

<u>3-26-19</u>

# FORSYTH COUNTY

# **HIGHWAY 400 WATERLINE RELOCATION**

TCG PROJECT NO. 100182.15

### PREPARED FOR

FORSYTH COUNTY 110 E. MAIN STREET STE. 150 CUMMING, GA. 30040

<u>COUNTY COMMISSIONERS</u>				
R.J. AMOS	DISTRICT 1			
DENNIS BROWN	DISTRICT 2			
TODD LEVENT	DISTRICT 3			
CINDY MILLS	DISTRICT 4			
LAURA SEMANSON	DISTRICT 5			

PREPARED BY:



FOR BIDS

368 WEST PIKE STREET LAWRENCEVILLE, GA 30046 (678)765-1780

> DATE PREPARED: DECEMBER 2017 **REVISION DATE**

> > MARCH 2019





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

HWY 400 WATERLINE RELOCATION

#### CONTACTS:

#### FORSYTH COUNTY WATER DEPARTMENT KYLE FIKES

#### CONSTANTINE ENGINEERING JEFF DUPLANTIS, MS, PE, PMP

ENGINEERS CERTIFICATION:		
I CERTIFY THAT THE PROPOSED WATER DISTRIBUTION	SVSTEM	
HAS BEEN DESIGNED IN ACCORDANCE WITH THE FCDV		
SPECIFICATION DOCUMENT TITLED "STANDARD SPECIFIC		
FOR WATER DISTRIBUTION SYSTEMS AND SANITARY	AIIONS	
SEWER SYSTEMS ", INCLUDING ALL AMENDMENTS.		
Sewert Statems , indebend Ale Amendments.		
May 2. the	3-26-19	
JEFFREY L. DUPLANTIS, P.E.	DATE	
GEORGIA P.E. #041239		
		FOR BIDS
	SHEET:	FOR BIDS
	SHEET: DWG NO:	
COVER SHEET		

	SHEET INDEX		SHEET INDEX
SHEET	DESCRIPTION	SHEET	DESCRIPTION
G1	COVER SHEET	C33	PROFILE IMPACT SITE #2 STA. 26+40 TO STA. 31+91
G2	SHEET INDEX	C32	PROFILE IMPACT SITE #2 STA. 31+91 TO STA. 37+91
G3	SHEET LAYOUT	C33	PROFILE IMPACT SITE #2 STA. 37+91 TO STA. 41+75
G4	GENERAL NOTES AND LEGEND	C34	PROFILE IMPACT SITE #2 STA. 41+75 TO STA. 45+70
G5-G24	EROSION AND SEDIMENTATION CONTROL PHASES 1&2	C35	PROFILE IMPACT SITE #2 STA. $45+70$ TO STA. $50+26$
G25-G44	EROSION AND SEDIMENTATION CONTROL PHASE 3	C36	PROFILE IMPACT SITE #3 STA. 50+26 TO STA. 53+78
G45-G53	EROSION AND SEDIMENTATION CONTROL NOTES	C37	PROFILE IMPACT SITE #3 STA. $0+00$ TO STA. $0+72$
C1	PROPOSED WATER LINE RELOCATION STA. 5004+50 TO STA. 5008+50		PROFILE IMPACT SITE $#4$ STA. 0+00 TO STA. 0+24
C2	PROPOSED WATER LINE RELOCATION STA. 5008+50 TO STA. 5012+00		PROFILE IMPACT SITE #5 STA. 0+00 TO STA. 0+31
C3	PROPOSED WATER LINE RELOCATION STA. 5012+00 TO STA. 5015+00	CD1-CD4	CONSTRUCTION DETAILS
C4	PROPOSED WATER LINE RELOCATION STA. 5015+00 TO STA. 5017+50		
C5	PROPOSED WATER LINE RELOCATION STA. 3019+50 TO STA. 3017+30 PROPOSED WATER LINE RELOCATION STA. 159+50 TO STA. 163+50		
C6	PROPOSED WATER LINE RELOCATION STA. 159+50 TO STA. 163+50 PROPOSED WATER LINE RELOCATION STA. 163+50 TO STA. 168+50		
	PROPOSED WATER LINE RELOCATION STA. 163+50 TO STA. 166+50 PROPOSED WATER LINE RELOCATION STA. 168+50 TO STA. 173+00		
C7			
C8	PROPOSED WATER LINE RELOCATION STA. 173+00 TO STA. 177+50		
C8A	PROPOSED WATER LINE RELOCATION IMPACT SITE #2 STA. 9+65 TO STA. 14+39		
C9	PROPOSED WATER LINE RELOCATION STA. 177+50 TO STA. 180+50		
C10	PROPOSED WATER LINE RELOCATION STA. 180+00 TO STA. 186+00		
C11	PROPOSED WATER LINE RELOCATION STA. 1038+50 TO STA. 1042+50		
C12	PROPOSED WATER LINE RELOCATION STA. 1042+50 TO STA. 1048+50		
C12A	PROPOSED WATER LINE RELOCATION IMPACT SITE #2 STA. 14+39 TO		
C13	STA. 20+91 PROPOSED WATER LINE RELOCATION STA. 1048+00 TO STA. 1053+50		
C13A	PROPOSED WATER LINE RELOCATION IMPACT SITE #2 STA. 20+91 TO		
C14	STA. 26+40 PROPOSED WATER LINE RELOCATION STA. 1053+50 TO STA. 1059+00		
C15	PROPOSED WATER LINE RELOCATION STA. 1059+00 TO STA. 1065+00		
C16	PROPOSED WATER LINE RELOCATION STA. 1065+00 TO STA. 1068+83		
C17	PROPOSED WATER LINE RELOCATION IMPACT SITE #2 STA. 41+75 TO		
C18	STA. 45+70PROPOSED WATER LINE RELOCATION IMPACT SITE #2 STA. 45+70 TO		
C19	STA. 50+26 PROPOSED WATER LINE RELOCATION IMPACT SITE #2 STA. 50+26 TO STA. 53+78		
C20	PROFILE IMPACT SITE #1 STA. 0+00 TO STA. 3+27		
C21	PROFILE IMPACT SITE #1 STA. 3+27 TO STA. 6+46		
C22	PROFILE IMPACT SITE #1 STA. 6+46 TO STA. 9+99		
C23	PROFILE IMPACT SITE #1 STA. 9+99 TO STA. 13+83		
C24	PROFILE IMPACT SITE #1 STA. 13+83 TO STA. 15+24		
C25	PROFILE IMPACT SITE #2 STA. 0+00 TO STA. 1+68		
C26	PROFILE IMPACT SITE #2 STA. 1+68 TO STA. 6+90		
C27	PROFILE IMPACT SITE #2 STA. 6+90 TO STA. 9+65		
C28	PROFILE IMPACT SITE #2 STA. 9+65 TO STA. 14+39		
C29	PROFILE IMPACT SITE #2 STA. 14+39 TO STA. 20+91		
C30	PROFILE IMPACT SITE #2 STA. 20+91 TO STA. 26+40		





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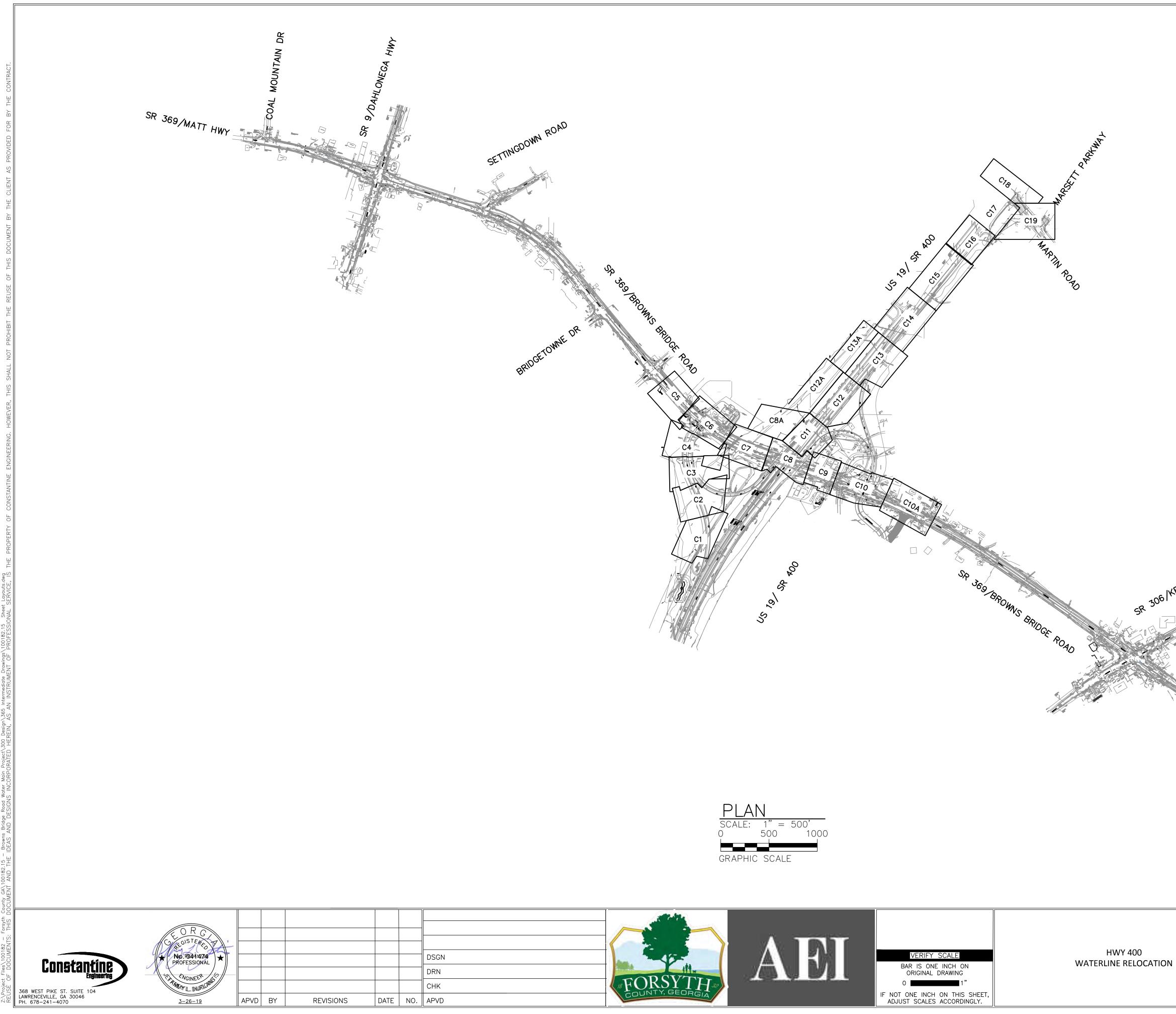


HWY 400 WATERLINE RELOCATION

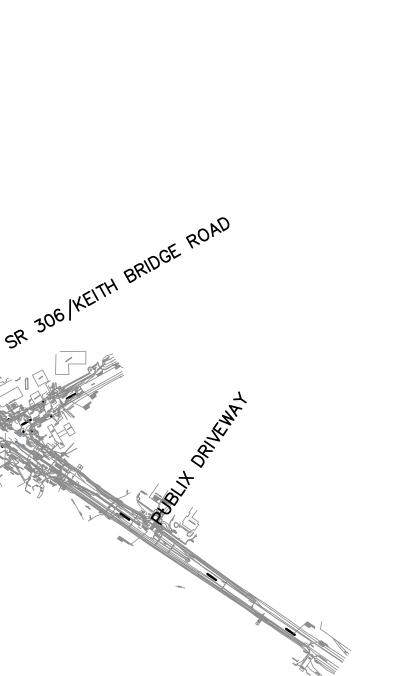
#### FOR BIDS

SHEET:	G2
DWG NO:	
DATE:	MARCH, 2019
PROJ NO:	100182.15

SHEET INDEX



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SCALE:	1" =	500'
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SHEET LAYOUT	SHEET: G3
	DWG NO:
	DATE: MARCH, 2019
	PROJ NO: 100182.15

#### FOR BIDS

#### **GENERAL NOTES:**

- 1. ALL WORK AND MATERIALS ARE TO CONFORM TO CURRENT FORSYTH COUNTY STANDARDS.
- 2. NOTIFY FORSYTH COUNTY WATER AND SEWER DEPT. 24 HOURS PRIOR TO ANY WATER LINE CONSTRUCTION AT (770) 781-2160
- 3. THE CONTRACTOR SHALL CALL THE UTILITIES PROTECTION CENTER "CALL BEFORE YOU DIG", TELEPHONE NUMBER 1-800-282-7411, BEFORE INITIATING EXCAVATION ACTIVITIES.
- 4. ALL 20" DIAMETER AND SMALLER WATER LINES SHALL BE DUCTILE IRON PRESSURE CLASS 350 AND POLY-WRAPPED UNLESS SHOWN OTHERWISE ON THE PLANS. PIPE SIZES 24" DIAMETER AND LARGER SHALL BE PRESSURE CLASS 200 AND POLY WRAPPED UNLESS SHOWN OTHERWISE ON THE PLANS.
- 5. WATER LINES SHALL BE INSTALLED INSIDE RIGHT-OF-WAY, OR IN LOCATION SHOWN ON PLANS.
- 6. WATER LINES SHALL HAVE AT LEAST 4 FEET OF COVER OR BE 4 FEET BELOW ROAD GRADE, WHICHEVER IS GREATER.
- 7. ALL ABANDONED WATER LINES OVER 6" IN DIAMETER WILL BE CUT, CAPPED, AND FULLY GROUT FILLED.
- 8. ALL ABANDONED VALVES AND BOXES SHALL BE REMOVED.
- 9. SHORT SIDE SERVICES SHALL BE 3/4" COPPER OR AS SHOWN ON THE PLANS.
- 10. LONG SIDE SERVICES SHALL BE I" COPPER INCASED IN 2" HDPE CONDUITS WITH 3/4" WYES AT LOT CORNERS. ALL LONG SIDE SERVICES TO BE DRY BORED OR HDD.
- 11. WATER METERS ARE TO BE LOCATED AT RIGHT-OF-WAY.
- 12. FIRE HYDRANTS ARE TO BE 3-WAY 5-1/4" TYPE. EXISTING LINES, HYDRANT, AND VALVES TO BE REMOVED AND LINES CAPPED.
- 13. FIRE HYDRANTS MUST BE FLOW TESTED PRIOR TO FINAL APPROVAL TO ENSURE ADEQUATE FIRE FLOWS.
- 14. CONCRETE VALVE MARKERS ARE TO BE INSTALLED AT ALL VALVES EXCEPT AT FIRE HYDRANTS.
- 15. CONCRETE BLOCKING SHALL BE PLACED AT ALL BENDS, TEES, AND FITTINGS FOR PIPES 20" AND SMALLER AND WHERE SHOWN ON THE PLANS FOR PIPES 24" AND LARGER.
- 16. ALL PIPE SHALL BE RESTRAINED JOINT.
- 17. ALL FITTINGS, BENDS, TEES AND VALVES SHALL INCLUDE RJ MJ RETAINER GLAND AS SPECIFIED.
- 18. 300 PSI CURB STOPS, CORPS, AND WYES, REQUIRED PER FORSYTH COUNTY STANDARDS.
- 19. ALL VALVES SHALL BE GATE VALVES.
- 20. NO DEVIATIONS FROM APPROVED DRAWINGS ARE ALLOWED WITHOUT APPROVAL FROM FORSYTH COUNTY DEPARTMENT OF WATER AND SEWER.
- 21. LINES ARE TO BE PRESSURE TESTED AND DISINFECTED PER COUNTY SPECIFICATIONS.
- 22. THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF ALL INFRASTRUCTURE FOR AN 18-MONTH PERIOD FOLLOWING INSTALLATION.
- 23. THE CONTRACTOR IS TO BE AWARE THAT THERE ARE OTHER EXISTING UTILITIES, BOTH ABOVE AND BELOW GROUND, ON THIS PROJECT. COORDINATE INSTALLATION WITH THE OTHER UTILITIES.
- 24. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE PRESENCE AND LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO BID AND CONSTRUCTION. THE CONTRACTOR SHALL REPAIR ANY DAMAGES TO OTHER UTILITIES AT NO ADDITIONAL COST TO THE OWNER.
- 25. THE CONTRACTOR SHALL VERIFY CONNECTIONS, WHERE INDICATED ON DRAWINGS, WITH OWNER.
- 26. THE CONTRACTOR IS RESPONSIBLE FOR REPLACING OR REPAIRING ANY DAMAGED PUBLIC OR PRIVATE PROPERTY OR FACILITIES TO THE SAME OR BETTER CONDITION AS EXISTED PRIOR TO THE CONSTRUCTION. THE CONTRACTOR WILL COORDINATE THE REPLACEMENT / REPAIR WITH THE ENGINEER AND THE FINAL INSTALLATION SHALL MEET THE APPROVAL OF THE ENGINEER.
- 27. THE EXISTING UTILITIES IN THIS CONSTRUCTION AREA ARE NOT NECESSARILY SHOWN ON THE PLANS. DATA CONCERNING UTILITIES SHOWN SHALL BE CONSIDERED AS APPROXIMATE ONLY.
- 28. CONTRACTOR SHALL FIELD VERIFY DIMENSIONS AND ELEVATIONS PRIOR TO BEGINNING CONSTRUCTION. SIGNIFICANT DEVIATIONS FROM INFORMATION SHOWN ON DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
- 29. WATER SHUTS FOR TIE-INS WILL TYPICALLY BE CONDUCTED FROM 10:00AM TO 2:00PM. PERIODICALLY THE SHUTS WILL BE REQUIRED AT NIGHT AFTER 10:00 PM TO MAINTAIN SERVICE TO CUSTOMERS. NO SEPARATE MEASUREMENT AND PAYMENT WILL BE MADE FOR NIGHT SHUTS.
- 30. ALL VALVES WILL BE SURVEYED WITH GPS COORDINATES BY THE CONTRACTOR WITHIN 2 DAYS OF INSTALLATION. ALL VALVES WILL BE RAISED DURING FINAL PAVING. PROVIDE GPS COORDINATES TO ENGINEER WITH EACH PAY ESTIMATE OR THE FIRST OF EACH MONTH.
- 31. ALL SERVICE LINES TO BE ABANDONED IN PLACE. CRIMP BOTH ENDS.
- 32. ALL WATER METERS, BACKFLOWS, AND METER BOXES TO BE RELOCATED.
- 33. ALL HYDRANTS, GATE VALVES, AND METERS REMOVED SHALL BE SALVAGED AND RETURNED TO FORSYTH COUNTY DEPARTMENT OF WATER AND SEWER AT 4050 COUNTY WAY, CUMMING, GA. PIPE AND FITTINGS SHALL BE DISPOSED OF ACCORDINGLY.
- 34. NO ADDITIONAL PAYMENT WILL BE MADE FOR NIGHT-TIME WORK.
- 35. NO CLEARING DURING THE MONTHS OF MAY 15 TO JULY 31 DUE TO LONG-EARED BAT ACTIVITY.
- 36. PIPE SHALL BE SWEPT DAILY. INSTALL BLOW-UP PLUG AT THE END OF EACH WORKDAY.



PH. 678-241-4070

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- 43. 36-INCH JOINT FLE

37. COORDINATE ALL WORK WITH GDOT ROADWAY CONTRACTOR.	
38. CONTRACTOR "AS-BUILTS" SHALL HAVE COORDINATE TABLE WITH NORTHING AN VALVES, HYDRANTS, MANHOLES, AND FITTINGS.	ND EASTING FOR ALL <u>DESCRIP</u>
38. ALL VALVE BOXES, HYDRANTS, MANHOLES, ETC. SHALL BE INSTALLED TO ACCO GRADE OR BE RAISED AS REQUIRED DURING ROADWAY CONSTRUCTION.	OMMODATE FINAL WATER VA
39. CONTRACTOR "AS BUILTS" SHALL HAVE COORDINATE TABLE WITH NORTHINGS A ALL VALVES, HYDRANTS, MANHOLES, AND FITTINGS.	AND EASTINGS FOR WATER ME
40. COMPLETE TIE-INS ON SHEETS C1 AND C12A CONCURRENTLY WITH TWO CONST	TRUCTION CREWS. WATER MA
41. COORDINATE WITH HWY 369/ 400 ROAD CONTRACTOR. INSTALL IMPACT SITE 1 STA. 0+00 TO 9+58 FIRST TO REDUCE IMPACTS ON CONSTRUCTION.	AND IMPACT SITE 2 ABANDON MAIN , WITH NO GRO
42 PULL DRY PIG DURING LINE CONSTRUCTION TO REDUCE SEDIMENT IN LINE.	
43. 36-INCH GATE VALVE SUPPLIED BY OWNER. PROVIDE PIPE END TO MATCH AN JOINT FLEX-RING BELL.	MERICAN RESTRAINED ABANDON MAIN WITH GROUT
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HWY 400 WATERLINE RELOCATION

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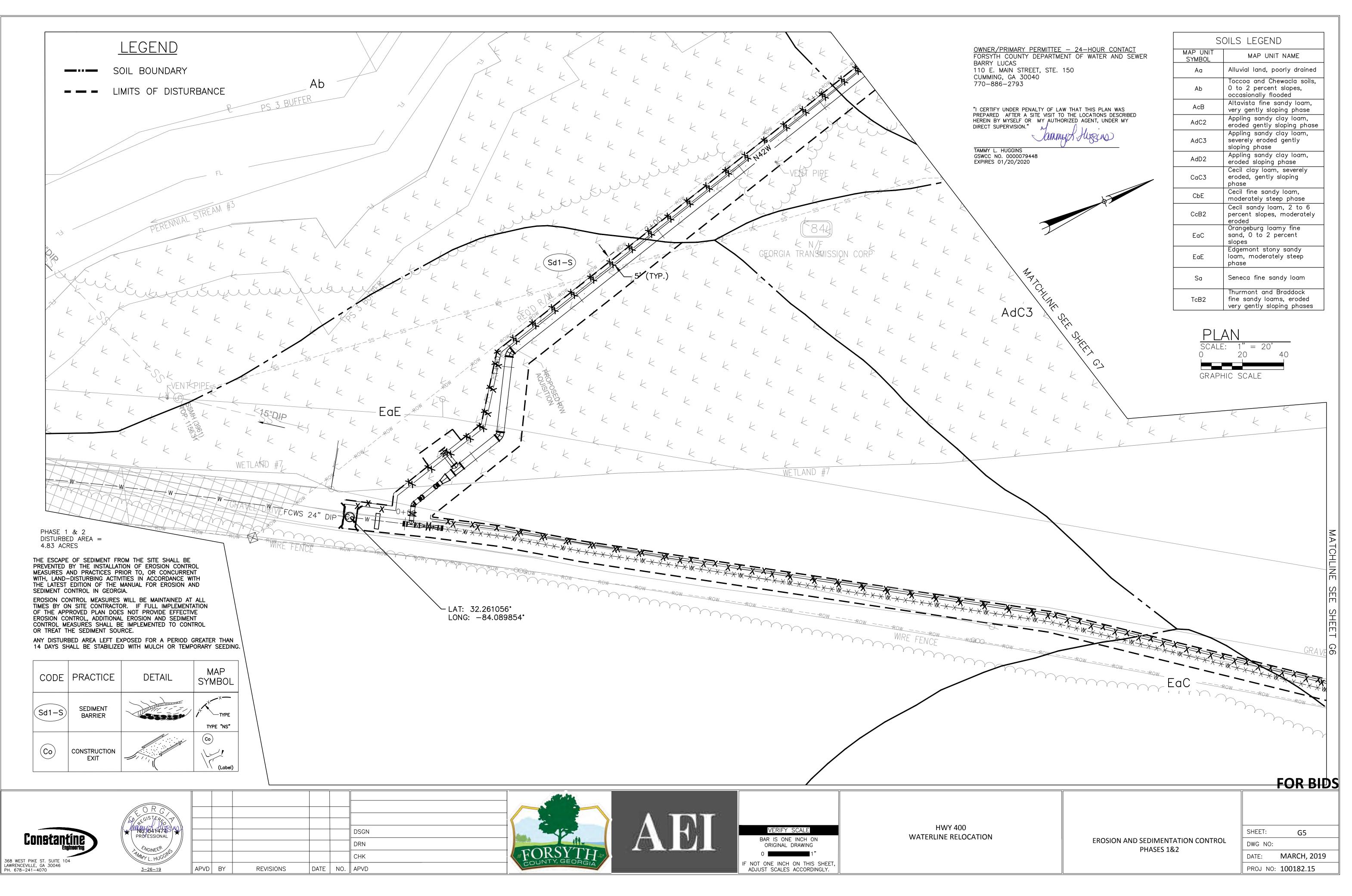




DESCRIPTION	EXISTING	NEW
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WATER MAIN		N8W
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OON MAIN / SERVICE VITH GROUT FILL	· _ /· _/· _/· _/· _/· /· /· /· /· /· /· /· /· /· /· /·	
OVE MAIN / SERVICE	$\cdot \ X \ \cdot $	
SEWER MAIN	— SS — 8"DIP _ SS —	N8S
FIRE HYDRANT	Ø	фғн
R RELEASE VALVE		Ο
EXISTING ROAD		
POSED FUTURE ROAD		
ND REPLACE ASPHALT		
ORE AND JACK PIT		
RTY AND EXISTING R/W LINE	R	
QUIRED R/W LINE		
NSTRUCTION LIMITS		
NT FOR CONSTRUCTION		
INT FOR CONSTRUCTION OF SLOPES		
INT FOR CONSTRUCTION OF DRIVES		
TREELINE		
ANGE BARRIER FENCE		
STREAM LINE	FL	
STREAM BUFFER	PS 3 BUFFER	
WETLANDS		
NG—EARED BAT HABITAT	ESA- BAT HABITAT	
MITS OF DISTURBANCE		
SOIL BOUNDARY		
SILT FENCE	<u> </u>	

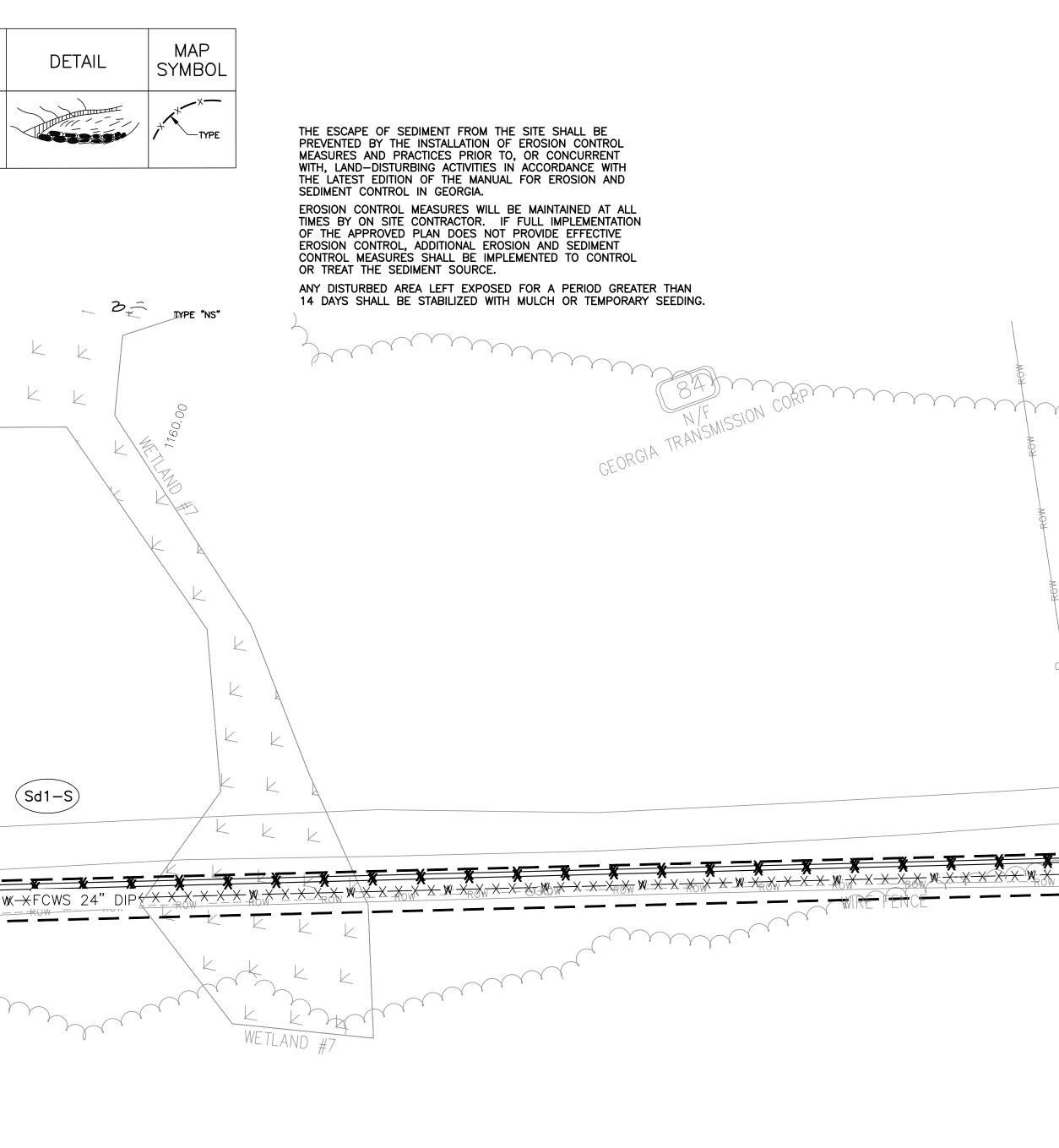
GENERAL NOTES AND LEGEND	SHEET:	G4
	DWG NO:	
	DATE:	MARCH, 2019
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MAP UNIT SYMBOL Aa Ab	MAP UNIT NAME Alluvial land, poorly drained Toccoa and Chewacla soils, 0 to 2 percent slopes, occasionally flooded Altavista fine sandy loam,	MATC	<b>X</b> X X X V ROW	KALA KEKOLA MANEKOLA ROW	<b>X</b> W - X ROW	K K K				×××	× × × ×	NCE	₩ *- X ₹0₩
MAP UNIT SYMBOL Aa	MAP UNIT NAME Alluvial land, poorly drained Toccoa and Chewacla soils, 0 to 2 percent slopes, occasionally flooded Altavista fine sandy loam, very gently sloping phase Appling sandy clay loam,	MATCHLINE	<b>X</b> X X X V ROW	KALA KEKOLA MANEKOLA ROW	<b>X</b> WX - X ROW	K K K				XXX V	× × ×	NCE	× ×
MAP UNIT SYMBOL Aa Ab AcB	MAP UNIT NAMEAlluvial land, poorly drainedToccoa and Chewacla soils, 0 to 2 percent slopes, occasionally floodedAltavista fine sandy loam, very gently sloping phaseAppling sandy clay loam, eroded gently sloping phaseAppling sandy clay loam, severely eroded gently	MATCHLINE SEE	X X X X V	KALA KEKOLA MANANA ROW	×wx-×	KUW				×××	XXX	NCE	
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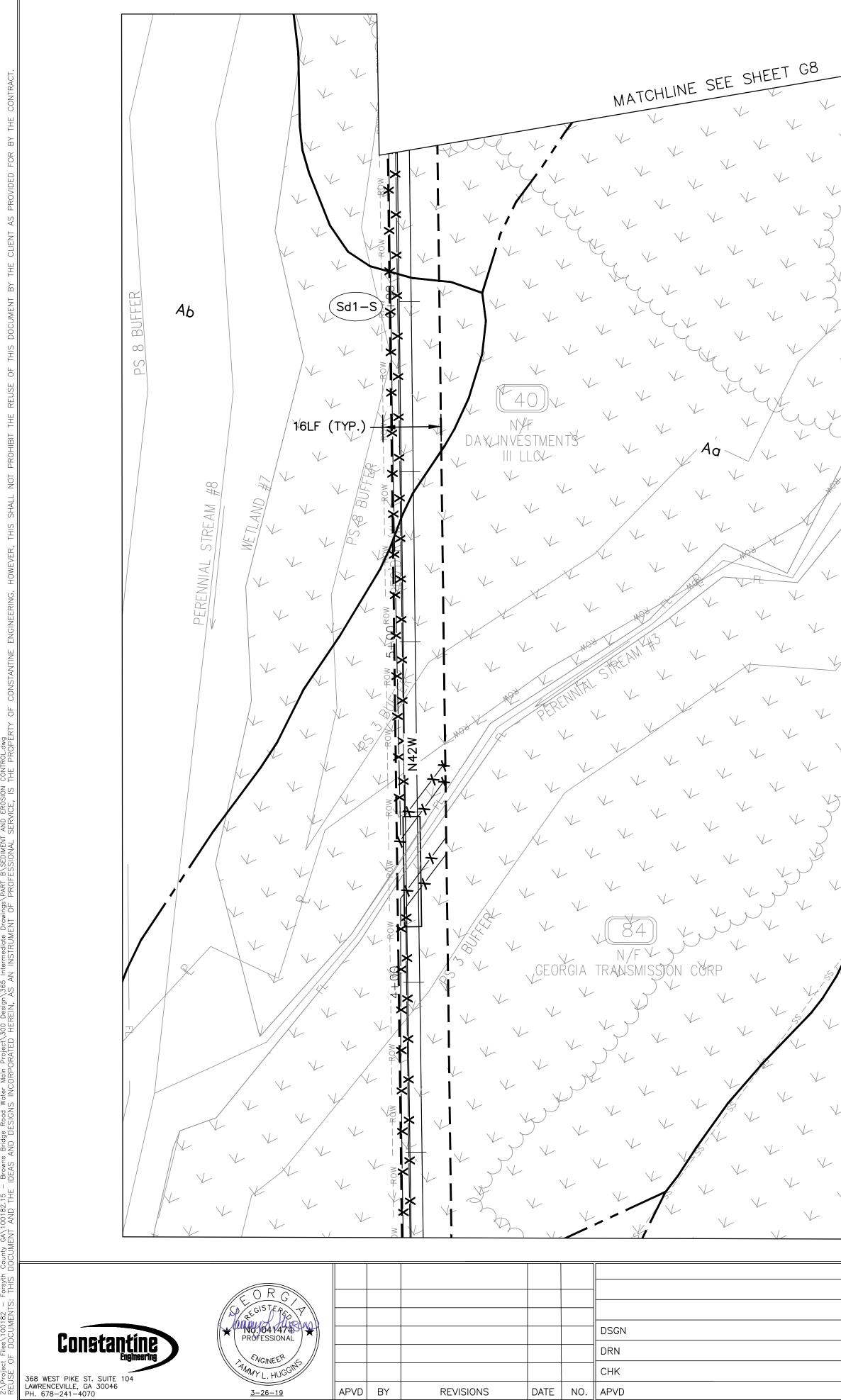
PLAN SCALE: 1'' = 20'20 40 GRAPHIC SCALE





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

	ECRECIA TRANSMISSION ECORECIA TRANSMISSION ECORECTA TRANSMISSION E	NOB XXXXXXXX
INV=1181.42'		MATCH LINE S
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VY 400 E RELOCATION	EROSION AND SEDIMENTATION CONTROL PHASES 1&2	SHEET:       G6         DWG NO:



AND SEDIMENT CONTROL IN GEORGIA.

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AdC3

V

V

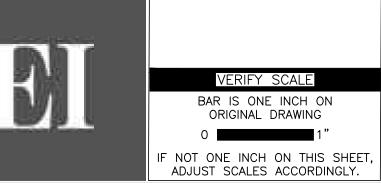
TO CONTROL OR TREAT THE SEDIMENT SOURCE.

V		V V
GEOD	S	OILS LEGEND
GEORGIA	MAP UNIT SYMBOL	MAP UNIT NAME
TAX ID	Aa	Alluvial land, poorly drained
V ,	Ab	Toccoa and Chewacla soils, 0 to 2 percent slopes, occasionally flooded
$\checkmark$	AcB	Altavista fine sandy loam, very gently sloping phase
- 	AdC2	Appling sandy clay loam, eroded gently sloping phase
X	AdC3	Appling sandy clay loam, severely eroded gently sloping phase
	AdD2	Appling sandy clay loam, eroded sloping phase
	CaC3	Cecil clay loam, severely eroded, gently sloping phase
	CbE	Cecil fine sandy loam, moderately steep phase
	CcB2	Cecil sandy loam, 2 to 6 percent slopes, moderately eroded
	EaC	Orangeburg loamy fine sand, 0 to 2 percent slopes
	EaE	Edgemont stony sandy loam, moderately steep phase
	Sa	Seneca fine sandy loam
	TcB2	Thurmont and Braddock fine sandy loams, eroded very gently sloping phases

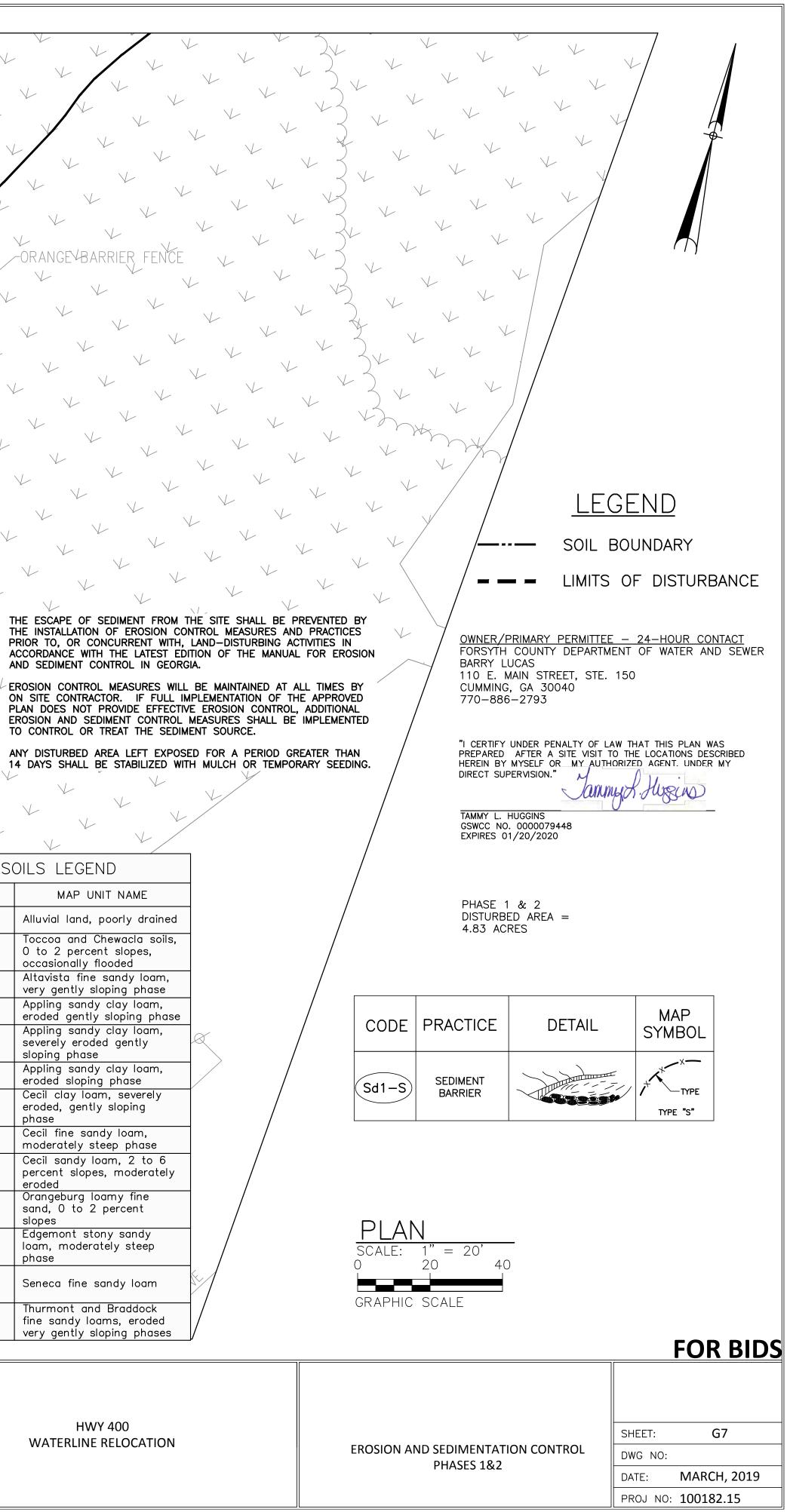


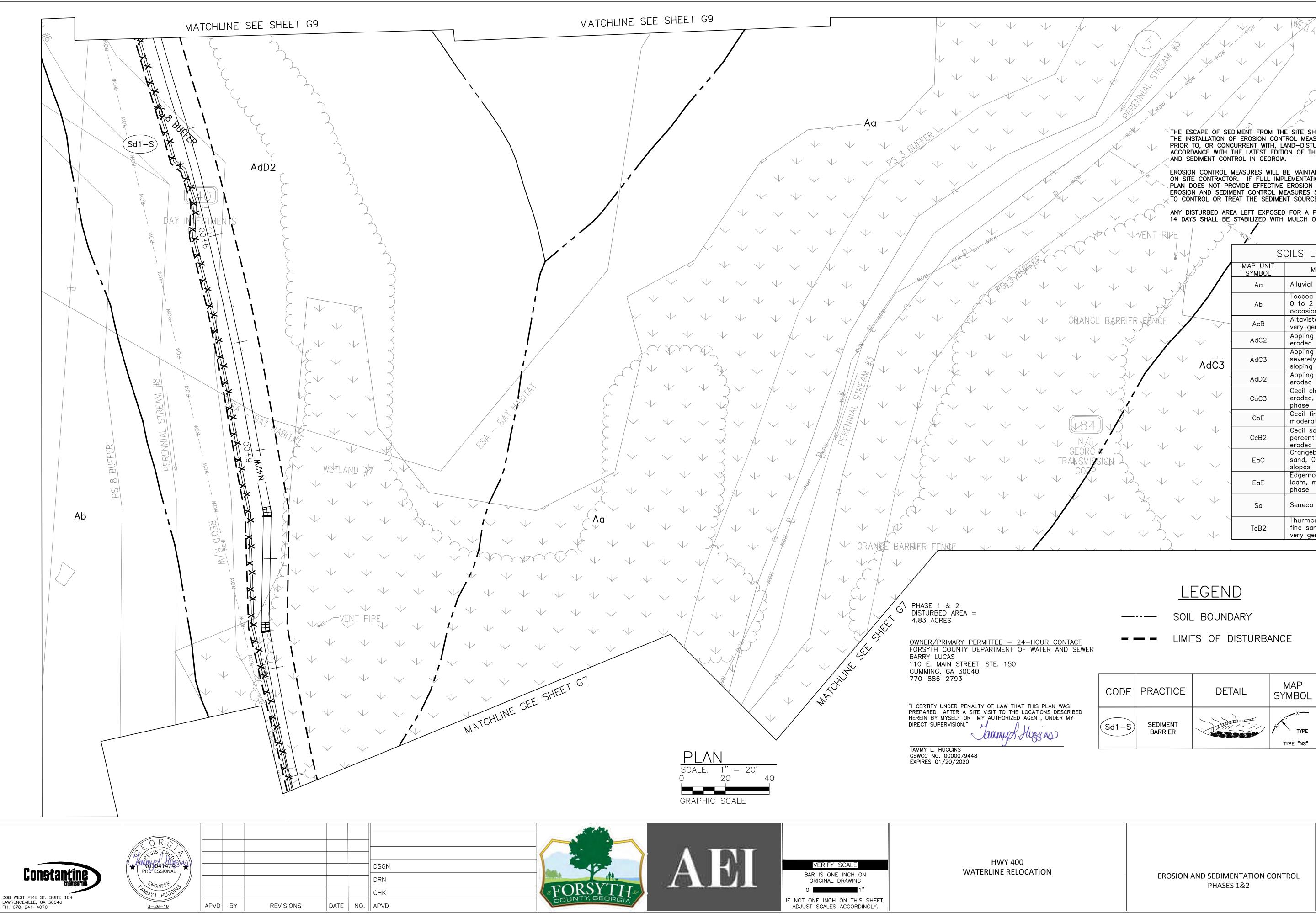


V



MATCHLINE SEE SHEET



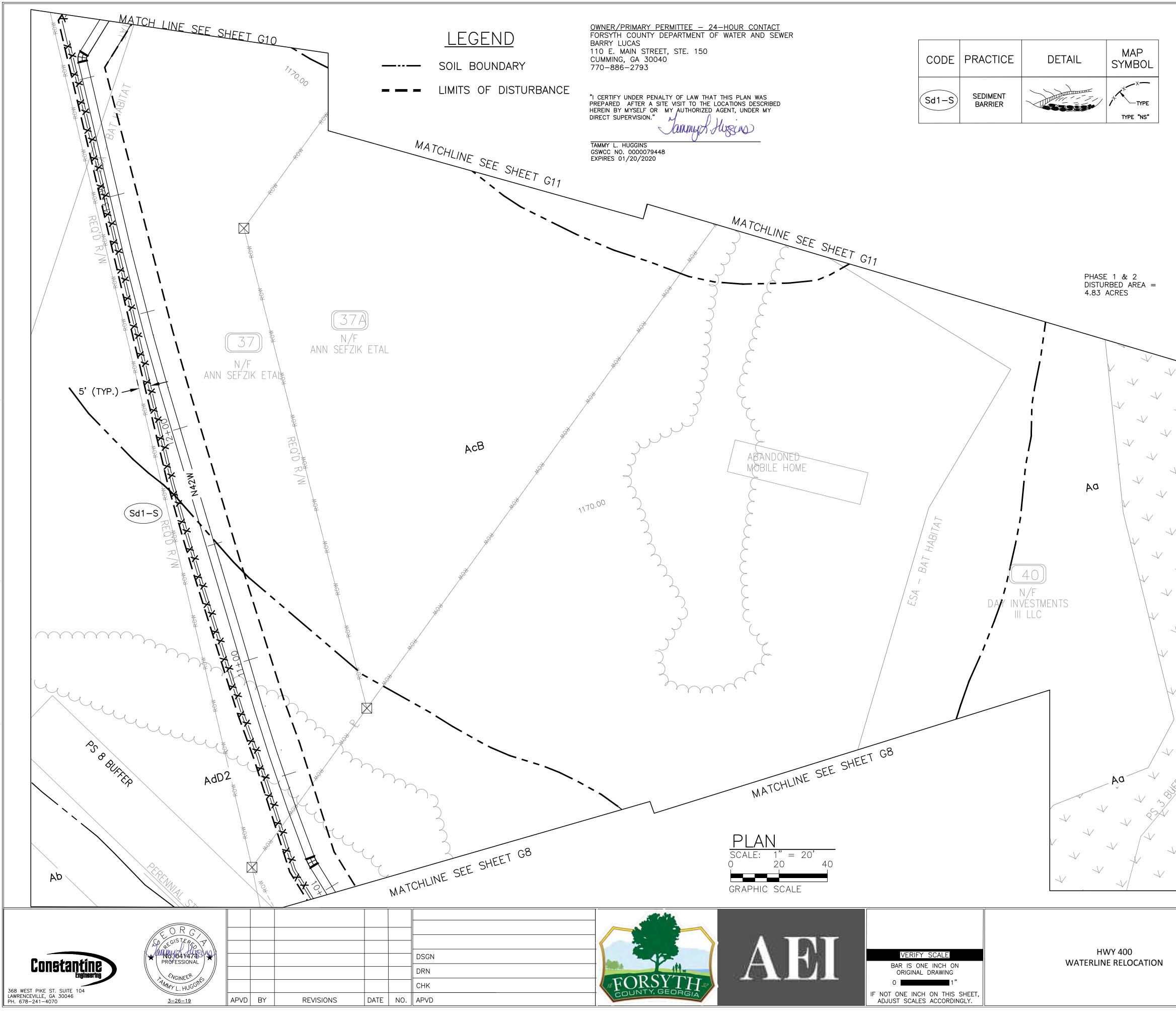


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THE INSTALLATION PRIOR TO, OR COL	OF EROSION CON NCURRENT WITH, I THE LATEST EDIT	HE SITE SHALL BE PREVENTED BY ITROL MEASURES AND PRACTICES AND-DISTURBING ACTIVITIES IN ION OF THE MANUAL FOR EROSION A.
NON SITE CONTRACT	IOR. IF FULL IMP ROVIDE EFFECTIVE IMENT CONTROL N	BE MAINTAINED AT ALL TIMES BY PLEMENTATION OF THE APPROVED E EROSION CONTROL, ADDITIONAL MEASURES SHALL BE IMPLEMENTED INT SOURCE.
		D FOR A PERIOD GREATER THAN I MULCH OR TEMPORARY SEEDING.
VENT RIPE	A A A A A A A A A A A A A A A A A A A	RON
		OILS LEGEND
	MAP UNIT SYMBOL	MAP UNIT NAME
	Aa	Alluvial land, poorly drained Toccoa and Chewacla soils,
	Ab	0 to 2 percent slopes, occasionally flooded
ORANGE BARRIER EENCE	Ab AcB	0 to 2 percent slopes, occasionally flooded Altavista fine sandy loam, very gently sloping phase
ORANGE BARRIER EENCE		O to 2 percent slopes, occasionally flooded Altavista fine sandy loam, very gently sloping phase Appling sandy clay loam, eroded gently sloping phase
ORANGE BARRIER EENCE	AcB	0 to 2 percent slopes, occasionally flooded Altavista fine sandy loam, very gently sloping phase Appling sandy clay loam,
	AcB AdC2	<ul> <li>0 to 2 percent slopes, occasionally flooded</li> <li>Altavista fine sandy loam, very gently sloping phase</li> <li>Appling sandy clay loam, eroded gently sloping phase</li> <li>Appling sandy clay loam, severely eroded gently sloping phase</li> <li>Appling sandy clay loam, eroded sloping phase</li> </ul>
	AcB AdC2 AdC3	O to 2 percent slopes, occasionally flooded Altavista fine sandy loam, very gently sloping phase Appling sandy clay loam, eroded gently sloping phase Appling sandy clay loam, severely eroded gently sloping phase Appling sandy clay loam,
	AcB AdC2 AdC3 AdD2	<ul> <li>0 to 2 percent slopes, occasionally flooded</li> <li>Altavista fine sandy loam, very gently sloping phase</li> <li>Appling sandy clay loam, eroded gently sloping phase</li> <li>Appling sandy clay loam, severely eroded gently sloping phase</li> <li>Appling sandy clay loam, eroded sloping phase</li> <li>Cecil clay loam, severely eroded, gently sloping phase</li> <li>Cecil fine sandy loam, moderately steep phase</li> </ul>
	AcB AdC2 AdC3 AdD2 CaC3	<ul> <li>0 to 2 percent slopes, occasionally flooded</li> <li>Altavista fine sandy loam, very gently sloping phase</li> <li>Appling sandy clay loam, eroded gently sloping phase</li> <li>Appling sandy clay loam, severely eroded gently sloping phase</li> <li>Appling sandy clay loam, eroded sloping phase</li> <li>Cecil clay loam, severely eroded, gently sloping phase</li> <li>Cecil fine sandy loam, moderately steep phase</li> <li>Cecil sandy loam, 2 to 6 percent slopes, moderately eroded</li> </ul>
	AcB AdC2 AdC3 AdD2 CaC3 CbE	<ul> <li>0 to 2 percent slopes, occasionally flooded</li> <li>Altavista fine sandy loam, very gently sloping phase</li> <li>Appling sandy clay loam, eroded gently sloping phase</li> <li>Appling sandy clay loam, severely eroded gently sloping phase</li> <li>Appling sandy clay loam, eroded sloping phase</li> <li>Cecil clay loam, severely eroded, gently sloping phase</li> <li>Cecil fine sandy loam, moderately steep phase</li> <li>Cecil sandy loam, 2 to 6 percent slopes, moderately eroded</li> <li>Orangeburg loamy fine sand, 0 to 2 percent slopes</li> </ul>
$\begin{array}{c} + & + & + \\ + & + & + \\ + & + & + \\ + & + &$	AcB AdC2 AdC3 AdD2 CaC3 CbE CcB2	<ul> <li>0 to 2 percent slopes, occasionally flooded</li> <li>Altavista fine sandy loam, very gently sloping phase</li> <li>Appling sandy clay loam, eroded gently sloping phase</li> <li>Appling sandy clay loam, severely eroded gently sloping phase</li> <li>Appling sandy clay loam, eroded sloping phase</li> <li>Cecil clay loam, severely eroded, gently sloping phase</li> <li>Cecil fine sandy loam, moderately steep phase</li> <li>Cecil sandy loam, 2 to 6 percent slopes, moderately eroded</li> <li>Orangeburg loamy fine sand, 0 to 2 percent</li> </ul>
$\begin{array}{c} + & + & + \\ + & + & + \\ + & + & + \\ + & + &$	AcB AdC2 AdC3 AdD2 CaC3 CbE CcB2 EaC	<ul> <li>0 to 2 percent slopes, occasionally flooded</li> <li>Altavista fine sandy loam, very gently sloping phase</li> <li>Appling sandy clay loam, eroded gently sloping phase</li> <li>Appling sandy clay loam, severely eroded gently sloping phase</li> <li>Appling sandy clay loam, eroded sloping phase</li> <li>Cecil clay loam, severely eroded, gently sloping phase</li> <li>Cecil fine sandy loam, moderately steep phase</li> <li>Cecil sandy loam, 2 to 6 percent slopes, moderately eroded</li> <li>Orangeburg loamy fine sand, 0 to 2 percent slopes</li> <li>Edgemont stony sandy loam, moderately steep</li> </ul>

G8
MARCH, 2019
100182.15

 $\square$ 

FOR BIDS



[	S	OILS LEGEND		
·	MAP UNIT	MAP UNIT NAME	`	
	SYMBOL Aa	Alluvial land, poorly drained		
	Ab	Toccoa and Chewacla soils, 0 to 2 percent slopes, occasionally flooded		X
	AcB	Altavista fine sandy loam, very gently sloping phase		
	AdC2	Appling sandy clay loam, eroded gently sloping phase		
	A d C 3	Appling sandy clay loam, severely eroded gently		
	AdC3	sloping phase Appling sandy clay loam,		
	AdD2	eroded sloping phase		
	CaC3	Cecil clay loam, severely eroded, gently sloping phase		
	CbE	Cecil fine sandy loam, moderately steep phase		
	C-D2	Cecil sandy loam, 2 to 6		
	CcB2	percent slopes, moderately eroded Orangeburg loamy fine		
	EaC	sand, 0 to 2 percent slopes		
	EaE	Edgemont stony sandy loam, moderately steep phase		Sd1-S
	Sa	Seneca fine sandy loam	*	I CWS
	TcB2	Thurmont and Braddock fine sandy loams, eroded		TIGHT CI
		very gently sloping phases	C/ .	MITHERE RUL
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тн	F ESCAPE OF SI	EDIMENT FROM THE SITE SHALL BE		
- 🗸 The	E INSTALLATION	OF EROSION CONTROL MEASURES A ICURRENT WITH, LAND-DISTURBING A	ND PRACTICES	
AC	CORDANCE WITH	THE LATEST EDITION OF THE MANU		
		MEASURES WILL BE MAINTAINED AT		
PLA	AN DOES NOT P	OR. IF FULL IMPLEMENTATION OF ROVIDE EFFECTIVE EROSION CONTRO	)L, ADDITIONAL	
		MENT CONTROL MEASURES SHALL E REAT THE SEDIMENT SOURCE.	BE IMPLEMENTED $\downarrow$	000.
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		· · · · · · · · · · · · · · · · · · ·		FOR BIDS
				PROFILE: SEE C23
				SHEET: <b>G9</b>
		EROSION AND SEDIMENTATIO	ON CONTROL	DWG NO:

PHASES 1&2

## DATE: MARCH, 2019 PROJ NO: 100182.15

OWNER/PRIMARY PERMITTEE – 24-HOUR CONTACT
FORSYTH COUNTY DEPARTMENT OF WATER AND SEWER
BARRY LUCAS
110 E. MAIN STREET, STE. 150
CUMMING, GA 30040
770-886-2793

"I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY DIRECT SUPERVISION."

Janmy K. Huzens

TAMMY L. HUGGINS GSWCC NO. 0000079448 EXPIRES 01/20/2020

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#### \_EGEND

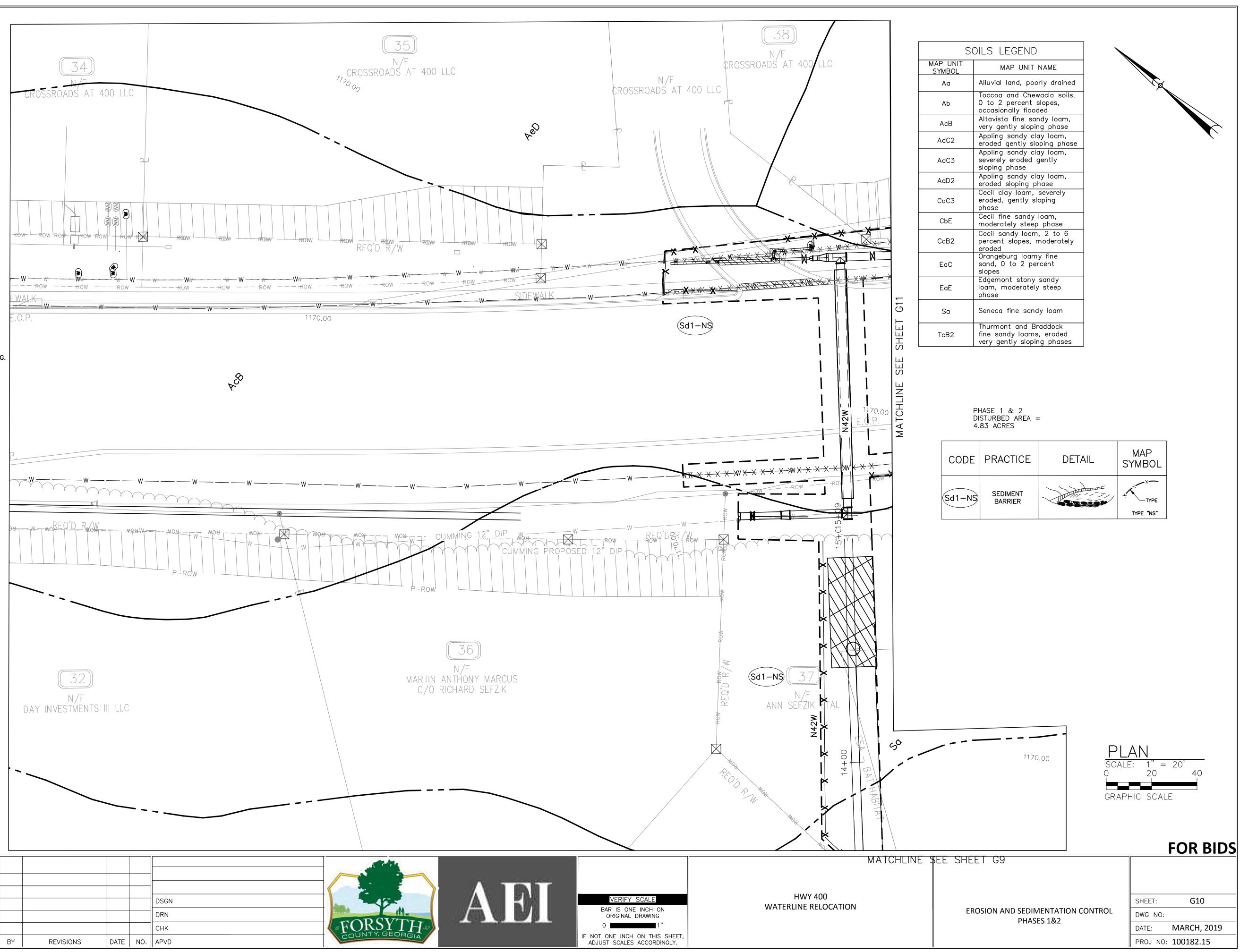
SOIL BOUNDARY

LIMITS OF DISTURBANCE

THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND-DISTURBING ACTIVITIES IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA. EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL

TIMES BY ON SITE CONTRACTOR. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.

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

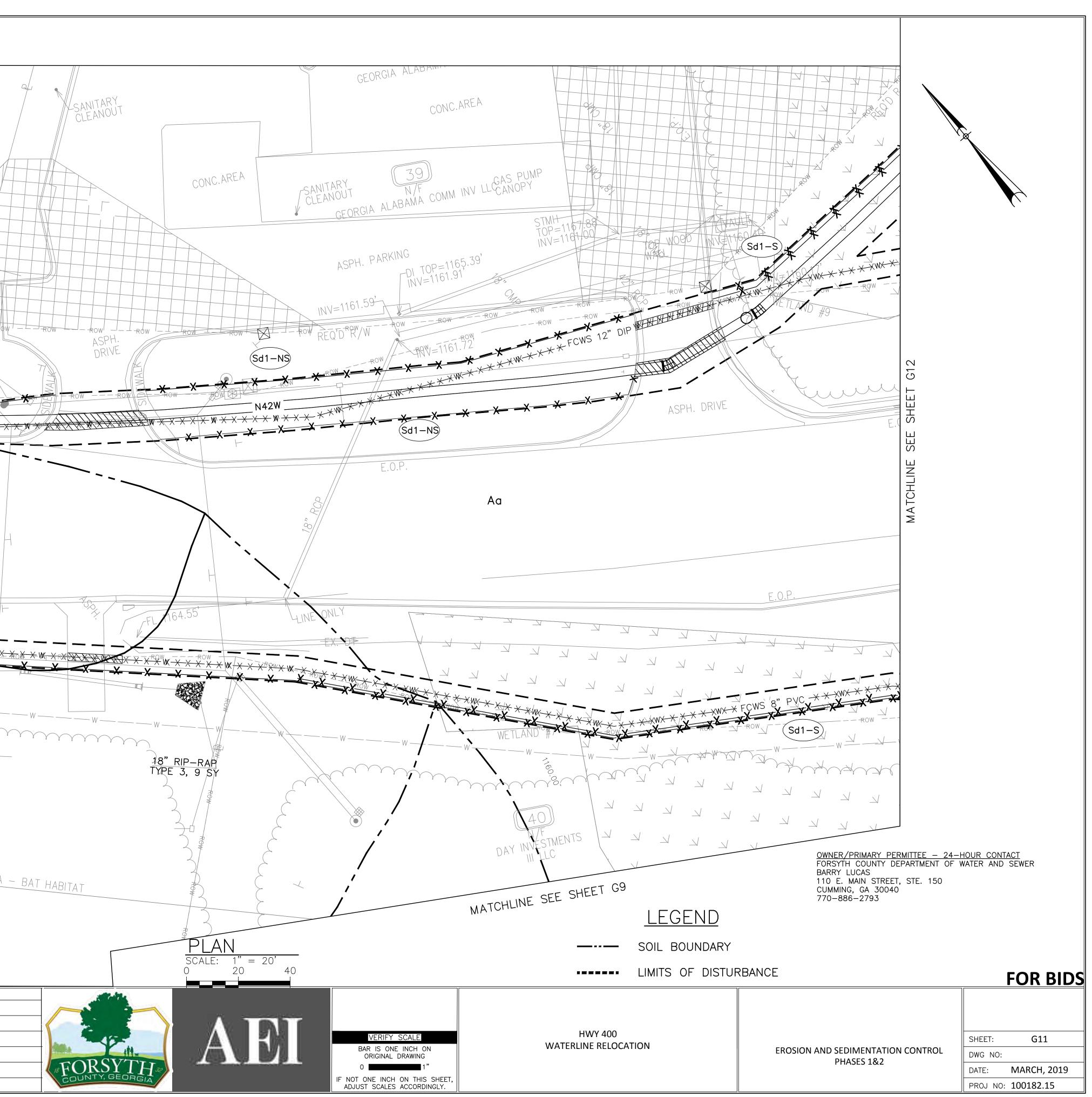


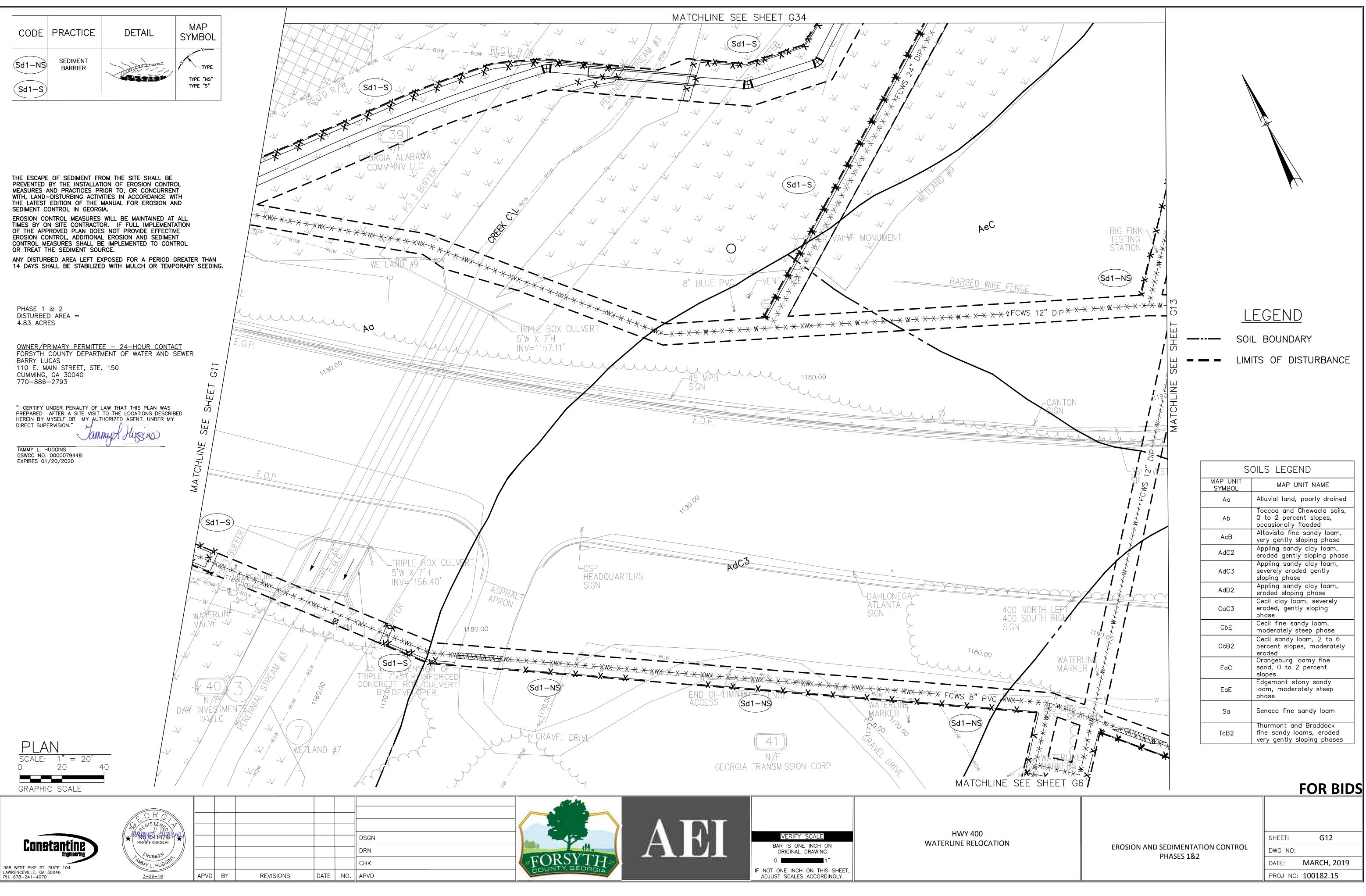


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NO.041470 PROFESSIONAL						DSGN
						DRN
ENGINEER MMY L. HUGGINS						
MY L. HUGG						СНК
3-26-19	APVD	BY	REVISIONS	DATE	NO.	APVD

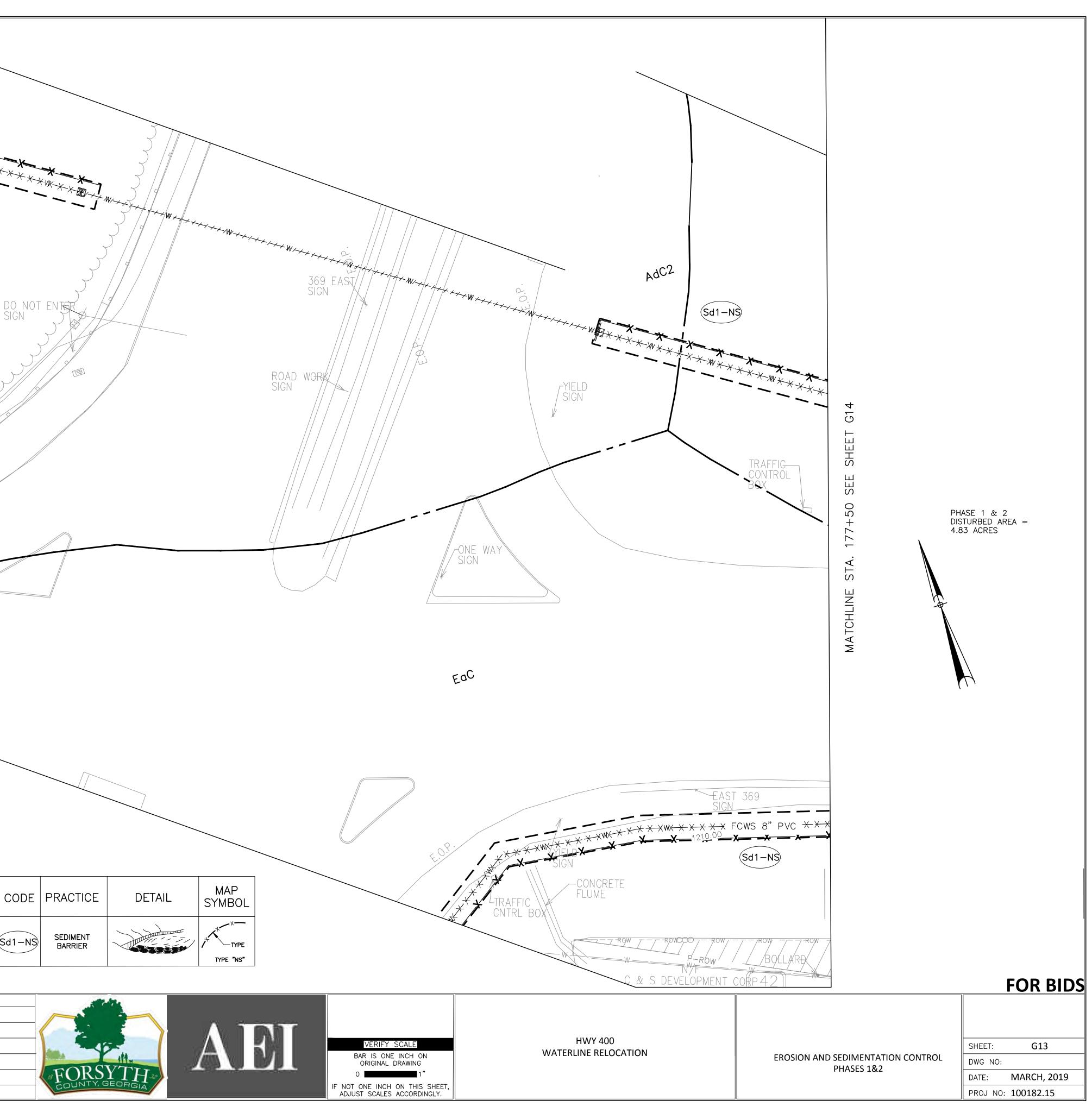
	SOILS LEGE	ND									
MAP UNIT SYMBOL	MAP U	NIT NAME	$\vdash$								
Aa		poorly drained Chewacla soils,									
Ab	0 to 2 perce	ent slopes,									
AcB		sandy loam,									
AdC2	Appling sand										/
AdC3	Appling sand severely erod	y clay loam,									J
	sloping phase Appling sand	e									ĥ
AdD2	eroded slopin Cecil clay loc	g phase				70]					
CaC3	eroded, gentl					50)			4-	$\mathbb{A}$	
CbE	Cecil fine sar moderately s	ndy loam, teep phase			ncsr0AD	38) 1/F 1/S AT 400	LLC				
CcB2	percent slope	oam, 2 to 6 es, moderately		CR	033113						
EaC	eroded Orangeburg I sand, 0 to 2										
	slopes Edgemont st										
EaE	loam, modere										
Sa	Seneca fine	sandy loam							ROW		20W
	Thurmont an					-NS	-R - R		A TION		
TcB2	fine sandy lo very gently s	ams, eroded loping phases	×	* * * *		- X REMVE	K F.R.	×	<del>-x - x - x</del>		
	PENALTY OF LAW TH	AT THIS PLAN WAS LOCATIONS DESCRIBED					RQW	<u> </u>		X ROWY	
HEREIN BY MYSELF DIRECT SUPERVISIO	F OR MY AUTHORIZE	AGENT, UNDER MY		XX	, SIDEWA	K				The the second s	
	Janmyx	Museus 05	.0.P.		× <u> </u>	XXXXX	<u>*</u> _*	<u> </u>	<u>** * * *</u> * *	<u>→ → → →</u> →	_X
TAMMY L. HUGGINS GSWCC NO. 00000	079448										$\neg$
EXPIRES 01/20/2	2020	SHEET									
		SEE									
		Ш Z									
		MATCHLINE									
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PHASE 1 & DISTURBED A 4.83 ACRES		R	<u>X</u>	HOW X			N <del>X - X</del> - <b>──X</b> ─	<u>X-X-X</u> <del>- Ro</del> ₩ <b>X</b> -		<u> </u>	<del>X                                    </del>
	OF SEDIMENT FROM	THE SITE SHALL BE									
PREVENTED B MEASURES AN	Y THE INSTALLATION	N OF EROSION CONTROR R TO, OR CONCURREN	١T		<u> </u>	\/	AH0		Sd1-NS		
THE LATEST E	DISTURBING ACTIVITIE EDITION OF THE MAI NTROL IN GEORGIA.	ES IN ACCORDANCE W NUAL FOR EROSION A	ITH ND						W W W	/	
EROSION CON	ITROL MEASURES W	ILL BE MAINTAINED AT IF FULL IMPLEMENT						ΥΥ		//	$\overline{\gamma}$
OF THE APPR EROSION CON	ROVED PLAN DOES I	NOT PROVIDE EFFECTIN EROSION AND SEDIMEN	VE NT			RIVE	AD4				
OR TREAT THE	E SEDIMENT SOURC			THAN		A A A A					
		OSED FOR A PERIOD ( WITH MULCH OR TEMF					ROH		B	UILDING Sa	
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CODE PF	RACTICE	DETAIL	MAP SYMBC		IK	ETAL /					
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	SEDIMENT			-		<u>P</u>				ES,	A _
Sd1-S	BARRIER		TYPE "NS								
						LOH LOH					
									(37A)		
					/				NI/F		
					1	L F	<u> </u>	<u></u>	N/F CEFZIK ETAL		
		C REGISTERS V									
Consta	antine								DSGN		
	Engineering	THOMAS L. HUGGINS	//						DRN CHK		
368 WEST PIKE ST. SUIT LAWRENCEVILLE, GA 3004 PH. 678–241–4070	TE 104 46	<u>3-26-19</u>	AP	VD BY	RE	/ISIONS	DATE	NO.	APVD		
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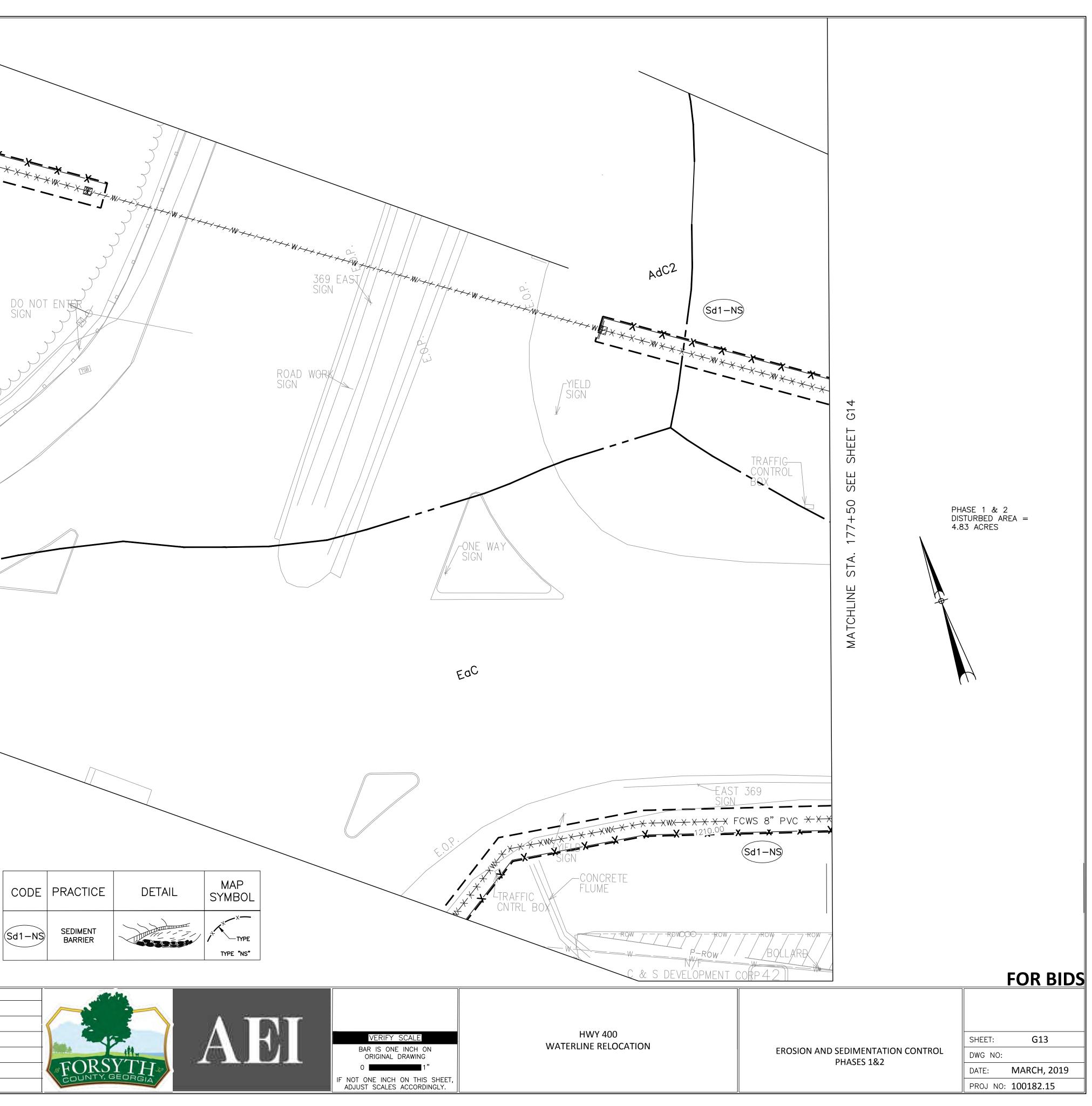


