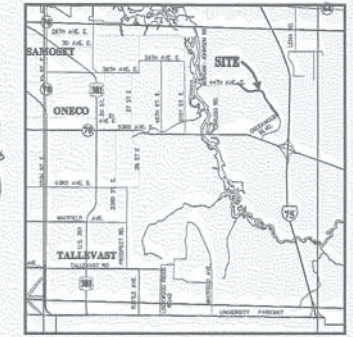


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VICINITY MAP

# CONSTRUCTION PLANS FOR CREEKWOOD BOULEVARD EXTENSION PHASE 1

LOCATED IN

SECTION 11 TOWNSHIP 35 SOUTH, RANGE 18 EAST  
MANATEE COUNTY, FLORIDA

PREPARED FOR:  
CREEKWOOD INVESTORS, LTD.  
7795 PINE TRACE DRIVE  
SARASOTA, FLORIDA 34243  
TEL: (941) 351-1908

PREPARED BY:  
ZOLLER, NAJJAR & SHROYER, L.C.  
P.O. BOX 9448  
201 5TH AVENUE DRIVE EAST  
BRADENTON, FLORIDA 34206  
TEL: (941) 748-8080

FILE OF RECORD  
PERMIT NO. 44005641.034

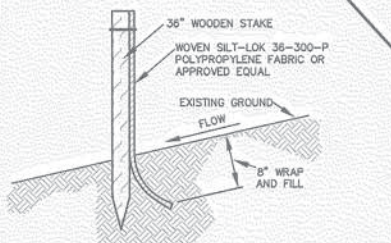
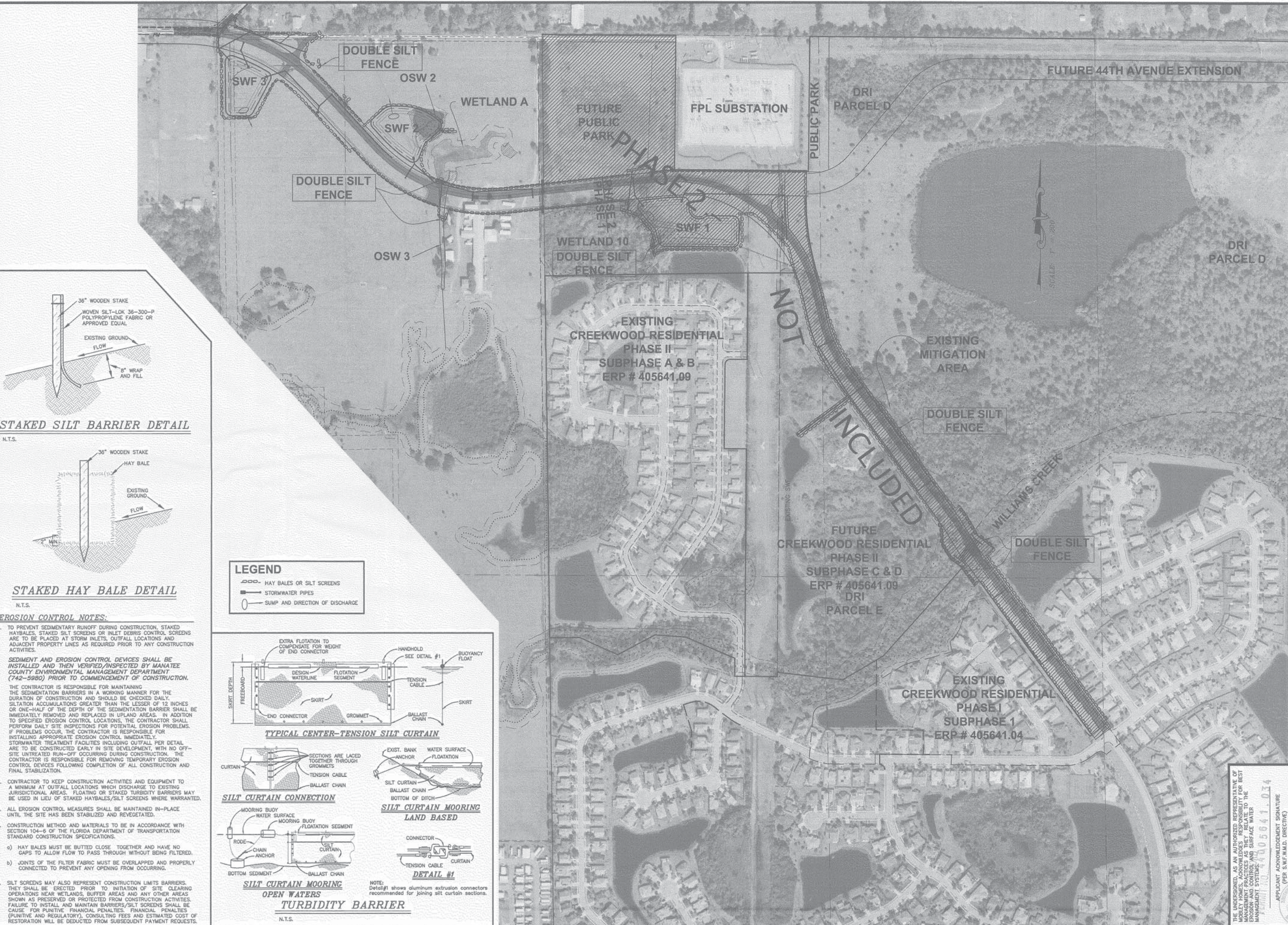
Imaged As Is

CREEKWOOD BOULEVARD EXTENSION - PHASE 1

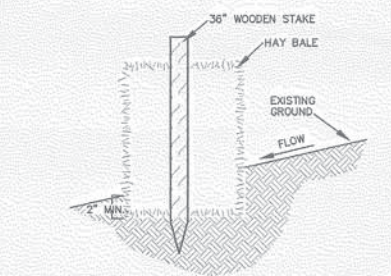
STEVE J. SHROYER  
PROFESSIONAL ENGINEER #33052  
10/12/2005  
SHEET 1

F.O.R. 44005641.034





**STAKED SILT BARRIER DETAIL**  
N.T.S.



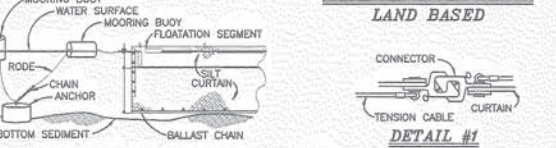
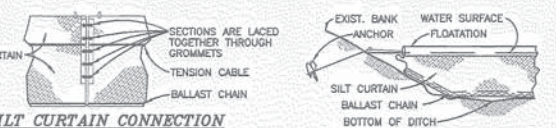
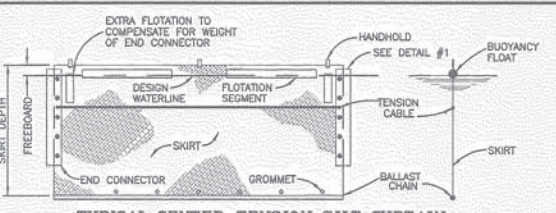
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N.T.S.

**LEGEND**

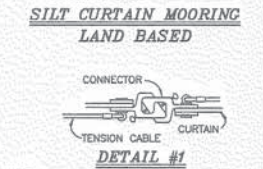
- HAY BALES OR SILT SCREENS
- STORMWATER PIPES
- SUMP AND DIRECTION OF DISCHARGE

**EROSION CONTROL NOTES:**

1. TO PREVENT SEDIMENTARY RUNOFF DURING CONSTRUCTION, STAKED HAYBALES, STAKED SILT SCREENS OR INLET DEBRIS CONTROL SCREENS ARE TO BE PLACED AT STORM INLETS, OUTFALL LOCATIONS AND ADJACENT PROPERTY LINES AS REQUIRED PRIOR TO ANY CONSTRUCTION ACTIVITIES.  
 SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSTALLED AND THEN VERIFIED/INSPECTED BY MANATEE COUNTY ENVIRONMENTAL MANAGEMENT DEPARTMENT (742-5980) PRIOR TO COMMENCEMENT OF CONSTRUCTION.  
 THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE SEDIMENTATION BARRIERS IN A WORKING MANNER FOR THE DURATION OF CONSTRUCTION AND SHOULD BE CHECKED DAILY. SLTATION ACCUMULATIONS GREATER THAN THE LESSER OF 12 INCHES OR ONE-HALF OF THE DEPTH OF THE SEDIMENTATION BARRIER SHALL BE IMMEDIATELY REMOVED AND REPLACED IN UPLAND AREAS. IN ADDITION TO SPECIFIED EROSION CONTROL LOCATIONS, THE CONTRACTOR SHALL PERFORM DAILY SITE INSPECTIONS FOR POTENTIAL EROSION PROBLEMS. IF PROBLEMS OCCUR, THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING APPROPRIATE EROSION CONTROL IMMEDIATELY. STORMWATER TREATMENT FACILITIES INCLUDING OUTFALL PER DETAIL ARE TO BE CONSTRUCTED EARLY IN SITE DEVELOPMENT, WITH NO OFF-SITE UNTREATED RUN-OFF OCCURRING DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR REMOVING TEMPORARY EROSION CONTROL DEVICES FOLLOWING COMPLETION OF ALL CONSTRUCTION AND FINAL STABILIZATION.
2. CONTRACTOR TO KEEP CONSTRUCTION ACTIVITIES AND EQUIPMENT TO A MINIMUM AT OUTFALL LOCATIONS WHICH DISCHARGE TO EXISTING JURISDICTIONAL AREAS. FLOATING OR STAKED TURBIDITY BARRIERS MAY BE USED IN LIEU OF STAKED HAYBALES/SILT SCREENS WHERE WARRANTED.
3. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED IN-PLACE UNTIL THE SITE HAS BEEN STABILIZED AND REVEGETATED.
4. CONSTRUCTION METHOD AND MATERIALS TO BE IN ACCORDANCE WITH SECTION 104-6 OF THE FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD CONSTRUCTION SPECIFICATIONS.
  - a) HAY BALES MUST BE BUTTED CLOSE TOGETHER AND HAVE NO GAPS TO ALLOW FLOW TO PASS THROUGH WITHOUT BEING FILTERED.
  - b) JOINTS OF THE FILTER FABRIC MUST BE OVERLAPPED AND PROPERLY CONNECTED TO PREVENT ANY OPENING FROM OCCURRING.
5. SILT SCREENS MAY ALSO REPRESENT CONSTRUCTION LIMITS BARRIERS. THEY SHALL BE ERRECTED PRIOR TO INITIATION OF SITE CLEARING OPERATIONS NEAR WETLANDS, BUFFER AREAS AND ANY OTHER AREAS SHOWN AS PRESERVED OR PROTECTED FROM CONSTRUCTION ACTIVITIES. FAILURE TO INSTALL AND MAINTAIN BARRIERS/SILT SCREENS SHALL BE CAUSE FOR PUNITIVE FINANCIAL PENALTIES. FINANCIAL PENALTIES (PUNITIVE AND REGULATORY), CONSULTING FEES AND ESTIMATED COST OF RESTORATION WILL BE DEDUCTED FROM SUBSEQUENT PAYMENT REQUESTS.



**SILT CURTAIN MOORING OPEN WATERS TURBIDITY BARRIER**  
N.T.S.



**DETAIL #1**  
NOTE: Detail#1 shows aluminum extrusion connectors recommended for joining silt curtain sections.

**Zoller, Najjar & Shroyer, L.C.**  
 Engineers, Planners, Surveyors, & Architects  
 10000 South US Highway 90, Suite 200  
 Fort Myers, FL 33907  
 TEL: 813.938.2700 FAX: 813.938.2701  
 WWW.ZNS.COM

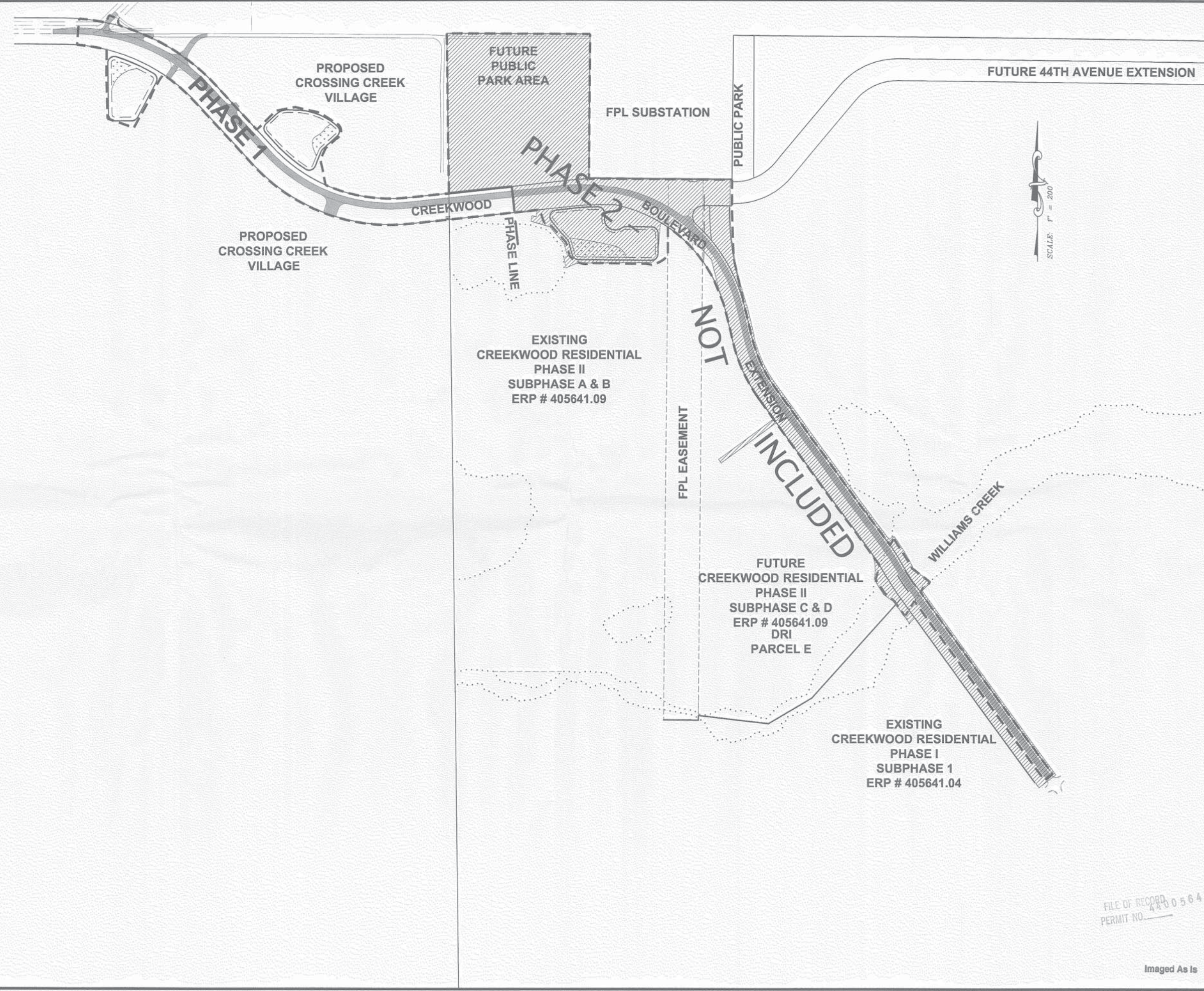
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 JOB NO. 00-3468  
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 DESIGNED: [Signature]  
 DRAWN: [Signature]

REVISIONS  
 1. ADD HAY BALE DETAIL PER PER  
 2. ADD HAY BALE DETAIL PER PER  
 3. ADD HAY BALE DETAIL PER PER  
 4. ZNS

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APPLICANT ACKNOWLEDGMENT SIGNATURE (PER S.W.F.M.D. DIRECTIVE)  
**ZNS**  
 AERIAL WITH SITE OVERLAY, DEWATERING & SWF SEQUENCING PLAN  
 FOR  
**CREEKWOOD BOULEVARD EXTENSION - Phase 1**  
 LOCATED IN  
 SECTION 11, TOWNSHIP 35 SOUTH, RANGE 18 EAST  
 MANATEE COUNTY, FLORIDA  
 SHEET 3

Plot date and time: 2025.10.12.12:26 Sheet Title: MASTER PHASING PLAN Job Number: 02-96318 CAD file name: C:\cadd\Creekwood\Bivz\Extern\Phase1\Phase1.dwg Sheet #: 34 SP #: File Number: E-FILE



FILE OF RECORD  
 PERMIT NO. 4805641.034

Imaged As Is

**MASTER PHASING PLAN**  
 FOR  
**CREEKWOOD BOULEVARD EXTENSION - Phase 1**  
 SECTION 11, TOWNSHIP 35 SOUTH, RANGE 18 EAST  
 MANATEE COUNTY, FLORIDA

