





D:\2020\15TH STREET STORMWATER IMPROVEMENTS\DWG\LEGENDS.DWG (DATE: 03/16/2024) 11:14 AM

DRAINAGE LEGEND		
	EXISTING	PROPOSED
PIPE	---	---
DITCH		→
CURB INLET (CI) CATCH BASIN (CB)		
CURB INLET - RIGHT (CI) OR CATCH BASIN - RIGHT (CB)		
CURB INLET - LEFT (CI) OR CATCH BASIN - LEFT (CB)		
CURB INLET - BOTH (CI) OR CATCH BASIN - BOTH (CB)		
CONFLICT BOX (CB)		
DITCH INLET (DI)		
GRATE INLET (GI)		
HOODED INLET (HI)		
JUNCTION BOX (JB)		
MANHOLE (SDMH)		
ROLL CURB INLET (RCI)		
ROOF INLET (RI)		
VALLEY INLET (VI)		
YARD INLET (YI)		
BEVELED END SECTION (BES)		
END SECTION (ES)		
FLARED END SECTION (FES)		
11 1/2° BEND - HORIZONTAL		
22 1/2° BEND - HORIZONTAL		
45° BEND - HORIZONTAL		
90° BEND - HORIZONTAL		
CLEANOUT		
PLUG		
TEE		
WYE		

WATER LEGEND		
	EXISTING	PROPOSED
FIRE PROTECTION	--- 10" FPW ---	--- 10" FPW ---
WATER MAIN	--- 10" W ---	--- 10" W ---
SINGLE SERVICE LATERAL	---	---
DOUBLE SERVICE LATERAL		
BUTTERFLY VALVE (BV)		
DOUBLE CHECK DETECTOR ASSEMBLY (DCDA)		
GATE VALVE AND BOX (GV)		
POST INDICATOR VALVE (PIV)		
TAPPING SLEEVE AND VALVE (TSV)		
REDUCED PRESSURE ZONE BACKFLOW (RPZ)		
WATER METER (WM)		
TRACER WIRE ACCESS BOX (TWAB)		
FIRE HYDRANT W/TEE, VALVE & BOX (FHA)		
POST HYDRANT (PH)		
REDUCER		
CROSS		
TEE		
90° BEND - HORIZONTAL		
45° BEND - HORIZONTAL		
22 1/2° BEND - HORIZONTAL		
11 1/2° BEND - HORIZONTAL		
BEND - VERTICAL		
CAP		

OTHER UTILITIES LEGEND	
	EXISTING
NATURAL GAS	--- UGG ---
TELEPHONE	--- OHT ---
UNDERGROUND TELEPHONE	--- UTL ---
ELECTRICITY	--- OHP ---
UNDERGROUND ELECTRICITY	--- UGP ---

SEWER LEGEND		
	EXISTING	PROPOSED
GRAVITY PIPE	--- SS ---	---
SINGLE SERVICE LATERAL	---	---
DOUBLE SERVICE LATERAL		
DROP MANHOLE (DMH)		
MANHOLE (MH)		
CLEANOUT (CO)		
FORCEMAIN	--- 10" FM ---	--- 10" FM ---
AIR RELEASE VALVE (ARV)		
CHECK VALVE (CV)		
PLUG VALVE AND BOX (PV)		
FLUSH HYDRANT		
PUMP CONNECTION (PC)		
REDUCER		
TRACER WIRE ACCESS BOX (TWAB)		
CROSS		
TEE		
TAPPING SLEEVE (TS)		
90° BEND HORIZONTAL		
45° BEND HORIZONTAL		
22 1/2° BEND HORIZONTAL		
11 1/2° BEND HORIZONTAL		
BEND VERTICAL		
PLUG \ CAP		

ABBREVIATIONS							
DBL	DOUBLE	FM	FORCE MAIN (SANITARY SEWER)	OC	ON CENTER	SS	SANITARY SEWER
BOT	BOTTOM	FP	FINISH PAD	PC	POINT OF CURVE	SSM	SANITARY SEWER MAIN
CB	CATCH BASIN	FPW	FIRE PROTECTION	PH	POST HYDRANT	TC	TOP OF CURB
CI	CURB INLET	FR	FRAME	PT	POINT OF TANGENT	TH	THROAT ELEVATION
CO	CLEAN OUT	GI	GRATE INLET	PVC	POLYVINYL CHLORIDE	TG	TOP OF GUTTER
CPP	CORRUGATED PLASTIC PIPE	GV	GATE VALVE	RCP	REINFORCED CONCRETE PIPE	TP	TOP OF PAVEMENT
DBL	DOUBLE	HDPE	HIGH DENSITY POLYETHYLENE	RC	ROLL CURB INLET	TW	TOP OF WALK
DI	DITCH INLET	HI	HOODED INLET	RCP	REINFORCED CONCRETE PIPE	TYP	TYPICAL
DIP	DUCTILE IRON PIPE	INV	INVERT ELEVATION	RI	ROOF INLET	VI	VALLEY INLET
EL	ELEVATION	JB	JUNCTION BOX	RJP	RESTRAINED JOINT PIPE	W	WATER
ES	END SECTION	LF	LINEAR FEET	R/W	RIGHT-OF-WAY	WM	WATER MAIN
FES	FLARED END SECTION	MAX	MAXIMUM	SD	STORM DRAINAGE	W/	WITH
FG	FINISH GRADE	MIN	MINIMUM	SDMH	STORM DRAINAGE MANHOLE	WV	WATER VALVE
FH	FIRE HYDRANT	MH	MANHOLE	SF	SQUARE FEET	YI	YARD INLET

NO.	REVISIONS	BY	DATE



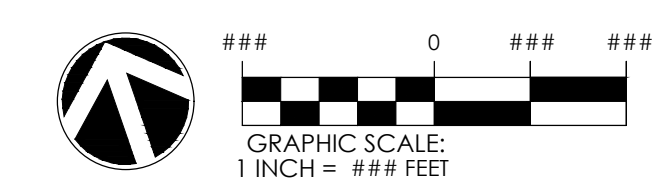
**THOMAS & HUTTON**  
 220 North Main Street • Suite 402  
 Greenville, SC 29601 • 864.412.2222  
 www.thomasandhutton.com

**LEGENDS AND ABBREVIATIONS**

**15TH STREET STORMWATER IMPROVEMENTS**

**PROJECT LOCATION:**  
 15TH STREET, TYBEE ISLAND  
 GEORGIA 31328

**CLIENT/OWNER:**  
 CITY OF TYBEE ISLAND  
 403 BUTLER AVENUE  
 TYBEE ISLAND, GA 31328  
 PETER GULBRONSON  
 peter.gulbranson@cityoftybee.gov

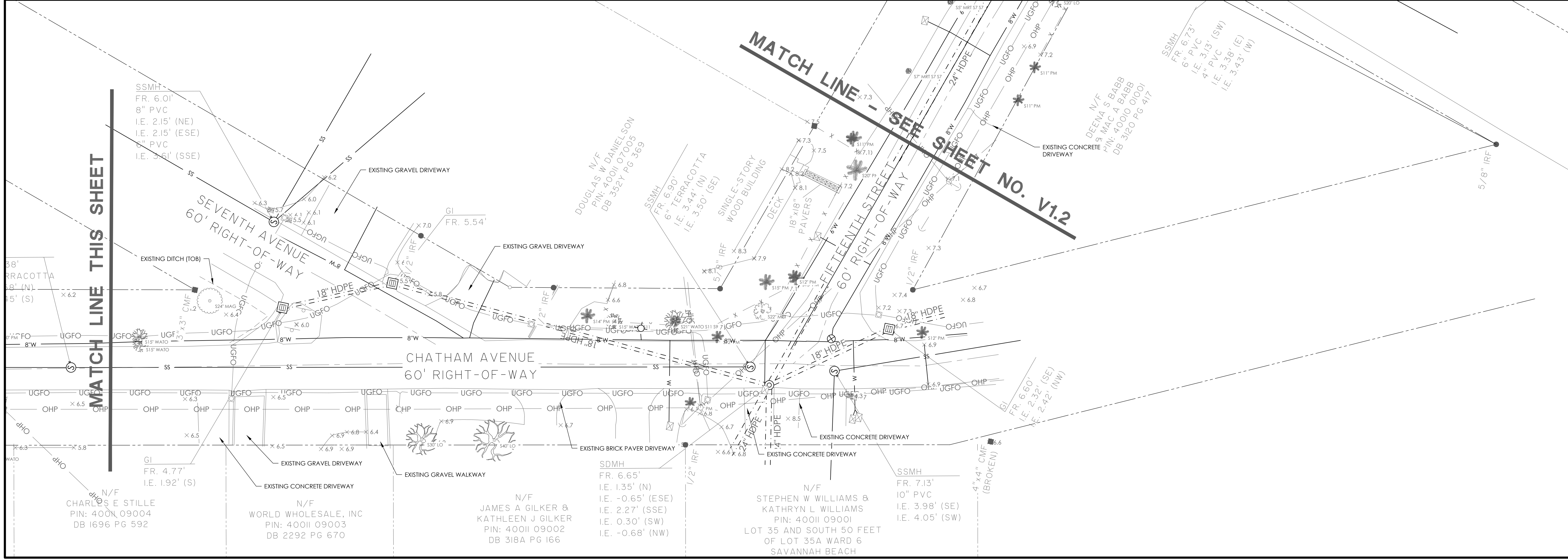
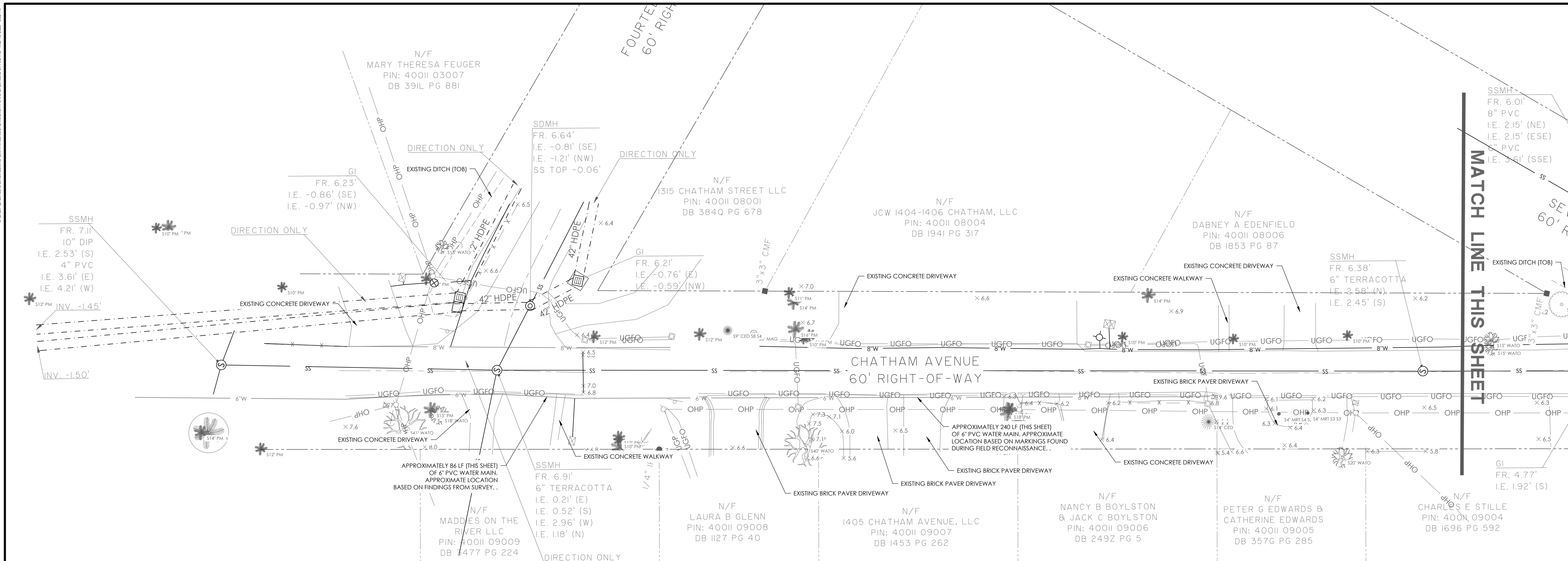


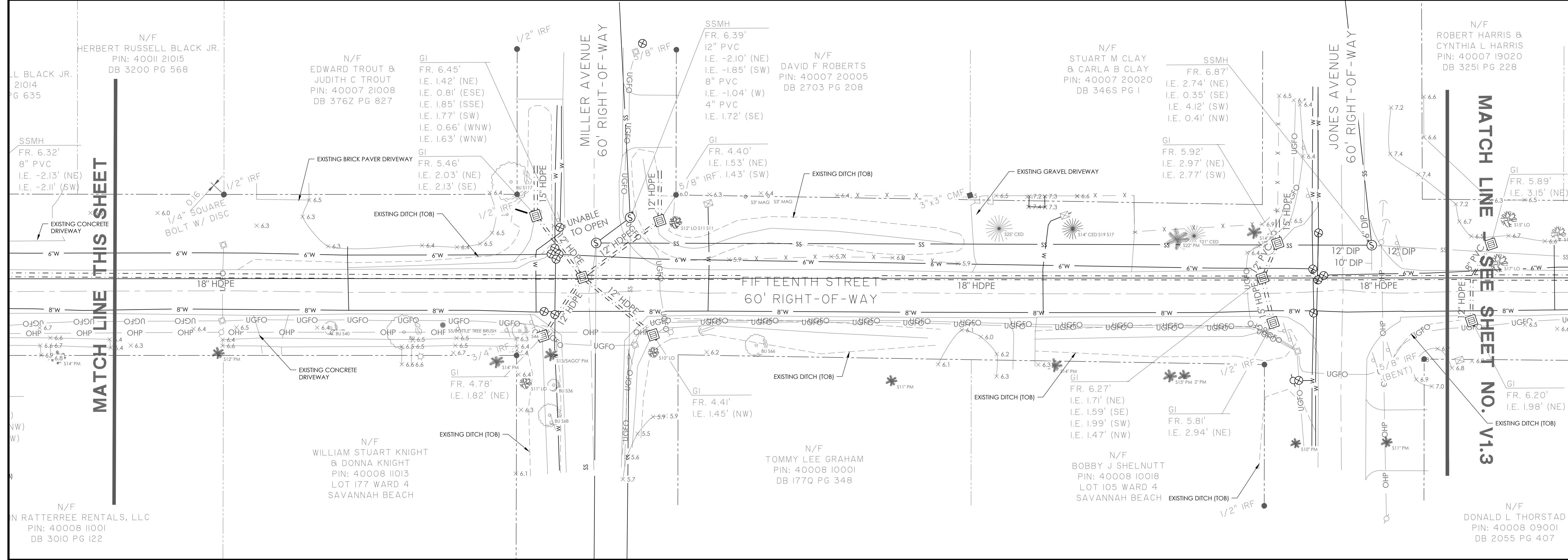
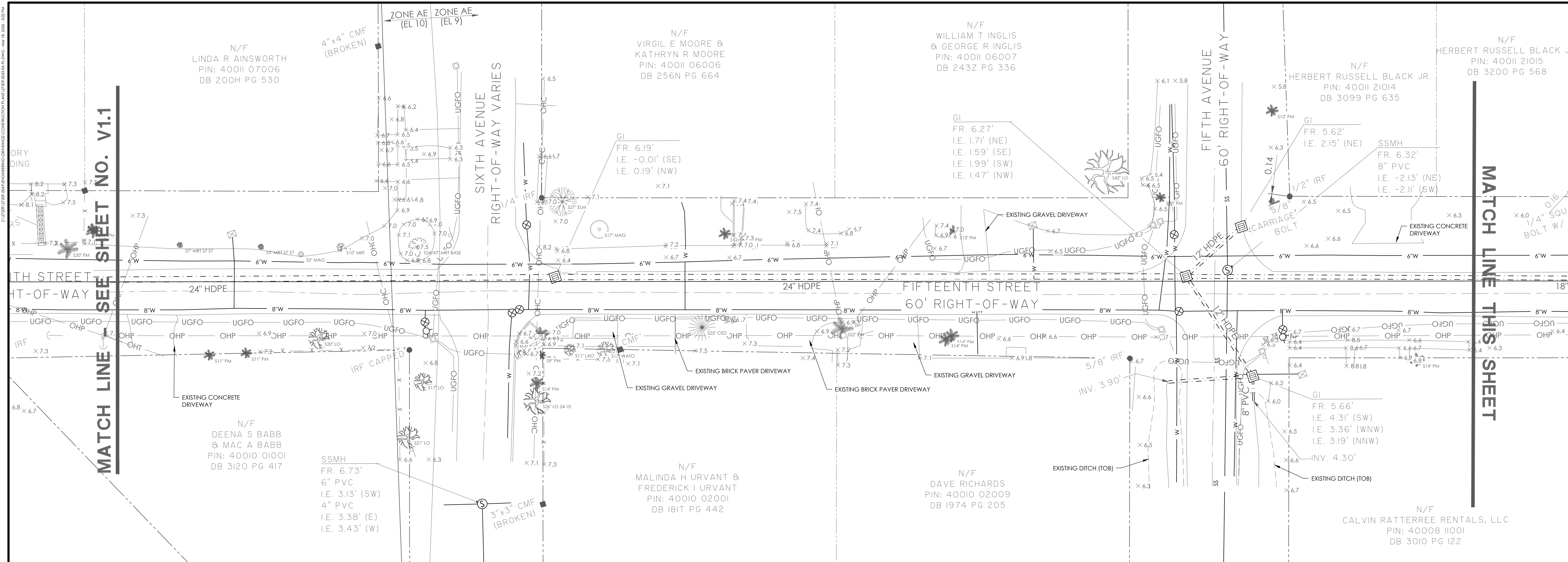
DATUM: HORIZ.: NAD 83      VERT.: NAVD 88

JOB NO:	27209.0043
DATE:	03/16/2024
DRAWN:	SAM
DESIGNED:	
REVIEWED:	
APPROVED:	KMS
SCALE:	

**G0.2**

22/2025/22209.0043 ENGINEERING CONSULTING SERVICES CORPORATION PROJECT NO. 22209.0043 DATE: MAR 16, 2024, 10:25 AM





NO.	REVISIONS	BY	DATE



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**EXISTING CONDITIONS**

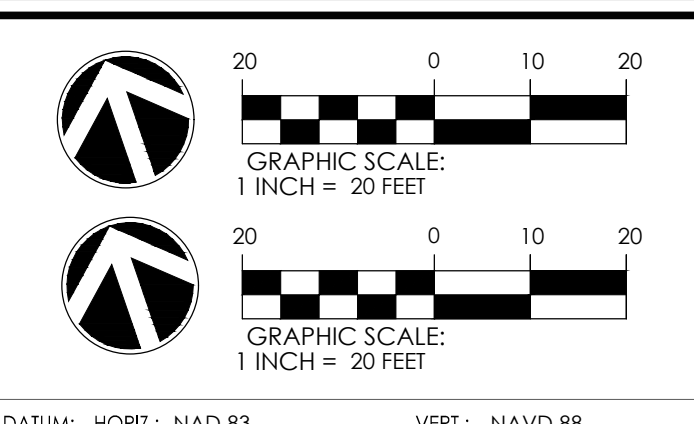
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**15TH STREET STORMWATER IMPROVEMENTS**

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 15TH STREET, TYBEE ISLAND  
 GEORGIA 31328

**CLIENT/OWNER:**  
 CITY OF TYBEE ISLAND  
 403 BUTLER AVENUE  
 TYBEE ISLAND, GA 31328  
 PETER GULBRONSON  
 peter.gulbronsn@cityoftybee.gov

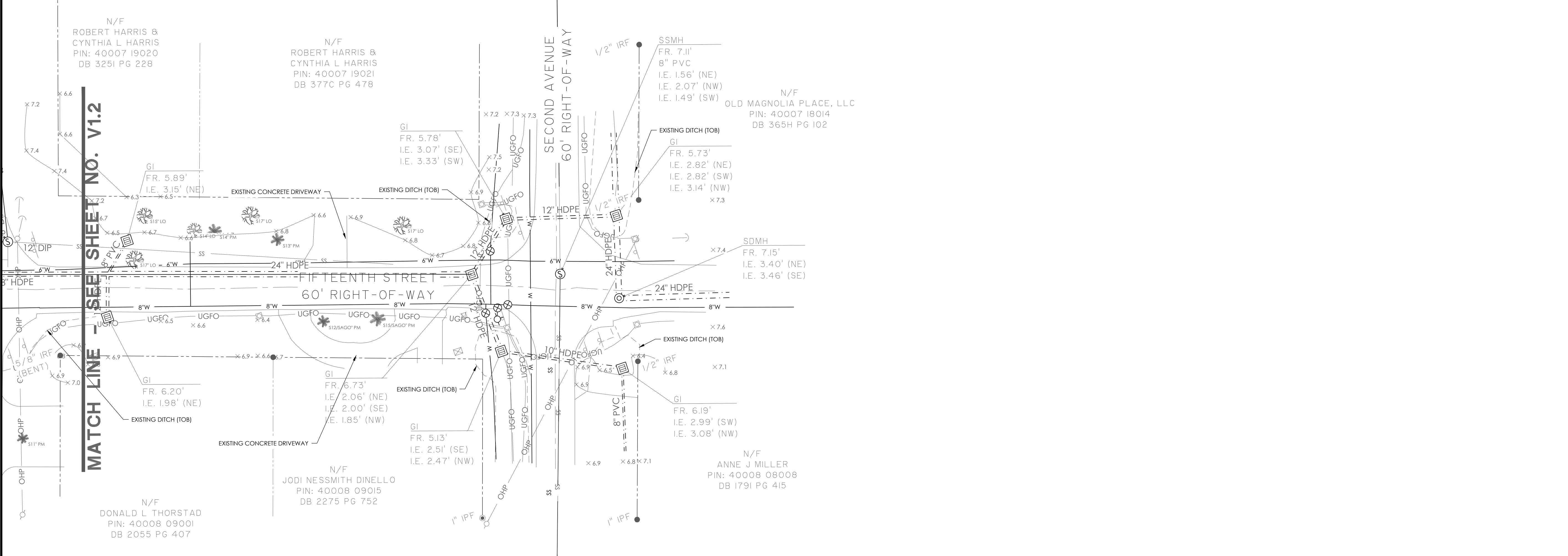


DATUM: HORIZ: NAD 83      VERT: NAVD 88

JOB NO: 27209.0043  
 DATE: 03/16/2026  
 DRAWN: SAM  
 DESIGNED:  
 REVIEWED:  
 APPROVED: KMS  
 SCALE: SEE SCALE BAR

**V1.2**

23/2709 02720 0401 ENGINEERING CONSULTING SERVICES, INC. 02720 0401 01.DWG, MAR 16, 2024, 1:02 PM



**MATCH LINE - SEE SHEET NO. V1.2**

N/F  
ROBERT HARRIS &  
CYNTHIA L. HARRIS  
PIN: 40007 19020  
DB 3251 PG 228

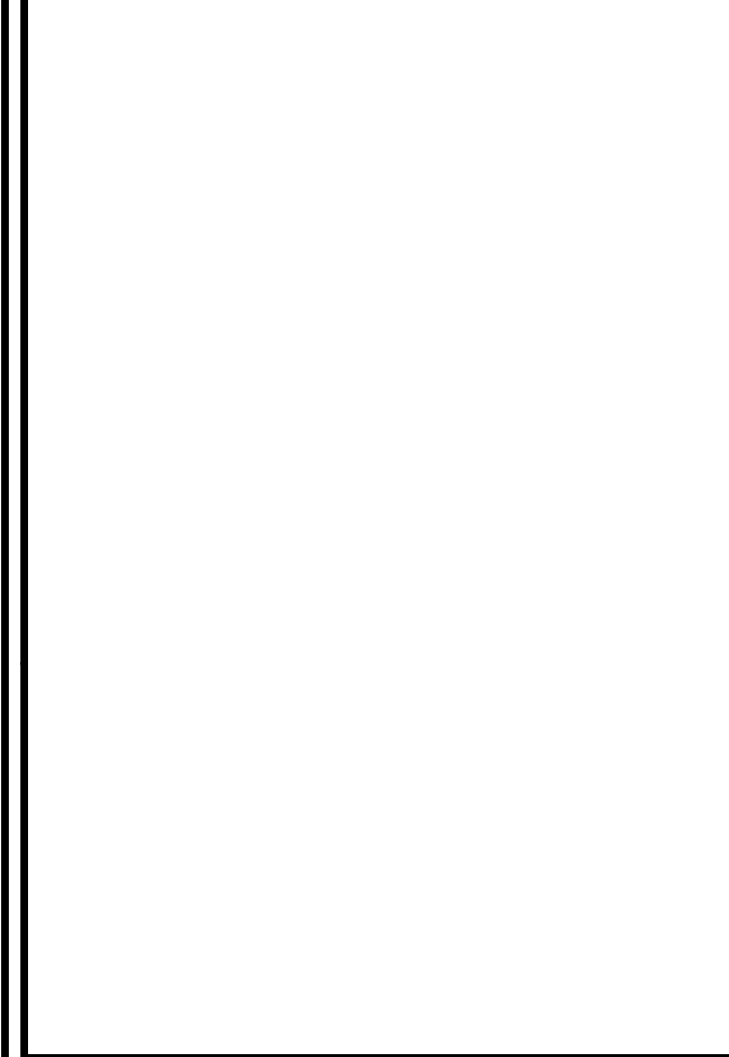
N/F  
ROBERT HARRIS &  
CYNTHIA L. HARRIS  
PIN: 40007 19021  
DB 377C PG 478

N/F  
OLD MAGNOLIA PLACE, LLC  
PIN: 40007 18014  
DB 365H PG 102

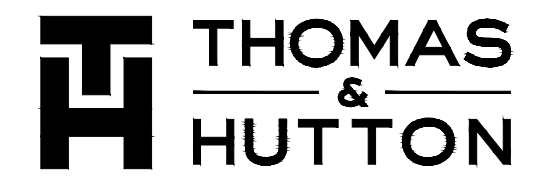
N/F  
ANNE J. MILLER  
PIN: 40008 08008  
DB 1791 PG 415

N/F  
JODI NESSMITH DINELLO  
PIN: 40008 09015  
DB 2275 PG 752

N/F  
DONALD L. THORSTAD  
PIN: 40008 09001  
DB 2055 PG 407



NO.	REVISIONS	BY	DATE



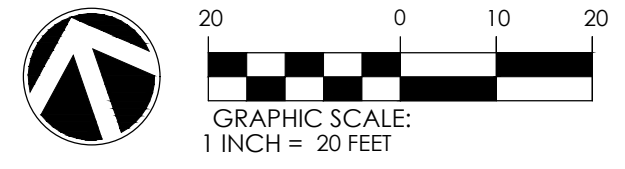
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Greenville, SC 29601 • 864.412.2222  
www.thomasandhutton.com

**EXISTING CONDITIONS**

**15TH STREET STORMWATER IMPROVEMENTS**

**PROJECT LOCATION:**  
15TH STREET, TYBEE ISLAND  
GEORGIA 31328

**CLIENT/OWNER:**  
CITY OF TYBEE ISLAND  
403 BUTLER AVENUE  
TYBEE ISLAND, GA 31328  
PETER GULBRONSON  
peter.gulbronson@cityoftybee.gov

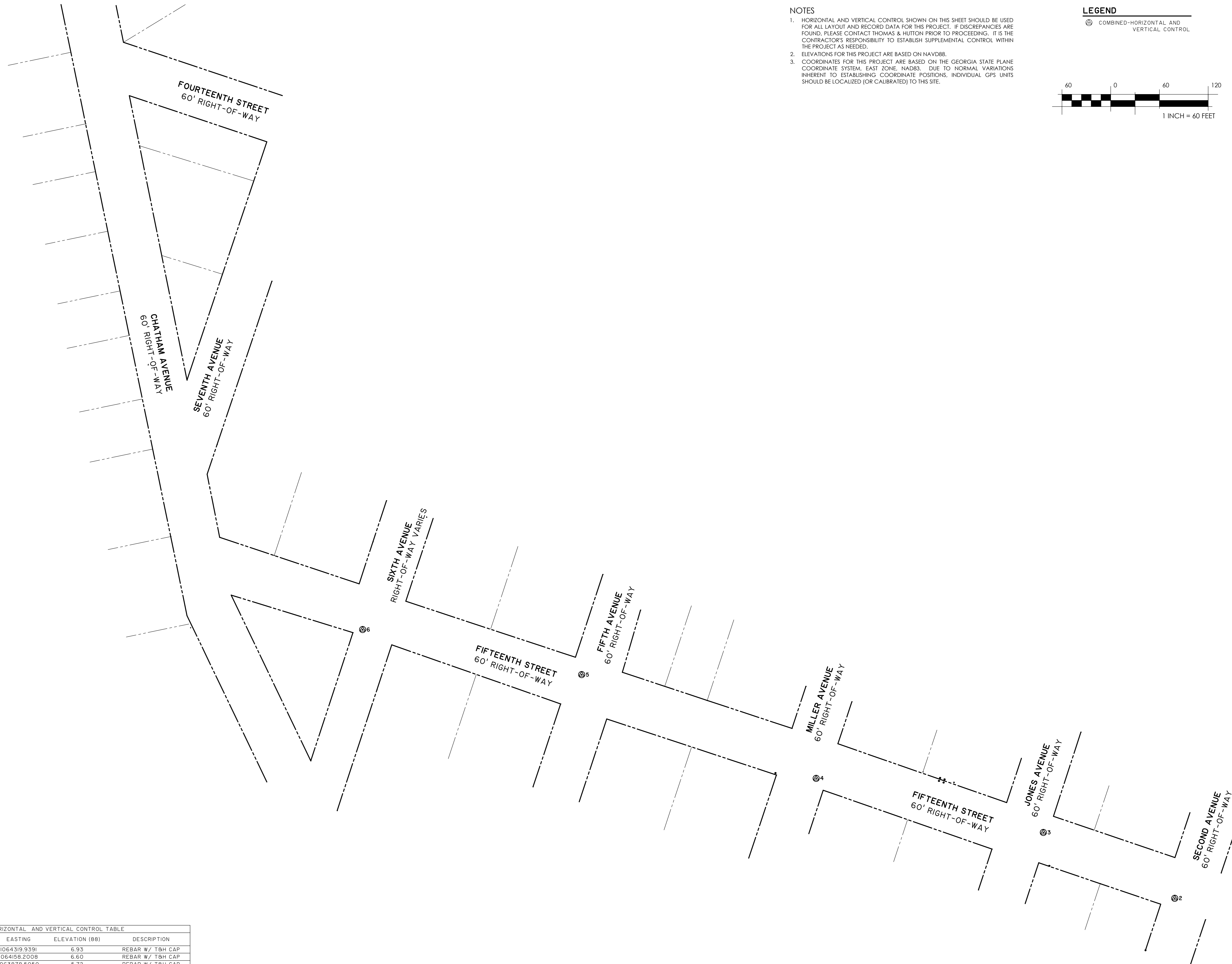


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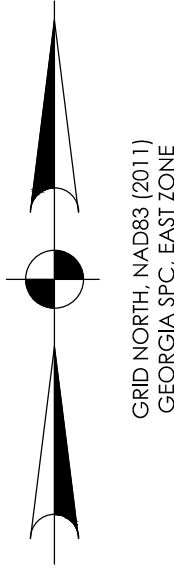
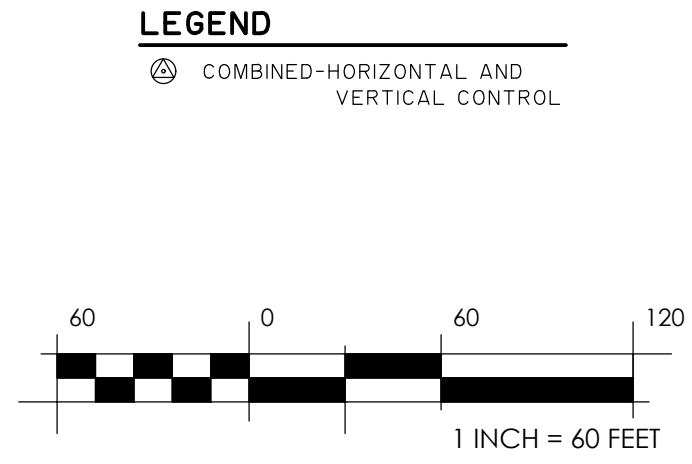
JOB NO: 27209.0043  
DATE: 03/16/2024  
DRAWN: SAM  
DESIGNED:  
REVIEWED:  
APPROVED: KMS  
SCALE: SEE SCALE BAR

**V1.3**

1:2709.0048 (PLAN) AND 1:2709.0048 (VERTICAL) DRAWING FILE: 2709.0048.DWG, DATE: MAR 18, 2024, 1:02 PM



- NOTES**
- HORIZONTAL AND VERTICAL CONTROL SHOWN ON THIS SHEET SHOULD BE USED FOR ALL LAYOUT AND RECORD DATA FOR THIS PROJECT. IF DISCREPANCIES ARE FOUND, PLEASE CONTACT THOMAS & HUTTON PRIOR TO PROCEEDING. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ESTABLISH SUPPLEMENTAL CONTROL WITHIN THE PROJECT AS NEEDED.
  - ELEVATIONS FOR THIS PROJECT ARE BASED ON NAVD88.
  - COORDINATES FOR THIS PROJECT ARE BASED ON THE GEORGIA STATE PLANE COORDINATE SYSTEM, EAST ZONE, NAD83. DUE TO NORMAL VARIATIONS INHERENT TO ESTABLISHING COORDINATE POSITIONS, INDIVIDUAL GPS UNITS SHOULD BE LOCALIZED (OR CALIBRATED) TO THIS SITE.



NO.	REVISIONS	BY	DATE

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**SURVEY CONTROL**

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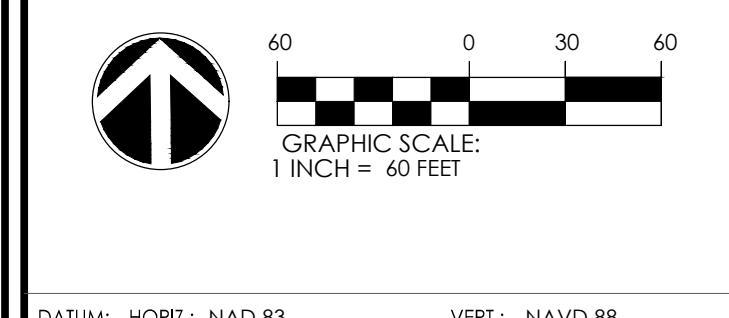
**15TH STREET STORMWATER IMPROVEMENTS**

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**PROJECT LOCATION:**  
15TH STREET, TYBEE ISLAND  
GEORGIA 31328

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**CLIENT/OWNER:**  
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JOB NO: 27209.0043  
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DESIGNED:  
REVIEWED:  
APPROVED: KMS  
SCALE: 1" = 60'

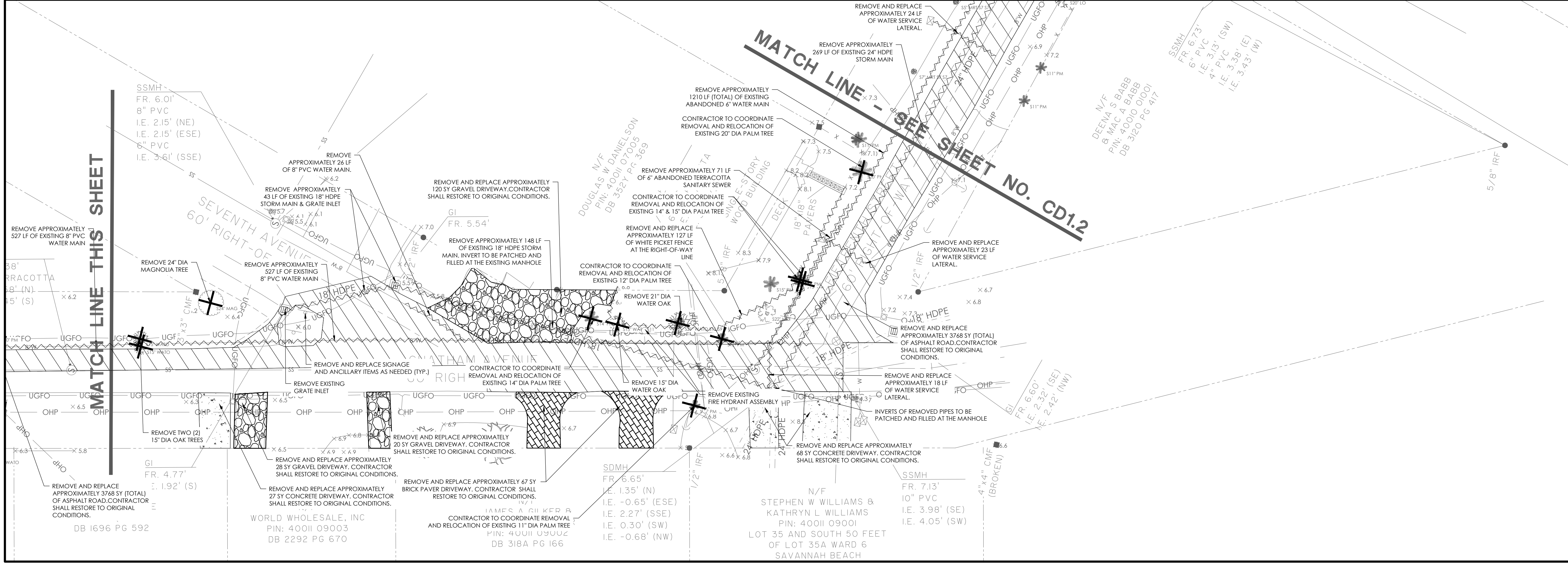
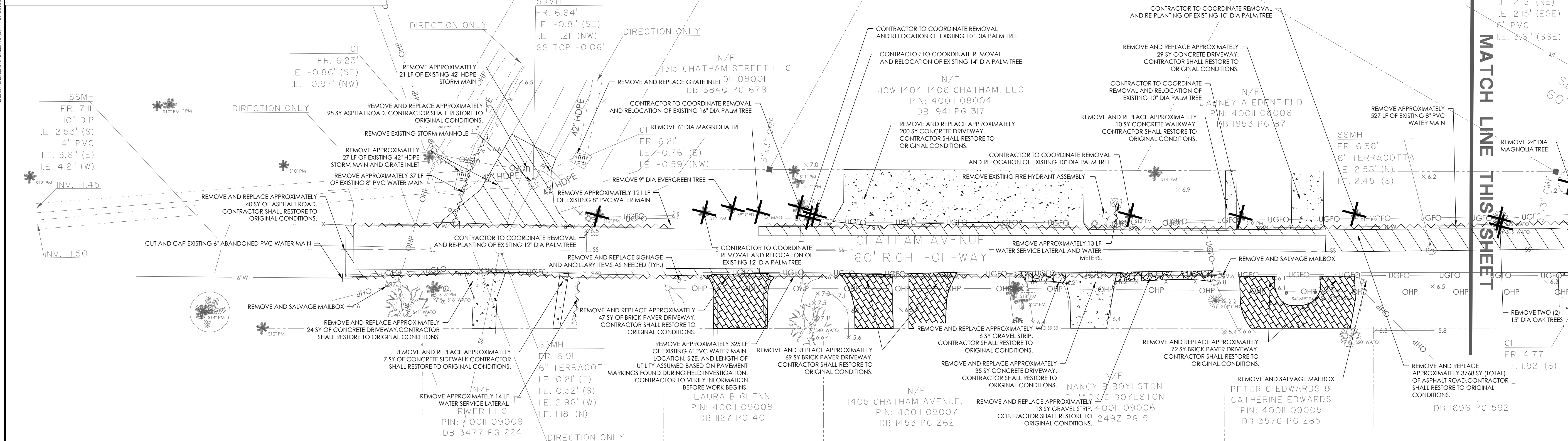
**V1.4**

**HORIZONTAL AND VERTICAL CONTROL TABLE**

POINT	NORTHING	EASTING	ELEVATION (88)	DESCRIPTION
2	727785.8317	1064319.9391	6.93	REBAR W/ T&H CAP
3	727866.9184	1064158.2008	6.60	REBAR W/ T&H CAP
4	727933.4482	1063878.5050	5.72	REBAR W/ T&H CAP
5	728061.3022	1063589.8199	6.33	REBAR W/ T&H CAP
6	72816.7573	1063320.1316	6.84	REBAR W/ T&H CAP

- DEMOLITION NOTES:**
- CONTRACTOR TO FIELD VERIFY DEPTH AND LOCATION OF ALL EXISTING UTILITIES SHOWN AND NOT SHOWN PRIOR TO CONSTRUCTION. CONTRACTOR SHALL COORDINATE WITH THE RESPECTIVE UTILITY PROVIDER REGARDING BRACING, PROTECTION, AND RELOCATION OF EXISTING UTILITY LINES PRIOR TO AND DURING CONSTRUCTION. ALL SAW CUTS FOR PAVEMENT REMOVAL SHALL BE PERPENDICULAR TO THE EDGE OF PAVEMENT AND COMPLETED SUCH THAT THE RESULTING EDGE IS VERTICAL, NEAT, AND CLEAN.
  - ANY DAMAGES TO EXISTING LANDSCAPING, UTILITIES, AND OTHER ITEMS NOT ANTICIPATED TO BE AFFECTED BY CONSTRUCTION, UNLESS SPECIFICALLY ILLUSTRATED IN THE CONSTRUCTION DOCUMENTS, SHALL BE REPAIRED BY THE CONTRACTOR AND AT THE CONTRACTOR'S EXPENSE.
  - CONTRACTOR SHALL COORDINATE DRIVEWAY AND WALKWAY REMOVAL AND RESTORATION WITH HOMEOWNER.
  - IN THE EVENT STRUCTURES OR TREES NOT CALLED OUT IN THESE PLANS MUST BE REMOVED THE CONTRACTOR SHALL COORDINATE THEIR REMOVAL AND REPLACEMENT WITH THE CITY OF TYBEE ISLAND AND/OR THE PROPERTY OWNER. QUANTITIES OF ITEMS TO BE REMOVED AND REPLACED ARE PROVIDED AS AN ESTIMATE AND ARE SUBJECT TO CHANGE.
  - TREES AVAILABLE FOR RELOCATION AND REPLANTING SHOULD BE REMOVED VIA TREE SPADE AS TO PRESERVE LIFE OF THE TREE. CONTRACTOR TO COORDINATE TREE RELOCATION AND REPLANTING WITH THE CITY OF TYBEE ISLAND OR THE PROPERTY OWNER.

- DEMOLITION LEGEND:**
- ASPHALT TO BE REMOVED
  - CONCRETE TO BE REMOVED
  - BRICK PAVEMENT TO BE REMOVED
  - GRAVEL TO BE REMOVED
  - TREE TO BE REMOVED OR RELOCATED



NO.	REVISIONS	BY	DATE



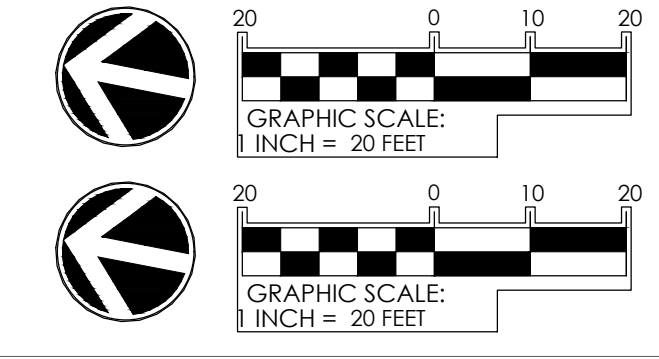
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www.thomasandhutton.com

**DEMOLITION & TREE REMOVAL PLAN**

**15TH STREET STORMWATER IMPROVEMENTS**

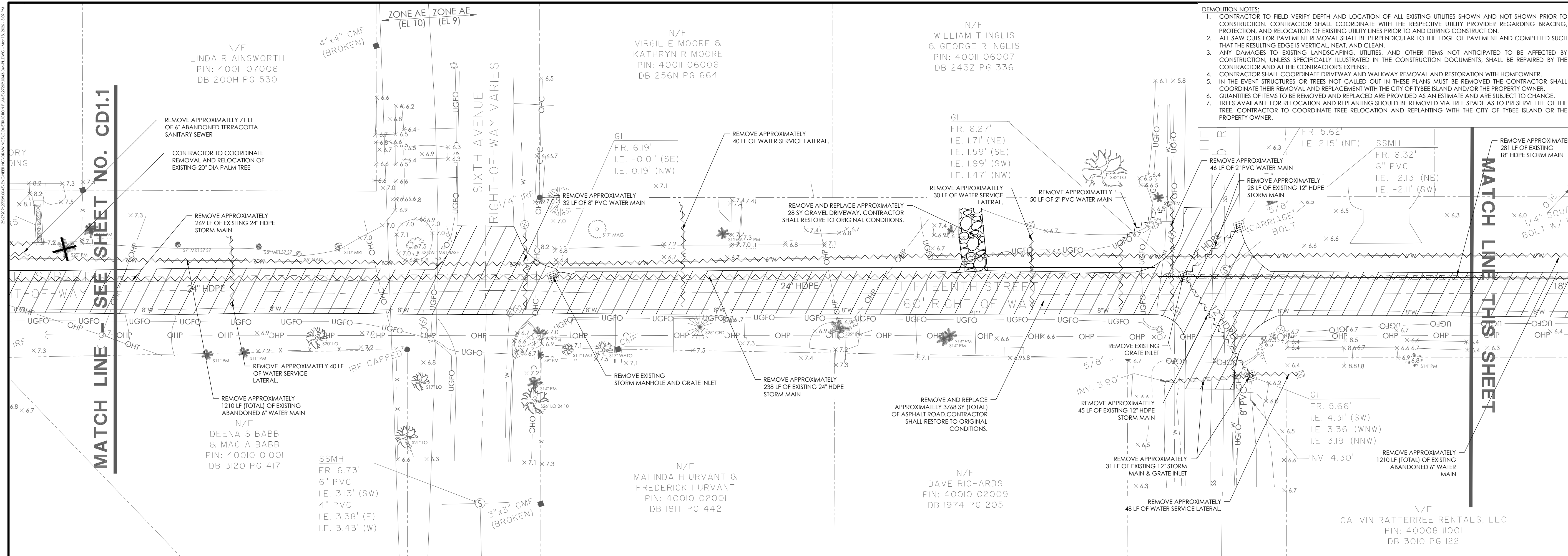
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GEORGIA 31328

**CLIENT/OWNER:**  
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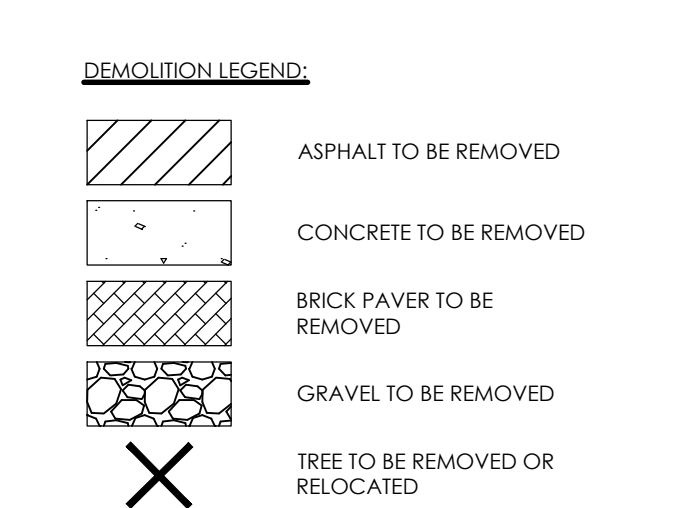


JOB NO: 27209.0043  
DATE: 03/16/2026  
DRAWN: SAM  
DESIGNED:  
REVIEWED:  
APPROVED: KMS  
SCALE: SEE SCALE BAR

**CD1.1**



- DEMOLITION NOTES:**
- CONTRACTOR TO FIELD VERIFY DEPTH AND LOCATION OF ALL EXISTING UTILITIES SHOWN AND NOT SHOWN PRIOR TO CONSTRUCTION. CONTRACTOR SHALL COORDINATE WITH THE RESPECTIVE UTILITY PROVIDER REGARDING BRACING, PROTECTION, AND RELOCATION OF EXISTING UTILITY LINES PRIOR TO AND DURING CONSTRUCTION.
  - ALL SAW CUTS FOR PAVEMENT REMOVAL SHALL BE PERPENDICULAR TO THE EDGE OF PAVEMENT AND COMPLETED SUCH THAT THE RESULTING EDGE IS VERTICAL, NEAT, AND CLEAN.
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  - TREES AVAILABLE FOR RELOCATION AND REPLANTING SHOULD BE REMOVED VIA TREE SPADE AS TO PRESERVE LIFE OF THE TREE. CONTRACTOR TO COORDINATE TREE RELOCATION AND REPLANTING WITH THE CITY OF TYBEE ISLAND OR THE PROPERTY OWNER.



NO.	REVISIONS	BY	DATE



**THOMAS & HUTTON**

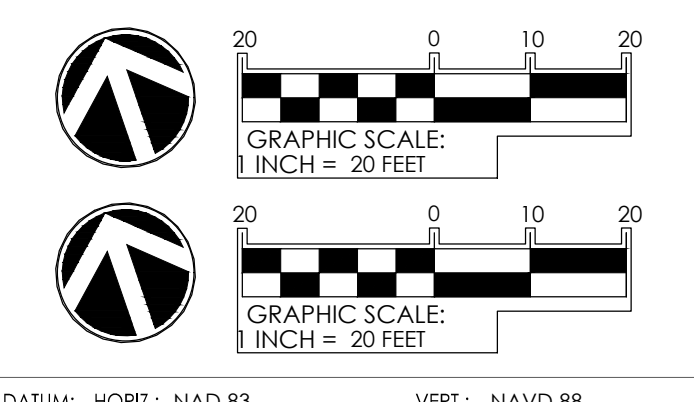
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**DEMOLITION & TREE REMOVAL PLAN**

**15TH STREET STORMWATER IMPROVEMENTS**

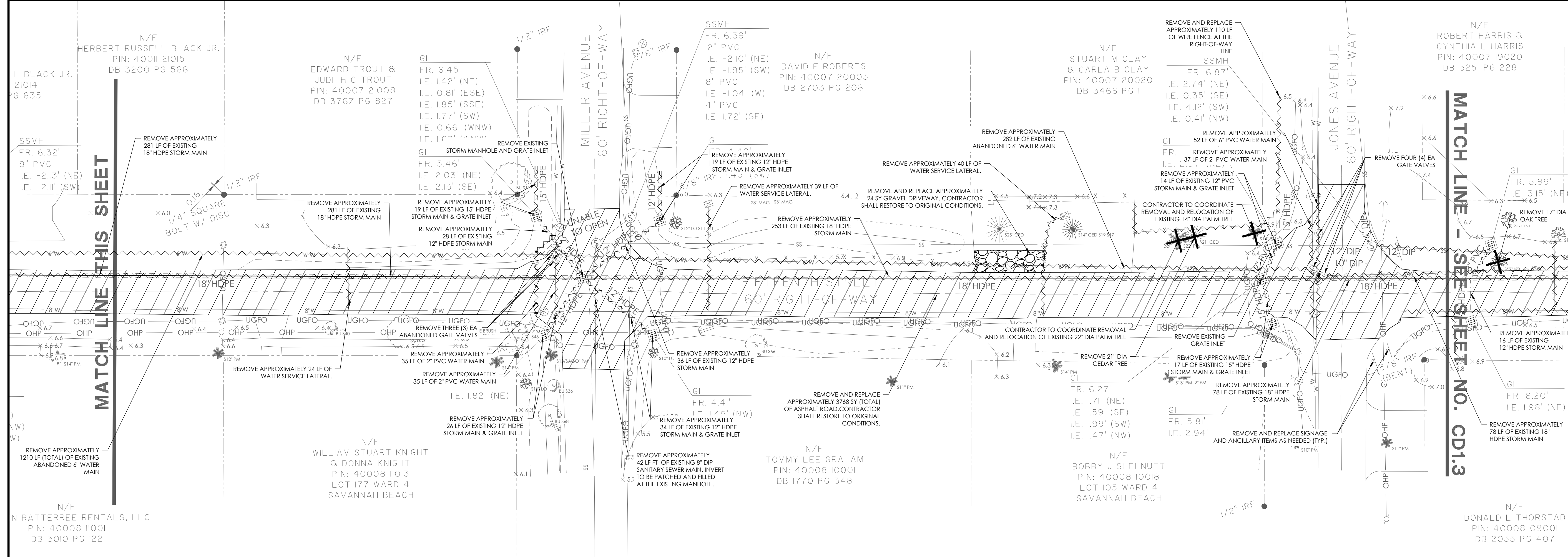
**PROJECT LOCATION:**  
15TH STREET, TYBEE ISLAND  
GEORGIA 31328

**CLIENT/OWNER:**  
CITY OF TYBEE ISLAND  
403 BUTLER AVENUE  
TYBEE ISLAND, GA 31328  
PETER GULBRONSON  
peter.gulbranson@cityoftybee.gov



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APPROVED:	KMS
SCALE:	SEE SCALE BAR

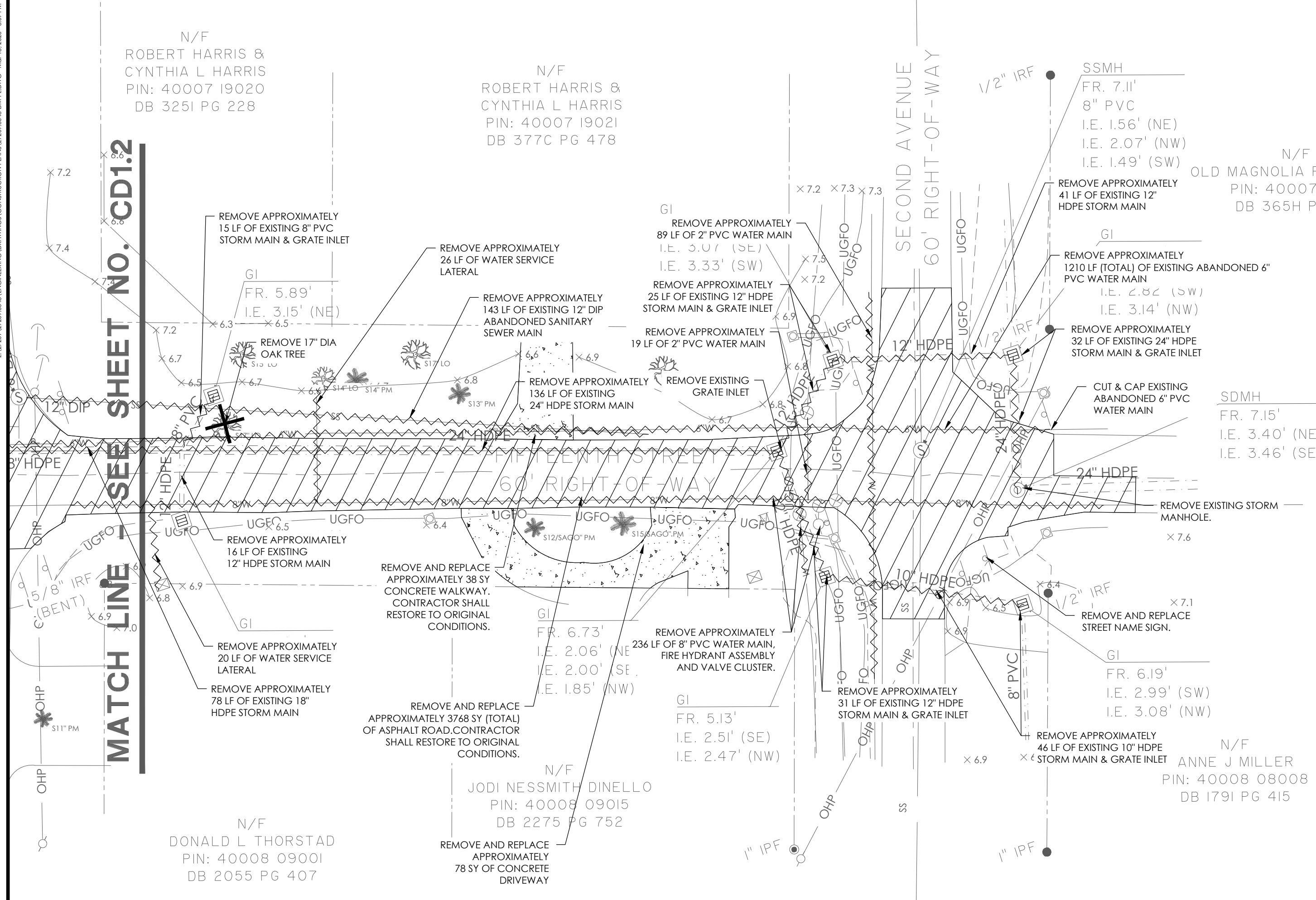
**CD1.2**



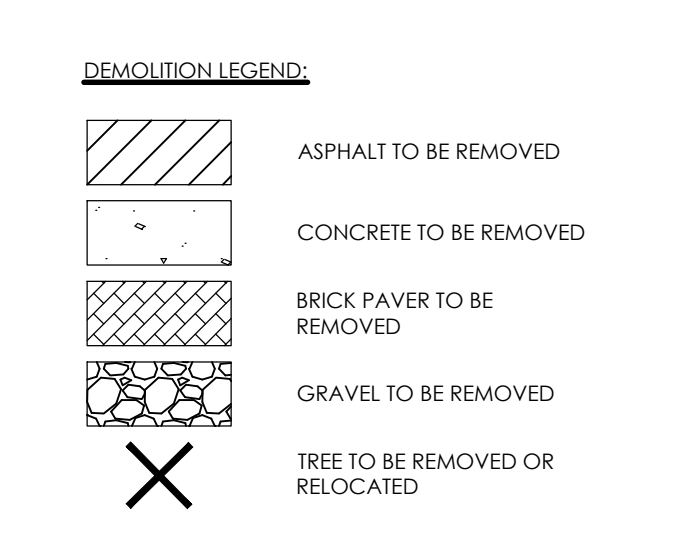
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DESIGNED:	
REVIEWED:	
APPROVED:	KMS
SCALE:	SEE SCALE BAR

**CD1.2**

2:32PM 1/16/2024 (DATE) 15TH STREET STORMWATER IMPROVEMENTS (PROJECT) PLANS (DRAWING) SHEET NO. CD1.3 (NO.)



