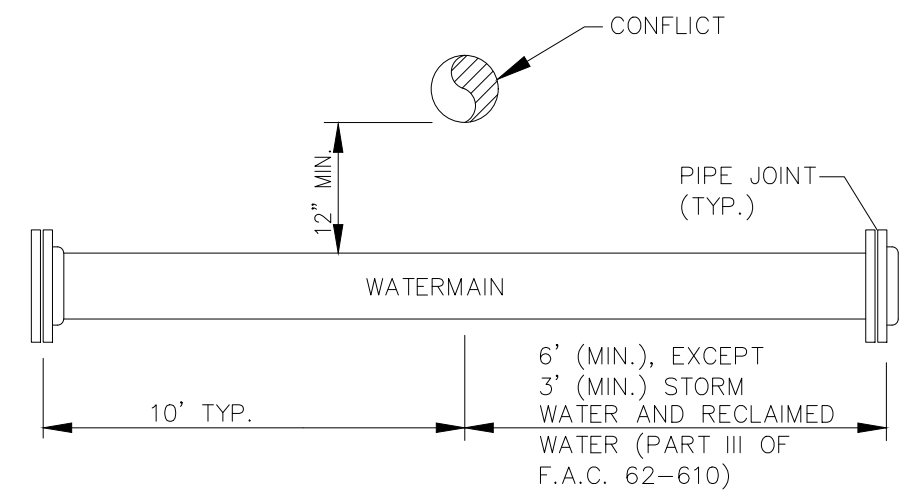
NOTE: THIS DETAIL REPRESENT THE REQUIRED SEPARATION OF WATERMAINS TO OTHER PIPING SYSTEM, AS REQUIRED BY F.A.C. 62-555.314 AND WHICH SHALL PREVAIL OVER THESE DETAIL.

HORIZONTAL SEPARATION DETAIL
N.T.S.

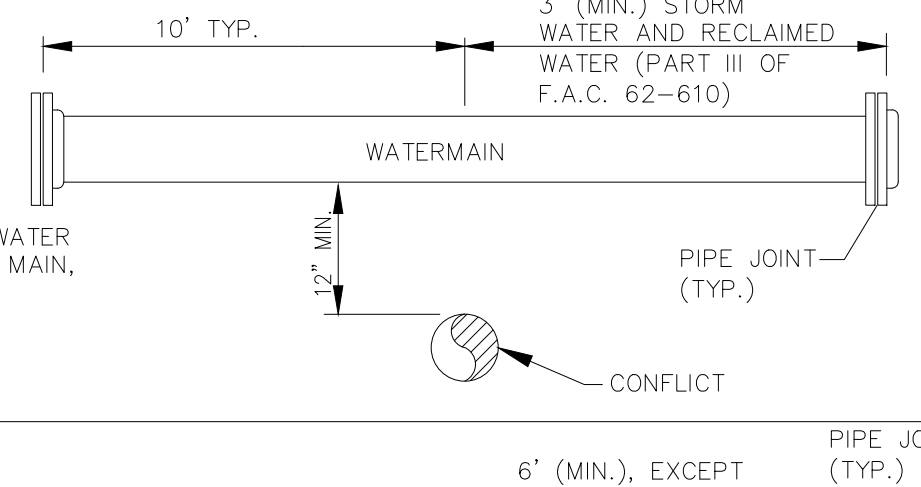


- NOTE:
1. SERVICE LATERALS SHALL TERMINATE INSIDE PROPERTY LINE A DEPTH OF 3 FEET AND MARKED WITH A 2"x 4" TREATED STAKE.
 2. CLEANOUT INSTALLATION SHALL BE PROPERTY OWNERS RESPONSIBILITY AND SHALL BE INSTALLED BY LICENSED PLUMBER.
 3. SEE DETAIL PW 2.1 FOR SEPARATION REQUIREMENTS.

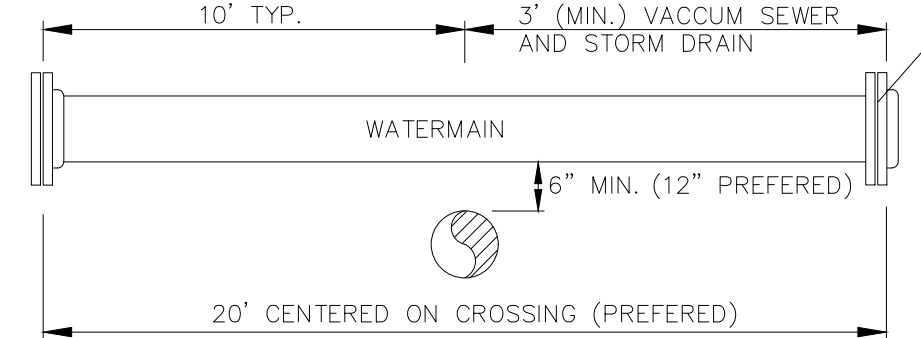
SEWER SERVICE CONNECTIONS
N.T.S.



CASE #1
WATER MAIN UNDER STORM WATER DRAIN, STORM WATER FORCEMAIN, SEWER FORCEMAIN, OR RECLAIMED WATERMAIN



CASE #2
WATERMAIN OVER STORM WATER FORCEMAIN, SEWER FORCE MAIN, OR RECLAIMED WATER.



CASE #3
WATERMAIN OVER STORM DRAIN, VACUUM SEWER, OR GRAVITY SEWER

NOTE: THIS DETAIL REPRESENT THE REQUIRED SEPARATION OF WATERMAINS TO OTHER PIPING SYSTEM, AS REQUIRED BY F.A.C. 62-555.314 AND WHICH SHALL PREVAIL OVER THESE DETAIL.

VERTICAL SEPARATION DETAIL
N.T.S.

