

Non-Potable Reuse Line Extension to Taylors Creek

for The City of Hinesville

at

Ft. Stewart

Liberty County, Georgia

June 9, 2020

Revised March 31, 2022

1. ALL CONSTRUCTION EQUIPMENT ENTERING FORT STEWART WILL BE REQUIRED TO ACCESS THROUGH THE 15TH STREET GATE (ACP 7). ONCE THE EQUIPMENT IS STAGED ON FORT STEWART THE CONTRACTOR WILL NOT BE REQUIRED TO ACCESS ACP 7 DAILY FOR CHECKS AND INSPECTIONS, HOWEVER IF THE EQUIPMENT LEAVES FORT STEWART ANY ACCESS BACK ONTO FORT STEWART WILL REQUIRE CHECKING AND INSPECTION AT ACP 7. ANY ACCESS THROUGH THE VETERANS PARKWAY GATE (ACP 8) SHALL REQUIRE SPECIAL COORDINATION WITH DES SECURITY DIVISION.

2. THE CONTRACTOR MUST OBTAIN VEHICLE PASSES FOR COMPANY/OFFICIAL VEHICLES. NO PERSONAL VEHICLES BELONGING TO CONSTRUCTION WORKERS WILL BE ALLOWED ON FORT STEWART FOR THIS PROJECT. ALL VEHICLES ENTERING WITH WORKERS WILL BE PERMITTED CONTRACTOR VEHICLES REGISTERED WITH THE FEDERAL GOVERNMENT. ALL WORKERS ENTERING FORT STEWART MUST HAVE A VALID PICTURE IDENTIFICATION.

3. DES SECURITY WILL REQUIRE AT LEAST THREE WEEKS NOTICE PRIOR TO UTILITY OR ROADWAY CONSTRUCTION OUTSIDE OF THE SITE BEGINNING TO ALLOW FORT STEWART RESIDENTS AND PERSONNEL TO BE NOTIFIED OF THE ANTICIPATED TRAFFIC CONGESTION. NO ROADWAY FULL OR PARTIAL CLOSURES FOR PAVEMENT CUTS WILL BE ALLOWED BETWEEN 05:00 TO 09:00, 11:00 TO 13:30 AND 16:00 TO 18:30, WEEKDAYS.

4. LIGHTING MUST BE MAINTAINED AT THE SITE DURING CONSTRUCTION. IF DAMAGED BY THE CONTRACTOR, THE CONTRACTOR MUST INSTALL TEMPORARY LIGHTING THAT PROVIDES THE SAME LUMINA VALUES AS THE EXISTING LIGHTS UNTIL SUCH TIME AS THE LIGHTING IS RESTORED.

5. KEYS AND LOCKS FOR ALL GATES WILL BE MAINTAINED BY ESG OPERATIONS.

6. ANY UTILITY AND ROADWAY WORK ON FORT STEWART WILL BE COORDINATED WITH DES SECURITY DIVISION.

7. THE CONTRACTOR SHALL REPLACE ALL MONUMENTS ALTERED OR DESTROYED BY THE CONSTRUCTION. THE REPLACED MONUMENT SHALL BE BY A GA RLS AND CERTIFIED TO FORT STEWART TO MEET FEDERAL STANDARDS

8. ALL TIMBER REMOVAL AND CLEARING ON FORT STEWART WILL BE REQUIRED TO COMPLY WITH THE FOLLOWING. ALL ABOVE GROUND TIMBER WILL BE TRANSPORTED AND STOCKPILED AT THE FORT STEWART CHIPPING SITE WITHIN THE SECURE AREA. ALL BELOW GROUND TIMBER (STUMPS AND ROOTS) SHALL BE DISPOSED OF AT A PERMITTED SITE. THE CONTRACTOR SHOULD ANTICIPATE THE DISPOSAL SITE WILL BE OFF FORT STEWART AND ACCESS BACK IN WILL BE THROUGH ACP 7.

9. NO BORROW MATERIAL IS AVAILABLE ON FORT STEWART. ALL BORROW MATERIAL TRANSPORTED ONTO FORT STEWART WILL BE THROUGH ACP 7.

10. ALL SIGNS LOCATED ON THE INSTALLATION WILL BE MANAGED BY FORT STEWART DURING CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE REMOVAL AND ADJUSTMENT OF SIGNS BY PROVIDING FORT STEWART OFFICIALS AT LEAST ONE WEEKS NOTICE OF SIGNS REQUIRING RELOCATION.

11. PROJECT MEETINGS WILL BE HELD WEEKLY TO REVIEW CONSTRUCTION STATUS, SECURITY ISSUES AND COORDINATION WITH FT STEWART DPW AND SECURITY

13. THE CONTRACTOR WILL BE REQUIRED TO PREPARE AND SUBMIT A SAFETY PLAN TO FT STEWART.

14. ANY WORK OUTSIDE OF THE SCOPE OF THE PLANS SHOWN WILL REQUIRE SECURITY APPROVAL PRIOR TO BEGINNING.

15. ARCHEOLOGICAL OR CULTURAL DISCOVERIES DURING CONSTRUCTION WILL IMMEDIATELY BE REPORTED TO FORT STEWART.

16. NO RIGHT OF WAY EXIST ON FORT STEWART. THE CONTRACTORS LIMITS OF DISTURBANCE, UNLESS OTHERWISE SPECIFICALLY INDICATED, SHALL BE LIMITED TO 10' OUTSIDE THE UTILITY MAINS BEING INSTALLED.

17. THE CONTRACTOR WILL BE REQUIRED TO OBTAIN PICTURE IDENTIFICATION CARDS FOR ALL PERSONNEL ENTERING FT STEWART

18. ALL EROSION AND SEDIMENT CONTROL ON THE PROJECT SHALL BE IN STRICT ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL MANUAL FOR GEORGIA.

19. THE WASTEWATER TREATMENT PLANT AND REUSE WATER SYSTEM MUST CONTINUE OPERATION FOR THE DURATION OF THE PROJECT. CLOSE COORDINATION WITH OPERATIONS PERSONNEL IS REQUIRED. THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY FINES OR EXPENSE OF OPERATIONS CAUSED BY INTERRUPTION, BY THE CONTRACTOR, OF ANY OPERATIONS TO MAINTAIN INTEGRITY OF THE TREATMENT PROCESS. INTERRUPTION OF THE PLANT OPERATIONS WILL NOT BE TOLERATED.

20. EXCEPT IN AN EMERGENCY, OPERATION OF ANY ISOLATION OR PROCESS VALVES OR EQUIPMENT CAN ONLY BE PERFORMED BY OPERATIONS PERSONNEL.

21. RELOCATION OF EQUIPMENT WILL REQUIRE COORDINATION WITH OPERATIONS PERSONNEL.

22. REHAB MATERIALS WILL MATCH NEW MATERIALS AS IT RELATES TO LOOKS AND PERFORMANCE.

SHEET INDEX:

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4. E&S PLANS	SHEETS 10-13
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GENERAL NOTES

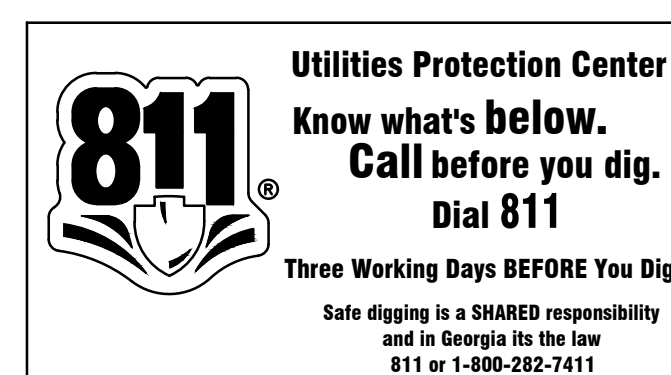
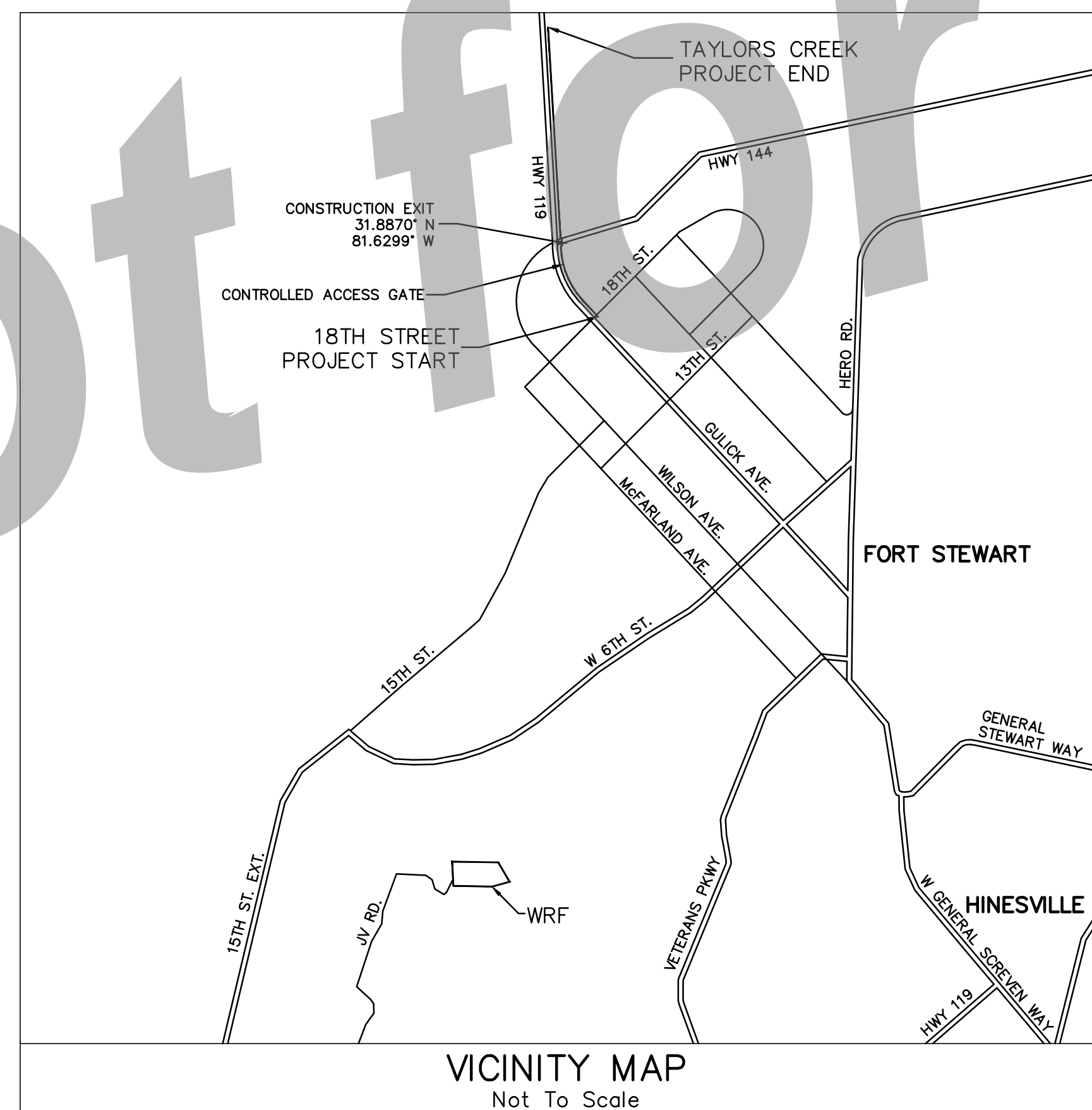
- ALL EXISTING UTILITIES SHOWN ARE LOCATED FROM BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ACTUAL FIELD LOCATION AND PROTECTION OF EXISTING UTILITIES. OVERHEAD LINES ARE NOT SHOWN FOR CLARITY.
- ALL DISTURBED AREAS TO BE RE-VEGETATED IMMEDIATELY AFTER CONSTRUCTION, IN ACCORDANCE WITH THE MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA.
- ALL EROSION AND SEDIMENTATION CONTROL STRUCTURES SHALL BE INSTALLED PRIOR TO START OF CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPLACEMENT OF ANY PROPERTY CORNERS, RIGHT OF WAY MONUMENTS, SIGNS OR OTHER STRUCTURES DISTURBED DURING CONSTRUCTION.
- ALL TRAFFIC AND SIGNAGE CONTROL SHALL BE IN ACCORDANCE WITH THE TRAFFIC CONTROL MANUAL GUCC, CURRENT EDITION.
- ALL STREET AND INFRASTRUCTURE INSTALLATION TO BE IN ACCORDANCE WITH CITY OF HINESVILLE STANDARDS.

OWNER/AGENT

CITY OF HINESVILLE
KENNETH HOWARD, CITY MANAGER
115 EAST M.L. KING JR. DRIVE
HINESVILLE, GA 31313
TEL: (912) 876-3564
FAX: (912) 369-2416



Level II Certification No. 935
Expiration Date: 10-01-23



JOB NO. 2017-100PRJ

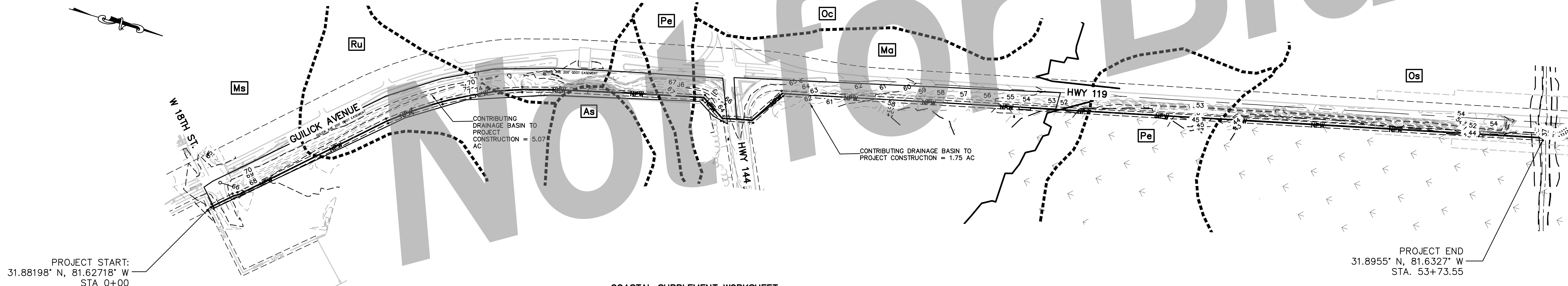
REVISION NO.	DATE	DESCRIPTION
1	12-17-18	PER GDOT COMMENTS
2	8-3-2020	TO UPDATE ES&PC DETAILS
3	12-20-20	ADDRESS E&S COMMENTS
4	2-6-21	RELOCATE RE-AERATION STRUCTURE OUT OF FLOOD PLAIN
5	3-23-21	UPDATE DISTURBED ACREAGE
6	3-12-22	MODIFIED PIPING ENTIRE ROUTE

GENERAL NOTES:

- TOTAL PROJECT ACRES = 2.46 AC
- EROSION AND SEDIMENT CONTROL TO BE IN ACCORDANCE WITH THE PUBLICATION ENTITLED "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA".
- ALL DISTURBED AREAS ARE TO BE REVEGETATED IMMEDIATELY AFTER CONSTRUCTION IN ACCORDANCE WITH THE PUBLICATION ENTITLED "MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA".
- THE INSTALLATION OF EROSION CONTROL MEASURES AND PRACTICES SHALL OCCUR PRIOR TO OR CONCURRENT WITH LAND DISTURBING ACTIVITIES.
- EROSION CONTROL MEASURES WILL BE MAINTAINED AT ALL TIMES. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY BY ON SITE INSPECTION.
- RIPRAP WILL BE USED TO STABILIZE DITCH BANKS IN AREAS WHERE STORM WATER FLOW CHANGES DIRECTION OR SLOPES ALLOW VELOCITY TO EXCEED 2 FT/SEC.
- UTILITY AND STREET INSTALLATION TO BE IN ACCORDANCE WITH THE CITY OF HINESVILLE STANDARD SPECIFICATIONS.
- NO RIGHT-OF-WAY PRESENT ON FT. STEWART
- TRAFFIC CONTROL TO BE IN ACCORDANCE WITH THE CURRENT MUTCD.
- REUSE LINE TO BE INSTALLED USING A COMBINATION OF TRENCHING AND BORING.

LEGEND FOR EROSION AND SEDIMENT CONTROL PRACTICES		
CODE	PRACTICE	DESCRIPTION
Co	CONSTRUCTION EXIT	A STONE PAD LOCATED AT THE JOB SITE EXIT TO REMOVE MUD AND DEBRIS FROM TIRES AND PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC ROADS.
Ch	CHANNEL STABILIZATION	LOOSE ROCK OR SIMILAR DURABLE MATERIAL INSTALL ON SLOPES FOR PROTECTION FROM EROSION CAUSED BY WATER TURBULENCE OR HIGH VELOCITIES.
Sd1	SILT FENCE (SEE DETAIL TYPE)	A TEMPORARY SEDIMENT BARRIER CONSISTING OF A FILTER FABRIC STRETCHED ACROSS AND ATTACHED TO SUPPORTING POSTS AND ENTRENCHED.
St	SEDIMENT TRAP	EXCAVATING AROUND A STORM DRAIN, DROP INLET TO CATCH SEDIMENT.
S	STORM DRAIN OUTLET PROTECTION	PAVED OR ROCK SECTION BELOW A STORM DRAIN OUTLET FOR PROTECTION FROM EROSION CAUSED BY WATER TURBULENCE OR HIGH VELOCITIES.
Ds1	DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)	APPLYING PLANT RESIDUES OR OTHER SUITABLE MATERIALS NOT PRODUCED ON THE SITE TO THE SOIL SURFACE SUCH AS GRAIN STRAW, HAY, PINE NEEDLES, WOOD WASTE AND SHREDDED RESIDUES.
Ds2	DISTURBED AREA STABILIZATION (WITH TEMPORARY SEEDINGS)	ESTABLISHING TEMPORARY VEGETATIVE COVER SUCH AS RYE, SUDANGRASS, WHEAT, OR RYEGRASS ON DISTURBED AREAS.
Ds3	DISTURBED AREA STABILIZATION (WITH PERMANENT VEGETATION)	ESTABLISHING PERMANENT VEGETATIVE COVER SUCH AS TREES, SHRUBS, VINES, GRASSES, SOD, OR LEGUMES ON DISTURBED AREAS.
CR-Hb	CHECK DAM - (HAYBALE TYPE)	SMALL TEMPORARY BARRIER, GRADE CONTROL STRUCTURE, OR DAM CONSTRUCTED ACROSS A SWALE, DRAINAGE DITCH, OR AREA OF CONCENTRATED FLOW.

DRAWING LEGEND		
DESCRIPTION	PROPOSED	EXISTING
SANITARY SEWER	—	SS
UNDERGROUND WATER LINE	W	W
FORCE MAIN	FM	FM
STORM DRAINAGE PIPE	—	—
UNDERGROUND TELEPHONE LINE	T	T
UNDERGROUND TELEPHONE CONDUIT	TC	TC
UNDERGROUND GAS LINE	12" G	12" G
DITCH CENTERLINE	—	—
TOP OF CURB & GUTTER ELEVATIONS	TC=90.00 G=89.50	EX TC=90.00 EX G=89.50
SPOT ELEVATION		
FIRE HYDRANT	⊗	⊗
SEWER MANHOLE	⊗	⊗
WATER VALVE	⊗	⊗
TELEPHONE MANHOLE	⊗	⊗
LIGHT POLE	⊗	⊗
SIGN	⊗	⊗
WATER METER	⊗	⊗
BENCHMARK	⊗	⊗
CONCRETE MONUMENT FOUND	⊗	⊗
GUY POLE	⊗	⊗
IRON PIN FOUND	⊗	⊗
IRON PIN SET	⊗	⊗
TELEPHONE PEDESTAL	⊗	⊗
POWER POLE	⊗	⊗
HANDICAP SPACE	⊗	⊗
SEDIMENT BASIN MARKER W/NOTCH	⊗	⊗



PROJECT START:
31.88198° N, 81.62718° W
STA 0+00

PROJECT END
31.8955° N, 81.6327° W
STA. 53+73.55

COASTAL SUPPLEMENT WORKSHEET

THIS PROJECT IS AN INFRASTRUCTURE PROJECT AND ADDS ONLY 384 SF OF IMPERVIOUS AREA (RE-AERATION BASIN ENCLOSURE) TO THE SITE.
RUNOFF REDUCTION FOR 95TH PERCENTILE RAINFALL EVENT (1.94 INCH STORM EVENT) FOR THE PROJECT THAT CREATE OR ADD 5,000 SF OR GREATER OF NEW IMPERVIOUS SURFACE.
NO CSS WORKSHEET PREPARED.

