

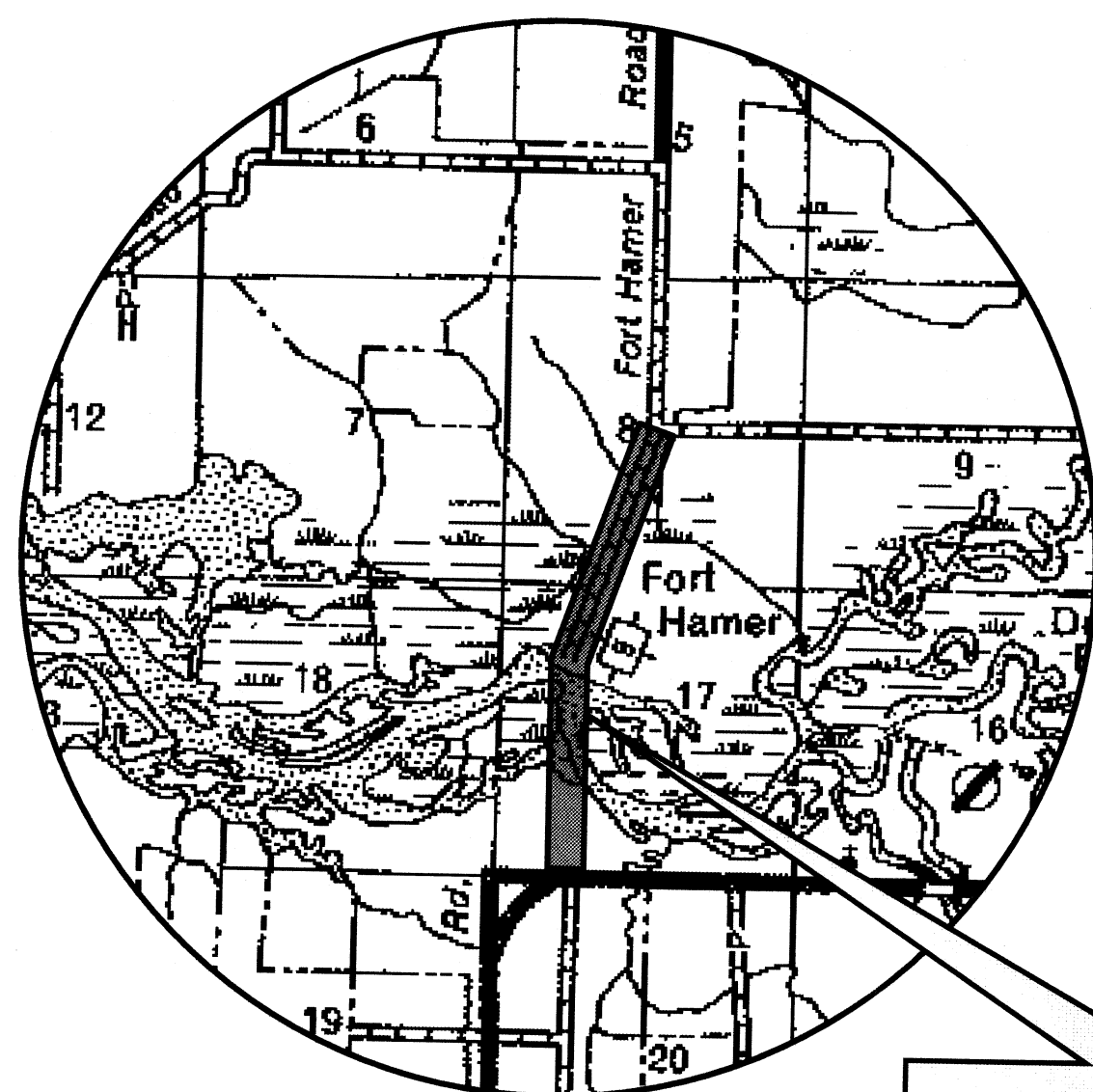
# MANATEE COUNTY, FLORIDA FT. HAMER ROAD WATER MAIN CROSSING PROJECT NO. 404-6054770

NOVEMBER 2012

BID SET

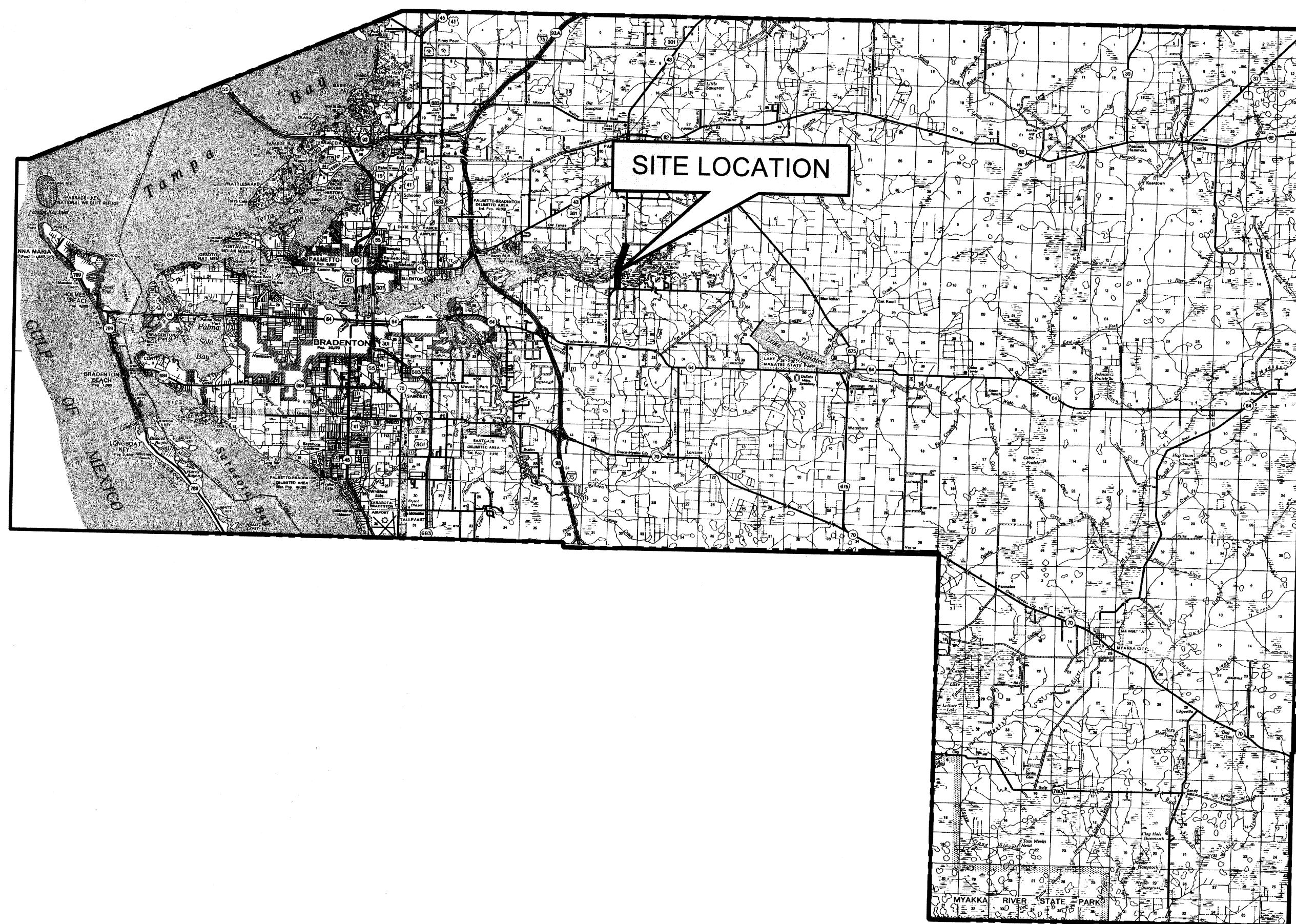
VERIFY SCALES: BAR IS ONE INCH ON ORIGINAL DRAWING 0 1 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALE ACCORDINGLY

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FT. HAMER ROAD WATER MAIN CROSSING, MANATEE COUNTY PROJECT NO. 404-6054770

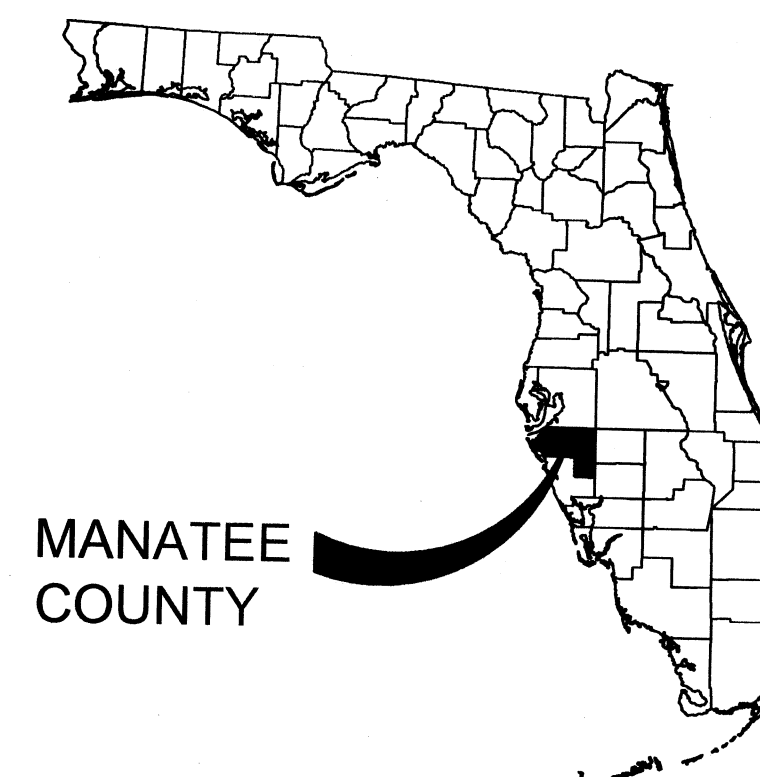


**PROJECT MAP**  
N.T.S.

PROJECT SITE



SITE LOCATION



MANATEE COUNTY



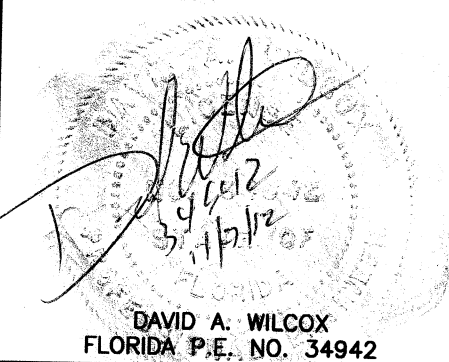
7650 West Courtney Campbell Causeway  
Suite 700  
Tampa, Florida 33607  
Ph: (813) 286-1711 Fax: (813) 286-6587  
Florida Engineering Number: 000002

NO.	BY	DATE	DESCRIPTION

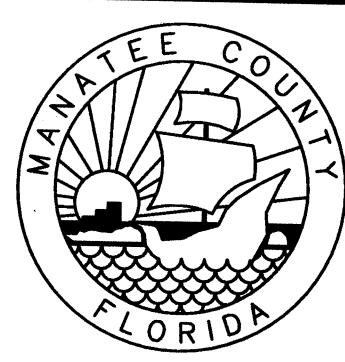
REVISIONS

URS JOB NUMBER  
12009610

PM: DAVID WILCOX  
ENG: DAVID WILCOX  
DRW: TERRY SONNENBERG  
FILE SAVE DATE:  
November 6, 2012



DAVID A. WILCOX  
FLORIDA P.E. NO. 34942



FT. HAMER ROAD  
WATER MAIN CROSSING  
FOR  
MANATEE COUNTY GOVERNMENT  
MANATEE COUNTY, FLORIDA

COVER SHEET

PROJECT STATUS  
BID SET  
NOVEMBER 2012

G-1

PLOTTED: November 6, 2012 6:03 PM PLOTTED BY: TERENCE SONNENBERG  
X:\MANATEE PROJECTS\12009610\FT HAMER WM CROSSING - WA# 16\CADD\CADD\G-1 COVER SHEET.DWG



PLOTTED November 6, 2012 6:04 PM PLOTTED BY: TERENCE SONNENBERG  
 X:\MANATEE PROJECTS\12090809 FT. HAMER WM. CROSSING - WAF\16\CADD\CADD-G-2 GENERAL NOTES AND INDEX TO SHEETS.DWG  
 VERIFY SCALES: BAR IS ONE INCH ON ORIGINAL DRAWING 0 1 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALE ACCORDINGLY