- DEMOLITION NOTES:**
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NO.	REVISIONS	BY	DATE



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**DEMOLITION & TREE REMOVAL PLAN**

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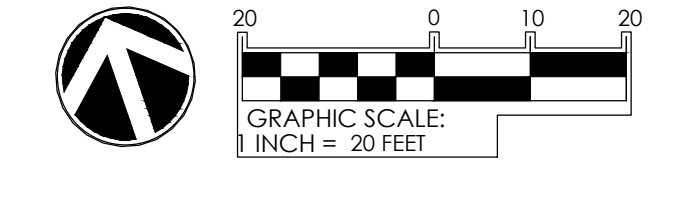
**15TH STREET STORMWATER IMPROVEMENTS**

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**PROJECT LOCATION:**  
15TH STREET, TYBEE ISLAND  
GEORGIA 31328

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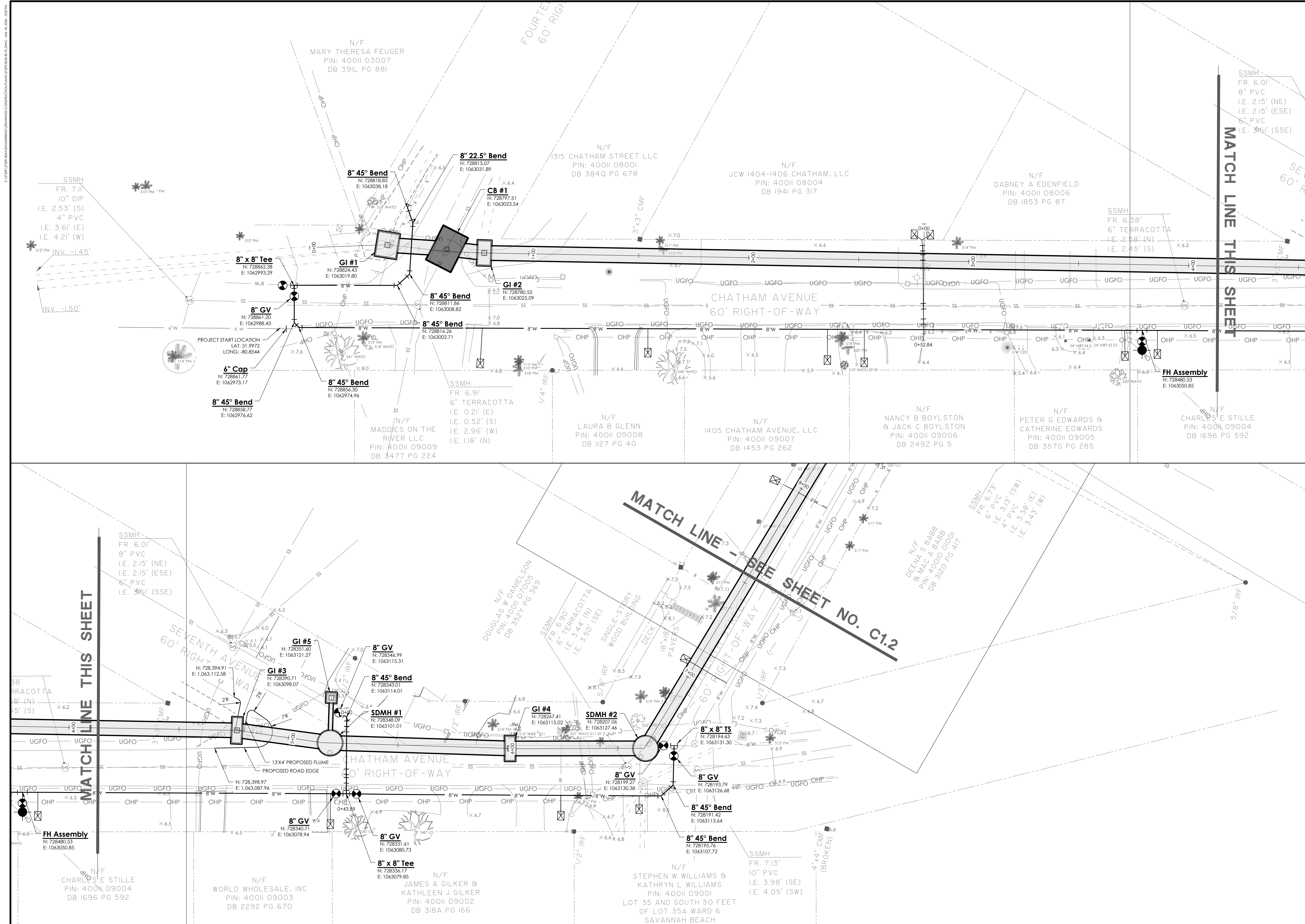
**CLIENT/OWNER:**  
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SCALE: SEE SCALE BAR

**CD1.3**



NO.	REVISIONS	BY	DATE

NO.	REVISIONS	BY	DATE

**REGISTERED PROFESSIONAL ENGINEER**

No. 029886  
KEVIN M. SMITH

**THOMAS & HUTTON**

50 Park of Commerce Way  
Savannah, GA 31405 • 912.234.5300  
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**STAKING PLAN**

**15TH STREET STORMWATER IMPROVEMENTS**

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GEORGIA 31328

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PETER GULBRONSON  
peter.gulbronson@cityoftybee.gov

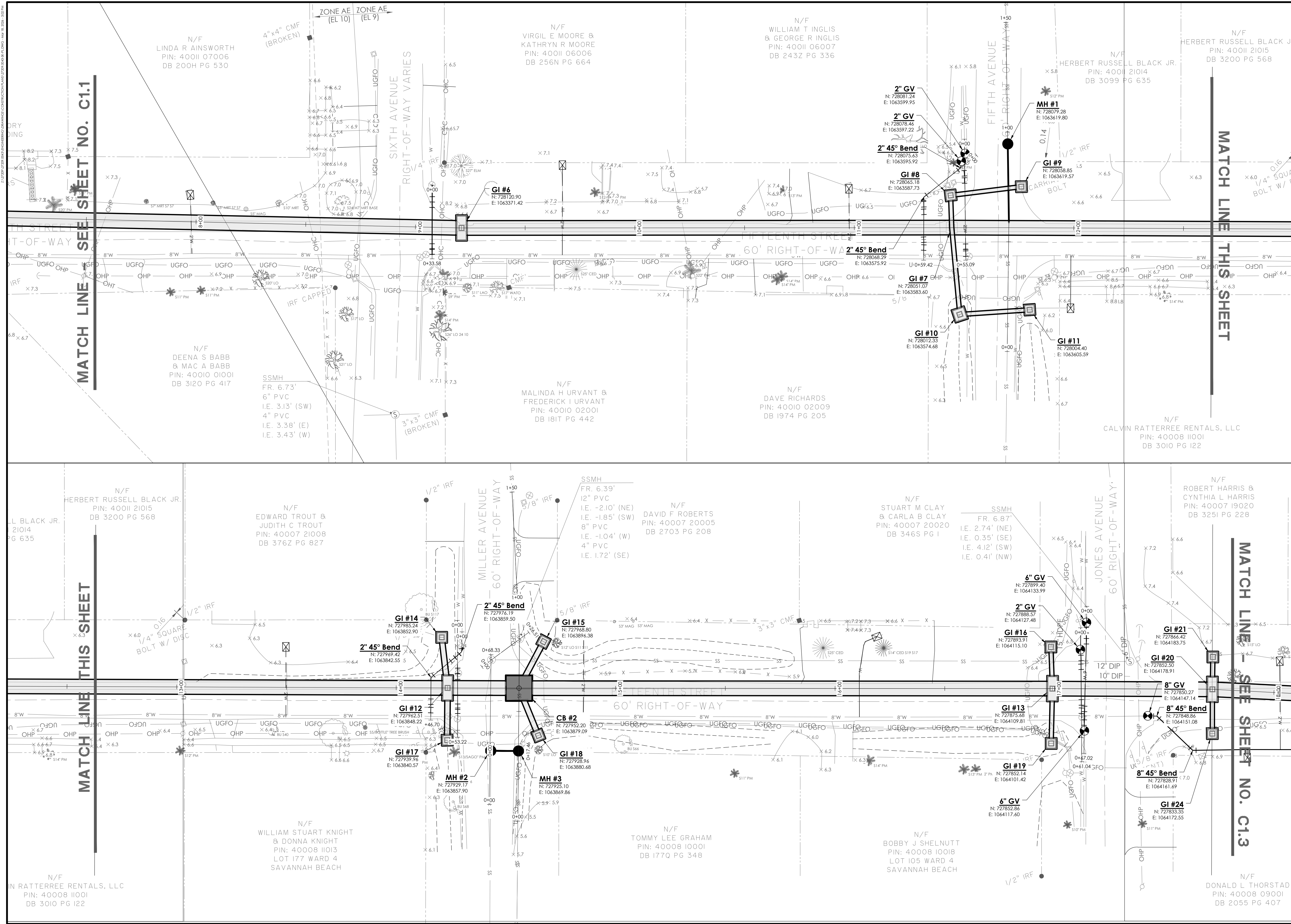
**GRAPHIC SCALE:**  
1 INCH = 20 FEET

**GRAPHIC SCALE:**  
1 INCH = 20 FEET

DATUM: HORIZ: NAD 83      VERT: NAVD 88

JOB NO:	27209.0043
DATE:	03/16/2026
DRAWN:	SAM
DESIGNED:	
REVIEWED:	
APPROVED:	KMS
SCALE:	SEE SCALE BAR

**C1.1**



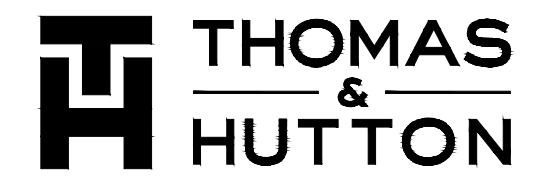
MATCH LINE SEE SHEET NO. C1.1

MATCH LINE THIS SHEET

MATCH LINE THIS SHEET

MATCH LINE SEE SHEET NO. C1.3

NO.	REVISIONS	BY	DATE



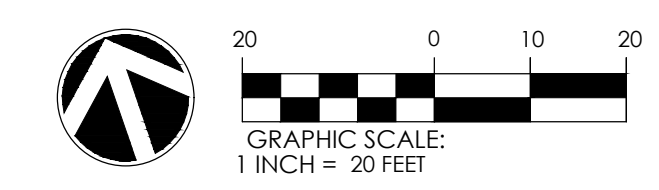
50 Park of Commerce Way  
Savannah, GA 31405 • 912.234.5300  
www.thomasandhutton.com

**STAKING PLAN**

**15TH STREET STORMWATER IMPROVEMENTS**

**PROJECT LOCATION:**  
15TH STREET, TYBEE ISLAND  
GEORGIA 31328

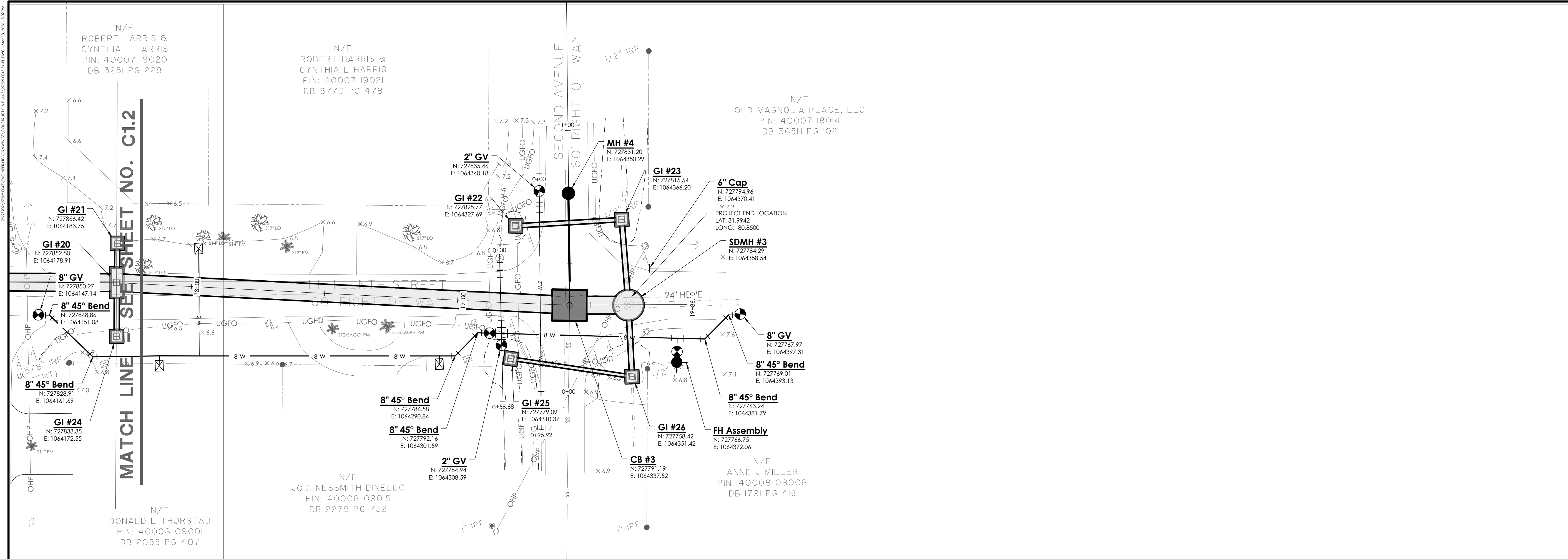
**CLIENT/OWNER:**  
CITY OF TYBEE ISLAND  
403 BUTLER AVENUE  
TYBEE ISLAND, GA 31328  
PETER GULBRONSON  
peter.gulbronson@cityoftybee.gov



DATUM: HORIZ.: NAD 83      VERT.: NAVD 88

JOB NO:	27209.0043
DATE:	03/16/2026
DRAWN:	SAM
DESIGNED:	
REVIEWED:	
APPROVED:	KMS
SCALE:	SEE SCALE BAR

**C1.2**



NO.	REVISIONS	BY	DATE



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**STAKING PLAN**

---

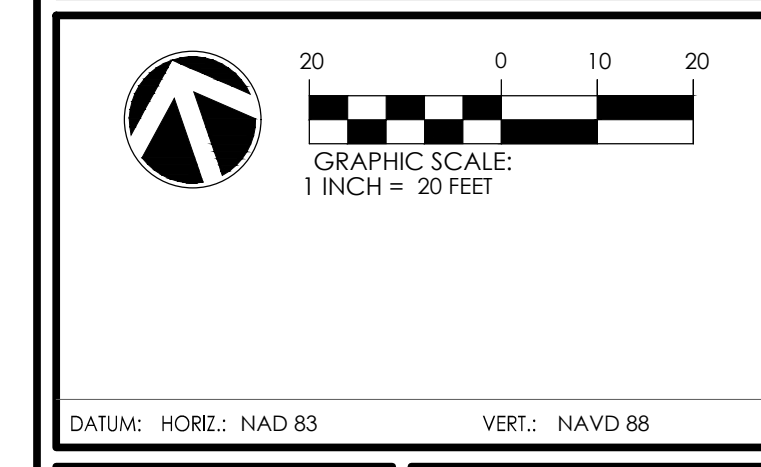
**15TH STREET STORMWATER IMPROVEMENTS**

---

**PROJECT LOCATION:**  
 15TH STREET, TYBEE ISLAND  
 GEORGIA 31328

---

**CLIENT/OWNER:**  
 CITY OF TYBEE ISLAND  
 403 BUTLER AVENUE  
 TYBEE ISLAND, GA 31328  
 PETER GULBRONSON  
 peter.gulbronson@cityoftybee.gov

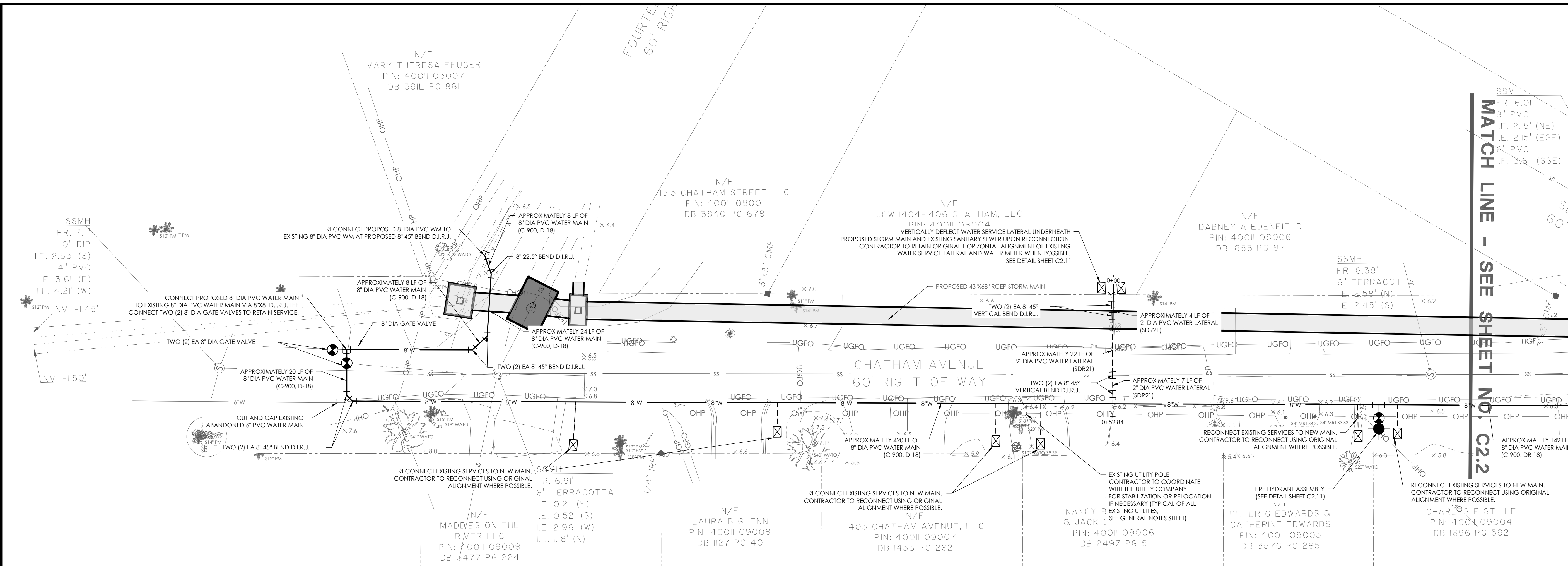


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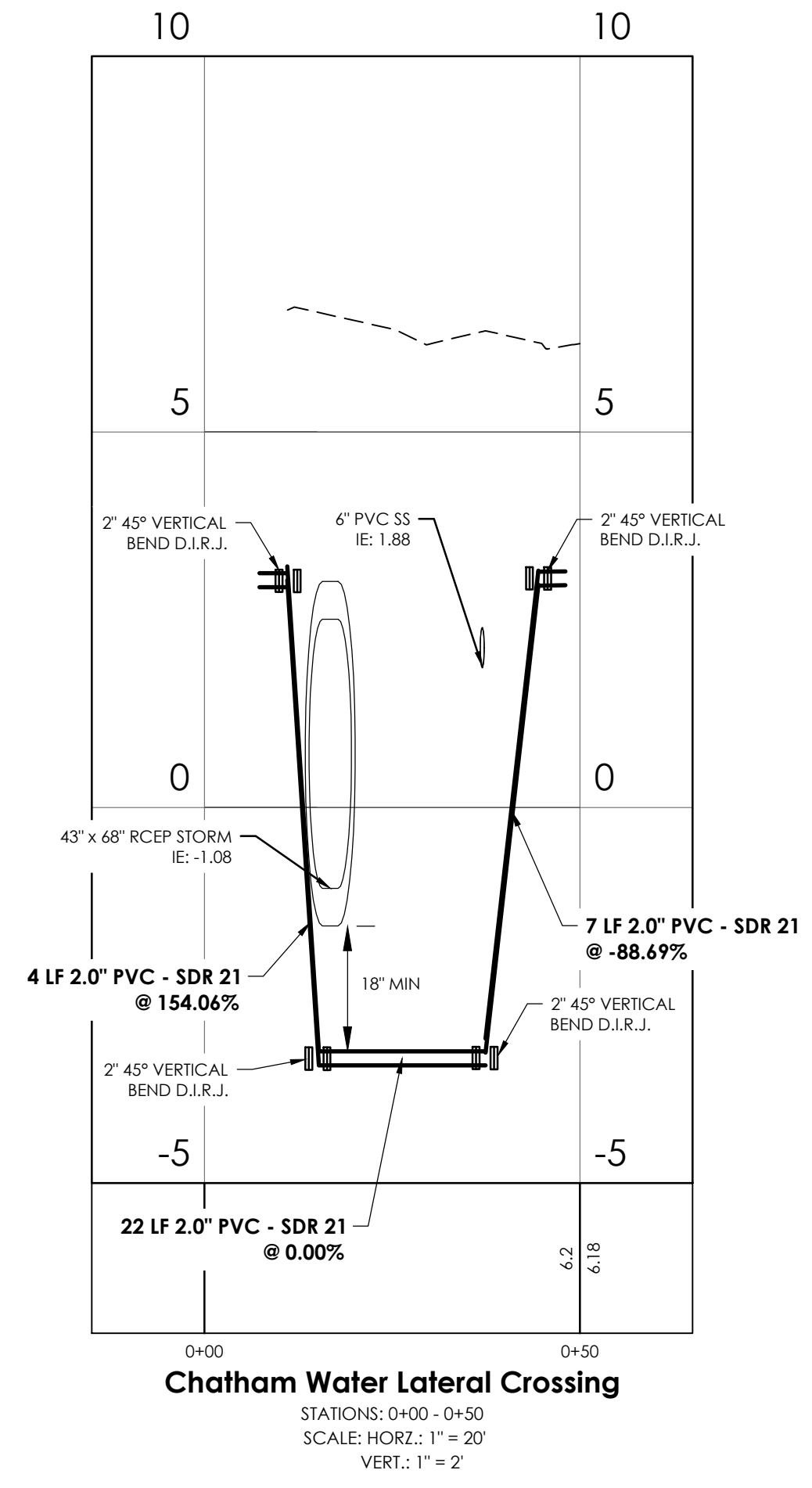
JOB NO:	27209.0043
DATE:	03/16/2026
DRAWN:	SAM
DESIGNED:	
REVIEWED:	
APPROVED:	KMS
SCALE:	SEE SCALE BAR

**C1.3**

2:2709:2209:0043:ENC:GENERAL CONTRACTOR PLAN 02209:0043:DWG. MAR 18, 2024, 10:57 AM



**MATCH LINE - SEE SHEET NO. C2.2**



SSMH  
FR. 6.01'  
8" PVC  
I.E. 2.15' (NE)  
I.E. 2.15' (ESE)  
8" PVC  
I.E. 3.61' (SSE)

NO.	REVISIONS	BY	DATE

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**WATER PLAN & PROFILE**

---

**15TH STREET STORMWATER IMPROVEMENTS**

---

PROJECT LOCATION:  
15TH STREET, TYBEE ISLAND  
GEORGIA 31328

---

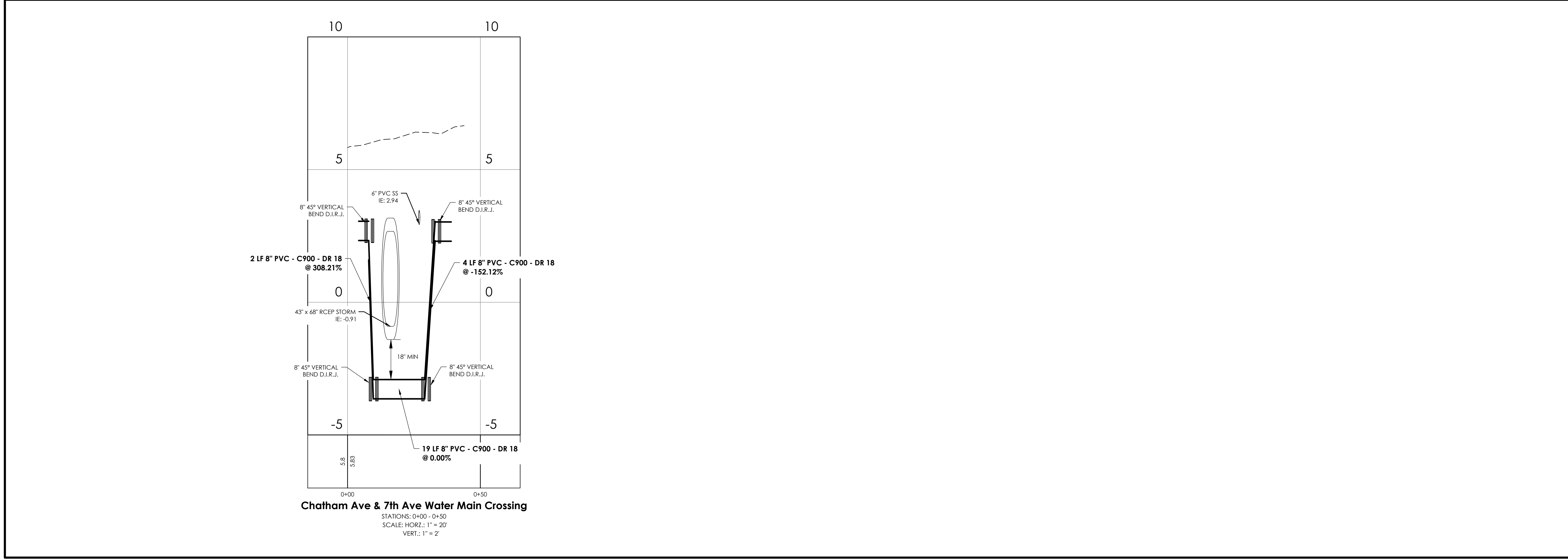
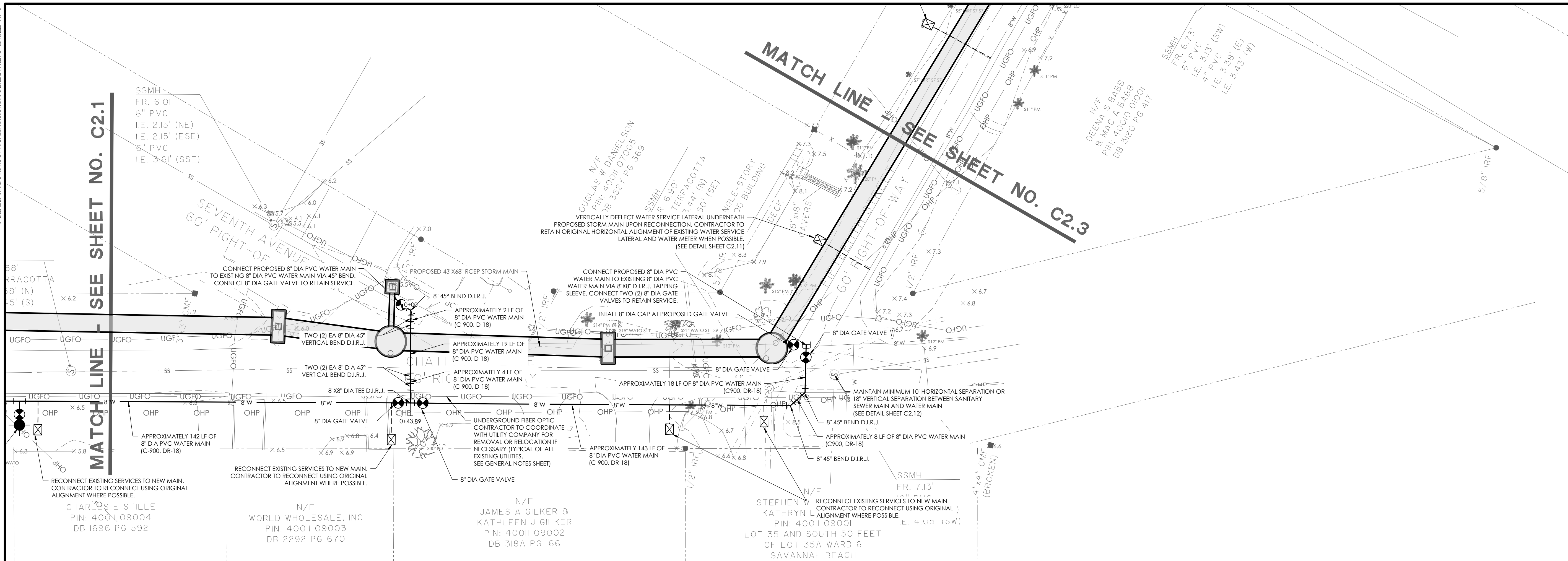
CLIENT/OWNER:  
CITY OF TYBEE ISLAND  
403 BUTLER AVENUE  
TYBEE ISLAND, GA 31328  
PETER GULBRONSON  
peter.gulbronson@cityoftybee.gov

DATUM: HORIZ.: NAD 83 VERT.: NAVD 88

JOB NO: 27209.0043  
DATE: 03/16/2026  
DRAWN: SAM  
DESIGNED:  
REVIEWED:  
APPROVED: KMS  
SCALE: SEE SCALE BAR

**C2.1**

132709.00200 04/08/2024 09:00 AM (C:\PROJECTS\15TH STREET\15TH STREET WATER PLAN & PROFILE.dwg) PLOT DATE: 04/08/2024 09:00 AM



**SEE SHEET NO. C2.1** (left)

**SEE SHEET NO. C2.3** (right)

NO.	REVISIONS	BY	DATE

REGISTERED PROFESSIONAL ENGINEER

No. 029886

KEVIN M. SMITH

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**WATER PLAN & PROFILE**

---

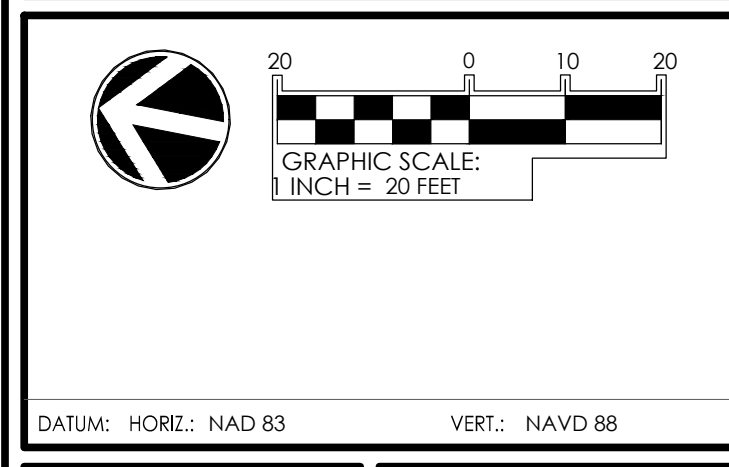
**15TH STREET STORMWATER IMPROVEMENTS**

---

**PROJECT LOCATION:**  
15TH STREET, TYBEE ISLAND  
GEORGIA 31328

---

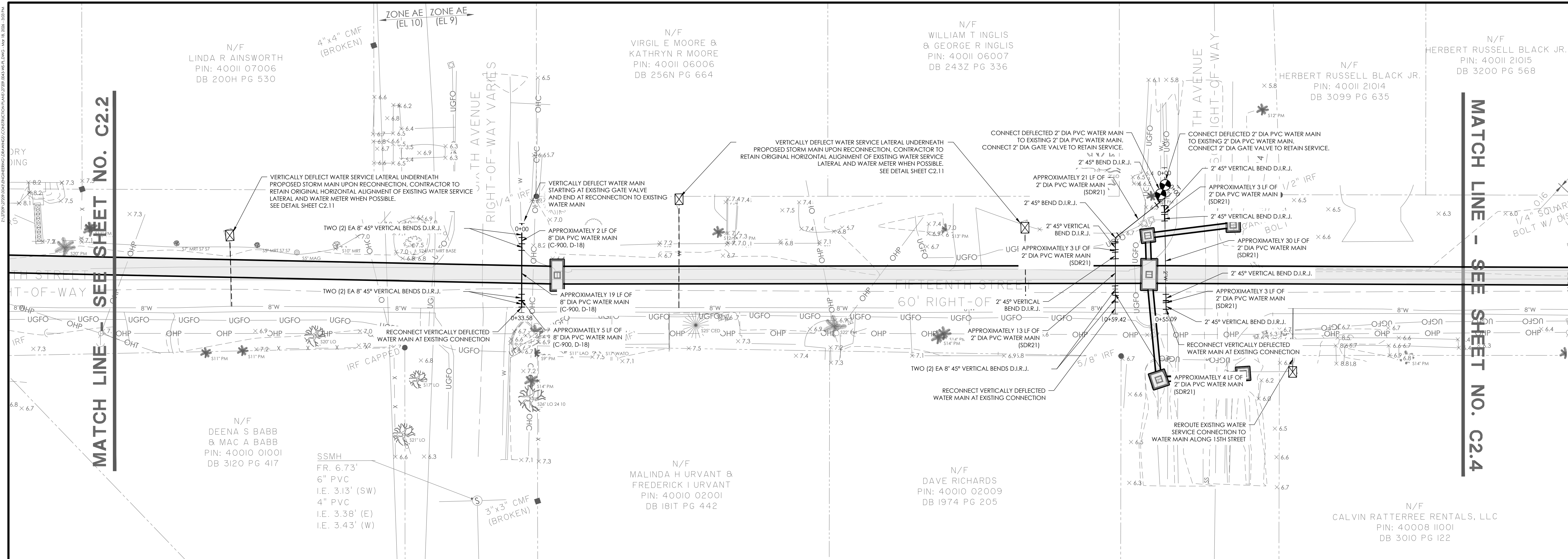
**CLIENT/OWNER:**  
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TYBEE ISLAND, GA 31328  
PETER GULBRONSON  
peter.gulbronson@cityoftybee.gov



DATUM: HORIZ.: NAD 83      VERT.: NAVD 88

JOB NO.: 27209.0043  
DATE: 03/16/2024  
DRAWN: SAM  
DESIGNED:  
REVIEWED:  
APPROVED: KMS  
SCALE: SEE SCALE BAR

**C2.2**



MATCH LINE - SEE SHEET NO. C2.2

MATCH LINE - SEE SHEET NO. C2.4

N/F  
LINDA R AINSWORTH  
PIN: 40011 07006  
DB 200H PG 530

N/F  
VIRGIL E MOORE &  
KATHRYN R MOORE  
PIN: 40011 06006  
DB 256N PG 664

N/F  
WILLIAM T INGLIS  
& GEORGE R INGLIS  
PIN: 40011 06007  
DB 243Z PG 336

N/F  
HERBERT RUSSELL BLACK JR.  
PIN: 40011 21014  
DB 3099 PG 635

N/F  
HERBERT RUSSELL BLACK JR.  
PIN: 40011 21015  
DB 3200 PG 568

N/F  
DEENA S BABB  
& MAC A BABB  
PIN: 40010 01001  
DB 3120 PG 417

SSMH  
FR. 6.73'  
6" PVC  
I.E. 3.13' (SW)  
4" PVC  
I.E. 3.38' (E)  
I.E. 3.43' (W)

N/F  
MALINDA H URVANT &  
FREDERICK I URVANT  
PIN: 40010 02001  
DB 181T PG 442

N/F  
DAVE RICHARDS  
PIN: 40010 02009  
DB 1974 PG 205

N/F  
CALVIN RATTERREE RENTALS, LLC  
PIN: 40008 11001  
DB 3010 PG 122

NO.	REVISIONS	BY	DATE



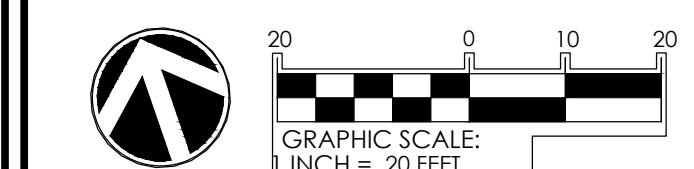
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**WATER PLAN & PROFILE**

**15TH STREET STORMWATER IMPROVEMENTS**

PROJECT LOCATION:  
15TH STREET, TYBEE ISLAND  
GEORGIA 31328

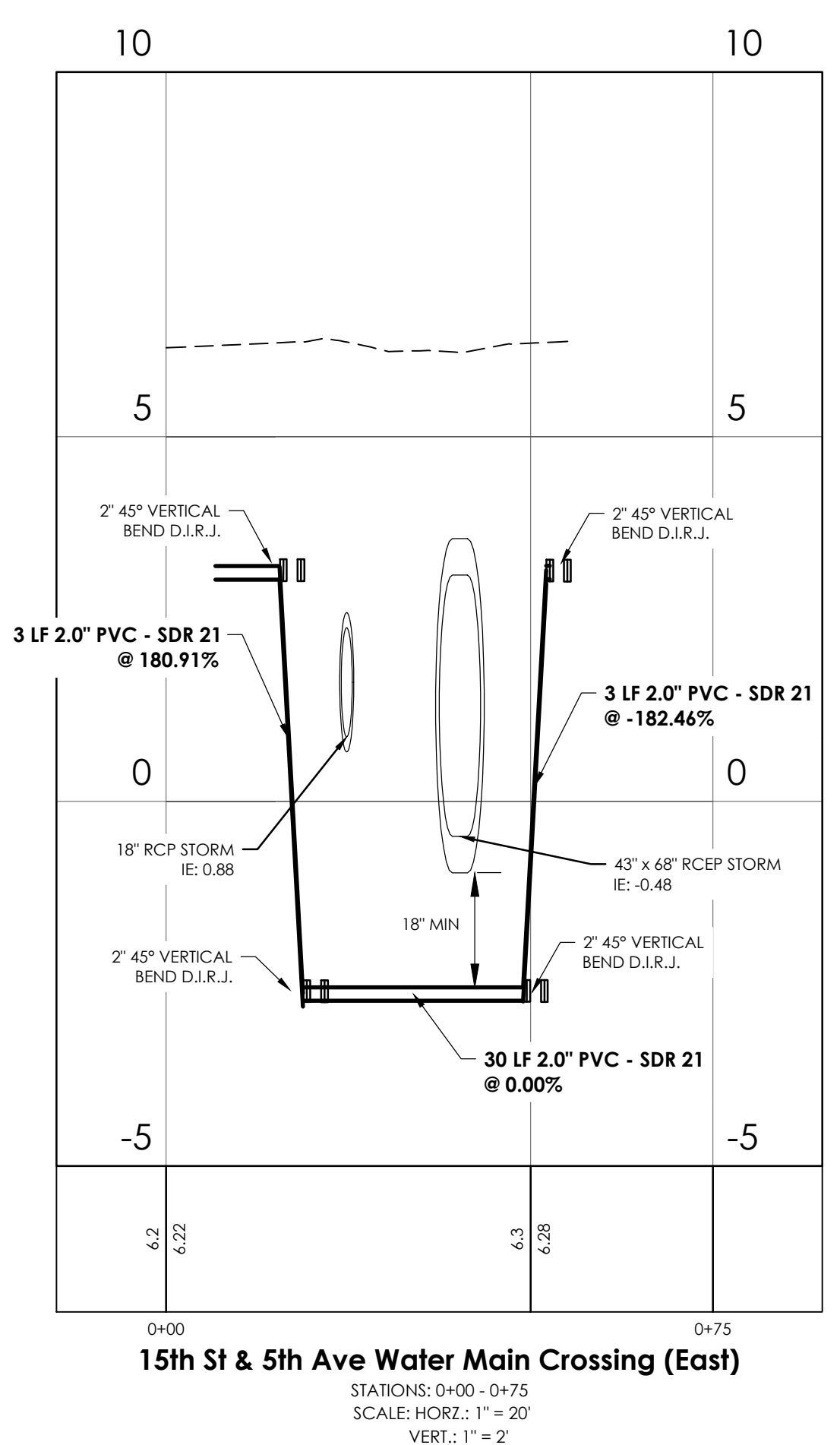
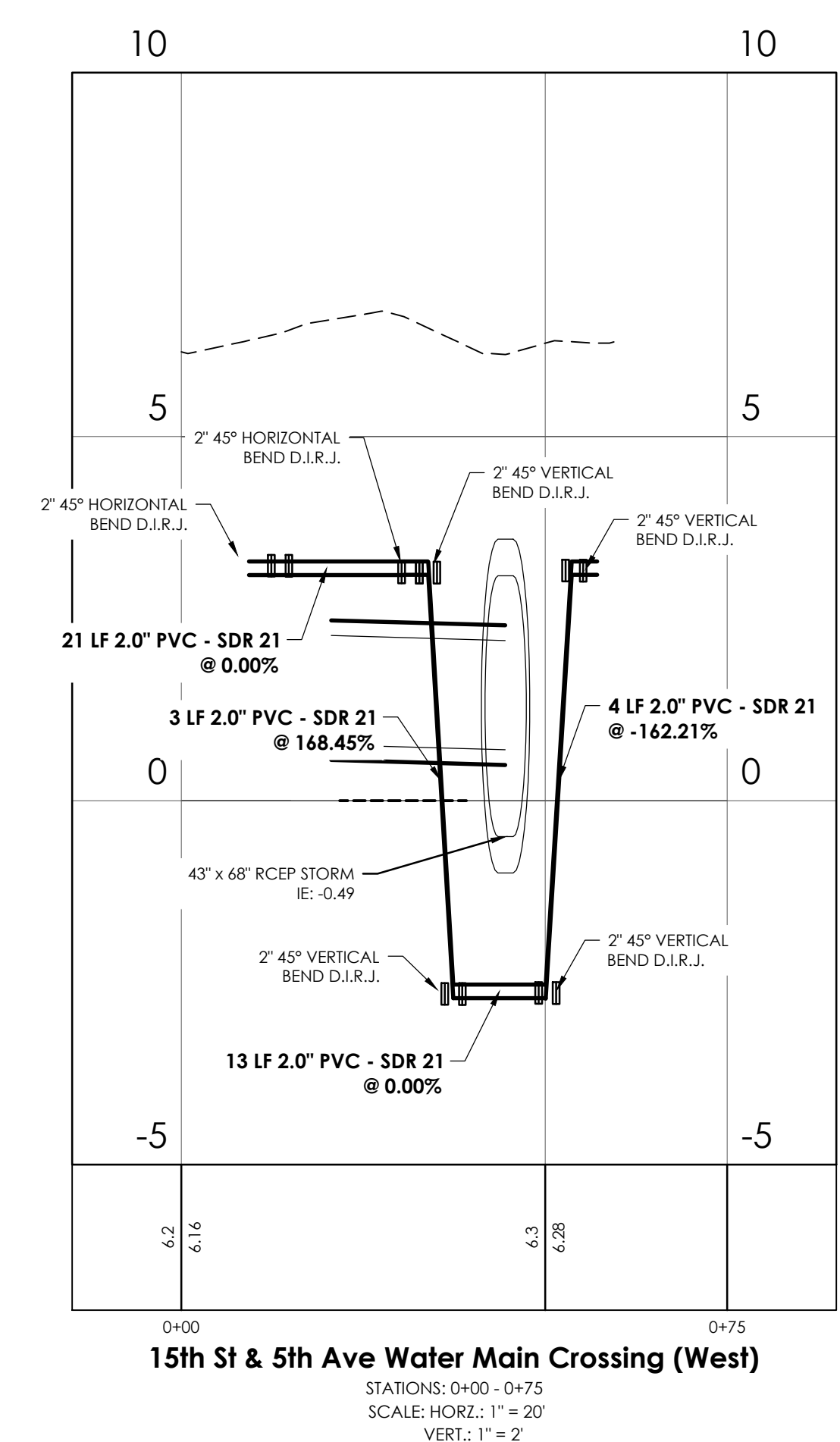
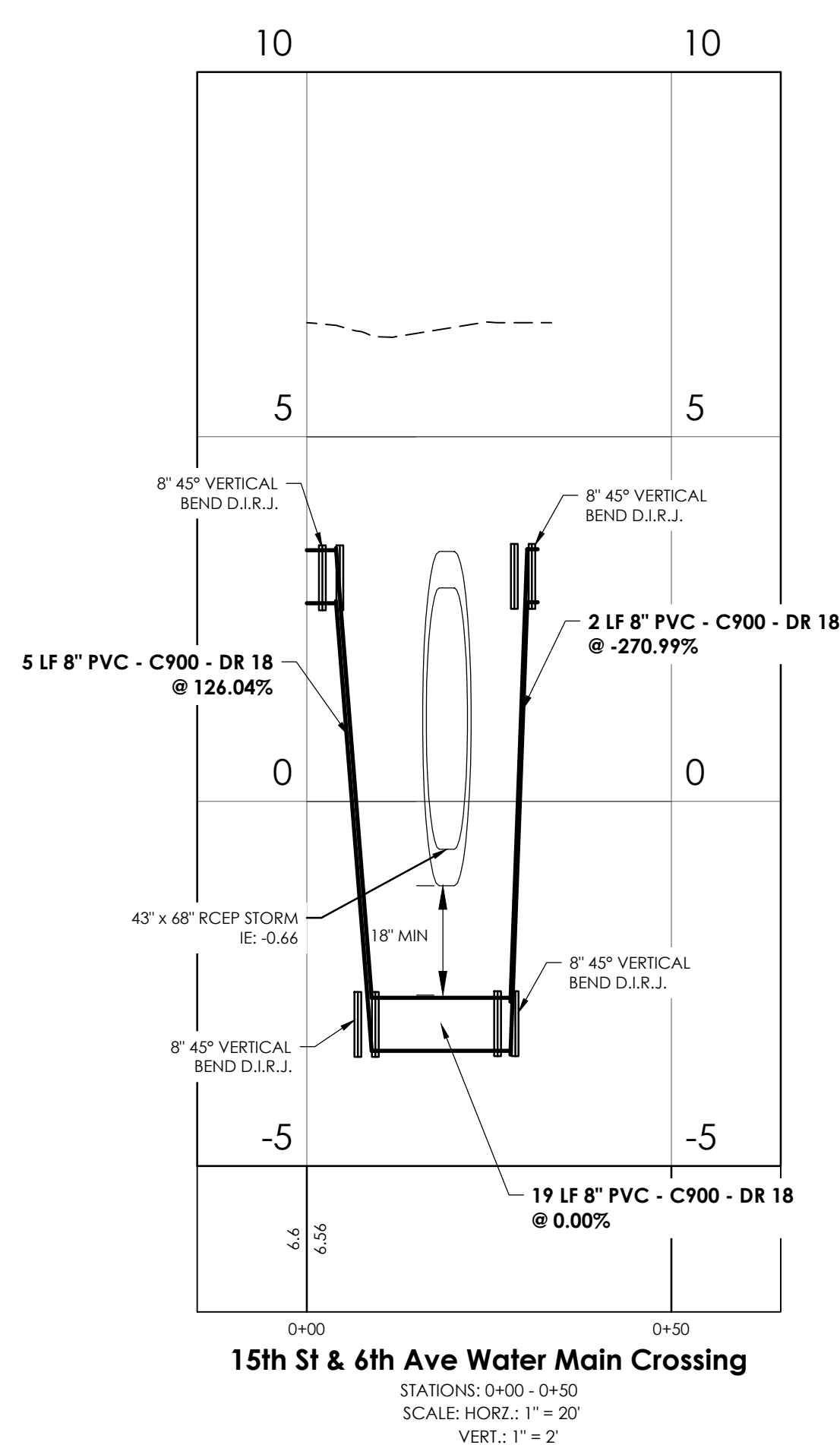
CLIENT/OWNER:  
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403 BUTLER AVENUE  
TYBEE ISLAND, GA 31328  
PETER GULBRONSON  
peter.gulbranson@cityoftybee.gov

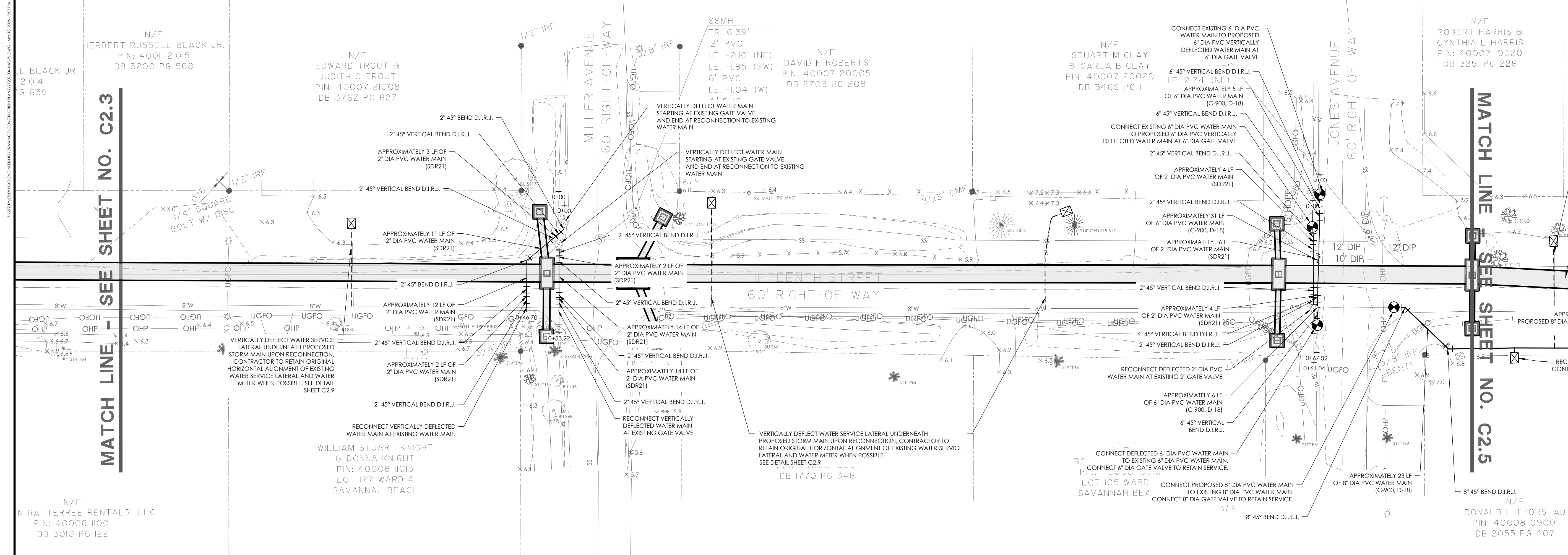


DATUM: HORIZ.: NAD 83      VERT.: NAVD 88

JOB NO: 27209.0043  
DATE: 03/16/2026  
DRAWN: SAM  
DESIGNED:  
REVIEWED:  
APPROVED: KMS  
SCALE: SEE SCALE BAR

**C2.3**

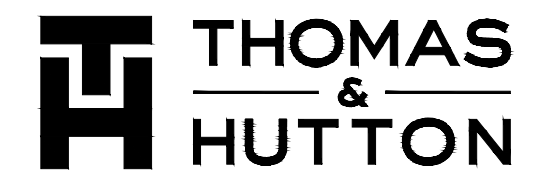




MATCH LINE - SEE SHEET NO. C2.3

MATCH LINE - SEE SHEET NO. C2.5

NO.	REVISIONS	BY	DATE



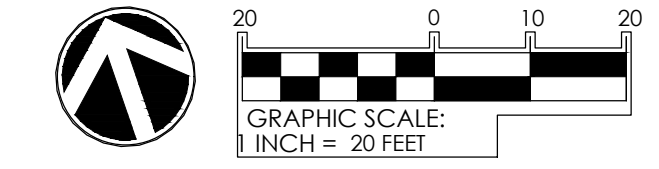
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**WATER PLAN & PROFILE**

**15TH STREET STORMWATER IMPROVEMENTS**

**PROJECT LOCATION:**  
15TH STREET, TYBEE ISLAND  
GEORGIA 31328

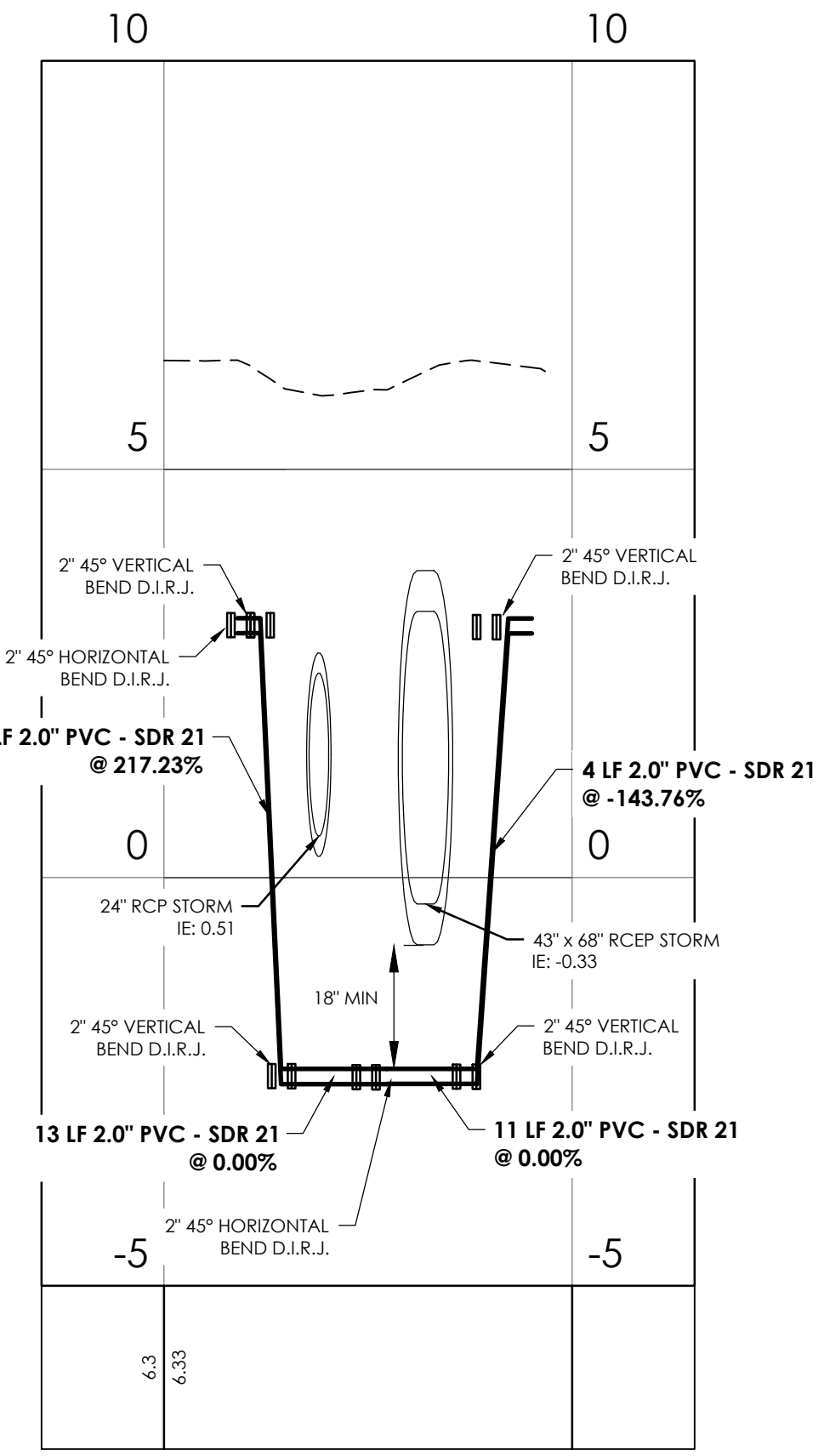
**CLIENT/OWNER:**  
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403 BUTLER AVENUE  
TYBEE ISLAND, GA 31328  
PETER GULBRONSON  
peter.gulbronson@cityoftybee.gov



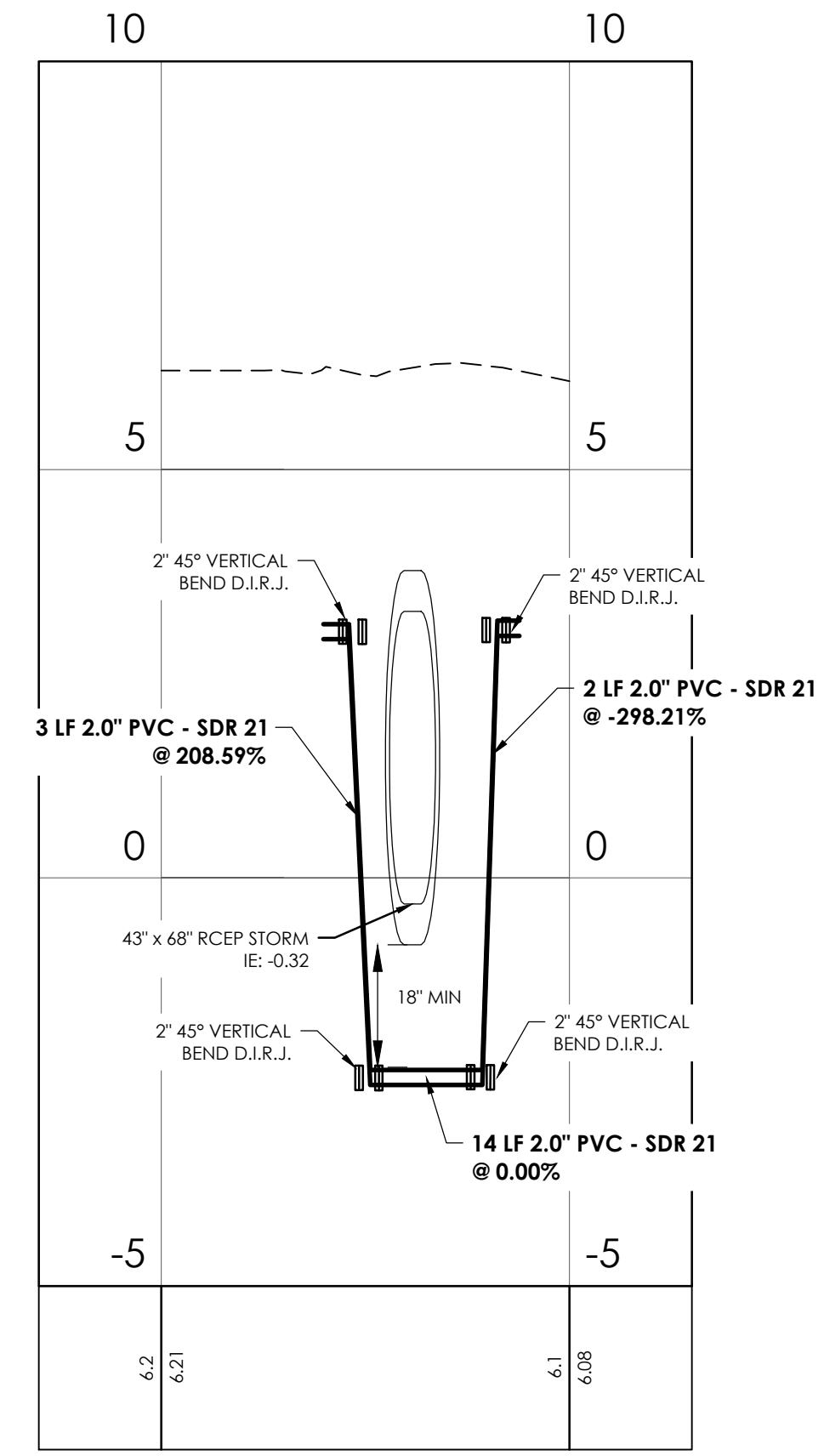
DATUM: HORIZ.: NAD 83 VERT.: NAVD 88

JOB NO.: 27209.0043  
DATE: 03/16/2026  
DRAWN: SAM  
DESIGNED:  
REVIEWED:  
APPROVED: KMS  
SCALE: SEE SCALE BAR

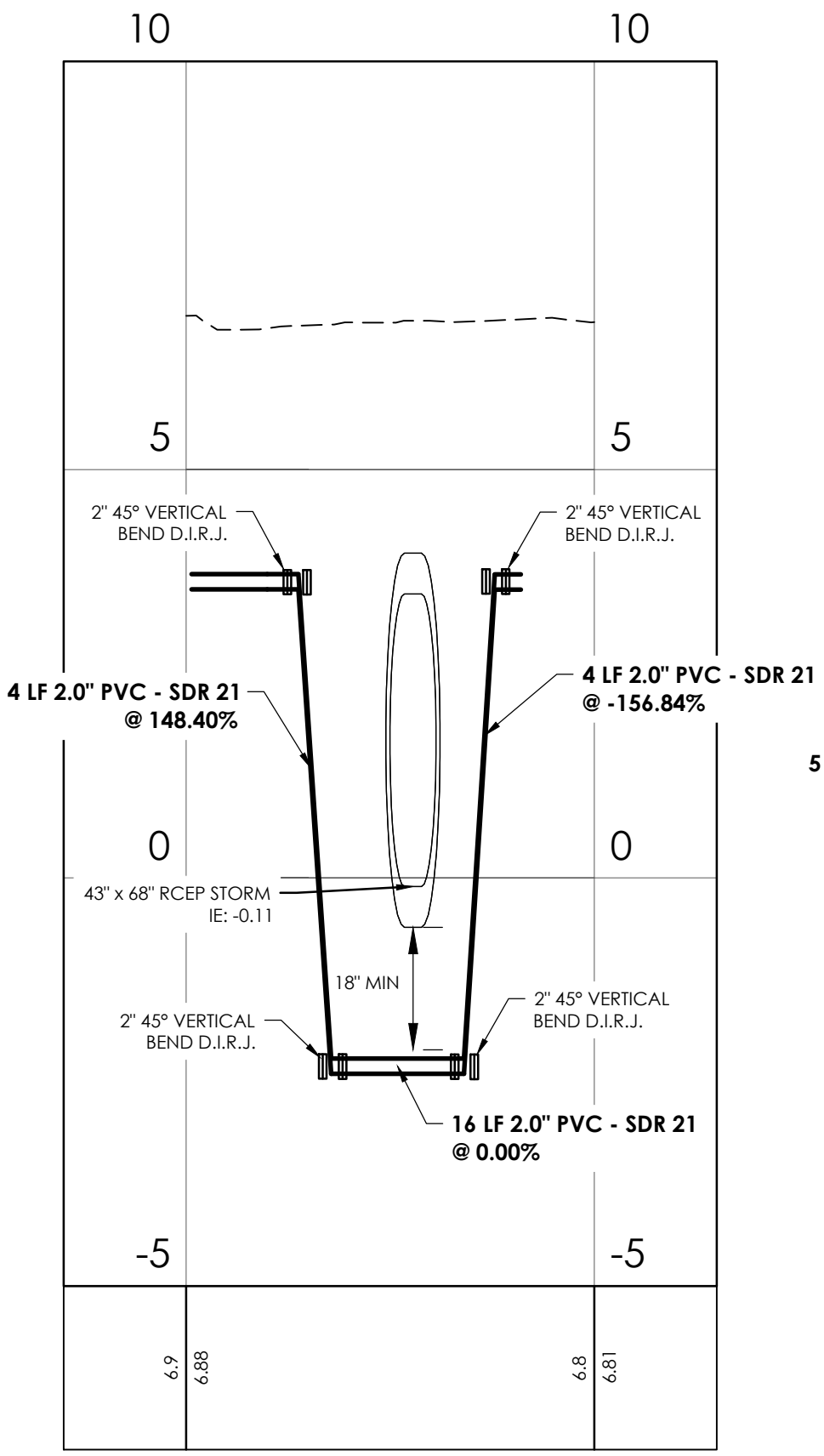
**C2.4**



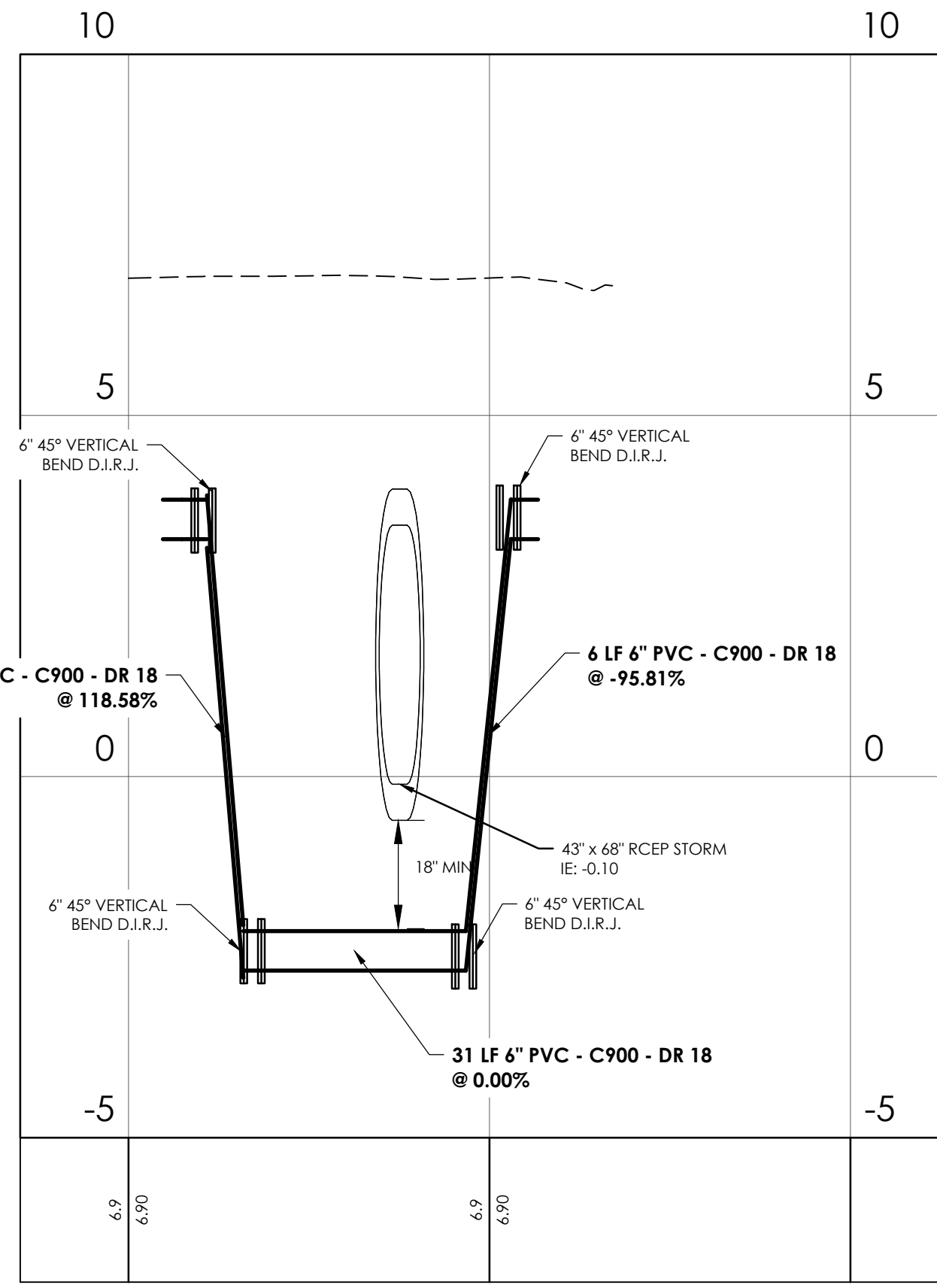
**15th St & Miller Ave Water Main Crossing (West)**  
STATIONS: 0+00 - 0+50  
SCALE: HORIZ.: 1" = 20'  
VERT.: 1" = 2'