EROSION CALCULATIONS

DISTURBED AREA = 1.7 AC
CONTRIBUTING DRAINAGE BASIN = 6.82 ACRES

SEDIMENT STORAGE REQUIRED:
6.82 AC X 67 CY/AC = 457 CY

SEDIMENT STORAGE PROVIDED:
TOTAL LENGTH Sd1 = 4604 LF
GSWCC REQUIRED SILT FENCE = 100' PER 1/4 ACRE
SILT GENERATED PER ACRE = 67 CY
67 CY/4 = 16.75 CY PER 1/4 ACRE
16.75 CY PER 100 LF = 0.1675 CY PER FOOT
.17 CY/LF X 4,604 LF = 782 CY

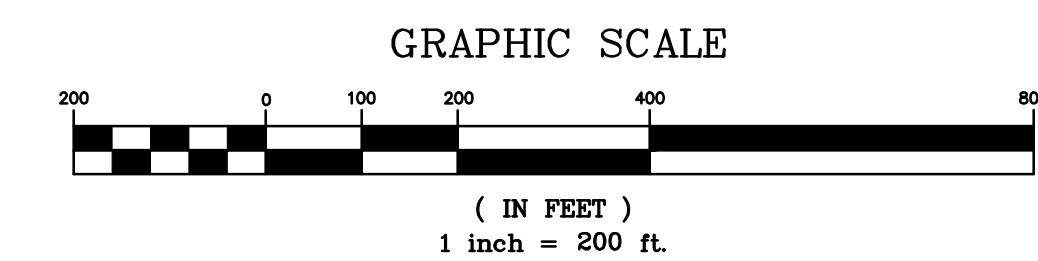
THERE WILL BE NO MASS GRADING RESULTING IN CHANGES OF CONTOUR LINES.

ALL BMPs ARE COMBINED INTO A SINGLE SET OF BMPs ONLY.

THE WETLANDS LOCATED INSIDE THE PROJECT AREA WILL BE DIRECTIONALLY BORED, MINIMIZING DISTURBANCES INSIDE THE DRAINAGE BASINS.

IT IS OUR PROFESSIONAL OPINION THAT THE INSTALLATION OF A SEDIMENT BASIN ON THIS PROJECT IS NOT NECESSARY OR FEASIBLE. CONTRACTOR/OWNER WILL NOT HAVE ADEQUATE AREA ON THE PROJECT TO INSTALL A SEDIMENT BASIN. THE SEDIMENT BASIN INSTALLATION WOULD CREATE MORE LAND DISTURBANCE THAN THE PROPOSED PROJECT. ADDITIONALLY, SITE TOPOGRAPHY DOES NOT ALLOW FOR SITE DRAINAGE TO SEDIMENT BASINS WITHOUT INCREASING THE POTENTIAL FOR INCREASED EROSION ACROSS THE SITE. IT IS OUR PROFESSIONAL OPINION THAT THE INSTALLATION OF THE BMPs IN THESE CONSTRUCTION PLANS, AND PROPER MAINTENANCE, SHOULD PROVIDE SUFFICIENT SEDIMENT STORAGE.

SOILS SERIES LEGEND	
As	ALBANY LOAMY FINE SAND, 0-2% SLOPE
Mq	MADARIN FINE SAND, 0-2% SLOPE
Me	MASCOTTE FINE SAND, 0-2% SLOPE
Ms	MASCOTTE-URBAN LAND COMPLEX, 0-2% SLOPE
Oc	OCCILLA LOAMY FINE SANDS
Os	OSIER AND BIBB SOILS
Pe	PELHAM LOAMY SAND, 0-2% SLOPES, FREQ. FLOODED
Ru	RUTLEGE FINE SAND



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REVISED: 8-3-2020 TO UPDATE ESR&PC DETAILS
12-20-2020 TO UPDATE ESR&PC COMMENTS
2-05-2021 REAERATION STRUCTURE OUT OF FLOOD PLAIN
3-23-21 MODIFY DISTURBED AREA AND UPDATE DWG

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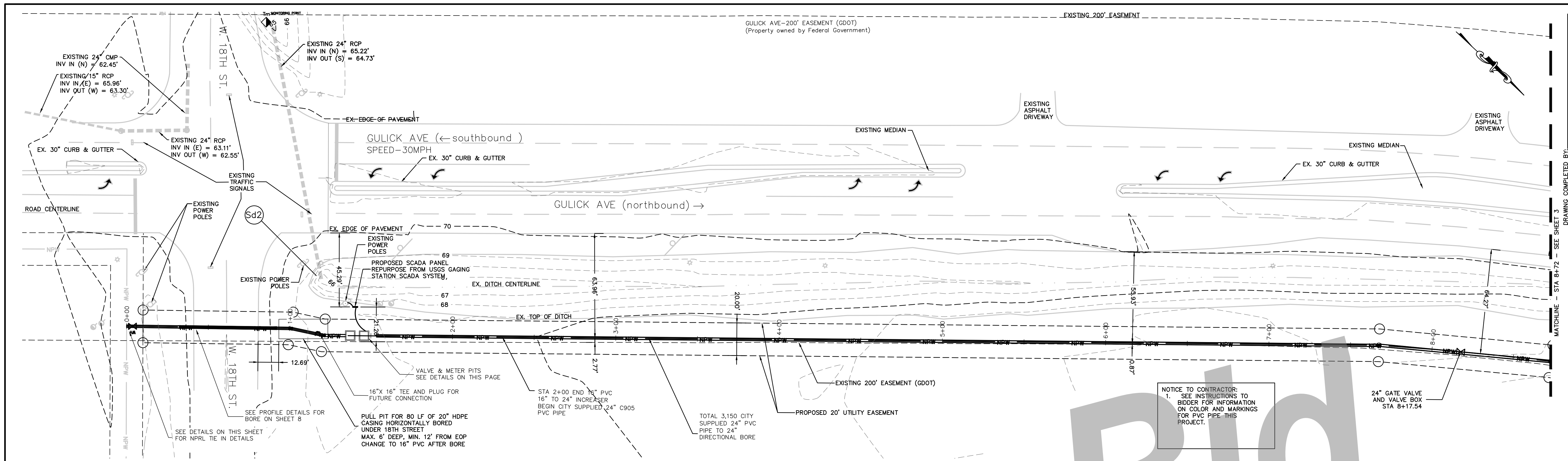
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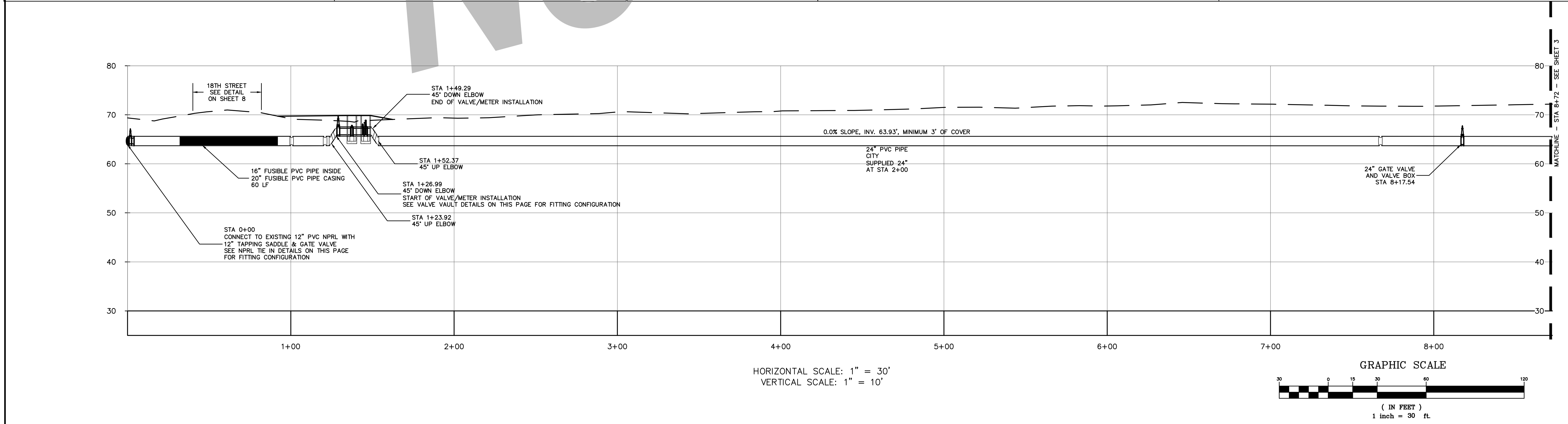
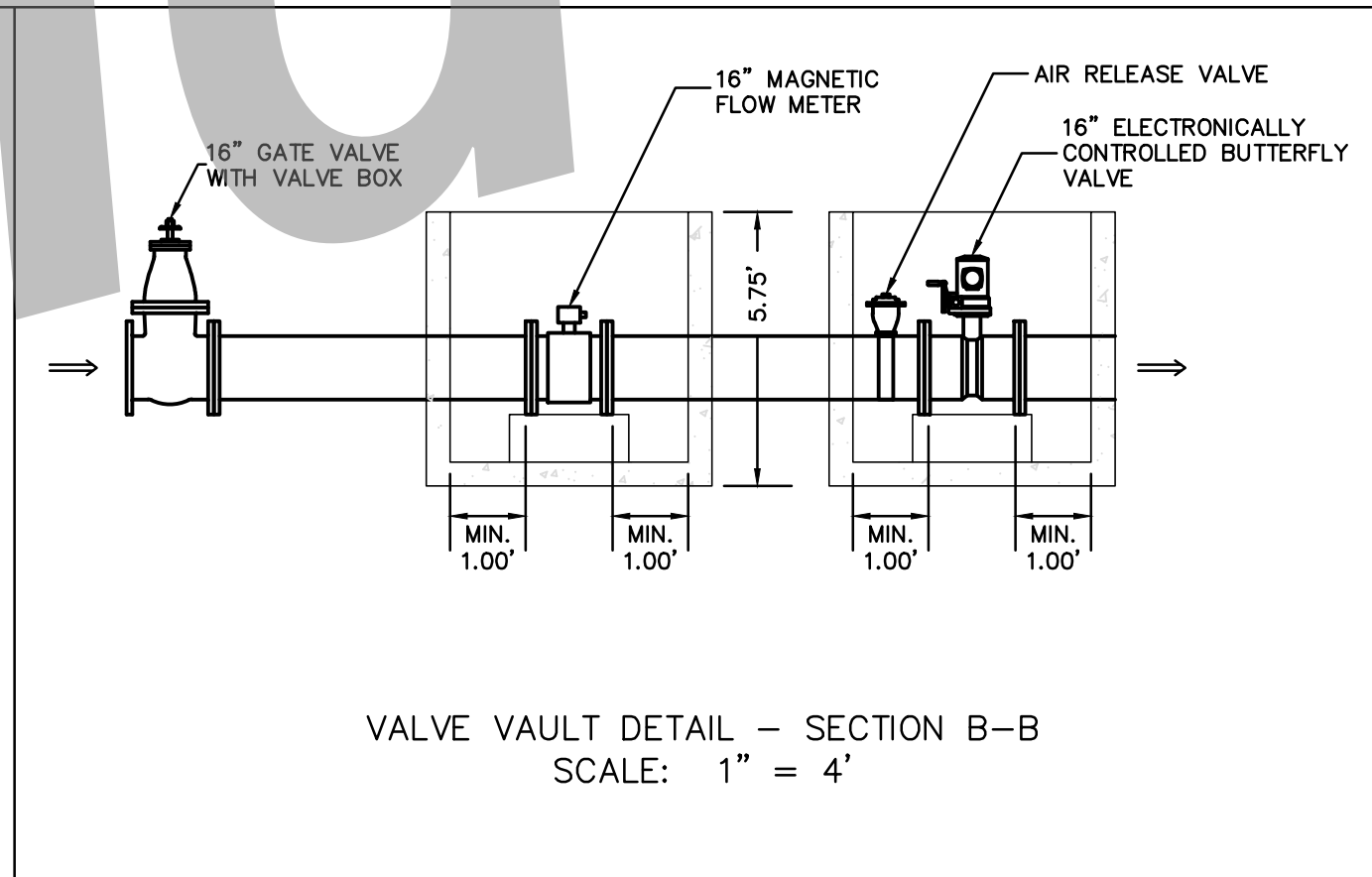
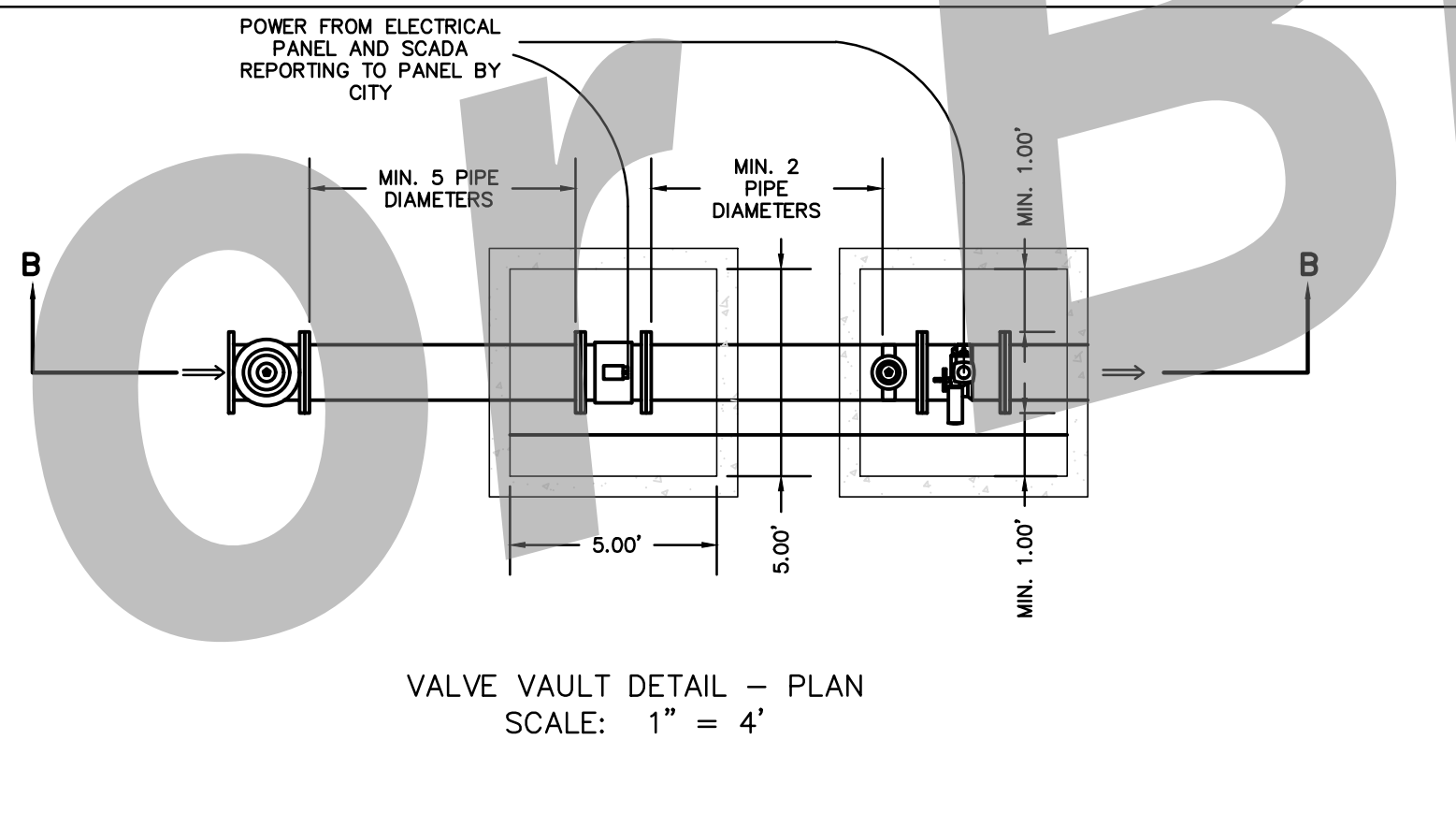
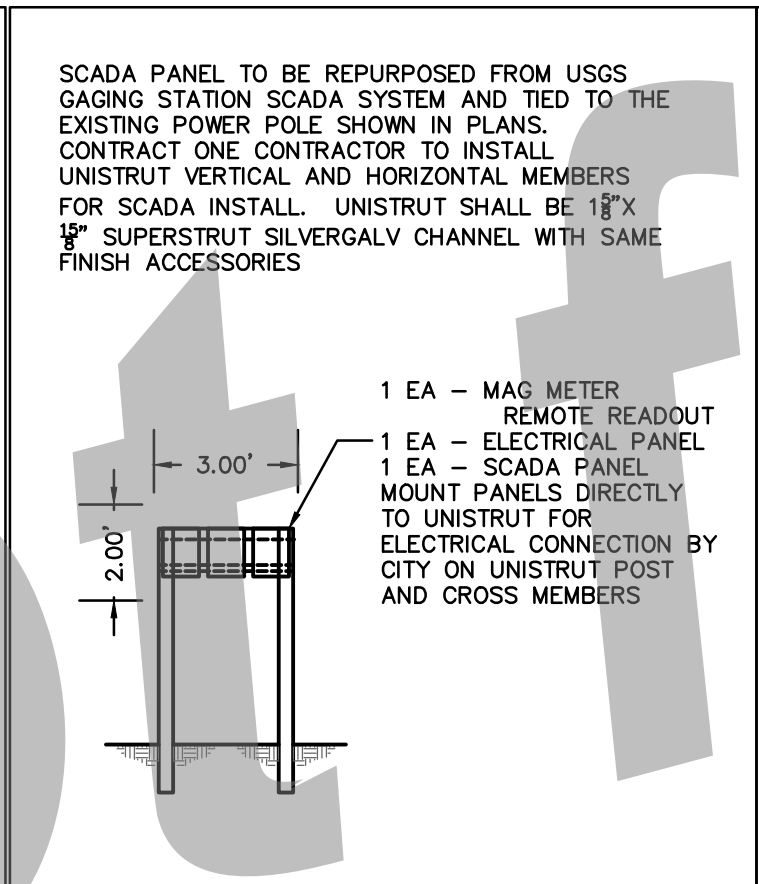
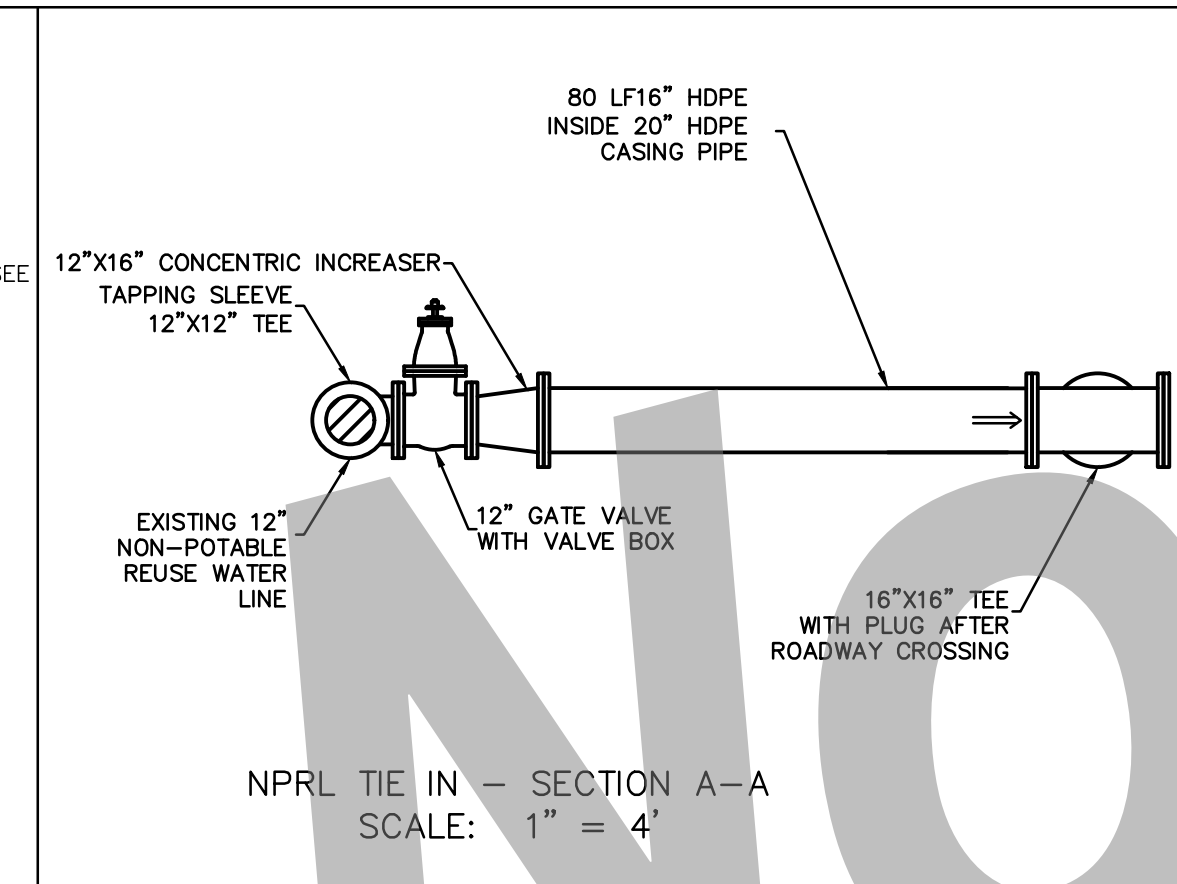
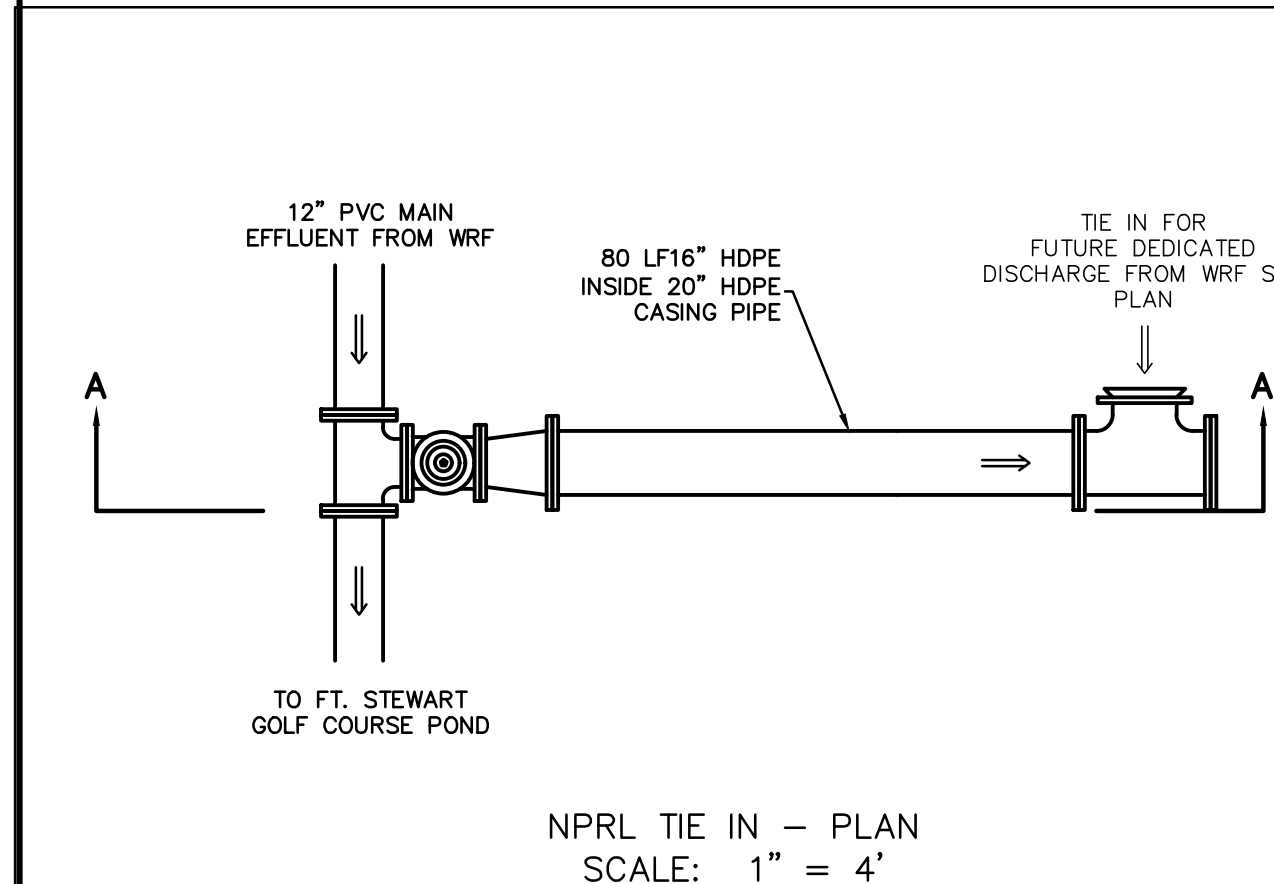
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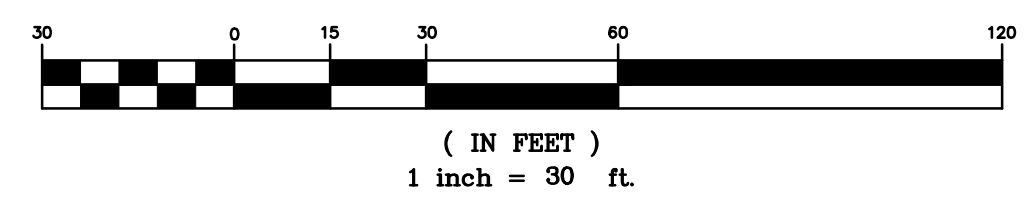
Plan
DATE: JUNE 9, 2020
FILE NO: 2017-100PRJ
SHEET: 1