**GENERAL NOTES**

1. ELEVATIONS SHOWN ON THE PLANS REFERENCE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (N.G.V.D. - 1929). HORIZONTAL DATUM IS NORTH AMERICAN DATUM 1983/1999 ADJUSTED STATE PLANE COORDINATE SYSTEM (SPCS).
2. LOCATION, ELEVATION, AND DIMENSIONS OF THE EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT TIME OF THE PREPARATION OF THESE PLANS. THE CONTRACTOR SHALL VERIFY THE LOCATIONS, ELEVATIONS, AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES AFFECTING THIS WORK PRIOR TO CONSTRUCTION.
3. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN AREAS OF BURIED UTILITIES AND SHALL PROVIDE AT LEAST 48 HOURS NOTICE TO THE UTILITY COMPANIES PRIOR TO CONSTRUCTION TO OBTAIN FIELD LOCATIONS OF EXISTING UNDERGROUND UTILITIES. CALL SUNSHINE ONE CALL CENTER OF FLORIDA AT 1-800-432-4770 TO ARRANGE FIELD LOCATIONS. THE CONTRACTOR SHALL REPAIR ALL DAMAGES RESULTING FROM FAILURE TO COMPLY WITH THIS REQUIREMENT. PROVIDE AT LEAST 10 DAYS MINIMUM NOTICE FOR WATER CROSSINGS.
4. THE CONTRACTOR SHALL COMPLY WITH ALL STATE, COUNTY, AND LOCAL ORDINANCES AND OBTAIN ANY NECESSARY WORK PERMITS THAT MAY BE REQUIRED PRIOR TO CONSTRUCTION.
5. UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS AND SPECIFICATIONS, THE CONTRACTOR SHALL PROVIDE SUITABLE BORROW MATERIAL, APPROVED BY THE ENGINEER, AND INSTALL SAID MATERIAL IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.
6. OVERALL CLEAN UP SHALL BE ACCOMPLISHED BY THE CONTRACTOR IN ACCORDANCE WITH COUNTY STANDARDS OR AS DIRECTED BY THE ENGINEER.
7. THE CONTRACTOR SHALL ENDEAVOR TO PROTECT PRIVATE PROPERTY. ANY DAMAGE CAUSED BY THE CONTRACTOR IN THE PERFORMANCE OF HIS WORK SHALL BE CORRECTED TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE. PAYMENT SHALL NOT BE MADE FOR THIS WORK.
8. ANY DAMAGE TO STATE, COUNTY, OR LOCAL ROADS CAUSED BY THE CONTRACTOR'S HAULING OR EXCAVATION EQUIPMENT SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE COUNTY PROJECT ENGINEER. PAYMENT SHALL NOT BE MADE FOR THIS WORK.
9. ANY U.S.C. AND G.S. MONUMENT WITHIN LIMITS OF CONSTRUCTION IS TO BE PROTECTED. IF IN DANGER OF DAMAGE, THE CONTRACTOR SHALL NOTIFY. GEODETIC INFORMATION CENTER  
 ATTN: MARK MAINTENANCE CENTER  
 ATTN: N/CG-162  
 6001 EXECUTIVE BLVD. ROCKVILLE,  
 MARYLAND 20852 PH. (301)443-8319
10. THE CONTRACTOR(S) PERFORMING TRENCH EXCAVATION ON THIS CONTRACT, SHALL COMPLY WITH THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION'S (OSHA) TRENCH EXCAVATION SAFETY STANDARDS, 29 C.F.R., S.1926.650, SUBPART P, INCLUDING ALL SUBSEQUENT REVISIONS OR UPDATES TO THE STANDARDS AS ADOPTED BY THE DEPARTMENT OF LABOR AND EMPLOYMENT SECURITY (DLES).
11. UNLESS OTHERWISE SPECIFIED IN THE PLANS, EXISTING SOD, DISTURBED BY CONSTRUCTION, SHALL BE REPLACED IN KIND (OR BETTER, AS APPROVED BY THE COUNTY'S PROJECT MANAGER.)
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL EXCESS MATERIAL AND THE PROPER DISPOSAL OF THE SAME.
13. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING ANY DAMAGE TO EXISTING FACILITIES, ABOVE OR BELOW GROUND THAT MAY OCCUR AS A RESULT OF THIS WORK PERFORMED IN THIS CONTRACT. THE CONTRACTOR IS TO "PROTECT IN PLACE" THE FACILITIES THAT ARE NOT TO BE RELOCATED AND/OR REMOVED, BUT ARE TO REMAIN IN PLACE.
14. A STANDARD MINIMUM 18 INCHES OF VERTICAL CLEARANCE SHALL BE PRACTICED FOR WATER, GRAVITY SEWER, RECLAIMED WATER, STORM AND FORCE MAINS PIPES THAT CROSS. WHERE IT IS DEMONSTRATED AND THE COUNTY AGREES THAT STANDARD SEPARATIONS ARE NOT REALISTIC, OR WHERE MAINTENANCE OF A PIPE WOULD BE MADE MORE ACCESSIBLE THE COUNTY ENGINEER MAY APPROVE REDUCTIONS OF THE STANDARD SEPARATIONS AS FOLLOWS:
  - A. CLEARANCE FROM WATER TO FORCE MAIN, STORM, RECLAIMED WATER AND GRAVITY SEWER AND CLEARANCE FROM RECLAIMED WATER TO GRAVITY SEWER, WATER, FORCE MAIN AND STORM MAY BE REDUCED TO 8 INCHES WHEN THE WATER OR RECLAIMED WATER PIPE IS DI.
  - B. CLEARANCE FROM FORCE MAIN TO WATER AND RECLAIMED WATER MAY BE REDUCED TO 3 INCHES WHEN THE FORCE MAIN IS BELOW AND HAS A WATER TIGHT CASING PIPE.
  - C. CLEARANCE FROM RECLAIMED WATER TO WATER MAY BE REDUCED TO 3 INCHES WHEN THE RECLAIMED WATER IS BELOW AND HAS A WATER TIGHT CASING PIPE.
15. A MINIMUM OF 10 FEET OF HORIZONTAL SEPARATION (OUTSIDE OF PIPE TO OUTSIDE OF PIPE) IS REQUIRED BETWEEN WATER MAINS AND FORCE MAINS, AND BETWEEN WATER MAINS AND GRAVITY SEWER, AND BETWEEN WATER MAINS AND STORM SEWER, AND BETWEEN STORM SEWER AND GRAVITY SEWER. ALL OTHER COMBINATIONS OF WATER, GRAVITY SEWER, FORCE MAIN, RECLAIMED WATER AND STORM SEWER PIPES MUST HAVE 5 FEET OF SEPARATION AT A MINIMUM, EXCEPT FOR GRAVITY SEWER AND FORCE MAINS, WHICH SHALL HAVE A MINIMUM OF 3 FEET OF SEPARATION. IF NOT FEASIBLE, REFER TO CURRENT MANATEE COUNTY UTILITY STANDARDS SECTION 9.07 FOR ALLOWABLE EXCEPTIONS.
16. ALL PROPOSED MAINS SHALL HAVE A MINIMUM OF 36 INCHES OF COVER.
17. THE CONTRACTOR IS TO ADJUST OR RELOCATE ALL THE FACILITIES THAT FALL IN CONFLICT IN ACCORDANCE WITH COUNTY STANDARDS.
18. ALL DUCTILE IRON PIPE SHALL BE POLY-WRAPPED.
19. MAINTENANCE OF TRAFFIC WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL MEET FDOT SERIES 600 AND MUTCD STANDARDS. MOT PREPARER SHALL HAVE ATSSA OR EQUIVALENT CERTIFICATION. A COPY OF THE CERTIFICATION SHALL BE SUBMITTED TO THE ENGINEER ALONG WITH THE MOT FOR REVIEW AND APPROVAL PRIOR TO ANY CLOSURES. CONTRACTOR SHALL COORDINATE LANE AND ROAD CLOSURES WITH MARK FRANSEN OF MANATEE COUNTY R/W INSPECTIONS (941-737-4776). LANE AND ROAD CLOSURES WILL REQUIRE A "PCMS" BOARD FOR 14 DAYS PRIOR TO CLOSURE AND NOTIFICATION OF RESIDENTS. REFER TO SPECIFICATION SECTION 01010, SUMMARY OF WORK, FOR ADDITIONAL REQUIREMENTS FOR LANE AND ROAD CLOSURES.

20. THE CONTRACTOR SHALL PROVIDE DETAILED RECORD DRAWINGS. ANY AND ALL EXPENSES INCURRED FOR THIS WORK SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR MISCELLANEOUS WORK AND CLEANUP. RED-LINE DRAWINGS SHALL BE CURRENT WITH EACH PAY APP SUBMITTED AND WILL BE CHECKED AS PART OF THE PAY APPLICATION REVIEW PROCESS.
21. ALL UTILITY CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE LATEST VERSION OF THE MANATEE COUNTY UTILITY STANDARDS.
22. CONTRACTOR IS TO PROVIDE EROSION CONTROL/SEDIMENTATION BARRIER (HAY BALES OR SILTATION CURTAIN) TO PREVENT SILTATION OF ADJACENT PROPERTY STREETS, STORM SEWERS, AND WATERWAYS. IF IN THE OPINION OF THE ENGINEER AND/OR LOCAL AUTHORITIES, EXCESSIVE QUANTITIES OF EARTH ARE TRANSPORTED OFF-SITE EITHER BY NATURAL DRAINAGE OR VEHICULAR TRAFFIC, THE CONTRACTOR IS TO REMOVE AND CLEAN SAID EARTH TO THE SATISFACTION OF THE ENGINEER AND/OR AUTHORITIES. THE MAINTENANCE OF EROSION CONTROL DEVICES AND THEIR COMPLETE REMOVAL ARE TO BE INCLUDED IN THE LUMP SUM BID PRICE.
23. THE CONTRACTOR SHALL PROVIDE ROUTINE MAINTENANCE OF PERMANENT AND TEMPORARY EROSION CONTROL FEATURES UNTIL THE PROJECT IS COMPLETE AND ALL BARED SOILS ARE STABILIZED.
24. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE EXISTING DRAINAGE SYSTEM WITHIN THE LIMITS OF THE PROJECT AREA, FOR THE DURATION OF THE PROJECT. NO ADDITIONAL PAYMENT WILL BE MADE FOR THE WORK INVOLVED.
25. PERIMETER OF ALL AREAS DISTURBED BY CONSTRUCTION MUST BE SURROUNDED BY SILT FENCE UNTIL RESTORATION IS COMPLETE.
26. IMMEDIATELY FOLLOWING COMPLETION OF SLOPE CONSTRUCTION, THE FILL AREAS AND DISTURBED BANKS OF WETLANDS OR OTHER SURFACE WATERS SHALL BE STABILIZED WITH VEGETATION OR RIPRAP TO PREVENT EROSION. TEMPORARY EROSION CONTROLS FOR ALL EXPOSED SOILS WITHIN WETLANDS AND OTHER SURFACE WATERS SHALL BE COMPLETED WITHIN SEVEN CALENDAR DAYS OF THE MOST RECENT CONSTRUCTION ACTIVITY. PREVENTION OF EROSION OF EXPOSED EARTH INTO WETLANDS AND OTHER SURFACE WATERS IS A CONSTRUCTION PRIORITY AND COMPLETED SLOPES SHALL NOT REMAIN UNSTABILIZED WHILE OTHER CONSTRUCTION CONTINUES.
27. THIS PROJECT SHALL MEET WATER QUALITY STANDARDS FOR CLASS III WATERS C2-302, FAC (<29 NTUs)
28. CONTRACTOR SHALL CREATE AND FOLLOW A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AS REQUIRED BY THEIR NPDES PERMIT.

**DITCH IMPACT NOTES:**

1. ALL DITCHES SHALL BE RESTORED TO PRE-CONSTRUCTION CONTOURS AND ELEVATIONS.
2. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL HAVE A LICENSED SURVEYOR VERIFY THE TOB AND TOS OF THE IMPACTED DITCHES SHOWN IN PROFILES OF SHEETS C-8, C-13, C-14, & C-15 AND CROSS SECTIONS SHOWN ON SHEET C-16. SUBMIT TO ENGINEER.
3. AFTER RESTORATION, THE CONTRACTOR SHALL HAVE A LICENSED SURVEYOR PROVIDE RECORD DATA FOR THE RESTORED IMPACTED DITCHES SHOWN IN PROFILES OF SHEETS C-8, C-13, C-14, & C-15 AND CROSS SECTIONS SHOWN ON SHEET C-16. INCLUDE IN RECORD DRAWINGS AS REQUIRED PER ENVIRONMENTAL PERMITS.

INDEX TO SHEETS	
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<b>GENERAL</b>	
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G-2	GENERAL NOTES AND INDEX TO SHEETS
G-3	SYMBOLS AND ABBREVIATIONS
G-4	SOIL BORING LOGS
G-5	SOIL BORING LOGS
G-6	HORIZONTAL CONTROL
<b>CIVIL</b>	
C-1	KEY SHEET
C-2	PLAN AND PROFILE
C-3	PLAN AND PROFILE
C-4	PLAN AND PROFILE
C-5	PLAN AND PROFILE
C-6	PLAN AND PROFILE
C-7	PLAN AND PROFILE
C-8	PLAN AND PROFILE
C-9	PLAN AND PROFILE
C-10	PLAN AND PROFILE
C-11	PLAN AND PROFILE
C-12	PLAN AND PROFILE
C-13	PLAN AND PROFILE
C-14	PLAN AND PROFILE
C-15	PLAN AND PROFILE
C-16	IMPACTED DITCH CROSS SECTIONS
<b>DETAILS</b>	
D-1	CIVIL DETAILS
D-2	CIVIL DETAILS
D-3	MISCELLANEOUS DETAILS
D-4	MISCELLANEOUS DETAILS

**UTILITY CONTACTS:**

- POWER** FLORIDA POWER AND LIGHT (941) 723-4430  
 1253 12th AVENUE EAST  
 PALMETTO, FLORIDA, 34221  
 ATTN: GREG COKER
- PEACE RIVER ELECTRIC COOP (863) 767-4621  
 15105 59th AVENUE EAST  
 BRADENTON, FLORIDA, 34211  
 ATTN: DAVID McCLINTOCK
- TELEPHONE** VERIZON (941) 906-6711  
 1701 RINGLING BLVD  
 SARASOTA, FLORIDA, 34236  
 ATTN: PATTI REID
- GAS** TECO/PEOPLES GAS (941) 342-4006  
 8261 VICO COURT  
 SARASOTA, FLORIDA, 34240  
 ATTN: DANNY SHANAHAN
- WATER/SEWER** MANATEE COUNTY UTILITIES
- CABLE** BRIGHT HOUSE NETWORKS (941) 345-1348  
 5413 S.R. 64 EAST  
 BRADENTON, FLORIDA 34208  
 ATTN: TOM WRIGHT

**URS**  
 7650 West Courtney Campbell Causeway  
 Suite 700  
 Tampa, Florida 33607  
 Ph: (813) 286-1711 Fax: (813) 286-6587  
 Florida Engineering Number: 000002

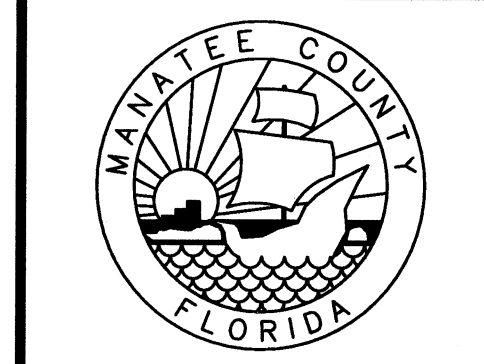
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12009610