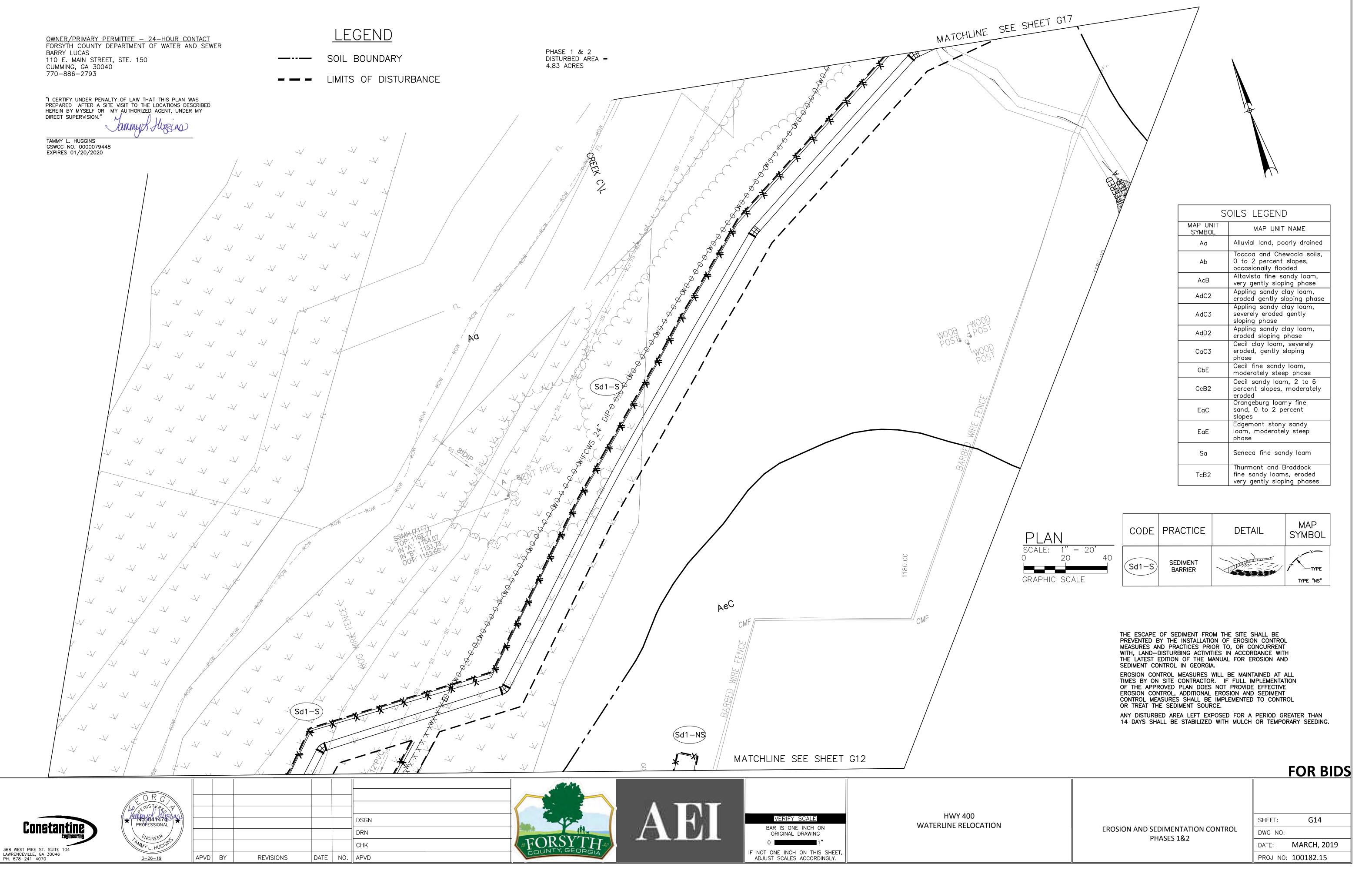


SHEET:	G12
DWG NO:	
DATE:	MARCH, 2019
PROJ NO:	100182.15

			МАТСНІ	INE SEE SHEET G14	4
		1170.			
		Ţ.	÷+.	(Sd1-NS)	
MAP UNIT	OILS LEGEND				
SYMBOL Aa	MAP UNIT NAME Alluvial land, poorly drained		A A A A A A A A A A A A A A A A A A A	CWS 12"	
	Toccoa and Chewacla soils,			CWS 12" DIP X XXWX XX	X
Ab	0 to 2 percent slopes, occasionally flooded Altavista fine sandy loam,	*	*   *   \$		*****
AcB	very gently sloping phase Appling sandy clay loam,		<i>k</i>		
AdC2	eroded gently sloping phase Appling sandy clay loam,	17	<i>.</i>		
AdC3	severely eroded gently sloping phase	<b>*</b>	1		
AdD2	Appling sandy clay loam, eroded sloping phase	***	1		
CaC3	Cecil clay loam, severely eroded, gently sloping				
СЬЕ	phase Cecil fine sandy loam,	**			
	moderately steep phase Cecil sandy loam, 2 to 6	× /			AeC
CcB2	percent slopes, moderately eroded Orangeburg loamy fine	× /			
EaC	sand, 0 to 2 percent slopes				
EaE	Edgemont stony sandy loam, moderately steep		-BIG FINK TESTING	~ <sup>1,80</sup> .00	
	phase		STATION		
Sa	Seneca fine sandy loam	X X	/		
TcB2	Thurmont and Braddock fine sandy loams, eroded very gently sloping phases	7 7 1			
L	I toty going bioping pridata				S ///
		$\leq  \downarrow $			
OWNER/PRIMARY PE	ERMITTEE - 24-HOUR CONTACT			-YIFLD	
BARRY LUCAS 110 E. MAIN STREE	DEPARTMENT OF WATER AND SEWER	MATCHLINE		KID STOR	
CUMMING, GA 3004 770-886-2793					
		SEE			
PREPARED AFTER A SI	LTY OF LAW THAT THIS PLAN WAS TE VISIT TO THE LOCATIONS DESCRIBED				
HEREIN BY MYSELF OR DIRECT SUPERVISION."	MY AUTHORIZED AGENT, UNDER MY	SHEE	P		
TAMMY L. HUGGINS	MININGO PUSCO		••••		
GSWCC NO. 0000079448 EXPIRES 01/20/2020	8	1 2	``		
			$\rightarrow$		
<u> </u>	<u>_egend</u>				
<b></b>	IL BOUNDARY				
		$\bigcirc \frown$			$\sim$
LIN	IITS OF DISTURBANCE				
PREVENTED BY THE INS	NT FROM THE SITE SHALL BE TALLATION OF EROSION CONTROL		- Alton		/
MEASURES AND PRACTIC WITH, LAND-DISTURBING	CES PRIOR TO, OR CONCURRENT ACTIVITIES IN ACCORDANCE WITH THE MANUAL FOR EROSION AND				
SEDIMENT CONTROL IN				/	
TIMES BY ON SITE CON OF THE APPROVED PLAN	TRACTOR. IF FULL IMPLEMENTATION N DOES NOT PROVIDE EFFECTIVE			$/ \parallel / $	
	ITIONAL EROSION AND SEDIMENT IALL BE IMPLEMENTED TO CONTROL T SOURCE.			$/ \parallel / 2$	$\gamma$
ANY DISTURBED AREA L	EFT EXPOSED FOR A PERIOD GREATER ABILIZED WITH MULCH OR TEMPORARY S		V W		
TT UNIS SHALL DE STA	ULLED WITH WOLCH OR LEMPORARY S			YIELD SIGN	
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	SCALE: $T = 20$ 0 20	40	*		
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368 WEST PIKE ST SUITE 104	RETING			СНК	
LAWRENCEVILLE, GA 30046 PH. 678-241-4070	3-26-19	APVD BY	REVISIONS	DATE NO. APVD	



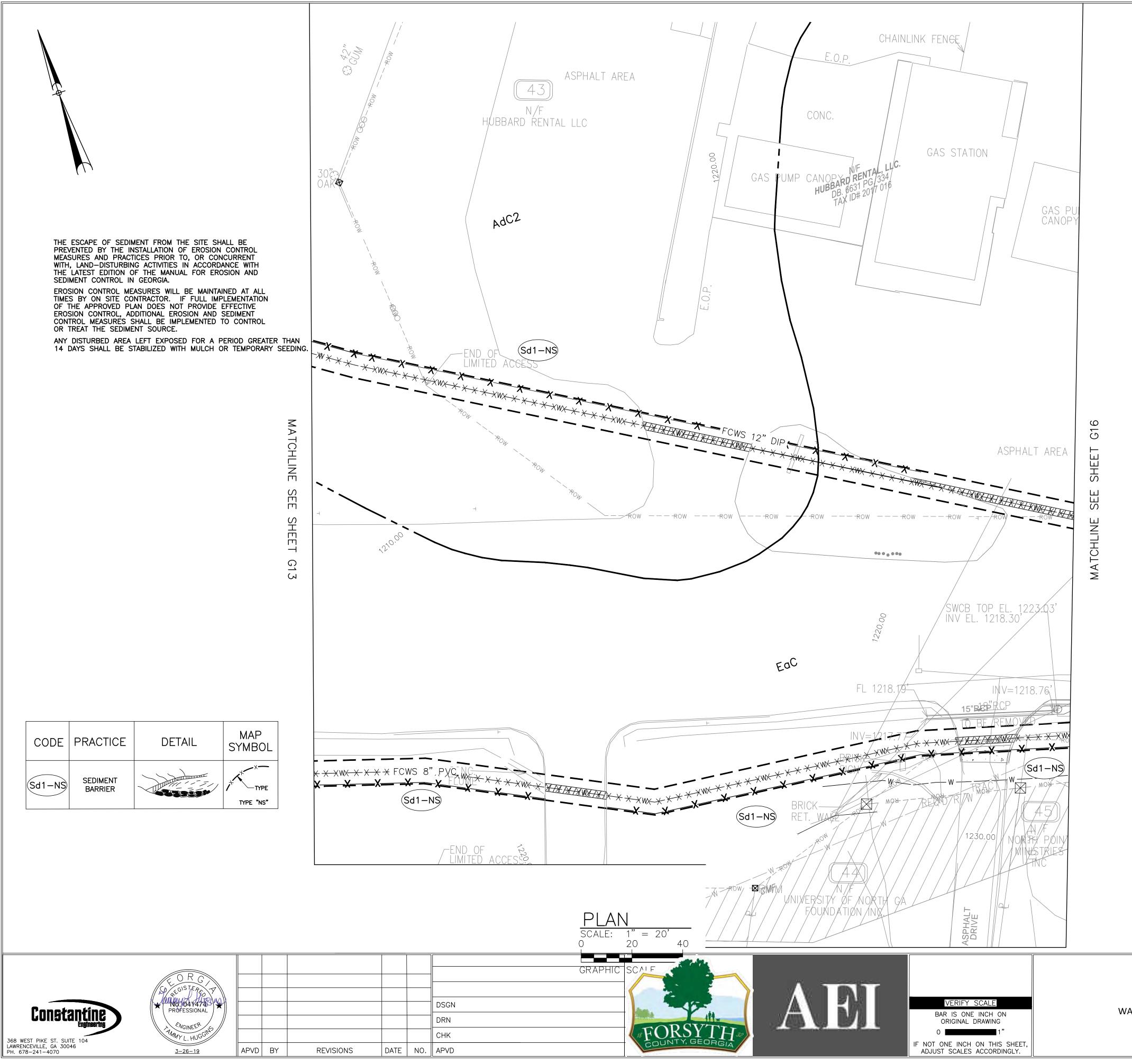




EET G17		
	MAP UNIT SYMBOL	SOILS LEGEND MAP UNIT NAME
	Aa	Alluvial land, poorly drained
	Ab	Toccoa and Chewacla soils, 0 to 2 percent slopes, occasionally flooded
	AcB	Altavista fine sandy loam, very gently sloping phase
	AdC2	Appling sandy clay loam, eroded gently sloping phase
	AdC3	Appling sandy clay loam, severely eroded gently sloping phase
	AdD2	Appling sandy clay loam, eroded sloping phase
	CaC3	Cecil clay loam, severely eroded, gently sloping phase
	CbE	Cecil fine sandy loam, moderately steep phase
	CcB2	Cecil sandy loam, 2 to 6 percent slopes, moderately eroded
	EaC	Orangeburg loamy fine sand, 0 to 2 percent slopes
/	EaE	Edgemont stony sandy loam, moderately steep phase
	Sa	Seneca fine sandy loam
	ToB2	Thurmont and Braddock

CODE	PRACTICE	DETAIL	MAP SYMBOL
Sd1-S	SEDIMENT BARRIER		TYPE "NS"

THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH, LAND-DISTURBING ACTIVITIES IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA.
EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES BY ON SITE CONTRACTOR. IF FULL IMPLEMENTATION OF THE APPROVED PLAN DOES NOT PROVIDE EFFECTIVE EROSION CONTROL, ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED TO CONTROL OR TREAT THE SEDIMENT SOURCE.
ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN 14 DAYS SHALL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING



MAP UNIT SYMBOL Aa Ab Ab AcB AdC2 AdC2 AdC3 CaC3 CbE CaC3 CbE CcB2 EaC EaC

TcB2

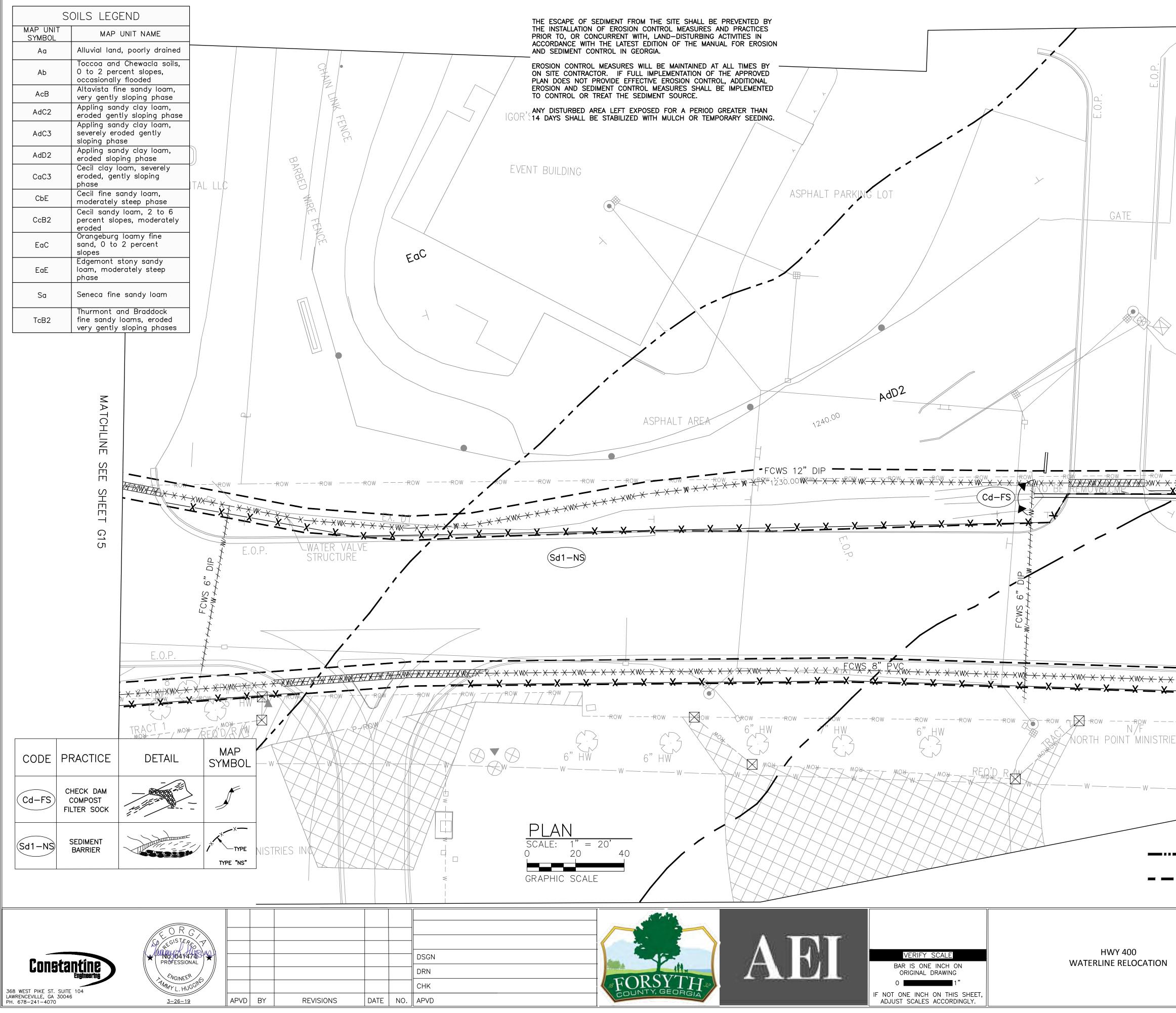
HWY 400 WATERLINE RELOCATION

S(	DILS LEGEND	<u>OWNER/PRIMARY PERMITTEE – 24–HOUR CONTACT</u> FORSYTH COUNTY DEPARTMENT OF WATER AND SEWER
IT L	MAP UNIT NAME	BARRY LUCAS 110 E. MAIN STREET, STE. 150
	Alluvial land, poorly drained	CUMMING, GA 30040 770–886–2793
	Toccoa and Chewacla soils, O to 2 percent slopes, occasionally flooded	
	Altavista fine sandy loam, very gently sloping phase	"I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY
	Appling sandy clay loam, eroded gently sloping phase	DIRECT SUPERVISION."
	Appling sandy clay loam, severely eroded gently sloping phase	TAMMY L. HUGGINS GSWCC NO. 0000079448
	Appling sandy clay loam, eroded sloping phase	EXPIRES 01/20/2020
	Cecil clay loam, severely eroded, gently sloping phase	
	Cecil fine sandy loam, moderately steep phase	LEGEND
	Cecil sandy loam, 2 to 6 percent slopes, moderately eroded	SOIL BOUNDARY
	Orangeburg loamy fine sand, 0 to 2 percent slopes	
	Edgemont stony sandy loam, moderately steep phase	LIMITS OF DISTURBANCE
	Seneca fine sandy loam	PHASE 1 & 2
	Thurmont and Braddock fine sandy loams, eroded very gently sloping phases	DISTURBED AREA = 4.83 ACRES

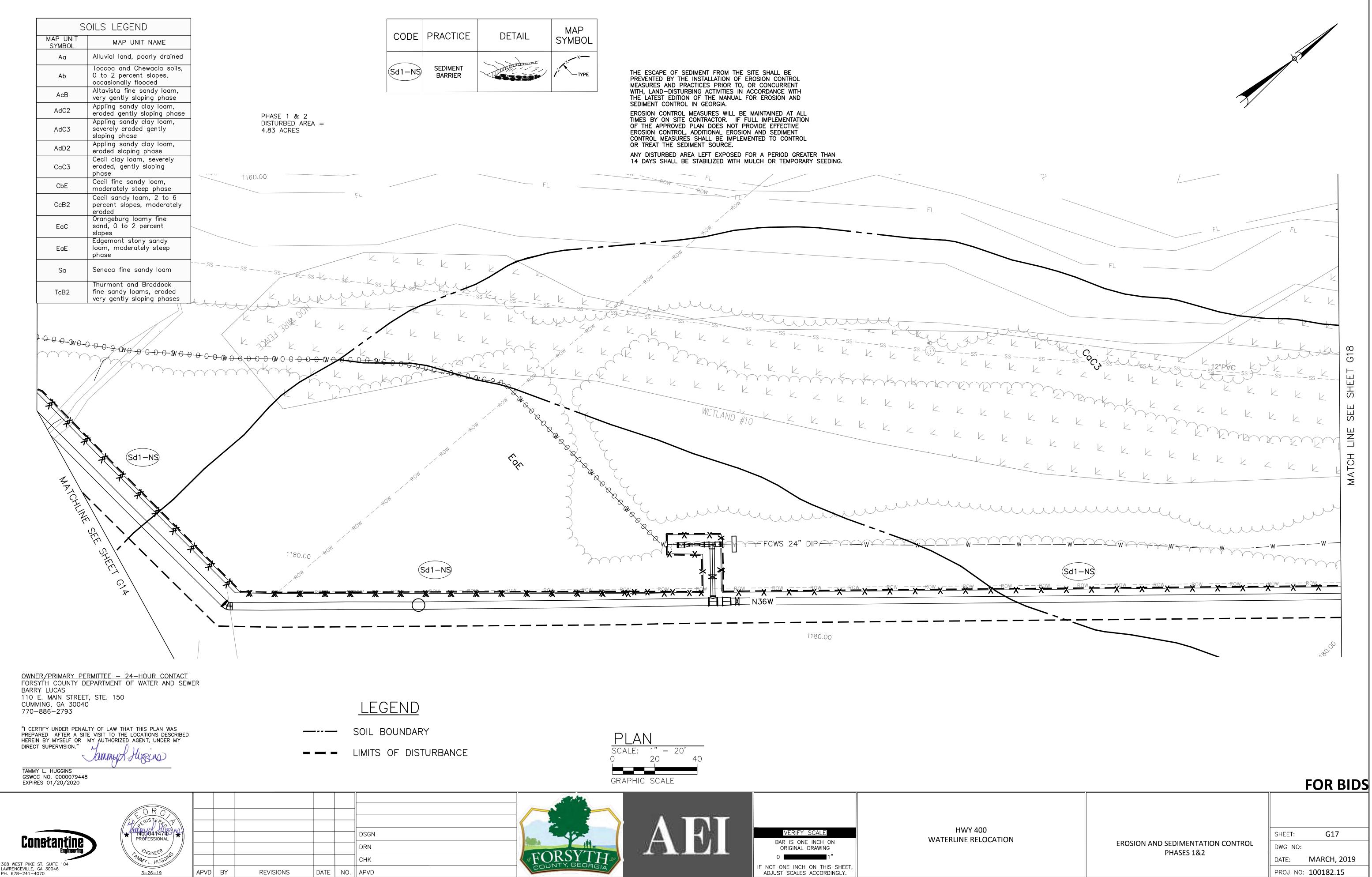
FO	R	BI	DS

SHEET:	G15
DWG NO:	
DATE:	MARCH, 2019
PROJ NO:	100182.15

EROSION AND SEDIMENTATION CONTROL PHASES 1&2



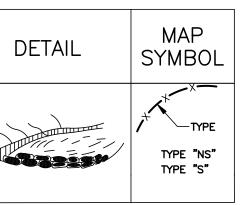
CHAIN LENCE CHAIN LENCE ONE STORY	47 N/F Y L MILLS	
OWNE         FORSY         BARRY         110         CUMM         770-	R/PRIMARY PERMITTEE YTH COUNTY DEPARTME Y LUCAS E. MAIN STREET, STE. 7 IING, GA 30040 886-2793	NT OF WATER AND SEWER
$-\pi_{OW} = -\pi_{OW} = -\pi_{$	owrow - 6" HW	PHASE 1 & 2
LEGEND SOIL BOUNDARY LIMITS OF DISTURBANCE	PREPARED AFTER A SITE	DISTURBED AREA = 4.83 ACRES of LAW THAT THIS PLAN WAS VISIT TO THE LOCATIONS DESCRIBED AUTHORIZED AGENT, UNDER MY MUMUAL MORE FOR BIDS
EROSION AND SEDIMEN PHASES 1		SHEET:       G16         DWG NO:       DATE:         DATE:       MARCH, 2019         PROJ NO:       100182.15

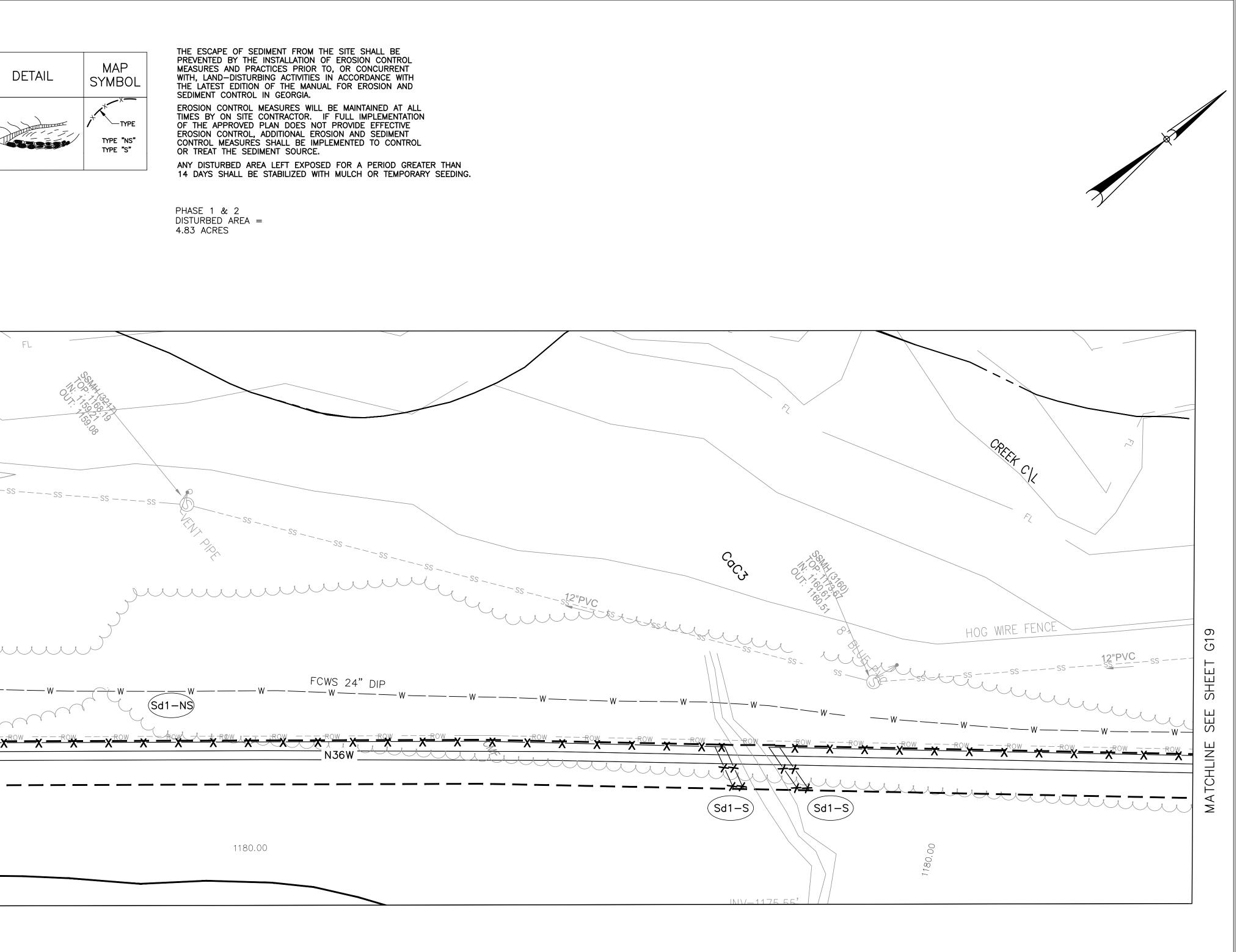


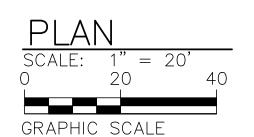
LAWRENCEVILLE, GA 30046 PH. 678–241–4070

SION AND SEDIMENTAT	ION CONTR
PHASES 1&2	

S	OILS LEGEND								
MAP UNIT SYMBOL	MAP UNIT NAME								
Aa	Alluvial land, poorly drained						COD	PRACTICE	
Ab	Toccoa and Chewacla soils, 0 to 2 percent slopes, occasionally flooded						(Sd1-	SEDIMENT	
AcB	Altavista fine sandy loam, very gently sloping phase						501-	BARRIER	
AdC2	Appling sandy clay loam, eroded gently sloping phase						(Sd1-	-S	
AdC3	Appling sandy clay loam, severely eroded gently sloping phase								_
AdD2	Appling sandy clay loam, eroded sloping phase								
CaC3	Cecil clay loam, severely eroded, gently sloping								
CbE	phase Cecil fine sandy loam,								
CcB2	moderately steep phase Cecil sandy loam, 2 to 6 percent slopes, moderately								
	eroded Orangeburg loamy fine								
EaC	sand, 0 to 2 percent slopes Edgemont stony sandy		_						
EaE	loam, moderately steep phase	Ļ							
Sa	Seneca fine sandy loam				ENCE				
TcB2	Thurmont and Braddock fine sandy loams, eroded		- K	K	Stor N				
	very gently sloping phases	K	K	KOC .	K K				
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	RIMARY PERMITTEE – 24–HOUR	CONTAC	т			LE	EGEND		
FORSYTH ( BARRY LU(	COUNTY DEPARTMENT OF WATER	AND SE	WER					,	
	AIN STREET, STE. 150 GA 30040 2703					- SOIL	BOUNDARY		
	NDER PENALTY OF LAW THAT THIS PLA	N WAS				LIMIT	S OF DISTU	JRBANCE	
PREPARED	AFTER A SITE VISIT TO THE LOCATIONS MYSELF OR MY AUTHORIZED AGENT, UN	DESCRIBE	D						
	Janmy R. Huzen	D							
TAMMY L. HU GSWCC NO.	0000079448								
EXPIRES 01,	. 20/ 2020								
	E O R G								
	C) € GISTER SE GISTE	and the second					DSGN		
Constai							DRN		
368 WEST PIKE ST. SUITE LAWRENCEVILLE, GA 30046	104	3M2			_		СНК		
PH. 678–241–4070	<u>3–26–19</u>		APVD B	BY	REVISIONS	DATE N	O. APVD		

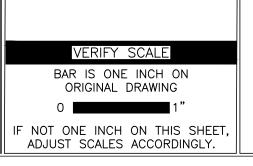










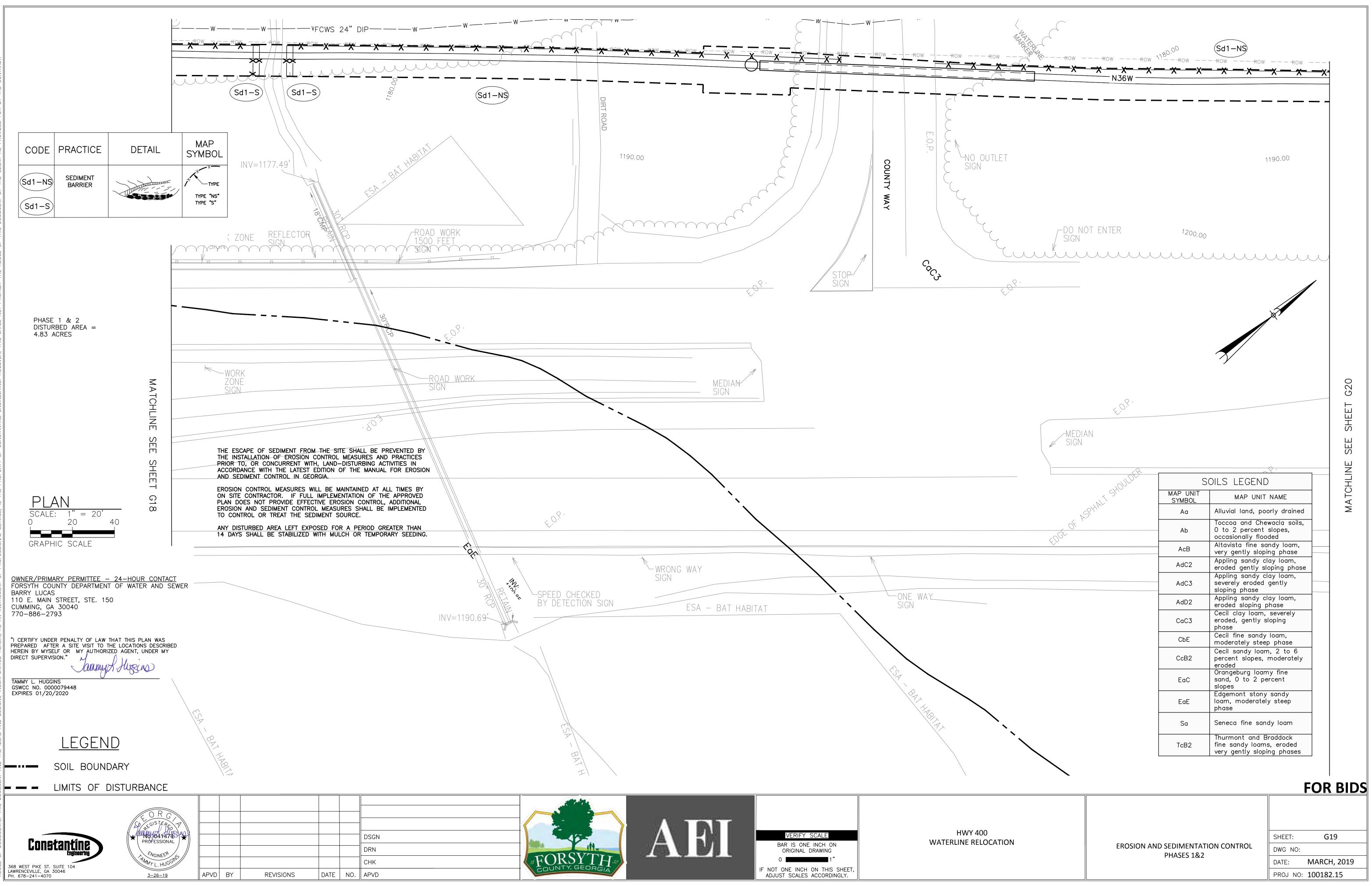


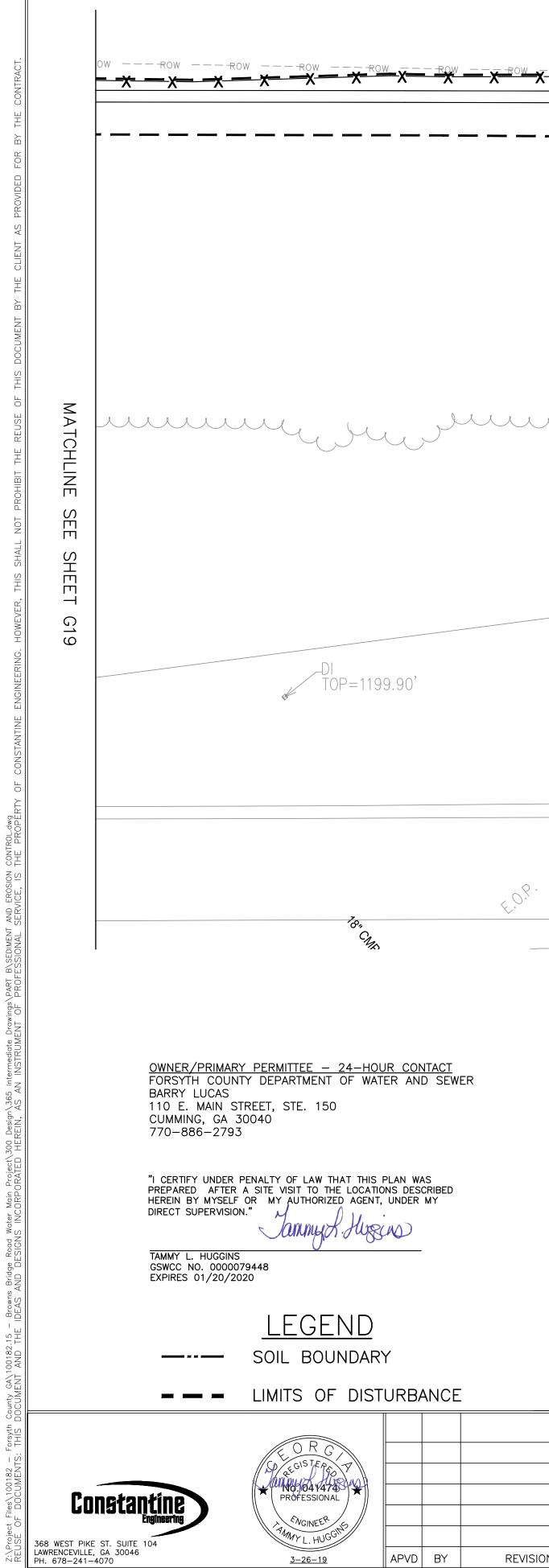
HWY 400 WATERLINE RELOCATION

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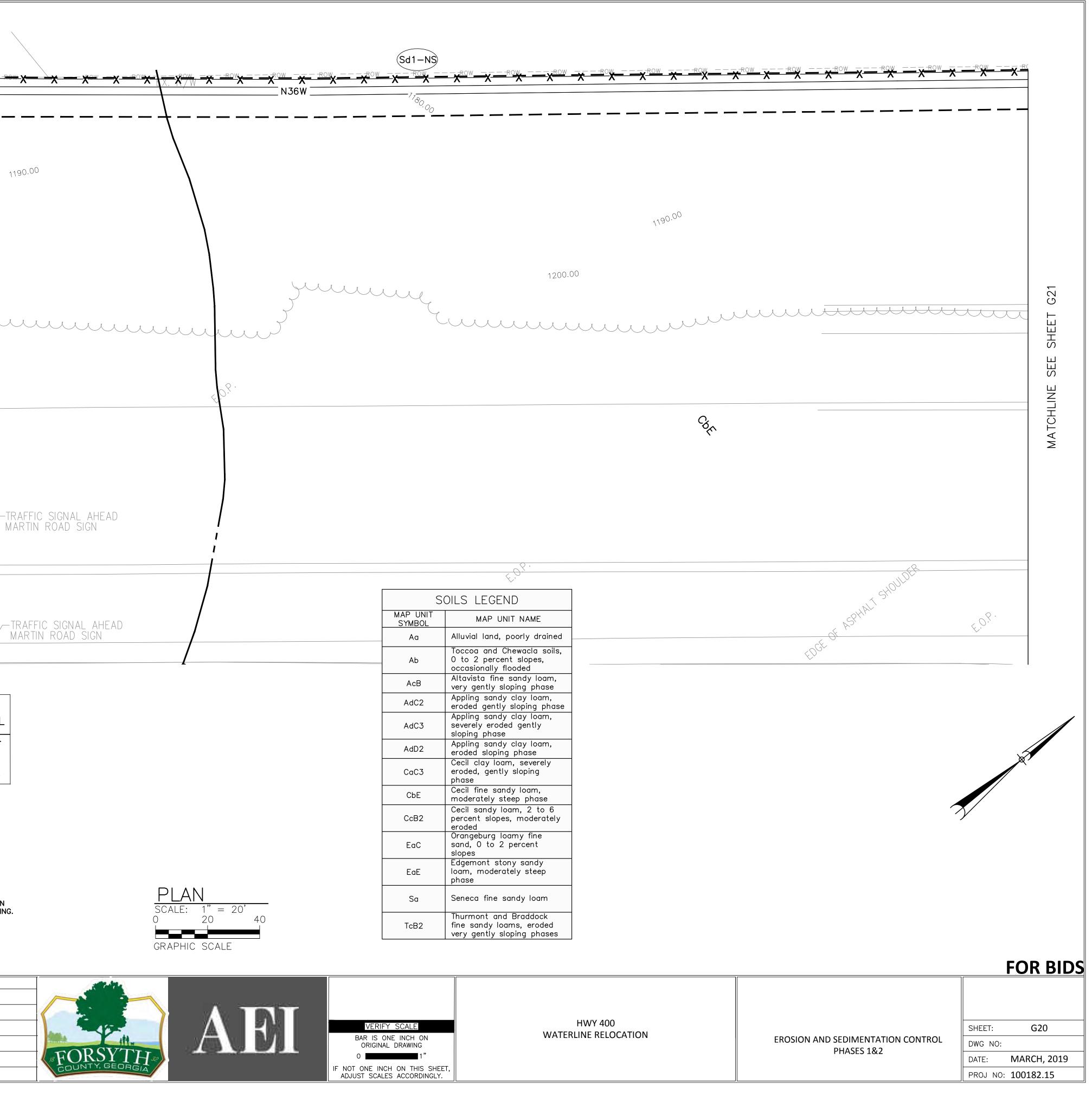
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DWG NO:	
DATE:	MARCH, 2019
PROJ NO:	100182.15

EROSION AND SEDIMENTATION CONTROL PHASES 1&2

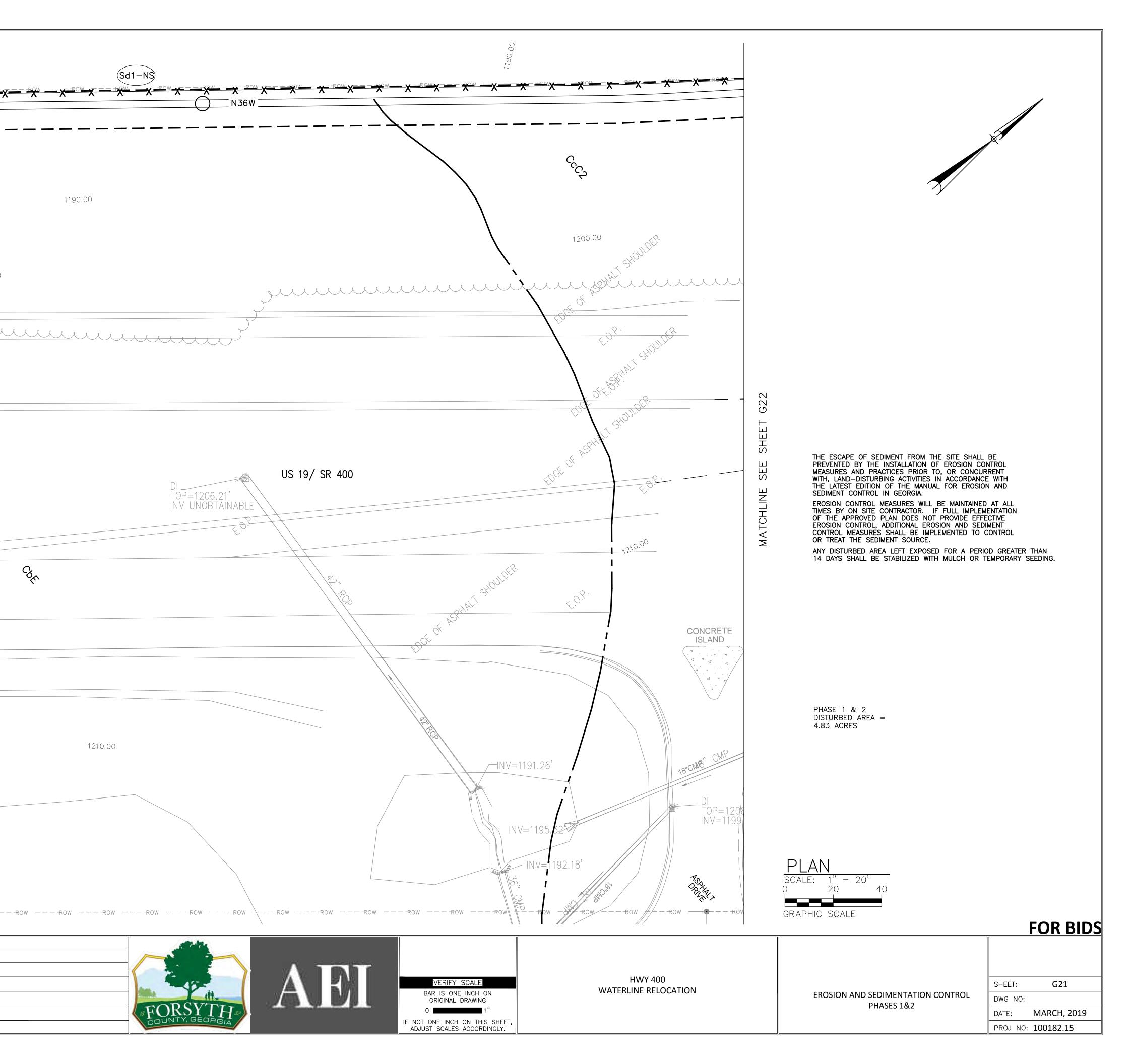


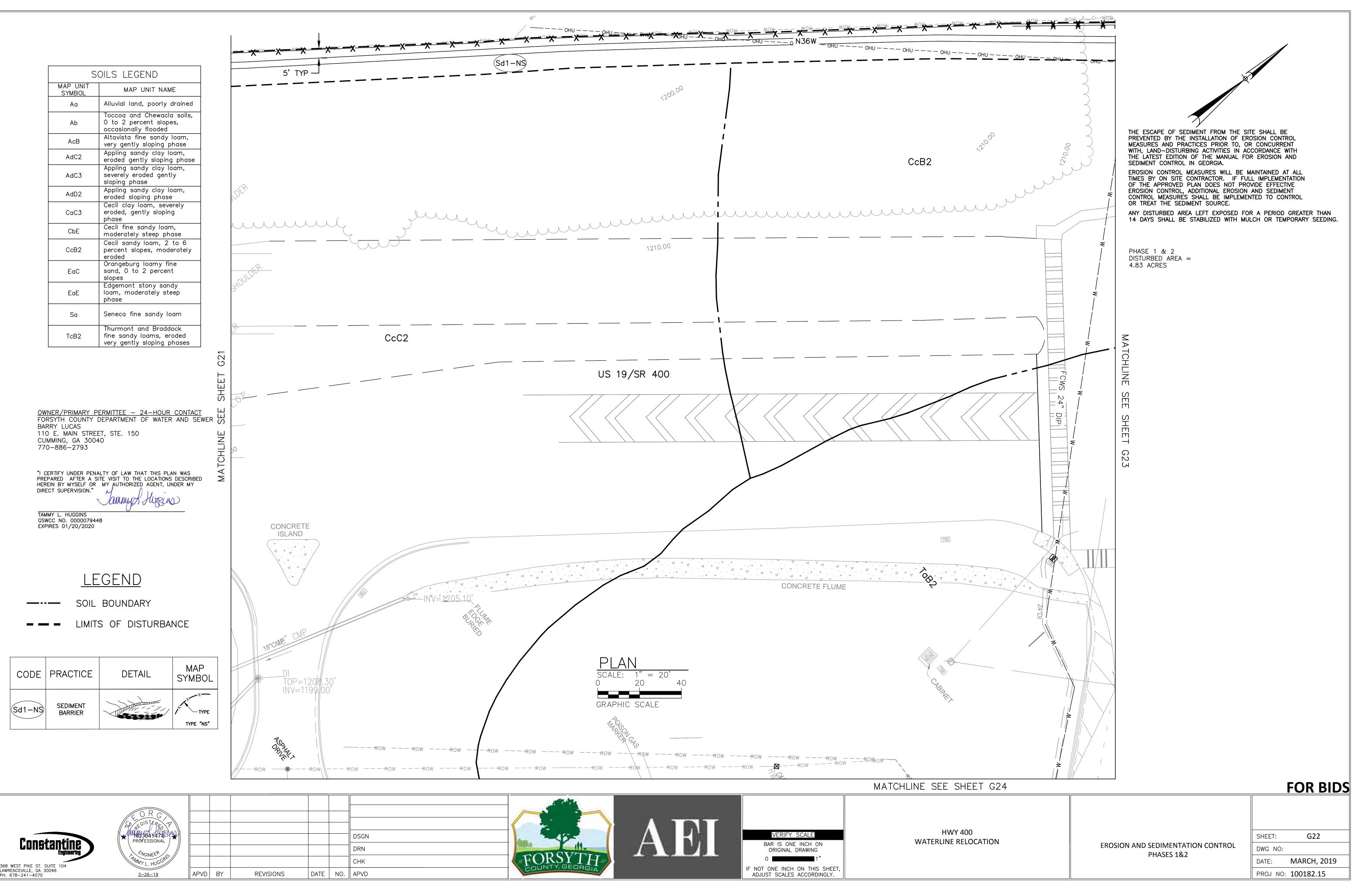


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DI TOP=1199.	90'				EDGE	ASPHALT SHOULDER	TRA
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<u>Y PERMITTEE – 24–HOUR</u> TY DEPARTMENT OF WATER TREET, STE. 150 50040	<u>CONTACT</u> AND SEW	ER	CODE Sd1-NS	PRAC SEDIM BARF	IENT	DETAIL	MAP SYMBOL
PENALTY OF LAW THAT THIS PLA A SITE VISIT TO THE LOCATIONS OR MY AUTHORIZED AGENT, UI N." 79448 220	DESCRIBED		PREVENTED MEASURES A WITH, LAND- THE LATEST SEDIMENT CO EROSION CO TIMES BY OI OF THE APP EROSION CO CONTROL ME OR TREAT TI ANY DISTURE	BY THE I ND PRAC DISTURBI EDITION ONTROL I NTROL M N SITE C ROVED P NTROL, A ASURES HE SEDIM BED AREA	NSTALLAT TICES PI NG ACTIN OF THE N GEORG EASURES ONTRACTO LAN DOE LAN DOE DDITIONA SHALL B ENT SOU	WILL BE MAINTAINED AT OR. IF FULL IMPLEMENT S NOT PROVIDE EFFECTIV L EROSION AND SEDIMENTED TO CON	NT ITH ND TATION VE NT TROL GREATER THAN
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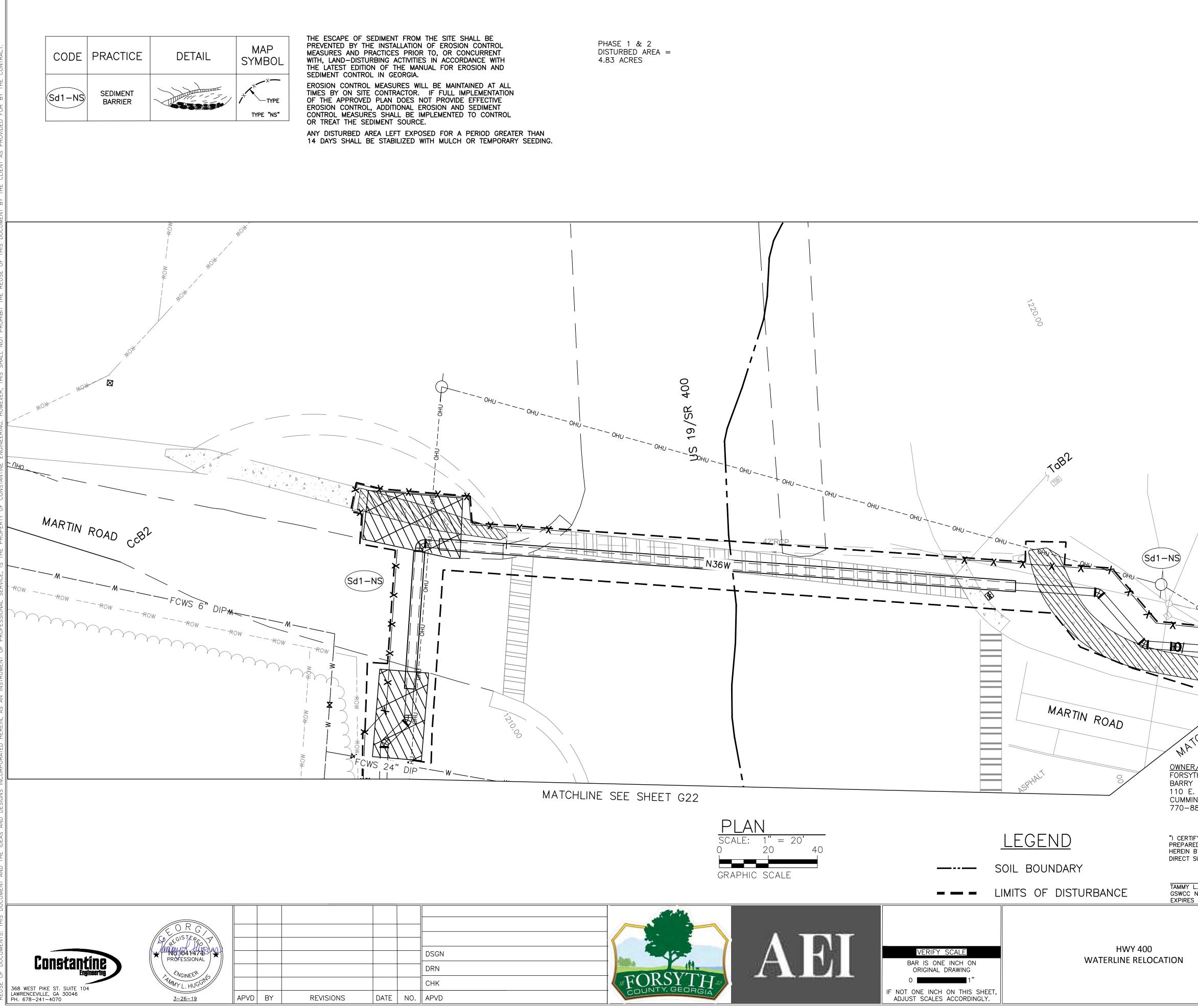
Γ	S	DILS LEGEND					
F	MAP UNIT SYMBOL	MAP UNIT NAME					
F	Aa	Alluvial land, poorly drained					
-	Ab	Toccoa and Chewacla soils, O to 2 percent slopes, occasionally flooded					
	AcB	Altavista fine sandy loam, very gently sloping phase					
	AdC2	Appling sandy clay loam, eroded gently sloping phase					
	AdC3	Appling sandy clay loam, severely eroded gently sloping phase					
	AdD2	Appling sandy clay loam, eroded sloping phase				IN DER	
	CaC3	Cecil clay loam, severely eroded, gently sloping phase			. <	SHOULDER	1200
-	CbE	Cecil fine sandy loam, moderately steep phase			ASPHAL		1200
	CcB2	Cecil sandy loam, 2 to 6 percent slopes, moderately eroded			<u></u> <i>SF</i> '		
	EaC	Orangeburg loamy fine sand, 0 to 2 percent			<u> </u>	U.J.	
	EaE	slopes Edgemont stony sandy Ioam, moderately steep phase			<u>`</u>	SHOULD	<i>\</i> .
-	Sa	Seneca fine sandy loam			SPHAL		<
	TcB2	Thurmont and Braddock fine sandy loams, eroded very gently sloping phases			OF ASPHALT		
770-8 "I CERTI PREPARE HEREIN I	ED AFTER A SITE	Y OF LAW THAT THIS PLAN WAS VISIT TO THE LOCATIONS DESCRIBED Y AUTHORIZED AGENT, UNDER MY	HLINE SEE SHEE	EDGEOF	ASPHI		
770-8 "I CERTI PREPARE HEREIN I DIRECT S TAMMY I GSWCC	386—2793 FY UNDER PENALT ED AFTER A SITE BY MYSELF OR M	VISIT TO THE LOCATIONS DESCRIBED Y AUTHORIZED AGENT, UNDER MY			ASPHI		
770-8 "I CERTI PREPARE HEREIN I DIRECT S TAMMY I GSWCC	SB6-2793 FY UNDER PENALT ED AFTER A SITE BY MYSELF OR M SUPERVISION." L. HUGGINS NO. 0000079448 01/20/2020	VISIT TO THE LOCATIONS DESCRIBED Y AUTHORIZED AGENT, UNDER MY	SEE		ASPHI		
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LAWRENCEVILLE, GA 30046 PH. 678–241–4070

DATE:		MARCH, 201
PROJ	NO:	100182.15



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		OILS LEGEND
		OILS LEGEND MAP UNIT NAME
	MAP UNIT	MAP UNIT NAME Alluvial land, poorly drained
	MAP UNIT SYMBOL	MAP UNIT NAME Alluvial land, poorly drained Toccoa and Chewacla soils, 0 to 2 percent slopes,
	MAP UNIT SYMBOL Aa	MAP UNIT NAME Alluvial land, poorly drained Toccoa and Chewacla soils, 0 to 2 percent slopes, occasionally flooded Altavista fine sandy loam,
	S MAP UNIT SYMBOL Aa Ab	MAP UNIT NAME Alluvial land, poorly drained Toccoa and Chewacla soils, 0 to 2 percent slopes, occasionally flooded Altavista fine sandy loam, very gently sloping phase Appling sandy clay loam,
	SYMBOL Aa Ab AcB AdC2	MAP UNIT NAME Alluvial land, poorly drained Toccoa and Chewacla soils, 0 to 2 percent slopes, occasionally flooded Altavista fine sandy loam, very gently sloping phase Appling sandy clay loam, eroded gently sloping phase Appling sandy clay loam,
FLUME	SYMBOL Aa Ab AcB AdC2 AdC3	MAP UNIT NAMEAlluvial land, poorly drainedToccoa and Chewacla soils, 0 to 2 percent slopes, occasionally floodedAltavista fine sandy loam, very gently sloping phaseAppling sandy clay loam, eroded gently sloping phaseAppling sandy clay loam, severely eroded gently sloping phase
FLUME	SYMBOL Aa Ab AcB AdC2	MAP UNIT NAMEAlluvial land, poorly drainedToccoa and Chewacla soils, 0 to 2 percent slopes, occasionally floodedAltavista fine sandy loam, very gently sloping phaseAppling sandy clay loam, eroded gently sloping phaseAppling sandy clay loam, severely eroded gently sloping phaseAppling sandy clay loam, severely eroded gently sloping phaseAppling sandy clay loam, severely eroded gently sloping phaseAppling sandy clay loam, eroded sloping phase
FLUME	SYMBOL Aa Ab AcB AdC2 AdC3	MAP UNIT NAMEAlluvial land, poorly drainedToccoa and Chewacla soils, 0 to 2 percent slopes, occasionally floodedAltavista fine sandy loam, very gently sloping phaseAppling sandy clay loam, eroded gently sloping phaseAppling sandy clay loam, severely eroded gently sloping phase
FLUME	SYMBOL Aa Ab AcB AdC2 AdC3 AdD2	MAP UNIT NAMEAlluvial land, poorly drainedToccoa and Chewacla soils, 0 to 2 percent slopes, occasionally floodedAltavista fine sandy loam, very gently sloping phaseAppling sandy clay loam, eroded gently sloping phaseAppling sandy clay loam, severely eroded gently sloping phaseAppling sandy clay loam, severely eroded gently sloping phaseAppling sandy clay loam, severely eroded gently sloping phaseCecil clay loam, severely eroded, gently sloping phaseCecil clay loam, severely eroded, gently sloping phaseCecil fine sandy loam,
FLUME	Aa Ab AcB AdC2 AdC3 AdD2 CaC3 CbE	MAP UNIT NAMEAlluvial land, poorly drainedToccoa and Chewacla soils, 0 to 2 percent slopes, occasionally floodedAltavista fine sandy loam, very gently sloping phaseAppling sandy clay loam, eroded gently sloping phaseAppling sandy clay loam, severely eroded gently sloping phaseAppling sandy clay loam, eroded sloping phaseCecil clay loam, severely eroded, gently sloping phaseCecil fine sandy loam, moderately steep phaseCecil sandy loam, 2 to 6
SEE SHEET G2A	SYMBOL Aa Ab Ab AcB AdC2 AdC2 AdC3 AdC2 CaC3 CbE CcB2	MAP UNIT NAMEAlluvial land, poorly drainedToccoa and Chewacla soils, 0 to 2 percent slopes, occasionally floodedAltavista fine sandy loam, very gently sloping phaseAppling sandy clay loam, eroded gently sloping phaseAppling sandy clay loam, severely eroded gently sloping phaseAppling sandy clay loam, severely eroded gently sloping phaseAppling sandy clay loam, severely eroded gently sloping phaseCecil clay loam, severely eroded, gently sloping phaseCecil fine sandy loam, moderately steep phaseCecil sandy loam, 2 to 6 percent slopes, moderately erodedOrangeburg loamy fine
ARY PERMITTEE - 24-HOUR CONTACT UNTY DEPARTMENT OF WATER AND SEWER	Aa Ab AcB AdC2 AdC3 AdD2 CaC3 CbE	MAP UNIT NAMEAlluvial land, poorly drainedToccoa and Chewacla soils, 0 to 2 percent slopes, occasionally floodedAltavista fine sandy loam, very gently sloping phaseAppling sandy clay loam, eroded gently sloping phaseAppling sandy clay loam, severely eroded gently sloping phaseAppling sandy clay loam, eroded sloping phaseCecil clay loam, severely eroded, gently sloping phaseCecil fine sandy loam, moderately steep phaseCecil sandy loam, 2 to 6 percent slopes, moderately erodedOrangeburg loamy fine sand, 0 to 2 percent slopes
ARY PERMITTEE - 24-HOUR CONTACT UNTY DEPARTMENT OF WATER AND SEWER S STREET, STE. 150	SYMBOL Aa Ab Ab AcB AdC2 AdC2 AdC3 AdC2 CaC3 CbE CcB2	MAP UNIT NAMEAlluvial land, poorly drainedToccoa and Chewacla soils, 0 to 2 percent slopes, occasionally floodedAltavista fine sandy loam, very gently sloping phaseAppling sandy clay loam, eroded gently sloping phaseAppling sandy clay loam, severely eroded gently sloping phaseAppling sandy clay loam, severely eroded gently sloping phaseCecil clay loam, severely eroded, gently sloping phaseCecil fine sandy loam, severely eroded, gently sloping phaseCecil fine sandy loam, moderately steep phaseCecil sandy loam, 2 to 6 percent slopes, moderately erodedOrangeburg loamy fine sand, 0 to 2 percent slopesEdgemont stony sandy loam, moderately steep
ARY PERMITTEE - 24-HOUR CONTACT UNTY DEPARTMENT OF WATER AND SEWER S STREET, STE. 150 A 30040	MAP UNIT SYMBOL Aa Ab AcB AdC2 AdC2 AdC3 AdC2 CaC3 CbE CcB2 EaC EaE	MAP UNIT NAMEAlluvial land, poorly drainedToccoa and Chewacla soils, 0 to 2 percent slopes, occasionally floodedAltavista fine sandy loam, very gently sloping phaseAppling sandy clay loam, eroded gently sloping phaseAppling sandy clay loam, severely eroded gently sloping phaseAppling sandy clay loam, eroded sloping phaseCecil clay loam, severely eroded, gently sloping phaseCecil fine sandy loam, moderately steep phaseCecil sandy loam, 2 to 6 percent slopes, moderately erodedOrangeburg loamy fine sand, 0 to 2 percent slopesEdgemont stony sandy loam, moderately steep phase
ARY PERMITTEE - 24-HOUR CONTACT UNTY DEPARTMENT OF WATER AND SEWER STREET, STE. 150 A 30040 793	SYMBOL Aa Ab Ab AcB AdC2 AdC2 AdC3 AdD2 CaC3 CbE CcB2 EaC	MAP UNIT NAMEAlluvial land, poorly drainedToccoa and Chewacla soils, 0 to 2 percent slopes, occasionally floodedAltavista fine sandy loam, very gently sloping phaseAppling sandy clay loam, eroded gently sloping phaseAppling sandy clay loam, severely eroded gently sloping phaseAppling sandy clay loam, eroded sloping phaseCecil clay loam, severely eroded, gently sloping phaseCecil fine sandy loam, severely eroded, gently sloping phaseCecil fine sandy loam, severely eroded, gently sloping phaseCecil fine sandy loam, severely eroded, gently sloping phaseCecil sandy loam, 2 to 6 percent slopes, moderately erodedOrangeburg loamy fine sand, 0 to 2 percent slopesEdgemont stony sandy loam, moderately steep

TAMMY L. HUGGINS GSWCC NO. 0000079448 EXPIRES 01/20/2020

FOR BIDS

G23

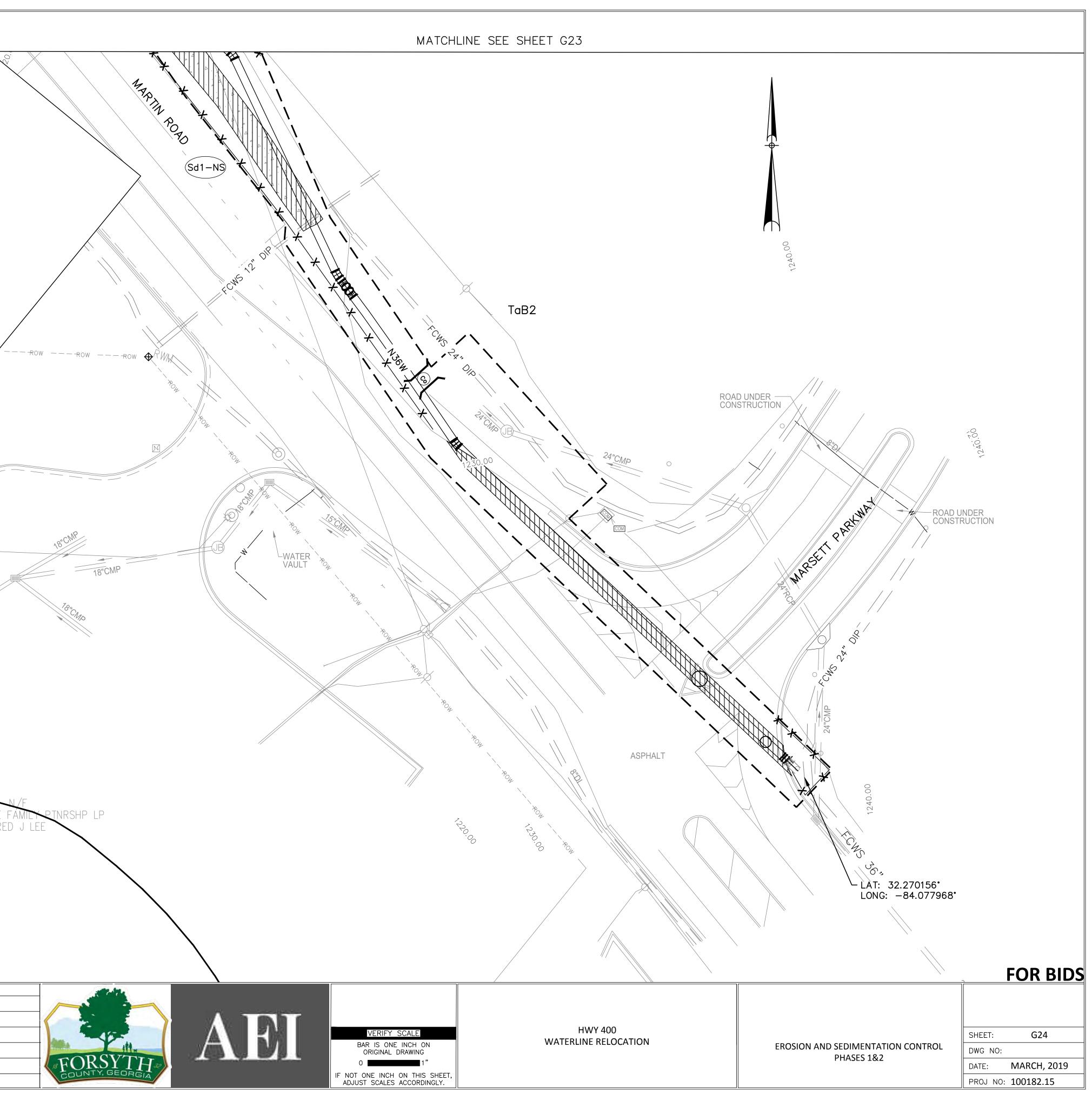
EROSION AND SEDIMENTATION CONTROL PHASES 1&2

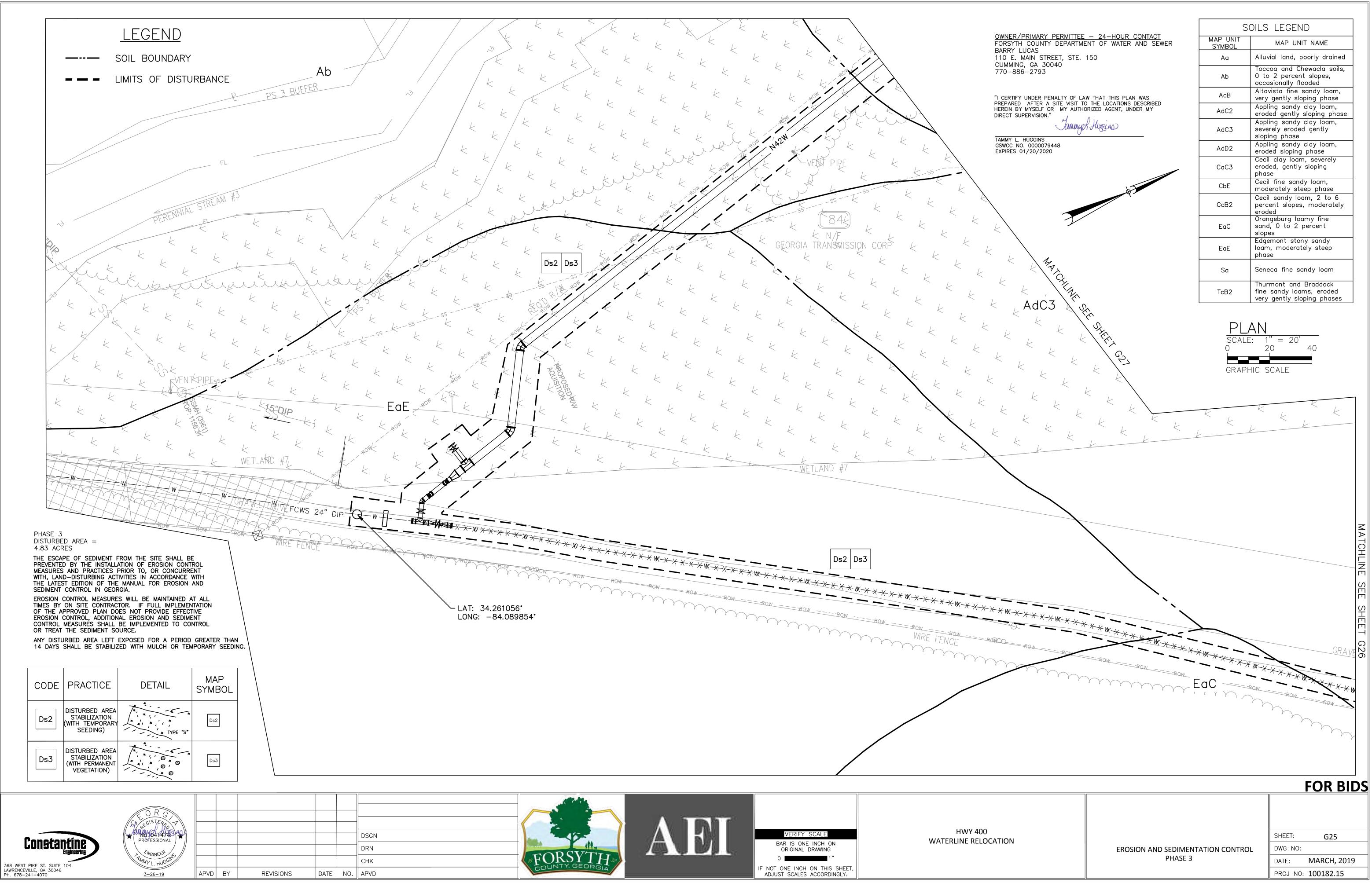
#### MARCH, 2019 DATE: PROJ NO: 100182.15

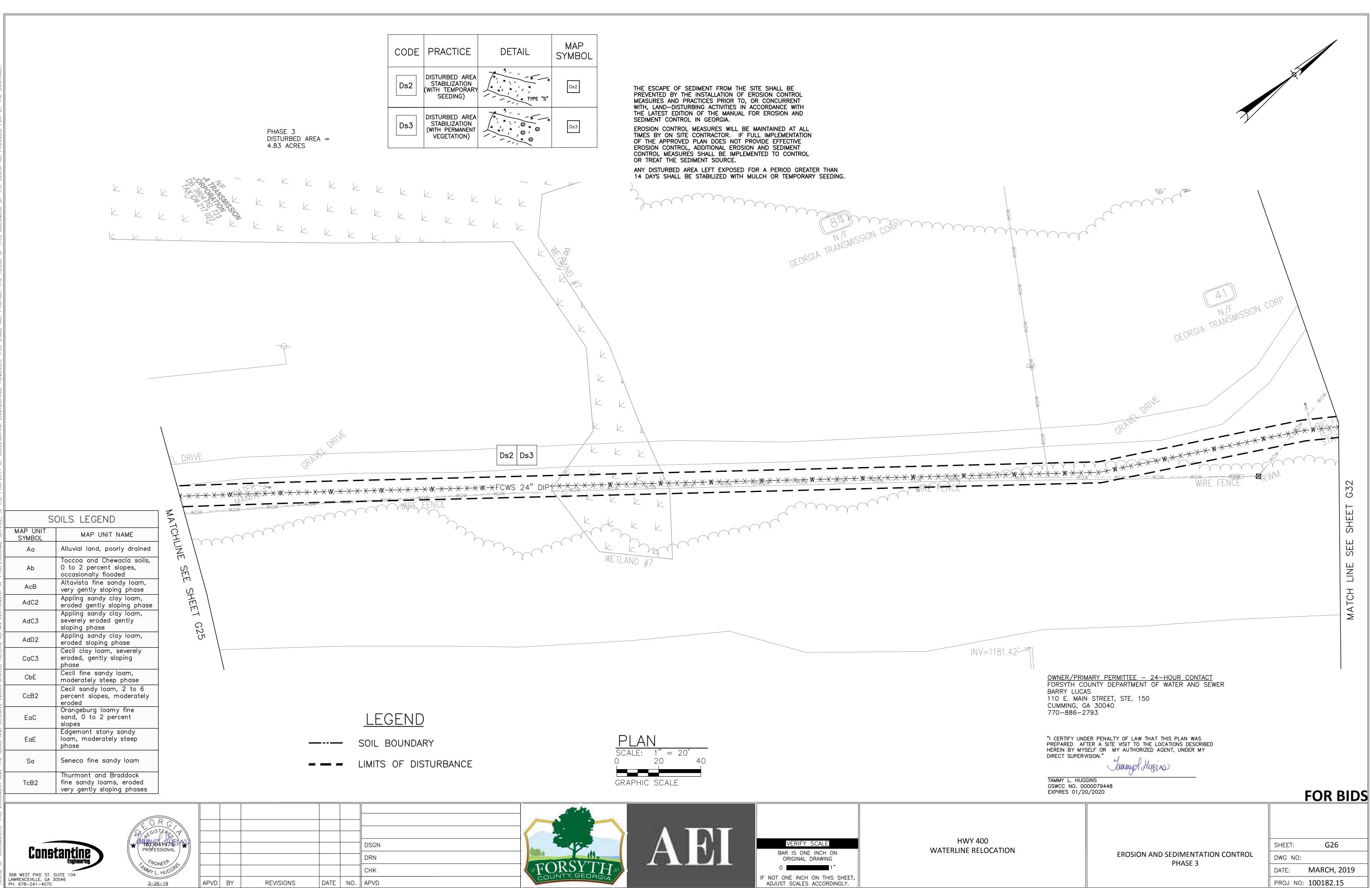
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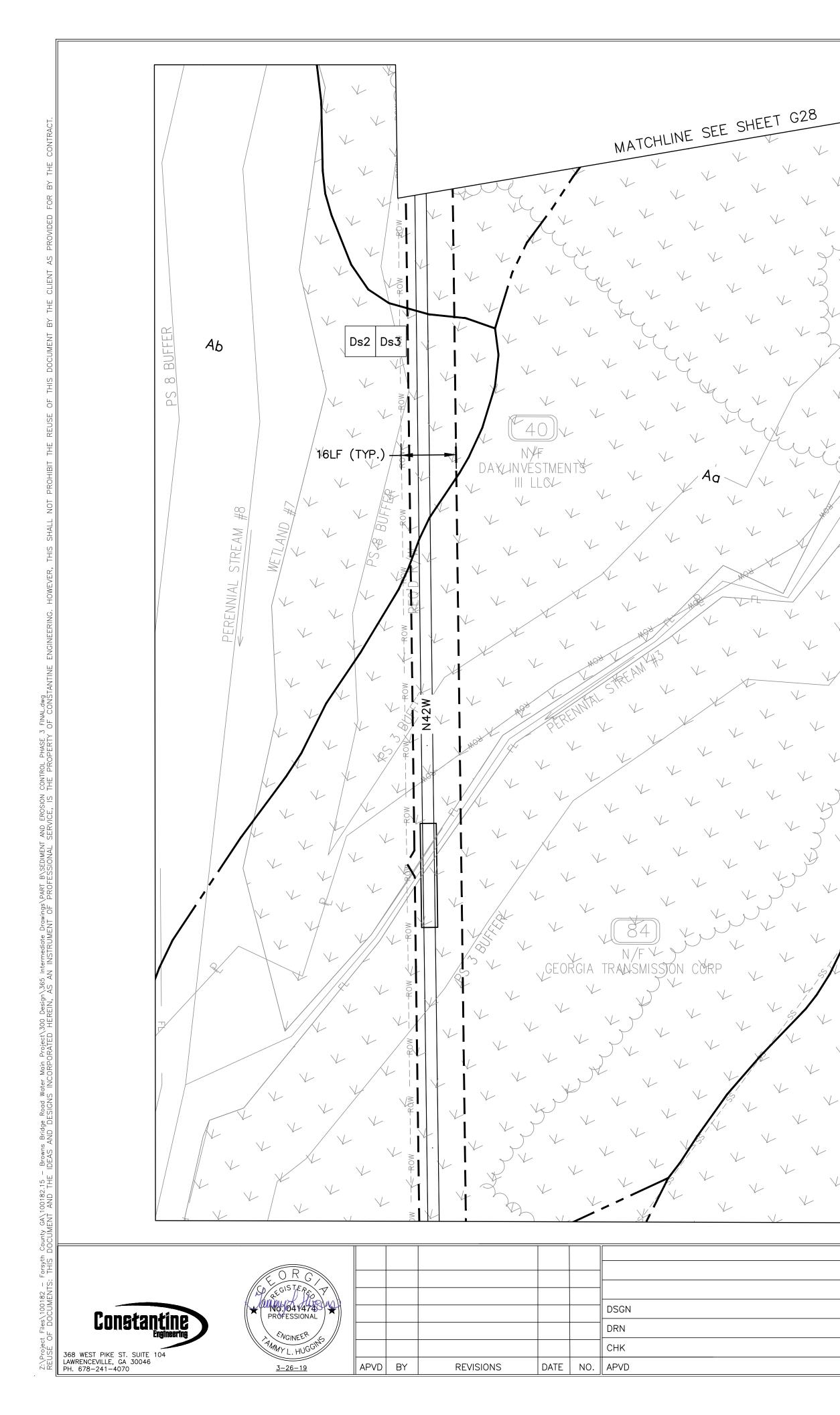
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MAP UNIT	SOILS LE		-	FORSYTH	COUNTY DEPAF	<u>TEE – 24–HOUR C</u> RTMENT OF WATER A	<u>ONTACT</u> AND SEWER	
SYMBOL		P UNIT NAME	-		MAIN STREET, S <sup>-</sup>	re. 150		
Aa		nd, poorly drained	-	CUMMINO 770-88	G, GA 30040 5-2793			
Ab	0 to 2 pe occasional	ercent slopes, Ily flooded						
AcB	very gentl	fine sandy loam, y sloping phase		PREPARED	AFTER A SITE VIS	F LAW THAT THIS PLAN IT TO THE LOCATIONS D UTHORIZED AGENT, UND	ESCRIBED	
AdC2	eroded ge	andy clay loam, ntly sloping phase			PERVISION."	nmy P. Husins		
AdC3	severely e	andy clay loam, roded gently		TAMMY L.	HUGGINS	anger word		
AdD2		nase andy clay loam, oping phase	-	GSWCC NO	0. 0000079448 01/20/2020			
CaC3	Cecil clay	pping phase loam, severely ently sloping	-		<u>LEGE</u>	ND		
	phase	sandy loam,	-					
CbE	moderatel	y steep phase ly loam, 2 to 6	-		SOIL BOU			
CcB2	percent sl eroded	opes, moderately			LIMITS OF	DISTURBANC	E	
EaC	sand, 0 to	g loamy fine o 2 percent						
		stony sandy derately steep	-					
EaE	phase	derately steep	-	PHASE 1 & 2				
Sa	Seneca fir	ne sandy loam		DISTURBED AR 4.83 ACRES	LA =		Ο.	
TcB2	fine sandy	and Braddock / loams, eroded					, de	/
		y sloping phases					jų /	
							Ly K	
				]		6.	× / 12	20.00
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	BARRIER		TYPE TYPE					
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AND SEDIMENT CONTROL IN GEORGIA.