NOTICE TO CONTRACTOR:
 1. SEE INSTRUCTIONS TO BIDDER FOR INFORMATION ON COLOR AND MARKINGS FOR PVC PIPE THIS PROJECT.



HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 10'



REVISIONS: 02-27-2020 PER URBAN DESIGN COMMENTS
 12-20-2020 TO UPDATE ESR&C COMMENTS
 2-05-2021 REVISION STRUCTURE OUT OF FLOOD PLAN
 3-23-21 MODIFY DISTURBED AREA AND UPDATE DWG
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 MATCHLINE - STA 8+72 - SEE SHEET 3

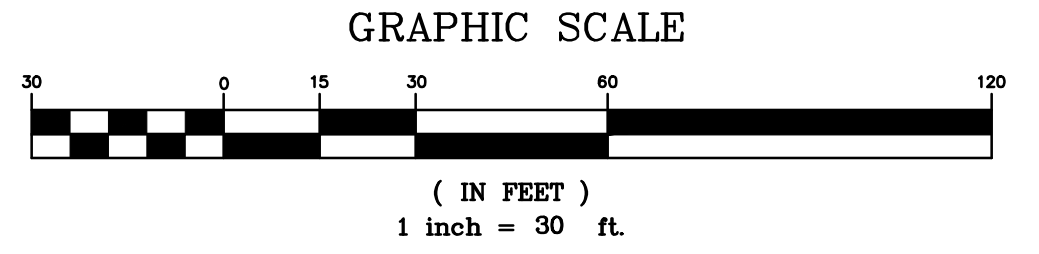
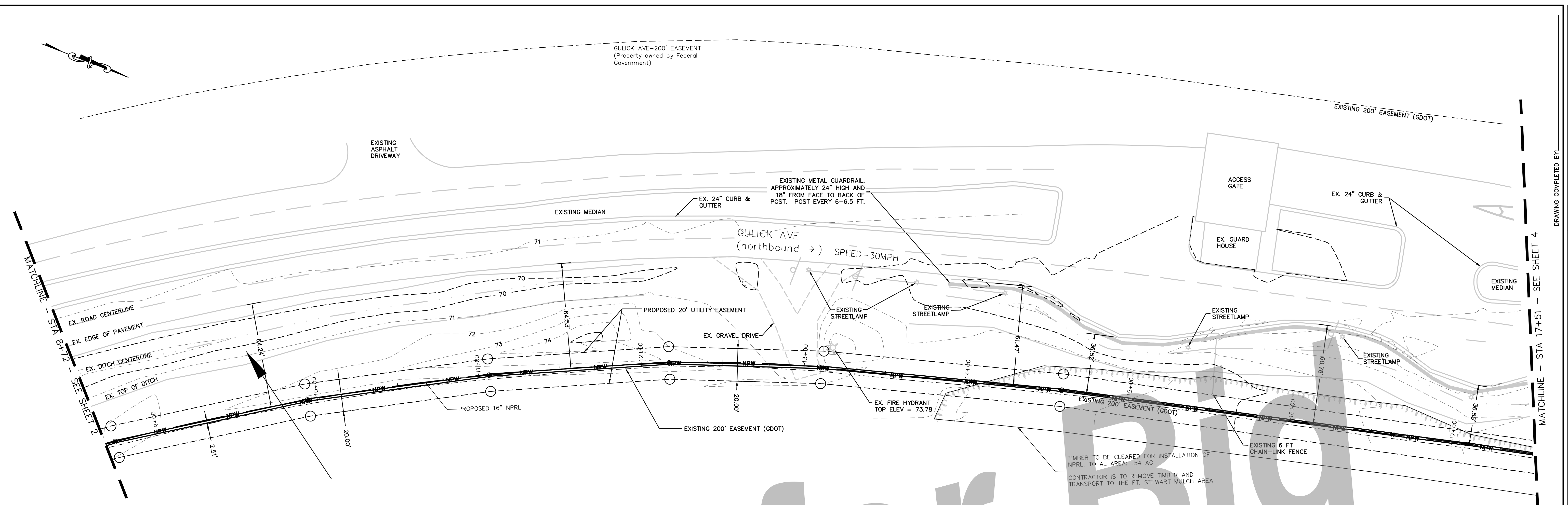
GEORGIA REGISTERED PROFESSIONAL ENGINEER
 PAUL C. SIMONTON
 LICENSE NO. 1000000935
 DATE:

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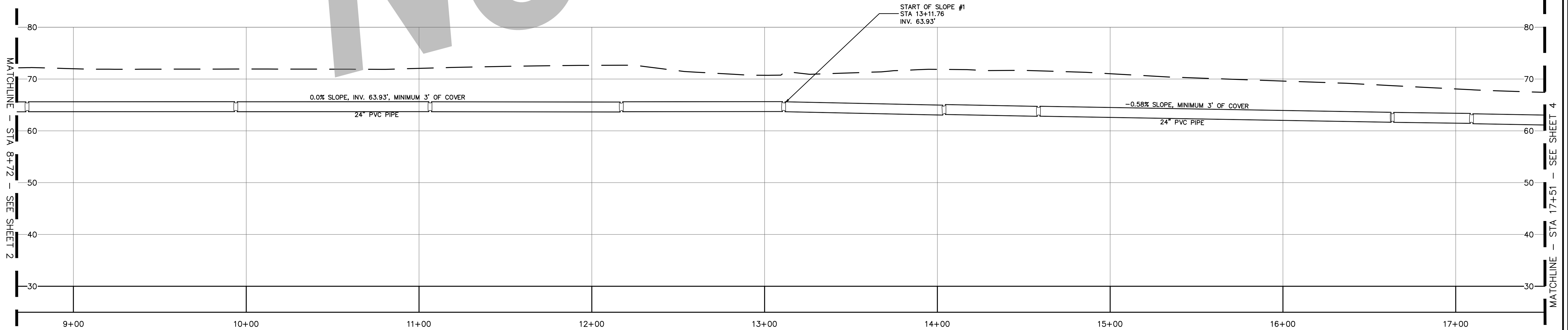
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Plan & Profile
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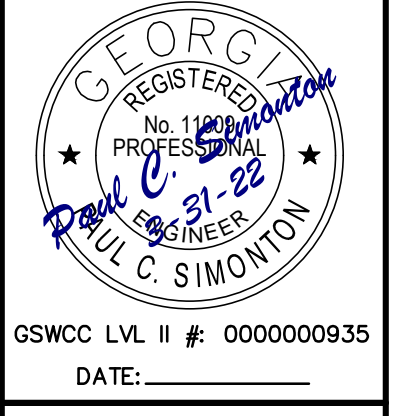


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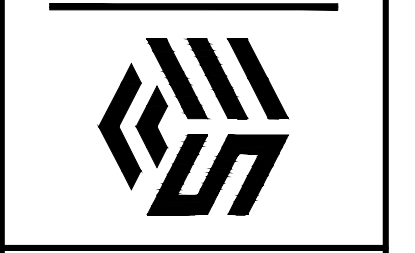
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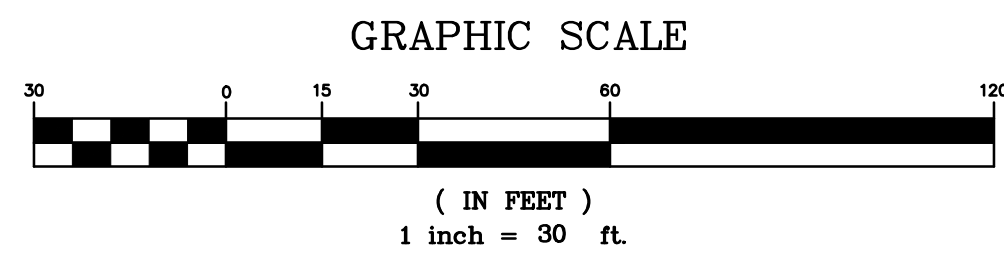
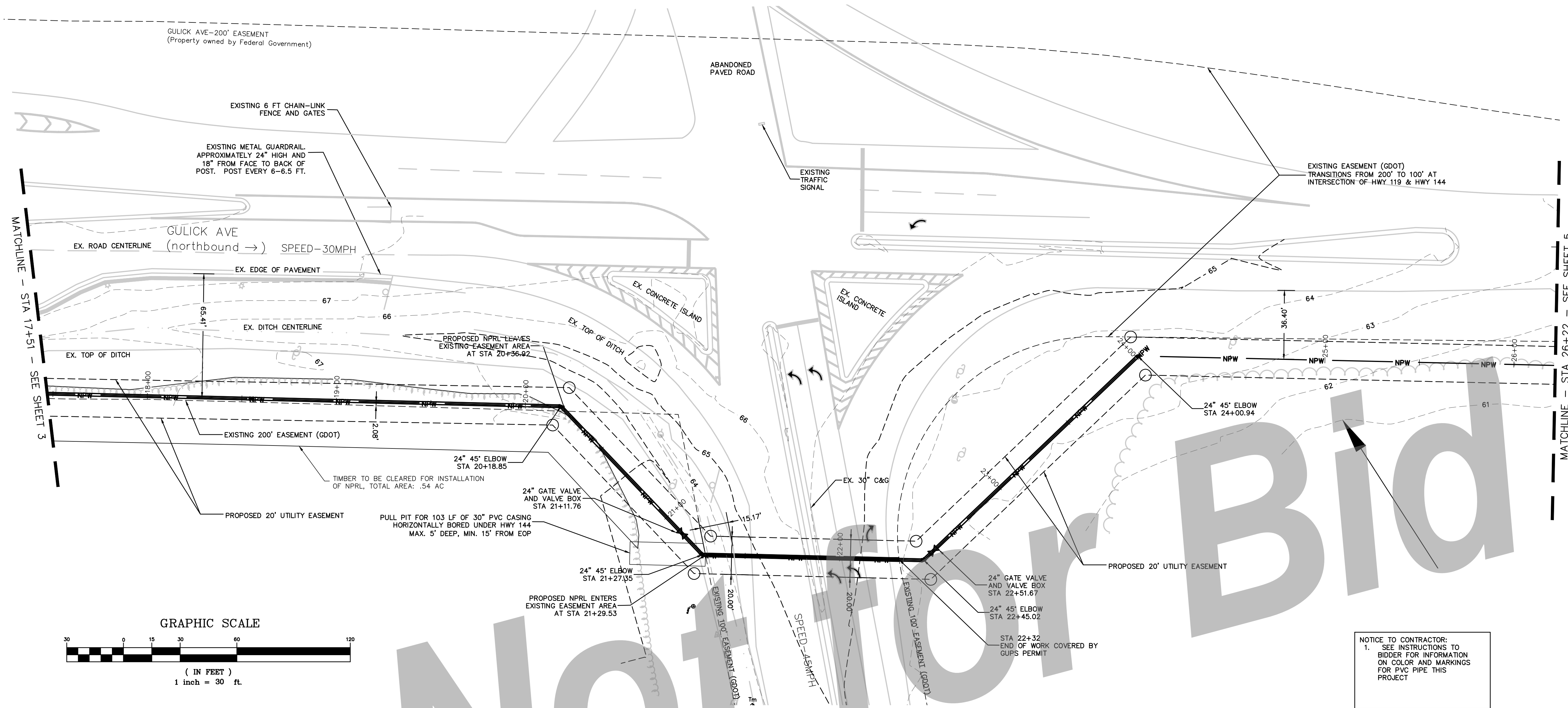
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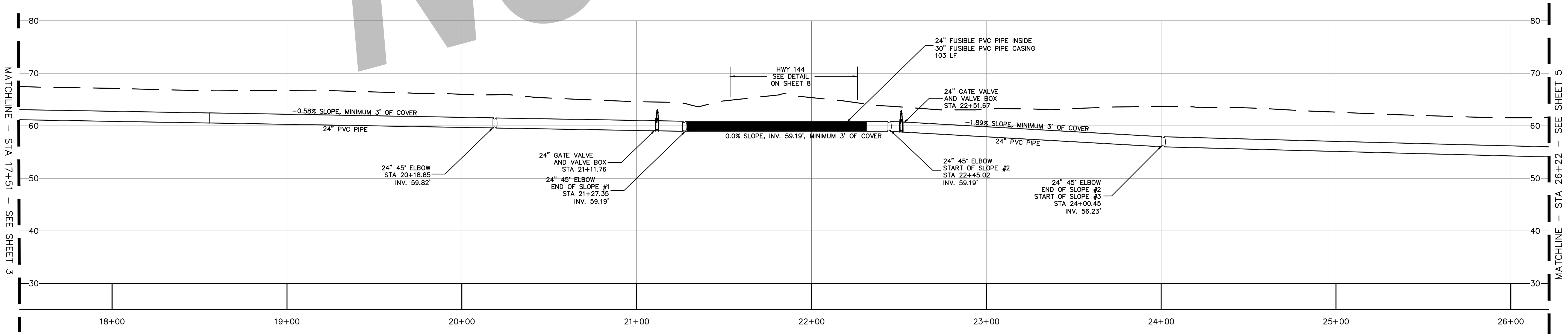


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 Liberty County, Georgia

Plan & Profile
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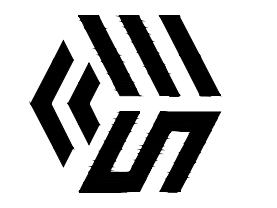
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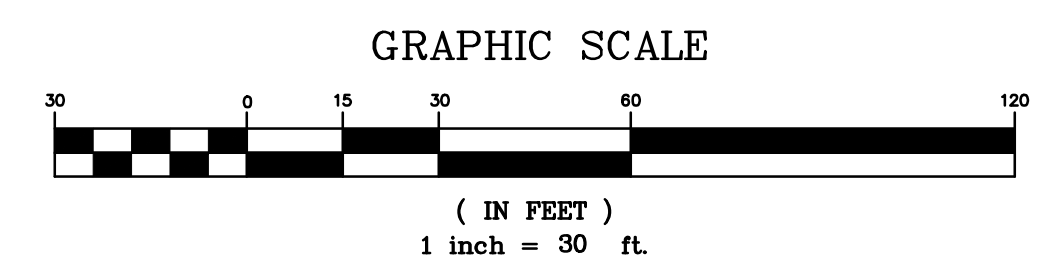
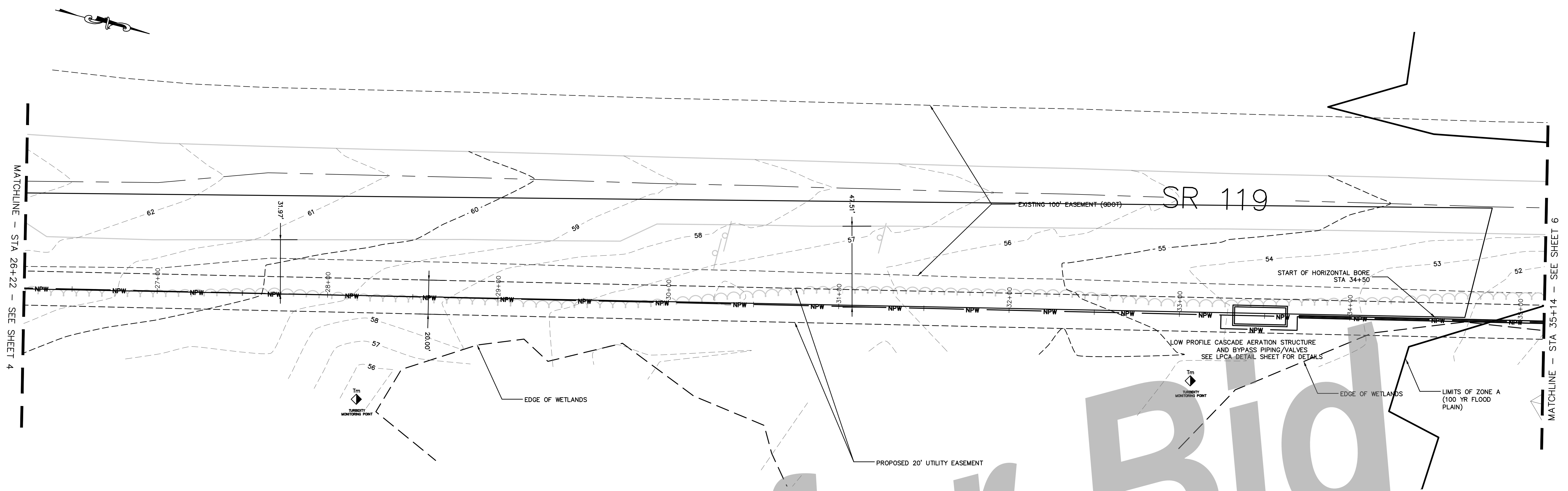
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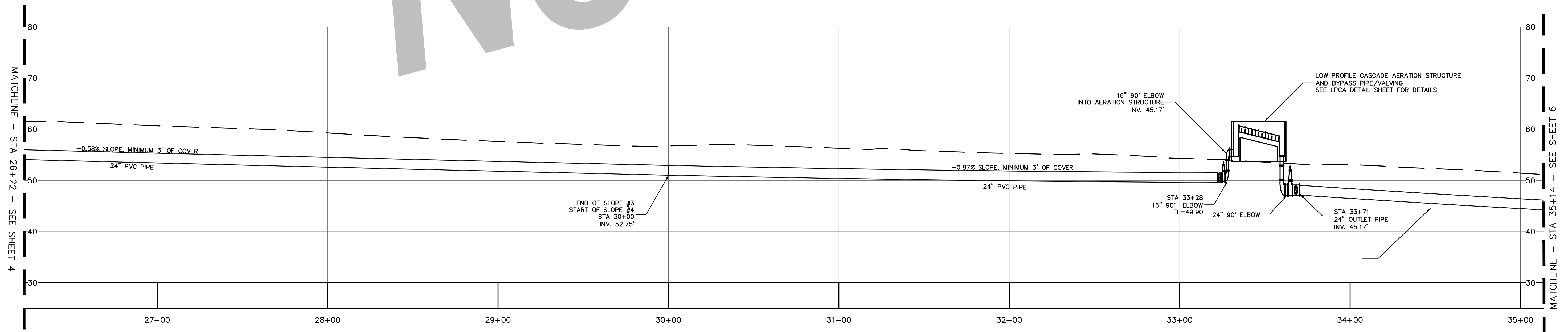
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 for
The City of Hinesville
 Hinesville
 Liberty County, Georgia