**15th St & Miller Ave Water Main Crossing (East)**  
STATIONS: 0+00 - 0+50  
SCALE: HORIZ.: 1" = 20'  
VERT.: 1" = 2'

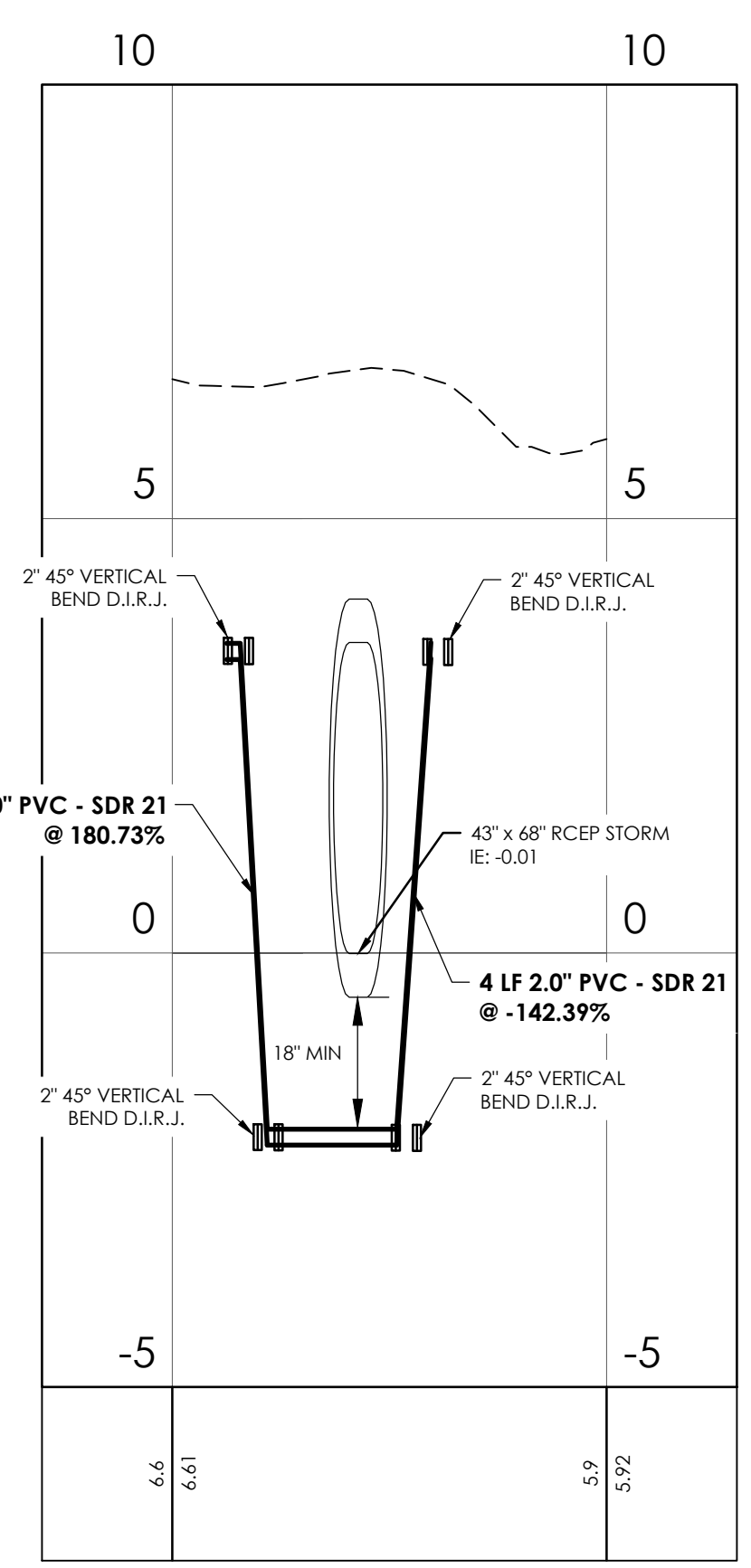
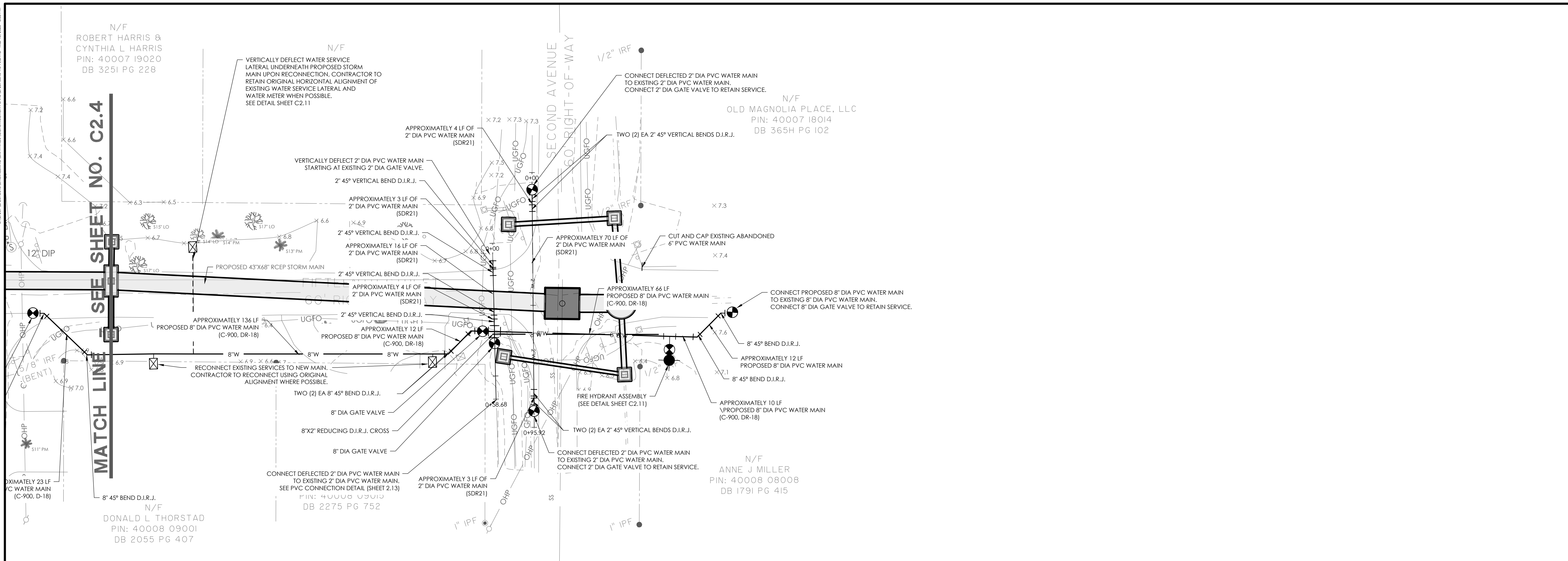


**15th St & Jones Ave Water Main Crossing (West)**  
STATIONS: 0+00 - 0+50  
SCALE: HORIZ.: 1" = 20'  
VERT.: 1" = 2'

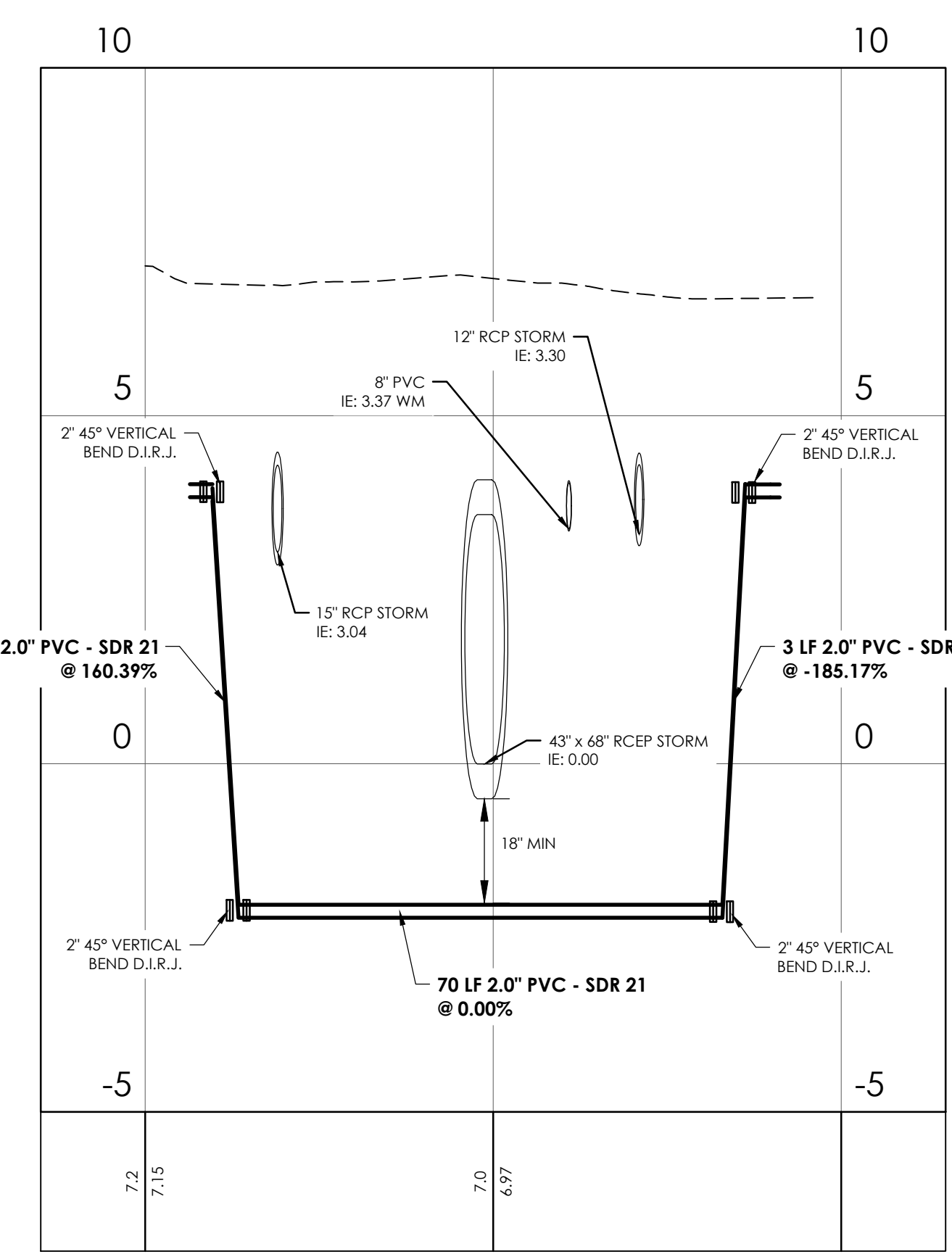


**15th St & Jones Ave Water Main Crossing (East)**  
STATIONS: 0+00 - 1+00  
SCALE: HORIZ.: 1" = 20'  
VERT.: 1" = 2'

13/2020/2209/046/ENGINEERING/CONSTRUCTION/PLANS/2209/046/PL 15.DWG, MAR 18, 2024, 3:03 PM



**15th St & 2nd Ave Water Main Crossing (West)**  
 STATIONS: 0+00 - 0+50  
 SCALE: HORIZ.: 1" = 20'  
 VERT.: 1" = 2'



**15th St & 2nd Ave Water Main Crossing (East)**  
 STATIONS: 0+00 - 1+00  
 SCALE: HORIZ.: 1" = 20'  
 VERT.: 1" = 2'

NO.	REVISIONS	BY	DATE

NO.	REVISIONS	BY	DATE



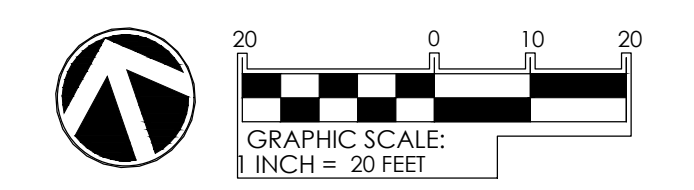
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**WATER PLAN & PROFILE**

**15TH STREET STORMWATER IMPROVEMENTS**

**PROJECT LOCATION:**  
 15TH STREET, TYBEE ISLAND  
 GEORGIA 31328

**CLIENT/OWNER:**  
 CITY OF TYBEE ISLAND  
 403 BUTLER AVENUE  
 TYBEE ISLAND, GA 31328  
 PETER GULBRONSON  
 peter.gulbronson@cityoftybee.gov

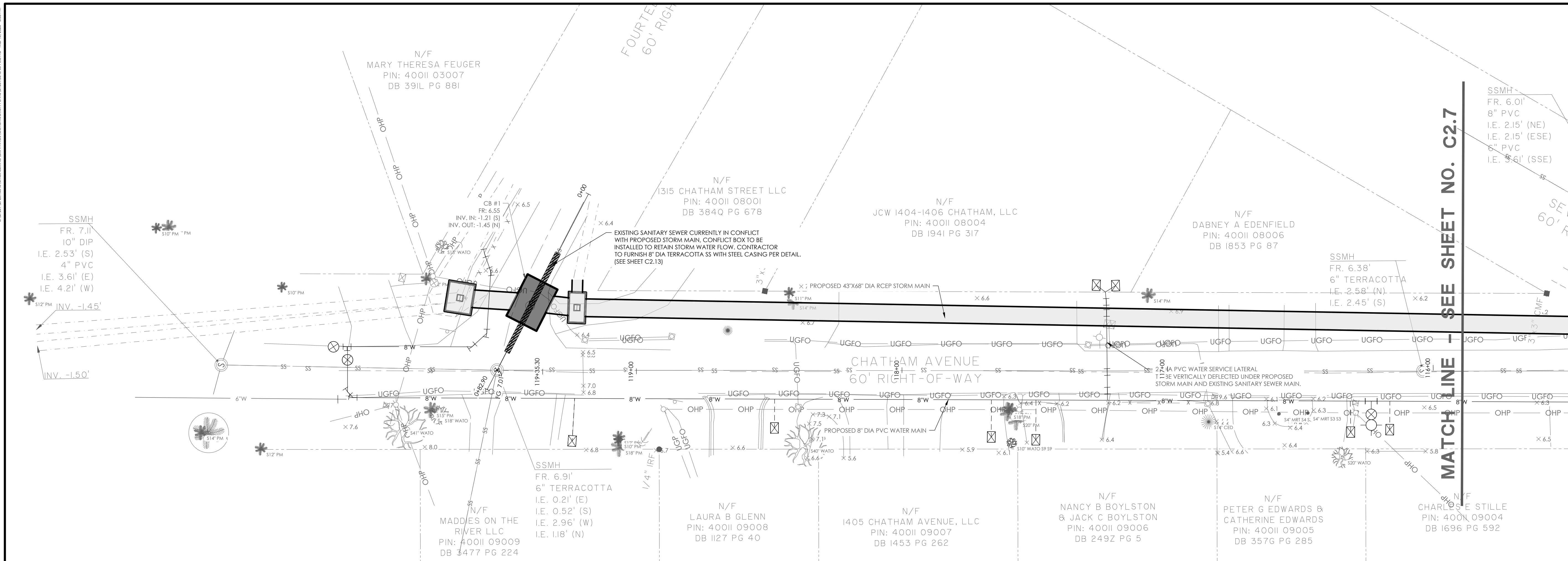


DATUM: HORIZ.: NAD 83      VERT.: NAVD 88

JOB NO:	27209.0043
DATE:	03/16/2026
DRAWN:	SAM
DESIGNED:	
REVIEWED:	
APPROVED:	KMS
SCALE:	SEE SCALE BAR

**C2.5**

23/286/2720/04/00/REGISTRATION/PLANS/CONSTRUCTION/PLANS/2024/04/15/1.000 - MAY 16, 2024, 10:17 AM



SEE SHEET NO. C2.7  
MATCH LINE

SSMH  
FR. 6.01'  
8" PVC  
I.E. 2.15' (NE)  
I.E. 2.15' (ESE)  
6" PVC  
I.E. 3.61' (SSE)

SSMH  
FR. 7.11'  
10" DIP  
I.E. 2.53' (S)  
4" PVC  
I.E. 3.61' (E)  
I.E. 4.21' (W)

SSMH  
FR. 6.38'  
6" TERRACOTTA  
I.E. 2.58' (N)  
I.E. 2.45' (S)

SSMH  
FR. 6.91'  
6" TERRACOTTA  
I.E. 0.21' (E)  
I.E. 0.52' (S)  
I.E. 2.96' (W)  
I.E. 1.18' (N)

N/F  
MADDIES ON THE RIVER LLC  
PIN: 40011 09009  
DB 3477 PG 224

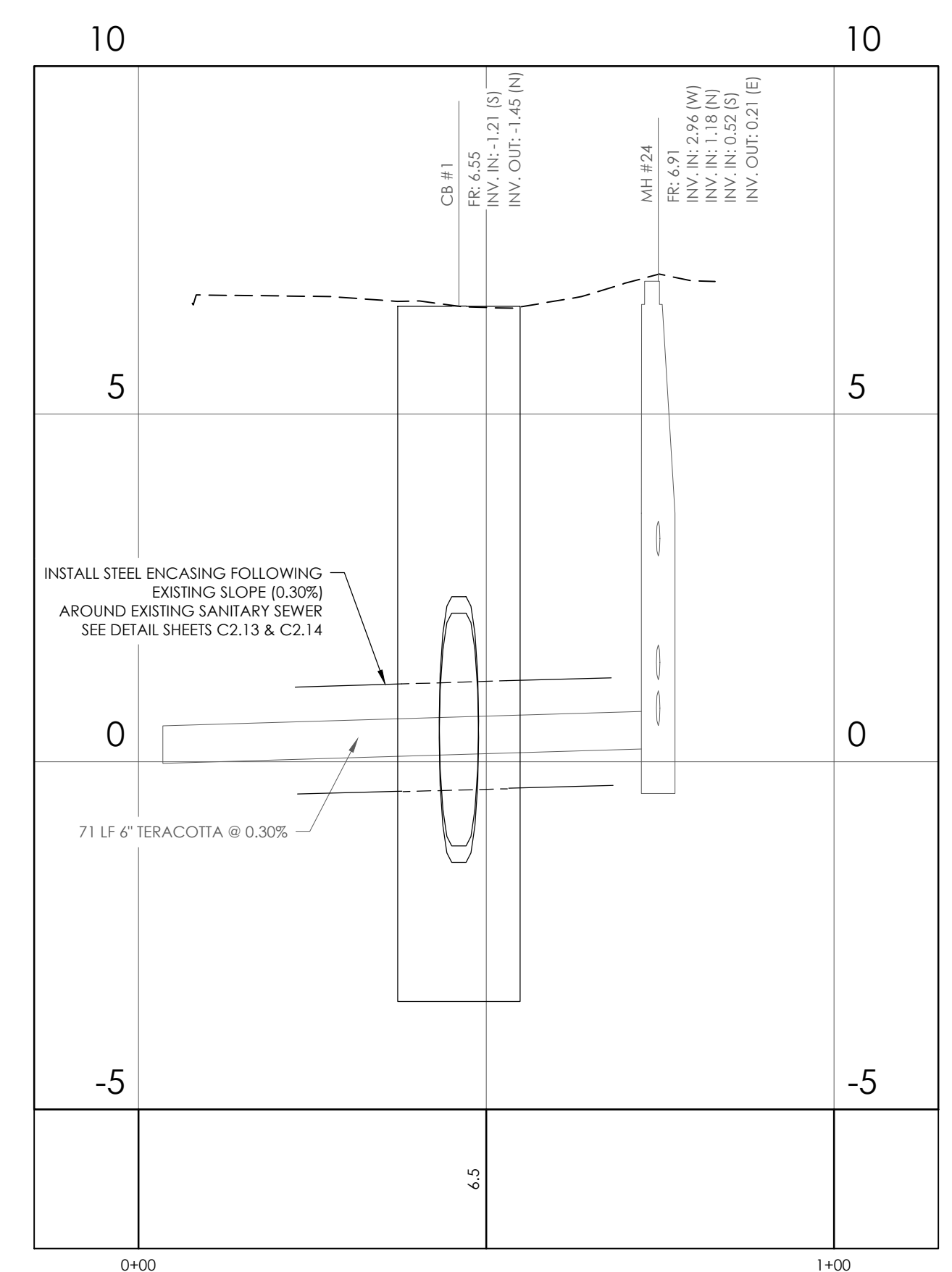
N/F  
LAURA B GLENN  
PIN: 40011 09008  
DB 1127 PG 40

N/F  
1405 CHATHAM AVENUE, LLC  
PIN: 40011 09007  
DB 1453 PG 262

N/F  
NANCY B BOYLSTON & JACK C BOYLSTON  
PIN: 40011 09006  
DB 249Z PG 5

N/F  
PETER G EDWARDS & CATHERINE EDWARDS  
PIN: 40011 09005  
DB 357G PG 285

N/F  
CHARLES E STILLE  
PIN: 40011 09004  
DB 1696 PG 592



**14th St Sanitary Sewer**  
STATIONS: 0+00 - 1+00  
SCALE: HORIZ.: 1" = 20'  
VERT.: 1" = 2'

NO.	REVISIONS	BY	DATE

NO.	REVISIONS	BY	DATE



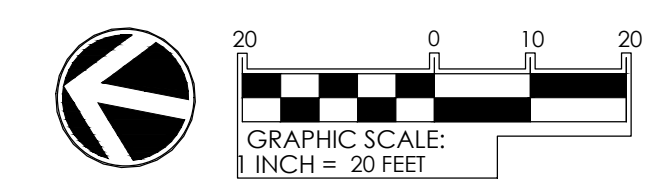
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**SANITARY SEWER PLAN & PROFILE**

**15TH STREET STORMWATER IMPROVEMENTS**

**PROJECT LOCATION:**  
15TH STREET, TYBEE ISLAND  
GEORGIA 31328

**CLIENT/OWNER:**  
CITY OF TYBEE ISLAND  
403 BUTLER AVENUE  
TYBEE ISLAND, GA 31328  
PETER GULBRONSON  
peter.gulbronson@cityoftybee.gov

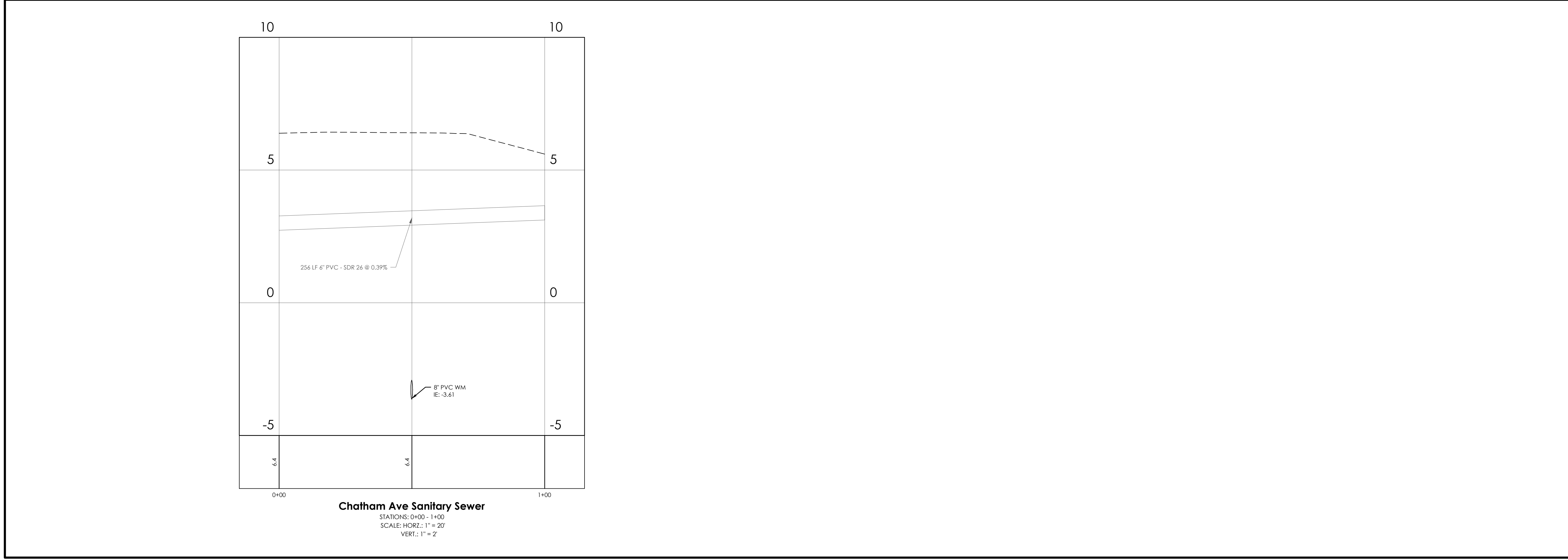
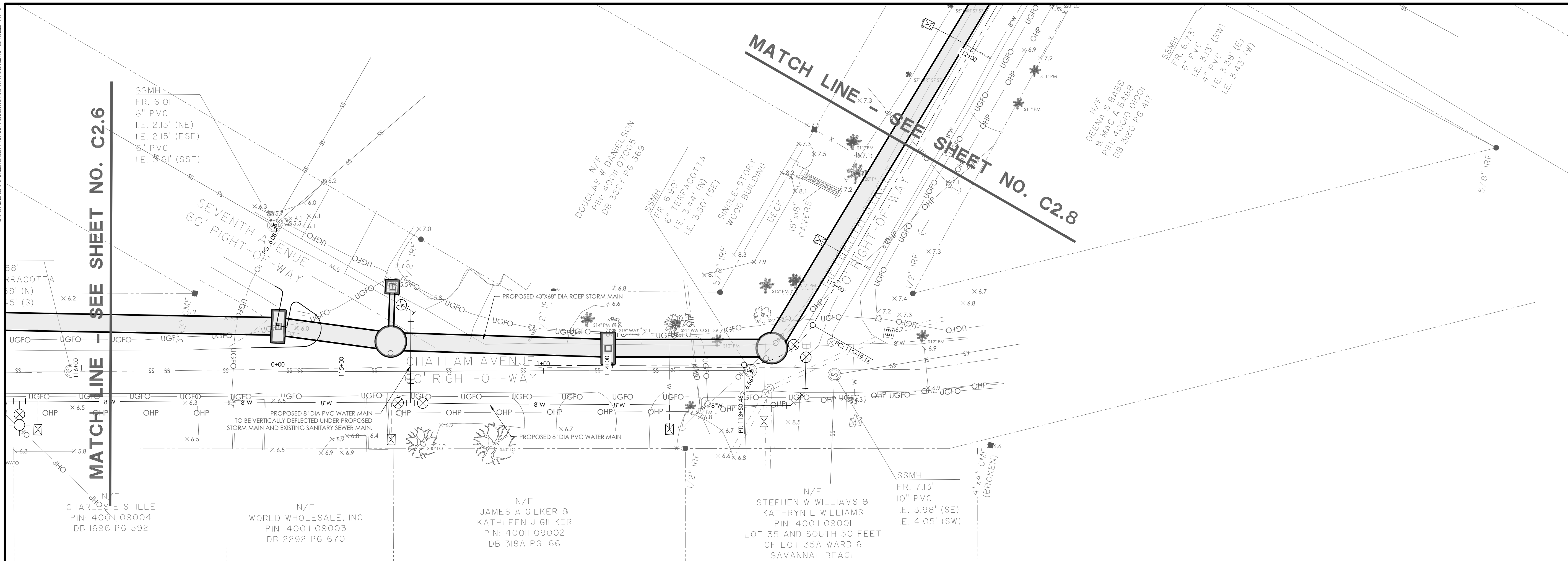


DATUM: HORIZ.: NAD 83      VERT.: NAVD 88

JOB NO: 27209.0043  
DATE: 03/16/2026  
DRAWN: SAM  
DESIGNED:  
REVIEWED:  
APPROVED: KMS  
SCALE: SEE SCALE BAR

**C2.6**

2/2/2025 2:27:06 PM (GMT-05:00) CONSTRUCTION PLANS 2025 04.01.17.DWG, MAP 16, 2024, 333.PW



NO.	REVISIONS	BY	DATE



**THOMAS & HUTTON**

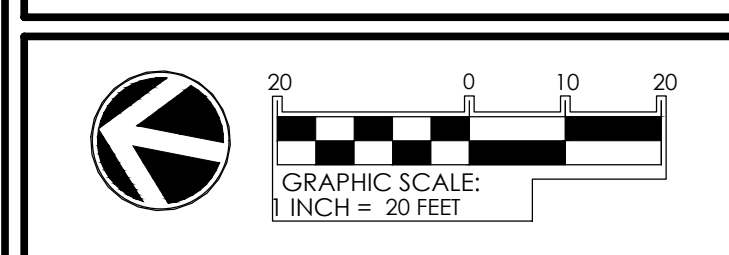
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[www.thomasandhutton.com](http://www.thomasandhutton.com)

**SANITARY SEWER PLAN & PROFILE**

**15TH STREET STORMWATER IMPROVEMENTS**

**PROJECT LOCATION:**  
 15TH STREET, TYBEE ISLAND  
 GEORGIA 31328

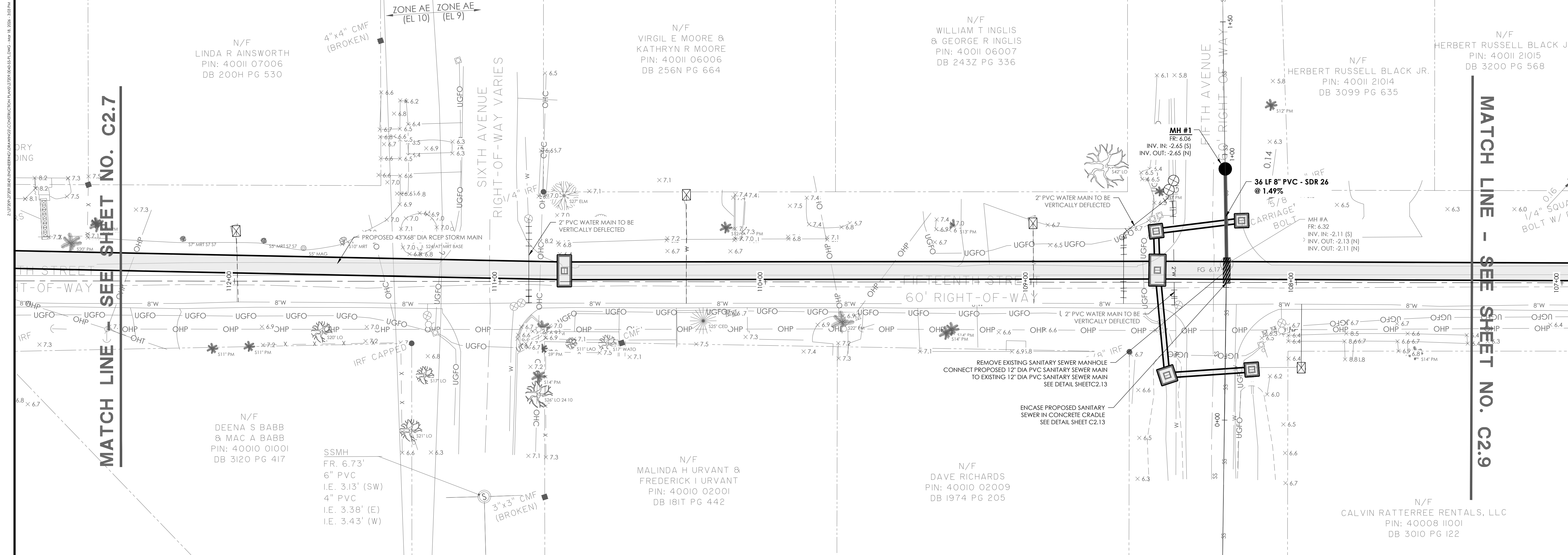
**CLIENT/OWNER:**  
 CITY OF TYBEE ISLAND  
 403 BUTLER AVENUE  
 TYBEE ISLAND, GA 31328  
 PETER GULBRONSON  
[peter.gulbronson@cityoftybee.gov](mailto:peter.gulbronson@cityoftybee.gov)



DATUM: HORZ.: NAD 83      VERT.: NAVD 88

JOB NO: 27209.0043  
 DATE: 03/16/2026  
 DRAWN: SAM  
 DESIGNED:  
 REVIEWED:  
 APPROVED: KMS  
 SCALE: SEE SCALE BAR

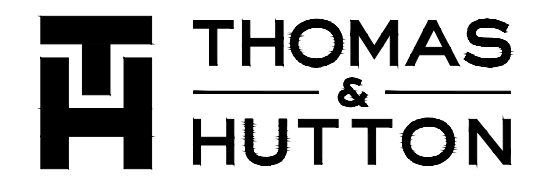
C2.7



MATCH LINE - SEE SHEET NO. C2.7

MATCH LINE - SEE SHEET NO. C2.9

NO.	REVISIONS	BY	DATE



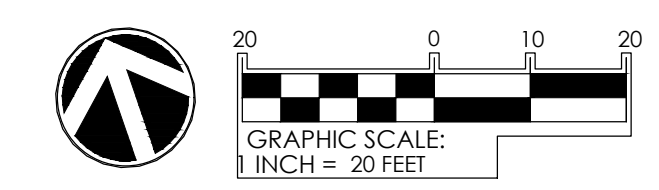
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**SANITARY SEWER PLAN & PROFILE**

**15TH STREET STORMWATER IMPROVEMENTS**

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GEORGIA 31328

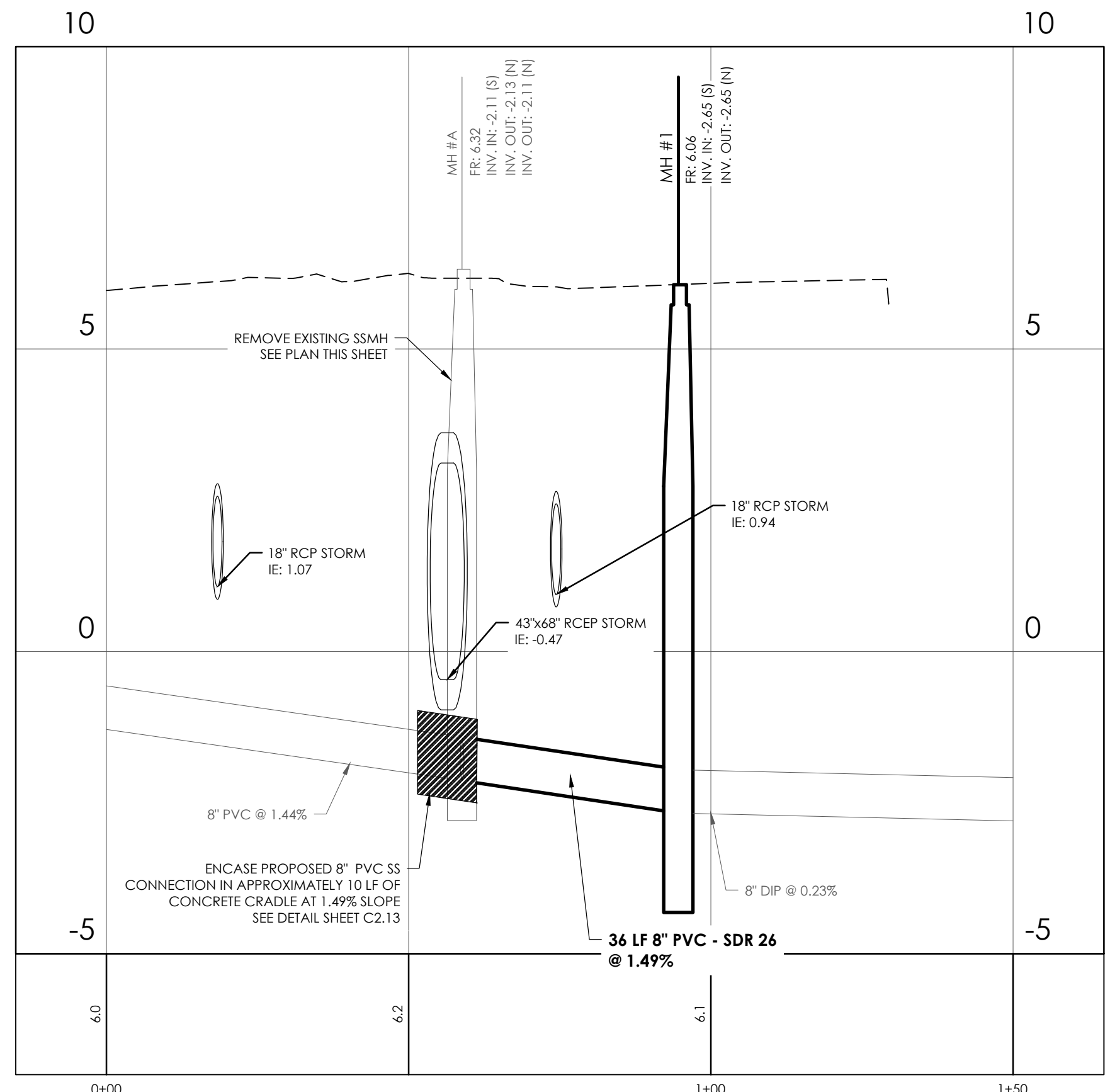
**CLIENT/OWNER:**  
CITY OF TYBEE ISLAND  
403 BUTLER AVENUE  
TYBEE ISLAND, GA 31328  
PETER GULBRONSON  
peter.gulbronson@cityoftybee.gov



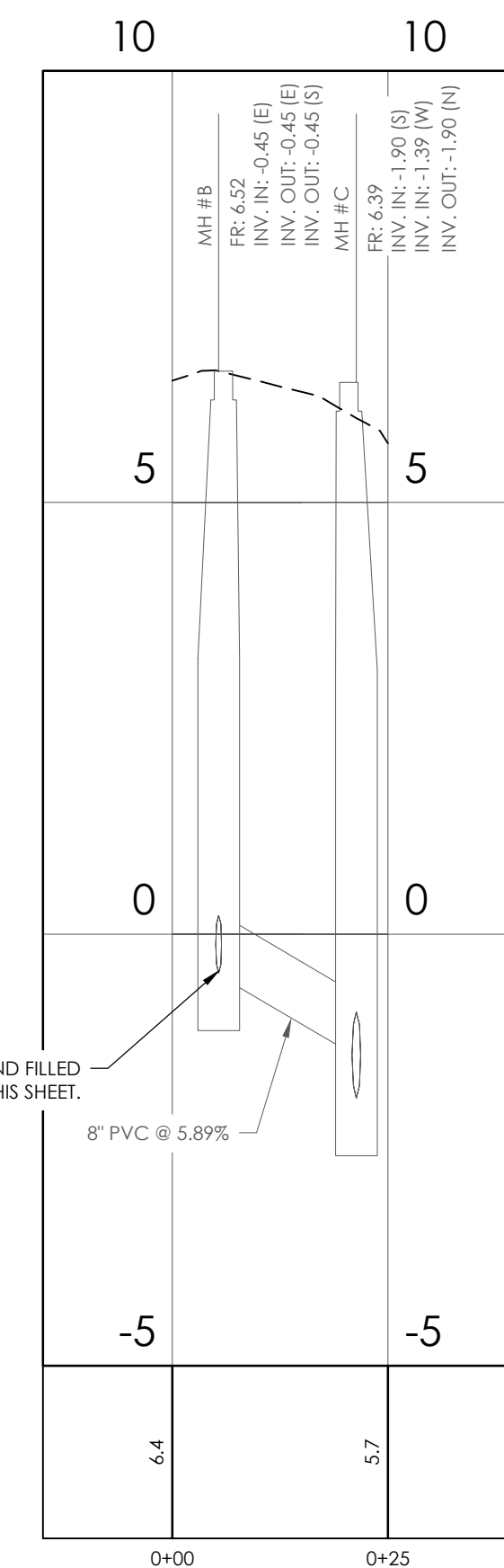
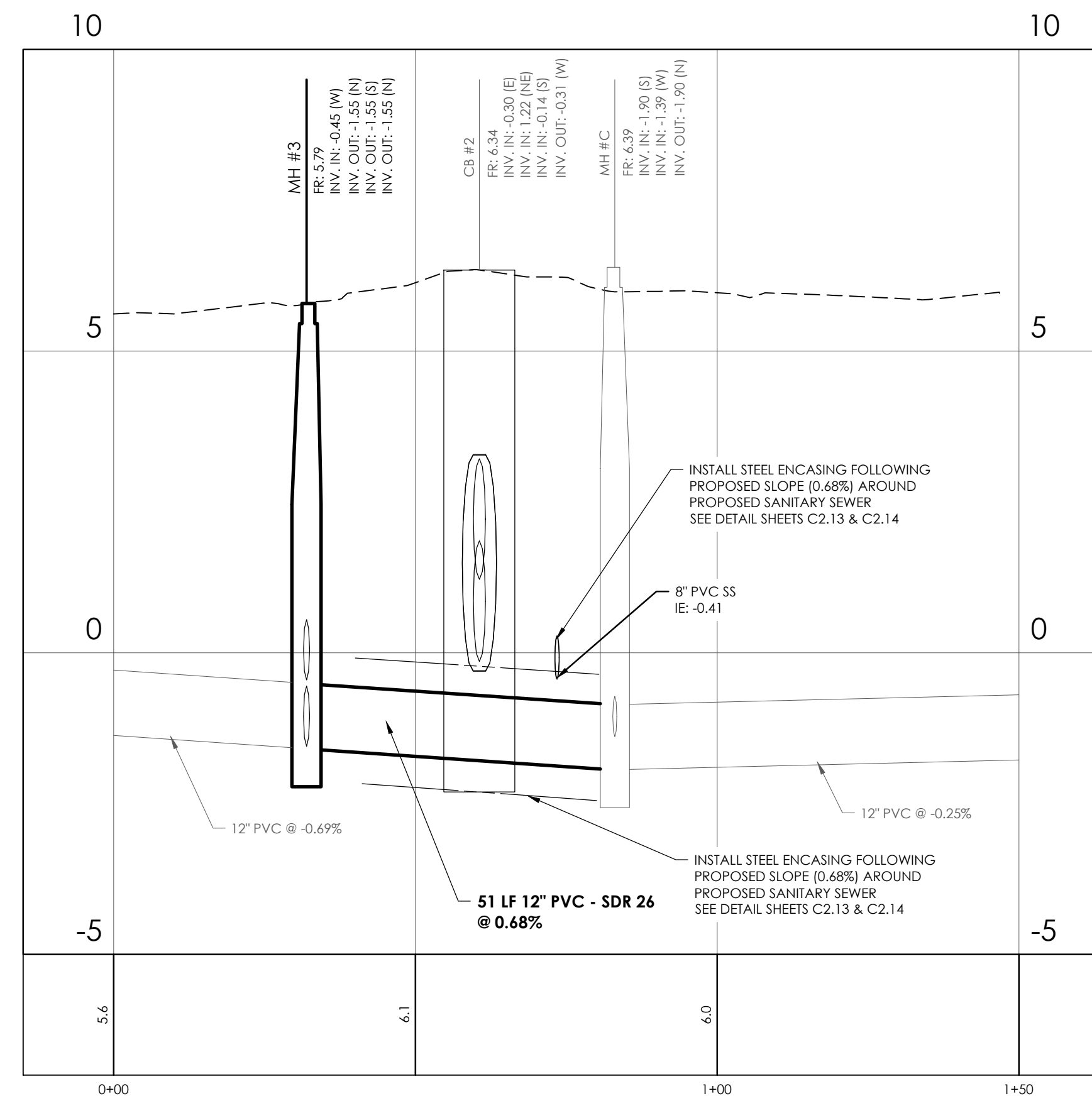
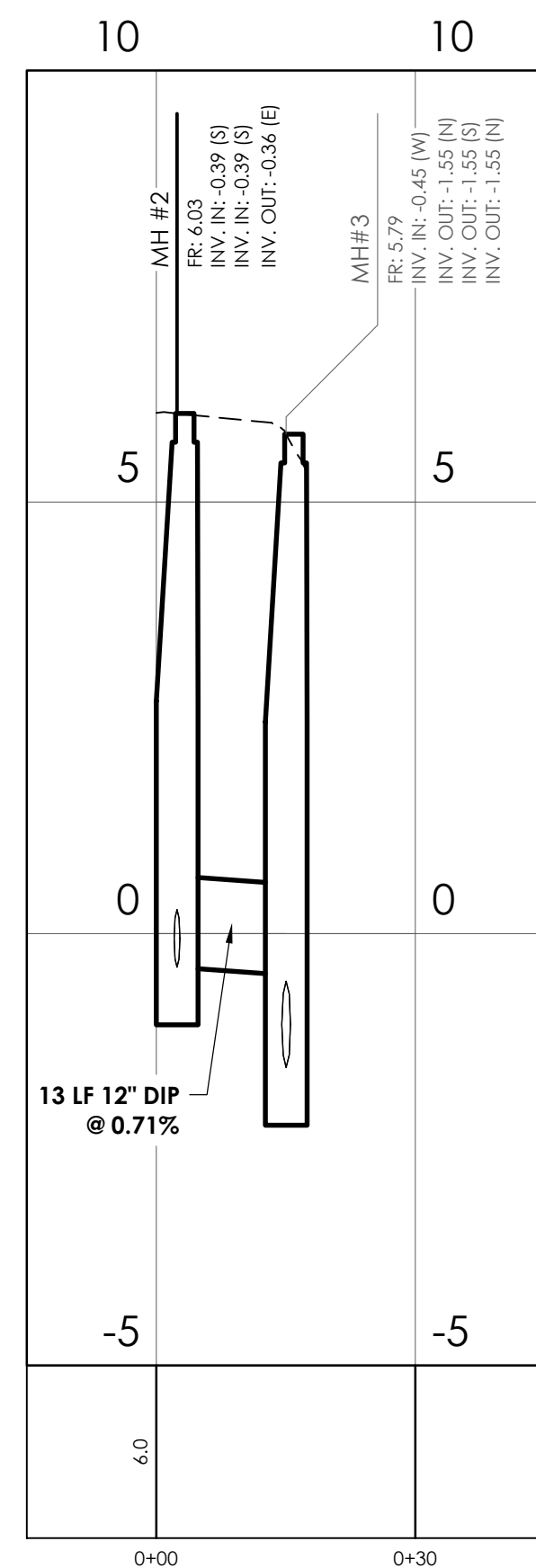
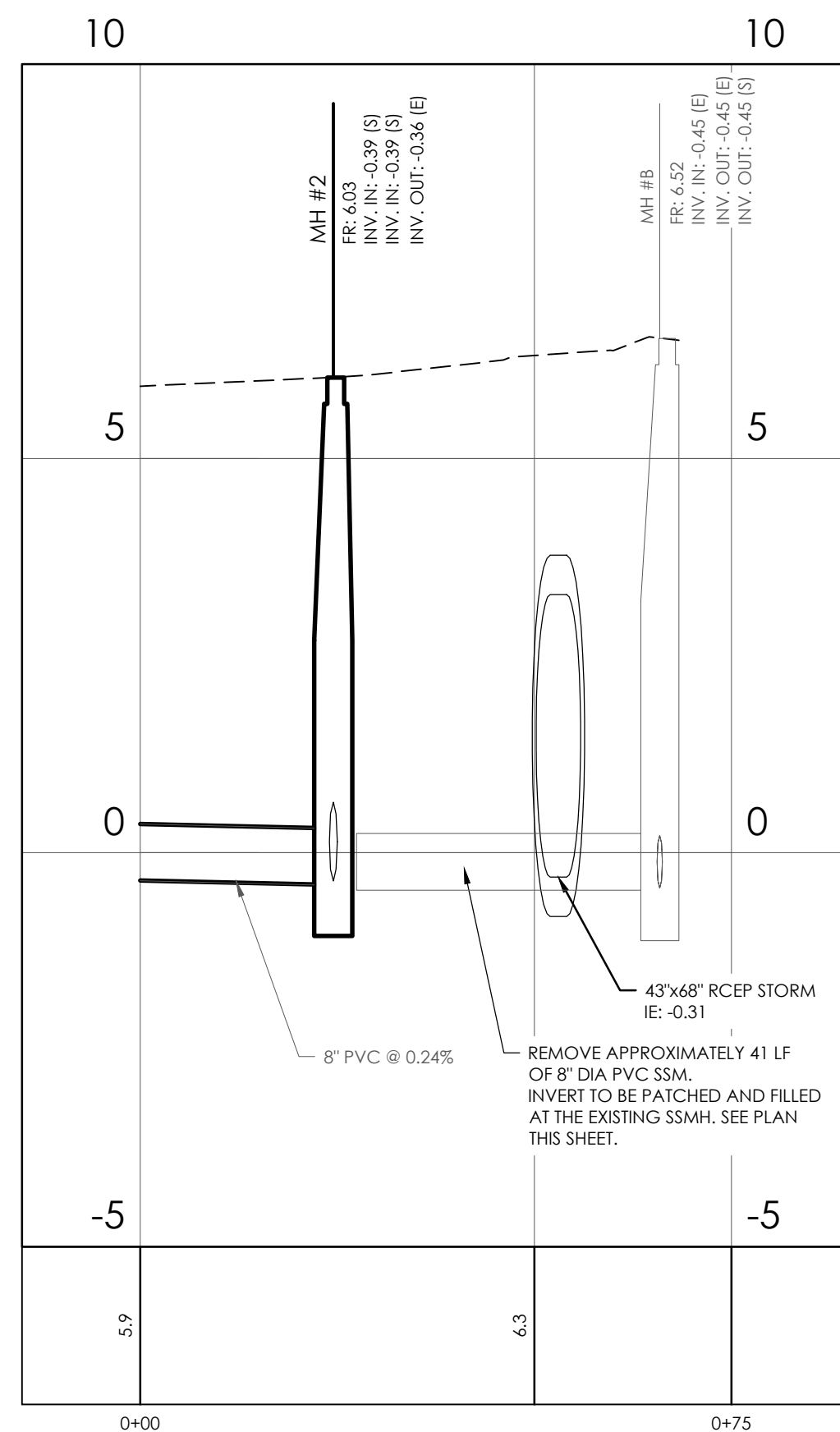
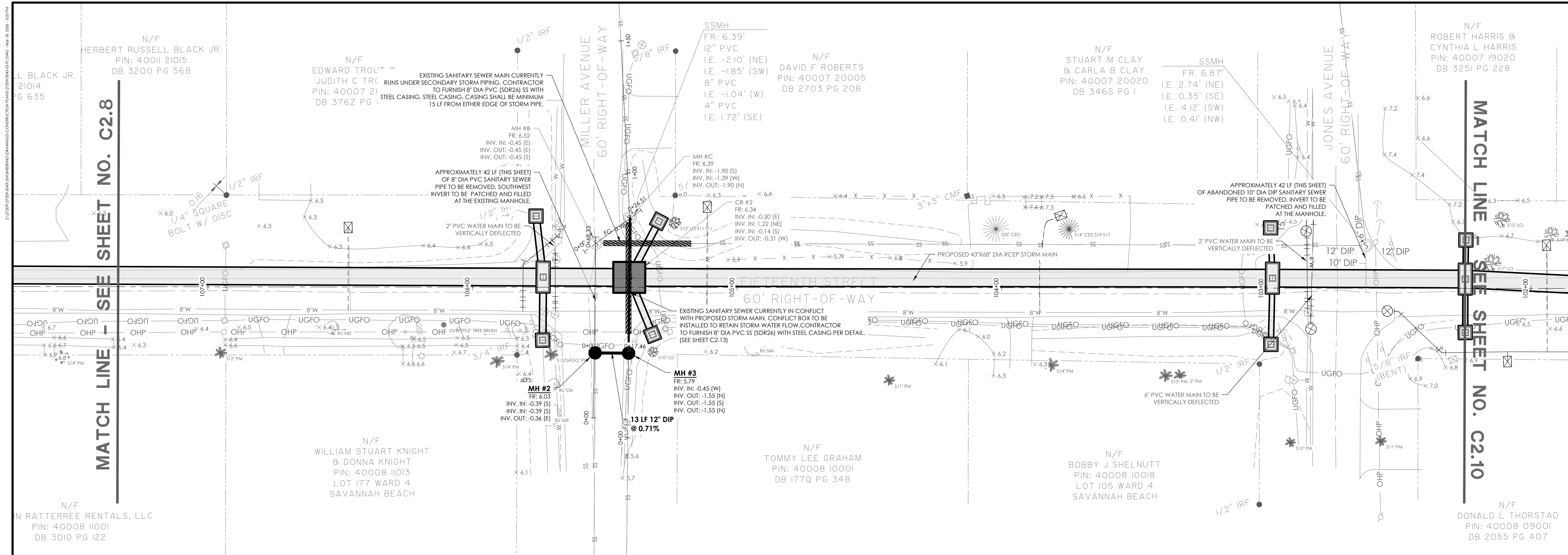
DATUM: HORIZ: NAD 83      VERT: NAVD 88

JOB NO: 27209.0043  
DATE: 03/16/2026  
DRAWN: SAM  
DESIGNED:  
REVIEWED:  
APPROVED: KMS  
SCALE: SEE SCALE BAR

**C2.8**



**5th Ave Sanitary Sewer**  
STATIONS: 0+00 - 1+50  
SCALE: HORIZ: 1" = 20'  
VERT: 1" = 2'



NO.	REVISIONS	BY	DATE

**THOMAS & HUTTON**  
 220 North Main Street • Suite 402  
 Greenville, SC 29601 • 864.412.2222  
 www.thomasandhutton.com

**SANITARY SEWER PLAN & PROFILE**

**15TH STREET STORMWATER IMPROVEMENTS**

**PROJECT LOCATION:**  
 15TH STREET, TYBEE ISLAND  
 GEORGIA 31328

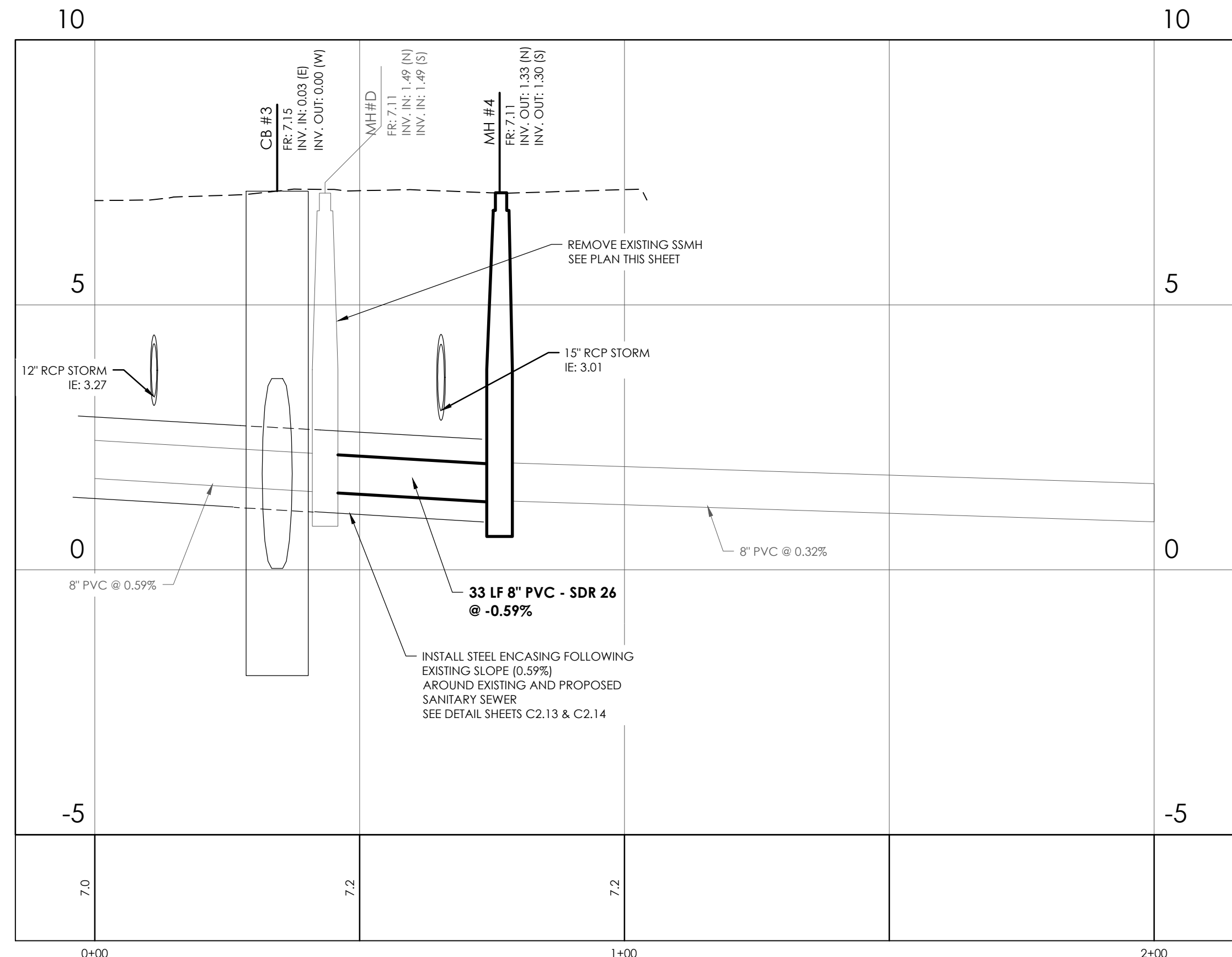
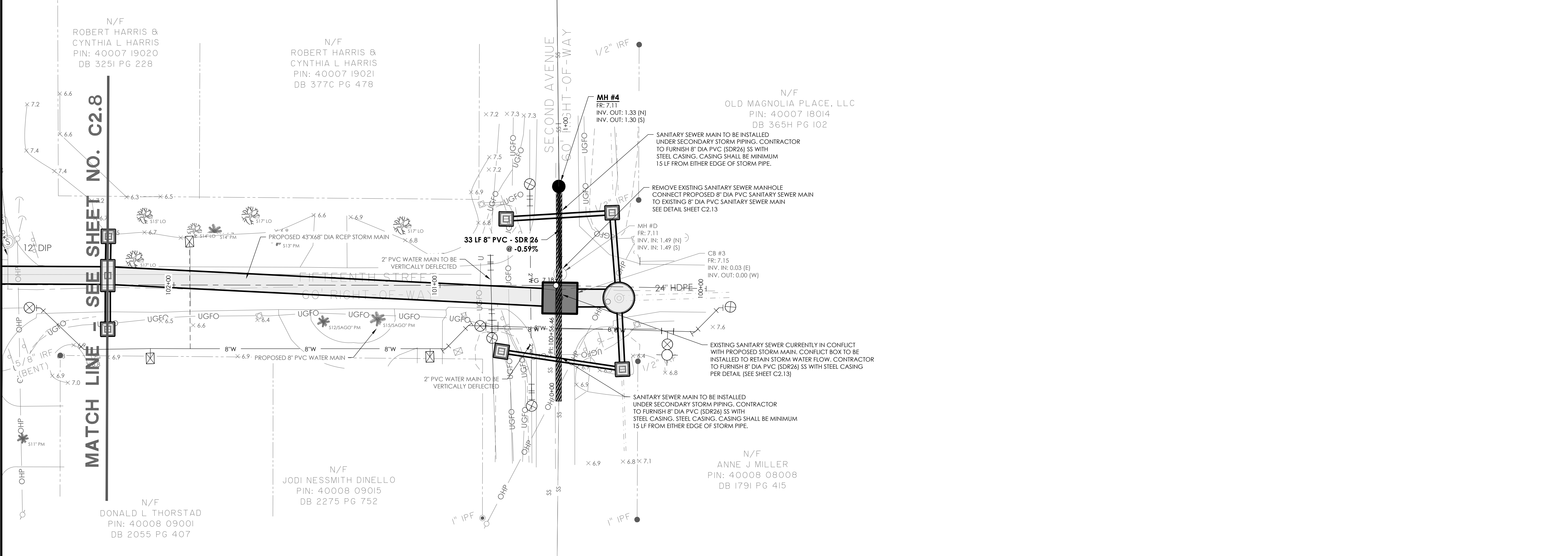
**CLIENT/OWNER:**  
 CITY OF TYBEE ISLAND  
 403 BUTLER AVENUE  
 TYBEE ISLAND, GA 31328  
 PETER GULBRONSON  
 peter.gulbronson@cityoftybee.gov

DATUM: HORIZ.: NAD 83 VERT.: NAVD 88

JOB NO: 27209.0043  
 DATE: 03/16/2026  
 DRAWN: SAM  
 DESIGNED:  
 REVIEWED:  
 APPROVED: KMS  
 SCALE: SEE SCALE BAR

**C2.9**

2/2/2024 2:29:06 PM (GMT-04:00) C:\WORK\2024\15TH STREET STORMWATER IMPROVEMENTS\15TH STREET STORMWATER IMPROVEMENTS.dwg, 18, 100%, 1311 PM



**2nd Ave Sanitary Sewer**  
 STATIONS: 0+00 - 2+00  
 SCALE: HORZ.: 1" = 20'  
 VERT.: 1" = 2'



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**SANITARY SEWER PLAN & PROFILE**