PM: DAVID WILCOX  
 ENG: DAVID WILCOX  
 DRW: TERRY SONNENBERG

FILE SAVE DATE:  
November 6, 2012

DAVID A. WILCOX  
FLORIDA P.E. NO. 34942



**FT. HAMER ROAD  
 WATER MAIN CROSSING**  
 FOR  
 MANATEE COUNTY GOVERNMENT  
 MANATEE COUNTY, FLORIDA

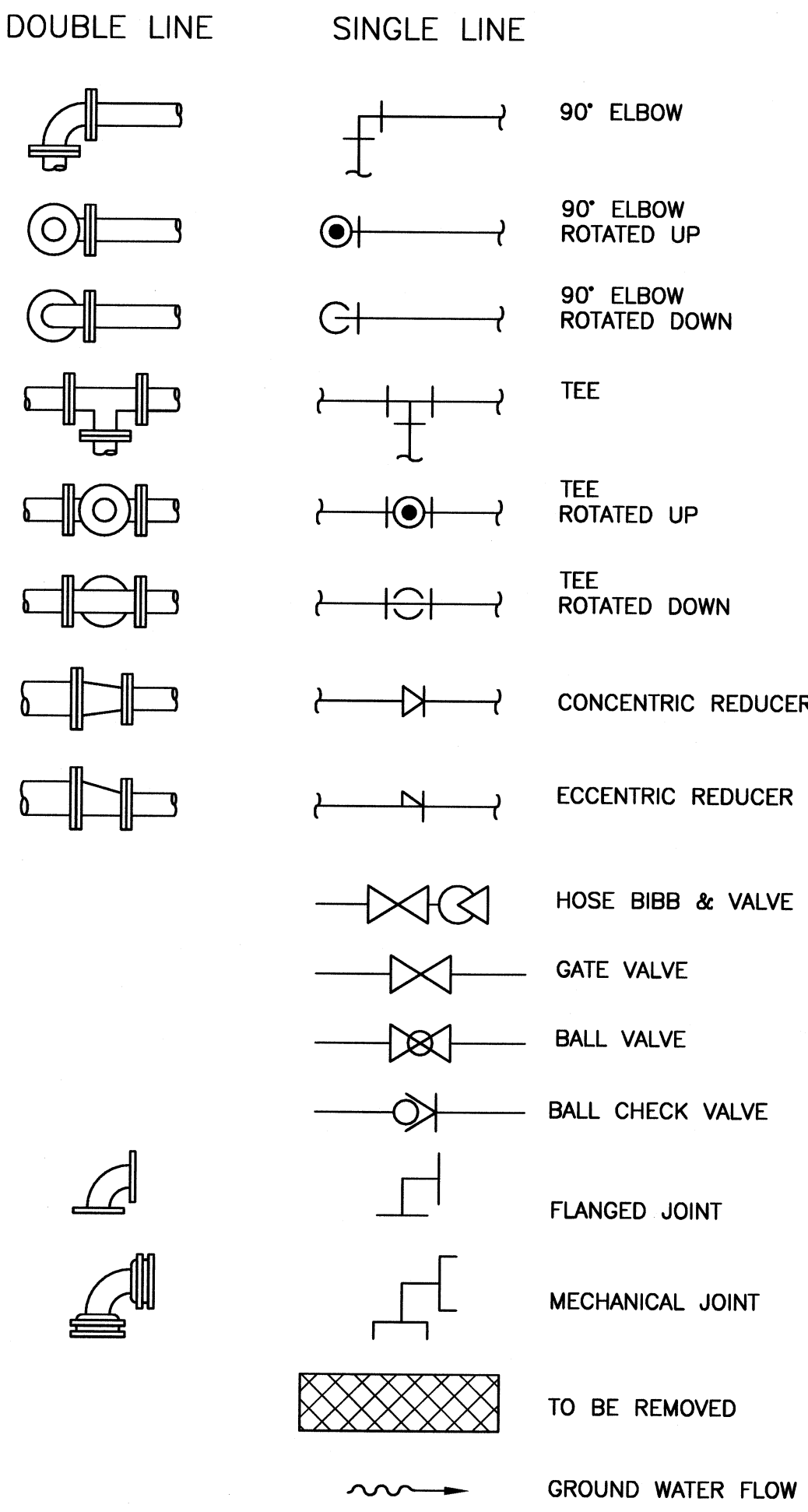
**GENERAL NOTES AND INDEX TO  
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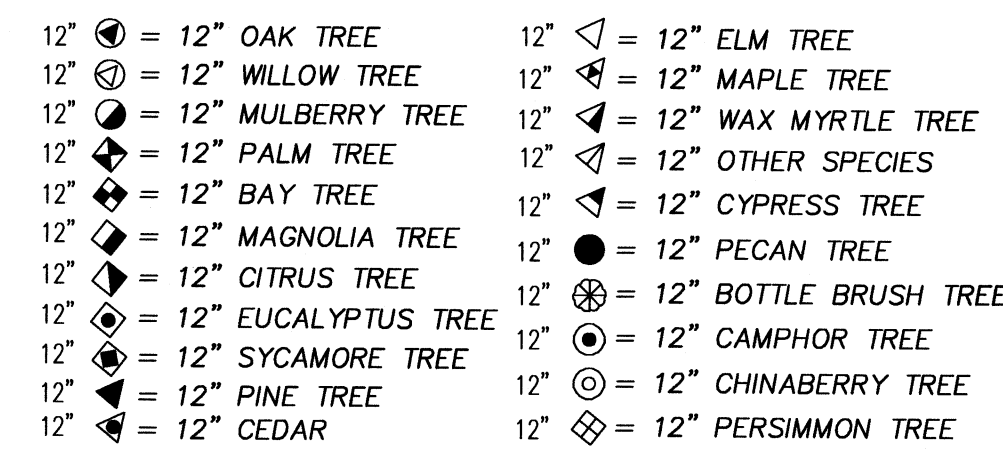
**G-2**

PLOTTED November 6, 2012 6:04 PM. PLOTTED BY: TERENCE SONNENBERG  
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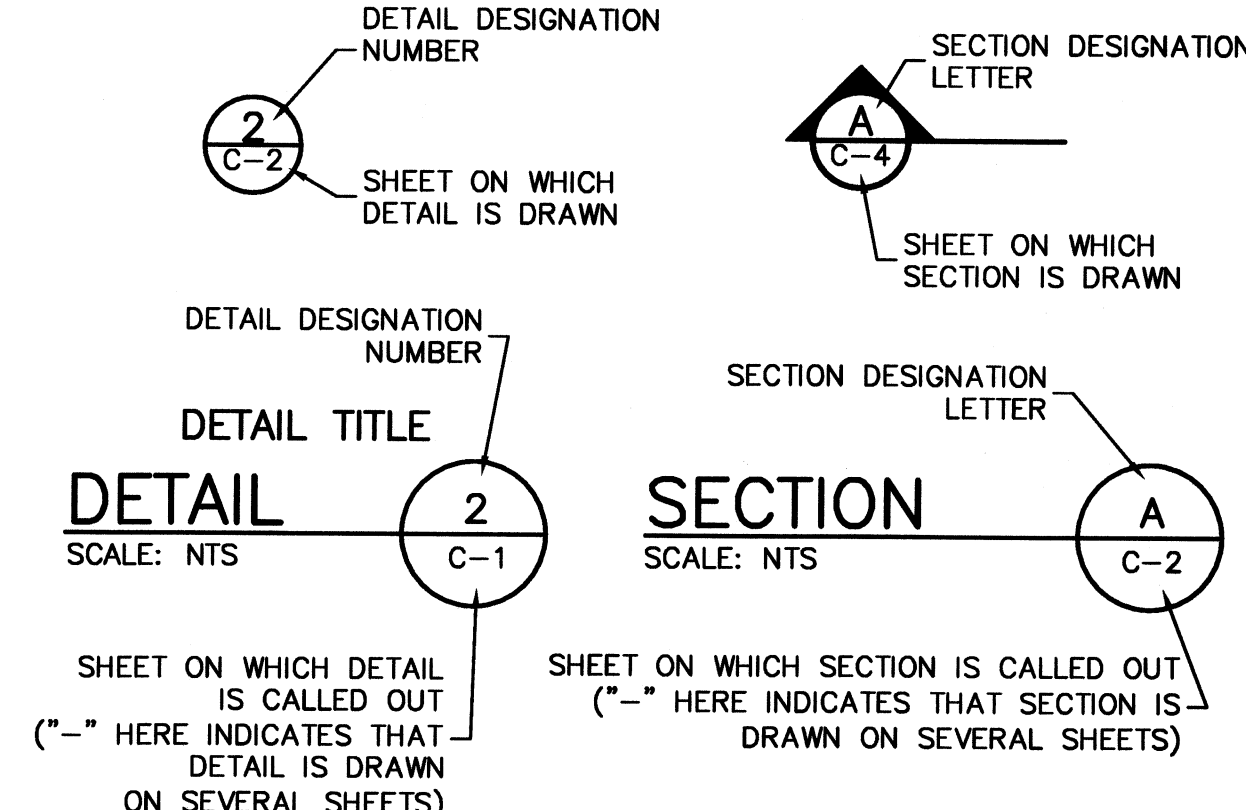
**PIPE AND FITTING SYMBOLS**



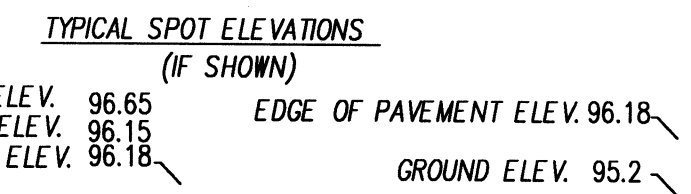
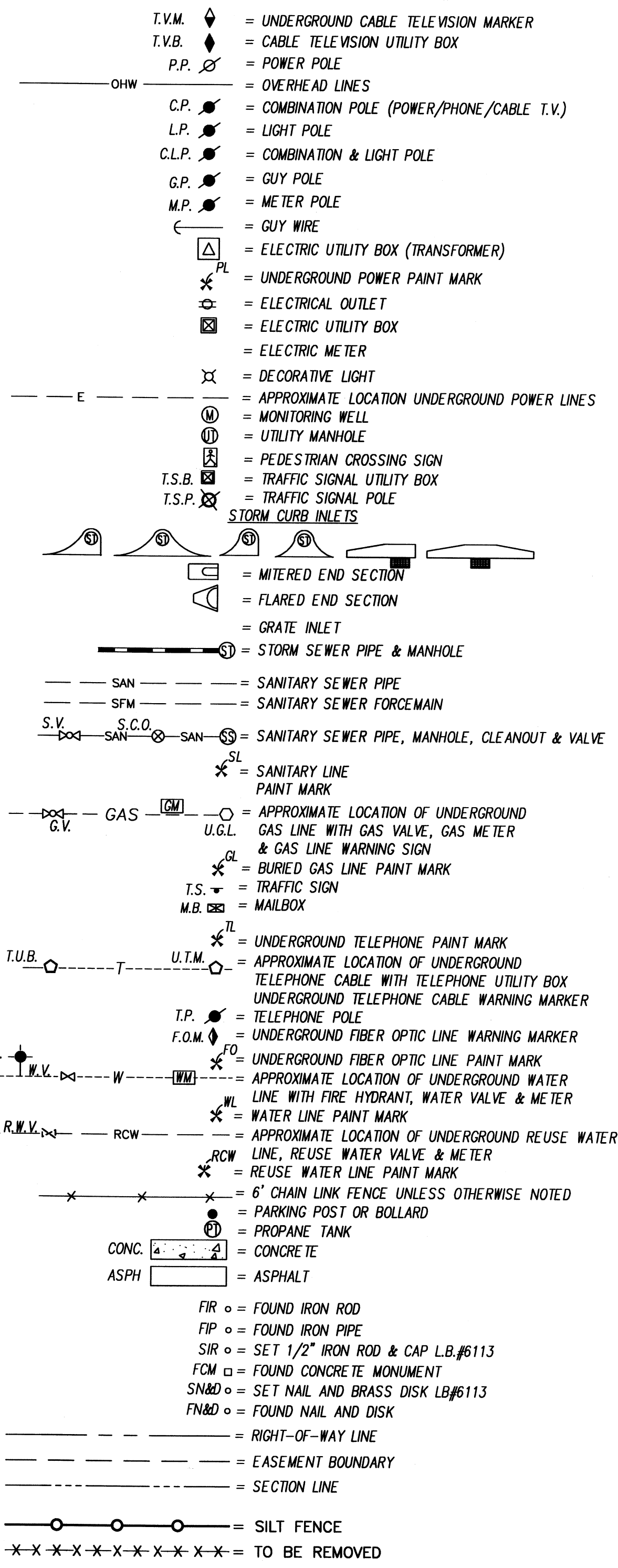
**TREE LEGEND**



**DETAIL & SECTION DESIGNATION**



**LEGEND OF SYMBOLS**



**ABBREVIATIONS:**

#	NUMBER	LB	LICENSED BUSINESS NUMBER
A/C	AIR CONDITIONER	ID	INSIDE DIAMETER
AC	ASBESTOS CEMENT PIPE	IE	INVERT ELEVATION
ADDL	ADDITIONAL	INF	INFLUENT
ADJ	ADJUSTABLE	LF	LINER FEET
ADPT	ADAPTER	LT	LEFT
ALUM	ALUMINUM	MATL	MATERIAL
APPROX	APPROXIMATE (LY)	MAX	MAXIMUM
ARV	AIR RELEASE VALVE	MECH	MECHANICAL
ASPH	ASPHALT	MFD	MANUFACTURED
AUTO	AUTOMATIC	MFG	MANUFACTURING
AUX	AUXILIARY	MFR	MANUFACTURER
AVG	AVERAGE	MH	MANHOLE
		MIN	MINIMUM
BM	BENCHMARK	MISC	MISCELLANEOUS
BV	BALL VALVE	MJ	MECHANICAL JOINT
BFV	BUTTERFLY VALVE	NTS	NOT TO SCALE
BLDG	BUILDING	OC	ON CENTER
BMP	BEST MANAGEMENT PRACTICE	OD	OUTSIDE DIAMETER
BOR	BORING	O/E	OR EQUAL
BOT	BOTTOM	OFF	OFFSET
		OR	OFFICIAL RECORD BOOK
CATV	CABLE TV	PE	PLAIN END
CHKD	CHECKED	PL	PROPERTY LINE
CI	CAST IRON	PLS	PROFESSIONAL LAND SURVEYOR
CL	CENTERLINE	PP	POWER POLE
CL2	CHLORINE	PROP	PROPOSED
CMP	CORRUGATED METAL PIPE	PS	PUMP STATION
CMU	CONCRETE MASONRY UNITS	PSI	POUNDS PER SQUARE INCH
CO	CLEAN OUT	PV	PLUG VALVE
CONC	CONCRETE	PVC	POLYVINYL CHLORIDE PIPE
CONC CONST	CONSTRUCTION	PWMT	PAVEMENT
CPLG	COUPLING	PW	POTABLE WATER
CTR	CENTER (ED)		
CV	CHECK VALVE		
		R	RADIUS
D	DRAIN	R/W	RIGHT-OF-WAY
DEMO	DEMOLITION	RCP	REINFORCED CONCRETE PIPE
DEPT	DEPARTMENT	RCW	RECLAIMED WATER
DI	DUCTILE IRON	RED	REDUCER
DIA	DIAMETER	REF	REFERENCE
DIAG	DIAGONAL	RMJ	RESTRAIN MECHANICAL JOINT
DIM	DIMENSION	RR	RAILROAD
DN	DOWN	RT	RIGHT
		RW	RAW WATER
EA	EACH	SAN	SANITARY
ECC	ECCENTRIC	SCH	SCHEDULE
EFF	EFFLUENT	SHC	SODIUM HYPOCHLORITE
EL	ELEVATION	SHT	SHEET
ELEV	ELEVATION	SQR	SQUARE
EOP	EDGE OF PAVEMENT	SS	SANITARY SEWER
EQ	EQUAL (LY)	SST	STAINLESS STEEL
EQUIV	EQUIVALENT	STA	STATION
EQUIP	EQUIPMENT	STD	STANDARD
ESMT	EASMENT	STL	STEEL
ETC	ETCETERA	SW	SOLVENT WELD
EW	EACH WAY	SWLK	SIDEWALK
EXIST	EXISTING		
EXP	EXPANSION	T&B	TOP AND BOTTOM
		TBM	TEMPORARY BENCHMARK
FDOT	FLORIDA DEPT OF TRANS	TEL	TELEPHONE
FH	FIRE HYDRANT	THD	THREADED
FIG	FIGURE	THK	THICK (NESS)
FIN	FINISH (ED)	TOB	TOP OF BANK
FLG	FLANGE	TOS	TOE OF SLOPE
FLR	FLOOR	TYP	TYPICAL
FM	FORCE MAIN		
FRP	FIBERGLASS REINFORCED PIPE	UD	UNDERDRAIN
FT	FOOT OR FEET	VCP	VITRIFIED CLAY PIPE
		VERT	VERTICAL
GAL	GALLON	W/	WITH
GALV	GALVANIZED	WL	WATER LEVEL
GV	GATE VALVE	WM	WATERMAIN OR WATER METER
		WV	WATER VALVE
HB	HOSE BIBB	WWM	WOVEN WIRE MESH
HDD	HORIZONTAL DIRECTIONAL DRILL		
HDPE	HIGH DENSITY POLYETHYLENE	XFMR	TRANSFORMER
HORIZ	HORIZONTAL		
HT	HEIGHT		