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AdC3

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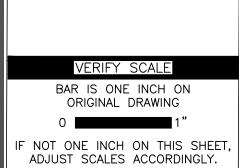
TO CONTROL OR TREAT THE SEDIMENT SOURCE.

X		V V
GEOD	S	DILS LEGEND
GEORGIA COR DB. 36	MAP UNIT SYMBOL	MAP UNIT NAME
TAX ID	Aa	Alluvial land, poorly drained
¥	Ab	Toccoa and Chewacla soils, 0 to 2 percent slopes, occasionally flooded
$\checkmark$	AcB	Altavista fine sandy loam, very gently sloping phase
- 	AdC2	Appling sandy clay loam, eroded gently sloping phase
X	AdC3	Appling sandy clay loam, severely eroded gently sloping phase
	AdD2	Appling sandy clay loam, eroded sloping phase
	CaC3	Cecil clay loam, severely eroded, gently sloping phase
	CbE	Cecil fine sandy loam, moderately steep phase
	CcB2	Cecil sandy loam, 2 to 6 percent slopes, moderately eroded
	EaC	Orangeburg loamy fine sand, 0 to 2 percent slopes
	EaE	Edgemont stony sandy Ioam, moderately steep phase
	Sa	Seneca fine sandy loam
	TcB2	Thurmont and Braddock fine sandy loams, eroded very gently sloping phases

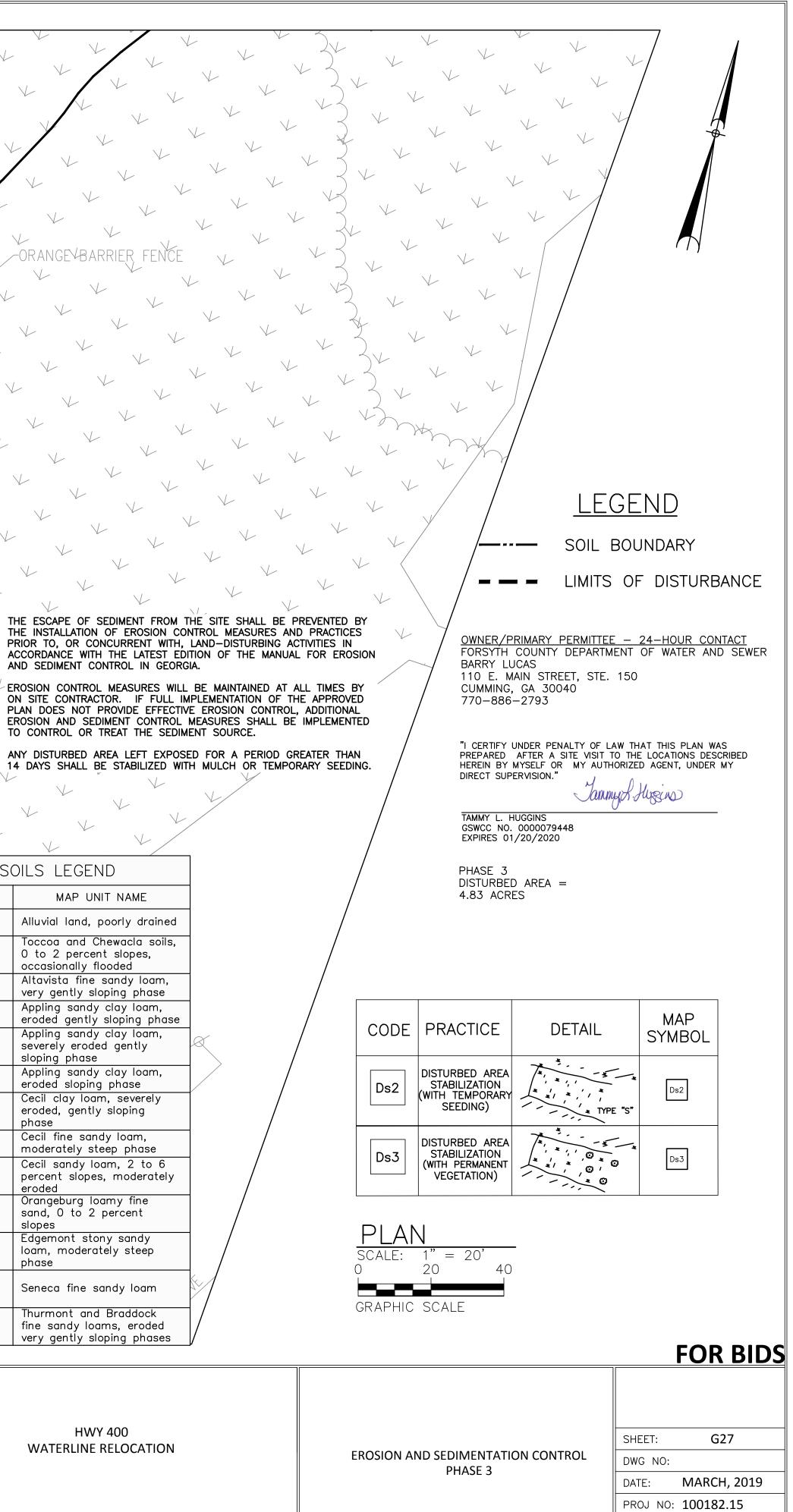
	V		$\checkmark$
MATCHLINE	SEE	SHEET	G25
_776			

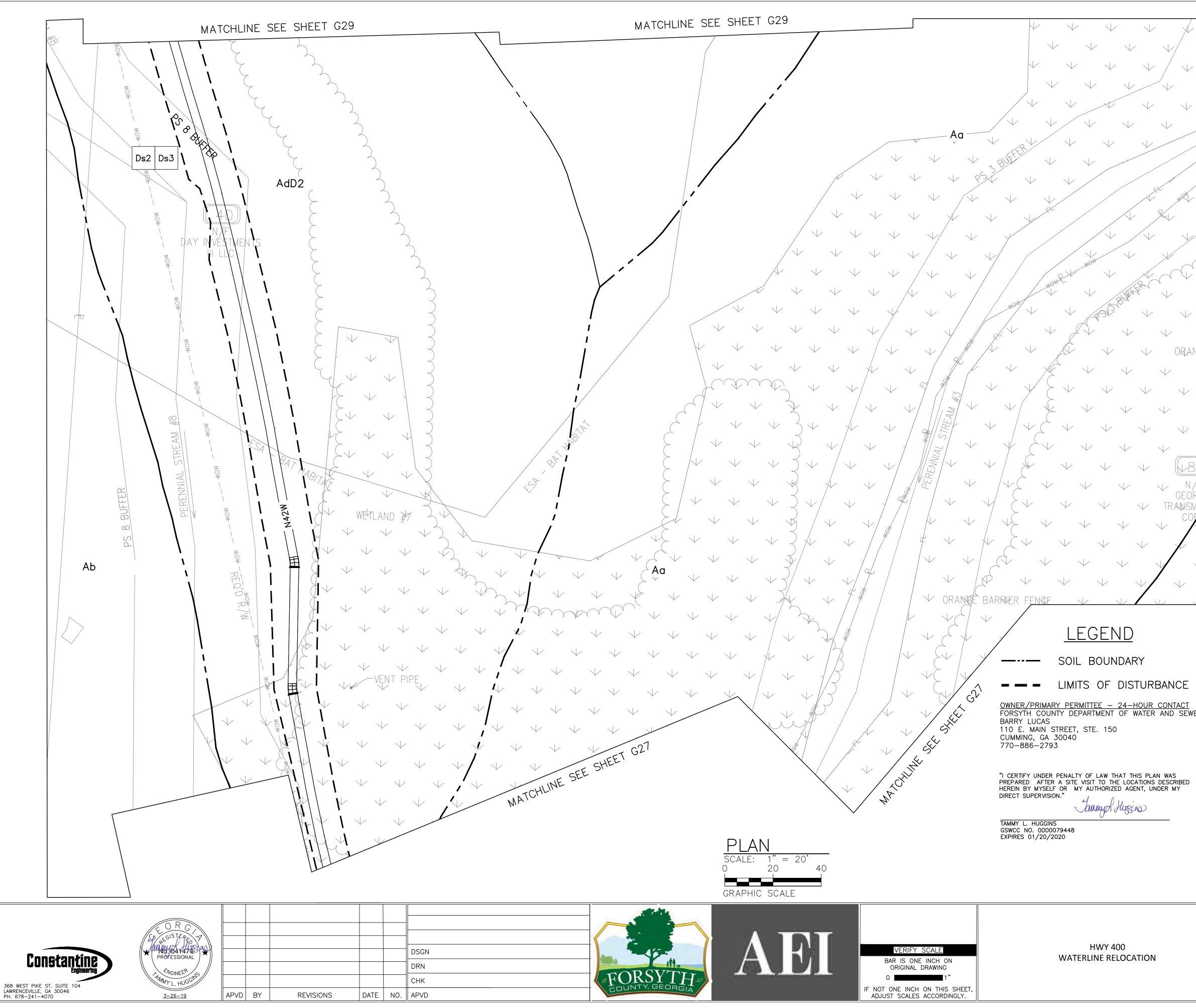


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MATCHLINE SEE SHEET 6





	V ROM V	WETLAND #7
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V V 20 X80W V V	. /	
		HE SITE SHALL BE PREVENTED BY
PRIOR TO, OR COM	ICURRENT WITH, I THE LATEST EDIT	LAND-DISTURBING ACTIVITIES IN FION OF THE MANUAL FOR EROSION
		BE MAINTAINED AT ALL TIMES BY PLEMENTATION OF THE APPROVED
PLAN DOES NOT P EROSION AND SED	ROVIDE EFFECTIVE	E EROSION CONTROL, ADDITIONAL MEASURES SHALL BE IMPLEMENTED
TO CONTROL OR T		D FOR A PERIOD GREATER THAN
14 DAYS SHALL BE	E STABILIZED WITH	H MULCH OR TEMPORARY SEEDING.
VENT RIPE	<sup>™</sup> ON	ROW
		SOILS LEGEND
	MAP UNIT SYMBOL	MAP UNIT NAME
	Aa	Alluvial land, poorly drained Toccoa and Chewacla soils,
	Ab	0 to 2 percent slopes, occasionally flooded
ORANGE BARRIER JEENCE	AcB	Altavista fine sandy loam, very gently sloping phase
$\psi$ $\psi$ $\psi$ $\psi$ $\psi$	AdC2	Appling sandy clay loam, eroded gently sloping phase
$\wedge$ $\wedge$ $\wedge$ $\wedge$ $\wedge$ AdC3	AdC3	Appling sandy clay loam, severely eroded gently sloping phase
$\downarrow \qquad \qquad$	AdC3 AdD2	severely eroded gently sloping phase Appling sandy clay loam, eroded sloping phase
+ $+$ $+$ $+$ $+$ $+$ $+$ $+$ $+$ $+$		severely eroded gently sloping phase Appling sandy clay loam, eroded sloping phase Cecil clay loam, severely eroded, gently sloping phase
$\begin{array}{c} & & & \\ & & & & \\ & & & & \\ & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ & & & & \\ &$	AdD2	severely eroded gently sloping phase Appling sandy clay loam, eroded sloping phase Cecil clay loam, severely eroded, gently sloping phase Cecil fine sandy loam, moderately steep phase
+ + + + + + + + + + + + + + + + + + +	AdD2 CaC3	severely eroded gently sloping phase Appling sandy clay loam, eroded sloping phase Cecil clay loam, severely eroded, gently sloping phase Cecil fine sandy loam, moderately steep phase Cecil sandy loam, 2 to 6 percent slopes, moderately eroded
+ + + + + + + + + + + + + + + + + + +	AdD2 CaC3 CbE	severely eroded gently sloping phase Appling sandy clay loam, eroded sloping phase Cecil clay loam, severely eroded, gently sloping phase Cecil fine sandy loam, moderately steep phase Cecil sandy loam, 2 to 6 percent slopes, moderately eroded Orangeburg loamy fine sand, 0 to 2 percent slopes
$\begin{array}{c} + & + \\ + & + \\ + & + \\ + & + \\ + & + \\ + & + \\ + & + \\ + & + \\ + & + \\ \\ \\ \\$	AdD2 CaC3 CbE CcB2	severely eroded gently sloping phase Appling sandy clay loam, eroded sloping phase Cecil clay loam, severely eroded, gently sloping phase Cecil fine sandy loam, moderately steep phase Cecil sandy loam, 2 to 6 percent slopes, moderately eroded Orangeburg loamy fine sand, 0 to 2 percent
$\begin{array}{c} + & + \\ + & + \\ + & + \\ + & + \\ + & + \\ + & + \\ + & + \\ + & + \\ + & + \\ \\ \\ \\$	AdD2 CaC3 CbE CcB2 EaC	severely eroded gently sloping phase Appling sandy clay loam, eroded sloping phase Cecil clay loam, severely eroded, gently sloping phase Cecil fine sandy loam, moderately steep phase Cecil sandy loam, 2 to 6 percent slopes, moderately eroded Orangeburg loamy fine sand, 0 to 2 percent slopes Edgemont stony sandy loam, moderately steep

PHASE 3	
DISTURBED AREA	=
4.83 ACRES	

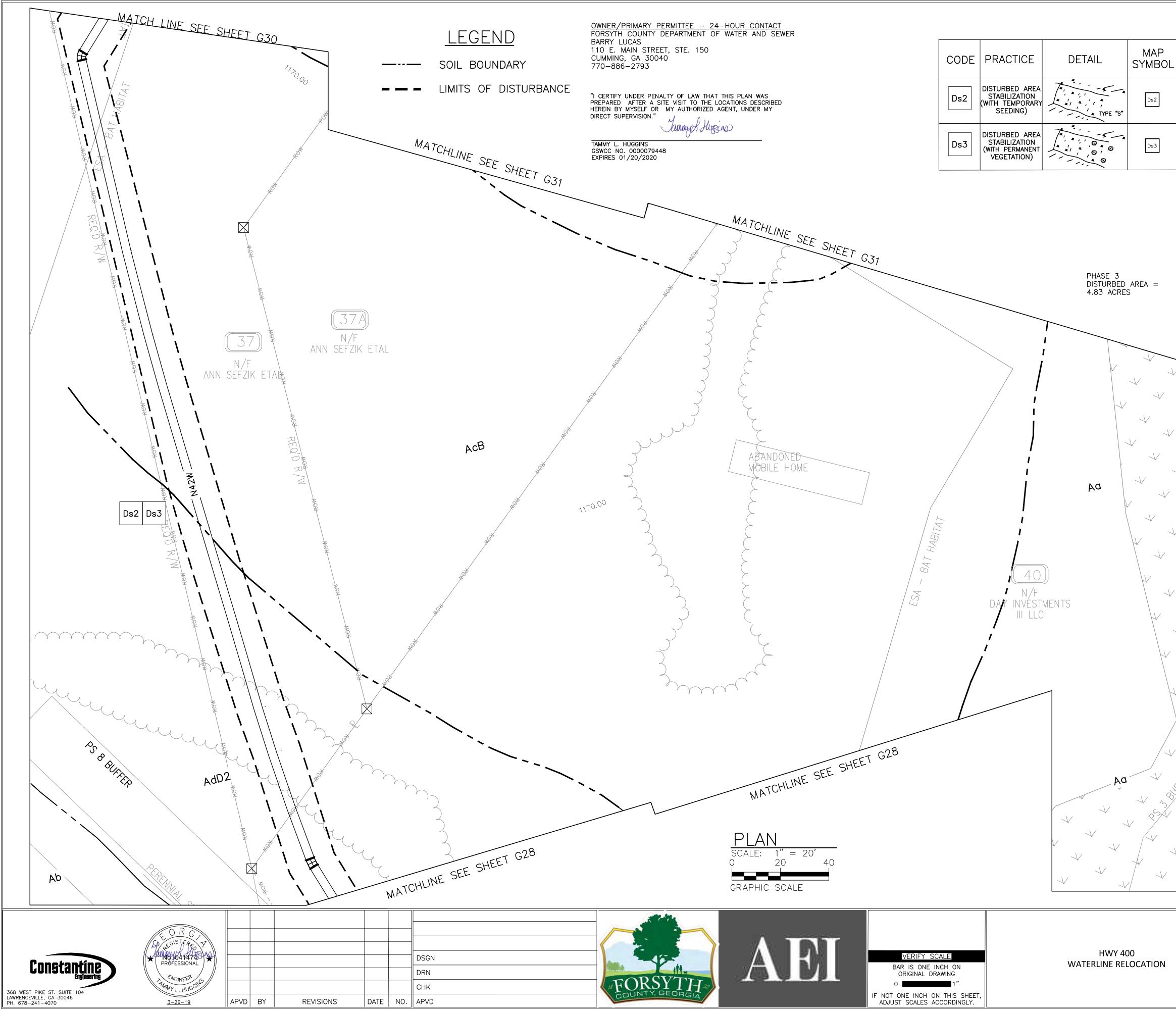
WER	CODE	PRACTICE	DETAIL	MAP SYMBOL
)	Ds2	DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDING)	*, *, ', ', * *, *, ', ', * * TYPE "S"	Ds2
	Ds3	DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION)		Ds3



( | )

EROSION AND SEDIMENTATION CONTROL PHASE 3

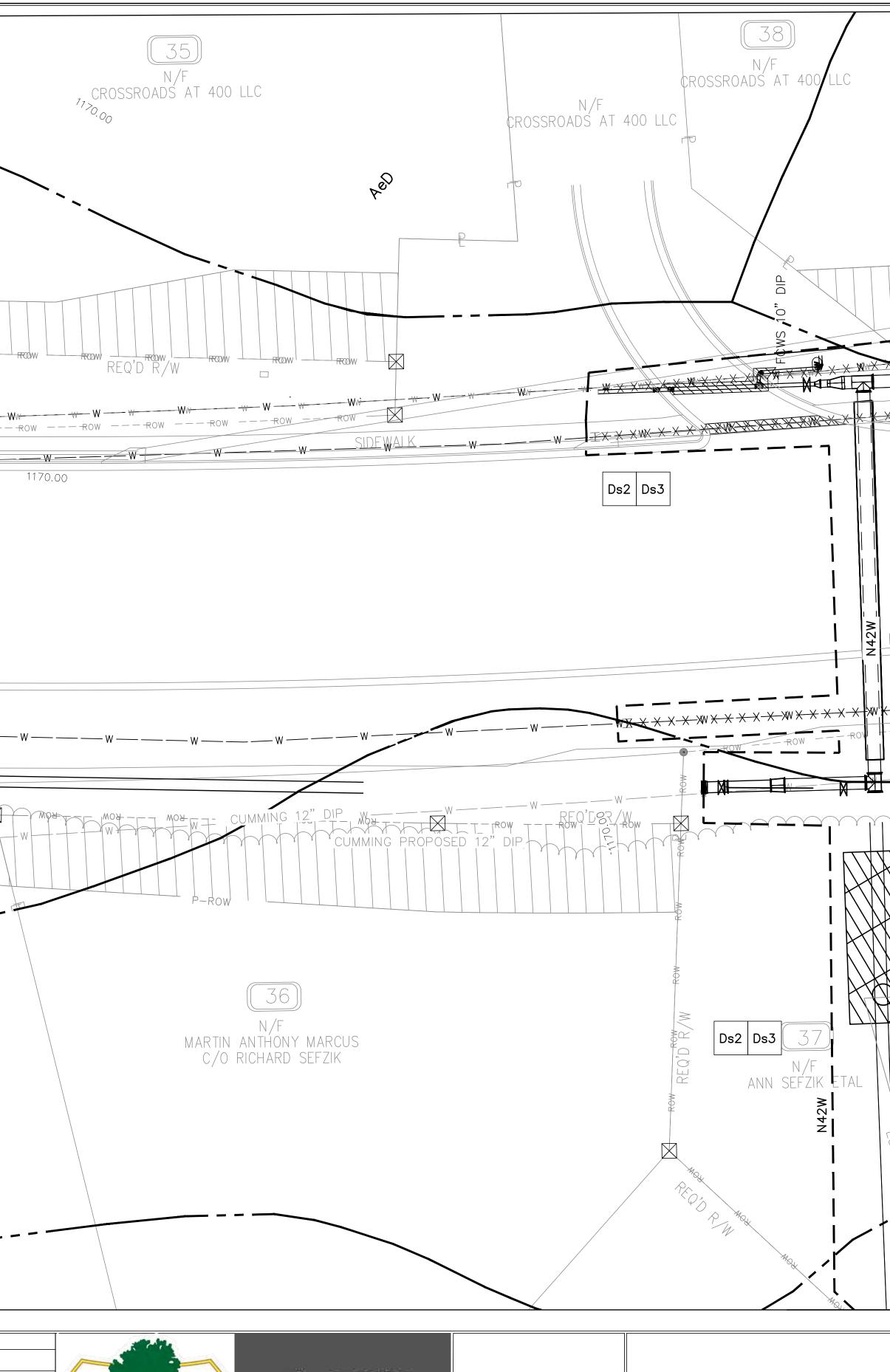
SHEET:	G28
DWG NO:	
DATE:	MARCH, 2019
PROJ NO:	100182.15



7		SOILS LEGEND		
	MAP U			
	<u>SYMB</u> Aa	Alluvial land, poorly drained		
	Ab	Toccoa and Chewacla soils, 0 to 2 percent slopes, occasionally flooded		
_	AcE	Altavista fine sandy loam		
	AdC	Appling sandy clay logm		
	AdC	Appling sandy clay loam, 3 severely eroded gently		
	AdD	sloping phase Appling sandy clay loam,		
	CaC	Cecil clay loam, severely		
	CbE	Cecil fine sandy loam		
	CcB:	Cecil sandy loam, 2 to 6	/	
	EaC	Orangeburg loamy fine sand, 0 to 2 percent		
	EaE	loam, moderately steep	Ds2 Ds3	
	Sa	Seneca fine sandy loam	FCWS 8"	
	TcB:	2 Thurmont and Braddock 2 fine sandy loams, eroded very gently sloping phases	ROME TO ARE FROM	
			MMING 12"	
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		OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY	A A A A A A A A A A A A A A A A A A A	
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*		IT CONTROL IN GEORGIA.		
	SITE CON AN DOES 1 OSION AND	TRACTOR. IF FULL IMPLEMENTATION OF THE APPROVED NOT PROVIDE EFFECTIVE EROSION CONTROL, ADDITIONAL SEDIMENT CONTROL MEASURES SHALL BE IMPLEMENTED OR TREAT THE SEDIMENT SOURCE.	× × 00	
	Y DISTURB	ED AREA LEFT EXPOSED FOR A PERIOD GREATER THAN	1160.(	
* 14 √	DAYS SHA	LL BE STABILIZED WITH MULCH OR TEMPORARY SEEDING.		
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			FOR	כעום
			SHEET: G29	
		EROSION AND SEDIMENTATION CONTROL	DWG NO:	
		PHASE 3	DATE: MARCH,	2019

PROJ NO: 100182.15
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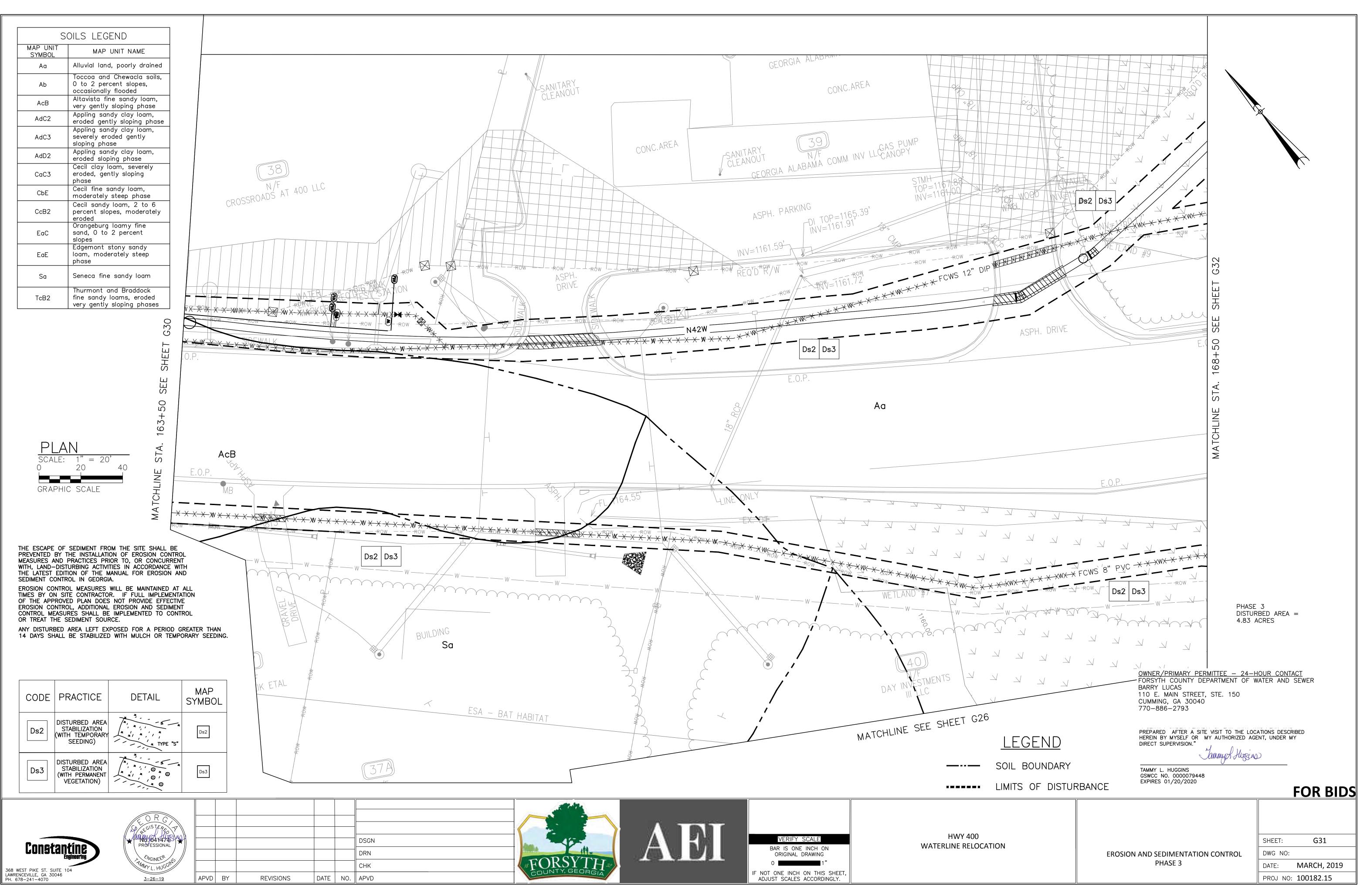
OWNER/PRIMARY PERMITTEE - 24-HOUR CONTACT FORSYTH COUNTY DEPARTMENT OF WATER AND SEWER BARRY LUCAS 110 E. MAIN STREET, STE. 150 CUMMING, GA 30040 770-886-2793 "I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY DIRECT SUPERVISION."	Image: CROSSROADS AT 400 LLC       Image: CROSSROADS AT 400 LLC       Image: CROW ROW ROW ROW ROW ROW ROW ROW ROW ROW
	PH-W-MOBEQ'D RWW MOB TO MOB MOB TO MOB TO MOB
	32 N/F DAY INVESTMENTS III LLC
Constanting Engineering 368 WEST PIKE ST. SUITE 104 LAWRENCEVILLE, GA 30046 PH. 678-241-4070 APVD	Image: Second

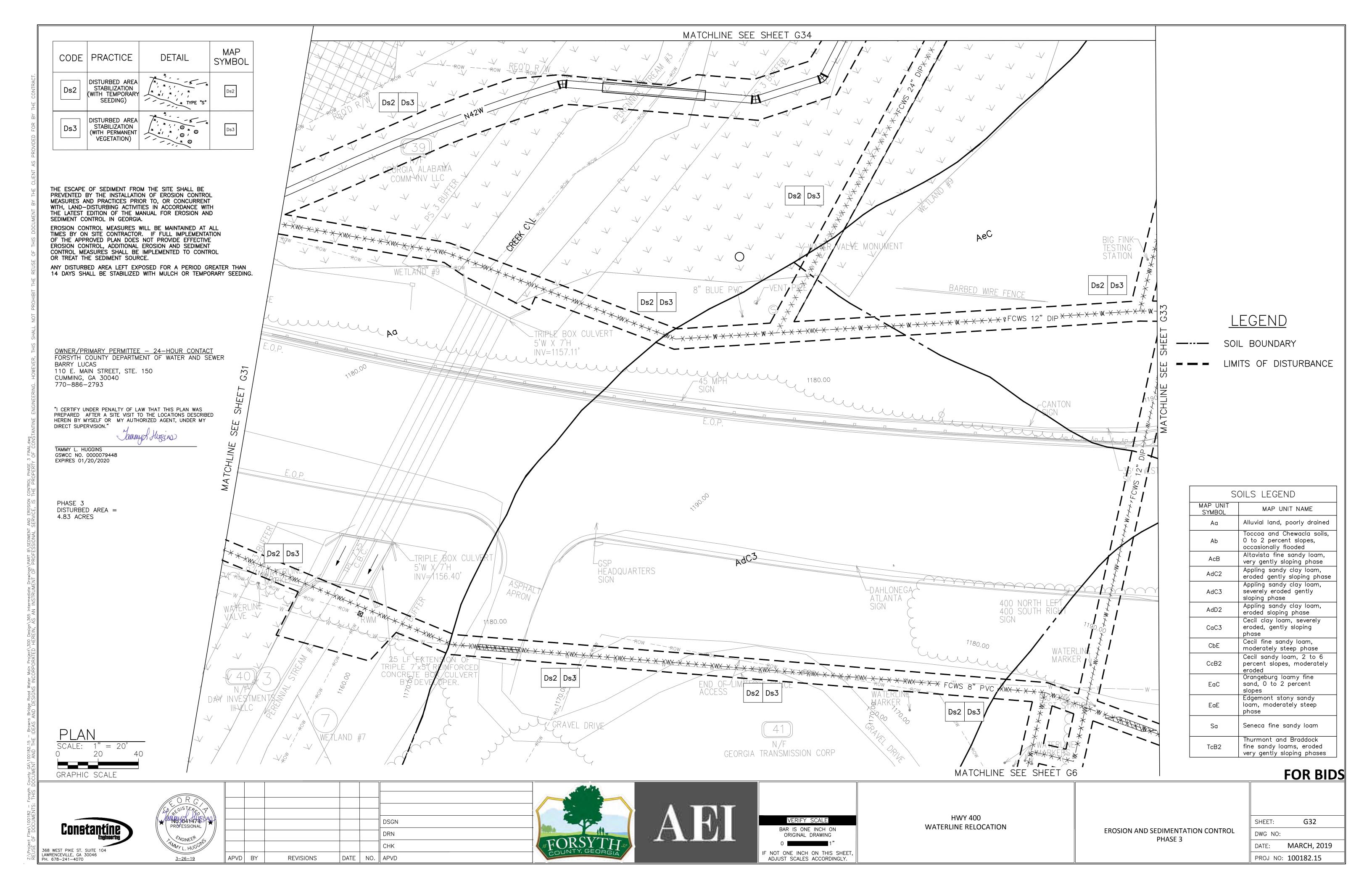


AE VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

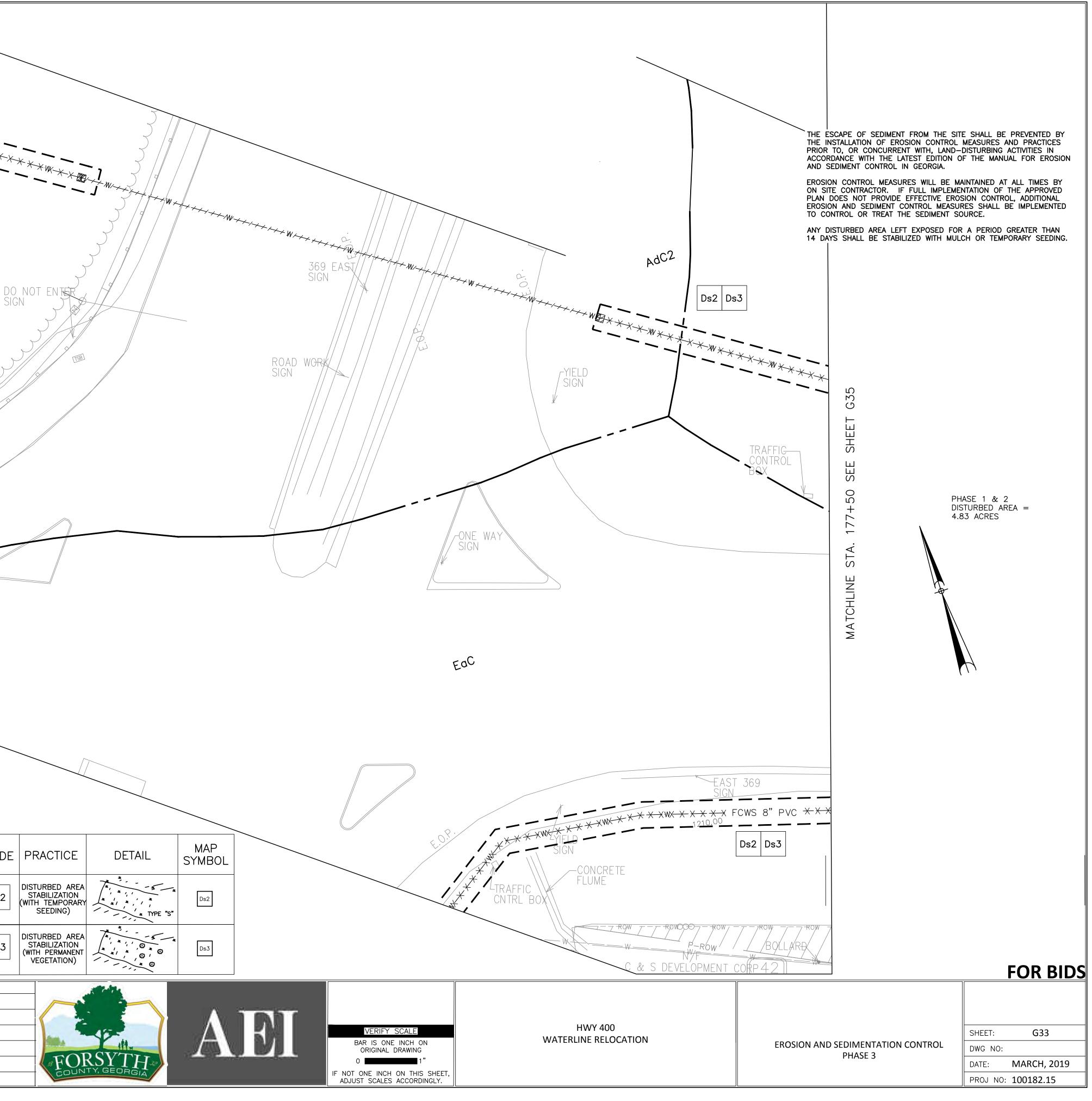
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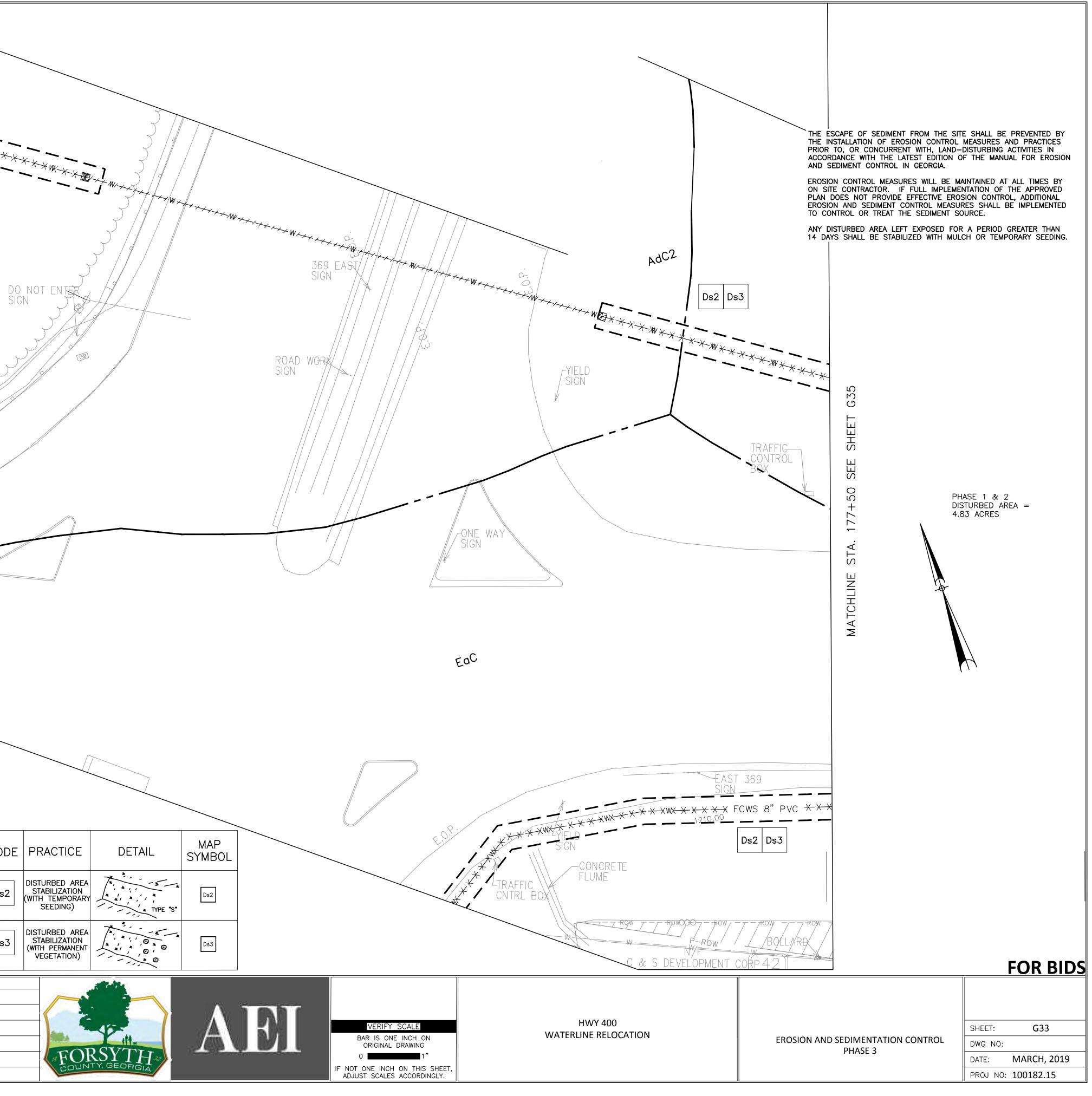
	]					
			SOILS LEG	END		
		MAP UNI SYMBOL		UNIT NAME		
		Aa		l, poorly drained		
		Ab		Chewacla soils, cent slopes, (flooded		No.
		AcB	Altavista fir	ne sandy loam, sloping phase		
		AdC2	Appling san	dy clay loam, tly sloping phase		
		AdC3	Appling san severely erc sloping pha	dy clay loam, oded gently se		
		AdD2	eroded slop			
		CaC3	eroded, ger	bam, severely Itly sloping		
		CbE	Cecil fine s	andy loam, steep phase		
		CcB2	percent slo	loam, 2 to 6 pes, moderately		
-N		EaC	eroded Orangeburg sand, 0 to	loamy fine 2 percent		
<del>( <u>×                                    </u></del>		EaE	loam, mode	stony sandy crately steep		
	G31	Sa	phase Seneca fine	sandy loam		
	SHEET	TcB2	fine sandy	nd Braddock Ioams, eroded sloping phases		
		L				
	SEE	PHASE 3 DISTURBED	AREA =			
	IN IN	4.83 ACRES	5			
170.00 0.P.	MATCHLINE					
	A N				MAP	,
L -		CODE	PRACTICE	DETAIL	SYMB(	
ROW		Ds2	DISTURBED AREA STABILIZATION		Ds2	
			(WITH TEMPORARY SEEDING)	*/ , , , , , , , , , , , , , , , , , , ,		
		Ds3	DISTURBED AREA STABILIZATION (WITH PERMANENT		Ds3	
Y. Y			VEGETATION)	* 0		
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ABITA					GRAPH	HIC SCALE
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МАТС	CHLINE	SEE SH	HEET G29		]	FOR BIDS
			EROSION AND	SEDIMENTATION CONT	ROL	SHEET: G30 DWG NO:
				PHASE 3		DATE: MARCH, 2019
						PROJ NO: 100182.15

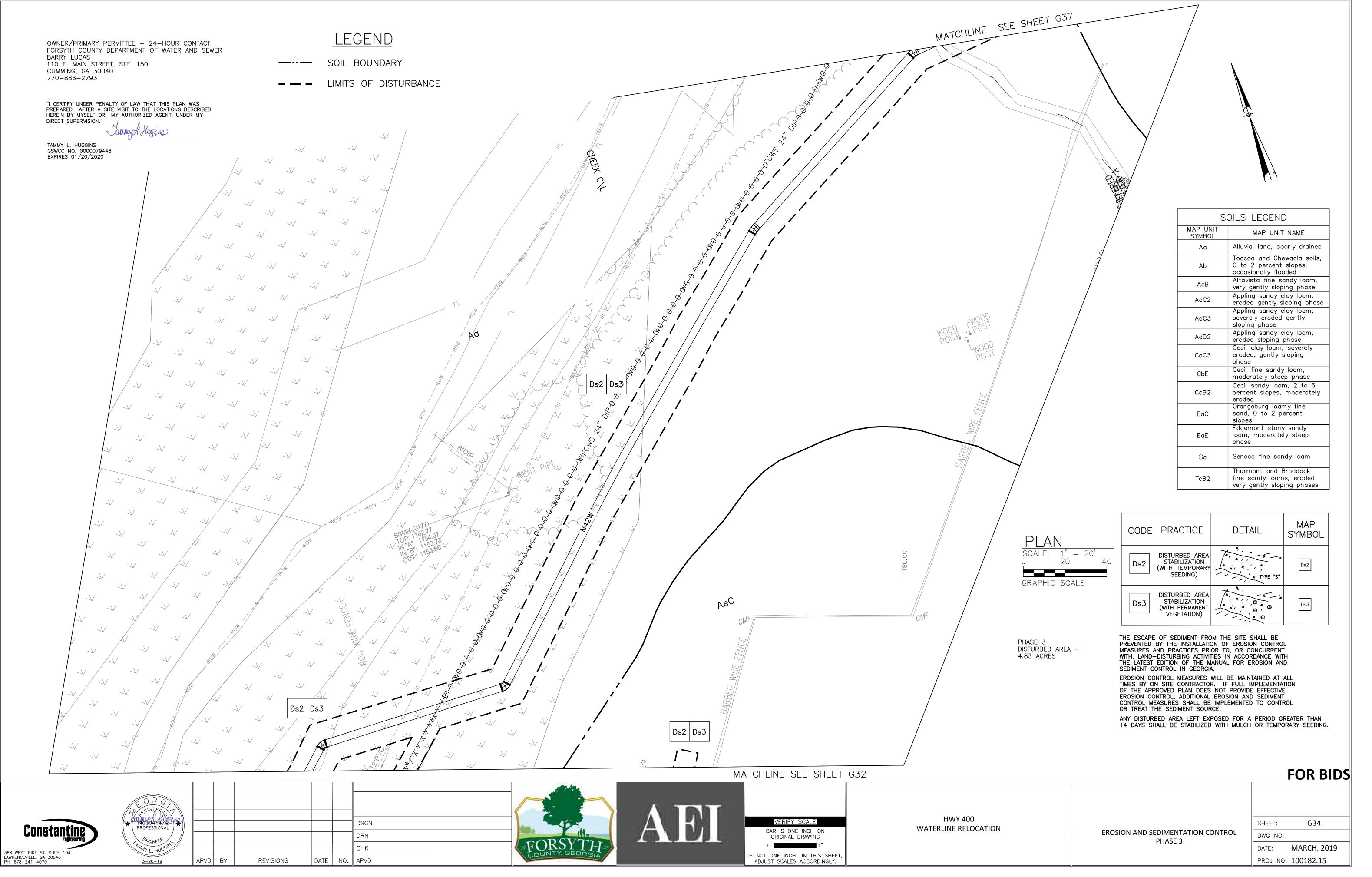




			MAT	CHLINE SFF	SHEET G34		
		1170.					
			54 <sup>°</sup>	// Г	Ds2 Ds3		
MAP UNIT	SOILS LEGEND		. <. <b>-</b> -				
SYMBOL Aa	Alluvial land, poorly drained		Lews	FCWS 12"	IP * * * WK * *		
Ab	Toccoa and Chewacla soils, 0 to 2 percent slopes,				IP * * * WK * V		
	occasionally flooded Altavista fine sandy loam,		$\begin{array}{c} * \\ * \\ * \\ * \\ * \\ * \\ * \\ * \\ * \\ * $			*****	
AcB	very gently sloping phase Appling sandy clay loam,	/	*1				KX WK XX
AdC2	eroded gently sloping phase Appling sandy clay loam,	.					
AdC3	severely eroded gently sloping phase Appling sandy clay loam,		k   				
AdD2	eroded sloping phase Cecil clay loam, severely		/ /				
CaC3	eroded, gently sloping phase	* * * * * * * * * * * * * * * * * * *	1				
СЬЕ	Cecil fine sandy loam, moderately steep phase	* <b> </b> \$					
CcB2	Cecil sandy loam, 2 to 6 percent slopes, moderately eroded	* 1				AeC	
EaC	Orangeburg loamy fine sand, 0 to 2 percent	<b>[</b> ]					DI
	slopes Edgemont stony sandy	/	BIG FINK		0		
EaE	loam, moderately steep phase		/ TESTING STATION		1. 100.00°		
Sa	Seneca fine sandy loam	× ×	- 1/				
TcB2	Thurmont and Braddock fine sandy loams, eroded	× × 7 ∫	Į.				$\mathcal{S}$
	very gently sloping phases		/				
OWNER/PRIMARY P	<u>ERMITTEE – 24–HOUR CONTACT</u> DEPARTMENT OF WATER AND SEWER				-YIELD		/
BARRY LUCAS 110 E. MAIN STREE					STOR		
CUMMING, GA 3004 770-886-2793	40	1					
		SEE					
PREPARED AFTER A SI HEREIN BY MYSELF OR	ALTY OF LAW THAT THIS PLAN WAS ITE VISIT TO THE LOCATIONS DESCRIBED MY AUTHORIZED AGENT, UNDER MY	SHEE					
DIRECT SUPERVISION."	Janmy S. Huzino						
TAMMY L. HUGGINS GSWCC NO. 000007944		G3:	<b>`</b>				/
EXPIRES 01/20/2020		Ň	$\rightarrow$				
	LEGEND						
_	DIL BOUNDARY						
		$\bigcirc$					$\sim$
	MITS OF DISTURBANCE						
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			— W/				CODE
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				YIEL	D SIGN/// )		Ds2
		, <b>\</b>				$\sum$	
	SCALE: $1" = 20$ 0 20	40	W X			1	Ds3
	GRAPHIC SCALE						
	CAL CISTER						
	CD 25 GISTER → NO.041470 PROFESSIONAL				DSGN		
Constanti					DRN		
368 WEST PIKE ST. SUITE 104 LAWRENCEVILLE, GA 30046	WMYL. HUGGI	APVD BY	REVISIONS		CHK NO. APVD		
PH. 678-241-4070	<u>3–26–19</u>	HALAN RI	KEVISIONS	DATE N			

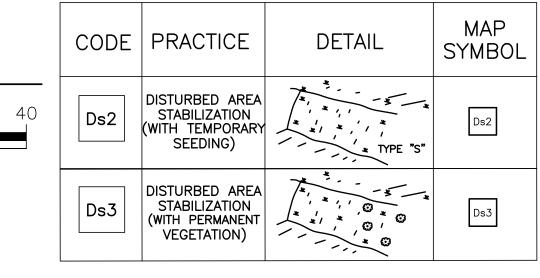


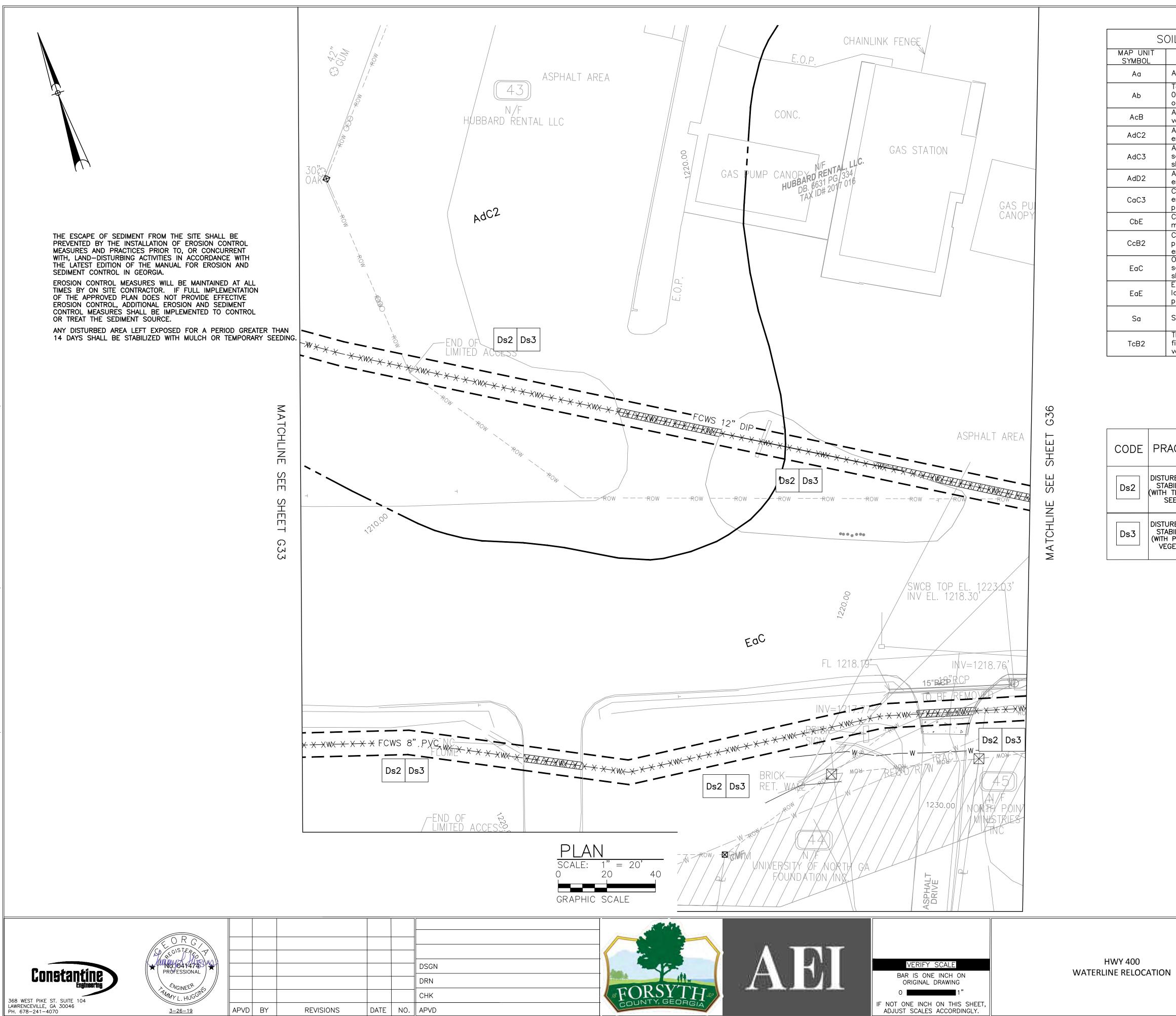






SOILS LEGEND			
MAP UNIT SYMBOL	MAP UNIT NAME		
Aa	Alluvial land, poorly drained		
Ab	Toccoa and Chewacla soils, O to 2 percent slopes, occasionally flooded		
AcB	Altavista fine sandy loam, very gently sloping phase		
AdC2	Appling sandy clay loam, eroded gently sloping phase		
AdC3	Appling sandy clay loam, severely eroded gently sloping phase		
AdD2	Appling sandy clay loam, eroded sloping phase		
CaC3	Cecil clay loam, severely eroded, gently sloping phase		
CbE	Cecil fine sandy loam, moderately steep phase		
CcB2	Cecil sandy loam, 2 to 6 percent slopes, moderately eroded		
EaC	Orangeburg loamy fine sand, 0 to 2 percent slopes		
EaE	Edgemont stony sandy loam, moderately steep phase		
Sa	Seneca fine sandy loam		
TcB2	Thurmont and Braddock fine sandy loams, eroded very gently sloping phases		

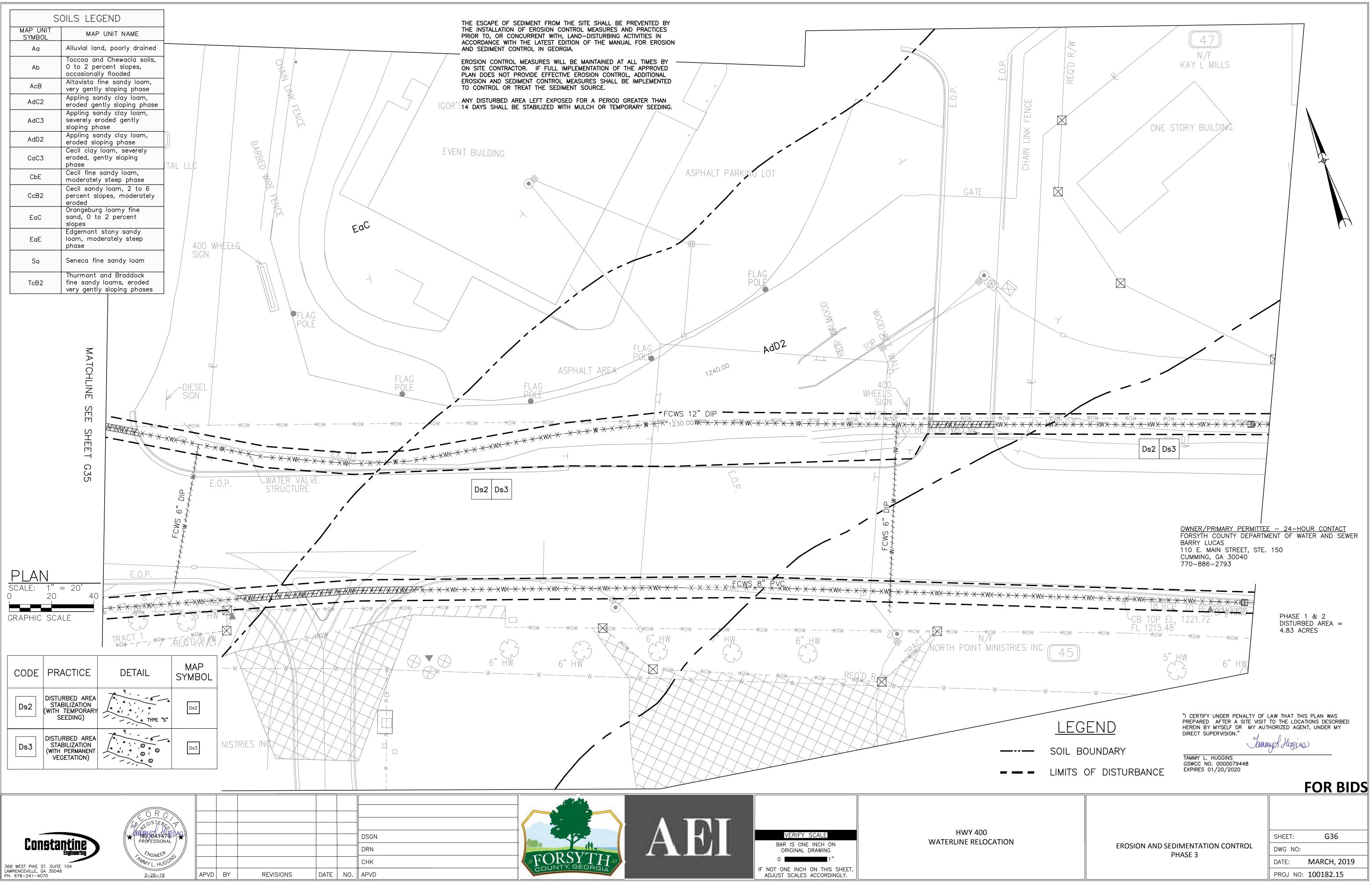


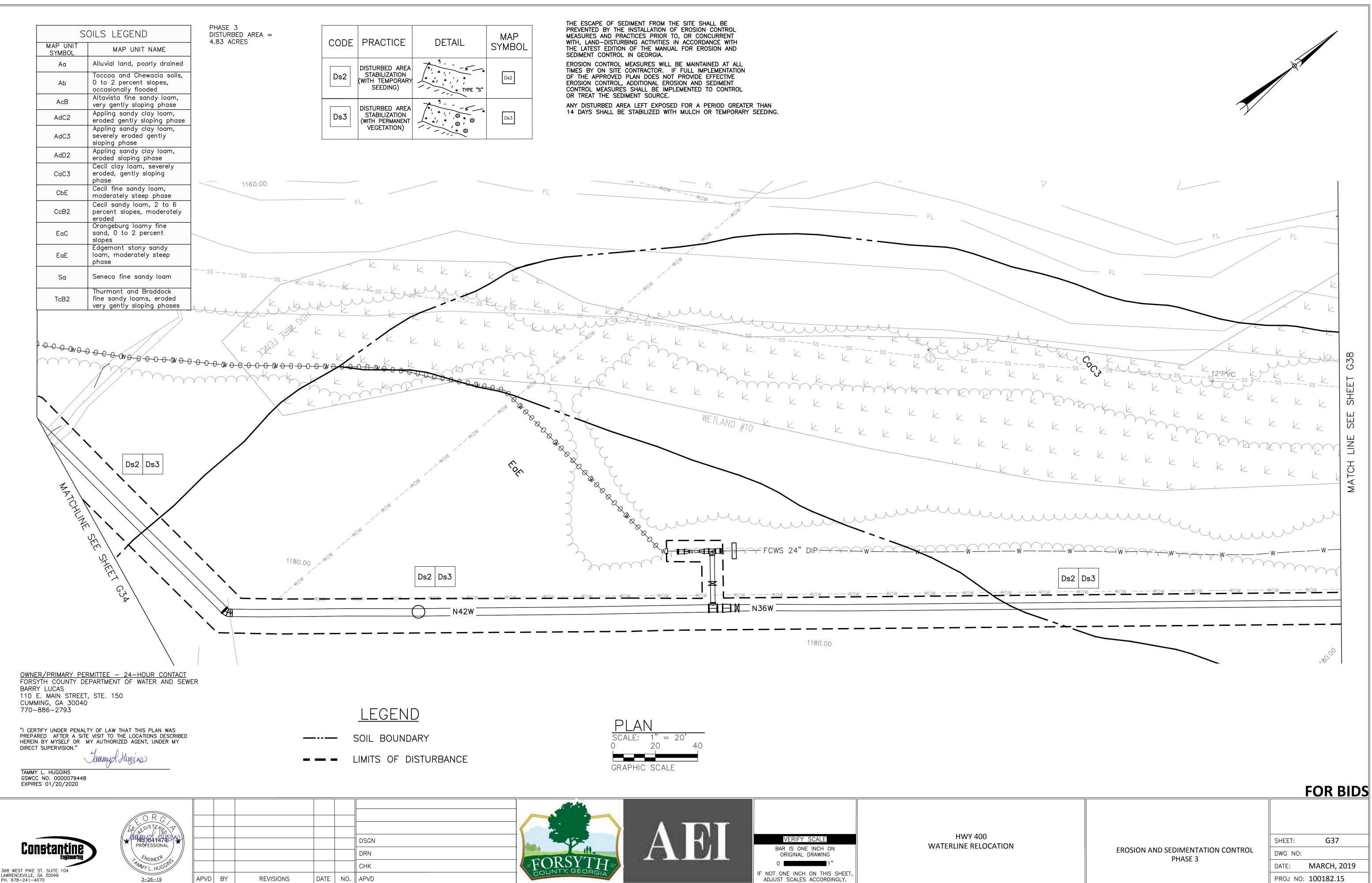


SOILS LEGEND		<u>OWNER/PRIMARY PERMITTEE – 24–HOUR CONTACT</u> FORSYTH COUNTY DEPARTMENT OF WATER AND SEWER		
IT -	MAP UNIT NAME	BARRY LUCAS 110 E. MAIN STREET, STE. 150 CUMMING, GA 30040 770–886–2793		
	Alluvial land, poorly drained			
	Toccoa and Chewacla soils, 0 to 2 percent slopes, occasionally flooded			
	Altavista fine sandy loam, very gently sloping phase	"I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY		
	Appling sandy clay loam, eroded gently sloping phase	DIRECT SUPERVISION."		
	Appling sandy clay loam, severely eroded gently sloping phase	TAMMY L. HUGGINS GSWCC NO. 0000079448		
	Appling sandy clay loam, eroded sloping phase	EXPIRES 01/20/2020		
	Cecil clay loam, severely eroded, gently sloping phase			
	Cecil fine sandy loam, moderately steep phase	LEGEND		
	Cecil sandy loam, 2 to 6 percent slopes, moderately			
	eroded Orangeburg loamy fine	SOIL BOUNDARY		
	sand, 0 to 2 percent slopes	– – – LIMITS OF DISTURBANCE		
	Edgemont stony sandy loam, moderately steep phase			
	Seneca fine sandy loam	PHASE 3 DISTURBED AREA =		
	Thurmont and Braddock fine sandy loams, eroded very gently sloping phases	4.83 ACRES		

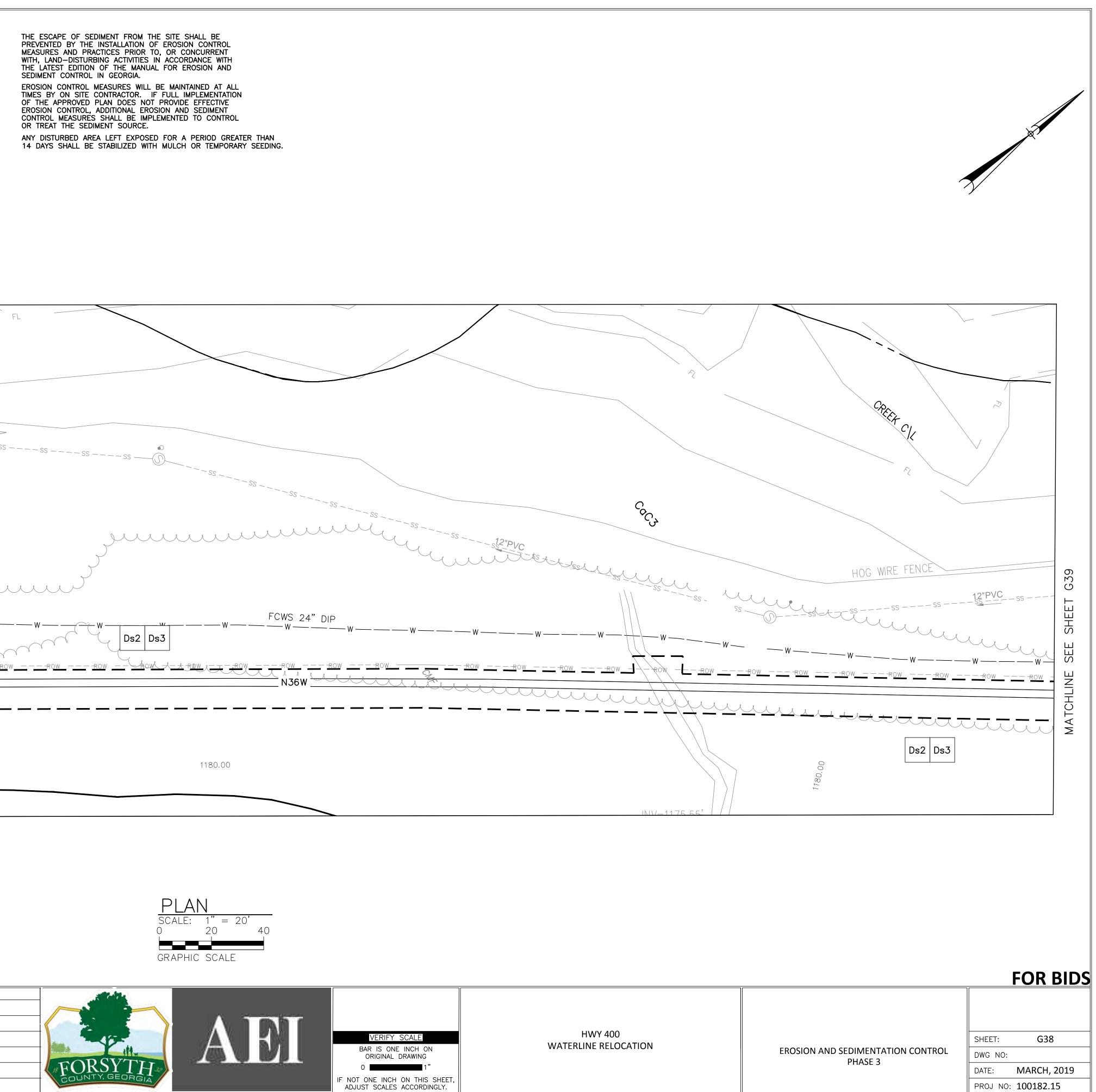
PRACTICE	DETAIL	MAP SYMBOL
DISTURBED AREA STABILIZATION WITH TEMPORARY SEEDING)	*, *, *, *, *, *, *, *, *, *, *, *, *, *	Ds2
DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION)		Ds3

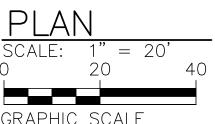
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N		SHEET:	G35
v	EROSION AND SEDIMENTATION CONTROL PHASE 3	DWG NO:	
	FIASE 5	DATE:	MARCH, 2019
		PROJ NO:	100182.15