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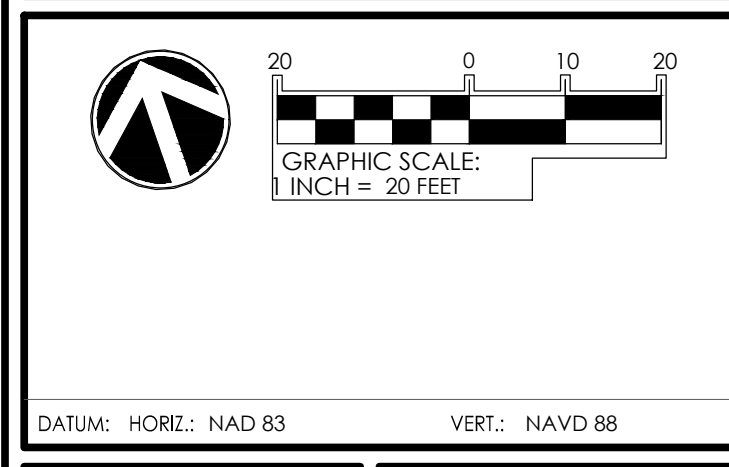
**15TH STREET STORMWATER IMPROVEMENTS**

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**PROJECT LOCATION:**  
 15TH STREET, TYBEE ISLAND  
 GEORGIA 31328

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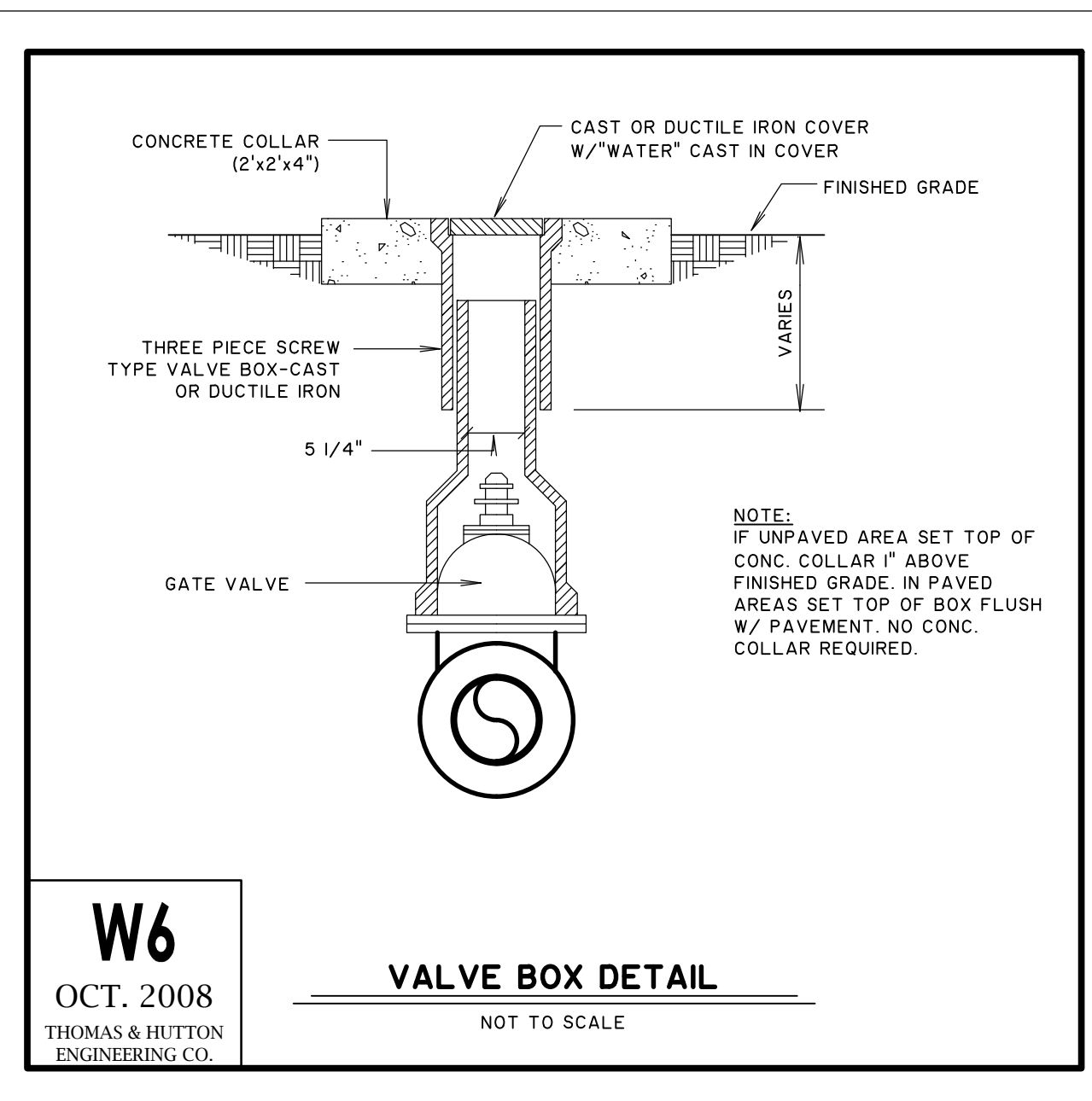
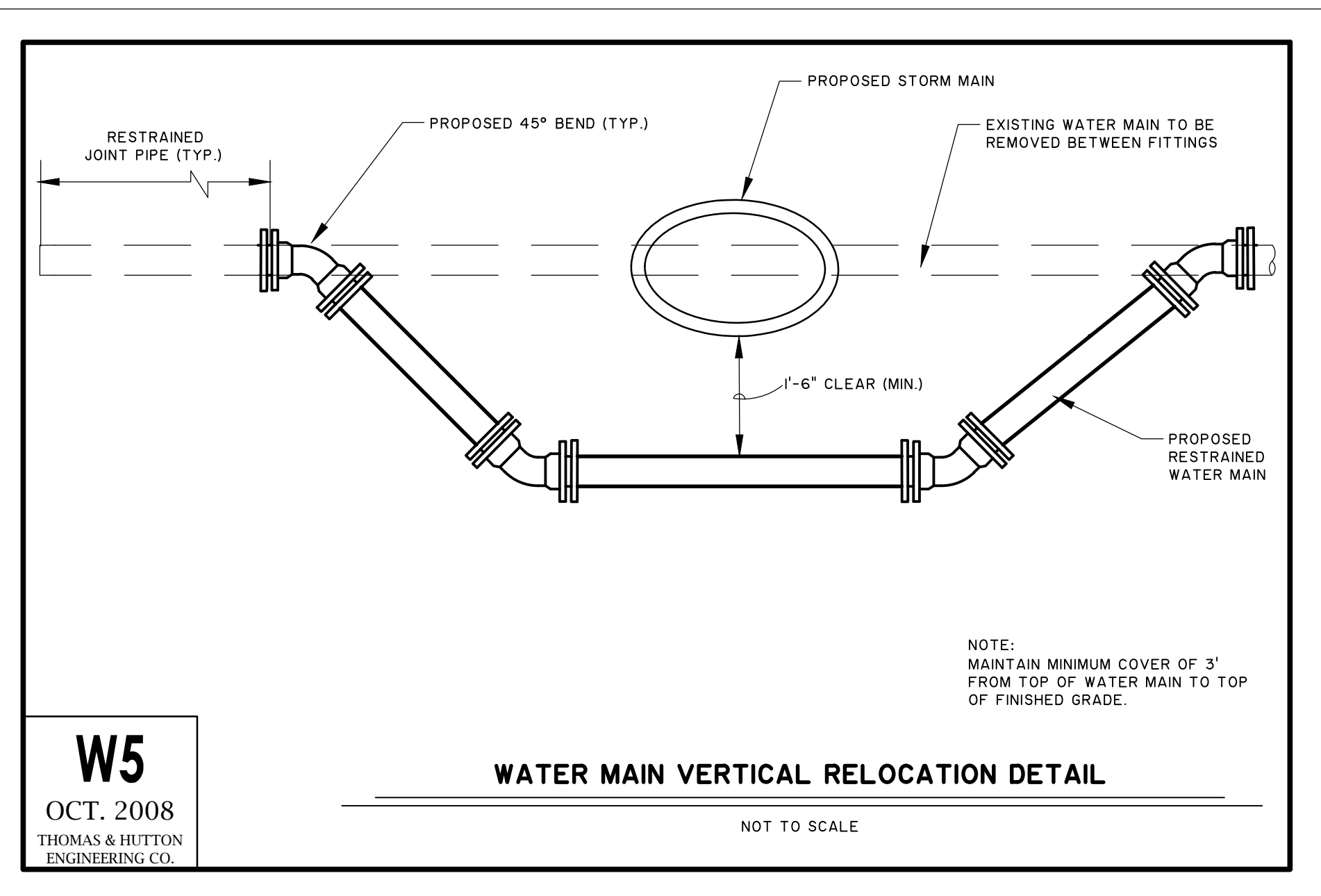
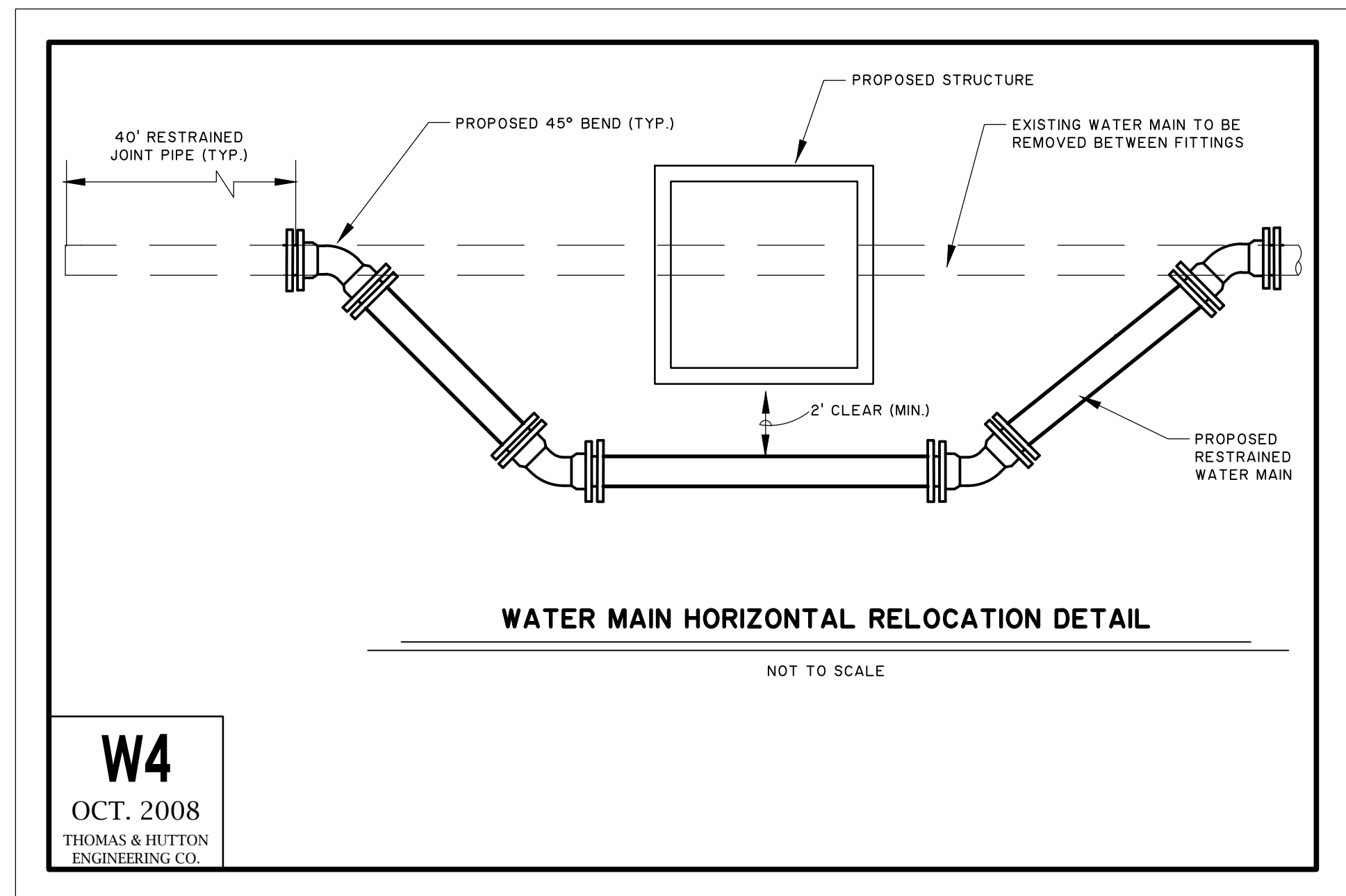
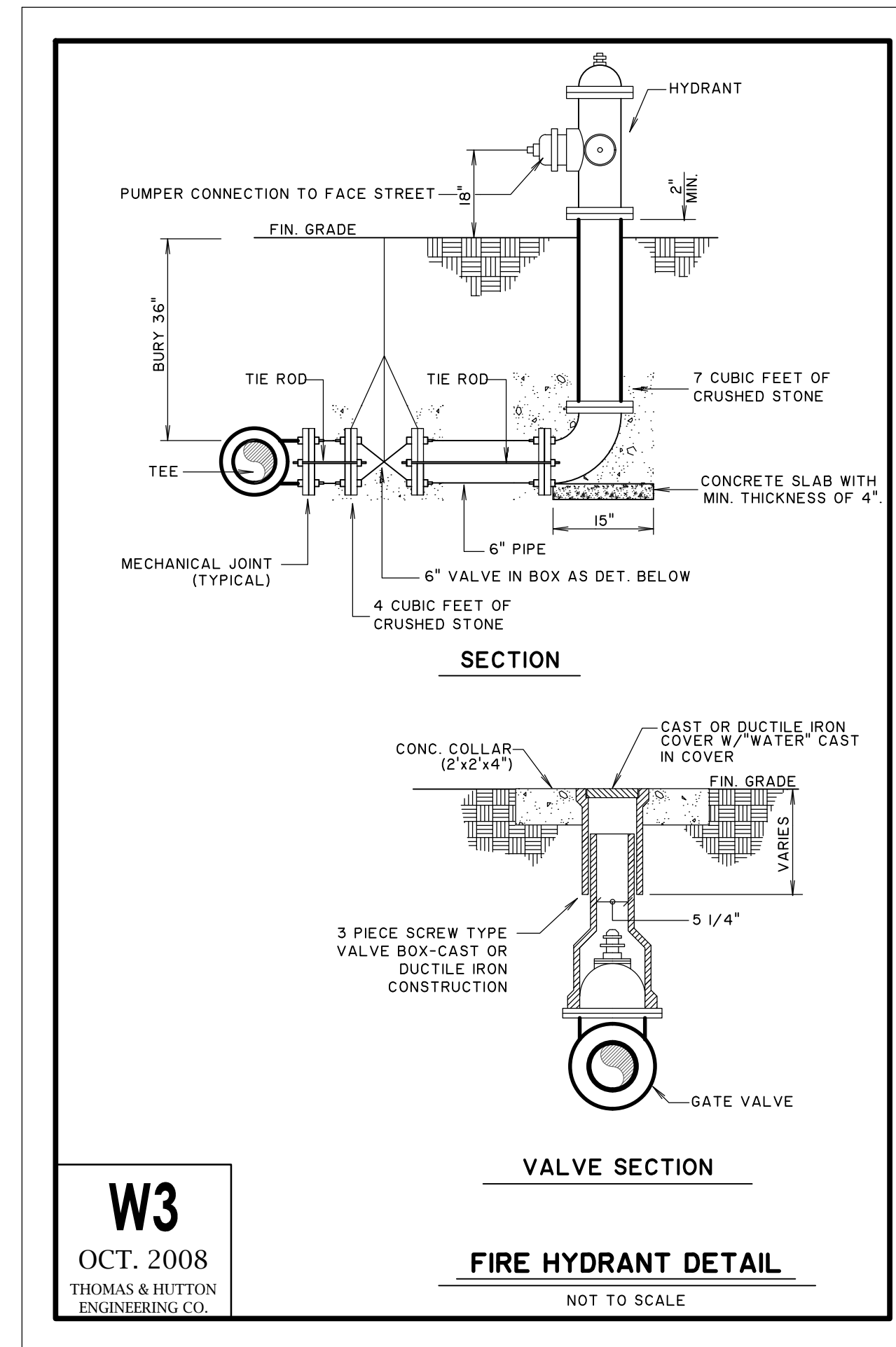
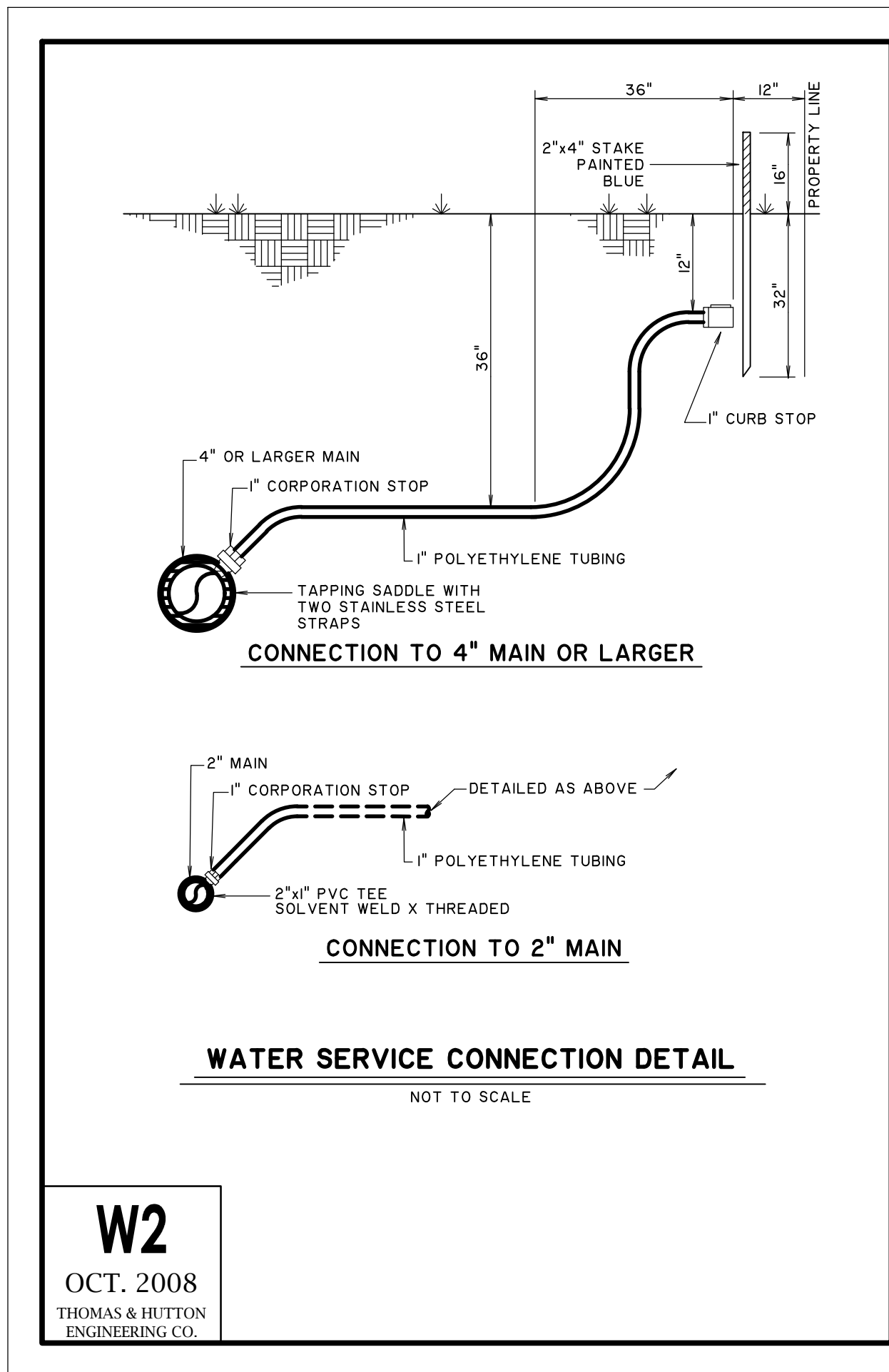
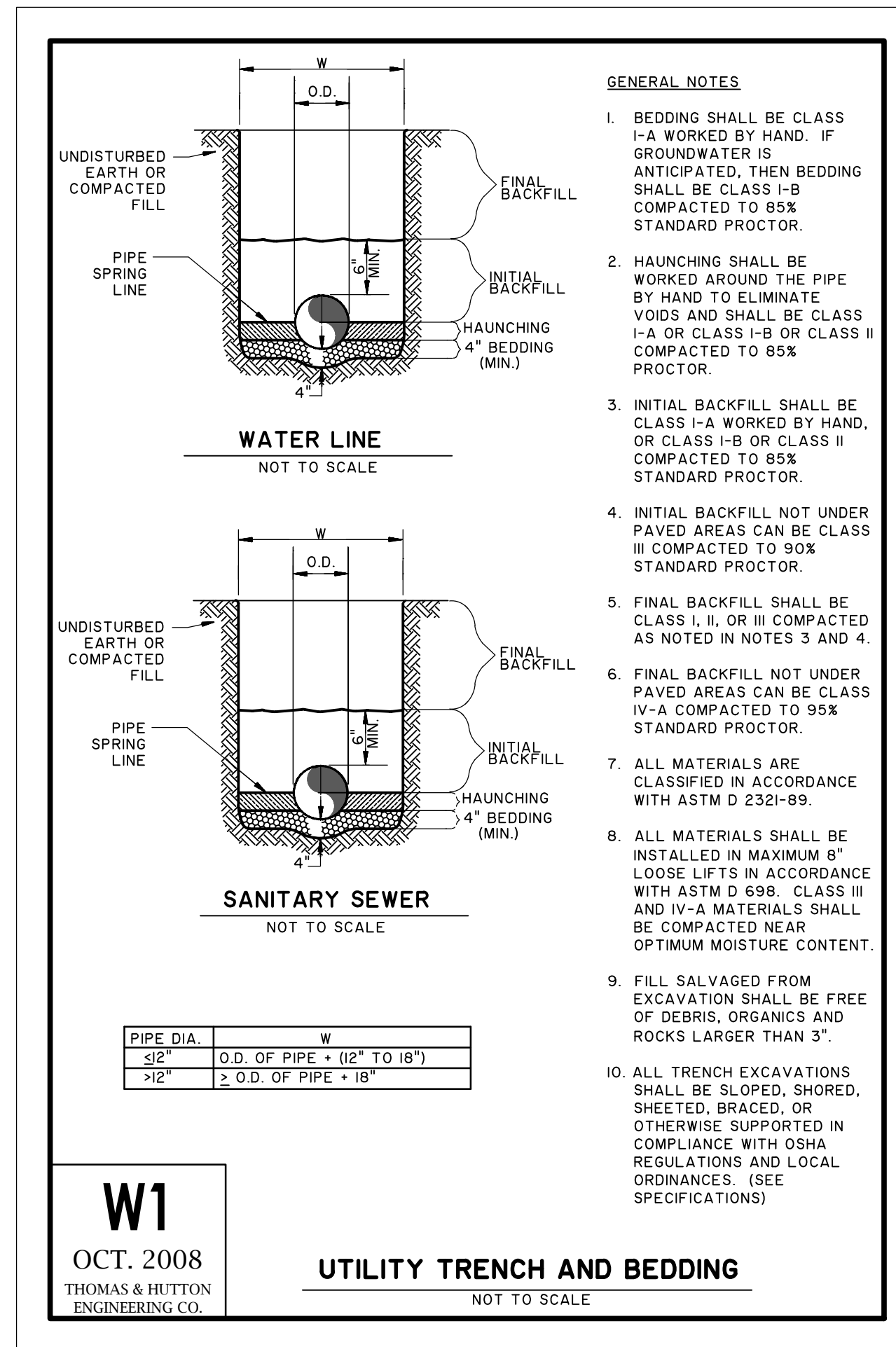
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 peter.gulbronson@cityoftybee.gov



JOB NO:	27209.0043
DATE:	03/16/2024
DRAWN:	SAM
DESIGNED:	
REVIEWED:	
APPROVED:	KMS
SCALE:	SEE SCALE BAR

**C2.10**

1:2020/02/26 08:00 INCH/FEET CONSTRUCTION PLANS/27209/04/02/DWG - 10/18/2008 10:31 AM



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**WATER DETAILS**

**15TH STREET STORMWATER IMPROVEMENTS**

**PROJECT LOCATION:**  
15TH STREET, TYBEE ISLAND  
GEORGIA 31328

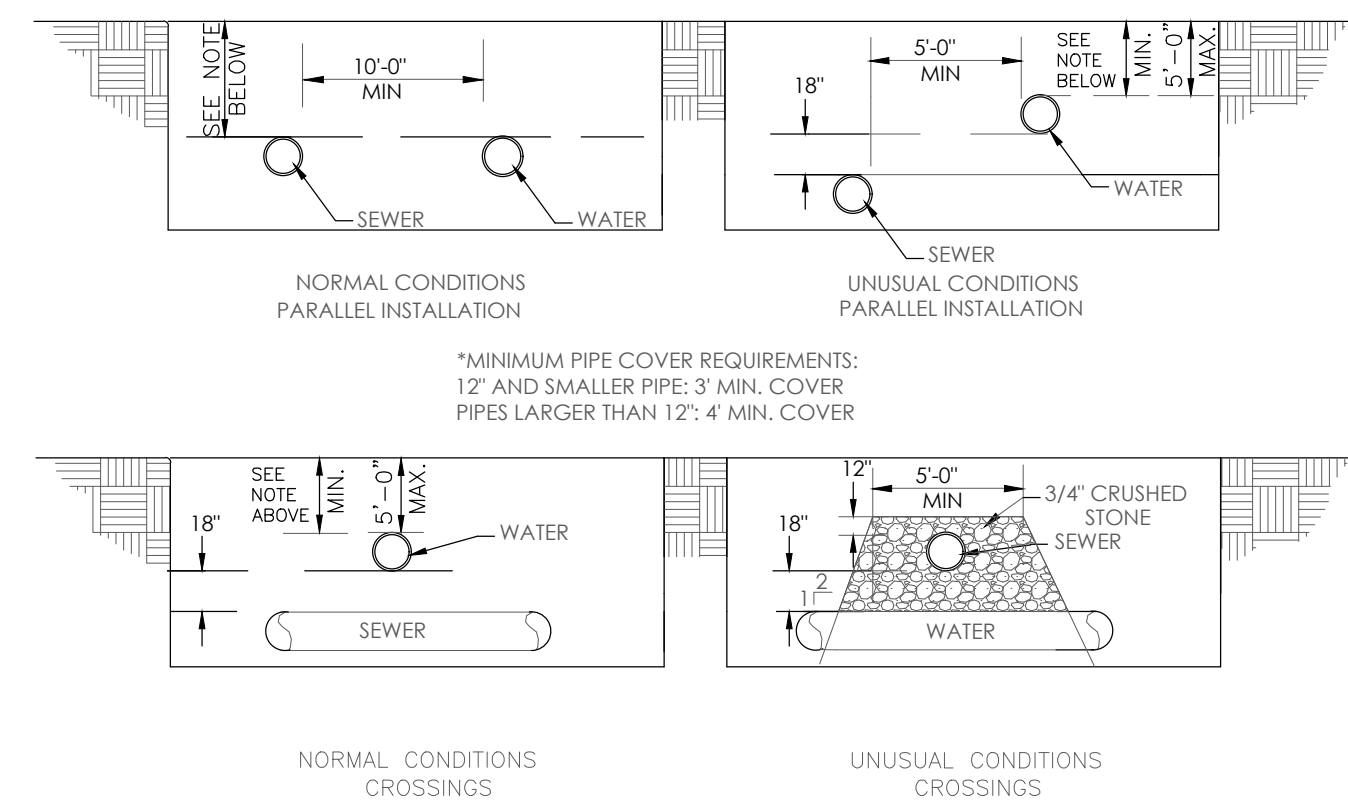
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403 BUTLER AVENUE  
TYBEE ISLAND, GA 31328  
PETER GULBRONSON  
peter.gulbronson@cityoftybee.gov

DATUM: HORIZ.: NAD 83      VERT.: NAVD 88

JOB NO: 27209.0043  
DATE: 03/16/2026  
DRAWN: SAM  
DESIGNED:  
REVIEWED:  
APPROVED: KMS  
SCALE: 1" = 1'

**C2.11**

2.2209.0000 (REVISED) CONSTRUCTION PLANS 2209.0000 (REVISED) MAY 18, 2004, 10:17 AM



NOTES:  
THE SEPARATION OF WATER MAINS AND SEWERS SHALL COMPLY WITH THE GEORGIA ENVIRONMENTAL PROTECTION DIVISION MINIMUM STANDARDS FOR PUBLIC WATER SYSTEMS. "WATER" LINES MAY REFER TO WATER MAINS OR WATER SERVICE LINES. "SEWER" LINES MAY REFER TO SANITARY SEWERS, STORM SEWERS, OR HOUSE SEWERS.

**A. PARALLEL INSTALLATION:**

- NORMAL CONDITIONS:** THE INSIDE EDGE OF A WATER LINE SHALL BE LAID AT LEAST 10 FEET HORIZONTALLY FROM THE INSIDE EDGE OF ANY SANITARY SEWER, STORM SEWER OR SEWER MANHOLE.  
  
MAXIMUM OBTAINABLE SEPARATION BETWEEN RECLAIMED WATER MAINS AND POTABLE WATER MAINS SHALL BE IMPLEMENTED. A MINIMUM HORIZONTAL SEPARATION OF 3 FEET, FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE, SHALL BE MAINTAINED BETWEEN RECLAIMED WATER MAINS AND EITHER POTABLE WATER MAINS OR SEWER COLLECTION MAINS.
- UNUSUAL CONDITIONS:** WHEN LOCAL CONDITIONS PREVENT A HORIZONTAL SEPARATION OF 10 FEET, AND WHEN APPROVED BY THE ENGINEER, THE INSIDE EDGE OF A WATER MAIN MAY BE LAID A MINIMUM OF 5 FEET FROM THE INSIDE EDGE OF A SEWER PROVIDED THAT THE BOTTOM OF THE WATER MAIN IS AT LEAST 18 INCHES HIGHER THAN THE TOP OF THE SEWER (SEE DETAIL), AND THE WATER MAIN IS LAID IN A SEPARATE TRENCH OR ON AN UNDISTURBED EARTH SHELF.  
  
A MINIMUM OF 18 INCHES SHALL BE MAINTAINED BETWEEN THE BOTTOM OF POTABLE WATER MAINS AND THE TOP OF RECLAIMED WATER MAINS.

**B. CROSSINGS:**

- NORMAL CONDITIONS:** WHENEVER POSSIBLE, THE BOTTOM OF THE WATER MAIN SHALL BE AT LEAST 18 INCHES HIGHER THAN THE TOP OF THE SEWER. AT CROSSINGS, ONE FULL LENGTH OF WATER PIPE SHALL BE LOCATED SO BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE.
- UNUSUAL CONDITIONS:** IF A WATER MAIN MUST CROSS UNDER A SEWER, THE TOP OF THE WATER MAIN SHALL BE AT LEAST 18 INCHES LOWER THAN THE BOTTOM OF THE SEWER. THE WATER MAIN PIPE SHALL BE CONSTRUCTED OF WATER MAIN MATERIALS CENTERED AT THE CROSSING SO THAT THE JOINTS ARE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE SEWER, AND ADEQUATE STRUCTURAL SUPPORT SHALL BE PROVIDED FOR THE SEWER TO PREVENT EXCESSIVE DEFLECTION OF THE SEWER AT THE CROSSING. ADEQUATE STRUCTURAL SUPPORT SHALL INCLUDE BACKFILLING THE ENTIRE UTILITY CROSSING AREA WITH 3/4" CRUSHED STONE AS SHOWN IN THE DETAIL. IN ADDITION, ONE OF THE FOLLOWING MEASURES SHALL BE TAKEN:
  - BOTH WATER MAIN AND SEWER SHALL BE CONSTRUCTED OF WATER MAIN MATERIALS EXTENDING ON EACH SIDE OF THE CROSSING UNTIL AT LEAST 10 FEET SEPARATES THE TWO PIPES. WATER MAIN AND SEWER SHALL BE SUBJECTED TO HYDROSTATIC TESTING AS PRESCRIBED IN THE GEORGIA EPD MINIMUM STANDARDS FOR PUBLIC WATER SYSTEMS, LATEST EDITION.
  - WATER MAIN OR SEWER SHALL BE ENCASED IN A CASING PIPE CONSTRUCTED OF WATER MAIN MATERIALS EXTENDING ON EACH SIDE OF THE CROSSING UNTIL AT LEAST 10 FEET SEPARATES THE TWO PIPES.
  - SEWER SHALL HAVE STRUCTURAL LINING THAT MEETS ASTM F1216 STANDARDS AND EXTENDS ON EACH SIDE OF CROSSING UNTIL AT LEAST 10 FEET SEPARATES WATER MAIN AND SEWER PIPE.

MINIMUM WATER, SEWER, STORM, AND RECLAIMED PIPE SEPARATION REQUIREMENTS

**DUCTILE IRON LINE**

PIPE DIA.	L
4	28
6	40
8	52
10	62
12	73
16	94
20	114
24	132

**PVC LINE**

PIPE DIA.	L
4	52
6	74
8	96
10	115
12	136

NOTES:  
1. LENGTH OF RESTRAINT SHOWN IS IN FEET.  
2. WHERE LINES CONSIST OF BOTH DUCTILE IRON AND PVC WITHIN THE LIMITS OF REQUIRED RESTRAINT, LIMITS FOR PVC SHALL APPLY.

**DEAD END RESTRAINT**

NOTES:  
1. LENGTH OF RESTRAINT SHOWN IS IN FEET.  
2. WHERE LINES CONSIST OF BOTH DUCTILE IRON AND PVC WITHIN THE LIMITS OF REQUIRED RESTRAINT, LIMITS FOR PVC SHALL APPLY.  
3. U1 AND U2 = UNINTERRUPTED STRAIGHT RUNS OF PIPE IN EACH DIRECTION.  
4. Ur = THE SMALLER OF U1 OR U2.  
5. L = MINIMUM RESTRAINED LENGTH ALONG THE BRANCH.  
6. WHERE Ur IS LESS THAN 5', RESTRAIN TEE AS A 90° HORIZONTAL BEND.

**MINIMUM RESTRAINED LENGTH (L)**  
RESTRAIN AT TEE ONLY.

**TEE RESTRAINT (PVC LINE)**

NOTES:  
1. LENGTH OF RESTRAINT SHOWN IS IN FEET.  
2. WHERE LINES CONSIST OF BOTH DUCTILE IRON AND PVC WITHIN THE LIMITS OF REQUIRED RESTRAINT, LIMITS FOR PVC SHALL APPLY.

**PVC LINE**

PIPE DIA.	BEND ANGLE			
	11 1/2°	22 1/2°	45°	90°
4	3	6	12	29
6	4	8	17	41
8	5	11	22	53
10	6	13	26	64
12	7	15	31	75

**DUCTILE IRON LINE**

PIPE DIA.	BEND ANGLE			
	11 1/2°	22 1/2°	45°	90°
4	2	4	8	20
6	3	6	12	28
8	4	7	15	36
10	4	9	18	43
12	5	10	21	51
16	6	13	27	65
20	8	16	33	79
24	9	18	38	92

**MINIMUM RESTRAINED LENGTH (L)**  
HORIZONTAL BEND RESTRAINT

**DUCTILE IRON LINE**

TEE	Ur	MINIMUM RESTRAINED LENGTH (L)							
		5'-10"	11'-20"	21'-35"	36'-50"	50'-75"	75'-100"		
4x4	23	15	2	*	*	*	*	*	*
6x4	21	9	*	*	*	*	*	*	*
6x6	35	27	14	*	*	*	*	*	*
8x4	18	3	*	*	*	*	*	*	*
8x6	33	23	5	*	*	*	*	*	*
8x8	47	39	26	6	*	*	*	*	*
10x4	16	*	*	*	*	*	*	*	*
10x6	31	18	*	*	*	*	*	*	*
10x8	46	36	19	*	*	*	*	*	*
10x10	57	49	36	17	*	*	*	*	*
12x4	13	*	*	*	*	*	*	*	*
12x6	30	14	*	*	*	*	*	*	*
12x8	44	32	13	*	*	*	*	*	*
12x10	56	47	31	7	*	*	*	*	*
12x12	68	60	47	28	*	*	*	*	*
16x6	26	4	*	*	*	*	*	*	*
16x8	41	25	*	*	*	*	*	*	*

**DUCTILE IRON LINE**

TEE	Ur	MINIMUM RESTRAINED LENGTH (L)							
		5'-10"	11'-20"	21'-35"	36'-50"	50'-75"	75'-100"		
16x10	54	41	20	*	*	*	*	*	*
16x12	66	56	38	*	*	*	*	*	*
16x16	89	81	38	*	*	*	*	*	*
20x6	22	*	*	*	*	*	*	*	*
20x8	38	18	*	*	*	*	*	*	*
20x10	51	35	8	*	*	*	*	*	*
20x12	64	51	28	*	*	*	*	*	*
20x16	87	77	60	35	10	*	*	*	*
20x20	108	100	87	67	48	*	*	*	*
24x6	18	*	*	*	*	*	*	*	*
24x8	35	10	*	*	*	*	*	*	*
24x10	49	29	*	*	*	*	*	*	*
24x12	62	45	17	*	*	*	*	*	*
24x16	86	73	53	22	*	*	*	*	*
24x20	107	97	81	57	33	*	*	*	*
24x24	127	119	106	86	66	33	*	*	*

**MINIMUM RESTRAINED LENGTH (L)**  
RESTRAIN AT TEE ONLY.

**TEE RESTRAINT (DUCTILE IRON LINE)**

**RESTRAINED JOINTS DETAILS**  
NOT TO SCALE

NO.	REVISIONS	BY	DATE

**W7**  
OCT. 2008  
THOMAS & HUTTON  
ENGINEERING CO.

NOTE:  
THE CONTRACTOR MAY ELECT TO USE RESTRAINED JOINTS IN LIEU OF CONCRETE THRUST BLOCKS. THE CONTRACTOR SHALL USE RESTRAINED JOINTS WHERE SPECIFIED.

PIPE DIA.	FITTING	(L) NUMBER OF RESTRAINED JOINTS
8"	90°	3
8"	45°	2
8"	22 1/2°	1
8"	11 1/4°	1

NOTE:  
1. A FULL PIPE LENGTH IS REQUIRED AFTER LAST RESTRAINED JOINT.  
2. A FULL PIPE LENGTH IS REQUIRED BETWEEN EACH RESTRAINED JOINT.  
3. RESTRAINED JOINTS WITHIN CASINGS ARE NOT INCLUDED IN JOINTS REQUIRED.

**RESTRAINED JOINT DETAIL**  
NOT TO SCALE

**W8**  
OCT. 2008  
THOMAS & HUTTON  
ENGINEERING CO.

**PLAN**  
BY-PASS PIPE  
1/8 BEND (TYP)  
TEE (TYP OF 2)  
STRAINER  
WATER METER  
VALVE (TYP OF 3)  
PRECAST CONCRETE VAULT CONFORMING TO ASTM C913

**SECTION WATER METER DETAIL**  
NOT TO SCALE  
2'x2'x4' CONC. COLLAR (TYP.)  
HINGED FRAME & COVER EQUIVALENT TO HALLIDAY SIR3636  
CAST IRON VALVE BOX  
36"x36"  
1/8 BEND (TYP)  
GRAVEL  
REDUCER (TYP OF 2)  
8" DIA. WEEP HOLE WITH GRAVEL (OPTIONAL-SUBJECT TO SUBSURFACE CONDITIONS)

**W9**  
JUNE 2018  
THOMAS & HUTTON  
ENGINEERING CO.

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www.thomasandhutton.com

**WATER DETAILS**

---

**15TH STREET STORMWATER IMPROVEMENTS**

---

PROJECT LOCATION:  
15TH STREET, TYBEE ISLAND  
GEORGIA 31328

---

CLIENT/OWNER:  
CITY OF TYBEE ISLAND  
403 BUTLER AVENUE  
TYBEE ISLAND, GA 31328  
PETER GULBRONSON  
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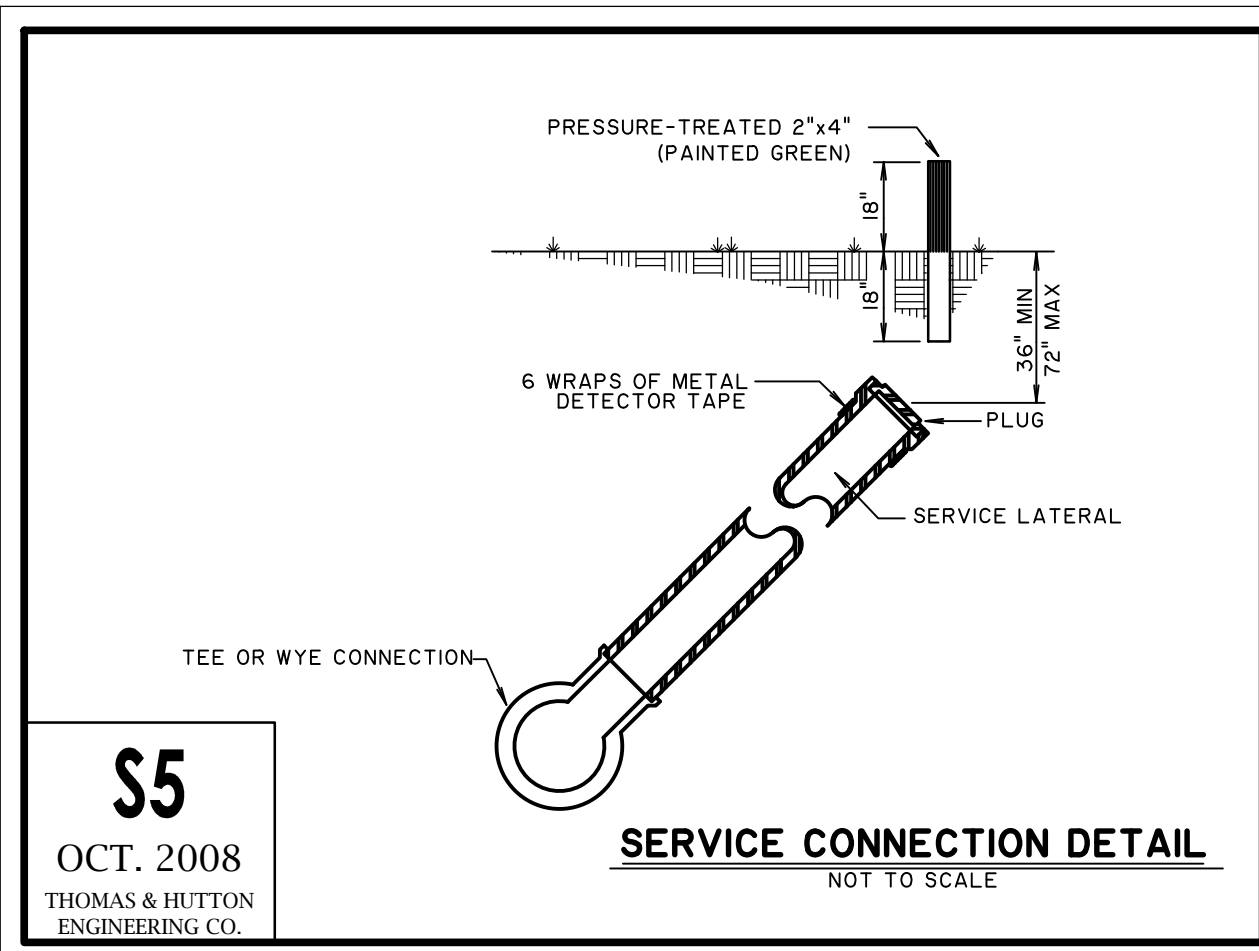
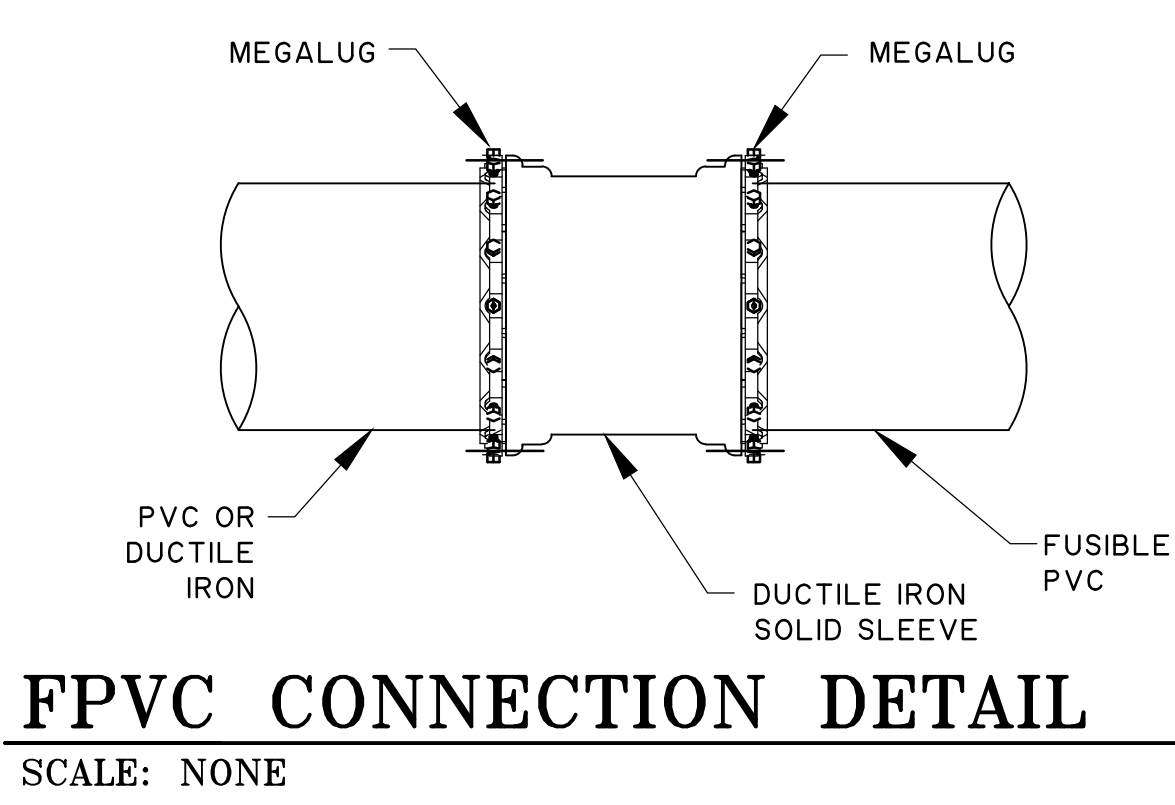
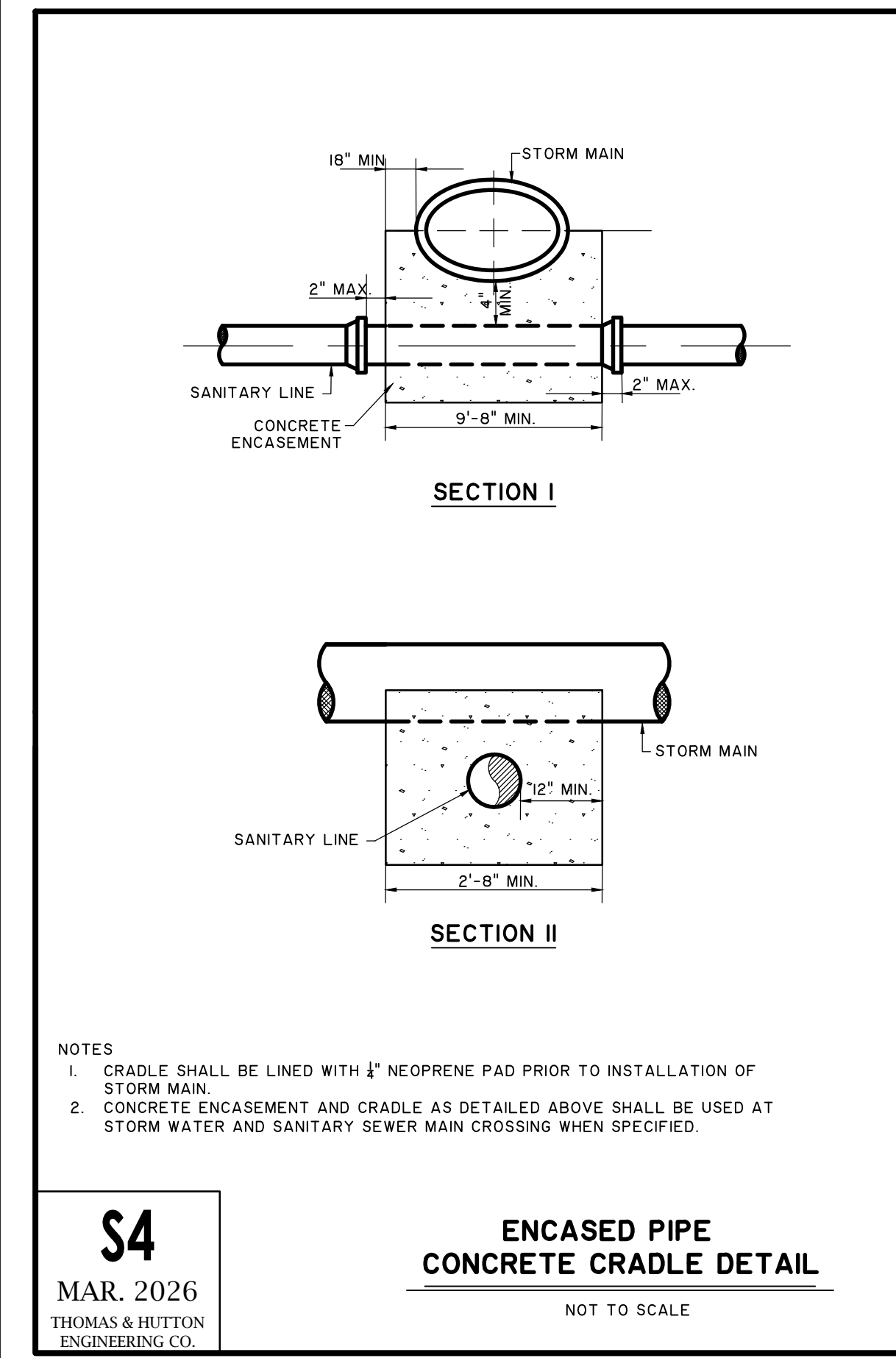
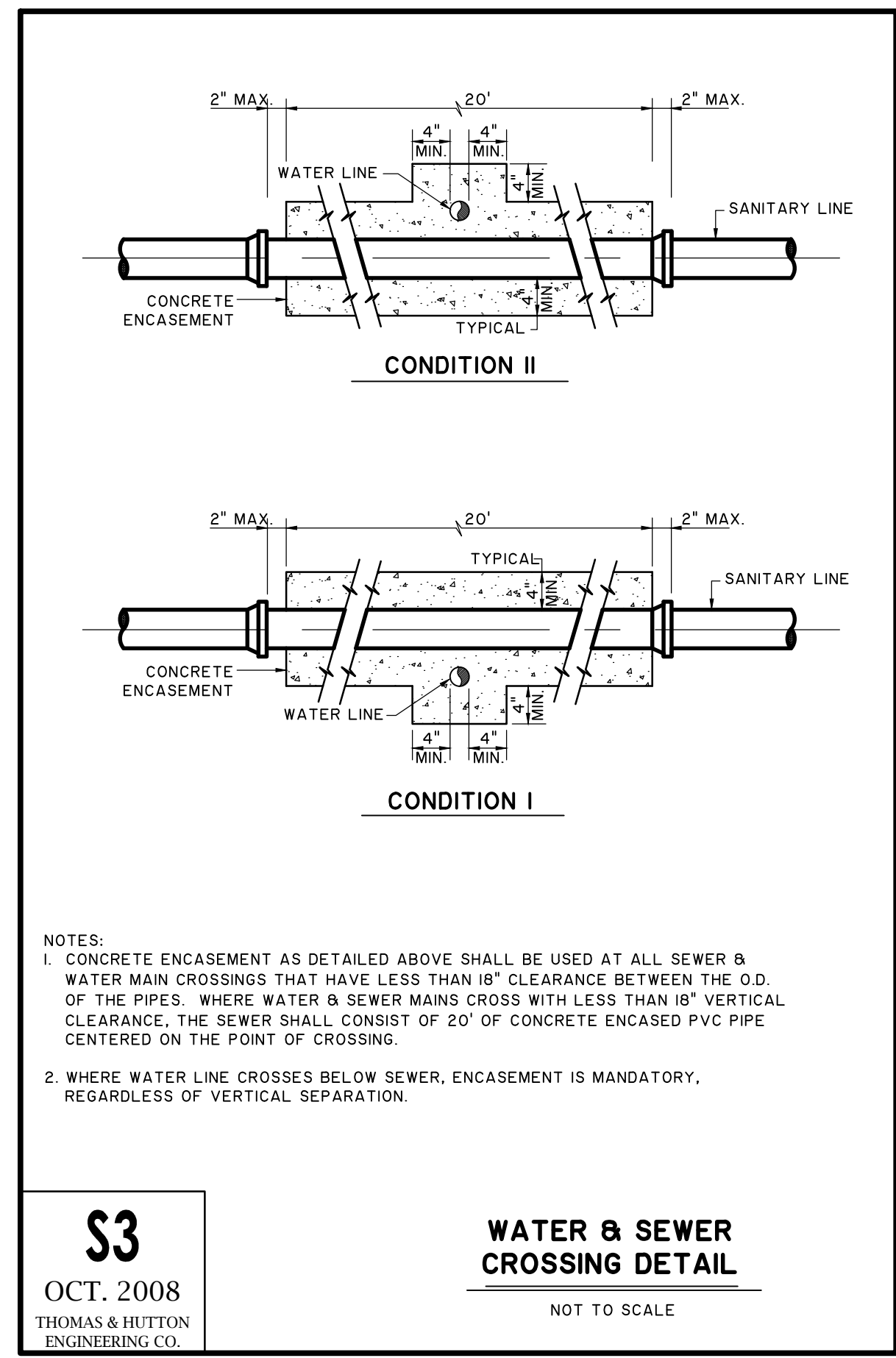
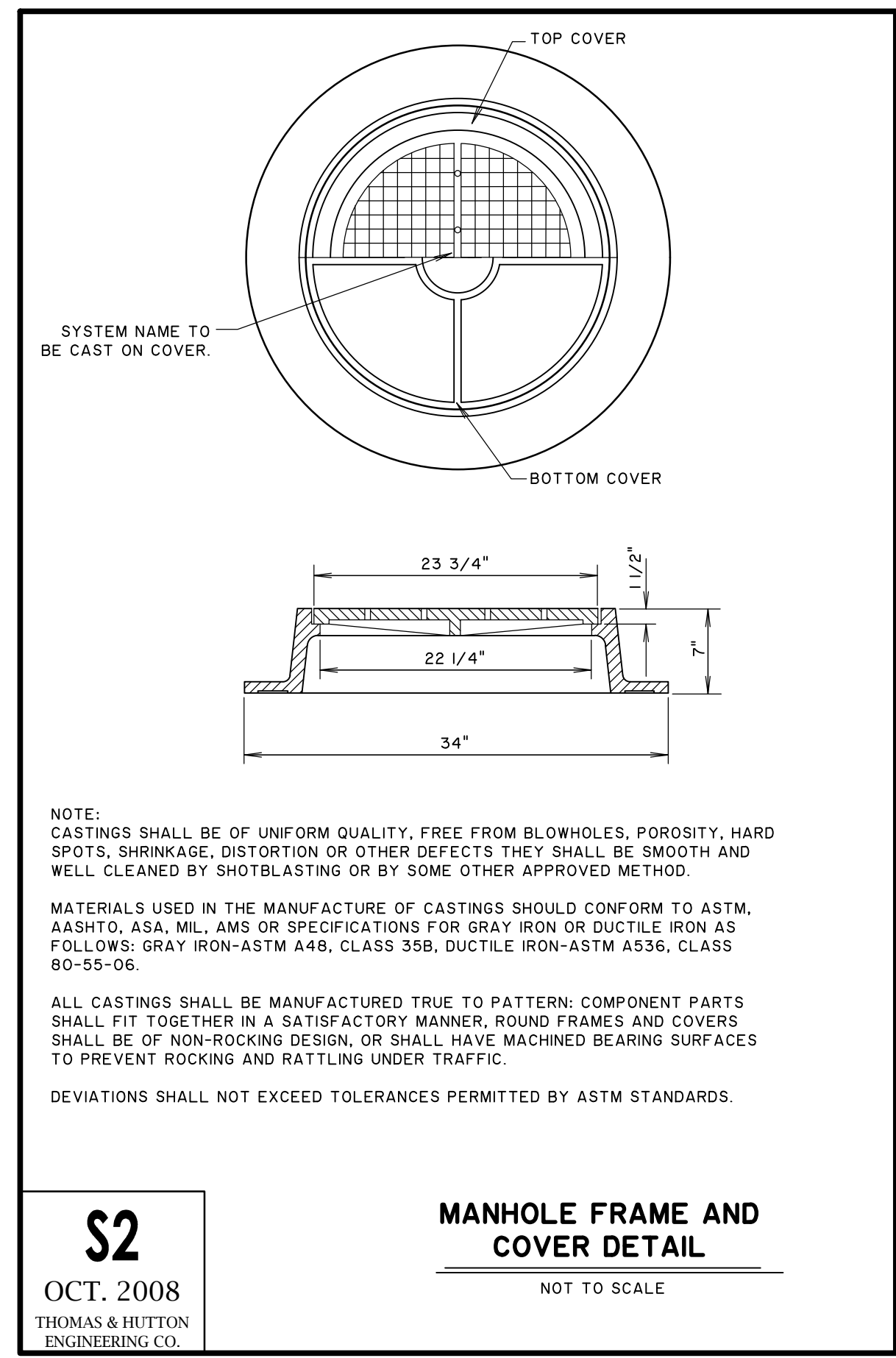
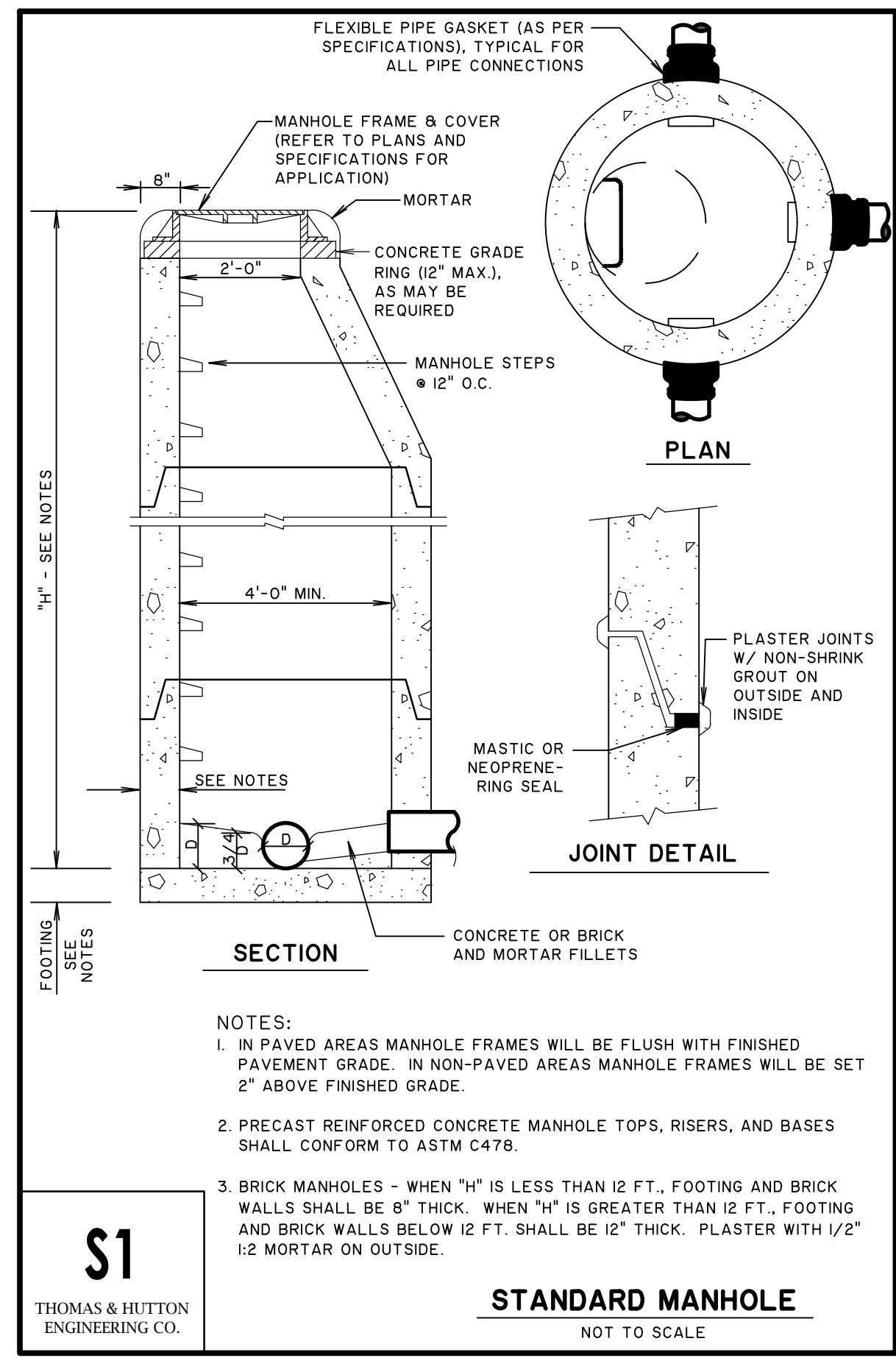
DATUM: HORIZ: NAD 83                  VERT: NAVD 88

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JOB NO: 27209.0043  
DATE: 03/16/2026  
DRAWN: SAM  
DESIGNED:  
REVIEWED:  
APPROVED: KMS  
SCALE: 1" = 1'

C2.12

23/209.0043 (S&M) (CONSTRUCTION) PLAN (2026) 04/16/2026 10:34 AM



NO.	REVISIONS	BY	DATE

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**SANITARY SEWER DETAILS**

**15TH STREET STORMWATER IMPROVEMENTS**

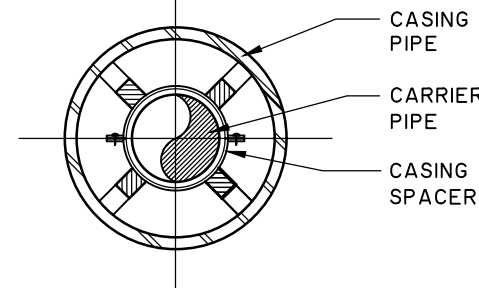
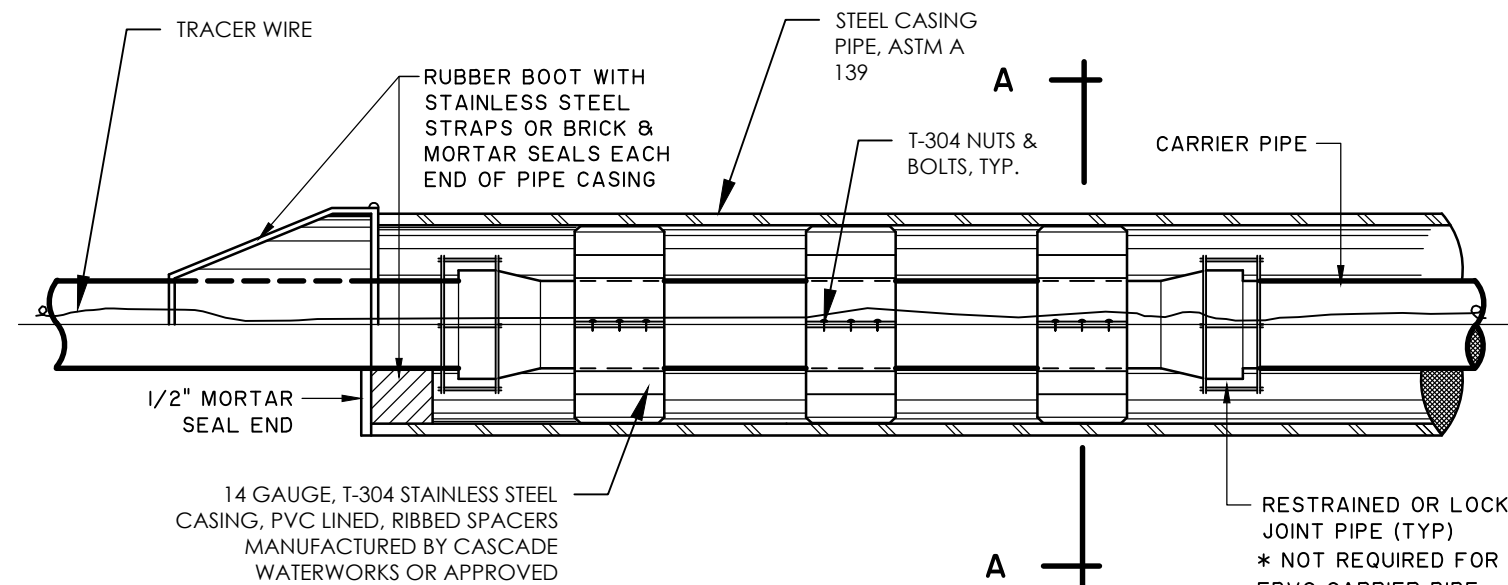
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GEORGIA 31328

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REVIEWED:	
APPROVED:	KMS
SCALE:	1" = 1'

**C2.13**



SECTION A-A

**SECTION**

**NOTES:**

1. CASING SPACERS SHALL BE SPACED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
2. ALL HIGHWAY CROSSINGS SHALL BE INSTALLED IN ACCORDANCE WITH G.D.O.T. REGULATIONS & PERMIT REQUIREMENTS.
3. ALL RAILROAD CROSSINGS SHALL BE INSTALLED IN ACCORDANCE TO AMERICAN RAILWAY ENGINEERING ASSOCIATION REGULATIONS, UNDER PART 5, PIPELINES (LATEST EDITION) AND PERMIT REGULATIONS.