**URS**  
 7650 West Courtney Campell Causeway  
 Suite 700  
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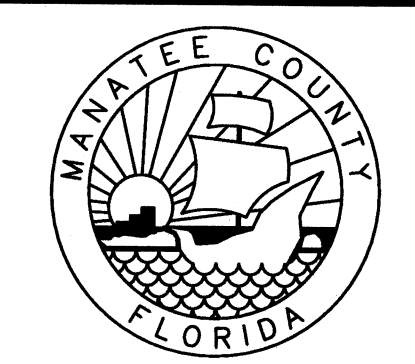
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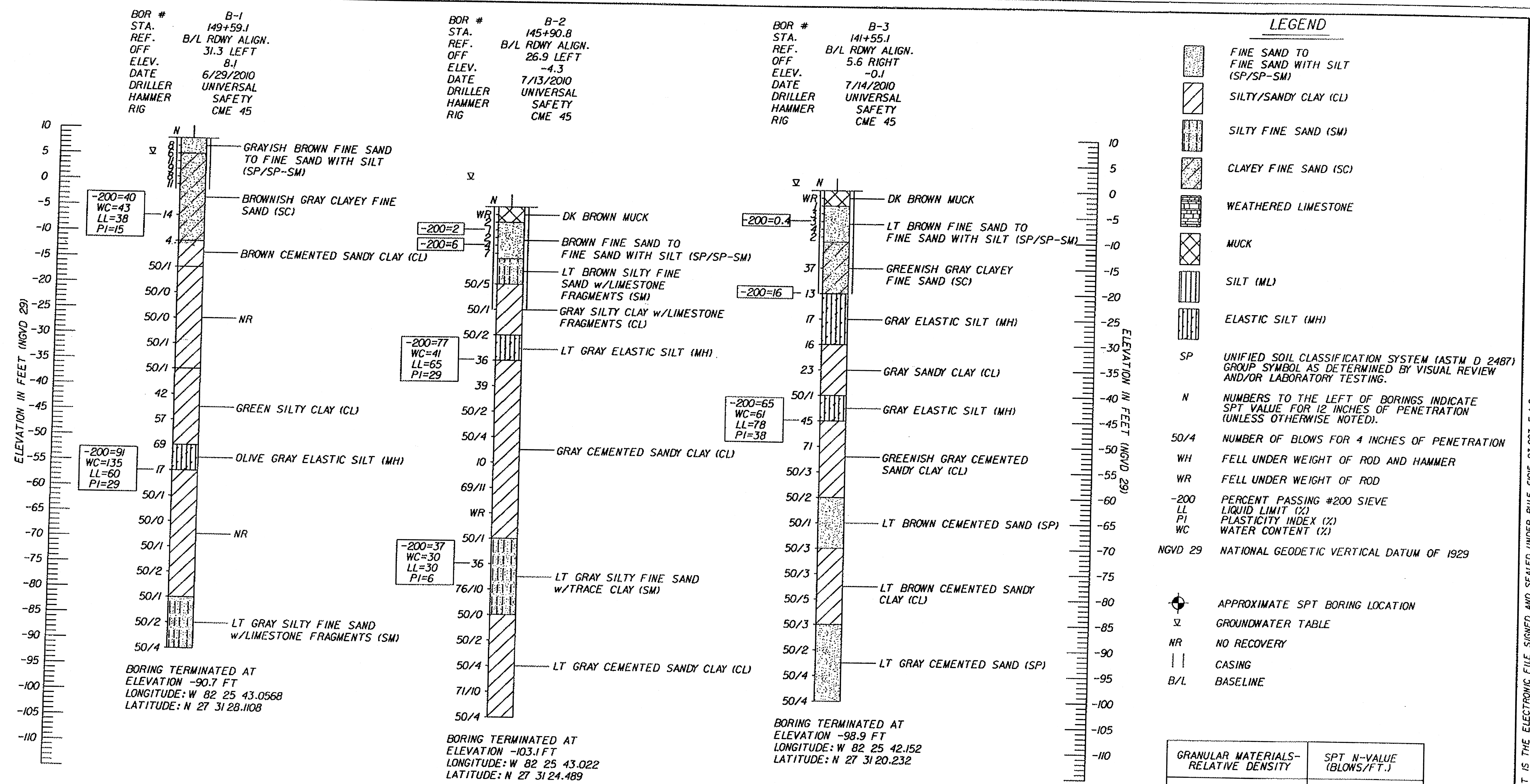
FT. HAMER ROAD  
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 MANATEE COUNTY, FLORIDA

PROJECT STATUS  
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**SYMBOLS AND ABBREVIATIONS**



PLOTTED November 6, 2012 6:04 PM PLOTTED BY: TERENCE SONNENBERG  
 X:\MANATEE PROJECTS\12009609 FT HAMER WM CROSSING - W\15\CADD\CADD\G-4 SOIL BORING LOGS.DWG  
 VERIFY SCALES: BAR IS ONE INCH ON ORIGINAL DRAWING 1 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALE ACCORDINGLY



NOTE:  
LABORATORY TEST RESULTS WERE TYPICALLY ROUNDED TO THE NEAREST WHOLE NUMBERS.

ENVIRONMENTAL CLASSIFICATION:  
 SUBSTRUCTURE CONCRETE: MODERATELY AGGRESSIVE (WATER RESISTIVITY: 1471 Ohm-cm)  
 SUBSTRUCTURE STEEL: MODERATELY AGGRESSIVE (SOIL pH=6.6)  
 SUPERSTRUCTURE SLIGHTLY AGGRESSIVE

GRANULAR MATERIALS- RELATIVE DENSITY	SPT N-VALUE (BLOWS/FT.)
VERY LOOSE	LESS THAN 4
LOOSE	4 to 10
MEDIUM DENSE	10 to 30
DENSE	30 to 50
VERY DENSE	GREATER THAN 50
SILTS AND CLAYS CONSISTENCY	SPT N-VALUE (BLOWS/FT.)
VERY SOFT	LESS THAN 2
SOFT	2 to 4
FIRM	4 to 8
STIFF	8 to 15
VERY STIFF	15 to 30
HARD	GREATER THAN 30

SEE SHEET C-5 FOR BORING LOCATIONS

REVISIONS				DATE		BY		DESCRIPTION	

<b>URS</b> MICHAEL R. SHARP, P.E. P.E. LICENSE NUMBER 41205 URS CORPORATION SOUTHERN 7650 WEST COURTNEY CAMPBELL CAUSEWAY TAMPA, FLORIDA 33607-1462 CERTIFICATE OF AUTHORIZATION 00000002	DRAWN BY: CMW 08/10 CHECKED BY: SPK 08/10 DESIGNED BY: SPK 08/10 CHECKED BY: MRS MRS	MANATEE COUNTY GOVERNMENT  MANATEE COUNTY, FLORIDA craig_tully	SHEET TITLE: <b>REPORT OF CORE BORINGS (1 OF 2)</b>	PROJECT NAME: <b>FT. HAMER BRIDGE OVER MANATEE RIVER MANATEE COUNTY, FLORIDA</b>	SHEET NO. <b>A-2</b>
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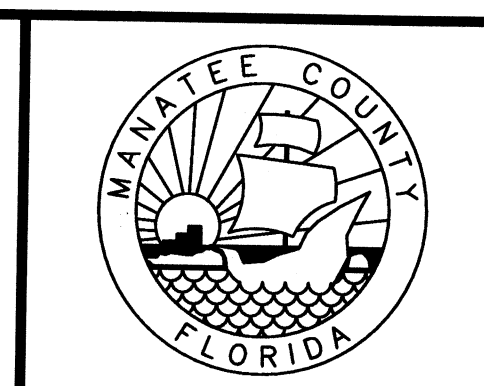
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DAVID A. WILCOX  
FLORIDA P.E. NO. 34942



FT. HAMER ROAD  
WATER MAIN CROSSING  
FOR  
MANATEE COUNTY GOVERNMENT  
MANATEE COUNTY, FLORIDA

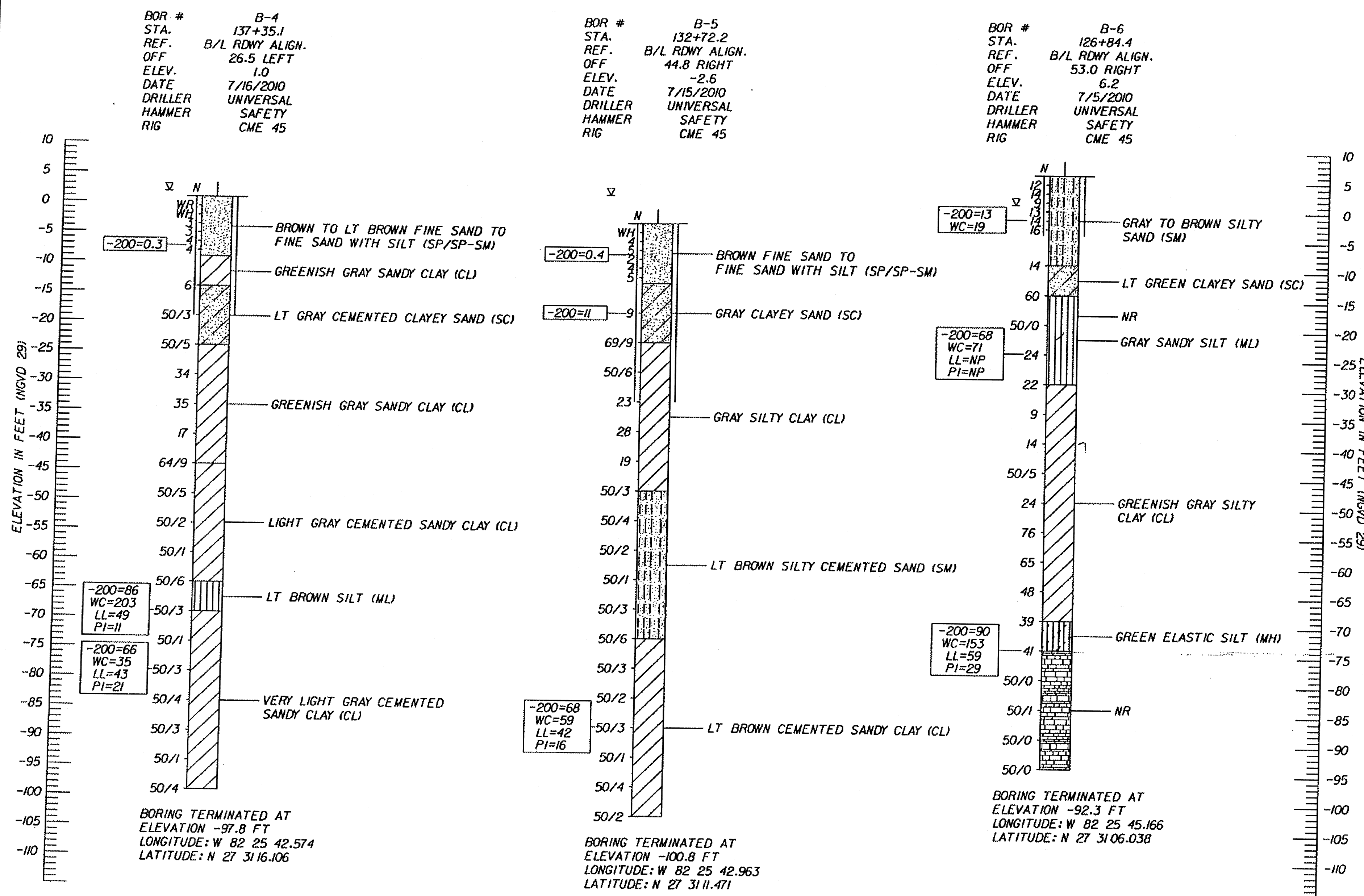
PROJECT STATUS  
BID SET  
NOVEMBER 2012

**SOIL BORING LOGS**

G-4



PLOTTED November 6, 2012 8:04 PM. PLOTTED BY: TERENCE SONNENBERG  
 X:\MANATEE PROJECTS\12009610 - FT. HAMER, WM CROSSING - WM - 10 (CAD)\CADD\G-5 SOIL BORING LOGS.DWG  
 VERIFY SCALES: BAR IS ONE INCH ON ORIGINAL DRAWING 1 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALE ACCORDINGLY



**LEGEND**

- FINE SAND TO FINE SAND WITH SILT (SP/SP-SM)
- SILTY/SANDY CLAY (CL)
- SILTY FINE SAND (SM)
- CLAYEY FINE SAND (SC)
- WEATHERED LIMESTONE
- MUCK
- SILT (ML)
- ELASTIC SILT (MH)

SP UNIFIED SOIL CLASSIFICATION SYSTEM (ASTM D 2487) GROUP SYMBOL AS DETERMINED BY VISUAL REVIEW AND/OR LABORATORY TESTING.

N NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12 INCHES OF PENETRATION (UNLESS OTHERWISE NOTED).

50/4 NUMBER OF BLOWS FOR 4 INCHES OF PENETRATION

WH FELL UNDER WEIGHT OF ROD AND HAMMER

WR FELL UNDER WEIGHT OF ROD

-200 PERCENT PASSING #200 SIEVE  
LL LIQUID LIMIT (%)  
PI PLASTICITY INDEX (%)  
WC WATER CONTENT (%)

NGVD 29 NATIONAL GEODETIC VERTICAL DATUM OF 1929

APPROXIMATE SPT BORING LOCATION

GROUNDWATER TABLE

NR NO RECOVERY

|| CASING

B/L BASELINE

NOTE:  
LABORATORY TEST RESULTS WERE TYPICALLY ROUNDED TO THE NEAREST WHOLE NUMBERS.

ENVIRONMENTAL CLASSIFICATION:  
 SUBSTRUCTURE CONCRETE: MODERATELY AGGRESSIVE (WATER RESISTIVITY: 1471 Ohm-cm)  
 SUBSTRUCTURE STEEL: MODERATELY AGGRESSIVE (SOIL pH=6.6)  
 SUPERSTRUCTURE SLIGHTLY AGGRESSIVE

GRANULAR MATERIALS- RELATIVE DENSITY	SPT N-VALUE (BLOWS/FT.)
VERY LOOSE	LESS THAN 4
LOOSE	4 TO 10
MEDIUM DENSE	10 TO 30
DENSE	30 TO 50
VERY DENSE	GREATER THAN 50
SILTS AND CLAYS CONSISTENCY	SPT N-VALUE (BLOWS/FT.)
VERY SOFT	LESS THAN 2
SOFT	2 TO 4
FIRM	4 TO 8
STIFF	8 TO 15
VERY STIFF	15 TO 30
HARD	GREATER THAN 30

SEE SHEET C-5 FOR BORING LOCATIONS

<p>REVISIONS</p> <table border="1"> <thead> <tr> <th>DATE</th> <th>BY</th> <th>DESCRIPTION</th> <th>DATE</th> <th>BY</th> <th>DESCRIPTION</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </tbody> </table>				DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION							<p><b>URS</b> MICHAEL R. SHARP, P.E.          P.E. LICENSE NUMBER 41205          URS CORPORATION SOUTHERN          7650 WEST COURTNEY CAMPBELL CAUSEWAY          TAMPA, FLORIDA 33607-1462          CERTIFICATE OF AUTHORIZATION 00000002</p>	<p>DRAWN BY: CMW 08/10          CHECKED BY: SPK 08/10          DESIGNED BY: SPK 08/10          CHECKED BY: MRS MRS</p>	<p>MANATEE COUNTY GOVERNMENT            MANATEE COUNTY, FLORIDA          9/23/2010 3:54:11 PM U:\Newcomb\New Folder\Nst119102.dgn</p>	<p>SHEET TITLE:  <b>REPORT OF CORE BORINGS (2 OF 2)</b></p> <p>PROJECT NAME:  <b>FT. HAMER BRIDGE OVER MANATEE RIVER          MANATEE COUNTY, FLORIDA</b></p> <p>SHEET NO.  <b>A-3</b></p>
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION														