MAP UNIT	SOILS LEGEND		COD		PRACTICE	Df	ETAIL		MAP	PHASE 3 DISTURBED AREA = 4.83 ACRES
SYMBOL Aa	MAP UNIT Alluvial land, poo				STURBED AREA				SYMBOL	
Ab	Toccoa and Chev 0 to 2 percent s occasionally flood	slopes, ded	Ds2		STABILIZATION ITH TEMPORARY SEEDING)	1	* , ' , * * , ' , * * , TYPE		Ds2	
AcB AdC2	Altavista fine sar very gently slopir Appling sandy clo	ng phase ay loam,	Ds3		STURBED AREA STABILIZATION	***			Dez	
AdC2 AdC3	eroded gently slo Appling sandy clo severely eroded of	ay loam,		(M	VITH PERMANENT VEGETATION)			2	Ds3	
AdD2	sloping phase Appling sandy clo eroded sloping pl	hase								
CaC3	Cecil clay loam, eroded, gently sl phase	oping								
CbE	Cecil fine sandy moderately steep Cecil sandy loam	phase								
CcB2	percent slopes, r eroded Orangeburg loam	noderately y fine								
EaC	sand, 0 to 2 per slopes Edgemont stony	rcent								
EaE	loam, moderately phase	v steep						/		F
Sa	Seneca fine sand	K			< "REFENC	~				
TcB2	fine sandy loams very gently slopir	, eroded ng phases			20G K L		A			
		- 55 -		slk				(		
		K				$SS k - \gamma$	ss <del>k</del>	-15		
					K K	$\swarrow$	k)	K		
		MA		4	Y K K			)		
		MATCHLINE		$\swarrow$	K					
		SEE	X		uu					
		SHEET			_	$\smile$			<u>, , , , , , , , , , , , , , , , , , , </u>	
				· /	<u> </u>	w	·		- W	— w w w
		G37			Y		$\mathcal{A}$	$\sim$	$\gamma \gamma $	
		- <u>-Row</u>		<u>R</u> ow -	———	<u> </u>	Row		<u> </u>	" " " " " " " " "
							¢,	$\langle \rangle$		
<u>OWNER/P</u>	RIMARY PERMITTEE	– 24–HOUR CONTAC	T				I T	- ~		
FORSYTH BARRY LU	COUNTY DEPARTMEN	NT OF WATER AND SE	EWER					<u> </u>	<u>end</u>	
	, GA 30040						SOIL	. B	OUNDARY	
PREPARED	MYSELF OR MY AUTHOR	' THAT THIS PLAN WAS THE LOCATIONS DESCRIBE RIZED AGENT, UNDER MY	D		-		LIMI	ΓS	OF DISTU	RBANCE
	Janmy	Musins								
TAMMY L. F GSWCC NO. EXPIRES 01	0000079448									
		C E GISTERS T								
Consta	<b>ntine</b> Engineering	PROFESSIONAL PROFESSIONAL							DSGN DRN	
368 WEST PIKE ST. SUITE LAWRENCEVILLE, GA 3004( PH. 678–241–4070	E 104 6	3-26-19	APVD	BY	REVISIC	NS	DATE 1	NO.	CHK APVD	
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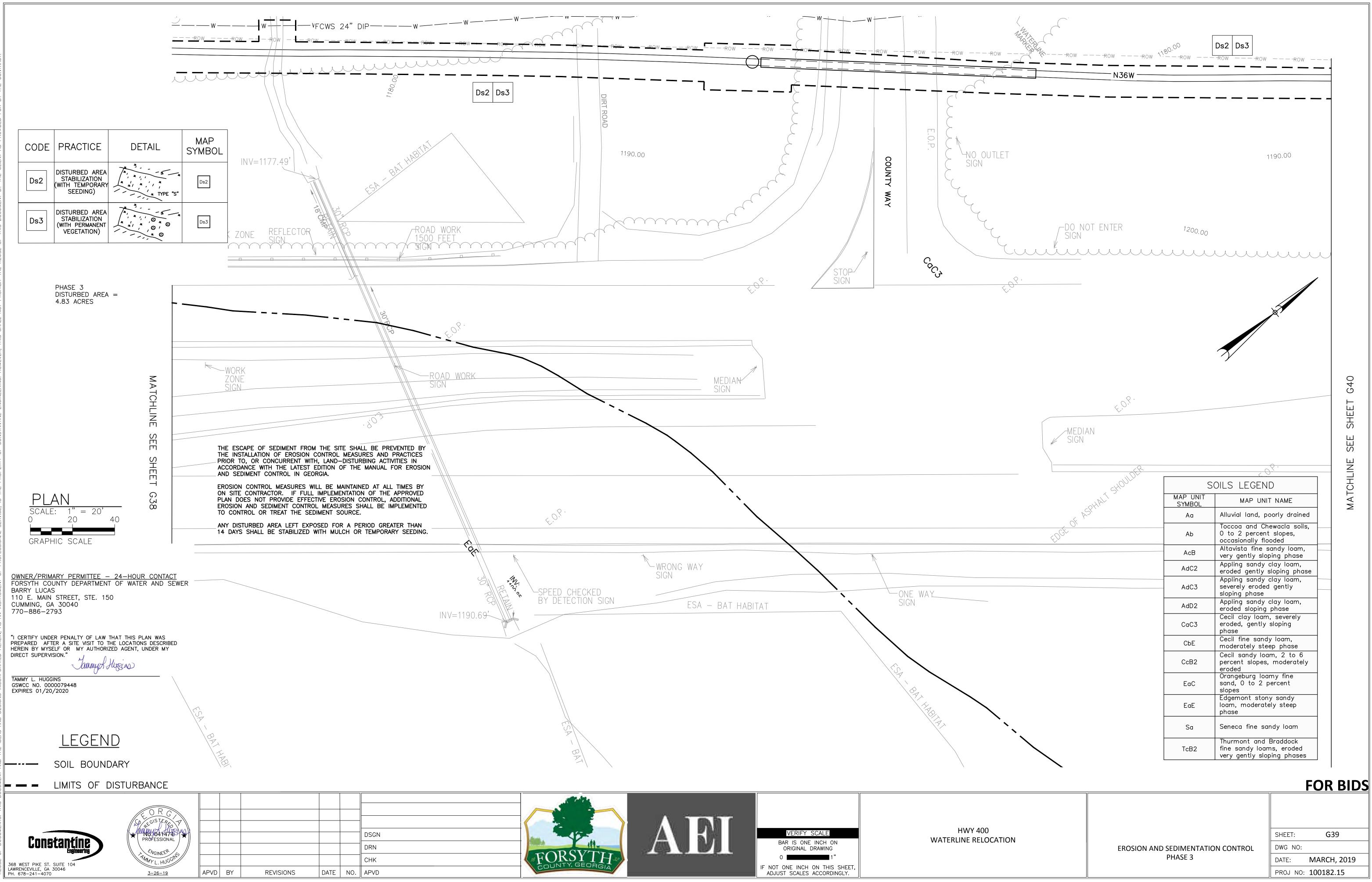




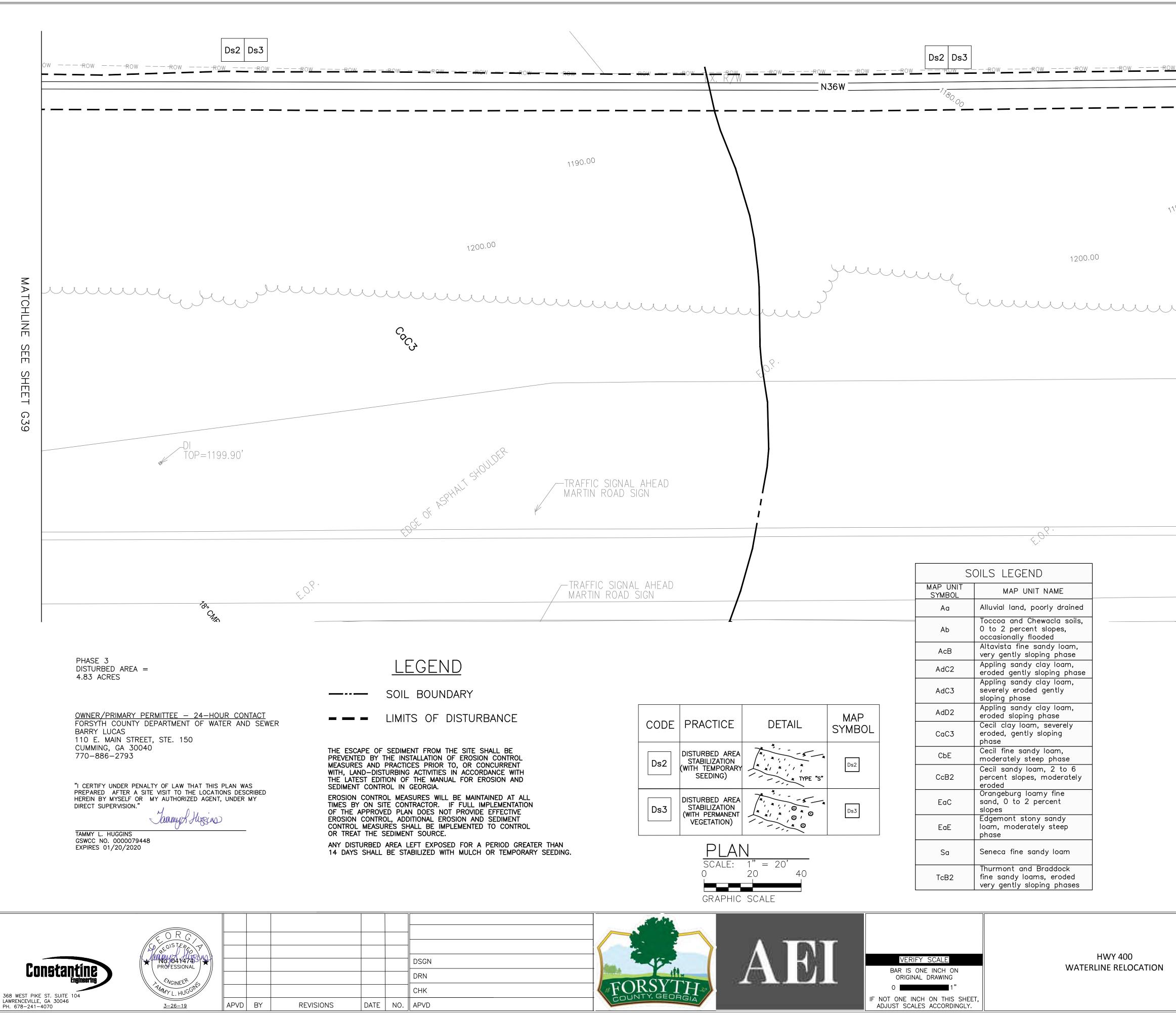




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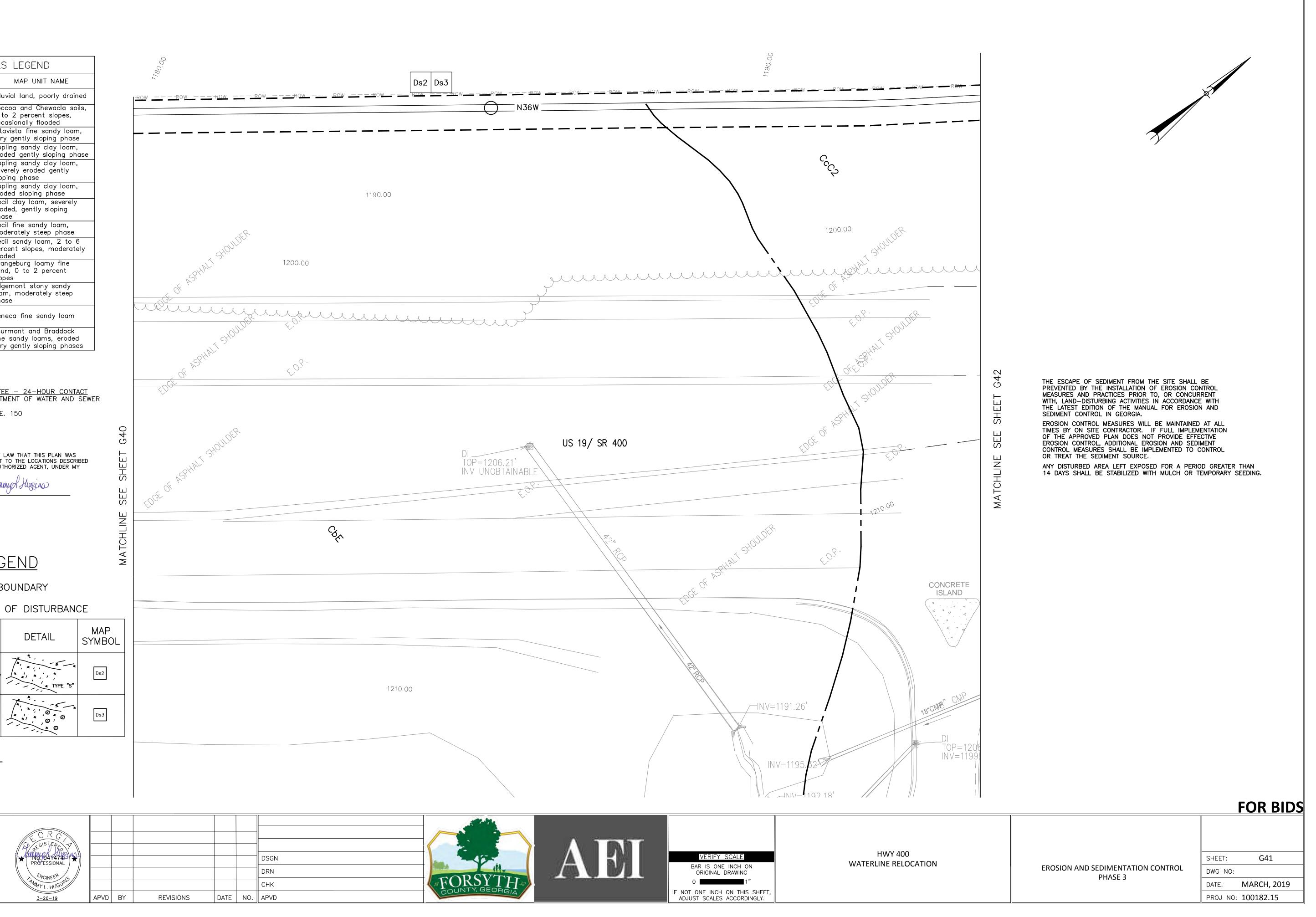
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DATE:	MARCH, 2019
PROJ NO:	100182.15



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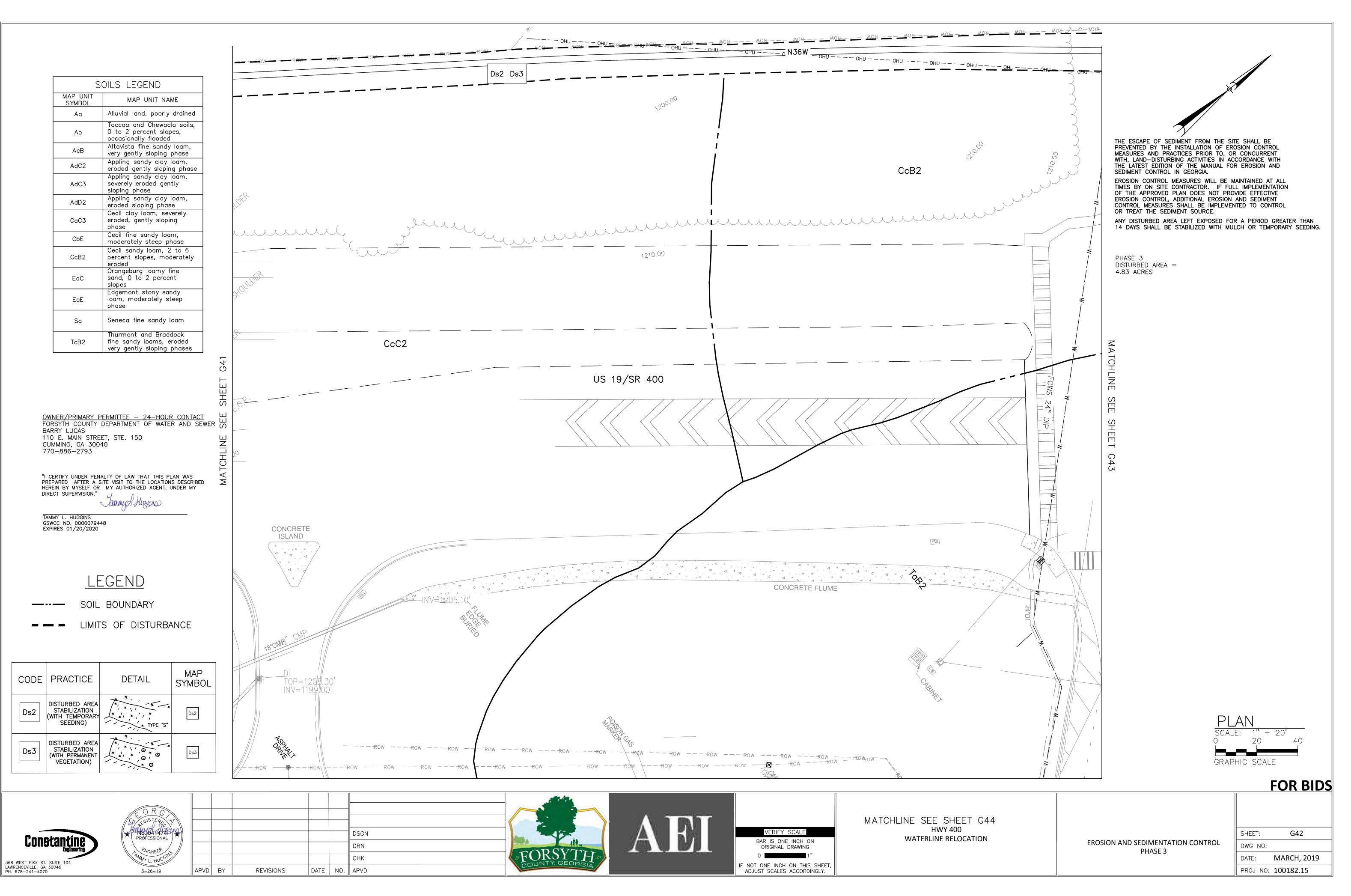
		OILS LEGEND	
	MAP UNIT SYMBOL	MAP UNIT NAME	
	Aa	Alluvial land, poorly draine	
	Ab	Toccoa and Chewacla soils 0 to 2 percent slopes, occasionally flooded	<b>,</b>
	AcB	Altavista fine sandy loam, very gently sloping phase	
	AdC2	Appling sandy clay loam, eroded gently sloping phas	se
	AdC3	Appling sandy clay loam, severely eroded gently sloping phase	
	AdD2	Appling sandy clay loam, eroded sloping phase	
	CaC3	Cecil clay loam, severely eroded, gently sloping phase	
	СЬЕ	Cecil fine sandy loam, moderately steep phase	
	CcB2	Cecil sandy loam, 2 to 6 percent slopes, moderately eroded	/
	EaC	Orangeburg loamy fine sand, 0 to 2 percent slopes	
	EaE	Edgemont stony sandy loam, moderately steep phase	
	Sa	Seneca fine sandy loam	
	TcB2	Thurmont and Braddock fine sandy loams, eroded very gently sloping phases	
	E 3 RBED AREA = ACRES		
110 E CUMM 770-7 "I CERT PREPAR HEREIN DIRECT TAMMY GSWCC	RED AFTER A SITE BY MYSELF OR M SUPERVISION."	, STE. 150 TY OF LAW THAT THIS PLAN WAS VISIT TO THE LOCATIONS DESCRIBE ITY AUTHORIZED AGENT, UNDER MY	D
		EGEND	
	-— SOIL	L BOUNDARY	
	<b>—</b> — LIMI	TS OF DISTURBANC	E
COD	E PRACTIC	E DETAIL	ا SY
	DISTURBED A		
Ds2	WITH TEMPOR SEEDING)	ON	
Ds3	DISTURBED A STABILIZATION (WITH PERMAN VEGETATION		
PLA SCALE: O GRAPHI	$\frac{N}{20}$ C SCALE	40	
Con	stantine Engineering	× PROFESSIONAL × MGINEER MMX + UNICONS	

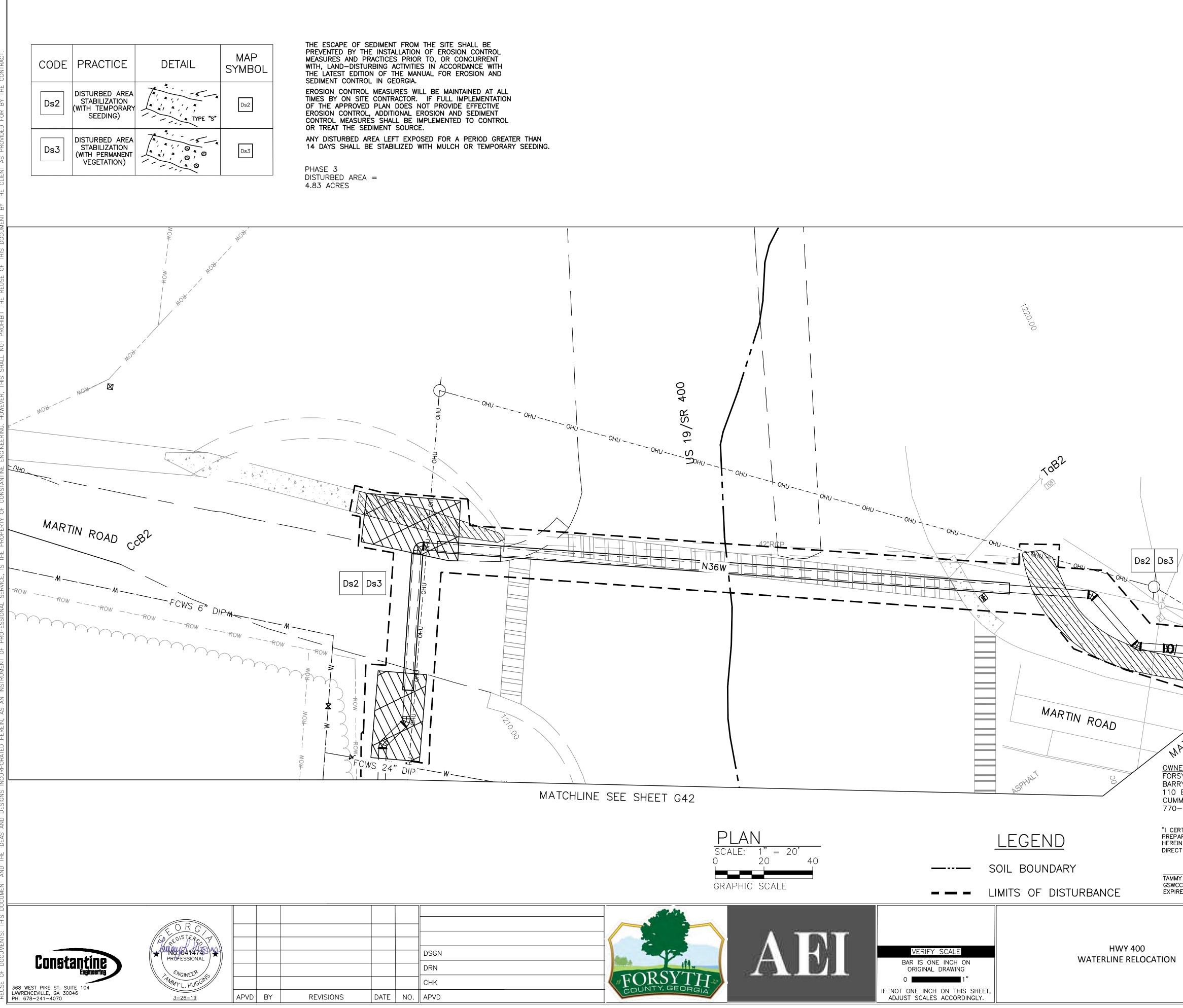
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368 WEST PIKE ST. SUITE 104 LAWRENCEVILLE, GA 30046 PH. 678–241–4070

DATE:		MARCH, 2019
PROJ	NO:	100182.15



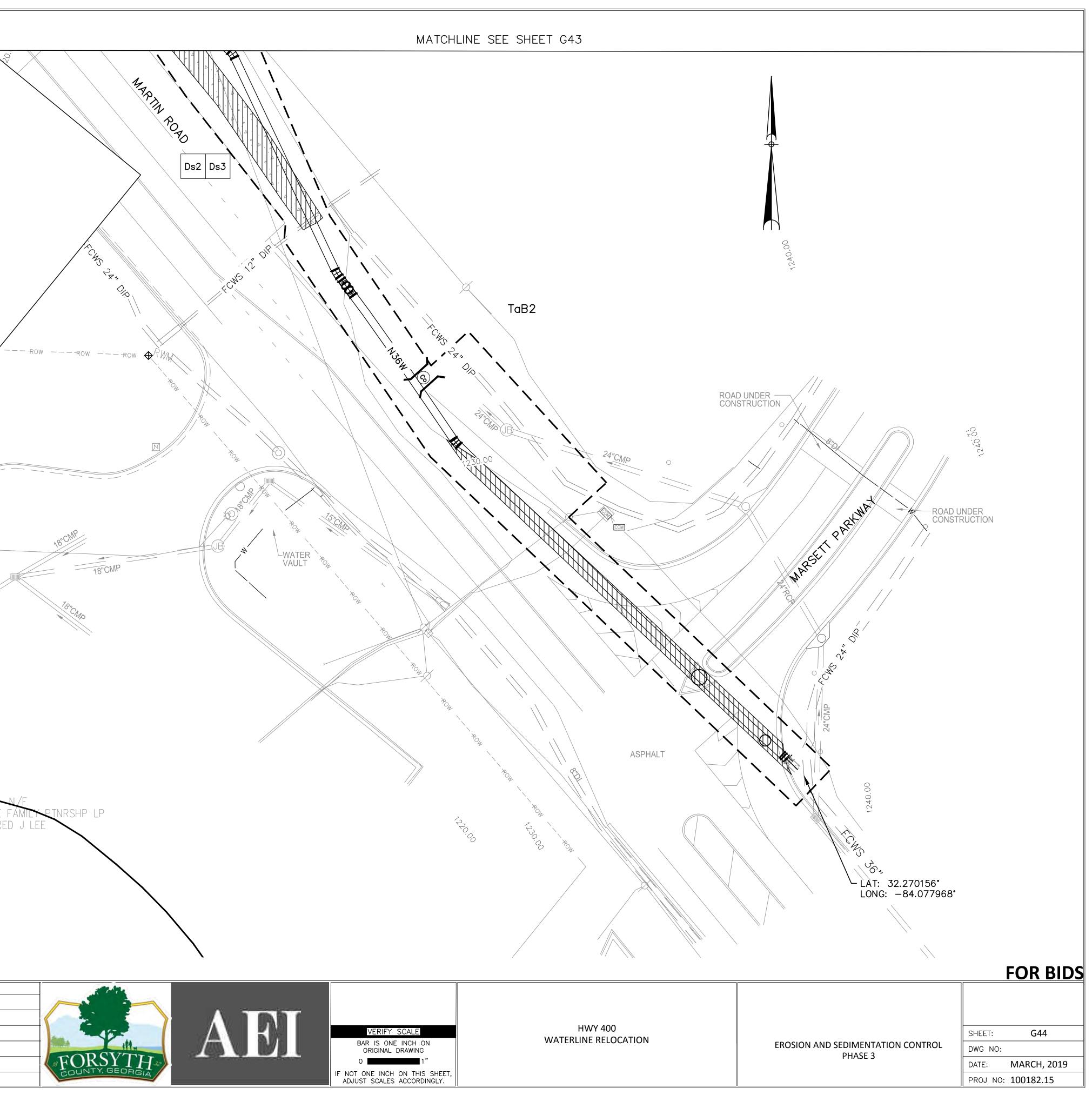


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Ĭ		
		SOILS LEGEND
	MAP UNIT SYMBOL	MAP UNIT NAME
D445	Aa Ab	Alluvial land, poorly drained Toccoa and Chewacla soils, 0 to 2 percent slopes,
	AcB	occasionally flooded Altavista fine sandy loam, very gently sloping phase
FLUME GAA	AdC2	Appling sandy clay loam, eroded gently sloping phase
ANNA ANNA ANNA ANNA ANNA ANNA ANNA ANN	AdC3	Appling sandy clay loam, severely eroded gently sloping phase
CEE SHU	AdD2	Appling sandy clay loam, eroded sloping phase
INF ST	CaC3	Cecil clay loam, severely eroded, gently sloping
CHL.	CbE	phase Cecil fine sandy loam, moderately steep phase
<u>/PRIMARY PERMITTEE – 24–HOUR CONTACT</u> H COUNTY DEPARTMENT OF WATER AND SEWER	CcB2	Cecil sandy loam, 2 to 6 percent slopes, moderately eroded
LUCAS MAIN STREET, STE. 150 IG, GA 30040	EaC	Orangeburg loamy fine sand, 0 to 2 percent slopes
86-2793	EaE	Edgemont stony sandy loam, moderately steep
Y UNDER PENALTY OF LAW THAT THIS PLAN WAS D AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY SUPERVISION."	Sa	phase Seneca fine sandy loam
Tanny A. Husins	TcB2	Thurmont and Braddock fine sandy loams, eroded very gently sloping phases
HUGGINS NO. 0000079448 01/20/2020		FOR BID

	SHE
EROSION AND SEDIMENTATION CONTROL PHASE 3	DWG
THASE 5	DAT

SHEET:	G43
DWG NO:	
DATE:	MARCH, 2019
PROJ NO:	100182.15

	SOILS LEC	GEND		OWNER PRIMARY PERMITTEE _ 24_4011P	CONTACT
MAP UN		P UNIT NAME		<u>OWNER/PRIMARY PERMITTEE – 24–HOUR</u> FORSYTH COUNTY DEPARTMENT OF WATER BARRY LUCAS	AND SEWER
<u>SYMBOI</u> Aa		nd, poorly drained		110 E. MAIN STREET, STE. 150 CUMMING, GA 30040	
Au	Toccoa an	nd Chewacla soils,		770–886–2793	
Ab	0 to 2 pe occasional	ercent slopes, Ily flooded			
AcB		fine sandy loam, y sloping phase		"I CERTIFY UNDER PENALTY OF LAW THAT THIS PLA PREPARED AFTER A SITE VISIT TO THE LOCATIONS	DESCRIBED
AdC2	Appling so	ndy clay loam, ntly sloping phase		HEREIN BY MYSELF OR MY AUTHORIZED AGENT, UN DIRECT SUPERVISION."	IDER MY
AdC3	Appling so	andy clay loam, roded gently		Janny & Hugins	
Auco	sloping ph	ase		TAMMY L. HUGGINS GSWCC NO. 0000079448 EXPLISES 01 (20 (2020)	
AdD2	eroded slo	andy clay loam, oping phase			
CaC3	eroded, ge	loam, severely ently sloping		<u>LEGEND</u>	
CbE	phase Cecil fine	sandy loam,		SOIL BOUNDARY	
	Cecil sand	y steep phase ly loam, 2 to 6			
CcB2	percent sl eroded	opes, moderately		LIMITS OF DISTURBAN	CE
EaC	Orangebur sand, 0 to	g loamy fine o 2 percent			
	slopes	stony sandy		PHASE 3	
EaE		derately steep		DISTURBED AREA = 4.83 ACRES	
Sa		ne sandy loam			
50		-			N2
TcB2	fine sandy	and Braddock / loams, eroded y sloping phases			
	l very gentl	y sloping phases			
		1			Children Chi
CODE	PRACTICE	DETAIL	MAP		1220.00
CODE			SYMBOL		× / \ \\
	DISTURBED AREA	× · · · · · · · · · · · · · · · · · · ·	_		$\langle \ \rangle$ $^{-}$
Ds2	STABILIZATION		Ds2	NA	
	SEEDING)	* TYPE "S			
	DISTURBED AREA		-		
1					
Ds3	STABILIZATION (WITH PERMANENT		Ds3		
Ds3	STABILIZATION (WITH PERMANENT VEGETATION)				
Ds3	WITH PERMANENT				
Ds3	WITH PERMANENT				
IE ESCAPE	(WITH PERMANENT VEGETATION) E OF SEDIMENT FR BY THE INSTALLAT	ROM THE SITE SHALL BE	Ds3 E ROL		
IE ESCAPE REVENTED EASURES A TH, LAND-	(WITH PERMANENT VEGETATION) E OF SEDIMENT FR BY THE INSTALLAT AND PRACTICES PF -DISTURBING ACTIV	ROM THE SITE SHALL BE FION OF EROSION CONT RIOR TO, OR CONCURRE /ITIES IN ACCORDANCE	Ds3 E ROL ENT WITH		erCMP
IE ESCAPE REVENTED EASURES A TH, LAND- IE LATEST	(WITH PERMANENT VEGETATION) E OF SEDIMENT FR BY THE INSTALLAT AND PRACTICES PF -DISTURBING ACTIV	ROM THE SITE SHALL BE FION OF EROSION CONT RIOR TO, OR CONCURRE /ITIES IN ACCORDANCE V MANUAL FOR EROSION	Ds3 E ROL ENT WITH		18" CMP
HE ESCAPE REVENTED EASURES A TH, LAND- HE LATEST EDIMENT C ROSION CO	(WITH PERMANENT VEGETATION) E OF SEDIMENT FR BY THE INSTALLAT AND PRACTICES PF -DISTURBING ACTIV EDITION OF THE ONTROL IN GEORG	ROM THE SITE SHALL BE FION OF EROSION CONT RIOR TO, OR CONCURRE /ITIES IN ACCORDANCE V MANUAL FOR EROSION	E ROL ENT WITH AND		18"CMP
IE ESCAPE REVENTED EASURES A ITH, LAND- IE LATEST EDIMENT C ROSION CO MES BY O F THE APP ROSION CO	(WITH PERMANENT VEGETATION) E OF SEDIMENT FR BY THE INSTALLAT AND PRACTICES PF -DISTURBING ACTIV EDITION OF THE ONTROL IN GEORG ONTROL IN GEORG ONTROL MEASURES N SITE CONTRACTO PROVED PLAN DOE ONTROL, ADDITIONA	ROM THE SITE SHALL BE FION OF EROSION CONT RIOR TO, OR CONCURRE /ITIES IN ACCORDANCE V MANUAL FOR EROSION GIA. WILL BE MAINTAINED A OR. IF FULL IMPLEMEN S NOT PROVIDE EFFECT L EROSION AND SEDIME	E ROL ENT WITH AND AT ALL ITATION TIVE ENT	ASPHALT PARKING	18°CMP
HE ESCAPE REVENTED EASURES A ITH, LAND- HE LATEST EDIMENT C ROSION CO MES BY OU F THE APP ROSION CO DNTROL ME	(WITH PERMANENT VEGETATION) E OF SEDIMENT FR BY THE INSTALLAT AND PRACTICES PF -DISTURBING ACTIV EDITION OF THE ONTROL IN GEORG ONTROL IN GEORG ONTROL MEASURES N SITE CONTRACTO PROVED PLAN DOE ONTROL, ADDITIONA	ROM THE SITE SHALL BE FION OF EROSION CONT RIOR TO, OR CONCURRE //TIES IN ACCORDANCE V MANUAL FOR EROSION SIA. WILL BE MAINTAINED A OR. IF FULL IMPLEMEN S NOT PROVIDE EFFECT L EROSION AND SEDIME E IMPLEMENTED TO CO	E ROL ENT WITH AND AT ALL ITATION TIVE ENT		18°CMP
HE ESCAPE REVENTED EASURES A TH, LAND- HE LATEST EDIMENT C ROSION CO MES BY OI THE APF ROSION CO DNTROL ME R TREAT T NY DISTURI	(WITH PERMANENT VEGETATION) E OF SEDIMENT FR BY THE INSTALLAT AND PRACTICES PF -DISTURBING ACTIV EDITION OF THE ONTROL IN GEORG ONTROL MEASURES N SITE CONTRACTO PROVED PLAN DOE ONTROL, ADDITIONA EASURES SHALL B HE SEDIMENT SOU BED AREA LEFT E	ROM THE SITE SHALL BE FION OF EROSION CONT RIOR TO, OR CONCURRE //TIES IN ACCORDANCE V MANUAL FOR EROSION SIA. WILL BE MAINTAINED A OR. IF FULL IMPLEMEN S NOT PROVIDE EFFECT L EROSION AND SEDIME E IMPLEMENTED TO CO	E ROL ENT WITH AND AT ALL ITATION IVE ENT NTROL GREATER THAN		18°CMP
HE ESCAPE REVENTED EASURES A TH, LAND- HE LATEST EDIMENT C ROSION CO MES BY OI THE APF ROSION CO DNTROL ME R TREAT T NY DISTURI	(WITH PERMANENT VEGETATION) E OF SEDIMENT FR BY THE INSTALLAT AND PRACTICES PF -DISTURBING ACTIV EDITION OF THE ONTROL IN GEORG ONTROL MEASURES N SITE CONTRACTO PROVED PLAN DOE ONTROL, ADDITIONA EASURES SHALL B HE SEDIMENT SOU BED AREA LEFT E	ROM THE SITE SHALL BE FION OF EROSION CONT RIOR TO, OR CONCURRE //TIES IN ACCORDANCE V MANUAL FOR EROSION GIA. WILL BE MAINTAINED A OR. IF FULL IMPLEMEN S NOT PROVIDE EFFECT L EROSION AND SEDIME SE IMPLEMENTED TO COU JRCE. XPOSED FOR A PERIOD	E ROL ENT WITH AND AT ALL ITATION IVE ENT NTROL GREATER THAN		18°CMP
HE ESCAPE REVENTED EASURES A ITH, LAND- HE LATEST EDIMENT C ROSION CO MES BY OU F THE APP ROSION CO DNTROL ME R TREAT T NY DISTURI 4 DAYS SH	(WITH PERMANENT VEGETATION) E OF SEDIMENT FR BY THE INSTALLAT AND PRACTICES PF -DISTURBING ACTIV EDITION OF THE ONTROL IN GEORG ONTROL MEASURES N SITE CONTRACTO PROVED PLAN DOE ONTROL, ADDITIONA EASURES SHALL B HE SEDIMENT SOU BED AREA LEFT E HALL BE STABILIZE	ROM THE SITE SHALL BE FION OF EROSION CONT RIOR TO, OR CONCURRE //TIES IN ACCORDANCE V MANUAL FOR EROSION GIA. WILL BE MAINTAINED A OR. IF FULL IMPLEMEN S NOT PROVIDE EFFECT L EROSION AND SEDIME SE IMPLEMENTED TO COU JRCE. XPOSED FOR A PERIOD	E ROL ENT WITH AND AT ALL ITATION IVE ENT NTROL GREATER THAN		BUCMP
HE ESCAPE REVENTED EASURES A ITH, LAND- HE LATEST EDIMENT CO ROSION CO MES BY OU F THE APP ROSION CO DNTROL ME R TREAT T NY DISTURI 4 DAYS SH	(WITH PERMANENT VEGETATION) E OF SEDIMENT FR BY THE INSTALLAT AND PRACTICES PF -DISTURBING ACTIV EDITION OF THE ONTROL IN GEORG ONTROL MEASURES N SITE CONTRACTO PROVED PLAN DOE ONTROL, ADDITIONA EASURES SHALL B HE SEDIMENT SOU BED AREA LEFT E HALL BE STABILIZE	ROM THE SITE SHALL BE FION OF EROSION CONT RIOR TO, OR CONCURRE //TIES IN ACCORDANCE V MANUAL FOR EROSION GIA. WILL BE MAINTAINED A OR. IF FULL IMPLEMEN S NOT PROVIDE EFFECT L EROSION AND SEDIME SE IMPLEMENTED TO COU JRCE. XPOSED FOR A PERIOD	E ROL ENT WITH AND AT ALL ITATION IVE ENT NTROL GREATER THAN		BICMP
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1.	THE PRIMARY PERMITTEE & 24-HOUR CONTACT FOR THIS PROJECT IS: OWNER: FORSYTH COUNTY DEPARTMENT OF WATER AND SEWER CONTACT PERSON: BARRY LUCAS ADDRESS: 110 E. MAIN STREET, STE. 150, CUMMING, GA 30040 TEL: 770-886-2793
	EMAIL: BHLUCAS@FORSYTHCO.COM
2.	THE TOTAL ACREAGE OF THE PROPERTY IS 4.86 ACRES AND THE TOTAL DISTURBED AREA IS 4.83 ACRES.
3.	THE PROPERTY IS LOCATED AT: GPS LOCATION BEGIN PROJECT: LATITUDE: 32.261056°; LONGITUDE: -84.089854° END PROJECT: LATITUDE: 32.270156°; LONGITUDE: -84.077968° ADDRESS: GA 400 @ HIGHWAY 369, CUMMING GA, FORSYTH COUNTY.
4.	THE PRESENCE OF ON-SITE WETLANDS HAS BEEN INVESTIGATED AND IT WAS DETERMINED THAT THERE ARE WETLANDS PRESENT. THERE ARE STATE WATERS LOCATED ON AND WITHIN 200 FEET OF THE PROJECT SITE. THE PROJECT CROSSES BALD RIDGE CREEK. PERMITS HAVE BEEN ACQUIRED FIR
5.	ENCROACHMENT UPON BUFFERS, WETLANDS, ENCROACHMENT UPON THE 25-FOOT PERENIAL STREAM BUFER INCLUDES CONSTRUCTION ACTIVITIES ASSOCIATED WITH THE INSTALLATION OF 42-INCH AND 36-INCH WATERLINES, INCLUDING TRENCHING, INSTALLATION OF PIPE AND BEDDING, BACKFILL, COMPACTION, AND RE-ESTABLISHING VEGETATION. DISTURBANCE IN THIS AREA WILL BE KEPT TO A MIMIMUM. A BUFFER VARIANCE APPROVAL HAS BEEN REQUESTED FROM GAEPD.
6.	THE RECEIVING WATERS OF THIS PROJECT IS BALD RIDGE CREEK, WHICH IS NOT AN IMPAIRED STREAM SEGMENT LOCATED LESS THAN 200 LF SOUTH OF THE SITE, ULTIMATELY LEADING TO HEADWATERS OF LAKE LANIER. A TMDL HAS NOT BEEN FINALIZED FOR THIS WATERBODY.
7.	THE MOST EFFICIENT METHOD OF DUST CONTROL FOR THE SITE SHALL BE DETERMINED EXPERIMENTALLY AND MAY CONSIST OF TEMPORARY MEASURES SUCH AS MULCHES, VEGETATIVE COVER, SPRAY-ON ADHESIVES, TILLAGE, IRRIGATION, BARRIERS AND/OR THE APPLICATION OF CALCIUM CHLORIDE. LIKEWISE, IF THE ACTION OF THE VEHICLE TRAVELING OVER THE GRAVEL CONSTRUCTION EXIT PAD DOES NOT SUFFICIENTLY REMOVE THE MUD FROM VEHICLE TIRES, THE TIRES SHOULD BE WASHED PRIOR TO THE ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE AND PROVISIONS THE INTERCEPT THE SEDIMENT-LADEN RUNOFF AND DIRECT IT INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
8.	<ul> <li>WASHOUT OF THE DRUM OF A CONCRETE TRUCK AT THE CONSTRICTION SITE IS PROHIBITED. CONCRETE WASHDOWN OF TOOLS, CONCRETE MIXER CHUTES, HOPPERS, AND THE REAR OF VEHICLES WILL ONLY BE ALLOWED IN A DESIGNATED AREA PROVIDED FOR THIS PURPOSE, AS SHOWN ON THE DRAWINGS. THE FOLLOWING BEST MANAGEMENT PRACTICES WILL BE FOLLOWED:</li> <li>(1) CONTAIN ALL WASH WATER ON SOIL, IN A BOWL SHAPED AREA CREATED IN THE DESIGNATED WASH AREA TO PREVENT THE WASH WATER FROM FLOWING FROM THE WASHOUT AREA;</li> <li>(2) USE THE MINIMUM AMOUNT OF WATER TO WASH DOWN THE TOOLS, CONCRETE MIXER CHUTES, HOPPERS AND THE REAR OF VEHICLES;</li> <li>(3) REMOVES ANY CONCRETE SEDIMENT FROM THE AREA SURROUNDING THE WASHOUT AREA BEFORE IT HARDENS; AND</li> <li>(4) REMOVE ALL CONCRETE RESIDUE FORM THE DESIGNATED AREA ONCE IT HAS HARDENED.</li> </ul>
9.	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, MATERIAL 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 LITER, SAND, SAWDUST AND PROPERLY LABELED PLASTIC AND METAL WASTE CONTAINERS. SPILL AND ADJUSTED AS NECESSARY TO PREVENT FUTURE SPILLS. ALL SPILLS WILL BE CLEANED UP IMMEDIATELY UPON DISCOVERY. ALL SPILLS WILL BE REPORTED AS REQUIRED BY LOCAL, STATE AND FEDERAL REGULATIONS. 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 NRC WILL BE CONTACTED WITHIN 24 HOURS. AT 1-800-424-8802. 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 THIN 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 1,320 GALLONS OF PETROLEUM IS STORED ONSITE (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.
10.	THE EXISTING SITE IS WOODED AND DEVELOPED RIGHTS-OF-WAY WITH A LAND COVER CONSISTING OF WOODS, GRASSED AREAS AND PAVED AREAS. THE SITE IS TO BE IMPROVED BY CLEARING THE RIGHT-OF-WAY AND INSTAILLING LF OF PIPELINE. DISTURBED AREAS WILL BE GRASSED OR RESTORED PAVEMENT.
11.	ALL POLLUTANTS FROM WASTE DISPOSAL PRACTICES, SOIL ADDITIVES, REMEDIATION OF SPILLS AND LEAKS OF PETROLEUM PRODUCTS, CONCRETE

TRUCK WASHOUT, ETC., SHOULD ANY OF THESE OCCUR, WILL BE CONTROLLED BY THE IMPLEMENTATION OF APPROPRIATE BEST MANAGEMENT PRACTICES. THE SITE WILL BE IN COMPLIANCE WITH ALL APPLICABLE STATE AND LOCAL WASTE DISPOSAL, SANITARY SEWER OR SEPTIC SYSTEM REGULATIONS.

PRODUCT SPECIFIC PRACTICES:

PETROLEUM BASED PRODUCTS - CONTAINERS FOR PRODUCTS SUCH AS FUELS, LUBRICANTS AND TARS WILL BE INSPECTED DAILY FOR LEAKS AND SPILLS THIS INCLUDES ONSITE VEHICLE AND MACHINERY DAILY INSPECTIONS AND REGULAR PREVENTATIVE MAINTENANCE OF SUCH EQUIPMENT. EQUIPMENT MAINTENANCE AREA WILL BE LOCATED AWAY FROM STATE WATER, NATURAL DRAINS AND STORMWATER 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.

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

CONCRETE TRUCK WASHING - NO CONCRETE TRUCKS WILL BE ALLOWED TO WASH OR DISCHARGE SURPLUS CONCRETE OR DRUM WASH WATER ONSITE.

FERTILIZER/HERBICIDES – THESE PRODUCTS 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 SEDIMENT CONTROL IN GEORGIA. ANY SOURCE OF THESE MATERIALS WILL BE UNDER ROOF IN SEALED CONTAINERS.

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

- 12. I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY SUPERVISION.
- 13. I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION AND 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.
- 14. I CERTIFY THAT THE PERMITTEE'S EROSION, SEDIMENTATION AND 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 TURBIDITY OF EACH SPECIFIC IDENTIFIED SAMPLED RECEIVING WATER WILL BE REPRESENTATIVE OF THE INCREASE IN THE TURBIDITY OF A SPECIFIC UN-SAMPLED RECEIVING WATER. Janmy & Hugens
- 15. 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.

SIGNATURE\_

- 16. THE DESIGN PROFESSIONAL WHO PREPARED THE ES&PC PLAN IS TO INSPECT THE INSTALLATION OF THE INITIAL SEDIMENT STORAGE REQUIREMENTS AND PERIMETER CONTROL BMPS WITHIN SEVEN (7) DAYS AFTER INSTALLATION.
- 17. THE PRIMARY PERMITTEE AND TERTIARY PERMITTEE(S) MUST RETAIN THE DESIGN PROFESSIONAL WHO PREPARED THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, EXCEPT WHEN THE PERMITTEE HAS REQUESTED IN WRITING AND EPD HAS AGREED TO AN ALTERNATE DESIGN PROFESSIONAL, TO INSPECT THE INSTALLATION OF THE INITIAL SEDIMENT STORAGE REQUIREMENTS AND PERIMETER CONTROL BMPS WHICH THE DESIGN PROFESSIONAL DESIGNED WITHIN SEVEN (7) DAYS AFTER INSTALLATION. THE DESIGN PROFESSIONAL SHALL DETERMINE IF THESE BMPS HAVE BEEN INSTALLED AND ARE BEING MAINTAINED AS DESIGNED. THE DESIGN PROFESSIONAL SHALL REPORT THE RESULTS OF



LAWRENCEVILLE, GA 30046

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THE INSPECTION TO THE PERMITTEE WITHIN SEVEN (7) DAYS AND THE PERMITTEE MUST CORRECT ALL DEFICIENCIES WITHIN TWO (2) BUSINESS DAYS OF RECEIPT OF THE INSPECTION REPORT FROM THE DESIGN PROFESSIONAL UNLESS WEATHER RELATED SITE CONDITIONS ARE SUCH THAT ADDITIONAL TIME IS REQUIRED.

- 18. THE PRIMARY, SECONDARY OR TERTIARY PERMITTEES, AS APPLICABLE, SHALL AMEND THEIR PLANS WHENEVER THERE IS A CHANGE IN DESIGN, CONSTRUCTION, OPERATION, OR MAINTENANCE WHICH HAS A SIGNIFICANT EFFECT ON BMPS WITH A HYDRAULIC COMPONENT. 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. ALL REVISIONS OR AMENDMENTS SHALL BE SUBMITTED TO THE LOCAL ISSUING AUTHORITY FOR REVIEW.
- 19. WASTE MATERIALS SHALL NOT BE DISCHARGED TO WATERS OF THE STATE. EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.
- 20. THE PRIMARY PERMITTEE SHALL COMPLETE A LIST OF ALL SECONDARY PERMITTEES AND CONTACT INFORMATION IN THE PACE PROVIDED BELOW, AND PROVIDE A COPY OF THE PLAN (AND ANY SUBSEQUENT REVISIONS TO THE PLAN) TO EACH SECONDARY PERMITTEE. EACH SECONDARY PERMITTEE SHALL SIGN AS WRITTEN ACKNOWLEDGEMENT OF RECEIPT OF THE PLAN IN THE SPACE PROVIDED BELOW. THE PRIMARY PERMITTEE SHALL KEEP A COPY OF THE ACKNOWLEDGEMENT ON-SITE IN HIS RECORDS.

SECONDARY PERMITTEES:

1.	NAME: COMPANY: ADDRESS:	
NO	CITY/ST/ZIP:	
	SIGNATURE:	
2.	NAME: COMPANY: ADDRESS:	
NO	CITY/ST/ZIP:	
	SIGNATURE:	
3.	NAME:	

	COMPANY:	
	ADDRESS:	
	CITY/ST/ZIP:	LEVEL IA CERTIFICATION
NO.	:	

	SIGNATURE:	
4.	NAME: COMPANY:	
	ADDRESS:	
	CITY/ST/ZIP:	
NO	··	

21. HAZARDOUS WASTES:

SIGNATURE:

ALL HAZARDOUS WASTE MATERIALS WILL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL, STATE AND/OR FEDERAL REGULATIONS AND BY THE MANUFACTURER OF SUCH PRODUCTS. THE JOB SITE SUPERINTENDENT, WHO WILL ALSO BE RESPONSIBLE FOR SEEING THAT THESE PRACTICES ARE FOLLOWED, WILL INSTRUCT SITE PERSONNEL IN THESE PRACTICES. MATERIAL SAFETY DATA SHEETS (MSDSs) FOR EACH SUBSTANCE WITH HAZARDOUS PROPERTIES THAT IS USED ON THE JOB SITE WILL BE OBTAINED AND USED FOR THE PROPER MANAGEMENT OF POTENTIAL WASTES THAT MAY RESULT FROM THESE PRODUCTS. AN MSDS WILL BE MAINTAINED IN THE ESPCP FILE AT THE JOBSITE CONSTRUCTION TRAILER OFFICE. EACH EMPLOYEE WHO MUST HANDLE A SUBSTANCE WITH HAZARDOUS PROPERTIES WILL BE INSTRUCTED ON THE USE OF MSDS SHEETS AND THE SPECIFIC INFORMATION IN THE APPLICABLE MSDS FOR THE PRODUCT HE/SHE IS USING, PARTICULARLY REGARDING SPILL CONTROL TECHNIQUES.

THE CONTRACTOR WILL IMPLEMENT THE SPILL PREVENTION CONTROL AND COUNTERMEASURES (SPCC) PLAN FOUND WITHIN THIS ESPCP AND WILL TRAIN ALL PERSONNEL IN THE PROPER CLEANUP AND HANDLING OF SPILLED MATERIALS. NO SPILLED HAZARDOUS MATERIAL OR HAZARDOUS WASTES WILL BE ALLOWED TO COME IN CONTACT WITH STORMWATER DISCHARGES. IF SUCH

CONTACT OCCURS, THE STORMWATER DISCHARGE WILL BE CONTAINED ON SITE UNTIL APPROPRIATE MEASURES IN COMPLIANCE WITH STATE AND FEDERAL REGULATIONS ARE TAKEN TO DISPOSE OF SUCH CONTAMINATED STORMWATER. IT SHALL BE THE RESPONSIBILITY OF THE JOB SITE SUPERINTENDENT TO PROPERLY TRAIN ALL PERSONNEL IN THE USE OF THE SPCC PLAN.

SANITARY WASTES: A MINIMUM OF ONE PORTABLE SANITARY UNIT WILL BE PROVIDED TO EVERY TEN (10) WORKERS ON THE SITE. ALL SANITARY WASTE WILL BE COLLECTED FROM THE PORTABLE UNITS A MINIMUM OF ONE TIME PER WEEK BY A LICENSED PORTABLE FACILITY PROVIDER IN COMPLETE COMPLIANCE WITH LOCAL AND STATE REGULATIONS.

ALL SANITARY WASTE UNITS WILL BE LOCATED IN AN AREA WHERE THE LIKELIHOOD OF THE UNIT CONTRIBUTING TO STORMWATER DISCHARGE IS NEGLIGIBLE. ADDITIONAL CONTAINMENT BMPS MUST BE IMPLEMENTED SUCH AS GRAVEL BAGS OR SPECIALLY DESIGNED PLASTIC PLASTIC SKID CONTAINERS AROUND THE BASE, TO PREVENT WASTES FROM CONTRIBUTING TO STORMWATER DISCHARGES. THE LOCATION OF WASTE UNITS MUST BE IDENTIFIED ON THE EROSION CONTROL PLAN GRADING PHASE BY THE CONTRACTOR ONCE THE LOCATIONS HAVE BEEN DETERMINED.

SANITARY SEWER WILL BE PROVIDED BY THE MUNICIPAL AUTHORITY IN CHARGE OF THE PLANT AT THE COMPLETION OF THE PROJECT.

22. INSPECTIONS:

A. PRIMARY PERMITTEE (1). EACH DAY WHEN ANY TYPE OF CONSTRUCTION ACTIVITY HAS TAKEN PLACE AT A PRIMARY PERMITTEE'S SITE, CERTIFIED PERSONNEL PROVIDED BY THE PRIMARY PERMITTEE SHALL INSPECT:

VEHICLES AND EQUIPMENT; AND SUBMITTED.

WHICHEVER OCCURS FIRST): TERMINATION IS SUBMITTED.





VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING F NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

HWY 400 WATERLINE RELOCATION

(A) ALL AREAS AT THE PRIMARY PERMITTEE'S SITE WHERE PETROLEUM PRODUCTS ARE STORED, USED, OR HANDLED FOR SPILLS AND LEAKS FROM

(B) ALL LOCATIONS AT THE PRIMARY PERMITTEE'S SITE WHERE VEHICLES ENTER OR EXIT THE SITE FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING. THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS

(2). MEASURE RAINFALL ONCE EVERY 24 HOURS EXCEPT ANY NON-WORKING SATURDAY, NON-WORKING SUNDAY AND NON-WORKING FEDERAL HOLIDAY UNTIL \_\_\_\_\_ A NOTICE OF TERMINATION IS SUBMITTED. MEASUREMENT OF RAINFALL MAY BE SUSPENDED IF ALL AREAS OF THE SITE HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION.

> (3). CERTIFIED PERSONNEL (PROVIDED BY THE PRIMARY PERMITTEE) SHALL INSPECT THE FOLLOWING AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.5 INCHES RAINFALL OR GREATER (UNLESS SUCH STORM ENDS AFTER 5:00 PM ON ANY FRIDAY OR ON ANY NON-WORKING SATURDAY, NON-WORKING SUNDAY OR ANY NON-WORKING FEDERAL HOLIDAY IN WHICH CASE THE INSPECTION SHALL BE COMPLETED BY THE END OF THE NEXT BUSINESS DAY AND/OR WORKING DAY,

(A) DISTURBED AREAS OF THE PRIMARY PERMITTEE'S CONSTRUCTION SITE;

(B) AREAS USED BY THE PRIMARY PERMITTEE FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION; AND

(C) STRUCTURAL CONTROL MEASURES, EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN APPLICABLE TO THE PRIMARY PERMITTEE'S SITE SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. 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). FOR AREAS OF A SITE THAT HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING TARGET OF PERENNIALS APPROPRIATE FOR THE REGION, THE PERMITTEE MUST COMPLY WITH PART IV.D.4.A.(4). THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF

(4). CERTIFIED PERSONNEL (PROVIDED BY THE PRIMARY PERMITTEE) SHALL INSPECT AT LEAST ONCE PER MONTH DURING THE TERM OF THIS PERMIT (I.E., UNTIL A NOTICE OF TERMINATION IS SUBMITTED TO EPD) THE AREAS OF THE SITE THAT HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION. THESE AREAS SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR POLLUTANTS ENTERING THE DRAINAGE SYSTEM AND THE RECEIVING WATER(S). EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN SHALL BE OBSERVED TO ENDURE THAT THEY ARE OPERATING CORRECTLY. 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).

(5). BASED ON THE RESULTS OF EACH INSPECTION, THE SITE DESCRIPTION AND THE POLLUTION CONTROL PLAN, THE PLAN SHALL BE REVISED AS APPROPRIATE NOT LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION. IMPLEMENTATION OF SUCH CHANGES SHALL BE MADE AS SOON AS PRACTICAL BUT IN NO CASE LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION. THE PRIMARY PERMITTEE MUST AMEND THE PLAN IN ACCORDANCE WITH PART IV.D.A.A.(5) WHEN A SECONDARY PERMITTEE NOTIFIES THE PRIMARY PERMITTEE OF ANY PLAN DEFICIENCIES.

> "I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY DIRECT SUPERVISION."

TAMMY L. HUGGINS GSWCC NO. 0000079448 EXPIRES 01/20/2020

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PROJ NO:	100182.15

**EROSION AND SEDIMENT CONTROL** NOTES

(6). A REPORT OF EACH INSPECTION THAT INCLUDES THE NAME(S) OF CERTIFIED PERSONNEL MAKING EACH INSPECTION, THE DATE(S) OF EACH INSPECTION, CONSTRUCTION PHASE (I.E., INITIAL, INTERMEDIATE OR FINAL) MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE EROSION. SEDIMENTATION AND POLLUTION CONTROL PLAN, AND ACTIONS TAKEN IN ACCORDANCE WITH PART IV.D.5.A.(5). OF THE PERMIT SHALL BE MADE AND RETAINED AT THE SITE OR BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION UNTIL THE ENTIRE SITE, OR THAT PORTION OF A CONSTRUCTION PROJECT THAT HAS BEEN PHASED, HAS UNDERGONE FINAL STABILIZATION AND A NOTICE OF TERMINATION IS SUBMITTED TO EPD. SUCH REPORTS SHALL BE READILY AVAILABLE BY THE END OF THE SECOND BUSINESS DAY AND/OR WORKING DAY AND SHALL IDENTIFY ALL INCIDENTS OF BEST MANAGEMENT PRACTICES THAT HAVE NOT BEEN PROPERLY INSTALLED AND/OR MAINTAINED AS DESCRIBED IN THE PLAN. WHERE THE REPORT DOES NOT IDENTIFY AN INCIDENT, THE INSPECTION REPORT SHALL CONTAIN A STATEMENT THAT THE BEST MANAGEMENT PRACTICES ARE IN COMPLIANCE WITH THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN. THE REPORT SHALL BE SIGNED IN ACCORDANCE WITH PART V.G.2. OF THIS PERMIT.

#### SECONDARY PERMITTEE

(1). EACH DAY WHEN ANY TYPE OF CONSTRUCTION ACTIVITY HAS TAKEN PLACE AT A SECONDARY PERMITTEE'S SITE, CERTIFIED PERSONNEL PROVIDED BY THE SECONDARY PERMITTEE SHALL INSPECT:

(A) ALL AREAS USED BY THE SECONDARY PERMITTEE WHERE PETROLEUM PRODUCTS ARE STORED, USED, OR HANDLED FOR SPILLS AND LEAKS FROM VEHICLES AND EQUIPMENT; AND

(B) ALL LOCATIONS AT THE SECONDARY PERMITTEE'S SITE WHERE THAT PERMITTEE'S VEHICLES ENTER OR EXIT THE SITE FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING. THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED. THIS PARAGRAPH IS NOT APPLICABLE TO UTILITY COMPANIES AND UTILITY CONTRACTORS IF THEY ARE SECONDARY PERMITTEES.

(2). CERTIFIED PERSONNEL (PROVIDED BY THE UTILITY COMPANIES AND UTILITY CONTRACTORS IF THEY ARE SECONDARY PERMITTEES) SHALL INSPECT THE FOLLOWING EACH DAY ANY TYPE OF CONSTRUCTION ACTIVITY HAS TAKEN PLACE AT THE CONSTRUCTION SITE:

(A) AREAS OF THE CONSTRUCTION SITE DISTURBED BY THE UTILITY COMPANIES AND UTILITY CONTRACTORS THAT HAVE NOT UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION;

(B) AREAS USED BY UTILITY COMPANIES AND UTILITY CONTRACTORS FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION THAT HAVE NOT UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION; AND

(C) STRUCTURAL CONTROL MEASURES, EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN APPLICABLE TO THE UTILITY COMPANIES AND UTILITY CONTRACTORS' CONSTRUCTION ACTIVITIES SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. 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). THIS PARAGRAPH IS NOT APPLICABLE TO UTILITY COMPANIES AND UTILITY CONTRACTORS WHEN THEY ARE SECONDARY PERMITTEES PERFORMING SERVICE LINE INSTALLATIONS OR WHEN CONDUCTING REPAIRS ON EXISTING LINE INSTALLATIONS.

(3). CERTIFIED PERSONNEL (PROVIDED BY THE SECONDARY PERMITTEE) SHALL INSPECT THE FOLLOWING AT LEAST ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 25 HOURS OF THE END OF A STORM THAT IS 0.5 INCHES RAINFALL OR GREATER (UNLESS SUCH STORM ENDS AFTER 5:00 PM ON ANY FRIDAY OR ON ANY NON-WORKING SATURDAY, NON-WORKING SUNDAY

OR ANY NON-WORKING FEDERAL HOLIDAY IN WHICH CASE THE INSPECTION SHALL BE COMPLETED BY THE END OF THE NEXT BUSINESS DAY AND/OR WORKING DAY, WHICHEVER OCCURS FIRST):

(A) DISTURBED AREAS OF THE SECONDARY PERMITTEE'S CONSTRUCTION SITE; (B) AREAS USED BY THE SECONDARY PERMITTEE FOR STORAGE OF

MATERIALS THAT ARE EXPOSED TO PRECIPITATION; AND

(C) STRUCTURAL CONTROL MEASURES, EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN APPLICABLE TO THE SECONDARY PERMITTEE'S SITE SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. 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). FOR AREAS OF A SITE THAT HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING TARGET OF PERENNIALS APPROPRIATE FOR THE REGION, THE PERMITTEE MUST COMPLY WITH PART IV.D.4.B.(4). THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED. THIS PARAGRAPH IS NOT APPLICABLE TO UTILITY COMPANIES AND UTILITY CONTRACTORS IF THEY ARE SECONDARY PERMITTEES

(4). CERTIFIED PERSONNEL (PROVIDED BY THE SECONDARY PERMITTEE) SHALL INSPECT AT LEAST ONCE PER MONTH DURING THE TERM OF THIS PERMIT (I.E., UNTIL A NOTICE OF TERMINATION IS SUBMITTED TO EPD) THE AREAS OF THEIR STIES THAT HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION. THESE AREAS SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM AND THE RECEIVING WATER(S). EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY, 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). THIS PARAGRAPH IS NOT APPLICABLE TO UTILITY COMPANIES AND UTILITY CONTRACTORS IF THEY ARE SECONDARY PERMITTEES. (5). BASED ON THE RESULTS OF EACH INSPECTION, THE SECONDARY PERMITTEE MUST NOTIFY THE PRIMARY PERMITTEE WITHIN 24 HOURS OF ANY SUSPECTED BMP DEFICIENCIES. THE PRIMARY PERMITTEE MUST EVALUATE WHETHER THESE DEFICIENCIES EXIST WITHIN 48 HOURS OF SUCH NOTICE. AND IF THESE DEFICIENCIES ARE FOUND TO EXIST MUST AMEND THE PLAN IN ACCORDANCE WITH PART IV.C. OF THIS PERMIT TO ADDRESS THOSE DEFICIENT BMPS WITHIN SEVEN (7) DAYS OF BEING NOTIFIED BY THE SECONDARY PERMITTEE. WHEN THE PLAN IS AMENDED, THE PRIMARY PERMITTEE MUST NOTIFY AND PROVIDE A COPY OF THE AMENDMENT TO ALL AFFECTED SECONDARY PERMITTEE(S) WITHIN THIS SEVEN (7) DAY PERIOD. THE SECONDARY PERMITTEE MUST IMPLEMENT ANY NEW PLAN REQUIREMENTS AFFECTING THEIR SITES(S) WITHIN 48 HOURS OF NOTIFICATION BY THE PRIMARY PERMITTEE.

(6). A REPORT OF EACH INSPECTION THAT INCLUDES THE NAME(S) OF CERTIFIED PERSONNEL MAKING EACH INSPECTION, THE DATE(S) OF EACH INSPECTION, CONSTRUCTION PHASE (I.E., INITIAL, INTERMEDIATE OR FINAL) MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, AND ACTIONS TAKEN IN ACCORDANCE WITH PART IV.D.4.B.(5). OF THE PERMIT SHALL BE MADE AND RETAINED AT THE SITE OR BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION UNTIL THE ENTIRE SITE, OR THAT PORTION OF A CONSTRUCTION PROJECT THAT HAS BEEN PHASED. HAS UNDERGONE FINAL STABILIZATION AND A NOTICE OF TERMINATION IS SUBMITTED TO EPD. SUCH REPORTS SHALL BE READILY AVAILABLE BY THE END OF THE SECOND BUSINESS DAY AND/OR WORKING DAY AND SHALL IDENTIFY ALL INCIDENTS OF BEST MANAGEMENT PRACTICES THAT HAVE NOT BEEN PROPERLY INSTALLED AND/OR MAINTAINED AS DESCRIBED IN THE PLAN. WHERE THE REPORT DOES NOT IDENTIFY AN INCIDENTS, THE INSPECTION REPORT SHALL CONTAIN A CERTIFICATION THAT THE BEST MANAGEMENT PRACTICES ARE IN COMPLIANCE WITH THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN. THE REPORT SHALL BE SIGNED IN ACCORDANCE WITH PART V.G.2. OF THIS PERMIT. THIS PARAGRAPH IS NOT APPLICABLE TO UTILITY COMPANIES AND UTILITY CONTRACTORS IF THE ARE SECONDARY PERMITTEES PERFORMING ONLY SERVICE LINE INSTALLATIONS OR WHEN CONDUCTING REPAIRS ON EXISTING INSTALLATIONS.

C. TERTIARY PERMITTEE

(1.) EACH DAY WHEN ANY TYPE OF CONSTRUCTION ACTIVITY HAS TAKEN PLACE AT A TERTIARY PERMITTEE'S SITE, CERTIFIED PERSONNEL PROVIDED BY THE TERTIARY PERMITTEE SHALL INSPECT: (A) ALL AREAS USE BY THE TERTIARY PERMITTEE WHERE PETROLEUM PRODUCTS ARE STORED, USED, OR HANDLED FOR SPILLS AND LEAKS FROM VEHICLES AND EQUIPMENT; AND (B) ALL LOCATIONS AT THE TERTIARY PERMITTEE'S SITE WHERE THAT PERMITTEE'S VEHICLES ENTER OR EXIT THE SITE FOR EVIDENCE OF OFF-SITE SEDIMENT TRACKING. THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED. THIS PARAGRAPH IS NOT APPLICABLE TO UTILITY COMPANIES AND UTILITY CONTRACTORS PERFORMING ONLY SERVICE LINE INSTALLATIONS OR WHEN CONDUCTING REPAIRS ON EXISTING LINE INSTALLATIONS. (2). MEASURE RAINFALL ONCE EVERY 24 HOURS EXCEPT ANY NON-WORKING SATURDAY, NON-WORKING SUNDAY AND NON-WORKING FEDERAL HOLIDAY UNTIL A NOTICE OF TERMINATION IS SUBMITTED. MEASUREMENT OF RAINFALL MAY BE SUSPENDED IF ALL AREAS OF THE SITE HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION. (3). CERTIFIED PERSONNEL (PROVIDED BY THE TERTIARY PERMITTEE) SHALL INSPECT AT LEAST THE FOLLOWING ONCE EVERY SEVEN (7) CALENDAR DAYS AND WITHIN 24 HOURS OF THE END OF A STORM THAT IS 0.5 INCHES RAINFALL OR GREATER (UNLESS SUCH STORM ENDS AFTER 5:00 PM ON ANY FRIDAY OR ON ANY NON-WORKING SATURDAY, NON-WORKING SUNDAY OR ANY NON-WORKING FEDERAL HOLIDAY IN WHICH CASE THE INSPECTION SHALL BE COMPLETED BY THE END OF THE NEXT BUSINESS DAY AND/OR WORKING DAY, WHICHEVER OCCURS FIRST): (A) DISTURBED AREAS OF THE TERTIARY PERMITTEE'S CONSTRUCTION SITE; (B) AREAS USED BY THE TERTIARY PERMITTEE FOR STORAGE OF MATERIALS THAT ARE EXPOSED TO PRECIPITATION: AND (C) STRUCTURAL CONTROL MEASURES, EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN APPLICABLE TO THE TERTIARY PERMITTEE'S SITE SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY. 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). FOR AREAS OF A SITE THAT HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING TARGET OF PERENNIALS APPROPRIATE FOR THE REGION, THE PERMITTEE MUST COMPLY WITH PART IV.D.4.C.(4). THESE INSPECTIONS MUST BE CONDUCTED UNTIL A NOTICE OF TERMINATION IS SUBMITTED. THIS PARAGRAPH IS NOT APPLICABLE TO UTILITY COMPANIES AND UTILITY



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CONTRACTORS PERFORMING ONLY SERVICE LINE INSTALLATIONS OR WHEN CONDUCTING REPAIRS ON EXISTING LINE INSTALLATIONS.

(4). CERTIFIED PERSONNEL (PROVIDED BY THE TERTIARY PERMITTEE) SHALL INSPECT AT LEAST ONCE PER MONTH DURING THE TERM OF THIS PERMIT (I.E., UNTIL A NOTICE OF TERMINATION IS SUBMITTED TO EPD) THE AREAS OF THE SITE THAT HAVE UNDERGONE FINAL STABILIZATION OR ESTABLISHED A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET PERENNIALS APPROPRIATE FOR THE REGION. THESE AREAS SHALL BE INSPECTED FOR EVIDENCE OF, OR THE POTENTIAL FOR, POLLUTANTS ENTERING THE DRAINAGE SYSTEM AND THE RECEIVING WATER(S). EROSION AND SEDIMENT CONTROL MEASURES IDENTIFIED IN THE PLAN SHALL BE OBSERVED TO ENSURE THAT THEY ARE OPERATING CORRECTLY, 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). THIS PARAGRAPH IS NOT APPLICABLE TO UTILITY COMPANIES AND UTILITY CONTRACTORS IF THEY ARE SECONDARY PERMITTEES.

(5). BASED ON THE RESULTS OF EACH INSPECTION, THE SITE DESCRIPTION AND THE POLLUTION PREVENTION AND CONTROL MEASURES IDENTIFIED IN THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, THE PLAN SHALL BE REVISED AS APPROPRIATE NOT LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING EACH INSPECTION. IMPLEMENTATION OF SUCH CHANGES SHALL BE MADE AS SOON AS PRACTICAL BUT IN NO CASE LATER THAN SEVEN (7) CALENDAR DAYS FOLLOWING THE INSPECTION.

(6). A REPORT OF EACH INSPECTION THAT INCLUDES THE NAME(S) OF CERTIFIED PERSONNEL MAKING EACH INSPECTION, THE DATE(S) OF EACH INSPECTION, CONSTRUCTION PHASE (I.E., INITIAL, INTERMEDIATE OR FINAL) MAJOR OBSERVATIONS RELATING TO THE IMPLEMENTATION OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN, AND ACTIONS TAKEN IN ACCORDANCE WITH PART IV.D.4.C.(5). OF THE PERMIT SHALL BE MADE AND RETAINED AT THE SITE OR BE READILY AVAILABLE AT A DESIGNATED ALTERNATE LOCATION UNTIL THE ENTIRE SITE. OR THAT PORTION OF A CONSTRUCTION PROJECT THAT HAS BEEN PHASED, HAS UNDERGONE FINAL STABILIZATION AND A NOTICE OF TERMINATION IS SUBMITTED TO EPD. SUCH REPORTS SHALL BE READILY AVAILABLE BY THE END OF THE SECOND BUSINESS DAY AND/OR WORKING DAY AND SHALL IDENTIFY ALL INCIDENTS OF BEST MANAGEMENT PRACTICES THAT HAVE NOT BEEN PROPERLY INSTALLED AND/OR MAINTAINED AS DESCRIBED IN THE PLAN. WHERE THE REPORT DOES NOT IDENTIFY AN INCIDENTS, THE INSPECTION REPORT SHALL CONTAIN A CERTIFICATION THAT THE BEST MANAGEMENT PRACTICES ARE IN COMPLIANCE WITH THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN. THE REPORT SHALL BE SIGNED IN ACCORDANCE WITH PART V.G.2. OF THIS PERMIT. THIS PARAGRAPH IS NOT APPLICABLE TO UTILITY COMPANIES AND UTILITY CONTRACTORS IF THE ARE SECONDARY PERMITTEES PERFORMING ONLY SERVICE LINE INSTALLATIONS OR WHEN CONDUCTING REPAIRS ON EXISTING INSTALLATIONS.

- 23. SAMPLING FREQUENCY:
- (1). THE PRIMARY PERMITTEE MUST SAMPLE IN ACCORDANCE WITH THE PLAN AT LEAST ONCE FOR EACH RAINFALL EVENT DESCRIBED BELOW. FOR A QUALIFYING EVENT, SAMPLES MUST BE TAKEN WITHIN FOURTY-FIVE (45) MINUTES OF:
- (A) THE ACCUMULATION OF THE MINIMUM AMOUNT OF RAINFALL FOR THE QUALIFYING EVENT, IF THE STORMWATER DISCHARGE TO A MONITORED RECEIVING WATER OR FROM A MONITORED OUTFALL HAS BEGUN AT OR PRIOR TO ACCUMULATION OR
- (B) THE BEGINNING OF ANY STORMWATER DISCHARGE TO A MONITORED RECEIVING WATER OR FROM A MONITORED OUTFALL, IF THE DISCHARGE BEGINS AFTER THE ACCUMULATION OF THE MINIMUM AMOUNT OF RAINFALL FOR THE QUALIFYING EVENT.