**MINIMUM STEEL PIPE CASING DIMENSIONS FOR D.I.P.**

CARRIER PIPE I.D. NOMINAL	STEEL CASING PIPE SIZE		HIGHWAY & DOT BORES < 200 L.F.		HIGHWAY & DOT BORES > 200 L.F.		HIGHWAY & DOT BORES < 200 L.F.		RAILROAD BORES WEIGHT CLASS
	PRESSURE SYSTEM	GRAVITY SYSTEM	MIN. WALL THICKNESS (IN)	WEIGHT CLASS	MIN. WALL THICKNESS (IN)	WEIGHT CLASS	MIN. WALL THICKNESS (IN)		
							PRESSURE	GRAVITY	
4	12	16	0.3750	STD	0.5000	XS	0.5000	0.5000	XS
6	16	20	0.3750	STD	0.5000	XS	0.5000	0.5000	XS
8	18	24	0.3750	STD	0.5000	XS	0.5000	0.5000	XS
10	20	24	0.3750	STD	0.5000	XS	0.5000	0.5000	XS
12	24	30	0.3750	STD	0.5000	XS	0.5000	0.5000	XS
16	30	36	0.3750	STD	0.5000	XS	0.5000	0.5320	XS
18	36	48	0.3750	STD	0.5000	XS	0.5320	0.6880	XS
24	38	48	0.3750	STD	0.5000	XS	0.5320	0.6880	XS
30	48	54	0.3750	STD	0.5000	XS	0.6880	0.7810	XS
36	54	60	0.3750	STD	0.5000	XS	0.7810	0.8440	XS

**MINIMUM STEEL PIPE CASING DIMENSIONS FOR FUSIBLE PVC**

CARRIER PIPE I.D. NOMINAL	STEEL CASING PIPE SIZE		HIGHWAY & DOT BORES < 200 L.F.		HIGHWAY & DOT BORES > 200 L.F.		HIGHWAY & DOT BORES < 200 L.F.		RAILROAD BORES WEIGHT CLASS
	PRESSURE SYSTEM	GRAVITY SYSTEM	MIN. WALL THICKNESS (IN)	WEIGHT CLASS	MIN. WALL THICKNESS (IN)	WEIGHT CLASS	MIN. WALL THICKNESS (IN)		
							PRESSURE	GRAVITY	
4	8	16	0.3750	STD	0.5000	XS	0.5000	0.5000	XS
6	10	20	0.3750	STD	0.5000	XS	0.5000	0.5000	XS
8	12	24	0.3750	STD	0.5000	XS	0.5000	0.5000	XS
10	16	24	0.3750	STD	0.5000	XS	0.5000	0.5000	XS
12	16	30	0.3750	STD	0.5000	XS	0.5000	0.5000	XS
16	20	36	0.3750	STD	0.5000	XS	0.5000	0.5320	XS
18	24	48	0.3750	STD	0.5000	XS	0.5320	0.6880	XS
24	30	48	0.3750	STD	0.5000	XS	0.5320	0.6880	XS
30	36	54	0.3750	STD	0.5000	XS	0.6880	0.7810	XS
36	42	60	0.3750	STD	0.5000	XS	0.7810	0.8440	XS

**S6**

OCT, 2022  
THOMAS & HUTTON  
ENGINEERING CO.

**CASING PIPE DETAIL**

NOT TO SCALE


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**SANITARY SEWER DETAILS**

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15TH STREET, TYBEE ISLAND  
GEORGIA 31328

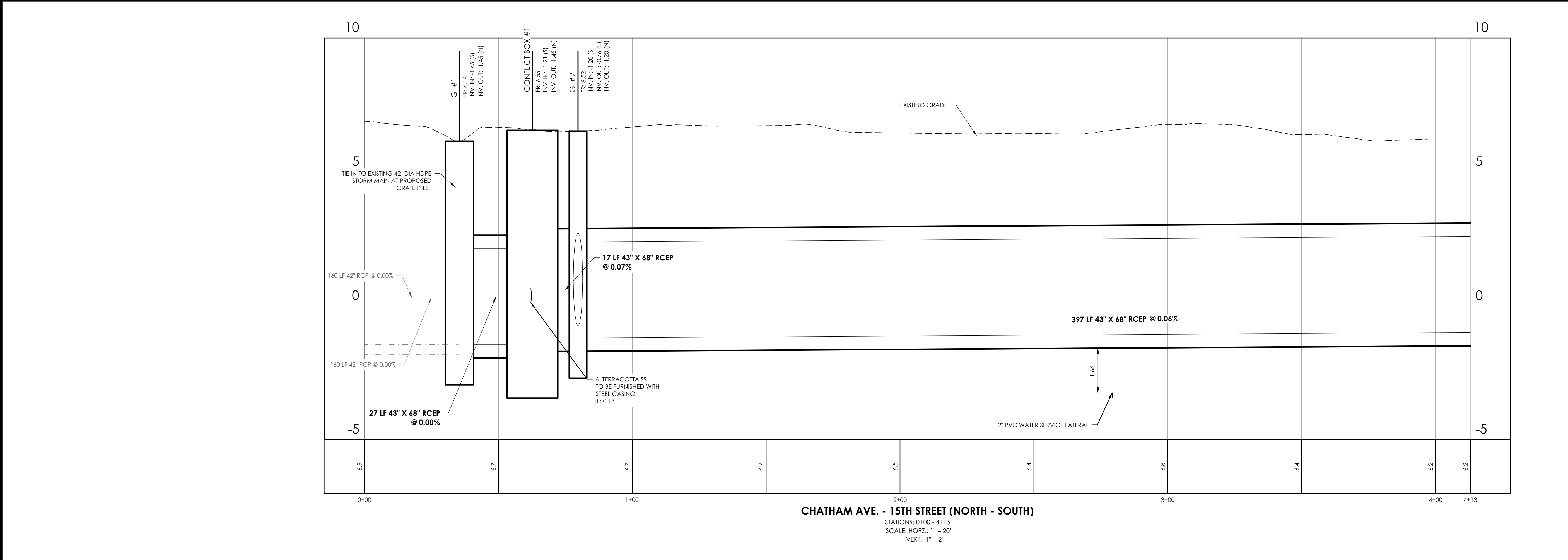
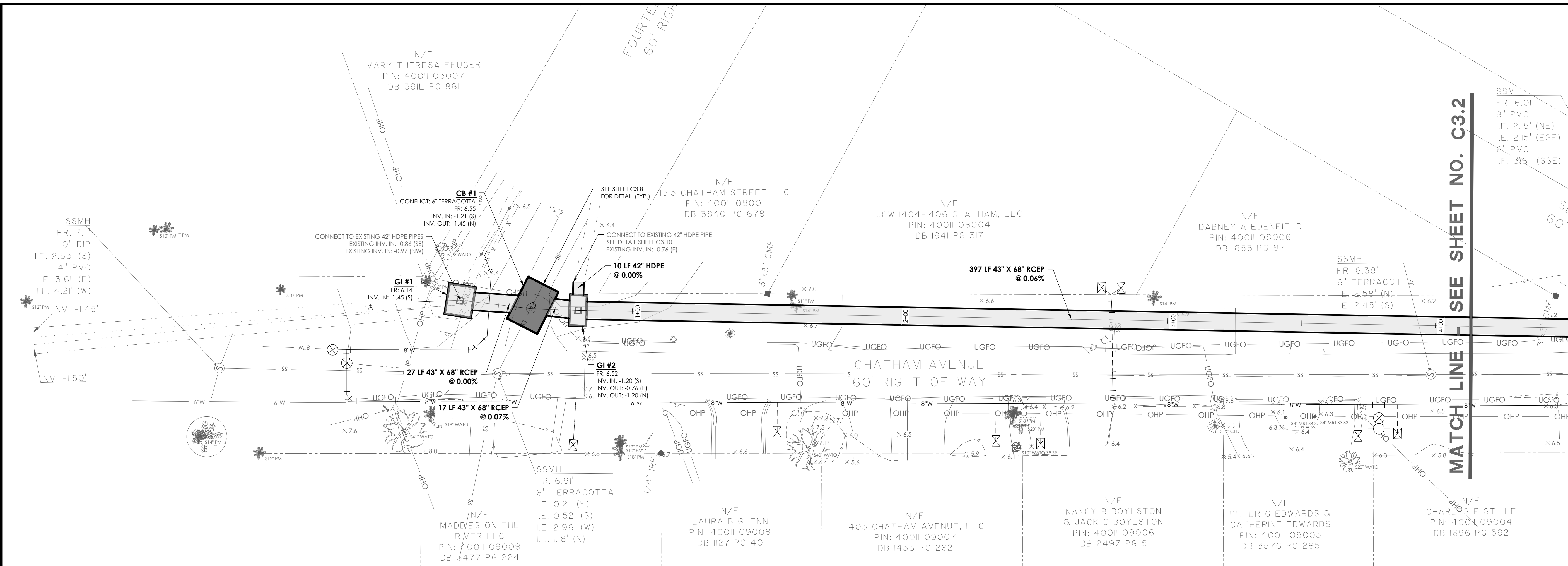
**CLIENT/OWNER:**  
CITY OF TYBEE ISLAND  
403 BUTLER AVENUE  
TYBEE ISLAND, GA 31328  
PETER GULBRONSON  
peter.gulbronson@cityoftybee.gov

DATUM: HORIZ.: NAD 83      VERT.: NAVD 88

JOB NO:	27209.0043
DATE:	03/16/2026
DRAWN:	SAM
DESIGNED:	
REVIEWED:	
APPROVED:	KMS
SCALE:	1" = 1'

**C2.14**

E:\2020\2020\15TH STREET STORMWATER IMPROVEMENTS\DRAWING\CONSTRUCTION\15TH STREET STORMWATER IMPROVEMENTS - SHEET C3.1.dwg, May 18, 2024, 3:54 PM



**CHATHAM AVE. - 15TH STREET (NORTH - SOUTH)**  
 STATIONS: 0+00 - 4+13  
 SCALE: HORIZ. 1" = 20'  
 VERT. 1" = 2'

**NOTES:**

- CONTRACTOR TO VERIFY SIZE AND DEPTH OF EXISTING WATER MAIN AND NOTIFY THE ENGINEER OF ANY CONFLICTS/DISCREPANCIES.

NO.	REVISIONS	BY	DATE



**THOMAS & HUTTON**

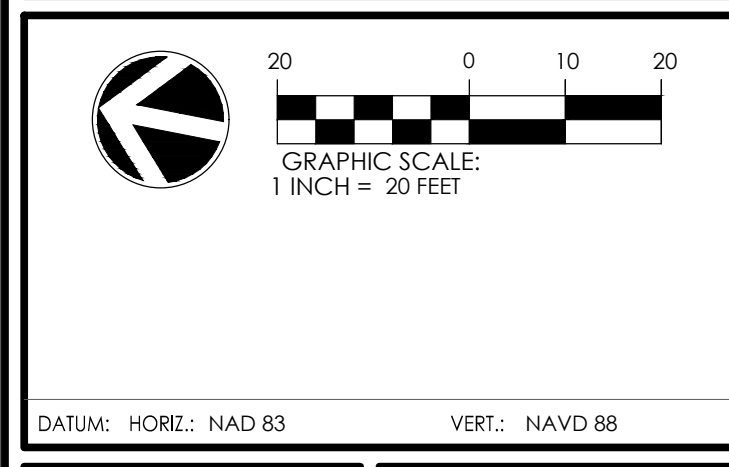
50 Park of Commerce Way  
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 www.thomasandhutton.com

**PAVING, GRADING & DRAINAGE PLAN & PROFILE**

**15TH STREET STORMWATER IMPROVEMENTS**

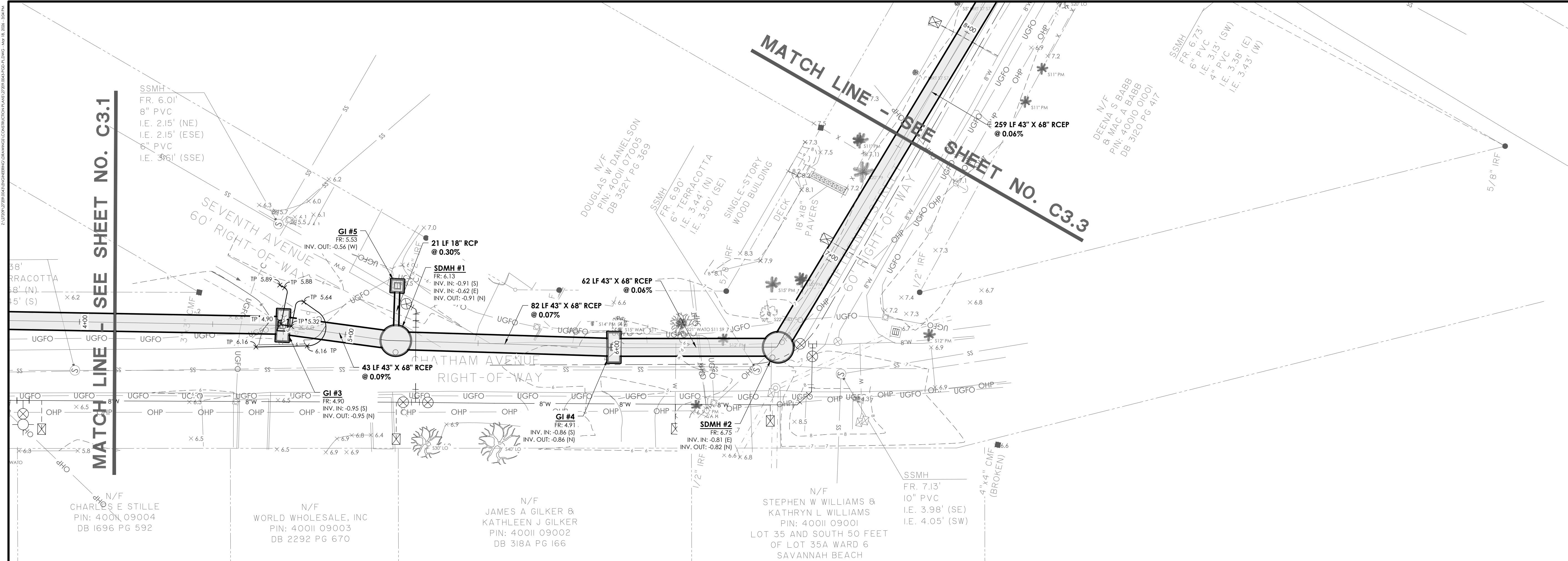
**PROJECT LOCATION:**  
 15TH STREET, TYBEE ISLAND  
 GEORGIA 31328

**CLIENT/OWNER:**  
 CITY OF TYBEE ISLAND  
 403 BUTLER AVENUE  
 TYBEE ISLAND, GA 31328  
 PETER GULBRONSON  
 peter.gulbronson@cityoftybee.gov



DATUM:	HORIZ.: NAD 83	VERT.: NAVD 88
JOB NO.:	27209.0043	
DATE:	03/16/2024	
DRAWN:	SAM	
DESIGNED:		
REVIEWED:		
APPROVED:	KMS	
SCALE:	SEE SCALE BAR	

**C3.1**



**NOTES:**

- CONTRACTOR TO VERIFY SIZE AND DEPTH OF EXISTING WATER MAIN AND NOTIFY THE ENGINEER OF ANY CONFLICTS/DISCREPANCIES.

NO.	REVISIONS	BY	DATE



**THOMAS & HUTTON**

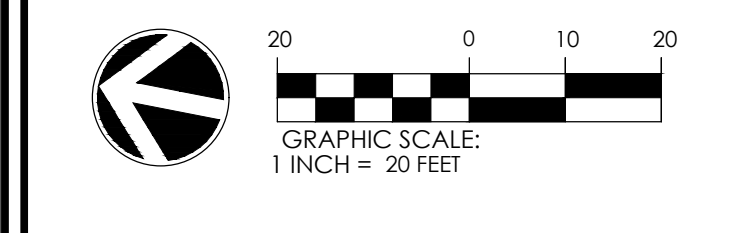
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**PAVING, GRADING & DRAINAGE PLAN & PROFILE**

**15TH STREET STORMWATER IMPROVEMENTS**

**PROJECT LOCATION:**  
15TH STREET, TYBEE ISLAND  
GEORGIA 31328

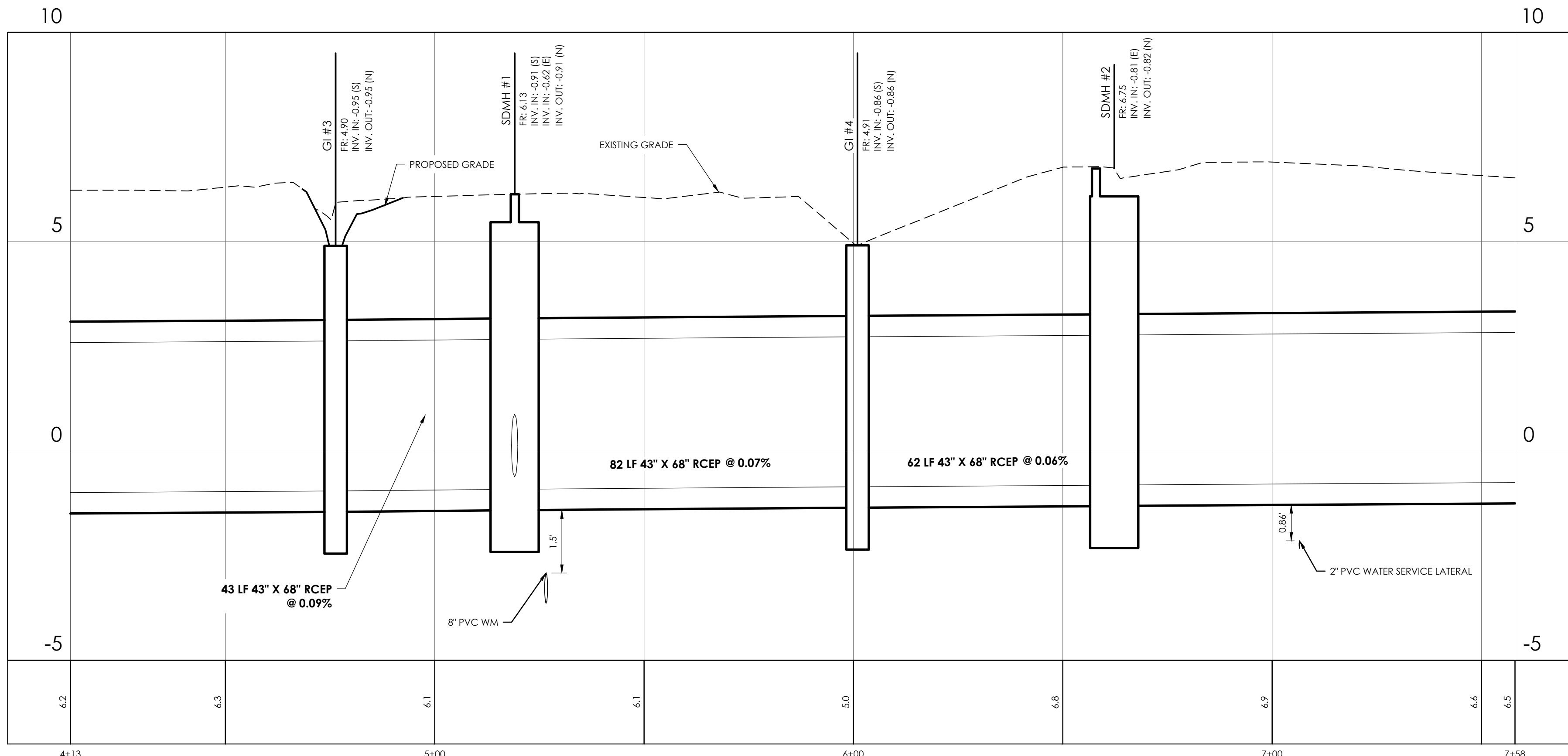
**CLIENT/OWNER:**  
CITY OF TYBEE ISLAND  
403 BUTLER AVENUE  
TYBEE ISLAND, GA 31328  
PETER GULBRONSON  
peter.gulbronson@cityoftybee.gov



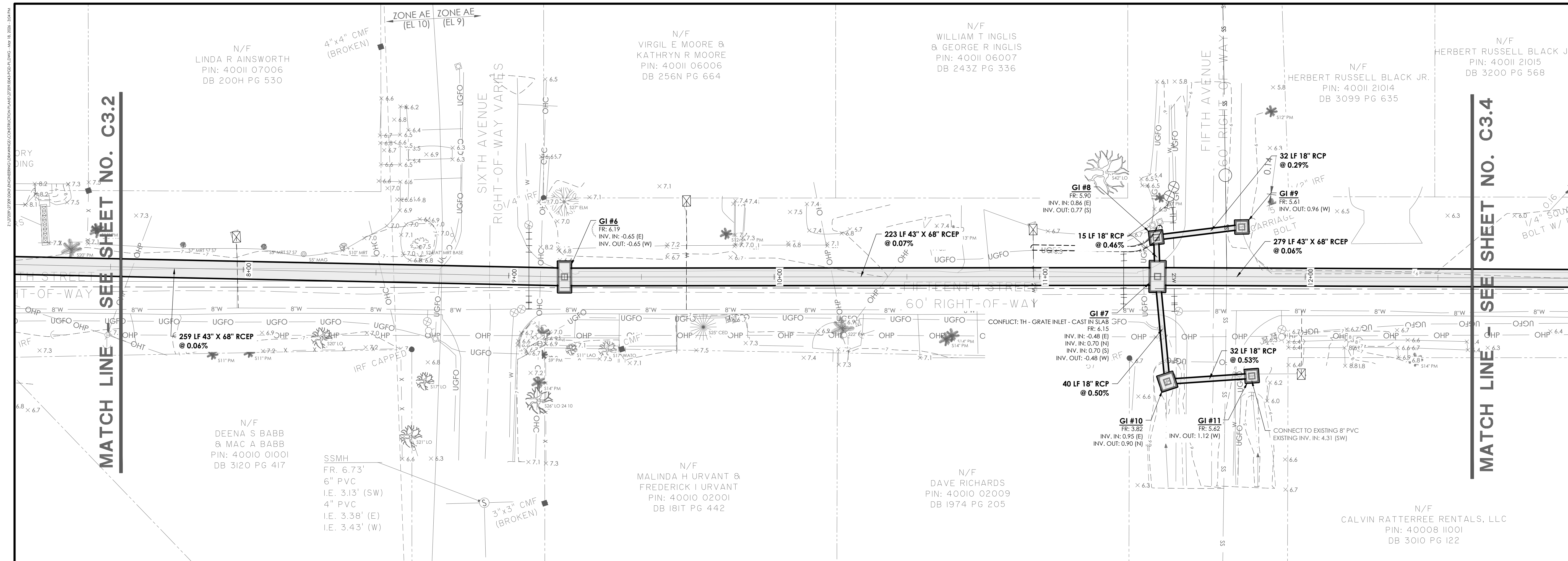
DATUM: HORIZ.: NAD 83      VERT.: NAVD 88

JOB NO: 27209.0043  
DATE: 03/16/2026  
DRAWN: SAM  
DESIGNED:  
REVIEWED:  
APPROVED: KMS  
SCALE: SEE SCALE BAR

**C3.2**



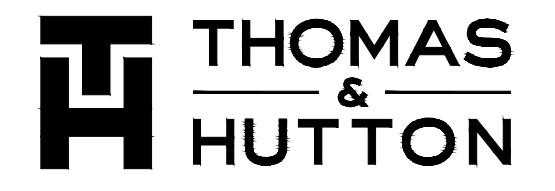
**CHATHAM AVE. - 15TH STREET (NORTH - SOUTH)**  
STATIONS: 4+13 - 7+58  
SCALE: HORIZ.: 1" = 20'  
VERT.: 1" = 2'



**NOTES:**

1. CONTRACTOR TO VERIFY SIZE AND DEPTH OF EXISTING WATER MAIN AND NOTIFY THE ENGINEER OF ANY CONFLICTS/DISCREPANCIES.

NO.	REVISIONS	BY	DATE



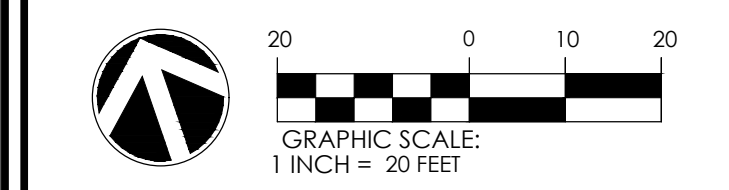
50 Park of Commerce Way  
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**PAVING, GRADING & DRAINAGE PLAN & PROFILE**

**15TH STREET STORMWATER IMPROVEMENTS**

**PROJECT LOCATION:**  
15TH STREET, TYBEE ISLAND  
GEORGIA 31328

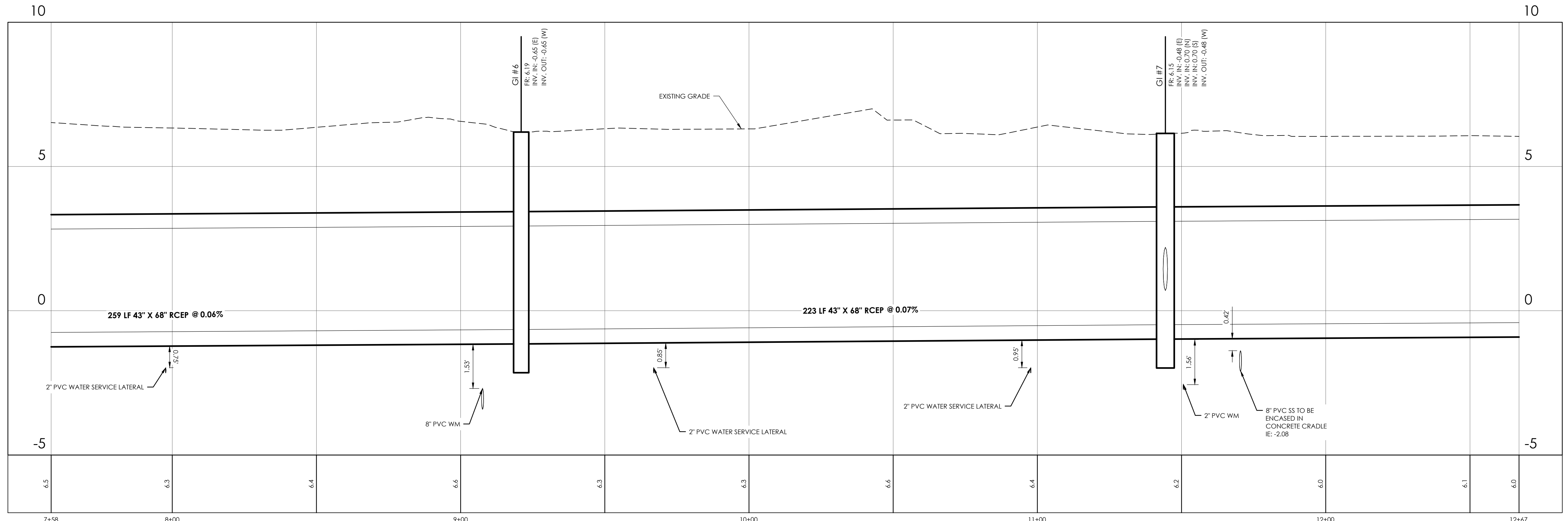
**CLIENT/OWNER:**  
CITY OF TYBEE ISLAND  
403 BUTLER AVENUE  
TYBEE ISLAND, GA 31328  
PETER GULBRONSON  
peter.gulbronson@cityoftybee.gov



DATUM: HORIZ.: NAD 83 VERT.: NAVD 88

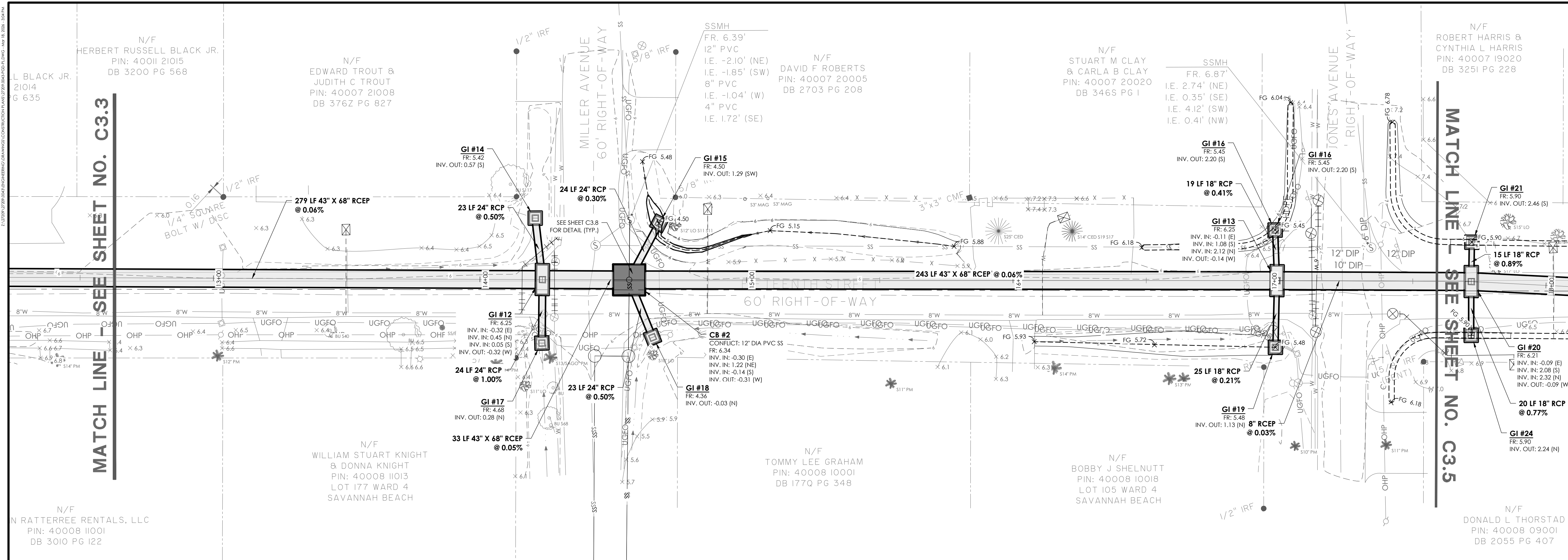
JOB NO:	27209.0043
DATE:	03/16/2026
DRAWN:	SAM
DESIGNED:	
REVIEWED:	
APPROVED:	KMS
SCALE:	SEE SCALE BAR

**C3.3**



**CHATHAM AVE. - 15TH STREET (NORTH - SOUTH)**

STATIONS: 7+58 - 12+67  
SCALE: HORIZ.: 1" = 20'  
VERT.: 1" = 2'



**NOTES:**

- CONTRACTOR TO VERIFY SIZE AND DEPTH OF EXISTING WATER MAIN AND NOTIFY THE ENGINEER OF ANY CONFLICTS/DISCREPANCIES.

NO.	REVISIONS	BY	DATE

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**PAVING, GRADING & DRAINAGE PLAN & PROFILE**

**15TH STREET STORMWATER IMPROVEMENTS**

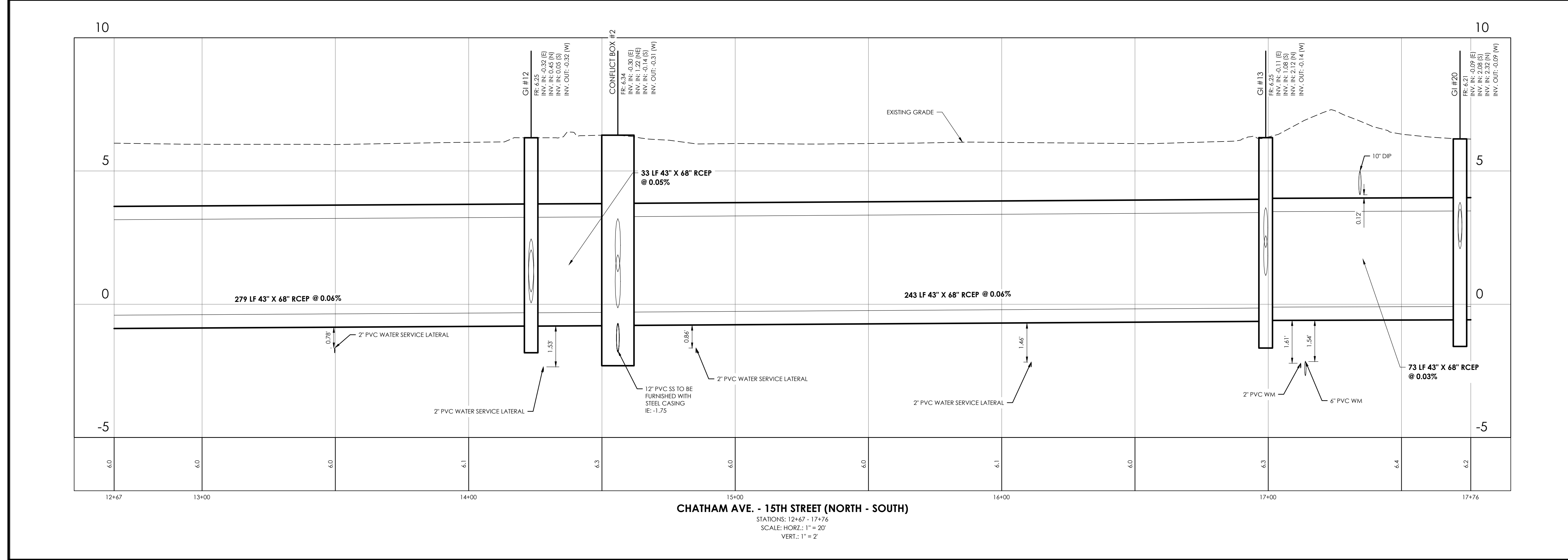
**PROJECT LOCATION:**  
15TH STREET, TYBEE ISLAND  
GEORGIA 31328

**CLIENT/OWNER:**  
CITY OF TYBEE ISLAND  
403 BUTLER AVENUE  
TYBEE ISLAND, GA 31328  
PETER GULBRONSON  
peter.gulbronson@cityoftybee.gov

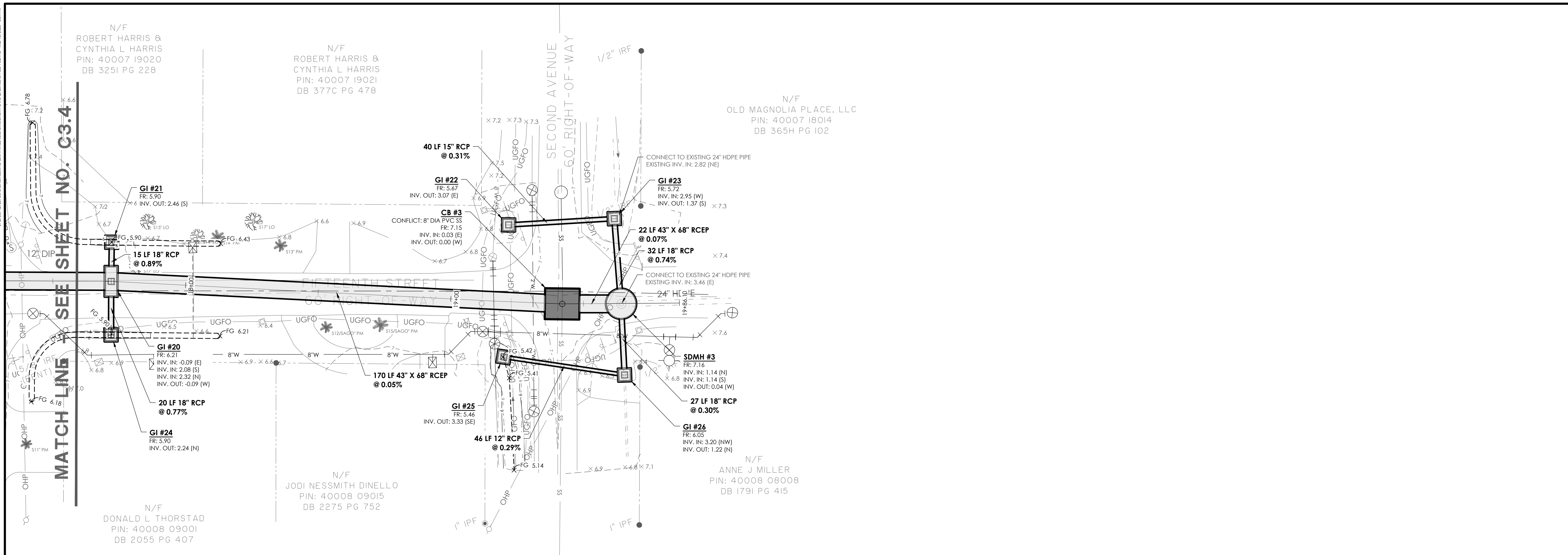
DATUM: HORIZ.: NAD 83      VERT.: NAVD 88

JOB NO:	27209.0043
DATE:	03/16/2026
DRAWN:	SAM
DESIGNED:	
REVIEWED:	
APPROVED:	KMS
SCALE:	SEE SCALE BAR

C3.4



**CHATHAM AVE. - 15TH STREET (NORTH - SOUTH)**  
STATIONS: 12+67 - 17+76  
SCALE: HORIZ.: 1" = 20'  
VERT.: 1" = 2'



**NOTES:**

1. CONTRACTOR TO VERIFY SIZE AND DEPTH OF EXISTING WATER MAIN AND NOTIFY THE ENGINEER OF ANY CONFLICTS/DISCREPANCIES.

NO.	REVISIONS	BY	DATE



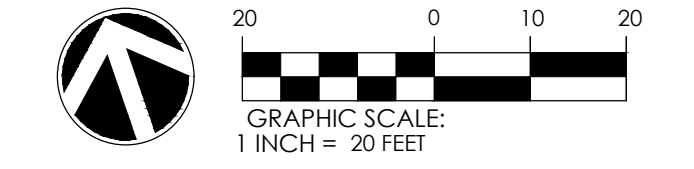
50 Park of Commerce Way  
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**PAVING, GRADING & DRAINAGE PLAN & PROFILE**

**15TH STREET STORMWATER IMPROVEMENTS**

**PROJECT LOCATION:**  
15TH STREET, TYBEE ISLAND  
GEORGIA 31328

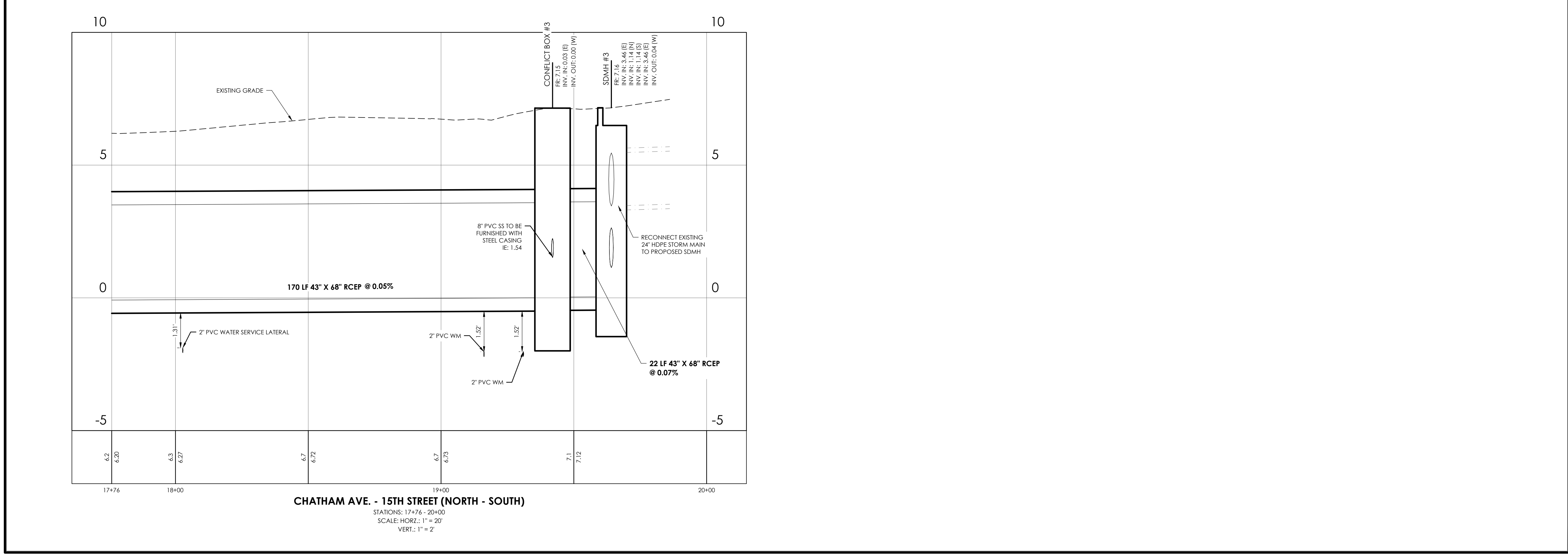
**CLIENT/OWNER:**  
CITY OF TYBEE ISLAND  
403 BUTLER AVENUE  
TYBEE ISLAND, GA 31328  
PETER GULBRONSON  
peter.gulbronson@cityoftybee.gov



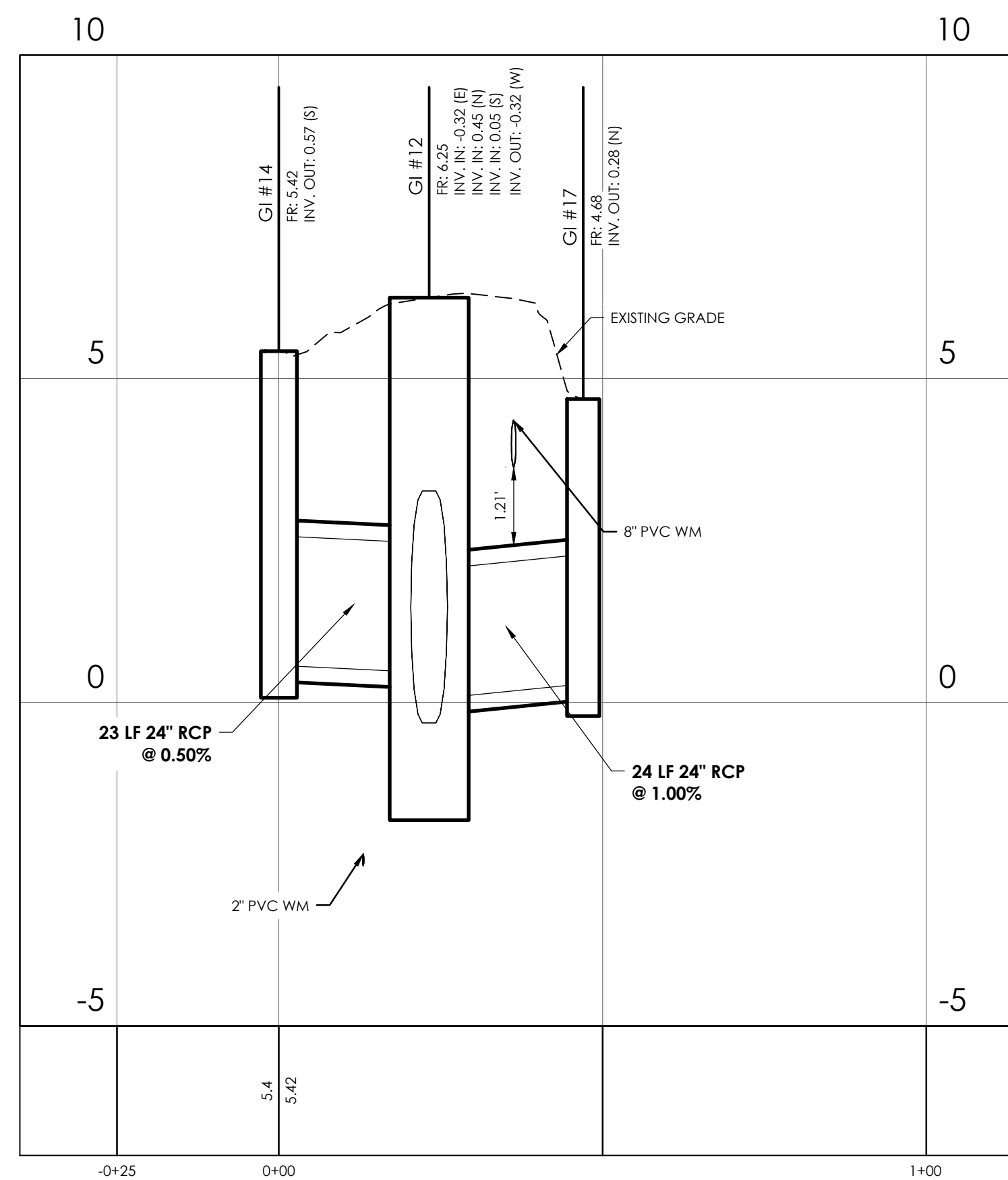
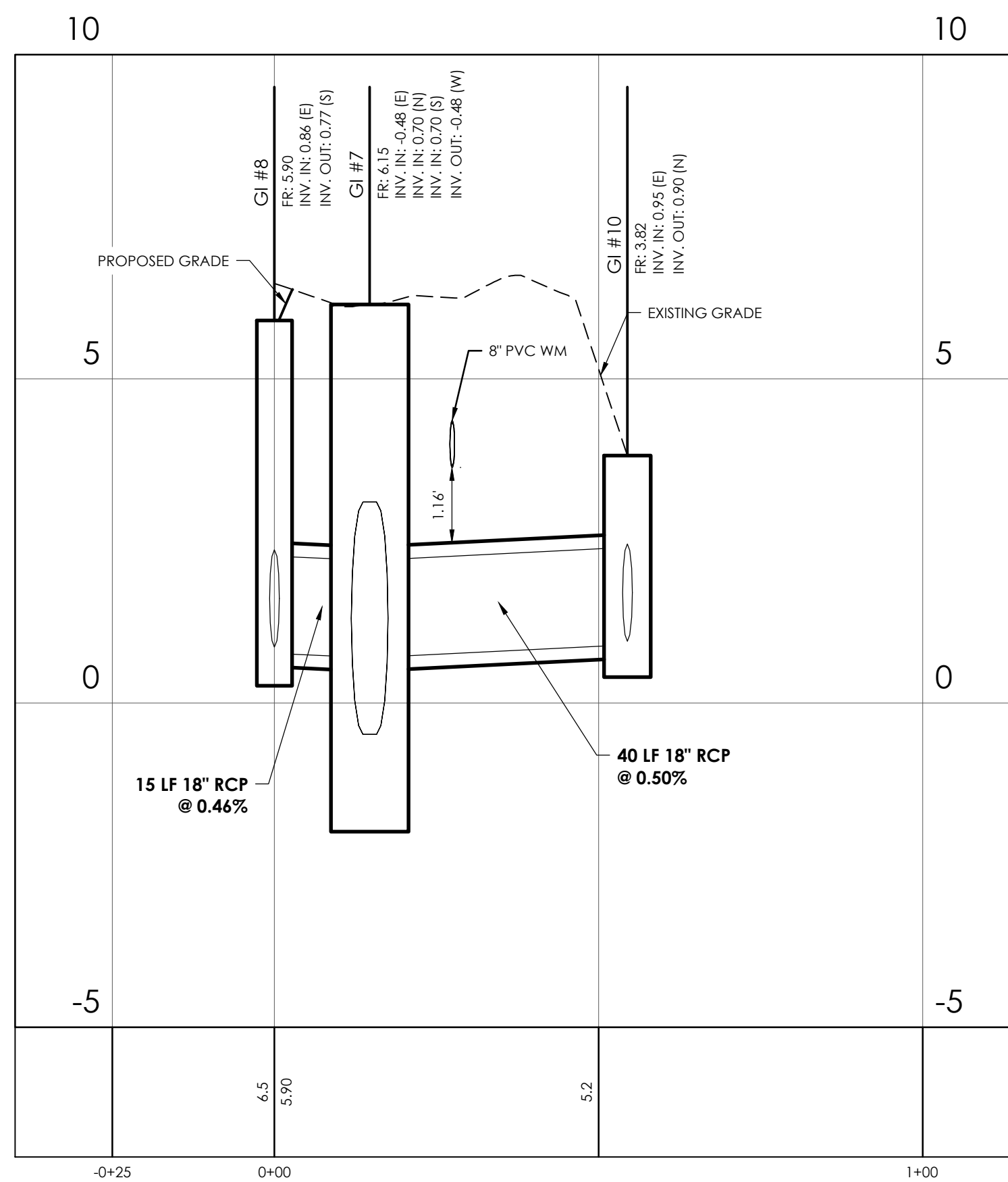
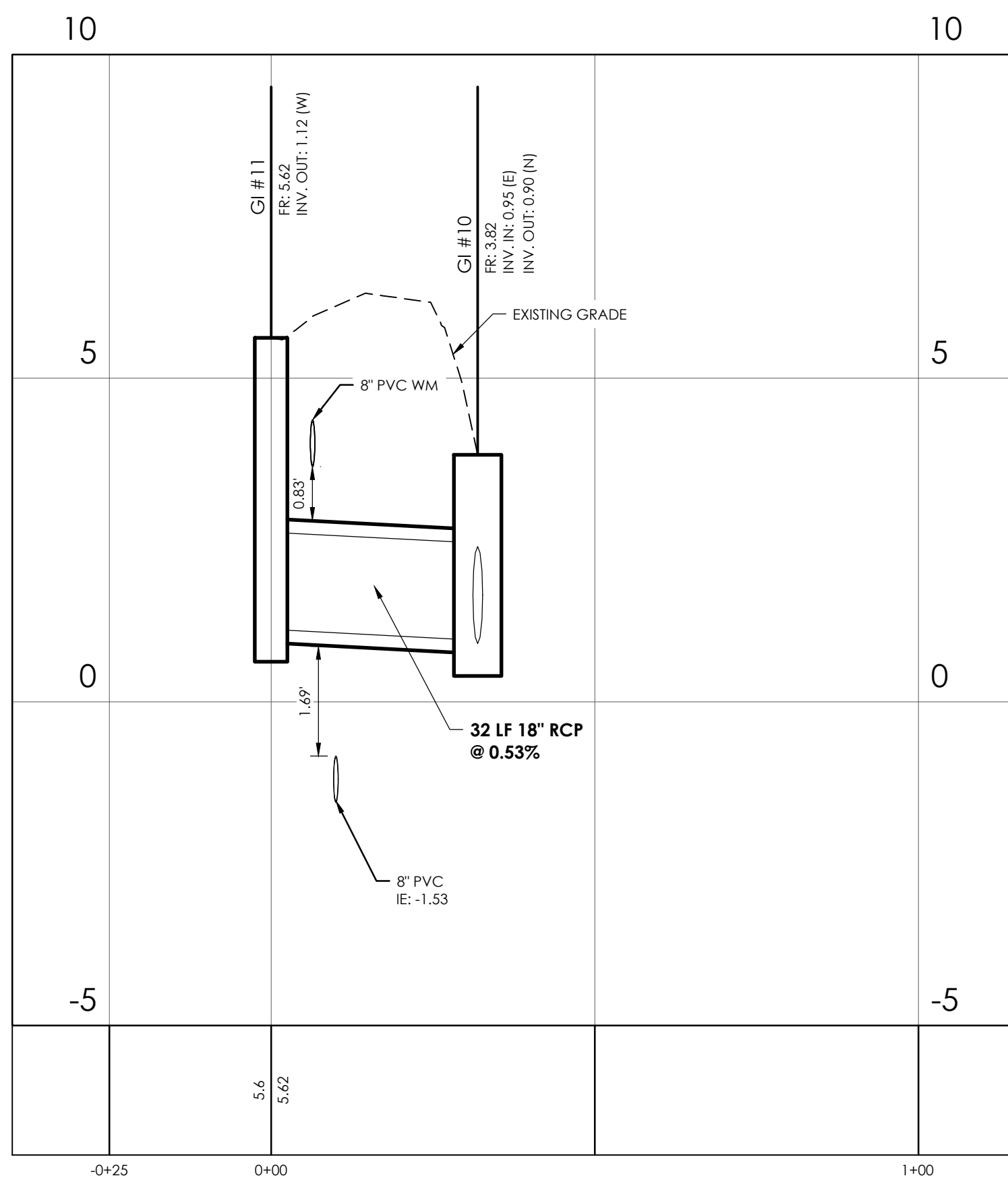
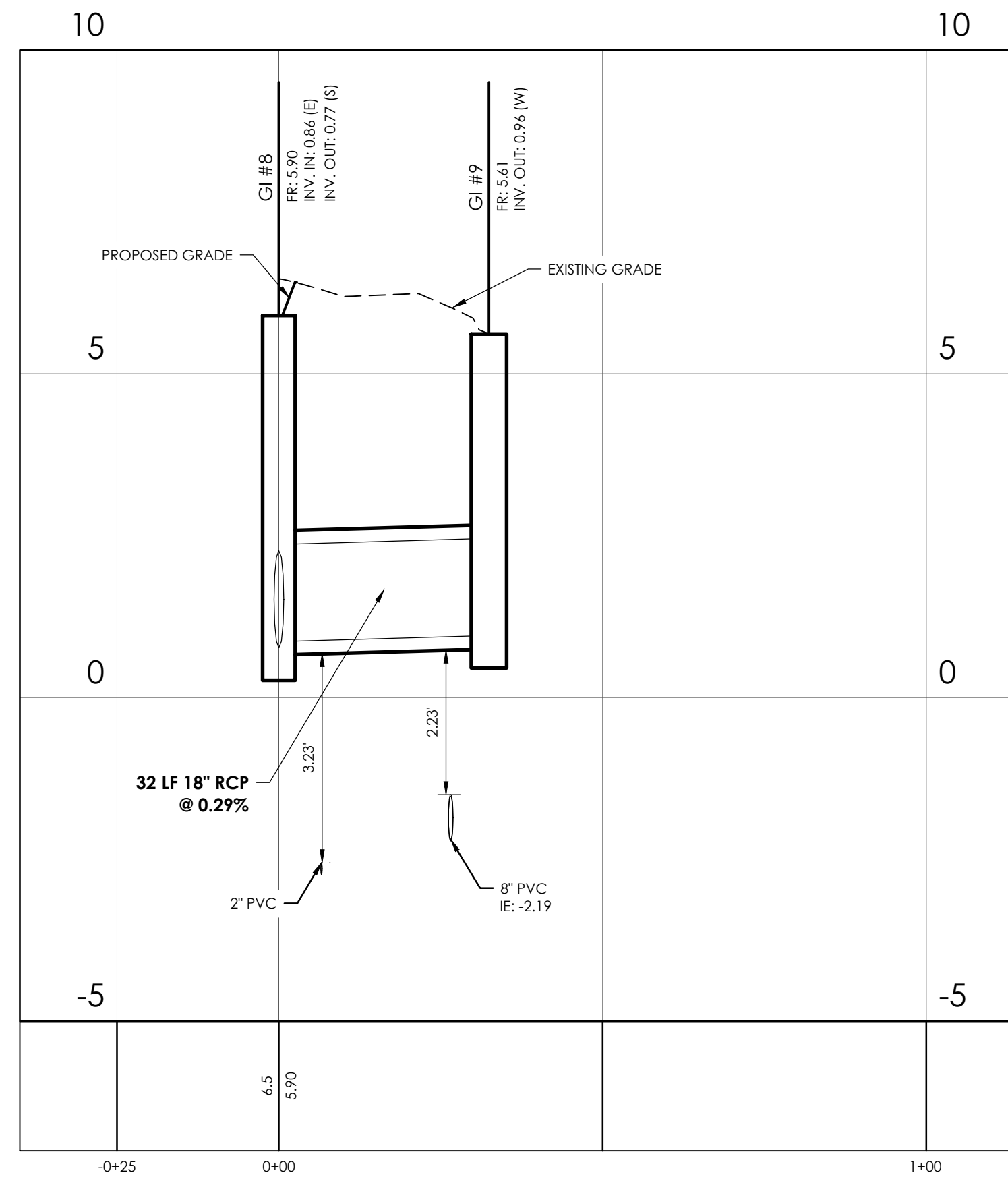
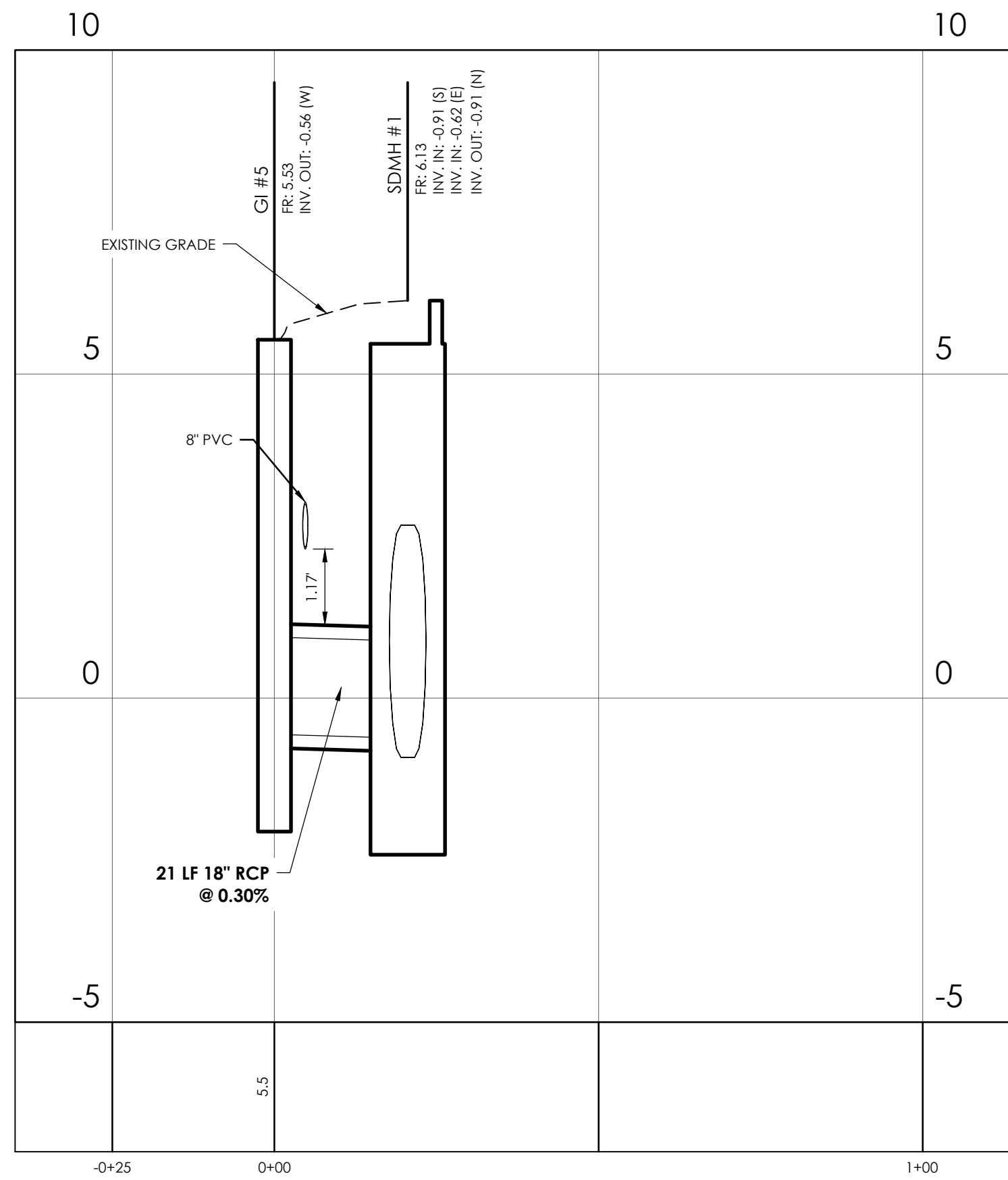
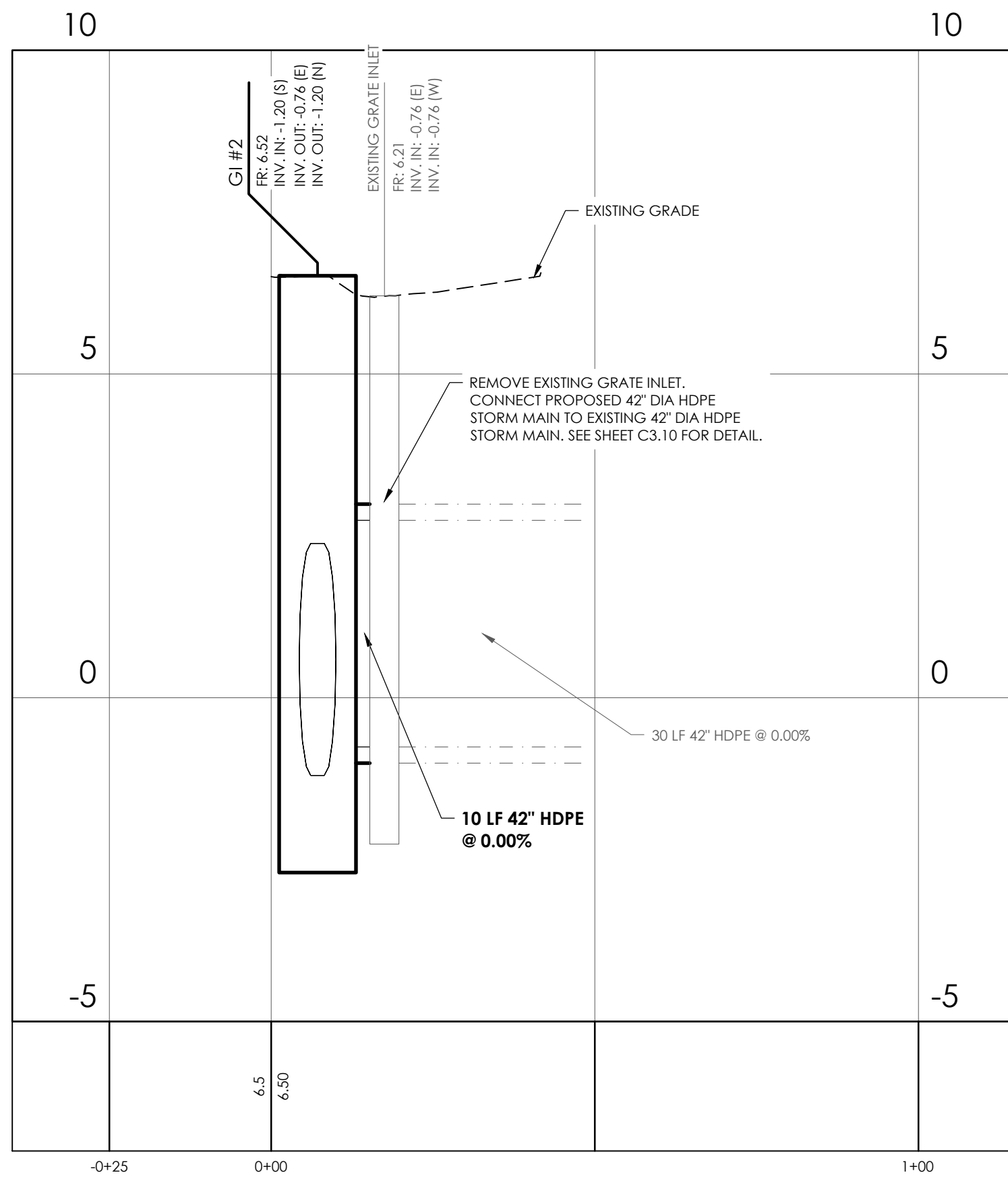
DATUM: HORIZ.: NAD 83      VERT.: NAVD 88