Plan & Profile

DATE: JUNE 9, 2020
 FILE NO: 2017-100PRJ
 SHEET: 4



NOTICE TO CONTRACTOR:
 1. SEE INSTRUCTIONS TO BIDDER FOR INFORMATION ON COLOR AND MARKINGS FOR PVC PIPE THIS PROJECT



HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 10'

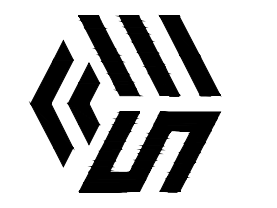
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 3-23-21 MODIFY DISTURBED AREA AND UPDATE DWG
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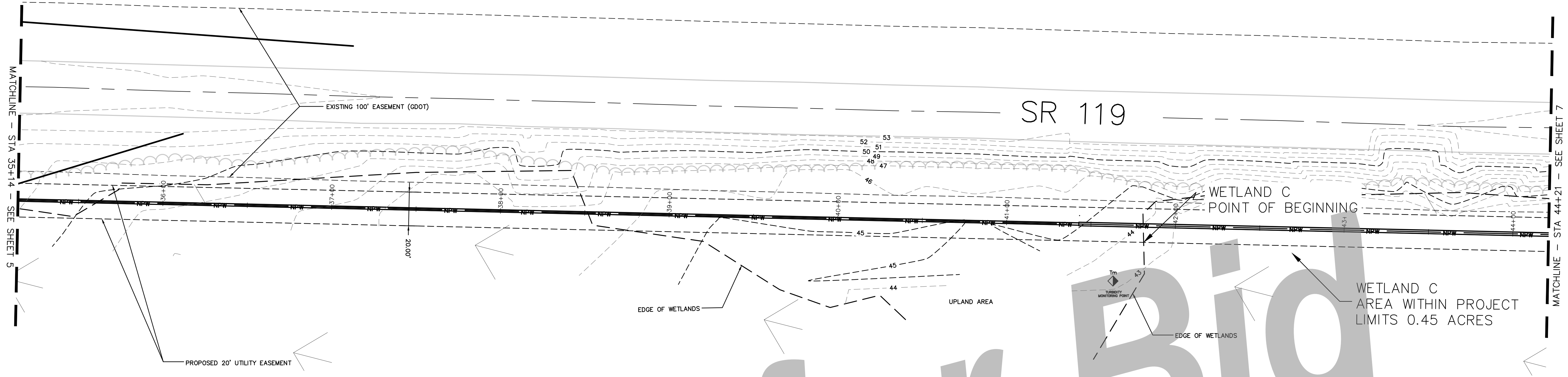
SIMUNTON ENGINEERING



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 Hinesville
 Liberty County, Georgia

Plan & Profile

DATE: JUNE 9, 2020
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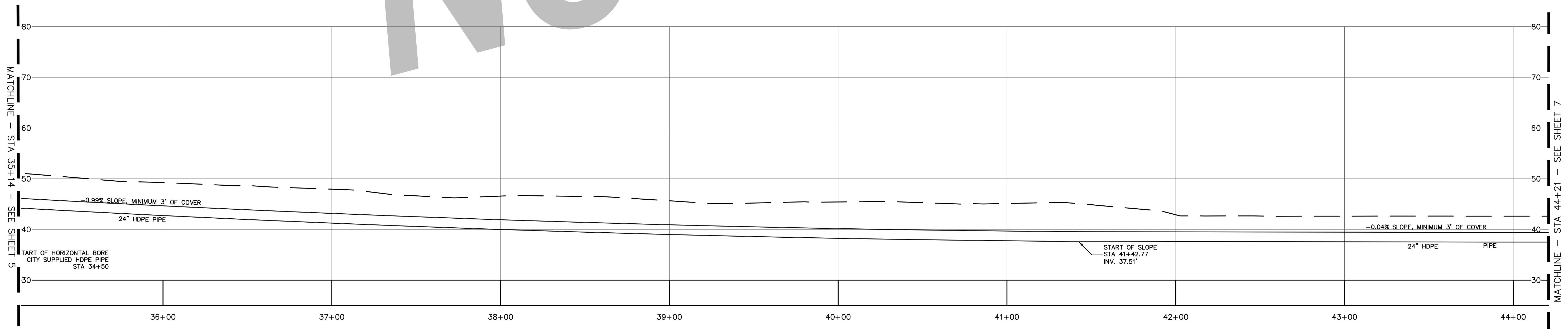
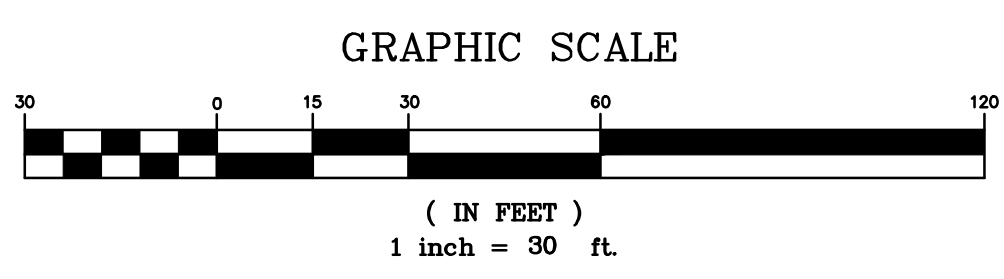


SR 119

WETLAND C
POINT OF BEGINNING

WETLAND C
AREA WITHIN PROJECT
LIMITS 0.45 ACRES

NOTICE TO CONTRACTOR:
1. SEE INSTRUCTIONS TO
BIDDER FOR INFORMATION
ON COLOR AND MARKINGS
FOR PVC PIPE THIS
PROJECT.



HORIZONTAL SCALE: 1" = 30'
VERTICAL SCALE: 1" = 10'

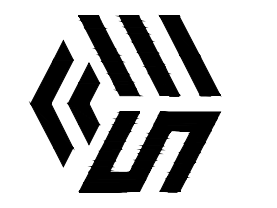
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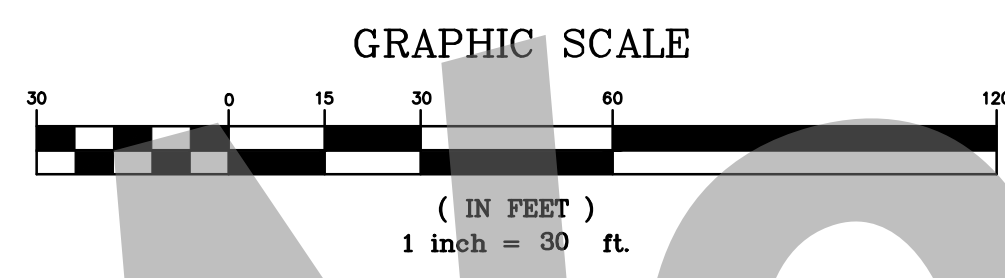
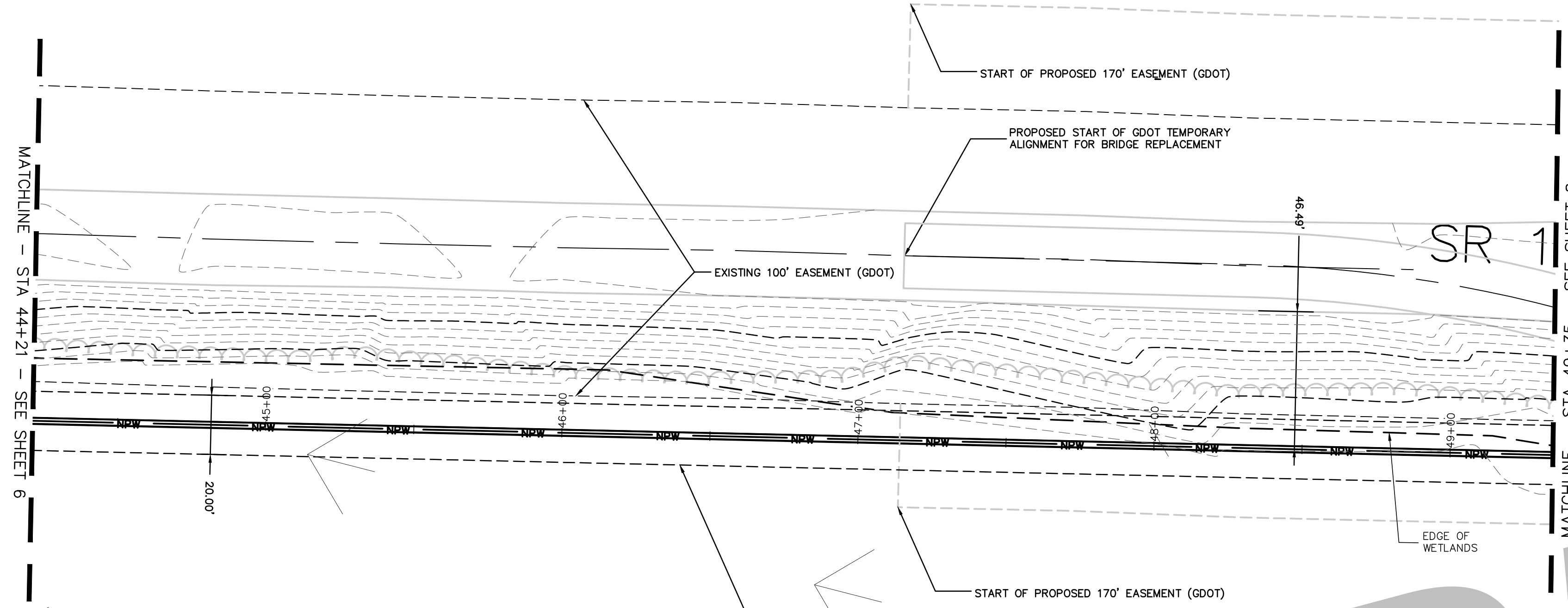
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Plan & Profile

DATE: JUNE 9, 2020
FILE NO: 2017-100PRJ
SHEET: 6



NOTICE TO CONTRACTOR:
 1. SEE INSTRUCTIONS TO BIDDER FOR INFORMATION ON COLOR AND MARKINGS FOR PVC PIPE THIS PROJECT

HORIZONTAL SCALE: 1" = 30'
 VERTICAL SCALE: 1" = 10'

Not for Bid

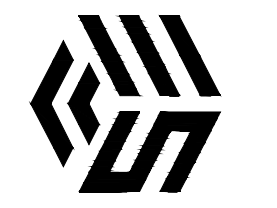
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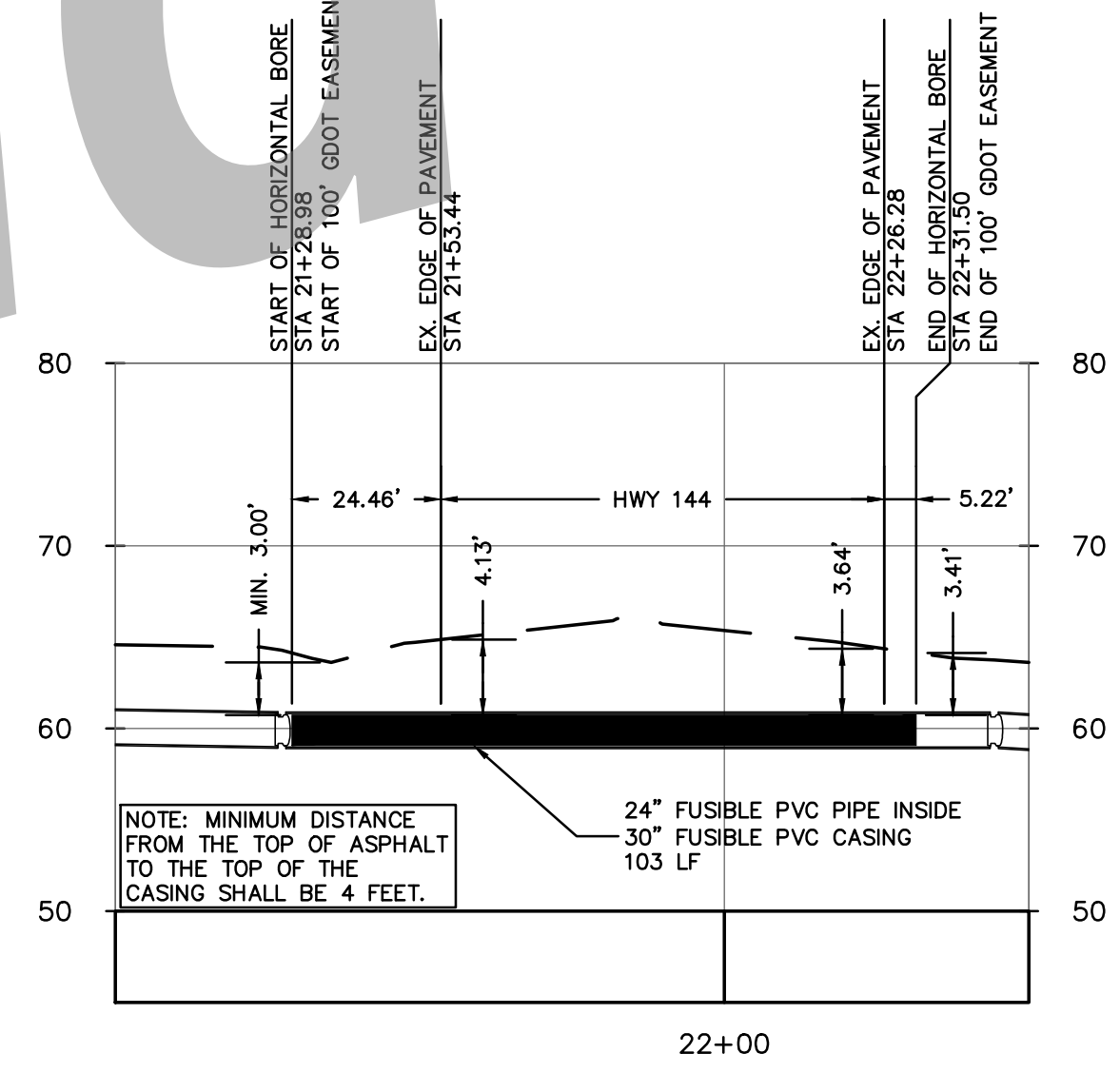
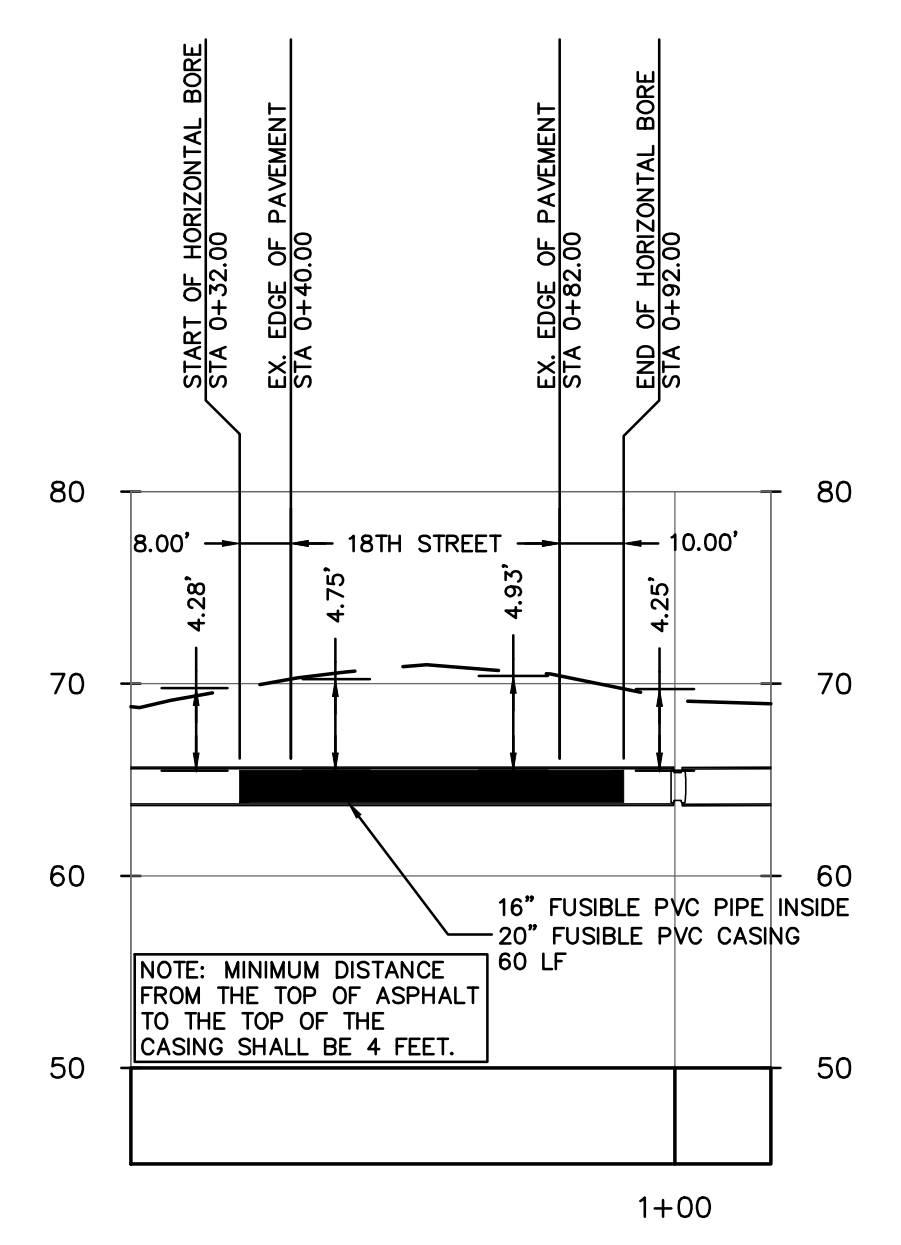
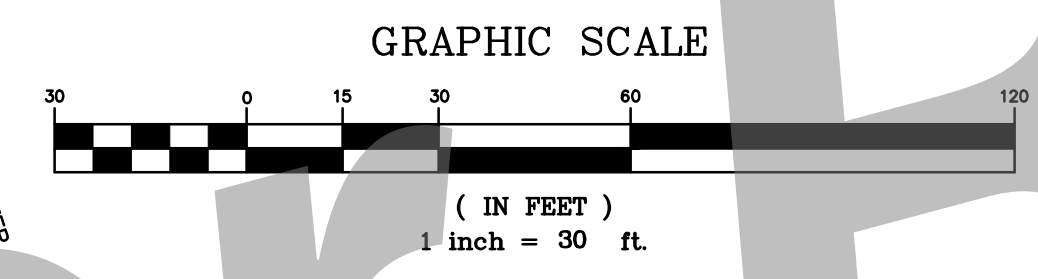
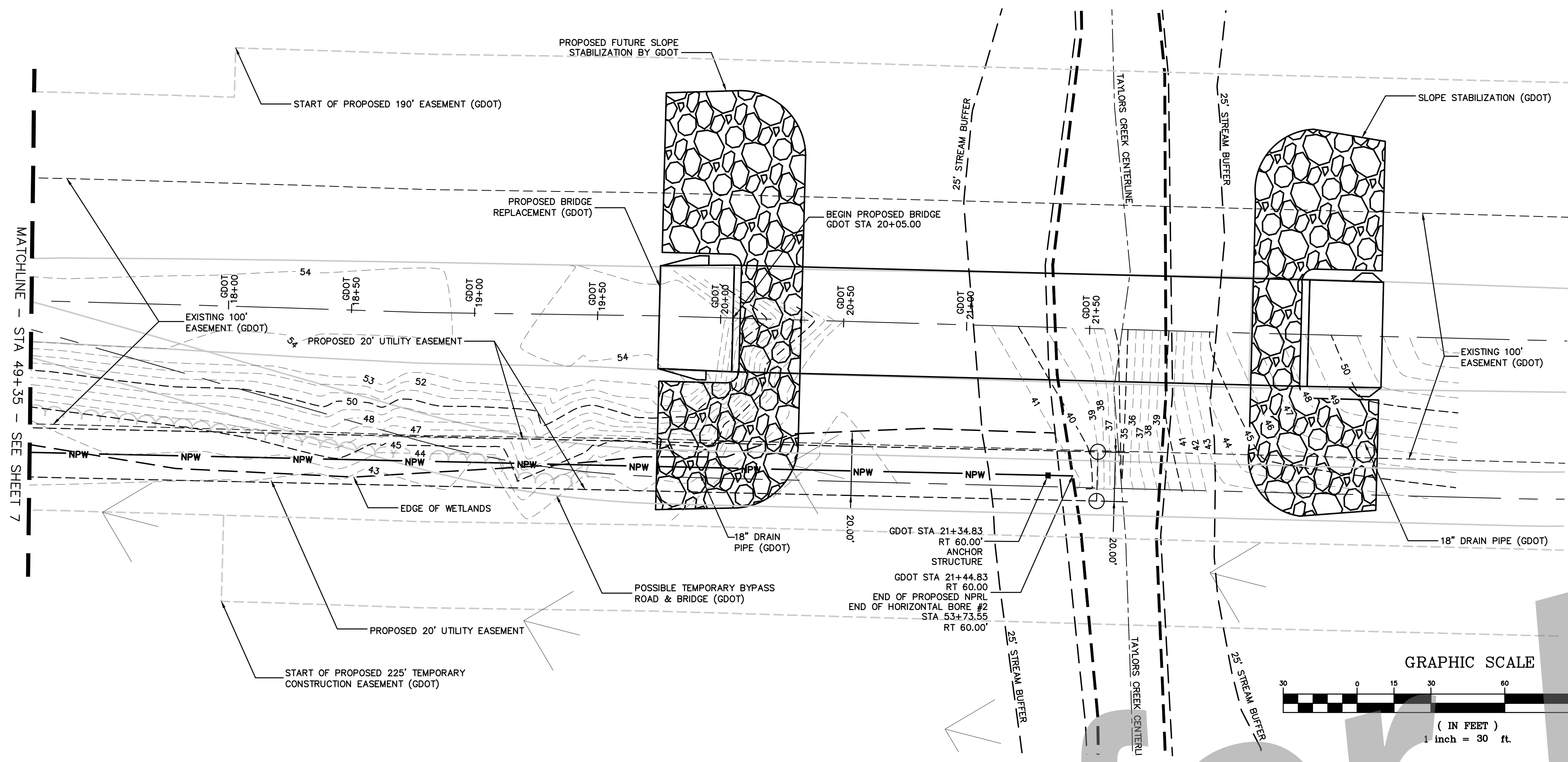
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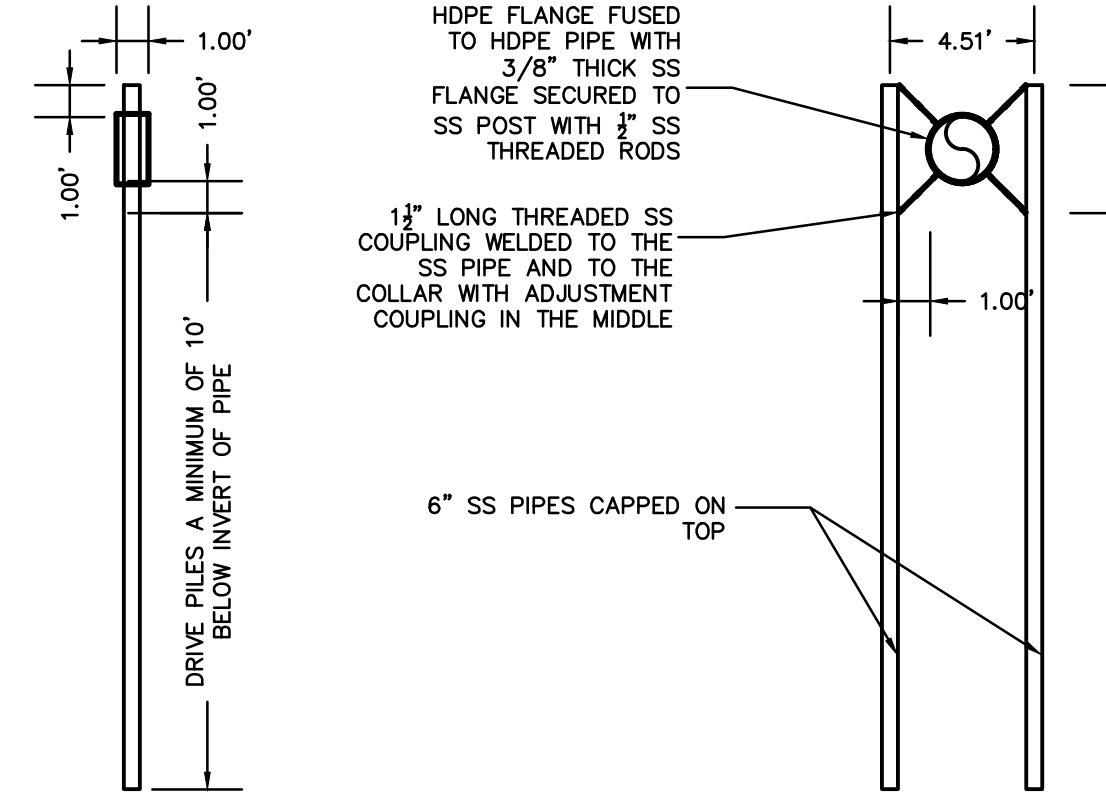
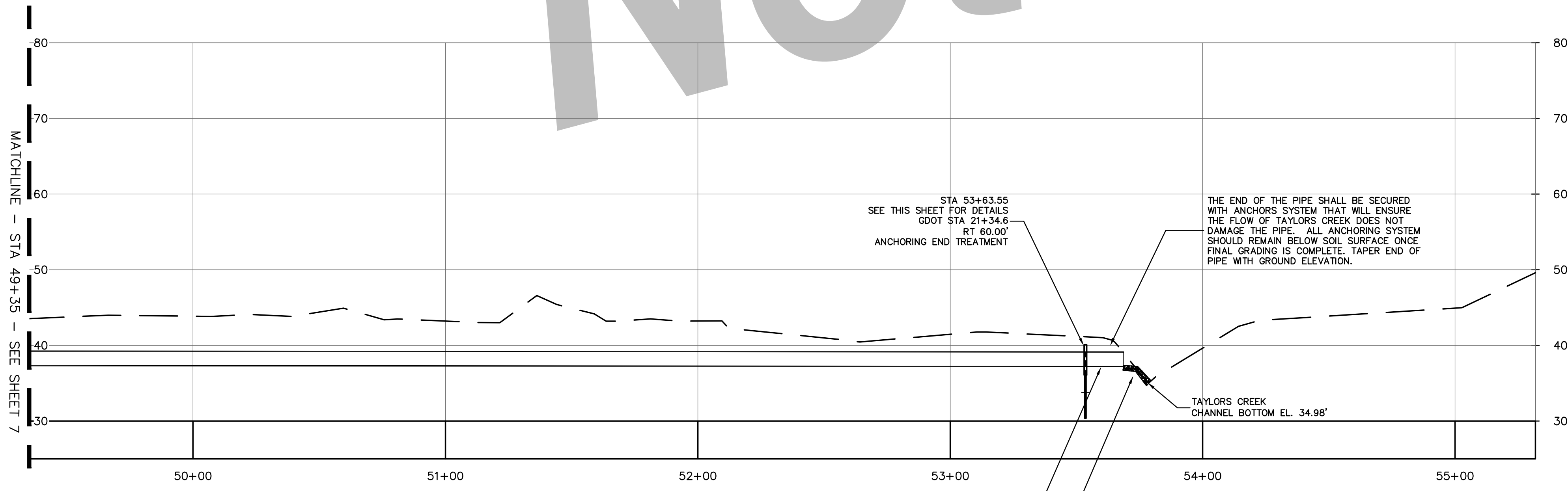
Plan & Profile