(2). HOWEVER, WHERE MANUAL AND AUTOMATIC SAMPLING ARE IMPOSSIBLE (AS DEFINED BY THIS PERMIT), OR ARE BEYOND THE PERMITTEE'S CONTROL, THE PERMITTEE SHALL TAKE SAMPLES AS SOON AS POSSIBLE, BUT IN NO CASE MORE THAN TWELVE (12) HOURS AFTER THE BEGINNING OF THE STORMWATER DISCHARGE.

(3). SAMPLING BY THE PERMITTEE SHALL OCCUR FOR THE FOLLOWING EVENTS: (A). FOR EACH AREA OF THE SITE THAT DISCHARGES TO A RECEIVING STREAM. THE FIRST RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH AND ALLOWS FOR MONITORING DURING NORMAL BUSINESS HOURS\* (MONDAY THRU FRIDAY, 8:00 AM TO 5:00 PM AND SATURDAY 8:00 AM TO 5:00 PM, EXCLUDING ALL NON-WORKING FEDERAL HOLIDAYS, WHEN CONSTRUCTION ACTIVITY IS BEING CONDUCTED BY THE PRIMARY PERMITTEE) THAT OCCURS AFTER ALL CLEARING AND GRUBBING OPERATIONS HAVE BEEN COMPLETED 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 STREAM. THE FIRST RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH AND ALLOWS FOR MONITORING DURING NORMAL

BUSINESS HOURS\* THAT OCCURS EITHER 90 DAYS AFTER THE FIRST SAMPLING EVENT OR AFTER ALL MASS GRADING OPERATIONS HAVE BEEN COMPLETED IN THE DRAINAGE AREA OF THE LOCATION SELECTED AS THE SAMPLING LOCATION, WHICHEVER COMES FIRST;

(C). AT THE TIME OF SAMPLING PERFORMED PURSUANT TO (A) AND (B) ABOVE, IF BMPS ARE FOUND TO BE PROPERLY DESIGNED, INSTALLED AND MAINTAINED. NO FURTHER ACTION IS REQUIRED. IF BMPS IN ANY AREA OF THE SITE DISCHARGES TO A RECEIVING STREAM ARE NOT PROPERLY DESIGNED, INSTALLED AND MAINTAINED, CORRECTIVE ACTION SHALL BE DESIGNED AND IMPLEMENTED WITHIN TWO (2) BUSINESS DAYS, AND TURBIDITY SAMPLES SHALL BE TAKEN

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

24. REPORTING: 1. THE APPLICABLE PERMITTEES ARE REQUIRED TO SUBMIT THE SAMPLING RESULTS TO THE EPD AT THE ADDRESS SHOWING IN PART 11.C. BY THE FIFTEENTH DAY OF THE MONTH FOLLOWING THE REPORTING PERIOD, SAMPLING RESULTS SHALL BE IN A CLEARLY LEGIBLE FORMAT. UPON WRITTEN NOTIFICATION, EPD MAY REQUIRE THE APPLICABLE PERMITTEE TO SUBMIT THE SAMPLING RESULTS ON A MORE FREQUENT BASIS. SAMPLING AND ANALYSIS OF ANY STORMWATER DISCHARGE(S) OR THE RECEIVING WATER(S) BEYOND THE MINIMUM FREQUENCY STATED IN THIS PERMIT MUST BE REPORTED IN SIMILAR MANNER TO THE EPD. THE SAMPLING REPORTS MUST BE SIGNED IN ACCORDANCE WITH PART V.G.2. SAMPLING REPORTS MUST BE SUBMITTED TO EPD UNTIL SUCH TIME AS A NOTICE OF TERMINATION IS SUBMITTED IN ACCORDANCE WITH PART VI. 2. ALL SAMPLING REPORTS 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;

E. THE NAME(S) OF THE CERTIFIED PERSONNEL WHO PERFORMED THE ANALYSES; F. REFERENCES AND WRITTEN PROCEDURES, WHEN AVAILABLE, FOR THE ANALYTICAL

TECHNIQUES OR METHODS USED;

RESULTS;

NTU;" AND

25. RETENTION OF RECORDS: 1. THE PRIMARY PERMITTEE SHALL RETAIN THE FOLLOWING RECORDS AT THE CONSTRUCTION SITE OR THE RECORDS SHALL BE 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:

C. THE DESIGN PROFESSIONAL'S REPORT OF THE RESULTS OF THE INSPECTION CONDUCTED IN ACCORDANCE WITH PART IV.A.5. OF THIS PERMIT; D. A COPY OF ALL SAMPLING INFORMATION, RESULTS, AND REPORTS REQUIRED BY

THIS PERMIT;

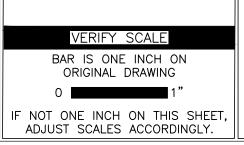
G. DAILY RAINFALL INFORMATION COLLECTED IN ACCORDANCE WITH PART IV.D.4.A.(2). OF THIS PERMIT. 2. EACH SECONDARY PERMITTEE SHALL RETAIN THE FOLLOWING RECORDS AT THE CONSTRUCTION SITE OR THE RECORDS SHALL BE AVAILABLE AT A DESIGNATED

ALTERNATE LOCATION FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A NOTICE OF TERMINATION IS SUBMITTED IN ACCORDANCE WITH PART

3. EACH TERTIARY PERMITTEE SHALL RETAIN THE FOLLOWING RECORDS AT THE CONSTRUCTION SITE OR THE RECORDS SHALL BE AVAILABLE AT A DESIGNATED ALTERNATE LOCATION FROM COMMENCEMENT OF CONSTRUCTION UNTIL SUCH TIME AS A NOTICE OF TERMINATION IS SUBMITTED IN ACCORDANCE WITH PART







HWY 400 WATERLINE RELOCATION

FROM DISCHARGES FROM THAT AREA OF THE SITE FOR EACH SUBSEQUENT RAIN EVENT THAT REACHES OR EXCEEDS 0.5 INCH DURING NORMAL BUSINESS HOURS\* UNTIL THE SELECTED TURBIDITY STANDARD IS ATTAINED, OR UNTIL POST-STORM EVENT INSPECTIONS DETERMINE THAT BMPS ARE PROPERLY DESIGNED, INSTALLED AND MAINTAINED; AND

(D). EXISTING CONSTRUCTION ACTIVITIES, I.E., THOSE THAT ARE OCCURRING ON OR BEFORE THE EFFECTIVE DATE OF THIS PERMIT, THAT HAVE MET THE SAMPLING REQUIRED BY (A) ABOVE SHALL SAMPLE IN ACCORDANCE WITH (B). THOSE EXISTING CONSTRUCTION ACTIVITIES THAT HAVE MET THE SAMPLING REQUIRED BY (B) ABOVE SHALL NOT BE REQUIRED TO CONDUCT ADDITIONAL SAMPLING OTHER THAN AS REQUIRED BY (C) ABOVE.

C. THE DATE(S) ANALYSES WERE PERFORMED;

D. THE TIME(S) ANALYSES WERE INITIATED;

G. THE RESULTS OF SUCH ANALYSES, INCLUDING THE BENCH SHEETS, INSTRUMENT READOUTS, COMPUTER DISKS OR TAPES, ETC., USED TO DETERMINE THESE

H. RESULTS WHICH EXCEED 1,000 NTU SHALL BE REPORTED AS "EXCEEDS 1,000

I. CERTIFICATION STATEMENT THAT SAMPLING WAS CONDUCTED AS PER THE PLAN.

A. A COPY OF ALL NOTICES OF INTENT SUBMITTED TO EPD;

B. A COPY OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN REQUIRED BY THIS PERMIT;

E. A COPY OF ALL INSPECTION REPORTS GENERATED IN ACCORDANCE WITH PART IV.D.4.A. OF THIS PERMIT;

F. A COPY OF ALL VIOLATIONS SUMMARIES AND VIOLATION SUMMARY REPORTS GENERATED IN ACCORDANCE WITH PART III.D.2. OF THIS PERMIT; AND

A. A COPY OF ALL NOTICES OF INTENT SUBMITTED TO EPD; B. A COPY OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN

REQUIRED BY THIS PERMIT; C. A COPY OF ALL INSPECTION REPORTS GENERATED IN ACCORDANCE WITH PART IV.D.4.B. OF THIS PERMIT; AND

D. A COPY OF ALL VIOLATIONS SUMMARIES AND VIOLATION SUMMARY REPORTS GENERATED IN ACCORDANCE WITH PART III.D.2. OF THIS PERMIT;

A. A COPY OF ALL NOTICES OF INTENT SUBMITTED TO EPD;

B. A COPY OF THE EROSION, SEDIMENTATION AND POLLUTION CONTROL PLAN

"I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY DIRECT SUPERVISION." anny rogan

TAMMY L. HUGGINS GSWCC NO. 0000079448 EXPIRES 01/20/2020

# FOR BIDS

SHEET:	G46
DWG NO:	
DATE:	MARCH, 2019
PROJ NO:	100182.15

EROSION AND SEDIMENT CONTROL
NOTES

- D. A COPY OF ALL SAMPLING INFORMATION, RESULTS, AND REPORTS REQUIRED BY THIS PERMIT;
- E. A COPY OF ALL INSPECTION REPORTS GENERATED IN ACCORDANCE WITH PART IV.D.4.C. OF THIS PERMIT;
- F. A COPY OF ALL VIOLATIONS SUMMARIES AND VIOLATION SUMMARY REPORTS GENERATED IN ACCORDANCE WITH PART III.D.2. OF THIS PERMIT; AND
- G. DAILY RAINFALL INFORMATION COLLECTED IN ACCORDANCE WITH PART IV.D.4.C.(2). OF THIS PERMIT.
- 4. COPIES OF ALL NOTICES OF INTENT, NOTICES OF TERMINATION, INSPECTION REPORTS, SAMPLING REPORTS (INCLUDING ALL CALIBRATION AND MAINTENANCE RECORDS AND ALL ORIGINAL STRIP CHART RECORDING FOR CONTINUOUS MONITORING INSTRUMENTATION) OR OTHER REPORTS REQUESTED BY THE EPD, EROSION, SEDIMENTATION AND POLLUTION CONTROL PLANS, RECORDS OF ALL OTHER 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 (3) YEARS FROM THE DATE THAT THE NOTICE OF INTENT IS SUBMITTED IN ACCORDANCE WITH PART VI. OF THIS PERMIT. THESE RECORDS MUST BE MAINTAINED AT THE PERMITTEE'S PRIMARY PLACE OF BUSINESS ONCE THE CONSTRUCTION ACTIVITY HAS CEASED AT THE PERMITTED SITE. THIS PERIOD MAY BE EXTENDED BY REQUEST OF EPD AT ANY TIME UPON WRITTEN NOTIFICATION TO THE PERMITTEE.
- 26. SAMPLING REQUIREMENTS.

THIS PERMIT REQUIRES THE MONITORING OF NEPHELOMETRIC TURBIDITY (NTU) IN RECEIVING WATER(S) OR OUTFALLS IN ACCORDANCE WITH THIS PERMIT. THIS SECTION IS APPLICABLE TO PRIMARY PERMITTEES WITH A TOTAL PLANNED DISTURBANCE EQUAL TO OR GREATER THAN ONE (1) ACRE AND TERTIARY PERMITTEES WITH A TOTAL PLANNED DISTURBANCE EQUAL TO OR GREATER THAN FIVE (5) ACRES. THIS SECTION IS NOT APPLICABLE TO SECONDARY PERMITTEES. THE FOLLOWING PROCEDURES CONSTITUTE EPD'S GUIDELINES FOR SAMPLING TURBIDITY:

- A. SAMPLING REQUIREMENTS SHALL INCLUDE THE FOLLOWING:
  - (1). A USGS TOPOGRAPHIC MAP, A TOPOGRAPHIC MAP OR A DRAWING (REFERRED TO AS A TOPOGRAPHIC MAP) THAT IS A SCALE EQUAL TO OR MORE DETAILED THAN A 1:24,000 MAP SHOWING THE LOCATION OF THE SITE OR THE COMMON DEVELOPMENT; (A) THE LOCATION OF ALL PERENNIAL AND INTERMITTENT STREAMS AND OTHER WATER BODIES LOCATED DURING MANDATORY FIELD VERIFICATION, INTO WHICH THE STORMWATER IS DISCHARGED AND (B) THE RECEIVING WATER AND/OR OUTFALL SAMPLING LOCATIONS. WHEN THE PERMITTEE HAS CHOSEN TO USE A USGS TOPOGRAPHIC MAP AND THE RECEIVING WATER(S) IS NOT SHOWN ON THE USGS TOPOGRAPHIC MAP, THE LOCATION OF THE RECEIVING WATER(S) MUST BE HAND-DRAWN ON THE USGS TOPOGRAPHIC MAP FROM WHERE THE STORMWATER(S) ENTERS THE RECEIVING WATER(S) TO THE POINT WHERE THE RECEIVING WATER(S) COMBINES WITH THE FIRST BLUE LINE STREAM SHOWN ON THE USGS TOPOGRAPHIC MAP;

(2). THE ANALYTICAL METHOD USED TO COLLECT AND ANALYZE THE SAMPLES INCLUDING QUALITY CONTROL / QUALITY ASSURANCE PROCEDURES. THIS NARRATIVE MUST INCLUDE PRECISE SAMPLING METHODOLOGY FOR EACH SAMPLING LOCATION:

(3). WHEN THE PERMITTEE HAS DETERMINED THAT SOME OR ALL OUTFALLS WILL BE MONITORED, A RATIONALE MUST BE INCLUDED FOR THE NTU LIMIT(S) SELECTED FROM APPENDIX B. THIS RATIONALE MUST INCLUDE THE SIZE OF THE CONSTRUCTION SITE, THE CALCULATION OF THE SIZE OF THE SURFACE WATER DRAINAGE AREA, AND THE TYPE OF RECEIVING WATER(S) (I.E., TROUT STREAM OR SUPPORTING WARM WATER FISHERIES); AND

ANY ADDITIONAL INFORMATION EPD DETERMINED NECESSARY TO BE PART OF THE PLAN, EPD WILL PROVIDE WRITTEN NOTICE TO THE PERMITTEE OF THE INFORMATION NECESSARY AND THE TIME LINE FOR SUBMITTAL.

## B. SAMPLE TYPE.

ALL SAMPLES SHALL BE COLLECTED BY "GRAB SAMPLES" AND THE ANALYSIS OF THESE SAMPLES MUST BE CONDUCTED N ACCORDANCE WITH METHODOLOGY AND TEST PROCEDURES ESTABLISHED BY 40 CFR PART 136 (UNLESS OTHER TEST PROCEDURES HAVE BEEN APPROVED); THE GUIDANCE DOCUMENT TITLED "NPDES STORM WATER SAMPLING GUIDANCE DOCUMENT, EPA 833-B-92-001" AND GUIDANCE DOCUMENTS THAT MAY BE PREPARED BY EPD.

(1). SAMPLE CONTAINERS SHOULD BE LABELED PRIOR TO COLLECTING THE SAMPLES.

(2). SAMPLES SHOULD BE WELL MIXED BEFORE TRANSFERRING TO A SECONDARY CONTAINER.

(3). LARGE MOUTH, CLEAN AND RINSED GLASS OR PLASTIC JARS SHOULD BE USED FOR COLLECTING SAMPLES. THE JARS SHOULD BE CLEANED THOROUGHLY TO AVOID CONTAMINATION.

(4). MANUAL, AUTOMATIC OR RISING STAGE SAMPLING MAY BE UTILIZED. SAMPLES REQUIRED BY THIS PERMIT SHOULD BE ANALYZED IMMEDIATELY, BUT IN NO CASE LATER THAN 48 HOURS AFTER COLLECTION. HOWEVER,

SAMPLES FROM AUTOMATIC SAMPLERS MUT THE NEXT BUSINESS DAY AFTER THE ACC
AUTOMATED ANALYSIS S UTILIZED. DILUTIO
SAMPLES MAY BE ANALYZED USING
CALIBRATED TURBIDIMETER. SAMPLES ARE
(5). SAMPLING AND ANALYSIS OF THE
BEYOND THE MINIMUM FREQUENCY STA
REPORTED TO EPD AS SPECIFIED IN PART

C. SAMPLING POINTS.

(1). FOR CONSTRUCTION ACTIVITIES THE PRIMARY PERMITTEE MUST SAMPLE ALL RECEIVING WATER(S), OR ALL OUTFALL(S), OR A COMBINATION OF RECEIVING WATER(S) AND OUTFALL(S). SAMPLES TAKEN FOR THE PURPOSE OF COMPLIANCE WITH THIS PERMIT SHALL BE REPRESENTATIVE OF THE MONITORED ACTIVITY AND THE REPRESENTATION OF THE WATER QUALITY OF THE RECEIVING WATER(S) AND/OR THE STORMWATER OUTFALLS USING THE FOLLOWING MINIMUM GUIDELINES: (A). THE UPSTREAM SAMPLE FOR EACH RECEIVING WATER(S) MUST BE TAKEN IMMEDIATELY UPSTREAM OF THE CONFLUENCE OF THE FIRST STORMWATER DISCHARGE FROM THE PERMITTED ACTIVITY (I.E., THE DISCHARGE FARTHEST UPSTREAM AT THE SITE) BUT DOWNSTREAM OF ANY OTHER STORMWATER DISCHARGES NOT ASSOCIATED WITH THE PERMITTED ACTIVITY. WHERE APPROPRIATE, SEVERAL UPSTREAM SAMPLES FROM ACROSS THE RECEIVING WATER(S) MAY NEED TO BE TAKEN AND THE ARITHMETIC AVERAGE OF THE TURBIDITY OF THESE SAMPLES USED FOR THE UPSTREAM TURBIDITY VALUE. (B). THE DOWNSTREAM SAMPLE FOR EACH RECEIVING WATER(S) MUST BE TAKEN DOWNSTREAM OF THE CONFLUENCE OF THE LAST STORMWATER DISCHARGE FROM THE PERMITTED ACTIVITY (I.E., THE DISCHARGE FARTHEST DOWNSTREAM AT THE SITE) BUT UPSTREAM OF ANY OTHER STORMWATER DISCHARGE NOT ASSOCIATED WITH THE PERMITTED ACTIVITY. WHERE APPROPRIATE, SEVERAL DOWNSTREAM SAMPLES FROM ACROSS THE RECEIVING WATER(S) MAY NEED TO BE TAKEN AND THE ARITHMETIC AVERAGE OF THE TURBIDITY OF THESE SAMPLES USED FOR THE DOWNSTREAM TURBIDITY VALUE.

(C). IDEALLY THE SAMPLES SHOULD BE TAKEN FROM THE HORIZONTAL AND VERTICAL CENTER OF THE RECEIVING WATER(S) OR THE STORMWATER OUTFALL CHANNEL(S).

(D). CARE SHOULD BE TAKEN TO AVOID STIRRING THE BOTTOM SEDIMENT IN THE RECEIVING WATER(S) OR IN THE OUTFALL STORMWATER CHANNEL. (E). THE SAMPLING CONTAINER SHOULD BE HELD SO THAT THE OPENING FACES UPSTREAM.

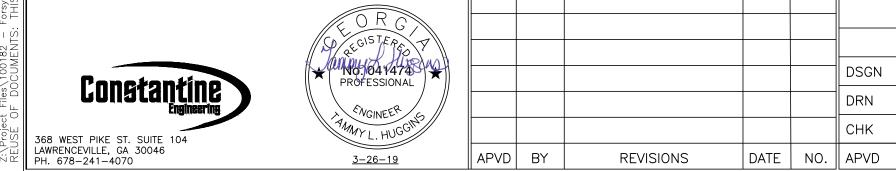
(F). THE SAMPLES SHOULD BE KEPT FREE FROM FLOATING DEBRIS. (G). PERMITTEES DO NOT HAVE TO SAMPLE SHEET FLOW THAT FLOWS ONTO UNDISTURBED NATURAL AREAS OR AREAS STABILIZED BY THE PROJECT. FOR PURPOSES OF THIS SECTION, STABILIZED SHALL MEAN, FOR UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES AND AREAS LOCATED OUTSIDE THE WASTE DISPOSAL LIMITS OF A LANDFILL CELL THAT HAS BEEN CERTIFIED BY EPD FOR WASTE DISPOSAL, 100% OF THE SOIL SURFACE IS UNIFORMLY COVERED IN PERMANENT VEGETATION WITH A DENSITY OF 70% OR GREATER. OR EQUIVALENT PERMANENT STABILIZATION MEASURES (SUCH AS THE USE OF RIP RAP, GABIONS, PERMANENT MULCHES OR GEOTEXTILES) HAVE BEEN USED. PERMANENT VEGETATION SHALL CONSIST OF: PLANTED TREES, SHRUBS, PERENNIAL VINES; A CROP OF PERENNIAL VEGETATION APPROPRIATE FOR THE TIME OF YEAR AND REGION; OR A CROP OF ANNUAL VEGETATION AND A SEEDING OF TARGET CROP PERENNIALS APPROPRIATE FOR THE REGION. FINAL STABILIZATION APPLIES TO EACH PHASE OF CONSTRUCTION.

(H). ALL SAMPLING PURSUANT TO THIS PERMIT MUST BE DONE IN A WAY (INCLUDING GENERALLY ACCEPTED SAMPLING METHODS, LOCATIONS, TIMING, AND FREQUENCY) AS TO ACCURATELY REFLECT WHETHER STORMWATER RUNOFF FROM THE CONSTRUCTION SITE IS IN COMPLIANCE WITH THE STANDARD SET FORTH IN PARTS III.D.3. OR III.D.4.. WHICHEVER IS APPLICABLE.

- 27. THE ALLOWABLE INCREASE IN TURBIDITY BETWEEN THE DOWNSTREAM AND UPSTREAM SAMPLING POINTS IN THE RECEIVING WATERS ARE AS FOLLOWS: SITE=1-10 AC, DRAINAGE AREA=0-4.99 SQ MI, ALLOWABLE NTU=75
- 28. THERE IS NO FLOODPLAIN ON THIS PROPERTY PER FIRM MAP NUMBER 13117C0064F DATED MARCH 4, 2013, THE PROJECT IS LOCATED FLOODWAY ZONE AE BASE FLOOD ELEVATION 1168.
- 29. EROSION CONTROL AND TREE PROTECTION MEASURES SHALL BE INSTALLED PRIOR TO ANY OTHER CONSTRUCTION ACTIVITY AND MAINTAINED UNTIL A PERMANENT GROUND COVER IS ESTABLISHED.
- 30. ADDITIONAL EROSION CONTROL MEASURES MAY BE REQUIRED BY THE FIELD INSPECTOR.

MMMJK moren

TAMMY L. HUGGINS REGISTERED GEORGIA ENGINEER NO. PE 041474



IST BE COLLECTED NO LATER THAN CUMULATION, UNLESS FLOW THOUGH ON OF SAMPLES IS NOT REQUIRED. A DIRECT READING, PROPERLY NOT REQUIRED TO BE COOLED. RECEIVING WATER(S) OR OUTFALLS ATED IN THIS PERMIT MUST BE IV.E.

LEVEL II CERTIFIED DESIGN PROFESSIONAL - CERTIFICATION NUMBER 0000079448

## PERMIT COVERAGE

THIS PLAN HAS BEEN PREPARED TO MEET THE REQUIREMENTS UNDER THE STATE OF GEORGIA, DEPARTMENT OF NATURAL RESOURCES, ENVIRONMENTAL PROTECTION DIVISION (EPD), GENERAL PERMIT NO. GAR100002 FOR AUTHORIZATION TO DISCHARGE UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES), STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY FOR STAND ALONE PROJECTS.

#### MANAGEMENT PRACTICES AND PERMIT VIOLATIONS PART (III.D)

- 1. BEST MANAGEMENT PRACTICES ARE REQUIRED FOR ALL CONSTRUCTION ACTIVITIES AND MUST BE IMPLEMENTED IN ACCORDANCE WITH THE DESIGN SPECIFICATIONS CONTAINED N THE "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA" TO PREVENT OR REDUCE THE POLLUTION OF WATERS OF GEORGIA. PROPER DESIGN, INSTALLATION, AND MAINTENANCE OF BMPS SHALL CONSTITUTE A COMPLETE DEFENSE TO ANY ACTION BY THE DIRECTOR OR TO ANY OTHER ALLEGATION OF NONCOMPLIANCE WITH PART III.D.3 AND PART III.D.4.
- 2. FAILURE TO PROPERLY DESIGN, INSTALL, OR MAINTAIN BMPS SHALL CONSTITUTE A VIOLATION OF THE PERMIT ROUTINE INSPECTIONS SHALL NOT BE CONSIDERED A VIOLATION. IF DURING THE COURSE OF THE PERMITTEE'S ROUTINE INSPECTIONS BMP FAILURES ARE OBSERVED WHICH HAVE RESULTED IN SEDIMENT DEPOSITION INTO WATERS OF THE STATE, THE PERMITTEE SHALL CORRECT THE BMP FAILURES AND SHALL SUBMIT A SUMMARY OF THE VIOLATIONS TO EPD IN ACCORDANCE WITH PART V.A.2 OF THE PERMIT.
- 3. A DISCHARGE OF STORMWATER RUNOFF FROM DISTURBED AREAS WHERE BMPS HAVE NOT BEEN PROPERLY DESIGNED, INSTALLED, AND MAINTAINED SHALL CONSTITUTE A SEPARATE VIOLATION FOR EACH DAY ON WHICH SUCH DISCHARGE RESULTS IN THE TURBIDITY OF RECEIVING WATER(S) BEING INCREASED BY MORE THAN TEN (10) NEPHELOMETRIC TURBIDITY UNITS (NTU) FOR WATERS CLASSIFIED AS TROUT STREAMS OR MOTE THAN TWENTY-FIVE (25) NTUS FOR FOR WATERS SUPPORTING WARM WATER FISHERIES, REGARDLESS OF A PERMITTEE'S CERTIFICATION UNDER PART II.B.1.1.J AND PART II.B.3.J.

AUTHORIZED DISCHARGES (PART I.C):

- 1. ALL DISCHARGES OF STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITY THAT WILL RESULT IN LAND DISTURBANCE EQUAL TO OR GREATER THAN ONE ACRE: PART I.C.1.A.
- 2. ALL DISCHARGES COVERED BY THIS PERMIT SHALL BE COMPOSED ENTIRELY OF STORMWATER EXCEPT AS PROVIDED IN PART I.C.2 AND PART III.A.2 OF THE PERMIT: PART III.A.1.
- 3. AUTHORIZED MIXED STORMWATER DISCHARGES: PART I.C.2.
- A. THE INDUSTRIAL SOURCE OR ACTIVITY OTHER CONSTRUCTION IS LOCATED ON SAME SITE AS THE CONSTRUCTION ACTIVITY AND IS AN INTEGRAL PART OF THE CONSTRUCTION ACTIVITY;
- B. THE STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE AREAS OF THE SITE WHERE CONSTRUCTION ACTIVITIES ARE OCCURRING ARE IN COMPLIANCE WITH THE TERMS OF THE PERMIT;
- C. STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY FROM THE AREAS OF THE SITE WHERE INDUSTRIAL ACTIVITY OTHER THAN CONSTRUCTION ARE OCCURRING ARE COVERED BY A DIFFERENT NPDES GENERAL PERMIT OR INDIVIDUAL PERMIT AUTHORIZING SUCH DISCHARGES AND THE DISCHARGES ARE IN COMPLIANCE WITH A DIFFERENT NPDES PERMIT.
- 4. THE FOLLOWING NON-STORMWATER DISCHARGES MAY BE AUTHORIZED BY THIS PERMIT PROVIDED THE NON-STORMWATER COMPONENT OF THE DISCHARGE IS EXPLICITLY IN THE PLAN AND IS IN COMPLIANCE WITH PERT IV.D.7: PART III.A.2.
- A. FIREFIGHTING ACTIVITIES;
- B. FIRE HYDRANT FLUSHING: C. POTABLE WATER SOURCES INCLUDING WATER LINE FLUSHING;
- D. IRRIGATION DRAINING:
- E. AIR CONDITIONING CONDENSATE;
- F. SPRINGS;
- G. UNCONTAMINATED GROUND WATER;
- H. FOUNDATION OR FOOTING DRAINS WHERE THE FLOWS ARE NOT CONTAMINATED WITH PROCESS MATERIALS OR POLLUTANTS.

LIMITATIONS ON COVERAGE PART I.C.3: THE FOLLOWING STORMWATER DISCHARGES FROM CONSTRUCTION SITES ARE NOT AUTHORIZED BY THIS PERMIT:

- A. STORMWATER DISCHARGES ASSOCIATED WITH AN INDUSTRIAL ACTIVITY THAT ORIGINATE FROM THE SITE AFTER CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED AND THE SITE HAS UNDERGONE FINAL STABILIZATION;
- B. DISCHARGES THAT ARE MIXED WITH SOURCES OF NON-STORMWATER OTHER THAN DISCHARGES WHICH ARE IDENTIFIED IN PART III.A.2 OF THIS PERMIT AND WHICH ARE IN COMPLIANCE WITH PART IV.D.7 (NON-STORMWATER DISCHARGES) OF THIS PERMIT:
- C. STORMWATER DISCHARGES ASSOCIATED WITH INDUSTRIAL ACTIVITY THAT ARE SUBJECT TO AN EXISTING NPDES INDIVIDUAL OR GENERAL PERMIT. SUCH





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

HWY 400 WATERLINE RELOCATION

CONTRIBUTING TO A VIOLATION OF A WATER QUALITY STANDARD.

COMPLIANCE WITH WATER QUALITY PART I.C.4 NO DISCHARGES AUTHORIZED BY THIS PERMIT SHALL CAUSE VIOLATIONS OF GEORGIA'S IN-STREAM WATER QUALITY STANDARDS AS PROVIDED BY THE RULES AND REGULATIONS FOR WATER QUALITY CONTROL, CHAPTER 391-3-6-.03.

DISCHARGES MAY BE AUTHORIZED UNDER THIS PERMIT AFTER AN EXISTING PERMIT EXPIRES PROVIDED THE EXISTING PERMIT DID NOT ESTABLISH NUMERIC LIMITATIONS FOR SUCH DISCHARGES; AND D. STORMWATER DISCHARGES FROM CONSTRUCTION SITES THAT THE DIRECTOR (EPD) HAS DETERMINED TO BE OR MAY REASONABLY BE EXPECTED TO BE

> "I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY DIRECT SUPERVISION anny R. Huzens

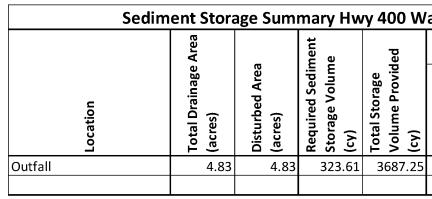
> > **EROSION AND SEDIMENT CONTROL**

NOTES

TAMMY L. HUGGINS GSWCC NO. 0000079448 EXPIRES 01/20/2020

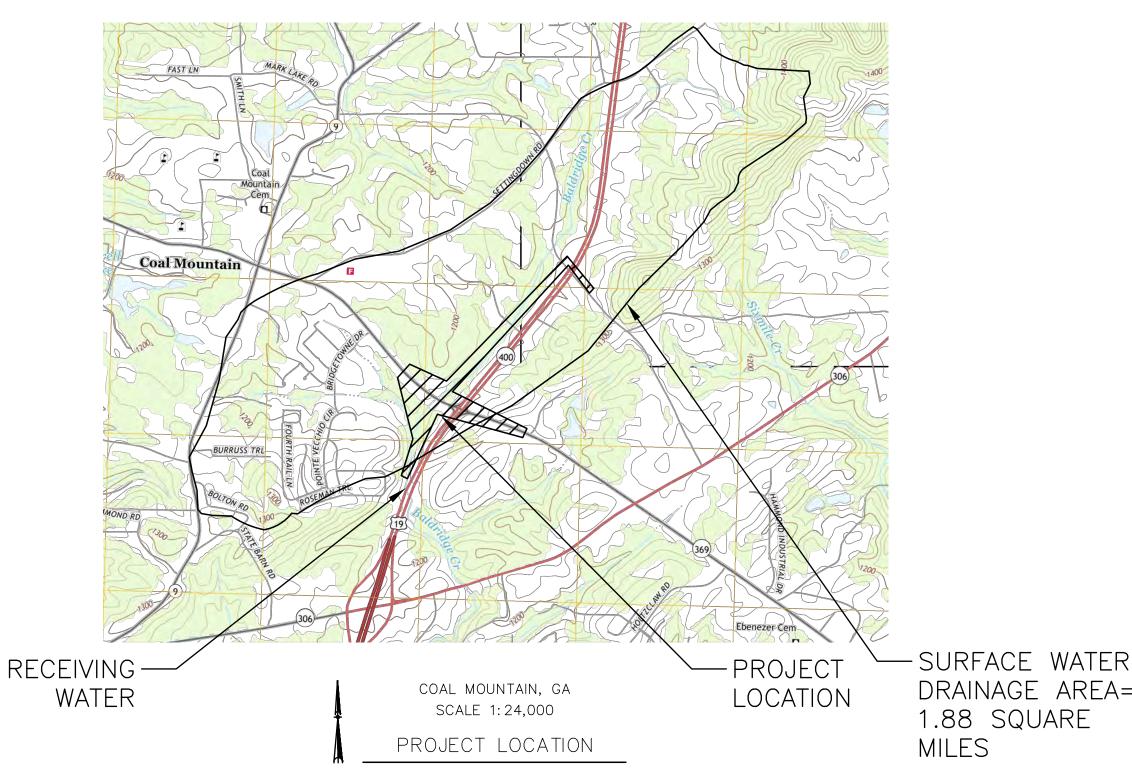
# FOR BIDS

SHEET:	G47
DWG NO:	
DATE:	MARCH, 2019
PROJ NO:	100182.15



This site has a total disturbed acreage of 4.83 acres

The table above summarizes the required and available sediment storage for every outfall on this project. The Contractor shall provide and maintain the storage volumes for the BMPs specified in this table.



EROSION CONTROL AND TREE PROTECTION MEASURES SHALL BE INSTALLED PRIOR TO ANY OTHER CONSTRUCTION ACTIVITY AND MAINTAINED UNTIL PERMANENT GROUND COVER IS ESTABLISHED.

"THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO, OR CONCURRENT WITH LAND-DISTRUBING ACTIVITIES."

"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."

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



					DSGN
					DRN
					СНК
APVD	BY	REVISIONS	DATE	NO.	APVD

aterline Relocation							
Check	Dams	Silt	Fence				
(# cy/	each)	(0.3 cy/ft)					
	Tatal	1	Tatal				
	Total	Length	Total				
# of	Volume	of Fence	Volume				
Devices	(cy)	(ft)	(cy)				
3.00	0.25	12290.00	3687.00				

DRAINAGE AREA= 1.88 SQUARE MILES

START DATE: <u>TBD. XX, 201X</u>					2018									2	2019				
	MAY	JUN.	JUL.	AUG.	SEP.	OCT.	NOV.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUN.	JUL.	AUG.	SEP.	ОСТ.	NOV
INSTALL CONSTRUCTION EXIT, PERIMETER SILT FENCE, INLET PROTECTION INSTALLATION OF WATER LINE	· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·	• • •		•		· · · · · · · · · · · · · · · · · · ·								
FINAL STABILIZATION			·   .			· ·	•	•	•		<u>.</u>	•	<u> </u>	•	· ·	·	•		·   ·
REMOVE TEMPORARY EROSION CONTROL MEASURES																			

NARRATIVE DESCRIPTION EROSION CONTROL PLAN FORSYTH COUNTY DEPARTMENT OF WATER AND SEWER WATERLINE INSTALLATION FORSYTH COUNTY, GEORGIA

DESCRIPTION: The existing site consists of 4.86 acres which is currently developed right—of—way with a land cover consisting of pavement, woods, and grassed areas. The project is located in Cumming, Forsyth County, Georgia. The project is a linear infrastructure project consisting of the installation of a new waterline within the existing right-of-way. Disturbed areas will be restored to existing conditions. (TOTAL DISTURBED ACREAGE:  $4.83 \pm$  AC.)

SOILS: The soils on this site are summarized in the Soil Information table below.

VEGETATION: The project site is existing road rights-of-way consisting of pavement, woods, and grass.

EROSION CONTROL PROGRAM: Clearing will be kept to a minimum and will only occur within right—of—way. Vegetation and mulch will be applied to applicable areas immediately after grading is completed. Land—disturbing activities will be scheduled to limit exposure of bare soils to erosive elements. Stormwater management structures will be employed to prevent erosion in areas of concentrated water flows. Erosion at the exits of all stormwater structures will be prevented by the installation of storm drain outlet protection devices.

SEDIMENT CONTROL PROGRAM: Sediment control will be accomplished by the installation of necessary silt fence, and check dams. A temporary construction exit will be employed to prevent the transport of sediment from the site by vehicular traffic.

MAINTENANCE PROGRAM: Sediment and erosion control measures will be inspected daily. Any damages observed will be repaired by the end of that day. Cleanout of sediment control structures will be accomplished in accordance with the specifications and sediment disposal accomplished by spreading on the site. Sediment basins and barriers will remain in place until sediment contributing areas are stabilized. The sediment fences and barriers will then be removed and the areas occupied by these structures vegetated. Guidelines for the maintenance of established vegetation will be provided to the owner when all disturbed areas are stabilized. 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 control measures shall be implemented to control or treat the sediment source.

#### SOIL INFORMATION

	JUIL INFURMATI	
SOIL		
SYMBOL	SOIL TYPE	SLOPE %
Aa	Alluvial land	poorly drained
Ab	Toccoa and Chewacla soils	0 to 2
AcB	Altavista fine sandy loam	very gently
AdC2	Appling sandy clay loam	eroded gently sloping phase
AdC3	Appling sandy clay loam	severely eroded gently sloping phase
AdD2	Appling sandy clay loam	eroded sloping phase
CaC3	Cecil clay loam	severely eroded
CbE	Cecil fine sandy loam	moderately steep phase
CcB2	Cecil sandy loam	2 to 6 percent slopes
EaC	Edgemont stony sandy loam	gently sloping phase
EaE	Edgemont stony sandy loam	moderately steep phase
EaE2	Edgemont stony sandy loam	eroded moderately steep phase
Sa	Seneca fine sandy loam	
TaB2	Thurmont and Braddock fine sandy loams	eroded very gently sloping phases





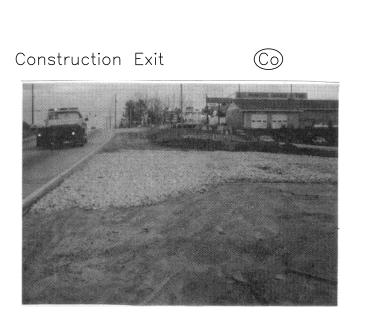
VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

HWY 400 WATERLINE RELOCATION

I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY DIRECT SUPERVISION Janny & Huzers

TAMMY L. HUGGINS GSWCC NO. 0000079448 EXPIRES 01/20/2020

		FOR BIDS
EROSION AND SEDIMENT CONTROL NOTES	SHEET: DWG NO:	G48
	DATE:	MARCH, 2019
	PROJ NO:	100182.15



#### DEFINITION

A stone stabilized pad located at any point where traffic will be leaving a construction site to a public right-of-way, street, alley, sidewalk or parking area or any other area where there is a transition from bare soil to a paved area.

#### PURPOSE

To reduce or eliminate the transport of mud from the construction area onto public rights-of-way by motor vehicles or by runoff.

#### CONDITIONS

This practice is applied at appropriate points of construction egress. Geotextile underliners are required to stabilize and support the pad aggregates.

#### DESIGN CRITERIA

6 inches.

Formal design is not required. The following standards shall be used:

#### Aggregate Size Stone will be in accordance with National Stone Association R-2 (1.5 to 3.5 inch stone).

Pad Thickness The gravel pad shall have a minimum thickness of

At a minimum, the width should equal full width of all points of vehicular egress, but not less than 20 feet

#### Washing

If the action of the vehicle travelling over the gravel pad does not sufficiently remove the mud, the tires should be washed prior to entrance onto public rights- of way. When washing is required, it shall be done on an area stabilized with crushed stone and provisions that intercept the sediment-laden runoff and direct it into an approved sediment trap or sediment basir

Location The exit shall be located or protected to prevent sediment from leaving the site.

#### CONSTRUCTION SPECIFICATIONS

It is recommended that the entrance area be excavated to a depth of 3 inches and be cleared of all vegetation and roots.

#### Diversion Ridge

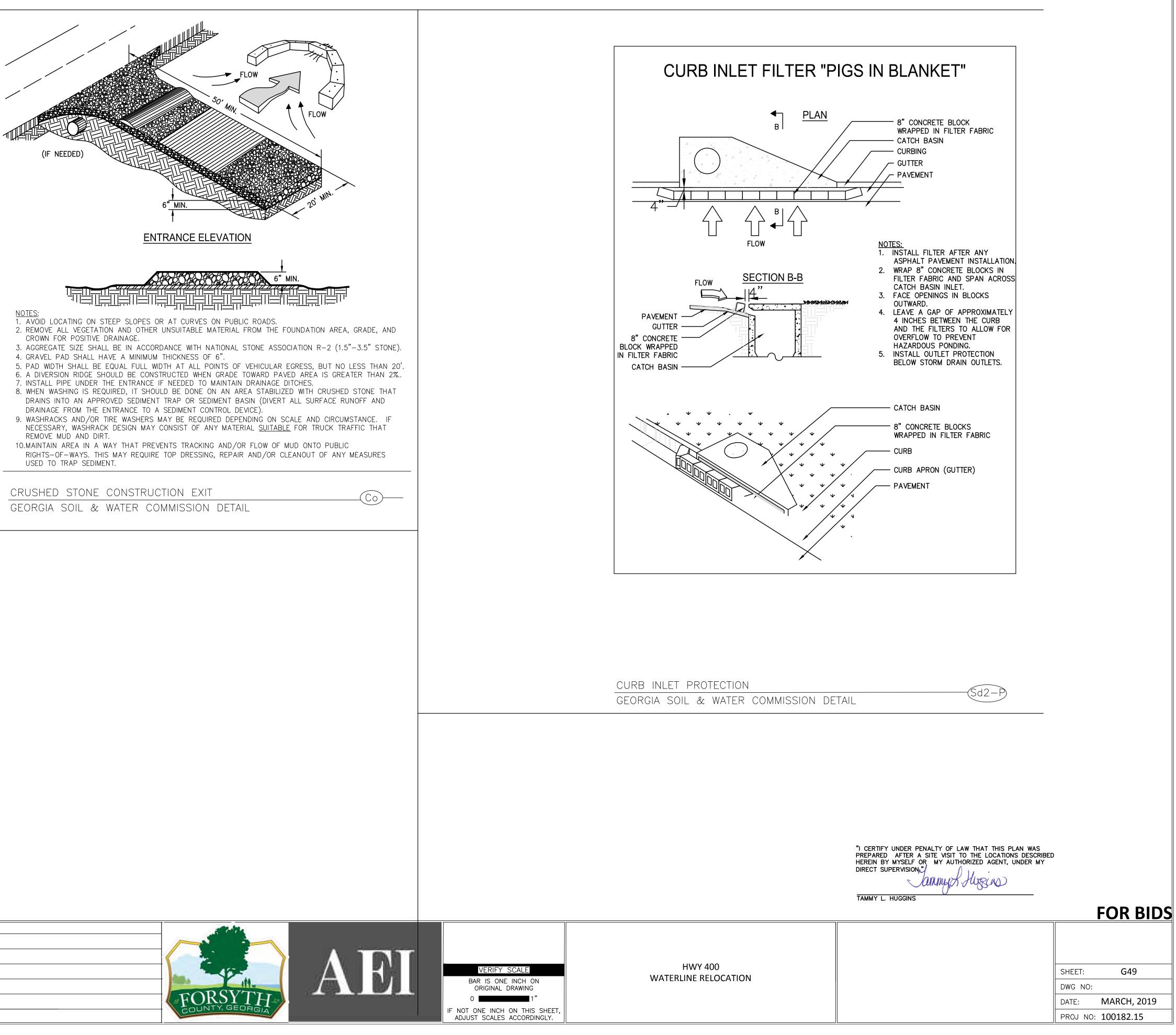
On sites where the grade toward the paved area is greater than 2%, a diversion ridge 6 to 8 inches high with 3:1 side slopes shall be constructed across the foundation approximately 15 feet above the road.

#### Geotextile

The geotextile underliner must be placed the full length and width of the entrance. Geotextile selection shall be based on AASHTO M288-98 specification: 1. For subgrades with a CBR greater than or equal to 3 or shear strength greater than 90 kPa, geotextile must meet requirements of section AASHTO M288-96 Section 7.3, Separation Requirements. 2. For subgrades with a CBR between 1 and 3 or sheer strength between 30 and 90 kPa, geotextile must meet requirements of section AASHTO M288-96 Section 7.4, Stabilization Requirements.

#### MAINTENANCE

The exit shall be maintained in a condition which will prevent tracking or flow of mud onto public rights-of-way. This may require periodic top dressing with 1.5 - 3.5 inch stone, as conditions demand, and repair and/or cleanout of any structures to trap sediment. All materials spilled, dropped, washed, or tracked from vehicles or site onto roadways or into storm drains must be removed immediately.

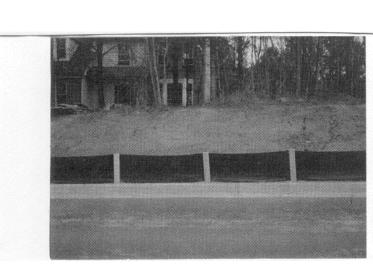




PH. 678-241-4070

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#### DEFINITION

Sediment barriers are temporary structures made up of a porous material typically supported by steel or wood posts. Types of sediment barriers may include silt fence, brush piles, mulch berms, compost filter socks or other filtering material.

#### PURPOSE

To minimize and prevent sediment carried by sheet flow from leaving the site and entering natural drainage ways or storm drainage systems by slowing storm water runoff and causing the deposition and/or filtration of sediment at the structure. The barriers retain the soil on the disturbed land until the activities disturbing the land are completed and vegetation is established.

#### CONDITIONS

Barriers should be installed where runoff can be stored behind the barrier without damaging the structure or the submerged area behind the fence. Silt fence shall not be installed across streams, ditches, waterways, or other concentrated flow areas.

#### Design Criteria

Sediment barriers are designed to retain sediment transported by sheet flow from disturbed areas. It is important for the design professional to take into account the profile of the product for use on the site. Sediment barriers should also provide a rip-rap pad or other outlet protection device for any point where flow may overtop the sediment barrier. Ensure that the maximum height of the barrier at a protected, reinforced outlet does not exceed 1 foot and that the support spacing does not exceed four feet

Where all runoff is to be stored behind the sediment barrier (where no storm water disposal system is present), maximum continuous slope length behind a sediment barrier shall not exceed those shown in Table 6-27.1. For longer slope lengths, slope interrupters must be used. The drainage area shall not exceed  $\frac{1}{4}$  acre for every 100 feet of sediment barrier.

#### PLACEMENT

The type of sediment barrier depends on whether the area is sensitive or non-sensitive. Sensitive areas can be defined as any area that needs additional protection, these areas include but are not limited to, state waters, wetlands, or any area the design professional designates

as sensitive. When using multiple types of sediment barriers on a site in a single run, the barriers must be overlapped 18 inches or as specified by design professional. As of January 1, 2016 Type C silt fence will be classified as sensitive. Type A & B will be classified as non-sensitive.

Type Sensitive Silt Fence Sd1-S

Sediment barriers being used as Type S shall have a support spacing no greater than 4 feet on center, with each being driven into the ground a minimum of 18 inches.

Type Non-Sensitive Silt Fence (Sd1-NS)

Sediment barriers being used as Type NS shall have a support spacing of no greater than 6 feet on center, with each being driven into the ground a minimum of 18 inches.

18" MIN. 🚫 18" MIN. FRONT VIEW ← 6' MAX. O.C. → FABRIC 30" MIN X 6" TRENCH 18" MIN 18" MIN NOTES: 1. USE STEEL OR WOOD POSTS OR AS SPECIFIED BY THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN. 2. HEIGHT (\*) IS TO BE SHOWN ON THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.



30" MIN.

Sediment shall be removed once it has accumulated to one-half the original height of the barrier.

Figure 6-27.1

Sediment barriers shall be replaced whenever they have deteriorated to such an extent that the effectiveness of the product is reduced (approximately six months) or the height of the product is not maintaining 80% of its properly installed height. Temporary sediment barriers shall remain in place until disturbed areas have been permanently stabilized.

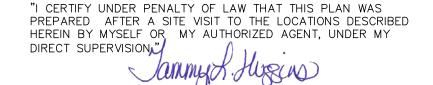
All sediment accumulated at the barrier shall be removed and properly disposed of before the barrier is removed.

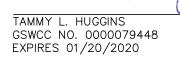
CRITERIA FOR SILT FENCE PLACEMENT Table 6-27.1						
	Maximum SLope Length					
Land Slope	Above Fence					
Percent	Feet					
<2	100					
2 to 5	75					
5 to 10	50					
10 to 20	25					
>20*	15					
*In areas where the slope is greater than 20%, a flat area length of 10 feet between the toe of the slope to the fence should be provided.						

30" MIN.

				Fi	gure 6-27.4		
	[			TYPE FENCE	А	В	С
	Minimum Length	J 1		Tensile Strength (Lbs. Min.) (1) (ASTM D-4632)	Warp — 120 Fill — 100	Warp — 120 Fill — 100	Warp — 120 Fill — 100
	NS 4'	Soft wood Oak Steel	3" dia. or 2x4 1.5" x 1.5" 1.15 lb./ft. min.	Elongation (% Max.) (ASTM D-4632)	40		
	S 4'	Oak Steel	1.15–1.25 lb./ft. min 2"x2"	AOS (Apparent Opening Size) (Max Sieve Size) (ASTM D-4751)	#30		
	FASTENE	RS FOR WOOD PC	2720	Flow Rate (Gal/Min/Sq. Ft.) (GDT-87)	25		
Wire Staples	Gauge	Table 6-27.3 Crown L	egs Staples/Post ' long 5 min.	Ultraviolet Stability (2) (ASTM D-4632 after 300 hours weathering in accordance with ASTM D-4355)	80		
Nails	Gauge 14 min.	Length Butto	n Heads Nail/Post /4" 4 min.	Bursting Strength (PSI Min.) (ASTM D-3786 Diaphragm Bursting Strength Tester)	g 175		
			by wire, cord, and pockets.	Minimum Fabric Width (Inches)	36		
				(1) Minimum roll average of five specimer (2) Percent of required initial minimum te	ns. ensile strength.		

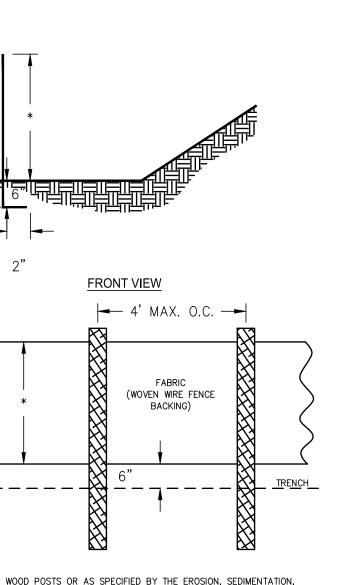
SEDIMENT BARRIER - TYPE "A" & "C" GEORGIA SOIL & WATER COMMISSION DETAIL







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<u>3-26-19</u>	BY	REVISIONS	DATE	<u>NO.</u>	APVD



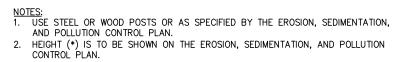
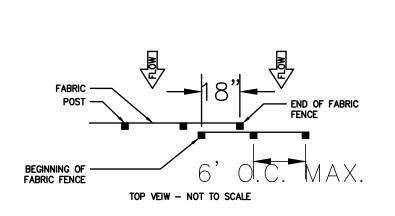
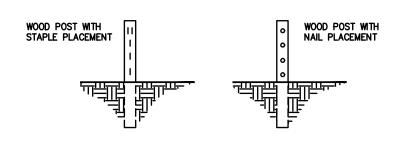


Figure 6-27.2



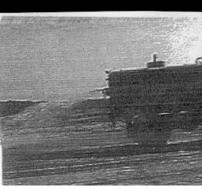


FRONT VIEWS - NOT TO SCALE

# NOTES: 1. THE FABRIC AND WIRE SHOULD BE SECURELY FASTENED TO POSTS AND FABRIC ENDS MUST BE OVERLAPPED A MINIMUM OF 18" OR WRAPPED TOGETHER AROUND A POST TO PROVIDE A CONTINUOUS FABRIC BARRIER AROUND THE INLET.

Figure 6-27.5

Dust Control on Disturbed Areas



DEFINITION Controlling surface and air on construction sites, road, and

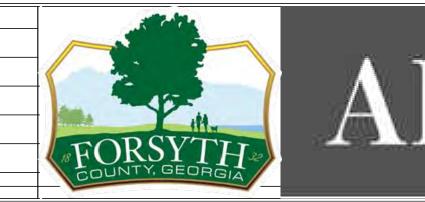
### PURPOSE

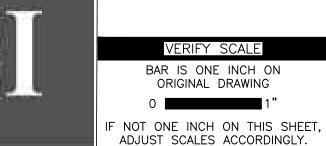
— To prevent surface and air r from exposed soil surfaces. To reduce the presence of air which may be harmful or injurio welfare, or safety, or to animals

### CONDITIONS

This practice is applicable surface and air movement of du off-site damage may occur with

DUST CONTROL ON GEORGIA SOIL & WA





HWY 400 WATERLINE RELOCATION

Du METHOD AND MATERIALS	
A. TEMPORARY METHODS Mulches. See standard Ds1 – Disturbed Area Stabilization (With Mulching Only). Synthetic resins may be used instead of asphalt to bind mulch material. Refer to standard Tb-Tackifiers and Binders. Resins such as Curasol or Terratack should be used according to manufacturer's recommendations. Vegetative Cover. See standard Ds2 – Disturbed Area Stabilization (With Temporary Seeding). Spray-on Adhesives. These are used on mineral soils (not effective on muck soils). Keep traffic off these areas. Refer to standard Tb-Tackifiers and Binders. Tillage. This practice is designed to roughen and bring clods to the surface. It is an emergency measure	
movement of dust d demolition sites. spring-toothed harrows, and similar plows are examples of equipment which may produce the desired effect. Irrigation. This is generally done as an emergency	
movement of dust airborne substances ous to human health, Is or plant life. Calcium Chloride. Apply at rate that will keep surface moist. May need retreatment.	
to areas subject to dust where on and thout treatment. B. PERMANENT METHODS Permanent Vegetation. See standard Ds3 – Disturbed Area Stabilization (With Permanent Vegetation). Existing trees and large shrubs may afford valuable protection if left in place. Topsoiling. This entails covering the surface with less erosive soil material. See standard Tp– Stone. Cover surface with crushed stone or coarse gravel. See standard Cr-Construction Road Stabilization.	
DISTURBED AREAS	

FO	R	BI	DS

SHEET:	G50
DWG NO:	
DATE:	MARCH, 2019
PROJ NO:	100182.15

EROSION AND SEDIMENT CONTROL
NOTES



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FNGINEER THMY L. HUGGINS
3-26-19

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APVD	ΒY	REVISIONS	DATE	NO.	APVD

Species	Rates 1/ - PER ACRE 1	CAST <u>- PLS 2/</u> PER .000 sq. ft.	RESOURCE AREA 3/	ਤਿ ਦੂ ਦੇ ਤਿ	a di di di di di	<u>Resource</u> tes optimum te permis	တ်	Remarks	
BAHIA, PENSACOLA (Paspalum notatum) alone or with temporary cover with other perennials	60 lbs. 30 lbs.	1.4 b. 0.7 b.	۵U		γ	×	O     I       Z     I       O     I       I     I	166,000 seed per pound. Low growing. Sod forming. Slow to establish. Plant with a companion crop. Will spread into bermuda pastures and lawns. Mix with Sericea lespedeza or weeping lovegrass.	
BAHIA, WILMINGTON (Paspalum notatum) alone or with temporary cover with other perennials	60 lbs. 30 lbs.	1.4 b. 0.7 b.	C M					166,000 seed per pound. Low growing. Sod forming. Slow to establish. Plant with a companion crop. Will spread into bermuda pastures and lawns. Mix with Sericea lespedeza or weeping lovearass.	
BERMUDA, COMMON (Cynodon Dactylon) Hulled Seed alone with other perennials	10 lbs. 6 lbs.	0.2 lb. 0.7 lb.	٩٥					1,787,000 seed per pound. Quick cover. Low growing and sod forming. Full sun. Good for athletic fields	
BERMUDA, COMMON (Cynodon Dactylon) Unhulled Seed			۵U						
ith temporary cover ith other perennials	10 lbs. 6 lbs.	0.2 lb. 0.7 lb.		 لد ح	⊤ ≥ < ≥	,, ح ح	۵ ۲ ۵	Plant with winter annuals Plant with tall fescue.	
BERMUDA, SPRIGS (Cynodon Dactylon) Coastal, Common, Midland or Tift 44 Coastal, Common, Tift 44 Tift 78	40cu ft or sod plugi	0.9 cu ft s 3'x3'	- - ⊾ ∪ × ∟∪ (					A cubic foot contains approximately 650 sprigs. A bushel contains 1.25 cubic feet or approx. 800 sprigs Same as above.	
CENTIPEDE (Eremochloa Ophiuroides)	Block sod c	ylnd	0 00					Drought tolerant. Full sun or partial shade. Effective adjacent to concrete and in concentrated flow areas. Irrigation is needed until fully established. Do not	
CROWNVETECH (Coronilla varia)								plant near pastures. Winte 100,000 seed per pound. growth. Drought tolerant a resistant. Attractive rose, f and white blossoms spring	hardy. ense d fire nk to
ith winter annuals or ool season grasses	15 lbs.	0.3 lb.						late fall. Mix with 30 pour Tall fescue or 15 pounds Inoculate see with M inocu Use from North Atlanta an Northward.	is of of rye. ant.
FESCUE, TALL (Festuca arundinacea) alone or with	50 lbs.	1.1 .1						227,000 seed per pound. alone only on better sites. with perennial lespededza Crownvetch. Apply topdress	Jse Mix Tgin
with other perennials KUD7U	30 lbs.	0.7 lb.	ן ב ב.					spring following fall plantin Not for heavy use areas c athletic fields.	<u>vi</u>
Pueraria thumbergiana) lants or Crowns	3, - 7,	, apart	ALL					Will climb. Good livestock	ontrol. orage.
ESPEDEZA, SERICEA Lespedeza cuneata)								350,000 seed per pound. Widely adapted. Low maintenance. Mix with	
carified	60 lbs.	1.4 lbs.	C D L W	<u> </u>				weeping lovegrass, commor bermuda, bahia, or tall fescue. Takes 2 to 3 yean to become fully established Excellent on roadbanks.	
nscarified	75 lbs.	1.7 lb.	л Г М						
eed-bearing hay	3 tons	138 lb.	сı U					Cut winter but be tall fe	
LESPEDEZA, SHRUB (Lespedeza bicolor) (Lespedeza thumherraii)					Γ       Σ          Δ       Σ	۲ ۲	2 0 0		
lants	3 <b>,</b> ×3		J d O ₩ ₩					Provide wildlife food and c	over
LESPEDEZA Ambro virgata (Lespedeza virgata DC) or Appalow (Lespedeza cuneata Dumont1 G. Don)								300,000 seed per pound. Height of growth is 18 to 24 inches. Advantageous ir urban areas. Spreading-ty growth has bronze colorati Mix with Weeping lovegrass Common bermuda. bohia.	 
carified	60 lbs.	1.4 lbs.	J⊿∪ M					tall fescue or winter annur Do not mix with Sericea lespedeza. Slow to develop solid strands. Inoculate see with EL inoculate.	ю́ п
nscarified	75 lbs.	1.7 lb.	L NPL M						
LOVEGRASS, WEEPING (Eragrostis curvula) alone with other perennials	4 lbs. 2 lbs.	0.1 lb. 0.05 lb.	J_GO ₹					1,500,000 seed per pound Quick cover. Drought tolerc Grows well with Sericea lespedeza on roadbanks.	it.
MAIDENCANE (Panicum hemitomon)								For very wet sites. May clo channels. Dig sprigs from	og local
spirig	2'x3' spaci	ing ALL						use along alines	S S S S S S S S S S S S S S S S S S S
PANICGRASS, ATLANTIC COASTAL (Panicum amarum vor amarukum)	20 lbs.	0.5 b.	۵U			۲ ۲		Grows well on coastal sand dunes, borrow areas, and g pits. Provides winter cover wildlife. Mix with Sericea lespedeza except sand dune	for ss.
REED CANARY GRASS (Phalaris arundinacea) alone	50 lbs.		ے لا ع					Grows similar to Tall fescu	
SUNFLOWER, 'AZTEC' MAXIMILLIAN (Helianthus maximiliani)	Q	<u>-</u>	_ ▼ - C					227,000 seed per pound. with weeping lovegrass or low-growing grasses or leg	Mix other gumes.





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

HWY 400 WATERLINE RELOCATION "I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY DIRECT SUPERVISION." anny R. Huzens

TAMMY L. HUGGINS GSWCC NO. 0000079448 EXPIRES 01/20/2020

EROSION AND SEDIMENT CONTROL NOTES

FOR	B	DS

SHEET:	G51
DWG NO:	
DATE:	MARCH, 2019
PROJ NO:	100182.15

clone       40 lbs.       0.9 lb.       C	<u>Remarks</u>
(Lespedezo strioto)	
alone       40 lbs.       0.9 lb.         in mixtures       10 lbs.       0.2 lb.         BARLEY (Incream vulagre) alone       3 bu. (144/bb)       3.3 lb.       M—L C       Image: Comparison of the	seed per pound.
BARLEY (Mordeum vulogre)       J       F       M       M       J       J       A       S       O       N       D         BARLEY (Mordeum vulogre)       J       bu. (144bs)       3.3       b.       M-L       C       I       I       A       M       J       A       S       O       N       D       Double         In mixtures       1/2 bu. (24bs)       0.6 lb.       D	nteer for several se inoculant EL.
(Hordeum vulagre)       abu. (144lba)       3.3 lb.       M-L       Image: Second	
$ \begin{array}{c c c c c c c c c c c c c c c c c c c $	seed per
in mixtures       1/2 bu. (24bs) 0.6 lb.	Winter hardy. productive
(Erogrostis curvula)	5015.
alone       4 lbs.       0.1 lb.       C       Image: Comparison of the comparison of th	
in mixtures       2 lbs.       0.05 lb.       J       F       M       A       M       J       J       A       S       0       N       D         MILLET, BROWNTOP (Panicum fasciculatem)       40 lbs.       0.9 lb.       M-L       J       F       M       A       M       J       J       A       S       0       N       D         MILLET, BROWNTOP (Panicum fasciculatem)       40 lbs.       0.9 lb.       M-L       J       F       M       A       M       J       J       A       S       0       N       D         MILLET, FEARL (Pennesetum glaucum) alone       50 lbs.       1.1 lb.       M-L       J       F       M       A       M       J       J       A       S       0       N       D       B8,000 Quick de producting wintures         OATS       50 lbs.       1.1 lb.       M-L       C       J       F       M       A       M       J       J       A       S       0       N       D       B8,000 Quick de producting wintures         OATS       50 lbs.       1.1 lb.       M-L       C       L       L       L       L       L       L       L       L       L       L	1,500,000 seed per pour May last for several year Mix with Sericea lespede:
(Panicum fasciculatern)       40 lbs.       0.9 lb.       J       F       M       A       M       J       J       A       S       O       N       D         MILLET, PEARL (Pennesetum glaucum)       50 lbs.       1.1 lb.       M-L       P       A       M       J       J       A       S       O       N       D       88,000         OATS (Avena sativa)       50 lbs.       1.1 lb.       M-L       P       A       M       J       J       A       S       O       N       D       88,000         OATS (Avena sativa)       50 lbs.       1.1 lb.       M-L       P       A       M       J       J       A       S       O       N       D       88,000         Oats       C       F       M       A       M       J       J       A       S       N       D       B	
alone       40 lbs.       0.9 lb.       J       F       M       A       M       J       A       S       0       N       D       Competition         MILLET, PEARL (Penesetum glaucum)       50 lbs.       1.1 lb.       M-L       P       A       M       J       J       A       S       0       N       D       S88,000         OATS       50 lbs.       1.1 lb.       M-L       P       A       M       J       J       A       S       0       N       D       S88,000         OATS       50 lbs.       1.1 lb.       M-L       P       A       M       J       J       A       S       0       N       D       S88,000         OATS       50 lbs.       1.1 lb.       M-L       P       A       M       J       J       A       S       O       N       D       S88,000         (Avena sativa)       4       bu. (168lbs)       2.9 lb.       A       F       M       A       M       J       J       A       S       O       N       D       Poducti as withtres         (Secole cereale)       3       bu. (128 bs.)       3.9 lb.       A       M       J	seed per pounc ense cover. Will
In mixtures       10 lbs.       0.2 lb.       J       F       M       A       M       J       J       A       S       0       N       D         MILLET, PEARL (Pennesetum glaucum)       50 lbs.       1.1 lb.       M       M       J       F       M       A       M       J       J       A       S       0       N       D         OATS (Avena sativa)       50 lbs.       1.1 lb.       M       M       A       M       J       J       A       S       0       N       D         OATS (Avena sativa)       4       bu. (168lbs)       2.9 lb.       M       C       I	provide too much competition in mixtures if seeded at high rates
alone 50 lbs. 1.1 lb. C $J F M A M J J A S O N D$ Alone 50 lbs. 1.1 lb. C $J F M A M J J A S O N D$ Alone 4 bu. (168lbs) 2.9 lb. $M^{-L} P_{C}$ $J F M A M J J A S O N D$ (Avena sativa) alone 4 bu. (168lbs) 2.9 lb. $M^{-L} P_{C}$ $J F M A M J J A S O N D$ RYE (Secale cereale) alone 3 bu. (128 lbs.) 0.7 lb. $M^{-L} P_{C}$ $J F M A M J J A S O N D$ (Secale cereale) alone 3 bu. (128 lbs.) 0.6 lb. $J F M A M J J J A S O N D$ RYEGRASS, ANNUAL (Lolium temulentum) alone 40 lbs. 0.9 lb. $M^{-L} P_{C}$ $J F M A M J J J A S O N D$ SUDANGRASS (Sorghum sudanese) alone 3 bu. (144lbs) 3.3 lb. $M^{-L} P_{C}$ $J F M A M J J J A S O N D$ SUDANGRASS (Sorghum sudanese) alone 3 bu. (144lbs) 3.3 lb. $C $ $M^{-L} P_{C}$ $J F M A M J J J A S O N D$ SUDANGRASS (Sorghum sudanese) alone 3 bu. (144lbs) 3.3 lb. $C $ $M^{-L} P_{C}$ $J F M A M J J J A S O N D$ SUDANGRASS (Sorghum sudanese) alone 3 bu. (144lbs) 3.3 lb. C $C$ $M^{-L} P_{C}$ $J F M A M J J J A S O N D$ SUDANGRASS (Sorghum sudanese) alone 3 bu. (144lbs) 3.3 lb. C $C$ $M^{-L} P_{C}$ $J F M A M J J J A S O N D$ SUDANGRASS (Sorghum sudanese) alone 3 bu. (144lbs) 3.3 lb. C $C$ $M^{-L} P_{C}$ $J F M A M J J J A S O N D$ Subangradient $J (D E E E C)$ $M^{-L} P_{C}$ $M^{-L} P$	seed per pound ense cover. May
OATS (Avena sativa)       4 bu. (168lbs) 2.9 lb.       M-L P C       M-L P C       Image: Constraint of the second se	reach 5 feet in height. <u>Not</u> recommended for mixtures.
alone4 bu. (168lbs)2.9 lb. $M^{-L}$ P CP C $M^{-L}$ P CP C $M^{-L}$ P CP C $M^{-L}$ P CP C $M^{-L}$ P CP C $M^{-L}$ P C $M^{-L}$ <br< td=""><td>seed per</td></br<>	seed per
in mixtures       1 bu. (32lbs)       0.7 lb.       Image: Constraint of the second	pound. Use on productive soils. Not as winter hardy as rye or barley.
(Secale cereale)       3 bu.       3.9 lb.       P	
alone3 bu. (128 lbs.)3.9 lb. (128 lbs.)C $u$	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	13,000 seed per pound Quick cover. Drought tolirant and winterhardy
RYEGRASS, ANNUAL (Lolium temulentum) alone       40 lbs.       0.9 lb.       M-L P C       M-L P C      M-L P C       M-L	
(Lolium temulentum)       40 lbs.       0.9 lb.       P       Image: Competitive of the second competitite of the second competitive of the second competitive	
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	) seed per pound cover. Very
SUDANGRASS (Sorghum sudanese) alone       60 lbs.       1.4 lb.       M-L P C       M-L P C       Image: Comparison of the state of the s	competitive and is <u>not</u> to be used in mixtures.
(Sorghum sudanese) alone 60 lbs. 1.4 lb. P C TRITICALE (X-Triticosecale) alone 3 bu. (144lbs) 3.3 lb. L (2 bu. (24lba) 0.6 lb.	seed per
alone       60 lbs.       1.4 lb.       recommendation         TRITICALE (X-Triticosecale)       3 bu. (144lbs)       3.3 lb.       C        Image: State of South Plain and Flatwood         alone       1 (2 bu. (24bb))       0.6 lb.       Image: State of South Plain and Flatwood       Image: State of South Plain and Flatwood	Good on y sites. Not
(X-Triticosecale) alone 3 bu. (144lbs) 3.3 lb. 1 (2 bu. (24lbs) 0.6 lb.	ended for
alone 3 bu. (144lbs) 3.3 lb. C of South 1 (2 bu. (24lbs) 0.6 lb. Flatwood	lower_part
	hern Coastal nd in Atlantic ds only.
	seed per Winter hardy.
alone 3 bu. (180lbs) 4.1 lb.	

1/ Temporary cover crops are very competitive and will crown out
2/ Reduce seeding rates by 50% when drilled
3/ PLS is an abbreviation for Pure Live Seed
4/ M-L represents the Mountain; Blue Ridge; and Valleys MLRAs
P represents the Southern Piedmont MLRA
C represents Southern Coastal Plain; Sand Hills; Black Lands; and Atlantic Coast Flatwoods MLRA (See Figure 6-4.1, p. 6-40)



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TRANKY L. HUGGINS						СНК
MAFL. HUGO						
3-26-19	APVD	BY	REVISIONS	DATE	NO.	APVD

FERTILIZER REQUIREMENTS						
TYPE OF SPECIES	YEAR	ANALYSIS OR EQUIVALENT N-P-K	RATE	N TOP DRESSING RATE		
1. Cool Season grasses	First Second Maintenance	6-12-12 6-12-12 10-10-10	1500 lbs./ac. 1000 lbs./ac. 400 lbs./ac.	50-100 lbs./ac. 1/2/  30		
2. Cool Season grasses and legumes	First Second Maintenance	6-12-12 0-10-10 0-10-10	1500 lbs./ac. 1000 lbs./ac. 400 lbs./ac.	0—50 lbs./ac. 1/ —— ——		
3. Ground covers	First Second Maintenance	10-10-10 10-10-10 10-10-10	1300 lbs./ac. 3/ 1300 lbs./ac. 3/ 1100 lbs./ac.	  		
4. Pine seedlings	First	20-10-5	one 21-gram pellet per seedling placed in the closing hole			
5. Shrub Lespedeza	First Maintenance	0-10-10 0-10-10	700 lbs./ac. 700 lbs./ac. 4/			
6. Temporary cover crops seeded alone	First	10-10-10	500 lbs./ac.	30 lbs./ac. 5/		
7. Warm season grasses	First Second Maintenance	6-12-12 6-12-12 10-10-10	1500 lbs./ac. 800 lbs./ac. 400 lbs./ac.	50-100 lbs./ac. 2/6/ 50-100 lbs./ac. 2/ 30 lbs./ac.		
7. Warm season grasses and legumes	First Second Maintenance	6-12-12 0-10-10 0-10-10	1500 lbs./ac. 1000 lbs./ac. 400 lbs./ac.	50 lbs./ac. 6/  		

## MAJOR LAND RESOURCE AREAS (MLRA) OF GEORGIA PROJECT SITE IS LOCATED IN: SOUTHERN PIEDMONT PLAIN

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.