JOB NO: 27209.0043  
DATE: 03/16/2026  
DRAWN: SAM  
DESIGNED:  
REVIEWED:  
APPROVED: KMS  
SCALE: SEE SCALE BAR

**C3.5**



P:\2020\27209\27209\DRAWINGS\CONSTRUCTION\15TH ST\27209\_03\_16\_2026.dwg, 15. 10. 2026, 3:04 PM



**NOTES:**

1. CONTRACTOR TO VERIFY SIZE AND DEPTH OF EXISTING WATER MAIN AND NOTIFY THE ENGINEER OF ANY CONFLICTS/DISCREPANCIES.

NO.	REVISIONS	BY	DATE



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**PAVING, GRADING & DRAINAGE PROFILES**

**15TH STREET STORMWATER IMPROVEMENTS**

**PROJECT LOCATION:**  
 15TH STREET, TYBEE ISLAND  
 GEORGIA 31328

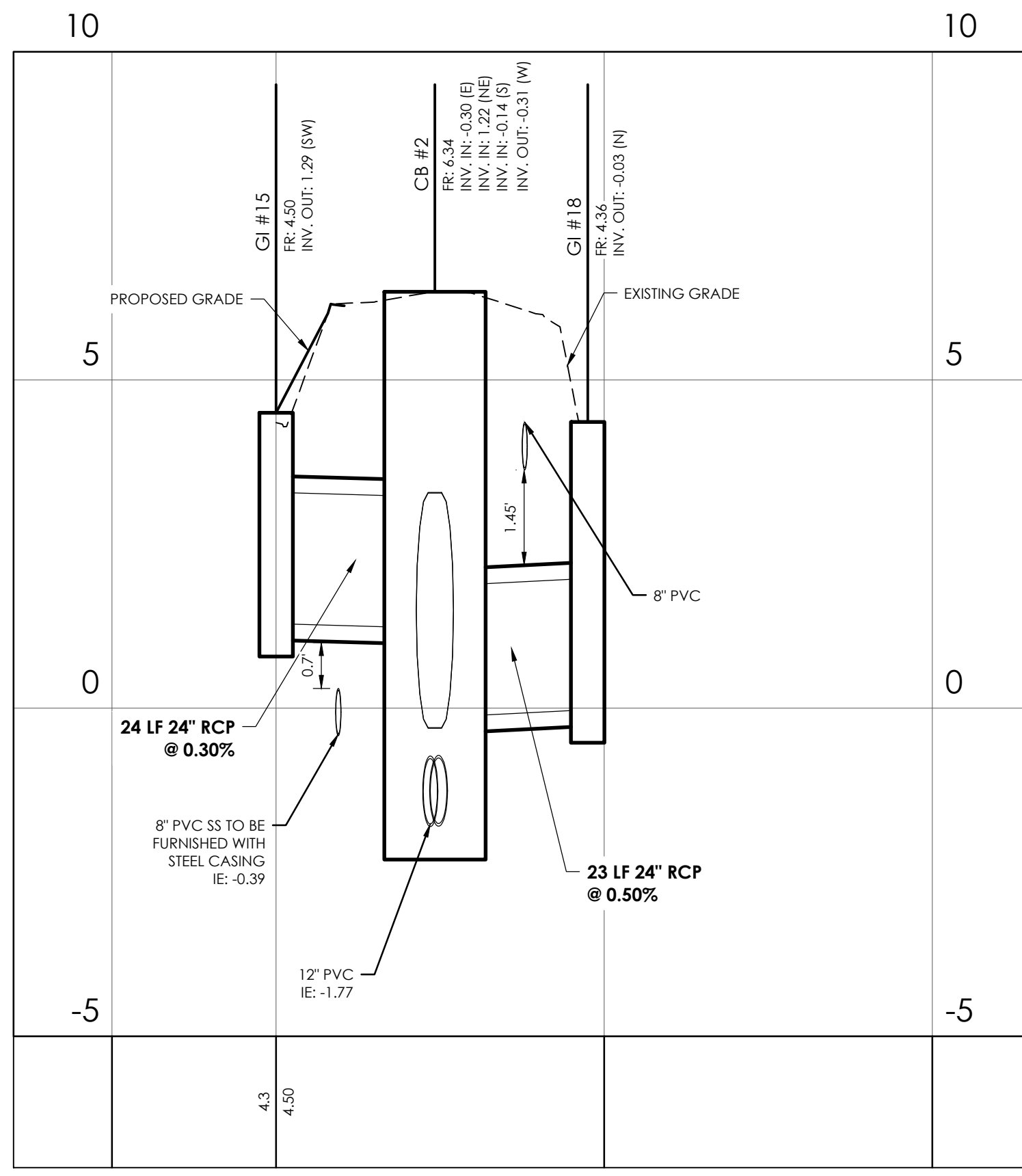
**CLIENT/OWNER:**  
 CITY OF TYBEE ISLAND  
 403 BUTLER AVENUE  
 TYBEE ISLAND, GA 31328  
 PETER GULBRONSON  
 peter.gulbronson@cityoftybee.gov

DATUM: HORIZ.: NAD 83 VERT.: NAVD 88

JOB NO: 27209.0043  
 DATE: 03/16/2026  
 DRAWN: SAM  
 DESIGNED:  
 REVIEWED:  
 APPROVED: KMS  
 SCALE: 1" = 20'

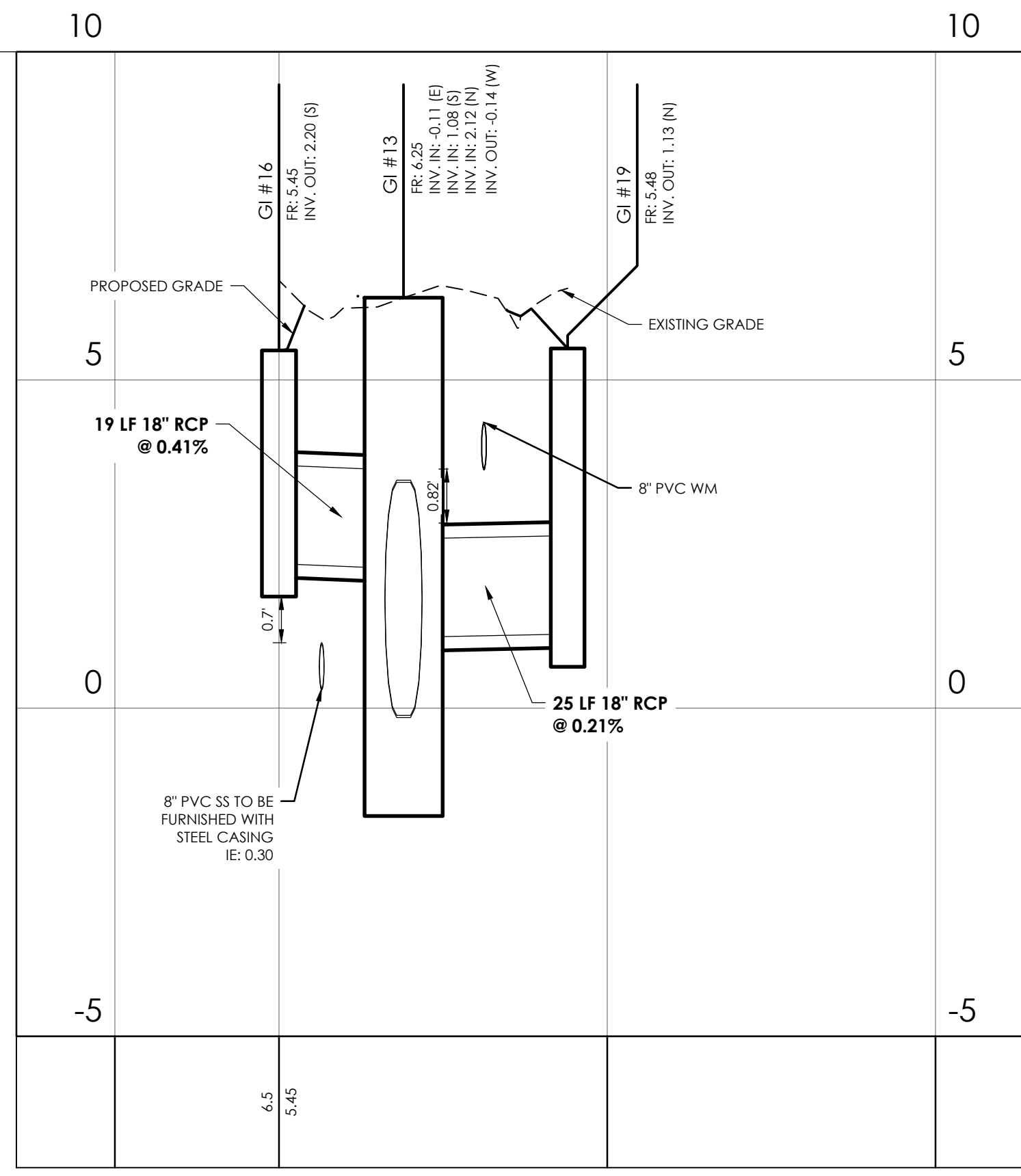
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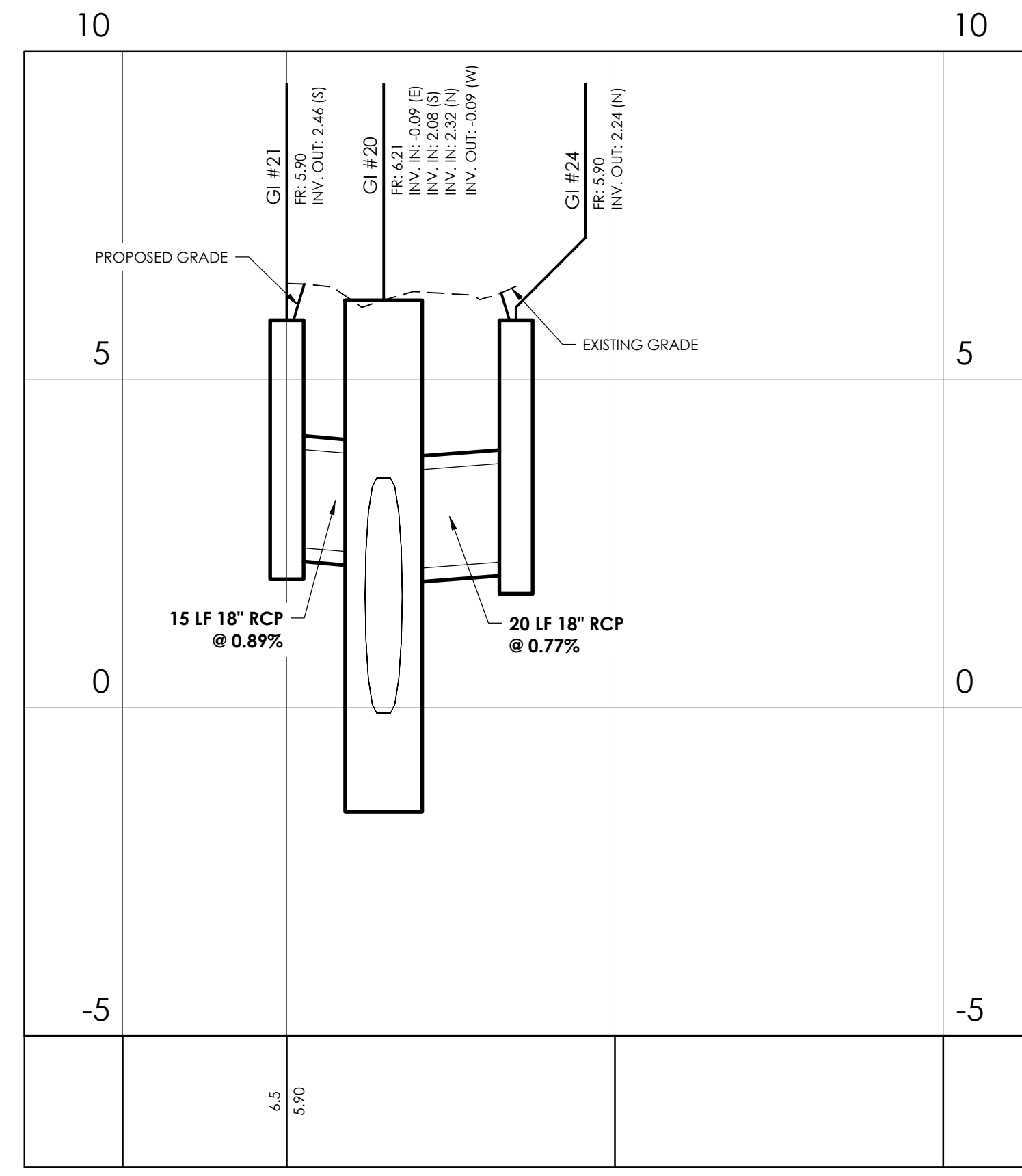
15th Street & Miller Avenue Minor Run (East)

STATIONS: -0+25 - 1+00  
SCALE: HORZ.: 1" = 20'  
VERT.: 1" = 2'



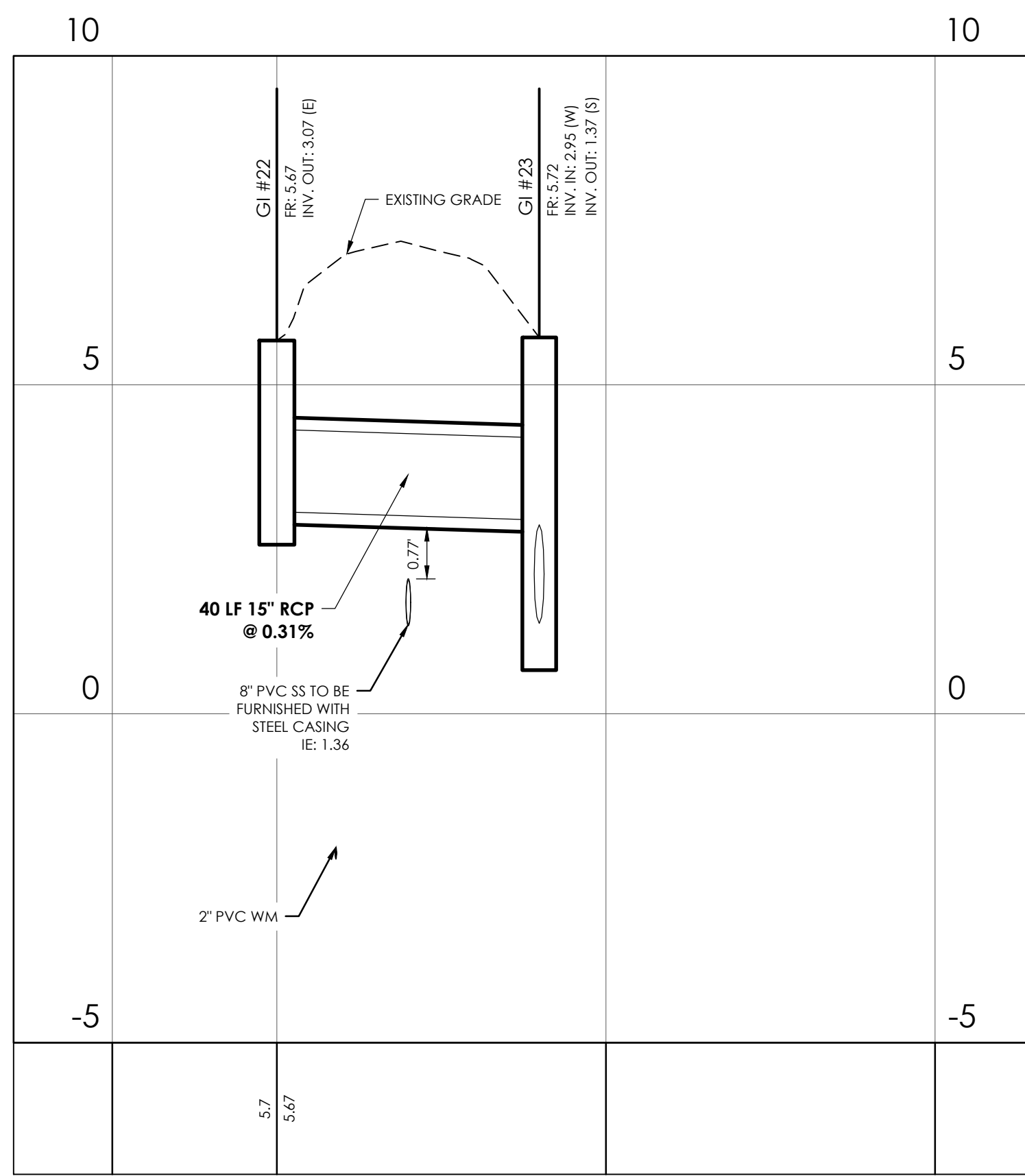
15th Street & Jones Avenue Minor Run (West)

STATIONS: -0+25 - 1+00  
SCALE: HORZ.: 1" = 20'  
VERT.: 1" = 2'



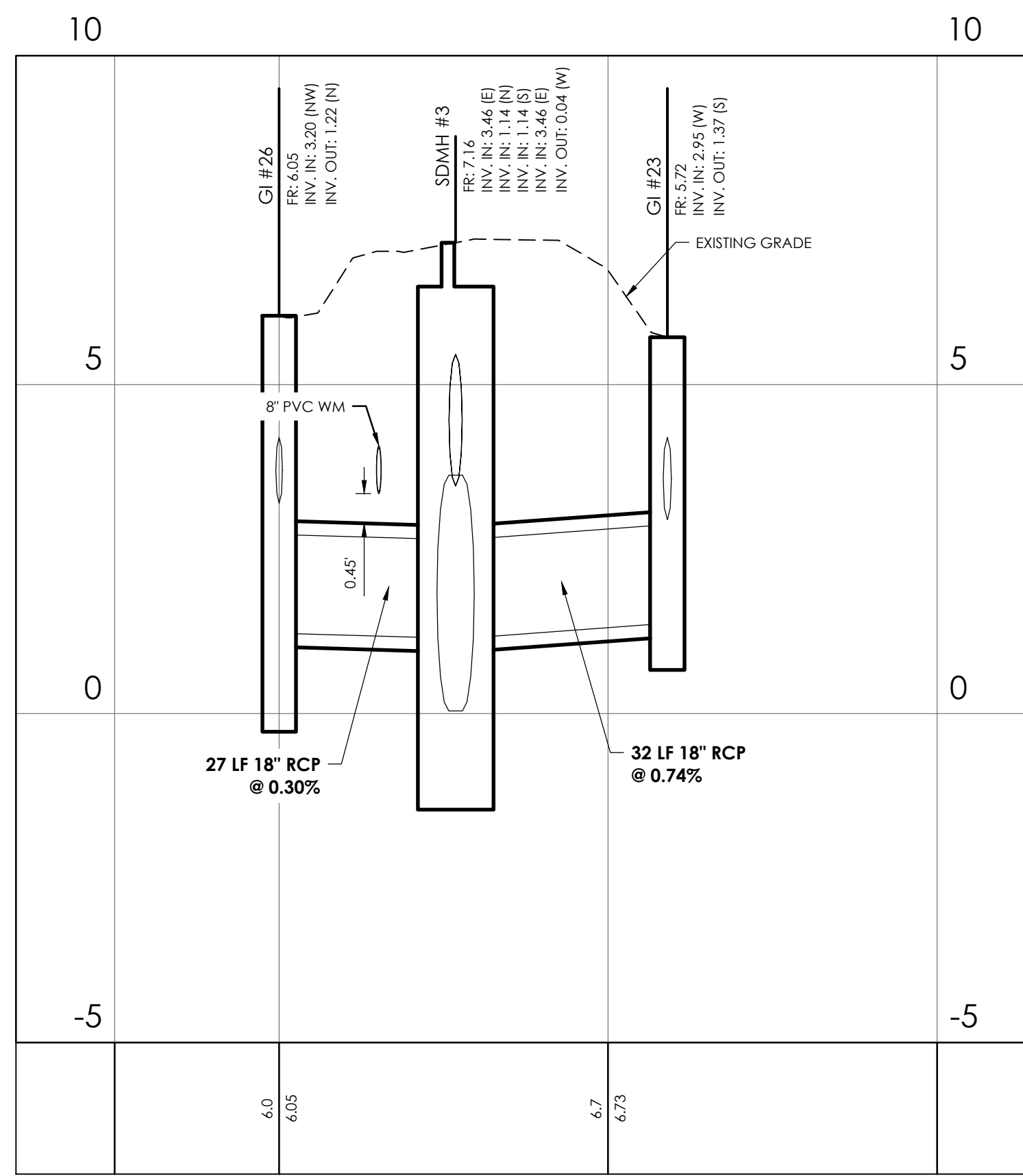
15th Street & Jones Avenue Minor Run (East)

STATIONS: -0+25 - 1+00  
SCALE: HORZ.: 1" = 20'  
VERT.: 1" = 2'



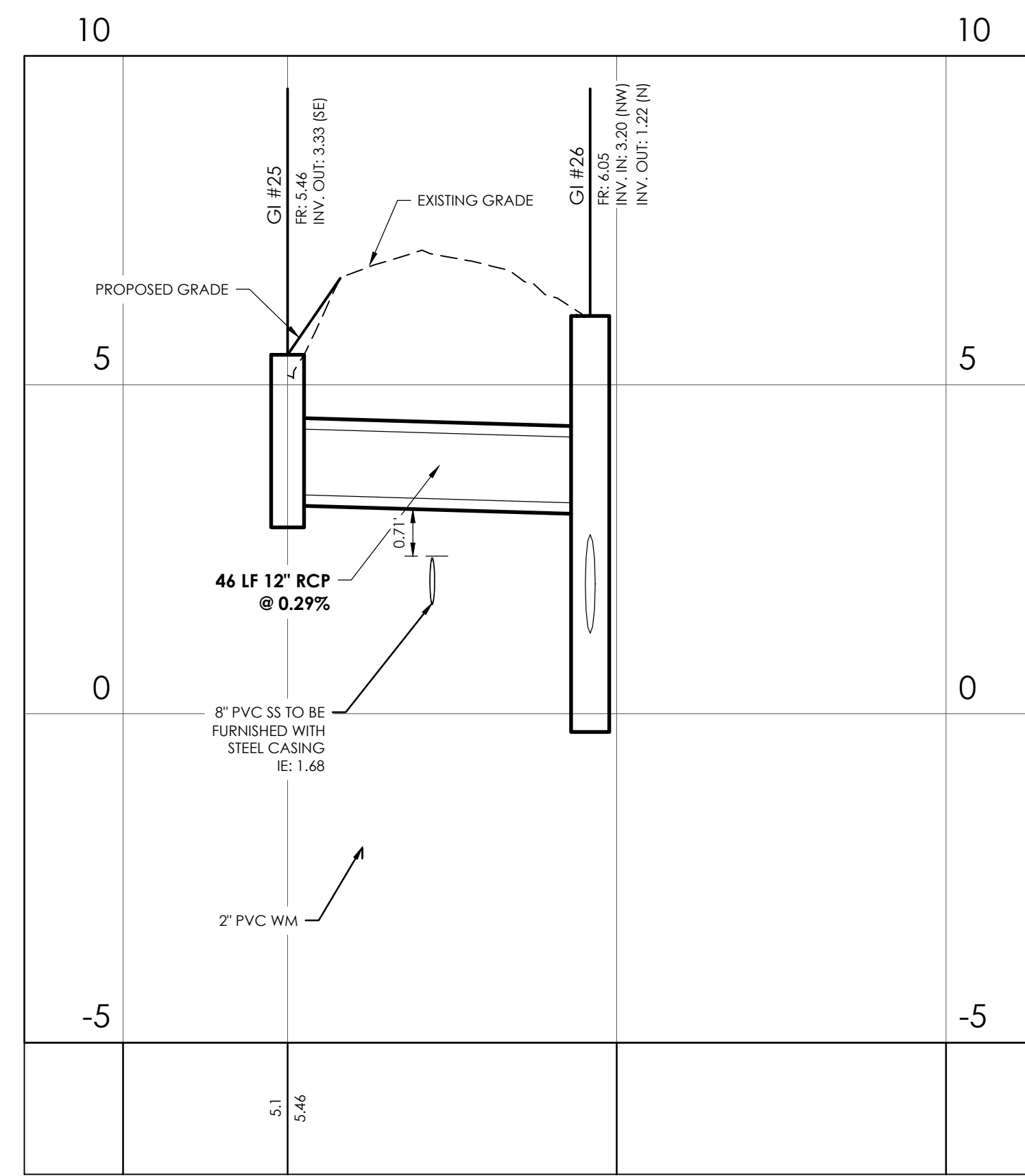
2nd Avenue Minor Run (North)

STATIONS: -0+25 - 1+00  
SCALE: HORZ.: 1" = 20'  
VERT.: 1" = 2'



15th Street & 2nd Avenue Minor Run

STATIONS: -0+25 - 1+00  
SCALE: HORZ.: 1" = 20'  
VERT.: 1" = 2'



2nd Avenue Minor Run (South)

STATIONS: -0+25 - 1+00  
SCALE: HORZ.: 1" = 20'  
VERT.: 1" = 2'

NOTES:

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PAVING, GRADING & DRAINAGE PROFILES

15TH STREET STORMWATER IMPROVEMENTS

PROJECT LOCATION:  
15TH STREET, TYBEE ISLAND  
GEORGIA 31328

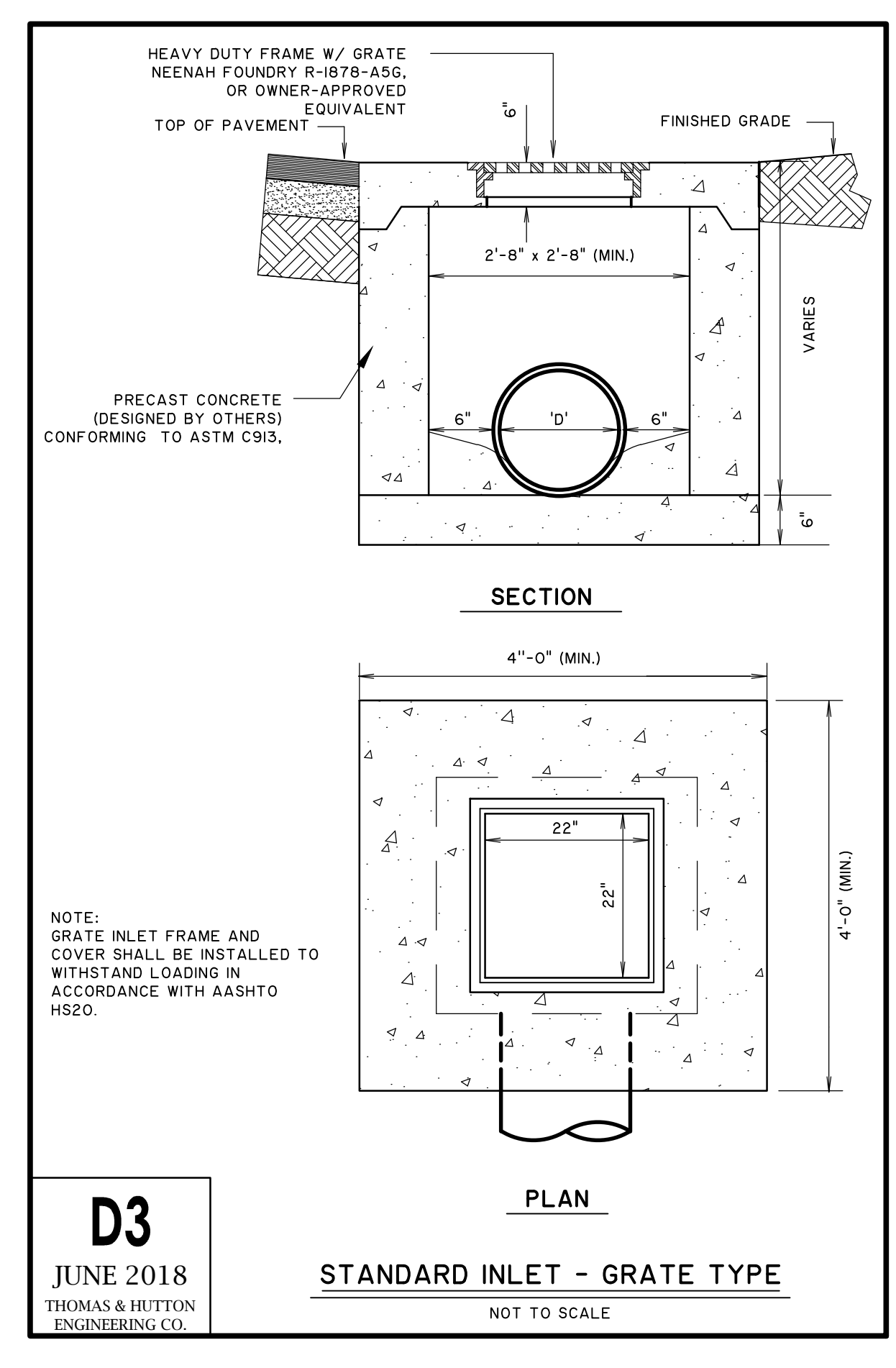
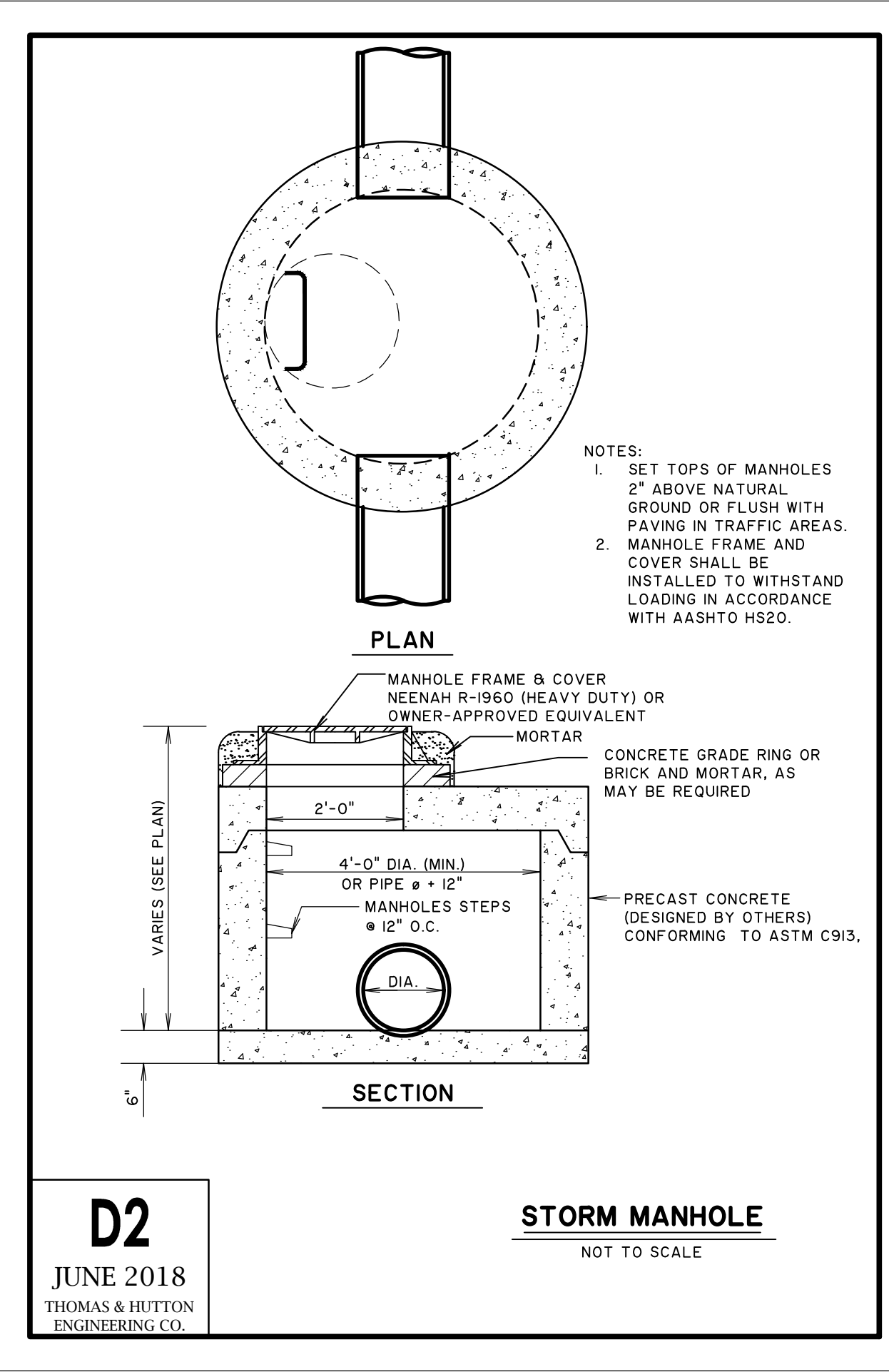
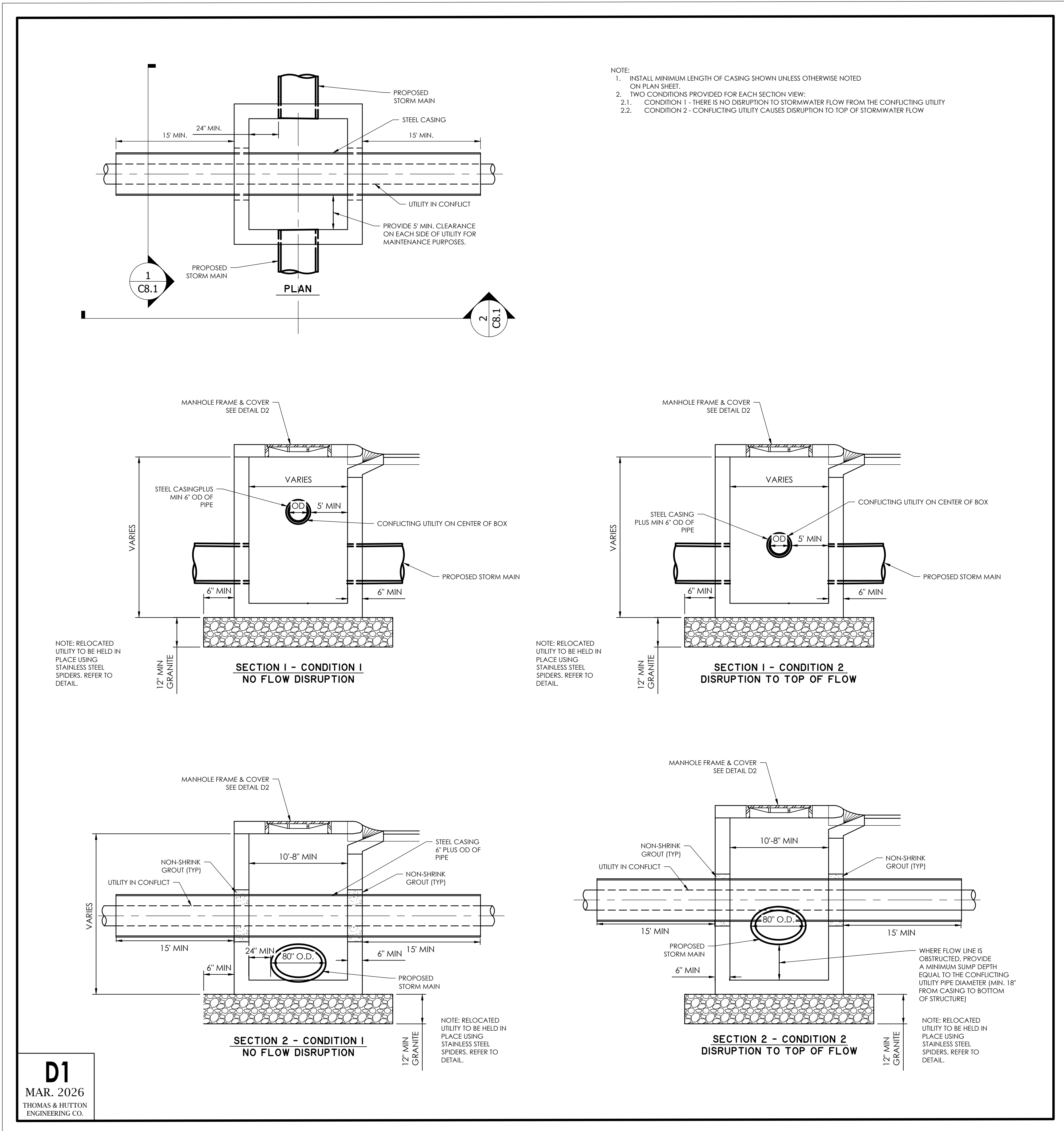
CLIENT/OWNER:  
CITY OF TYBEE ISLAND  
403 BUTLER AVENUE  
TYBEE ISLAND, GA 31328  
PETER GULBRONSON  
peter.gulbronson@cityoftybee.gov

DATUM: HORZ.: NAD 83      VERT.: NAVD 88

JOB NO:	27209.0043
DATE:	03/16/2024
DRAWN:	SAM
DESIGNED:	
REVIEWED:	
APPROVED:	KMS
SCALE:	1" = 20'

C3.7

1: 27209.0043 (CONSTRUCTION) (PLAN) (SCALE) (DATE) (REV.) (APP. BY) (DATE)



NO.	REVISIONS	BY	DATE

THOMAS & HUTTON  
220 North Main Street • Suite 402  
Greenville, SC 29601 • 864.412.2222  
www.thomasandhutton.com

**PAVING, GRADING & DRAINAGE DETAILS**

**15TH STREET STORMWATER IMPROVEMENTS**

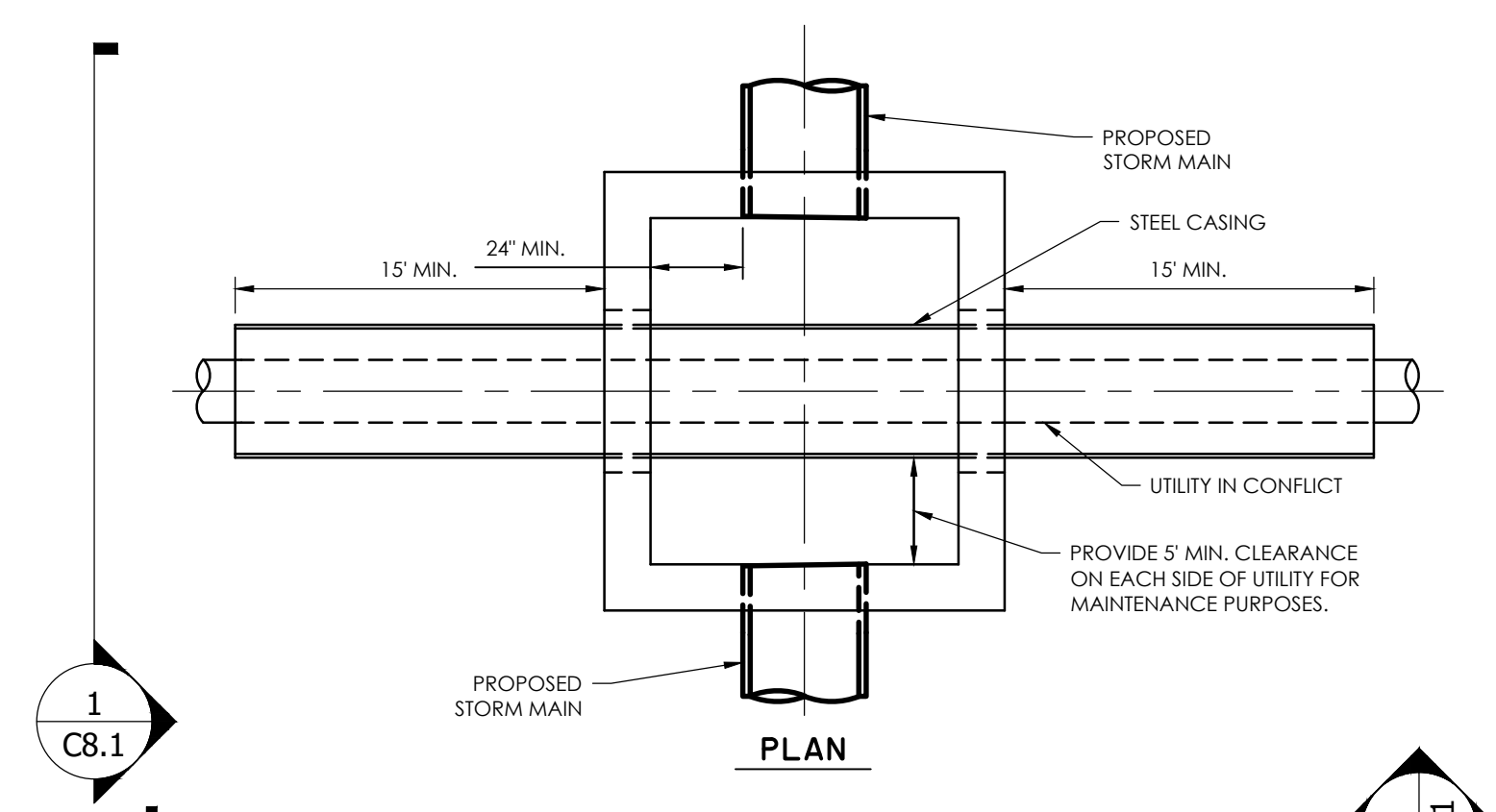
**PROJECT LOCATION:**  
15TH STREET, TYBEE ISLAND  
GEORGIA 31328

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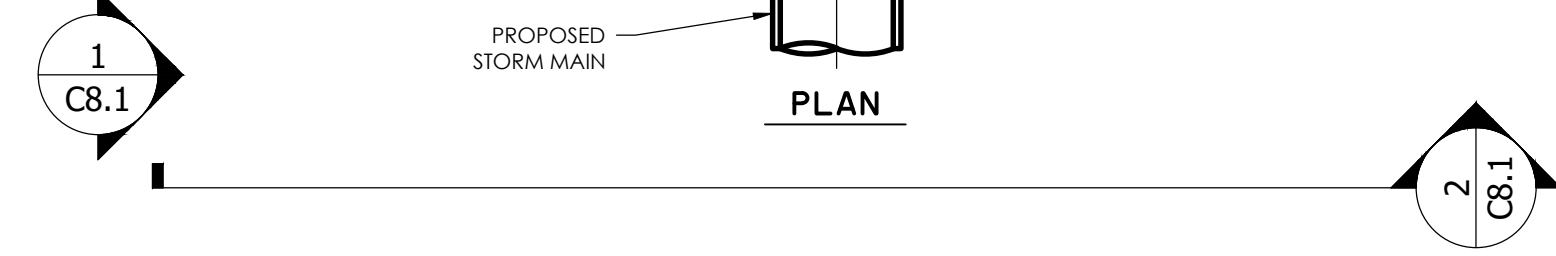
DATUM: HORIZ.: NAD 83      VERT.: NAVD 88

JOB NO:	27209.0043
DATE:	03/16/2026
DRAWN:	SAM
DESIGNED:	
REVIEWED:	
APPROVED:	KMS
SCALE:	1" = 1'

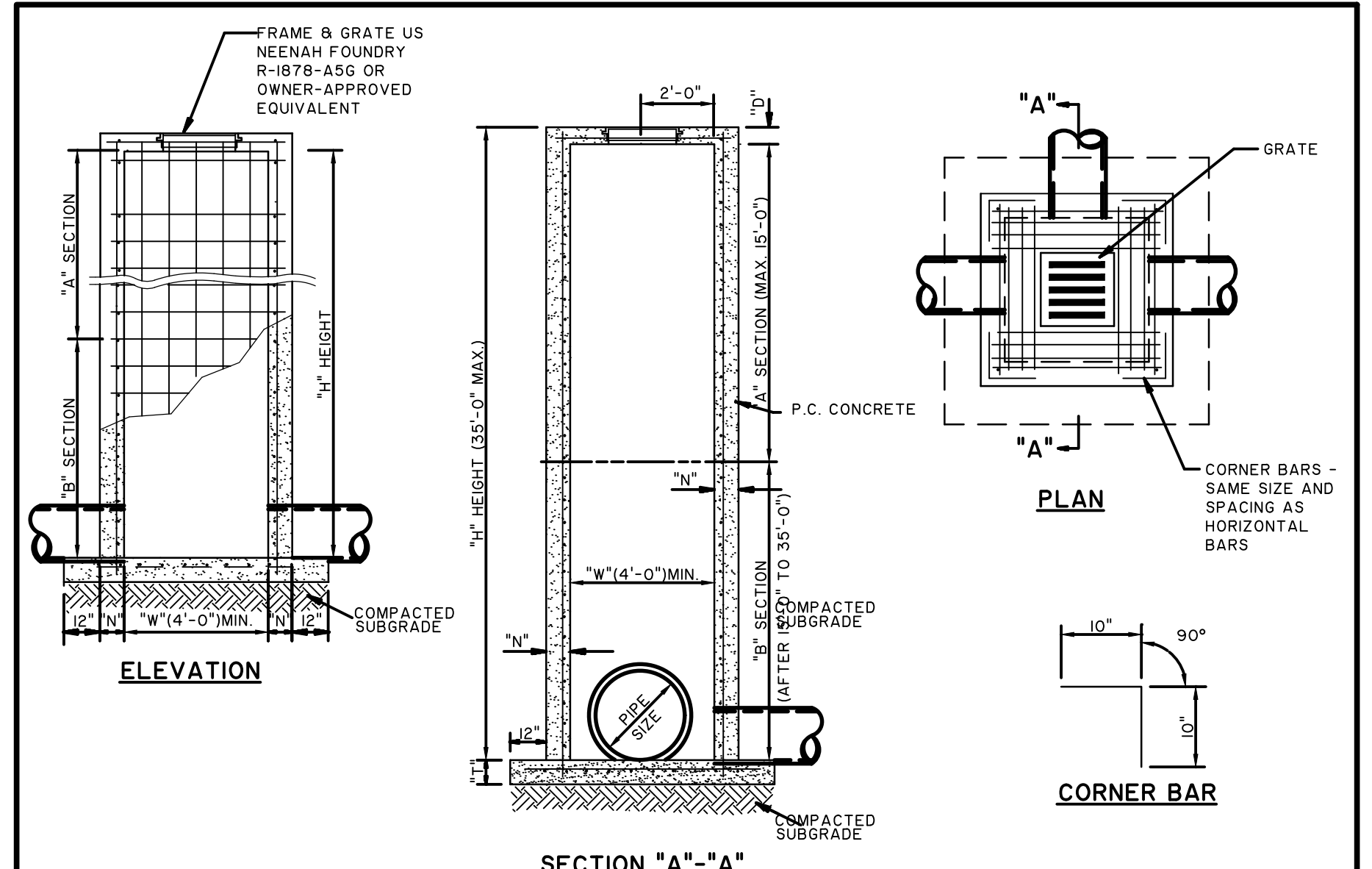
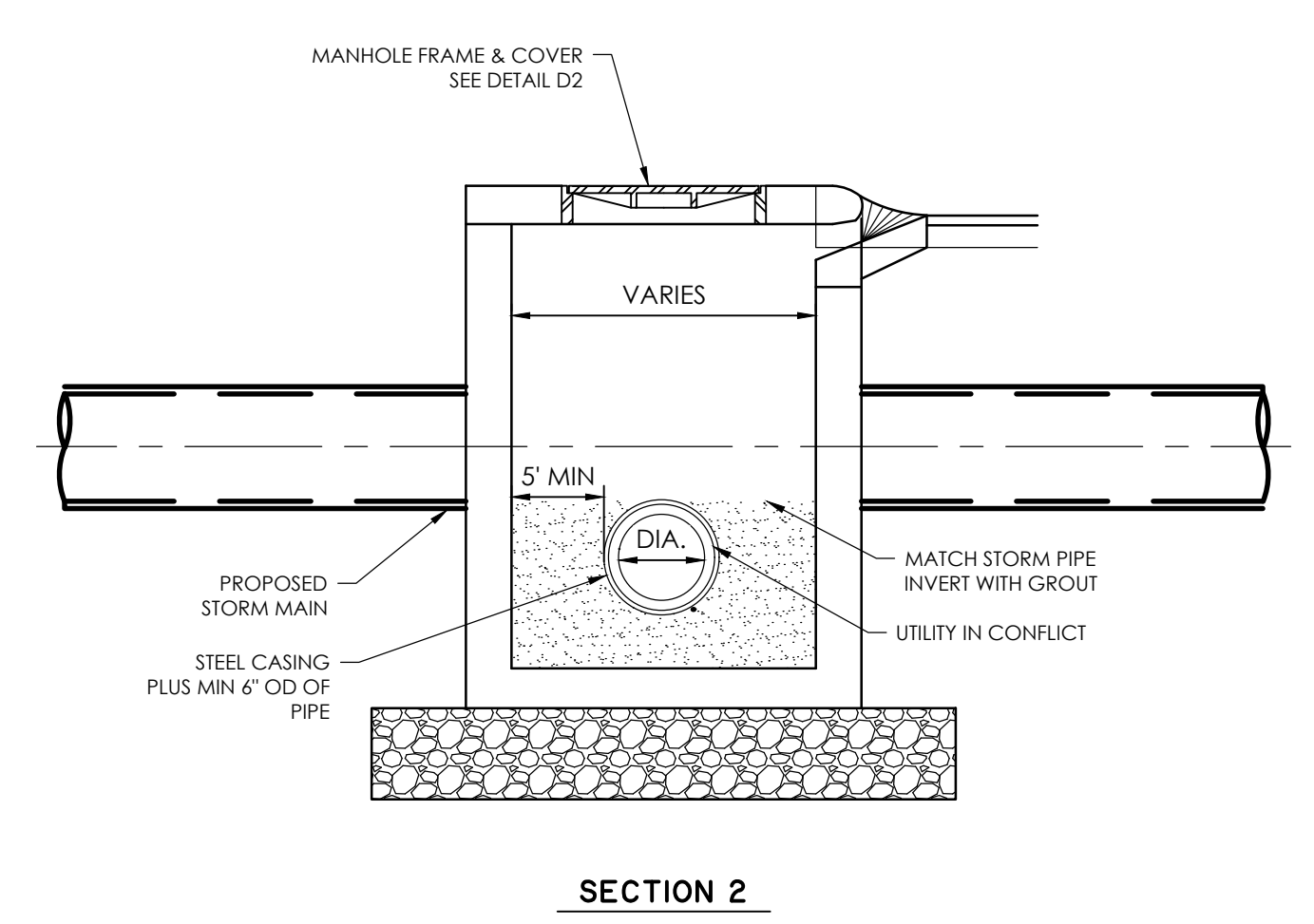
**C3.8**



NOTE:  
INSTALL MINIMUM LENGTH OF CASING  
SHOWN UNLESS OTHERWISE NOTED  
ON PLAN SHEET.



**D4**  
MAR. 2026  
THOMAS & HUTTON  
ENGINEERING CO.



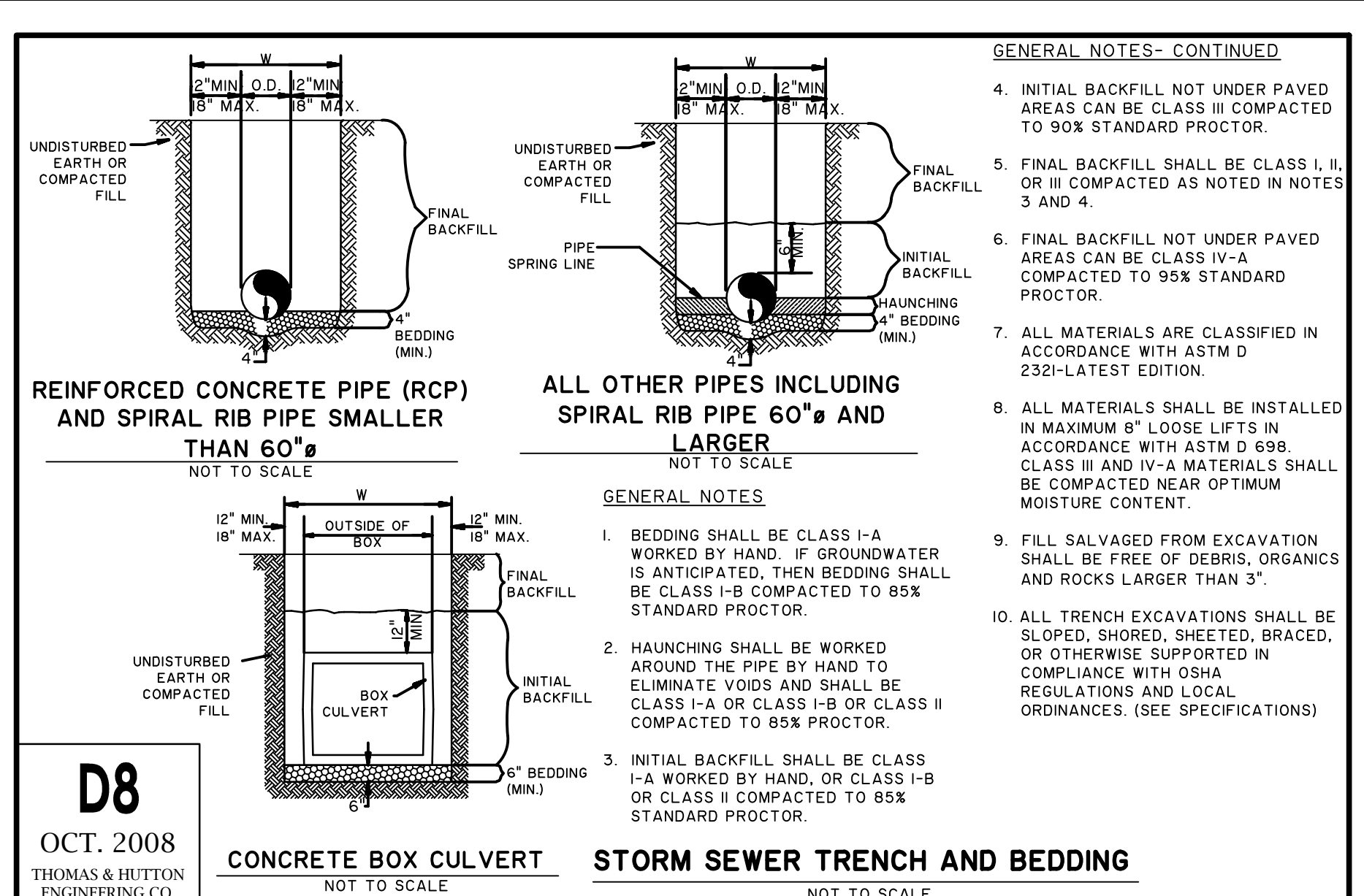
- GENERAL NOTES:
- ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFER.
  - ALL #4 & #5 REINFORCING BARS TO HAVE 1-1/2" COVER, LARGER SIZES TO HAVE 2" COVER.
  - SEE GRADING AND DRAINAGE PLAN FOR PIPE SIZES, LOCATIONS, AND FLOW LINES.
  - PIPES SHALL CONNECT TO THE ENDS OR SIDES OF THE INLET. CONNECTION SHALL NOT BE MADE AT CORNERS OF INLET.
  - ALL REINFORCING BARS TO BE GRADE 60.

