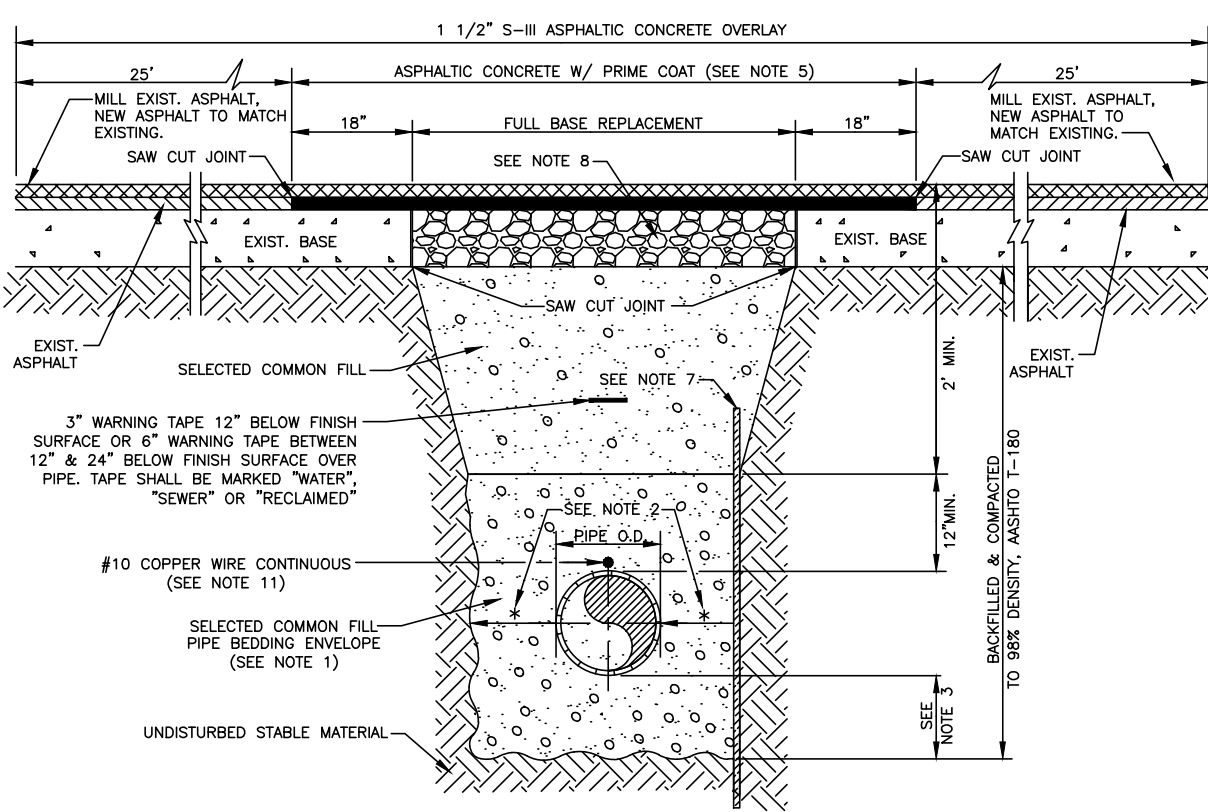


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- NOTES:
- USE OF TYPE A-2 AND A-3 PIPE BEDDING TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
 - PROVIDE ADEQUATE CLEARANCE TO PLACE AND COMPACT STAGE 1 BEDDING MATERIAL IN TRENCH AREA BELOW PIPE SPRINGLINE. PIPE EMBEDEDMENT MUST BE COMPACTED OUT TO THE TRENCH WALL OR 2.5 TIMES THE PIPE OD, WHICHEVER IS LESS.
 - TYPICALLY 4" TO 6".
 - PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
 - ASPHALTIC CONCRETE STRUCTURE COURSE WITH PRIME COAT SHALL BE THE SAME DEPTH AND TYPE AS EXISTING OR A MINIMUM OF 1 1/4 INCH, WHICHEVER IS GREATER.
 - MILL 25' BACK FROM TRENCH SAW CUT. ADJUST MILLING PER INDIVIDUAL SITE TO NOT IMPACT BASE BUTT JOINT TO EXIST ASPHALT. FINAL OVERLAY LIMITS ARE FROM EDGE OF PAVEMENT TO EDGE OF PAVEMENT. FINAL OVERLAY TO MATCH EXISTING WITH NO DISCERNABLE "BUMP" AT JOINT. MILLING LIMITS THAT IMPACT INTERSECTION SHALL BE ADDRESSED ON A CASE BY CASE BASIS AND APPROVED BY MANATEE COUNTY.
 - SHEETING ORDERED LEFT IN PLACE TO BE CUT OFF 24" BELOW FINISHED GRADE OR 12" BELOW SUBGRADE.
 - BASE SHALL BE 8" MINIMUM THICKNESS CRUSHED CONCRETE.
 - TEMPORARY PATCHES WILL BE INSTALLED TO PROVIDE A SMOOTH ALL WEATHER SURFACE AT ALL TIMES. PERMANENT REPLACEMENT TO BE MADE AS SOON AS POSSIBLE.
 - RESTORE SIGNAGE & MARKING WITH THERMOPLASTIC PER FDOT STANDARDS, LATEST EDITION.
 - TRACER WIRE NOT REQUIRED FOR GRAVITY SEWERS.
 - NOTES 5, THRU 10, ARE MINIMUM REQUIREMENTS FOR A TRENCH IN A ROAD. REFER TO LATEST EDITION OF MANATEE COUNTY HIGHWAY AND TRAFFIC STANDARDS FOR ADDITIONAL REQUIREMENTS.