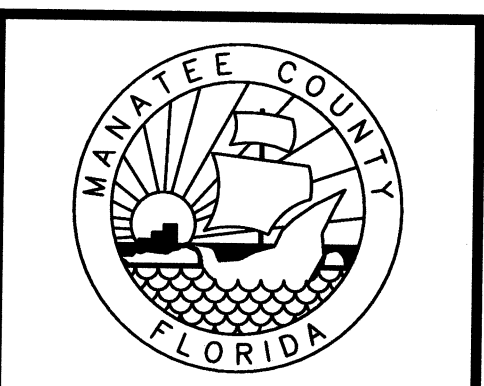
**URS**  
 7650 West Courtney Campbell Causeway  
 Suite 700  
 Tampa, Florida 33607  
 Ph: (813) 286-1711 Fax: (813) 286-6587  
 Florida Engineering Number: 000002

NO.	BY	DATE	DESCRIPTION

URS JOB NUMBER  
12009610

PM: DAVID WILCOX  
 ENG: DAVID WILCOX  
 DRW: TERRY SONNENBERG  
 FILE SAVE DATE:  
November 6, 2012

DAVID A. WILCOX  
 FLORIDA P.E. NO. 34942



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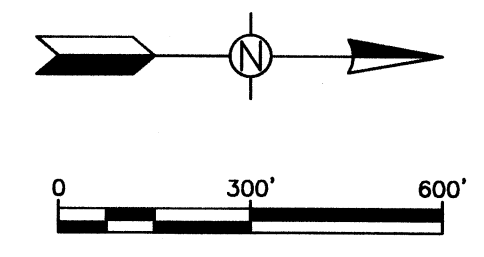
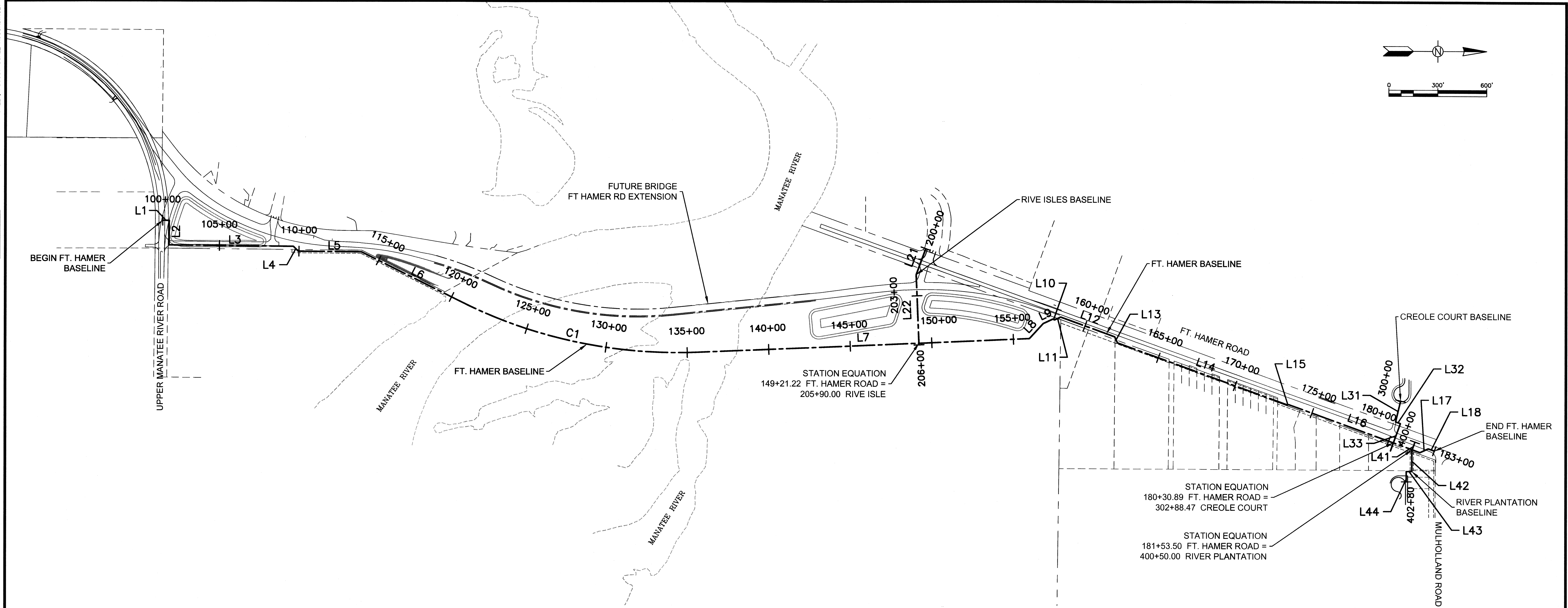
PROJECT STATUS  
 BID SET  
 NOVEMBER 2012

**SOIL BORING LOGS**

**G-5**

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 68J5-23.003, F.A.C.

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LINE TABLE -- FT. HAMER BASELINE						
LINE NO.	LENGTH	DIRECTION	START POINT	START STATION	END POINT	END STATION
L1	40.00'	N0° 32' 09.44"E	N: 1156190.02 E: 516794.00	100+00.00	N: 1156230.02 E: 516794.37	100+40.00
L2	151.12'	S89° 30' 27.95"E	N: 1156230.02 E: 516794.37	100+40.00	N: 1156228.72 E: 516945.48	101+91.12
L3	761.91'	N0° 30' 29.30"E	N: 1156228.72 E: 516945.48	101+91.12	N: 1156990.60 E: 516952.24	109+53.03
L4	42.43'	N45° 30' 29.30"E	N: 1156990.60 E: 516952.24	109+53.03	N: 1157020.33 E: 516982.51	109+95.46
L5	386.43'	N0° 30' 29.30"E	N: 1157020.33 E: 516982.51	109+95.46	N: 1157406.74 E: 516985.93	113+81.88
L6	665.05'	N26° 32' 17.41"E	N: 1157406.74 E: 516985.93	113+81.88	N: 1158001.73 E: 517283.08	120+46.94
L7	2032.62'	N2° 27' 50.08"E	N: 1158001.73 E: 517283.08	120+46.94	N: 1161501.82 E: 517509.01	155+98.10
L8	125.10'	N47° 27' 50.08"W	N: 1161501.82 E: 517509.01	155+98.10	N: 1161586.39 E: 517416.83	157+23.20
L9	63.63'	N25° 06' 23.99"W	N: 1161586.39 E: 517416.83	157+23.20	N: 1161644.01 E: 517389.83	157+86.83
L10	12.73'	N19° 52' 11.64"E	N: 1161644.01 E: 517389.83	157+86.83	N: 1161655.98 E: 517394.16	157+99.56
L11	41.03'	N25° 06' 23.99"W	N: 1161655.98 E: 517394.16	157+99.56	N: 1161693.13 E: 517376.75	158+40.59
L12	352.41'	N19° 52' 11.64"E	N: 1161693.13 E: 517376.75	158+40.59	N: 1162024.57 E: 517496.53	161+93.00

LINE TABLE -- FT. HAMER BASELINE (CONT'D)						
LINE NO.	LENGTH	DIRECTION	START POINT	START STATION	END POINT	END STATION
L13	40.84'	N65° 06' 24.23"E	N: 1162024.57 E: 517496.53	161+93.00	N: 1162041.76 E: 517533.58	162+33.85
L14	1103.77'	N19° 52' 11.64"E	N: 1162041.76 E: 517533.58	162+33.85	N: 1163079.82 E: 517908.73	173+37.62
L15	11.44'	N2° 36' 23.99"W	N: 1163079.82 E: 517908.73	173+37.62	N: 1163091.24 E: 517908.21	173+49.05
L16	855.16'	N19° 53' 36.01"E	N: 1163091.24 E: 517908.21	173+49.05	N: 1163895.37 E: 518199.20	182+04.21
L17	55.48'	N25° 06' 23.99"W	N: 1163895.37 E: 518199.20	182+04.21	N: 1163945.61 E: 518175.66	182+59.69
L18	40.31'	N19° 53' 36.01"E	N: 1163945.61 E: 518175.66	182+59.69	N: 1163983.51 E: 518189.38	183+00.00

CURVE TABLE -- FT. HAMER BASELINE							
CURVE NO.	RADIUS	LENGTH	CHORD DIRECTION	START POINT	START STATION	END POINT	END STATION
C1	3000.00'	1518.55'	N12° 02' 13.66"E	N: 1158001.73 E: 517283.08	120+46.94	N: 1159471.08 E: 517596.39	135+65.48

LINE TABLE -- RIVE ISLES BASELINE						
LINE NO.	LENGTH	DIRECTION	START POINT	START STATION	END POINT	END STATION
L21	170.45'	S69° 57' 50.08"E	N: 1160865.92 E: 516958.81	200+00.00	N: 1160807.52 E: 517118.95	201+70.45
L22	429.55'	N87° 32' 09.92"E	N: 1160807.52 E: 517118.95	201+70.45	N: 1160825.99 E: 517548.10	206+00.00

LINE TABLE -- CREOLE COURT BASELINE						
LINE NO.	LENGTH	DIRECTION	START POINT	START STATION	END POINT	END STATION
L31	131.62'	S76° 43' 26.91"E	N: 1163776.00 E: 517883.37	300+00.00	N: 1163745.78 E: 518011.47	301+31.62
L32	31.23'	N19° 53' 36.01"E	N: 1163745.78 E: 518011.47	301+31.62	N: 1163775.14 E: 518022.10	301+62.85
L33	158.15'	S70° 06' 23.99"E	N: 1163775.14 E: 518022.10	301+62.85	N: 1163714.86 E: 518188.68	303+40.00

LINE TABLE -- RIVER PLANTATION BASELINE						
LINE NO.	LENGTH	DIRECTION	START POINT	START STATION	END POINT	END STATION
L41	56.00'	S70° 06' 23.99"E	N: 1163864.70 E: 518134.93	400+00.00	N: 1163845.65 E: 518187.59	400+56.00
L42	127.39'	N90° 00' 00.00"E	N: 1163845.65 E: 518187.59	400+56.00	N: 1163845.65 E: 518314.98	401+83.39
L43	33.76'	S00° 09' 00.13"W	N: 1163845.65 E: 518314.98	401+83.39	N: 1163811.89 E: 518314.89	402+17.15
L44	62.85'	N90° 00' 00.00"E	N: 1163811.89 E: 518314.89	402+17.15	N: 1163811.89 E: 518377.74	402+80.00

PLOTTED November 6, 2012 6:04 PM PLOTTED BY: TERENCE SONNENBERG X:\MANATEE PROJECTS\22009610\G-6\HORIZONTAL CONTROL.DWG

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 7650 West Courtney Campbell Causeway  
 Suite 700  
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 Florida Engineering Number: 000002

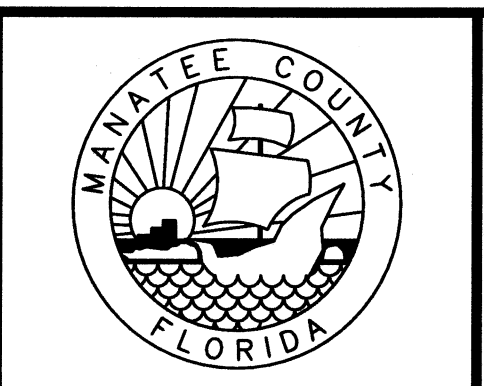
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12009610

PM: DAVID WILCOX  
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 DRW: TERRY SONNENBERG

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FT. HAMER ROAD  
 WATER MAIN CROSSING  
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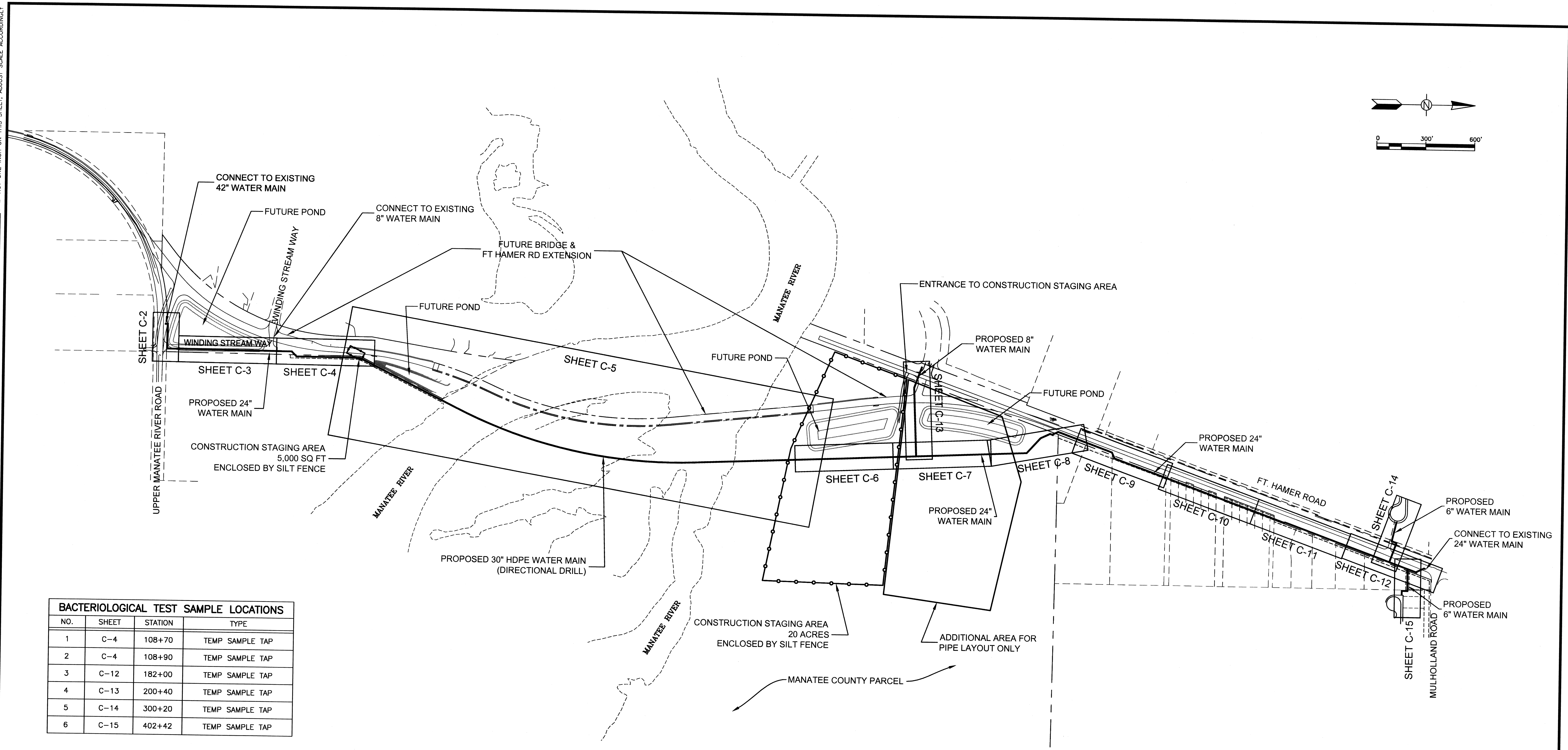
HORIZONTAL CONTROL

PROJECT STATUS  
 BID SET  
 NOVEMBER 2012

G-6



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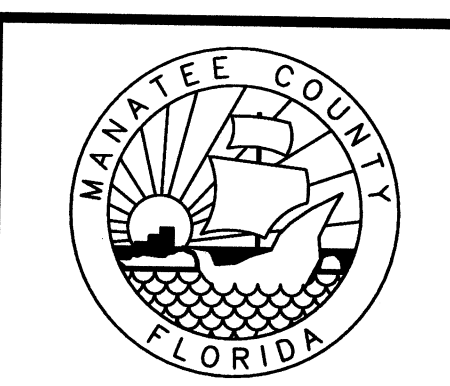
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NO.	SHEET	STATION	TYPE
1	C-4	108+70	TEMP SAMPLE TAP
2	C-4	108+90	TEMP SAMPLE TAP
3	C-12	182+00	TEMP SAMPLE TAP
4	C-13	200+40	TEMP SAMPLE TAP
5	C-14	300+20	TEMP SAMPLE TAP
6	C-15	402+42	TEMP SAMPLE TAP