TOWN OF LANTANA
SOUTH LAKE DRIVE
FORCE MAIN REPLACEMENT

STANDARD DETAILS – SHEET 1

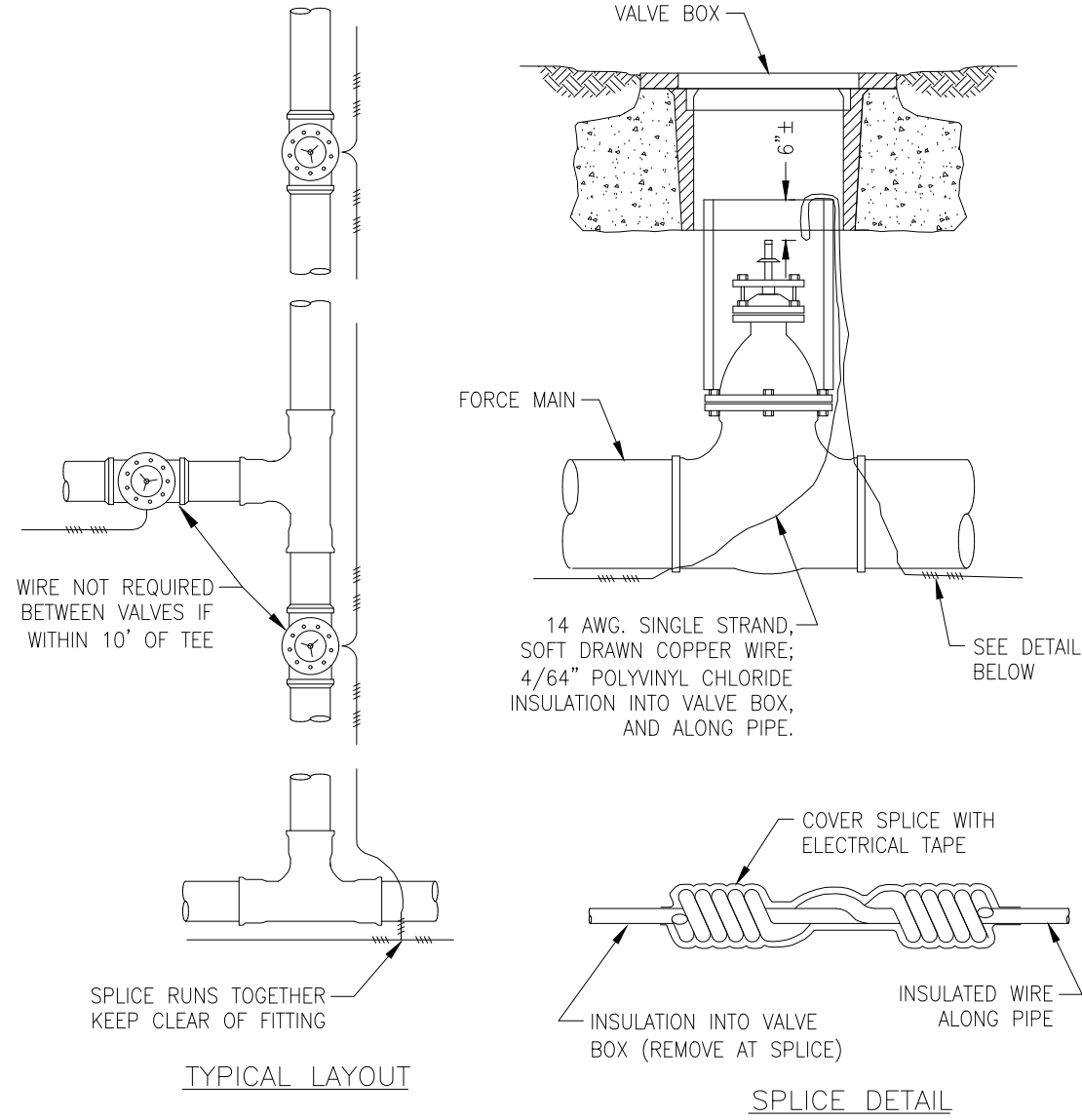
DATE: AUGUST 2017

SHEET: 12 of 15

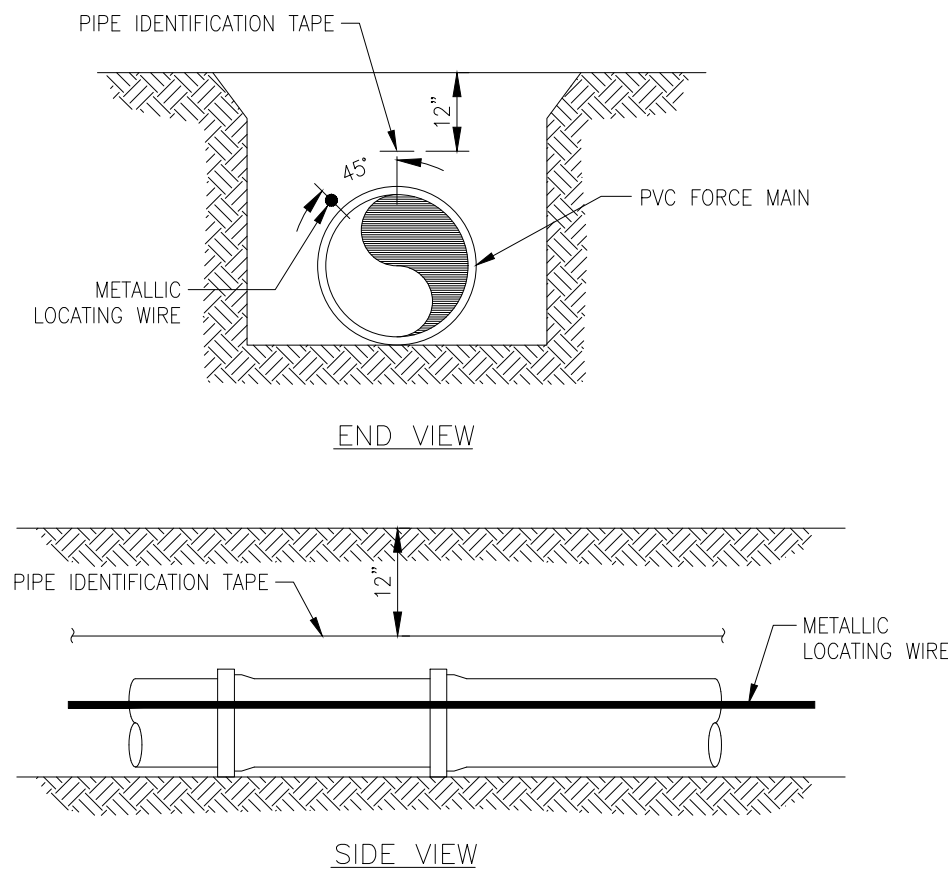
DRAWING: D-1

BIDDING

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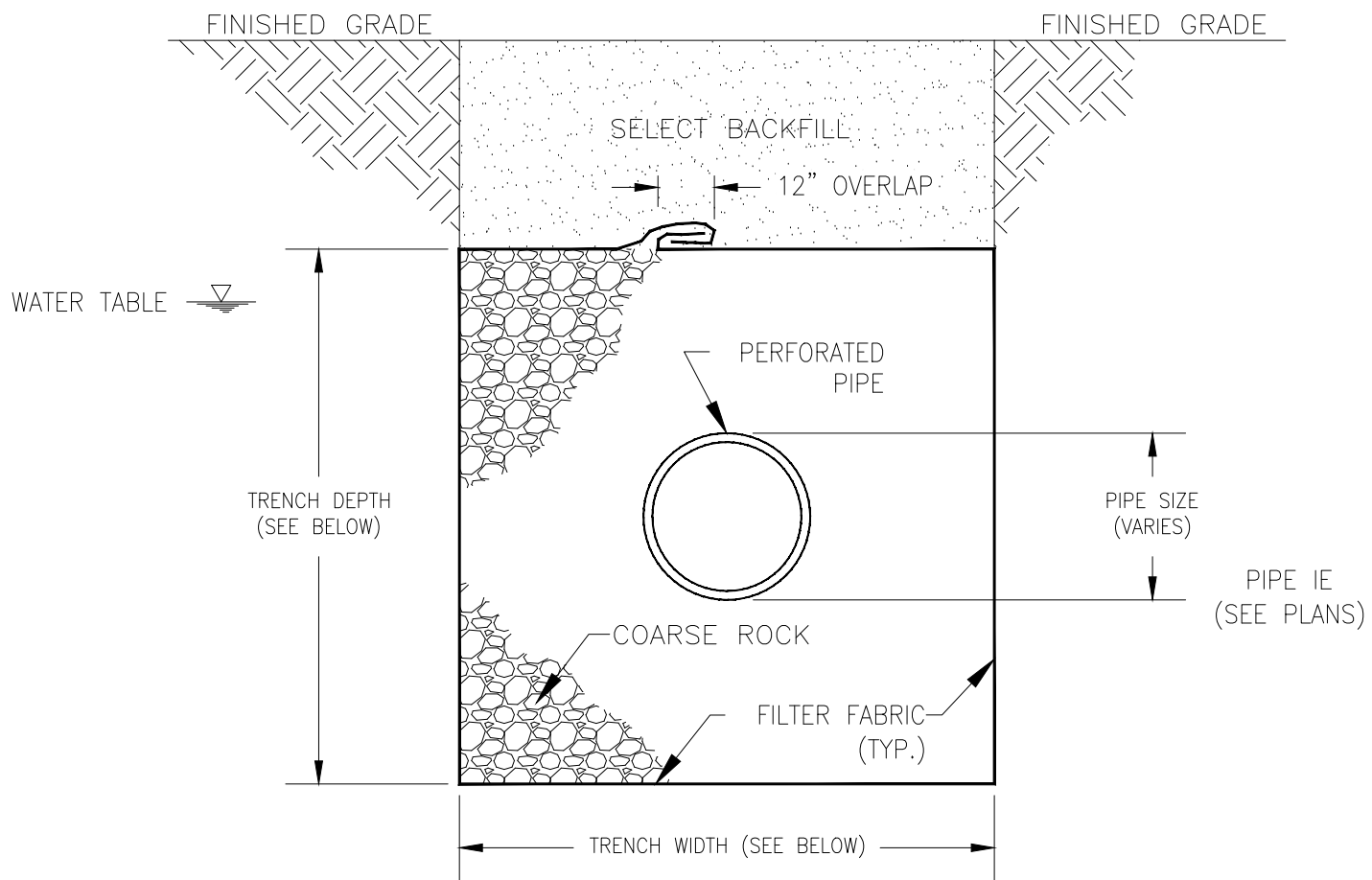
FORCE MAIN LOCATING WIRE DETAIL
N.T.S.



NOTES:

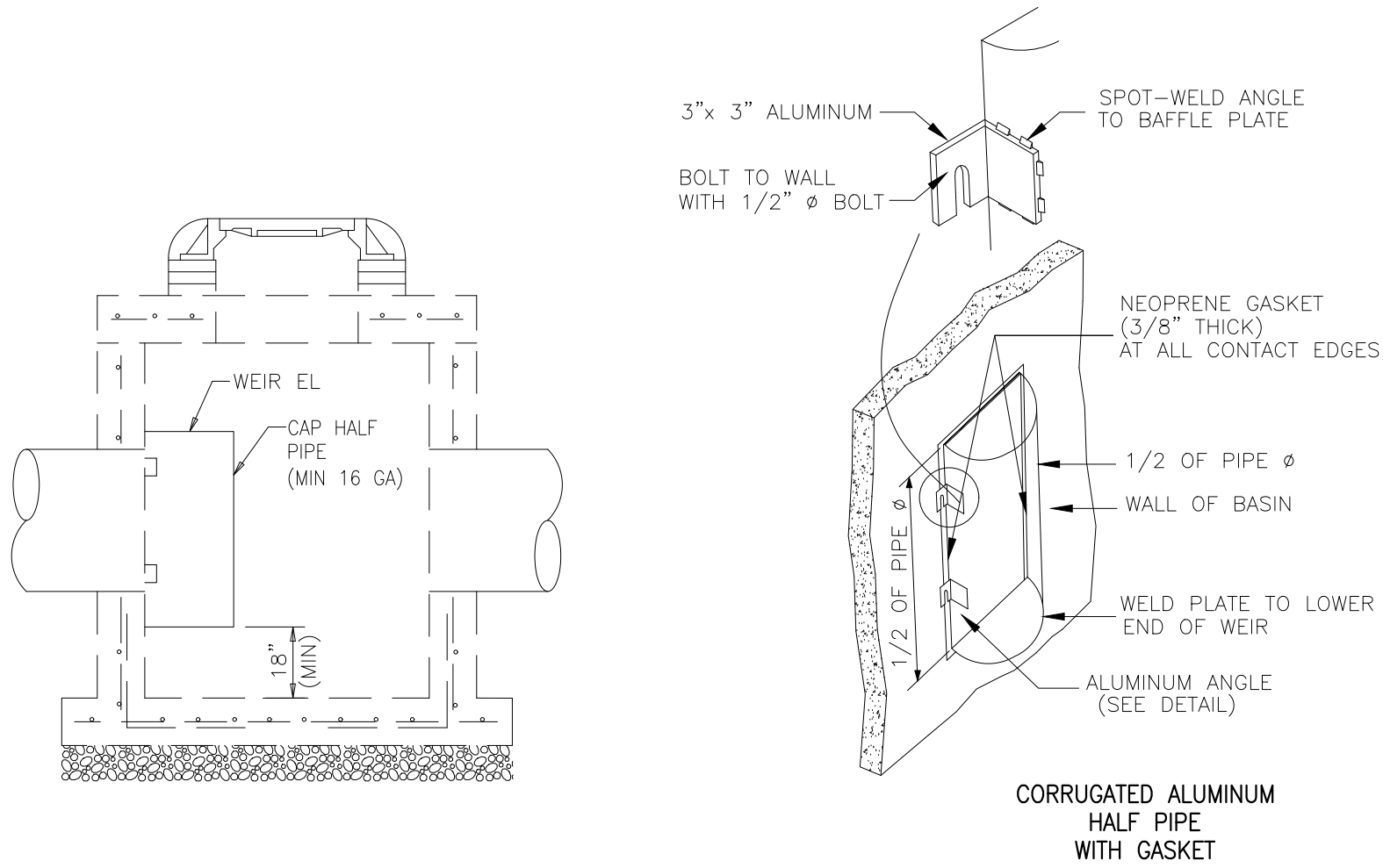
- ALL PRESSURE PIPE SHALL REQUIRE INSULATED METALLIC LOCATING WIRE (14 GAUGE COPPER) CAPABLE OF DETECTION BY A CABLE LOCATOR AND SHALL BE BURIED DIRECTLY AGAINST PIPE.
- LOCATING WIRE SHALL TERMINATE AT THE TOP OF EACH VALVE BOX AND BE CAPABLE OF EXTENDING 12" ABOVE TOP OF BOX IN SUCH A MANNER SO AS NOT TO INTERFERE WITH VALVE OPERATION.
- USE DUCT TAPE AS NECESSARY TO HOLD WIRE DIRECTLY AGAINST THE PIPE.
- ALL PRESSURE PIPE SHALL REQUIRE 3" ALUMINUM FOIL IDENTIFICATION TAPE INDICATING MATERIAL CONTAINED WITHIN PIPE (E.G., WASTEWATER). TAPE SHALL BE BURIED DIRECTLY ABOVE THE CENTERLINE OF PIPE, AND UNBROKEN THE ENTIRE RUN OF PIPE.

PVC PIPE LOCATING WIRE DETAIL
N.T.S.



PIPE SIZE	EXFILTRATION TRENCH
18" RCP	4' HIGH x 4' WIDE ROCK TRENCH

STORMWATER SYSTEM - EXFILTRATION TRENCH



DISCHARGE PIPE DIAMETER	WEIR DIAMETER (1)	WEIR DIAMETER (2)	GAUGE
15"	21"	21"	16
18"	24"	24"	16
24"	30"	36"	16
30"	36"	42"	14
36"	42"	48"	14
42"	48"	54"	14
48"	54"	60"	14
54"	60"	66"	14

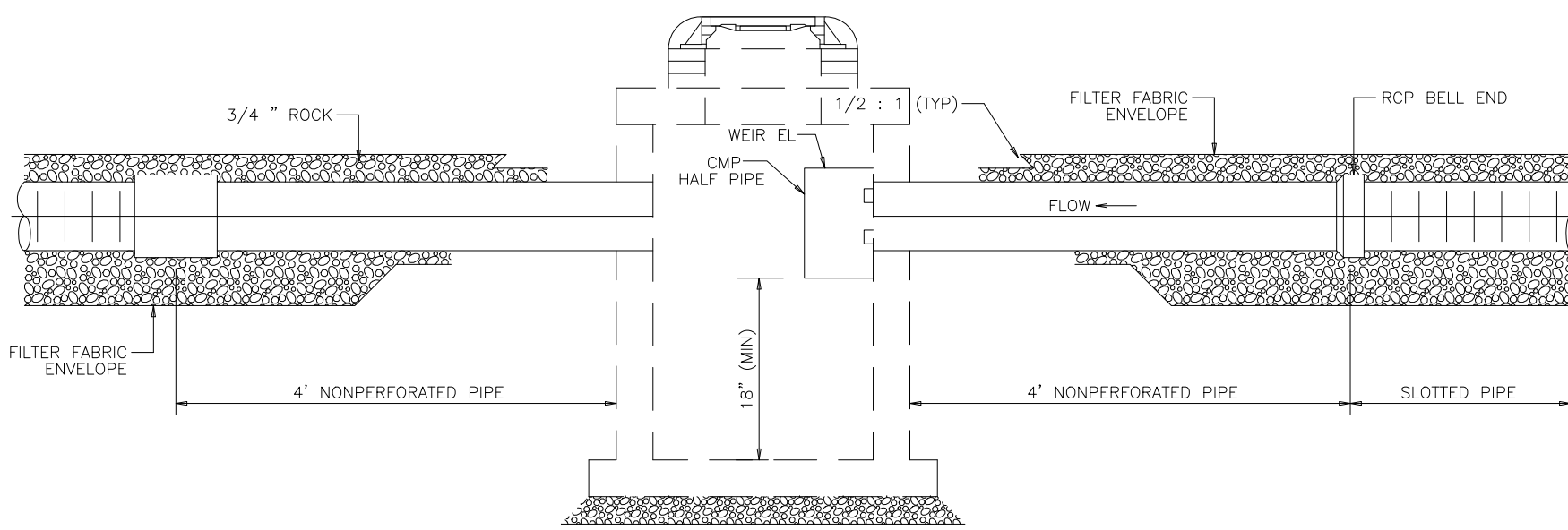
NOTES:

- ALUMINUM SHEET OF SAME THICKNESS (GAUGE) AS PIPE SHALL BE WELDED TO CLOSE THE OPENING AT THE BOTTOM OF THE HALF PIPE FOR WEIR.
- NEOPRENE ADHESIVE BACKED GASKET, OR APPROVED EQUAL (1"x3") SHALL BE INSTALLED ON THE SIDES AND BOTTOM OF ALL WEIR PIPES.
- WEIRS TO BE FASTENED IN PLACE WITH 3/8" x 4" STAINLESS STEEL "RED HEADS" OR APPROVED EQUAL. MOUNTING BRACKETS MAY BE ADDED TO FLAT BARS TO EASE INSTALLATION IN ROUND STRUCTURES. SPACING TO MATCH HOLES IN FLAT BARS.
- REFER TO PLANS AND DETAILS FOR STRUCTURE DIMENSIONS.

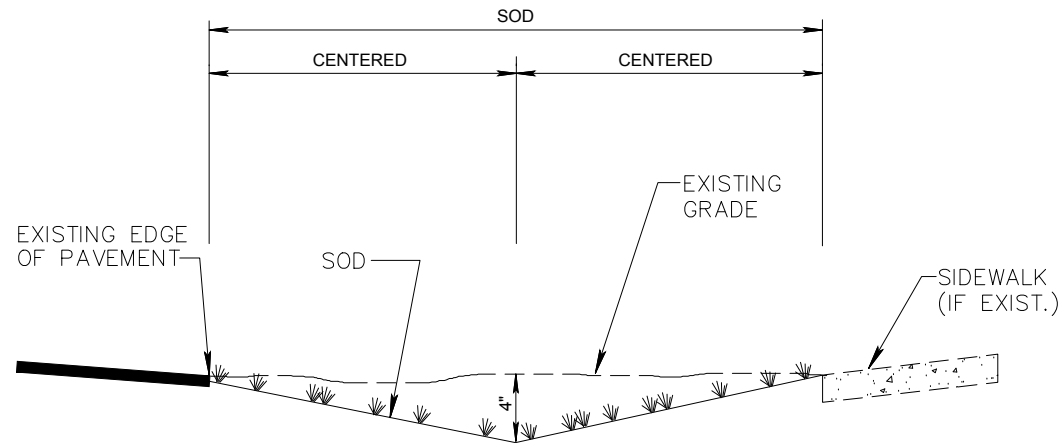
(1) RECTANGULAR STRUCTURE
(2) ROUND STRUCTURE

WEIR TABLE			
Dwg.	Structure	Weir Size	Weir Elevation
C-3	D-10	24"	3.80'
C-4	D-14	24"	3.80'
C-1	D-6	24"	3.80'

WEIR DETAIL
N.T.S.