MANATEE COUNTY		TRENCH WITH ASPHALT PAVEMENT SURFACE TYPE A-1 PIPE BEDDING		UG-12
REV. BY	DATE	DATE OF APPROVAL		PAGE 112
WRT/KE	03/11	MAY 10, 2011		

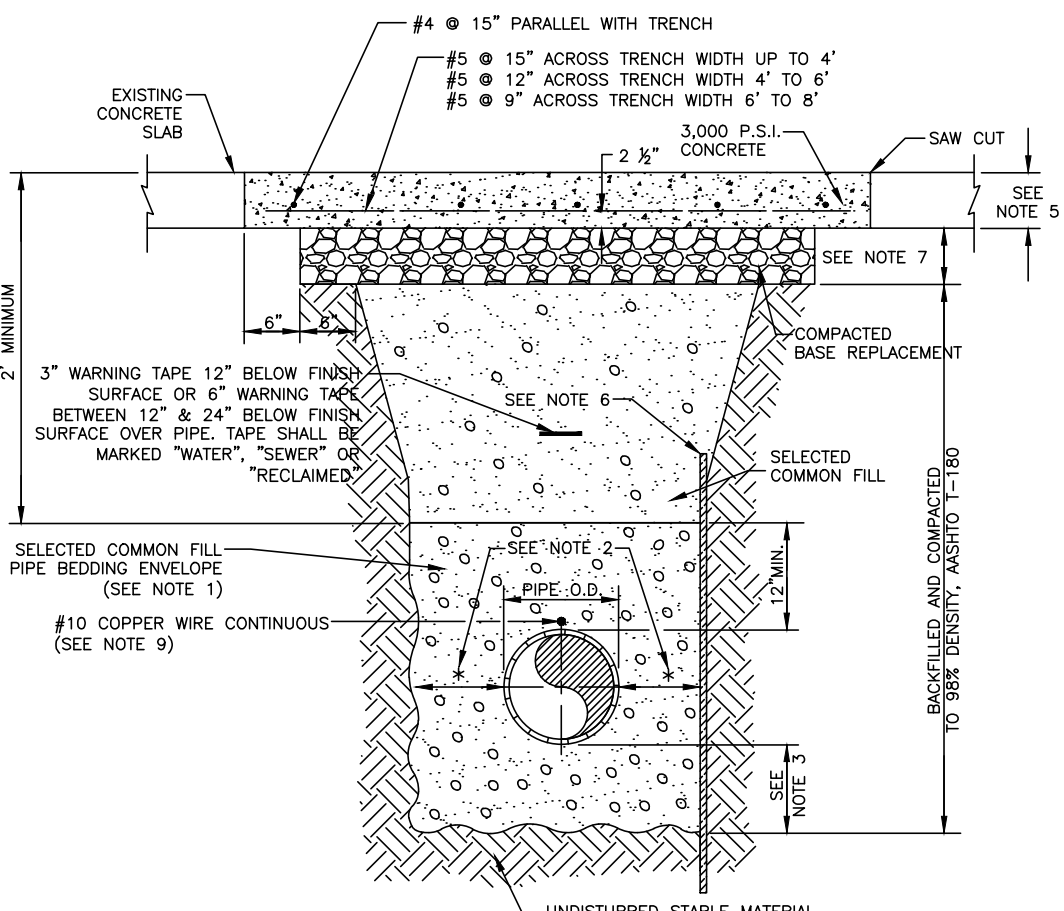
GENERAL NOTES

- SIDEWALK SHALL BE CONSTRUCTED A MINIMUM OF 4" THICK, USING 3000 PSI CONCRETE. WHERE SIDEWALK BISECTS A DRIVEWAY, THE MINIMUM SHALL BE 6" OF CLASS I CONCRETE REINFORCED WITH 6"x6" #10 WIRE MESH.
* SEE SHEETS #101.2 & 101.3.
- ALL SIDEWALKS SHALL BE CONSTRUCTED TO THE SPECIFICATIONS OF THE MANATEE COUNTY LAND DEVELOPMENT CODE, SECTION 722. A MINIMUM (5) FOOT WIDE SIDEWALK SHALL BE INSTALLED ALONG THE NORTH AND WEST SIDES OF ALL NEW LOCAL STREETS WHICH ARE CONSTRUCTED IN CONJUNCTION WITH A NEW RESIDENTIAL DEVELOPMENT. A SIDEWALK A MINIMUM OF (5) FEET IN WIDTH SHALL BE INSTALLED ON BOTH SIDES OF ALL THOROUGHFARES. REFER TO F.D.O.T. ROADWAY AND TRAFFIC STANDARDS, LATEST REVISION FOR CURB CUT RAMP SPECIFICATIONS.
- THE CONCRETE SHALL BE GIVEN A BROOM FINISH. THE SURFACE VARIATIONS SHALL NOT BE MORE THAN 1/4" UNDER A TEN FOOT STRAIGHTEDGE, NOR MORE THAN 1/8" ON A FIVE FOOT TRAVERSE SECTION. THE EDGE OF THE SIDEWALK SHALL BE CAREFULLY FINISHED WITH AN EDGING TOOL HAVING A RADIUS OF 1/2".
- EXPANSION JOINT: EXPANSION JOINTS BETWEEN THE SIDEWALKS AND THE CURB OR DRIVEWAY OR AT FIXED OBJECTS AND SIDEWALK INTERSECTIONS SHALL BE 1/2" MATERIAL. SHALL MEET THE REQUIREMENTS OF AASHTO M153 OR AASHTO M213. FOR LONG POORS, AN EXPANSION JOINT SHALL BE PLACED AT INTERVALS NOT TO EXCEED 120'.
- CONTRACTION JOINTS:
OPEN TYPE JOINTS
OPEN TYPE CONTRACTION JOINTS SHALL BE FORMED BY STAKING A METAL BULKHEAD IN PLACE AND DEPOSITING THE CONCRETE ON BOTH SIDES. AFTER THE CONCRETE HAS SET SUFFICIENTLY TO PRESERVE THE WIDTH AND THE SHAPE OF THE JOINT, THE BULKHEAD SHALL BE REMOVED. AFTER THE SIDEWALK HAS BEEN FINISHED OVER THE JOINT, THE SLOT SHALL BE FINISHED WITH A TOOL HAVING A 1/2" RADIUS.
SAWED JOINTS
A SLOT APPROXIMATELY 3/16" WIDE AND NOT LESS THAN 1" DEEP AT 10' CENTERS SHALL BE CUT WITH A CONCRETE SAW AFTER THE CONCRETE HAS SET.
- SIDEWALKS ALONG OTHER STREETS SHALL BE CONSTRUCTED AND DEDICATED AS REQUIRED BY THE APPROVING AUTHORITY WHEN NECESSARY TO CONTINUE AN EXISTING OR PROPOSED SIDEWALK.
- HANDICAP RAMPS SHALL MEET FLORIDA ACCESSIBILITIES STANDARDS, AND SECTIONS 301.0, 301.1 AND 301.2.
- ALL SIDEWALKS ON R/W WITHIN 10' OF AN EXISTING OR PROPOSED TREE THAT WILL EXCEED 6" IN DIAMETER AT MATURITY SHALL BE 5" THICK AND CONTAIN 2-#3 REBAR CENTERED VERTICALLY AND SPACED 3' ON CENTER. PALMS ARE NOT CONSIDERED TREES.