REINFORCEMENT SCHEDULE, BASE		TABLE OF 'W' DIMENSIONS	
SECTION	PIPE SIZE	SINGLE	SKEW OF CROSS DRAIN
"A"	#4's @ 6" E.W.	30"	30°
"B"	#6's @ 6" E.W.	24"	45°
		30"	4'-0"
		42"	4'-0"
		48"	4'-0"
		60"	4'-0"
		30"	5'-0"
		42"	5'-0"
		48"	5'-0"
		60"	5'-0"
REINFORCEMENT SCHEDULE, WALLS		TABLE OF 'T' & 'N' DIMENSIONS	
SECTION	WIDTH ("W")	"T"	"N"
"A"	4'	6" + PIPE THICKNESS	8"
	BETWEEN 4' & 7'	6" + PIPE THICKNESS	8"
	GREATER THAN 7'	6" + PIPE THICKNESS	8"
"B"	4'	6" + PIPE THICKNESS	8"
	BETWEEN 4' & 7'	6" + PIPE THICKNESS	8"

**D5**  
JUNE 2018  
THOMAS & HUTTON  
ENGINEERING CO.

**GRATE INLET**  
NOT TO SCALE

REINFORCEMENT SCHEDULE, TOP		SPECIAL PATTERN	
DIMENSIONS	STEEL	SPECIAL PATTERN	
W1 = 7' OR LESS	#4's @ 8" E.W.	DIAGONAL @ COVER	
W2 = 7' OR LESS	#4's @ 6" E.W.	DIAGONAL @ COVER	
W1 = 7' OR LESS	#4's @ 8" E.W.	DIAGONAL @ COVER	
W2 = 7' OR GREATER	#4's @ 6" E.W.	DIAGONAL @ COVER	
W1 = 7' OR GREATER	#4's @ 6" E.W.	DIAGONAL @ COVER	
W2 = 7' OR GREATER	#4's @ 6" E.W.	DIAGONAL @ COVER	



**D8**  
OCT. 2008  
THOMAS & HUTTON  
ENGINEERING CO.

**CONCRETE BOX CULVERT**  
NOT TO SCALE

**STORM SEWER TRENCH AND BEDDING**  
NOT TO SCALE

NO.	REVISIONS	BY	DATE

NO.	REVISIONS	BY	DATE

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Greenville, SC 29601 • 864.412.2222  
www.thomasandhutton.com

PAVING, GRADING &  
DRAINAGE DETAILS

15TH STREET STORMWATER  
IMPROVEMENTS

PROJECT LOCATION:  
15TH STREET, TYBEE ISLAND  
GEORGIA 31328

CLIENT/OWNER:  
CITY OF TYBEE ISLAND  
403 BUTLER AVENUE  
TYBEE ISLAND, GA 31328  
PETER GULBRONSON  
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DATUM: HORIZ: NAD 83      VERT: NAVD 88

JOB NO:	27209.0043
DATE:	03/16/2026
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DESIGNED:	
REVIEWED:	
APPROVED:	KMS
SCALE:	1" = 1'

**C3.9**

1: 27209-0043 (REVISED) CONSTRUCTION DETAILS FOR STORM DRAINAGE SYSTEMS, MAR. 2026, 30x78

**D6**  
SEPT 2022  
THOMAS & HUTTON

**DUAL WALLED CORRUGATED HIGH DENSITY POLYETHYLENE (HDPE) STORM TRENCH INSTALLATION DETAIL**  
NOT TO SCALE

36" OR PIPE DIAMETER WHICHEVER IS GREATER MIN. COVER TO NON-TRAFFICED AREA (SEE NOTE 7)

FINAL BACKFILL

INITIAL BACKFILL

HAUNCH

BEDDING

SUITABLE FOUNDATION (SEE TABLE)

PIPE DIAM.	MIN. TRENCH WIDTH
12"	30"
15"	34"
18"	38"
24"	48"
30"	56"
36"	64"
42"	72"
48"	80"
60"	96"

NOTES:

- ALL PIPE SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ASTM D2321, "STANDARD PRACTICE FOR UNDERGROUND INSTALLATION OF THERMOPLASTIC PIPE FOR SEWERS AND OTHER GRAVITY FLOW APPLICATIONS", LATEST EDITION. SOIL CLASSIFICATIONS ARE PER THE LATEST VERSION OF ASTM D2321. CLASS IV AND CLASS V MATERIALS ARE NOT APPROPRIATE MATERIALS FOR FOUNDATION, BEDDING, HAUNCH OR INITIAL BACKFILL.
- MEASURES SHOULD BE TAKEN TO PREVENT MIGRATION OF NATIVE FINES INTO BACKFILL MATERIAL WHEN REQUIRED.
- FOUNDATION: WHERE THE TRENCH BOTTOM IS UNSTABLE, THE CONTRACTOR SHALL EXCAVATE TO A DEPTH REQUIRED BY THE GEOTECHNICAL ENGINEER AND REPLACE WITH SUITABLE MATERIAL AS SPECIFIED BY THE GEOTECHNICAL ENGINEER.
- BEDDING: SUITABLE MATERIAL SHALL BE CLASS II, III, OR IV. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MINIMUM COMPACTION DENSITY SHALL BE 85% AND 90% MODIFIED PROCTOR (ASTM D1557) FOR CLASS II AND CLASS III SOILS, RESPECTIVELY UNLESS OTHERWISE SPECIFIED BY THE GEOTECHNICAL ENGINEER. MINIMUM BEDDING THICKNESS SHALL BE 6". THE MIDDLE 1/3 BENEATH THE PIPE INVERT SHALL BE LOOSELY PLACED.
- INITIAL BACKFILL: SUITABLE MATERIAL SHALL BE CLASS II, III OR IV IN THE PIPE ZONE EXTENDING TO THE CROWN OF THE PIPE. THE CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR MATERIAL SPECIFICATION TO ENGINEER. MATERIAL SHALL BE INSTALLED AS REQUIRED IN ASTM D2321, LATEST EDITION. MINIMUM COMPACTION DENSITY SHALL BE 95% MODIFIED PROCTOR (ASTM D1557) UNLESS OTHERWISE SPECIFIED BY THE GEOTECHNICAL ENGINEER.
- FINAL BACKFILL: FINAL BACKFILL MAY BE NATIVE MATERIALS COMPACTED TO A MINIMUM DENSITY OF 90% AS DETERMINED BY ASTM D1557 IN NON-TRAFFIC AREAS.
- MINIMUM COVER: MINIMUM COVER IS 36" OR THE DIAMETER OF THE PIPE WHICHEVER IS GREATER MEASURED FROM THE TOP OF PIPE TO GROUND SURFACE IN UNPAVED, NON-TRAFFIC AREAS. MINIMUM COVER MAY BE REDUCED IF A SITE SPECIFIC ANALYSIS IS CERTIFIED BY A REGISTERED PROFESSIONAL GEOTECHNICAL ENGINEER OR THE MANUFACTURER.
- MAXIMUM COVER: CONTRACTOR TO VERIFY MAXIMUM FILL HEIGHT HAS NOT BEEN EXCEEDED PER SPECIFIC SITE CONDITIONS, INCLUDING CONSIDERATIONS FOR HYDROSTATIC PRESSURE.
- PROTECTION DURING CONSTRUCTION: CONTRACTOR SHALL TAKE APPROPRIATE MEASURES TO PROTECT PIPE FROM VEHICULAR AND EQUIPMENT TRAFFIC DURING CONSTRUCTION.

**D7**  
JUNE 2018  
THOMAS & HUTTON ENGINEERING CO.

**JUNCTION BOX**  
NOT TO SCALE  
PROPOSED STORM MAIN

NEENAH R-1960 (HEAVY DUTY) OR OWNER-APPROVED EQUIVALENT

CORNER BARS - SAME SIZE AND SPACING AS HORIZONTAL BARS

GENERAL NOTES:

- ALL EXPOSED CORNERS TO HAVE 3/4" CHAMFER.
- ALL #4 & #5 REINFORCING BARS TO HAVE 1-1/2" COVER, LARGER SIZES TO HAVE 2" COVER.
- SEE GRADING AND DRAINAGE PLAN FOR PIPE SIZES, LOCATIONS, AND FLOW LINES.
- PIPES SHALL CONNECT TO THE ENDS OR SIDES OF THE INLET. CONNECTION SHALL NOT BE MADE AT CORNERS OF INLET.
- ALL REINFORCING BARS TO BE GRADE 60.

SECTION	PIPE SIZE	SKEW OF CROSS DRAIN
"A"	#4's @ 6" E.W.	SINGLE STRAIGHT
"B"	#6's @ 6" E.W.	30°

PIPE SIZE	45°	30°	45°	45°
24"	4'-0"	4'-0"	4'-10"	4'-10"
30"	4'-0"	4'-7"	5'-8"	5'-8"
36"	4'-0"	5'-3"	6'-5"	6'-5"
42"	5'-3"	5'-11"	7'-3"	7'-3"
48"	5'-10"	6'-7"	8'-0"	8'-0"
60"	7'-0"	7'-10"	9'-8"	9'-8"

SECTION	WIDTH ("W")	HORIZONTAL	VERTICAL
"A"	4'	#4's @ 9"	#4's @ 10"
"A"	BETWEEN 4' & 7'	#6's @ 9"	#4's @ 10"
"A"	GREATER THAN 7'	#5's @ 4 1/2"	#4's @ 10"
"B"	4'	#4's @ 6"	#4's @ 10"
"B"	BETWEEN 4' & 7'	#6's @ 6"	#4's @ 10"

SECTION	WIDTH ("W")	"T"	"N"	"D"
"A"	BETWEEN 4' & 7'	6" + PIPE THICKNESS	8"	6"
"A"	GREATER THAN 7'	6" + PIPE THICKNESS	8"	8"
"B"	BETWEEN 4' & 7'	6" + PIPE THICKNESS	8"	8"

DIMENSIONS	STEEL	SPECIAL PATTERN
W1 = 7' OR LESS	#4's @ 8" E.W.	DIAGONAL COVER
W2 = 7' OR LESS	#4's @ 8" E.W.	DIAGONAL COVER
W1 = 7' OR LESS	#4's @ 8" E.W.	DIAGONAL COVER
W2 = 7' OR GREATER	#4's @ 6" E.W.	DIAGONAL COVER
W1 = 7' OR GREATER	#4's @ 6" E.W.	DIAGONAL COVER
W2 = 7' OR GREATER	#4's @ 6" E.W.	DIAGONAL COVER

**D9**  
MAR. 2026  
THOMAS & HUTTON ENGINEERING CO.

**HDPE TO HDPE CONNECTION**  
NOT TO SCALE

REMOVE BELL OR SPIGOT END OF EXISTING PIPE (IF APPLICABLE)

EXCAVATE EXISTING GRADE TO AVOID SOIL INTRUSION & TO CREATE SAFE WORK AREA SEE DETAIL D6 THIS SHEET

EXISTING GRADE

EXISTING HDPE PIPE

EXISTING HDPE PIPE

MISSION RUBBER, FERRO, OR OWNER-APPROVED EQUIVALENT TO CREATE A WATERTIGHT CONNECTION

HDPE PIPE TO BE CONNECTED

PIPE BEDDING MATERIAL SEE DETAIL D6 THIS SHEET

NOTES:

- CONNECTION AND PIPE TO BE BACKFILLED PER ASTM D2321, LATEST EDITION.
- FOR CONNECTIONS WHERE THE OUTSIDE DIAMETERS OF THE TWO CONNECTING PIPES ARE DIFFERENT AND A WATERTIGHT CONNECTION IS REQUIRED, THE COUPLER MANUFACTURER MAY RECOMMEND THE USE OF A PIPE BUSHING. THE PIPE BUSHING SIZE WILL BE AT THE DISCRETION OF THE COUPLER MANUFACTURER AND IS BASED ON THE PIPE DIMENSIONS.

FOR W = 2'-0" TO 4'-0" CONCRETE = 2.41 + 0.0926 (L)
FOR W = 4'-0" TO 6'-0" CONCRETE = 2.39 + 0.096 (L)
FOR EITHER W LBS. STEEL = 4 + 0.361 (L)
SAND CEMENT BAG RP RAP H BAGS X 0.667 SQ. YDS./BAG = 2.333 SQ. YDS.

FOR W = 2'-0" TO 4'-0" CONCRETE = 1.8 + 0.2096 (L)
FOR W = 4'-0" TO 6'-0" CONCRETE = 1.8 + 0.2096 (L)
FOR EITHER W LBS. STEEL = 5.5 + 0.667 (PI) + 0.336 (L)
SAND CEMENT BAG RP RAP H BAGS X 0.667 SQ. YDS./BAG = 2.333 SQ. YDS.

W	P	FLUME QTY.	P	FLUME QTY.
6"	10"	1.94	10"	2.68
8"	12"	2.08	12"	3.45
10"	14"	2.28	14"	3.05
12"	16"	2.58	16"	3.84
14"	18"	2.84	18"	4.32
16"	20"	3.08	20"	5.48
18"	22"	3.28	22"	6.00

GENERAL NOTES:

- SPECIFICATIONS GEORGIA STANDARD, CURRENT EDITION, AND SUPPLEMENTS THEREOF.
- SIZE AND DIMENSIONS OF TYPE A OR TYPE B FLUMES MAY BE ADJUSTED FOR AN INDIVIDUAL SITE WHERE SHOWN ON THE PLANS OR DIRECTED BY THE ENGINEER.
- AT LOCATIONS WHERE FLUME OUTLETS INTO AN INLET STRUCTURE, DRY BAFFLE AND CONTAIN END AND CONNECT FLUME TO THE INLET STRUCTURE.
- SAND CEMENT BAG RP RAP SHALL BE OMITTED IN PAVED DITCHES OR WHERE OTHER APPROVED EROSION CONTROL MATERIALS ARE USED.
- POURED IN PLACE CONCRETE SHALL BE CLASS B MINIMUM CLASS A CONCRETE SHALL BE USED FOR BAFFLES & PRECAST.
- BASE OF FINISH:
  - CLASS B CONCRETE --- C.U. YDS.
  - BAR REINFORCEMENT STEEL --- L.B.
  - SAND CEMENT BAG RP RAP, 6" N. OR 8" N. --- SQ. YDS.

DEPARTMENT OF TRANSPORTATION  
STATE OF GEORGIA  
CONSTRUCTION DETAIL  
CONCRETE FLUMES  
TYPES "A" & "B"

DATE: OCTOBER 1983 NUMBER: D-09  
NOT TO SCALE

NO.	REVISIONS	BY	DATE

**THOMAS & HUTTON**

220 North Main Street • Suite 402  
Greenville, SC 29601 • 864.412.2222  
www.thomasandhutton.com

**PAVING, GRADING & DRAINAGE DETAILS**

**15TH STREET STORMWATER IMPROVEMENTS**

**PROJECT LOCATION:**  
15TH STREET, TYBEE ISLAND  
GEORGIA 31328

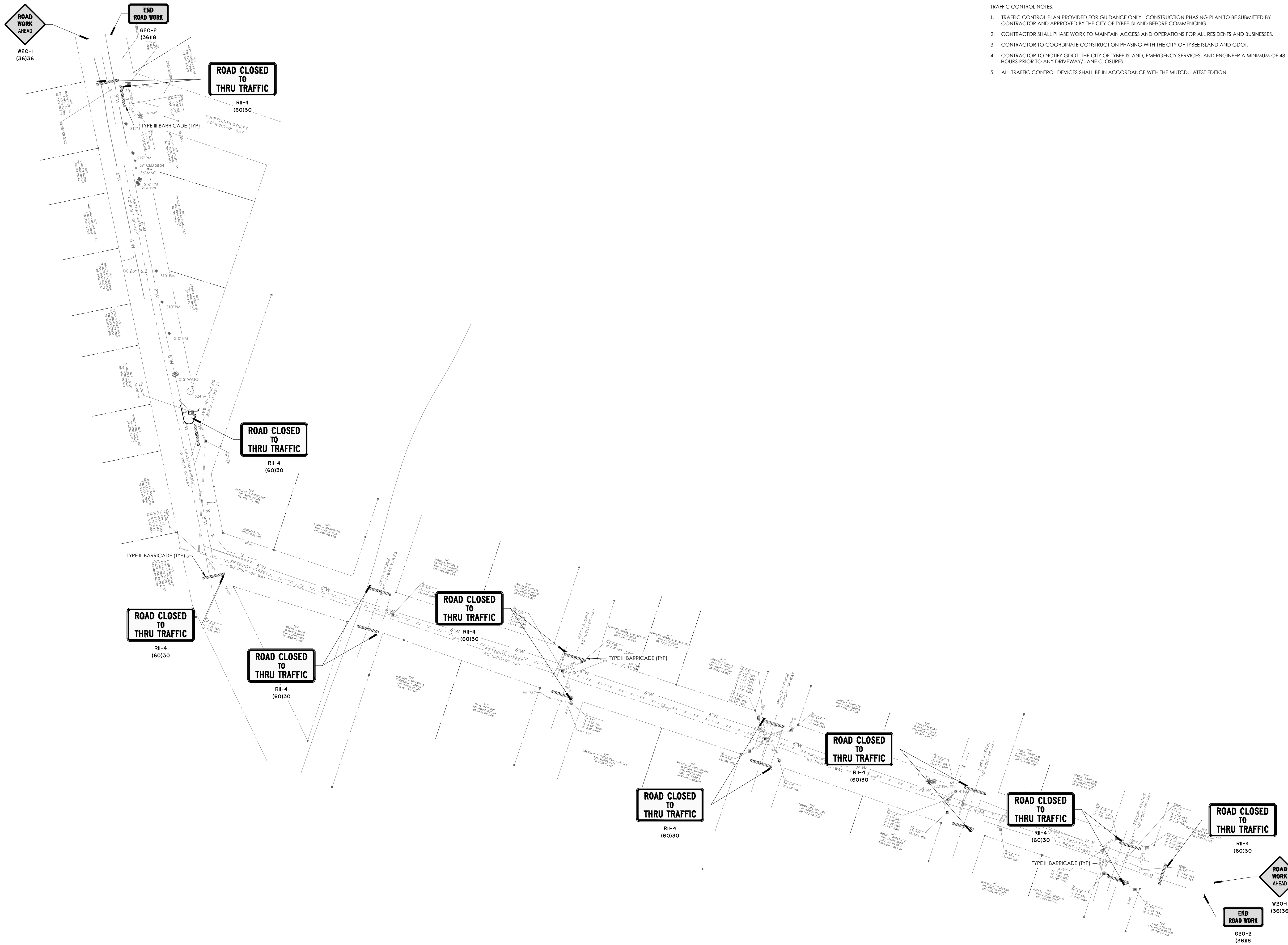
**CLIENT/OWNER:**  
CITY OF TYBEE ISLAND  
403 BUTLER AVENUE  
TYBEE ISLAND, GA 31328  
PETER GULBRONSON  
peter.gulbronson@cityoftybee.gov

DATUM: HORIZ: NAD 83 VERT: NAVD 88

JOB NO: 27209-0043  
DATE: 03/16/2026  
DRAWN: SAM  
DESIGNED:  
REVIEWED:  
APPROVED: KMS  
SCALE: 1" = 1'

**C3.10**

13/2709.0000 (MATHING) CONSTRUCTION PLANS (2026) DATE: MAR 16, 2026, 3:02 PM



- TRAFFIC CONTROL NOTES:
1. TRAFFIC CONTROL PLAN PROVIDED FOR GUIDANCE ONLY. CONSTRUCTION PHASING PLAN TO BE SUBMITTED BY CONTRACTOR AND APPROVED BY THE CITY OF TYBEE ISLAND BEFORE COMMENCING.
  2. CONTRACTOR SHALL PHASE WORK TO MAINTAIN ACCESS AND OPERATIONS FOR ALL RESIDENTS AND BUSINESSES.
  3. CONTRACTOR TO COORDINATE CONSTRUCTION PHASING WITH THE CITY OF TYBEE ISLAND AND GDOT.
  4. CONTRACTOR TO NOTIFY GDOT, THE CITY OF TYBEE ISLAND, EMERGENCY SERVICES, AND ENGINEER A MINIMUM OF 48 HOURS PRIOR TO ANY DRIVEWAY/LANE CLOSURES.
  5. ALL TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE MUTCD, LATEST EDITION.

NO.	REVISIONS	BY	DATE



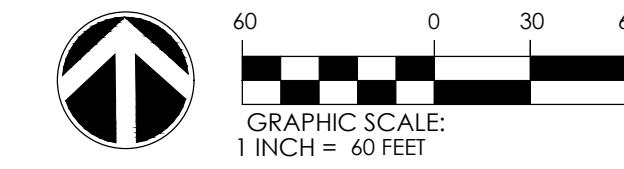
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### TRAFFIC CONTROL PLAN

#### 15TH STREET STORMWATER IMPROVEMENTS

**PROJECT LOCATION:**  
15TH STREET, TYBEE ISLAND  
GEORGIA 31328

**CLIENT/OWNER:**  
CITY OF TYBEE ISLAND  
403 BUTLER AVENUE  
TYBEE ISLAND, GA 31328  
PETER GULBRONSON  
peter.gulbranson@cityoftybee.gov



DATUM: HORIZ: NAD 83      VERT: NAVD 88

JOB NO: 27209.0043  
DATE: 03/16/2026  
DRAWN: SAM  
DESIGNED:  
REVIEWED:  
APPROVED: KMS  
SCALE: 1" = 60'

**C4.1**

# EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST - INFRASTRUCTURE CONSTRUCTION PROJECTS

**SWCD: COASTAL**  
 PROJECT NAME: 15TH STREET STORMWATER IMPROVEMENTS  
 DATE ON PLANS: MARCH 16, 2026  
 CITY/COUNTY: TYBEE ISLAND, GA 31328  
 LOCAL ISSUING AUTHORITY: CITY OF TYBEE ISLAND

ADDRESS: 15TH STREET, TYBEE ISLAND, GEORGIA 31328  
 DATE ON PLANS: MARCH 16, 2026  
 NAME & EMAIL OF PERSON FILLING OUT CHECKLIST: SAKILE MORGAN, morgan.s@tandh.com

EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

MINIMIZATION OF EXPOSURE IS NOT REQUIRED IN CASES WHERE EXPOSURE TO PRECIPITATION AND TO STORMWATER WILL NOT RESULT IN A DISCHARGE OF POLLUTANTS, OR WHERE EXPOSURE OF A SPECIFIC MATERIAL OR PRODUCT POSSES LITTLE RISK TO STORMWATER CONTAMINATION (SUCH AS FINAL PRODUCTS AND MATERIALS INTENDED FOR OUTDOOR USE).

**ATTACHED**  **YES** 1. THE APPLICABLE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN CHECKLIST ESTABLISHED BY THE COMMISSION AS OF JANUARY 1 OF THE YEAR IN WHICH THE LAND-DISTURBING ACTIVITY WAS PERMITTED.

PLEASE FIND THE CURRENT INFRASTRUCTURE EROSION, SEDIMENTATION AND POLLUTION CONTROL CHECKLIST ATTACHED WITH THIS PLAN

**ALL**  **YES** 2. LEVEL II CERTIFICATION NUMBER ISSUED BY THE COMMISSION, SIGNATURE AND SEAL OF THE CERTIFIED DESIGN PROFESSIONAL.

PLEASE FIND ON EACH SHEET OF THIS PLAN THE GSWCC LEVEL 2 CERTIFICATION NUMBER, SIGNATURE AND SEAL FOR MR. KEVIN M. SMITH, PE.

**EC0.1**  **YES** 3. THE NAME AND PHONE NUMBER OF THE 24-HOUR CONTACT RESPONSIBLE FOR EROSION, SEDIMENTATION AND POLLUTION CONTROLS.  
 GENE CHERVENOK  
 THOMAS B. HUTTON  
 50 PARK OF COMMERCE WAY  
 SAVANNAH, GA 31405  
 EMAIL: chervenok.g@tandh.com  
 DAY: 912-721-4102  
 NIGHT : 912-657-2305

**EC0.1**  **YES** 4. PROVIDE THE NAME, ADDRESS, EMAIL ADDRESS, AND PHONE NUMBER OF PRIMARY PERMITTEE.  
 CITY OF TYBEE ISLAND  
 403 BUTLER AVENUE  
 TYBEE ISLAND, GA 31328  
 PETER GULBRONSON  
 EMAIL: PETER.GULBRONSON@CITYOFTYBEE.GOV  
 PHONE: 912-472-5041

**EC0.1**  **YES** 5. NOTE TOTAL AND DISTURBED ACREAGES OF THE PROJECT OR PHASE UNDER CONSTRUCTION.  
 TOTAL PROJECT ACREAGE - 3.10 ACRES.  
 TOTAL DISTURBED ACREAGE FOR THE PROJECT - 3.10 ACRES.

**EC0.1**  **YES** 6. PROVIDE THE GPS LOCATIONS OF THE BEGINNING AND END OF THE INFRASTRUCTURE PROJECT. GIVE THE LATITUDES AND LONGITUDES IN DECIMAL DEGREES.  
 PROJECT START STATION - LAT: N31.9972 LONG: W80.8544  
 PROJECT END STATION - LAT: N31.9942 LONG: W80.8500

**ALL**  **YES** 7. INITIAL DATE OF THE PLAN AND THE DATES OF ANY REVISIONS MADE TO THE PLAN INCLUDING THE ENTITY WHO REQUESTED THE REVISIONS.

PLEASE FIND THE INITIAL DATE OF THE PLAN AND ALL REVISIONS ON THE COVER SHEET AS WELL AS EACH INDIVIDUAL SHEET OF THE PLAN.

**EC0.1**  **YES** 8. DESCRIPTIONS OF THE NATURE OF CONSTRUCTION ACTIVITY AND EXISTING SITE CONDITIONS.  
 THE PROJECT INCLUDES INSTALLING APPROXIMATELY 1,900 LF OF 43 x 68" STORM SEWER PIPE WITH ACCOMPANYING SECONDARY DRAINAGE, GRATE INLETS, JUNCTION BOXES, AND STORM MANHOLES; INSTALLING APPROXIMATELY 937LF OF 8" WATER MAIN WITH LATERALS, GATE VALVES, TEES, AND 82 LF OF SANITARY SEWER MAIN, MANHOLES ALL OTHER ASSOCIATED APPURTENANCES, EXISTING PAVEMENT WILL BE EXCAVATED AND REPLACED TO MATCH EXISTING GRADE. THE SITE CONSISTS OF A TWO-LANE ROAD FACILITY SERVING SINGLE-FAMILY RESIDENTIAL LOTS, APPROXIMATELY 1/8 TO 1/4 ACRE IN SIZE.

**COVER**  **YES** 9. PROVIDE VICINITY MAP SHOWING SITE'S RELATION TO SURROUNDING AREAS. INCLUDE DESIGNATION OF SPECIFIC PHASE, IF NECESSARY.

PLEASE FIND THE VICINITY MAP LOCATED ON THE COVER SHEET OF THE PLANS

**EC0.1**  **YES** 10. IDENTIFY THE PROJECT RECEIVING WATERS AND DESCRIBE ALL SENSITIVE ADJACENT AREAS INCLUDING STREAMS, LAKES, RESIDENTIAL AREAS, WETLANDS, MARSHLANDS, ETC. WHICH MAY BE AFFECTED.

THE MS4 OPERATOR IS THE CITY OF TYBEE ISLAND AND THE RECEIVING WATER FOR THIS PROJECT IS TYBEE CREEK. TYBEE CREEK IS NOT A TROUT STREAM HOWEVER IT DOES SUPPORT WARM WATER FISHERIES.

**EC0.1**  **YES** 11. DESIGN PROFESSIONAL'S CERTIFICATION STATEMENT AND SIGNATURE THAT THE SITE WAS VISITED PRIOR TO DEVELOPMENT OF THE ES&PC PLAN AS STATED ON PART IV PAGE 21 OF THE PERMIT.  
 I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR AUTHORIZED AGENT UNDER MY SUPERVISION.

KEVIN M. SMITH, PE  
 GSWCC LEVEL II DESIGN PROFESSIONAL  
 CERTIFICATION #0000012473  
 EXPIRATION DATE: 07/11/2027

**EC0.1**  **YES** 12. DESIGN PROFESSIONAL'S CERTIFICATION STATEMENT AND SIGNATURE THAT THE PERMITEE'S ES&PC PLAN PROVIDES FOR AN APPROPRIATE AND COMPREHENSIVE SYSTEM OF BMPs AND SAMPLING TO MEET PERMIT REQUIREMENTS AS STATED ON PART IV PAGE 21 OF THE PERMIT. \*  
 I CERTIFY THAT THE PERMITEE'S EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN PROVIDES FOR AN APPROPRIATE AND COMPREHENSIVE SYSTEM OF BEST MANAGEMENT PRACTICES REQUIRED BY THE GEORGIA WATER QUALITY CONTROL ACT AND THE DOCUMENT "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" (MANUAL) PUBLISHED BY THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION AS OF JANUARY 1 OF THE YEAR IN WHICH THE LAND-DISTURBING ACTIVITY WAS PERMITTED, PROVIDES FOR THE SAMPLING OF THE RECEIVING WATER(S) OR THE SAMPLING OF THE STORM WATER OUTFALLS AND THAT THE DESIGNED SYSTEM OF BEST MANAGEMENT PRACTICES AND SAMPLING METHODS IS EXPECTED TO MEET THE REQUIREMENTS CONTAINED IN THE GENERAL NPDES PERMIT NO. GAR 100002.

KEVIN M. SMITH, PE  
 GSWCC LEVEL II DESIGN PROFESSIONAL  
 CERTIFICATION #0000012473  
 EXPIRATION DATE: 07/11/2027

**EC0.1**  **YES** 13. DESIGN PROFESSIONAL CERTIFICATION STATEMENT AND SIGNATURE THAT THE PERMITEE'S ES&PC PLAN PROVIDES FOR REPRESENTATIVE SAMPLING AS STATED ON PART IV.D.6.C.(3), PAGE 37 OF THE PERMIT AS APPLICABLE. \*  
 I CERTIFY THAT THE PERMITEE'S EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN PROVIDES FOR THE MONITORING OF: (A) ALL PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES SHOWN ON THE USGS TOPOGRAPHIC MAP AND ALL OTHER FIELD VERIFIED PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES, OR (B) WHERE ANY SUCH SPECIFIC IDENTIFIED PERENNIAL OR INTERMITTENT STREAM AND OTHER WATER BODY IS NOT PROPOSED TO BE SAMPLED, I HAVE DETERMINED IN MY PROFESSIONAL JUDGEMENT, UTILIZING THE FACTORS REQUIRED IN THE GENERAL NPDES PERMIT NO. GAR 100002, THAT THE INCREASE IN THE TURBIDITY OF EACH SPECIFIC IDENTIFIED SAMPLED RECEIVING WATER WILL BE REPRESENTATIVE OF THE INCREASE IN THE TURBIDITY OF A SPECIFIC IDENTIFIED UN-SAMPLED RECEIVING WATER.

KEVIN M. SMITH, PE  
 GSWCC LEVEL II DESIGN PROFESSIONAL  
 CERTIFICATION #0000012473  
 EXPIRATION DATE: 07/11/2027

**EC0.1**  **YES** 14. CLEARLY NOTE THE STATEMENT THAT "THE DESIGN PROFESSIONAL WHO PREPARED THE ES&PC PLAN IS TO INSPECT AND CERTIFY THE INSTALLATION OF THE INITIAL SEDIMENT STORAGE REQUIREMENTS AND PERIMETER CONTROL BMPs WITHIN 7 DAYS AFTER INSTALLATION." \*

THE DESIGN PROFESSIONAL WHO PREPARED THE ES&PC PLAN IS TO INSPECT AND CERTIFY THE INSTALLATION OF THE INITIAL SEDIMENT STORAGE REQUIREMENTS AND PERIMETER CONTROL BMPs WITHIN 7 DAYS AFTER INSTALLATION.

**DESIGN PROFESSIONAL 7-DAY VISIT CERTIFICATION**  
 DESIGN PROFESSIONAL WHO PREPARED THE ES&PC PLAN IS TO INSPECT AND CERTIFY (A) THE INSTALLATION OF SEDIMENT STORAGE REQUIREMENTS AND PERIMETER CONTROL BMP'S FOR THE "INITIAL SEGMENT" OF THE LINEAR INFRASTRUCTURE PROJECT AND (B) ALL SEDIMENT BASINS WITHIN THE ENTIRE LINEAR INFRASTRUCTURE WITHIN 7 DAYS AFTER INSTALLATION.

DATE OF INSPECTION: \_\_\_\_\_  
 I CERTIFY THE SITE WAS \_\_\_\_\_ WITH THE ES&PC PLAN ON THE DATE OF INSPECTION.

GSWCC LEVEL II DESIGN PROFESSIONAL CERTIFICATION # \_\_\_\_\_  
 INSPECTION REVEALED THE FOLLOWING DISCREPANCIES FROM THE ES&PC PLAN

THESE DEFICIENCIES MUST BE ADDRESSED IMMEDIATELY AND A RE-INSPECTION SCHEDULED. WORK SHALL NOT PROCEED ON THE SITE UNTIL DESIGN PROFESSIONAL CERTIFICATION IS OBTAINED.

**EC0.1**  **YES** 15. CLEARLY NOTE THE STATEMENT THAT "NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50-FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITHIN 25-FEET OF THE COASTAL MARSHLAND BUFFER AS MEASURED FROM THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS." \*

NON-EXEMPT ACTIVITIES SHALL NOT BE CONDUCTED WITHIN THE 25 OR 50-FOOT UNDISTURBED STREAM BUFFERS AS MEASURED FROM THE POINT OF WRESTED VEGETATION OR WITHIN 25-FEET OF THE COASTAL MARSHLAND BUFFER AS MEASURED FROM THE JURISDICTIONAL DETERMINATION LINE WITHOUT FIRST ACQUIRING THE NECESSARY VARIANCES AND PERMITS.

**EC0.1**  **YES** 16. PROVIDE A DESCRIPTION OF ANY BUFFER ENCROACHMENTS AND INDICATE WHETHER A BUFFER VARIANCE IS REQUIRED.

NO BUFFERS ARE PRESENT ON SITE FROM STATEWATER/WETLANDS.

**EC0.1**  **YES** 17. CLEARLY NOTE THE STATEMENT THAT "AMENDMENTS/REVISIONS TO THE ES&PC PLAN WHICH HAVE A SIGNIFICANT EFFECT ON BMPs WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL." \*

AMENDMENTS/REVISIONS TO THE ES&PC PLAN WHICH HAVE A SIGNIFICANT EFFECT ON BMPs WITH A HYDRAULIC COMPONENT MUST BE CERTIFIED BY THE DESIGN PROFESSIONAL.

**EC0.1**  **YES** 18. CLEARLY NOTE THE STATEMENT THAT "WASTE MATERIALS SHALL NOT BE DISCHARGED TO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT." \*

WASTE MATERIALS SHALL NOT BE DISCHARGED TO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.

**EC0.1**  **YES** 19. CLEARLY NOTE STATEMENT THAT "THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO LAND DISTURBING ACTIVITIES." \*

THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO LAND DISTURBING ACTIVITIES.

**EC0.1**  **YES** 20. CLEARLY NOTE STATEMENT THAT "EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE FOR EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE." \*

**EC0.1**  **YES** 21. CLEARLY NOTE THE STATEMENT "ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING."

ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.

**EC0.1**  **YES** 22. ANY CONSTRUCTION ACTIVITY WHICH DISCHARGES STORM WATER INTO A BIOTA IMPAIRED STREAM SEGMENT, OR WITHIN 1 LINEAR MILE UPSTREAM OF AND WITHIN THE SAME WATERSHED AS ANY PORTION OF A BIOTA IMPAIRED STREAM SEGMENT, MUST COMPLY WITH PART II.C. OF THE PERMIT. INCLUDE THE COMPLETED APPENDIX 1 OF THIS CHECKLIST WITH AT LEAST 4 OF THE CHOSEN BMPs THAT WILL BE USED FOR THOSE AREAS OF THE SITE WHICH DISCHARGE TO THE IMPAIRED STREAM SEGMENT. \*

THE SITE IS LOCATED MORE THAN 1 LINEAR MILE UPSTREAM OF THE NEAREST IMPAIRED STREAM SEGMENT.

**EC0.1**  **N/A** 23. IF A TMDL IMPLEMENTATION PLAN FOR SEDIMENT HAS BEEN FINALIZED FOR THE BIOTA IMPAIRED STREAM SEGMENT (IDENTIFIED IN ITEM 22 ABOVE) AT LEAST SIX MONTHS PRIOR TO SUBMITTAL OF NOI, THE ES&PC PLAN MUST ADDRESS ANY SITE-SPECIFIC CONDITIONS OR REQUIREMENTS INCLUDED IN THE TMDL IMPLEMENTATION PLAN. \*

THE SITE IS LOCATED MORE THAN 1 LINEAR MILE UPSTREAM OF THE NEAREST IMPAIRED STREAM SEGMENT.

**EC0.1**  **YES** 24. BMPs FOR CONCRETE WASHDOWN OF TOOLS, CONCRETE MIXER CHUTES, HOPPERS AND THE REAR OF THE VEHICLES. INCLUDE STATEMENT THAT WASHOUT OF THE DRUM AT THE CONSTRUCTION SITE IS PROHIBITED. \*

NO CONCRETE TRUCKS WILL BE ALLOWED TO WASH OUT OR DISCHARGE SURPLUS CONCRETE DRUM WASH WATER ON-SITE.

**EC0.1**  **YES** 25. PROVIDE BMP'S FOR THE REMEDIATION OF ALL PETROLEUM SPILLS AND LEAKS.

PETROLEUM BASED PRODUCTS- CONTAINERS FOR PRODUCTS SUCH AS FUELS, LUBRICANTS AND TARS WILL BE INSPECTED DAILY FOR LEAKS AND SPILLS. THIS INCLUDES ON-SITE VEHICLE AND MACHINERY INSPECTIONS AND REGULAR PREVENTATIVE MAINTENANCE FOR SUCH EQUIPMENT. EQUIPMENT MAINTENANCE AREAS WILL BE LOCATED AWAY FROM STATE WATER, NATURAL DRAINS AND STORM WATER DRAINAGE INLETS. IN ADDITION, TEMPORARY FUELING TANKS SHALL HAVE A SECONDARY CONTAINMENT LINER TO PREVENT/MINIMIZE SITE CONTAMINATION. DISCHARGE OF OILS, FUELS AND LUBRICANTS IS PROHIBITED. PROPER DISPOSAL METHODS WILL INCLUDE COLLECTION IN A SUITABLE CONTAINER AND DISPOSAL AS REQUIRED BY LOCAL AND STATE REGULATIONS. HAVE EQUIPMENT TO CONTAIN AND CLEAN UP PETROLEUM SPILLS IN FUEL STORAGE AREAS OR ON MAINTENANCE AND FUELING VEHICLES. STORE IN COVERED AREAS PROTECTED WITH DIKES. REGULARLY INSPECT FOR CRACKS OR LEAKAGE IN CONTAINERS/TANKS.

**SPILL CLEANUP AND CONTROL PRACTICES**

- LOCAL, STATE AND MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND PROCEDURES WILL BE MADE AVAILABLE TO SITE PERSONNEL.
- MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREAS. TYPICAL MATERIALS AND EQUIPMENT INCLUDES, BUT IS NOT LIMITED TO, BROOMS, DUSTPANS, MOPS, RAGS, GLOVES, GOGGLES, CAT LITTER, SAND, SAWDUST, AND PROPERLY LABELED PLASTIC AND MEAL WASTE CONTAINERS.
- SPILL PREVENTION PRACTICES AND PROCEDURES WILL BE REVIEWED AFTER A SPILL AND ADJUSTED AS NECESSARY TO PREVENT FUTURE SPILLS.
- FOR SPILLS THAT IMPACT SURFACE WATER (LEAVE A SHEEN ON SURFACE WATER), THE NATIONAL RESPONSE CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS AT 1-800-424-8802.
- FOR SPILLS OF AN UNKNOWN AMOUNT, THE NATIONAL CENTER (NRC) WILL BE CONTACTED WITHIN 24 HOURS
- FOR SPILLS GREATER THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE GEORGIA EPD WILL BE CONTACTED WITHIN 24 HOURS.
- FOR SPILLS LESS THAN 25 GALLONS AND NO SURFACE WATER IMPACTS, THE SPILL WILL BE CLEANED UP AND LOCAL AGENCIES WILL BE CONTACTED AS REQUIRED.

THE CONTRACTOR SHALL NOTIFY THE LICENSED PROFESSIONAL WHO PREPARED THIS PLAN IF MORE THAN 1320 GALLONS OF PETROLEUM IS STORED ON-SITE (THIS INCLUDES CAPACITIES OF EQUIPMENT) OR IF ANY ONE PIECE OF EQUIPMENT HAS A CAPACITY GREATER THAN 660 GALLONS, THE CONTRACTOR WILL NEED A SPILL PREVENTION CONTAINMENT AND COUNTERMEASURES PLAN PREPARED BY THAT LICENSED PROFESSIONAL.

**EC0.1**  **YES** 26. DESCRIPTION OF THE MEASURES THAT WILL BE INSTALLED DURING THE CONSTRUCTION PROCESS TO CONTROL POLLUTANTS IN STORM WATER THAT WILL OCCUR AFTER CONSTRUCTION OPERATIONS HAVE BEEN COMPLETED. \*

PERMANENT GRASSING AND LANDSCAPING WILL BE INSTALLED TO PROTECT EARTHEN AREAS FROM EROSION ONCE CONSTRUCTION IS COMPLETE.

**EC0.1**  **YES** 27. DESCRIPTION OF PRACTICES TO PROVIDE COVER FOR BUILDING MATERIALS AND BUILDING PRODUCTS ON SITE.

THE CONTRACTOR IS TO PROVIDE COVER FOR: FOR BUILDING MATERIALS, BUILDING PRODUCTS, CONSTRUCTION WASTES, TRASH, LANDSCAPE MATERIALS, FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS, SANITARY WASTE AND OTHER MATERIALS PRESENT ON THE SITE, PROVIDE COVER (E.G., PLASTIC SHEETING, TEMPORARY ROOFS) TO MINIMIZE THE EXPOSURE OF THESE PRODUCTS TO PRECIPITATION AND TO STORMWATER, OR A SIMILARLY EFFECTIVE MEANS DESIGNED TO MINIMIZE THE DISCHARGE OF POLLUTANTS FROM THESE AREAS.

**EC0.1**  **YES** 28. DESCRIPTION OF THE PRACTICES THAT WILL BE USED TO REDUCE THE POLLUTANTS IN STORM WATER DISCHARGES.

**POLLUTANT PREVENTION**

THE FOLLOWING MATERIALS ARE EXPECTED ON-SITE DURING CONSTRUCTION: PETROLEUM BASED FUELS AND LUBRICANTS FOR EQUIPMENT, ADDITIVES FOR SOIL STABILIZATION, PESTICIDES, FERTILIZERS, HERBICIDES, CRUSHED STONE, CONCRETE PRODUCTS, ASPHALT, TAR, LUMBER, , PAINTS/STAINS/FINISHING TREATMENTS, PAINT SOLVENTS, CLEANING SOLVENTS, PLASTICS AND METAL PIPES.

PRACTICES SUCH AS GOOD HOUSEKEEPING, PROPER HANDLING OF HAZARDOUS PRODUCTS AND PROPER SPILL CONTROL PRACTICES WILL BE FOLLOWED TO REDUCE THE RISK OF SPILLS FROM DISCHARGING INTO STORM WATER RUNOFF.

**GOOD HOUSEKEEPING**

- QUANTITIES ON-SITE WILL BE LIMITED TO THE AMOUNT NEEDED FOR THE JOB.
- PRODUCTS AND MATERIALS WILL BE STORED IN A NEAT, ORDERLY MANNER IN APPROPRIATE CONTAINERS PROTECTED FROM RAINFALL, WHERE POSSIBLE.
- PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH MANUFACTURER'S LABELS LEGIBLE AND VISIBLE.
- PRODUCT MIXING, DISPOSAL, AND DISPOSAL OF PRODUCT CONTAINERS WILL BE ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
- THE CONTRACTOR WILL INSPECT SUCH MATERIALS TO ENSURE PROPER USE, STORAGE AND DISPOSAL.

**PRODUCT SPECIFIC PRACTICES**

FERTILIZER/HERBICIDES/PESTICIDES/DETERGENTS- THESE WILL BE APPLIED AT RATES THAT DO NOT EXCEED THE MANUFACTURER'S SPECIFICATIONS OR ABOVE THE GUIDELINES SET FORTH IN THE CROP ESTABLISHMENT OR IN THE GSWCC MANUAL FOR EROSION AND SEDIMENTATION CONTROL IN GEORGIA. ANY STORAGE OF THESE MATERIALS WILL BE UNDER ROOF IN SEALED CONTAINERS. DO NOT DISCHARGE WASH WATER INTO STORM WATER SYSTEM. INSTALL CURBS OR DIKES AROUND STORAGE AREA TO PROTECT AGAINST SPILLS. LIMIT USE OF DETERGENTS ON-SITE.

PAINTS/FINISHES/SOLVENTS- ALL PRODUCTS WILL BE STORED IN TIGHTLY SEALED ORIGINAL CONTAINERS WHEN NOT IN USE. EXCESS PRODUCT WILL NOT BE DISCHARGED TO THE STORM WATER COLLECTION SYSTEM. EXCESS PRODUCT, MATERIALS USED WITH THESE PRODUCTS AND PRODUCT CONTAINERS WILL BE DISPOSED OF ACCORDING TO THE MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS.

CONCRETE TRUCK WASHING- CONCRETE WASHOUT SHALL OCCUR ONLY IN THE WASH PAD VICINITY DELINEATED IN THE PLANS.

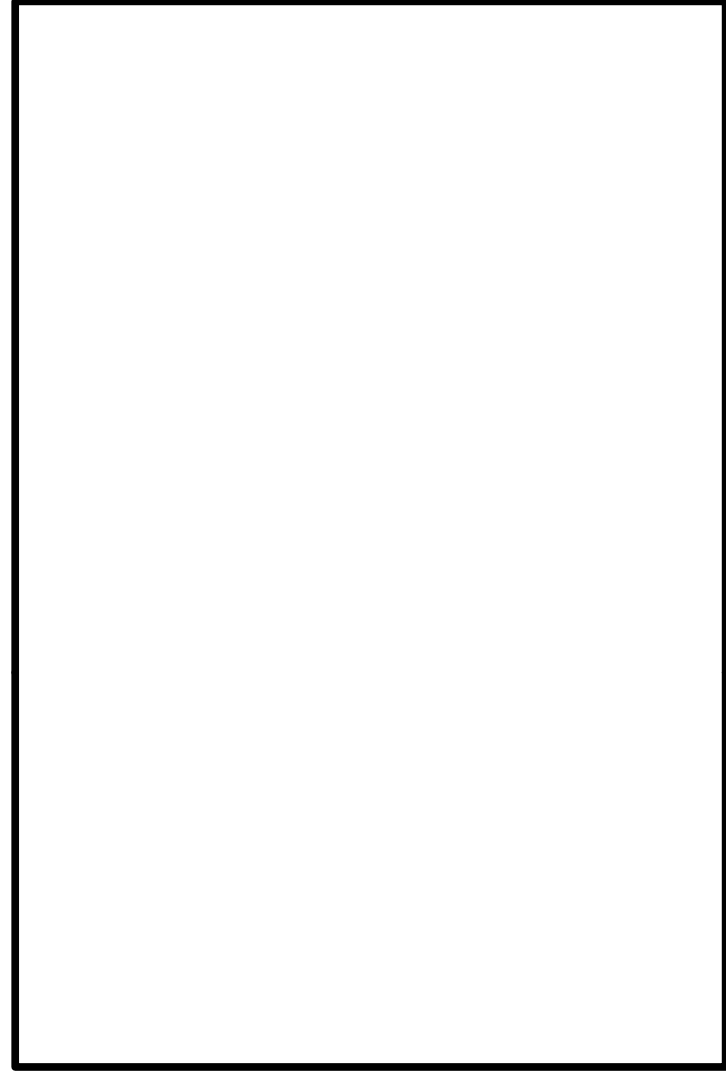
BUILDING MATERIALS- NO BUILDING OR CONSTRUCTION MATERIALS WILL BE BURIED OR DISPOSED OF ON-SITE. ALL SUCH MATERIAL WILL BE DISPOSED OF IN PROPER WASTE DISPOSAL PROCEDURES.

**EC0.2**  **YES** 29. DESCRIPTION AND CHART OR TIMELINE OF THE INTENDED SEQUENCE OF MAJOR ACTIVITIES WHICH DISTURB SOILS FOR THE MAJOR PORTIONS OF THE SITE (I.E., INITIAL PERIMETER AND SEDIMENT STORAGE BMPs, CLEARING AND GRUBBING ACTIVITIES, EXCAVATION ACTIVITIES, UTILITY ACTIVITIES, GRADING, INFRASTRUCTURE, TEMPORARY AND FINAL STABILIZATION).

A SPECIFIED WORK SCHEDULE IS NEEDED TO COORDINATE THE TIMING OF LAND DISTURBING ACTIVITIES WITH THE INSTALLATION OF EROSION AND SEDIMENTATION CONTROL MEASURES.

THE PURPOSE OF THE SCHEDULE IS TO REDUCE ON-SITE EROSION AND OFF-SITE SEDIMENTATION BY PERFORMING LAND DISTURBING ACTIVITIES AND INSTALLING EROSION AND SEDIMENTATION CONTROL PRACTICES IN ACCORDANCE WITH A PLANNED SCHEDULE.

IN PLANNING CONSTRUCTION WORK, IT MAY BE HELPFUL TO OUTLINE ALL LAND DISTURBING ACTIVITIES NECESSARY TO COMPLETE THE PROPOSED PROJECT. THEN LIST ALL PRACTICES NEEDED TO CONTROL EROSION AND SEDIMENTATION ON THE SITE. THESE TWO LISTS CAN THEN BE COMBINED IN LOGICAL ORDER TO PROVIDE A PRACTICAL AND EFFECTIVE CONSTRUCTION SEQUENCE SCHEDULE THAT BECOMES PART OF THE EROSION AND SEDIMENTATION CONTROL PLAN.



NO.	REVISIONS	BY	DATE

KEVIN SMITH  
 GSWCC LEVEL II  
 DESIGN PROFESSIONAL  
 CERTIFICATION # 0000012473  
 EXPIRATION: 7/11/2027

**THOMAS & HUTTON**

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 www.thomasandhutton.com

**EROSION, SEDIMENTATION, AND POLLUTION CONTROL NOTES**

**15TH STREET STORMWATER IMPROVEMENTS**

**PROJECT LOCATION:**  
 15TH STREET, TYBEE ISLAND  
 GEORGIA 31328

**CLIENT/OWNER:**  
 CITY OF TYBEE ISLAND  
 403 BUTLER AVENUE  
 TYBEE ISLAND, GA 31328  
 PETER GULBRONSON  
 peter.gulbrnson@cityoftybee.gov

DATUM: HORIZ: NAD 83          VERT: NAVD 88  
 JOB NO: 27209.0043  
 DATE: 03/16/2026  
 DRAWN: SAM  
 DESIGNED:  
 REVIEWED:  
 APPROVED: KMS  
 SCALE: 1" = 1"

# EC0.1

27209.0043 INFRASTRUCTURE CONSTRUCTION PLAN AND COVER SHEET (DWG) - MAR 16, 2026, 10:18 AM

EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST - INFRASTRUCTURE CONSTRUCTION PROJECTS

SWDC: COASTAL
PROJECT NAME: 15TH STREET STORMWATER IMPROVEMENTS
CITY/COUNTY: TYBEE ISLAND, GA 31328
LOCAL ISSUING AUTHORITY: CITY OF TYBEE ISLAND

ADDRESS: 15TH STREET, TYBEE ISLAND, GEORGIA 31328
DATE ON PLANS: MARCH 16, 2026
NAME & EMAIL OF PERSON FILLING OUT CHECKLIST: SAKILE MORGAN, MORGAN.S@TANDH.COM

Table with 2 columns: CONSTRUCTION ACTIVITY and SCHEDULE CONSIDERATION. Rows include permits, site marking, pre-construction conference, access, traps, runoff control, conveyance system, clearing, stabilization, building, landscaping, etc.

CONSTRUCTION SCHEDULE grid showing activity progress from month 1 to 11. Activities include BMPs, clearing, grading, grassing, paving, building, and final stabilization.

EC0.2 YES

30. PROVIDE COMPLETE REQUIREMENTS OF INSPECTIONS AND RECORD KEEPING BY THE PRIMARY PERMITEE. INSPECTIONS AND RECORD KEEPING. A. PRIMARY PERMITEE: 1. EACH DAY WHEN ANY TYPE OF CONSTRUCTION ACTIVITY HAS TAKEN PLACE AT A PRIMARY PERMITEE'S SITE...

DAY, WHICHEVER OCCURS FIRST). POST-RAIN INSPECTIONS WILL RESET THE 14-DAY INSPECTION FREQUENCY REQUIREMENT. WHERE DISCHARGE LOCATIONS OR POINTS ARE ACCESSIBLE, THEY SHALL BE INSPECTED TO ASCERTAIN WHETHER EROSION CONTROL MEASURES ARE EFFECTIVE IN PREVENTING SIGNIFICANT IMPACTS TO RECEIVING WATER(S)...

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THOMAS & HUTTON
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SAVANNAH, GA 31405
912.721.4250

EC0.2 YES

31. PROVIDE COMPLETE REQUIREMENTS OF SAMPLING FREQUENCY AND REPORTING OF SAMPLING RESULTS.

SAMPLING REQUIREMENTS. THIS PERMIT REQUIRES THE MONITORING OF NEPHELOMETRIC TURBIDITY IN RECEIVING WATER(S) OR OUTFALLS IN ACCORDANCE WITH THIS PERMIT. THIS PARAGRAPH SHALL NOT APPLY TO ANY LAND DISTURBANCE ASSOCIATED WITH THE CONSTRUCTION OF SINGLE-FAMILY HOMES WHICH ARE NOT PART OF A SUBDIVISION OR PLANNED COMMON DEVELOPMENT UNLESS FIVE (5) ACRES OR MORE WILL BE DISTURBED...

32. PROVIDE COMPLETE DETAILS FOR RETENTION OF RECORDS AS PER PART IV.F. OF THE PERMIT. RETENTION OF RECORDS. 1. THE PRIMARY PERMITEE MUST SAMPLE IN ACCORDANCE WITH THE PLAN AT LEAST ONCE FOR EACH RAINFALL EVENT DESCRIBED BELOW. FOR A QUALIFYING EVENT, THE PERMITEE SHALL SAMPLE AT THE BEGINNING OF ANY STORM WATER DISCHARGE TO A MONITORED RECEIVING WATER AND/OR FROM A MONITORED OUTFALL LOCATION WITHIN FORTY-FIVE (45) MINUTES OR AS SOON AS POSSIBLE...

EC0.2 YES

A. FOR EACH AREA OF THE SITE THAT DISCHARGES TO A RECEIVING WATER OR FROM AN OUTFALL, THE FIRST RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH WITH A STORM WATER DISCHARGE THAT OCCURS DURING NORMAL BUSINESS HOURS AFTER ALL CLEARING AND GRUBBING OPERATIONS HAVE BEEN COMPLETED, BUT PRIOR TO COMPLETION OF MASS GRADING OPERATIONS, IN THE DRAINAGE AREA OF THE LOCATION SELECTED AS THE SAMPLING LOCATION; B. IN ADDITION TO (A.) ABOVE, FOR EACH AREA OF THE SITE THAT DISCHARGES TO A RECEIVING WATER OR FROM AN OUTFALL, THE FIRST RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH WITH A STORM WATER DISCHARGE THAT OCCURS DURING NORMAL BUSINESS HOURS EITHER 90 DAYS AFTER THE FIRST SAMPLING EVENT OR AFTER ALL MASS GRADING OPERATIONS HAVE BEEN COMPLETED...

\*NOTE THAT THE PERMITEE MAY CHOOSE TO MEET THE REQUIREMENTS OF (A) AND (B) ABOVE BY COLLECTING TURBIDITY SAMPLES FROM ANY RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH AND ALLOWS FOR SAMPLING AT ANY TIME OF THE DAY OR WEEK.

REPORTING. 1. THE APPLICABLE PERMITEES ARE REQUIRED TO SUBMIT THE SAMPLING RESULTS TO THE EPD AT THE ADDRESS SHOWN IN PART II.C BY THE FIFTEENTH DAY OF THE MONTH FOLLOWING THE REPORTING PERIOD. REPORTING PERIODS ARE MONTHS DURING WHICH SAMPLES ARE TAKEN IN ACCORDANCE WITH THIS PERMIT. SAMPLING RESULTS SHALL BE IN A CLEARLY LEGIBLE FORMAT. UPON WRITTEN NOTIFICATION, EPD MAY REQUIRE THE APPLICABLE PERMITEE TO SUBMIT THE SAMPLING RESULTS ON A MORE FREQUENT BASIS...

2. ALL SAMPLING REPORT SHALL INCLUDE THE FOLLOWING INFORMATION: a. THE RAINFALL AMOUNT, DATE, EXACT PLACE AND TIME OF SAMPLING OR MEASUREMENTS; b. THE NAME(S) OF THE CERTIFIED PERSONNEL WHO PERFORMED THE SAMPLING AND MEASUREMENTS; c. THE DATE(S) ANALYSES WERE PERFORMED; d. THE TIME(S) ANALYSES WERE INITIATED; e. THE NAMES(S) OF THE CERTIFIED PERSONNEL WHO PERFORMED THE ANALYSES; f. REFERENCES AND WRITTEN PROCEDURES, WHEN AVAILABLE, FOR THE ANALYTICAL TECHNIQUES OR METHODS USED; g. THE RESULTS OF SUCH ANALYSES, INCLUDING THE BENCH SHEETS, INSTRUMENT READOUTS, COMPUTER DISKS OR TAPES, ETC., USED TO DETERMINE THESE RESULTS; h. RESULTS WHICH EXCEED 1000 NTU SHALL BE REPORTED AS "EXCEEDS 1000 NTU;" AND i. CERTIFICATION STATEMENT THAT SAMPLING WAS CONDUCTED AS PER THE PLAN.

32. PROVIDE COMPLETE DETAILS FOR RETENTION OF RECORDS AS PER PART IV.F. OF THE PERMIT.

RETENTION OF RECORDS. 1. THE PRIMARY PERMITEE SHALL RETAIN THE FOLLOWING RECORDS AT THE CONSTRUCTION SITE OR THE RECORDS SHALL BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A NOTICE OF TERMINATION IS SUBMITTED IN ACCORDANCE WITH PART VI.

Table with 4 columns: NO., REVISIONS, BY, DATE.



EROSION, SEDIMENTATION, AND POLLUTION CONTROL NOTES

15TH STREET STORMWATER IMPROVEMENTS

PROJECT LOCATION: 15TH STREET, TYBEE ISLAND GEORGIA 31328

CLIENT/OWNER: CITY OF TYBEE ISLAND 403 BULLER AVENUE TYBEE ISLAND, GA 31328 PETER GULBRONSON peter.gulbranson@cityoftybee.gov

DATUM: HORIZ.: NAD 83 VERT.: NAVD 88
JOB NO: 27209.0043
DATE: 03/16/2026
DRAWN: SAM
DESIGNED:
REVIEWED:
APPROVED: KMS
SCALE: 1"=1'

EC0.2

# EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST - INFRASTRUCTURE CONSTRUCTION PROJECTS

SWCD: COASTAL  
PROJECT NAME: 15TH STREET STORMWATER IMPROVEMENTS  
CITY/COUNTY: TYBEE ISLAND, GA 31328  
LOCAL ISSUING AUTHORITY: CITY OF TYBEE ISLAND

ADDRESS: 15TH STREET, TYBEE ISLAND, GEORGIA 31328  
DATE ON PLANS: MARCH 16, 2026  
NAME & EMAIL OF PERSON FILLING OUT CHECKLIST: SAKILE MORGAN,  
MORGAN.S@TANDH.COM

- COPY OF ALL NOTICES OF INTENT SUBMITTED TO EPD.
- A COPY OF THE ES&PC PLAN REQUIRED IN PERMIT NO. GAR 100001.
- THE DESIGN PROFESSIONALS REPORT OF THE RESULTS OF THE INSPECTION CONDUCTED IN ACCORDANCE WITH PART IV.A.5 IN PERMIT NO. GAR 100001.
- A COPY OF ALL SAMPLING INFORMATION, RESULTS, AND REPORTS REQUIRED BY IN PERMIT NO. GAR 100001.
- A COPY OF ALL INSPECTION REPORTS GENERATED IN ACCORDANCE WITH PART IV.D.4.g OF PERMIT NO. GAR 100001.
- A COPY OF ALL VIOLATION SUMMARIES AND VIOLATION SUMMARY REPORTS GENERATED IN ACCORDANCE WITH PART III.D.2 IN PERMIT NO. GAR 100001.
- DAILY RAINFALL INFORMATION COLLECTED IN ACCORDANCE WITH PART IV.D.4.g.(2), IN PERMIT NO. GAR 100001.

2. COPIES OF ALL NOTICES OF INTENT, NOTICES OF TERMINATION, INSPECTION REPORTS, SAMPLING REPORTS (INCLUDING ALL CALIBRATION AND MAINTENANCE RECORDS AND ALL ORIGINAL STRIP CHART RECORDINGS FOR CONTINUOUS MONITORING INSTRUMENTATION) OR OTHER REPORTS REQUESTED BY THE EPD, EROSION, SEDIMENTATION AND POLLUTION CONTROL PLANS, RECORDS OF ALL DATA USED TO COMPLETE THE NOTICE OF INTENT TO BE COVERED BY THIS PERMIT AND ALL OTHER RECORDS REQUIRED BY THIS PERMIT SHALL BE RETAINED BY THE PERMITTEE WHO EITHER PRODUCED OR USED IT FOR A PERIOD OF AT LEAST THREE YEARS FROM THE DATE THAT THE NOTICE OF TERMINATION IS SUBMITTED IN ACCORDANCE WITH PART VI OF THE GAR100002. THESE RECORDS MUST BE MAINTAINED AT THE PERMITTEE'S PRIMARY PLACE OF BUSINESS OR AT A DESIGNATED ALTERNATIVE LOCATION ONCE THE CONSTRUCTION ACTIVITY HAS CEASED AT THE PERMITTED SITE. THIS PERIOD MAY BE EXTENDED BY REQUEST OF THE EPD AT ANY TIME UPON WRITTEN NOTIFICATION TO THE PERMITTEE.

ECO.3 YES 33. DESCRIPTION OF ANALYTICAL METHODS TO BE USED TO COLLECT AND ANALYZE THE SAMPLES FROM EACH LOCATION.

STORM WATER SAMPLES ARE TO BE ANALYZED IN ACCORDANCE WITH METHODOLOGY AND TEST PROCEDURES ESTABLISHED BY 40 CFR PART 136 AND THE GUIDANCE DOCUMENT TITLED "NPDES STORM WATER SAMPLING GUIDANCE DOCUMENT EPA 833-B-92-001.

ECO.3 YES 34. APPENDIX B RATIONALE FOR NTU VALUES AT ALL OUTFALL SAMPLING POINTS WHERE APPLICABLE.

STORM WATER IS TO BE SAMPLED FOR NEPHELOMETRIC TURBIDITY UNITS (NTU) AT THE OUTFALL LOCATIONS. A DISCHARGE OF STORM WATER RUNOFF FROM DISTURBED AREAS WHERE BEST MANAGEMENT PRACTICES HAVE NOT BEEN PROPERLY DESIGNED, INSTALLED, AND MAINTAINED SHALL CONSTITUTE A SEPARATE VIOLATION FOR EACH DAY ON WHICH SUCH CONDITION RESULTS IN THE TURBIDITY OF THE DISCHARGE EXCEEDING 150. THE VALUE THAT WAS SELECTED FROM APPENDIX B IN PERMIT NO. GAR 100002. THE NTU IS BASED UPON THE SITE SIZE OF 2.87 ACRES FOR THE PROJECT SITE. THE SURFACE WATER DRAINAGE AREA OF 5 - 9.99 SQUARE MILES AND RECEIVING WATER WHICH SUPPORTS WARM WATER FISHERIES. APPENDIX B WAS USED TO DETERMINE THE NTU ALLOWABLE AND DOWNSIDE SAMPLING WILL BE PERFORMED FOR THIS PROJECT.