SHEET 34

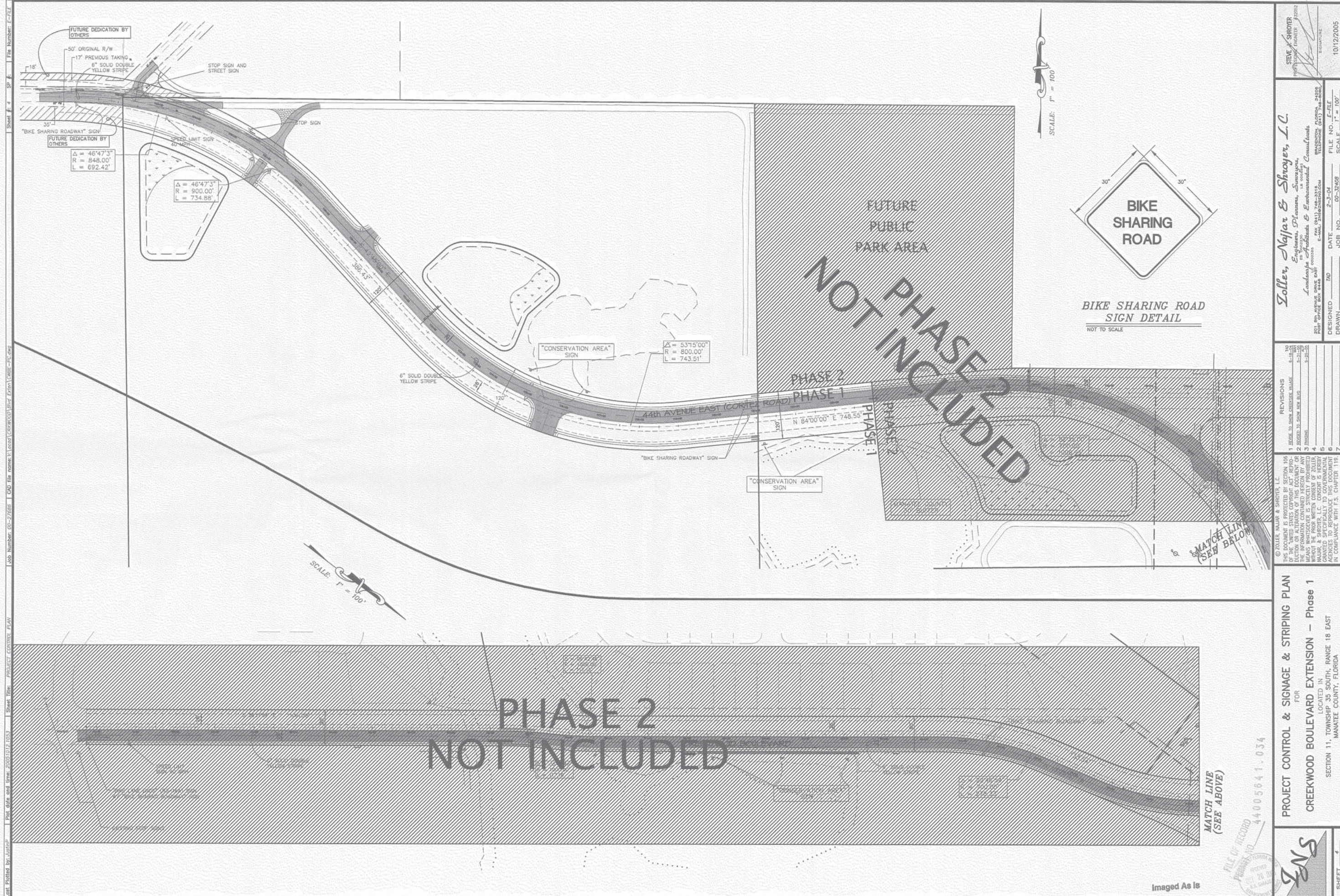
DESIGNED: AAS DATE: 10-11-05 JOB NO.: 02-96318 SCALE: 1" = 200'  
 DRAWN: AJP

ZOLLER, MAJUR & SHROYER, L.C.  
 ENGINEERS, PLANNERS, SURVEYORS  
 LANDSCAPE ARCHITECTS & ENVIRONMENTAL CONSULTANTS  
 1000 W. MANATEE AVENUE, SUITE 200  
 PALM BAY, FLORIDA 32909  
 TEL: (888) 888-8888 FAX: (888) 888-8888  
 WWW.ZMS.COM

STATE OF FLORIDA  
 PROFESSIONAL ENGINEER #00202  
 PROFESSIONAL LANDSCAPE ARCHITECT #00202  
 PROFESSIONAL SURVEYOR #00202  
 10/12/2005

NO.	REVISIONS
1	
2	
3	
4	
5	
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7	

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 Date: 2/20/12 10:53  
 Plot Date and Time: 2/20/12 10:53  
 Plot By: Justin P  
 File Number: E-FILE  
 Sheet #: 4  
 SP #:

SCALE: 1" = 100'



SCALE: 1" = 100'

MATCH LINE  
 (SEE ABOVE)

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REVISIONS  
 1. NONE TO DATE  
 2. NONE TO DATE  
 3. NONE TO DATE  
 4. NONE TO DATE  
 5. NONE TO DATE  
 6. NONE TO DATE  
 7. NONE TO DATE

PROJECT CONTROL & SIGNAGE & STRIPING PLAN  
 FOR  
 CREEKWOOD BOULEVARD EXTENSION - Phase 1  
 LOCATED IN  
 SECTION 11, TOWNSHIP 35 SOUTH, RANGE 18 EAST  
 MANATEE COUNTY, FLORIDA

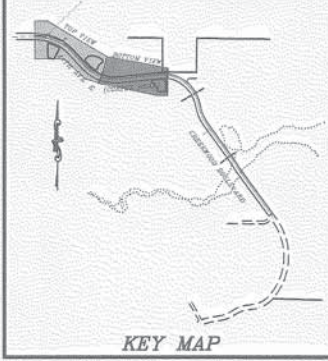
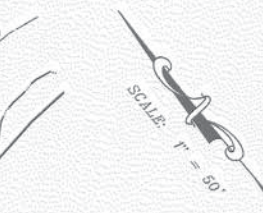
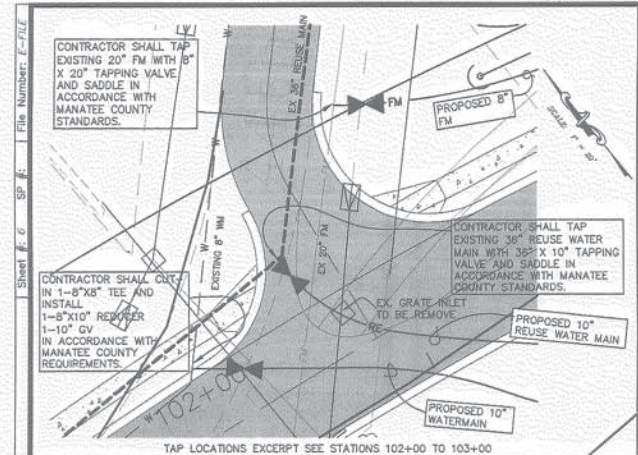
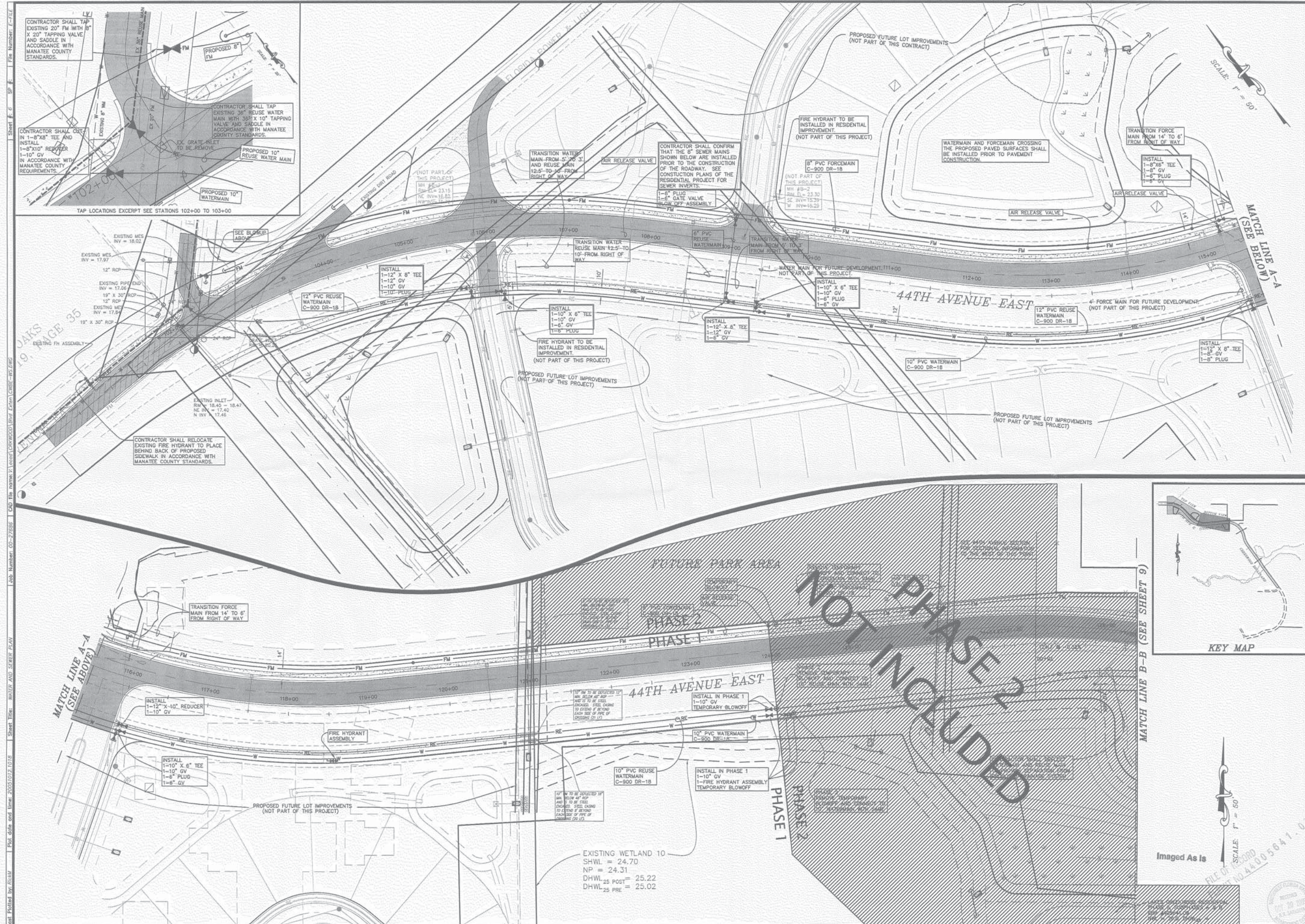
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 FILE NO.: E-REF  
 SCALE: 1" = 100'  
 10/12/2005  
 STEVE SHROYER  
 PROFESSIONAL ENGINEER  
 122002  
 SIGNATURE

Zoller, Najjar & Shroyer, L.L.C.  
 Engineers, Planners, Surveyors,  
 in cooperation with  
 Leachman, Coulter & Environmental Consultants  
 201 1st Avenue South, Suite 200  
 Manatee County, Florida 34428  
 P.O. Box 100, Manatee County, Florida 34428  
 TEL: 888-333-3333 FAX: 888-333-3333  
 WWW.ZOLLERNAJJARSHROYER.COM

SHEET 4





Plot Date and Time: 20251012 10:18  
 Sheet Title: WATER AND SEWER PLAN  
 Job Number: 00-27088 CAD File Name: C:\cadd\0027088\001.dwg  
 User: JMS  
 File Number: E-TITLE

**WATER AND SEWER PLAN**  
 FOR  
**CREEKWOOD BOULEVARD EXTENSION - Phase 1**  
 LOCATED IN  
 SECTION 11, TOWNSHIP 35 SOUTH, RANGE 18 EAST  
 MANATEE COUNTY, FLORIDA

**NOT IN PHASE 1  
NOT IN PHASE 2**

**Imaged As Is**

SCALE: 1" = 50'  
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 DATE: 10/12/2005  
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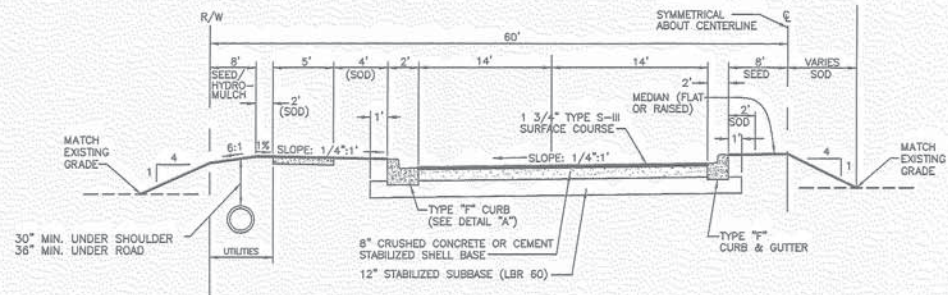
**Zoller, Najjar & Shroyer, L.L.C.**  
 Engineers, Planners, Surveyors,  
 Landscape Architects & Environmental Consultants  
 191 W. MANATEE AVENUE, SUITE 401  
 TAMPA, FL 33601  
 TEL: 813-281-1234 FAX: 813-281-1234  
 WWW.ZNS.COM

DESIGNED: TAD  
 DRAWN: JMS  
 CHECKED: JMS  
 APPROVED: JMS  
 REVISIONS:  
 1. DATE: 10/12/05 BY: JMS  
 2. DATE: 10/12/05 BY: JMS  
 3. DATE: 10/12/05 BY: JMS  
 4. DATE: 10/12/05 BY: JMS  
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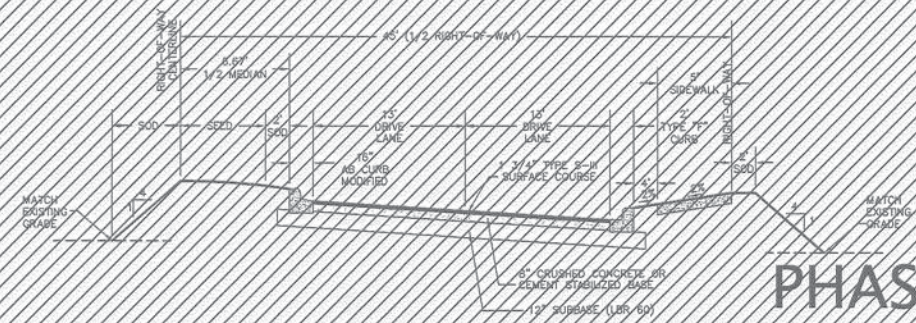
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**ZNS**  
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 SP # 7  
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 Drawn by: J. J. ...  
 Checked by: J. J. ...  
 Date: 10/12/2005

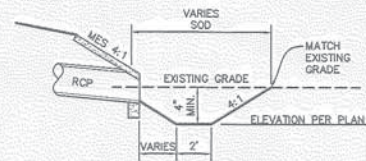


**44th AVENUE EAST  
(CORTEZ ROAD)  
SECTION**  
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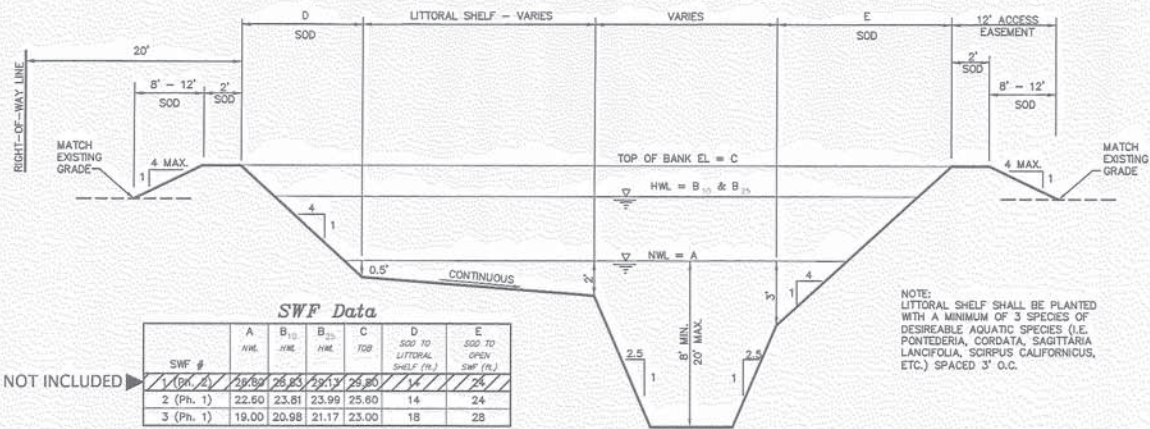


**CREEKWOOD BOULEVARD  
DIMENSIONING SECTION**  
N.T.S.

**PHASE 2  
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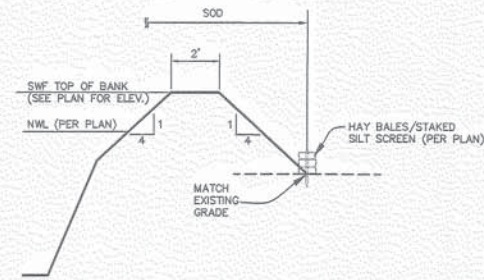
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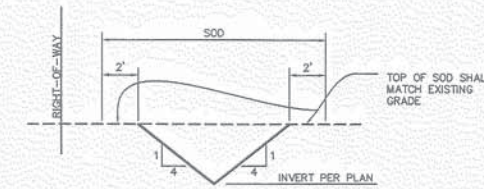
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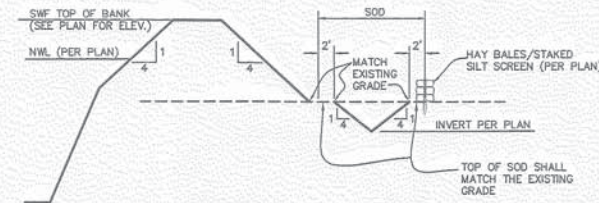
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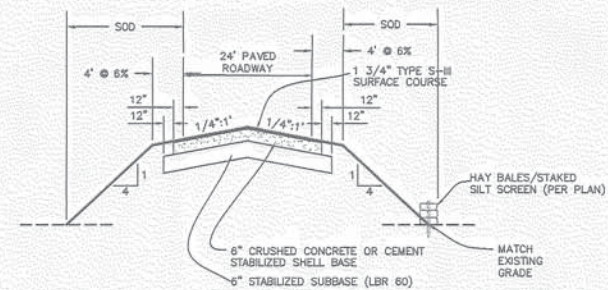
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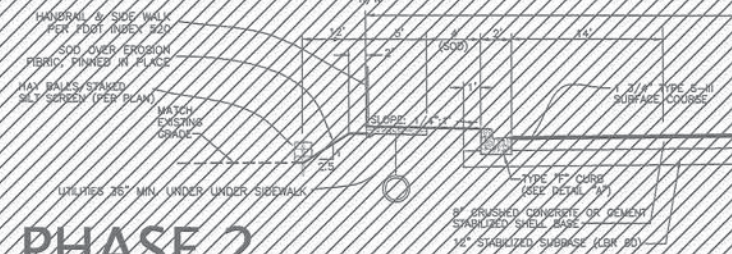
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**SECTION D-D**  
N.T.S.