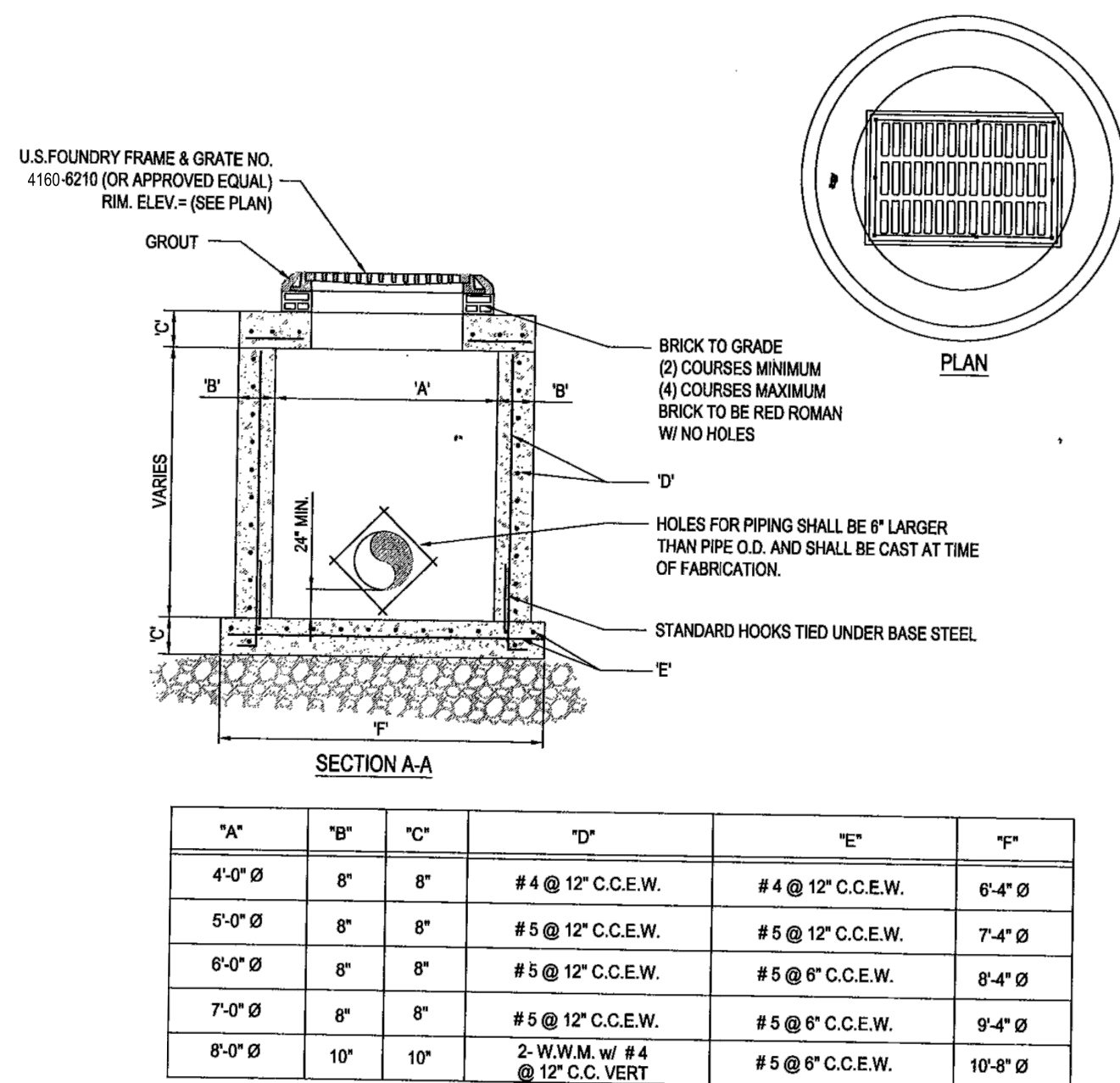
TYPICAL EXFILTRATION TRENCH LONGITUDINAL SECTION



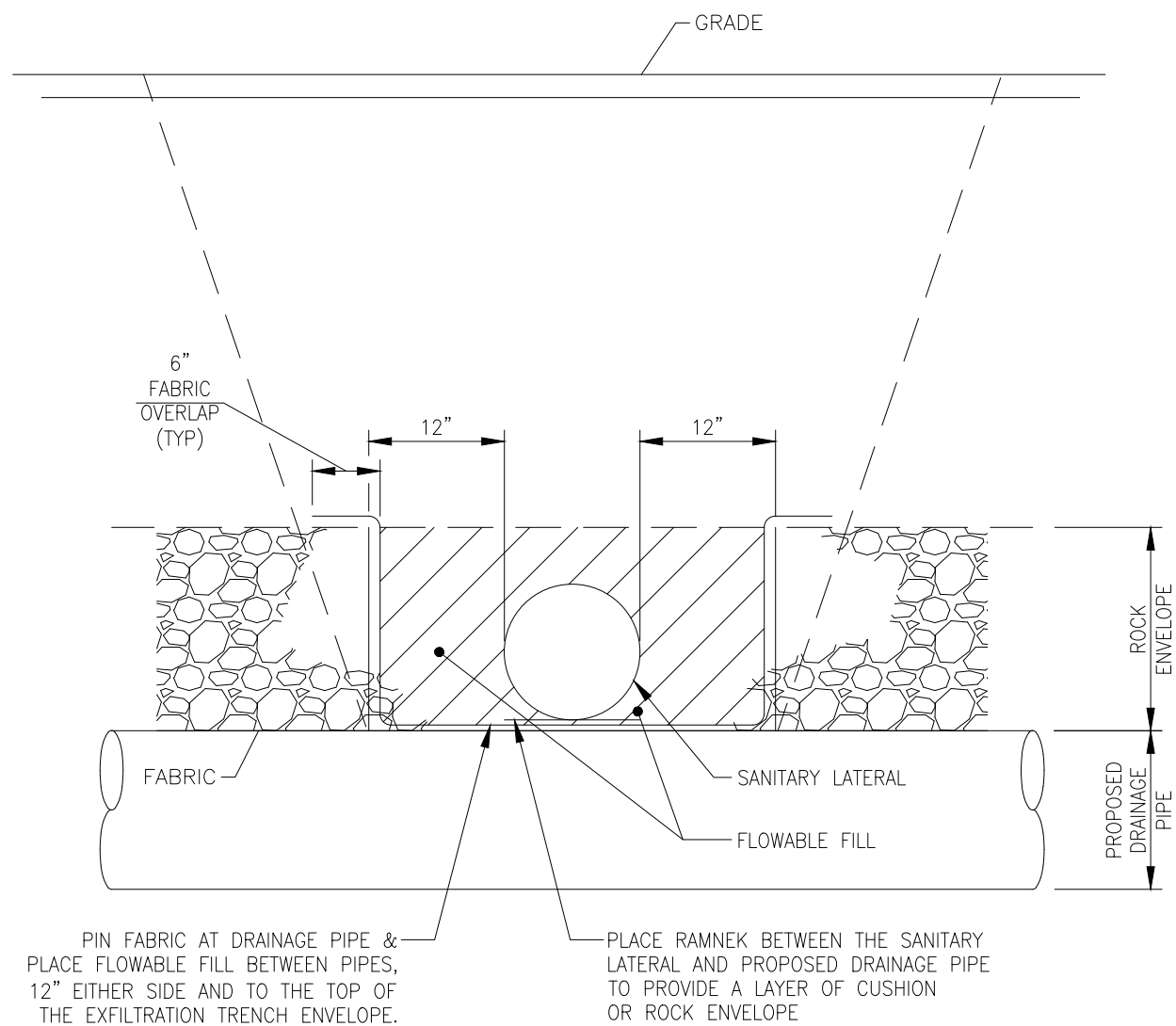
NOTES:

- CONTRACTOR TO REPLACE ALL IRRIGATION, TREES & SHRUBBERY IN SWALES DAMAGED DURING CONSTRUCTION.
- SOD SHALL BE ST. AUGUSTINE IF IRRIGATED AND BAHIA IF NOT IRRIGATED.

SWALE REPLACEMENT DETAIL



PRECAST CIRCULAR INLET DETAIL

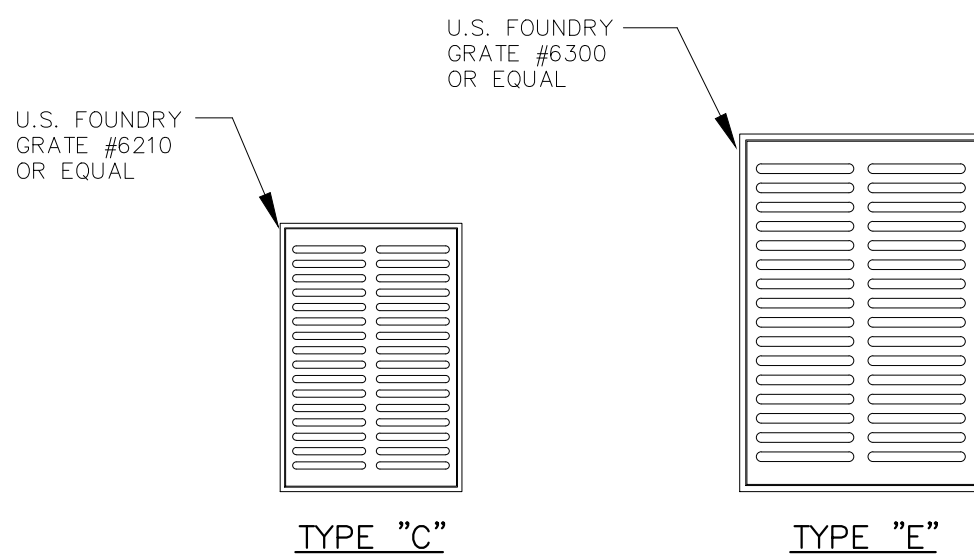


NOTES:

- DETAIL APPLIES AT LOCATIONS WHERE PROPOSED DRAINAGE PIPE PASSES UNDER OR OVER SANITARY LATERALS. PLACE FLOWABLE FILL BETWEEN DRAINAGE AND SANITARY PIPES, 12" EITHER SIDE.

TRENCH DETAIL AT EXFILTRATION TRENCH AND SANITARY LATERAL CROSSING
N.T.S.

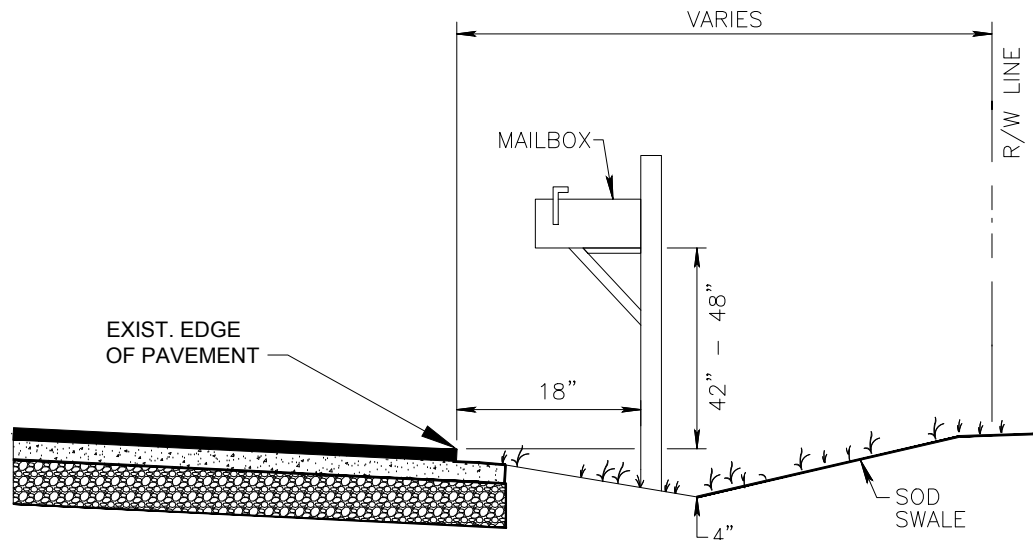
INLET TYPE	DIMENSIONS		GRATE TYPE	MAX. PIPE SIZE	
	A	B		WALL A	WALL B
'C'	2'-0"	3'-1"	U.S. FOUNDRY No. 6210	15" R.C.P.	24" R.C.P.
'E'	3'-0"	4'-5"	U.S. FOUNDRY No. 6300	24" R.C.P.	36" R.C.P.