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 12009610  
 PM: DAVID WILCOX  
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 FILE SAVE DATE:  
 November 6, 2012

DAVID A. WILCOX  
 FLORIDA P.E. NO. 34942



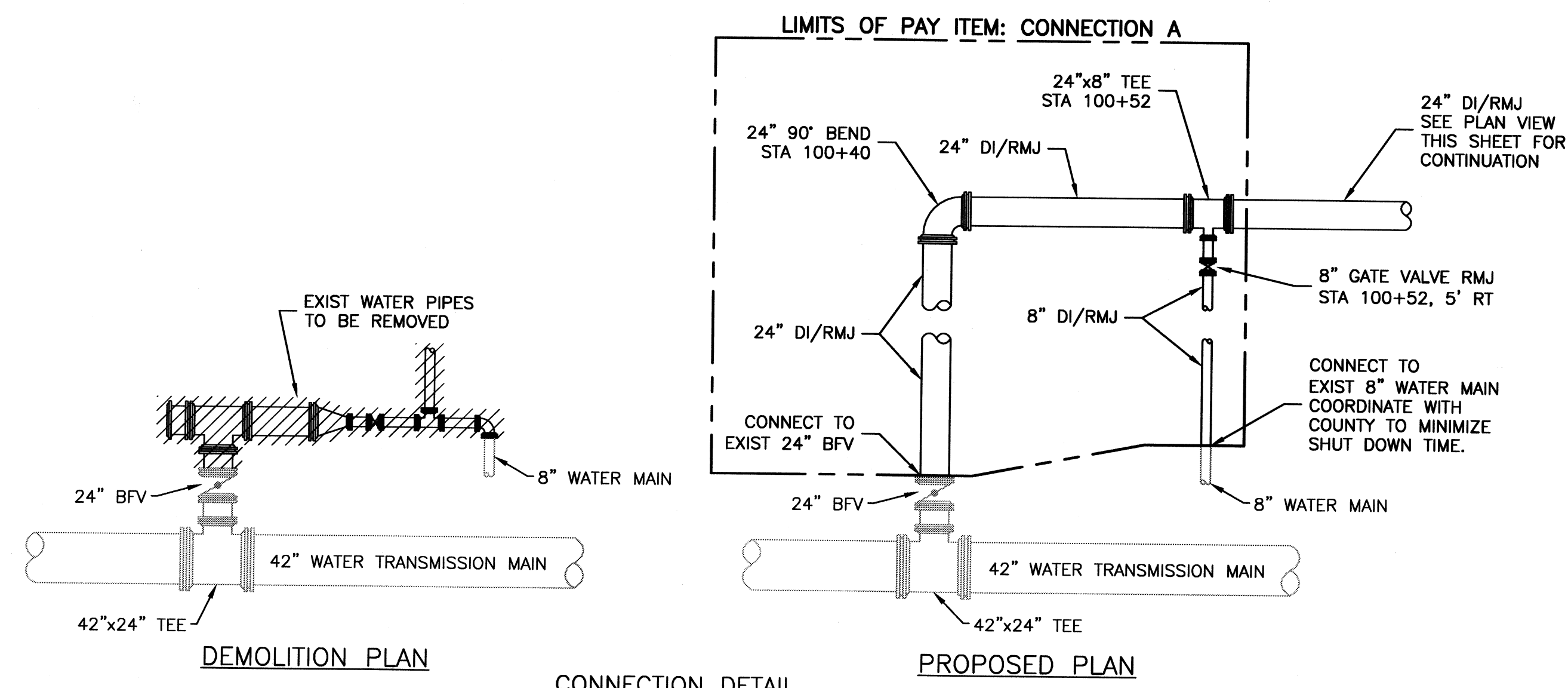
**FT. HAMER ROAD  
 WATER MAIN CROSSING**  
 FOR  
 MANATEE COUNTY GOVERNMENT  
 MANATEE COUNTY, FLORIDA

**KEY SHEET**

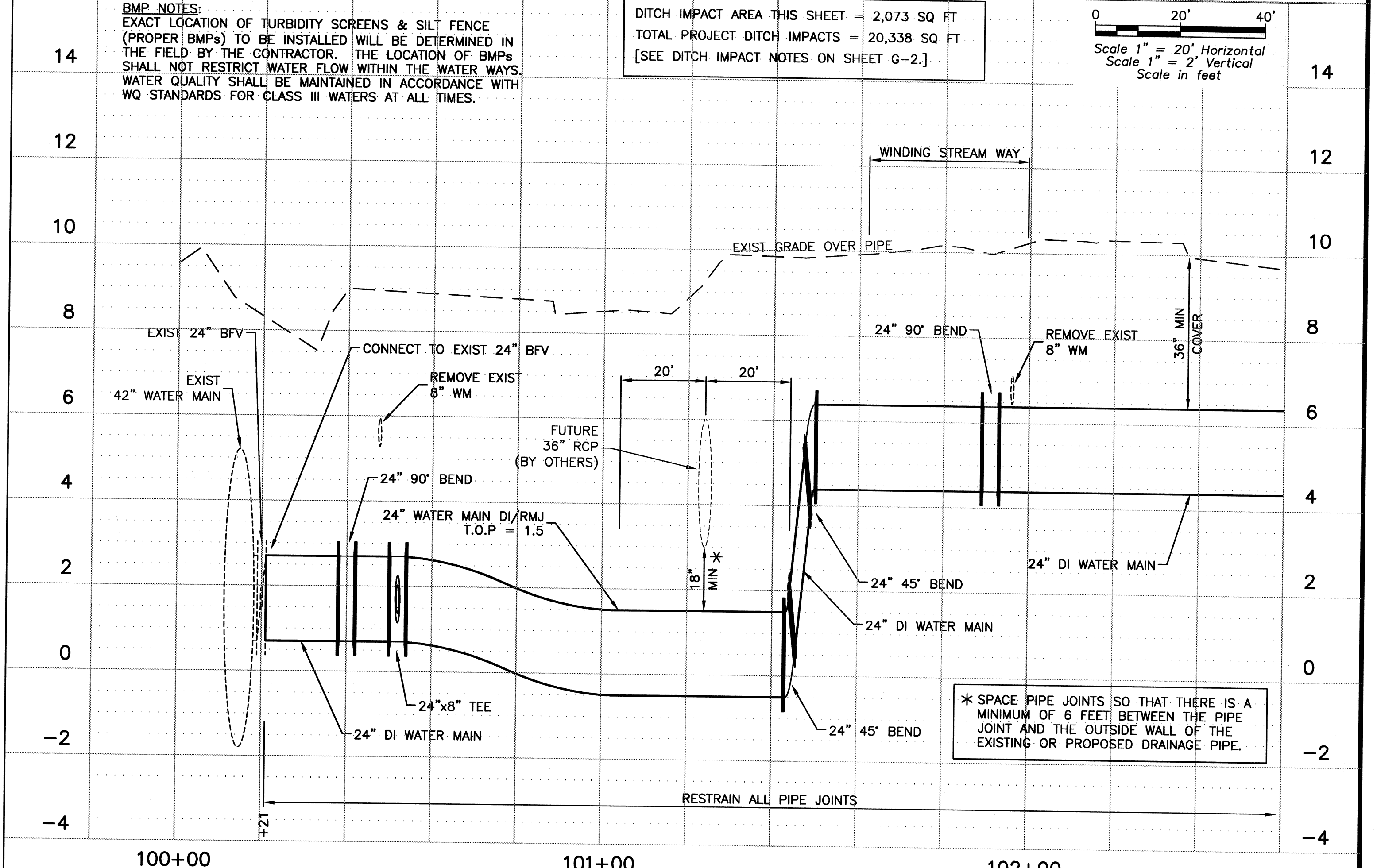
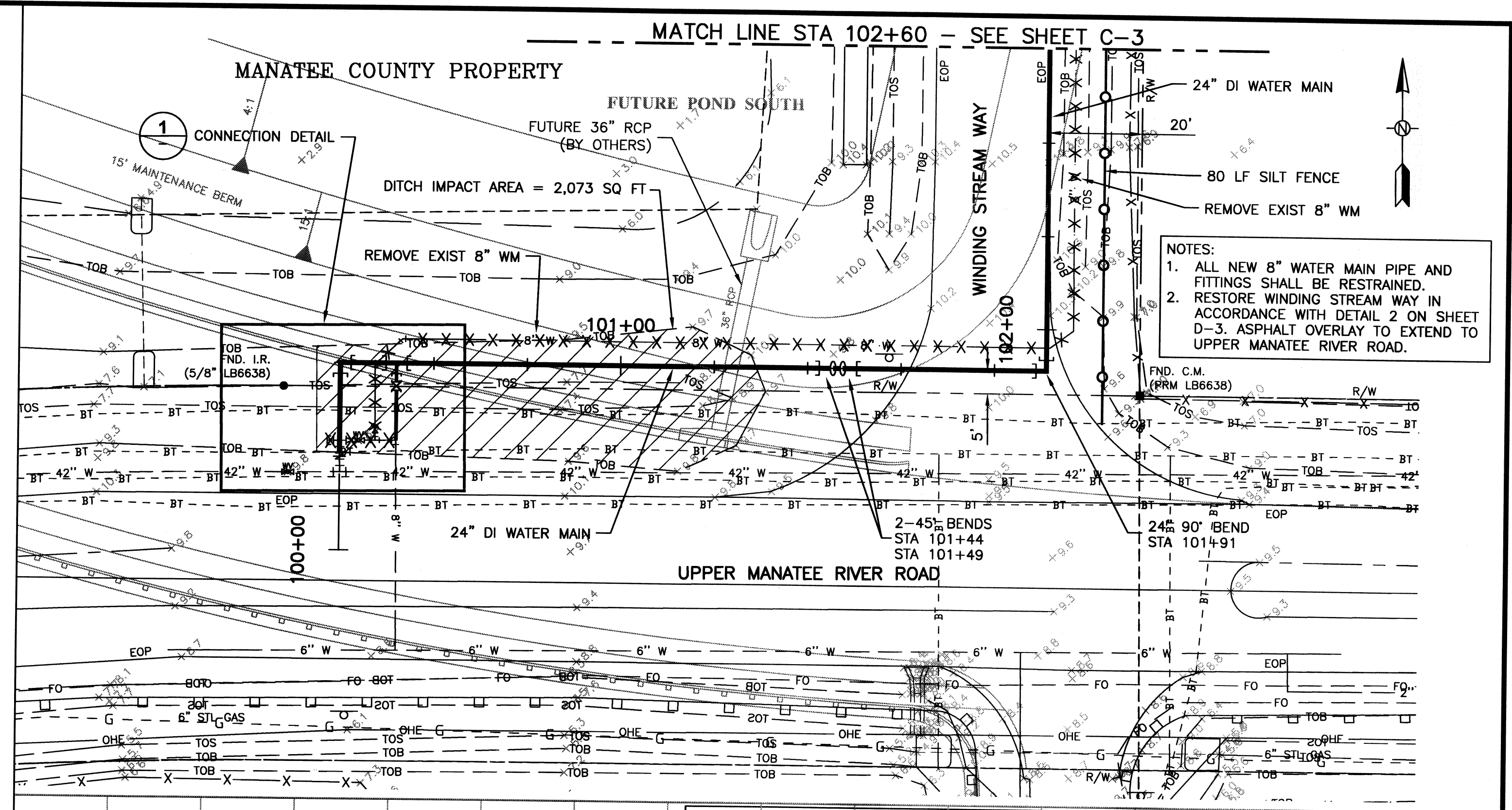
PROJECT STATUS  
 BID SET  
 NOVEMBER 2012  
**C-1**

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**1** CONNECTION DETAIL  
 SCALE: 1/8"=1'-0"



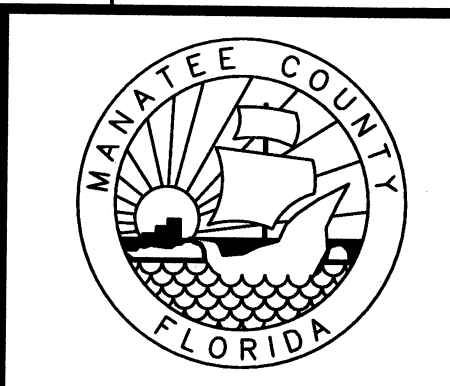
100+00	101+00	102+00
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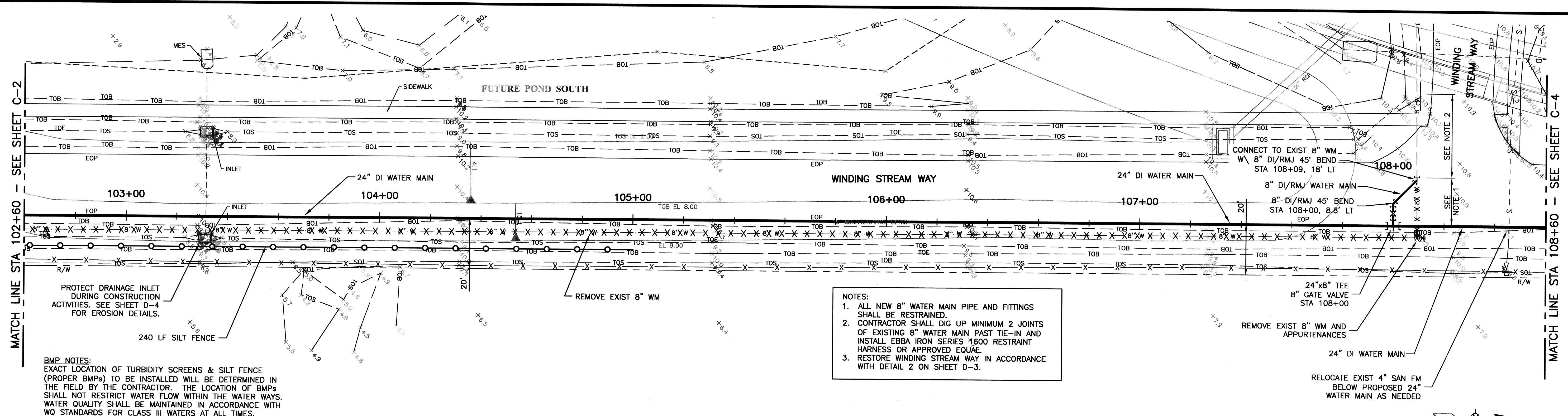
PROJECT STATUS  
 BID SET  
 NOVEMBER 2012

**PLAN AND PROFILE**

C-2

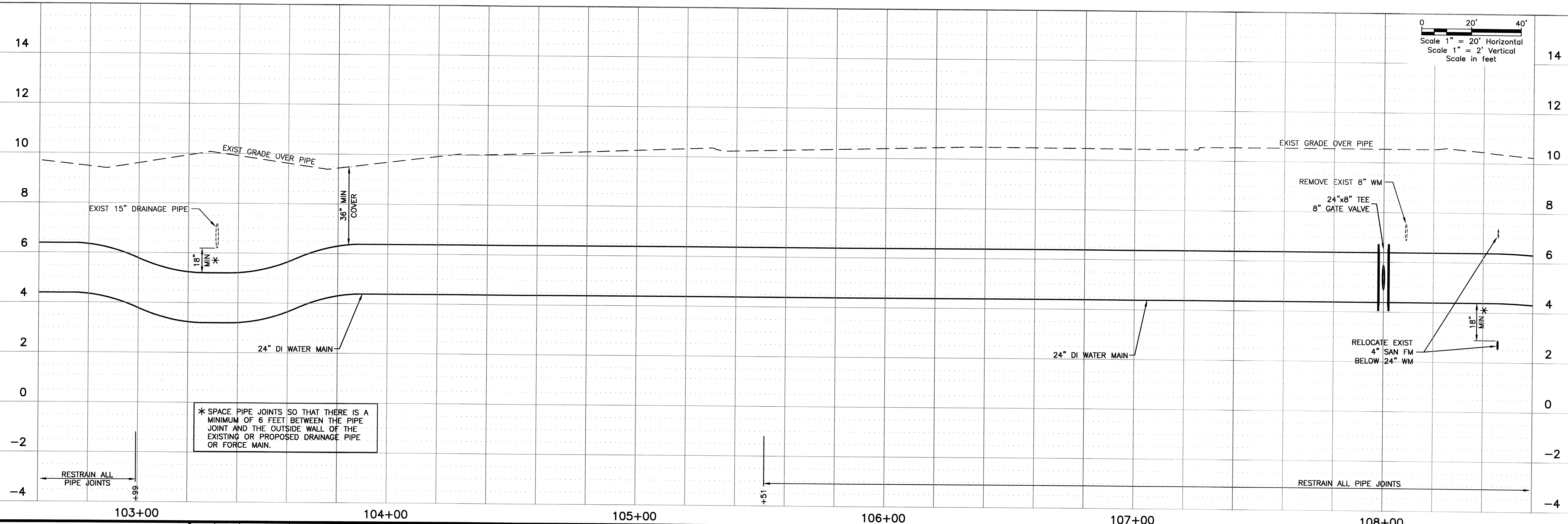
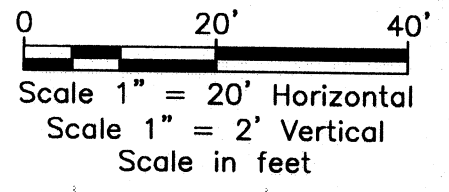


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- NOTES:**
1. ALL NEW 8" WATER MAIN PIPE AND FITTINGS SHALL BE RESTRAINED.
  2. CONTRACTOR SHALL DIG UP MINIMUM 2 JOINTS OF EXISTING 8" WATER MAIN PAST TIE-IN AND INSTALL EBBA IRON SERIES 1600 RESTRAINT HARNESS OR APPROVED EQUAL.
  3. RESTORE WINDING STREAM WAY IN ACCORDANCE WITH DETAIL 2 ON SHEET D-3.

**BMP NOTES:**  
 EXACT LOCATION OF TURBIDITY SCREENS & SILT FENCE (PROPER BMPs) TO BE INSTALLED WILL BE DETERMINED IN THE FIELD BY THE CONTRACTOR. THE LOCATION OF BMPs SHALL NOT RESTRICT WATER FLOW WITHIN THE WATER WAYS. WATER QUALITY SHALL BE MAINTAINED IN ACCORDANCE WITH WQ STANDARDS FOR CLASS III WATERS AT ALL TIMES.



\* SPACE PIPE JOINTS SO THAT THERE IS A MINIMUM OF 6 FEET BETWEEN THE PIPE JOINT AND THE OUTSIDE WALL OF THE EXISTING OR PROPOSED DRAINAGE PIPE OR FORCE MAIN.

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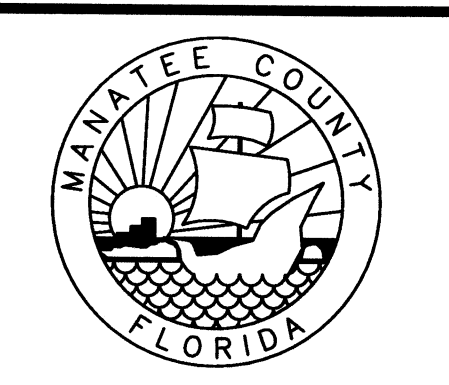
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 WATER MAIN CROSSING  
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PLAN AND PROFILE

PROJECT STATUS  
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 NOVEMBER 2012

**C-3**



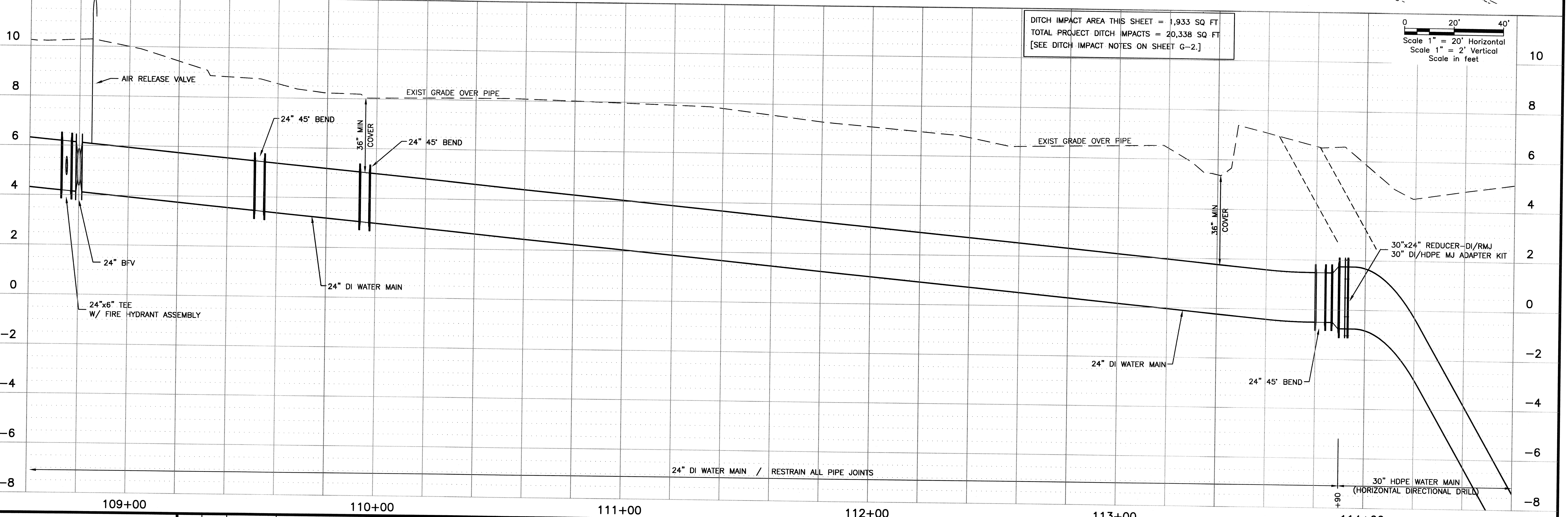
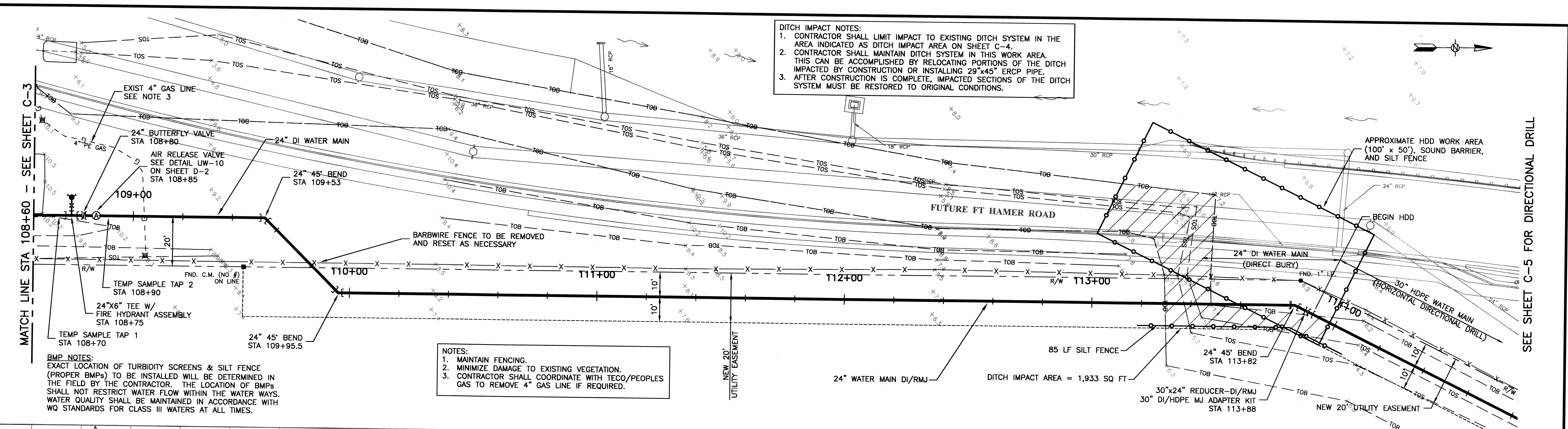
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**DITCH IMPACT NOTES:**  
 1. CONTRACTOR SHALL LIMIT IMPACT TO EXISTING DITCH SYSTEM IN THE AREA INDICATED AS DITCH IMPACT AREA ON SHEET C-4.  
 2. CONTRACTOR SHALL MAINTAIN DITCH SYSTEM IN THIS WORK AREA. THIS CAN BE ACCOMPLISHED BY RELOCATING PORTIONS OF THE DITCH IMPACTED BY CONSTRUCTION OR INSTALLING 29"x45" ERCP PIPE.  
 3. AFTER CONSTRUCTION IS COMPLETE, IMPACTED SECTIONS OF THE DITCH SYSTEM MUST BE RESTORED TO ORIGINAL CONDITIONS.

**NOTES:**  
 1. MAINTAIN FENCING.  
 2. MINIMIZE DAMAGE TO EXISTING VEGETATION.  
 3. CONTRACTOR SHALL COORDINATE WITH TECO/PEOPLES GAS TO REMOVE 4" GAS LINE IF REQUIRED.

**BMP NOTES:**  
 EXACT LOCATION OF TURBIDITY SCREENS & SILT FENCE (PROPER BMPs) TO BE INSTALLED WILL BE DETERMINED IN THE FIELD BY THE CONTRACTOR. THE LOCATION OF BMPs SHALL NOT RESTRICT WATER FLOW WITHIN THE WATER WAYS. WATER QUALITY SHALL BE MAINTAINED IN ACCORDANCE WITH WQ STANDARDS FOR CLASS III WATERS AT ALL TIMES.



DITCH IMPACT AREA THIS SHEET = 1,933 SQ FT  
 TOTAL PROJECT DITCH IMPACTS = 20,338 SQ FT  
 [SEE DITCH IMPACT NOTES ON SHEET G-2.]

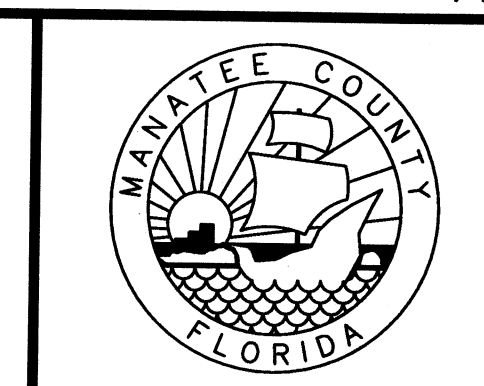
0 20' 40'  
 Scale 1" = 20' Horizontal  
 Scale 1" = 2' Vertical  
 Scale in feet

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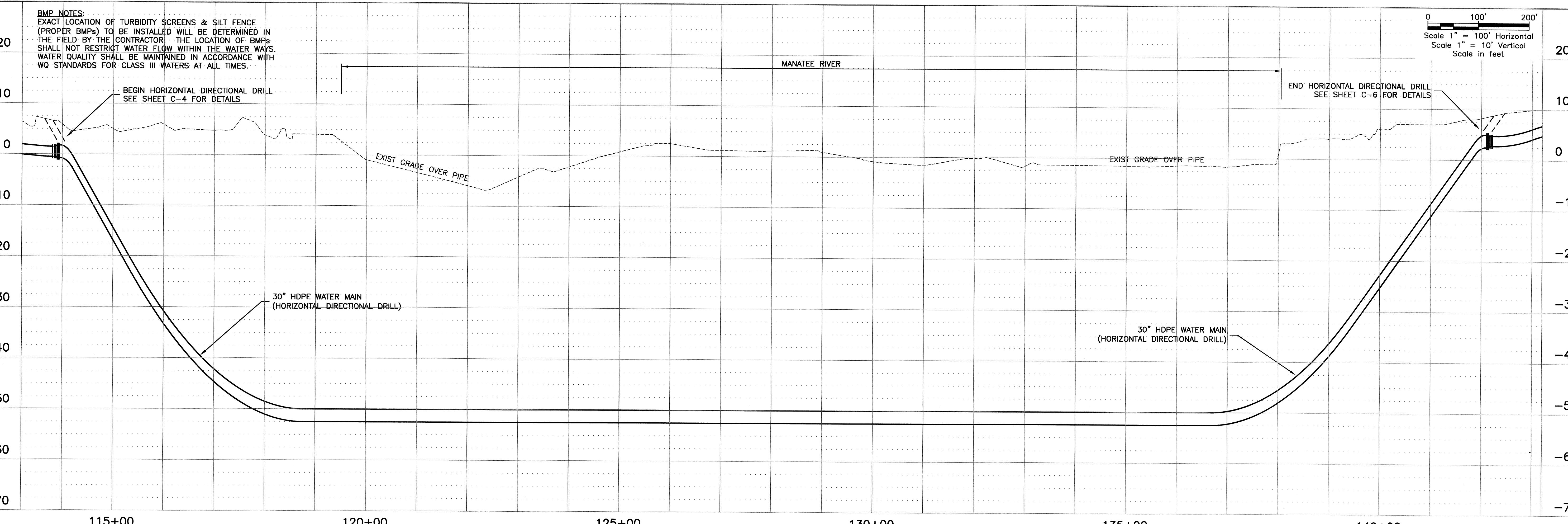
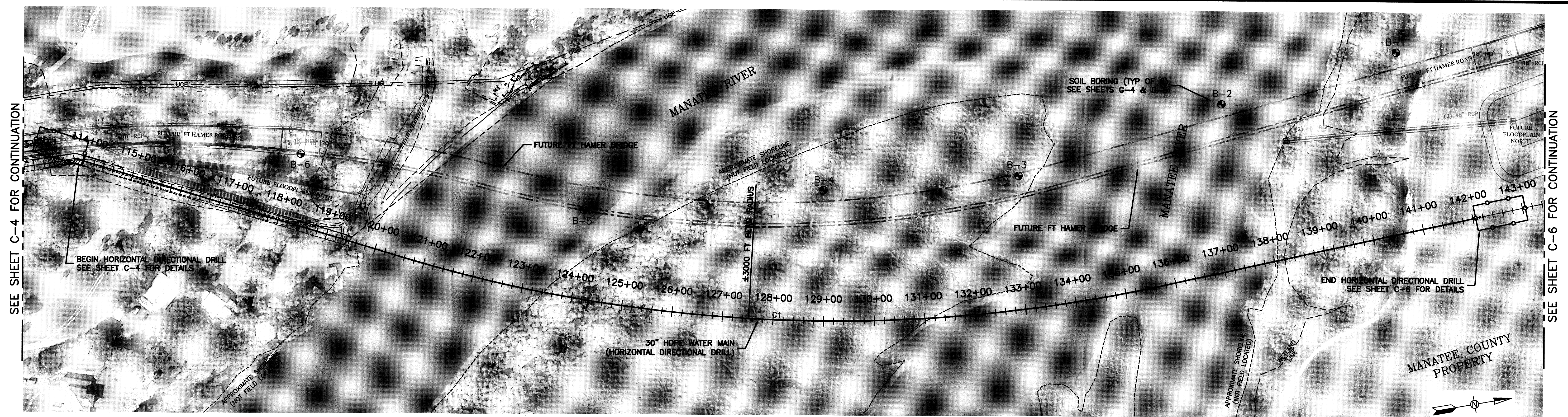
PROJECT STATUS  
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 NOVEMBER 2012

**PLAN AND PROFILE**

C-4



VERIFY SCALES: BAR IS ONE INCH ON ORIGINAL DRAWING 1 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALE ACCORDINGLY



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0 100' 200'  
Scale 1" = 100' Horizontal  
Scale 1" = 10' Vertical  
Scale in feet

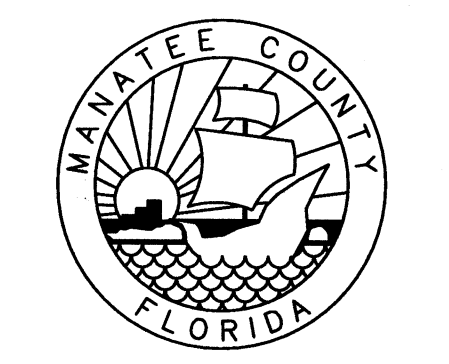
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**URS**  
7650 West Courtney Compell Causeway  
Suite 700  
Tampa, Florida 33607  
Ph: (813) 286-1711 Fax: (813) 286-6587  
Florida Engineering Number: 000002

NO.	BY	DATE	DESCRIPTION

URS JOB NUMBER  
12009610  
PM: DAVID WILCOX  
ENG: DAVID WILCOX  
DRW: TERRY SONNENBERG  
FILE SAVE DATE:  
November 6, 2012

DAVID A. WILCOX  
FLORIDA P.E. NO. 34942



**FT. HAMER ROAD  
WATER MAIN CROSSING**  
FOR  
MANATEE COUNTY GOVERNMENT  
MANATEE COUNTY, FLORIDA

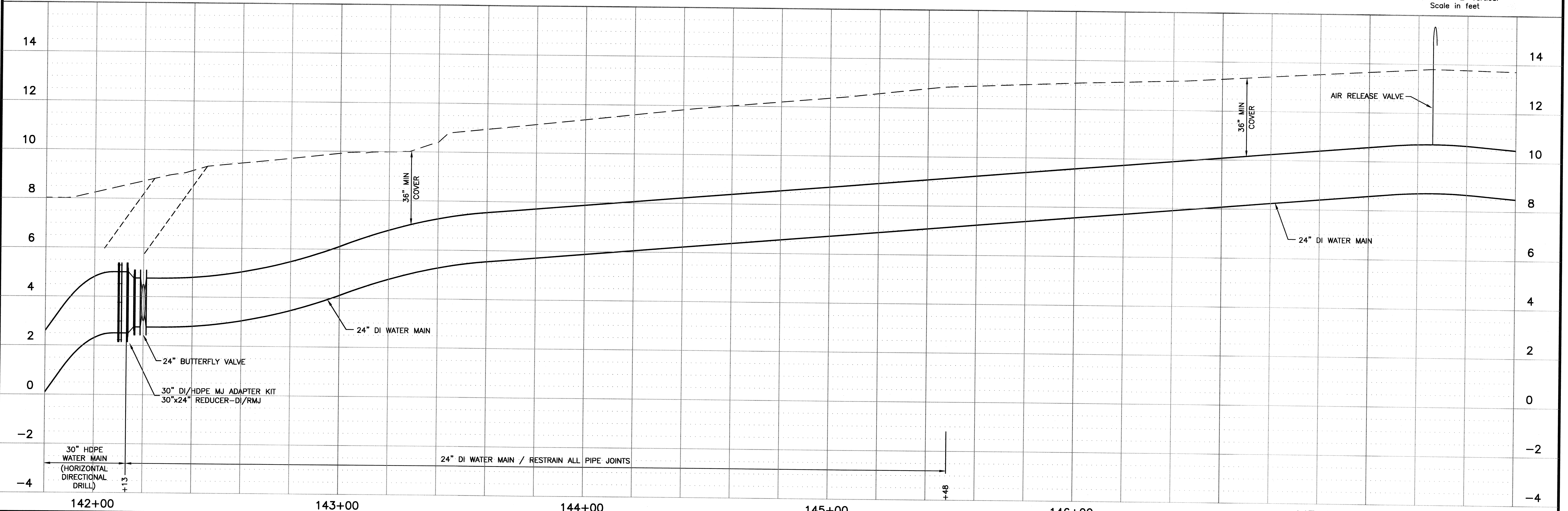
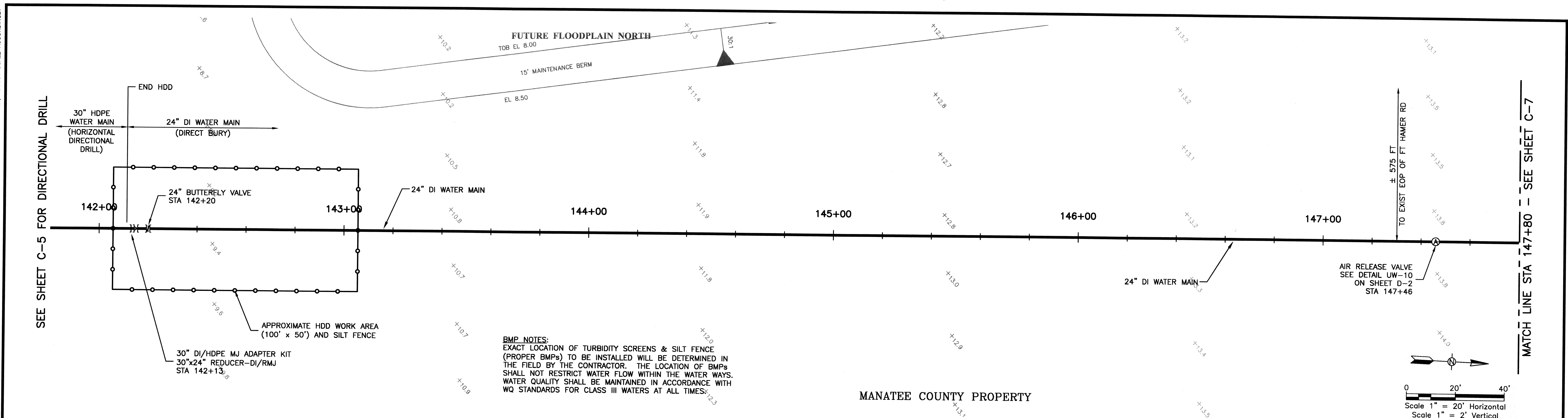
**PLAN AND PROFILE**

PROJECT STATUS  
BID SET  
NOVEMBER 2012

**C-5**



PLOTTED November 6, 2012 6:10 PM, PLOTTED BY: TERENCE SONNENBERG  
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 VERIFY SCALES: BAR IS ONE INCH ON ORIGINAL DRAWING 1 IF NOT ONE INCH ON THIS SHEET, ADJUST SCALE ACCORDINGLY



**URS**  
 7650 West Courtney Campbell Causeway  
 Suite 700  
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 Ph: (813) 286-1711 Fax: (813) 286-6587  
 Florida Engineering Number: 000002

NO.	BY	DATE	DESCRIPTION

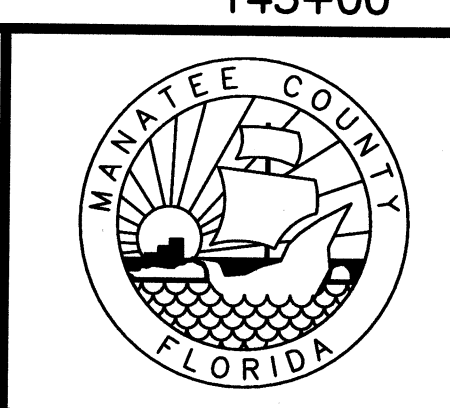
URS JOB NUMBER  
12009610

PM: DAVID WILCOX  
 ENG: DAVID WILCOX  
 DRW: TERRY SONNENBERG

FILE SAVE DATE:  
November 6, 2012

*David Wilcox*  
 11/06/12

DAVID A. WILCOX  
 FLORIDA P.E. NO. 34942



**FT. HAMER ROAD  
 WATER MAIN CROSSING**  
 FOR  
 MANATEE COUNTY GOVERNMENT  
 MANATEE COUNTY, FLORIDA

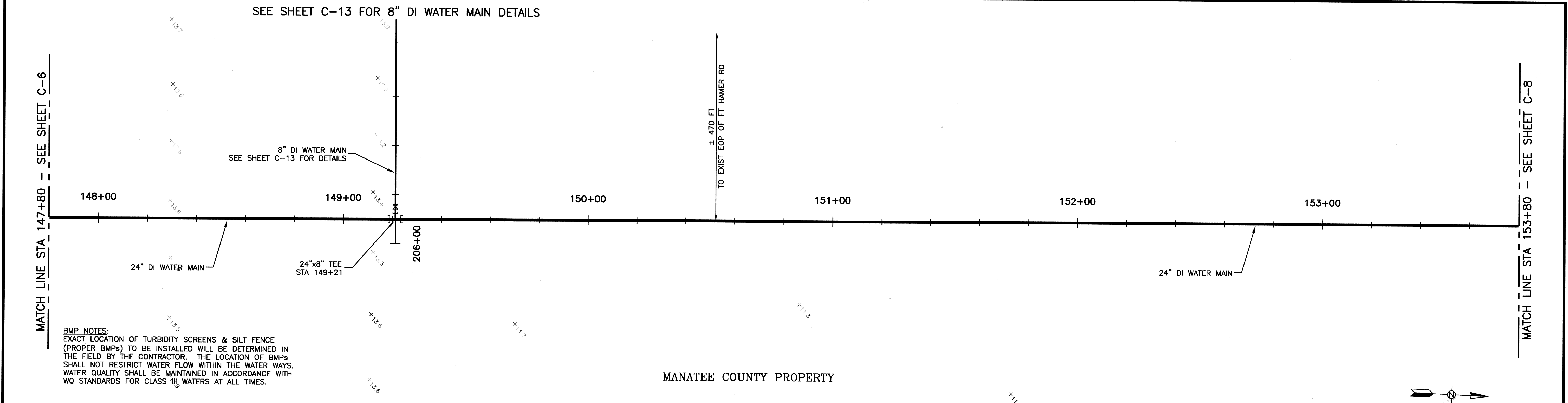
**PLAN AND PROFILE**

PROJECT STATUS  
 BID SET  
 NOVEMBER 2012

**C-6**

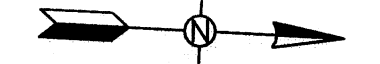


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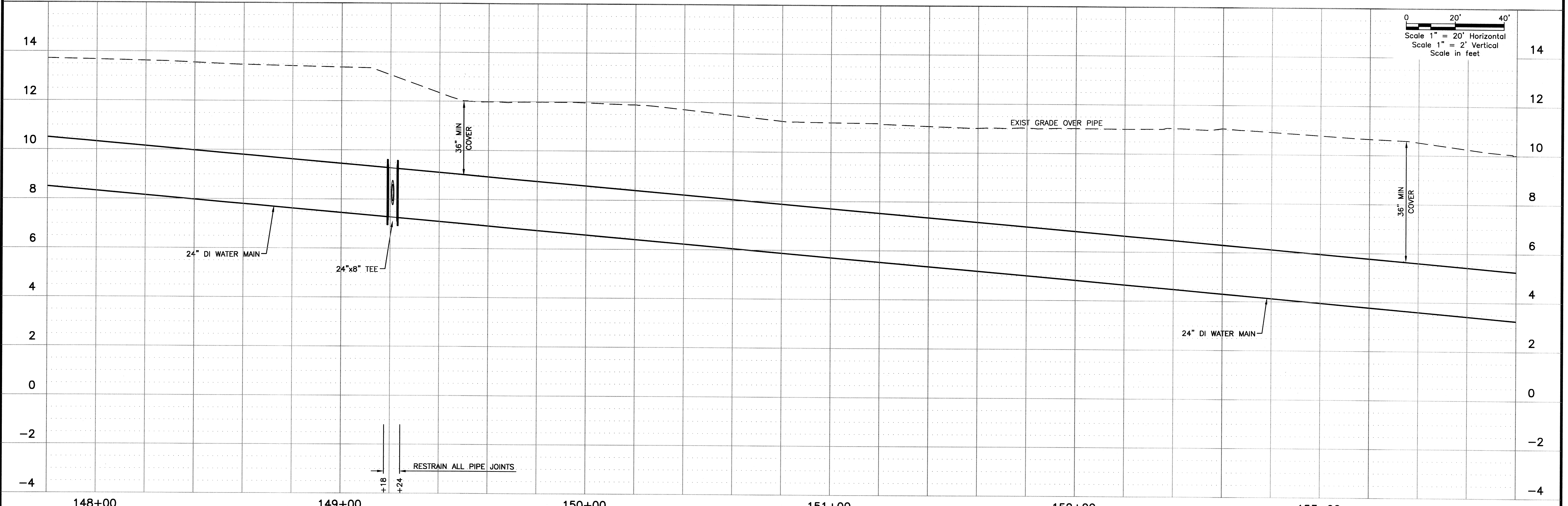


**BMP NOTES:**  
 EXACT LOCATION OF TURBIDITY SCREENS & SILT FENCE (PROPER BMPs) TO BE INSTALLED WILL BE DETERMINED IN THE FIELD BY THE CONTRACTOR. THE LOCATION OF BMPs SHALL NOT RESTRICT WATER FLOW WITHIN THE WATER WAYS. WATER QUALITY SHALL BE MAINTAINED IN ACCORDANCE WITH WQ STANDARDS FOR CLASS III WATERS AT ALL TIMES.

MANATEE COUNTY PROPERTY



0 20' 40'  
 Scale 1" = 20' Horizontal  
 Scale 1" = 2' Vertical  
 Scale in feet

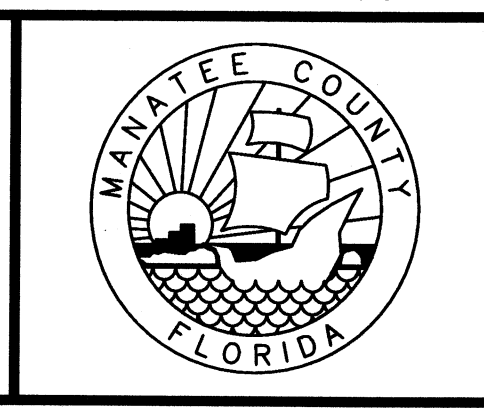


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 FLORIDA P.E. NO. 34942



FT. HAMER ROAD  
 WATER MAIN CROSSING  
 FOR  
 MANATEE COUNTY GOVERNMENT  
 MANATEE COUNTY, FLORIDA

PLAN AND PROFILE

PROJECT STATUS  
 BID SET  
 NOVEMBER 2012

C-7