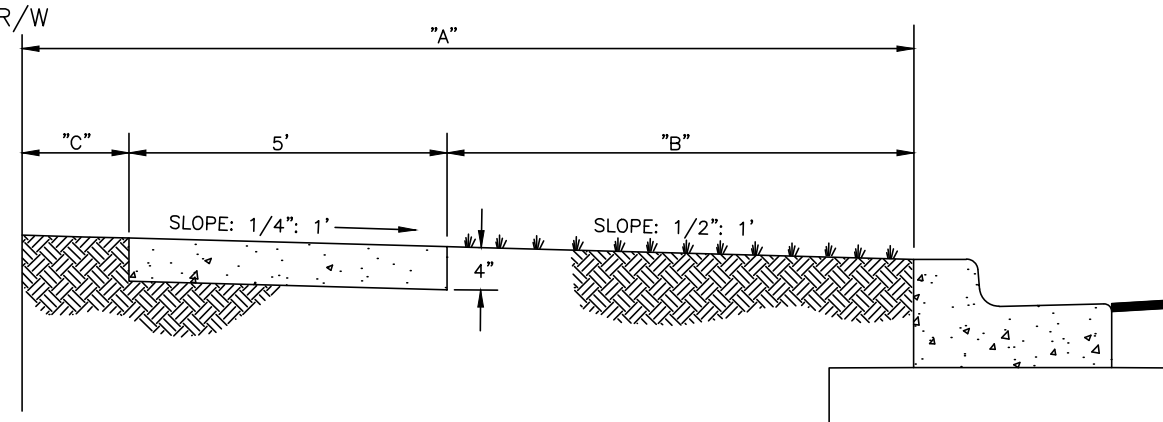
*NOTE: FOR COMPLETE SIDEWALK DETAILS, SEE F.D.O.T. DESIGN STANDARDS, 2006 EDITION, INDEX 304, SHEETS 1 THROUGH 6 AND INDEX 310, SHEETS 1 & 2.

MANATEE COUNTY		SIDEWALKS GENERAL NOTES		301.0
REV. BY	DATE	DATE OF B.O.C.C. APPROVAL		
	6/12/07			

- NOTES:
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 - PROVIDE ADEQUATE CLEARANCE TO PLACE AND COMPACT STAGE 1 BEDDING MATERIAL IN TRENCH AREA BELOW PIPE SPRINGLINE. PIPE EMBEDEDMENT MUST BE COMPACTED OUT TO THE TRENCH WALL OR 2.5 TIMES THE PIPE OD, WHICHEVER IS LESS.
 - TYPICALLY 4" TO 6".
 - PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
 - THICKNESS TO MATCH EXISTING OR BE 8" MINIMUM, WHICHEVER IS GREATER.
 - SHEETING ORDERED LEFT IN PLACE TO BE CUT OFF 24" BELOW FINISHED GRADE OR 12" BELOW SUBGRADE.
 - BASE SHALL BE 8" MINIMUM THICKNESS CRUSHED CONCRETE.
 - TEMPORARY PATCHES WILL BE INSTALLED TO PROVIDE A SMOOTH ALL WEATHER SURFACE AT ALL TIMES. PERMANENT REPLACEMENT TO BE MADE AS SOON AS POSSIBLE.
 - TRACER WIRE NOT REQUIRED FOR GRAVITY SEWERS.
 - NOTES 5, THRU 8, ARE MINIMUM REQUIREMENTS. REFER TO MANATEE COUNTY HIGHWAY AND TRAFFIC STANDARDS FOR ADDITIONAL REQUIREMENTS.