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

HWY 400 WATERLINE RELOCATION

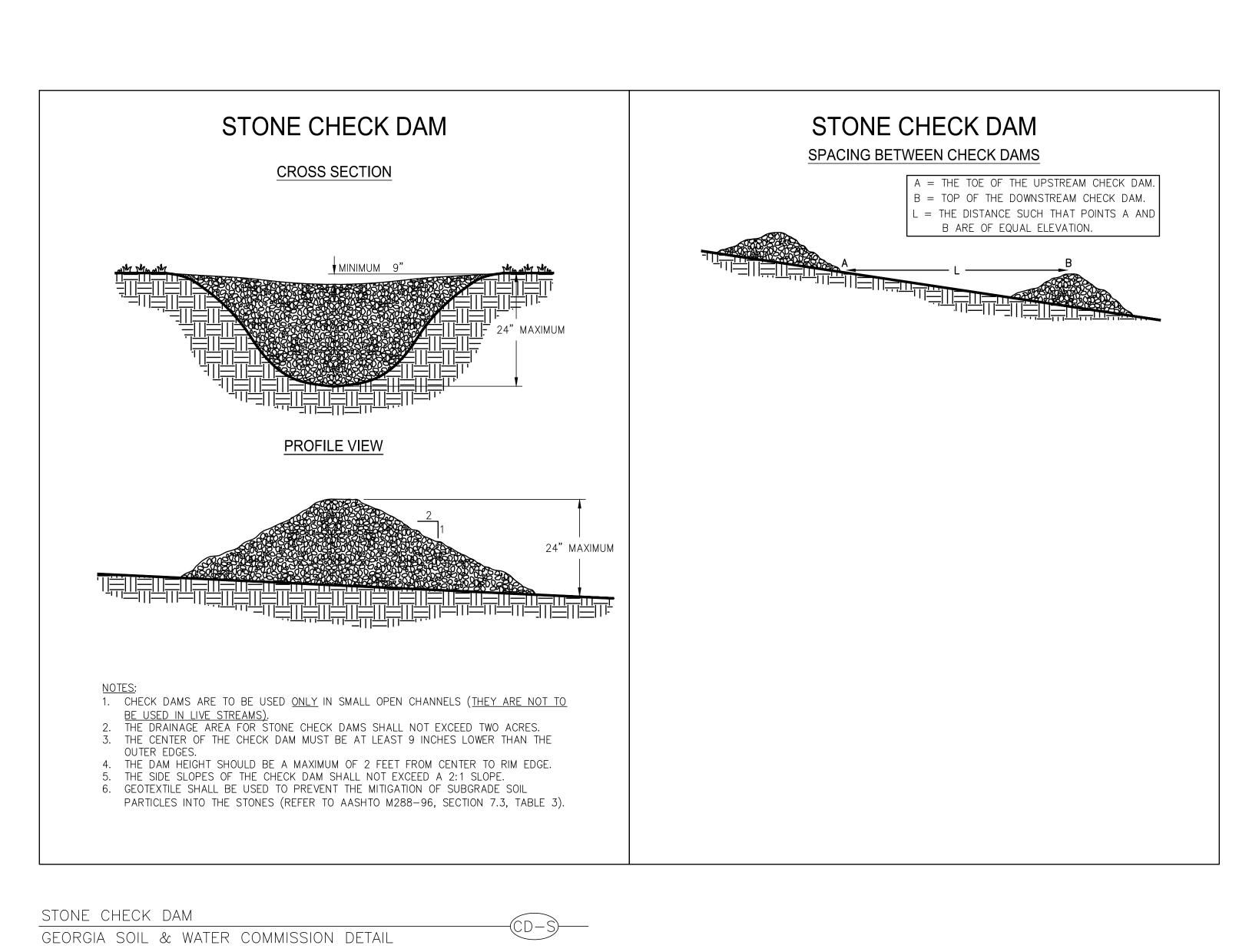
"I CERTIFY UNDER PENALTY OF LAW THAT THIS PLAN WAS PREPARED AFTER A SITE VISIT TO THE LOCATIONS DESCRIBED HEREIN BY MYSELF OR MY AUTHORIZED AGENT, UNDER MY DIRECT SUPERVISION." aning S. Husins

TAMMY L. HUGGINS GSWCC NO. 0000079448 EXPIRES 01/20/2020

# FOR BIDS

EROSION AND SEDIMENT CONTROL NOTES

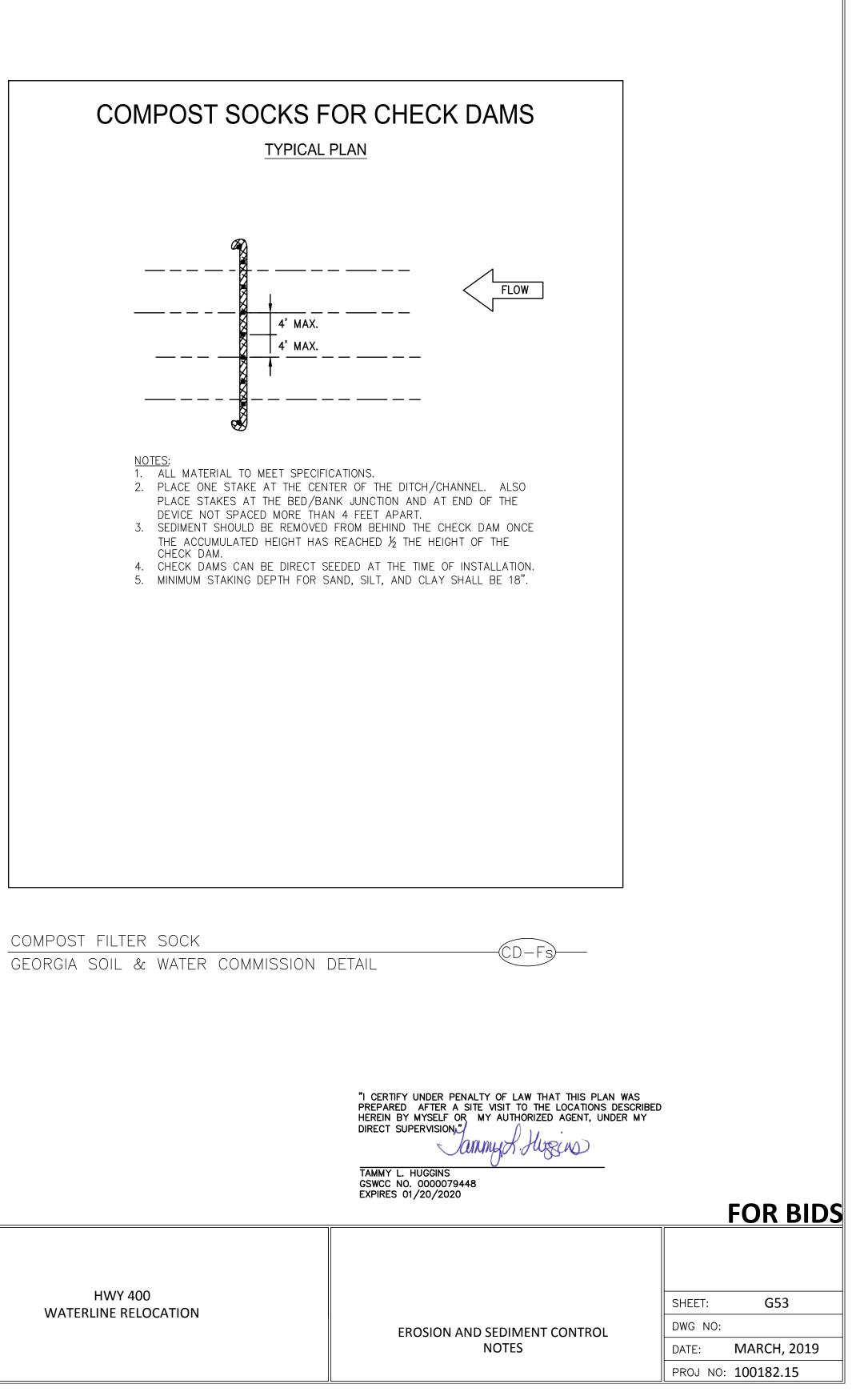
SHEET:	G52
DWG NO:	
DATE:	MARCH, 2019
PROJ NO:	100182.15







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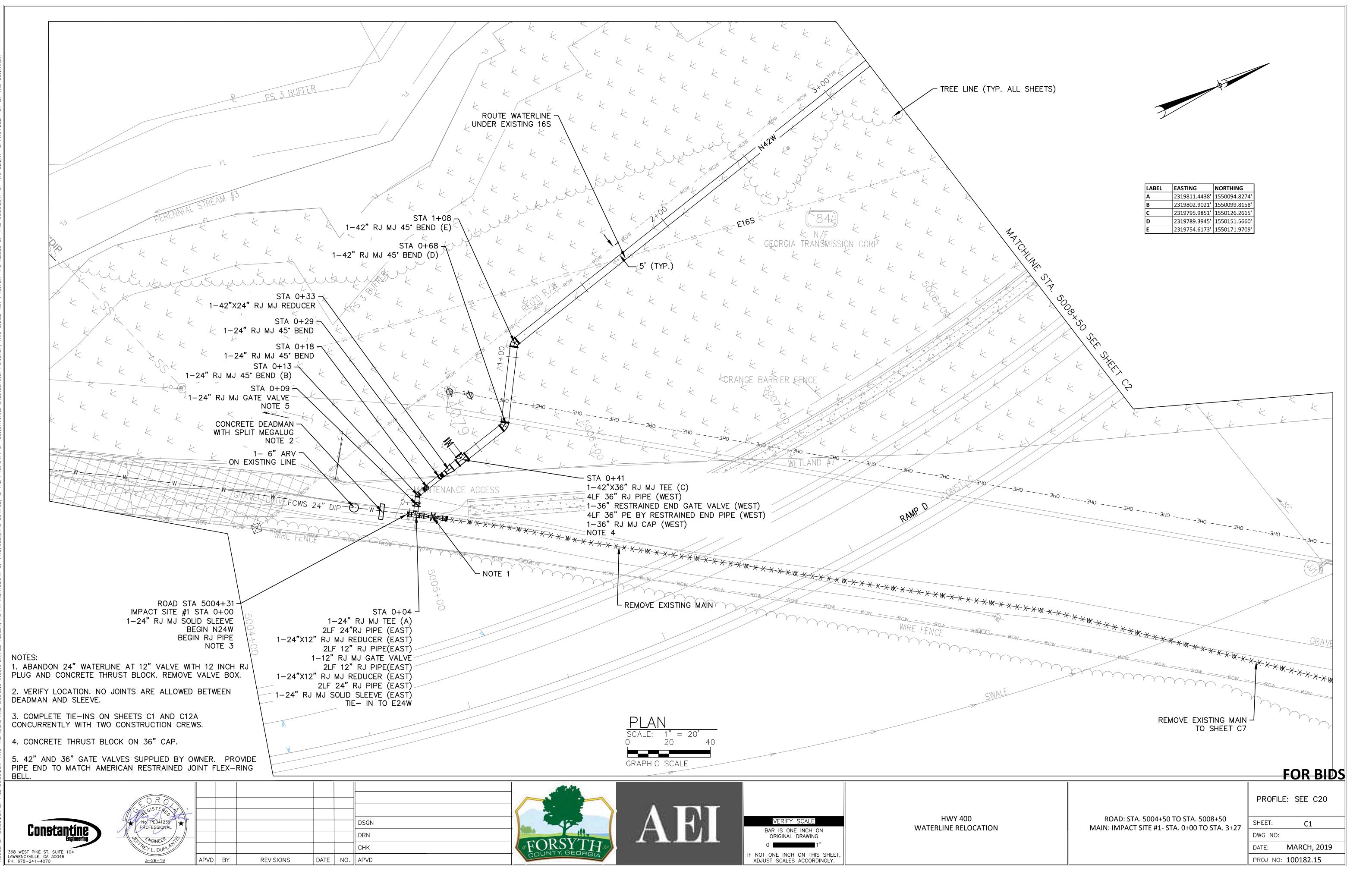
COMPOST FILTER SOCK



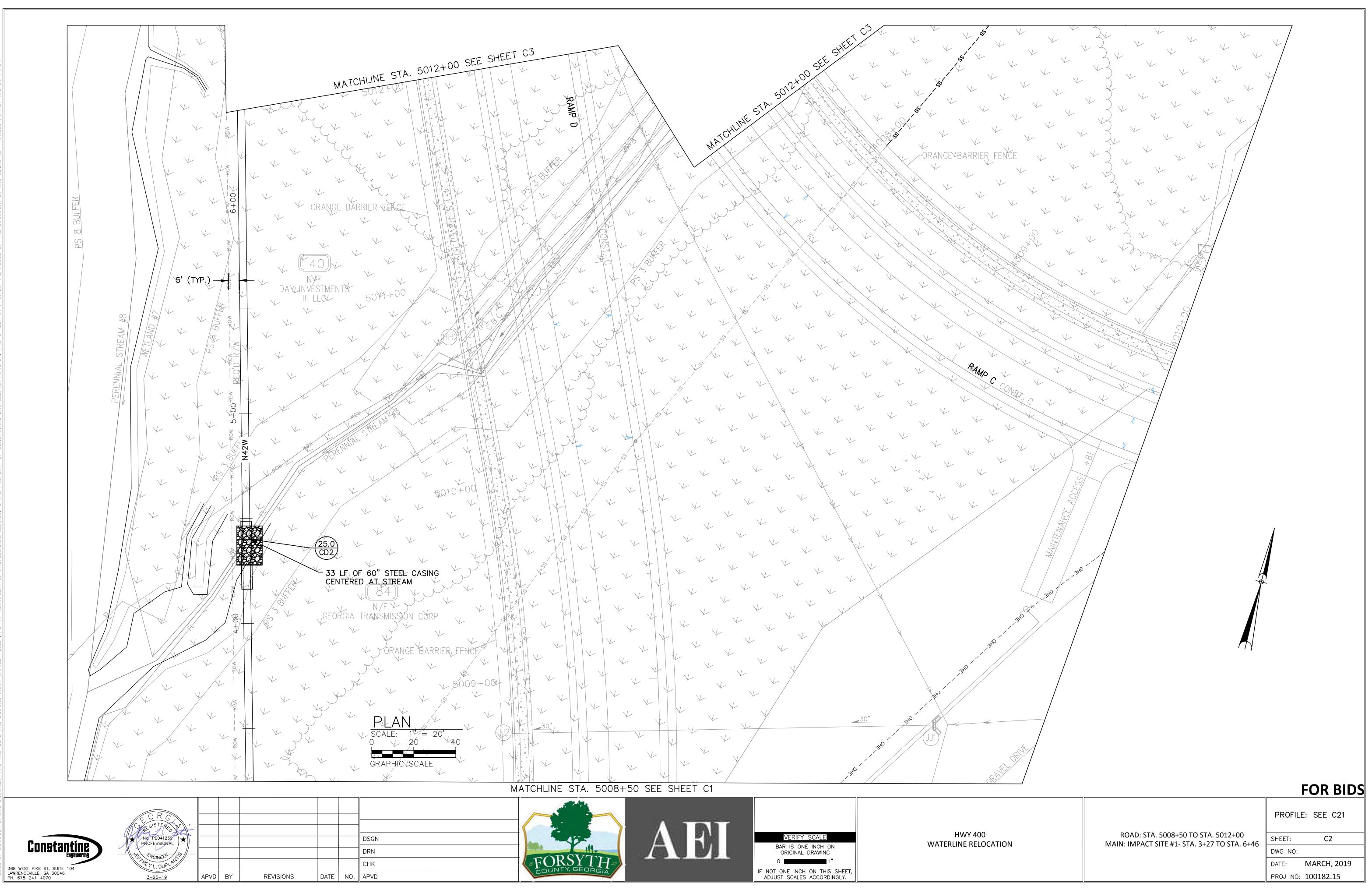


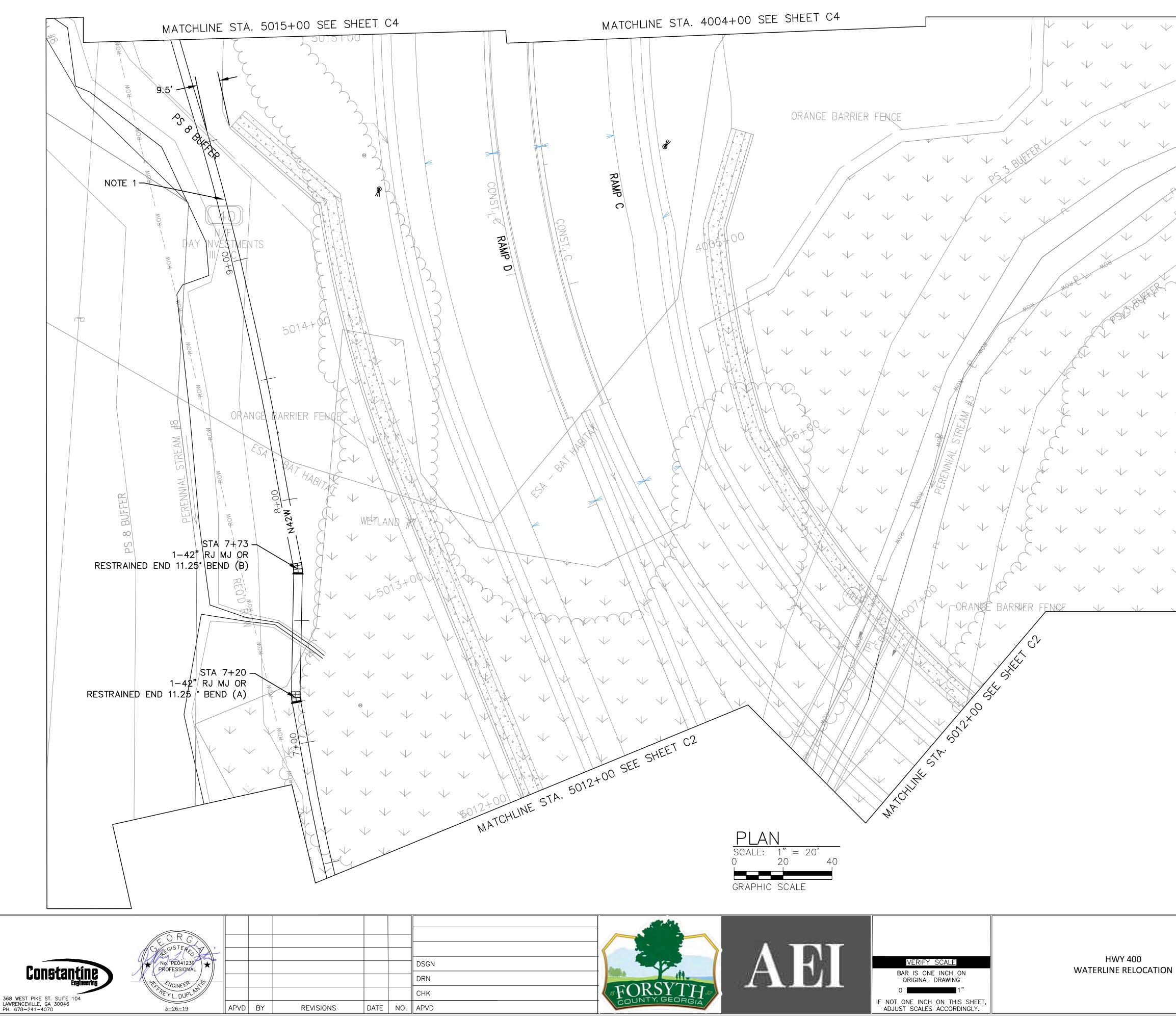
VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON THIS SHEET,

ADJUST SCALES ACCORDINGLY.



DWG NO:	
DATE:	MARCH, 2019
PROJ NO.	100182 15



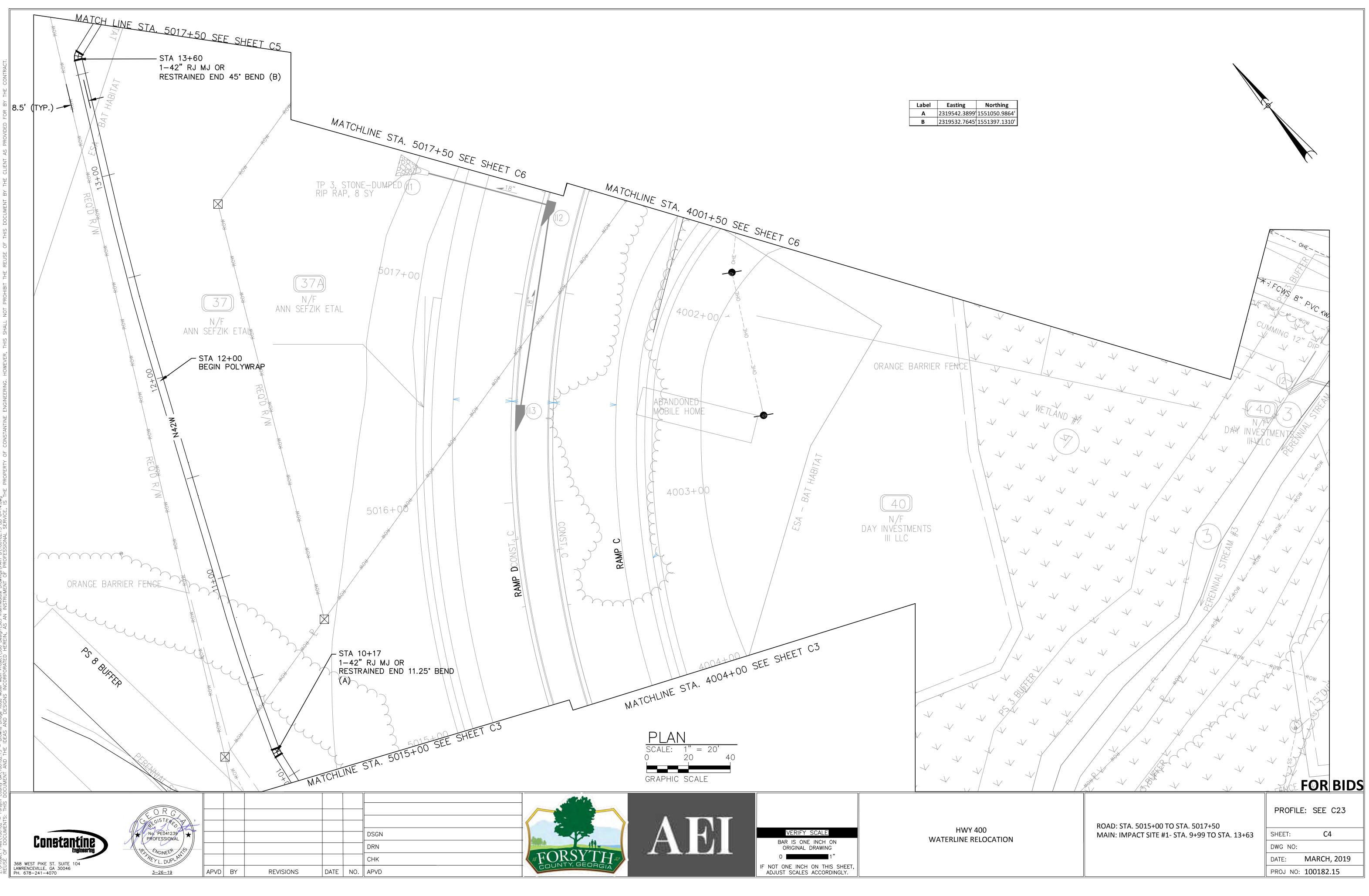


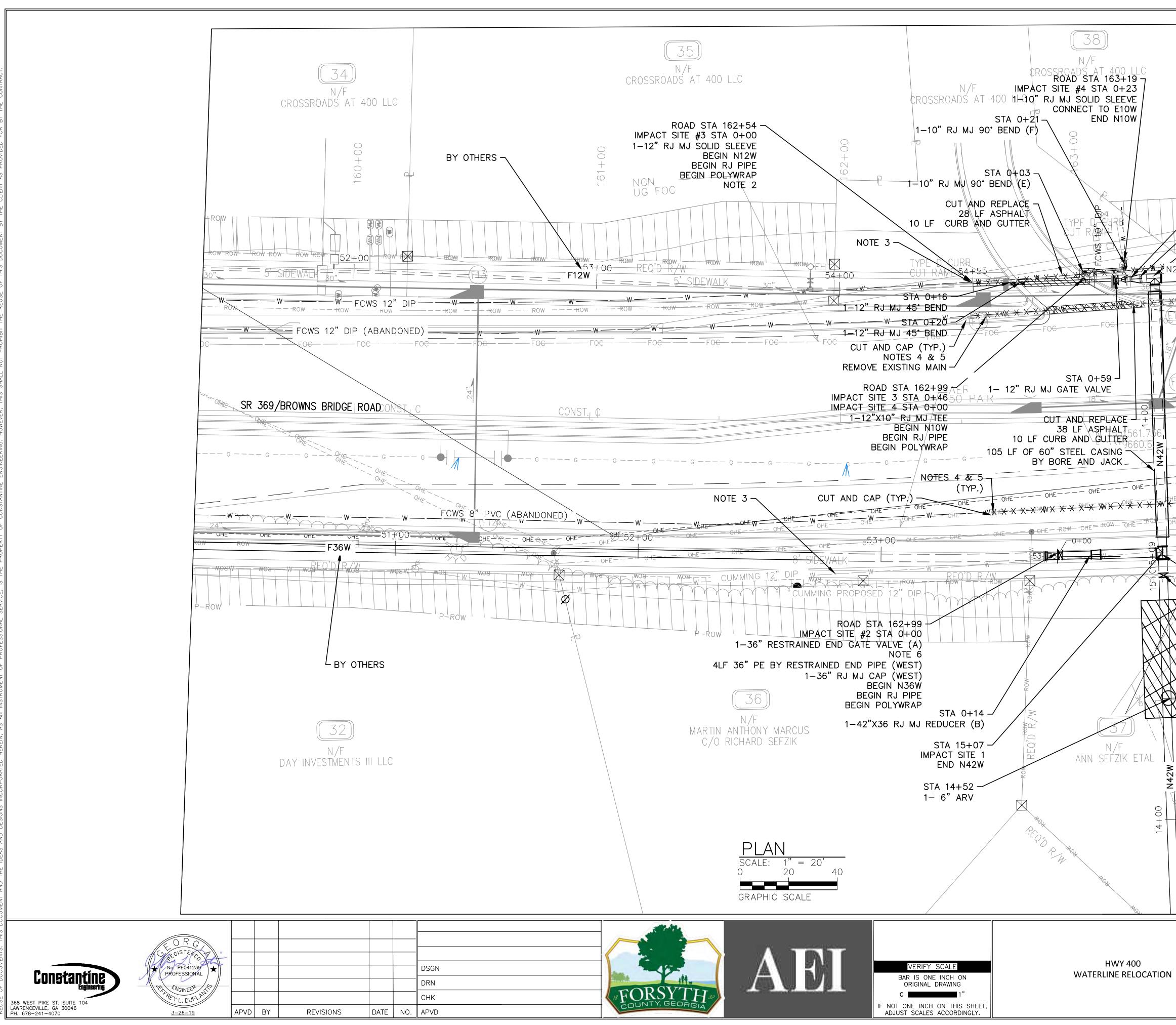
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LABEL	EASTING	NORTHING			
Α	2319603.3808'	1550764.9826'			
В	2319603.1745'	1550817.5617'			

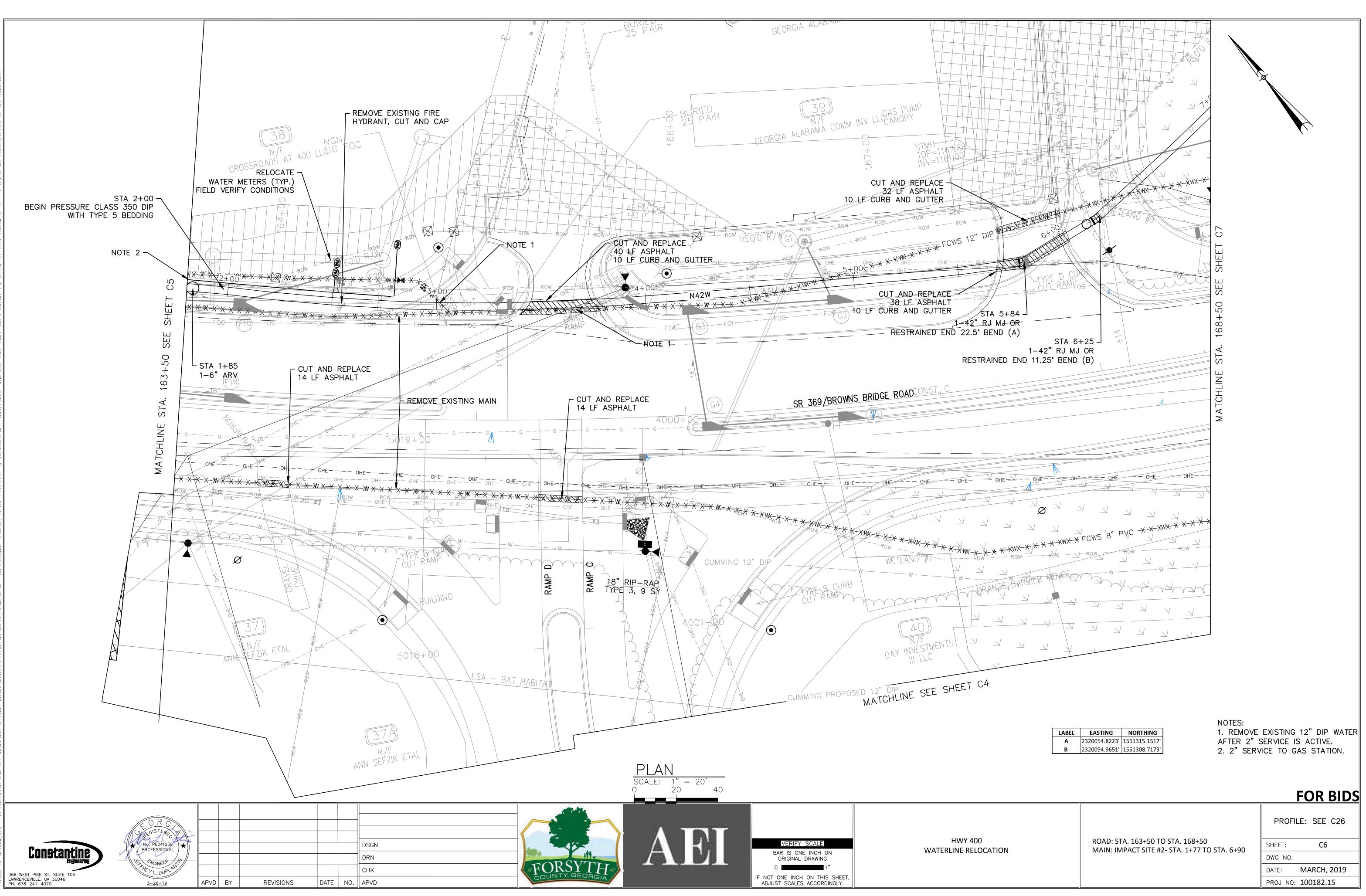
NOTES: 1. DEFLECT PIPE AROUND TOP OF STREAM BANK.

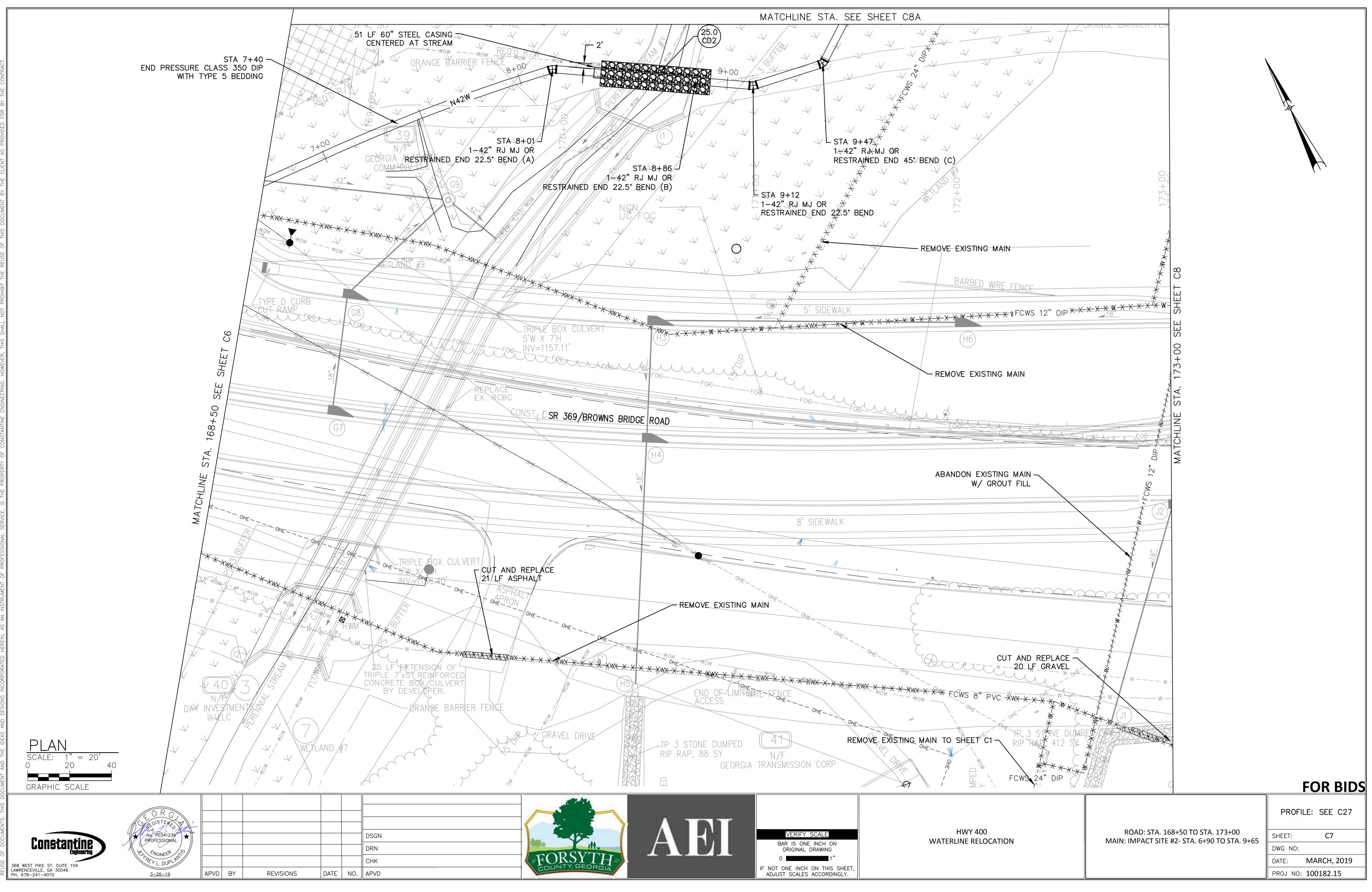
	FOR BIDS
	PROFILE: SEE C22
ROAD: STA. 5012+00 TO STA. 5015+00 MAIN: IMPACT SITE #1- STA. 6+46 TO STA. 9+99	SHEET: C3
	DWG NO:
	DATE: MARCH, 2019
	PROJ NO: 100182.15

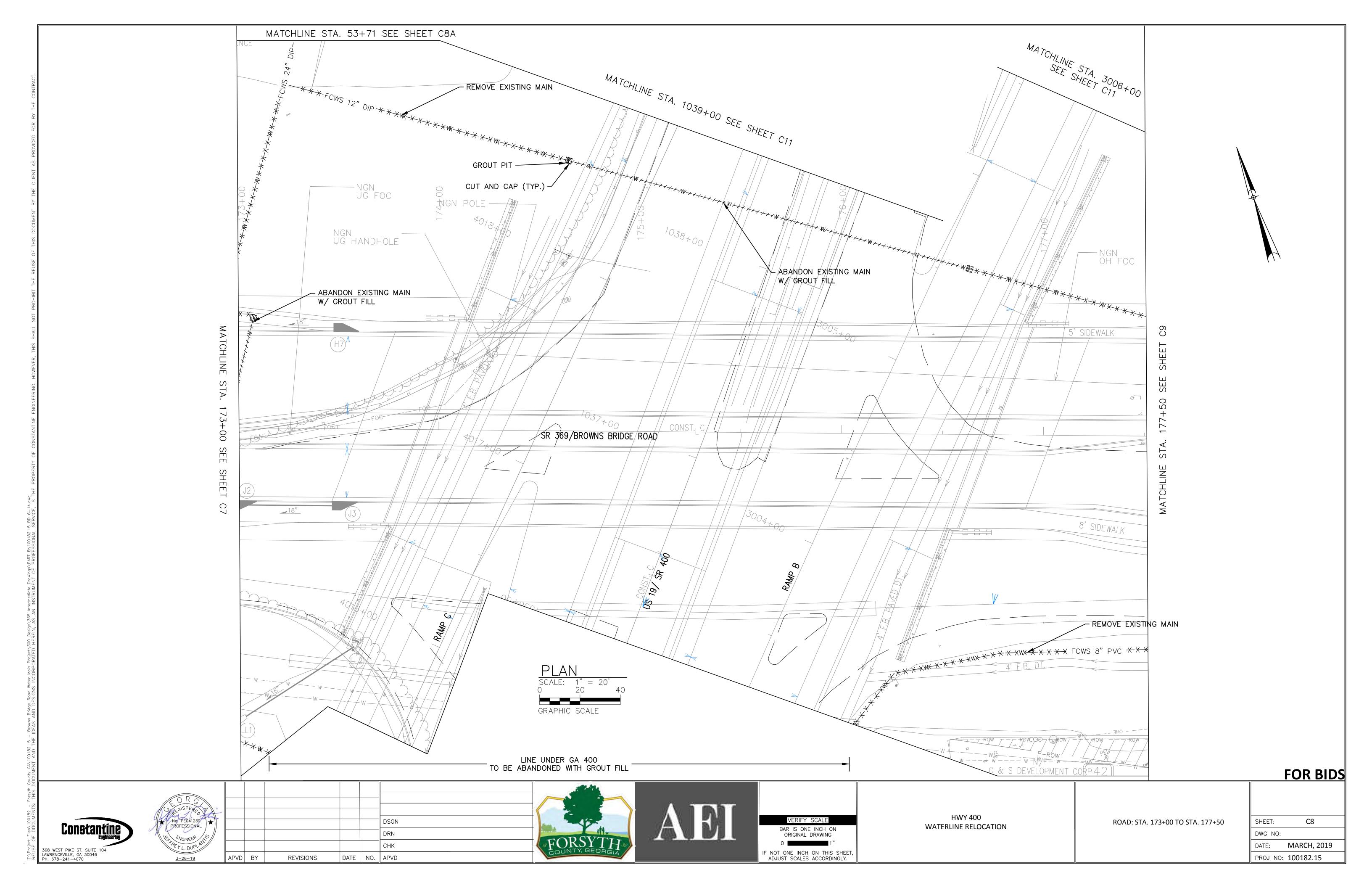




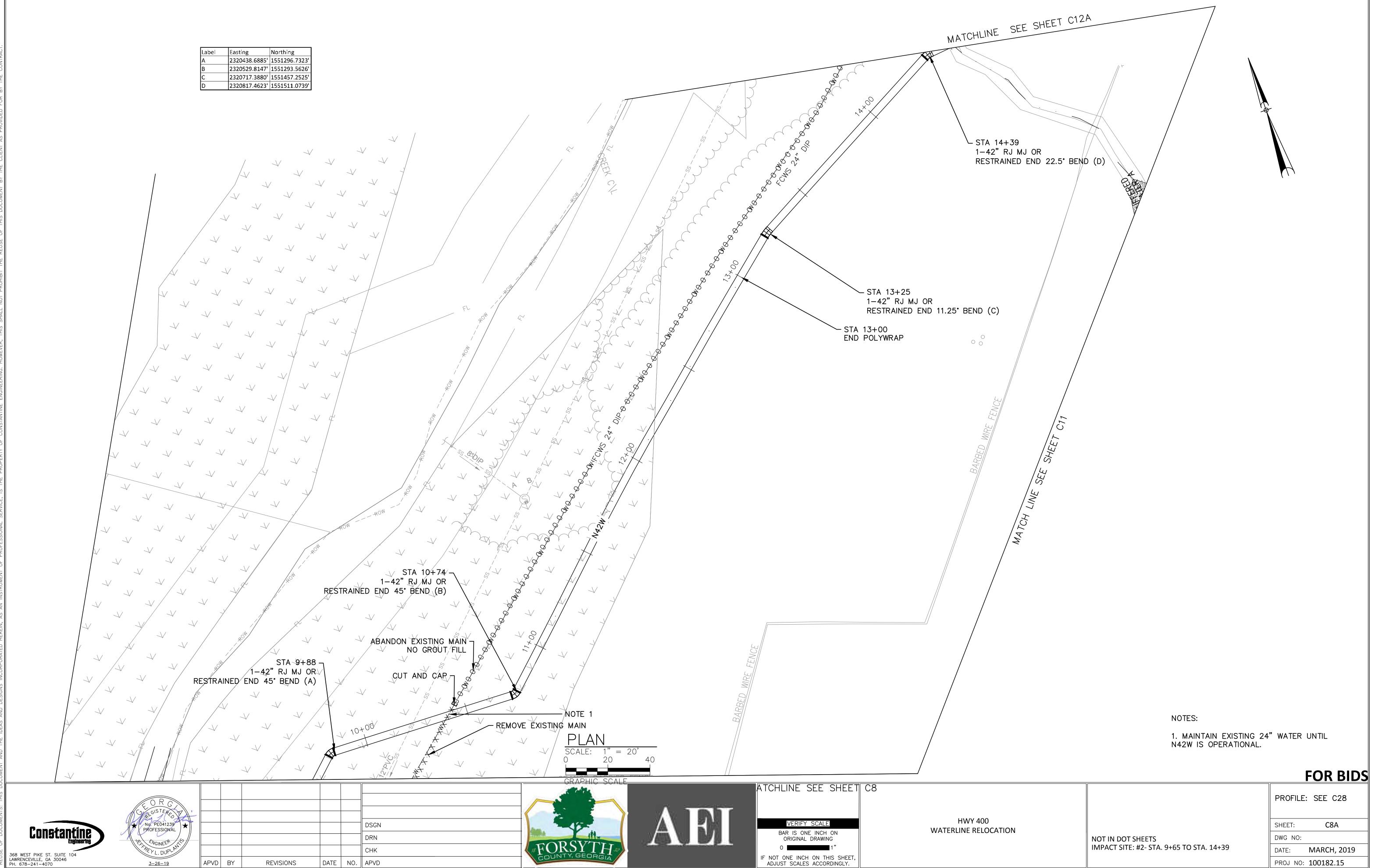
		_	STA 0+62		
			1-24"X12" RJ MJ STA 0+67	REDUCER	
			1-42"X24" RJ MJ	REDUCER	
		/ /	- ROAD STA 163+3 IMPACT SITE 2 ST IMPACT SITE 3 ST	TA 1+58	
			1-42" RJ MJ TEE TIE TO IMPACT SI	(D)	
			END N12W		
			REMOVE EXISTING	MAIN	
			NOTE 1 STA 1+75		
	ET C6		1– 42" RESTRAINI NOTE 6	ED END GATE V	ALVE
6) -	SHEE		Label Easting	Northing	
/	SEE		A 2319613.3320' B 2319623.2080'	1551532.0922' 1551521.3436'	
17	163+50		C         2319642.0598'           D         2319723.9800'           E         2319706.6025'	1551579.2846' 1551602.8447'	
			<b>F</b>  2319719.2548'	1551590.5312'	
	STA.				
OHE - (	MATCHLINE				
* *	ž				
	REM	OVE EXISTIN	g main		
		∽ STA 0+43 1-42" RJ	3 MJ TEE (C)		
X					
X		∽ STA 15+0 1−42" RE NOTE 6	STRAINED END GA	TE VALVE	
				NOTES: 1.2"SERVI	CE TO GAS STATION.
				2. CONNEC	
		— 20'Х40' В	ORE PIT	ABANDONME	
					RJ CAPS ON SHEET OW ABANDONMENT.
					TIMBER KICKER FOR UNTIL CONCRETE
BAT HABITAT				42" VALVES TO MATCH	TO PROVIDE 36" AND S. PROVIDE PIPE END AMERICAN RESTRAINED –RING BELL.
			SEE SHEET C4		FOR BIDS
			. 159+50 TO STA. 163+ ACT SITE #1- STA. 13+6		PROFILE: SEE C24, C25, C37
		IMP IMP	ACT SITE #2- STA. 0+00 ACT SITE #3- STA. 0+00	) TO STA. 1+77 ) TO 0+72	SHEET: C5 DWG NO:
		IMP	ACT SITE #4-STA. 0+00	10 STA. 0+24	DATE: MARCH, 2019 PROJ NO: 100182.15



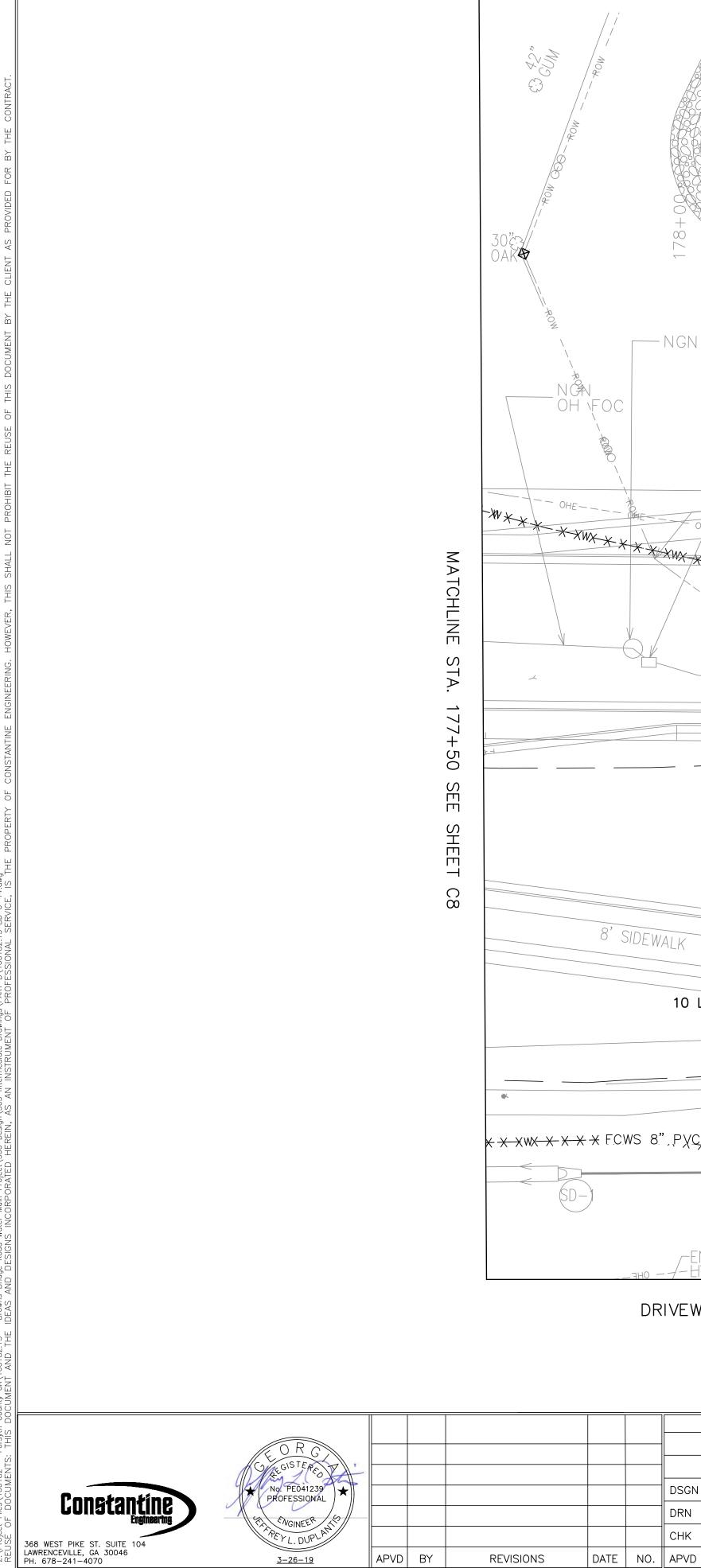








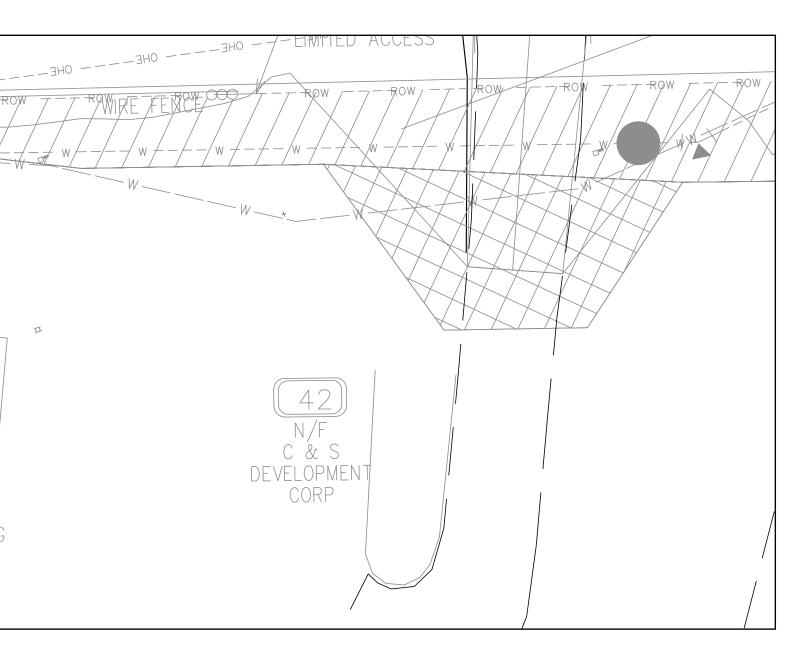
		PROFILE	: SEE C28
		SHEET:	C8A
	NOT IN DOT SHEETS	DWG NO:	
	IMPACT SITE: #2- STA. 9+65 TO STA. 14+39	DATE:	MARCH, 2019
		PROJ NO:	100182.15



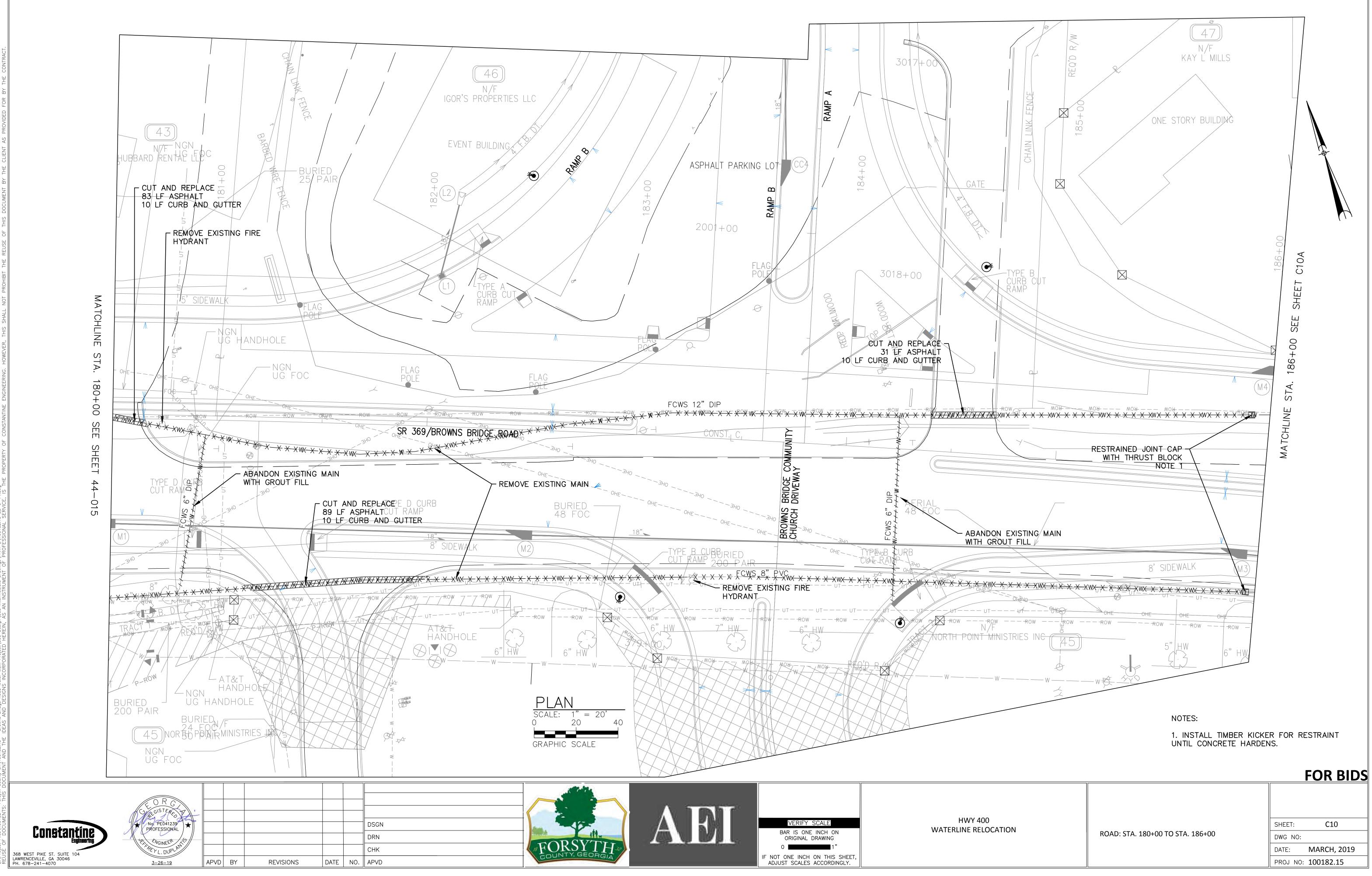


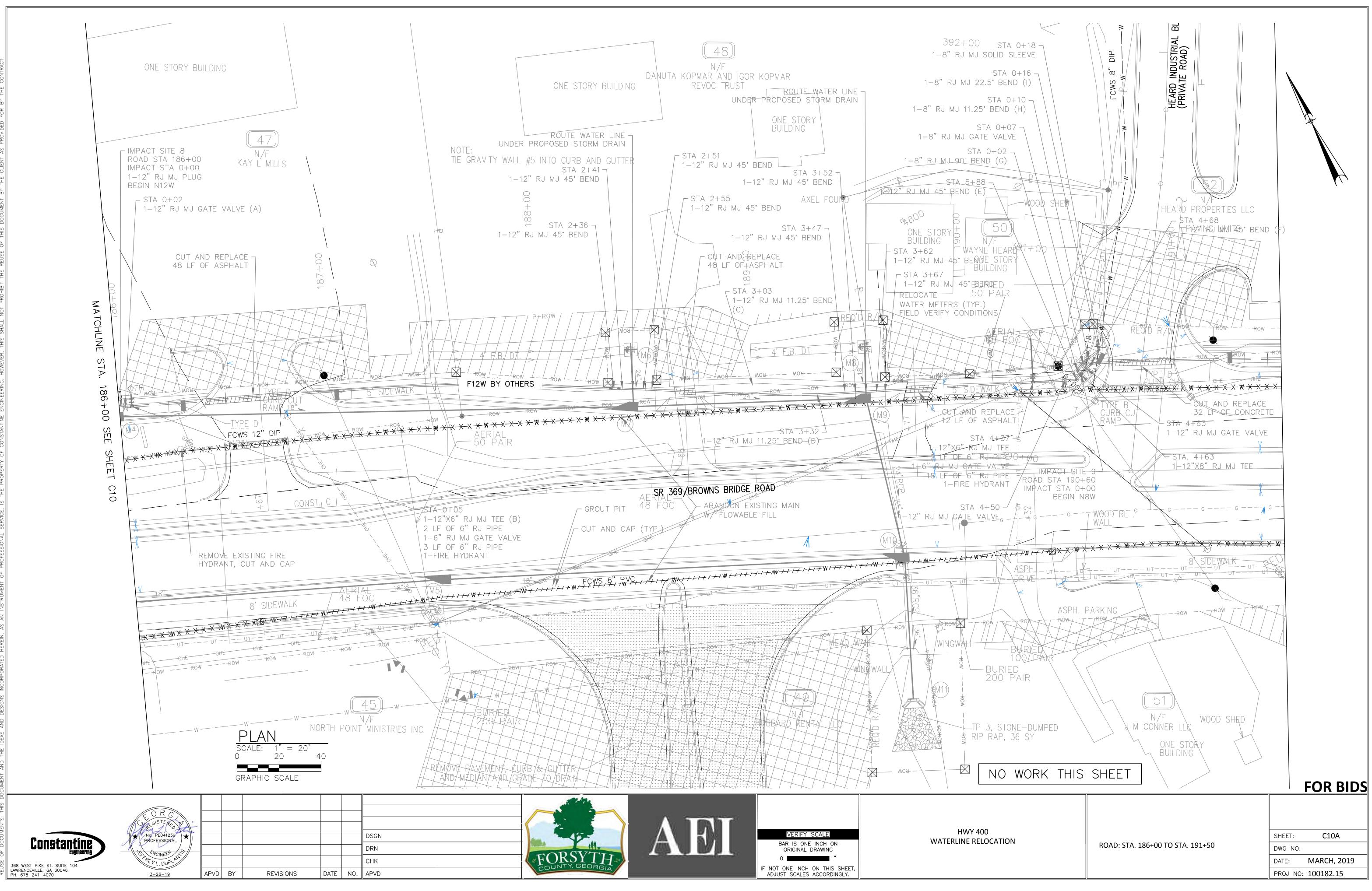


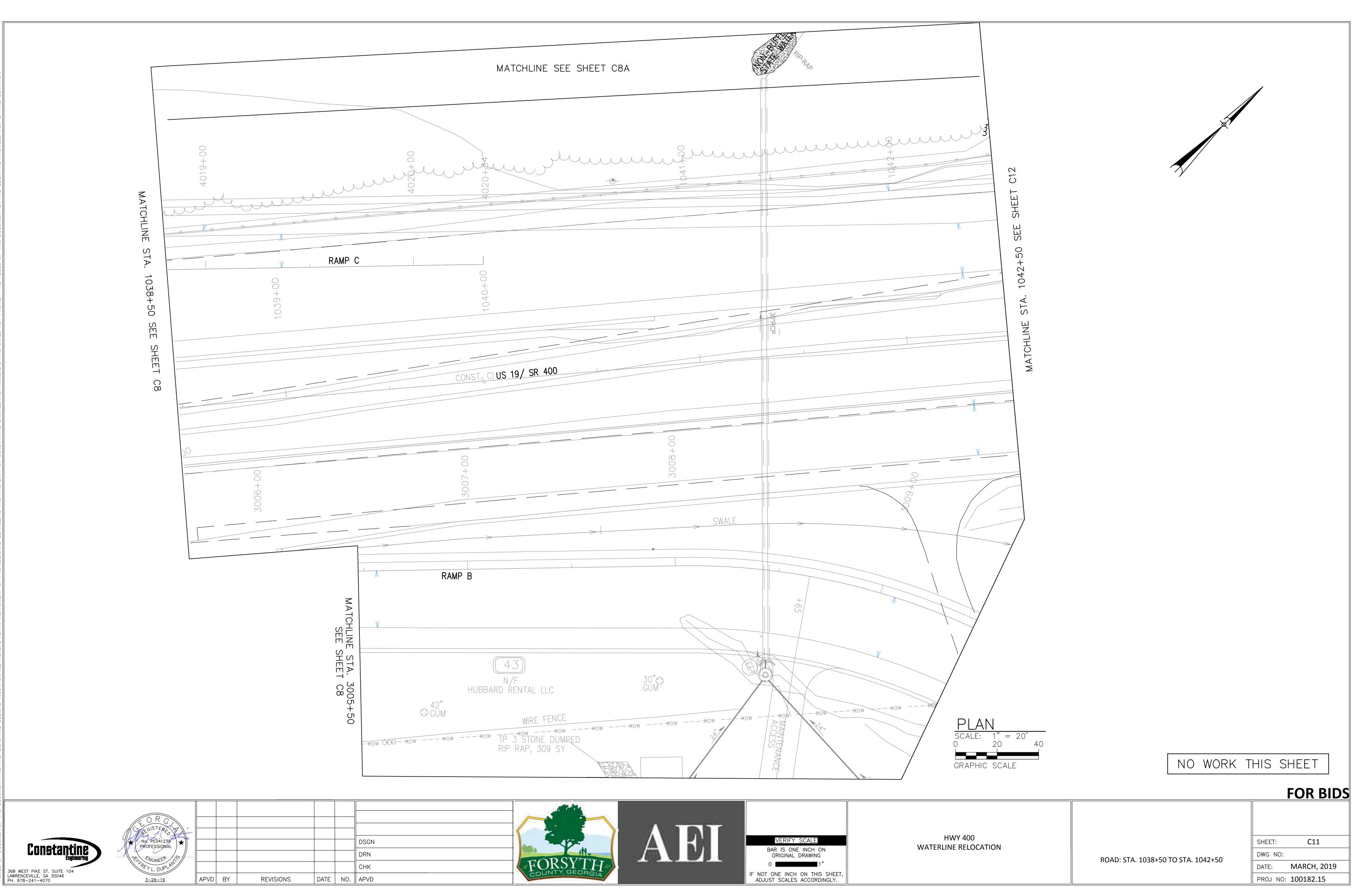
# MATCHLINE- THIS SHEET

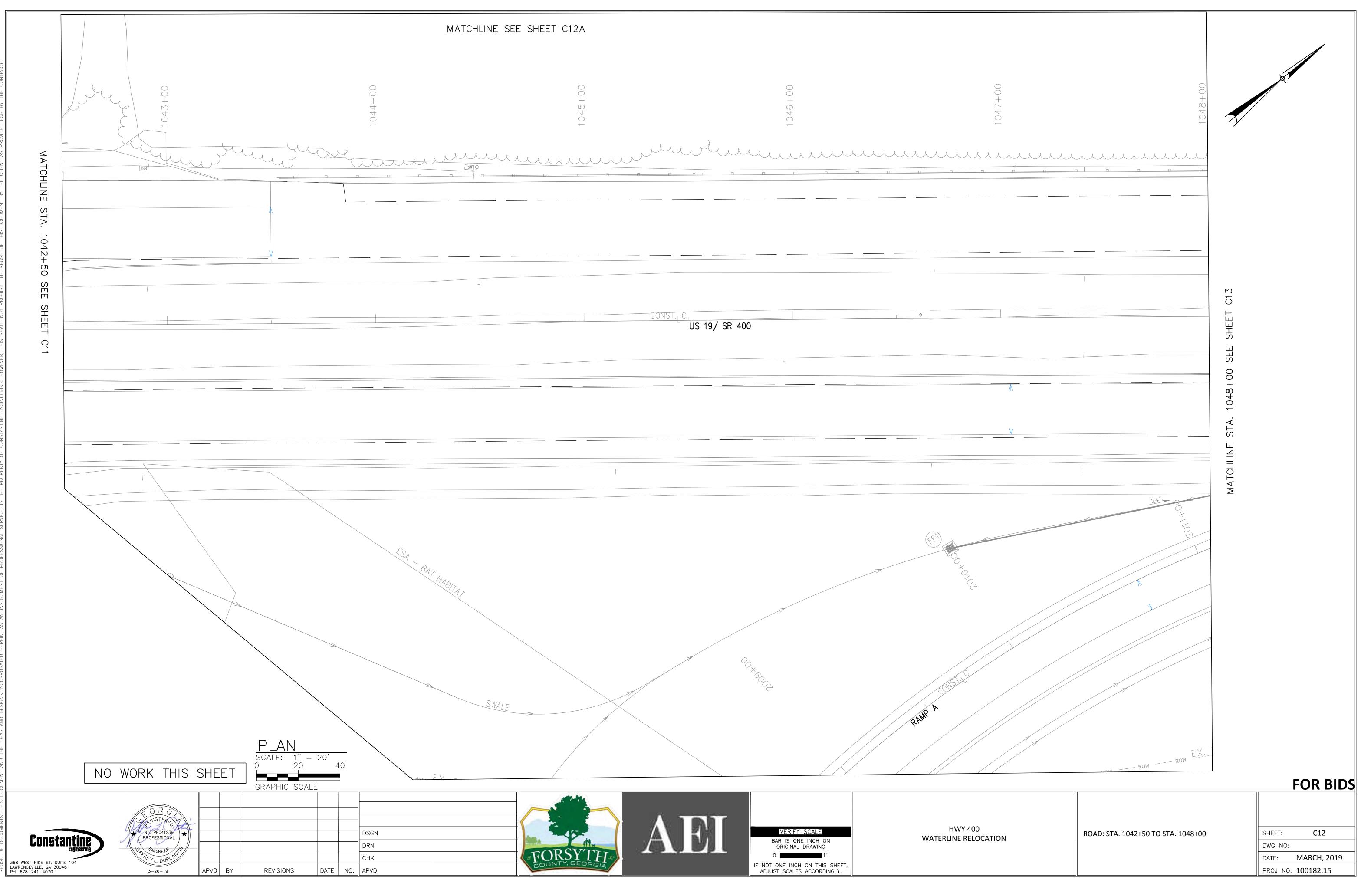


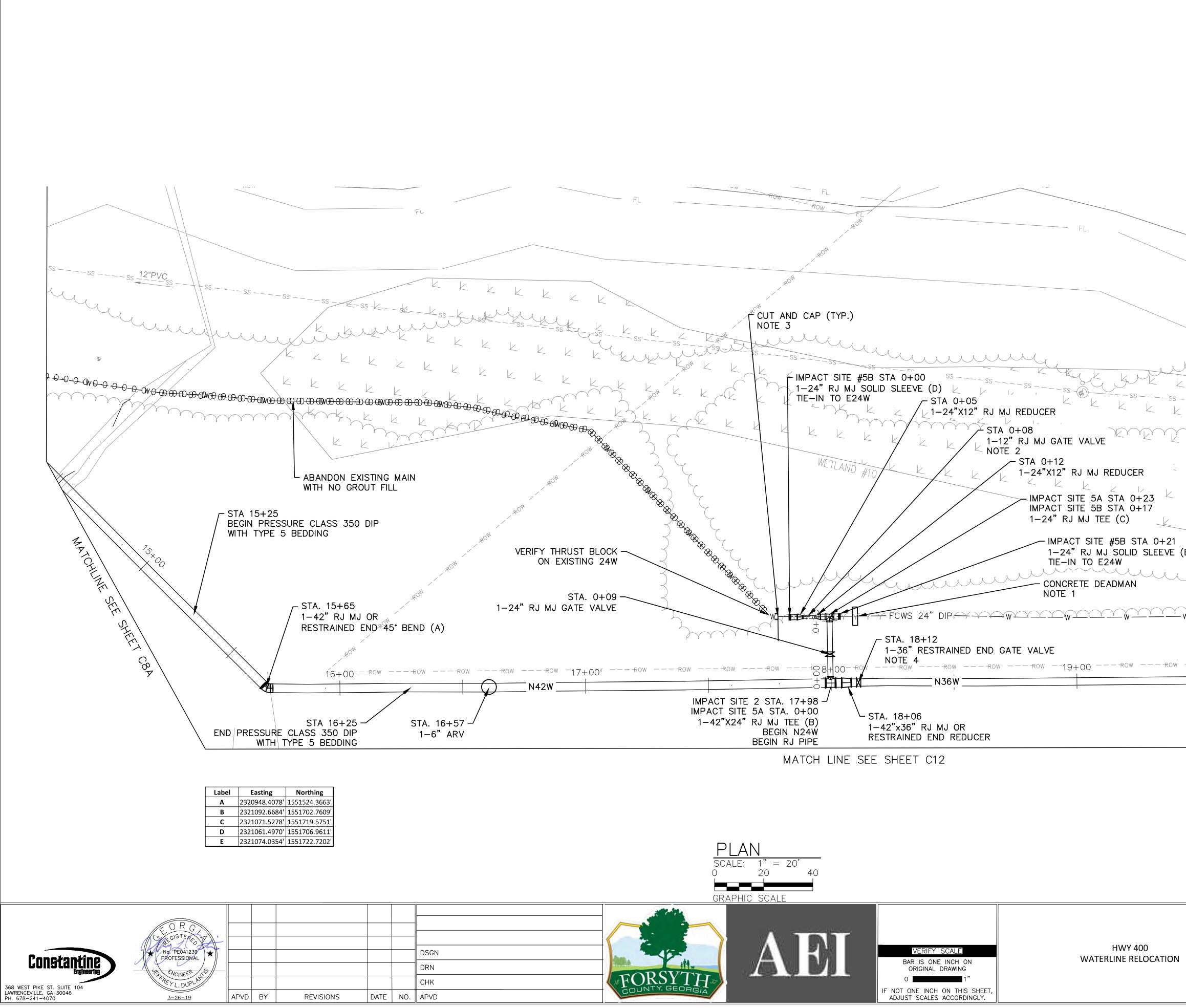
			FOR BIDS
NI	ROAD: STA. 177+50 TO STA. 180+50	SHEET:	C9
N		DWG NO:	
		DATE:	MARCH, 2019
		PROJ NO:	100182.15



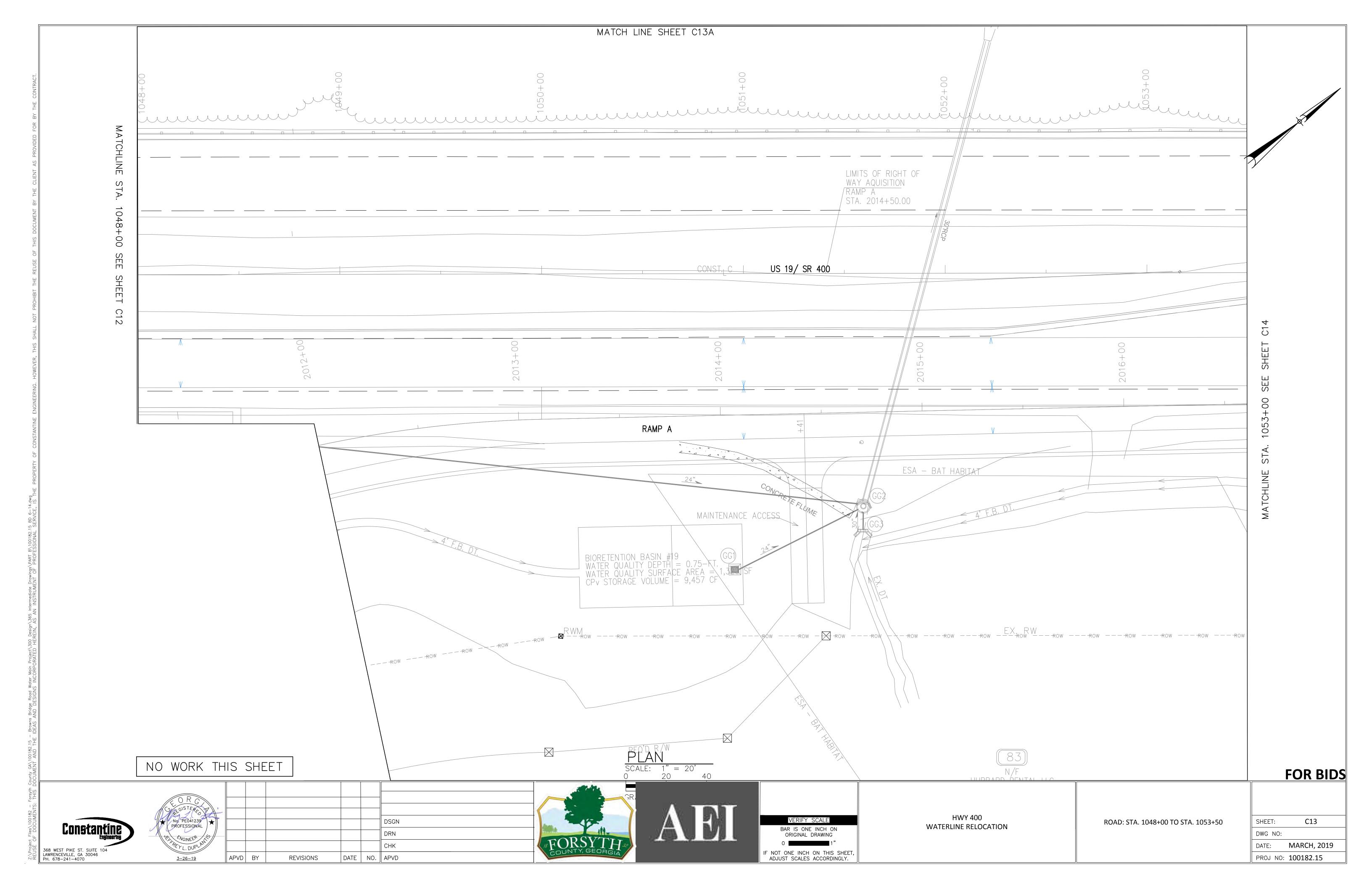


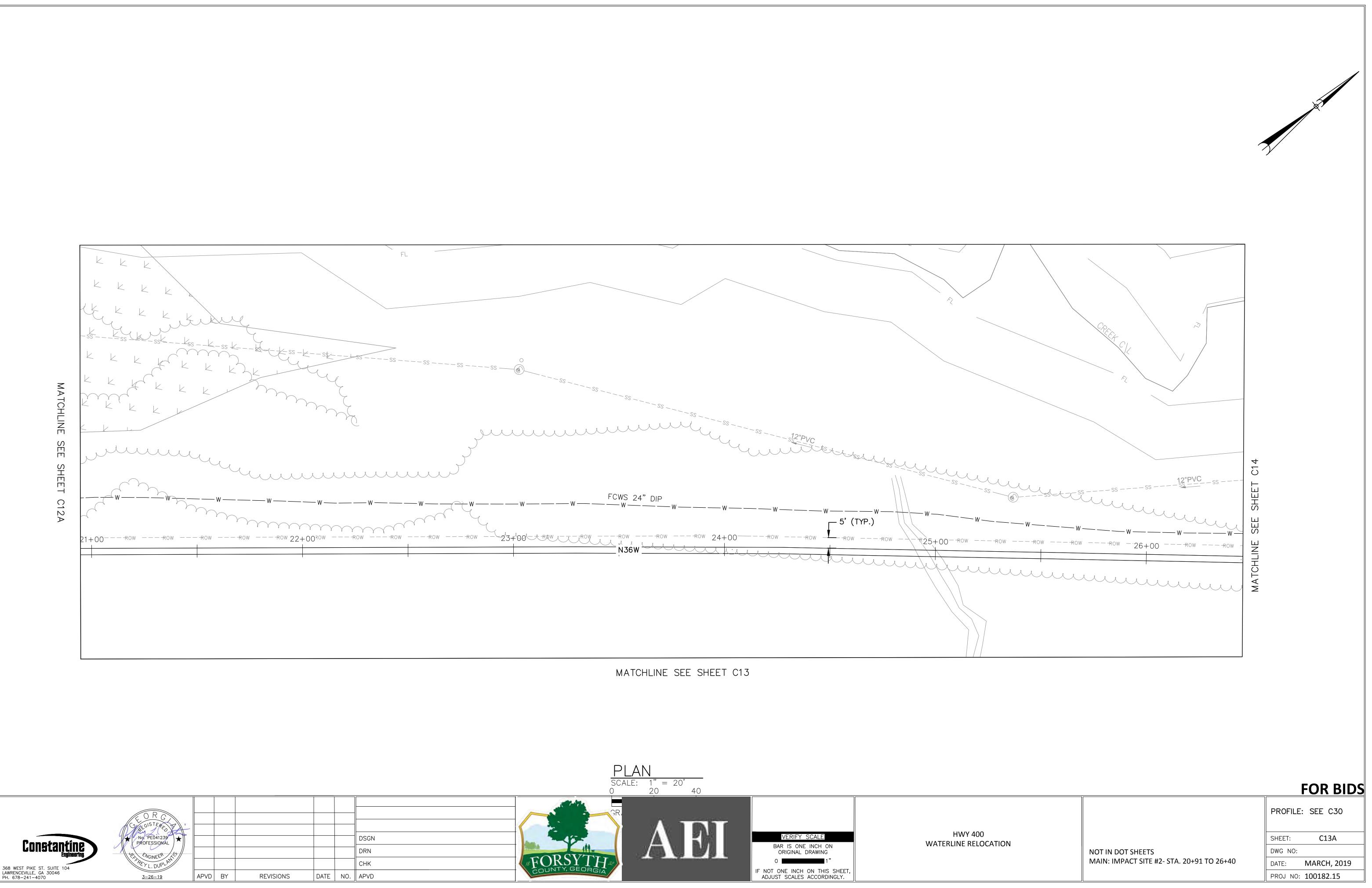


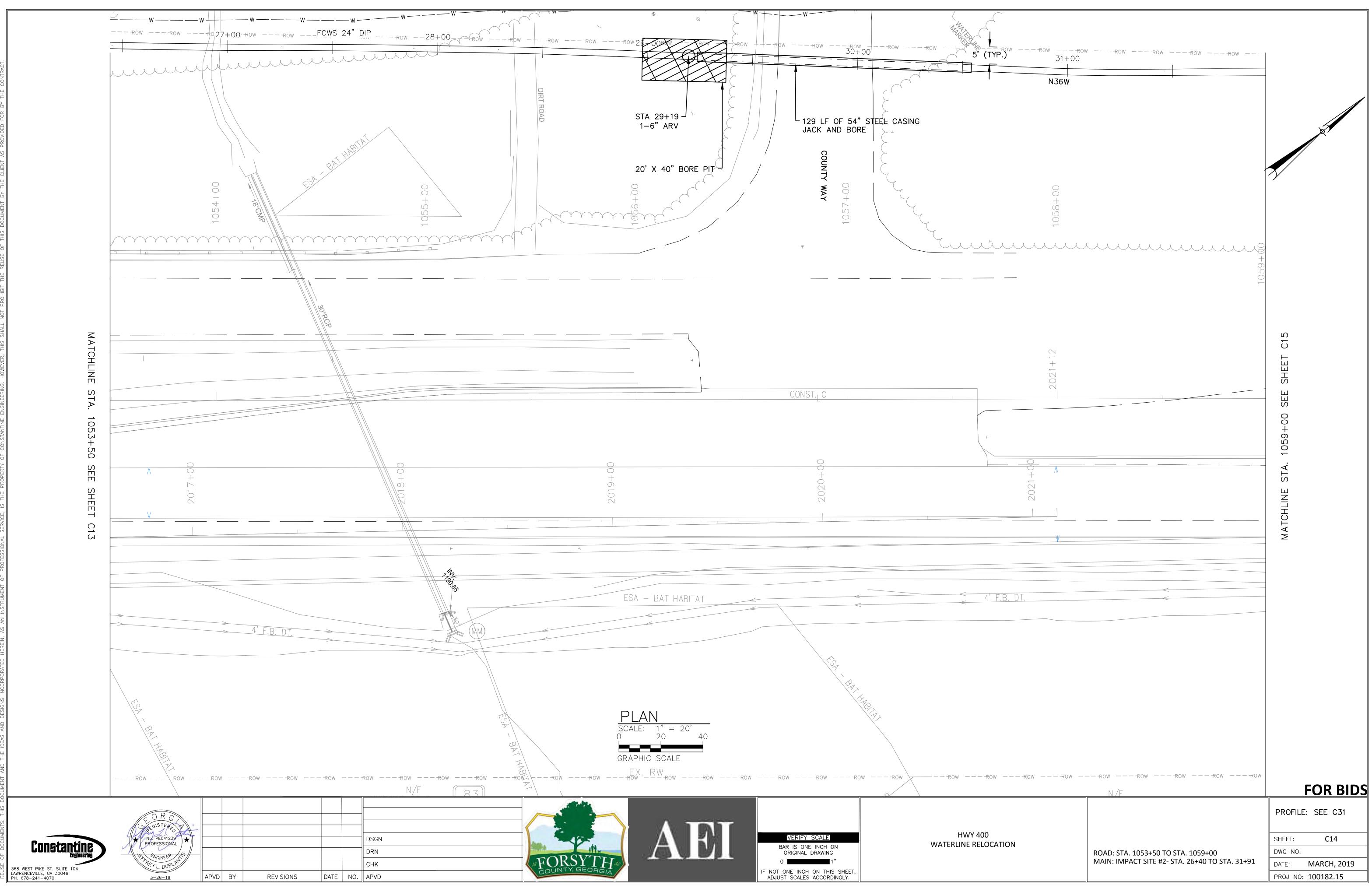




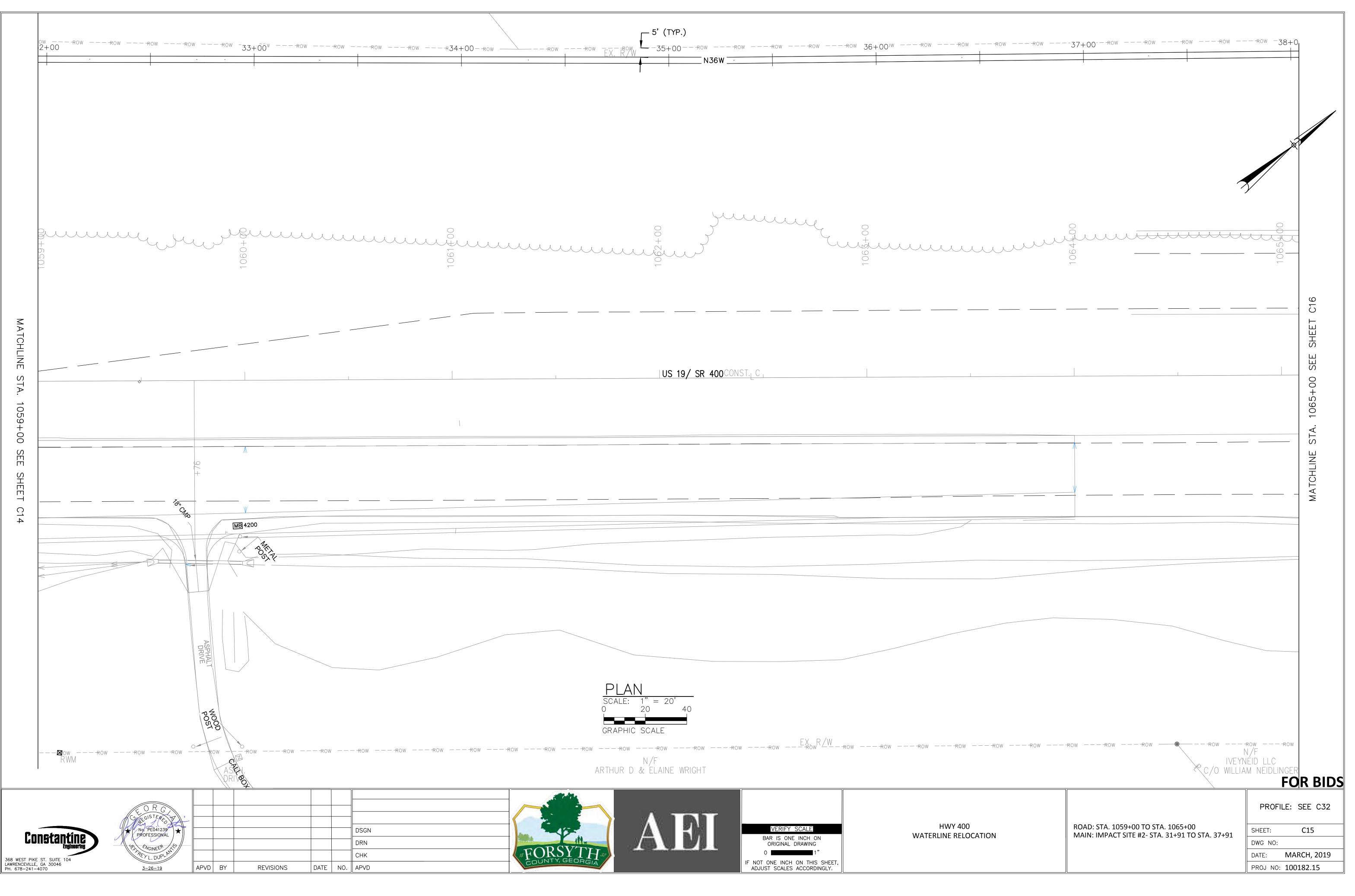
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REMOVE VALVE BOX. IN BETWEEN 12" PLUG AND 3. INSTALL 24" RJ MJ LINE. 4. OWNER TO PROVIDE PROVIDE BELL END TO RESTRAINED JOINT FLEX	D 24" CAP. CAP TO ABANDON EXISTING 36" GATE VALVE. MATCH AMERICAN
ROAD: STA. 1042+50 TO STA. 1048+50 MAIN: IMPACT SITE #2- STA. 14+39 TO STA. 20+ IMPACT SITE #3- STA. 0+00 TO 0+45	PROFILE: SEE C29