NOTES:

- ALL GRATES SHALL BE SUITABLE FOR H-20 LOADING (HIGHWAY TRAFFIC LOADS)

TYPE C & E INLET GRATE DETAIL



TYPICAL MAIL BOX RELOCATION AND 6" SODDED SWALE DETAIL D 10.2
N.T.S.

BIDDING

NO.	DATE	ISSUED FOR	APRV'D BY
1	05/17/17	REV. PER SFWM COMMENTS	M.R.T.

DESIGNED: C.K.M.
DRAWN: J.A.J./F.R.C.
CHECKED: D.L.M./A.C.
APPROVED: D.L.M.

DAVID L. MATHEWS, P.E.
No. 48242

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a BAXTER & WOODMAN company

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Phone: 561-655-6175 • Fax: 561-655-6179
www.baxterwoodman.com EB-31795

VERIFY SCALE

1"

BAR IS ONE INCH ON FULL SIZE (22x34) ORIGINAL DRAWING. ADJUST SCALES AS NECESSARY.

ENGINEER NO.: 1856

CLIENT PROJECT NO.:

CAD REF.: 1856DETAILS

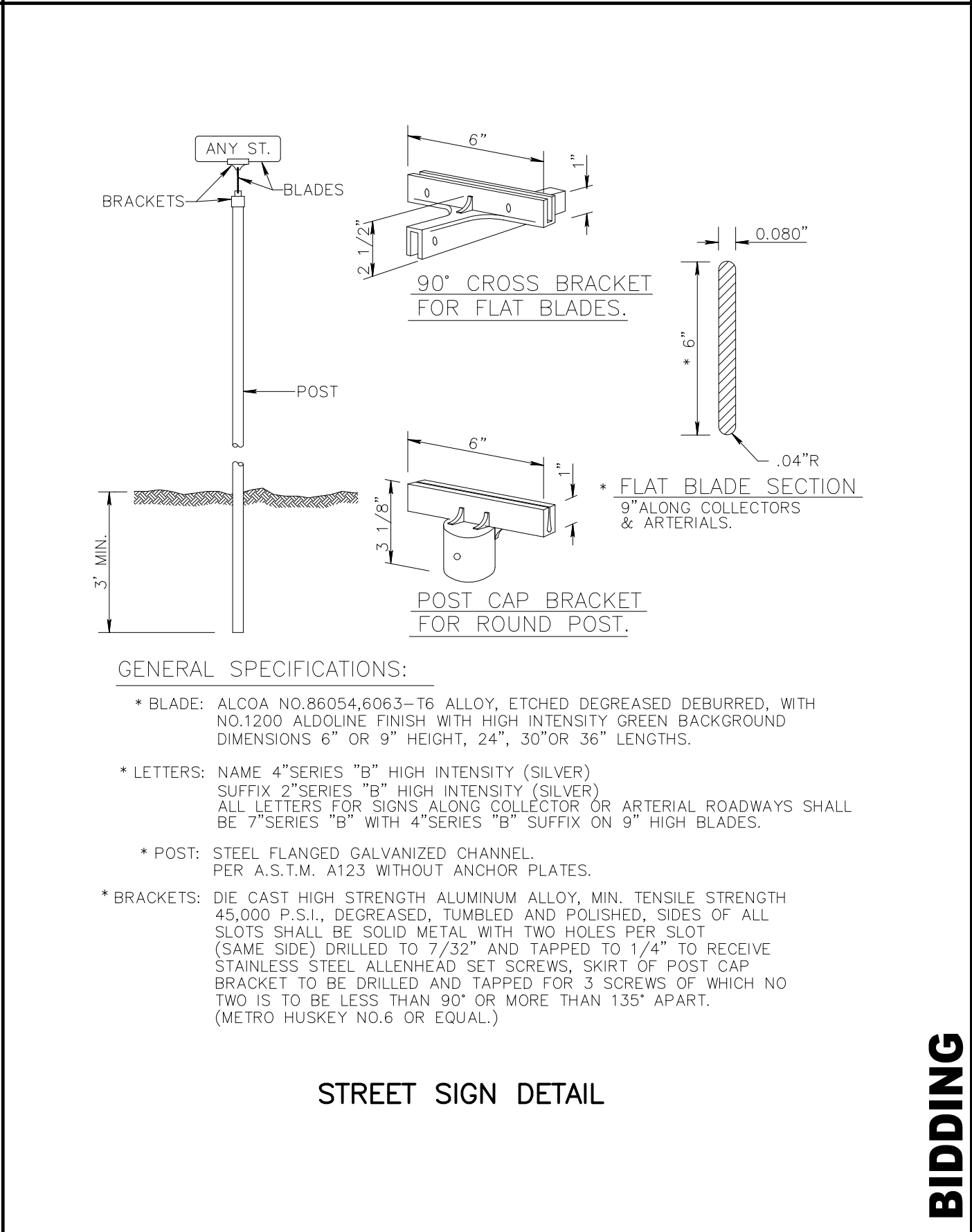
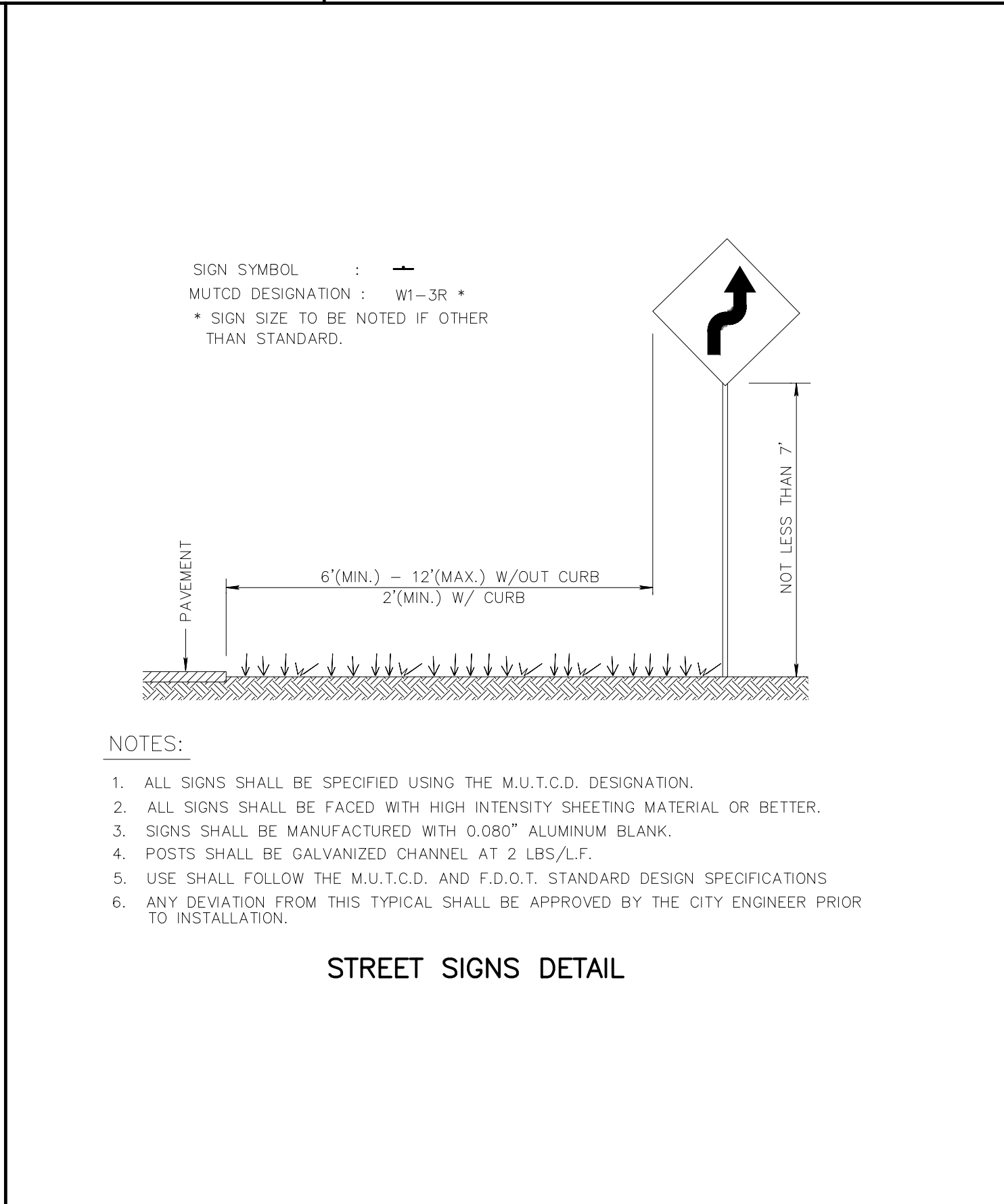
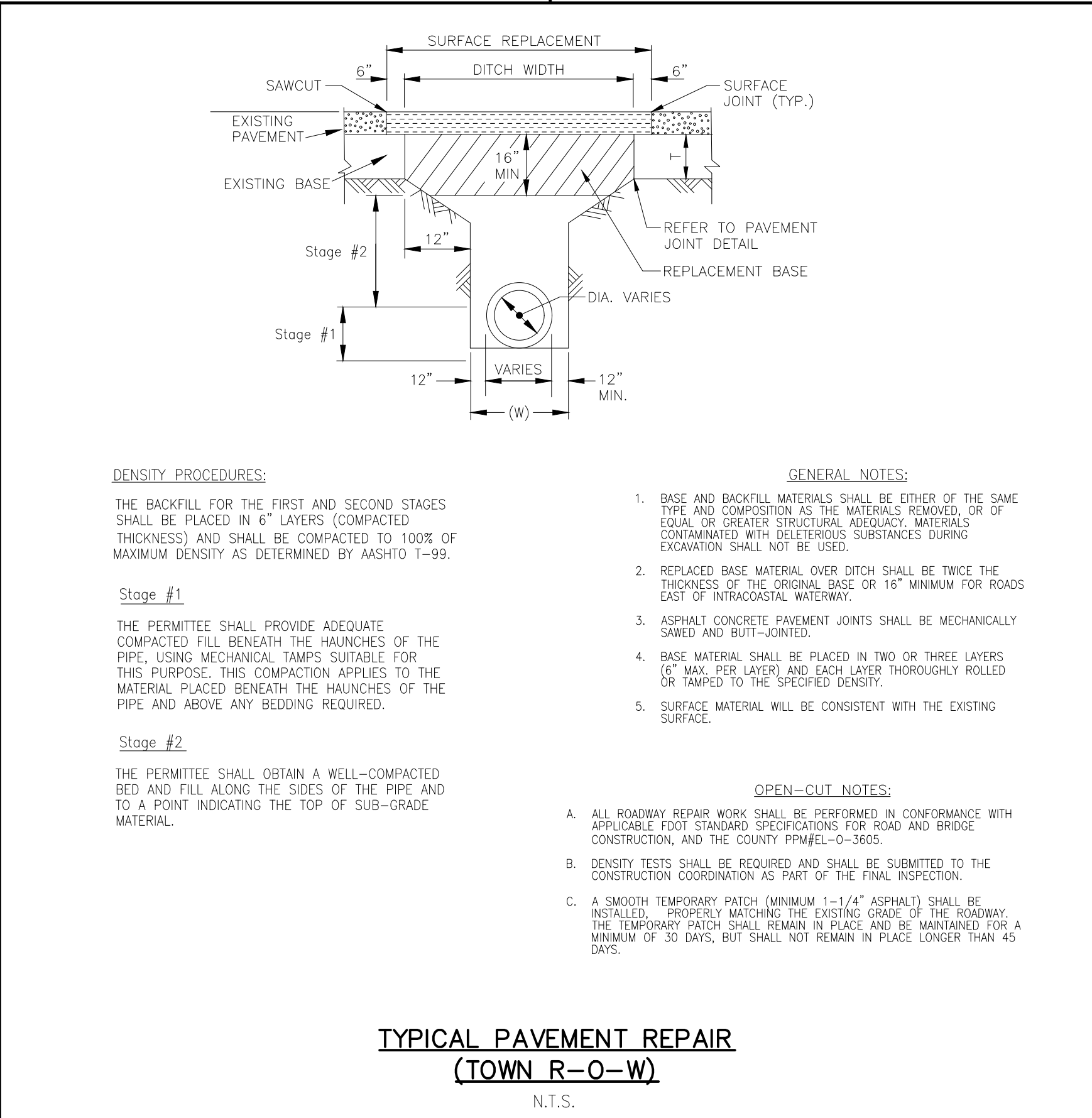
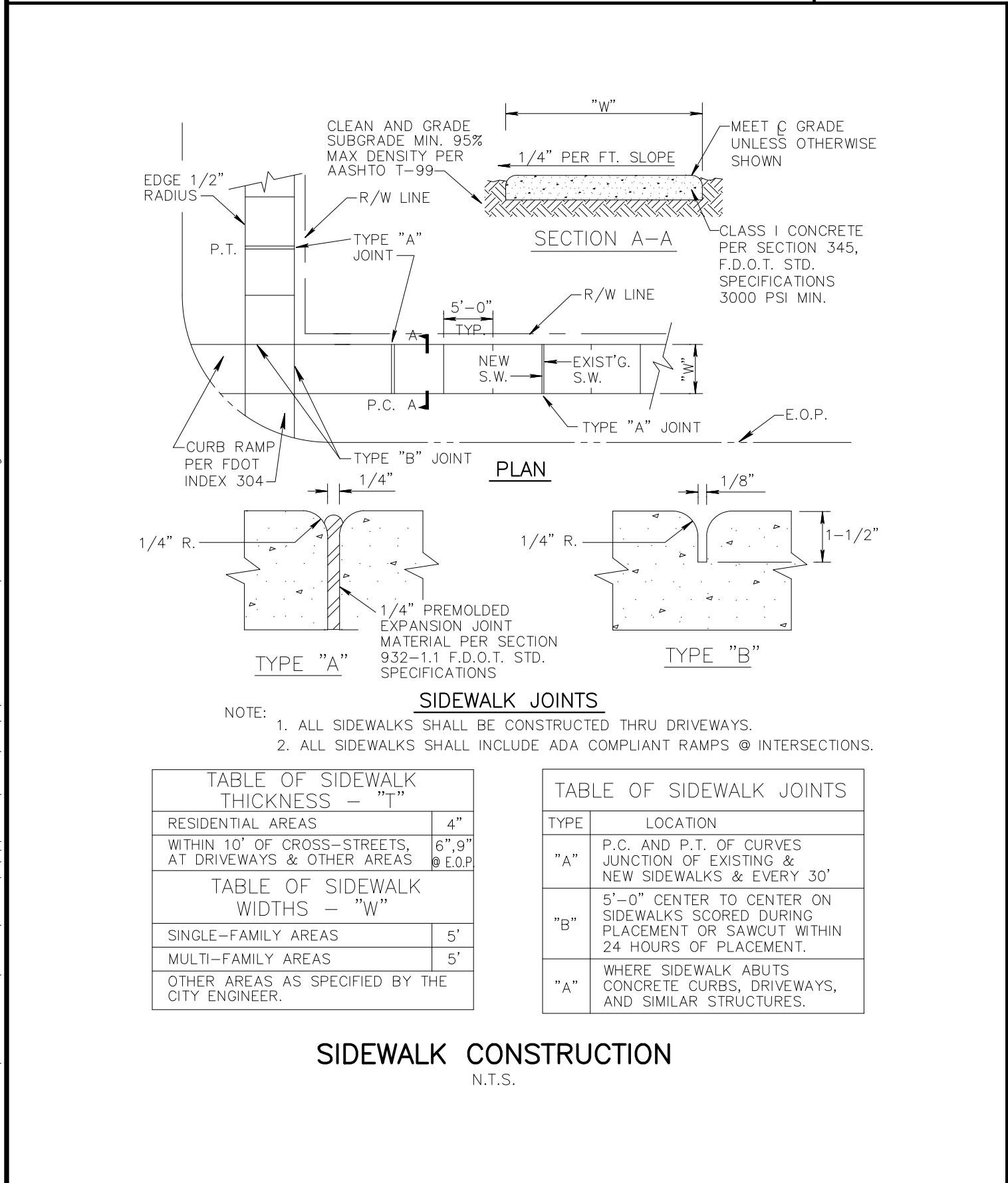
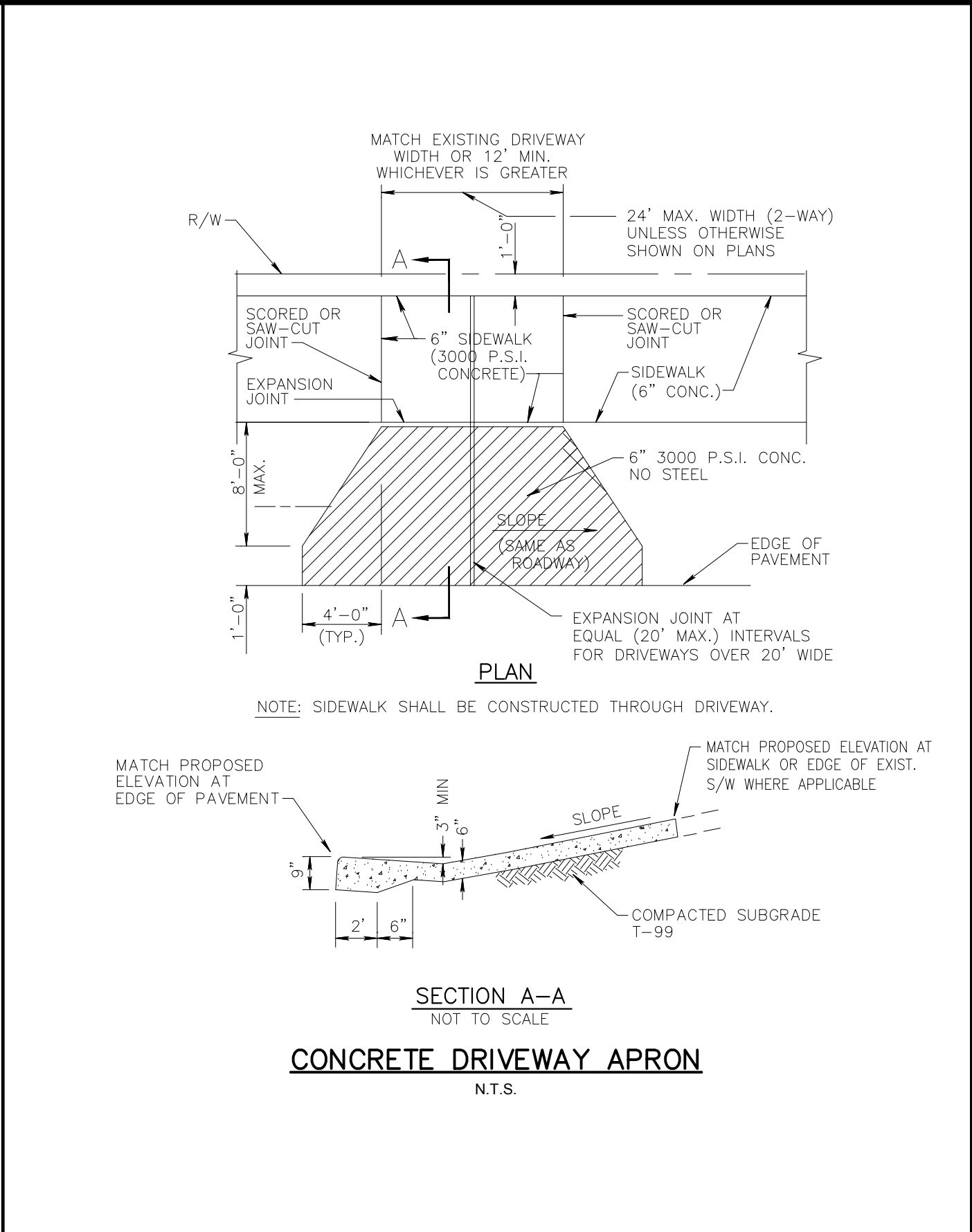
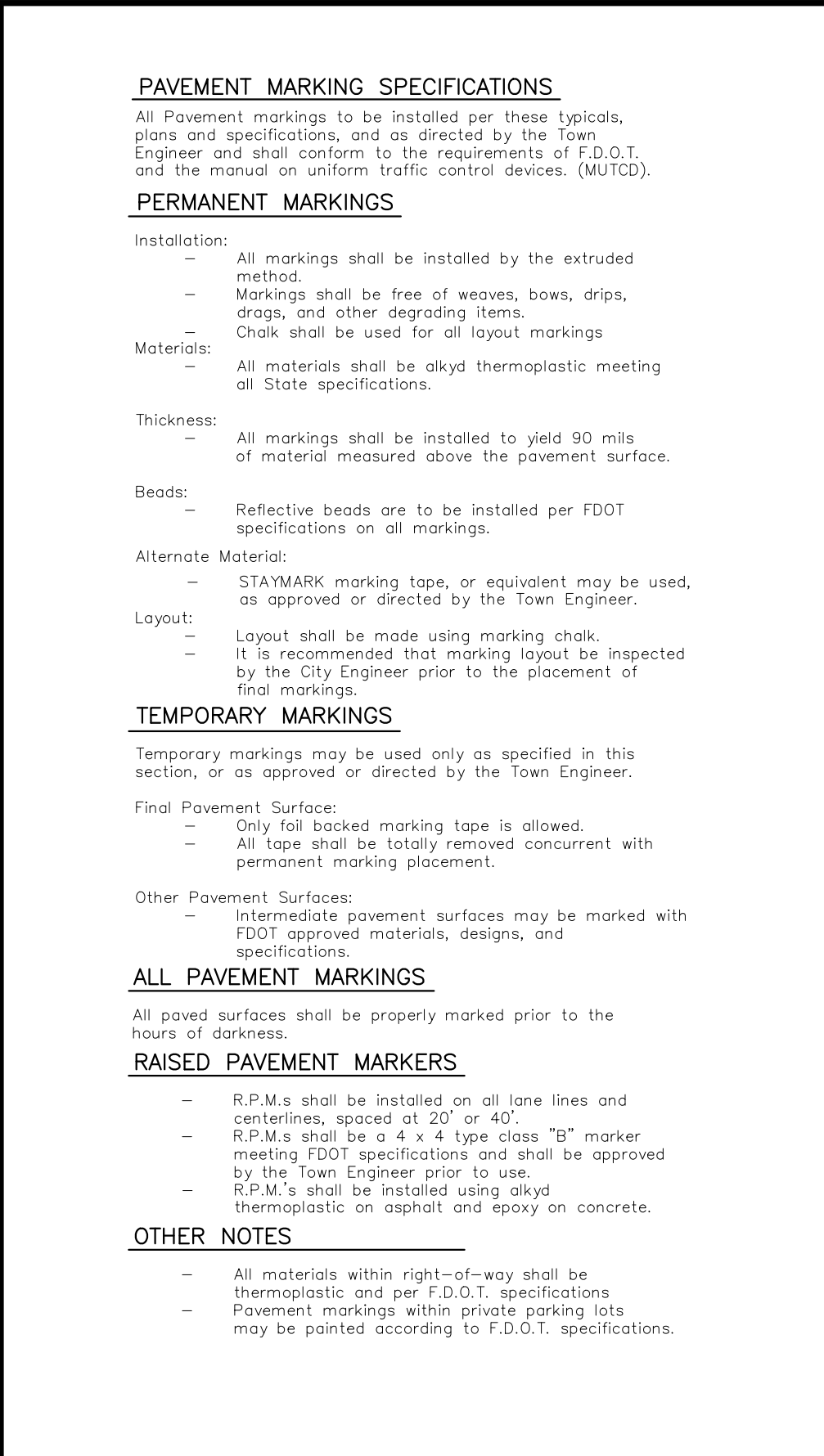
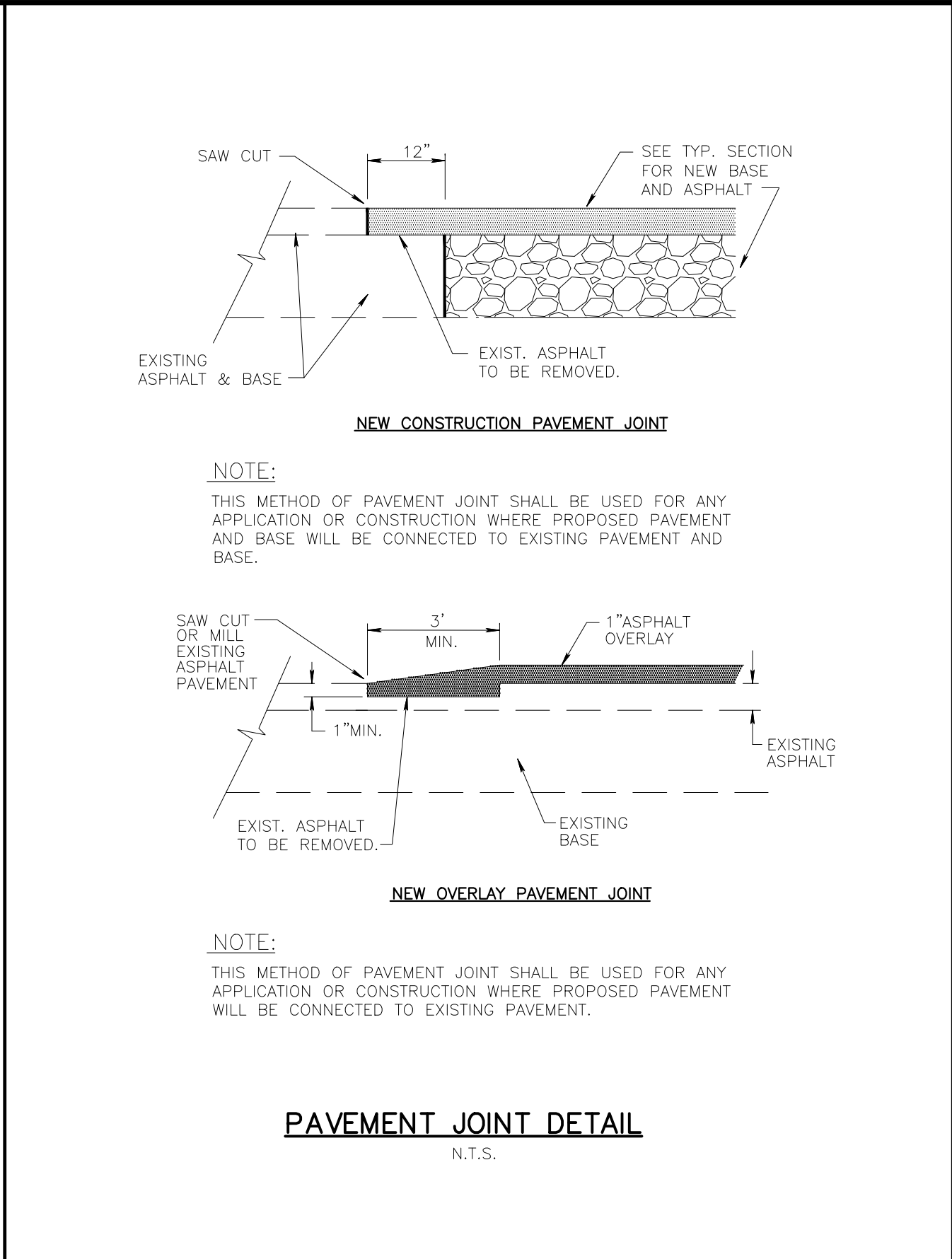
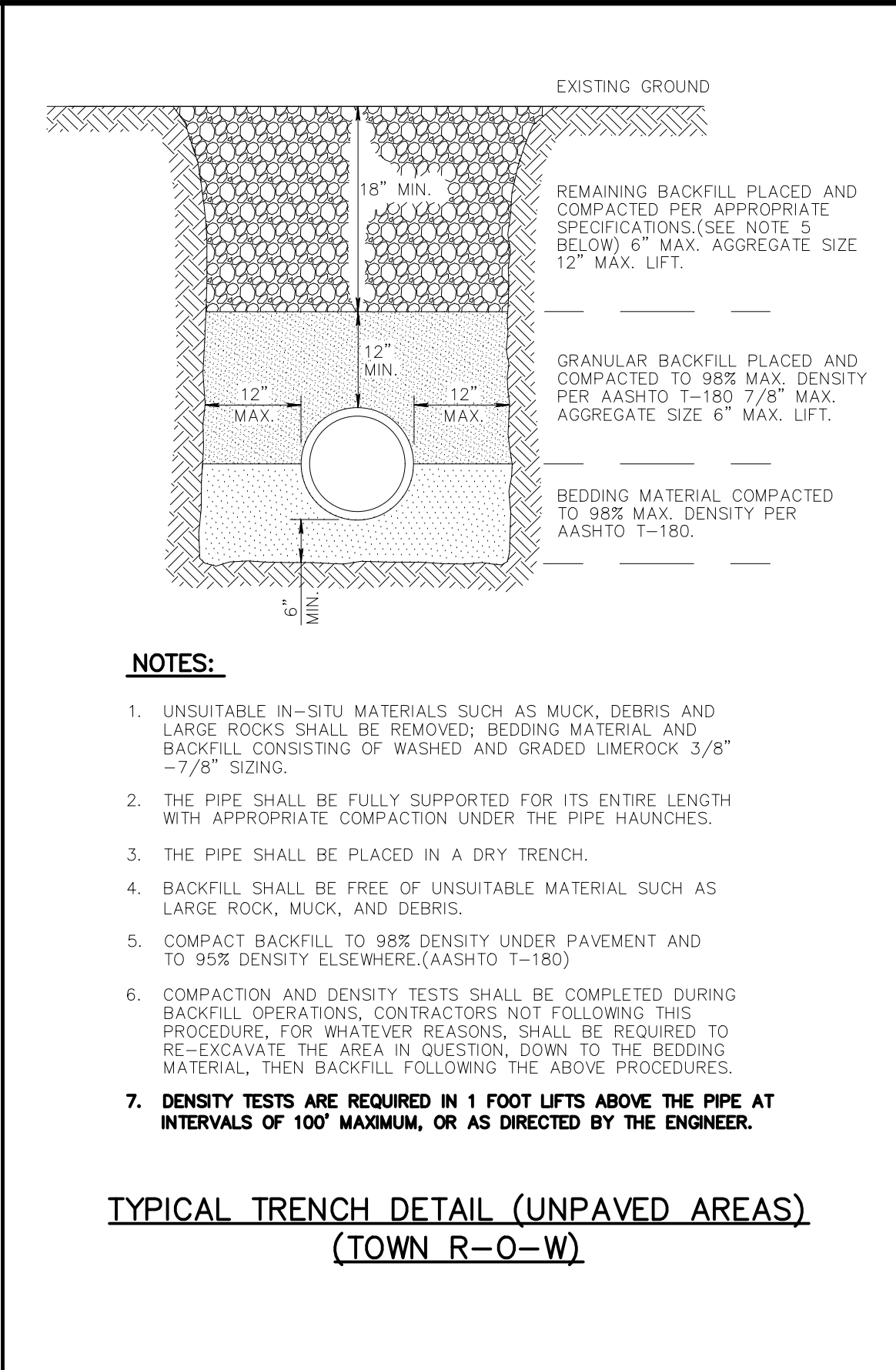
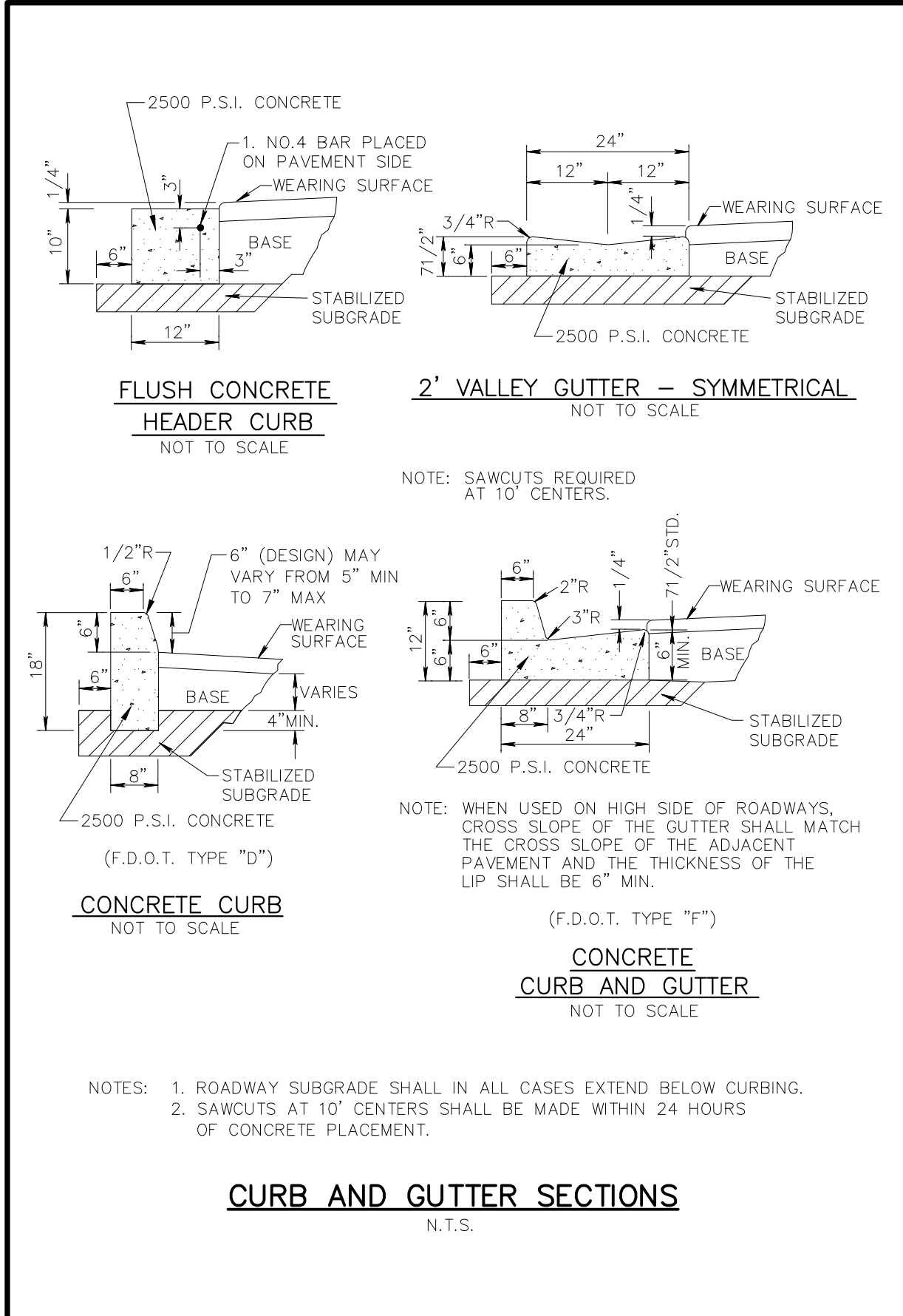
TOWN OF LANTANA
SOUTH LAKE DRIVE
FORCE MAIN REPLACEMENT