DATE: JUNE 9, 2020
 FILE NO: 2017-100PRJ
 SHEET: 7



- CONSTRUCTION NOTES:
- HORIZONTAL BORE: PIPE SHALL BE FUSED AND LAID ALONG HWY 119 ON THE OPPOSITE SIDE OF TAYLORS CREEK THEN PULLED BACK THROUGH THE BORE PIT.
 - PIPELINE CONTRACTOR SHALL WORK WITH BRIDGE CONTRACTOR IF ON SITE TO INSTALL PIPE AND MAINTAIN OPERATION OF THE PIPE DURING CONSTRUCTION OF THE BRIDGE, IF BRIDGE CONSTRUCTION HAS STARTED BEFORE BORE IS COMPLETE. IF PIPELINE IS INSTALLED FIRST, THE PIPELINE CONTRACTOR WILL COOPERATE WITH BRIDGE CONTRACTOR IF ON SITE TO AVOID CONFLICTS AND KEEP PIPELINE IN OPERATION.

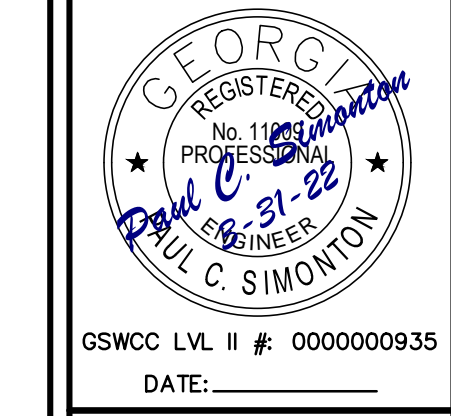
PROJECT DESCRIPTION OF ENCROACHMENT:
 HORIZONTAL BORE: THE HORIZONTAL WILL BEGIN AT PIPELINE STATION 34+50 AND CONTINUE WITH THE HORIZONTAL BORE FOR 2,200 LF TO TAYLORS CREEK. THE BORE WILL INTERCEPT TAYLORS CREEK AT AN ANGLE OF APPROXIMATELY 90°. THE FUSED JOINT PIPE WILL THEN BE ASSEMBLED AND PREPARED FOR THE PULL BACK ON THE SHOULDER OF HWY 119. THE PIPE WILL BE CONNECTED TO THE CUTTER HEAD AND WILL BE PULLED BACK THROUGH THE BORED HOLE ENLARGING IT TO ACCEPT THE 24" PIPE. THE CUTTER DEBRI (MUD) WILL BE COLLECTED AT THE ORIGINAL ENTRY POINT (STA 34+50) ON AN UPLAND SITE WHERE IT WILL BE COLLECTED THEN TRANSPORTED TO A LANDFILL FOR DISPOSAL. ONCE COMPLETE THE TWO STAINLESS STEEL POLES WILL BE DRIVEN INTO THE SUBGRADE APPROXIMATELY 20' ATTACHED TO THE SS RING (FUSED HDPE FLANGE ALTERNATE) AROUND THE BORED PIPE AS PER THE DETAIL THIS SHEET. RIP RAP WILL THEN BE PLACED AT THE OUTLET FOR EROSION PROTECTION OF THE STREAM BANK. NO BUFFER VARIANCE WILL BE REQUIRED FOR THIS ACTIVITY.



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 2-05-2021 REVISION TO UPDATE EMBARC COMMENTS
 3-23-21 MODIFY DISTURBED AREA AND UPDATE DWG

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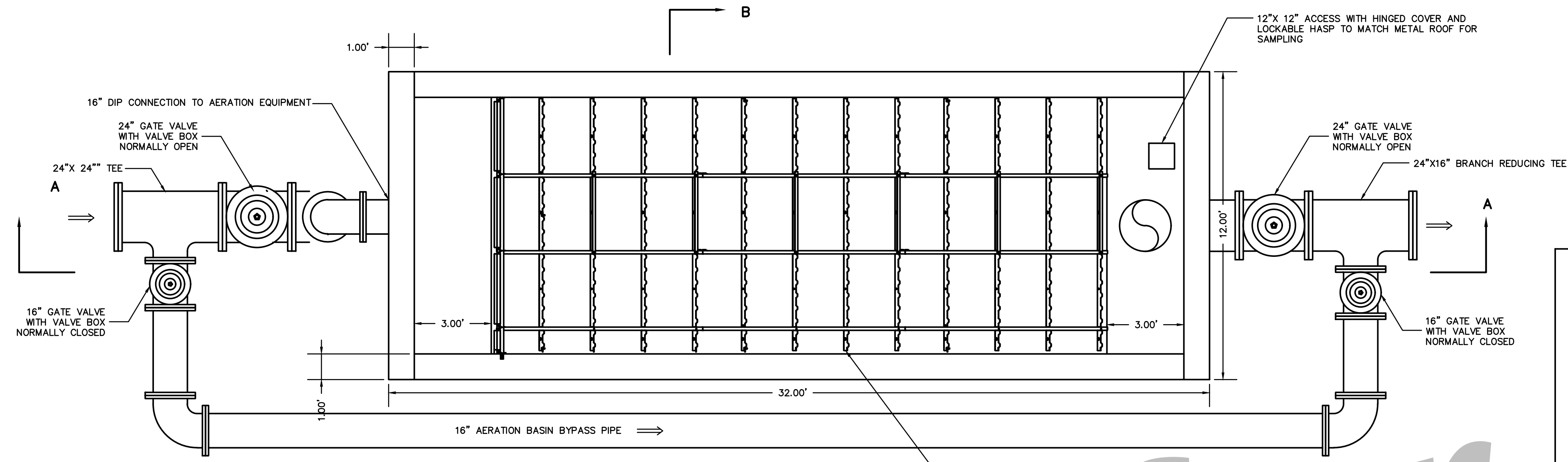
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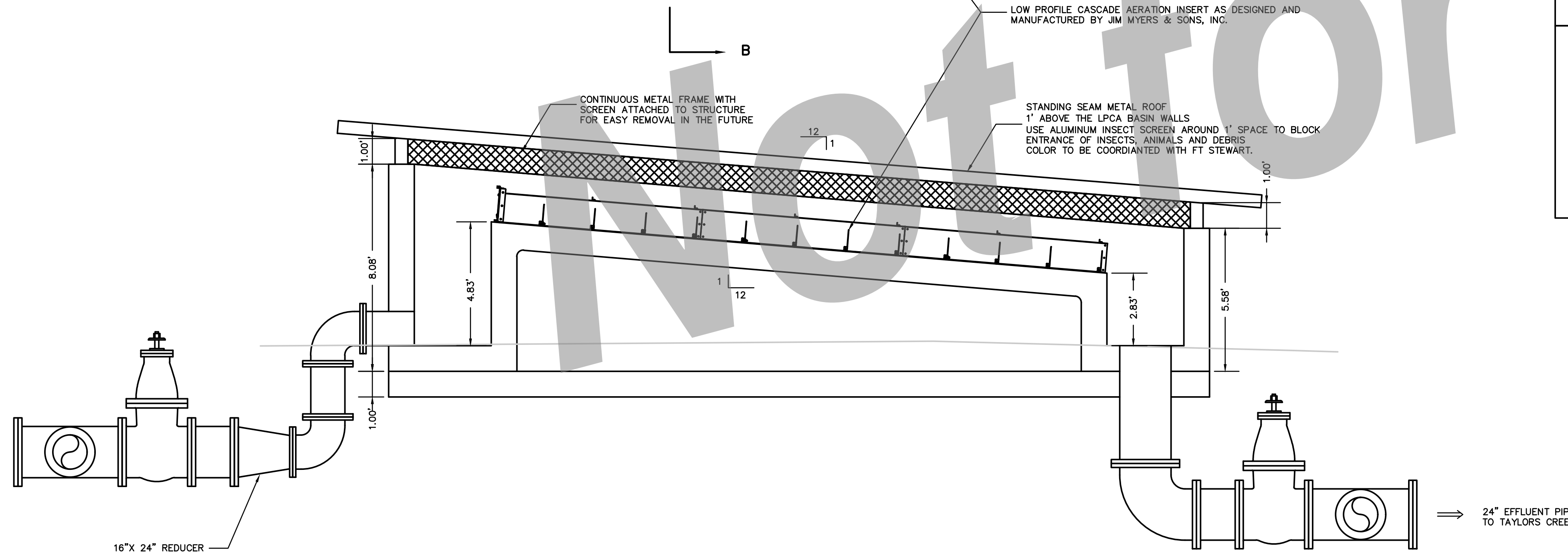
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 Hinesville, Georgia
 Liberty County, Georgia

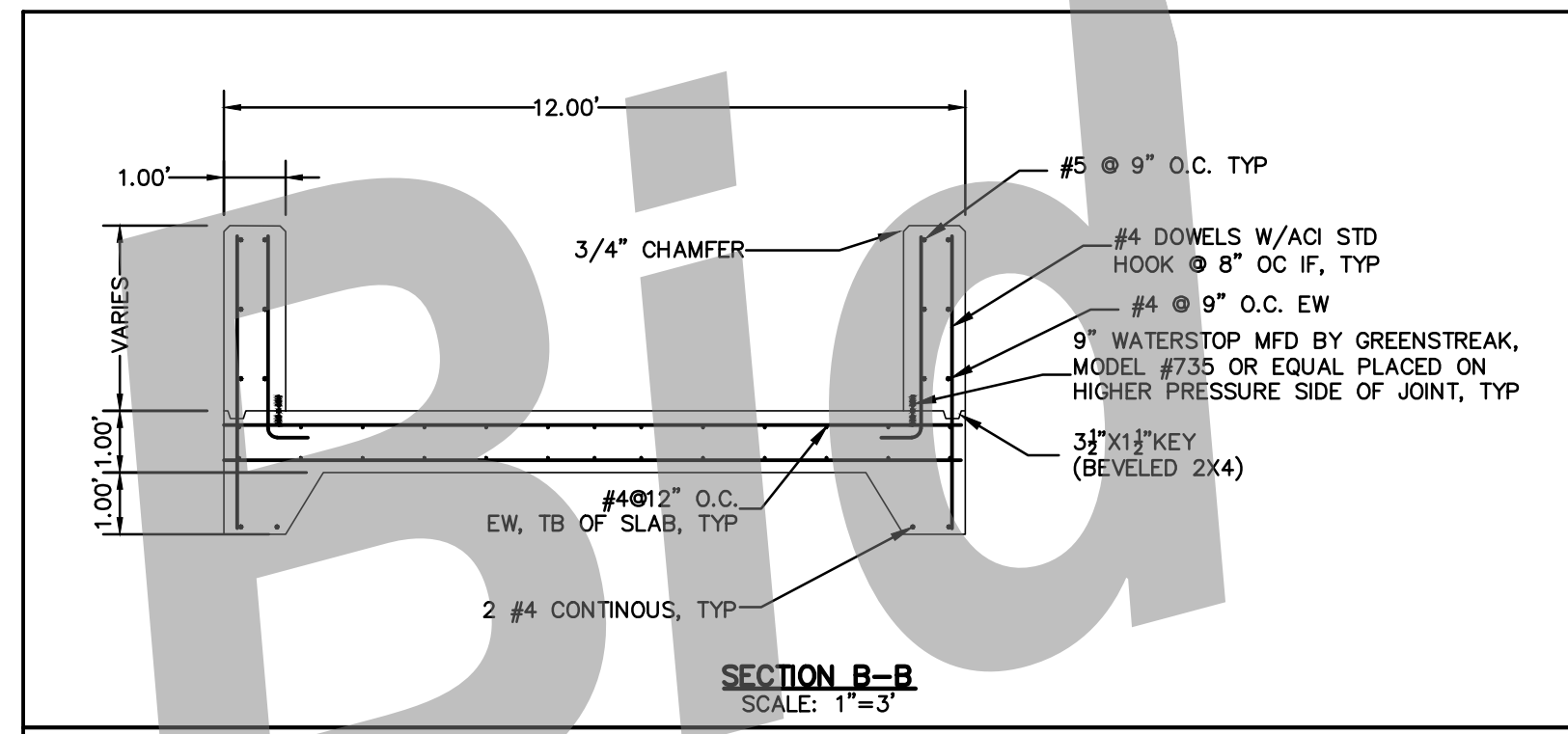
Plan & Profile
 DATE: JUNE 9, 2020
 FILE NO: 2017-100PRJ
 SHEET: 8