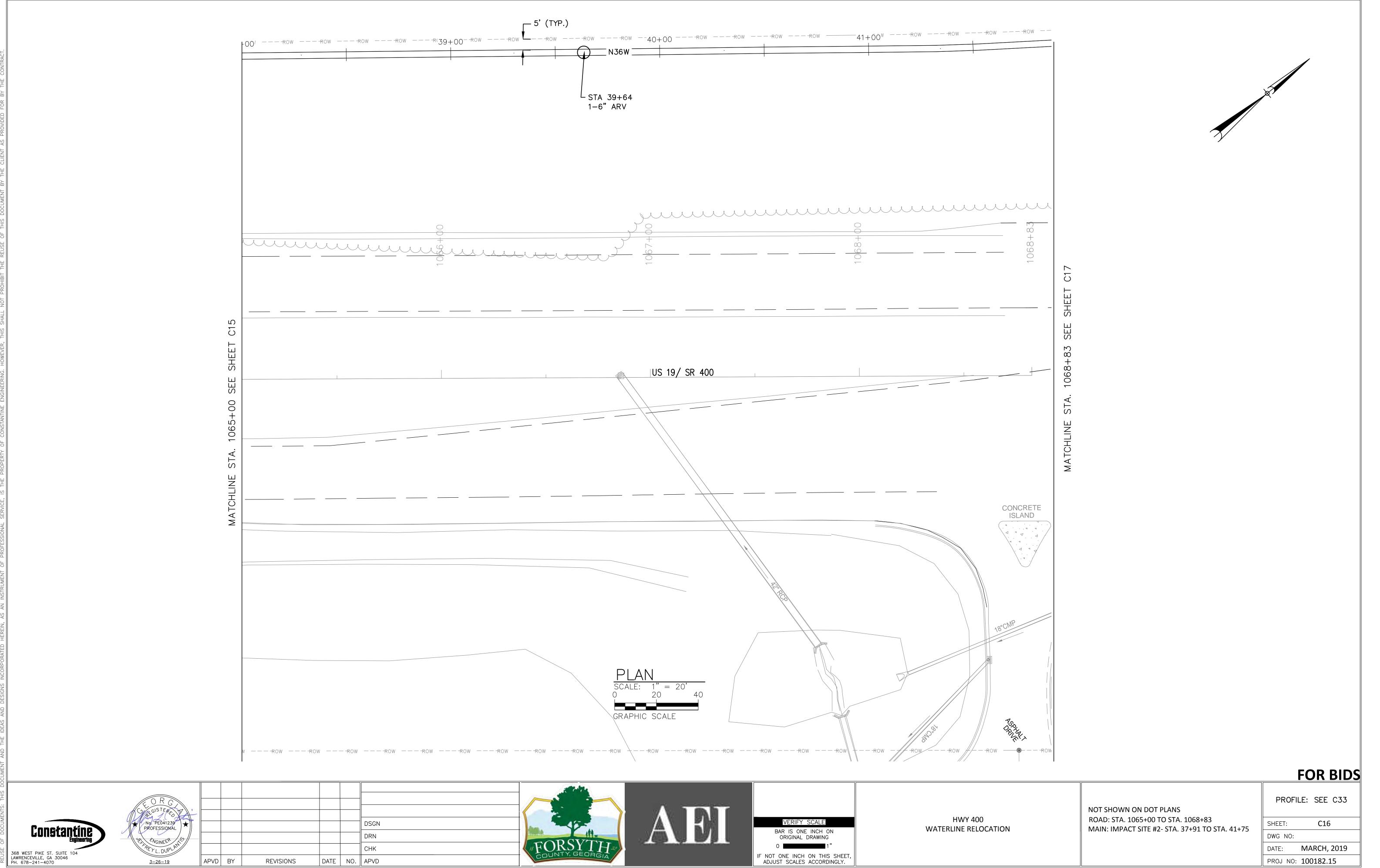




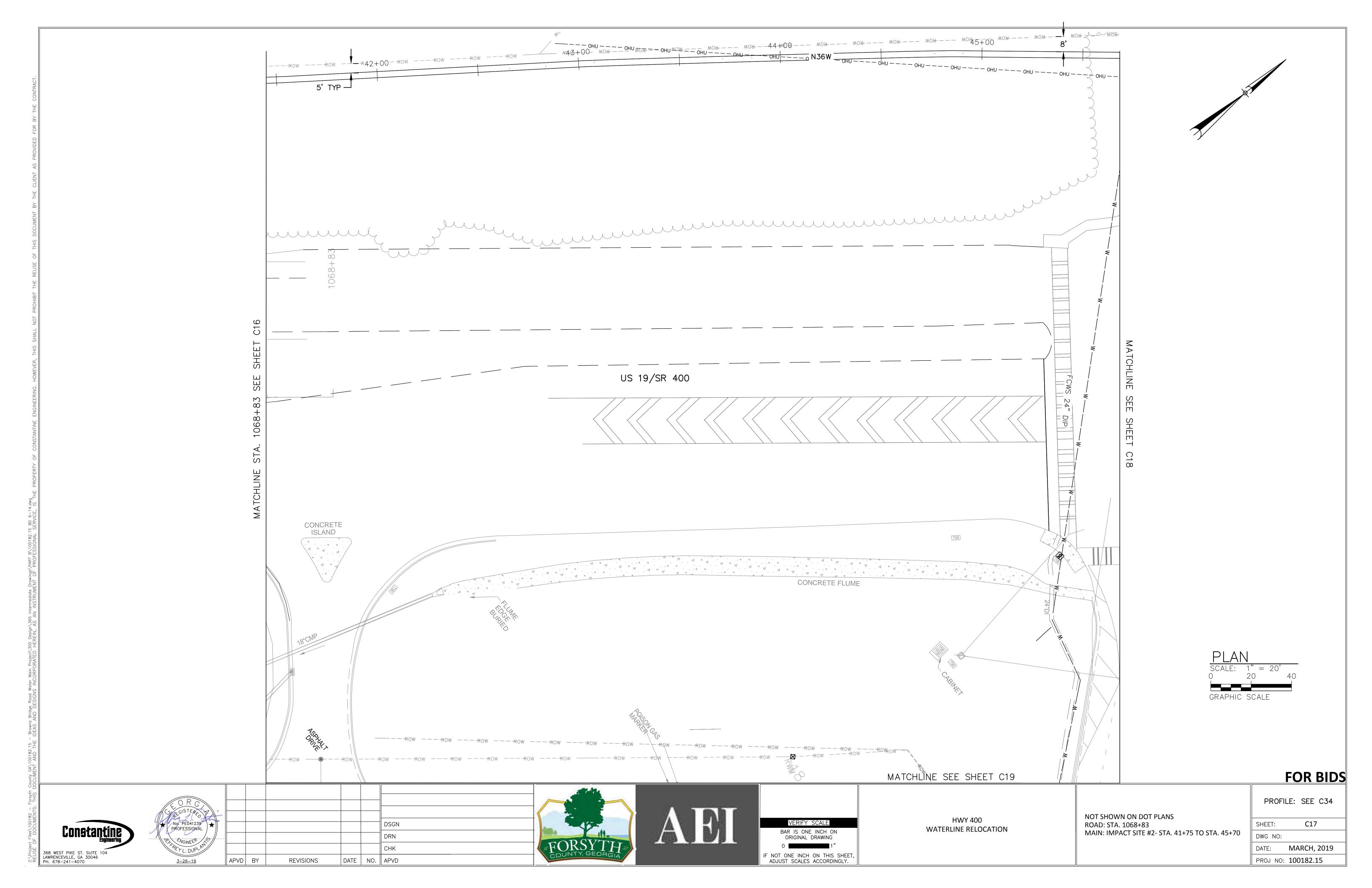


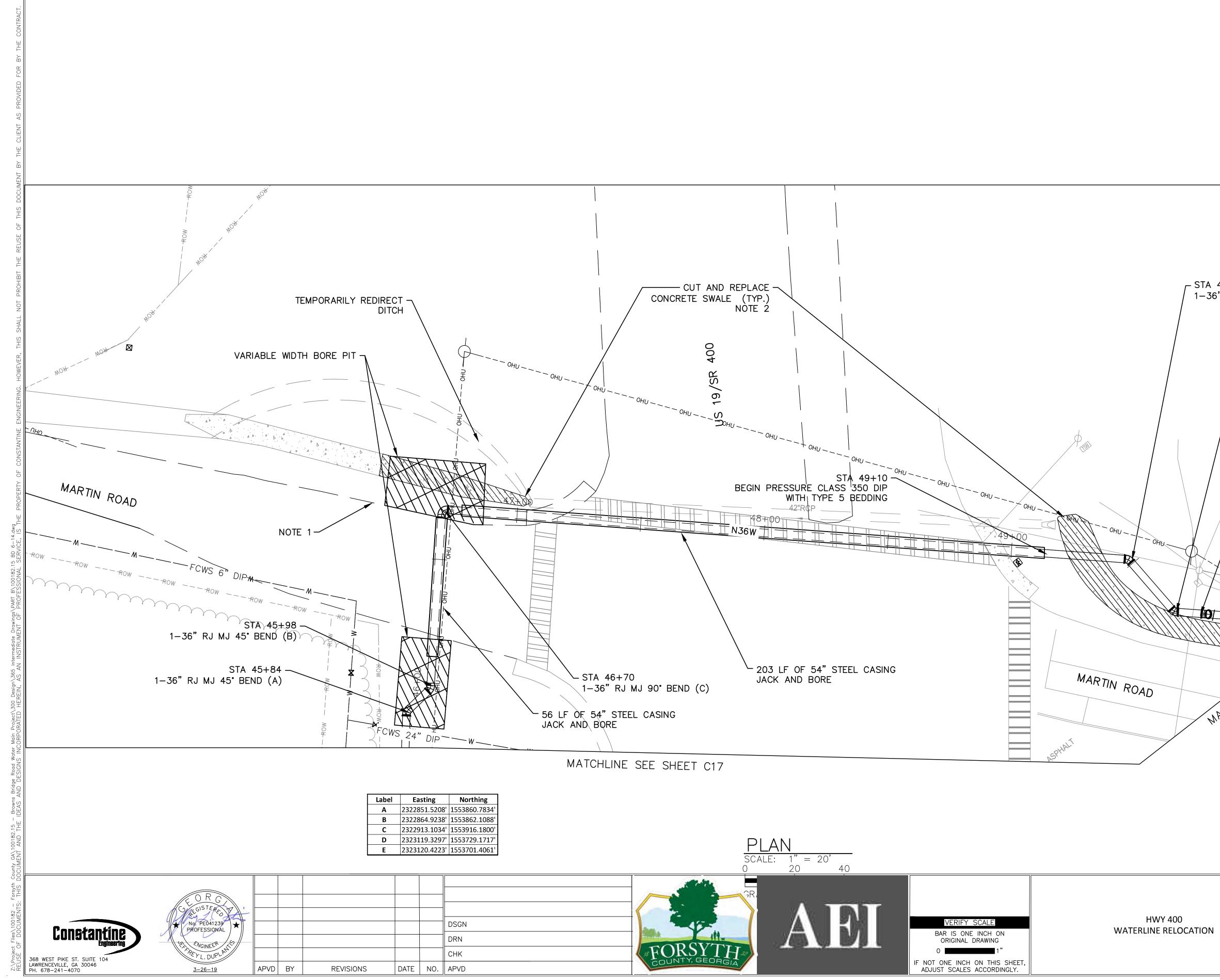




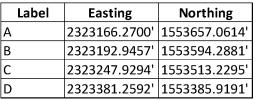


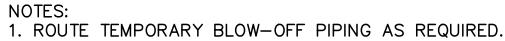
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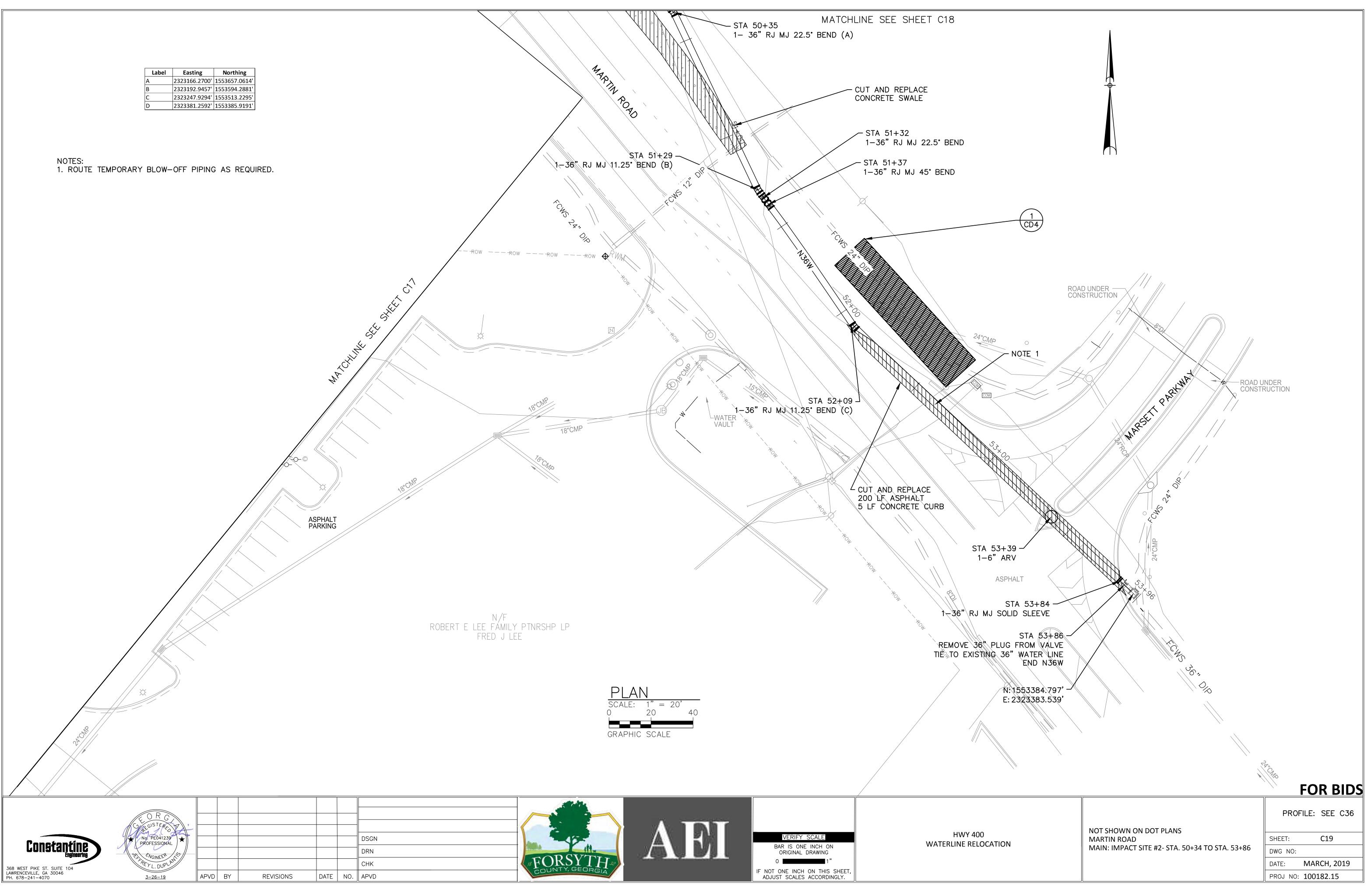


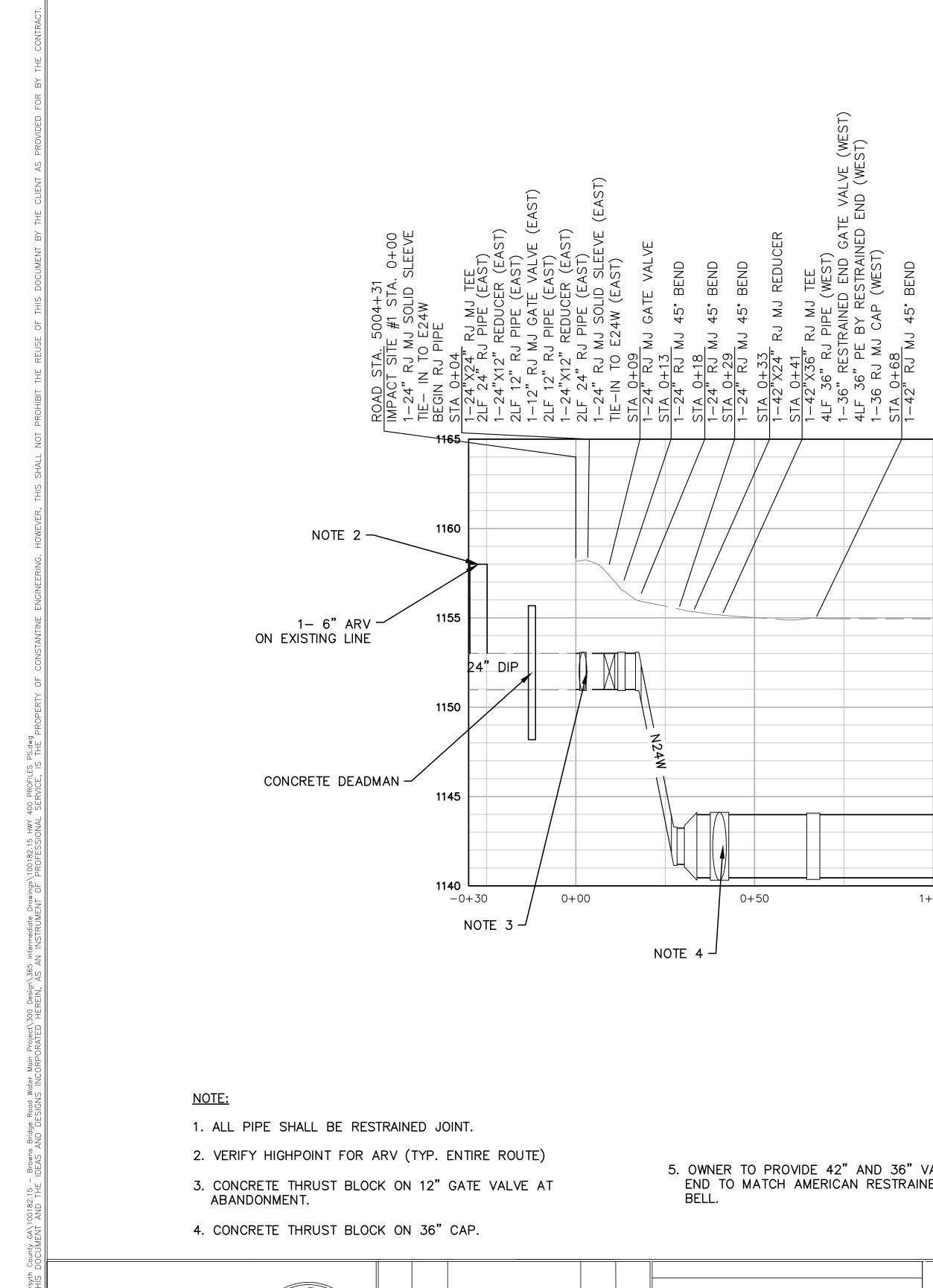


49+47 "RJ MJ 45' BEND (D) STA 49+76 1-36" RJ MJ 45' BEND (E) STA 49+87 1- 36" RJ MJ 45' BEND STA 50+06 1- 36" RJ MJ 45' BEND STA 50+16 END PRESSURE CLASS 350 WITH TYPE 5 BEDDING STA 50+16 END PRESSURE CLASS 350 WITH TYPE 5 BEDDING STA 50+16 END PRESSURE CLASS 350 WITH TYPE 5 BEDDING	DIP
CLOSURE REQUIRE APPROV	ACE CONCRETE SWALE TO EXISTING.
NOT SHOWN ON DOT PLANS MARTIN ROAD MAIN: IMPACT SITE #2- STA. 45+70 TO STA. 50+26	FOR BIDSPROFILE: SEE C35SHEET:C18DWG NO:DATE:DATE:MARCH, 2019PROJ NO:100182.15









No. PE041239 PROFESSIONAL

<u>3-26-19</u>

Constantine 368 WEST PIKE ST. SUITE 1 LAWRENCEVILLE, GA 30046 PH. 678-241-4070

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F						DSGN
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						СНК
	APVD	ΒY	REVISIONS	DATE	NO.	APVD

NOTE 4 -

BELL.

0+50

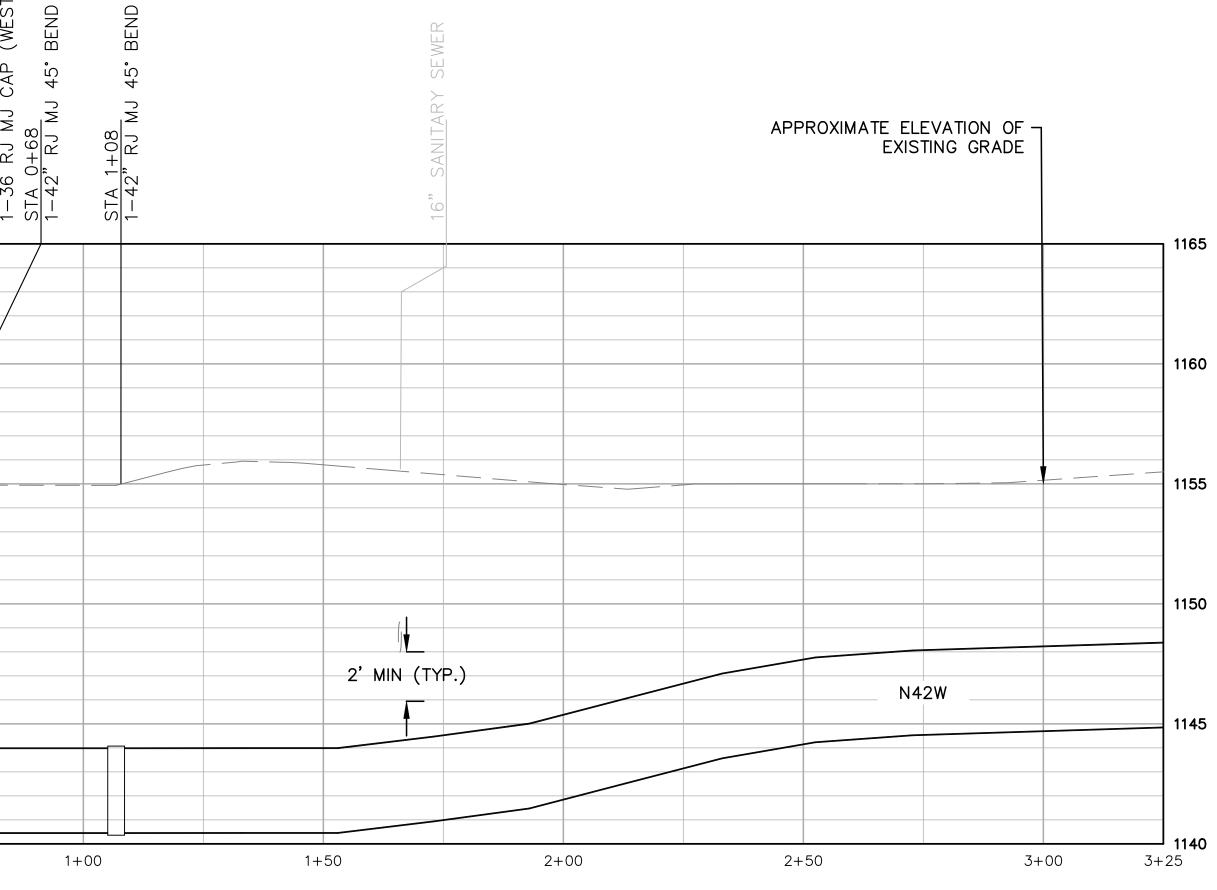


HWY 400 WATERLINE RELOCATION

5. OWNER TO PROVIDE 42" AND 36" VALVES. PROVIDE PIPE END TO MATCH AMERICAN RESTRAINED JOINT FLEX-RING

<u>PROFILE</u> SCALE: HOR.: 1"=20' VERT.: 1"=4'

IMPACT SITE #1



# FOR BIDS

PLAN: SEE C1

SHEET: C20 DWG NO: MARCH, 2019 DATE: PROJ NO: 100182.15

IMPACT SITE #1 STA. 0+00 TO STA. 3+25

1160						1160
1155						4' MIN (TYP)
1150						1150
1145				N42W		1145
<b>1140</b> 3+25	60" STEEL CASING 3+50 4+00	4+50	5+00	5+50	6+00	<b>1140</b> 6+46

NOTE:

1. ALL PIPE SHALL BE RESTRAINED JOINT.



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No. PE041239 PROFESSIONAL						DSGN
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FT. ENGINEER 115 PEFL. DUPLAN						СНК
3-26-19	APVD	ΒY	REVISIONS	DATE	NO.	APVD





VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY. HWY 400 WATERLINE RELOCATION

IMPACT SITE #1

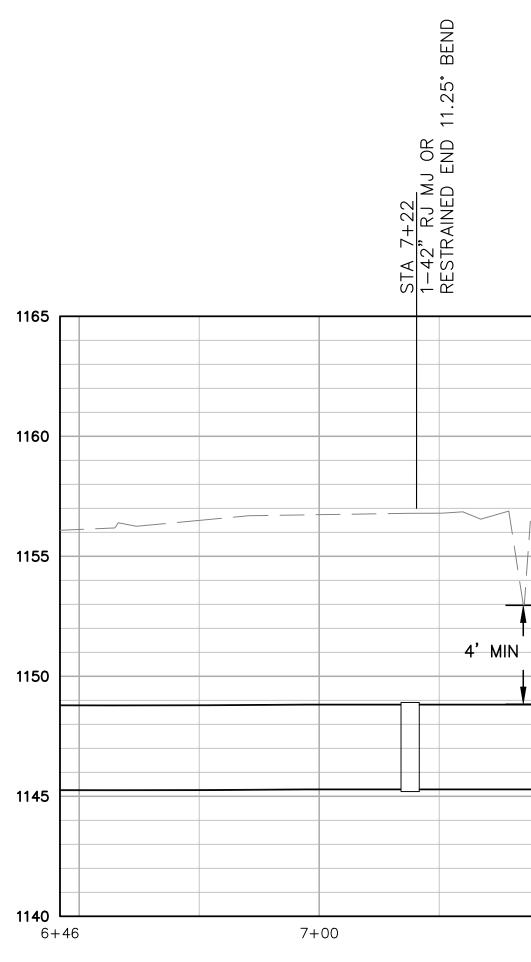
PROFILE
scale: hor: 1"=20'
VERT.: 1"=4'

APPROXIMATE ELEVATION OF EXISTING GRADE

## FOR BIDS

PLAN	: SEE C2
SHEET:	C21
DWG NO:	
DATE:	MARCH, 2019
PROJ NO:	100182.15

IMPACT SITE #1 STA. 3+25 TO STA. 6+46



1. ALL PIPE SHALL BE RESTRAINED JOINT.



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3-26-19	APVD	ΒY	REVISIONS	DATE	NO.	APVD



BEND

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VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY. HWY 400 WATERLINE RELOCATION

PROFILE SCALE: HOR.: 1"=20' VERT.: 1"=4'

### IMPACT SITE #1

	STA 7+72	1–42" RJ MJ OR RESTRAINED END 11.25'	APPRC	XIMATE E EXIS	LEVATION OF STING GRADE						
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										· · · · · · · · · · · · · · · · · · ·	4' MIN (TYP.
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(TYP	).)										
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		]				N42W					
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7+5	50		8+00		5	3+50	9+	-00	9+	-50	Ğ



### FOR BIDS

 PLAN:
 SEE
 C3

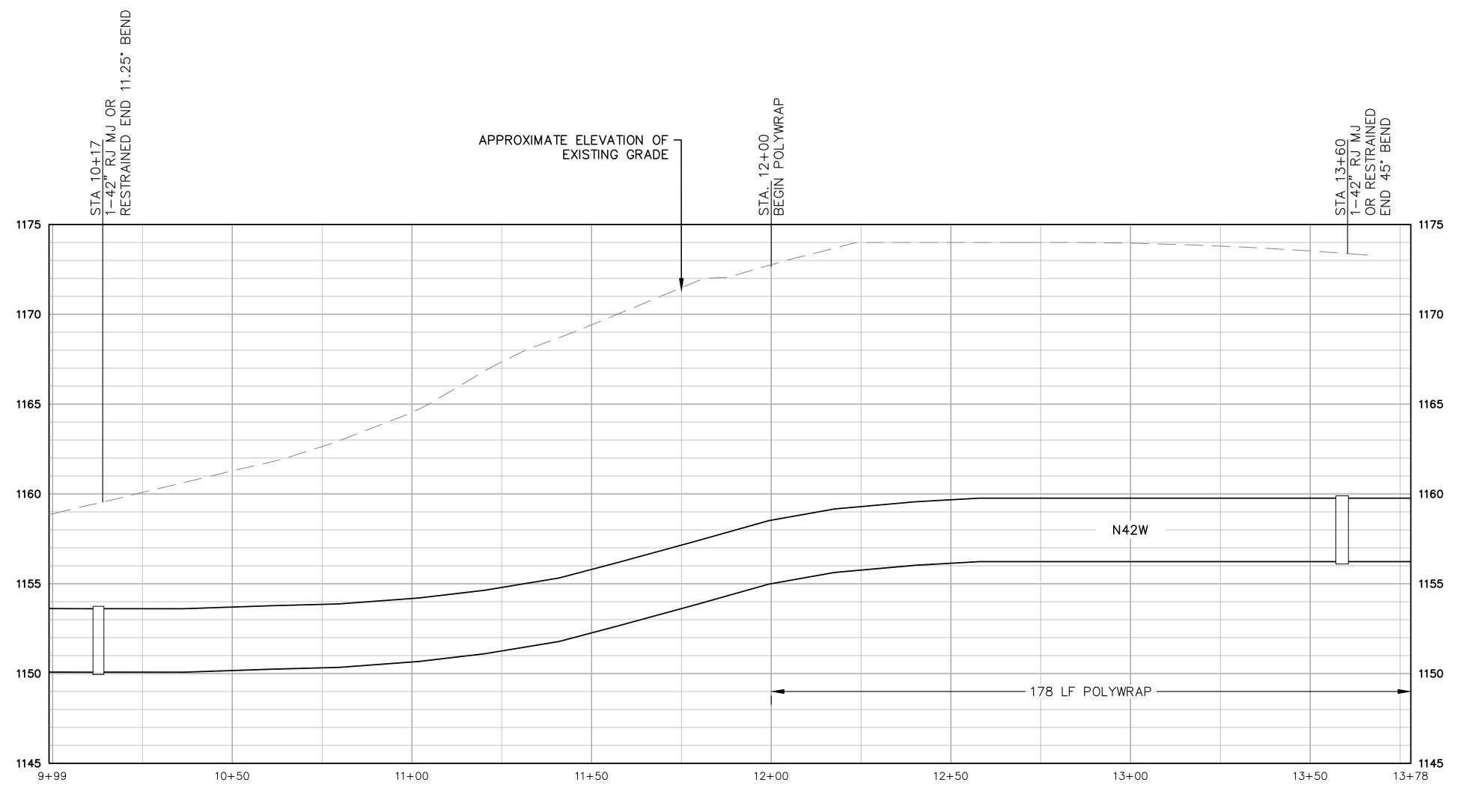
 SHEET:
 C22

 DWG
 NO:

 DATE:
 MARCH, 2019

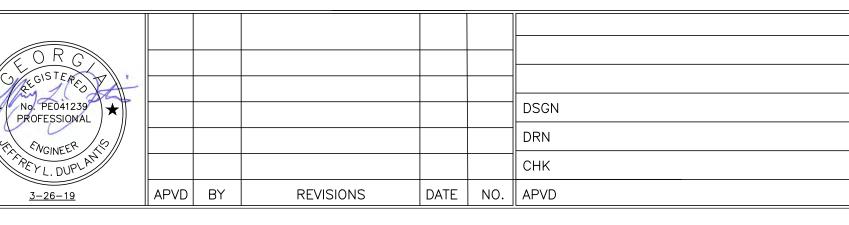
 PROJ
 NO:

IMPACT SITE #1 STA. 6+46 TO STA. 9+99



1. ALL PIPE SHALL BE RESTRAINED JOINT.





## IMPACT SITE #1

PROFILE SCALE: HOR.: 1"=20' VERT.: 1"=4'





VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY. HWY 400 WATERLINE RELOCATION

## FOR BIDS

 PLAN:
 SEE
 C4

 SHEET:
 C23

 DWG
 NO:

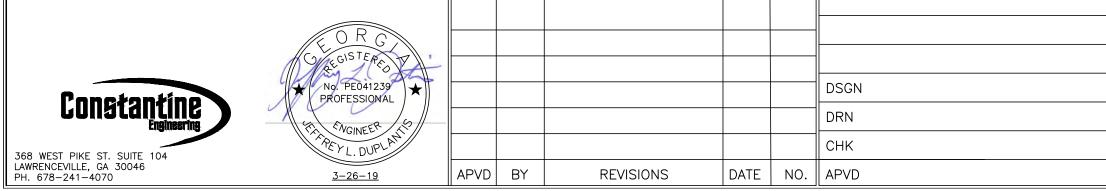
 DATE:
 MARCH, 2019

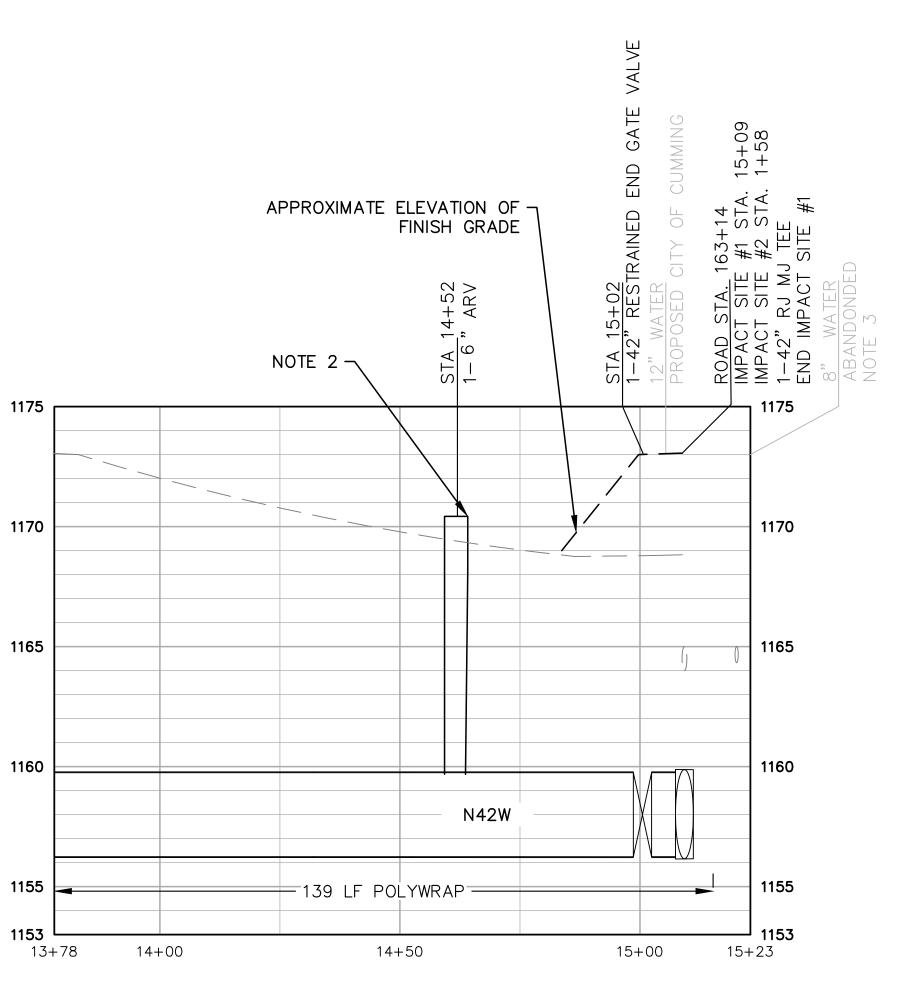
 PROJ
 NO:

#### IMPACT SITE #1 STA. 9+99 TO STA. 13+66

- 1. ALL PIPE SHALL BE RESTRAINED JOINT.
- 2. VERIFY HIGH POINT FOR ARV.
- 3. VERIFY CUMMING WATER LINE ABANDONMENT.
- 4. OWNER TO PROVIDE 42" AND 36" VALVES. PROVIDE PIPE END TO MATCH AMERICAN RESTRAINED JOINT FLEX-RING BELL.

APPROXIMATE ELEVATION OF EXISTING GRADE





IMPACT SITE #1

PROFILE SCALE: HOR.: 1"=20' VERT.: 1"=4'





VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY. HWY 400 WATERLINE RELOCATION

## FOR BIDS

PLAN	: SEE C5
SHEET:	C24
DWG NO:	
DATE:	MARCH, 2019
PROJ NO:	100182.15

#### IMPACT SITE #1 STA. 13+66 TO STA. 15+23

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0+00 JD GA<sup>-</sup>

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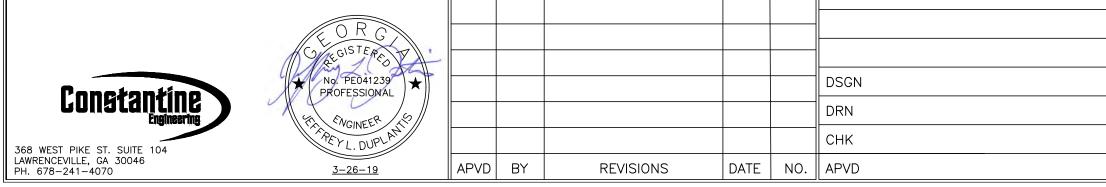
1165

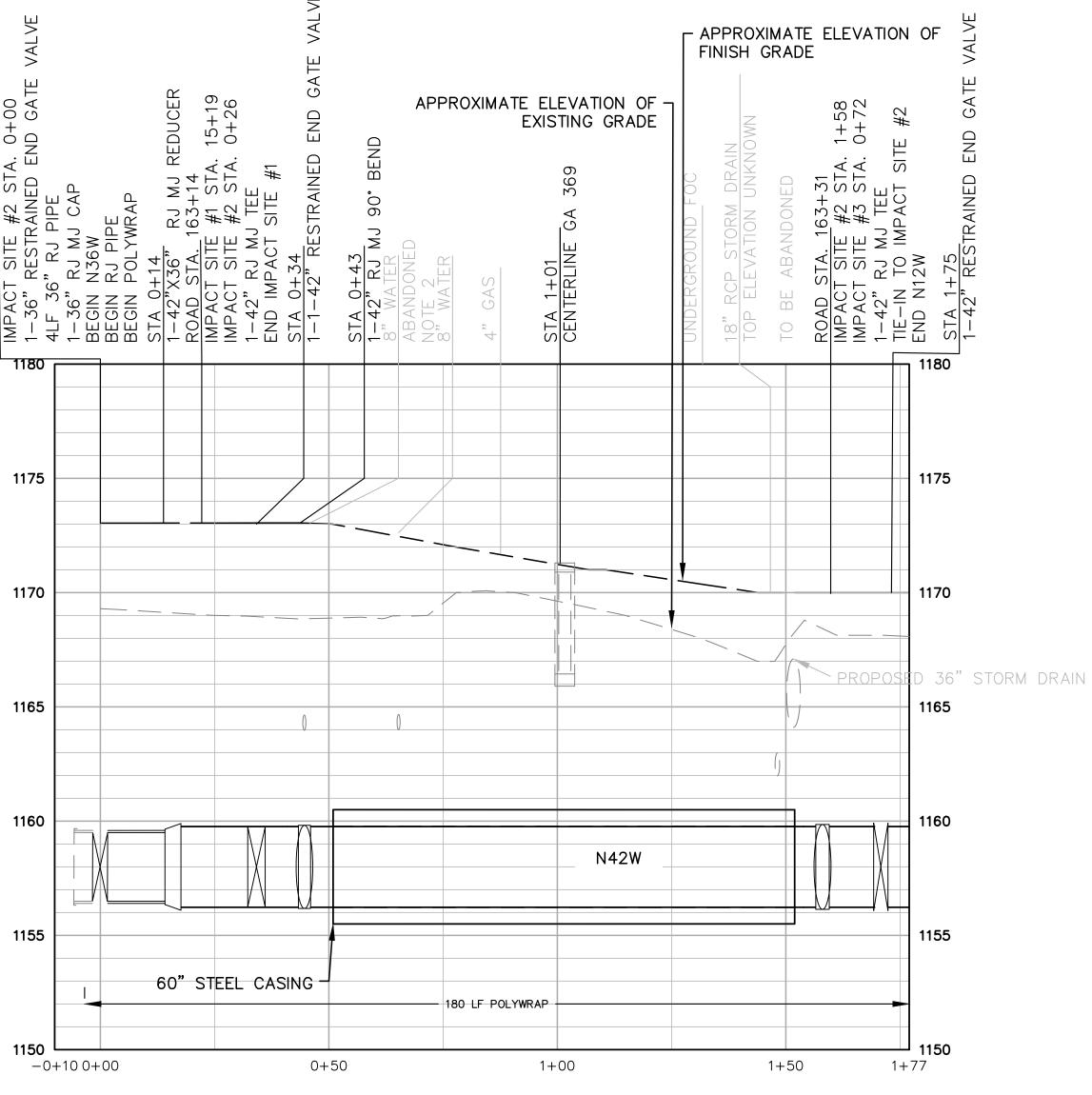
1155

1150

<u>NOTE:</u>

- 1. ALL PIPE SHALL BE RESTRAINED JOINT.
- 2. VERIFY CUMMING WATER LINE ABANDONMENT.
- 3. OWNER TO PROVIDE 42" AND 36" VALVES. PROVIDE PIPE END TO MATCH AMERICAN RESTRAINED JOINT FLEX-RING BELL.





IMPACT SITE #2

<u>PROFILE</u> SCALE: HOR.: 1"=20' VERT.: 1"=4'



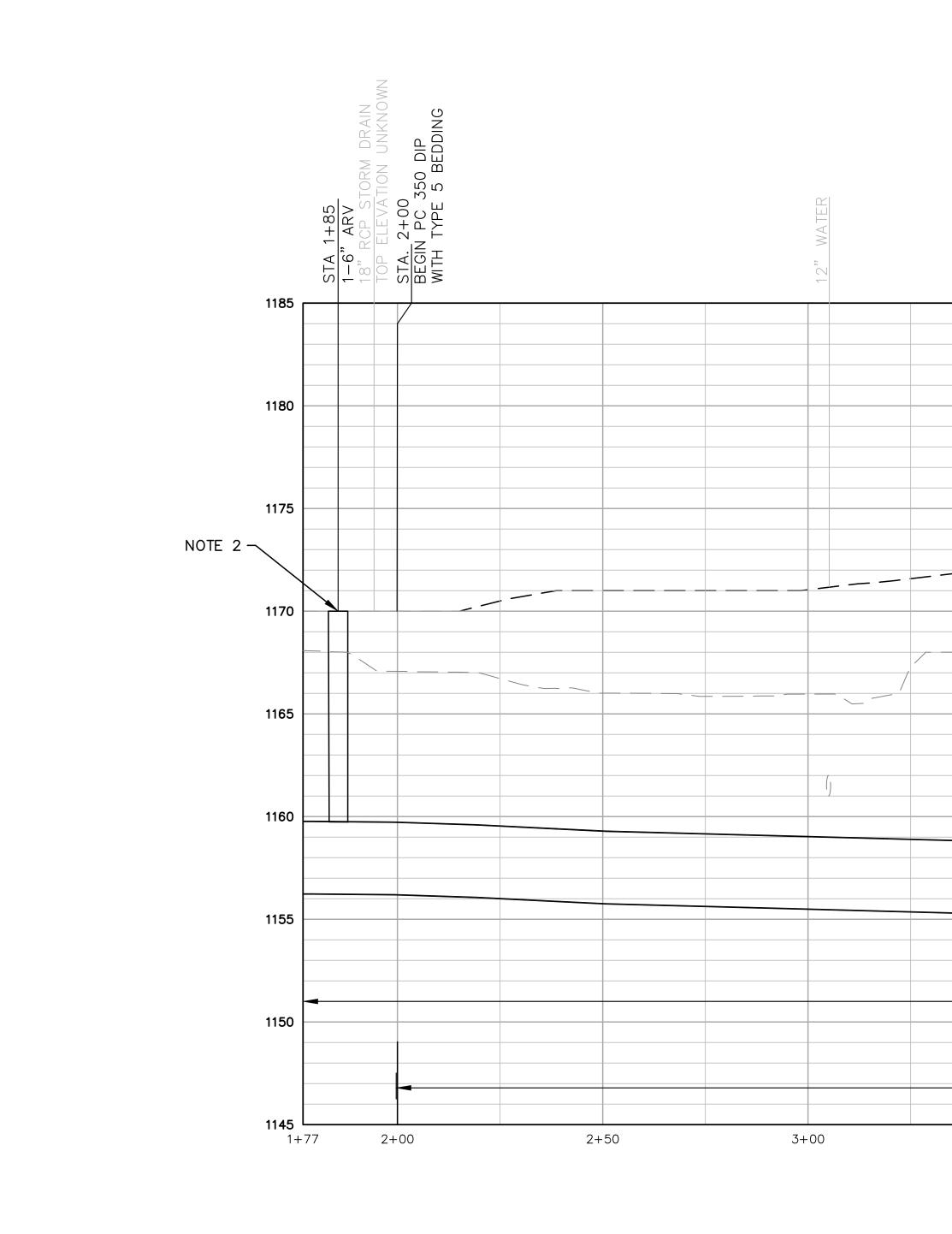
VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

HWY 400 WATERLINE RELOCATION

### FOR BIDS

PLAN	: SEE C5
SHEET:	C25
DWG NO:	
DATE:	MARCH, 2019
PROJ NO:	100182.15

IMPACT SITE #2 STA. 0+00 TO STA. 1+77



1. ALL PIPE SHALL BE RESTRAINED JOINT.

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2. VERIFY HIGH POINT FOR ARV (TYP. ENTIRE ROUTE).



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26-19	APVD	ΒY	REVISIONS	DATE	NO.	APVD





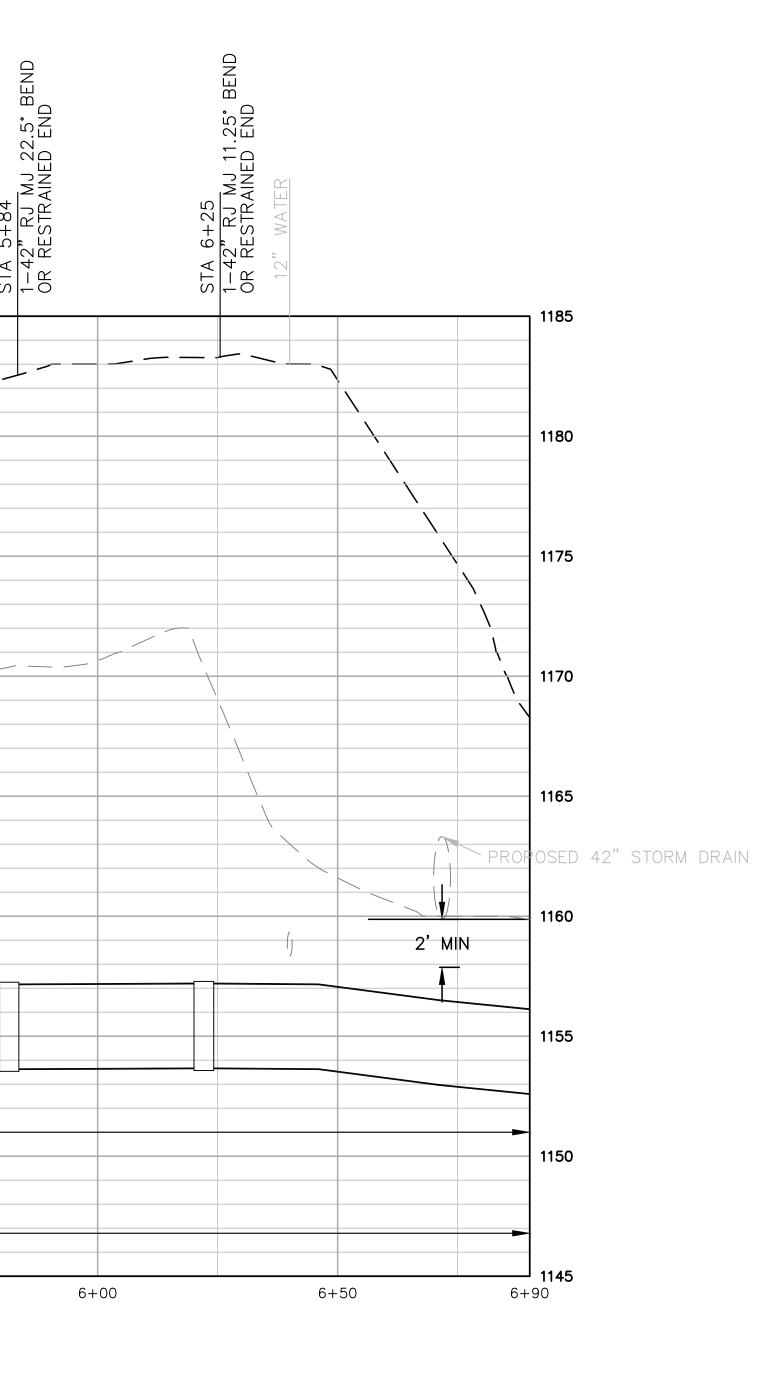
VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

HWY 400 WATERLINE RELOCATION

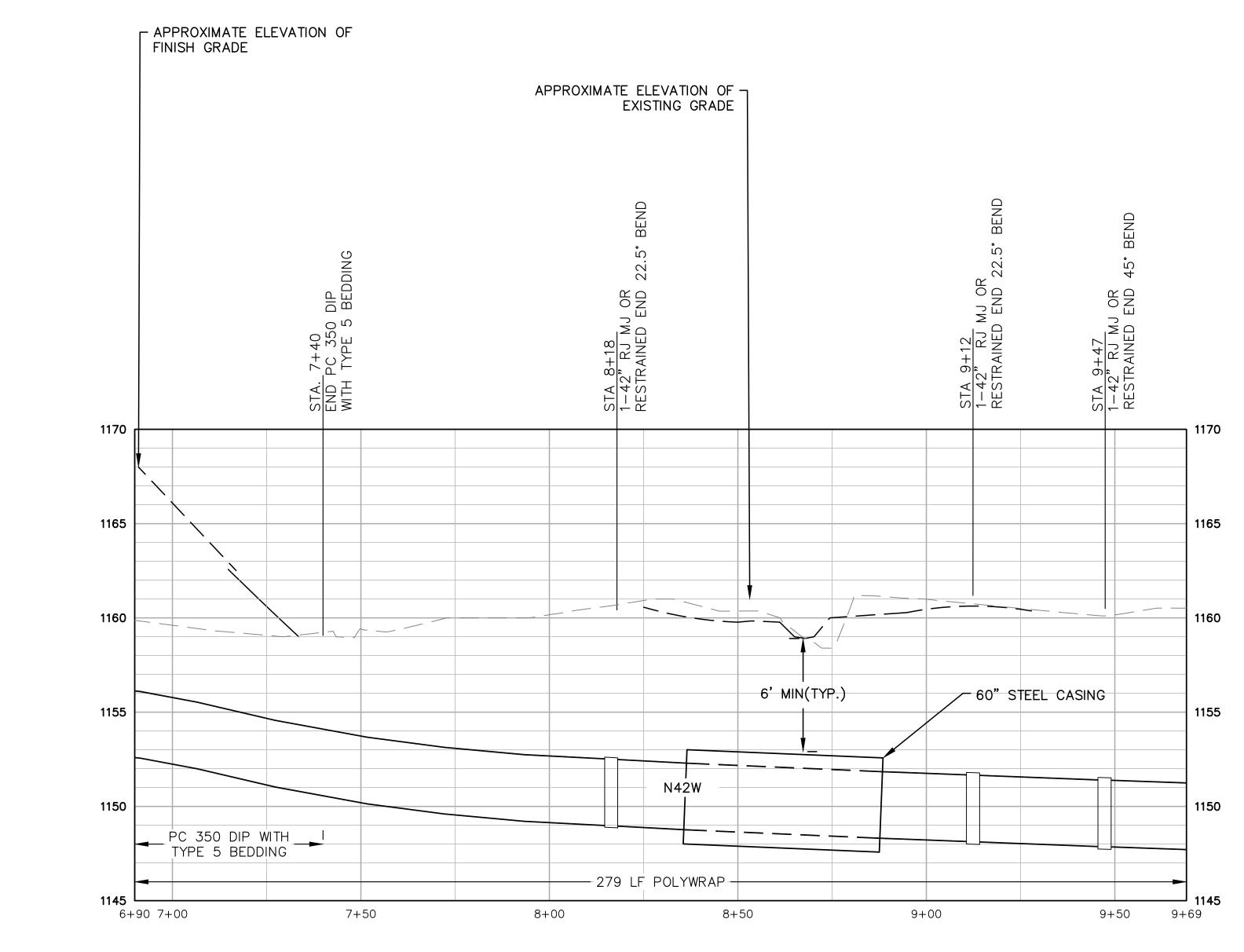


IMPACT SITE #2

	APPROXIMATE ELEV/ EXISTIN	ATION OF – G GRADE	18" RCP STORM DRAIN INVERT ELEVATION 1161.72 12" WATER	OXIMATE ELEN FINI	VATION OF - SH GRADE		STA 5+84
				- I PROF	OSED 18" 5	FORM DRAIN	
′							
			[.				
			(				
	N42W						
	513 LF	POLYWRAP					
	PRES	SURE CLASS 3	50 DIP				
	WIT	H TYPE 5 BED	DING				
3+50	4+00	4+50		5+00		5+50	)

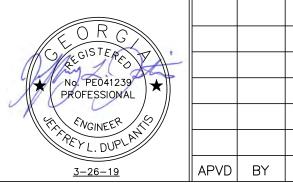


	FOR BIDS
	PLAN: SEE C6
IMPACT SITE #2 STA. 1+77 TO STA. 6+90	SHEET: C26
	DWG NO:
	DATE: MARCH, 2019
	PROJ NO: 100182.15



1. ALL PIPE SHALL BE RESTRAINED JOINT.





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						DSGN
						DRN
						СНК
	APVD	ΒY	REVISIONS	DATE	NO.	APVD

IMPACT SITE #2

PROFILE SCALE: HOR.: 1"=20' VERT.: 1"=4'



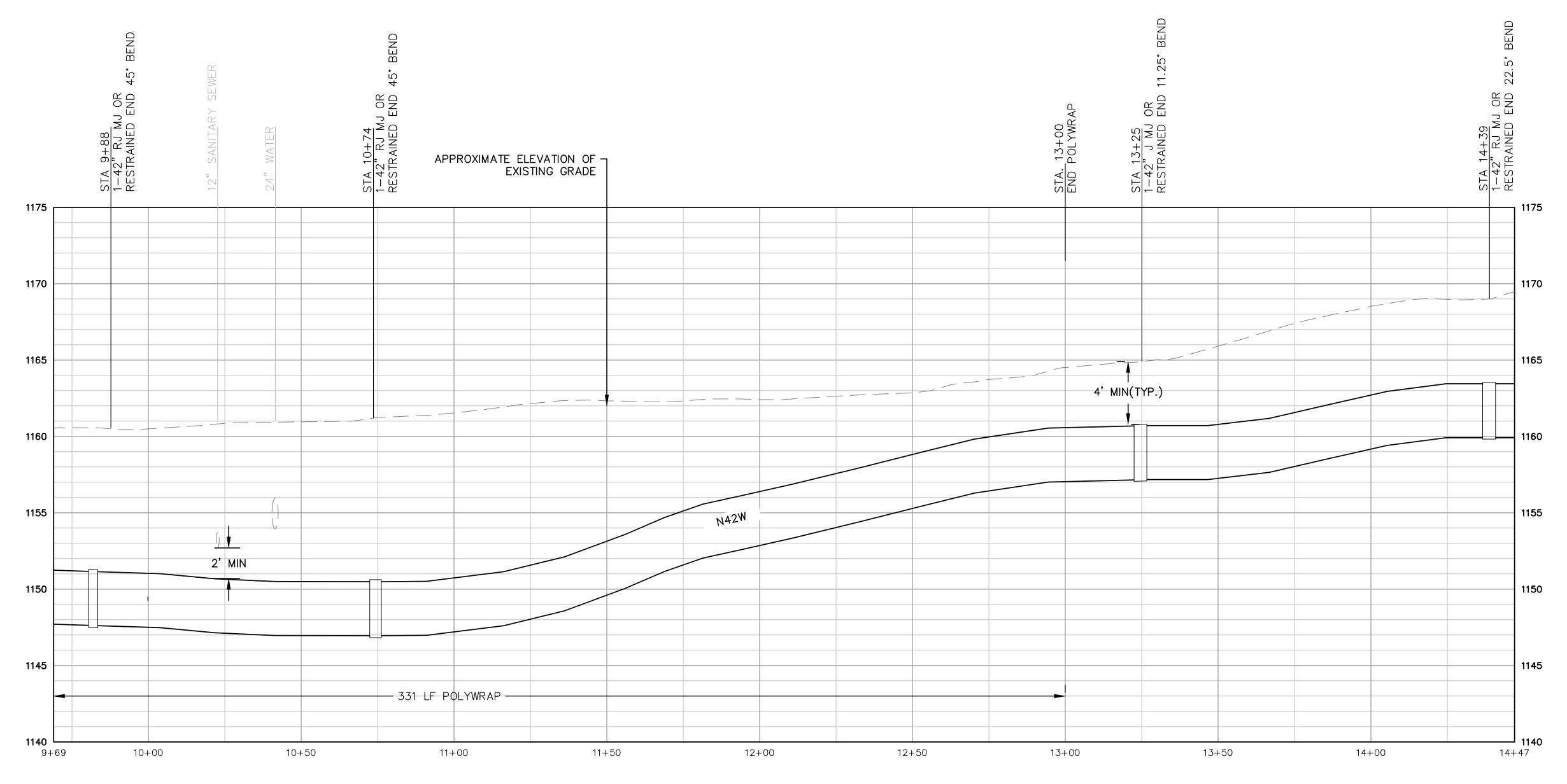
VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY. HWY 400 WATERLINE RELOCATION

### FOR BIDS

PLAN:SEEC7SHEET:C27DWGNO:DATE:MARCH, 2019

PROJ NO: 100182.15

IMPACT SITE #2 STA. 6+90 TO STA. 9+65



#### NOTE:

1. ALL PIPE SHALL BE RESTRAINED JOINT.



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★ No. PE041239 PROFESSIONAL ★						DSGN
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FT. ENGINEER NS						СНК
3-26-19	APVD	ΒY	REVISIONS	DATE	NO.	APVD





VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY. HWY 400 WATERLINE RELOCATION



# IMPACT SITE #2

PLAN: SEE C11A SHEET: C28 DWG NO:

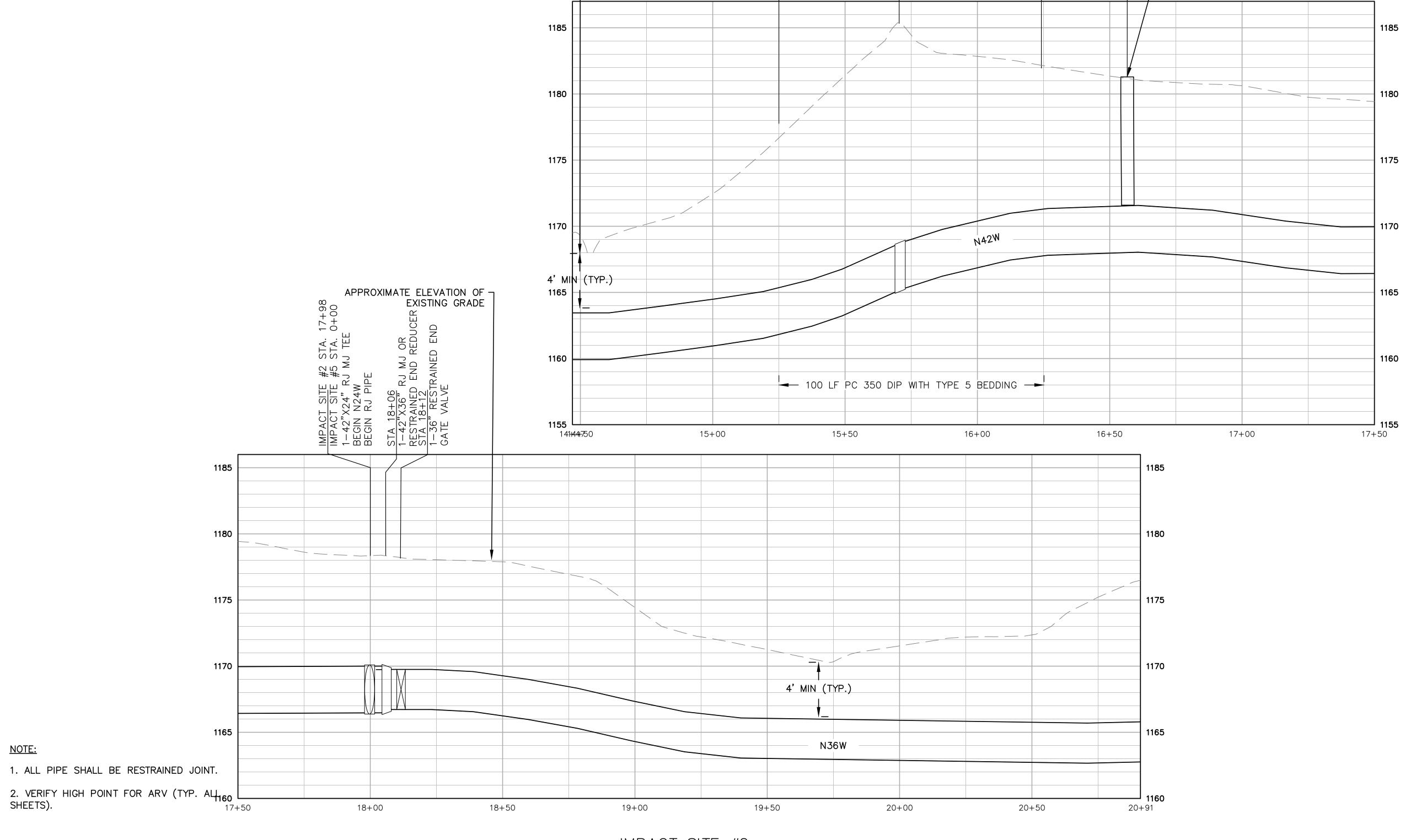
DATE: MARCH, 2019

PROJ NO: 100182.15

IMPACT SITE #2 STA. 9+65 TO STA. 14+39

## FOR BIDS

APPROXIMATE ELEVATION OF EXISTING GRADE



<u>STA.</u> 15+25 <u>BEGIN</u> PC 350 WITH TYPE 5 E

" RJ M.

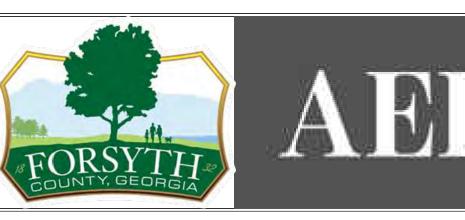
STA 1-4: 45°

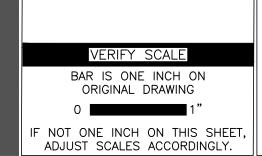




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					DRN
					СНК
APVD	BY	REVISIONS	DATE	NO.	APVD

<u>NOTE:</u>





HWY 400 WATERLINE RELOCATION

## IMPACT SITE #2

#### └ NOTE 2

STA 16+57 1-6" ARV

STA. 16+25 END PC 350 E WITH TYPE 5 {



C29 SHEET: DWG NO: DATE: MARCH, 2019 PROJ NO: 100182.15

PLAN: SEE C12A

IMPACT SITE #2 STA. 14+39 TO STA. 20+91

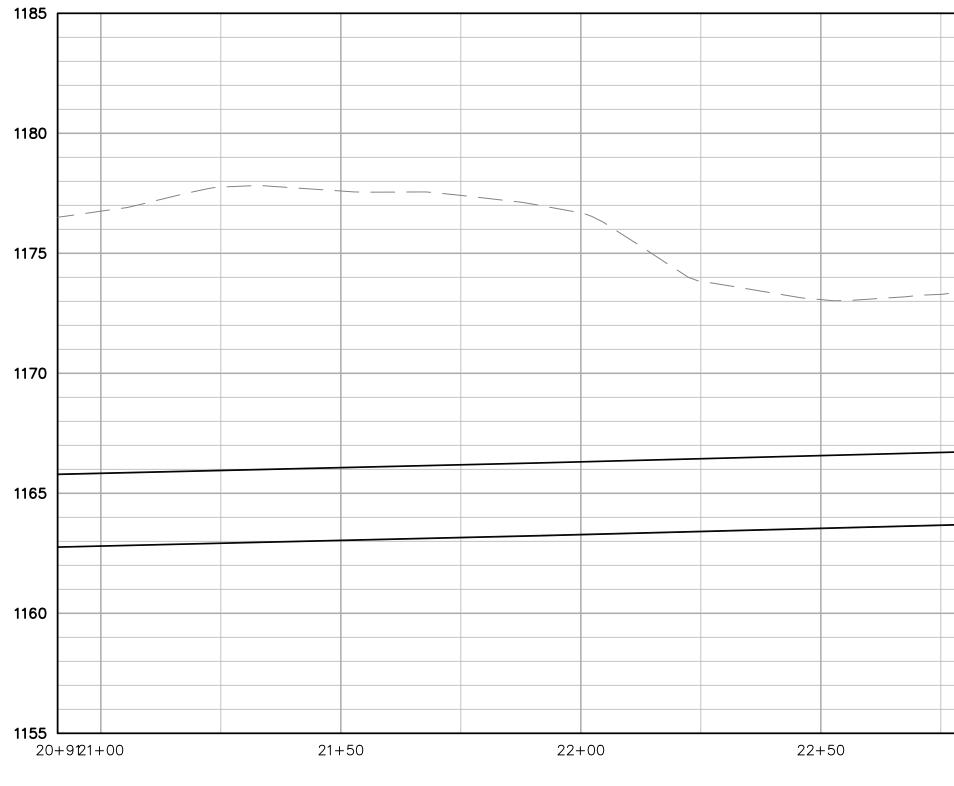
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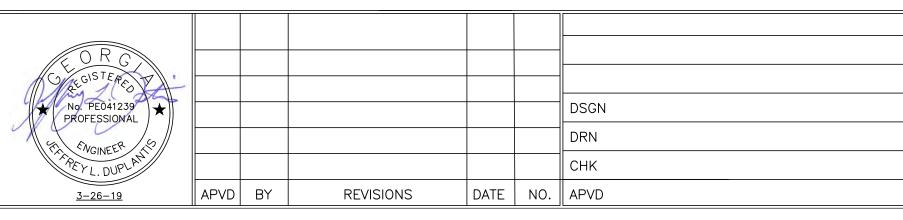
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<u>NOTE:</u> 1. ALL PIPE SHALL BE RESTRAINED JOINT.