**SECTION E-E**  
N.T.S.



**PHASE 2  
NOT INCLUDED**

**SECTION F-F**  
N.T.S.

**STEVE J. SHROYER**  
 PROJECT LEADER  
 13202  
**Zoller, Najjar & Shroyer, L.C.**  
 Engineers, Planners, Surveyors,  
 in cooperation with  
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 Ft. Lauderdale, Florida 33309  
 Phone: (954) 744-8888  
 Fax: (954) 744-8889  
 E-mail: zns@znsinc.com  
 10/12/2005  
 FILE NO. E-FILE  
 SCALE NOT TO SCALE  
 DESIGNED: JMO  
 DATE: 2-3-04  
 JOB NO. 20-27666  
 DRAWN: JMO

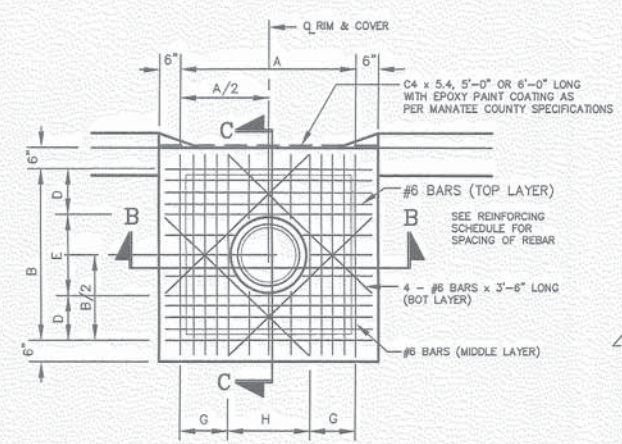
**REVISIONS**  
 1. ASSIGNED SECTION L-1  
 2. PHASE  
 3.  
 4.  
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 7.

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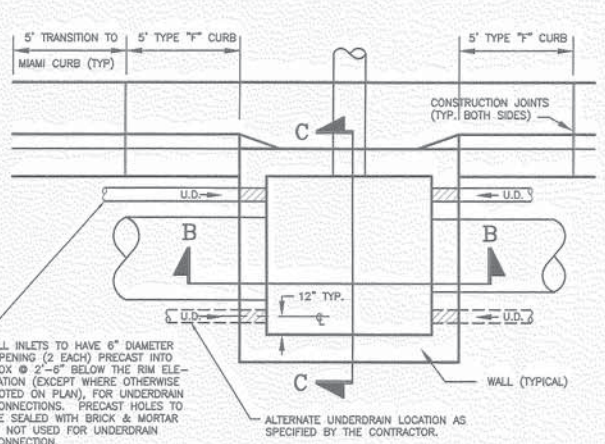
**DRAINAGE DETAILS**  
 FOR  
**CREEKWOOD BOULEVARD EXTENSION - Phase 1**  
 LOCATED IN  
 SECTION 11, TOWNSHIP 35 SOUTH, RANGE 18 EAST  
 MANATEE COUNTY, FLORIDA  
 44005641.034  
**ZNS**



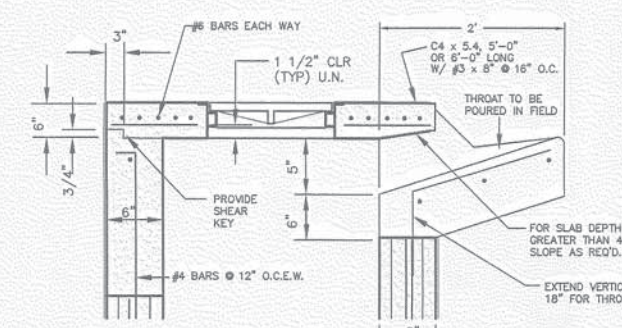
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 Plot by: Jshirer



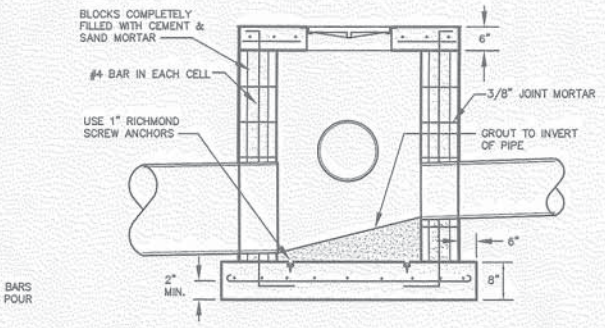
REINFORCING PLAN



PLAN



SECTION C-C (PRECAST)

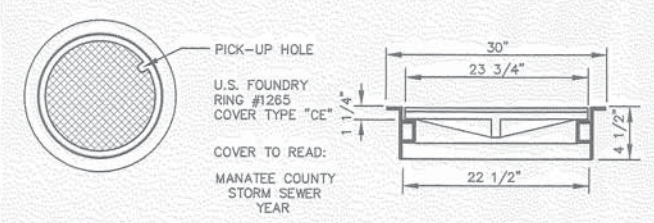


SECTION B-B (CONC. BLOCK)

LOADING CONDITIONS	SCHEDULE					
	A	B	D	E	G	H
H10-44M	4'-0"	4'-0"	4 @ 3 1/2"	4 @ 6 3/4"	4 @ 3 1/2"	4 @ 6 3/4"
	5'-0"	4'-0"	4 @ 3 3/8"	3 @ 7"	3 @ 5 1/2"	3 @ 9"
	5'-0"	5'-0"	5 @ 3 1/4"	4 @ 6 7/8"	4 @ 3 1/4"	4 @ 6 7/8"
	4'-0"	5'-0"	3 @ 5 1/2"	3 @ 9"	4 @ 3 3/8"	3 @ 7"

NOTE: CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO CONSTRUCTION, SHOULD ANY VARIANCE OF THIS DETAIL BE NECESSARY.

CATCH BASIN TOP SLAB

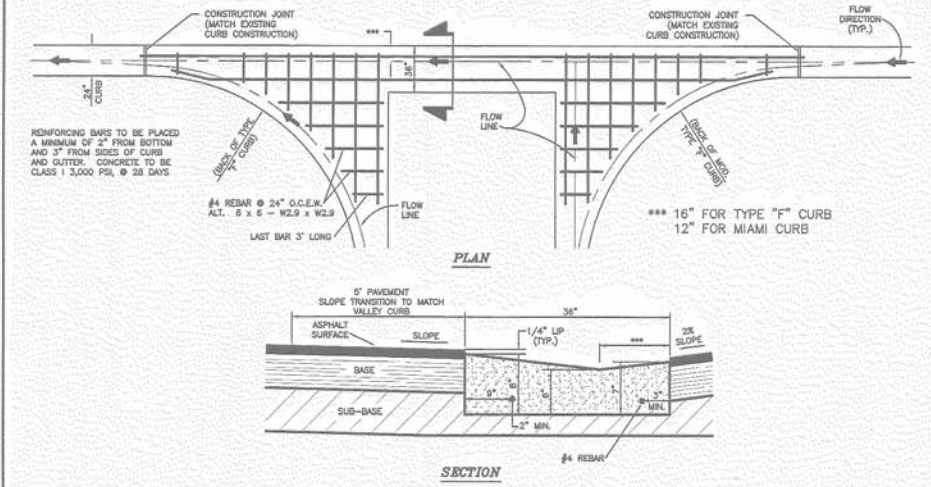


CAST IRON COVER

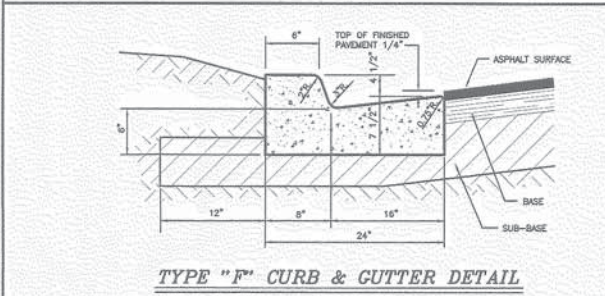
- NOTES:
- CONCRETE SHALL BE AS SPECIFIED IN SECTION 345 OF FLORIDA D.O.T. SPECIFICATIONS, 1986.
  - THE MORTAR SHALL BE OF PORTLAND CEMENT AND SAND, MIXED IN THE PROPORTIONS OF ONE PART CEMENT TO THREE PARTS OF SAND. MASONRY CEMENT MAY BE USED IN LIEU OF MORTAR, PROVIDED IT IS TYPE I OR TYPE II.
  - IRON CASTINGS SHALL BE AS SPECIFIED IN SECTION 962-8 OF FLORIDA D.O.T. SPECIFICATIONS, 1986.
  - CONCRETE SHALL BE 3000 PSI AT 28 DAYS. PROVIDE 3/4" CHAMFER ON ALL EXPOSED EDGES.
  - REINFORCEMENT STEEL SHALL BE AS SPECIFIED IN SECTION 931-1 OF FLORIDA D.O.T. SPECIFICATIONS, 1986.
  - WHERE MATERIAL UNSATISFACTORY FOR FOUNDATION IS ENCOUNTERED AT FLOOR ELEVATION, OMIT FLOOR AND CARRY WALLS DOWN TO SATISFACTORY FOUNDATION. BACKFILL TO FLOOR WITH CLEAN SAND.
  - PRE-CAST BOX WALLS TO BE 6" THICK. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO CONSTRUCTION.
  - UNDERDRAIN TO BE PLACED AT DRAINAGE STRUCTURES WHERE NECESSARY AS DETERMINED BY THE COUNTY AND ENGINEER OF RECORD.

TYPE "F" CURB INLET

N.T.S.

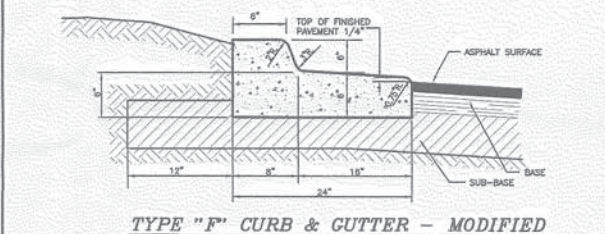


VALLEY CURB CROSSING



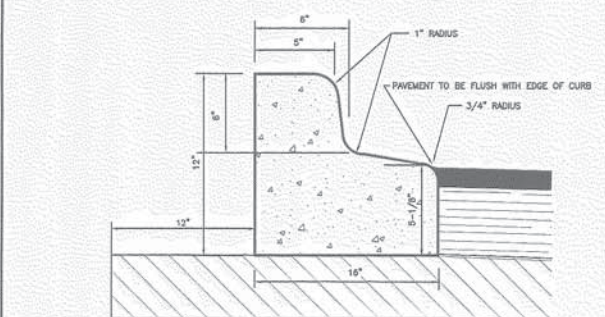
TYPE "F" CURB & GUTTER DETAIL

N.T.S. (TO BE INSTALLED AT ALL INTERSECTION RADIUS)



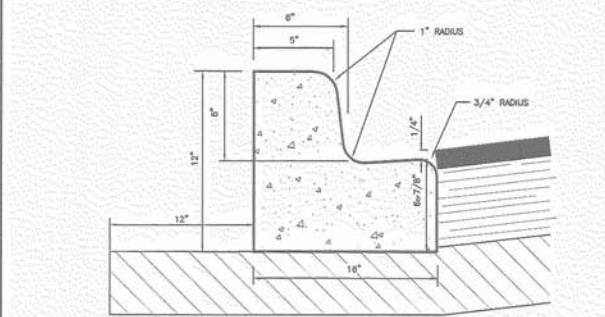
TYPE "F" CURB & GUTTER - MODIFIED

N.T.S.



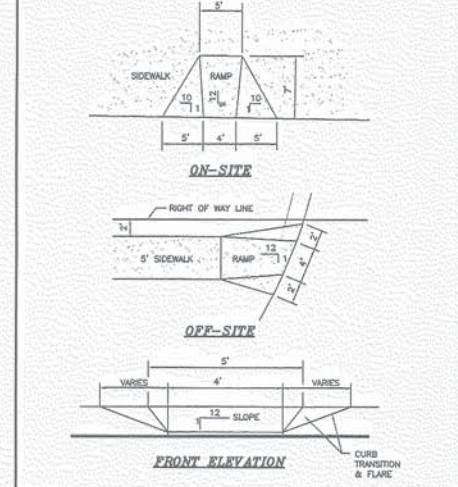
MODIFIED TYPE "AB" CURB

N.T.S.



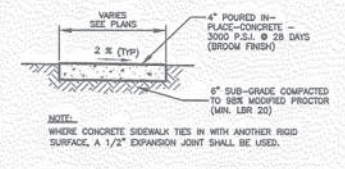
TYPE "AB" CURB

N.T.S.



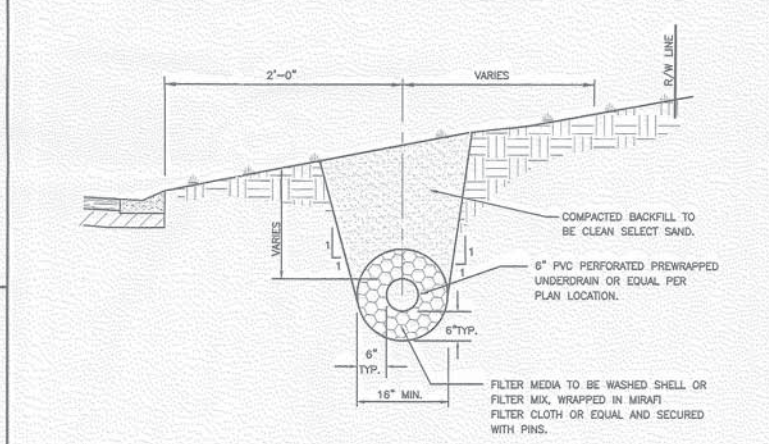
HANDICAP RAMP DETAIL

N.T.S.



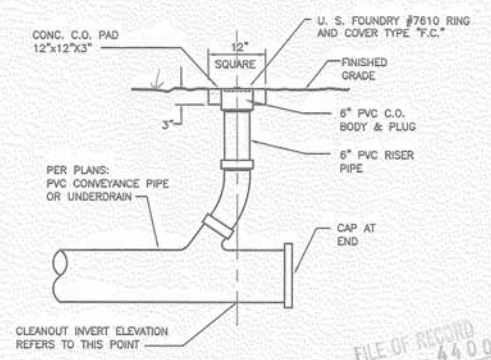
TYPICAL SIDEWALK DETAIL

N.T.S.



ROADSIDE UNDERDRAIN DETAIL

N.T.S.



UNDERDRAIN CLEANOUT DETAIL

N.T.S.

FILE OF RECORD PERMIT NO. 44005641.034

Imaged As Is

SHEET 8 OF 8  
 SCALE: 1/4" = 1'-0"  
 DATE: 2-3-04  
 JOB NO.: 00-35408  
 DESIGNED: MD  
 DRAWN: [Signature]  
 REVISIONS:  
 1. [Blank]  
 2. [Blank]  
 3. [Blank]  
 4. [Blank]  
 5. [Blank]  
 6. [Blank]  
 7. [Blank]

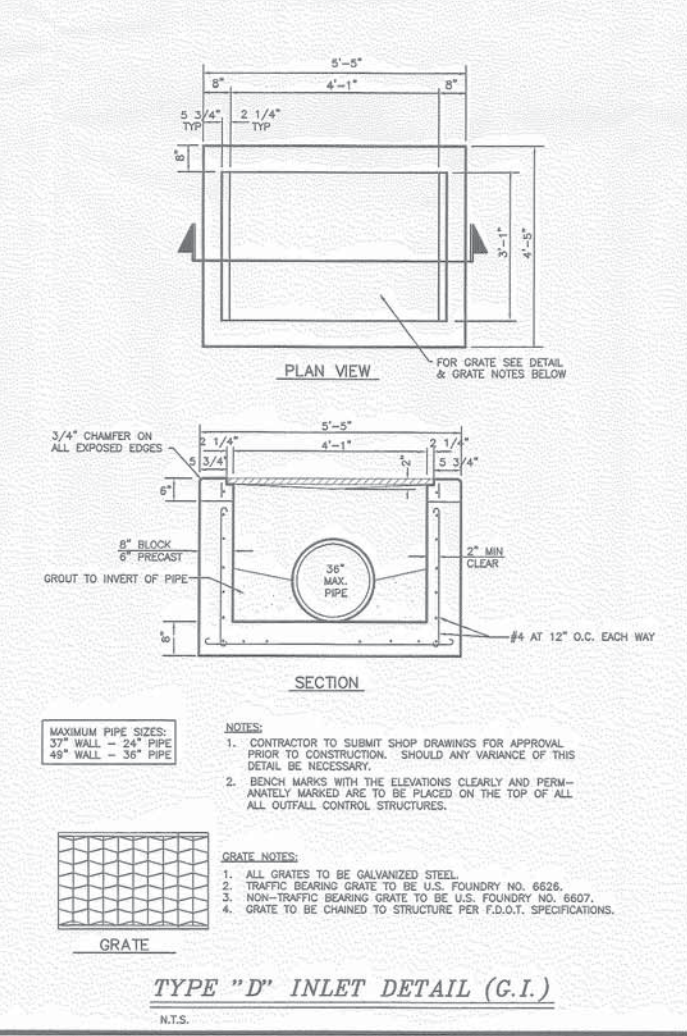
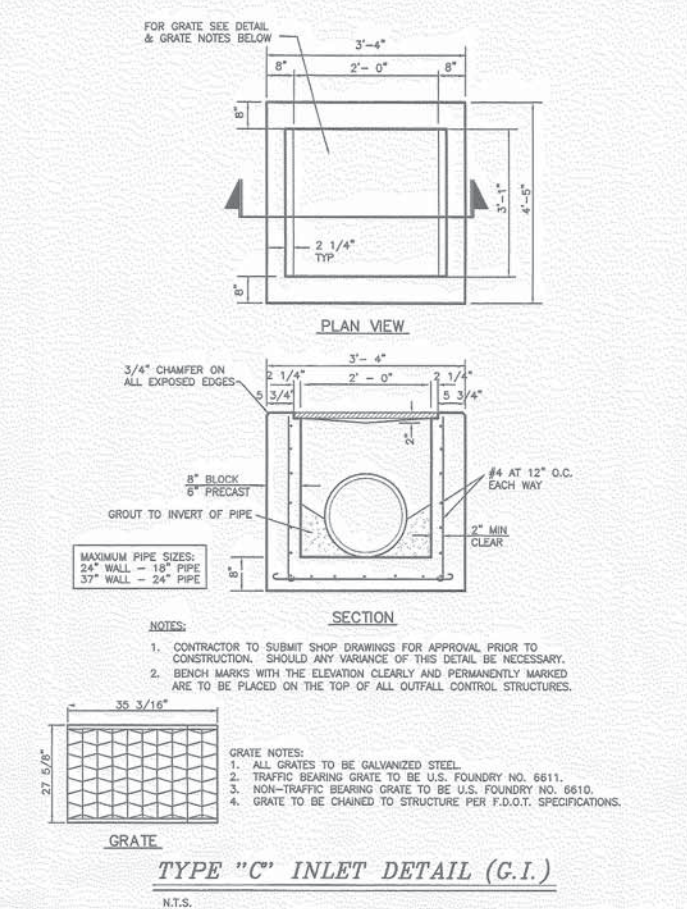
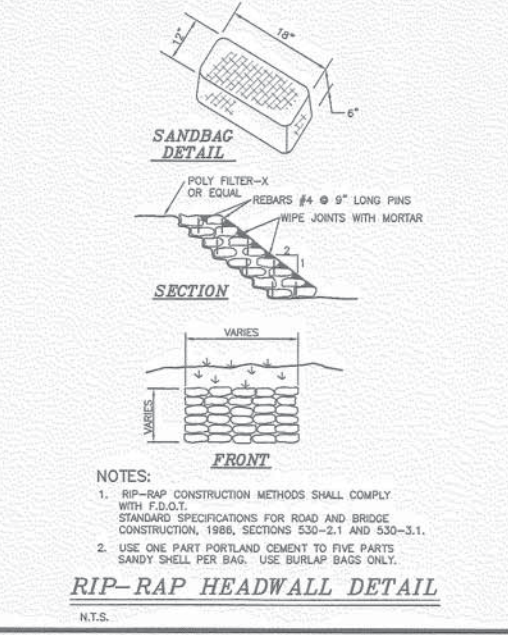
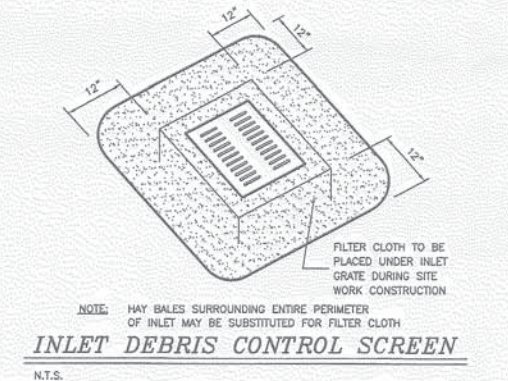
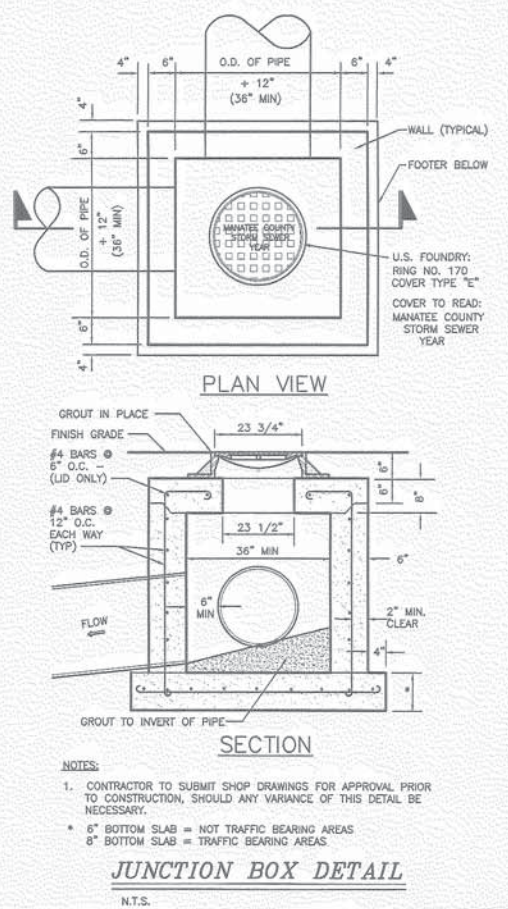
Zoller, Najjar & Shroyer, L.C.  
 Engineers, Planners, Surveyors, & Environmental Consultants  
 12000 W. BOULEVARD, SUITE 200  
 TAMPA, FLORIDA 33607  
 TEL: 813.281.2222  
 FAX: 813.281.2222