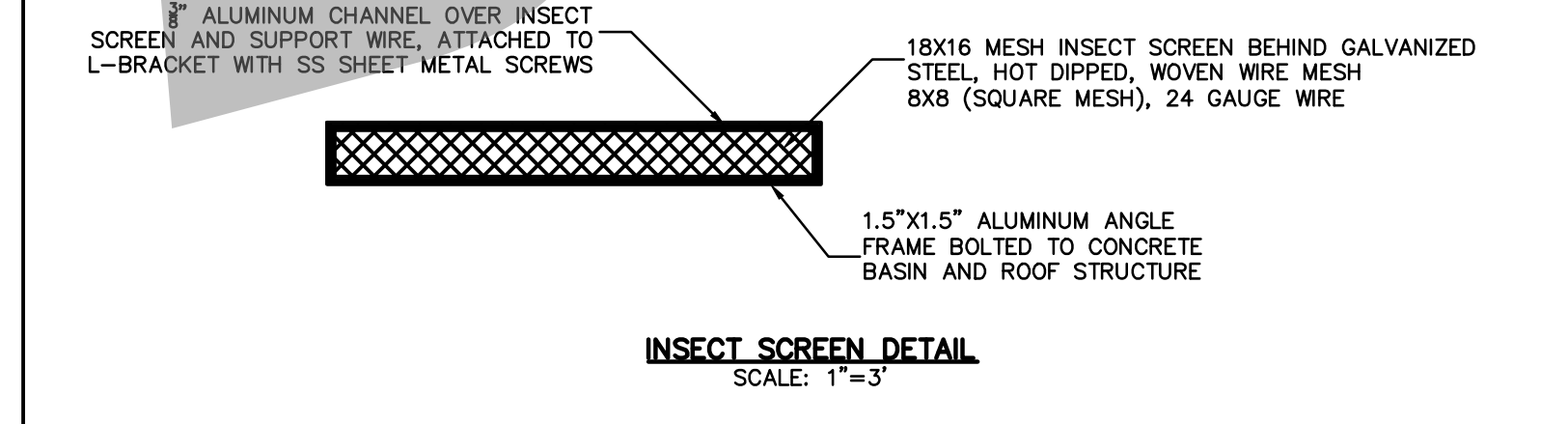
LOW PROFILE CASCADE AERATOR -- PLAN
1" = 3'



LOW PROFILE CASCADE AERATOR -- SECTION A-A
1" = 3'



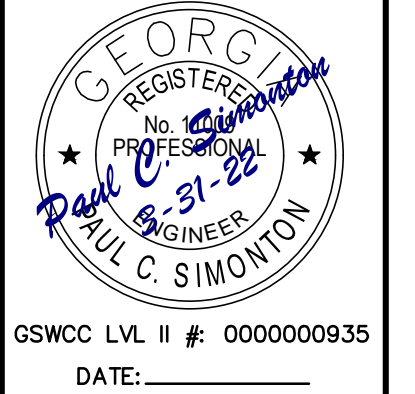
SECTION B-B
SCALE: 1" = 3'



INSECT SCREEN DETAIL
SCALE: 1" = 3'

- ⊕ BASIN EXIT HWL
EL. 48.00'
- ⊕ 16" INFLUENT/24" EFFLUENT PIPE
EL. 45.17'
- ⊕ 16" EFFLUENT PIPE
EL. 40.29'
- ⊕ 24" EFFLUENT PIPE
EL. 37.51'

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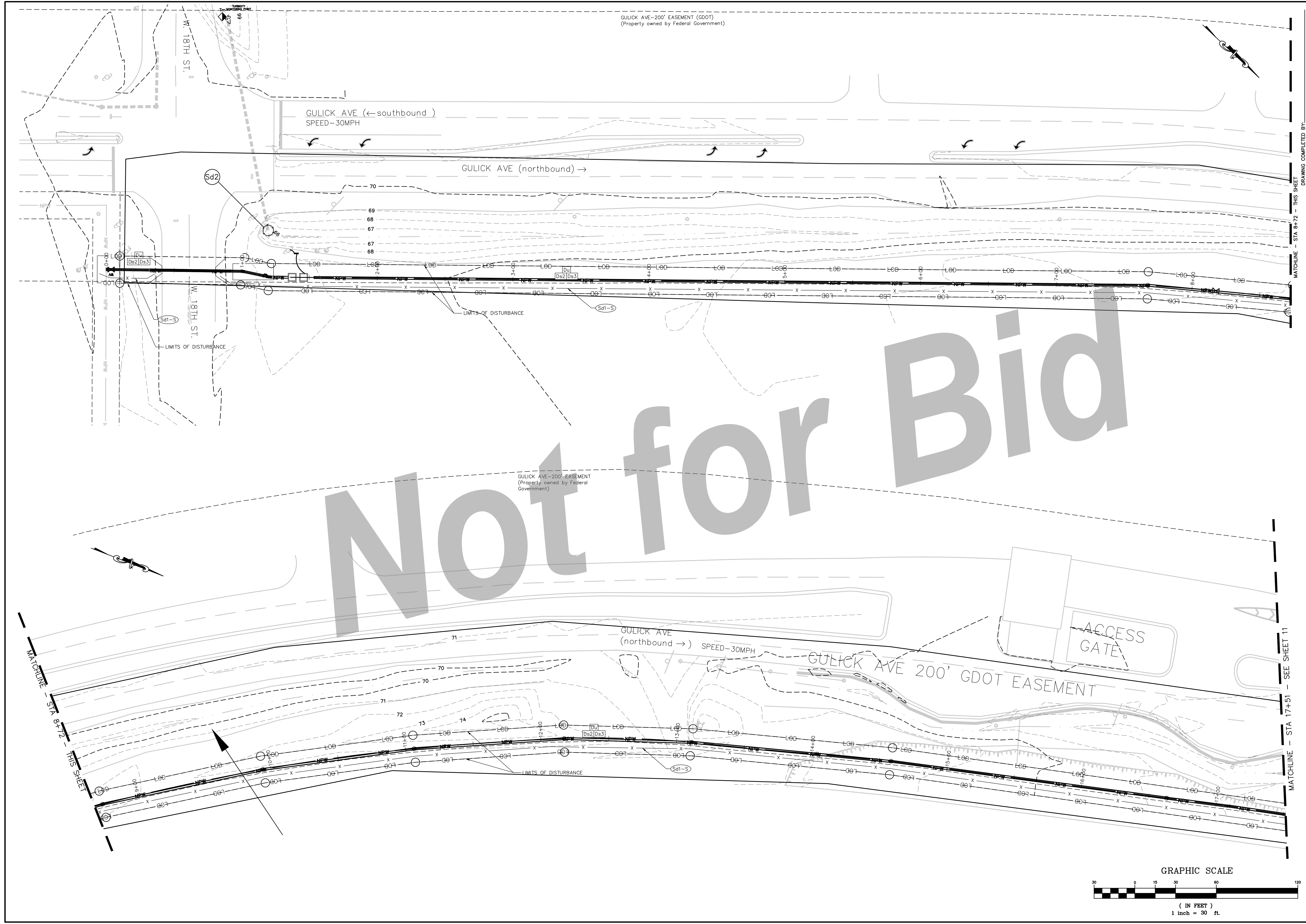


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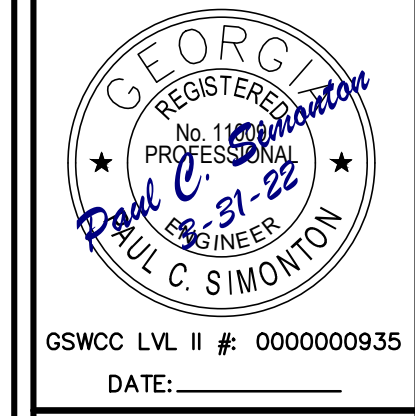
Low Profile Cascade
 Aerator Detail
 DATE: JUNE 9, 2020
 FILE NO: 2017-100PRJ
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REVISIONS: 02-25-2020 PER (GDOT) COMMENTS
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 2-05-2021 REGENERATION STRUCTURE OUT OF FLOOD PLAN
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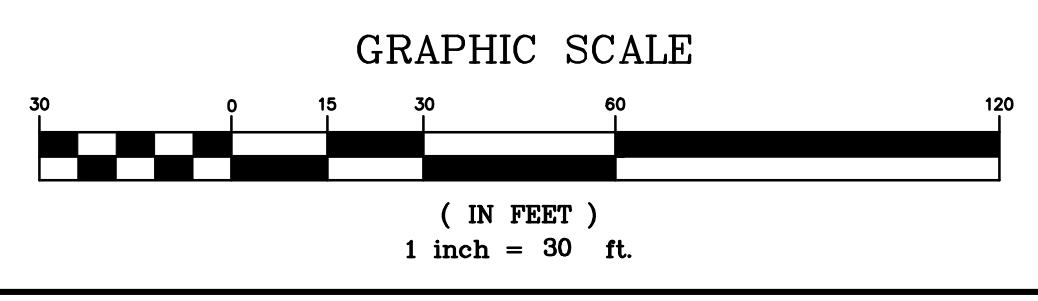
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E&S Plan

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DRAWING COMPLETED BY: STA 84+72 - THIS SHEET

MATCHLINE - STA 17+51 - SEE SHEET 11

MATCHLINE - STA 8+72 - THIS SHEET

W. 18TH ST.

W. 18TH ST.

GULICK AVE-200' EASEMENT (GDOT)
 (Property owned by Federal Government)

GULICK AVE-200' EASEMENT
 (Property owned by Federal Government)

GULICK AVE
 (northbound →) SPEED-30MPH

GULICK AVE 200' GDOT EASEMENT

ACCESS GATE

GULICK AVE (←southbound)
 SPEED-30MPH

GULICK AVE (northbound →)

Ds2|Ds3

Sd2

Sd1-S

LIMITS OF DISTURBANCE

LIMITS OF DISTURBANCE

LIMITS OF DISTURBANCE

70

69

68

67

67

68

71

70

71

72

75

74

12+00

14+00

15+00

16+00

17+00

18+00

19+00

20+00

21+00

22+00

23+00

24+00

25+00

26+00

27+00

28+00

29+00

30+00

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92+00

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95+00

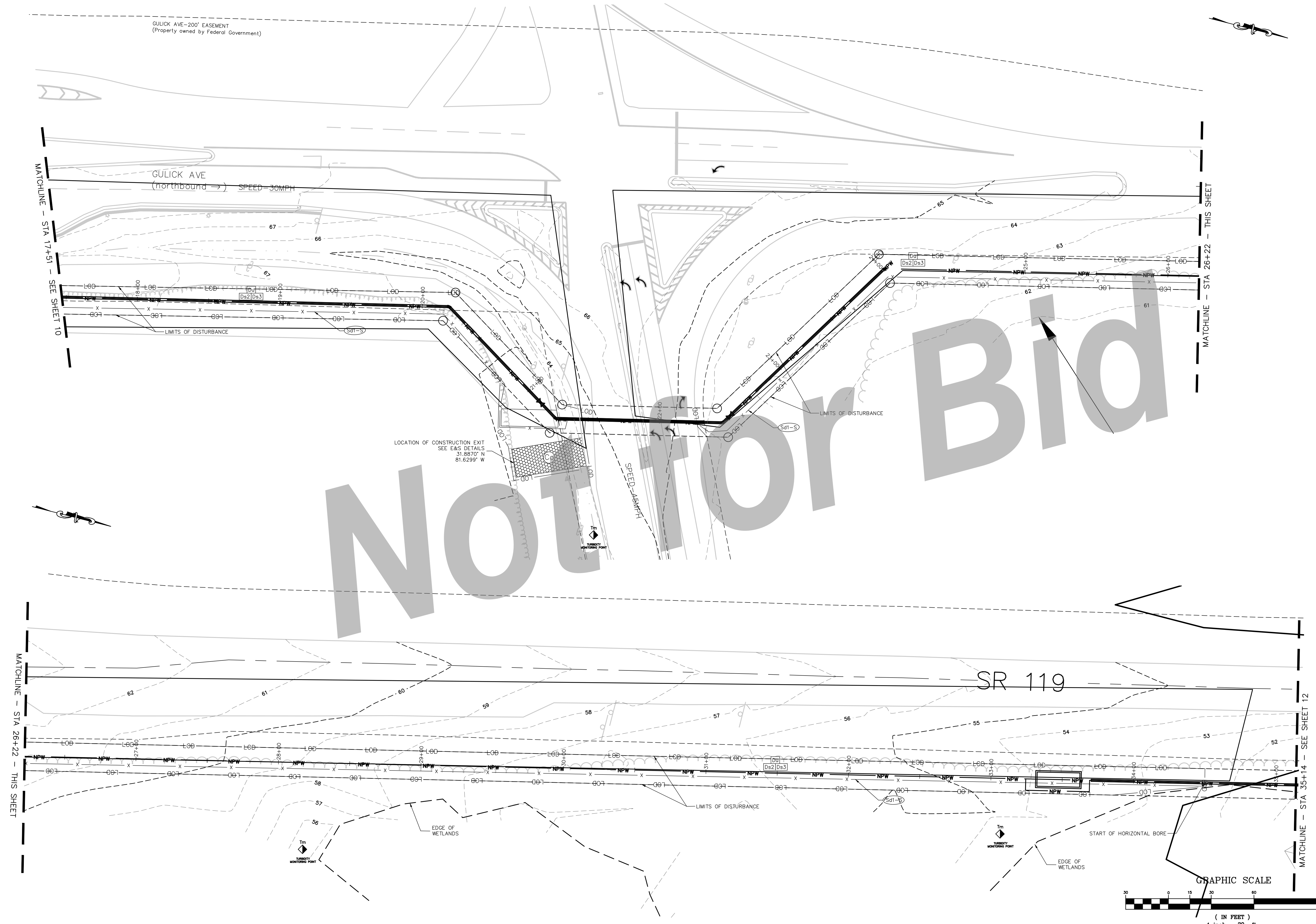
96+00

97+00

98+00

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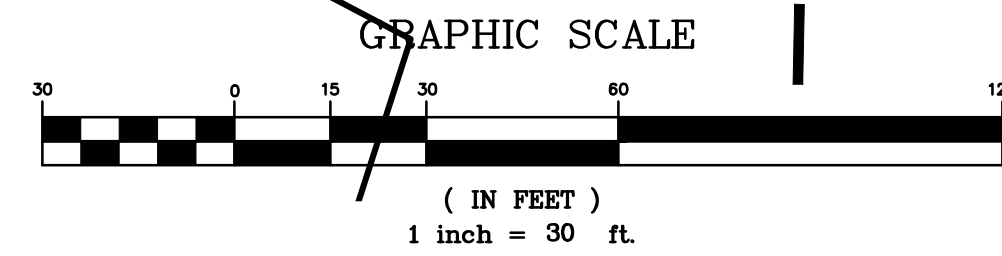


GULICK AVE-200' EASEMENT
(Property owned by Federal Government)

GULICK AVE
(northbound →) SPEED=30MPH

LOCATION OF CONSTRUCTION EXIT
SEE E&S DETAILS
31.8870' N
81.6299' W

SR 119



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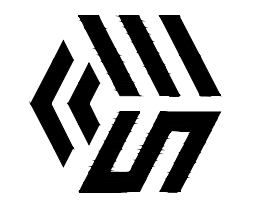
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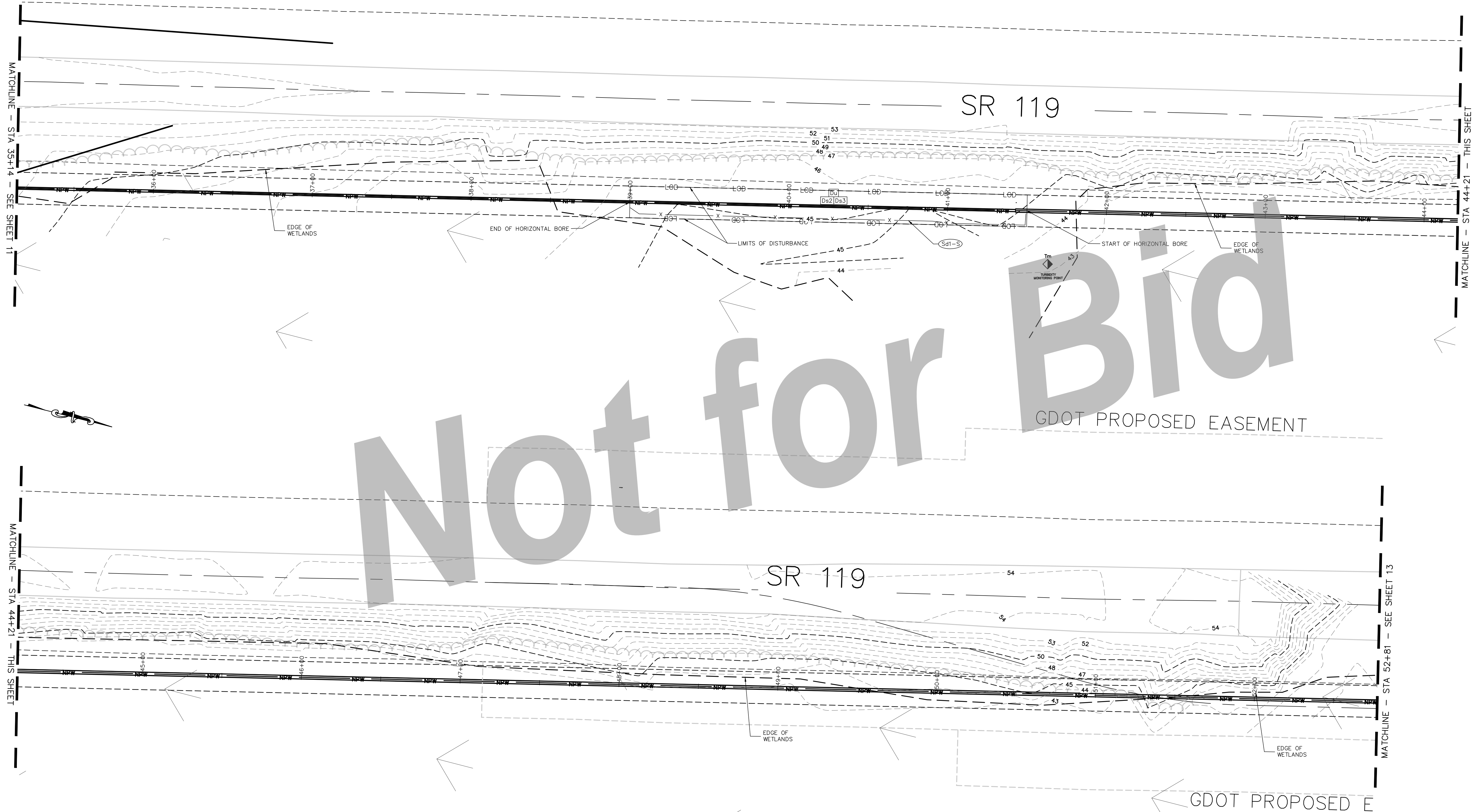
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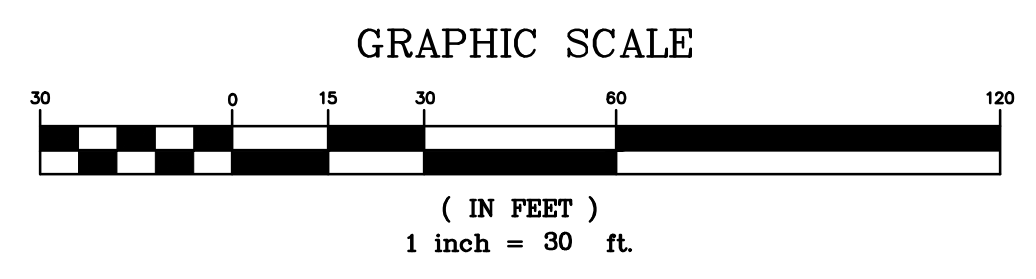
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GEORGIA REGISTERED PROFESSIONAL ENGINEER
 PAUL C. SIMONTON
 LICENSE NO. 10000
 EXPIRES 12/31/22

GSWCC LV. II # 0000000935
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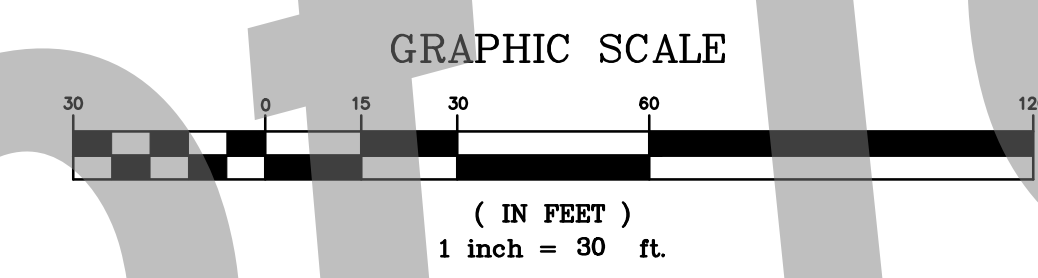
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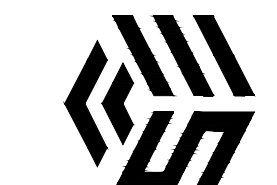
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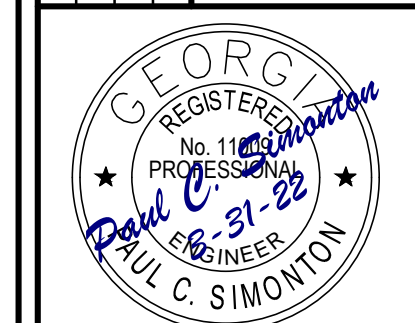
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Ds3 SPECIES AND PLANTING SCHEDULE