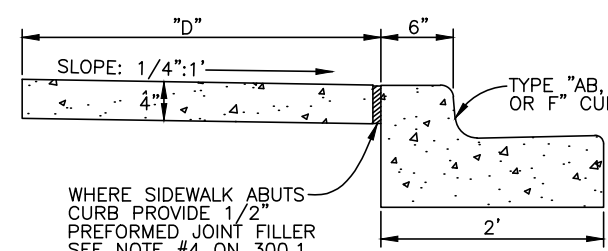


MANATEE COUNTY		TRENCH WITH CONCRETE PAVEMENT SURFACE TYPE A-1 PIPE BEDDING		UG-13
REV. BY	DATE	DATE OF APPROVAL		PAGE 113
CLB/BR	11/10	MAY 10, 2011		



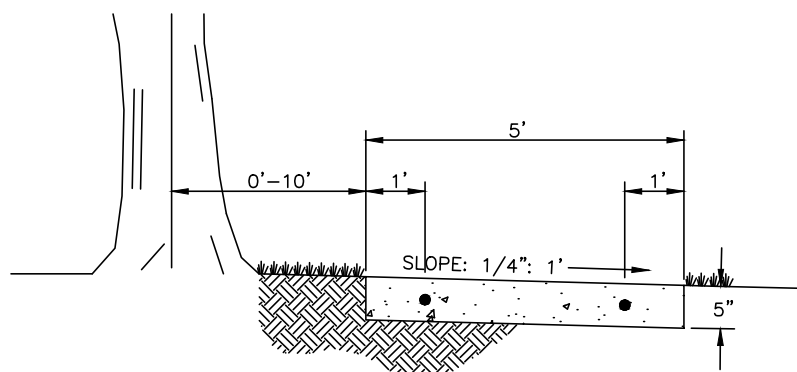
A= BACK OF CURB TO R/W (VARIES)
B= UNPAVED AREA (VARIES). REFER TO F.D.O.T. GREEN BOOK, TABLE 3-12, LATEST REVISION.
C= VARIES, SEE 401 SERIES

TYPICAL SIDEWALK LOCATION



D= SIDEWALK WIDTH SHALL BE 6" STANDARD, WHERE WALK ABUTS TYPE "AB, D OR F" CURB. WHERE SPEED LIMIT IS 25 MPH OR LESS, WIDTH CAN BE 5'-6".
* SEE SHEET 300.1 "GENERAL NOTES" FOR FURTHER INFORMATION