CREEKWOOD BOULEVARD EXTENSION - Phase 1  
 SECTION 11, TOWNSHIP 35 SOUTH, RANGE 18 EAST  
 MANATEE COUNTY, FLORIDA

DRAINAGE DETAILS FOR

10/12/2005

Job Number: 07-27669 CAD file name: \Local\Projects\2007\Brid\Exam\07c10.dwg Plot Date and Time: 2/23/2010 16:27 Sheet Title: DRAINAGE DETAILS



**DIMENSIONS & QUANTITIES**

**OVAL PIPE**

**DIMENSIONS & QUANTITIES**

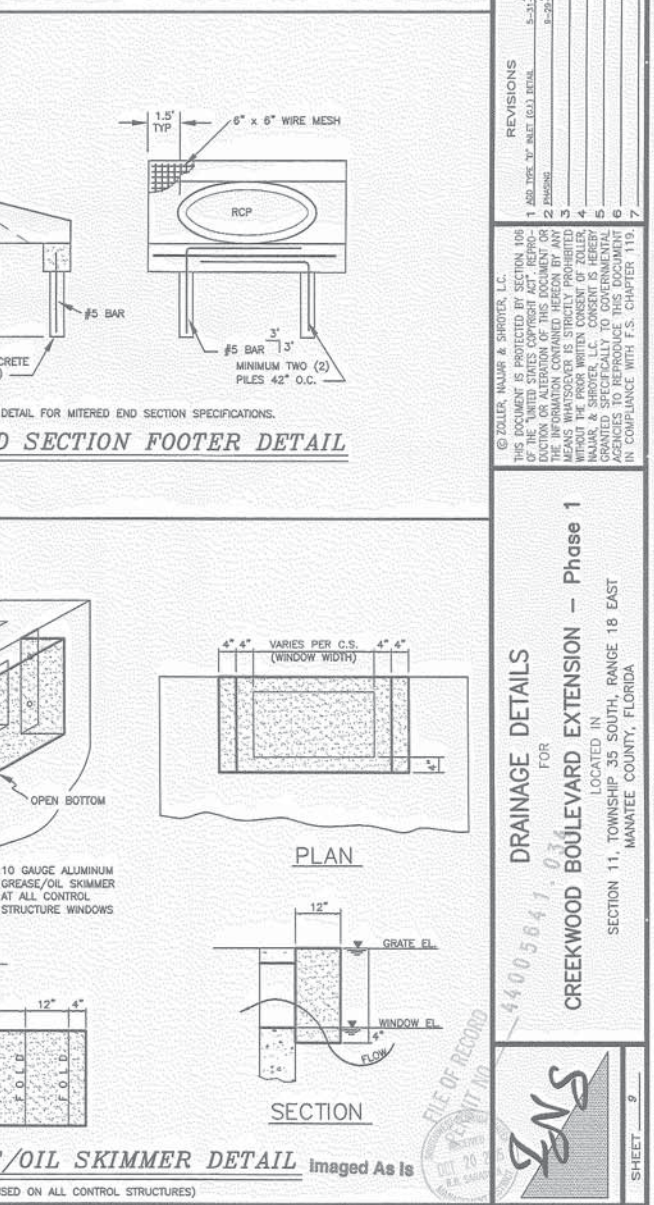
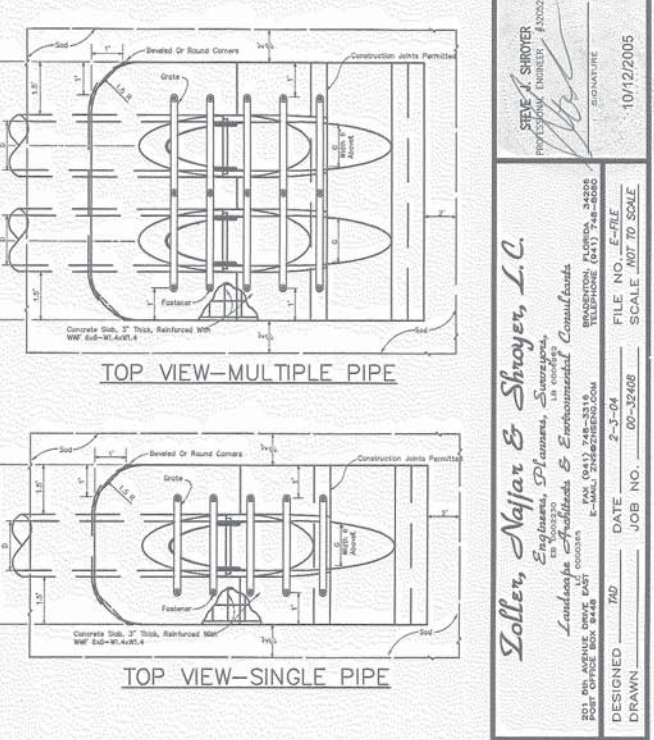
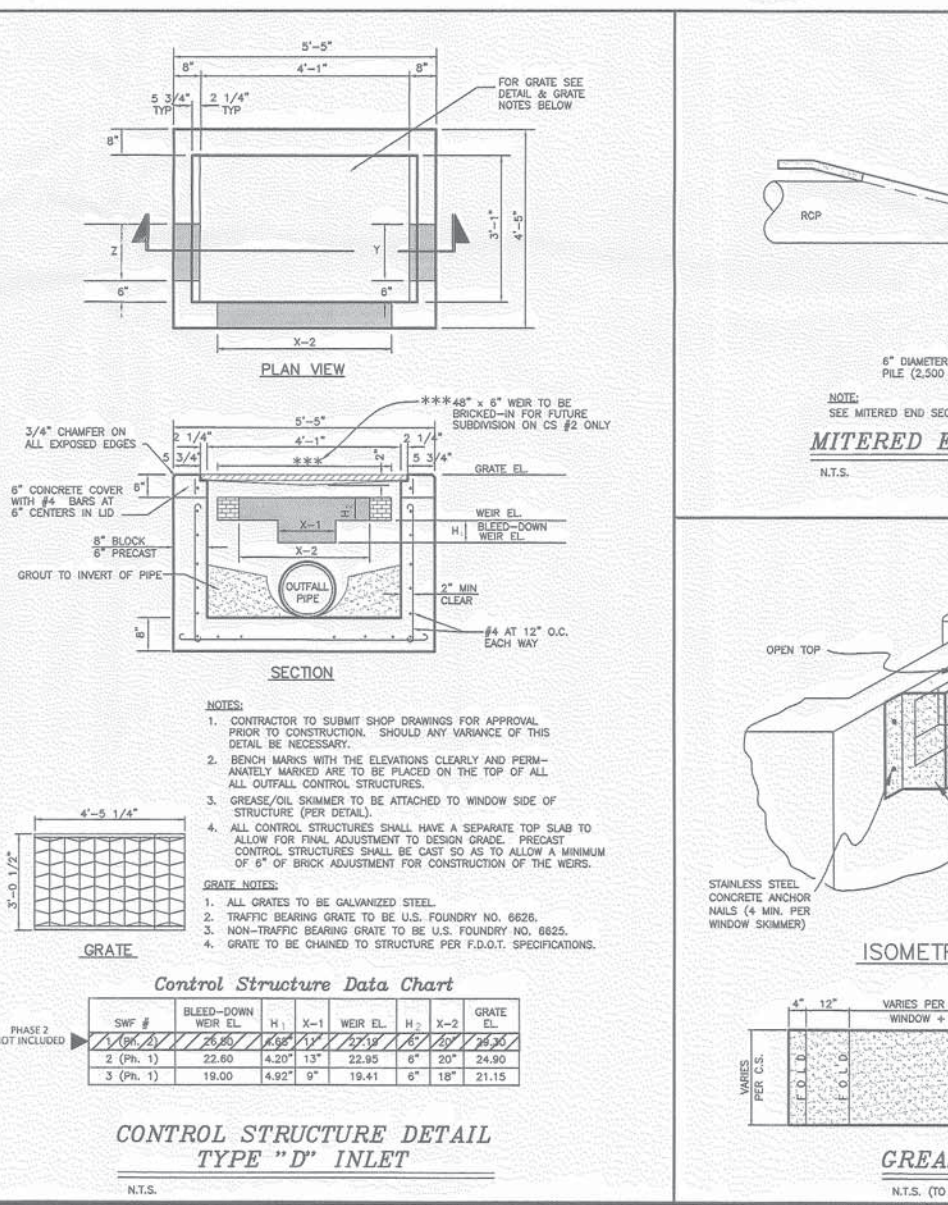
Pipe Size	Span	X	GRADES								CONCRETE (Cu. Yds.)		SODDING (Sq. Yds.)		Quot. Pipe
			A	B	C	E	F	G	Single	Double	Triple	Quot. Pipe	Single	Double	
18"	18'	2'0"	2.30	3.00	4.40	3.50	4'0"	1.90	4.80	2.70	14.44	1.33	1.00	2.00	1.00
18"	24'	2'0"	3.44	3.70	6.10	3.50	6'0"	1.90	6.30	10.00	15.20	1.33	2.00	2.00	1.00
24"	24'	2'0"	2.70	2.10	4.80	2.50	3'0"	2.80	5.70	11.70	16.70	1.33	2.00	2.00	1.00
24"	30'	2'0"	2.90	2.10	4.80	2.50	3'0"	2.80	5.70	11.70	16.70	1.33	2.00	2.00	1.00
30"	30'	2'0"	2.90	2.10	4.80	2.50	3'0"	2.80	5.70	11.70	16.70	1.33	2.00	2.00	1.00
30"	36'	2'0"	3.10	1.90	4.80	2.50	3'0"	2.80	5.70	11.70	16.70	1.33	2.00	2.00	1.00
36"	36'	2'0"	3.10	1.90	4.80	2.50	3'0"	2.80	5.70	11.70	16.70	1.33	2.00	2.00	1.00
36"	42'	2'0"	3.10	1.90	4.80	2.50	3'0"	2.80	5.70	11.70	16.70	1.33	2.00	2.00	1.00
42"	42'	2'0"	3.10	1.90	4.80	2.50	3'0"	2.80	5.70	11.70	16.70	1.33	2.00	2.00	1.00
42"	48'	2'0"	3.10	1.90	4.80	2.50	3'0"	2.80	5.70	11.70	16.70	1.33	2.00	2.00	1.00
48"	48'	2'0"	3.10	1.90	4.80	2.50	3'0"	2.80	5.70	11.70	16.70	1.33	2.00	2.00	1.00
48"	54'	2'0"	3.10	1.90	4.80	2.50	3'0"	2.80	5.70	11.70	16.70	1.33	2.00	2.00	1.00
54"	54'	2'0"	3.10	1.90	4.80	2.50	3'0"	2.80	5.70	11.70	16.70	1.33	2.00	2.00	1.00
54"	60'	2'0"	3.10	1.90	4.80	2.50	3'0"	2.80	5.70	11.70	16.70	1.33	2.00	2.00	1.00

**ROUND PIPE**

**DIMENSIONS & QUANTITIES**

Pipe Size	Span	X	GRADES								CONCRETE (Cu. Yds.)		SODDING (Sq. Yds.)		Quot. Pipe
			A	B	C	E	F	G	Single	Double	Triple	Quot. Pipe	Single	Double	
18"	18'	2'0"	2.30	3.00	4.40	3.50	4'0"	1.90	4.80	2.70	14.44	1.33	1.00	2.00	1.00
18"	24'	2'0"	3.44	3.70	6.10	3.50	6'0"	1.90	6.30	10.00	15.20	1.33	2.00	2.00	1.00
24"	24'	2'0"	2.70	2.10	4.80	2.50	3'0"	2.80	5.70	11.70	16.70	1.33	2.00	2.00	1.00
24"	30'	2'0"	2.90	2.10	4.80	2.50	3'0"	2.80	5.70	11.70	16.70	1.33	2.00	2.00	1.00
30"	30'	2'0"	2.90	2.10	4.80	2.50	3'0"	2.80	5.70	11.70	16.70	1.33	2.00	2.00	1.00
30"	36'	2'0"	3.10	1.90	4.80	2.50	3'0"	2.80	5.70	11.70	16.70	1.33	2.00	2.00	1.00
36"	36'	2'0"	3.10	1.90	4.80	2.50	3'0"	2.80	5.70	11.70	16.70	1.33	2.00	2.00	1.00
36"	42'	2'0"	3.10	1.90	4.80	2.50	3'0"	2.80	5.70	11.70	16.70	1.33	2.00	2.00	1.00
42"	42'	2'0"	3.10	1.90	4.80	2.50	3'0"	2.80	5.70	11.70	16.70	1.33	2.00	2.00	1.00
42"	48'	2'0"	3.10	1.90	4.80	2.50	3'0"	2.80	5.70	11.70	16.70	1.33	2.00	2.00	1.00
48"	48'	2'0"	3.10	1.90	4.80	2.50	3'0"	2.80	5.70	11.70	16.70	1.33	2.00	2.00	1.00
48"	54'	2'0"	3.10	1.90	4.80	2.50	3'0"	2.80	5.70	11.70	16.70	1.33	2.00	2.00	1.00
54"	54'	2'0"	3.10	1.90	4.80	2.50	3'0"	2.80	5.70	11.70	16.70	1.33	2.00	2.00	1.00
54"	60'	2'0"	3.10	1.90	4.80	2.50	3'0"	2.80	5.70	11.70	16.70	1.33	2.00	2.00	1.00

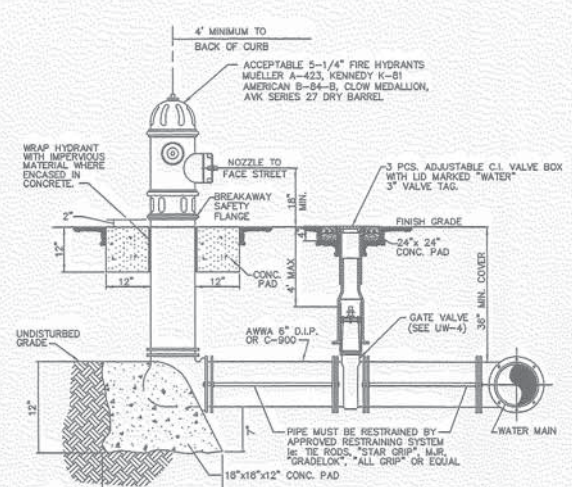
**NOTES:**  
1. SAFETY GRATING FOR 30" (34" x 53") OR LARGER SIDE DRAINS ONLY.  
2. SOD TO BE PLACED 18" AROUND THE PERIMETER OF THE WALL. SOD TO BE BAHA ST. AUGUSTINE SOD WHERE THERE IS TIDAL OR HEAVY CONCENTRATION OF SALT.