STANDARD DETAILS - SHEET 2

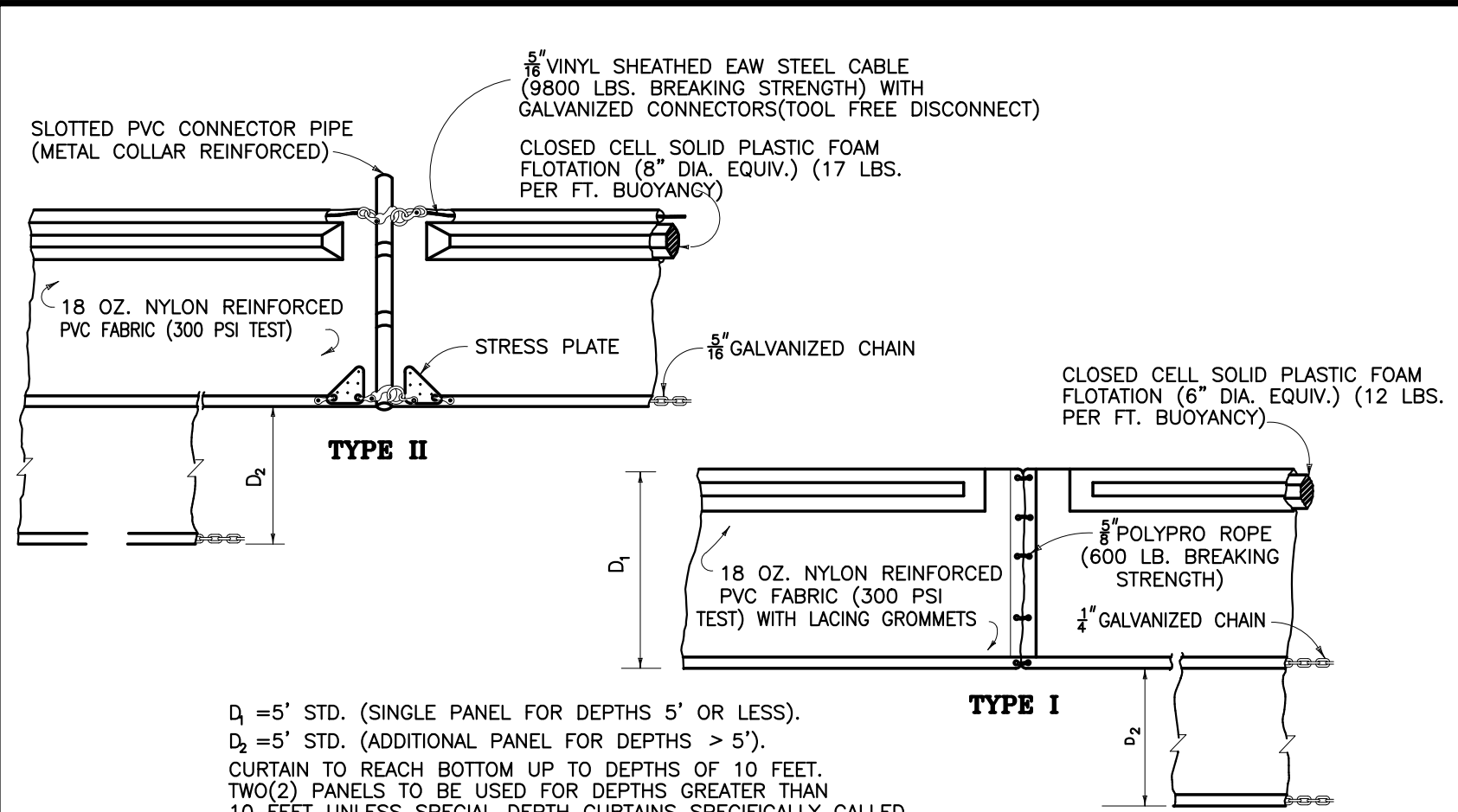
DATE: AUGUST 2017

SHEET: 13 of 15

DRAWING: D-2

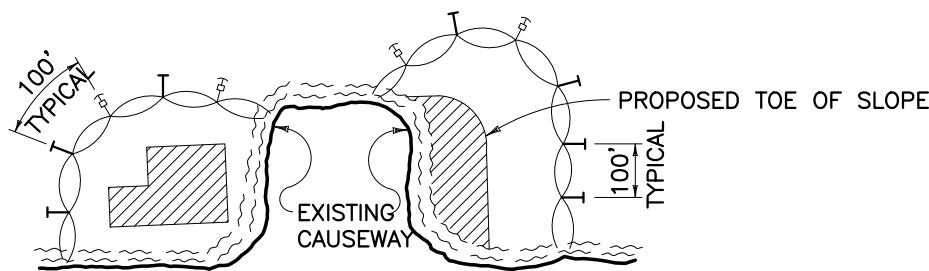


NO.	DATE	ISSUED FOR	APRV'D BY	DESIGNED: C.K.M.	DRAWN: J.A.J./F.R.C.	CHECKED: D.L.M./A.C.	APPROVED: D.L.M.	DAVID L. MATHEWS, P.E. No. 48242	VERIFY SCALE 1" BAR IS ONE INCH ON FULL SIZE (22x34) ORIGINAL DRAWING. ADJUST SCALES AS NECESSARY.	ENGINEER NO.: 1856	CLIENT PROJECT NO.:	CAD REF.: 1856DETAILS	TOWN OF LANTANA SOUTH LAKE DRIVE FORCE MAIN REPLACEMENT	DATE: AUGUST 2017
														SHEET: 14 of 15
													STANDARD DETAILS - SHEET 3	DRAWING: D-3