**Appendix B**  
**Nepheometric Turbidity Unit (NTU) Table**  
**Warm Water (Supporting Warm Water Fisheries)**  
Surface Water Drainage Area, square miles

Site Size, acres	0-4.99		5-9.99		10-24.99		25-49.99		50-99.99		100-249.99		250-499.99		500+	
	75	100	100	200	200	300	300	500	500	750	750	750	750	750	750	750
1.00-10	75	100	100	200	200	300	300	500	500	750	750	750	750	750	750	750
10.01-25	50	100	100	200	200	300	300	500	500	750	750	750	750	750	750	750
25.01-50	50	50	100	100	200	200	300	300	500	750	750	750	750	750	750	750
50.01-100	50	50	50	100	100	100	150	150	300	300	600	600	600	600	600	600
100.01+	50	50	50	50	50	50	100	100	200	200	100	100	100	100	100	100

ECO.3 YES 35. DELINEATE ALL SAMPLING LOCATIONS ON ALL PHASES OF THE PLAN, AND PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES INTO WHICH STORM WATER IS DISCHARGED.

PLEASE SEE PLAN SHEETS FOR DELINEATION OF SAMPLING LOCATIONS, PERENNIAL, INTERMITTENT STREAMS AND OTHER WATER BODIES INTO WHICH STORM WATER IS DISCHARGED.

ECO.3 YES 36. A DESCRIPTION OF APPROPRIATE CONTROLS AND MEASURES THAT WILL BE IMPLEMENTED AT THE CONSTRUCTION SITE INCLUDING: (1) INITIAL SEDIMENT STORAGE REQUIREMENTS AND PERIMETER CONTROL BMPs, (2) INTERMEDIATE GRADING AND DRAINAGE BMPs, AND (3) FINAL BMPs. FOR CONSTRUCTION SITES WHERE THERE WILL BE NO MASS GRADING AND THE INITIAL SEDIMENT STORAGE REQUIREMENTS AND INITIAL PERIMETER CONTROL BMPs, INTERMEDIATE GRADING AND DRAINAGE BMPs, AND FINAL BMPs ARE THE SAME, THE PLAN MAY COMBINE ALL BMPs INTO A SINGLE PHASE PLAN. \*

SINGLE PHASE - THE ES&PC PLAN WILL INCLUDE THE INSTALLATION AND MAINTENANCE OF THE CONSTRUCTION EXIT, TYPE NS & S SILT FENCE, STORM DRAIN OUTLET PROTECTION AT DISCHARGE LOCATIONS, AND SEDIMENT INLET TRAPS AS INDICATED ON THE PLANS. DUST CONTROL, MULCHING, AND TEMPORARY SEEDING WILL BE IMPLEMENTED AS NECESSARY. PERMANENT SEEDING WILL BE IMPLEMENTED FOR SITE STABILIZATION. ONCE THE SITE IS STABILIZED, ALL TEMPORARY BMPs ARE TO BE REMOVED.

EC1.1-1.3 YES 37. GRAPHIC SCALE AND NORTH ARROW.

GRAPHIC SCALE AND NORTH ARROW ARE LOCATED ON EACH PLAN SHEET.

ALL YES 38. EXISTING AND PROPOSED CONTOUR LINES WITH CONTOUR LINES DRAWN AT AN INTERVAL IN ACCORDANCE WITH THE FOLLOWING:

EXISTING CONTOURS	USGS 1":2000' TOPOGRAPHICAL SHEETS
PROPOSED CONTOURS	1":400' CENTERLINE PROFILE

EXISTING AND PROPOSED CONTOUR LINES DRAWN AT AN INTERVAL OF 1' ARE SHOWN ON EACH PLAN SHEET.

ECO.3 N/A 39. USE OF ALTERNATIVE BMP'S WHOSE PERFORMANCE HAS BEEN DOCUMENTED TO BE EQUIVALENT TO OR SUPERIOR TO CONVENTIONAL BMP'S AS CERTIFIED BY A DESIGN PROFESSIONAL (UNLESS DISAPPROVED BY GAEPD OR THE GEORGIA SOIL AND WATER CONSERVATION COMMISSION). PLEASE REFER TO THE ALTERNATIVE BMP GUIDANCE DOCUMENT FOUND AT [www.gaswcc.georgia.gov](http://www.gaswcc.georgia.gov).

ALTERNATIVE BMPs WILL NOT BE USED AS PART OF THIS PROJECT.

ECO.3 N/A 40. USE OF ALTERNATIVE BMP FOR APPLICATION TO THE EQUIVALENT BMP LIST. REFER TO APPENDIX A-2 OF THE MANUAL FOR EROSION & SEDIMENT CONTROL IN GEORGIA 2016 EDITION.\*

ALTERNATIVE BMPs WILL NOT BE USED AS PART OF THIS PROJECT.

ECO.3 N/A 41. DELINEATION OF THE APPLICABLE 25-FOOT OR 50-FOOT UNDISTURBED BUFFERS ADJACENT TO STATE WATERS AND ANY ADDITIONAL BUFFERS REQUIRED BY THE LOCAL ISSUING AUTHORITY. CLEARLY NOTE AND DELINEATE ALL AREAS OF IMPACT.

THERE ARE NO BUFFERS ASSOCIATED WITH THIS PROJECT.

EC1.1-1.3 YES 42. DELINEATION OF ON-SITE WETLANDS AND ALL STATE WATERS LOCATED ON AND WITHIN 200 FEET OF THE PROJECT SITE.

ALL WETLANDS AND STATE WATERS WITHIN 200 FEET OF THE PROJECT SITE ARE DELINEATED ON THE PLANS. NO WETLAND IMPACTS ARE PROPOSED.

EXHIBIT YES 43. DELINEATION AND ACREAGE OF CONTRIBUTING DRAINAGE BASINS ON THE PROJECT SITE.

SEE DRAINAGE BASIN EXHIBIT.

EXHIBIT YES 44. DELINEATE ON-SITE DRAINAGE AND OFF-SITE WATERSHEDS USING USGS 1":2000' TOPOGRAPHICAL SHEETS.

SEE WATERSHED EXHIBIT.

ECO.3 YES 45. AN ESTIMATE OF THE RUNOFF COEFFICIENT OR PEAK DISCHARGE FLOW OF THE SITE PRIOR TO AND AFTER CONSTRUCTION ACTIVITIES ARE COMPLETED.

RUNOFF COEFFICIENT: PRE-CONSTRUCTION CN = 77  
POST-CONSTRUCTION CN = 77

ECO.3 N/A 46. STORM-DRAIN PIPE AND WEIR VELOCITIES WITH APPROPRIATE OUTLET PROTECTION TO ACCOMMODATE DISCHARGES WITHOUT EROSION. IDENTIFY/DELINEATE ALL STORM WATER DISCHARGE POINTS.

THE STORM SYSTEM TIES INTO AN EXISTING GRATE INLET, THEREFORE NO RIP-RAP IS REQUIRED AT THIS SITE.

EC1.1-1.3 YES 47. SOIL SERIES FOR THE PROJECT SITE AND THEIR DELINEATION.

SOILS ARE DELINEATED ON THE EROSION CONTROL SHEETS. THE SOILS FOR THE SITE ARE: CUC - CHIPLEY-URBAN LAND COMPLEX.

EC1.1-1.3 YES 48. THE LIMITS OF DISTURBANCE FOR EACH PHASE OF CONSTRUCTION.

PLEASE SEE THE PLAN FOR THE DELINEATION OF THE LIMITS OF DISTURBANCE.

ECO.3 YES

49. PROVIDE A MINIMUM OF 67 CUBIC YARDS OF SEDIMENT STORAGE PER ACRE DRAINED USING A TEMPORARY SEDIMENT BASIN, RETROFITTED DETENTION POND, AND/OR EXCAVATED INLET SEDIMENT TRAPS FOR EACH COMMON DRAINAGE LOCATION. SEDIMENT STORAGE VOLUME MUST BE IN PLACE PRIOR TO AND DURING ALL LAND DISTURBANCE ACTIVITIES UNTIL FINAL STABILIZATION OF THE SITE HAS BEEN ACHIEVED. A WRITTEN JUSTIFICATION EXPLAINING THE DECISION TO USE EQUIVALENT CONTROLS WHEN A SEDIMENT BASIN IS NOT ATTAINABLE MUST BE INCLUDED IN THE PLAN FOR EACH COMMON DRAINAGE LOCATION IN WHICH A SEDIMENT BASIN IS NOT PROVIDED. A WRITTEN JUSTIFICATION AS TO WHY 67 CUBIC YARDS OF STORAGE IS NOT ATTAINABLE MUST ALSO BE GIVEN. WORKSHEETS FROM THE MANUAL MUST BE INCLUDED FOR STRUCTURAL BMPs AND ALL CALCULATIONS USED BY THE DESIGN PROFESSIONAL TO OBTAIN THE REQUIRED SEDIMENT STORAGE WHEN USING EQUIVALENT CONTROLS. WHEN DISCHARGING FROM SEDIMENT BASINS AND IMPOUNDMENTS, PERMITTEES ARE REQUIRED TO UTILIZE OUTLET STRUCTURES THAT WITHDRAW WATER FROM THE SURFACE, UNLESS INFEASIBLE. IF OUTLET STRUCTURES THAT WITHDRAW WATER FROM THE SURFACE ARE NOT FEASIBLE, A WRITTEN JUSTIFICATION EXPLAINING THIS DECISION MUST BE INCLUDED IN THE PLAN.

SEDIMENT STORAGE - THE PERMIT REQUIRES A MINIMUM OF 67 CUBIC YARDS OF SEDIMENT STORAGE PER ACRE DRAINED.

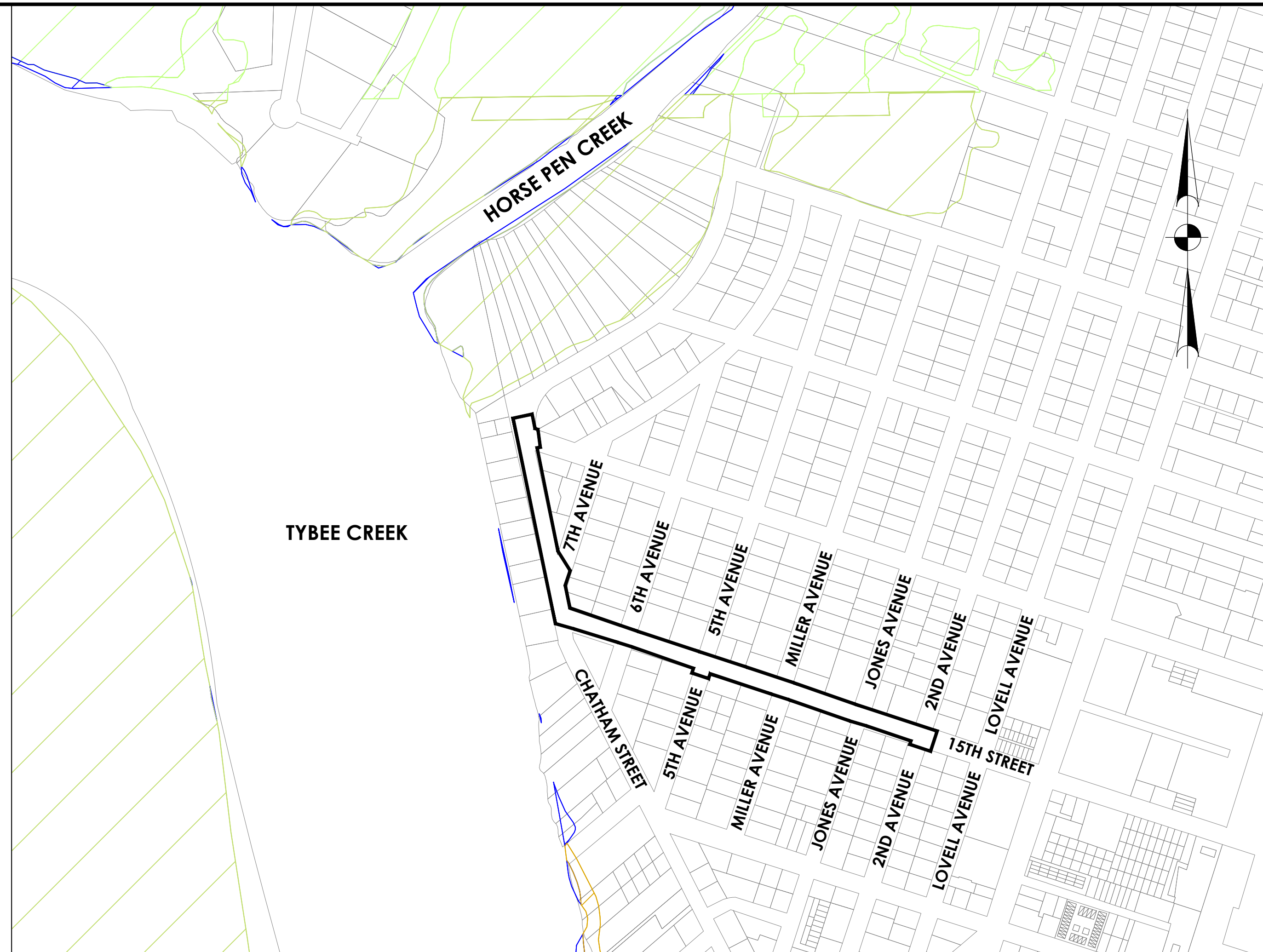
THE SEDIMENT STORAGE REQUIREMENT WILL BE ACHIEVED BY UTILIZING SILT FENCE. THESE BMPs WERE CHOSEN BECAUSE OF THE LINEAR NATURE OF THIS INFRASTRUCTURE PROJECT WITHOUT AREAS TO CONSTRUCT PERMANENT PONDS OR TEMPORARY SEDIMENT BASINS.

SEDIMENT STORAGE REQUIRED  
ON SITE AND CONTRIBUTING BASIN ACREAGE: 7.25 AC  
REQUIRED ON SITE SEDIMENT STORAGE = 7.25 X 67 CY/AC = 485.75 CY

STORAGE PROVIDED (SILT FENCE)  
SILT FENCE PROVIDED: 3,641 LF  
SEDIMENT STORAGE PER LF OF SILT FENCE: 0.37 CY/FT  
SEDIMENT STORAGE: 3,641 LF X 0.37 CY/FT = 1,347.18 CY

STORAGE PROVIDED: 1,347 CY WHICH EXCEEDS 483 CY

EC1.1-1.3 YES 50. LOCATION OF BEST MANAGEMENT PRACTICES THAT ARE CONSISTENT WITH AND NO LESS STRINGENT THAN



SCALE : 1:300

THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA. USE UNIFORM CODING SYMBOLS FROM THE MANUAL, CHAPTER 6, WITH LEGEND.

PLEASE SEE THE PLAN SHEETS FOR THE LOCATION OF BEST MANAGEMENT PRACTICES THAT ARE CONSISTENT WITH AND NO LESS STRINGENT THAN THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA USING THE UNIFORM CODING SYMBOLS FROM THE MANUAL, CHAPTER 6 WITH ACCOMPANYING LEGEND.

EC2.1-2.2 YES 51. PROVIDE DETAILED DRAWINGS FOR ALL STRUCTURAL PRACTICES. SPECIFICATIONS MUST, AT A MINIMUM, MEET THE GUIDELINES SET FORTH IN THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA.

PLEASE SEE THE DETAIL SHEET FOR DETAILED DRAWINGS FOR ALL STRUCTURAL PRACTICES WITH SPECIFICATIONS MEETING THE GUIDELINES SET FORTH IN THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA.

EC1.1-2.2 YES 52. PROVIDE VEGETATIVE PLAN, NOTING ALL TEMPORARY AND PERMANENT VEGETATIVE PRACTICES, INCLUDE SPECIES, PLANTING DATES AND SEEDING, FERTILIZER, LIME AND MULCHING RATES. VEGETATIVE PLAN SHALL BE SITE SPECIFIC FOR APPROPRIATE TIME OF YEAR THAT SEEDING WILL TAKE PLACE AND FOR APPROPRIATE GEOGRAPHIC REGION OF GEORGIA.

PLEASE SEE THE PLAN AND DETAIL SHEETS FOR THE VEGETATIVE PLAN NOTING ALL TEMPORARY AND PERMANENT VEGETATIVE PRACTICES INCLUDING SPECIES, PLANTING DATES AND SEEDING, FERTILIZER, LIME AND MULCHING RATES. THIS PLAN IS SPECIFIC TO THE SITE AND APPROPRIATE FOR TIME OF YEAR THAT SEEDING WILL TAKE PLACE AND FOR THE APPROPRIATE GEOGRAPHIC REGION OF GEORGIA.

EFFECTIVE JANUARY 1, 2026

NO.	REVISIONS	BY	DATE

KEVIN SMITH  
 GSWCC LEVEL II  
 DESIGN PROFESSIONAL  
 CERTIFICATION # 0000012473  
 EXPIRATION: 7/11/2027

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**EROSION, SEDIMENTATION,  
AND POLLUTION CONTROL  
NOTES**

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**15TH STREET STORMWATER  
IMPROVEMENTS**

---

**PROJECT LOCATION:**  
 15TH STREET, TYBEE ISLAND  
 GEORGIA 31328

---

**CLIENT/OWNER:**  
 CITY OF TYBEE ISLAND  
 403 BUTLER AVENUE  
 TYBEE ISLAND, GA 31328  
 PETER GULBRONSON  
[peter.gulbronson@cityoftybee.gov](mailto:peter.gulbronson@cityoftybee.gov)

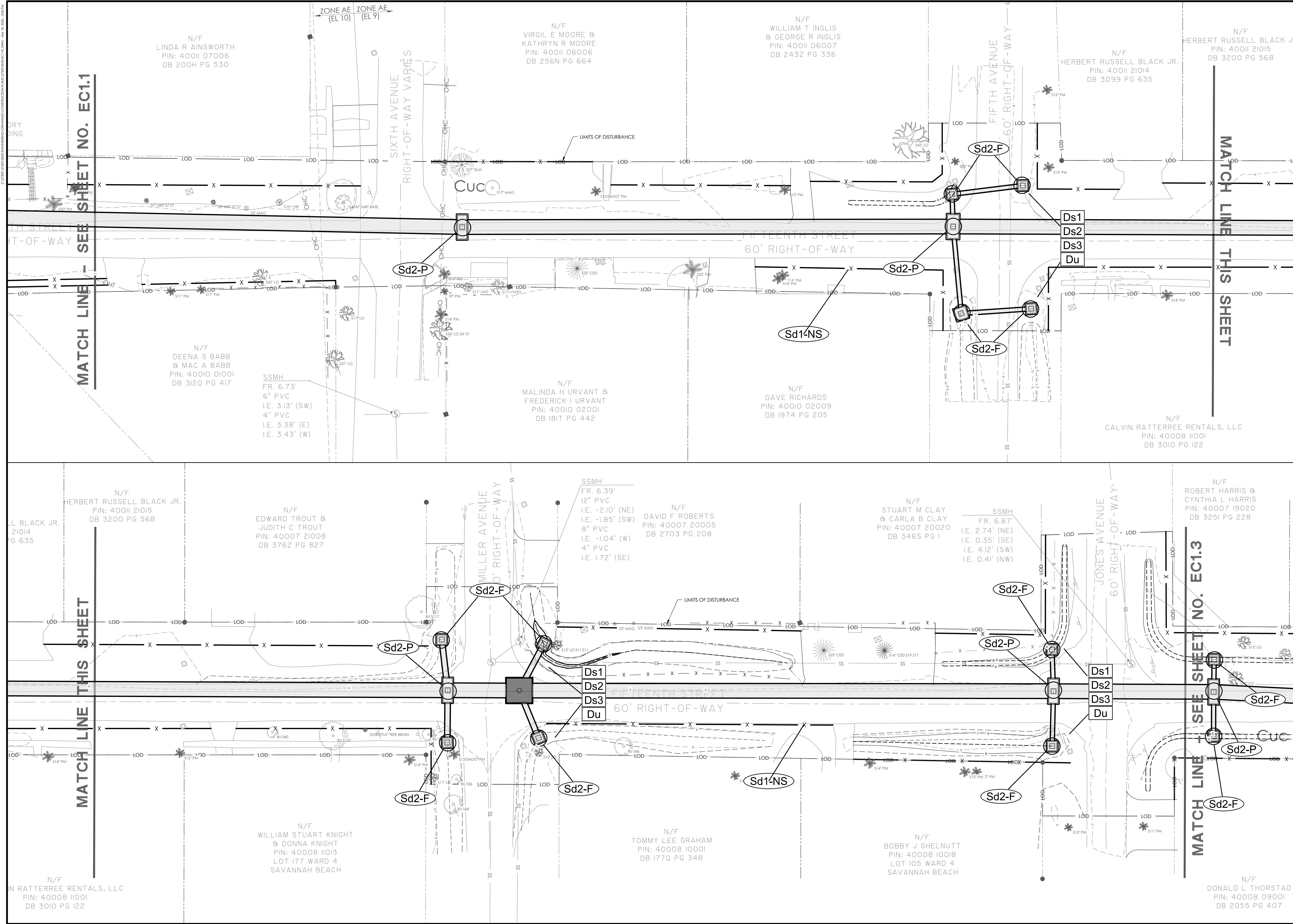
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DATUM: HORIZ.: NAD 83      VERT.: NAVD 88

JOB NO: 27209.0043  
DATE: 03/16/2026  
DRAWN: SAM  
DESIGNED:  
REVIEWED:  
APPROVED: KMS  
SCALE: 1" = 1'

EC0.3





EROSION CONTROL LEGEND	
DESCRIPTION	PLAN SYMBOL
DISTURBED AREA STABILIZATION (MULCHING ONLY)	Ds1
DISTURBED AREA STABILIZATION (TEMPORARY SEEDING)	Ds2
DISTURBED AREA STABILIZATION (PERMANENT VEGETATION)	Ds3
DUST CONTROL	Du
SILT FENCE - TYPE NS	Sd1-NS
SILT FENCE - TYPE S	Sd1-S
INLET SEDIMENT TRAP (CURB INLET)	Sd2-P

NO.	REVISIONS	BY	DATE

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**EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN**

**15TH STREET STORMWATER IMPROVEMENTS**

**PROJECT LOCATION:**  
 15TH STREET, TYBEE ISLAND  
 GEORGIA 31328

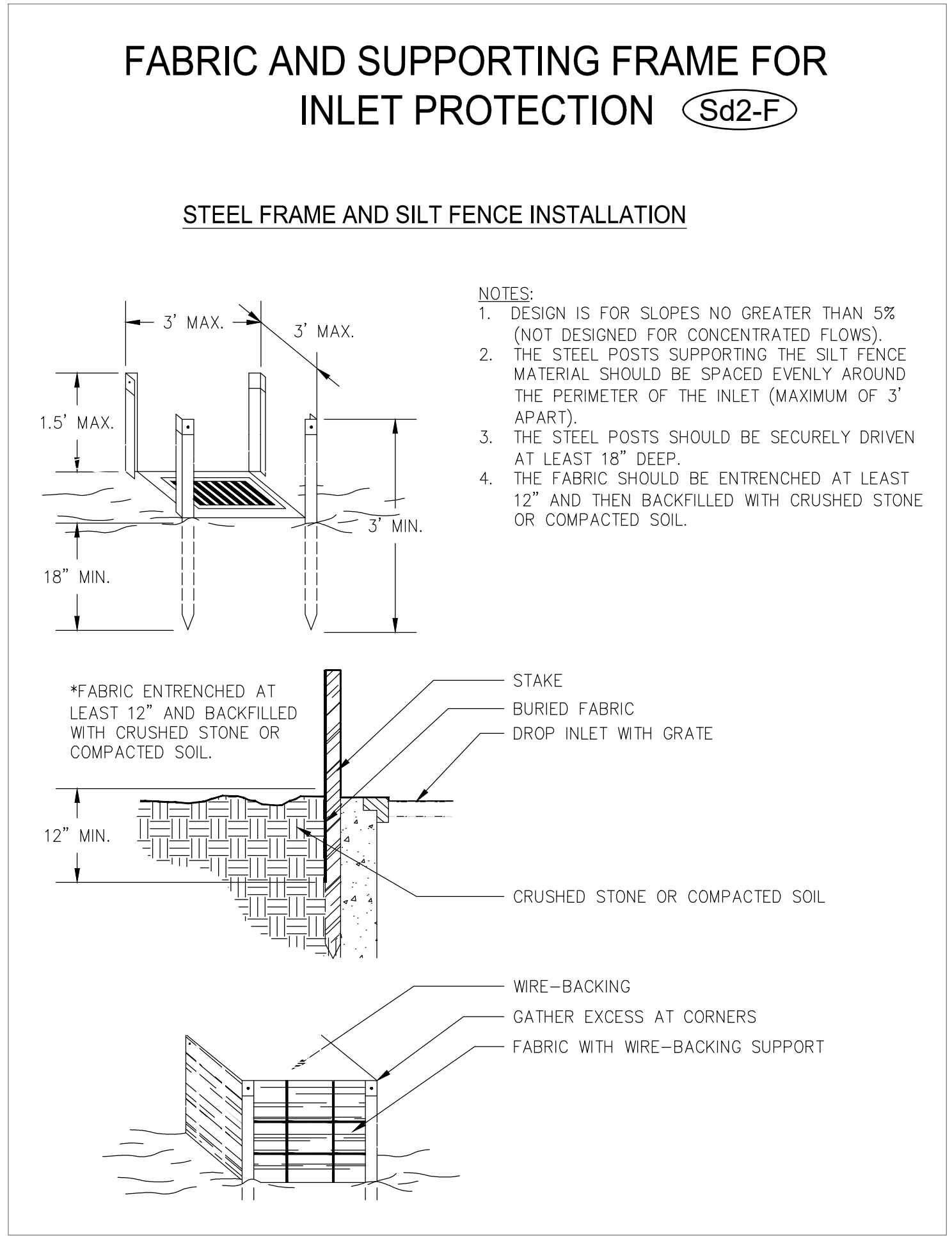
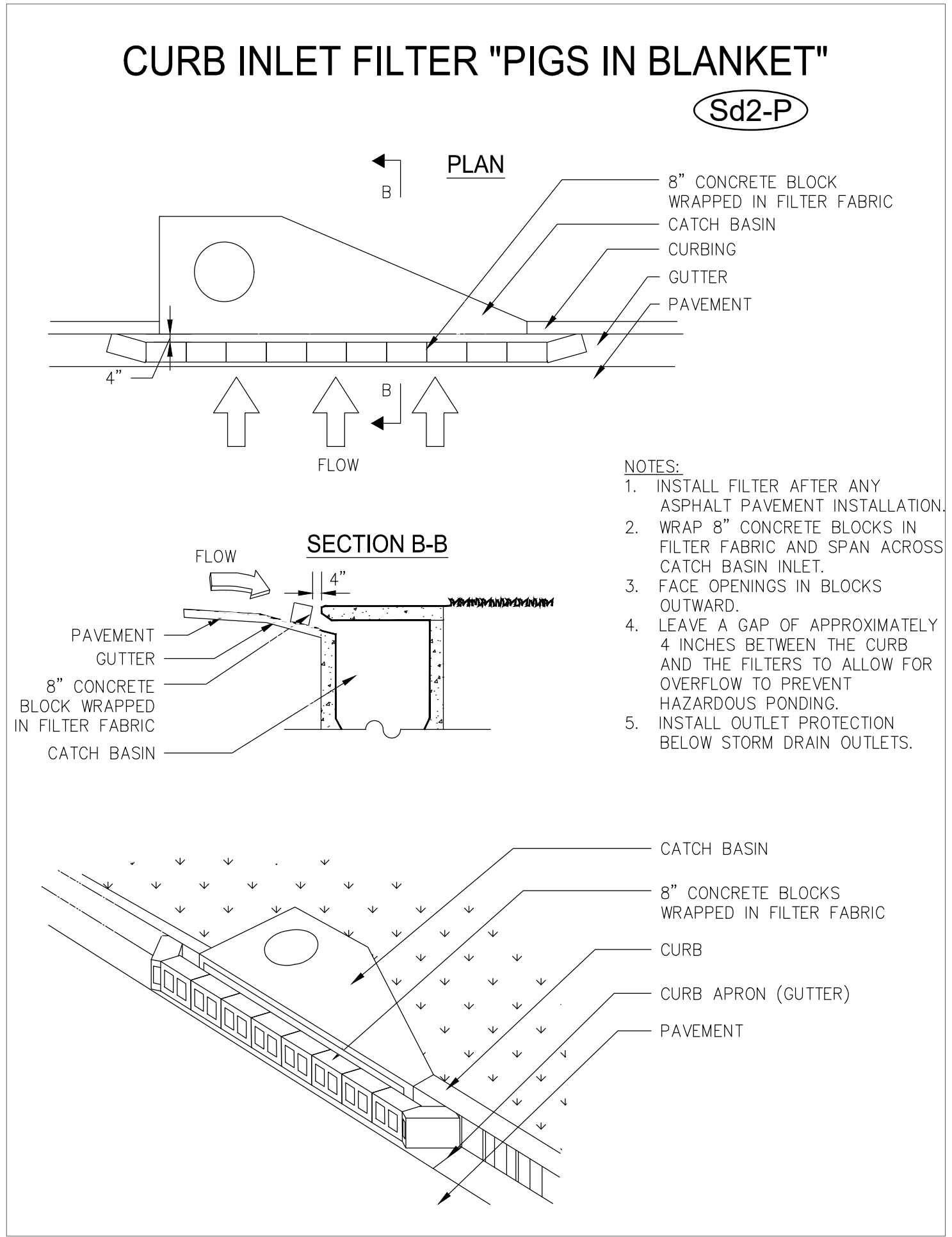
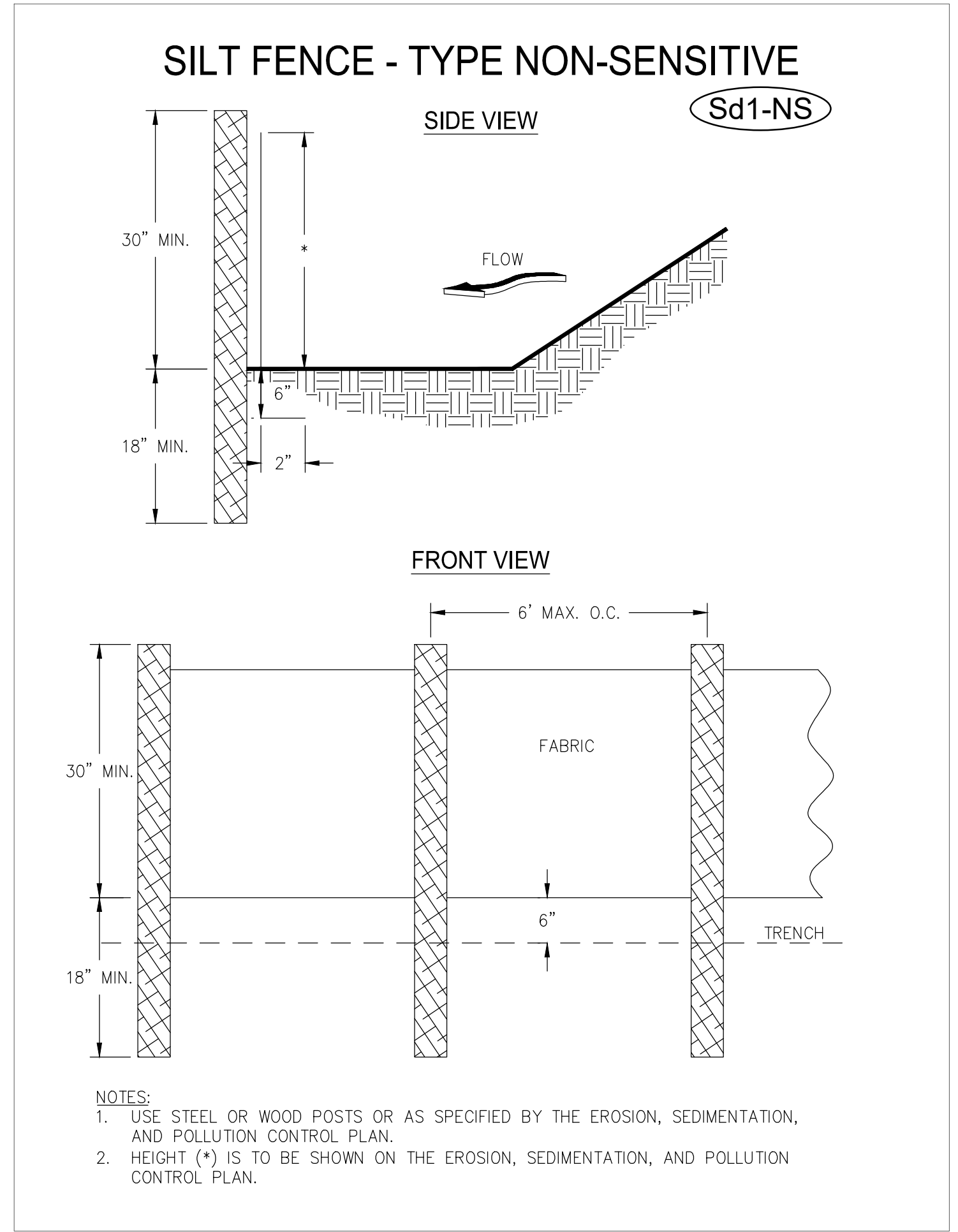
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 TYBEE ISLAND, GA 31328  
 PETER GULBRONSON  
 peter.gulbronson@cityoftybee.gov

GRAPHIC SCALE:  
 1 INCH = 20 FEET  
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 APPROVED: KMS  
 SCALE: SEE SCALE BAR

**EC1.2**





### Ds1 DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)

**DEFINITION**

A temporary cover of plant residues or other suitable materials, produced on site if possible, applied to the soil surface.

**PURPOSE**

- Reduce runoff and erosion
- Modify soil temperature
- Conserve moisture
- Prevent surface compaction and crusting
- Control undesirable vegetation
- Increase biological activity in the soil

**INSTALLATION**

- Apply mulch or temporary grassing to all exposed areas within 14 days of disturbance.
- Applicable to graded or cleared areas where seedings may not have a suitable growing season to produce an erosion retardant cover.
- Mulch can be used as a singular erosion control device for up to 6 months.
- Apply at the appropriate depth. Refer to Table 1 for specific materials.

**Site Preparation**

- Grade to permit the use of equipment for applying and anchoring mulch

**Applying Mulch**

- Install needed erosion control measures such as dikes, berms, and sediment barriers.
- Loosen compacted soil to a minimum depth of 3".
- Apply dry straw or hay and wood chips uniformly by hand or by mechanical equipment.
- Apply 20-30 lbs of nitrogen/acre if the area will eventually be covered with perennial vegetation.
- Apply polyethylene film on exposed areas.

**Anchoring Mulch**

- Press straw or hay into the soil with a disk harrow immediately after application. Tackifiers may be used when spreading mulch with blower-type equipment.
- Anchor wood waste using the appropriate size netting
- Trench polyethylene at the top as well as incrementally as necessary.

**Table 1. Mulching Application Requirements**

Material	Rate	Depth
Straw or hay	-	2" to 4"
Wood waste, chips, sawdust, bark	-	2" to 3"
Polyethylene film	Secure with soil, anchors, weights	-
Geotextiles, jute matting, netting, etc.	See manufacturer's recommendations	-

**MAINTENANCE**

- The appropriate depth and 90% cover shall be maintained at all times.

**REFERENCES**

**Tac** Tackifiers

### Ds2 DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING)

**DEFINITION**

The establishment of temporary vegetative cover with fast growing seedings for seasonal protection on disturbed or denuded areas.

**PURPOSE**

- Reduce runoff and sediment damage of down stream resources
- Protect the soil surface from erosion
- Improve wildlife habitat
- Improve aesthetics
- Improve tilth, infiltration, and aeration as well as organic matter for permanent plantings

**INSTALLATION**

- Apply mulch or temporary grassing to all exposed areas within 14 days of disturbance.
- Applicable to rough graded areas that will be exposed for less than 6 months.
- Coordinate with permanent measures to ensure economical and effective stabilization.
- Take note of which species are not appropriate for companion crop plantings.
- When the soil has been sealed by rainfall or consists of smooth cut slopes, scarify the soil in order to provide a place for the seed to lodge and germinate.

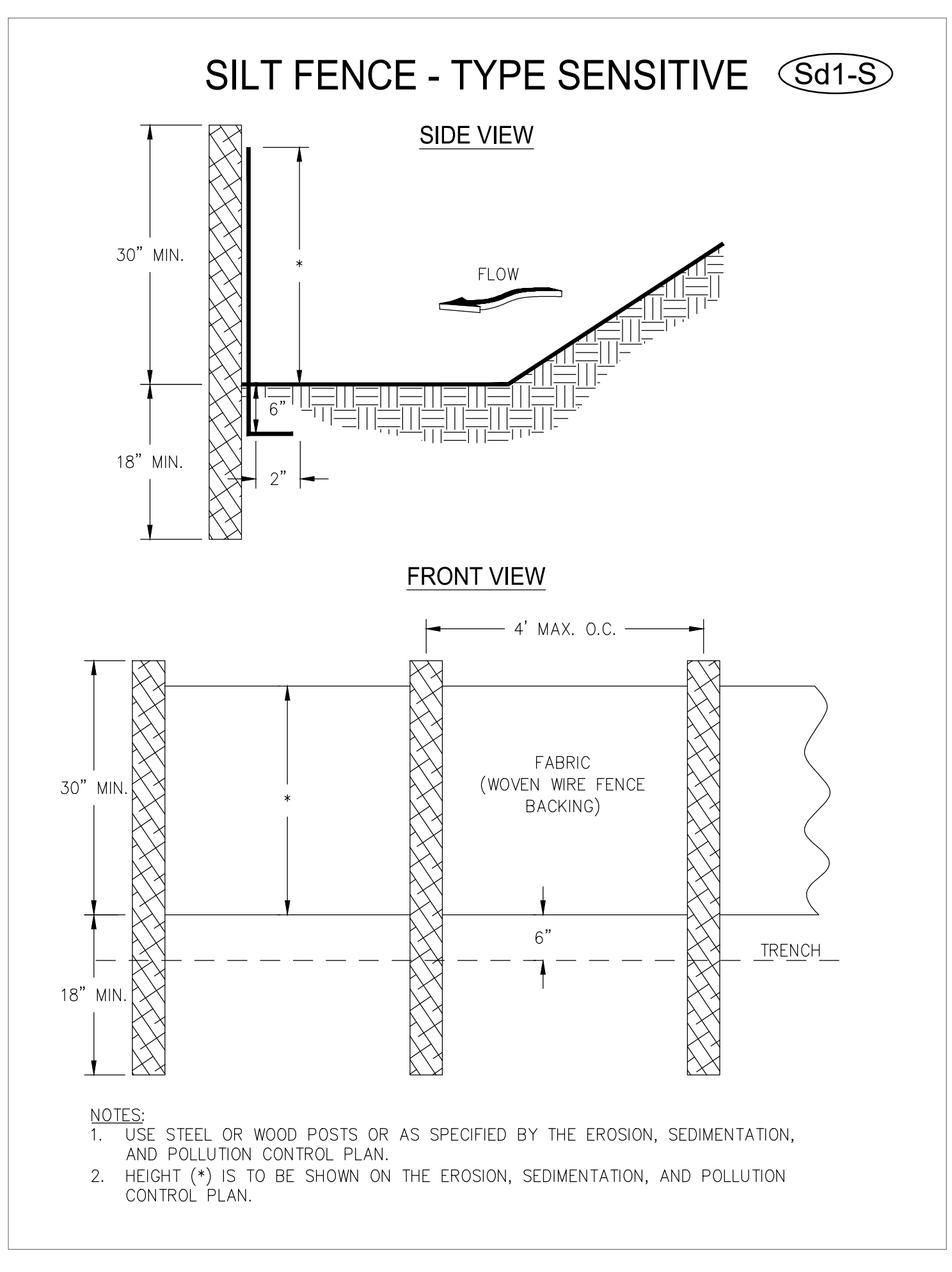
**MAINTENANCE**

- Re-seed areas where an adequate stand of temporary vegetation fails to emerge.
- If optimum conditions for temporary vegetation is lacking, mulch can be used a singular erosion control device.

**REFERENCES**

**Ds1** Disturbed Area Stabilization (With Mulching Only)

**Tac** Tackifiers



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**THOMAS & HUTTON**

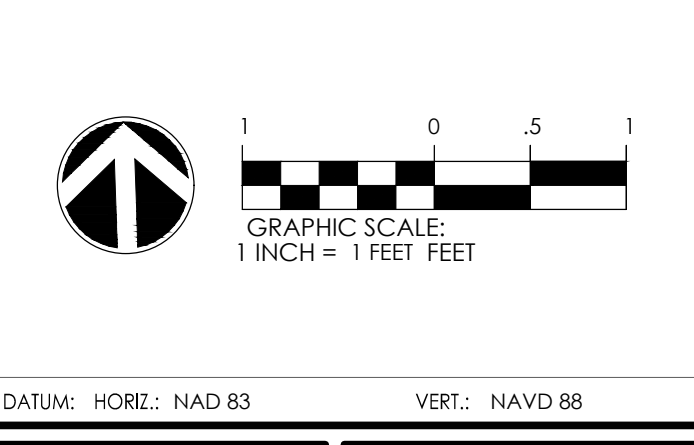
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**EROSION, SEDIMENTATION, AND POLLUTION CONTROL DETAILS**

**15TH STREET STORMWATER IMPROVEMENTS**

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**CLIENT/OWNER:**  
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DRAWN:	SAM
DESIGNED:	
REVIEWED:	
APPROVED:	KMS
SCALE:	1" = 1'

## EC2.1

SEEDING RATES FOR TEMPORARY & PERMANENT COVER							
MONTH	TEMPORARY COVER	RATE PER ACRE		PERMANENT COVER	RATE PER ACRE		
		SEEDED ALONE	ADDED TO MIX		SEEDED ALONE	ADDED TO MIX	
JANUARY	* LESPEDEZA, ANNUAL * RYEGRASS, ANNUAL * WHEAT	40 lbs. 3 bu. 40 lbs. 3 bu.	10 lbs. .5 bu. .5 bu.	* BAHIA, PENSACOLA BERMUDA, UNHULLED CENTIPEDE, SOD LESPEDEZA, SERICEA	1	60 lbs. 10 lbs. 75 lbs. -	30 lbs. 6 lbs. -
FEBRUARY	* LESPEDEZA, ANNUAL * LOVEGRASS, WEEPING * RYE * RYEGRASS, ANNUAL	40 lbs. 4 lbs. 3 bu. 40 lbs.	10 lbs. 2 lbs. .5 bu.	* BAHIA, PENSACOLA CENTIPEDE, SOD LESPEDEZA, SEDICIA LOVEGRASS, WEEPING	1 2	60 lbs. 75 lbs. 4 lbs.	30 lbs. -
MARCH	* LESPEDEZA, ANNUAL * LOVEGRASS, WEEPING * RYEGRASS, ANNUAL * SUDANGRASS	40 lbs. 4 lbs. 40 lbs. 60 lbs.	10 lbs. 2 lbs. -	* BAHIA, PENSACOLA BERMUDA, UNHULLED CENTIPEDE, SOD LESPEDEZA, SEDICIA LOVEGRASS, WEEPING	1	60 lbs. 10 lbs. 75 lbs. 75 lbs. 4 lbs.	30 lbs. 6 lbs. -
APRIL	LOVEGRASS, WEEPING MILLET, BROWNTOP * MILLET, PEARL SUDANGRASS	4 lbs. 40 lbs. 50 lbs. 60 lbs.	2 lbs. 10 lbs. -	* BAHIA, PENSACOLA BERMUDA, UNHULLED CENTIPEDE, SOD LESPEDEZA, SEDICIA LOVEGRASS, WEEPING	1 2	60 lbs. 10 lbs. 75 lbs. 75 lbs. 4 lbs.	30 lbs. 6 lbs. -
MAY	LOVEGRASS, WEEPING MILLET, BROWNTOP MILLET, PEARL SUDANGRASS	4 lbs. 40 lbs. 50 lbs. 60 lbs.	2 lbs. 10 lbs. -	* BAHIA, PENSACOLA BERMUDA, UNHULLED CENTIPEDE, SOD LESPEDEZA, SEDICIA LOVEGRASS, WEEPING	1 2	60 lbs. 10 lbs. 75 lbs. 75 lbs. 4 lbs.	30 lbs. 6 lbs. -
JUNE	* LOVEGRASS, WEEPING MILLET, BROWNTOP MILLET, PEARL SUDANGRASS	4 lbs. 40 lbs. 50 lbs. 60 lbs.	2 lbs. 10 lbs. -	* BAHIA, PENSACOLA BERMUDA, UNHULLED CENTIPEDE, SOD LESPEDEZA, SEDICIA LOVEGRASS, WEEPING	1 2	60 lbs. 10 lbs. 75 lbs. 75 lbs. 4 lbs.	30 lbs. 6 lbs. -

SEEDING RATES FOR TEMPORARY & PERMANENT COVER							
MONTH	TEMPORARY COVER	RATE PER ACRE		PERMANENT COVER	RATE PER ACRE		
		SEEDED ALONE	ADDED TO MIX		SEEDED ALONE	ADDED TO MIX	
JULY	* MILLET, BROWNTOP MILLET, PEARL SUDANGRASS	40 lbs. 50 lbs. 60 lbs.	10 lbs. -	* BAHIA, PENSACOLA LESPEDEZA, SEDICIA	1	60 lbs. 75 lbs.	30 lbs. -
AUGUST	* MILLET, PEARL RYEGRASS, ANNUAL	50 lbs. 40 lbs.	-	* BAHIA, PENSACOLA LESPEDEZA, SEDICIA	1	60 lbs. 75 lbs.	30 lbs. -
SEPTEMBER	* BARLEY OATS RYE RYEGRASS, ANNUAL WHEAT	3 bu. 4 bu. 3 bu. 40 lbs. 3 bu.	.5 bu. 1 bu. .5 bu. .5 bu.	* BAHIA, PENSACOLA LESPEDEZA, SEDICIA	1	60 lbs. 75 lbs.	30 lbs. -
OCTOBER	BARLEY OATS RYE RYEGRASS, ANNUAL WHEAT	3 bu. 4 bu. 3 bu. 40 lbs. 3 bu.	.5 bu. 1 bu. .5 bu. .5 bu.	* BAHIA, PENSACOLA LESPEDEZA, SEDICIA	1	60 lbs. 75 lbs.	30 lbs. -
NOVEMBER	BARLEY OATS RYE RYEGRASS, ANNUAL WHEAT	3 bu. 4 bu. 3 bu. 40 lbs. 3 bu.	.5 bu. 1 bu. .5 bu. .5 bu.	* BAHIA, PENSACOLA BERMUDA, UNHULLED CENTIPEDE, SOD LESPEDEZA, SEDICIA	1	60 lbs. 10 lbs. 75 lbs.	30 lbs. 6 lbs. -
DECEMBER	BARLEY OATS RYE RYEGRASS, ANNUAL WHEAT	3 bu. 4 bu. 3 bu. 40 lbs. 3 bu.	.5 bu. 1 bu. .5 bu. .5 bu.	* BAHIA, PENSACOLA BERMUDA, UNHULLED CENTIPEDE, SOD LESPEDEZA, SEDICIA	1	60 lbs. 10 lbs. 75 lbs.	30 lbs. 6 lbs. -

NOTES:  
ALL PERMANENT GRASS PLANTINGS SHALL BE MULCHED  
\* INDICATES MARGINAL (BUT PERMISSIBLE) PLANTING DATE  
1. UNSCARIFIED  
2. SCARIFIED  
3. CENTIPEDE SOD CAN BE USED AS PERMANENT COVER ANYTIME EXCEPT JUNE THRU OCTOBER

FERTILIZER REQUIREMENTS				
TYPE OF SPECIES	YEAR	ANALYSIS OR EQUIVALENT N-P-K	RATE	N TOP DRESSING RATE
1. COOL SEASON CROPS	FIRST MAINTENANCE	6-12-12 10-10-10	1500lbs./ac. 400 lbs./ac.	50-100 lbs./ac. * 1 & 2 30
2. COOL SEASON GRASSES AND LEGUMES	FIRST MAINTENANCE	6-12-12 10-10-10	1500lbs./ac. 400 lbs./ac.	50-100 lbs./ac. * 1
3. GROUND COVERS	FIRST MAINTENANCE	10-10-10 10-10-10	1300lbs./ac. * 3 1100 lbs./ac.	-
4. PINE SEEDLINGS	FIRST	20-10-5	ONE 21-GRAM FERTILIZER PLACED IN THE CLOSING HOLE	-
5. SHRUB LESPEDEZA	FIRST MAINTENANCE	0-10-10 0-10-10	700lbs./ac. 700lbs./ac. * 4	-
6. TEMPORARY COVER SEEDED ALONE	FIRST	10-10-10	500lbs./ac.	30 lbs./ac. * 5
7. WARM SEASON GRASSES	FIRST MAINTENANCE	6-12-12 10-10-10	1500lbs./ac. 400 lbs./ac.	50-100 lbs./ac. * 2 & 6 30 lbs./ac. * 2
8. WARM SEASON CROPS AND LEGUMES	FIRST MAINTENANCE	6-12-12 10-10-10	1500lbs./ac. 400 lbs./ac.	50-100 lbs./ac. * 6

- \* 1 APPLY IN SPRING FOLLOWING SEEDING.
- \* 2 APPLY IN SPLIT APPLICATIONS WHEN HIGH RATES ARE USED.
- \* 3 APPLY IN 3 SPLIT APPLICATIONS.
- \* 4 APPLY WHEN PLANTS ARE PRUNED.
- \* 5 APPLY TO GRASS SPECIES ONLY.
- \* 6 APPLY WHEN PLANTS GROW TO A HEIGHT OF 2 TO 4 INCHES.

**LIME RATES AND ANALYSIS**  
\* AGRICULTURAL LIME SHALL BE APPLIED AT THE RATE OF ONE TO TWO TONS PER ACRE UNLESS SOIL TESTS INDICATE OTHERWISE. GRADED AREAS REQUIRE LIME APPLICATION. IF LIME IS APPLIED WITHIN SIX MONTHS OF PLANTING PERMANENT PERENNIAL VEGETATION, ADDITIONAL LIME IS NOT REQUIRED. AGRICULTURAL LIME SHALL BE WITHIN THE SPECIFICATIONS OF THE GEORGIA DEPARTMENT OF AGRICULTURE.

**MULCHING RATE**  
MULCHING (MULCHING IS REQUIRED FOR ALL PERMANENT VEGETATION APPLICATIONS. MULCH APPLIED TO SEEDED AREAS SHALL ACHIEVE 75% SOIL COVER. SELECT THE MULCHING MATERIAL FROM THE FOLLOWING AND APPLY AS INDICATED:  
\* DRY STRAW OR DRY HAY OF GOOD QUALITY AND FREE OF WEED SEEDS CAN BE USED DRY STRAW SHALL BE APPLIED AT THE RATE OF TWO TONS PER ACRE. DRY HAY SHALL BE APPLIED AT THE RATE OF 2 1/2 TONS PER ACRE.  
\* WOOD CELLULOSE MULCH OR WOOD PULP FIBER SHALL BE USED WITH HYDRAULIC SEEDING. IT SHALL BE APPLIED AT A RATE OF 500 POUNDS PER ACRE. DRY STRAW OR DRY HAY SHALL BE APPLIED (AT THE RATE INDICATED BELOW) AFTER HYDRAULIC SEEDING.  
\* ONE THOUSAND POUNDS OF WOOD CELLULOSE OR WOOD PULP FIBER, WHICH INCLUDES TACKIFIER, SHALL BE USED WITH HYDRAULIC SEEDING ON SLOPES 4:1 OR STEEPER.  
\* SERICEA LESPEDEZA HAY CONTAINING MATURE SEED SHALL BE APPLIED AT A RATE OF 3 TONS PER ACRE.  
\* PINE STRAW OR PINE BARK SHALL BE APPLIED AT A THICKNESS OF 3 INCHES FOR BEDDING PURPOSES. OTHER SUITABLE MATERIALS IN SUFFICIENT QUANTITY MAY BE USED WHERE ORNAMENTALS OR OTHER GROUND COVERS ARE PLANTED. THIS IS NOT APPROPRIATE FOR SEEDED AREAS.  
\* WHEN USING TEMPORARY EROSION CONTROL BLANKETS OR BLACK SOD, MULCH IS NOT REQUIRED.

**SPECIFICATIONS: MULCHING WITHOUT SEEDING**  
THIS STANDARD APPLIES TO GRADED OR CLEARED AREAS WHERE SEEDINGS MAY NOT HAVE A SUITABLE GROWING SEASON TO PRODUCE AN EROSION RETARDANT COVER, BUT CAN BE STABILIZED WITH A MULCH COVER.  
**SITE PREPARATION**  
1. GRADE TO PERMIT THE USE OF EQUIPMENT FOR APPLYING AND ANCHORING MULCH.  
2. INSTALL NEEDED EROSION CONTROL MEASURES AS REQUIRED SUCH AS DIKES, DIVERSIONS, BERMS, TERRACES, AND SEDIMENT BARRIERS.  
3. LOOSEN COMPACT SOIL TO A MINIMUM DEPTH OF 3 INCHES.  
**MULCHING MATERIALS**  
SELECT ONE OF THE FOLLOWING MATERIALS AND APPLY AT THE DEPTH INDICATED:  
1. DRY STRAW OR HAY SHALL BE APPLIED AT A DEPTH OF 2 TO 4 INCHES PROVIDING COMPLETE SOIL COVERAGE. ONE ADVANTAGE OF THIS MATERIAL IS EASY APPLICATION.  
2. WOOD WASTE (CHIPS, SAWDUST OR BARK) SHALL BE APPLIED AT A DEPTH OF 2 TO 3 INCHES. ORGANIC MATERIAL FROM THE CLEARING STAGE OF DEVELOPMENT SHOULD REMAIN ON SITE, BE CHIPPED, AND APPLIED AS MULCH. THIS METHOD OF MULCHING CAN GREATLY REDUCE EROSION CONTROL COSTS.  
3. POLYETHYLENE FILM SHALL BE SECURED OVER BANKS OR STOCKPILED SOIL MATERIAL FOR TEMPORARY PROTECTION. THIS MATERIAL CAN BE SALVAGED AND RE-USED.  
**APPLYING MULCH**  
WHEN MULCH IS USED WITHOUT SEEDING, MULCH SHALL BE APPLIED TO PROVIDE FULL COVERAGE OF THE EXPOSED AREA.  
1. PINE STRAW OR HAY MULCH AND WOOD CHIPS SHALL BE APPLIED UNIFORMLY BY HAND OR BY MECHANICAL EQUIPMENT.  
2. IF THE AREA WILL EVENTUALLY BE COVERED WITH PERENNIAL VEGETATION, 20-30 POUNDS OF NITROGEN PER ACRE IN ADDITION TO THE NORMAL AMOUNT SHALL BE APPLIED TO OFFSET THE UPTAKE OF NITROGEN CAUSED BY THE DECOMPOSITION OF THE ORGANIC MULCHES.  
3. APPLY POLYETHYLENE FILM ON EXPOSED AREAS.  
**ANCHORING MULCH**  
1. STRAW OR HAY MULCH CAN BE PRESSED INTO THE SOIL WITH A DISK HARROW WITH THE DISK SET STRAIGHT OR WITH A SPECIAL "PACKER DISK." DISKS MAY BE SMOOTH OR SERRATED AND SHOULD BE 20 INCHES OR MORE IN DIAMETER AND 8 TO 12 INCHES APART. THE EDGES OF THE DISK SHOULD BE DULL ENOUGH NOT TO CUT THE MULCH BUT TO PRESS IT INTO THE SOIL LEAVING MUCH OF IT IN AN UPRIGHT POSITION. STRAW OR HAY MULCH SHALL BE ANCHORED IMMEDIATELY AFTER APPLICATION.  
STRAW OR HAY MULCH SPREAD WITH SPECIAL BLOWER-TYPE EQUIPMENT MAY BE ANCHORED, TACKIFIERS, BINDERS, AND HYDRAULIC MULCH WITH TACKIFER SPECIFICALLY DESIGNED FOR TACKING STRAW CAN BE SUBSTITUTED FOR EMULSIFIED ASPHALT. PLEASE REFER TO SPECIFICATION TAC-TACKIFIERS. PLASTIC MESH OR NETTING WITH MESH NO LARGER THAN ONE INCH BY ONE INCH SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.  
2. NETTING OF THE APPROPRIATE SIZE SHALL BE USED TO ANCHOR WOOD WASTE. OPENINGS OF THE NETTING SHALL NOT BE LARGER THAN THE AVERAGE SIZE OF THE WOOD WASTE CHIPS.  
3. POLYETHYLENE FILM SHALL BE ANCHOR TRENCHED AT THE TOP AS WELL AS INCREMENTALLY AS NECESSARY.

NO.	REVISIONS	BY	DATE

**GEORGIA REGISTERED ENGINEER**  
KEVIN M. SMITH  
No. 029886  
PROFESSIONAL  
KEVIN M. SMITH  
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GSWCC LEVEL II  
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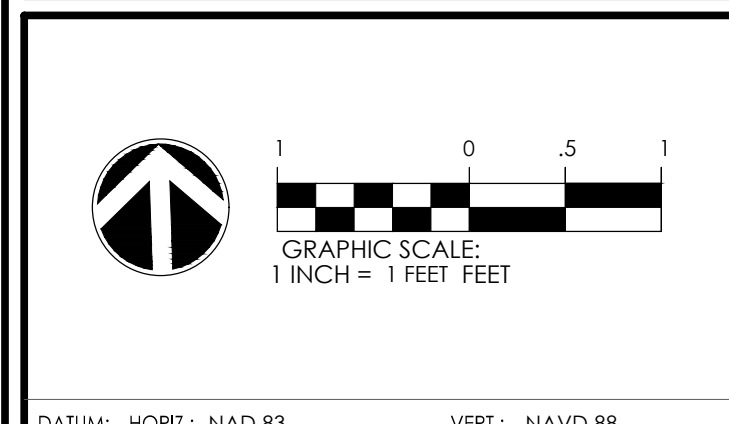
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SCALE:	1" = 1'

**DUST CONTROL**  
DEFINITION: CONTROLLING SURFACE AND AIR MOVEMENT OF DUST ON LAND-DISTURBING ACTIVITIES.  
PURPOSE: PREVENT THE MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES AND PREVENT THE MOVEMENT OF AIRBORNE SUBSTANCES THAT MAY BE HARMFUL TO HEALTH.

TEMPORARY METHODS	PERMANENT METHODS
- MULCHES - TEMPORARY VEGETATIVE COVER - SPRAY ON ADHESIVES - TILLAGE - IRRIGATION - BARRIERS - CALCIUM CHLORIDE	- PERMANENT VEGETATION - TOPSOILING - STONE COVER

INSTALLATION:  
APPLY ACCORDING TO APPROVED PLAN, IF SHOWN. MULCH DISTURBED AREAS AND TACKIFY WITH REDSINS SUCH AS ASPHALT, CURASOL OR TERRATACK ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. STABILIZE DISTURBED AREAS WITH TEMPORARY OR PERMANENT VEGETATION. COVER SURFACES WITH CRUSHED STONE OR GRAVEL. APPLY CALCIUM CHLORIDE AT A RATE TO KEEP SURFACES MOIST. APPLY SPRAY-ON ADHESIVES TO MINERAL SOILS (NOT MUCK SOILS AS DESCRIBED IN TABLE I).

ADHESIVE	WATER DILUTION	NOZZLE TYPE	APPLICATION (GAL / ACRE)
ANIONIC ASPHALT EMULSION	7:1 *	COARSE SPRAY	1,200
LATEX EMULSION	12.5:1 *	FINE SPRAY	235
RESIN-IN-WATER EMULSION	4:1 *	FINE SPRAY	300

MAINTENANCE:  
PROHIBIT TRAFFIC ON SURFACE AFTER SPRAYING.  
SUPPLEMENT SURFACE COVERING AS NEEDED.

**E2**  
OCT. 2008  
THOMAS & HUTTON  
ENGINEERING CO.

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**DUST CONTROL**  
NOT TO SCALE

**Ds3 DISTURBED AREA STABILIZATION (WITH PERMANENT SEEDING) DEFINITION**  
The planting of perennial vegetation such as trees, shrubs, vines, grasses, or legumes on exposed areas for final permanent stabilization.

**Ds3 PURPOSE**

- Apply agricultural lime at a rate of 1-2 tons/acre unless soil tests indicate otherwise. Please refer to Table 2 for initial fertilization, nitrogen, topdressing, and maintenance fertilizer requirements for each species.
- Apply seed hydraulically. If using conventional methods, use a culti-packer seeder, drill, rotary seeder, or by hand.
- Cover the seed lightly with 1/8"-1/4" of soil for small seed and 1/2"-1" of soil for large seed when using a cultipacker.
- Check seed tags for % germination & % purity in order to calculate Pure Live Seed (PLS), which is the percentage of the seeds that are pure and will germinate.
- Mulch is required for all permanent vegetation applications. Please refer to Ds1 for application rates and anchoring methods for different materials.
- Irrigate when the soil is dry and at a rate that will not cause runoff.

**Ds3 INSTALLATION**

- Protect the soil surface from erosion
- Reduce damage from sediment and runoff to down-stream areas
- Improve wildlife habitat and visual resources
- Improve aesthetics

**Ds3 INSTALLATION**

- Use conventional planting methods where possible.
- Final Stabilization means that 100% of the soil surface is uniformly covered in permanent vegetation with a density of 70% or greater, or landscaped according to the plan (uniformly covered landscaping materials in planned landscaped areas), or equivalent permanent stabilization measures.
- Select plants species based on site and soil conditions, planned use and maintenance of the area, time of year, method of planting, and the needs of the land user. (Refer to Table 1)

**Figure 1. Typical Tag on a Bag of Seed**

**PLS Example**  
Tall Fescue  
85% germination & 95% purity  
PLS = 0.85 germination x 0.95 purity  
PLS = 80.75%  
Seeding rate = 50 lbs./acre PLS/acre = 61.92 lbs/acre  
PLS 80.75% PLS