DESIGNED BY: S. J. SHROYER  
DATE: 2-3-04  
JOB NO.: 00-12408  
SCALE: 1/8" = 1'-0"

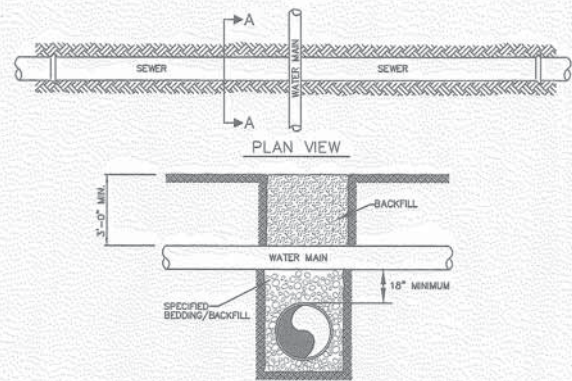
DESIGNED BY: S. J. SHROYER  
DATE: 2-3-04  
JOB NO.: 00-12408  
SCALE: 1/8" = 1'-0"

Plot date and time: 2/20/2009 12:25  
 Sheet Title: WATER DETAILS  
 Job Number:  
 CAD file name: C:\Users\jg001\Documents\2009\2009-02-25\2009-02-25.dwg  
 Job Number:  
 File Number: SP-F-10



- NOTES:
1. HIDEHOLES TO BE PLUGGED WITH BRASS PLUGS.
  2. FIRE HYDRANTS SHALL BE A MINIMUM OF 6"-0" OFF EDGE OF PAVEMENT AND 10"-0" MAX. FROM BACK OF CURB WHERE POSSIBLE AND WHERE SIDEWALK IS TO BE INSTALLED, SHALL BE LOCATED BETWEEN THE SIDEWALK AND EDGE OF ROAD.
  3. HYDRANTS SHALL BE PAINTED SAFETY YELLOW. HYDRANT SHALL BE ALL CAST IRON CONSTRUCTION.
  4. PAV. ITEMS FOR FIRE HYDRANT ASSEMBLIES SHALL INCLUDE HYDRANT, VALVE, PIPING, MAINLINE TEE & HARNESING, VALVE BOX & CONCRETE ENCASEMENTS.
  5. FIRE HYDRANTS SHALL BE PREFERABLY PLACED SO THAT STORM WATER FLOWS AWAY FROM & NOT TOWARDS THE HYDRANT.
  6. FIRE HYDRANTS SHALL BE CONSTRUCTED WITH "GROUND LINE" SET TO FINISH GRADES AS ESTABLISHED IN THE FIELD. NORMAL BURY IS 3 FEET OF COVER FOR WATER LINES. IF EXTENSIONS ARE REQUIRED, THE COST SHALL BE INCLUDED IN THE PRICE BID.
  7. FIRE HYDRANTS MAY BE CONSTRUCTED WITH "GRADELOK" OFFSET FITTING.
  8. RAISED REFLECTIVE PAVEMENT MARKER (BLUE) SHALL BE INSTALLED AT CENTERLINE OF PAVEMENT ADJACENT TO EACH HYDRANT.
  9. ALL EXPOSED EDGES OF CONCRETE SHALL HAVE 1/2" CHAMFER.

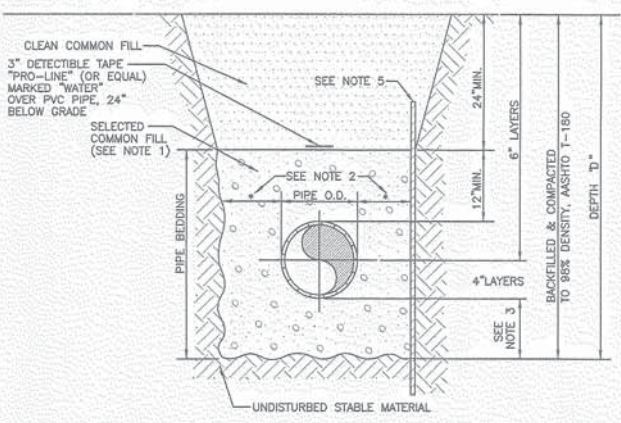
**TYPICAL FIRE HYDRANT ASSEMBLY**  
 N.T.S.



**TYPICAL WATER/SEWER CROSSING**  
 N.T.S.

**NOTES:**

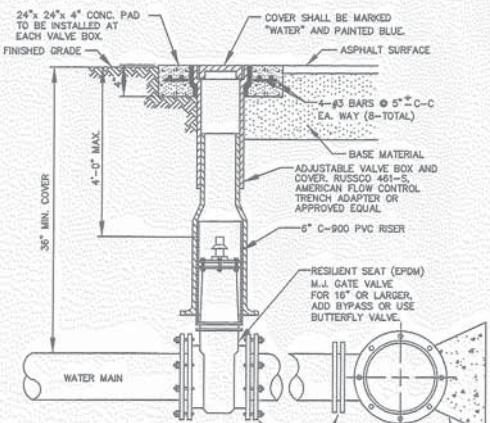
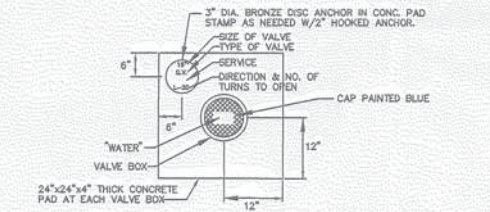
1. USE OF TYPE A-2 AND A-3 PIPE BEDDING TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
2. 10" MAX. FOR PIPE DIAMETERS LESS THAN 24"; 12" MAX. FOR PIPE DIAMETER 24" AND LESS THAN 42"; 24" MAX. FOR PIPE DIAMETER 42" AND OVER.
3. 4" MAX. FOR PIPE 16" DIAMETER & LESS; 6" MAX. FOR PIPE 18" TO 36" DIAMETER; AND 9" MAX. FOR PIPE 42" DIAMETER AND LARGER.
4. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
5. SHEETING ORDERED LEFT IN PLACE TO BE CUT OFF 24" BELOW FINISHED GRADE OR 12" BELOW SUBGRADE.
6. BACKFILL AASHTO M-145 SHALL BE PLACED IN LAYERS NOT TO EXCEED 6 INCHES. EACH LAYER SHALL BE THOROUGHLY TAMPED AND/OR ROLLED TO 98% AASHTO T-180 DENSITY.



**TRENCH DETAIL TYPE A-1 PIPE BEDDING**  
 N.T.S.

**WATER CONSTRUCTION NOTES**

1. WHERE POTABLE WATERMANS CROSS SANITARY SEWER, STORM SEWER AND/OR RECLAIMED WATERMANS, THE WATERMANS SHALL MAINTAIN A MINIMUM OF 18" VERTICAL CLEARANCE.
2. WHEN A POTABLE WATERMAIN PARALLELS A SANITARY SEWER AND/OR STORM SEWER MAIN OR RECLAIMED WATERMAIN, A SEPARATION OF AT LEAST 10 FEET SHALL BE MAINTAINED.
3. WHERE WATER SERVICE LINES CROSS STREETS, SAID LINES SHALL BE INSTALLED IN CONDUIT.
4. GATE VALVES TO BE RESTRAINED BACK TO TEE ON SHORT SERVICES AND RESTRAINED TO FIRST FULL LENGTH OF PIPE ON LONG SERVICES.
5. SEE SUPPLEMENT WATER SPECIFICATIONS SUPPLIED BY THE ENGINEER. A COPY OF SAID SUPPLEMENTARY SPECIFICATIONS MUST BE AT THE JOB SITE DURING CONSTRUCTION.
6. PIPE SHALL BE COLOR CODED PER M.C.P.W.D. REQUIREMENTS (PIGMENTED COLOR BLUE)
7. VALVES INSTALLED AT END OF LINES SHALL BE RESTRAINED WITH THE RODS AND LOCATED WITHIN 18" OF TEES.
8. CONTRACTOR SHALL COORDINATE FIRE HYDRANT ORIENTATION WITH THE APPROPRIATE FIRE DEPARTMENT PRIOR TO CONSTRUCTION.
9. WATERMANS TO BE C-900 DR18, CLASS 150 PIPE.
10. PER MANATEE COUNTY REQUIREMENTS, ALL SERVICES FOR SINGLE-FAMILY RESIDENTIAL LOTS ARE TO HAVE BACKFLOW PREVENTORS INSTALLED BY THE PLUMBERS AFTER THE WATER METER AND INSPECTED BY THE BUILDING DEPARTMENT.



- NOTES:
1. GATE VALVE TO BE MARKED IN CURB WITH A "W" WITH A FOOTAGE FROM THE BACK OF CURB TO THE VALVE OR IF NO CURB, A BLUE DISC WITH "W" IN THE EDGE OF PAVEMENT WITH THE FOOTAGE FROM THE DISC TO THE VALVE.
  2. ALL EXISTING AND PROPOSED VALVE BOXES SHALL BE ADJUSTED TO FINISH GRADES AS ESTABLISHED IN THE FIELD.
  3. WATER VALVES SHALL NOT BE PLACED IN HANDICAPPED RAMPS.
  4. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1/2".

**GATE VALVE, BOX, COVER AND TAG**  
 N.T.S.

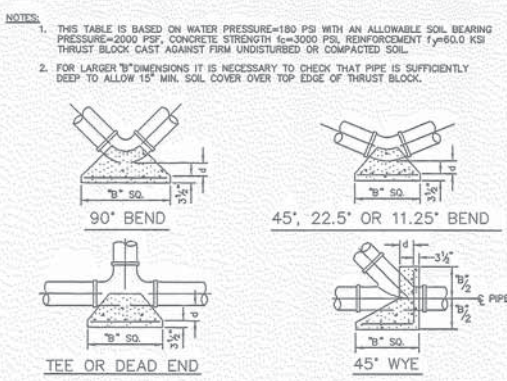
THRUST BLOCK DIMENSIONS B ft. x d inches

PIPE SIZE (IN.)	90° BEND		45° BEND		22.5° BEND		11.25° BEND		DEAD END		45° WYE	
	B	d	B	d	B	d	B	d	B	d	B	d
4	1.3	3 1/2	1.0	3 1/2	0.7	3 1/2	0.6	3 1/2	1.1	3 1/2	1.0	3 1/2
6	1.9	4 1/2	1.5	3 3/4	1.1	3 1/2	0.8	3 1/2	1.6	4	1.5	3 3/4
8	2.6	6 1/4	1.9	4 3/4	1.4	3 1/2	1.0	3 1/2	2.2	5 1/2	1.8	4 1/2
10	3.2	7 3/4	2.4	6	1.7	4 1/4	1.2	3 1/2	2.7	6 1/2	2.3	5 1/2
12	3.8	9 1/4	2.8	6 3/4	2.0	5	1.5	3 3/4	3.2	7 3/4	2.7	6 1/2
14	4.5	11	3.3	8	2.4	6	1.7	4 1/4	3.8	9 1/4	3.2	7 3/4
16	5.1	12 1/4	3.8	9 1/4	2.7	6 1/2	1.9	4 3/4	4.3	10 1/2	3.6	8 3/4
18	5.7	13 3/4	4.2	10 1/4	3.0	7 1/4	2.2	5 1/2	4.8	11 3/4	4.1	10
20	6.4	15 1/2	4.7	11 1/2	3.4	8 1/4	2.4	6	5.4	13	4.5	11
24	7.6	18 1/4	5.6	13 1/2	4.0	9 3/4	2.9	7	6.4	15 1/2	5.4	13
30	9.5	23	7.0	17	5.0	12	3.6	8 3/4	8.0	19 1/4	6.7	16
36	11.4	27 1/2	8.4	20 1/4	6.0	14 1/2	4.3	10 1/2	9.6	23	8.1	19 1/2

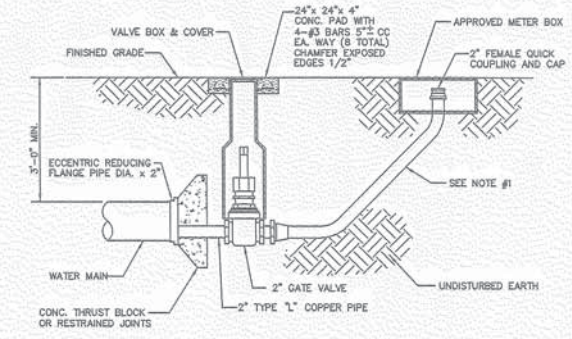
REINFORCEMENT MAT SCHEDULE

FOR DIM. "B" BETWEEN 5.75' & 11.5' USE #4 @ 8" EACH WAY

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



**THRUST BLOCK DETAILS**  
 N.T.S.



- NOTES:
1. POLYETHYLENE SERVICE PIPE MEETING AWWA C-901, SHALL BE POLY-E DRISCOPE S100 ULTRA-LINE OR ENDURE BY ENDOT OR APPROVED EQUAL. PIPE SHALL BE BLUE OR ENCASED IN BLUE SLEEVE.
  2. IF FUTURE WATER MAIN EXTENSION BEYOND THIS PLUG IS POSSIBLE, PROVIDE A MAIN-LINE GATE VALVE BETWEEN THIS PLUG & THE LAST SERVICE BUT THE DISTANCE BETWEEN THE IN-LINE VALVE & THE PLUG SHALL NOT EXCEED 40 FEET.
  3. THIS DETAIL TO BE USED FOR ALL WATER MAINS 10" DIA. OR SMALLER.

**END OF LINE 2" BLOW-OFF ASSEMBLY**  
 N.T.S.

MANATEE COUNTY, FLORIDA

DESIGNED BY: RMW DATE: 11-18-04 JOB NO.: 00-32468 SCALE: A67 TO BOLE

DRAWN BY: RMW

REVISIONS

1	UPDATE DRAWING FOR THE 11/18/04
2	2/20/09
3	
4	
5	
6	
7	

DATE: 11-18-04

FILE NO.: E-787

SCALE: A67 TO BOLE

10/12/2005

MANATEE COUNTY, FLORIDA

SECTION 11, TOWNSHIP 35 SOUTH, RANGE 18 EAST

CREEKWOOD BOULEVARD EXTENSION - Phase 1

FOR WATER DETAILS

LOCATED IN

MANATEE COUNTY, FLORIDA

Imaged As Is

4400541.034

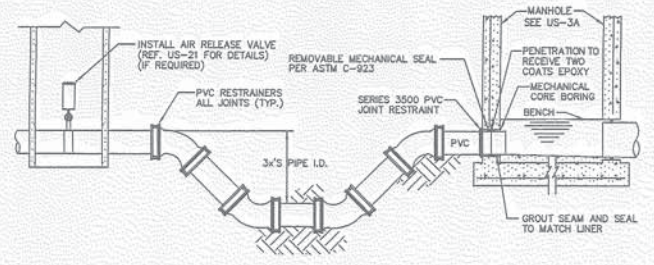
FILE OF RECORD

RECEIVED OCT 20 2005 P.A. MARSHALL

14

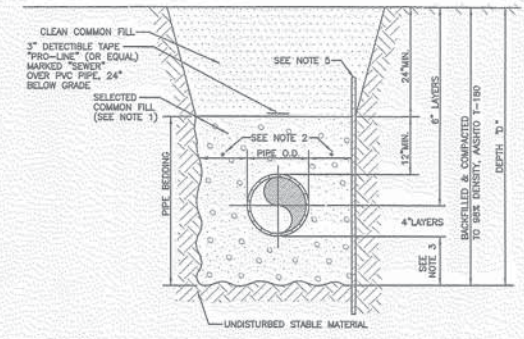
Job Number: 00-272656 CAD File Name: C:\cadd\cadd\00272656\Drawn\Drawn\00-272656.dwg Plot Date: 03/20/2010 10:10:10 AM Plot Path: C:\Program Files\Autodesk\AutoCAD 2010\Plot\Plot1.dwg

- NOTES:**
- PIPE FITTINGS TO BE ANNA C-907, CLASS 150, (OR 18) MINIMUM.
  - PVC RESTRAINTERS TO BE EBBA IRON SERIES 1100 PV, 1100 HV, 1500, 1600 & 3500 (AT M.H.) UN-FLANGE EQUIVALENT IS ACCEPTABLE, SUBMIT DETAILS TO ENGINEERING DIVISION, M.C.P.W.D., FOR APPROVAL.
  - WHEN FORCE MAIN ENTERS M.H. ABOVE BOTTOM, REFER TO US-7, FORCE MAIN INSIDE DROP CONNECTION.
  - BUILD CHANNEL FOR F/M FLOW TO BLEND IN WITH EXISTING CHANNEL.



**FORCE MAIN CONNECTION TO MANHOLE DETAIL**  
N.T.S.

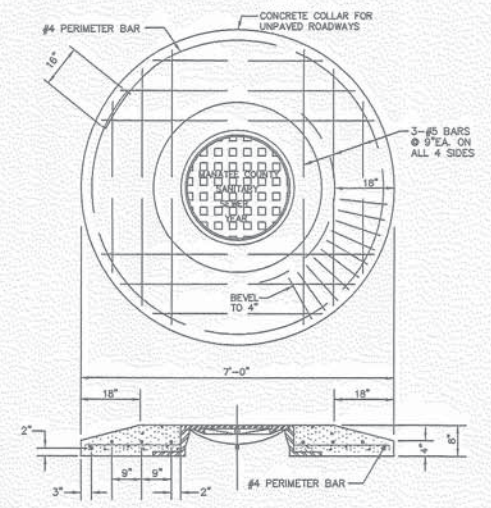
- NOTES:**
- USE OF TYPE A-2 AND A-3 PIPE BEDDING TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
  - 1" MAX. FOR PIPE DIAMETERS LESS THAN 24"; 1.5" MAX. FOR PIPE DIAMETER 24" AND LESS THAN 42"; 2.4" MAX. FOR PIPE DIAMETER 42" AND OVER.
  - 4" MAX. FOR PIPE 16" DIAMETER & LESS; 6" MAX. FOR PIPE 18" TO 36" DIAMETER; AND 8" MAX. FOR PIPE 42" DIAMETER AND LARGER.
  - INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
  - SHEETING ORDERED LEFT IN PLACE TO BE CUT OFF 24" BELOW FINISHED GRADE OR 12" BELOW SUBGRADE.
  - BACKFILL ASHTO M-145 SHALL BE PLACED IN LAYERS NOT TO EXCEED 6" THICK. EACH LAYER SHALL BE THOROUGHLY TAMPED AND/OR ROLLED TO 98% ASHTO T-100 DENSITY.