SPECIES	BROADCAST RATES 1/ PER ACRE 2/ PER 1000 S.F.	PLANTING DATES BY RESOURCE AREA 3/	AREAS *	SPECIFICATIONS
BAHIA, PENSACOLA ALONE OR WITH TEMP. COVER W/ OTHER PERENNIALS	60 LBS 1.4 LB PER ACRE 30 LBS 0.7 LB	P C	J F M A M J J A S O N D	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 ALONE OR WITH TEMP. COVER WITH OTHER PERENNIALS	60 LBS 1.4 LB PER ACRE 30 LBS 0.7 LB	M-L P	J F M A M J J A S O N D	SAME AS ABOVE
BERMUDA, COMMON HULLED SEED ALONE WITH OTHER PERENNIALS	10 LBS. 0.2 LB. 6 LBS. 0.1 LB.	P C	J F M A M J J A S O N D	1,787,000 SEED PER POUND. QUICK COVER. LOW GROWING AND SOD FORMING. FULL SUN. GOOD FOR ATHLETIC FIELDS.
BERMUDA, COMMON UNHULLED SEED WITH TEMPORARY COVER WITH OTHER PERENNIALS	10 LBS. 0.2 LB. 6 LBS. 0.1 LB.	P C	J F M A M J J A S O N D	PLANT WITH WINTER ANNUALS. PLANT WITH TALL FESCUE.
BERMUDA SPRIGS COASTAL, COMMON, MIDLAND, OR TIFT 44 COASTAL, COMMON, TIFT 44	40 CU. FT. 0.9 CU.FT. OR SOD PLUGS 3' X 3'	M-L P C C	J F M A M J J A S O N D	A CUBIC FT. CONTAINS APPROXIMATELY 650 SPRIGS. A BUSHEL CONTAINS 1.25 C.F. OR APPROXIMATELY 800 SPRIGS. SAME AS ABOVE.
CENTPEDE	BLOCK SOD ONLY	P C	J F M A M J J A S O N D	SOUTHERN COASTAL PLAIN ONLY DROUGHT TOLERANT. FULL SUN OR PARTIAL SHADE. EFFECTIVE AGAINST TO CONCRETE AND IN CONCENTRATED FLOW AREAS. IRRIGATION IS NEEDED UNTIL FULLY EST. DO NOT PLANT NEAR PARTURES. WINTERHARDY AS FAR NORTH AS ATHENS AND ATLANTA.
CROWNVETCH WITH WINTER ANNUALS OR COOL; SEASON GRASSES	15 LBS. 0.3 LB.	M-L P	J F M A M J J A S O N D	100,000 SEED PER POUND. DENSE GROWTH. DROUGHT TOLERANT AND FIRE RESISTANT. ATTRACTIVE ROSE, PINK AND WHITE BLOSSOMS SPRING TO LATE FALL. MIX WITH 15 POUNDS OF RYE. INOCULATE SEED WITH M INOCULATE. USE FROM NORT ATLANTA AND NORTHWARD.
FESCUE, TALL ALONE WITH OTHER PERENNIALS	50 LBS. 1.1 LB. 30 LBS. 0.7 LB.	M-L P	J F M A M J J A S O N D	227,000 SEED PER POUND. USE ALONE ONLY ON BETTER SITES. NOT FOR DROUGHTY SOILS. MIX WITH PERENNIAL LESPEDEZAS OR CROWN-VETCH. APPLY TOPDRESSING IN SPRING FOLLOWING FALL PLANTING. NOT FOR HEAVY USE AREAS OR ATHLETIC FIELDS.
KUDZU PLANTS OR CROWNS	3'-7' APART	ALL	J F M A M J J A S O N D	RAPID AND VIGOROUS GROWTH. EXCELLENT IN GULLY EROSION CONTROL. WILL CLIMB. GOOD LIVESTOCK FORAGE.
LESPEDEZA, SERICEA SCARIFIED	60 LBS. 1.4 LB.	M-L P C C	J F M A M J J A S O N D	350,000 SEED PER POUND. WIDELY ADAPTED LOW MAINTENANCE. MIX WITH WEEPING LOVE-GRASS, COMMON BERMUDA, BAHIA, OR TALL FESCUE. TAKES 2 TO 3 YEARS TO BECOME FULLY EST. EXCELLENT ON ROADBANKS. INOCULANT SEED WITH EL INOCULANT.
UNSCARIFIED SEED-BEARING HAY	75 LBS. 1.7 LB. 3 TONS 138 LB.	M-L P C C	J F M A M J J A S O N D	MIX WITH TALL FESCUE OR WINTER ANNUALS CUT WHEN SEED IS MATURE, BUT BEFORE IT SHATTERS. ADD TALL FESCUE OR WINTER ANNUALS.
LESPEDEZA AMBROA VIRGATA OR APALOW SCARIFIED	60 LBS. 1.4 LB.	M-L P C C	J F M A M J J A S O N D	300,000 SEED PER POUND. HEIGHT OF GROWTH IS 18 TO 24 INCHES. ADVANTAGEOUS IN URBAN AREAS. SPREADING-TYPE GROWTH. NEW GROWTH HAS BRONZE COLORATION. DO NOT MIX WITH SERICEA LESPEDEZA. SLOW TO DEVELOP SOD STANDS. INOCULANT SEED WITH EL INOCULANT.
UNSCARIFIED	75 LBS. 1.7 LB.	M-L P C C	J F M A M J J A S O N D	
LESPEDEZA, SHRUB	3'X3'	M-L P C	J F M A M J J A S O N D	PROVIDES WILDLIFE FOOD AND COVER.
LOVEGRASS, WEEPING ALONE WITH OTHER PERENNIALS	4 LBS. 0.1 LB. 2 LBS. 0.05 LB.	M-L P C	J F M A M J J A S O N D	1,500,000 SEED PER POUND. QUICK COVER. DROUGHT TOLERANT. GROWS WELL WITH SERICEA LESPEDEZA ON ROADBANKS.
MAIDENCANE SPRIGS	2' X 3' SPAACING	ALL	J F M A M J J A S O N D	FOR VERY WET SITES, MAY CLOG CHANNELS. DIG SPRIGS FROM LOCAL SOURCES. USE ALONG RIVERBANKS AND SHORELINES.
PANICGRASS, ATLANTIC COASTAL	20 LBS. 0.5 LB.	P C	J F M A M J J A S O N D	GROWS WELL ON COASTAL SAND DUNES, BOGROW AREAS, AND GRAVEL PITS. PROVIDES WINTER COVER FOR WILDLIFE. MIX WITH SERICEA LESPEDEZA EXCEPT ON SAND DUNES.
REED CANARY GRASS ALONE WITH OTHER PERENNIALS	50 LBS. 1.1 LB. 30 LBS. 0.7 LB.	M-L P	J F M A M J J A S O N D	GROWS SIMILAR TO TALL FESCUE
SUNFLOWER, 'AZTEC' MAXIMILLIAN	10 LBS. 0.2 LB.	M-L P C	J F M A M J J A S O N D	227,000 SEED PER POUND. MIX WITH WEEPING LOVEGRASS OR OTHER LOW-GROWING GRASSES OR LEGUMES.
SWITCHGRASS	40 LBS. 0.9 LB.	M-L P C	J F M A M J J A S O N D	STREAMBANKS

* (DARK LINES REPRESENT OPTIMUM DATES, GRAY LINES INDICATE PERMISSIBLE BUT MARGINAL DATES.)

FERTILIZER AND LIME REQUIREMENTS FOR PERMANENT VEGETATION (Ds3)					
TYPES OF SPECIES	PLANTING YEAR	FERTILIZER (N-P-K)	RATE (LBS./ACRE)	N TOP DRESSING RATE (LBS./ACRE)	LIME APPLICATION (TONS/ACRE)
Cool Season Grasses	First Maintenance	6-12-12	1500	50-100	1
	Second Maintenance	6-12-12	1000	30	-
Cool Season Grasses and Legumes	First Maintenance	6-12-12	1500	0-50	1
	Second Maintenance	0-10-10	1000	-	-
Warm Season Grasses	First Maintenance	6-12-12	1500	50-100	1
	Second Maintenance	6-12-12	800	30	-
Warm Season Grasses and Legumes	First Maintenance	6-12-12	1500	0-50	1
	Second Maintenance	0-10-10	1000	-	-

Ds3 MULCH NOTES:

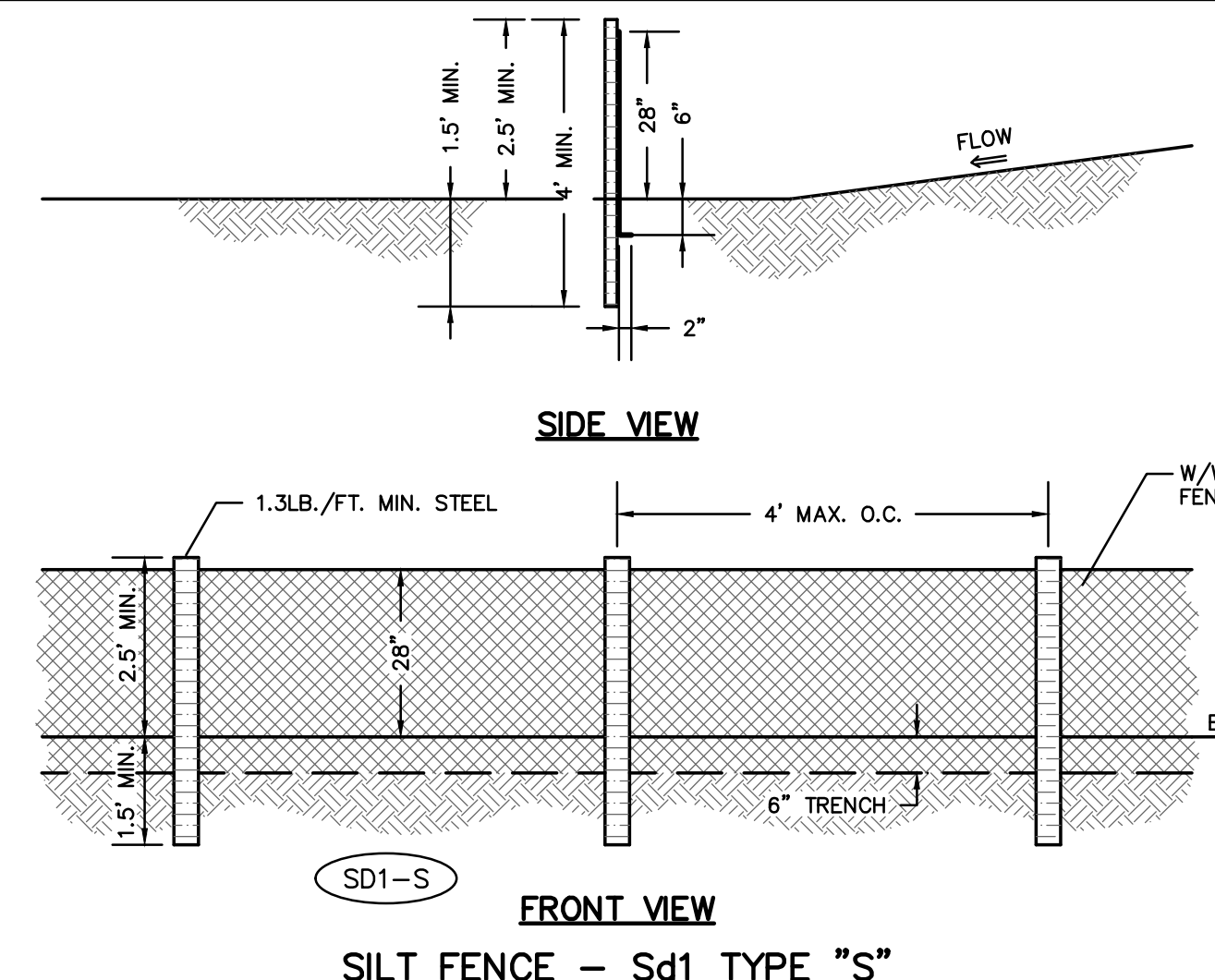
MULCH IS REQUIRED FOR ALL PERMANENT VEGETATION APPLICATIONS. MULCH APPLIED TO SEEDED AREAS SHALL ACHIEVE 75% TO 100% SOIL COVER.

- DRY STRAW OR DRY HAY OF GOOD QUALITY AND FREE OF WEED AND SEEDS CAN BE USED. DRY STRAW SHALL BE APPLIED AT THE RATE OF 2 TONS PER ACRE. DRY HAY SHALL BE APPLIED AT A RATE OF 2 1/2 TONS PER ACRE.
- PINE STRAW OR PINE BARK SHALL BE APPLIED AT A THICKNESS OF 3 INCHES FOR BEDDING PURPOSES. OTHER SUITABLE MATERIALS IN SUFFICIENT QUANTITY MAY BE USED WHERE ORNAMENTALS OR OTHER GROUND COVERS ARE PLANTED. THIS IS NOT APPROPRIATE FOR SEEDED AREAS.

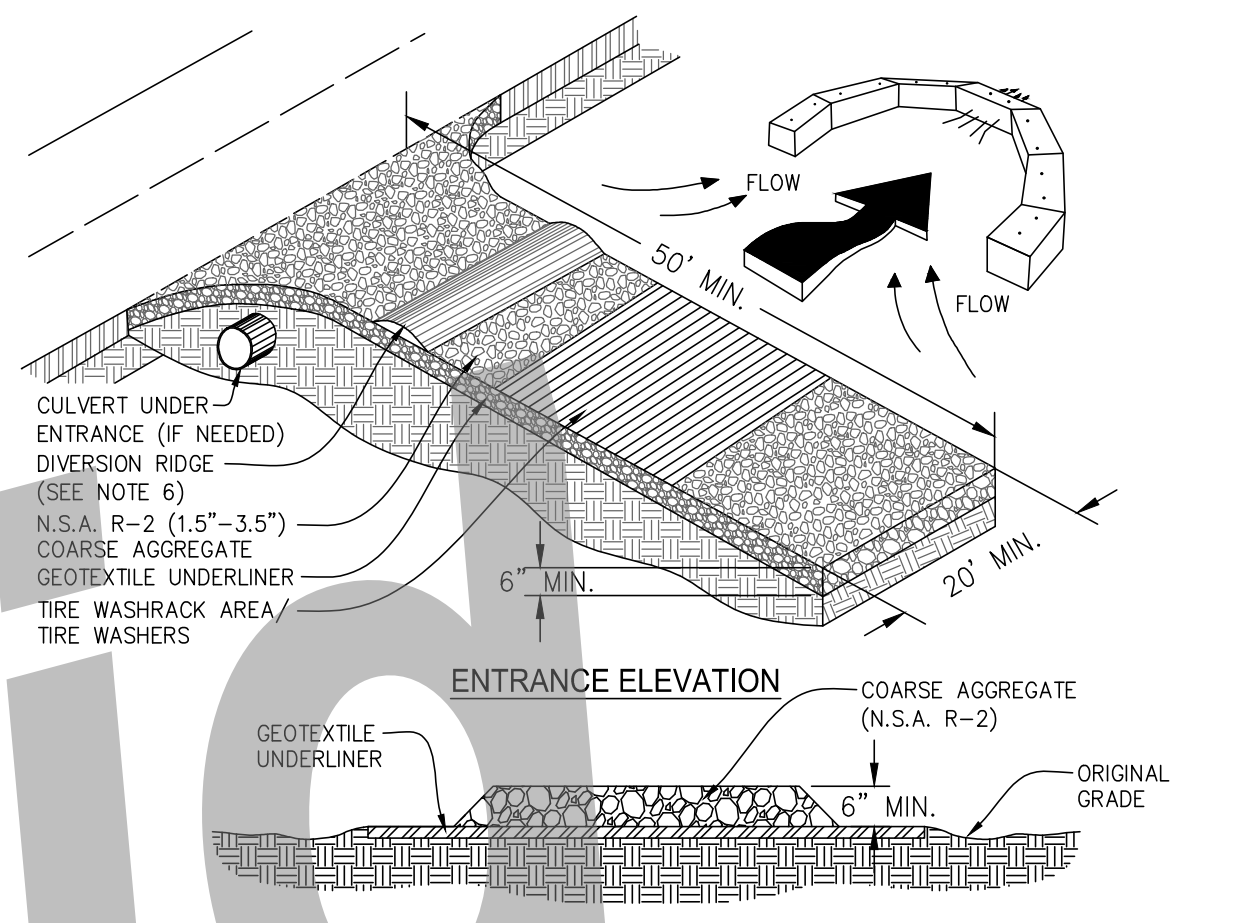
FERTILIZER AND LIME REQUIREMENTS FOR TEMPORARY VEGETATION (Ds2)					
TYPES OF SPECIES	PLANTING YEAR	FERTILIZER (N-P-K)	RATE (LBS./ACRE)	N TOP DRESSING RATE (LBS./ACRE)	LIME APPLICATION (TONS/ACRE)
Cool Season Grasses	First Maintenance	6-12-12	1500	50-100	1
	Second Maintenance	6-12-12	1000	30	-
Cool Season Grasses and Legumes	First Maintenance	6-12-12	1500	0-50	1
	Second Maintenance	0-10-10	1000	-	-
Temporary Cover Crops Seeded Alone	First	10-10-10	500	30	1
Warm Season Grasses	First Maintenance	6-12-12	1500	50-100	1
	Second Maintenance	6-12-12	800	30	-

ADDITIONAL EROSION CONTROL NOTES:

- IT IS OUR PROFESSIONAL OPINION THAT THE INSTALLATION OF A SEDIMENT BASIN ON THIS PROJECT IS NOT NECESSARY OR FEASIBLE. CONTRACTOR/OWNER WILL NOT HAVE ADEQUATE AREA ON THE PROJECT TO INSTALL A SEDIMENT BASIN. THE SEDIMENT BASIN INSTALLATION WOULD CREATE MORE LAND DISTURBANCE THAN THE PROPOSED PROJECT. IT IS OUR PROFESSIONAL OPINION THAT THE INSTALLATION OF THE APPROPRIATE BMPs, AND PROPER MAINTENANCE, SHOULD PROVIDE SUFFICIENT SEDIMENT STORAGE.
- THIS ES&C PLAN IS IN COMPLIANCE WITH WASTEWATER, SANITARY SEWER, AND SEPTIC REGULATIONS DURING AND AFTER CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED.
- REPAIR ALL DAMAGES CAUSED BY SOIL EROSION OR CONSTRUCTION EQUIPMENT AT OR BEFORE THE END OF EACH WORKING DAY. SEDIMENT SHALL BE REMOVED FROM ALONG THE SILT FENCE WHEN IT REACHES HALF FULL. SEDIMENT SHALL NOT ENTER ADJACENT STREAMS OR DRAINAGE WAYS DURING SEDIMENT REMOVAL OR DISPOSAL.
- WHEN TEMPORARY STRUCTURES HAVE SERVED THEIR INTENDED PURPOSE AND THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED, THE STRUCTURES MUST BE REMOVED PRIOR TO FILING A NOTICE OF TERMINATION.
- ALL WASTE GENERATED WILL BE PLACED IN A CONTAINER, BED TRUCK OR TRAILER AND REMOVED FROM THE SITE DAILY.
- ALL BUILDING MATERIALS AND BUILDING PRODUCTS STORED ON SITE WILL BE COVERED WITH PLASTIC SHEETING OR TEMPORARY ROOFS IN ORDER TO MINIMIZE EXPOSURE TO PRECIPITATION AND TO STORMWATER. THESE MATERIALS INCLUDE BUILDING MATERIALS, BUILDING PRODUCTS, CONSTRUCTION WASTES, TRASH, LANDSCAPE MATERIAL, FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS, SANITARY WASTE, AND OTHER MATERIALS.