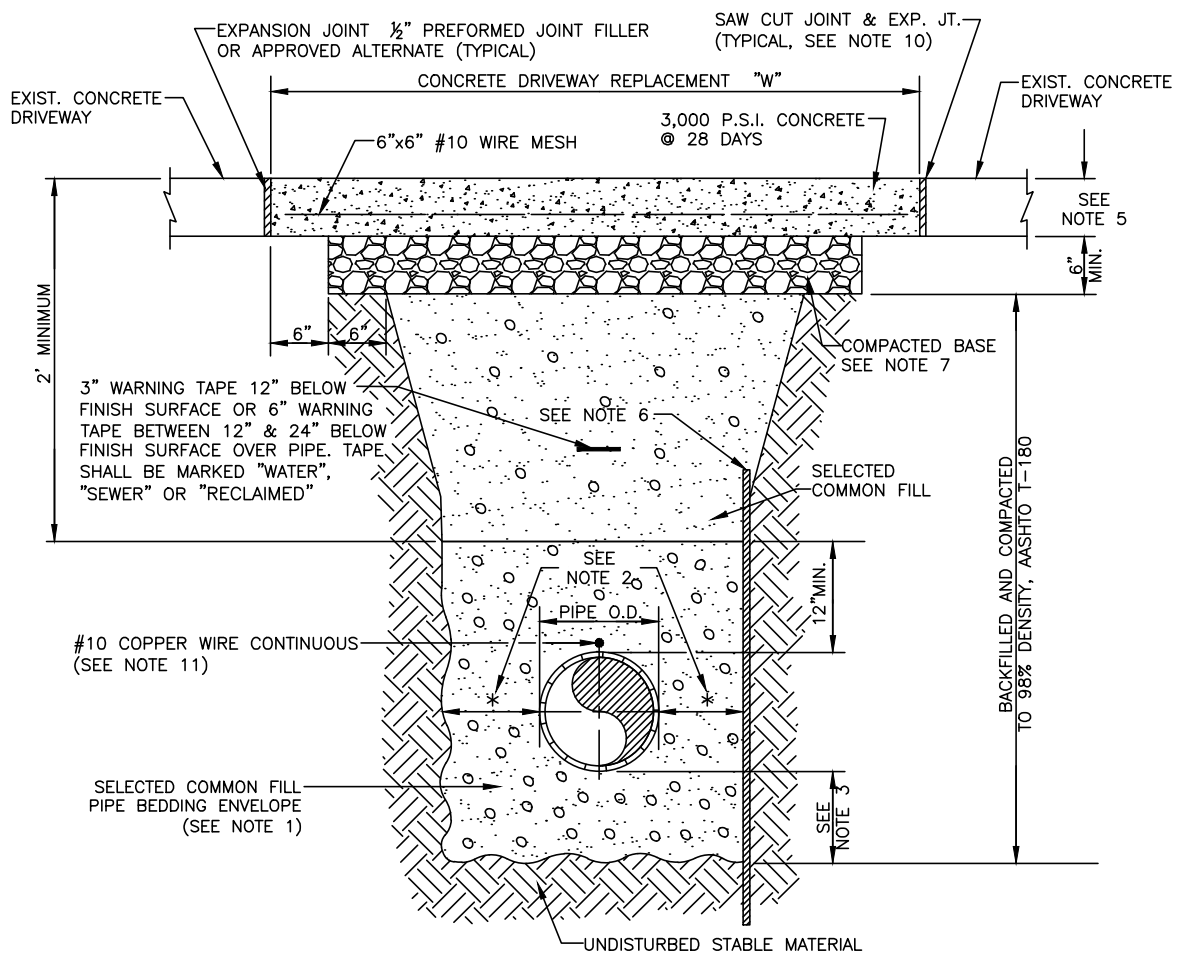
ALTERNATE SIDEWALK LOCATION



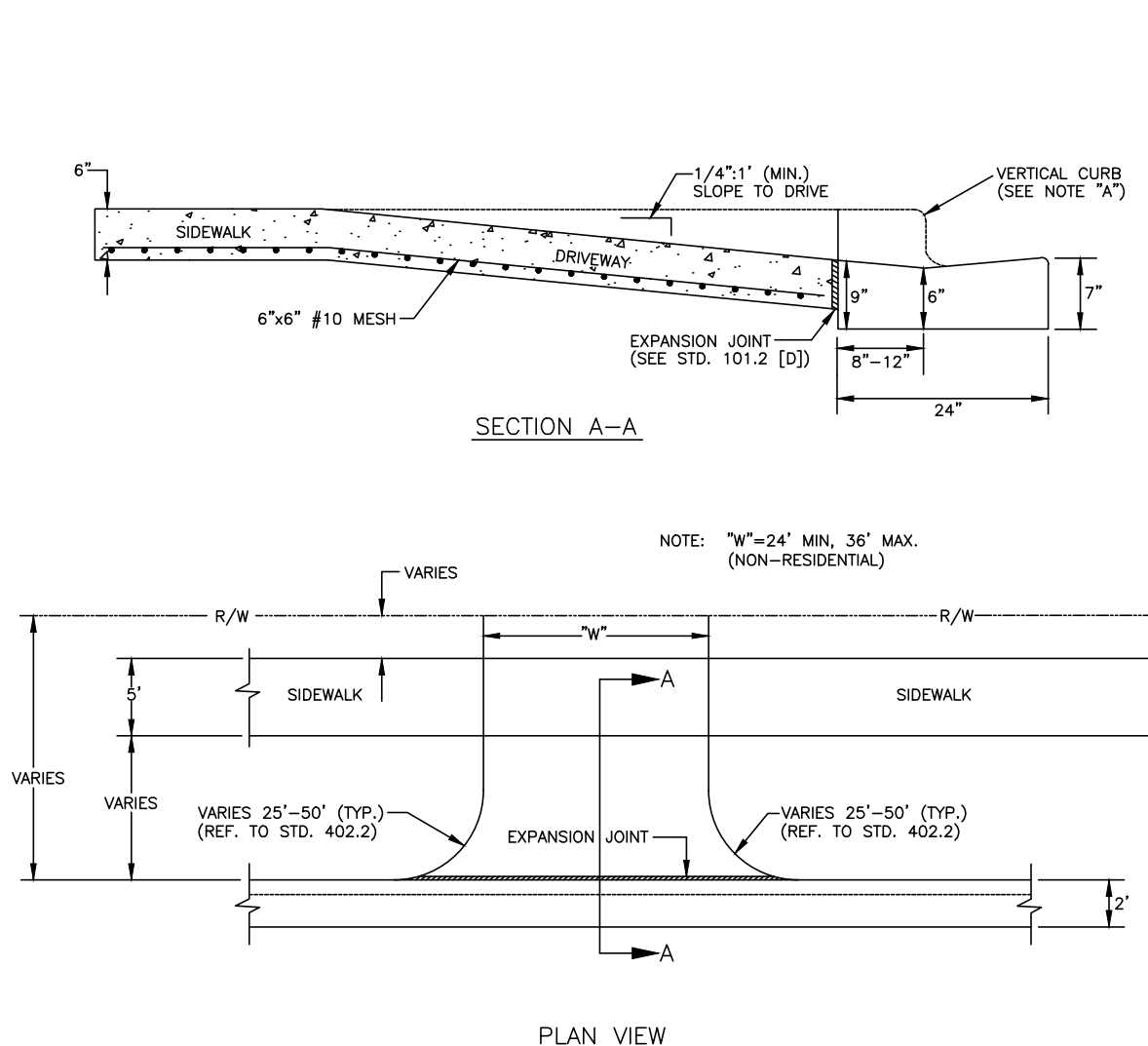
SIDEWALK LOCATION CLOSE TO TREES

MANATEE COUNTY		SIDEWALK REQUIREMENTS		301.1
REV. BY	DATE	DATE OF B.O.C.C. APPROVAL		
	6/12/07			

- NOTES:
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 - TYPICALLY 4" TO 6".
 - PIPE INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
 - THICKNESS TO MATCH EXISTING OR BE 6" MINIMUM, WHICHEVER IS GREATER.
 - SHEETING ORDERED LEFT IN PLACE TO BE CUT OFF 24" BELOW FINISHED GRADE OR 12" BELOW SUBGRADE.
 - BASE SHALL BE COMPACTED 6" MINIMUM THICKNESS OF APPROVED MATERIAL.
 - DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST ADOPTED CONSTRUCTION STANDARDS OF THE MANATEE COUNTY TRANSPORTATION DEPARTMENT.
 - IF THE DRIVEWAY IS 12' OR WIDER, SAWCUT AN EXPANSION JOINT ALONG THE CENTER OF THE DRIVEWAY (3/8" WIDE AND 1 1/2" DEEP) AFTER THE CONCRETE HAS SET.
 - IF THERE IS AN EXISTING EXPANSION JOINT WITHIN 3' OF THE PROPOSED JOINT, EXTEND DRIVEWAY REPLACEMENT TO THE EXISTING JOINT.
 - TRACER WIRE NOT REQUIRED FOR GRAVITY SEWERS.