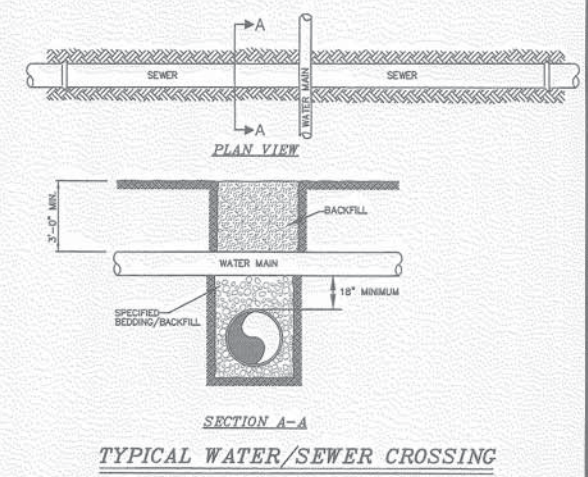
**TRENCH DETAIL TYPE A-1 PIPE BEDDING**  
N.T.S.

**SANITARY SEWER NOTES**

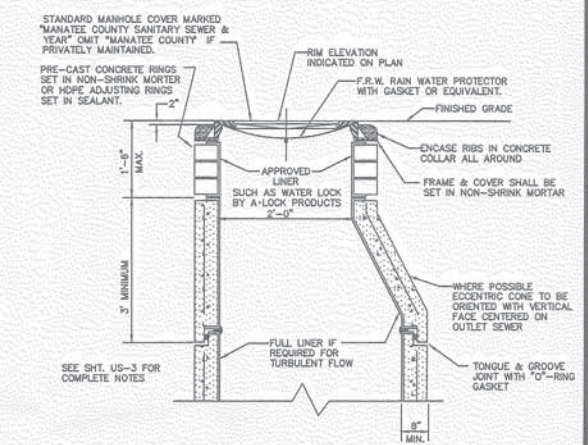
- WHERE SANITARY SEWER CROSSES WITHIN 18" VERTICALLY OF A POTABLE WATERMAIN, RECLAIMED WATERMAIN OR STORM DRAIN, THE SEWER MAINS AND/OR WATERMANS SHALL MAINTAIN A MINIMUM OF 18" VERTICAL CLEARANCE. WHEN A SANITARY SEWER MAIN PARALLELS A RECLAIMED WATERMAIN, A MINIMUM OF 5 FEET HORIZONTAL SEPARATION (CENTER TO CENTER) AND 3 FEET (OUTSIDE TO OUTSIDE) IS REQUIRED.
- MANHOLES SHALL BE CONSTRUCTED COATED AND INSTALLED ACCORDANCE WITH MANATEE COUNTY SPECIFICATIONS.
- ALL P.V.C. PIPING SHALL BE COLOR CODED (METHOD ESTABLISHED BY M.C.P.W.D. DIRECTIVE) IN THE FOLLOWING COLORS:  
GRAVITY & PRESSURE, RAW SEWAGE - GREEN  
TREATED EFFLUENT - LAVENDER  
ALL FERROUS PIPING SHALL BE FIELD CODED (SAME COLORS BY METHOD SUBMITTED TO AND APPROVED BY M.C.P.W.D.).
- ALL CLEAN OUT COVERS SHALL BE MARKED "S" FOR SEWER. ALL I.P.S. PLUGS FOR C.O. SHALL BE RAISED NUT SOLID PLUGS.
- P.V.C. PIPE (GRAVITY SEWER) FITTINGS AND JOINTS SHALL MEET A.S.T.M. STANDARDS, A.S.T.M. 9224H, A.S.T.M. D1704, A.S.T.M. D2004, A.S.T.M. F-477, A.S.T.M. 5333B UN-BELL, B-4 OR UN-BELL B-7 AND STANDARD DIMENSION RATIO (SDR 26). ALL SANITARY GRAVITY SEWER PIPES SHALL BE 20' 2" PVC MEETING THE REQUIREMENTS OF ASTM 5334 & COLOR CODED (METHOD ESTABLISHED BY M.C.P.W.D. DIRECTIVE) IN THE COLOR GREEN. ALL PIPE MUST BE MARKED WITH APPLICABLE STANDARDS AND SO CERTIFIED.
- ALL PRE-CAST MANHOLES SHALL BE 8" THICK, TYPE II CEMENT, 4000 PSI REINFORCED CONCRETE MANUFACTURED TO MEET OR EXCEED THE REQUIREMENTS OF A.S.T.M. C-478, LATEST REVISIONS WITH ALL APPLICABLE DOCUMENTS. THE FOUR (4) FOOT SECTIONS SHALL BE JOINED BY TONGUE AND GROOVE METHOD AND CONTAIN AN "O"-RING GASKET IN ACCORDANCE WITH A.S.T.M. C-443. CONCENTRIC CONE TOP SECTIONS SHALL HAVE THICKENED UPPER WALLS WITH THE SMALLEST I.D. OF 24" RECEIVE FRAME AND COVER. SHALLOW MANHOLES SHALL HAVE 10.5" REINFORCED CONCRETE TOP FORMED AND GASKETED TO FIT BARREL SECTION. ALL PIPE OPENINGS SHALL BE FITTED WITH RESILIENT PIPE TO MANHOLE SEALS AS PER A.S.T.M. C-923. PRE-CAST GRADE RINGS SHALL BE USED TO EXTEND MANHOLE TO PROPER GRADE. THEY SHALL BE SET IN THICK BED OF NON-SHRINK MORTAR AND BE COATED SAME AS MANHOLE. LIFTING HOLES SHALL NOT PENETRATE THE MANHOLE WALLS. PRE-CAST INVERTS AND BENCHES PREFERRED.
- FIBERGLASS RAIN WATER PROTECTORS SHALL BE EQUAL TO FRW'S SEWER GUARD AND SET WITH GASKET.
- DROP MANHOLES MAY HAVE THE LOWER CONNECTION PRE-CAST TO INCLUDE THE 90" INLET. THIS CASTING MUST BE COATED IN ACCORDANCE WITH MANHOLE SPECIFICATIONS.
- ALL MANHOLES SHALL BE SET ON FIRM, UNDISTURBED SOIL.
- SUBMIT ALL MATERIALS, STRUCTURES, PRODUCTS AND METHODS FOR APPROVAL.
- ALL BIDDERS ARE HEREBY ADVISED THAT ALL EXCAVATION ON THIS PROJECT MUST COMPLY WITH THE FLORIDA STATUTE 90-95 "TRENCH SAFETY ACT", AND THAT THE COST OF COMPLIANCE IS INCLUDED IN THE BASE BID. THE BIDDER SHALL INDICATE ON THE BID FORM THE COSTS ASSOCIATED WITH COMPLIANCE.



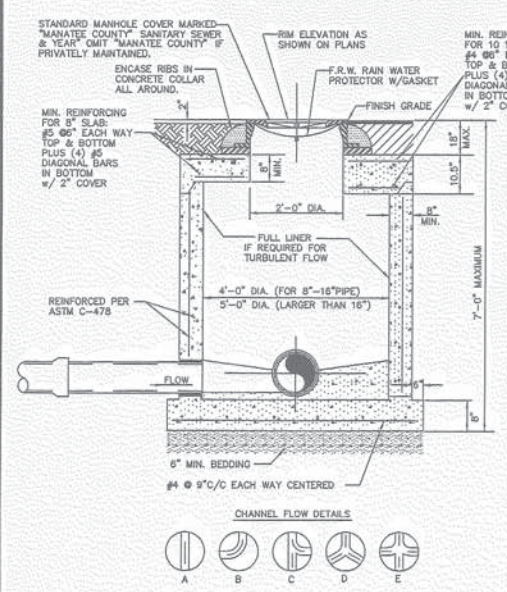
**MANHOLE COVER & CONCRETE COLLAR FOR UNPAVED ROADWAYS**  
N.T.S.



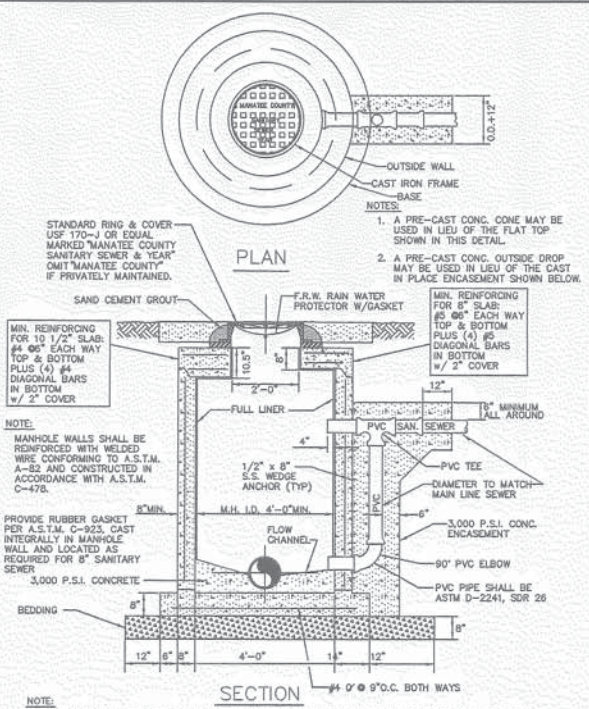
**TYPICAL WATER/SEWER CROSSING**  
N.T.S.



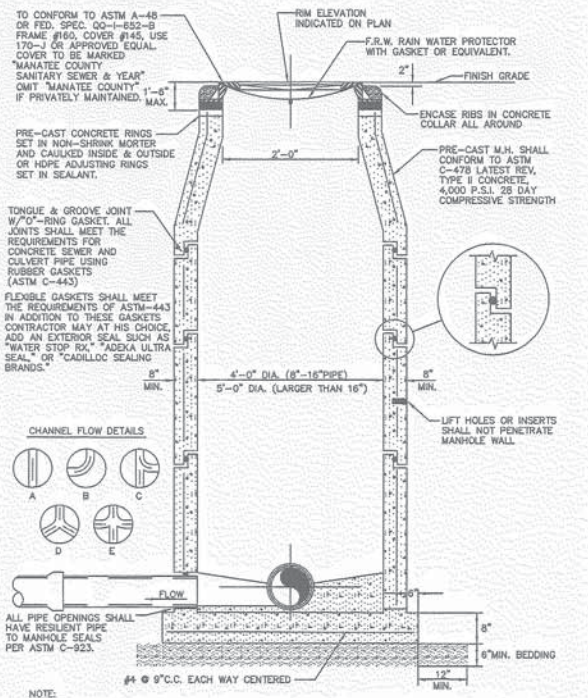
**STANDARD PRE-CAST SANITARY SEWER ECCENTRIC MANHOLE**  
N.T.S.



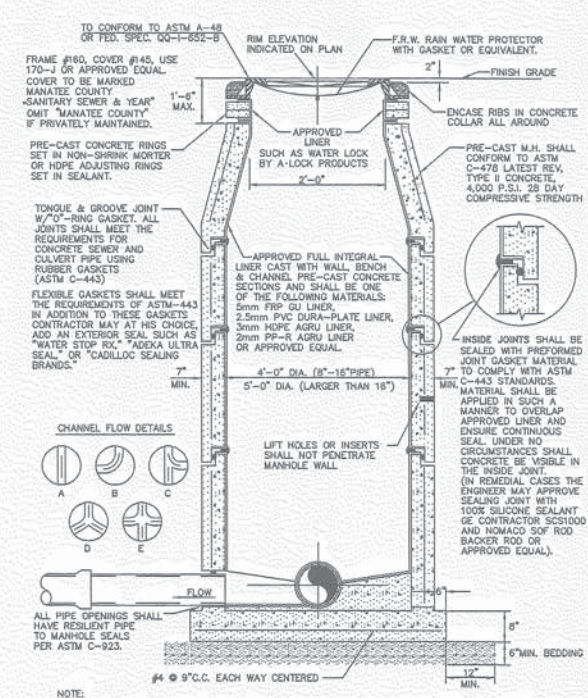
**STANDARD PRE-CAST SHALLOW MANHOLE**  
N.T.S.



**GRAVITY SEWER STANDARD DROP CONNECTION DETAIL**  
N.T.S.



**STANDARD PRE-CAST SANITARY SEWER MANHOLE FOR UNDISTURBED FLOW**  
N.T.S.



**STANDARD PRE-CAST SANITARY SEWER MANHOLE FOR TURBULENT FLOW**  
N.T.S.

**SEWER DETAILS**  
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 FOR RECORD  
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 DRAWN: ALP  
 DESIGNED: ALP  
 DATE: 11-19-04  
 JOB NO.: 00-32408  
 SCALE: NOT TO SCALE  
 FILE NO.: E-FILE  
 10/12/2005

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 10/12/2005

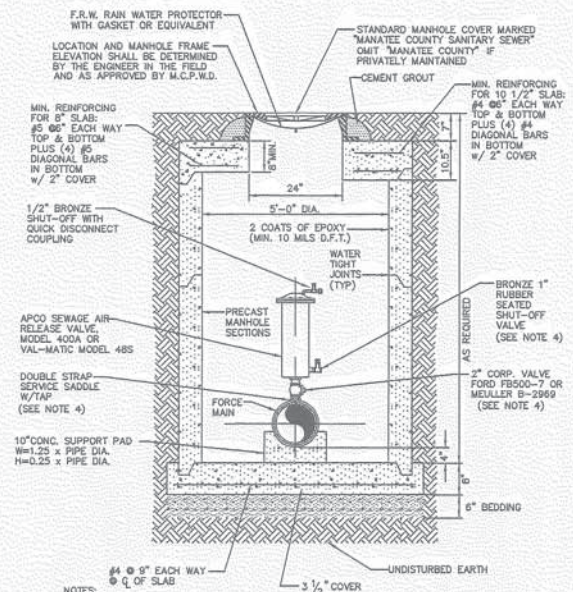
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 DATE: 11-19-04  
 JOB NO.: 00-32408  
 SCALE: NOT TO SCALE  
 FILE NO.: E-FILE  
 10/12/2005

**Zoller, Najjar & Shroyer, L.L.C.**  
 Engineers, Planners, Surveyors,  
 Landscape Architects & Environmental Consultants  
 201 9th Avenue SW, Suite 1000  
 Tallahassee, Florida 32301  
 TEL: (904) 244-2318  
 FAX: (904) 244-2319  
 E-MAIL: ZN@ZNSINC.COM  
 WWW.ZNSINC.COM  
 TELEPHONE (CAT) 744-8282

**CREEKWOOD BOULEVARD EXTENSION - Phase 1**  
 LOCATED IN  
 SECTION 11, TOWNSHIP 35 SOUTH, RANGE 18 EAST  
 MANATEE COUNTY, FLORIDA

SHEET 17

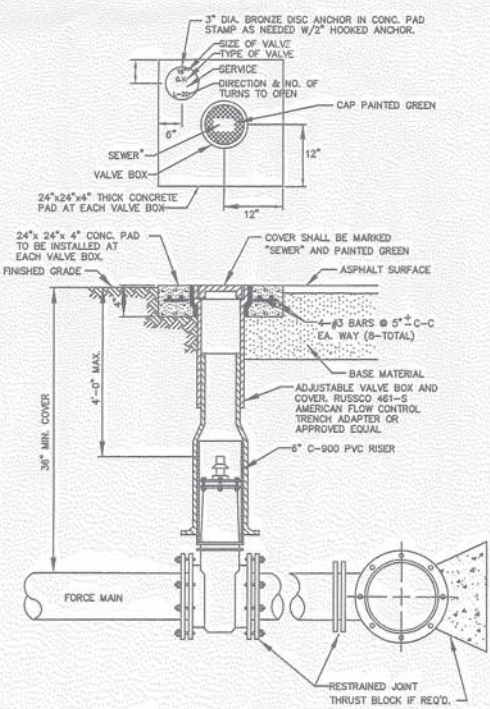
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- NOTES:
1. WHERE POSSIBLE ARV IS TO BE MOUNTED ABOVE GROUND IN STAINLESS STEEL CABINET.
  2. TO PREVENT DAMAGE TO VALVE FROM TIPPED MANHOLE COVERS IN SHALLOW BOXES IT MAY BE NECESSARY TO OFFSET VALVE FROM CENTER LINE.
  3. AIR RELEASE VALVES WHERE REQUIRED ON 4" AND LARGER FORCE MAINS.
  4. ARV TO BE SIZED ACCORDING TO MANUFACTURER'S RECOMMENDATION FOR FORCE MAIN SIZE.
  5. ALL PIPE STUBS, HOPLER AND HARDWARE TO BE 304 STAINLESS STEEL.
  6. WHERE AIR RELEASE VALVE IS FURTHER THAN 1/2" FROM CURB OR SHOULDER OF ROADWAY, SERIES HIR3030 ACCESS DOOR OR APPROVED EQUAL MAY BE USED.

**BELOW GRADE AIR RELEASE VALVE**

N.T.S.



- NOTES:
1. PLUG VALVE TO BE MARKED IN CURB WITH A "SV" WITH A FOOTAGE FROM THE BACK OF CURB TO THE VALVE OR IF NO CURB, A GREEN DISC WITH "SV" IN THE EDGE OF PAVEMENT WITH THE FOOTAGE FROM THE DISC TO THE VALVE.
  2. ALL EXISTING AND PROPOSED VALVE BOXES SHALL BE ADJUSTED TO FINISHED GRADES AS ESTABLISHED IN THE FIELD.
  3. SEWER VALVES SHALL NOT BE PLACED IN HANDICAPPED RAMPS.
  4. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 1/2".

**PLUG VALVE, BOX COVER AND TAG**

N.T.S.