CRUSHED STONE CONSTRUCTION EXIT



- NOTES:
- AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS.
 - REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE.
 - AGGREGATE SIZE SHALL BE IN ACCORDANCE WITH THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE.
 - GRAVEL PAD SHALL HAVE A MINIMUM THICKNESS OF 6".
 - PAD WIDTH SHALL BE EQUAL FULL WIDTH AT ALL POINTS OF VEHICULAR EGRESS, BUT NO LESS THAN 20".
 - A DIVERSION RIDGE SHOULD BE CONSTRUCTED WHEN GRADE TOWARD PAVED AREA IS GREATER THAN 2%.
 - INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES.
 - WHEN WASHING IS REQUIRED, IT SHOULD BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN (DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE).
 - WASHRACKS AND/OR TIRE WASHERS MAY BE REQUIRED DEPENDING ON SCALE AND CIRCUMSTANCE. IF NECESSARY, WASHRACK DESIGN MAY CONSIST OF ANY MATERIAL SUITABLE FOR TRUCK TRAFFIC THAT REMOVE MUD AND DIRT.
 - MAINTAIN AREA IN A WAY THAT PREVENTS TRACKING AND/OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.

Co CONSTRUCTION EXIT

SIMONTON ENGINEERING, LLC						
1050 PARKSIDE COMMONS - SUITE 101						
GREENSBORO, GEORGIA 30642						
(706) 454-0870						
TENTATIVE CONSTRUCTION SCHEDULE						
Non-Potable Reuse Line Extension for the City of Hinesville						
SEP	OCT	NOV	DEC	JAN	FEB	MAR

DRAWING COMPLETED BY: [REDACTED]
REVISION: [REDACTED]
12-20-2020 TO UPDATE ES&C COMMENTS
2-05-2021 REVISION TO UPDATE ES&C COMMENTS
3-23-21 MODIFY DISTURBED AREA AND UPDATE DWG

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S-12-22-21
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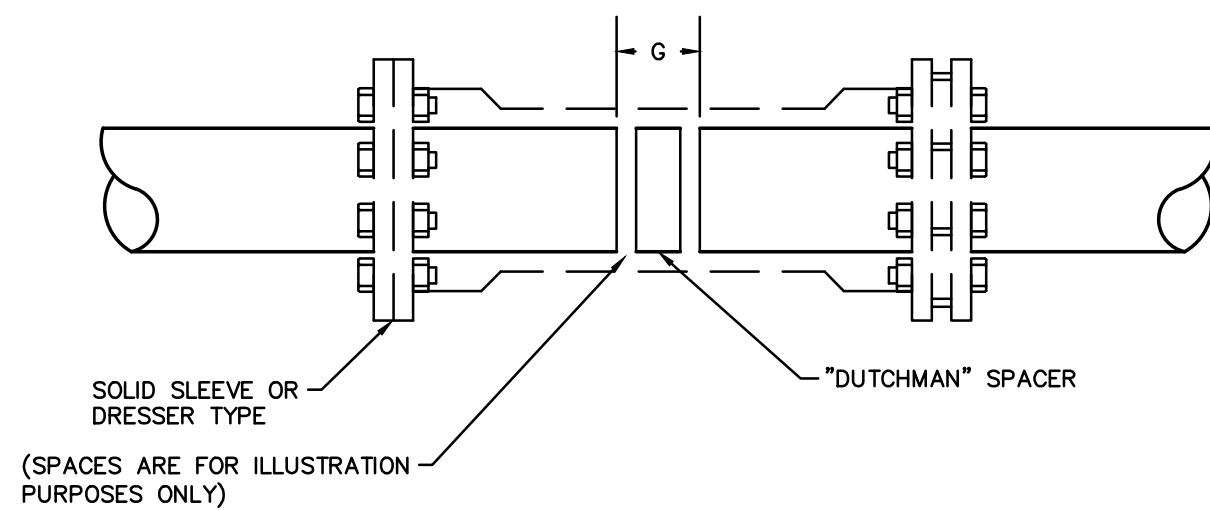
1050 PARKSIDE COMMONS
GREENSBORO, GA 30642
TEL: (706) 454-0870
www.simontonengineering.com

GSWC LV. II # 0000000935
DATE: [REDACTED]

SIMONTON ENGINEERING
REGISTERED PROFESSIONAL ENGINEER
PAUL C. SIMONTON

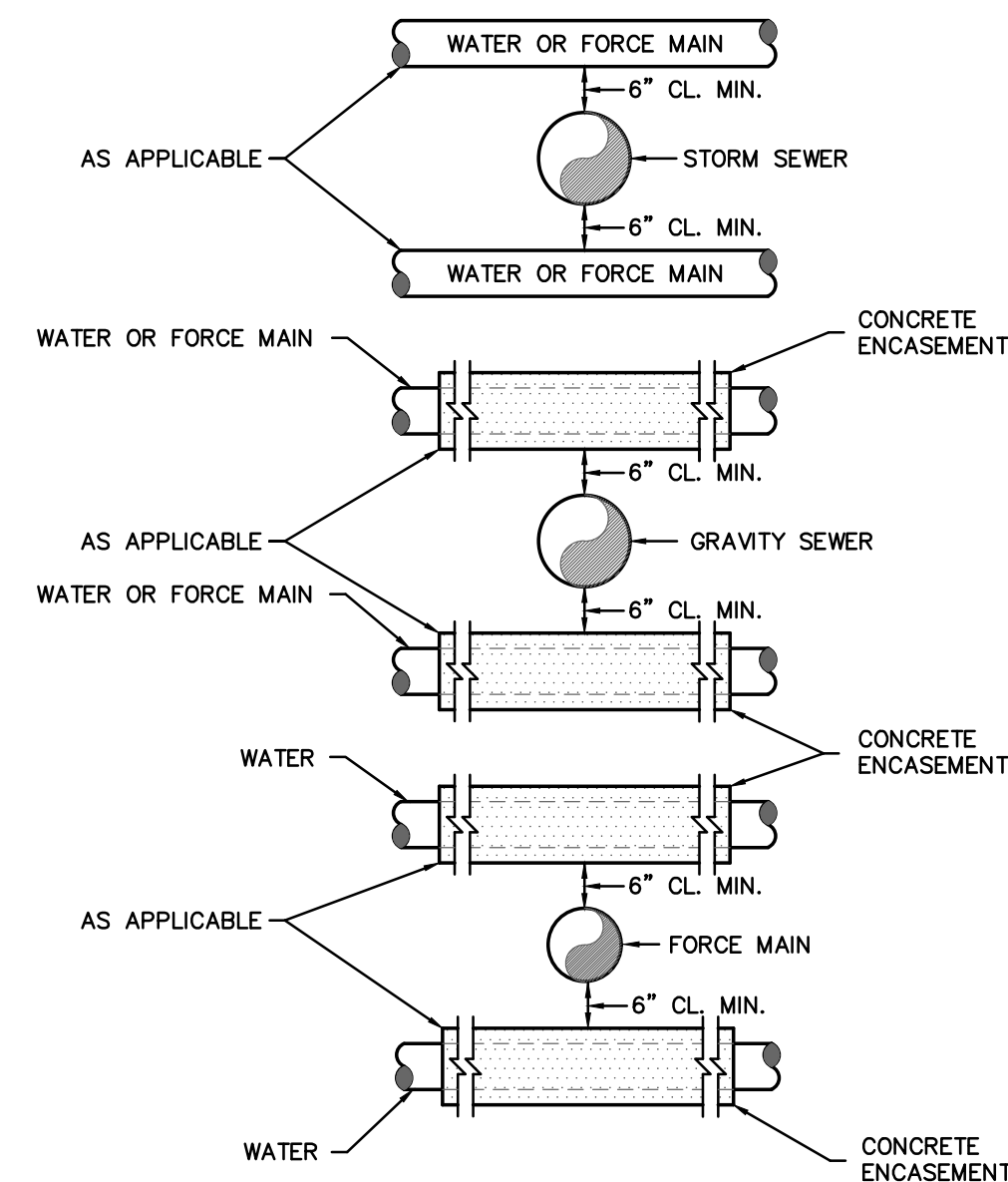
NPRL
for
The City of Hinesville
Hinesville
Liberty County, Georgia

E&S Details
DATE: JUNE 9, 2020
FILE NO.: 2017-100PRJ
SHEET: 15



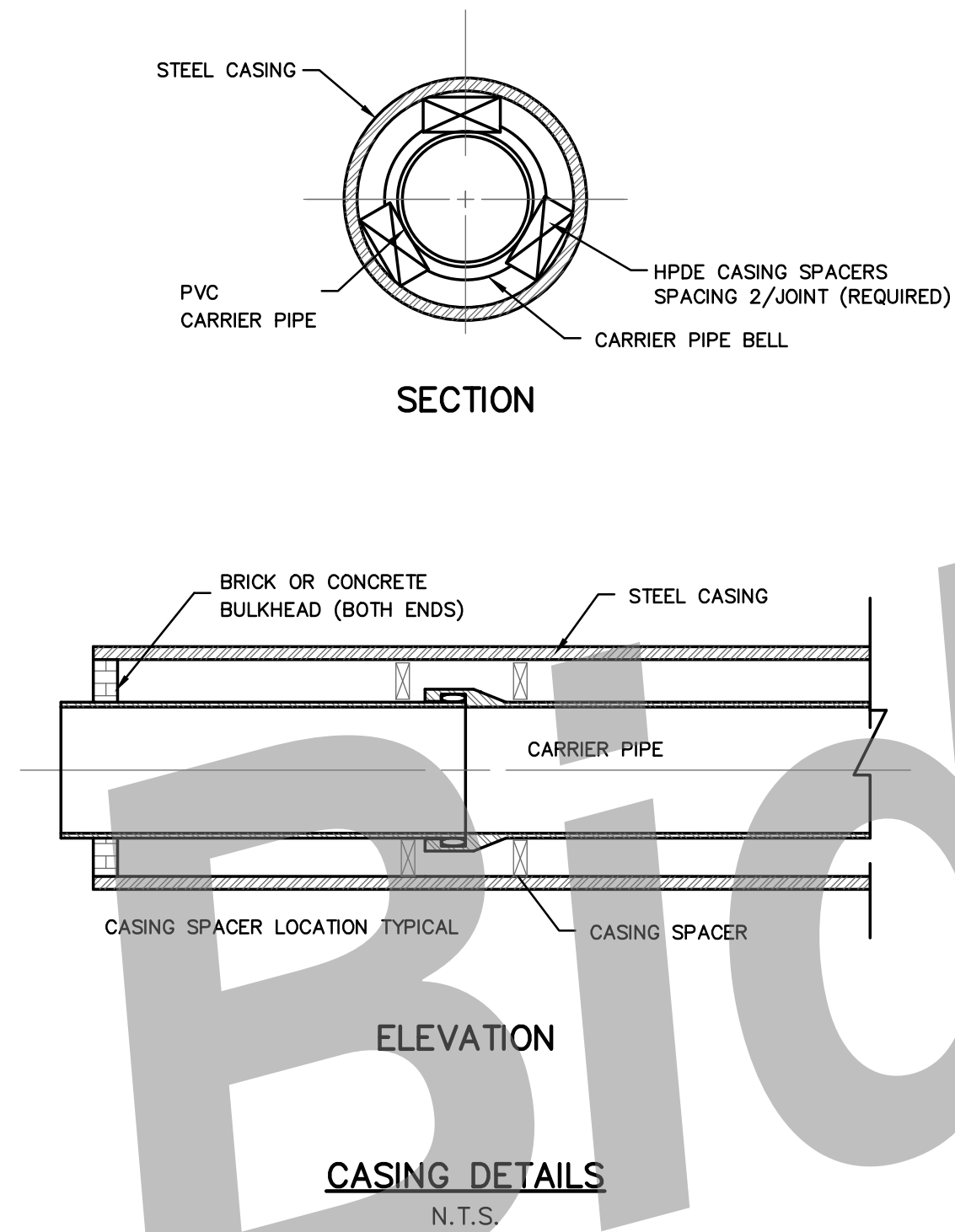
- NOTES**
- IF "G" IS GREATER THAN 1/2", AT ITS NARROWEST POINT, THEN A FULL-CIRCLE SPACER OR "DUTCHMAN" MUST BE CUT AND PLACED IN THE GAP BEFORE THE SLEEVE IS USED TO CLOSE THE JOINT.
 - THE "DUTCHMAN" SPACER SHALL BE CUT TO A WIDTH NO LESS THAN 1/4" LESS THAN THE NARROWEST WIDTH OF "G".
 - EACH PIPE SPIGOT SHALL BE MARKED TO INDICATE THE POINT WHERE THE SLEEVE WILL BE PROPERLY CENTERED OVER THE POINT.
 - "FULL-CIRCLE" REPAIR CLAMPS ARE NOT APPROVED FOR JOINING PIPE. SUCH CLAMPS ARE SPECIFICALLY DESIGNED FOR REPAIRS ONLY.
 - IF "STEEL" SLEEVE IS USED, PROPERLY COAT BEFORE BACKFILLING. SEE NOTE 5, DRWG. A-30 FOR COATING.

SLEEVE INSTALLATION DETAIL
N.T.S.

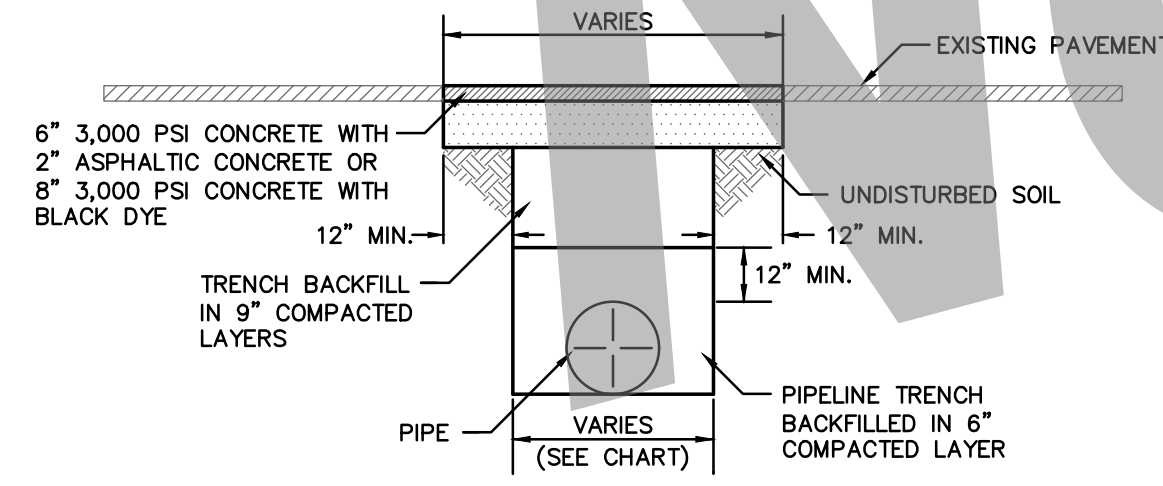


- NOTES:**
- CONCRETE ENCASEMENT TO EXTEND A MINIMUM OF 10' ON BOTH SIDES OF CROSSING.
 - FOR ELEVATION OF PIPES, SEE PLANS.
 - CONCRETE ENCASEMENT REQUIRED IF 18" VERTICAL SEPARATION IS NOT MAINTAINED.

SEPERATION DETAIL
N.T.S.



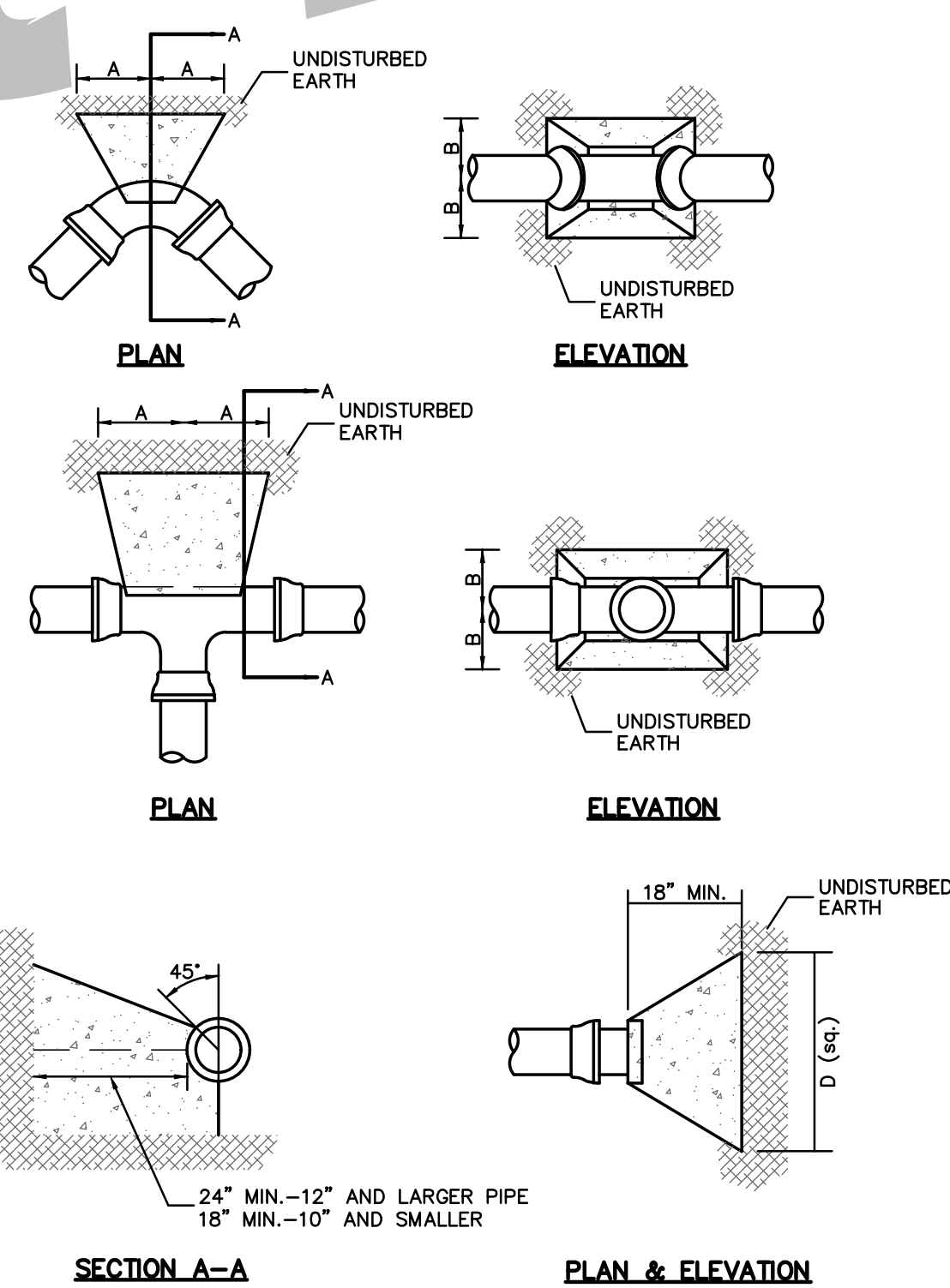
CASING DETAILS
N.T.S.



NOTE: MAXIMUM PAVEMENT WIDTH FOR CUT DEPTH OVER 6 FEET SHALL BE 8 FEET UNLESS NOTED OTHERWISE ON PLANS.

PIPE DIAMETER	MAXIMUM TRENCH WIDTH 0 - 6' CUT DEPTH	MAXIMUM PAVEMENT WIDTH 0 - 6' CUT DEPTH
6" TO 15"	16" + DIA.	40" + DIA.
18" TO 21"	20" + DIA.	44" + DIA.
24" TO 30"	24" + DIA.	48" + DIA.
33" TO 42"	36" + DIA.	60" + DIA.
48"+	36" + DIA.	60" + DIA.

PAVEMENT REMOVAL & REPLACEMENT
N.T.S.



STANDARD THRUST BLOCKS FOR WATER MAIN AND FORCE MAINS
N.T.S.

TYPE	SIZE	1/4 BENDS		1/8 BENDS		1/16 BENDS		TEES		PLUGS	
		A	B	A	B	A	B	A	B	C	D
TYPE 1 4,000 PSF SOIL	6"	8"	10"	6"	8"	3"	8"	8"	8"	10"	15"
	8"	12"	12"	8"	10"	5"	9"	9"	12"	12"	20"
	10"	16"	14"	10"	12"	6"	10"	11"	14"	14"	25"
	12"	19"	16"	12"	14"	8"	11"	14"	16"	16"	30"
	14"	23"	18"	14"	16"	10"	12"	16"	18"	18"	34"
TYPE 1 2,000 PSF SOIL	6"	16"	10"	9"	10"	6"	8"	10"	12"	10"	21"
	8"	22"	13"	12"	13"	8"	10"	13"	16"	12"	29"
	10"	26"	17"	14"	17"	10"	13"	16"	20"	14"	36"
	12"	29"	21"	16"	21"	11"	16"	18"	24"	16"	41"
	14"	35"	24"	19"	24"	12"	20"	22"	27"	18"	48"
16"	38"	27"	21"	27"	12"	24"	24"	30"	20"	54"	

DRAWING COMPLETED BY: _____
 REVISED: 02-21-2020 PER URBAN DESIGN DETAILS
 12-20-2020 TO UPDATE ES&PC COMMENTS
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DATE: _____

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SIMONTON ENGINEERING



NPRL
 for
The City of Hinesville
 Hinesville
 Liberty County, Georgia

General Details
 DATE: JUNE 9, 2020
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