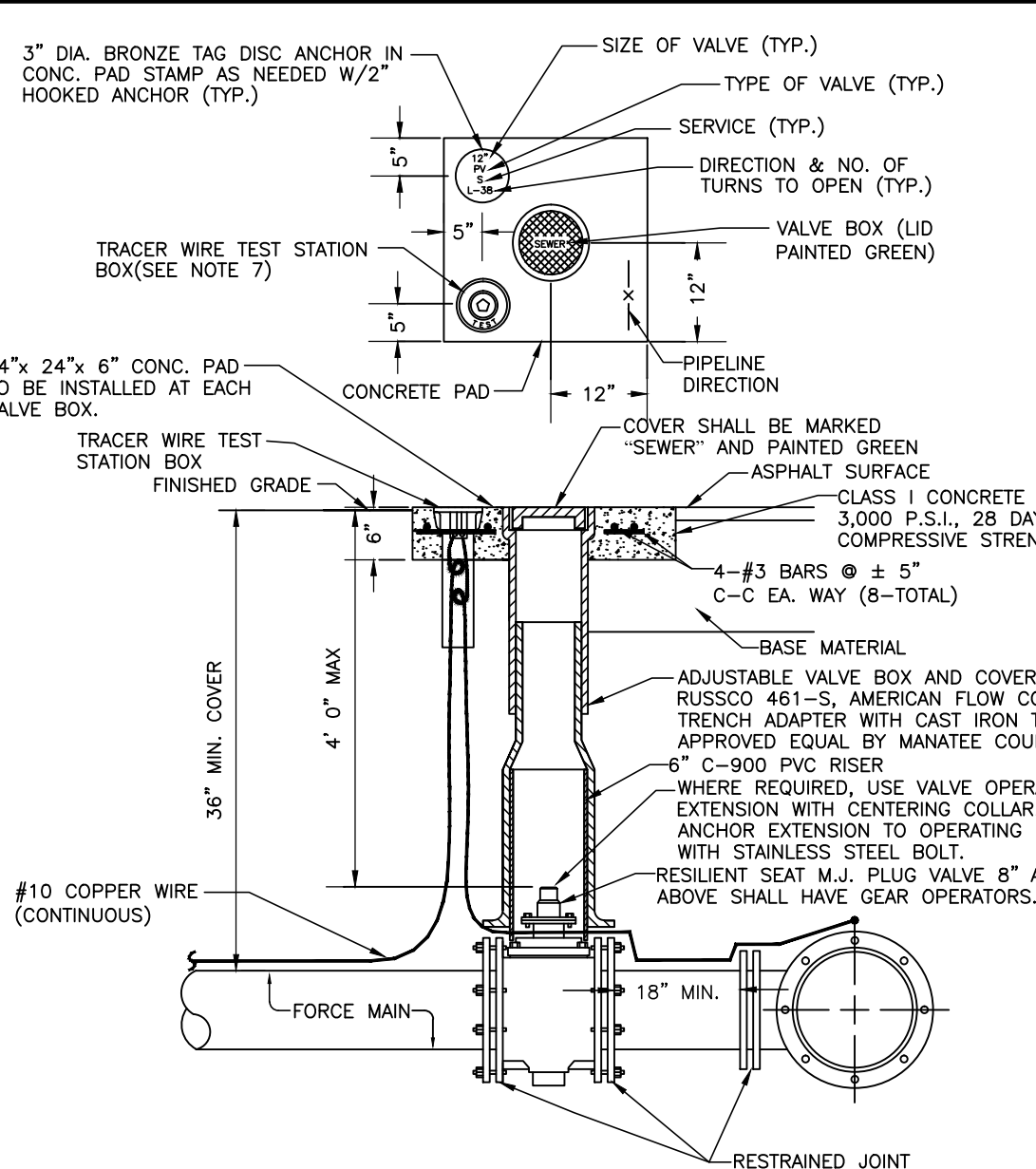


MANATEE COUNTY		TRENCH WITH CONCRETE DRIVEWAY SURFACE TYPE A-1 PIPE BEDDING		UG-14
REV. BY	DATE	DATE OF APPROVAL		PAGE 114
CLB/BR	11/10	MAY 10, 2011		