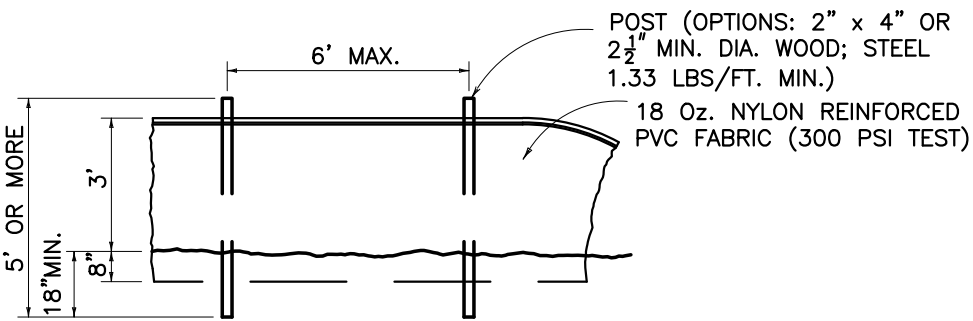
D₁ = 5' STD. (SINGLE PANEL FOR DEPTHS 5' OR LESS).
D₂ = 5' STD. (ADDITIONAL PANEL FOR DEPTHS > 5').
CURTAIN TO REACH BOTTOM UP TO DEPTHS OF 10 FEET.
TWO(2) PANELS TO BE USED FOR DEPTHS GREATER THAN 10 FEET UNLESS SPECIAL DEPTH CURTAINS SPECIFICALLY CALLED FOR IN THE PLANS OR AS DETERMINED BY THE ENGINEER.

NOTE:
COMPONENTS OF TYPES I AND II MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES I AND II SHALL BE AS APPROVED BY THE ENGINEER.

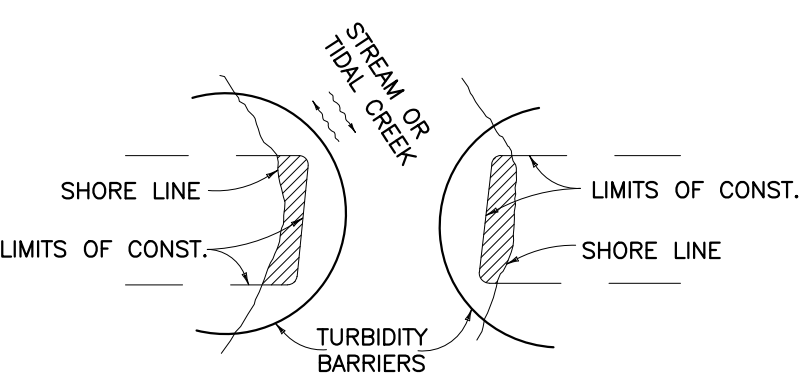


LEGEND

- PILE LOCATIONS
- ▨ DREDGE OR FILL AREA
- MOORING BUOY W/ANCHOR
- ANCHOR
- BARRIER MOVEMENT DUE TO CURRENT ACTION



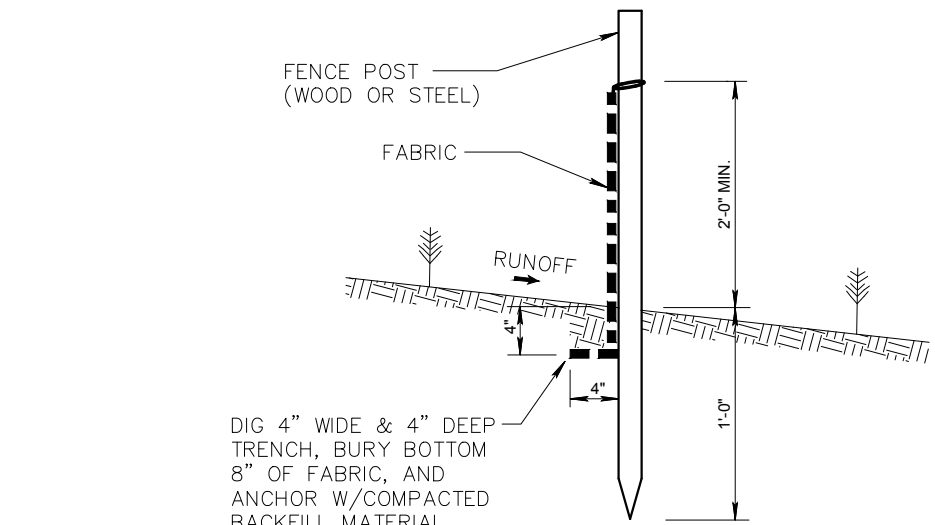
STAKED TURBIDITY BARRIER



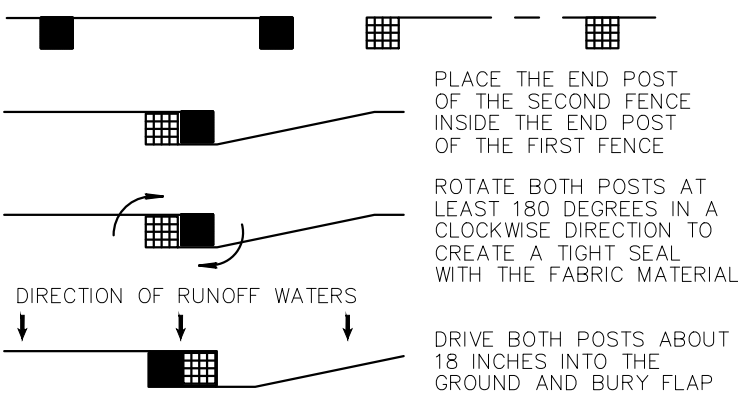
FLOATING TURBIDITY BARRIERS

NOTES:

- TURBIDITY BARRIERS FOR FLOWING STREAMS AND TIDAL CREEKS MAY BE EITHER FLOATING, OR STAKED TYPES OR ANY COMBINATION OF TYPES THAT WILL SUIT SITE CONDITIONS AND MEET EROSION CONTROL AND WATER QUALITY REQUIREMENTS. THE BARRIER TYPE(S) WILL BE AT THE CONTRACTORS OPTION UNLESS OTHERWISE SPECIFIED IN THE PLANS. POSTS IN STAKED TURBIDITY BARRIERS TO BE INSTALLED IN VERTICAL POSITION UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- TURBIDITY BARRIERS ARE TO BE USED IN ALL PERMANENT BODIES OF WATER REGARDLESS OF WATER DEPTH.
- NUMBER AND SPACING OF ANCHORS DEPENDENT ON CURRENT VELOCITIES.
- DEPLOYMENT OF BARRIER AROUND PILE LOCATIONS MAY VARY TO ACCOMMODATE CONSTRUCTION OPERATIONS.
- NAVIGATION MAY REQUIRE SEGMENTING BARRIER DURING CONSTRUCTION OPERATIONS.
- FOR ADDITIONAL INFORMATION SEE SECTION 104 OF THE STANDARD SPECIFICATIONS.

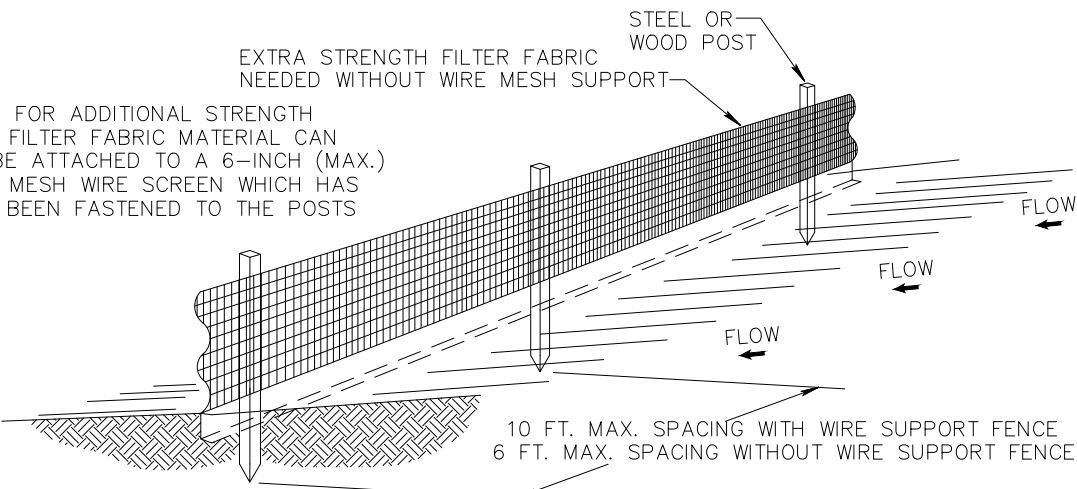


**SILT FENCE SECTION
NOT TO SCALE**



**ATTACHING TWO SILT FENCES
NOT TO SCALE**

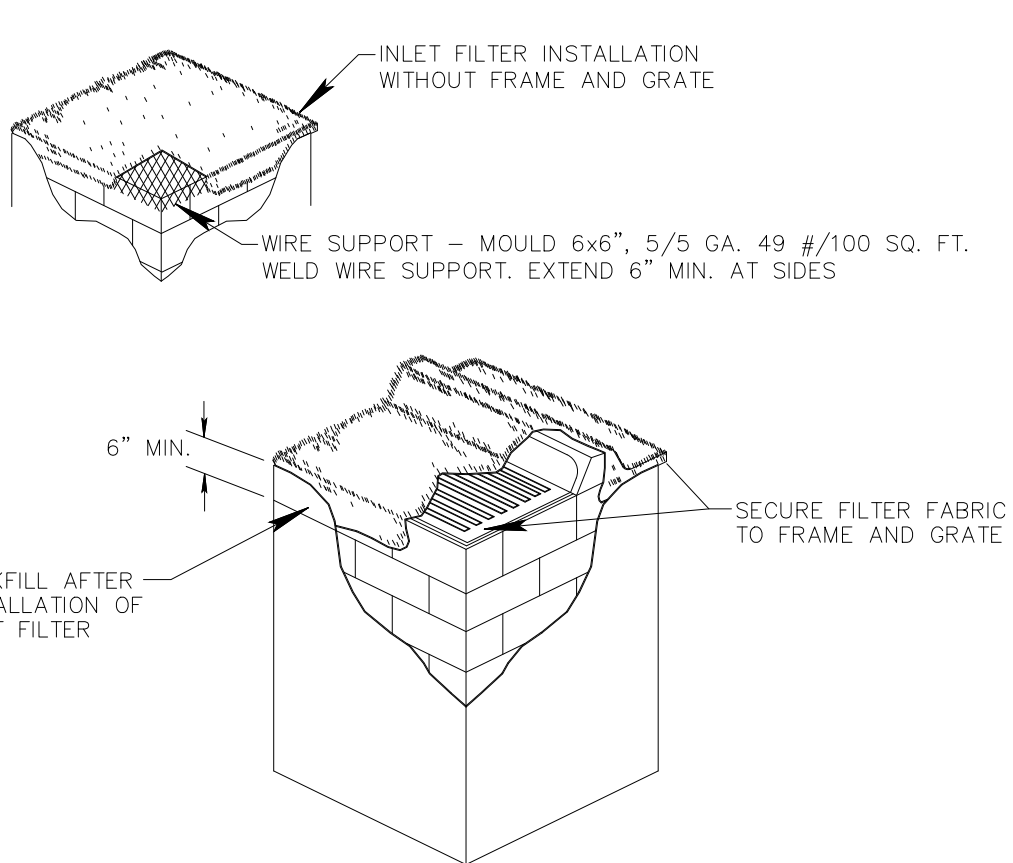
SILT FENCE INSTALLATION DETAIL



NOTES:

- THE HEIGHT OF A SILT FENCE SHALL NOT EXCEED 36 INCHES (90 CM).
- THE FILTER FABRIC SHALL BE PURCHASED IN A CONTINUOUS ROLL CUT TO THE LENGTH OF THE BARRIER TO AVOID THE USE OF JOINTS.
- POSTS SHALL BE SPACED A MAXIMUM OF 10 FEET (3 M) APART AT THE BARRIER LOCATION AND DRIVEN SECURELY INTO THE GROUND A MINIMUM OF 12 INCHES (30 CM). WHEN EXTRA STRENGTH FABRIC IS USED WITHOUT THE WIRE SUPPORT FENCE, POST SPACING SHALL NOT EXCEED 6 FEET (1.8 M).
- A TRENCH SHALL BE EXCAVATED APPROXIMATELY 4 INCHES (10 CM) WIDE AND 4 INCHES (10 CM) DEEP ALONG THE LINE OF POSTS AND UPSLOPE FROM THE BARRIER.
- WHEN STANDARD STRENGTH FILTER FABRIC IS USED, A WIRE MESH SUPPORT FENCE SHALL BE FASTENED SECURELY TO THE UPSLOPE SIDE OF THE POSTS USING HEAVY DUTY WIRE STAPLES AT LEAST 1 INCH (25 MM) LONG, TIE WIRES, OR HOG RINGS. THE WIRE SHALL EXTEND INTO THE TRENCH A MINIMUM OF 2 INCHES (5 CM) AND SHALL NOT EXTEND MORE THAN 36 INCHES (90 CM) ABOVE THE ORIGINAL GROUND SURFACE.
- THE STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE, AND 8 INCHES (20 CM) OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABRIC SHALL NOT EXTEND MORE THAN 36 INCHES (90 CM) ABOVE THE ORIGINAL GROUND SURFACE.
- THE TRENCH SHALL BE BACKFILLED AND THE SOIL COMPACTED OVER THE FILTER FABRIC.