STATE OF FLORIDA  
 PROFESSIONAL ENGINEER  
 No. 12002  
 10/12/2005

**Zoller, Najjar & Shroyer, L.C.**  
 Engineers, Planners, Surveyors,  
 Landscape Architects & Environmental Consultants  
 2000 N.W. 11th Street, Suite 3000  
 Ft. Lauderdale, FL 33309  
 Phone: (954) 746-2010  
 Fax: (954) 746-2011  
 E-Mail: zns@zns.com

NO.	DATE	BY	REVISIONS
1	11-15-04	ALP	ISSUED FOR PERMITS
2	12-08-04	ALP	REVISIONS TO PERMITS
3	12-08-04	ALP	REVISIONS TO PERMITS
4	12-08-04	ALP	REVISIONS TO PERMITS
5	11-18-04	ALP	REVISIONS TO PERMITS
6	11-18-04	ALP	REVISIONS TO PERMITS
7	10-12-05	ALP	REVISIONS TO PERMITS

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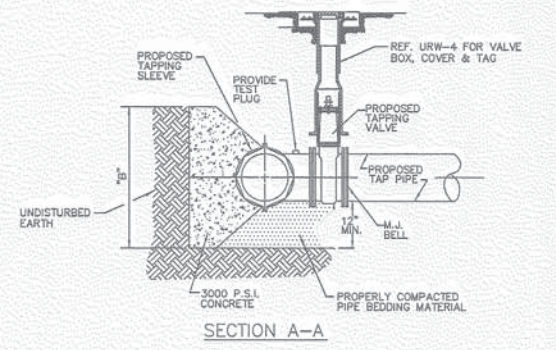
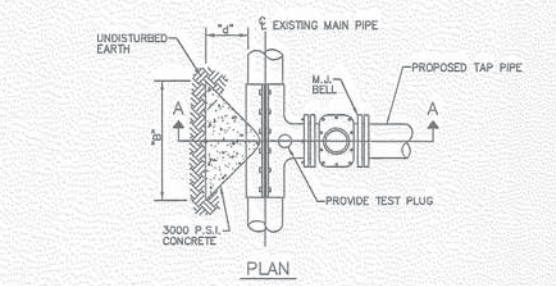
**SEWER DETAILS**  
 FOR  
**CREEKWOOD BOULEVARD EXTENSION - Phase 1**  
 LOCATED IN  
 SECTION 11, TOWNSHIP 35 SOUTH, RANGE 18 EAST  
 MANATEE COUNTY, FLORIDA

FILE OF RECORD  
 PERMIT NO. 44005041.034  
 Imaged As Is

RESERVED  
 OCT 20 2005  
 12:00 PM  
 16

SHEET 12

Sheet Title: RECLAIMED WATER DETAILS  
 Lab Number:  
 CAD file name: V:\cadd\creekwood\dwg\creekwood-rw.dwg  
 Plot date and time: 08/26/2005 11:27:27  
 Sheet # 13 of 13  
 File Number: 10122005



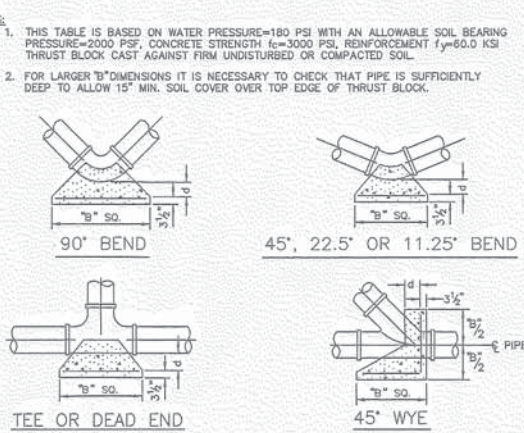
FOR DIMENSIONS "B" AND "d" SEE URW-14; THRUST BLOCK DETAILS

**NOTES:**

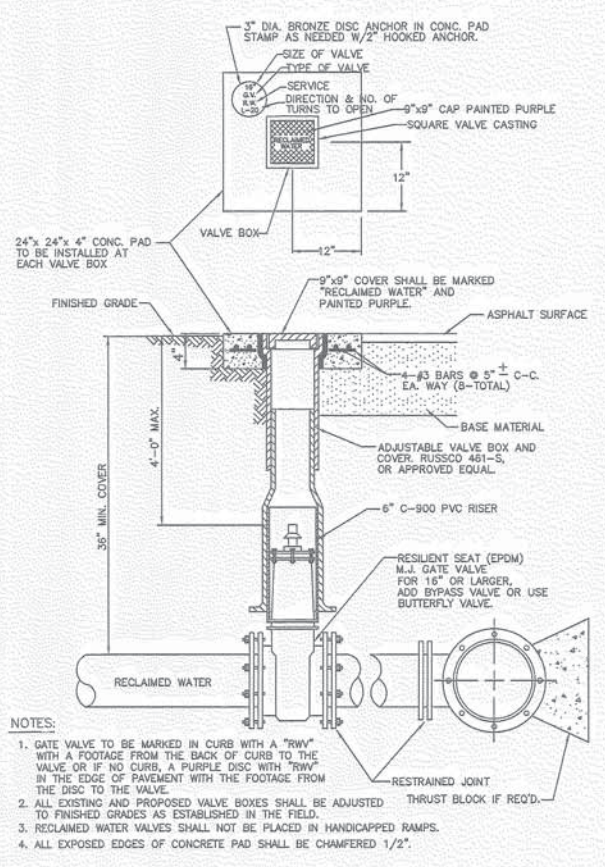
- NO CUTS SHALL BE MADE BEFORE:
  - A TEST OF 180 P.S.I. FOR 60 MINUTES IS MADE.
  - ALL FITTINGS TO BE WRAPPED WITH 20 MIL VISQUEEN AT THRUST BLOCK.
  - ALL TAPS TO BE MADE BY M.C.P.W.D. AND MATERIAL TO BE FURNISHED BY THE INFRASTRUCTURE CONTRACTOR.
- ALL TAPS MUST BE OF A SMALLER SIZE THAN THE MAIN BEING TAPPED & PLACED NO CLOSER THAN 30" OR A DISTANCE EQUAL TO (1) MAIN PIPE DIAMETER PLUS (2) TAP PIPE DIAMETERS (WHICHEVER IS LARGER) FROM A JOINT OR FITTING.
- CONTRACTOR TO SUPPLY A DRY HOLE FOR TAPPING CREW TO WORK AND A BACK-HOLE TO LOWER MACHINE INTO HOLE.

**TAPPING SLEEVE & VALVE BLOCKING DETAIL**  
N.T.S.

PIPE SIZE (IN.)	THRUST BLOCK DIMENSIONS B ft. x d inches					
	90° BEND	45° BEND	22.5° BEND	11.25° BEND	DEAD END & TEE	45° WYE
4	1.3 3/2	1.0 3/2	0.7 3/2	0.6 3/2	1.1 3/2	1.0 3/2
6	1.9 4 1/2	1.5 3 3/4	1.1 3 3/2	0.8 3 1/2	1.6 4	1.5 3 3/4
8	2.8 6 1/4	1.9 4 3/4	1.4 3 1/2	1.0 3 1/2	2.2 5 1/2	1.8 4 1/2
10	3.2 7 3/4	2.4 6	1.7 4 1/4	1.2 3 1/2	2.7 6 1/2	2.3 5 1/2
12	3.8 9 1/4	2.8 6 3/4	2.0 5	1.5 3 3/4	3.2 7 3/4	2.7 6 1/2
14	4.5 11	3.3 8	2.4 6	1.7 4 1/4	3.8 9 1/4	3.2 7 3/4
16	5.1 12 1/4	3.8 9 1/4	2.7 6 1/2	1.9 4 3/4	4.3 10 1/2	3.6 8 3/4
18	5.7 13 3/4	4.2 10 1/4	3.0 7 1/4	2.2 5 1/2	4.8 11 3/4	4.1 10
20	6.4 15 1/2	4.7 11 1/2	3.4 8 1/4	2.4 6	5.4 13	4.5 11
24	7.8 18 1/4	5.6 13 1/2	4.0 9 3/4	2.9 7	6.4 15 1/2	5.4 13
30	9.5 23	7.0 17	5.0 12	3.6 8 3/4	8.0 19 1/4	6.7 16
36	11.4 27 1/2	8.4 20 1/4	6.0 14 1/2	4.3 10 1/2	9.6 23	8.1 18 1/2



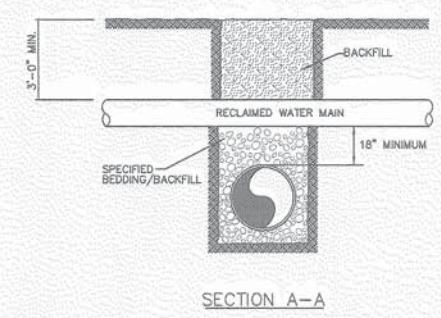
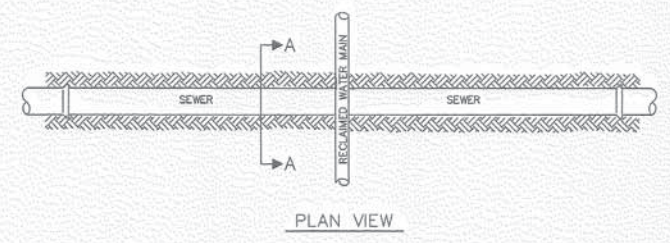
**THRUST BLOCK DETAILS**  
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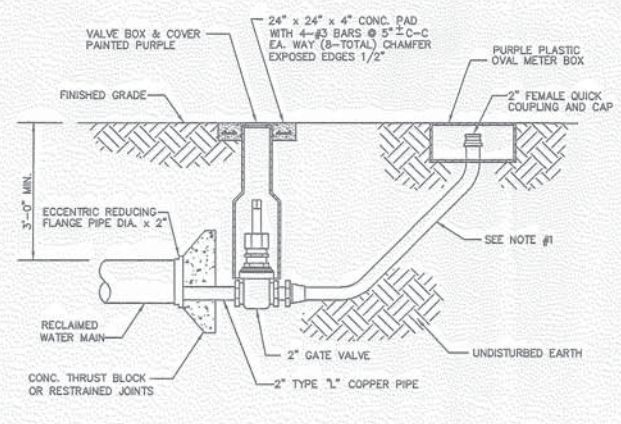
**NOTES:**

- GATE VALVE TO BE MARKED IN CURB WITH A "RW" WITH A FOOTAGE FROM THE BACK OF CURB TO THE VALVE OR IF NO CURB, A PURPLE DISC WITH "RW" IN THE EDGE OF PAVEMENT WITH THE FOOTAGE FROM THE DISC TO THE VALVE.
- ALL EXISTING AND PROPOSED VALVE BOXES SHALL BE ADJUSTED TO FINISHED GRADES AS ESTABLISHED IN THE FIELD.
- RECLAIMED WATER VALVES SHALL NOT BE PLACED IN HANDICAPPED RAMPS.
- ALL EXPOSED EDGES OF CONCRETE PAD SHALL BE CHAMFERED 1/2".

**GATE VALVE, BOX, COVER AND TAG**  
N.T.S.



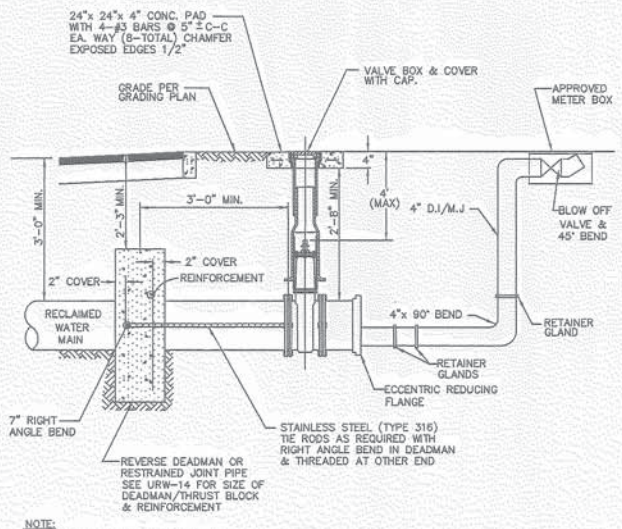
**TYPICAL RECLAIMED WATER/SEWER CROSSING**  
N.T.S.



**NOTES:**

- POLYETHYLENE SERVICE PIPE MEETING AWWA C-901, SHALL BE POLY-E DRISCOPE 5100 ULTRA-LINE OR ENDOLINE BY ENDO OR APPROVED EQUAL. PIPE SHALL BE PURPLE OR ENCASED IN PURPLE SLEEVE.
- IF FUTURE RECLAIMED WATER MAIN EXTENSION BEYOND THIS PLUG IS POSSIBLE, PROVIDE A MAIN LINE GATE VALVE BETWEEN THIS PLUG AND THE LAST SERVICE BUT THE DISTANCE BETWEEN THE IN-LINE VALVE AND THE PLUG SHALL NOT EXCEED 40 FT.
- THIS DETAIL TO BE USED FOR ALL RECLAIMED WATER MAINS 10" DIA. OR SMALLER.

**END OF LINE 2" BLOW-OFF ASSEMBLY**  
N.T.S.

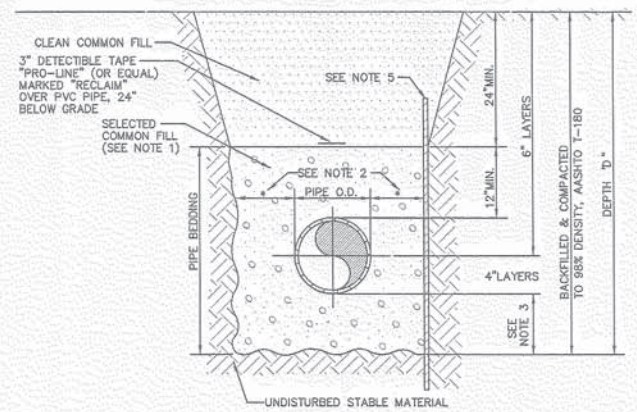


**NOTE:** THIS DETAIL TO BE USED FOR ALL RECLAIMED WATER MAINS LARGER THAN 10" DIA.

**4" AND LARGER BLOW-OFF ASSEMBLY**  
N.T.S.

**NOTES:**

- USE OF TYPE A-2 AND A-3 PIPE BEDDING TO BE DETERMINED IN THE FIELD BY THE ENGINEER.
- 10" MAX. FOR PIPE DIAMETERS LESS THAN 24"; 12" MAX. FOR PIPE DIAMETER 24" AND LESS THAN 42"; 24" MAX. FOR PIPE DIAMETER 42" AND OVER.
- 4" MAX. FOR PIPE 16" DIAMETER & LESS; 6" MAX. FOR PIPE 18" TO 36" DIAMETER; AND 9" MAX. FOR PIPE 42" DIAMETER AND LARGER.
- INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.
- SHEETING ORDERED LEFT IN PLACE TO BE CUT OFF 24" BELOW FINISHED GRADE OR 12" BELOW SUBGRADE.
- BACKFILL AASHTO M-145 SHALL BE PLACED IN LAYERS NOT TO EXCEED 6 INCHES. EACH LAYER SHALL BE THOROUGHLY TAMPED AND/OR ROLLED TO 98% AASHTO T-180 DENSITY.



**TRENCH DETAIL TYPE A-1 PIPE BEDDING**  
N.T.S.

Zoller, Najjar & Shroyer, L.C.  
 Engineers, Planners, Surveyors, La. License No. 10000  
 Landscaping, Irrigation, & Environmental Consultants  
 10000 Highway 101, Suite 100, Baton Rouge, LA 70802  
 PHONE: (504) 771-1111 FAX: (504) 771-1112  
 E-MAIL: zns@zns-engineers.com

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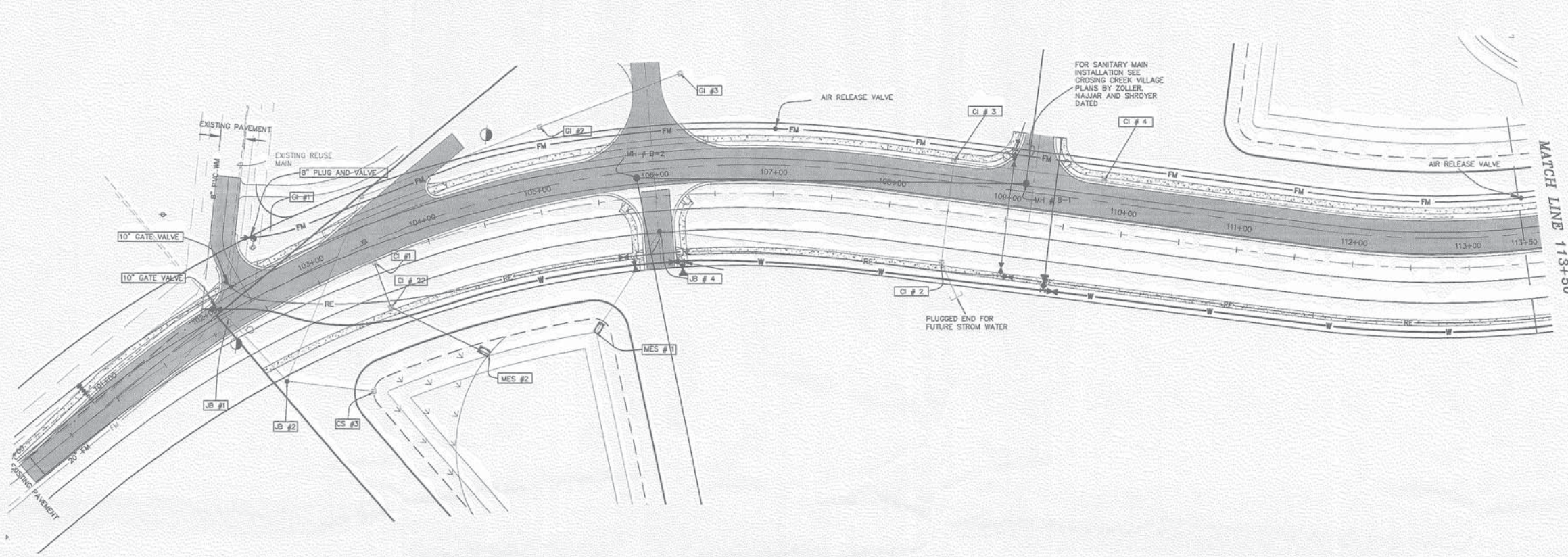
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 1. USED PER 10-10-04  
 2. 25%  
 3. 25%  
 4. 25%  
 5. 25%  
 6. 25%  
 7. 25%