368 WEST PIKE ST. SUITE 104 LAWRENCEVILLE, GA 30046 PH. 678–241–4070





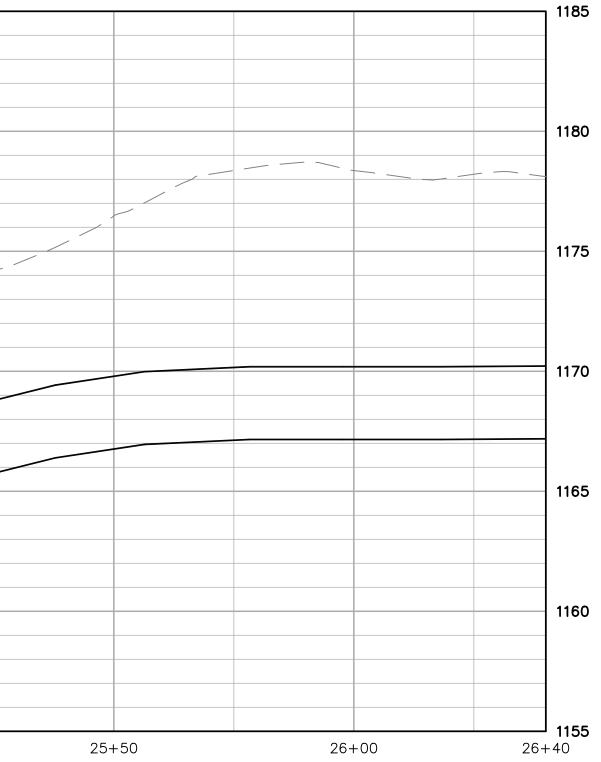
VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

HWY 400 WATERLINE RELOCATION

IMPACT SITE #2

PROFILE SCALE: HOR.: 1"=20' VERT.: 1"=4'

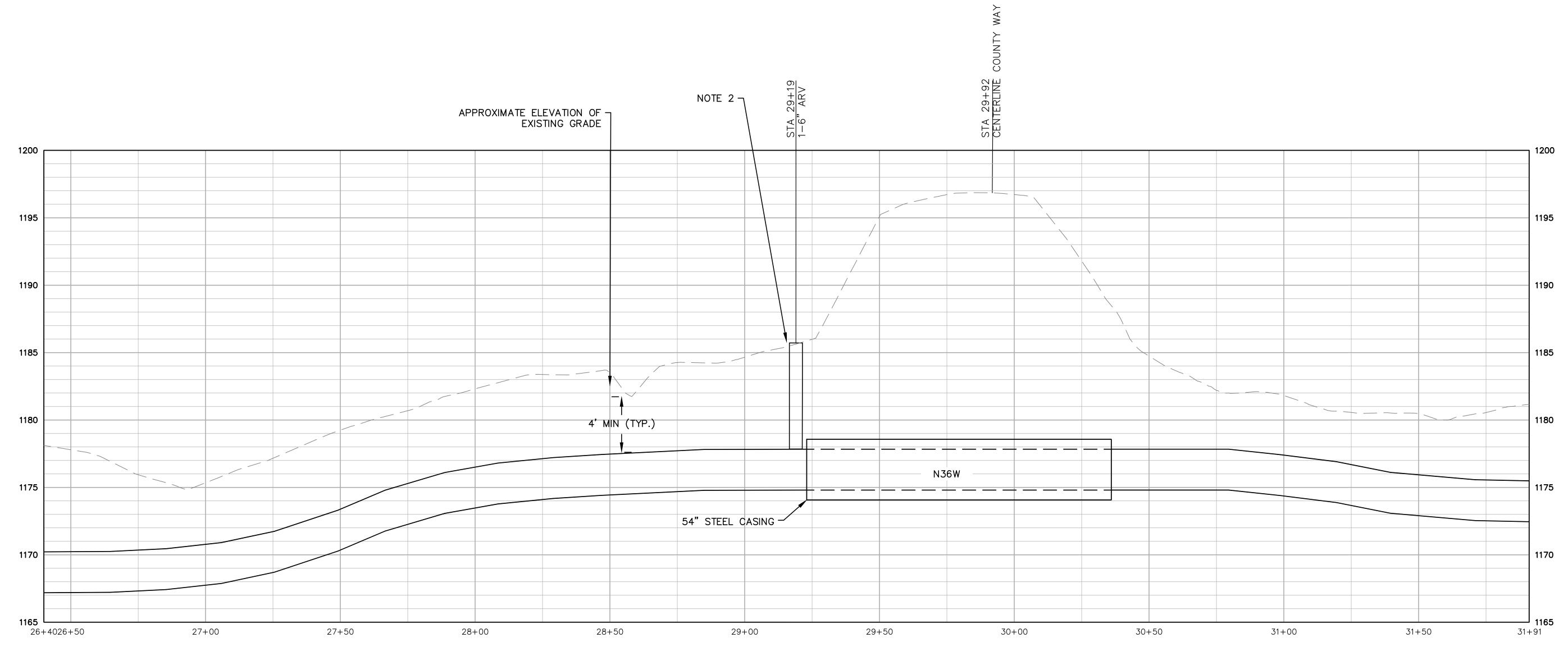
				4' MIN						
				+ WIIN	(115.)					
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						N36W	l /			
23+	-00	23+	-50	24+	-00	24+	+50	25-	+00	



FOR BIDS

SHEET:	C30
DWG NO:	
DATE:	MARCH, 2019
PROJ NO:	100182.15

IMPACT SITE #2 STA. 20+91 TO STA. 26+40



1. ALL PIPE SHALL BE RESTRAINED JOINT.

2. VERIFY HIGH POINT FOR ARV (TYP. ALL SHEETS).



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No. PE041239						DSGN
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APEYL. DUPLAN						СНК
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## IMPACT SITE #2

PROFILE SCALE: HOR.: 1"=20' VERT.: 1"=4'



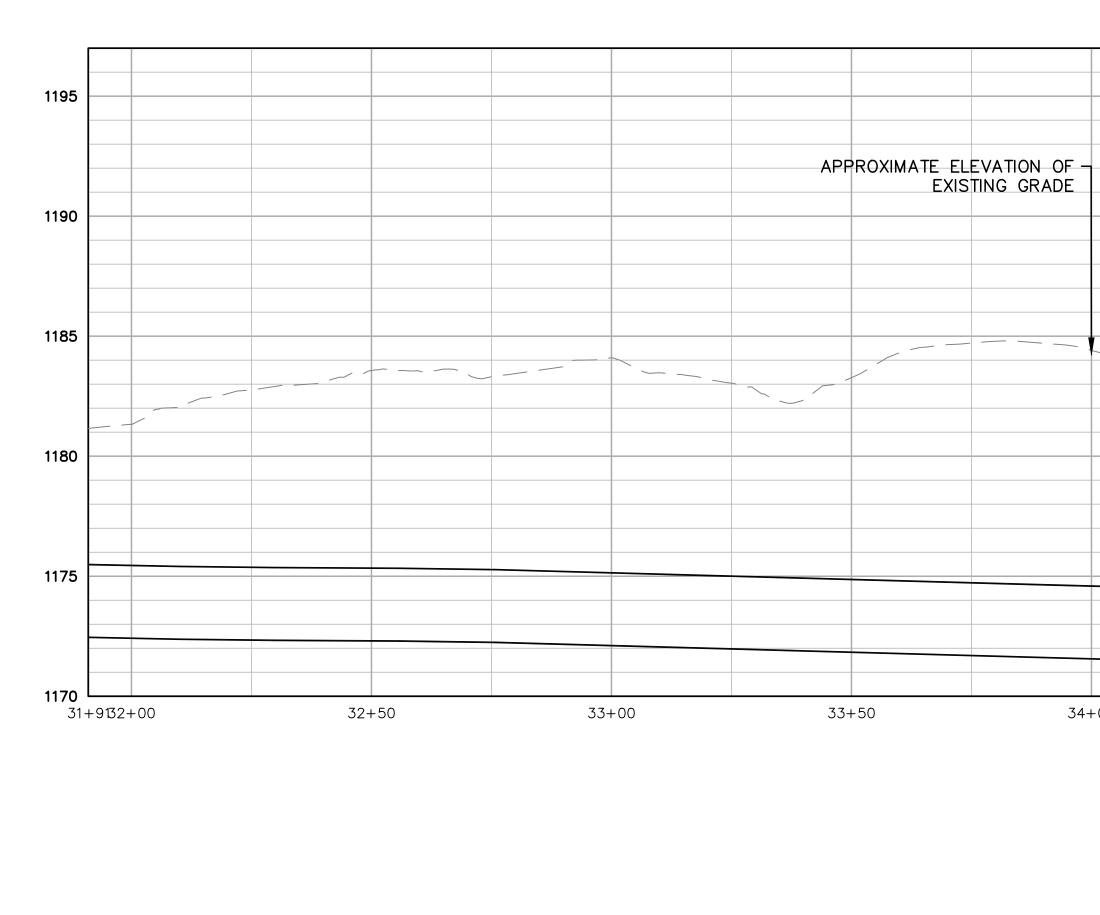


VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

HWY 400 WATERLINE RELOCATION FOR BIDS

PLAN	I: SEE C14
SHEET:	C31
DWG NO:	
DATE:	MARCH, 2019
PROJ NO:	100182.15

IMPACT SITE #2 STA. 26+40 TO STA. 31+91



<u>NOTE:</u> 1. ALL PIPE SHALL BE RESTRAINED JOINT.



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No PEDA1239						
No. PE041239 PROFESSIONAL						DSGN
ENGINEER (S)						DRN
FL ENGINEER 115 PETL. DUPLANT						СНК
3-26-19	APVD	ΒY	REVISIONS	DATE	NO.	APVD





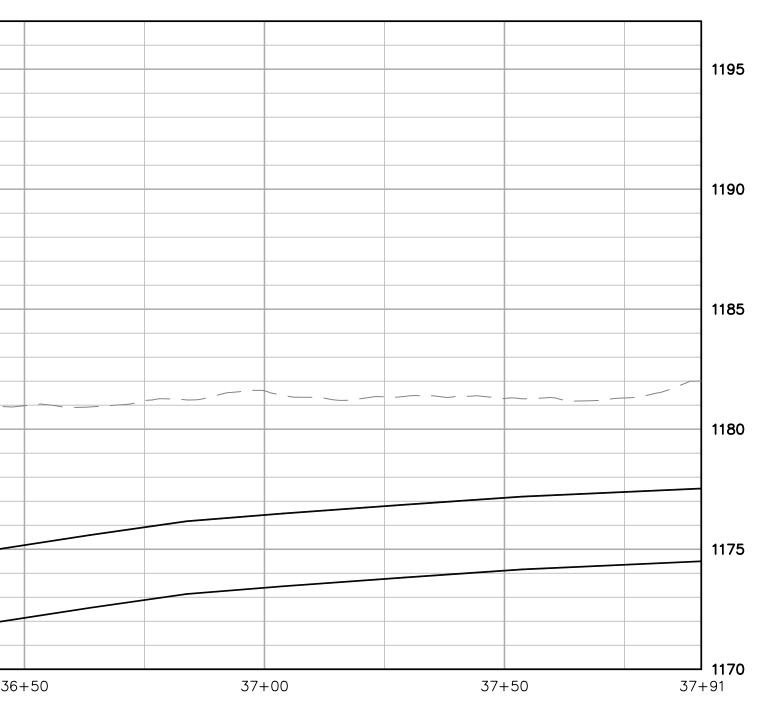
VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

HWY 400 WATERLINE RELOCATION

PROFILE
SCALE: HOR.: 1"=20'
VERT.: 1"=4'

# IMPACT SITE #2

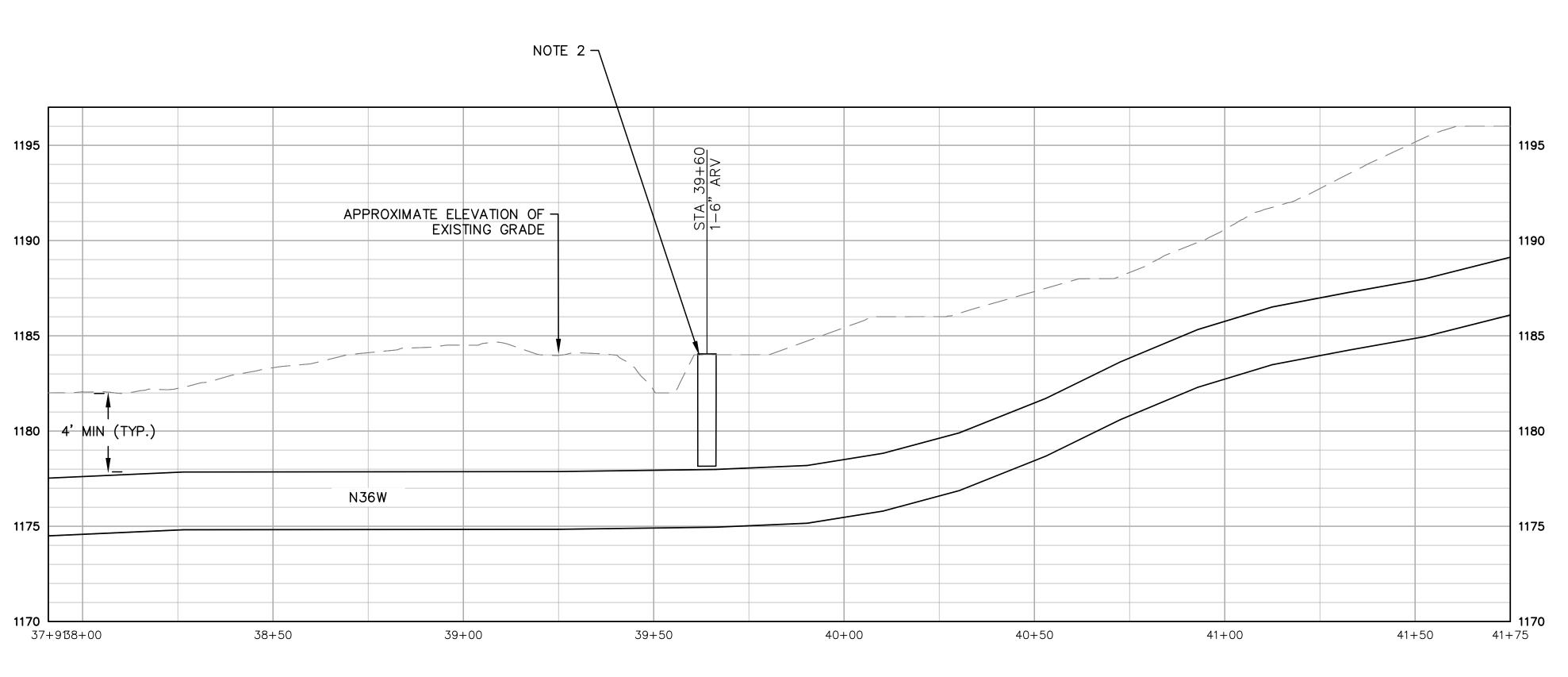
+00	34.	+50	35-	+00	35-	+50	36-	+00	36+
_		NJ	36W						
			4'	MIN (TYP.)					
								_/	
	`								
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		1	1						



## FOR BIDS

PLAN	N: SEE C15
SHEET:	C32
DWG NO:	
DATE:	MARCH, 2019
PROJ NO:	100182.15

IMPACT SITE #2 STA. 31+91 TO STA. 37+91



1. ALL PIPE SHALL BE RESTRAINED JOINT.

2. INTERMEDIATE ARV BETWEEN HIGH POINTS.



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SEGISTERED T						
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PROFESSIONAL						DSGN
EN ENGINEER 12						DRN
FARSINEER MS						СНК
3-26-19	APVD	ΒY	REVISIONS	DATE	NO.	APVD





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

HWY 400 WATERLINE RELOCATION



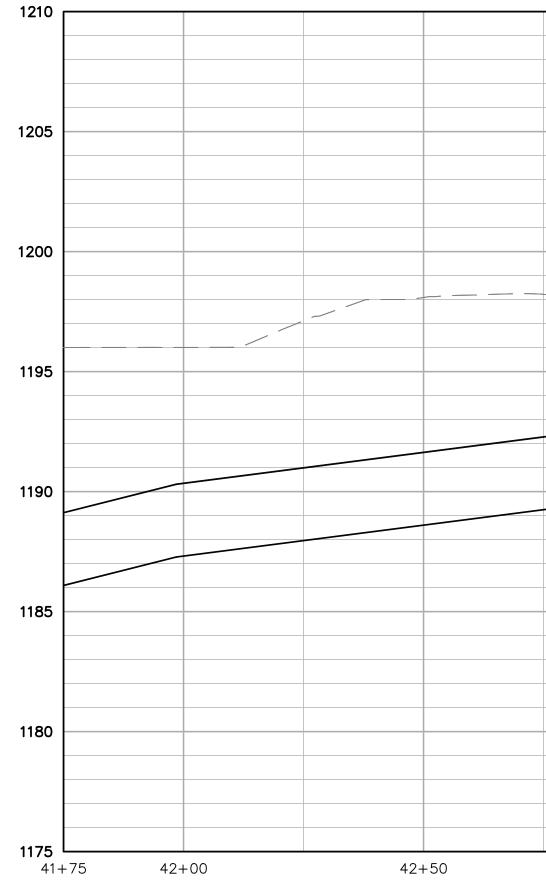
# IMPACT SITE #2

## FOR BIDS

IMPACT SITE #2 STA. 37+91 TO STA. 41+75

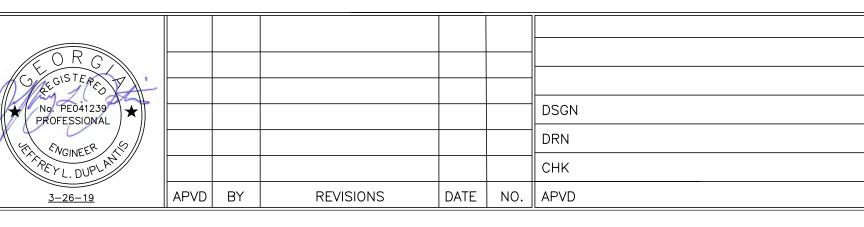
#### SHEET: C33 DWG NO: DATE: MARCH, 2019 PROJ NO: 100182.15

PLAN: SEE C16



1. ALL PIPE SHALL BE RESTRAINED JOINT.





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		EXISTI	NG GRADE						
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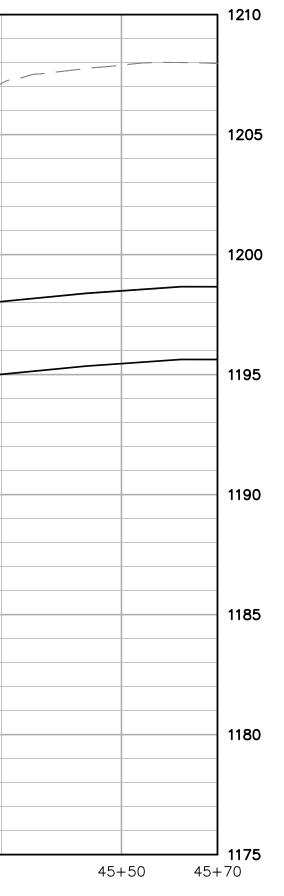
## IMPACT SITE #2

PROFILE SCALE: HOR.: 1"=20' VERT.: 1"=4'





VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY. HWY 400 WATERLINE RELOCATION

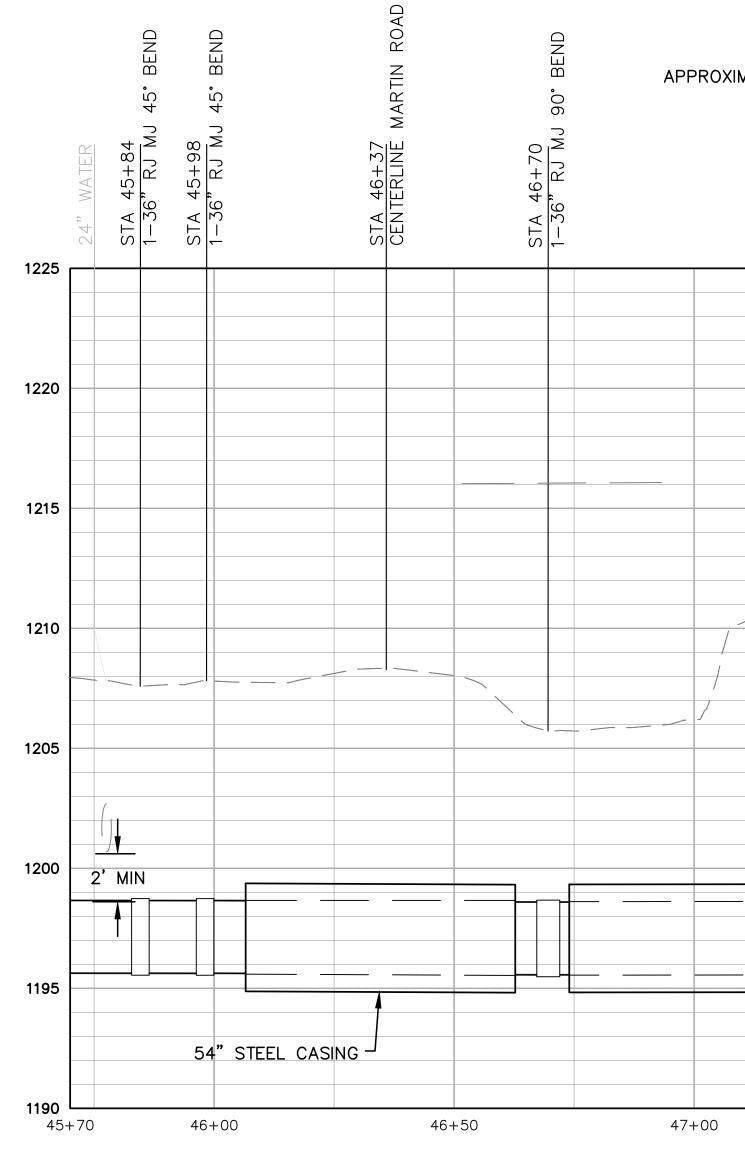




IMPACT SITE #2 STA. 41+75 TO STA. 45+70

#### 

PLAN: SEE C17



1. ALL PIPE SHALL BE RESTRAINED JOINT.





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/						СНК
	APVD	ΒY	REVISIONS	DATE	NO.	APVD

IMATE ELEVATION OF – EXISTING GRADE				CENTERLINE GA 400				STA. 49+31	PC 350 UIF FYPE 5 BED 9+47	1- <u>36" RJ M</u> J 45° BEND
							` ~	/		
/										
				N36W -						
		4								
	54"STEEL(	CASING -						-		
47-	-50	48-	+00	48+	-50	49-	-00			49+50

IMPACT SITE #2

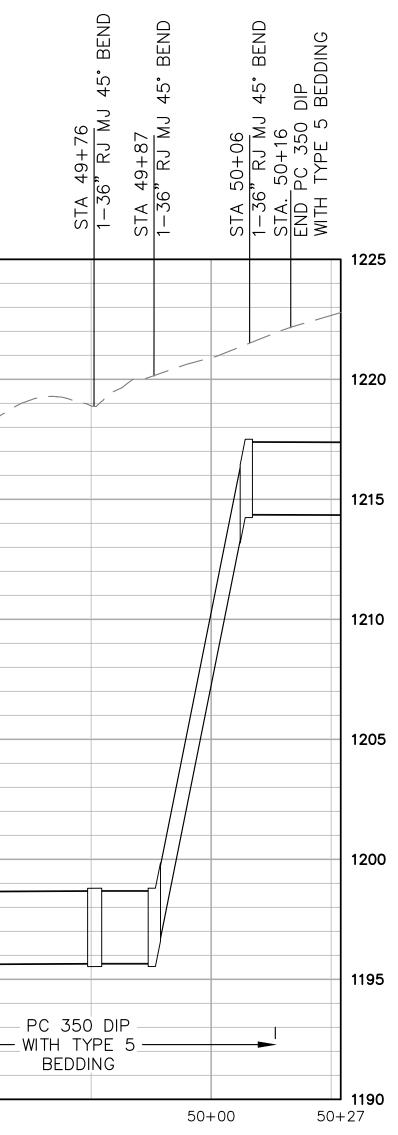






VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING 0 1" IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

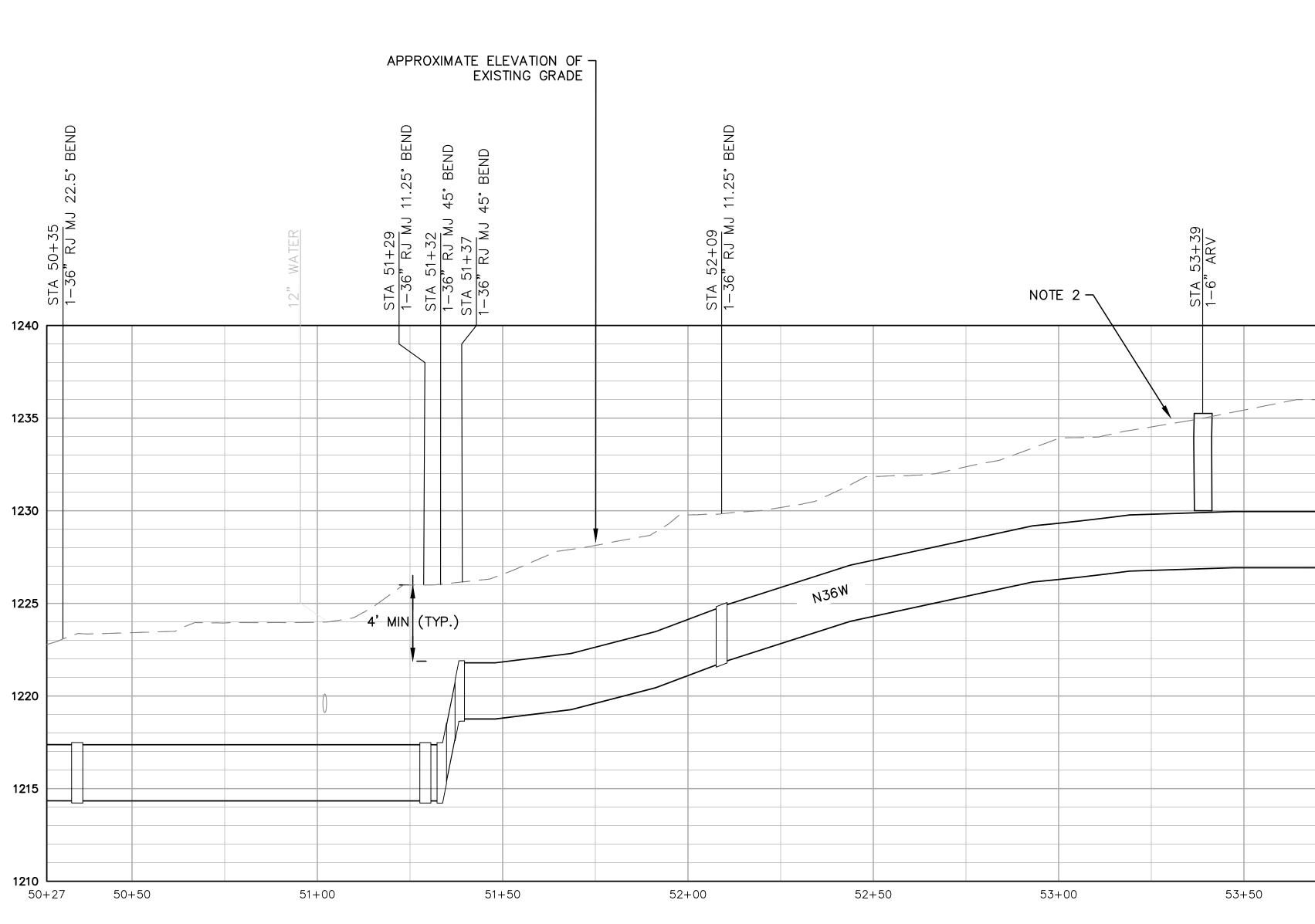
HWY 400 WATERLINE RELOCATION



PLAN	N: SEE C18
SHEET:	C35
DWG NO:	
DATE:	MARCH, 2019
PROJ NO:	100182.15

FOR BIDS

IMPACT SITE #2 STA. 45+70 TO STA. 50+27



NOTE:

1. ALL PIPE SHALL BE RESTRAINED JOINT.

2. VERIFY HIGH POINT FOR ARV (TYP. ALL SHEETS). LOCATE ARV OUT OF ROADWAY.



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REGISTER						
No. PE041239						DSGN
PROFESSIONAL						
						DRN
ENGINEER 15						
PETL. DUPLAN						СНК
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<u>3-26-19</u>	APVD	BY	REVISIONS	DATE	NO.	APVD

IMPACT SITE #2

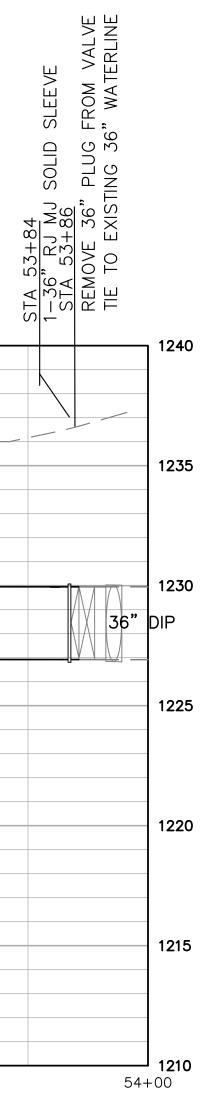
<u>PROFILE</u> SCALE: HOR.: 1"=20' VERT.: 1"=4'





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

HWY 400 WATERLINE RELOCATION

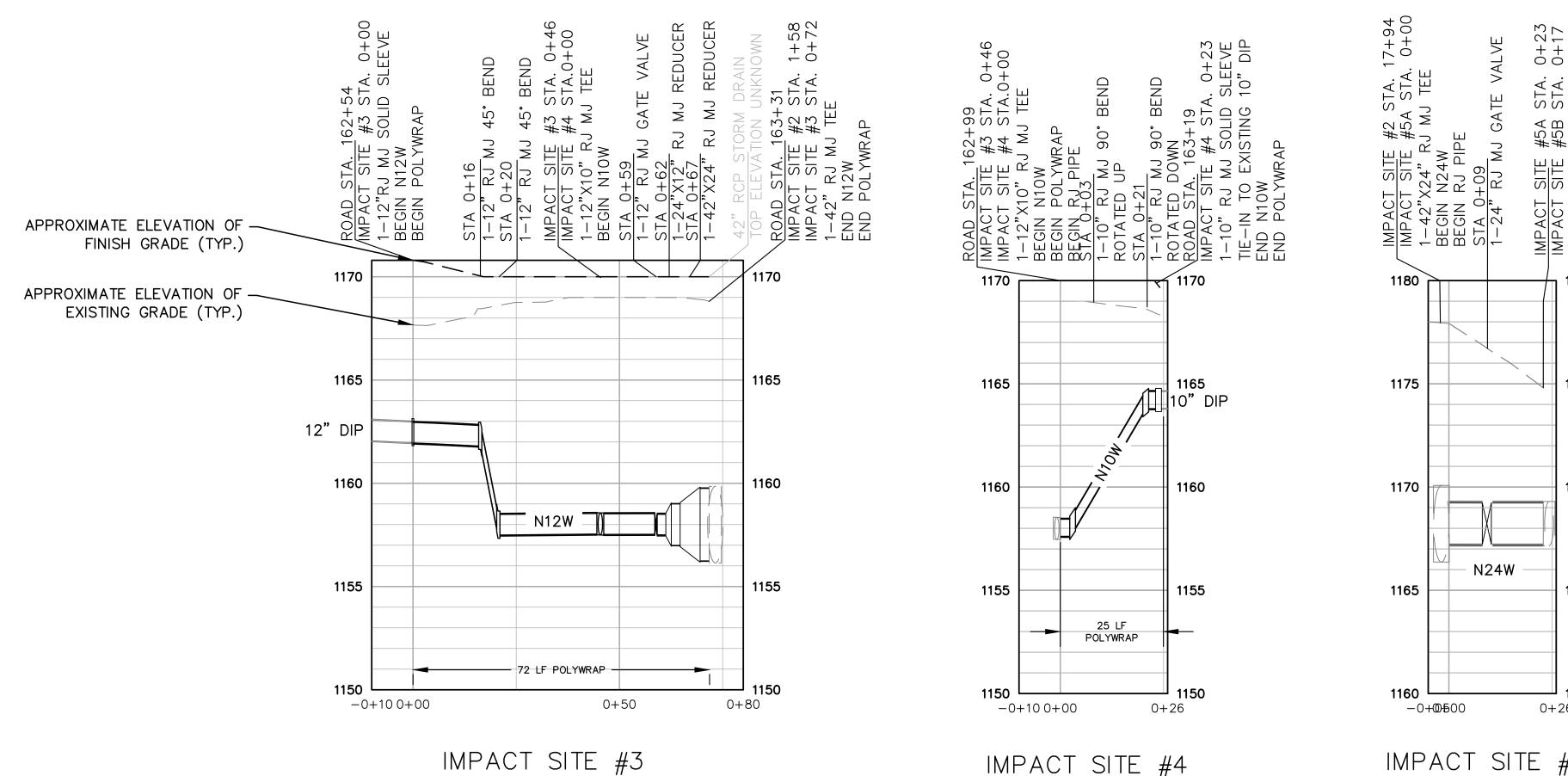


## FOR BIDS

PLAN: SEE C19

C36 SHEET: DWG NO: DATE: MARCH, 2019 PROJ NO: 100182.15

IMPACT SITE #2 STA. 50+35 TO STA. 53+86



IMPACT SITE #3

PROFILE SCALE: HOR.: 1"=20' VERT.: 1"=4'

<u>NOTE:</u>

1. ALL PIPE SHALL BE RESTRAINED JOINT.

No. PE04123 PROFESSION

2. 10" AND 12" PIPE SHALL BE RESTRAINED JOINT WITH CONCRETE THRUST BLOCK AT FITTINGS.



ORG						
REGISTERED						
No. PE041239						DSGN
PROFESSIONAL						
ENCINEER 5						
REFL. DUPLAN						СНК
3-26-19	APVD	ΒY	REVISIONS	DATE	NO.	APVD
REGISTER No. PEO41239 PROFESSIONAL REFL. DUPLAN	APVD	BY	REVISIONS	DATE	NO.	DRN CHK

N24W

IMPACT SITE #5A

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ST, ST,

#5A #5B J TEE

IMPACT SITE # IMPACT SITE # 1-24" RJ MJ END N24W

1180

1175

1170

1165

1160

0+26

<u>PROFILE</u> SCALE: HOR.: 1"=20' VERT.: 1"=4'



VERIFY SCALE

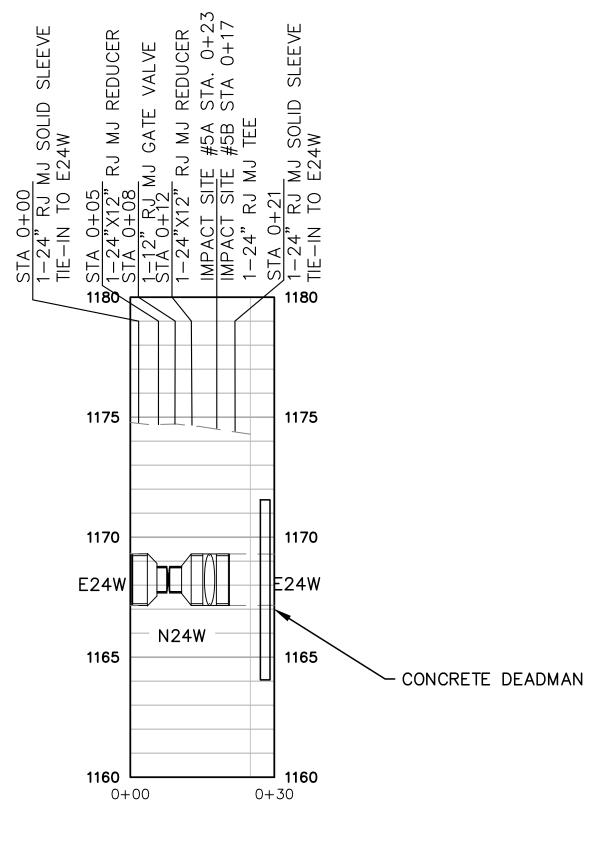
<u>PROFILE</u>

SCALE: HOR.: 1"=20'

VERT.: 1"=4'

BAR IS ONE INCH ON ORIGINAL DRAWING IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

HWY 400 WATERLINE RELOCATION



### IMPACT SITE #5B

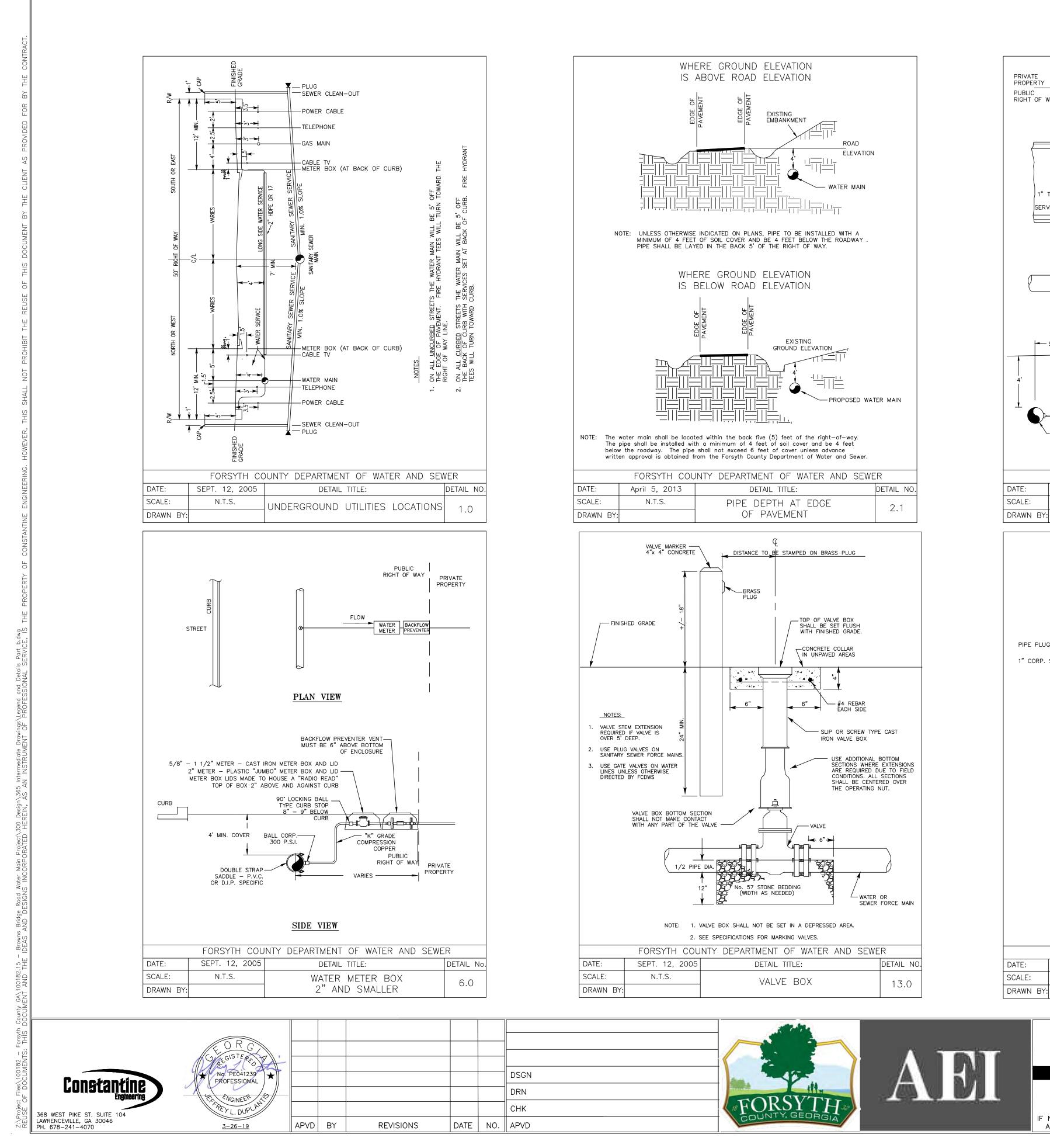
PROFILE SCALE: HOR.: 1"=20' VERT.: 1"=4'

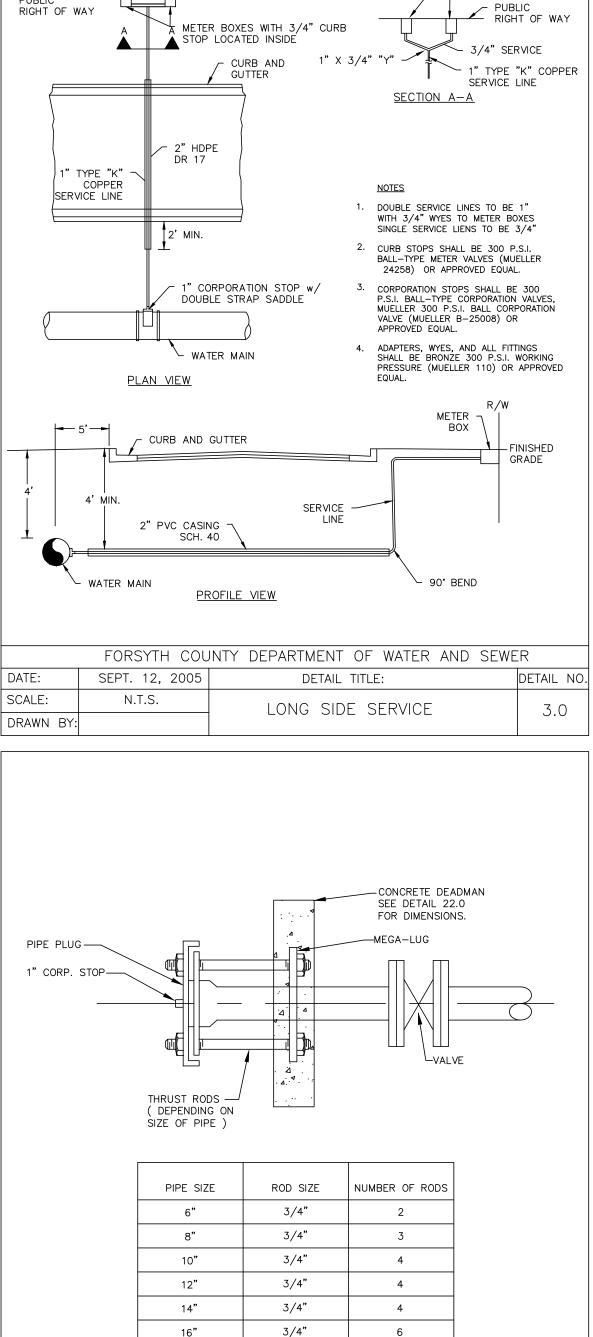


PLAN: SEE C5, C12A

IMPACT SITES #3, 4, & 5

SHEET: C37 DWG NO: MARCH, 2019 DATE: PROJ NO: 100182.15





3/4"

3/4"

1"

1"

FORSYTH COUNTY DEPARTMENT OF WATER AND SEWER

DETAIL TITLE:

DEADMAN FOR PLUG

6

8

8

10

20"

24"

30"

36"

SEPT. 12, 2005

VERIFY SCALE

BAR IS ONE INCH ON

ORIGINAL DRAWING

IF NOT ONE INCH ON THIS SHEET,

ADJUST SCALES ACCORDINGLY.

N.T.S.

METER BOXES WITH

3/4" CURB STOP

LOCATED INSIDE

P/L

PRIVATE

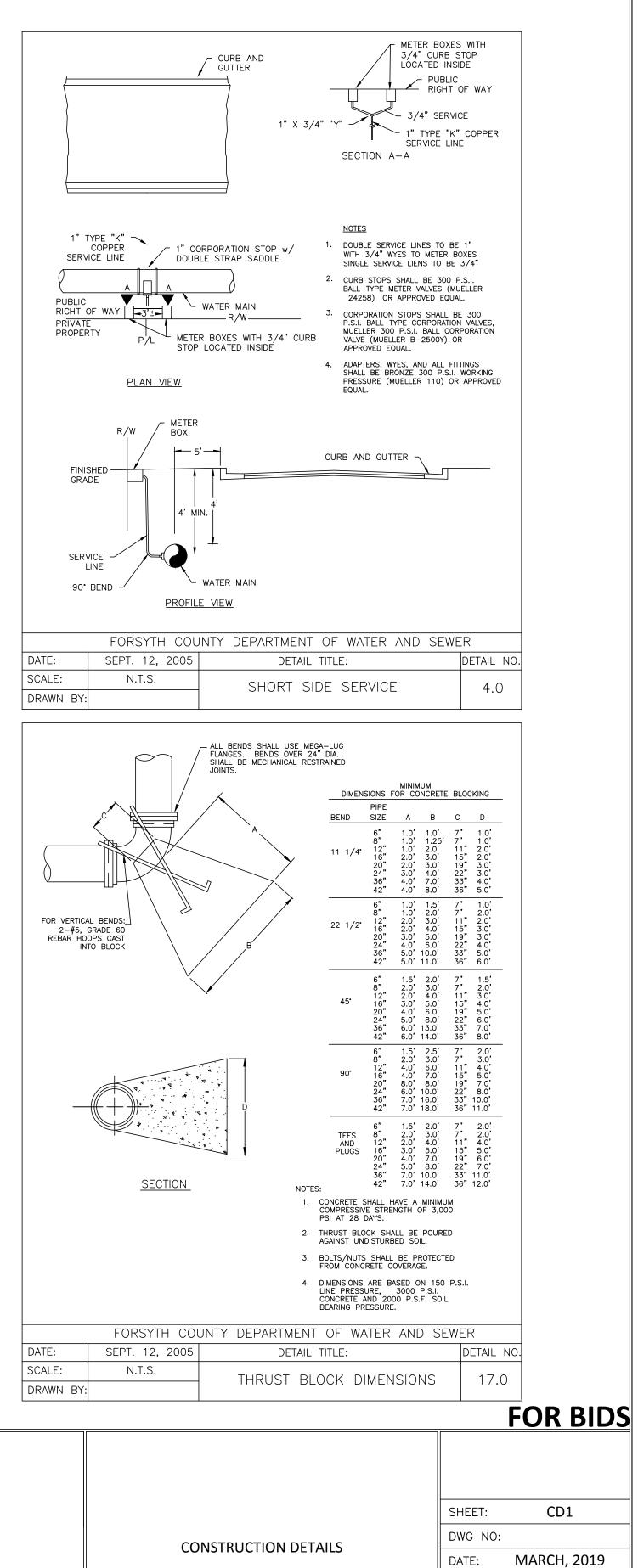
PUBLIC

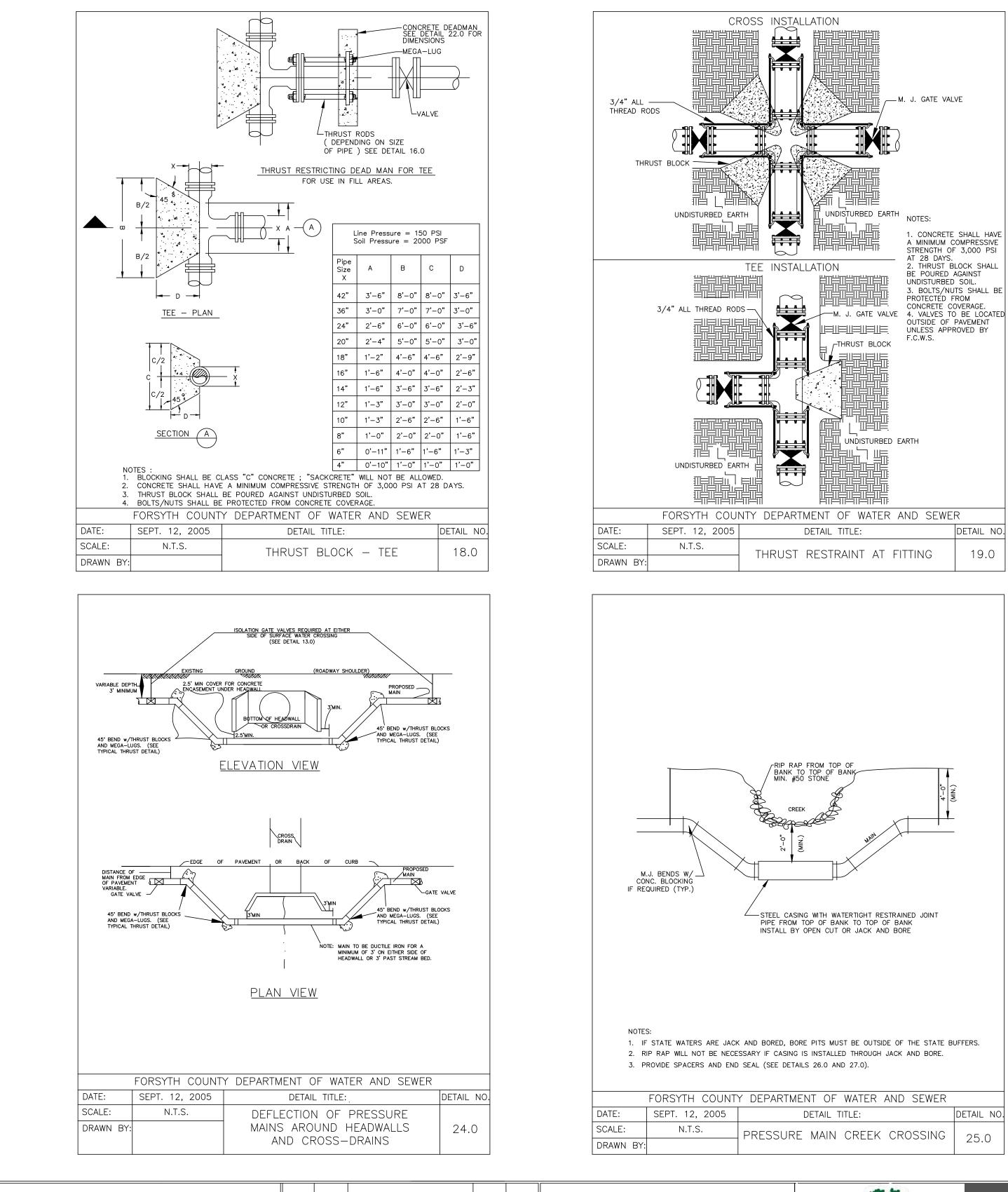
PROPERTY

HWY 400 WATERLINE RELOCATION

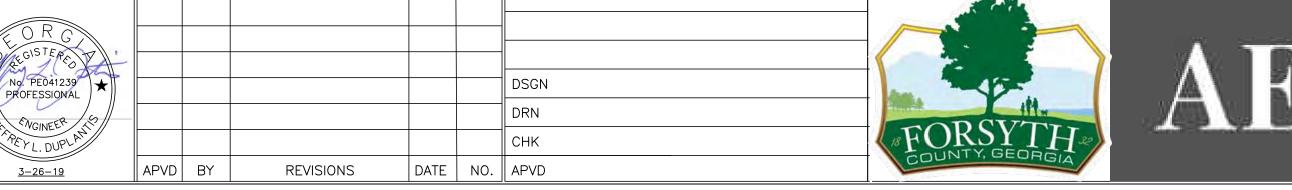
DETAIL NO.

16.0









DEFAILINEINT OF WATER AND SEWER	
DETAIL TITLE:	DETAIL NO.
PRESSURE MAIN CREEK CROSSING	25.0

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

SEPT. 12, 2005

N.T.S.

DATE:

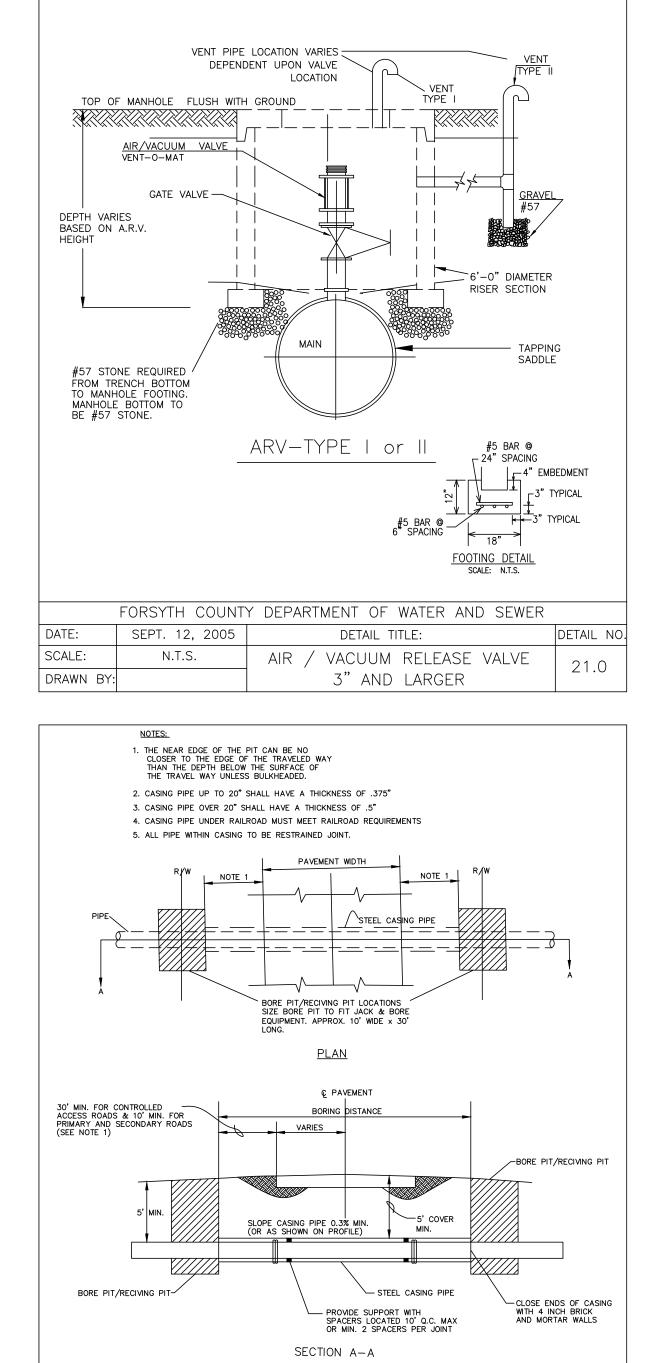
SCALE:

DRAWN BY

HWY 400 WATERLINE RELOCATION

DETAIL NO.

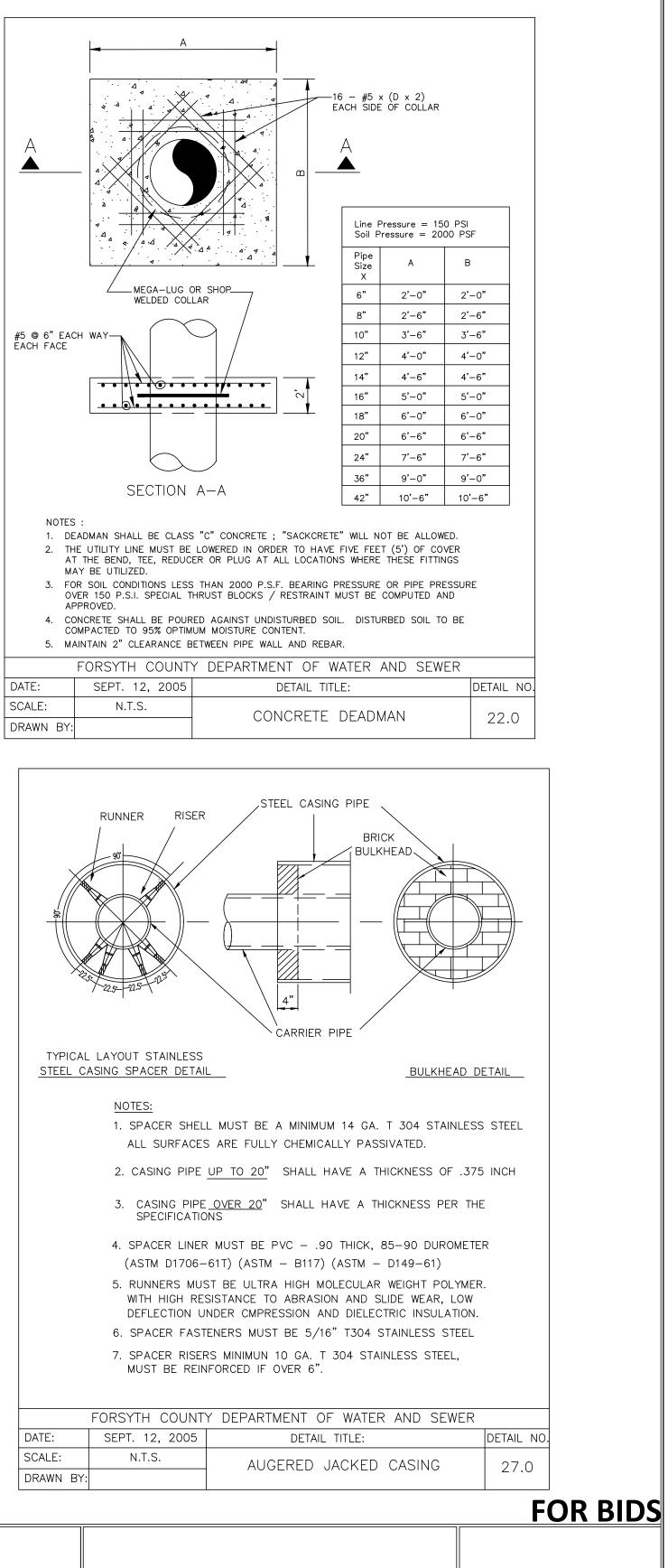
26.0



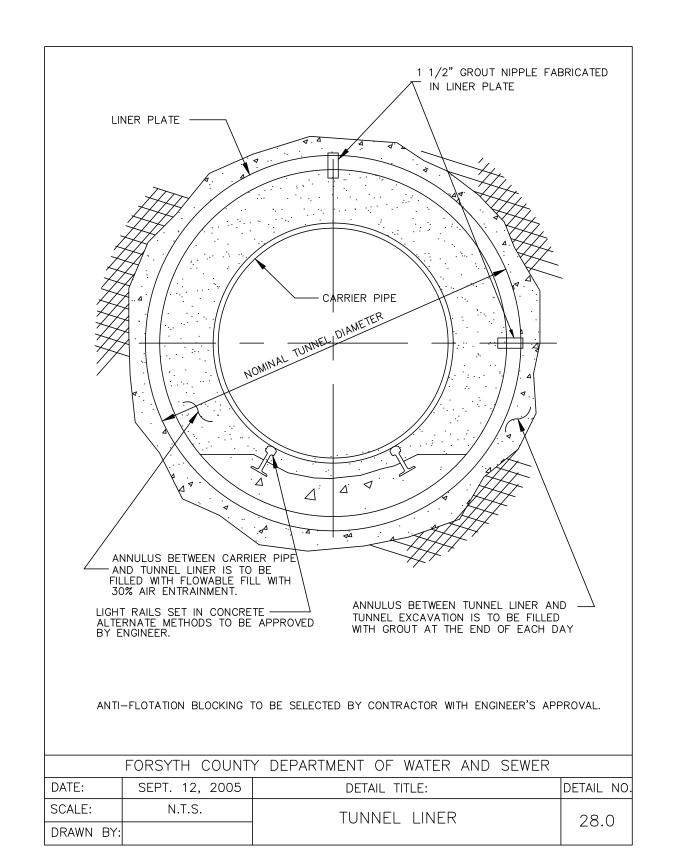
FORSYTH COUNTY DEPARTMENT OF WATER AND SEWER

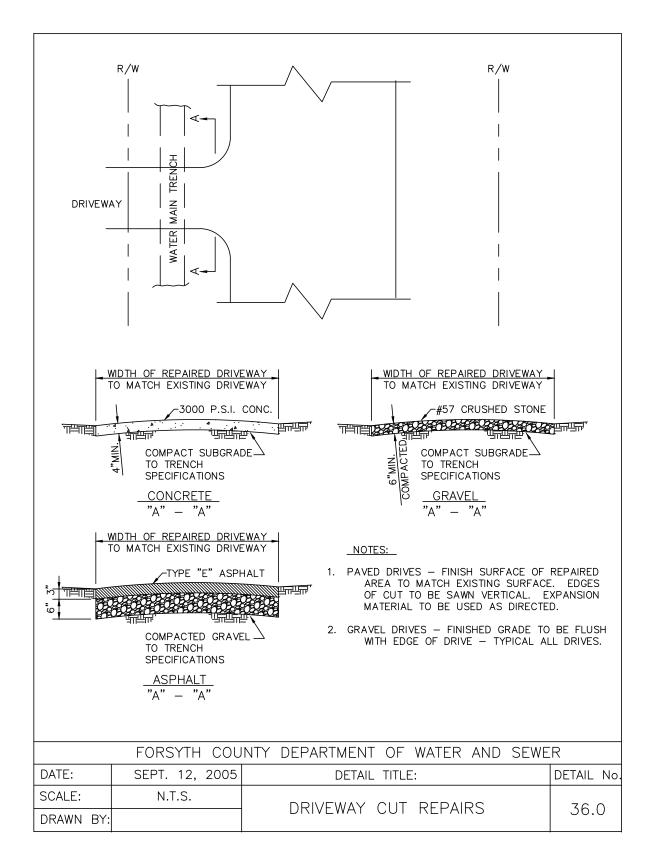
DETAIL TITLE:

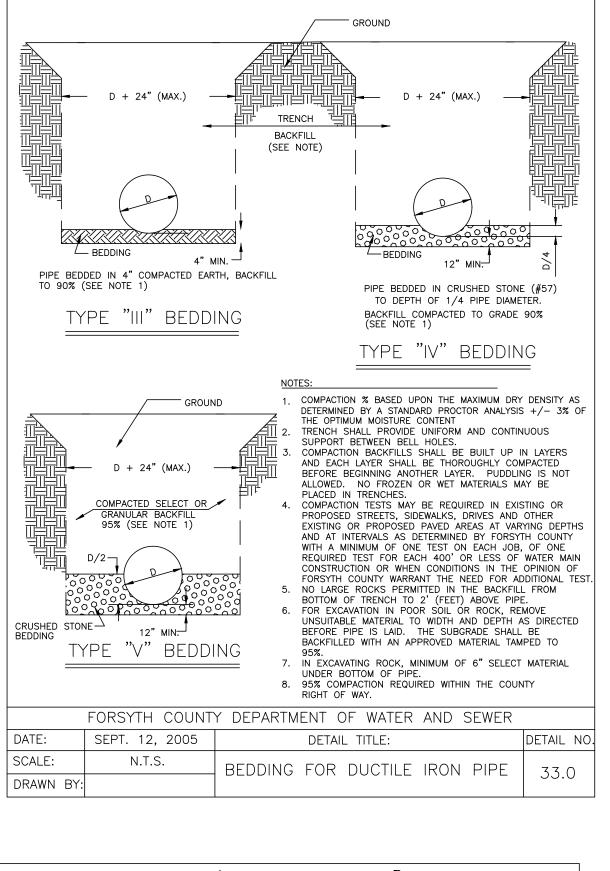
CASING PIPE JACK AND BORE

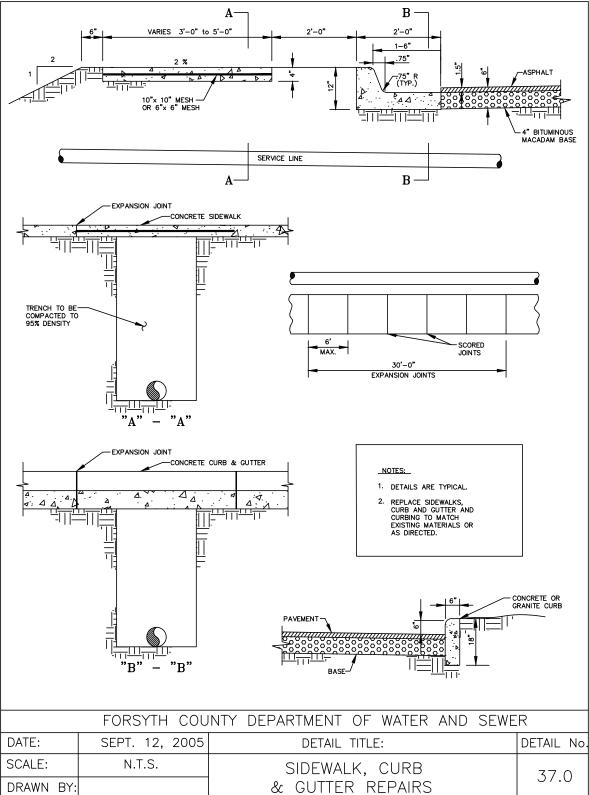


SHEET: CD2
DWG NO:
DATE: MARCH, 2019
PROJ NO: 100182.15









FORSYTH





1.						
$\star$						DSGN
						DRN
?//						
						СНК
	APVD	ΒY	REVISIONS	DATE	NO.	APVD



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

HWY 400 WATERLINE RELOCATION

			Г 7 ) depth					
SIZE PRESSURE LAYING CONDITIONS INCHES CLASS MAXIMUM DEPTH OF COVER IN FEET								
	P.S.I.	TYPE III	TYPE IV	TYPE V				
6	350	37	47	65				
8	350	25	34	50				
10	350	19	28	45				
12	350	19	28	44				
14	350	19	27	44				
16	350	20	28	44				
18	250 300 350	14 17 19	22 26 28	31 36 41				
20	250 300 350	14 17 19	22 26 28	30 35 38				
24	200 250 300 350	12 15 17 19	17 20 24 28	25 29 32 37				

19

19

FORSYTH COUNTY DEPARTMENT OF WATER AND SEWER

24

23

DETAIL TITLE:

MAXIMUM TRENCH DEPTHS, D.I.P.

32

32

DETAIL NO.

34.0

36

42

SEPT. 12, 2005

N.T.S.

DATE:

SCALE:

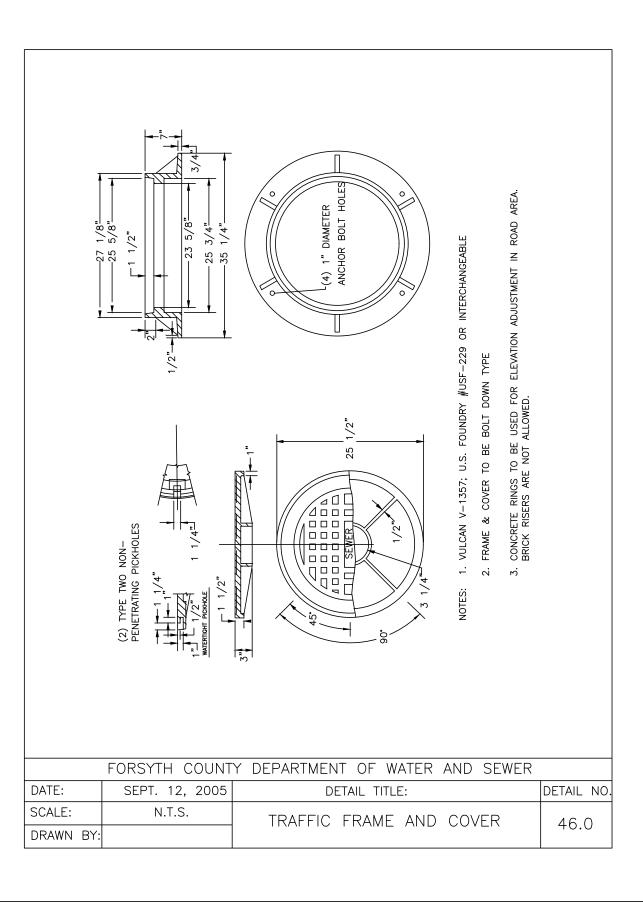
DRAWN BY:

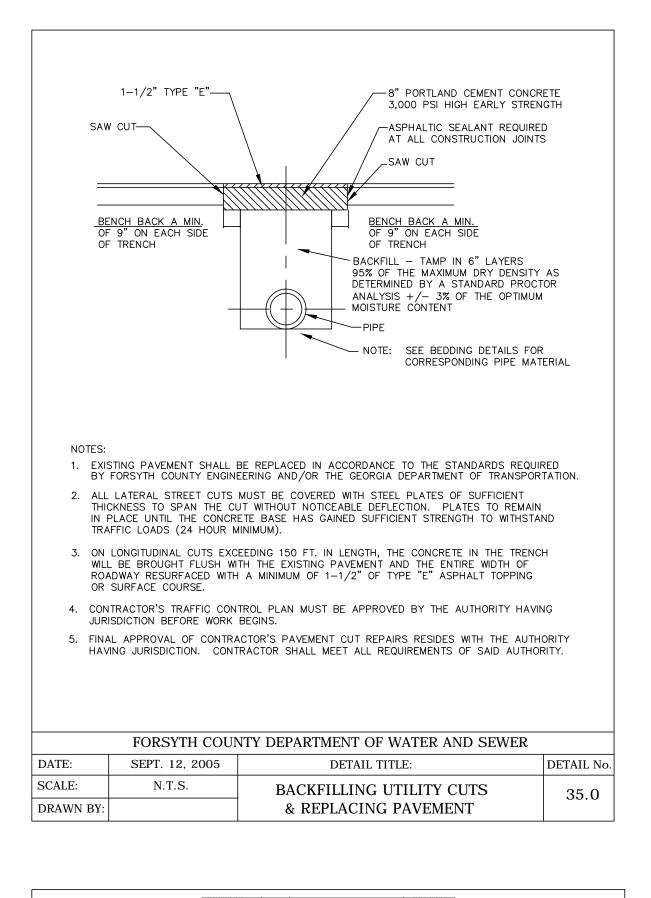
AWWA M41 TABLE 4 - 6

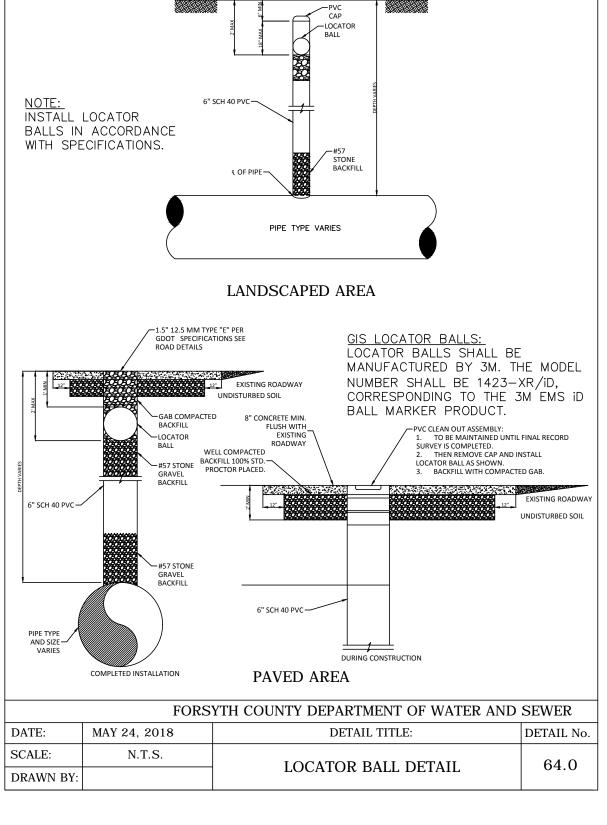
350

350

п п







CONSTRUCTION DETAILS

# FOR BIDS

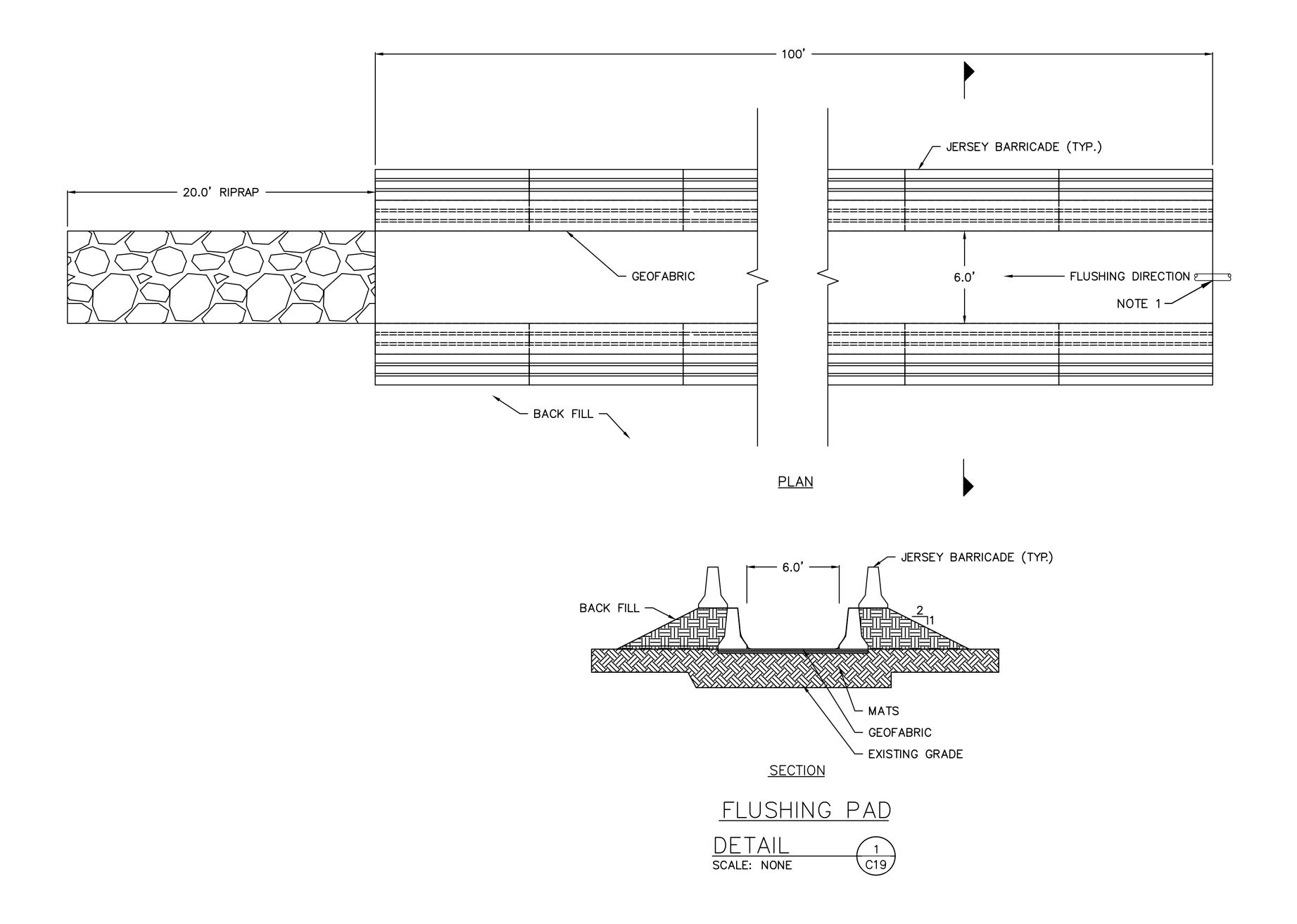
SHEET:	CD3
DWG NO:	
DATE:	MARCH, 2019
PROJ NO:	100182.15







F						
						DSGN
/						DRN
						СНК
	APVD	ΒY	REVISIONS	DATE	NO.	APVD





HWY 400 WATERLINE RELOCATION

SHEET:	CD4			
DWG NO:				
DATE:	MARCH, 2019			
PROJ NO:	100182.15			

#### CONSTRUCTION DETAILS

FOR BIDS

NOTES: 1. ROUTE TEMPORARY PIPING FROM NEW MAIN TO FLUSHING PAD. SUPPORT PIPING AS REQUIRED. PROVIDE MINIMUM 24-INCH FLUSHING PIPE FOR 36 AND 42-INCH MAINS. 2. PROVIDE A MINIMUM OF 1 WEEK NOTICE FOR FLUSHING 3. PROVIDE DOWNSTREAM EROSION PROTECTION AS REQUIRED.