SILT FENCE INSTALLATION DETAIL



NOTES:

- CONTRACTOR IS TO CLEAN INLET FILTER AFTER EVERY STORM.
- CONTRACTOR TO REMOVE FABRIC JUST PRIOR TO PAVING.

A SEDIMENT TRAP WILL BE EXCAVATED BEHIND THE CURB AT THE INLET. THE BASIN SHALL BE AT LEAST 12 TO 14 INCHES IN DEPTH, APPROXIMATELY 36 INCHES IN WIDTH, AND APPROXIMATELY 7 TO 10 FEET IN LENGTH PARALLEL TO THE CURB.

INLET FILTER DETAIL

MAXIMUM QUANTITY OF WATER (GALLONS PER HOUR) THAT MAY BE SUPPLIED TO MAINTAIN PRESSURE WITHIN 5 P.S.I. OF THE SPECIFIED TEST PRESSURE. (MECHANICAL OR PUSH-ON JOINT, 16 FT. NOMINAL LENGTHS, PER 1000 FT. OF PIPE)

AVG. TEST PRESSURE, PSI	2	3	4	6	8	10	12	14	16	18	20	24	30	36	42	48
150	0.08	0.12	0.16	0.25	0.33	0.41	0.50	0.58	0.68	0.74	0.83	0.99	1.24	1.49	1.74	1.99
200	0.09	0.14	0.19	0.29	0.38	0.48	0.57	0.67	0.76	0.86	0.96	1.15	1.43	1.72	2.01	2.29

NOTES:

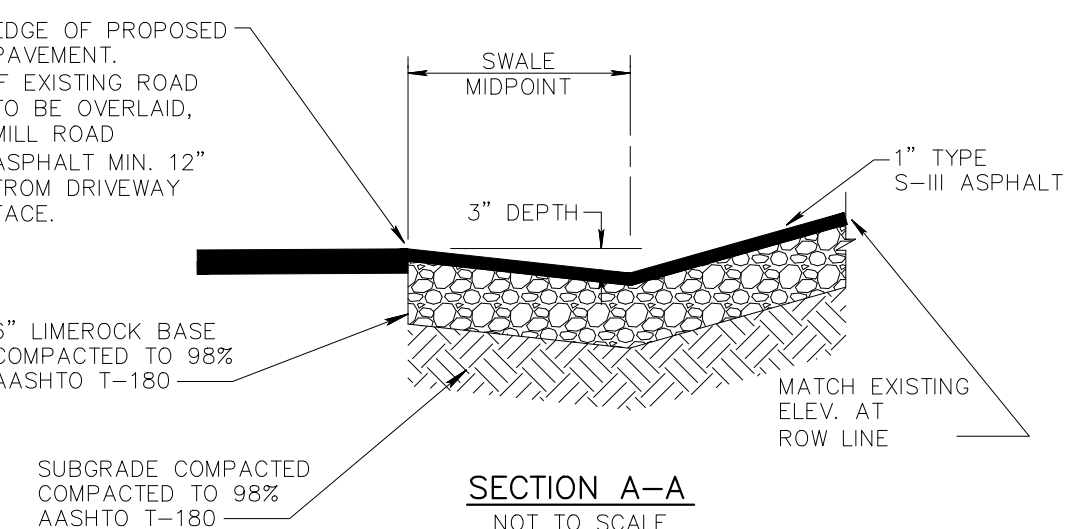
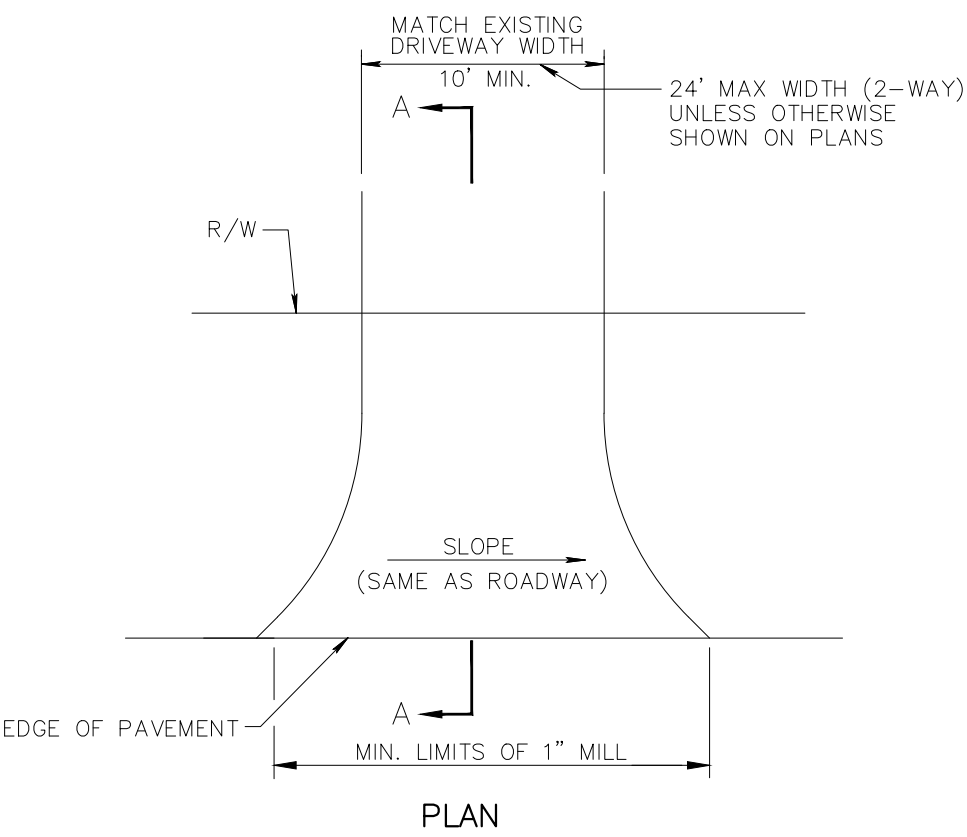
- TO OBTAIN THE MAXIMUM QUANTITY OF WATER FOR PIPE WITH 20 FT. NOMINAL LENGTHS, MULTIPLY THE QUANTITY CALCULATED FROM THE TABLE BY 0.9
- THE MAXIMUM QUANTITY OF ADDED WATER FOR A PIPELINE IS CALCULATED BY MULTIPLYING THE QUANTITY PER HOUR AS OBTAINED FROM THE ABOVE TABLE, BY THE DURATION OF THE TEST IN HOURS, AND BY THE TOTAL LENGTH OF THE LINE BEING TESTED DIVIDED BY 1,000. IF THE LINE UNDER TEST CONTAINS SECTIONS OF VARIOUS DIAMETERS, THE MAXIMUM QUANTITY ADDED WILL BE THE SUM OF THE COMPUTED QUANTITIES FOR EACH SIZE.
- MAXIMUM TEST LENGTH = 2,500 FEET PER SECTION.
- THIS STANDARD SHALL REFLECT ANY REVISION OF A.W.W.A. C-600. HOWEVER, THE MAXIMUM QUANTITY OF WATER ADDED SHALL NOT EXCEED 50% OF THE RECOMMENDED LIMIT PER APPLICABLE AWWA C-600 STANDARD.
- STANDARD TEST PRESSURE = 150 P.S.I.
- FORMULA BASIS: $L = \frac{(S) \times (D) \times (P)^{1/2}}{148,000} \times 1/2$

L = MAXIMUM QUANTITY OF WATER TO BE ADDED (GALLONS PER HOUR)
S = LENGTH OF PIPE TESTED (FEET)
D = DIAMETER OF PIPE (INCHES)
P = TEST PRESSURE (P.S.I.)

- PRESSURE TEST DURATION TO BE MIN. 2 HOURS.

PRESSURE TEST CRITERIA

N.T.S.



NOTE:
WHEREVER THE SIDEWALK CROSSES A DRIVEWAY, IT IS TO BE INSTALLED 6-INCHES THICK. ALL OTHER LOCATIONS, THE SIDEWALKS ARE 4-INCHES THICK.

ASPHALT DRIVEWAY APRON DETAIL

N.T.S.

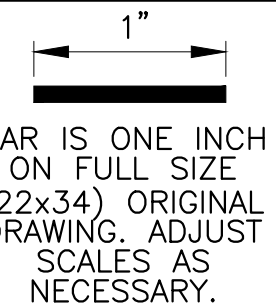
EROSION CONTROL NOTES DETAIL

- THE INTENT OF EROSION CONTROL MEASURES INDICATED GRAPHICALLY ON PLANS IS TO PROVIDE A BARRIER TO CONTAIN SILT AND SEDIMENT ON THE PROJECT SITE. THIS REPRESENTATION IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR. THE TEST OF EROSION CONTROL EFFECTIVENESS IS NOT TO BE DETERMINED BY ADHERENCE TO THE REPRESENT SET FORTH ON THE DRAWINGS AND SPECIFICATIONS, BUT BY MEETING THE REGULATIONS SET FORTH BY THE AUTHORITY HAVING JURISDICTION OVER WATER QUALITY CONTROL AND OTHER SEDIMENTATION RESTRICTION REQUIREMENTS IN THE REGION.
- APPROVED EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO ANY CLEARING, GRADING, EXCAVATION, FILLING, OR OTHER LAND DISTURBANCE ACTIVITIES, EXCEPT THOSE OPERATIONS NEEDED TO INSTALL SUCH MEASURES.
- INSPECTION OF ALL EROSION CONTROL MEASURES SHALL BE CONDUCTED WEEKLY, OR AFTER EACH RAINFALL EVENT. REPAIR, AND/OR REPLACEMENT OF SUCH MEASURES SHALL BE MADE PROMPTLY, AS NEEDED.
- KEEP DUST WITHIN TOLERABLE LIMITS BY SPRINKLING OR OTHER ACCEPTABLE MEANS.
- ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES MAY BE REQUIRED IF DEEMED NECESSARY BY ONSITE INSPECTION.
- FAILURE TO PROPERLY INSTALL, AND MAINTAIN EROSION CONTROL PRACTICES SHALL RESULT IN CONSTRUCTION BEING HALTED.
- DRAINAGE INLETS SHALL BE PROTECTED BY FILTER AND GRADED ROCK AS PER INLET PROTECTION DETAIL.
- ANY ACCESS ROUTES TO SITE SHALL BE BASED WITH CRUSHED STONE, WHERE PRACTICAL.
- EROSION CONTROL MEASURES ARE TO BE MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
- WHENEVER FEASIBLE, NATURAL VEGETATION SHALL BE RETAINED AND PROTECTED.
- ALL WORK IS TO BE IN COMPLIANCE WITH THE RULES AND REGULATIONS SET FORTH BY THE STATE OF FLORIDA, DEPARTMENT OF ENVIRONMENTAL PROTECTION AND THE CITY OF DELRAY BEACH.
- DISCHARGE FROM DEWATERING OPERATIONS SHALL BE RETAINED ONSITE IN A CONTAINMENT AREA.

MATHEWS CONSULTING
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Phone: 561-655-6175 Fax: 561-655-6179
www.baxterwoodman.com EB-31795

VERIFY SCALE



ENGINEER NO.: 1856

CLIENT PROJECT NO.: _____

CAD REF.: 1856DETAILS

**TOWN OF LANTANA
SOUTH LAKE DRIVE
FORCE MAIN REPLACEMENT**

STANDARD DETAILS – SHEET 4

DATE: AUGUST 2017

SHEET: 15 of 15

DRAWING: D-4

BIDDING