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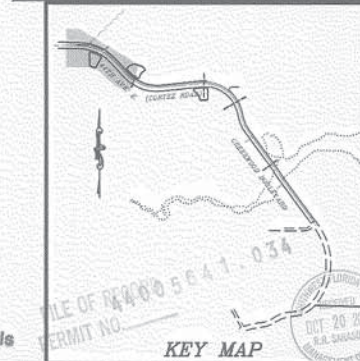
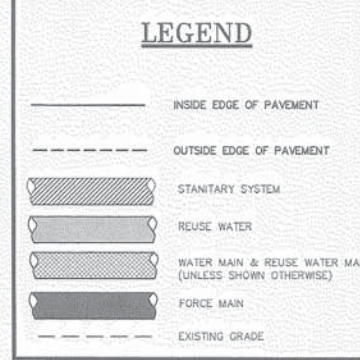
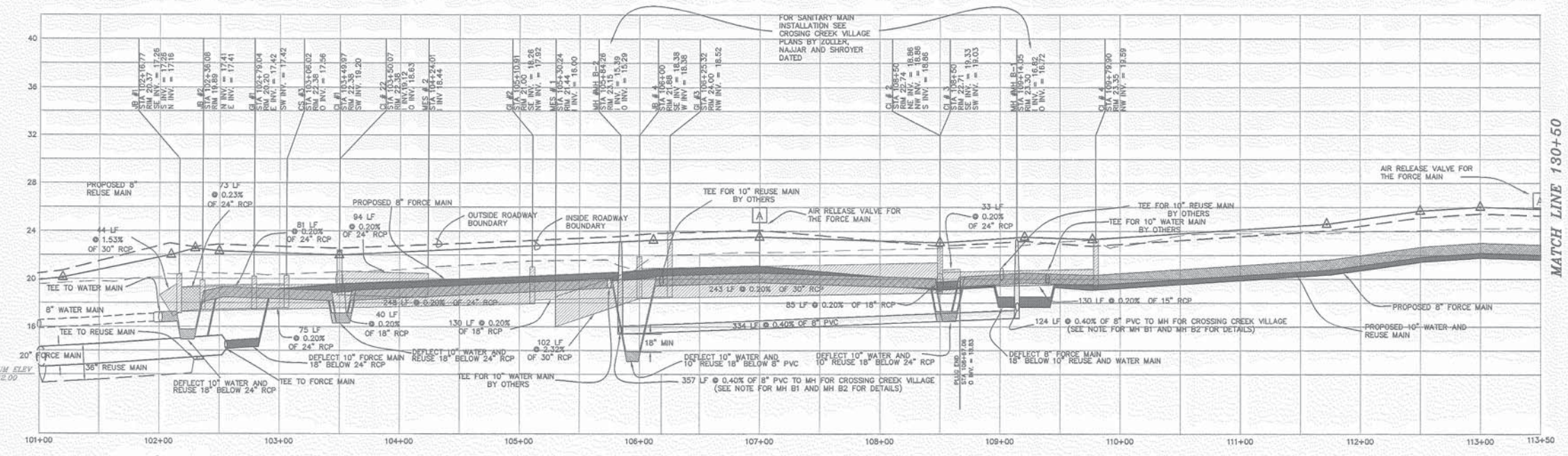
RECLAIMED WATER DETAILS FOR CREEKWOOD BOULEVARD EXTENSION - Phase 1 LOCATED IN SECTION 11, TOWNSHIP 35 SOUTH, RANGE 18 EAST MANATEE COUNTY, FLORIDA

Imaged As Is  
 FILE OF RECORD PERMIT NO. 44005641-034  
 RECEIVED OCT 20 2005  
 B.L. SAKOITA

SHEET 13



SCALE:  
 HORIZONTAL 1"=50'  
 VERTICAL 1"=5'



STEVE SHROYER  
 PROFESSIONAL ENGINEER  
 F32002  
 10/12/2005

**Zoller, Najjar & Shroyer, L.C.**  
 Engineers, Planners, Surveyors,  
 Environmental & Environmental Consultants  
 1111th St. N. Suite 100, St. Petersburg, FL 33713  
 Phone: (727) 321-2200 Fax: (727) 321-2202  
 E-Mail: zns@zns-engineers.com

DESIGNED: TAD DATE: 2-3-04 FILE NO.: E-FILE  
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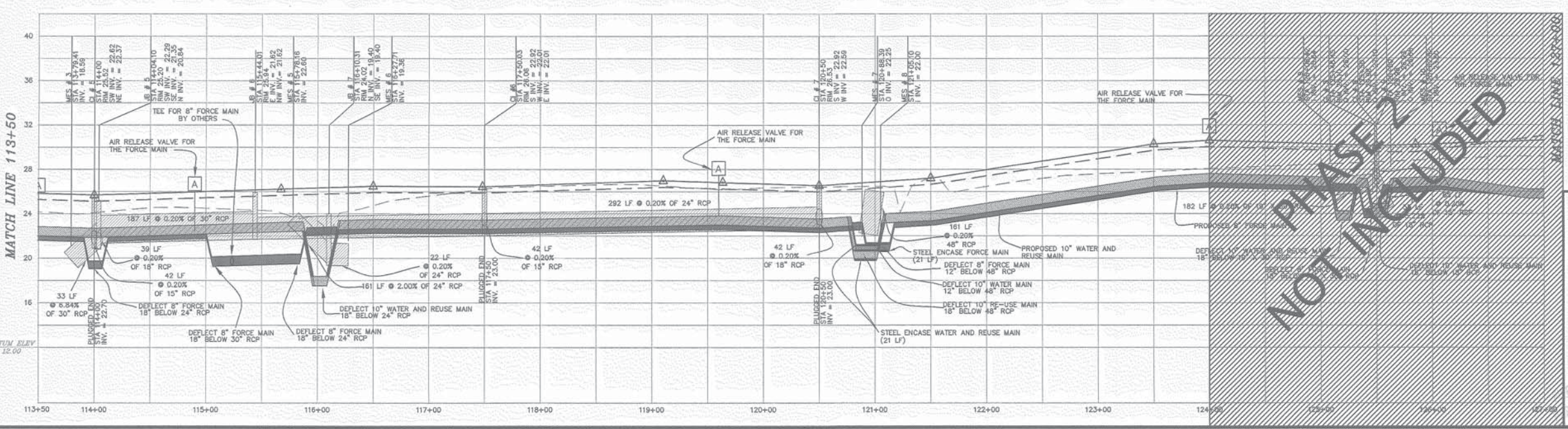
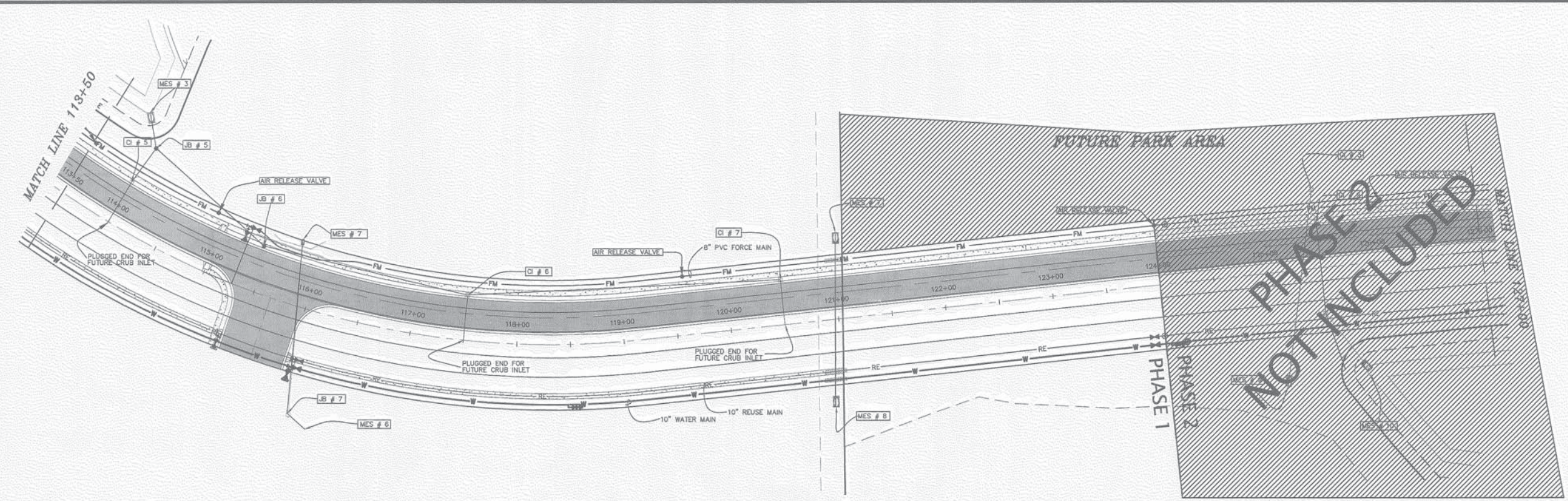
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2	11-15-05	REVISED PERMITS
3	8-25-06	FINAL
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5		
6		
7		

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 PROJECT IDENTIFIED IN THE TITLE OF THIS  
 DOCUMENT IN COMPLIANCE WITH F.S. CHAPTER 119.

**PLAN AND PROFILE 101+00 TO 113+50**  
 FOR  
**CREEKWOOD BOULEVARD EXTENSION - Phase 1**  
 LOCATED IN  
 SECTION 11, TOWNSHIP 35 SOUTH, RANGE 18 EAST  
 MANATEE COUNTY, FLORIDA

SHEET 14

File Number: E-FILE  
 Sheet # 15 SP F  
 Job Number: 02-32408  
 Lib Number: 113+50 TO 124+00  
 Plot Date and Time: 20251012 10:13  
 Plot Path: PLAN AND PROFILE 113+50 TO 124+00  
 CAD File Name: E:\cadd\113+50 TO 124+00\113+50 TO 124+00.dwg  
 User: E:\cadd\113+50 TO 124+00\113+50 TO 124+00.dwg



**LEGEND**

- INSIDE EDGE OF PAVEMENT
- - - OUTSIDE EDGE OF PAVEMENT
- ▨ STANTARY SYSTEM
- ▨ REUSE WATER
- ▨ WATER MAIN & REUSE WATER MAIN (UNLESS SHOWN OTHERWISE)
- ▨ FORCE MAIN
- - - EXISTING GRADE

SCALE:  
 HORIZONTAL 1"=50'  
 VERTICAL 1"=5'



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DESIGNED BY: JAW DATE: 2-3-06  
 DRAWN BY: JAW JOB NO.: 02-32408 SCALE: 1"=50'  
 FILE NO.: E-FILE  
 10/12/2005

REVISIONS

1	UPDATE PROJECT DATA
2	ISSUE FOR PERMITS
3	ISSUE FOR CONSTRUCTION
4	ISSUE FOR RECORDS
5	ISSUE FOR AS-BUILT
6	ISSUE FOR FINAL
7	ISSUE FOR ARCHIVE

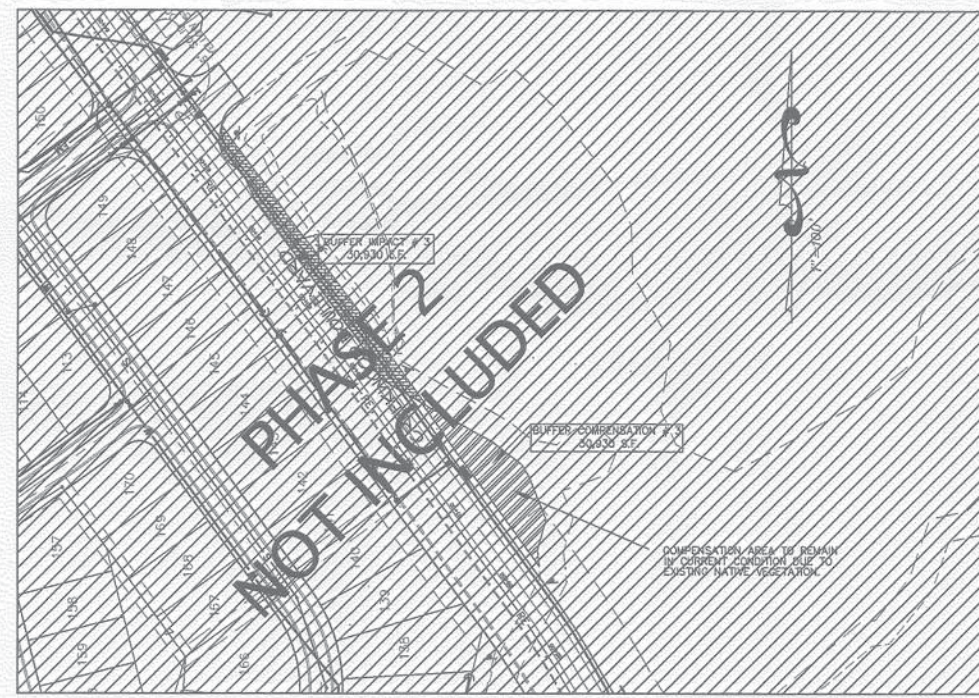
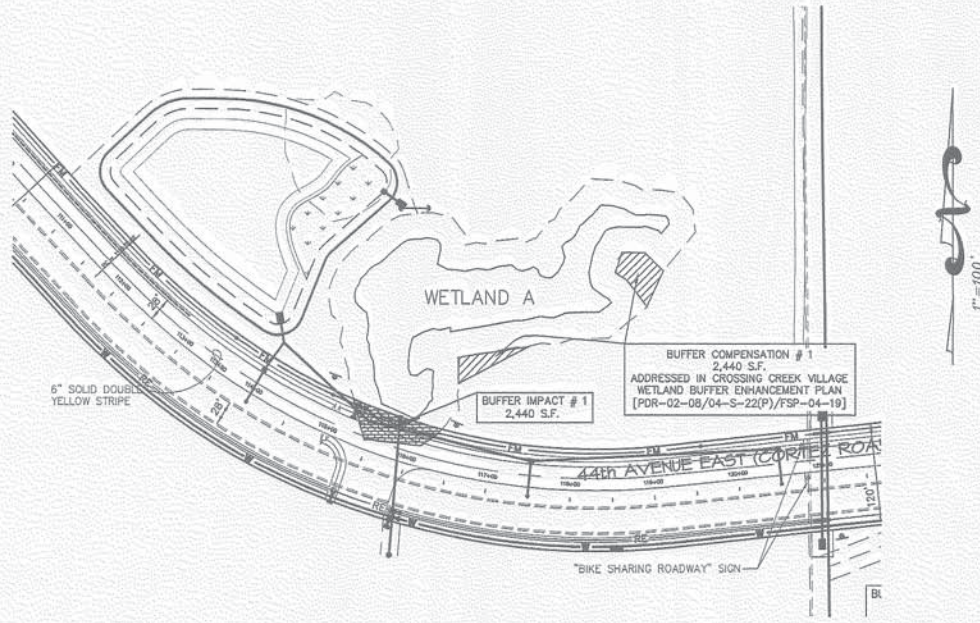
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**PLAN AND PROFILE 113+50 TO 124+00**  
 FOR  
**CREEKWOOD BOULEVARD EXTENSION - Phase 1**  
 LOCATED IN  
 SECTION 11, TOWNSHIP 35 SOUTH, RANGE 18 EAST  
 MANATEE COUNTY, FLORIDA

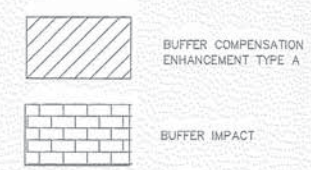
**JMS**

SHEET 15



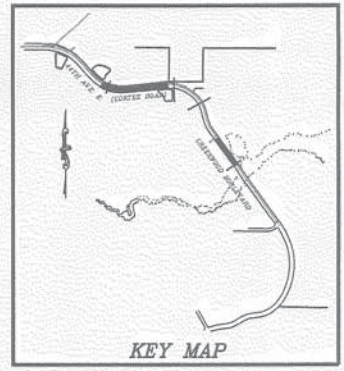
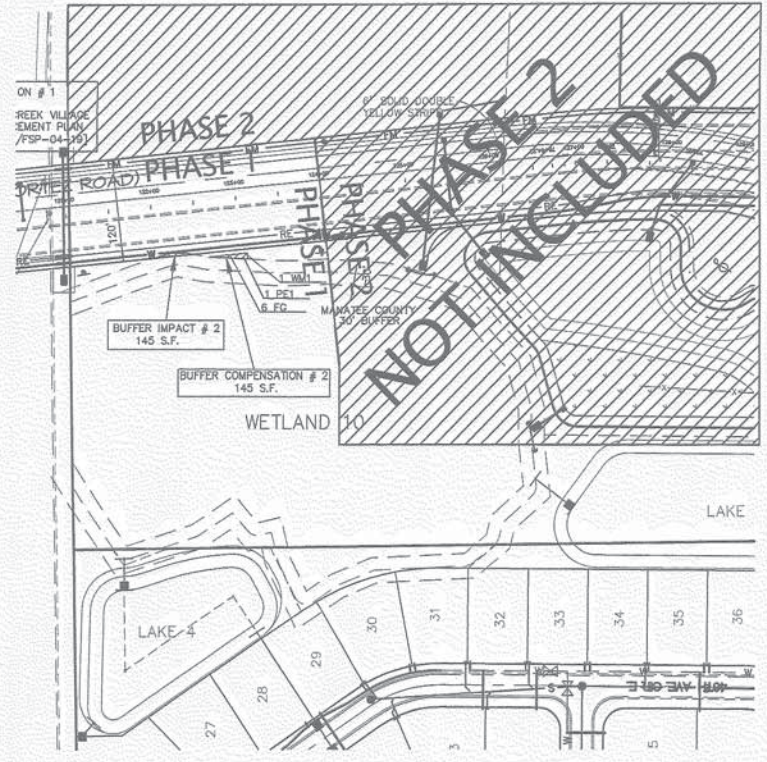


LEGEND



PLANT SCHEDULE

QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	SPACING	COMMENTS
1	WM1	Myrica cerifera	Wax Myrtle	1 gal.	10' oc	1-2' ht
1	PE1	Pinus Elliottii	Slash Pine	1 gal.	10' oc	1-2' ht
6	FG	Tripsacum dactyloides	Fakahatchee grass	1 gal.	5' oc	



- BUFFER ENHANCEMENT NOTES:
- ALL TREES WITHIN THE BUFFER COMPENSATION AREAS SHALL BE PLANTED 10' ON CENTER WITH THE QUANTITIES IDENTIFIED EXCEPT THOSE AREAS WHICH CONTAIN EXISTING NATIVE VEGETATION (I.E. BUFFER COMPENSATION AREA # 3).
  - GROUND COVER SHALL INCLUDE FAKAHATCHEE GRASS PLANTED 5' ON CENTER.
  - ALL EXOTIC NUISANCE VEGETATION SHALL BE REMOVED PRIOR TO PLANTING.

FILE OF RECORD  
 PERMIT NO. 44005641-034  
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DESIGNED BY: JAE  
 DRAWN BY: JAE  
 DATE: 11/03/2004  
 JOB NO.: 00-32408  
 FILE NO.: 10122005  
 SCALE: 1"=200'

REVISIONS  
 1. FINISHING  
 2. E-28-16

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**BUFFER ENHANCEMENT PLAN**  
 FOR  
**CREEKWOOD BOULEVARD EXTENSION - Phase 1**  
 LOCATED IN  
 SECTION 11, TOWNSHIP 35 SOUTH, RANGE 18 EAST  
 MANATEE COUNTY, FLORIDA

16  
 SHEET