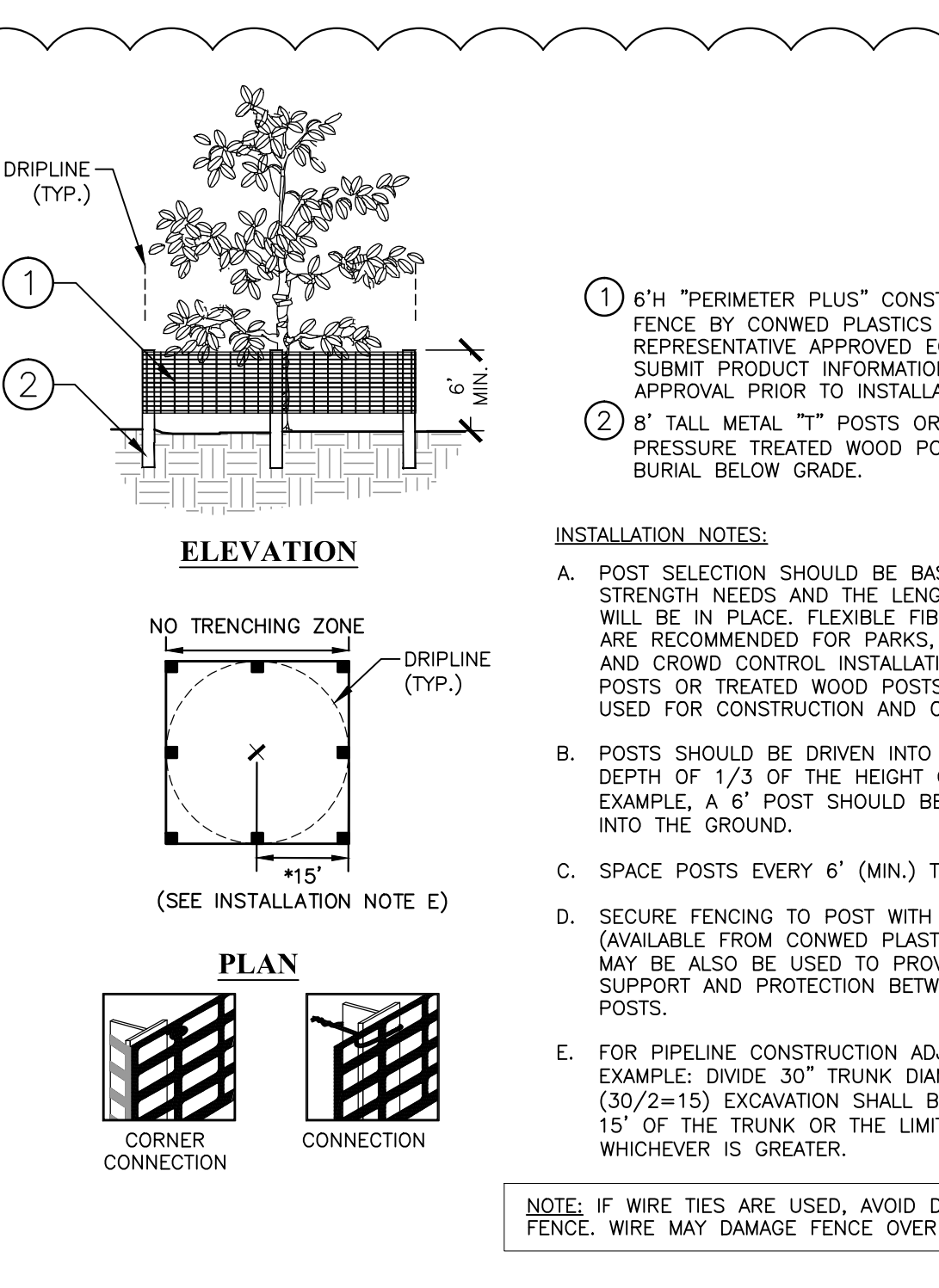
- A) IF REPLACING VERTICAL CURB AND GUTTER, REPLACE WITH MIAMI CURB AND GUTTER.
* NO CHANGE WITH 3' VALLEY CROSSING
- B) SIDEWALK, CONSTRUCT WITH 6" CONCRETE, 6"x6" #10 MESH, 3000 PSI AT 28 DAYS.
- C) DRIVEWAY CONSTRUCTED WITH 6" CONCRETE WITH 6"x6" #10 MESH, 3000 PSI AT 28 DAYS.
- D) EXPANSION JOINT 1/2" PREFORMED JOINT FILLER PER FDOT SECTION 932-1.1 OR APPROVED ALTERNATE.
* IF DRIVE IS WIDER THAN 12', ADD JOINTS AT 10' CENTERS
- E) 5' SIDEWALK ON LOCAL STREETS, 5' SIDEWALK ON THOROUGHFARES.
(MIXED USE PATHS MAY REQUIRE 8' SIDEWALKS PER LAND DEVELOPMENT CODE.)

MANATEE COUNTY		COMMERCIAL & INDUSTRIAL DRIVE		101.3
REV. BY	DATE	DATE OF B.O.C.C. APPROVAL		
	6/12/07			



- NOTES:
- "SV" TO BE IMPRESSED INTO THE NEWLY-POURED CONCRETE CURB, ALONG WITH DISTANCE IN FEET TO THE VALVE. IF NO CURB, INSTALL A GREEN DISC WITH "SV" AND A 1/8"x1" GALVANIZED STEEL SCREW IN THE EDGE OF PAVEMENT WITH THE DISTANCE (FT.) FROM THE DISC TO THE VALVE.
 - ALL EXISTING AND PROPOSED VALVE BOXES SHALL BE ADJUSTED TO FINISHED GRADES AS ESTABLISHED IN THE FIELD.
 - SEWER VALVES SHALL NOT BE PLACED IN HANDICAPPED RAMPS.
 - PRECAST CONCRETE PADS SHALL NOT BE USED.
 - ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1/2".
 - PLUG VALVES SHALL NOT BE USED AS A TAPPING VALVE WHERE AN EXISTING FORCE MAIN IS TO BE TAPPED, USE A TAPPING GATE VALVE PER THE TAPPING SLEEVE AND VALVE DETAIL.
 - TEST BOX TO BE BINGHAM & TAYLOR P200NFC OR EQUAL FOR NORMAL YARD SERVICE, WHERE VALVE WILL BE IN STREET OR UNDER VEHICLE TRAFFIC, USE P25SRD CENTERED IN SEPARATE CONCRETE PAD SIMILAR TO STANDARD VALVE BOX PAD.

MANATEE COUNTY		PLUG VALVE, BOX, COVER AND TAG		US-12
REV. BY	DATE	DATE OF APPROVAL		PAGE 152
CLB/DOH	11/10	MAY 10, 2011		



TREE PROTECTION FENCING DETAIL

N.T.S.

PIPE SIZE (IN.)		THRUST		BLOCK		DIMENSIONS 8 ft. x d inches		DEAD END & TEE		45° WYE	
		90°BEND		45°BEND		22.5°BEND		11.25°BEND			
B	d	B	d	B	d	B	d	B	d	B	d
4	1.5 3 ½	1.1 3 ½	0.8 3 ½	0.6 3 ½	1.3 3 ½	1.1 3 ½	0.8 3 ½	1.3 3 ½	1.1 3 ½	1.6 3 ½	2.0 4 ½
6	2.2 5 ½	1.6 5 ½	1.2 5 ½	0.8 5 ½	1.9 4 ½	2.4 5 ½	1.6 5 ½	2.4 5 ½	2.0 4 ½	2.4 5 ½	3.0 7 ½
8	2.9 7	2.1 5	1.5 3 ½	1.1 3 ½	2.4 5 ½	2.9 7	2.1 5	2.4 5 ½	2.0 4 ½	2.4 5 ½	3.0 7 ½
10	3.5 8 ½	2.6 6 ½	1.9 4 ½	1.3 3 ½	3.0 7 ½	3.5 8 ½	2.6 6 ½	3.0 7 ½	2.4 5 ½	2.4 5 ½	3.0 7 ½
12	4.2 10	3.1 7 ½	2.2 5 ½	1.6 3 ½	3.5 8 ½	4.2 10	3.1 7 ½	3.5 8 ½	2.4 5 ½	2.4 5 ½	3.0 7 ½
14	4.9 11 ¾	3.6 8 ½	2.6 6 ½	1.8 4 ½	4.1 9 ½	4.9 11 ¾	3.6 8 ½	4.1 9 ½	3.4 8 ½	3.4 8 ½	3.4 8 ½
16	5.5 13 ½	4.1 9 ½	2.9 7	2.1 5	4.7 11 ½	5.5 13 ½	4.1 9 ½	4.7 11 ½	3.9 9 ½	3.9 9 ½	3.9 9 ½
18	6.2 15	4.6 11	3.3 8	2.3 5 ½	5.2 12 ½	6.2 15	4.6 11	5.2 12 ½	4.4 10 ½	4.4 10 ½	4.4 10 ½
20	6.9 16 ½	5.0 12	3.6 8 ½	2.6 6 ½	5.8 14	6.9 16 ½	5.0 12	5.8 14	4.9 11 ½	4.9 11 ½	4.9 11 ½
24	8.2 19 ½	6.0 14 ½	4.3 10 ½	3.1 7 ½	6.9 16 ½	8.2 19 ½	6.0 14 ½	6.9 16 ½	5.8 14	5.8 14	5.8 14
30	10.1 24 ½	7.5 18	5.3 12 ½	3.8 9	8.5 20 ½	10.1 24 ½	7.5 18	8.5 20 ½	7.2 17 ½	7.2 17 ½	7.2 17 ½
36	12.1 29	8.9 21 ½	6.4 15 ½	4.5 10 ½	10.2 24 ½	12.1 29	8.9 21 ½	10.2 24 ½	8.6 20 ½	8.6 20 ½	8.6 20 ½

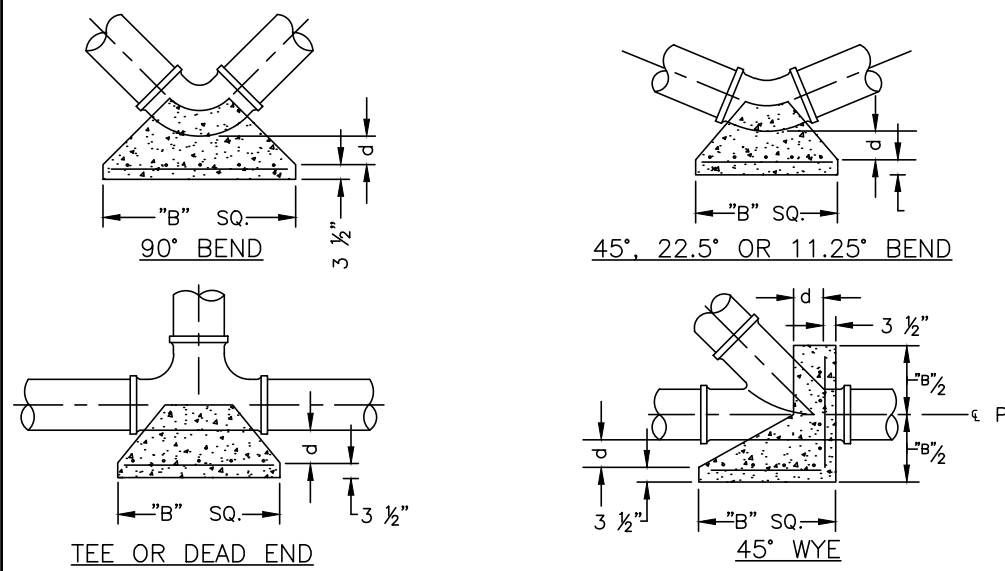
REINFORCEMENT MAT SCHEDULE

FOR DIM. "B" BETWEEN 5.75' & 12.5' USE #4 @ 8" EACH WAY

FOR DIM. "B" LESS THAN 5.75' USE #3 @ 8" EACH WAY

REINFORCEMENT MAT SCHEDULE

FOR DIM. "B" BETWEEN 5.75' & 12.5' USE #4 @ 8" EACH WAY
FOR DIM. "B" LESS THAN 5.75' USE #3 @ 8" EACH WAY



MANATEE COUNTY		CONCRETE THRUST BLOCKS		UG-17
REV. BY	DATE	DATE OF APPROVAL		PAGE 107
CLB/BR	11/10	MAY 10, 2011		

GROUNDWATER / DEWATERING NOTE:

THE PRESENCE OF GROUNDWATER SHOULD BE ANTICIPATED ON THIS PROJECT. CONTRACTOR'S BID SHALL INCLUDE CONSIDERATION FOR THIS ISSUE. WHEN PERFORMING GRADING OPERATIONS DURING PERIODS OF WET WEATHER, PROVIDE ADEQUATE DEWATERING, DRAINAGE AND GROUND WATER MANAGEMENT TO CONTROL MOISTURE OF SOILS.



SHEET NUMBER

51

Kimley»Horn

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KHA PROJECT
148400003
DATE
SEPT 2016
SCALE AS SHOWN
DESIGNED BY AMM
DRAWN BY JRT
CHECKED BY WWW

Manatee County
FLORIDA
FORCE MAIN 1M
REHABILITATION

MANATEE COUNTY

LICENSED PROFESSIONAL

W. WADE WOOD, P.E.

FL LICENSE NUMBER
69051

FL DATE: