

# CW64924 BRANCH AVENUE PARK STREAM RESTORATION

DEPARTMENT OF ENERGY AND ENVIRONMENT, DISTRICT OF COLUMBIA GOVERNMENT,  
WATERSHED PROTECTION DIVISION  
WASHINGTON, D.C.

AS-BUILT CERTIFICATION BY PROFESSIONAL ENGINEER

WITHIN 21 DAYS AFTER COMPLETION OF CONSTRUCTION OF ALL STORMWATER BEST MANAGEMENT PRACTICES (BMPs), STORMWATER INFRASTRUCTURE, AND LAND COVERS (COLLECTIVELY THE "FACILITY"), PLEASE SEND THIS PAGE TO THE WATERSHED PROTECTION DIVISION OF THE DEPARTMENT OF ENERGY AND ENVIRONMENT.

**1. FACILITY INFORMATION:**

SOURCE NAME: \_\_\_\_\_  
SOURCE LOCATION: STREET: \_\_\_\_\_  
CITY: \_\_\_\_\_  
DCRA PERMIT NO.: \_\_\_\_\_  
DATE ISSUED: \_\_\_\_\_

**1. AS BUILT CERTIFICATION**

I HEREBY CERTIFY THAT ALL STORMWATER BEST MANAGEMENT PRACTICES (BMPs), STORMWATER INFRASTRUCTURE, AND LAND COVERS HAVE BEEN BUILT SUBSTANTIALLY IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND THAT ANY DEVIATIONS NOTED BELOW WILL NOT PREVENT THE SYSTEM FROM FUNCTIONING IN COMPLIANCE WITH THE REQUIREMENTS CHAPTER 5 OF TITLE 21 OF THE DISTRICT OF COLUMBIA MUNICIPAL REGULATIONS WHEN PROPERLY MAINTAINED AND OPERATED. THESE DETERMINATIONS HAVE BEEN BASED UPON ON-SITE OBSERVATION OF CONSTRUCTION, SCHEDULED AND CONDUCTED BY ME OR BY A PROJECT REPRESENTATIVE UNDER MY DIRECT SUPERVISION. I HAVE ENCLOSED ONE SET OF AS-BUILT ENGINEERING DRAWINGS.

SIGNATURE OF ENGINEER \_\_\_\_\_ NAME (PLEASE TYPE) D.C. REG. NO. \_\_\_\_\_

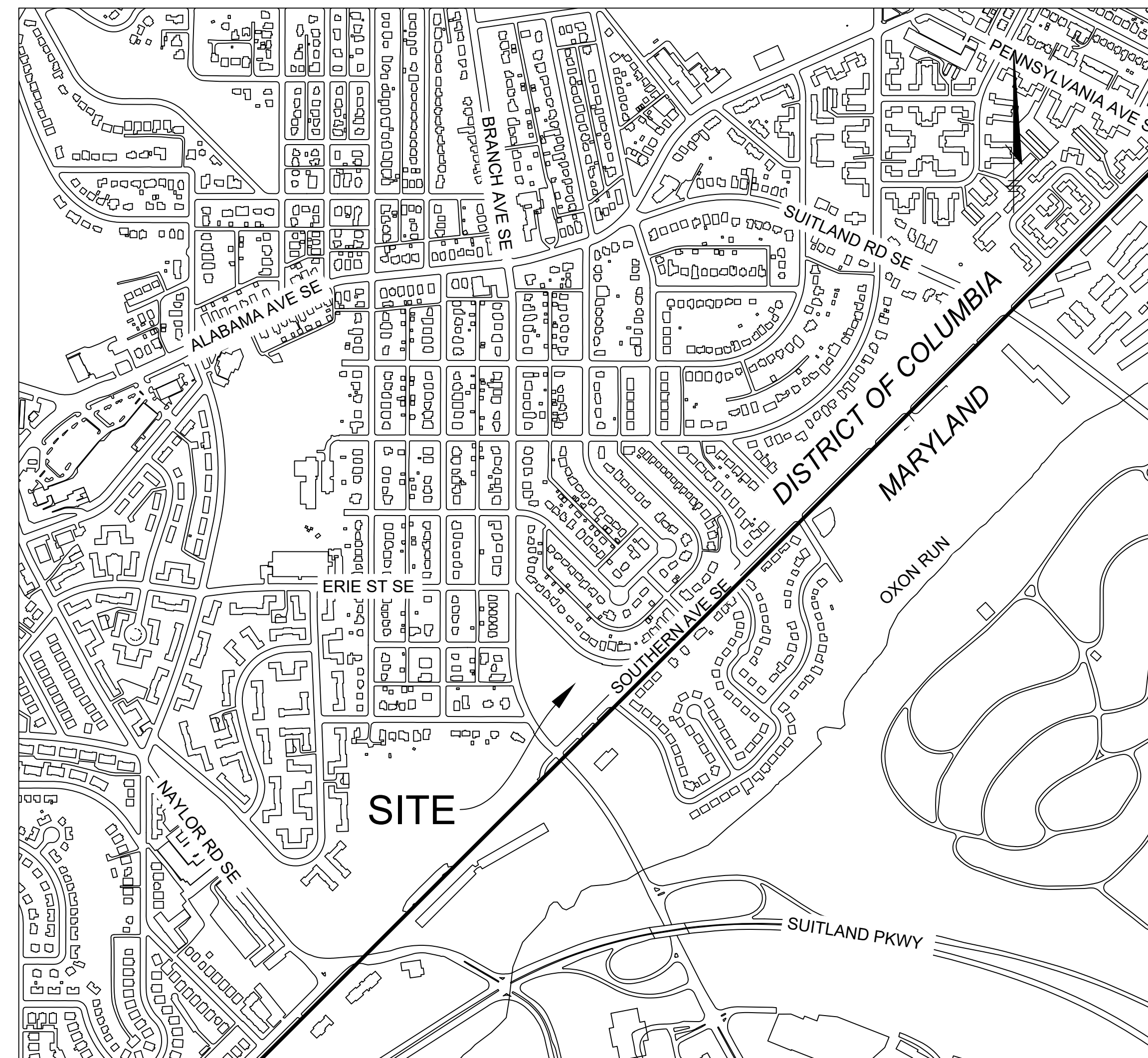
AFFIX SEAL: \_\_\_\_\_ COMPANY NAME \_\_\_\_\_

COMPANY ADDRESS \_\_\_\_\_

DATE: \_\_\_\_\_ PHONE NO.: \_\_\_\_\_

SUBSTANTIAL DEVIATIONS FROM THE APPROVED PLANS AND SPECIFICATIONS (ATTACH ADDITIONAL SHEETS IF REQUIRED).

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



VICINITY MAP  
1" = 500'

STANDARD SYMBOLS

SS	EXISTING SANITARY SEWER LINE AND MANHOLE	EOI	END OF INFORMATION	---	SURVEYED 5' MAJOR CONTOUR
36" RCP	EXISTING STORMDRAIN AND MANHOLE	U	EXISTING UTILITY POLE	---	SURVEYED 1' MINOR CONTOUR
W	EXISTING UNDERGROUND WATER LINE	L	EXISTING LIGHT POLE	LOD	LIMITS OF DISTURBANCE
W(OLC)	EXISTING UNDERGROUND WATER LINE (QUALITY "C" INVESTIGATION)	S	SIGN POST	---	PROPOSED MAJOR CONTOURS
E	EXISTING UNDERGROUND ELECTRIC LINE	TP	EXISTING TRAVERSE POINT	---	PROPOSED MINOR CONTOURS
Fo(OLC)	EXISTING UNDERGROUND FIBER OPTIC LINE (QUALITY "C" INVESTIGATION)	B	BENCHMARK	---	PROPOSED RIFFLE WEIR
G	EXISTING UNDERGROUND GAS LINE	P	PROPERTY BOUNDARY	---	PROPOSED CASCADE
G(OLC)	EXISTING UNDERGROUND GAS LINE (QUALITY "C" INVESTIGATION)	W	TREE (DIAMETER AT BREAST HEIGHT)	---	PROPOSED POOL
WATER METER		TS	TREE STUMP	---	TREE REMOVAL
WV	EXISTING WATER VALVE	WUS	EXISTING WATERS OF THE U.S.	---	PROPOSED WOODY DEBRIS
FH	EXISTING FIRE HYDRANT	W	NONTIDAL WETLAND	---	
TM	TELEPHONE MANHOLE	---	EXISTING STRUCTURE	---	
EP	EXISTING ELECTRIC POLE	---	EXISTING EDGE OF PAVEMENT	---	
TS	TRAFFIC SIGNAL POLE				
EM	ELECTRICAL MANHOLE				

**NOT FOR  
CONSTRUCTION**

SHEET INDEX

SHEET #	DWG #	SHEET TITLE
1	TI-01	TITLE SHEET
2	EC-01	EXISTING CONDITIONS
3	PC-01	PROPOSED CONDITIONS
4-5	LP-01 - LP-02	LONGITUDINAL PROFILES
6-7	TS-01 - TS-01	TYPICAL SECTIONS
8	ES-01	EROSION AND SEDIMENT CONTROL PLAN
9	EN-01	EROSION AND SEDIMENT CONTROL NOTES
10	LS-01	LANDSCAPING PLAN
11	LN-01	LANDSCAPING NOTES
12-14	CS-01 - CS-03	CROSS SECTIONS

GENERAL NOTES:

- THE SYSTEM OF COORDINATES USED IS BASED ON THE FOLLOWING DATUMS:
  - HORIZONTAL: MARYLAND STATE PLANE NAD OF 1983/2011
  - VERTICAL: NORTH AMERICAN VERTICAL DATUM (NAVD) 1988
- TOPOGRAPHIC SURVEYS WERE PERFORMED BY MERCADO, INC. IN DECEMBER, 2018.
- THE WETLAND DELINEATION FOR THIS SITE WAS PERFORMED BY STRAUGHAN ENVIRONMENTAL IN JANUARY 2019.
- NO STOCKPILE OF ANY MATERIAL IS ALLOWED IN THE 100-YEAR FLOODPLAIN.

STATEMENT BY PROFESSIONAL ENGINEER REGISTERED  
IN THE DISTRICT OF COLUMBIA

THIS IS TO CERTIFY THAT THE ENGINEERING FEATURES OF ALL STORMWATER BEST MANAGEMENT PRACTICES (BMPs), STORMWATER INFRASTRUCTURE, AND LAND COVERS (COLLECTIVELY THE "FACILITY") HAVE BEEN DESIGNED/EXAMINED BY ME AND FOUND TO BE IN CONFORMITY WITH MODERN ENGINEERING PRINCIPLES APPLICABLE TO THE TREATMENT AND DISPOSAL OF STORMWATER POLLUTANTS. I FURTHER CERTIFY THAT THE FACILITY HAS BEEN DESIGNED IN ACCORDANCE WITH THE SPECIFICATION REQUIRED UNDER CHAPTER 5 OF TITLE 21 OF THE DISTRICT OF COLUMBIA MUNICIPAL REGULATIONS. IT IS ALSO STATED THAT THE UNDERSIGNED HAS FURNISHED THE APPLICANT WITH A SET OF INSTRUCTIONS FOR THE MAINTENANCE AND OPERATION OF THE SITE'S FACILITY.

NAME AND TITLE (PLEASE TYPE) \_\_\_\_\_  
ADDRESS \_\_\_\_\_  
DATE \_\_\_\_\_ PHONE NO.: \_\_\_\_\_

AFFIX SEAL:



DES:	BY:	NO.	REVISIONS	DATE
JA/PC				
DRN: PC				
CHK: JA				
DATE: Aug-2019				

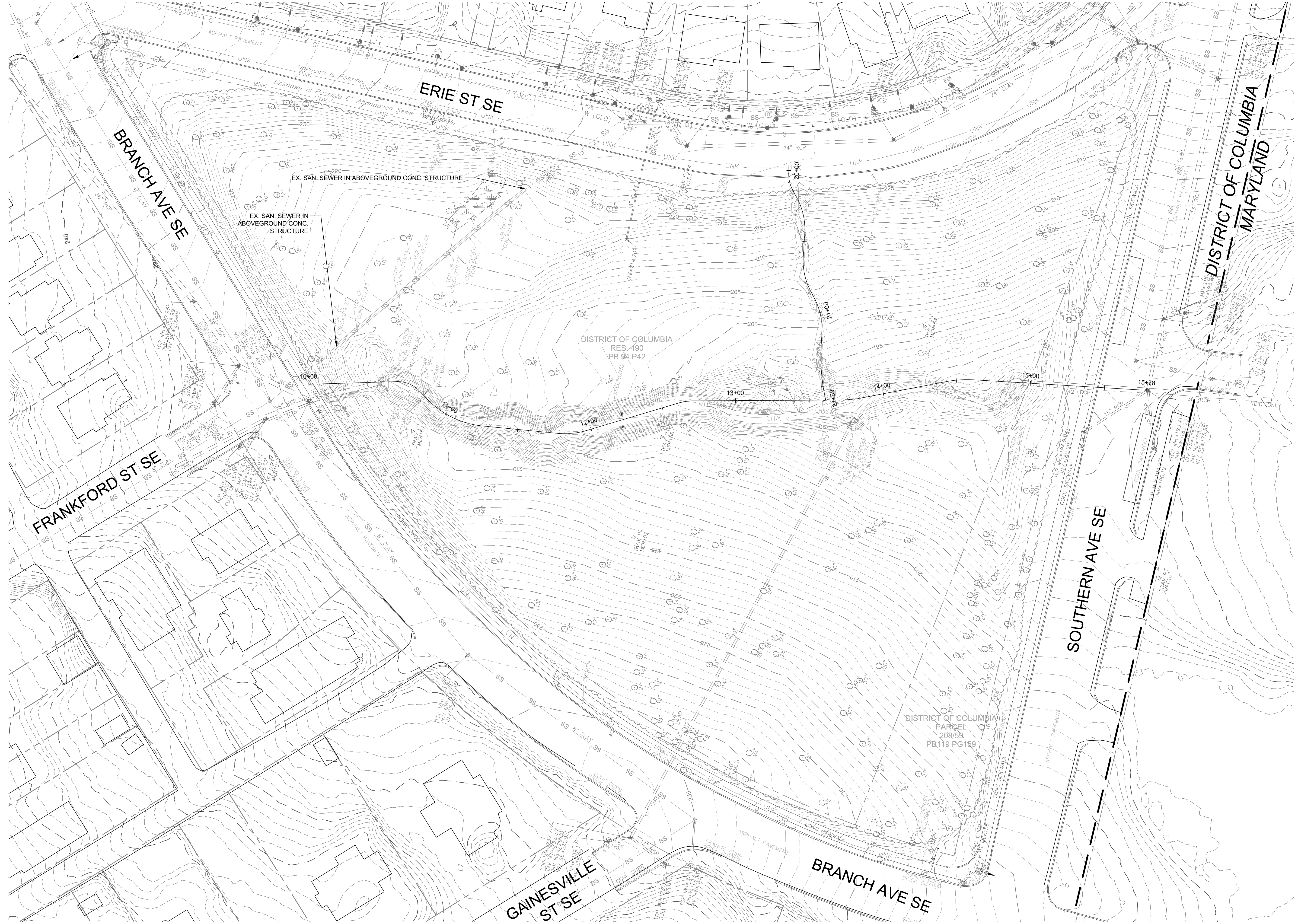
FINAL DESIGN PLANS  
TITLE SHEET  
TI-01

BRANCH AVE STREAM RESTORATION

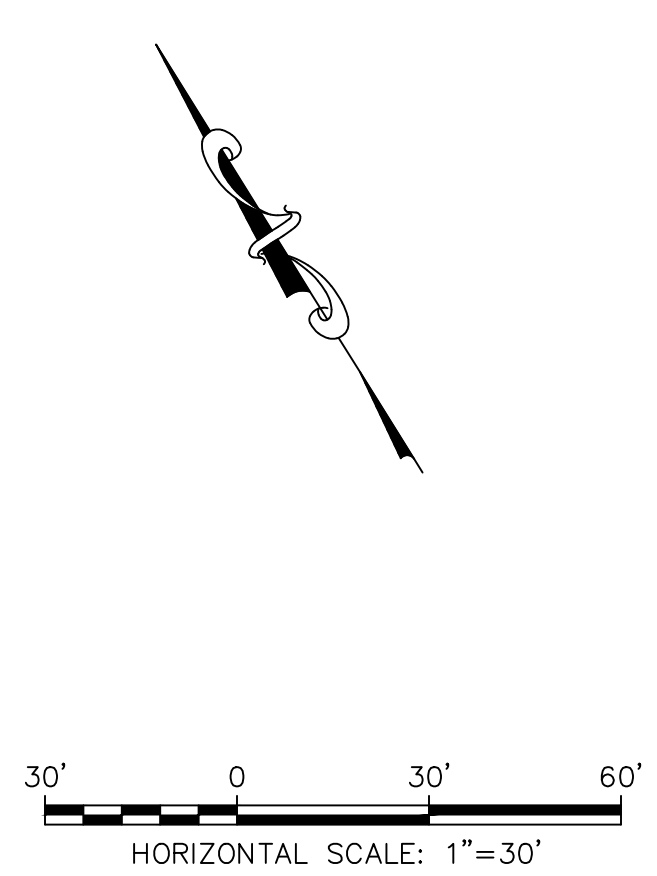
DISTRICT DEPARTMENT OF ENERGY AND ENVIRONMENT  
WASHINGTON, DC

SCALE  
1" = 500'  
SHEET  
1 OF 14





DISTRICT OF COLUMBIA  
MARYLAND



**NOT FOR CONSTRUCTION**

8/6/19  
JAMES WOOD  
3110 15TH ST SE, WASHINGTON, DC 20003  
BRANCH AVENUE PARK STREAM RESTORATION/CAVITY EXISTING CONDITIONS.DWG



**WE ARE WASHINGTON**  
GOVERNMENT OF THE DISTRICT OF COLUMBIA  
**MURIEL BOWSER, MAYOR**



DES:	BY	NO.	REVISIONS	DATE
JA/PC				
DRN: PC				
CHK: JA				
DATE: Aug-2019				

**FINAL DESIGN PLANS**  
**EXISTING CONDITIONS**  
**EC-01**

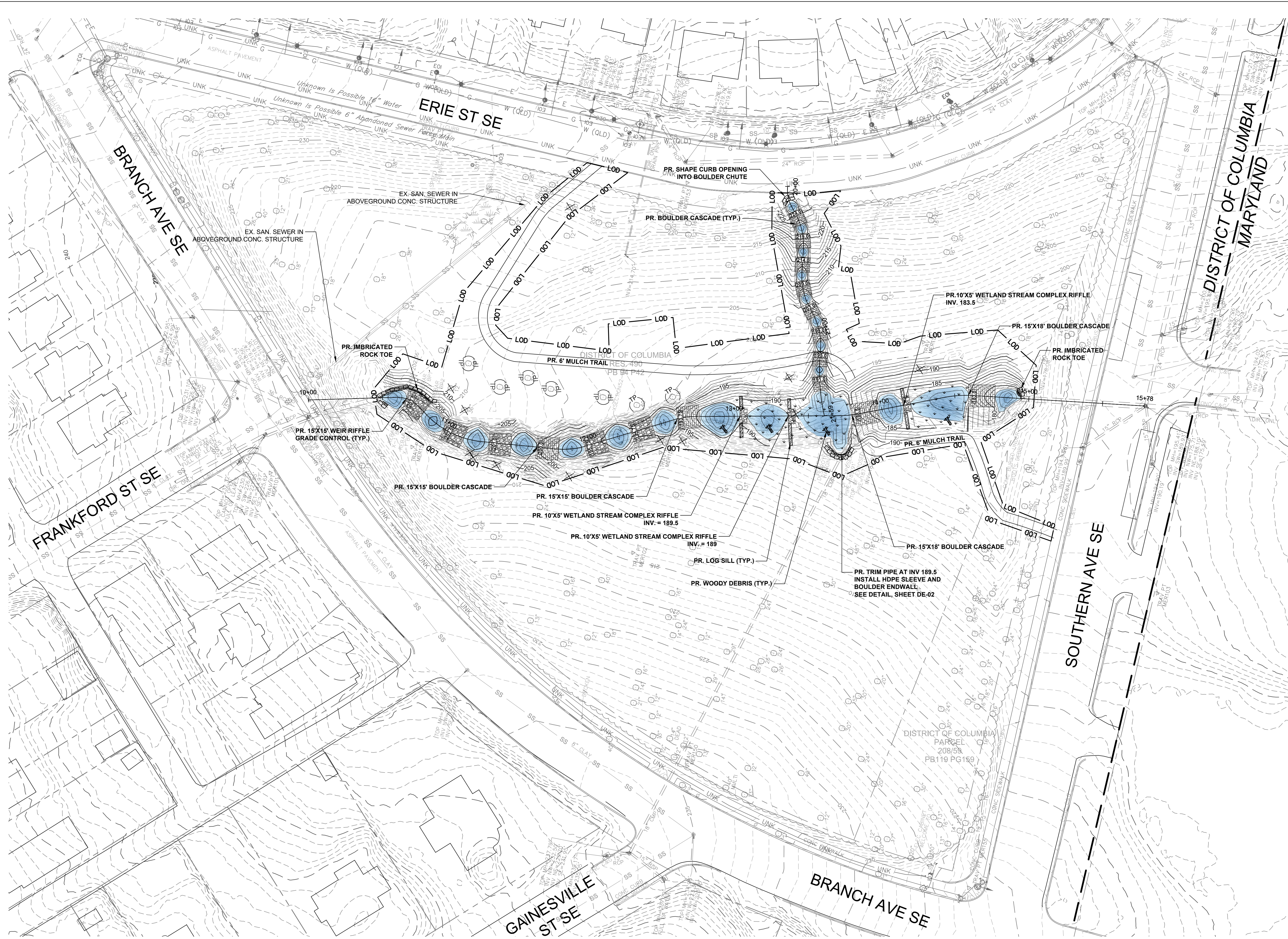
NAD83/NAVD88 MAP NO. XX BLOCK NO. N/A

**BRANCH AVE STREAM RESTORATION**

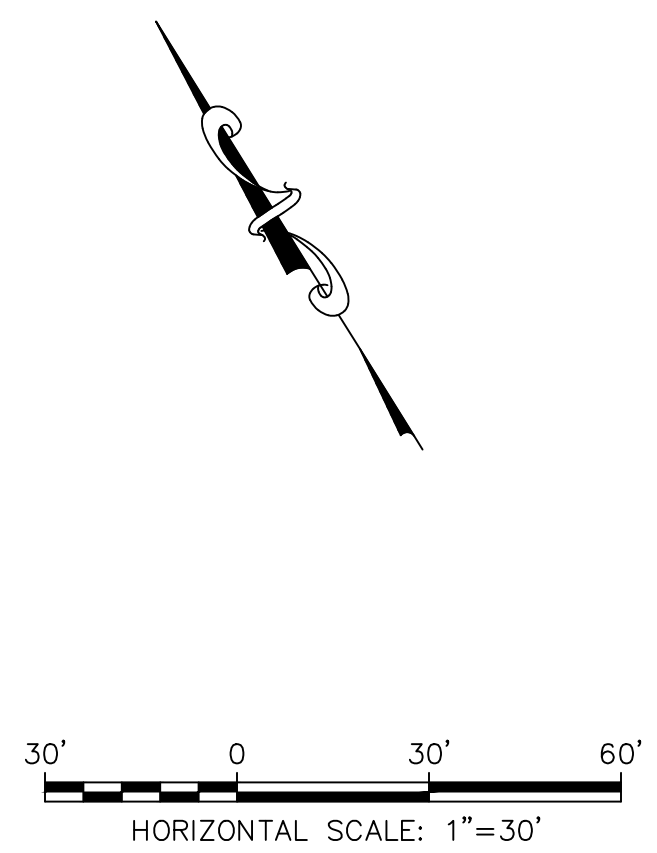
DISTRICT DEPARTMENT OF ENERGY AND ENVIRONMENT  
WASHINGTON, DC

SCALE  
1" = 30'  
SHEET  
2 OF 14





- NOTES:
1. CONTRACTOR IS PERMITTED TO MODIFY STREAM BANKS WITHIN LOD IN SUPPORT OF IMPROVEMENTS TO BANK CONDITION, EROSION CONTROL, AND VEGETATIVE STABILIZATION. WORK MAY INCLUDE: REMOVAL OF VEGETATION AND/OR ROOTS, REMOVAL AND REPLACEMENT OF BANK MATERIAL/SOIL, PLACEMENT OF STONE, PLACEMENT OF WOODY MATERIAL, PLACEMENT OF WOOD CHIPS, PLACEMENT OF EROSION CONTROL MATTING, AND INSTALLATION OF VEGETATION.
  2. CONTRACTOR TO CREATE ORGANICALLY SHAPED POOLS WHEREVER POSSIBLE.
  3. CONTRACTOR TO PLACE WOODY DEBRIS AT DIRECTION OF ENGINEER.



**NOT FOR CONSTRUCTION**

8/6/19 JAMES MORGAN BRANCH AVENUE PARK STREAM RESTORATION/CAVUL PROPOSED CONDITIONS.DWG



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**MURIEL BOWSER, MAYOR**



DES:	BY:	NO.	REVISIONS	DATE
JA/PC				
DRN: PC				
CHK: JA				
DATE: Aug-2019				

**FINAL DESIGN PLANS**  
**PROPOSED CONDITIONS**  
 PC-01

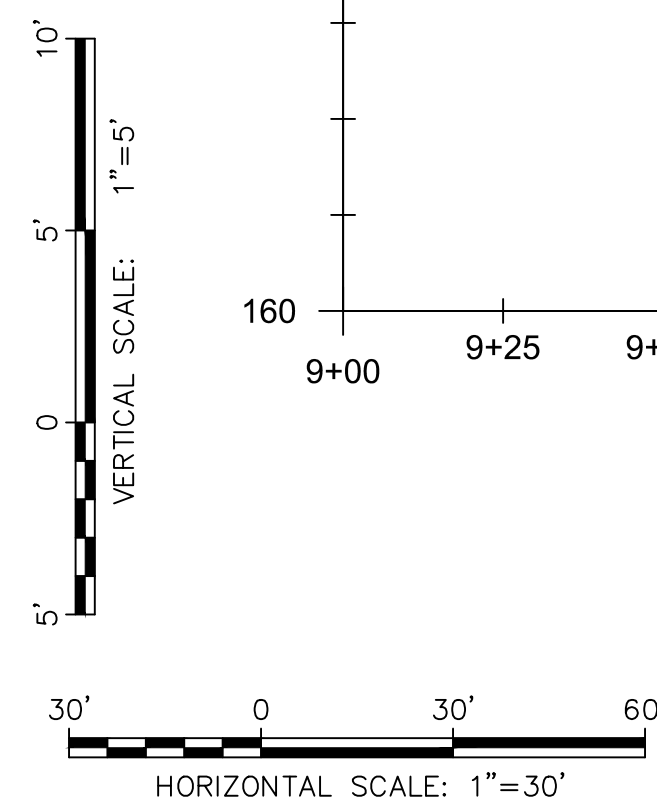
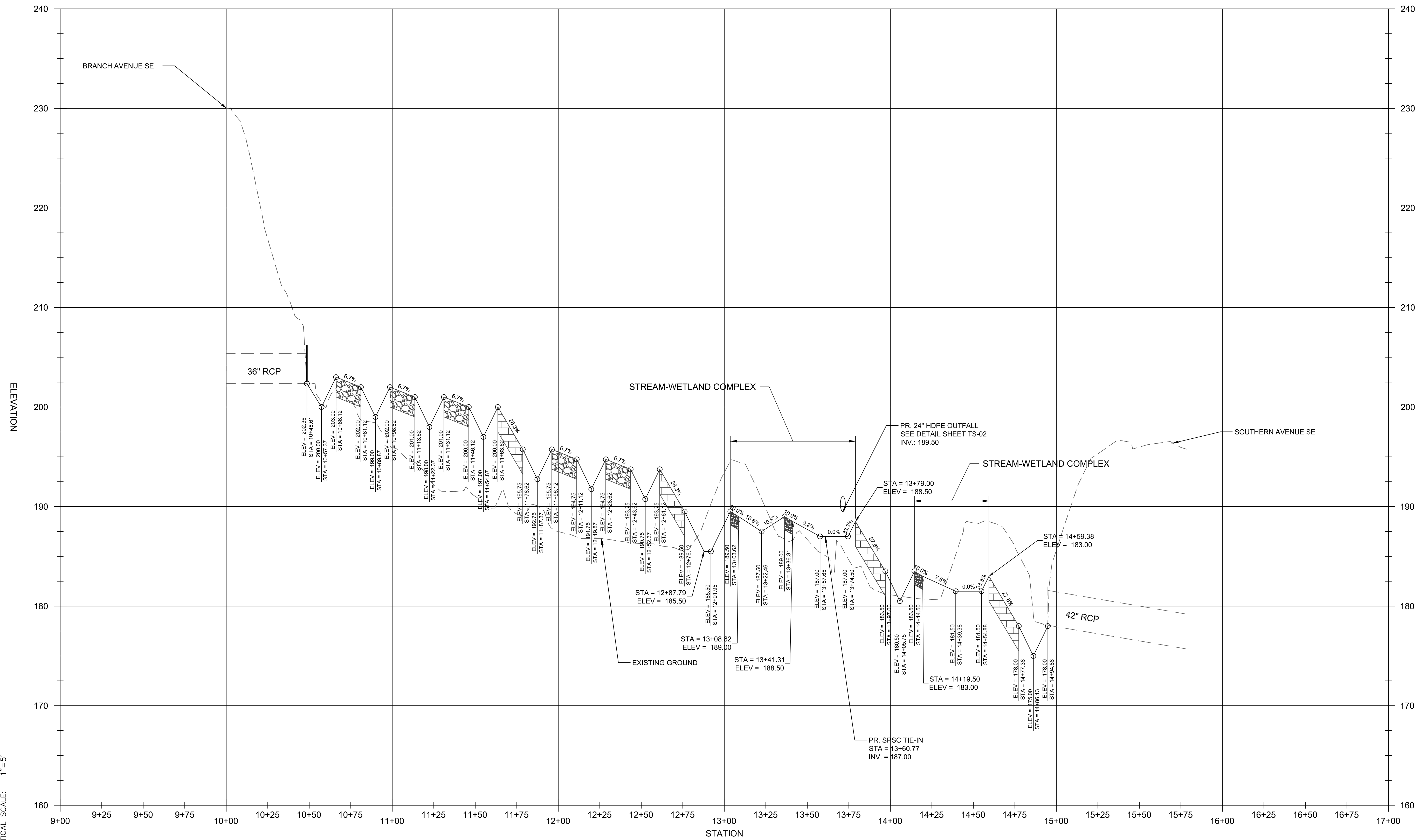
**BRANCH AVE STREAM RESTORATION**  
 DISTRICT DEPARTMENT OF ENERGY AND ENVIRONMENT  
 WASHINGTON, DC

NAD83/NAVD88 MAP NO. XX BLOCK NO. N/A

SCALE  
 1" = 30'  
 SHEET  
 3 OF 14



# STREAM - PROPOSED PROFILE



**NOT FOR CONSTRUCTION**

8/6/19 J:\Projects\Branch Ave Stream Restoration\CD\LONGITUDINAL\_PROFILE.DWG



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**MURIEL BOWSER, MAYOR**



DES:	JA/PC	BY	NO.	REVISIONS	DATE
DRN:	PC				
CHK:	JA				
DATE:	Aug-2019				

**FINAL DESIGN PLANS**  
 LONGITUDINAL PROFILE - STREAM  
 LP-01

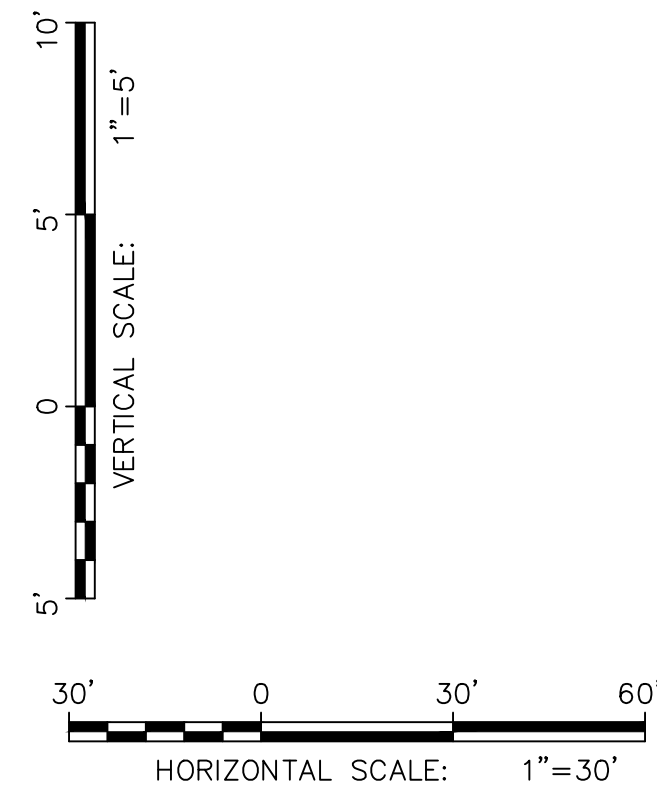
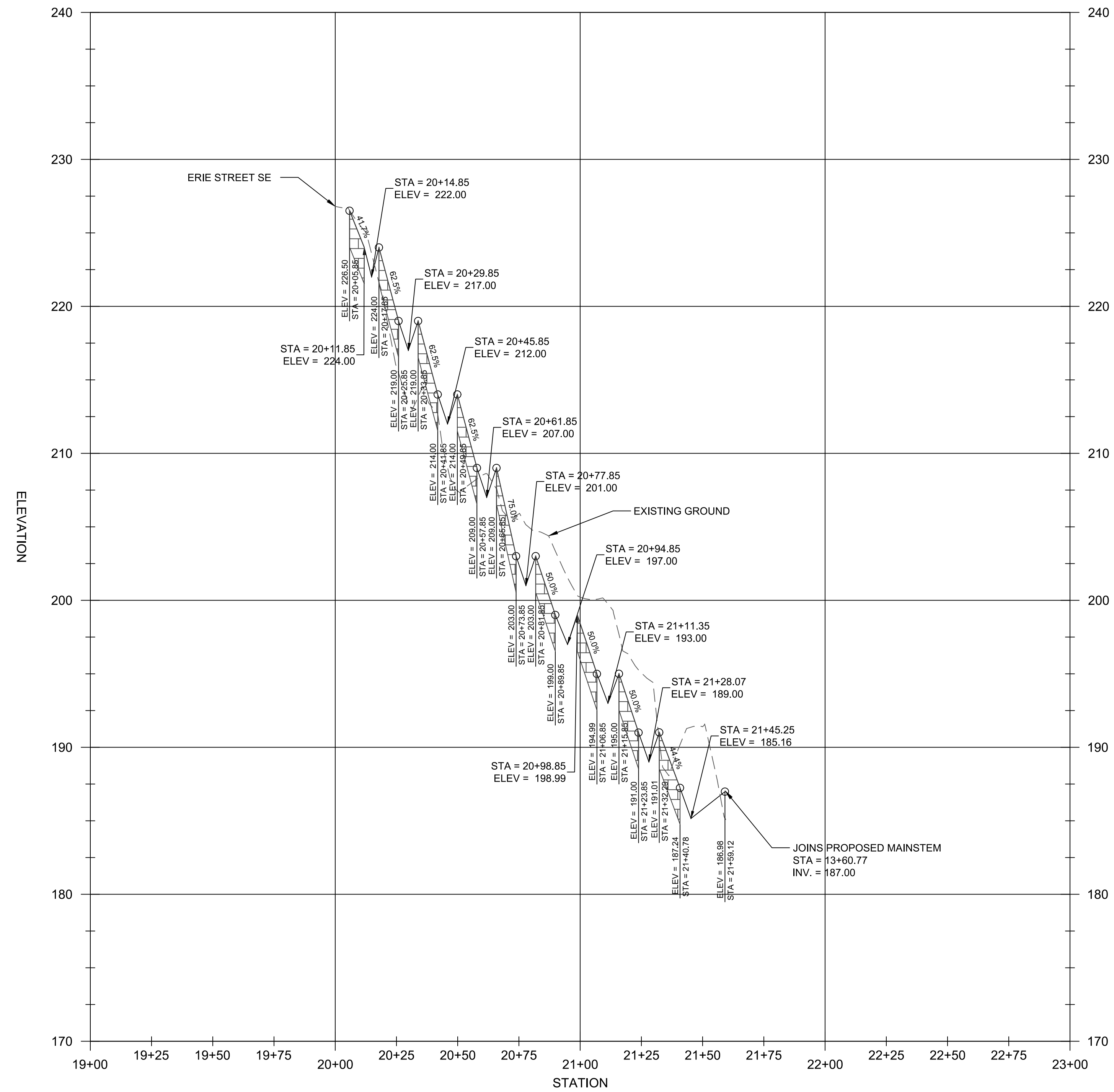
**BRANCH AVE STREAM RESTORATION**  
 DISTRICT DEPARTMENT OF ENERGY AND ENVIRONMENT  
 WASHINGTON, DC

SCALE AS SHOWN  
 SHEET 4 OF 14

NAD83/NAVD88 MAP NO. XX BLOCK NO. N/A



### SPSC - PROPOSED PROFILE



**NOT FOR CONSTRUCTION**

8/6/19  
C:\Users\jacob\OneDrive\Documents\BRANCH AVE STREAM RESTORATION\CADD\LONGITUDINAL\_PROFILE.DWG



**WE ARE WASHINGTON**  
GOVERNMENT OF THE DISTRICT OF COLUMBIA  
**MURIEL BOWSER, MAYOR**



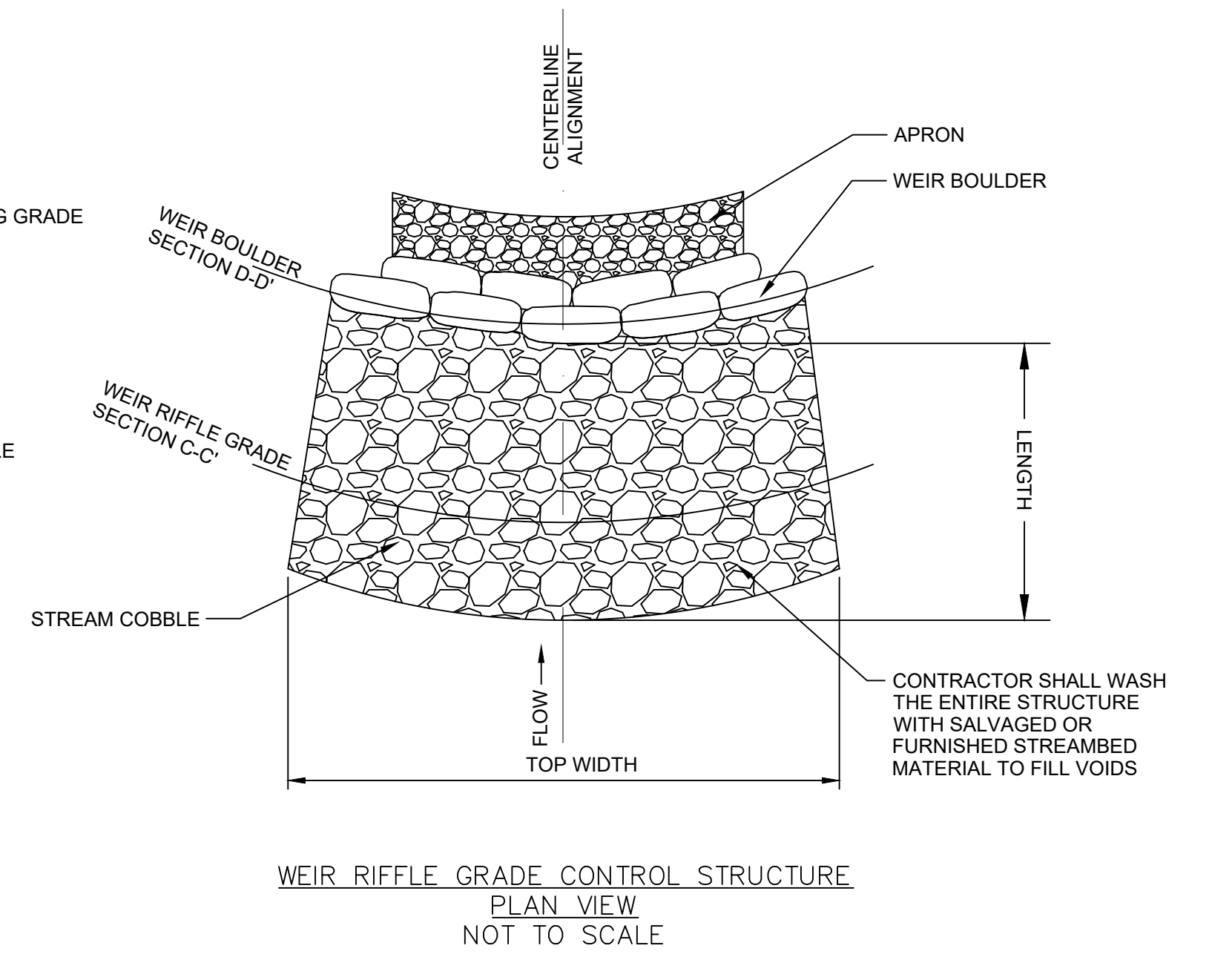
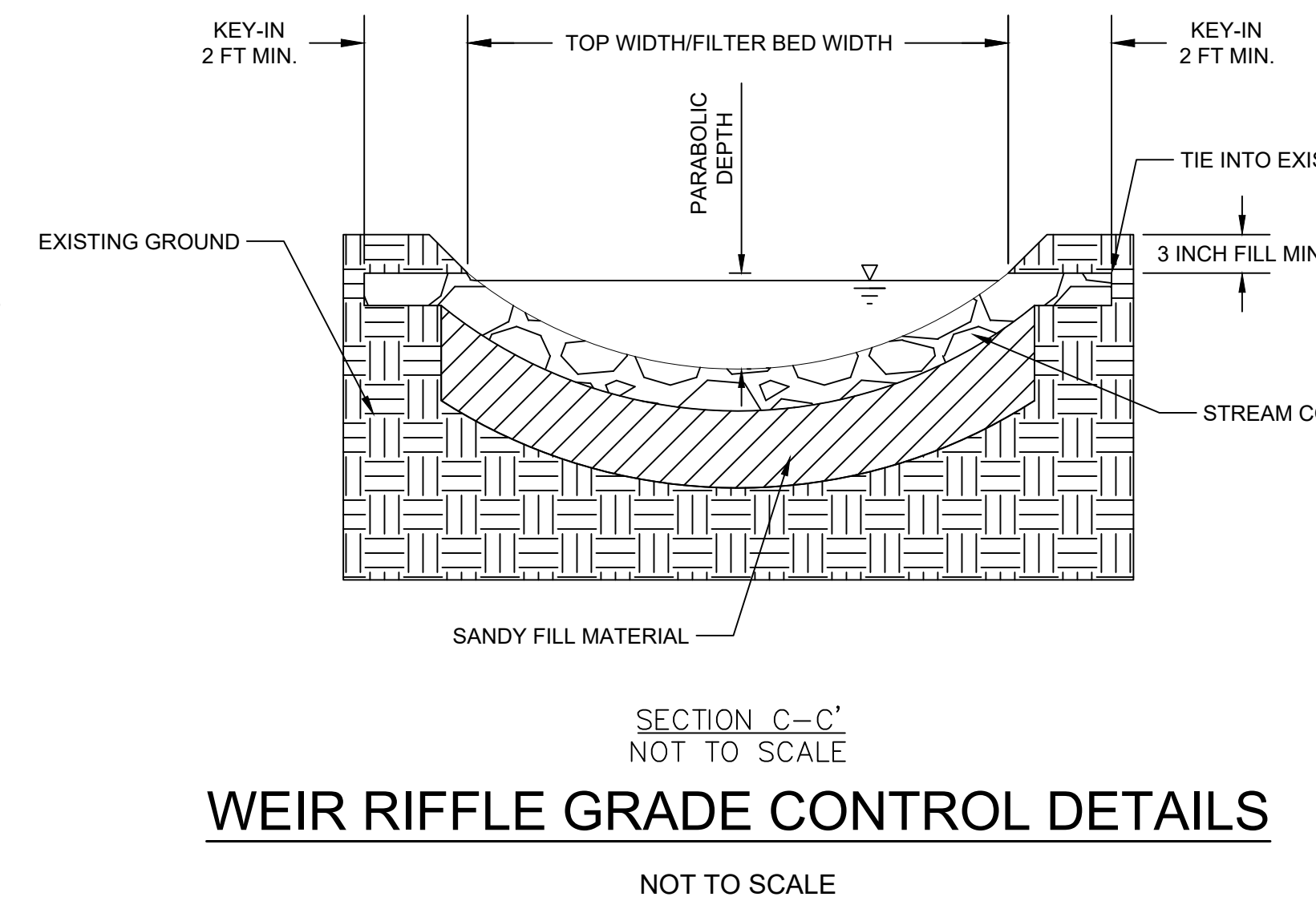
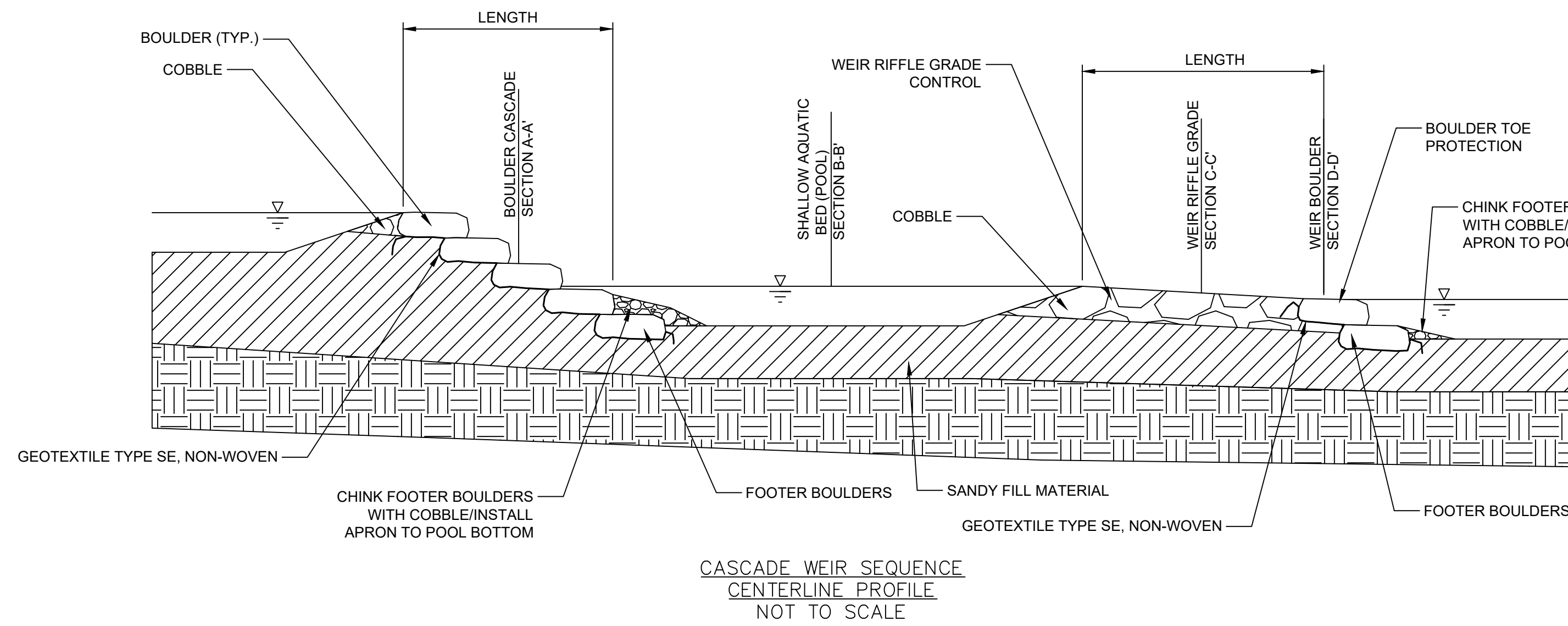
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DRN:	PC				
CHK:	JA				
DATE:	Aug-2019				

**FINAL DESIGN PLANS**  
LONGITUDINAL PROFILE - SPSC  
LP-02  
NAD83/NAVD88 MAP NO. XX BLOCK NO. N/A

**BRANCH AVE STREAM RESTORATION**  
DISTRICT DEPARTMENT OF ENERGY AND ENVIRONMENT  
WASHINGTON, DC

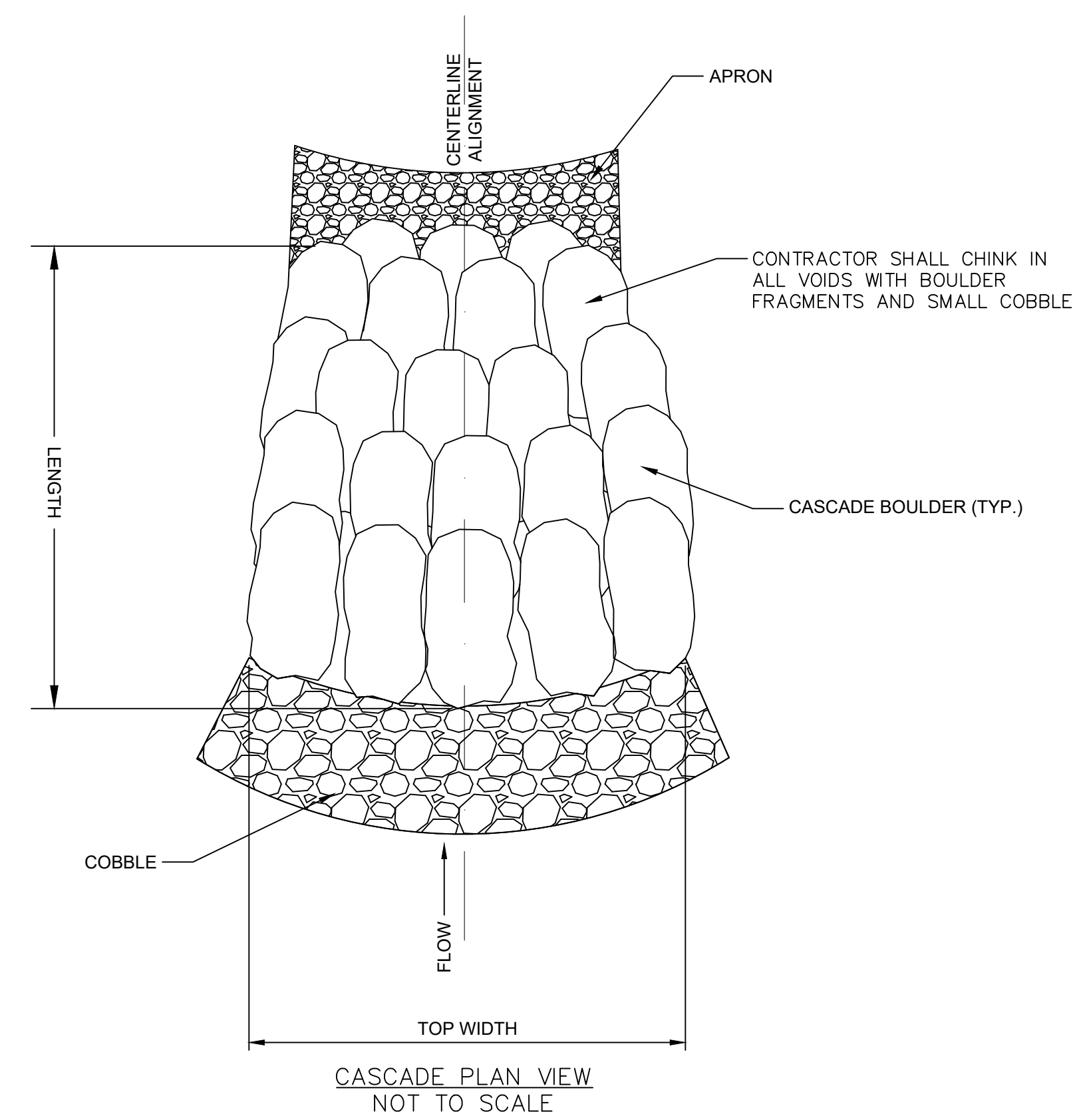
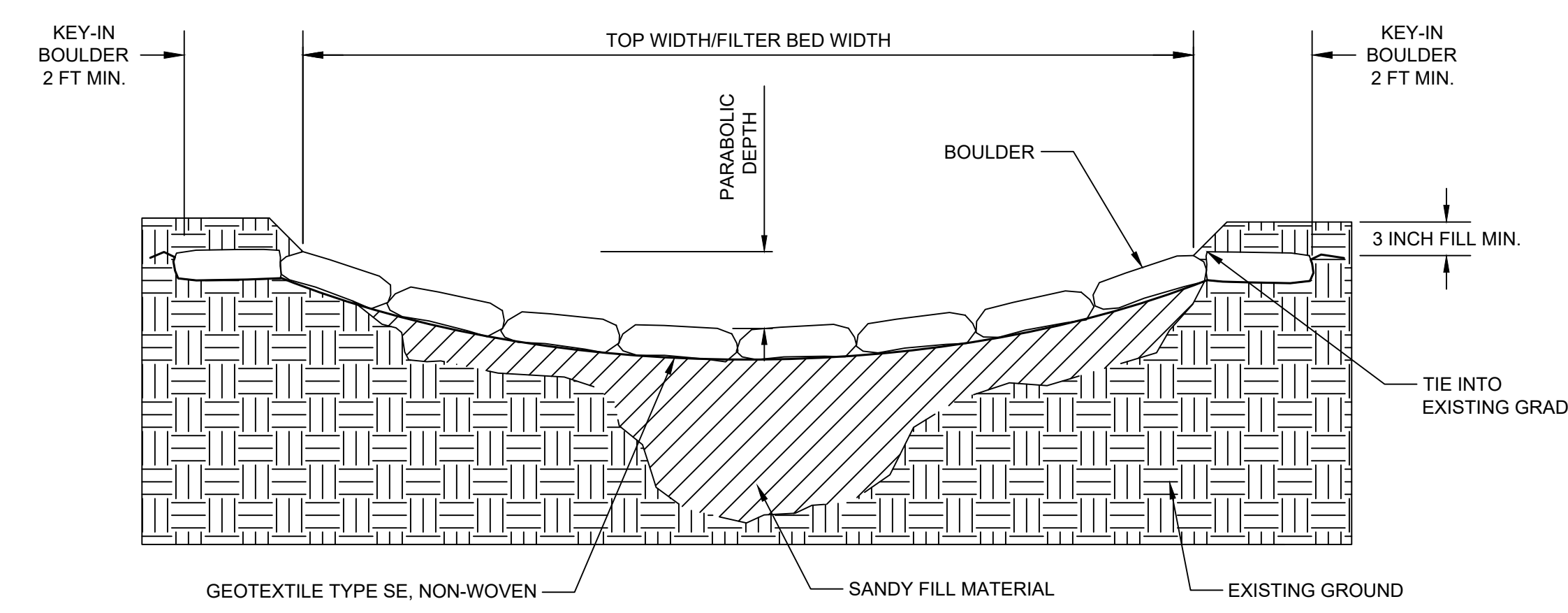
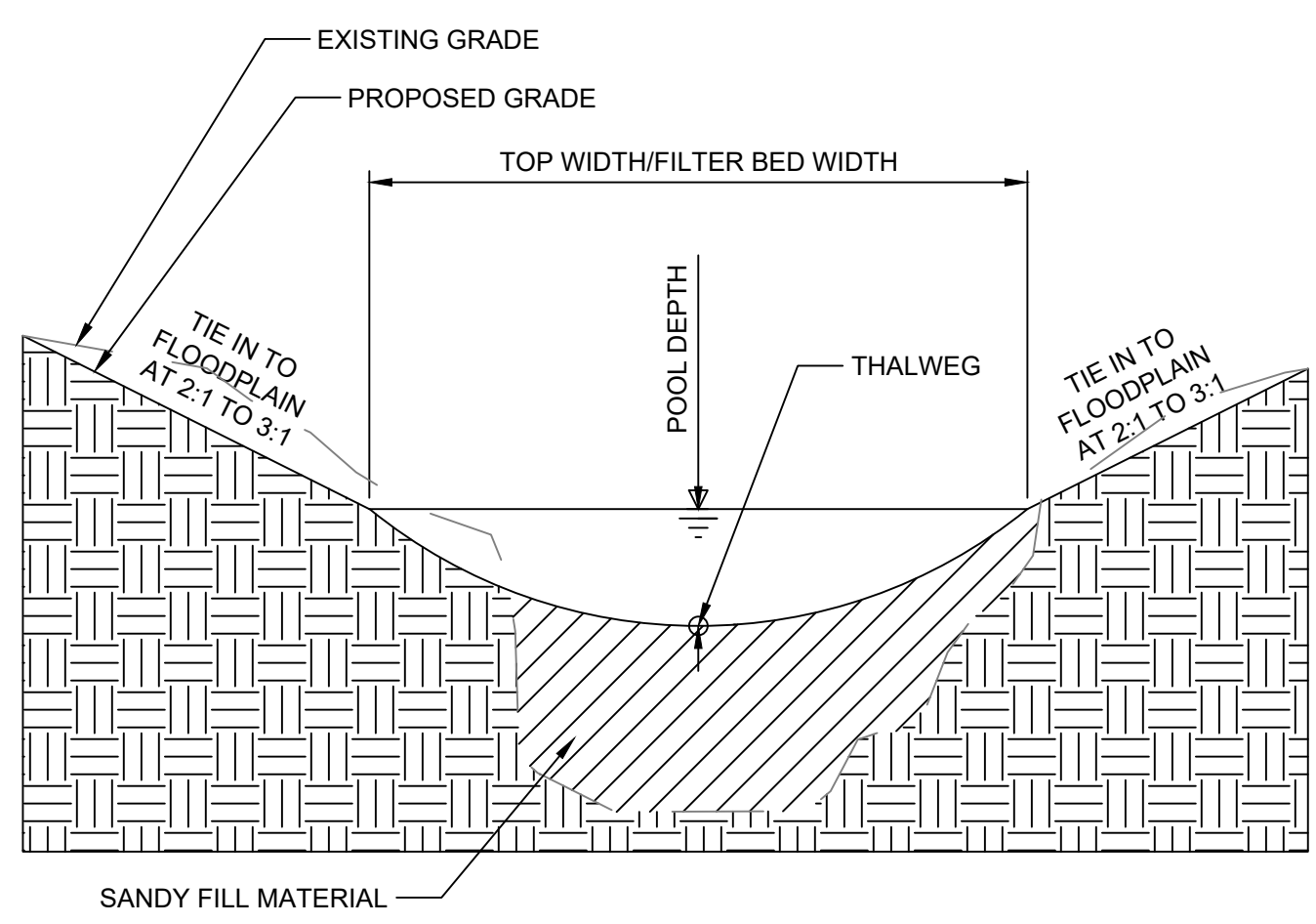
SCALE AS SHOWN  
SHEET 5 OF 14



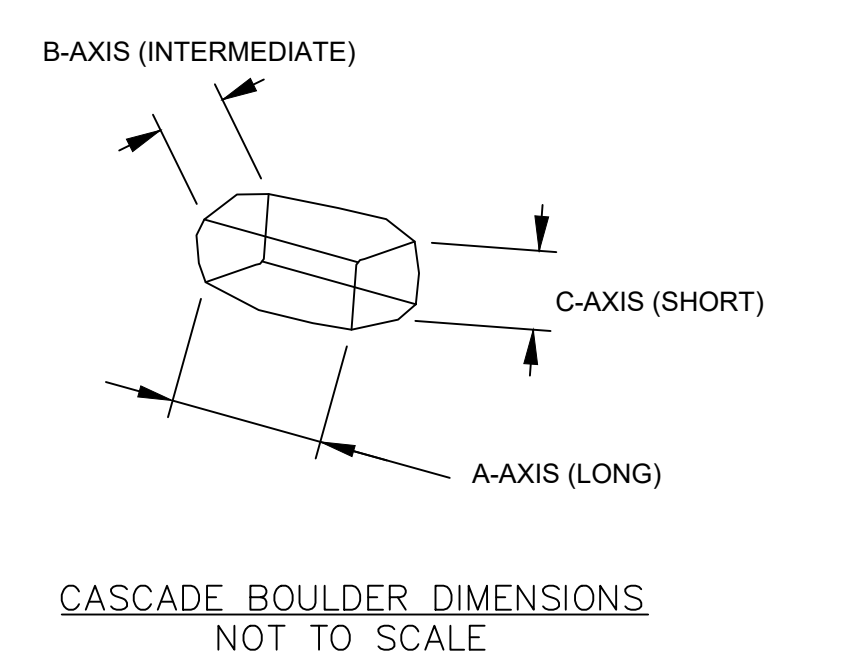


WEIR RIFFLE COBBLE GRADATION			
D50 MEDIAN STONE SIZE (INCHES)	% OF MATERIAL SMALLER THAN TYPICAL STONE	TYPICAL STONE EQUIVALENT DIAMETER (INCHES)	TYPICAL STONE WEIGHT (POUNDS)
12	70 - 100	21	440
	50 - 70	18	275
	35 - 50	12	85
	2 - 10	4	3

SOURCE: ANNE ARUNDEL COUNTY REGENERATIVE STEP POOL STORM CONVEYANCE DESIGN GUIDELINES



CASCAD BOUNDER DIMENSIONS		
A-AXIS	B-AXIS	C-AXIS
2 - 3'	2 - 3'	1.5 - 2'



**BOULDER CASCADE DETAILS**  
NOT TO SCALE

SHALLOW AQUATIC BED (POOL)  
SECTION B-B'  
NOT TO SCALE

BOULDER CASCADE  
SECTION A-A'  
NOT TO SCALE

NOTE: CONTRACTOR TO CREATE ORGANICALLY SHAPED POOLS WHENEVER POSSIBLE.

**NOT FOR CONSTRUCTION**

8/6/19 JAMES WOODS BRANCH AVENUE PARK STREAM RESTORATION/CAVUS TYPICAL SECTIONS.DWG



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GOVERNMENT OF THE DISTRICT OF COLUMBIA  
MURIEL BOWSER, MAYOR



DES:	BY:	NO.:	REVISIONS	DATE
JA/PC				
DRN: PC				
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DATE: Aug-2019				

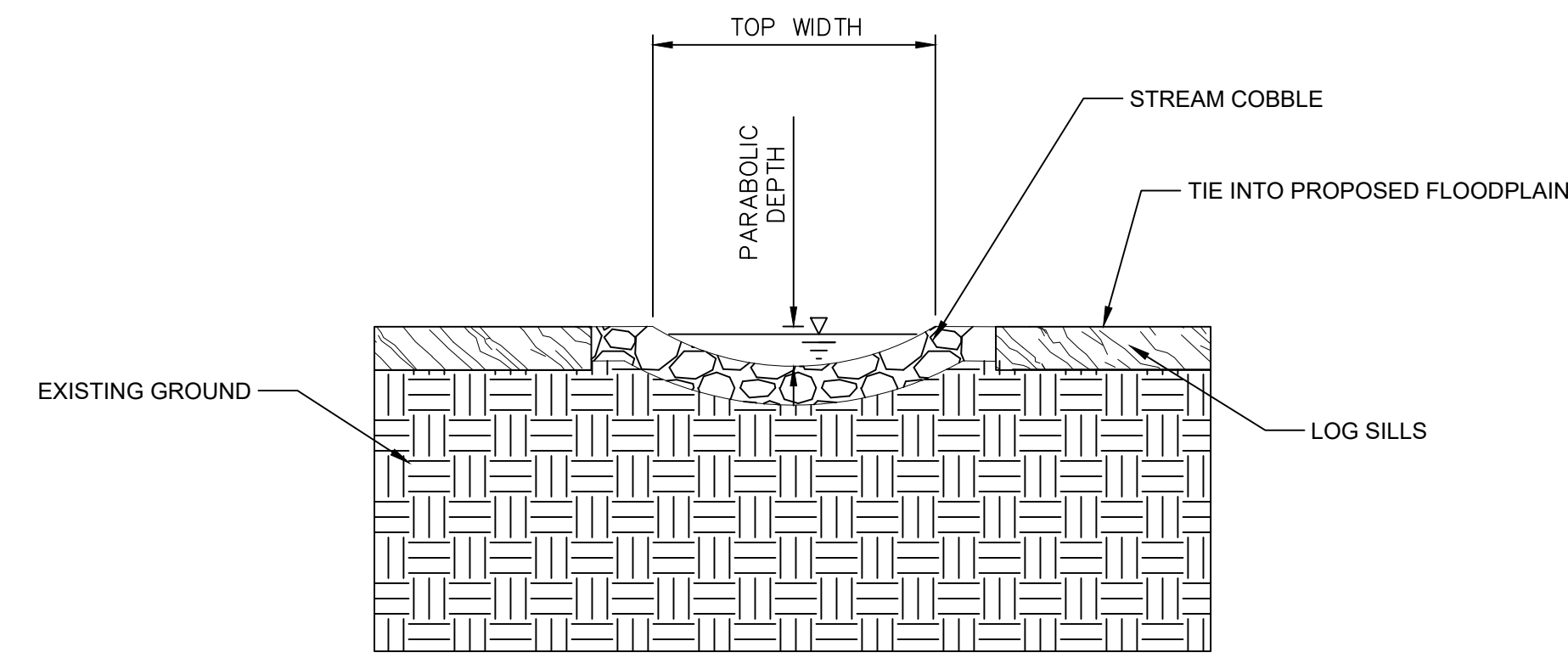
FINAL DESIGN PLANS  
TYPICAL SECTIONS  
TS-01

BRANCH AVE STREAM RESTORATION  
DISTRICT DEPARTMENT OF ENERGY AND ENVIRONMENT  
WASHINGTON, DC

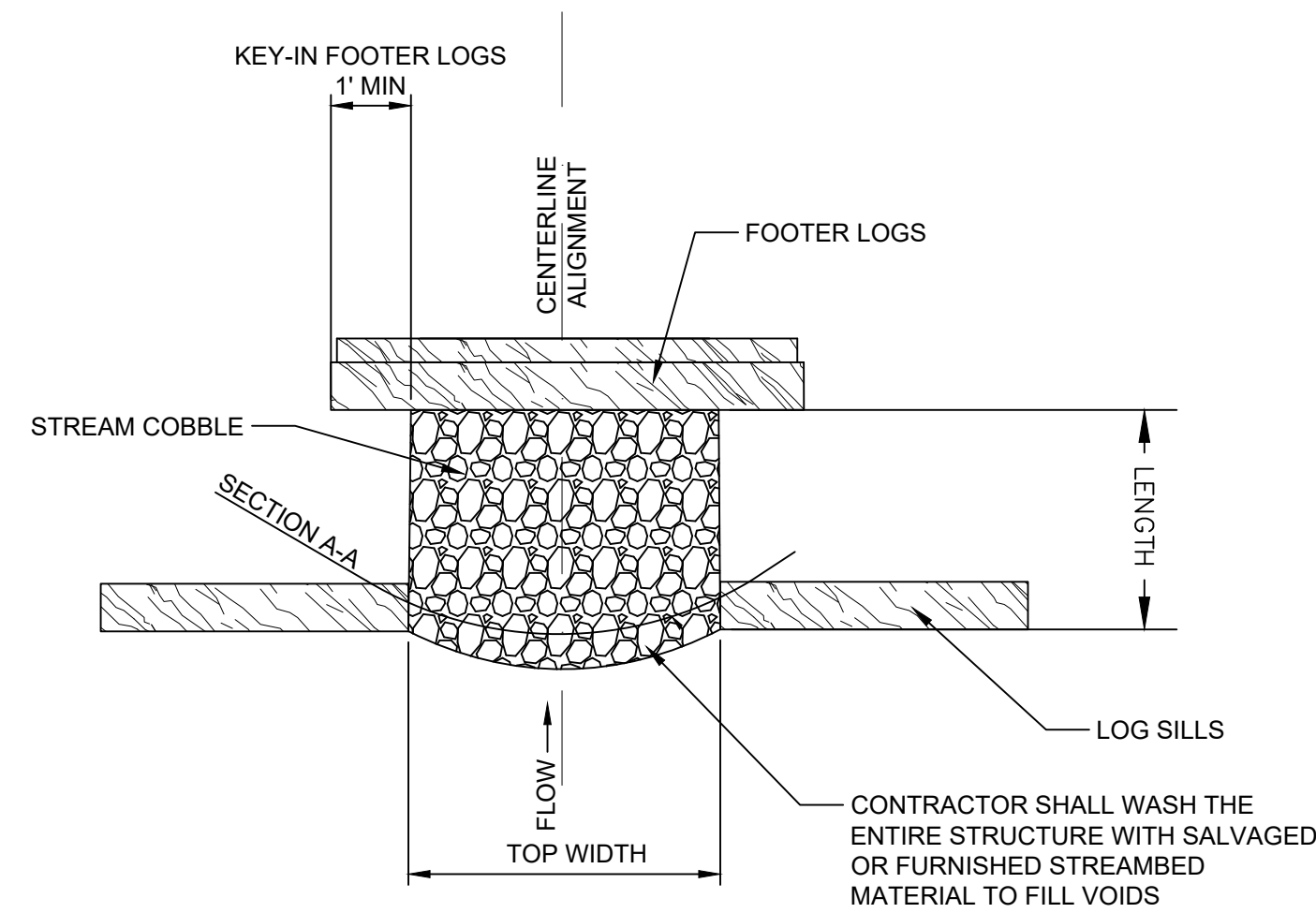
SCALE  
See details  
SHEET  
6 OF 14

NAD83/NAVD88 MAP NO. XX BLOCK NO. N/A

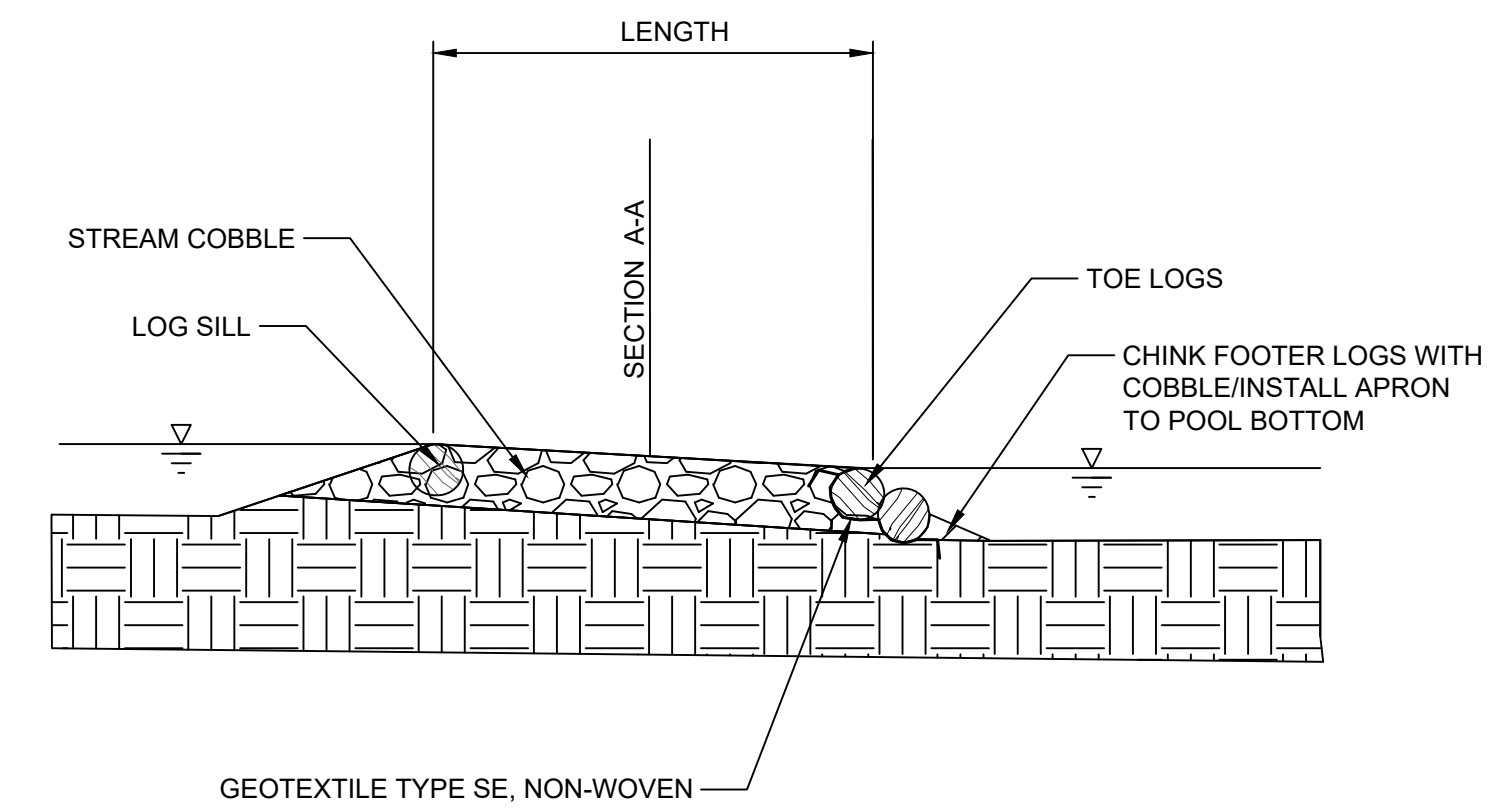




WETLAND STREAM COMPLEX RIFFLE STRUCTURE  
SECTION A-A  
NOT TO SCALE



WETLAND STREAM COMPLEX RIFFLE STRUCTURE  
PLAN VIEW  
NOT TO SCALE



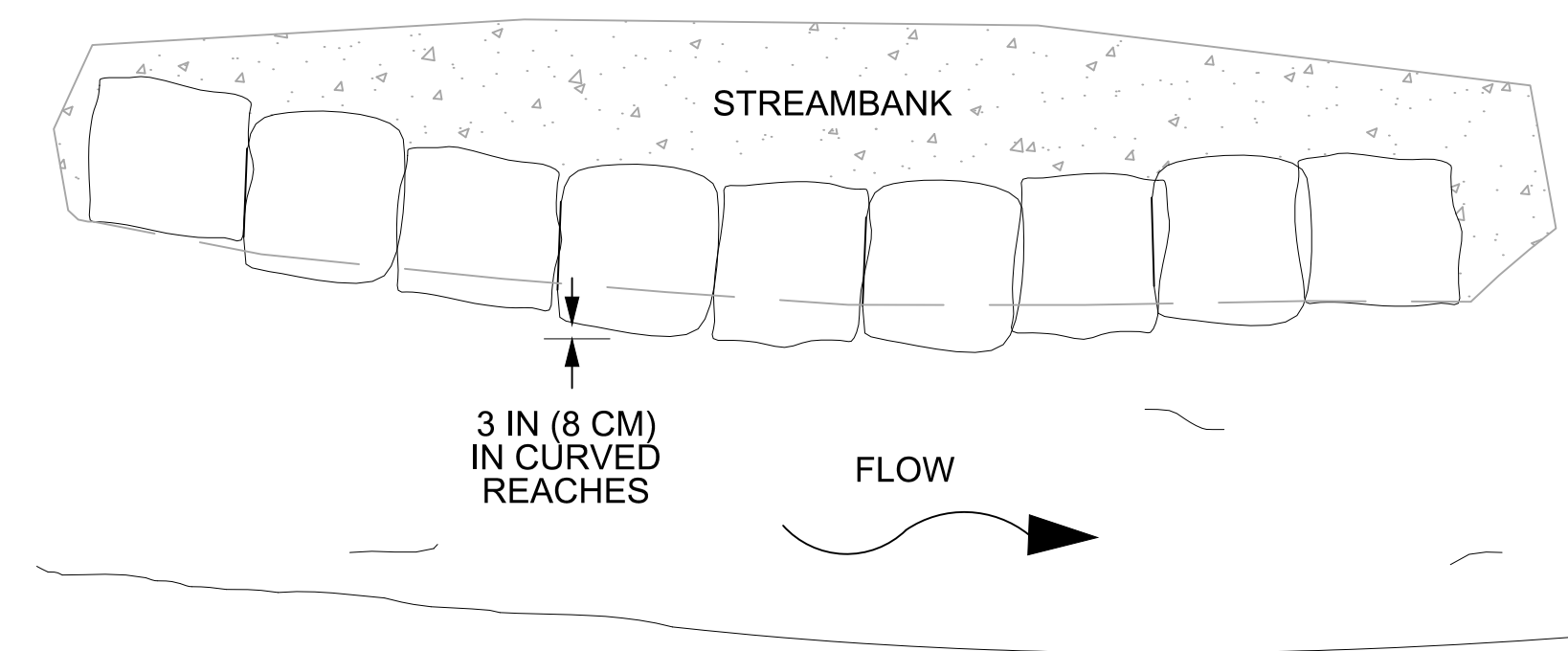
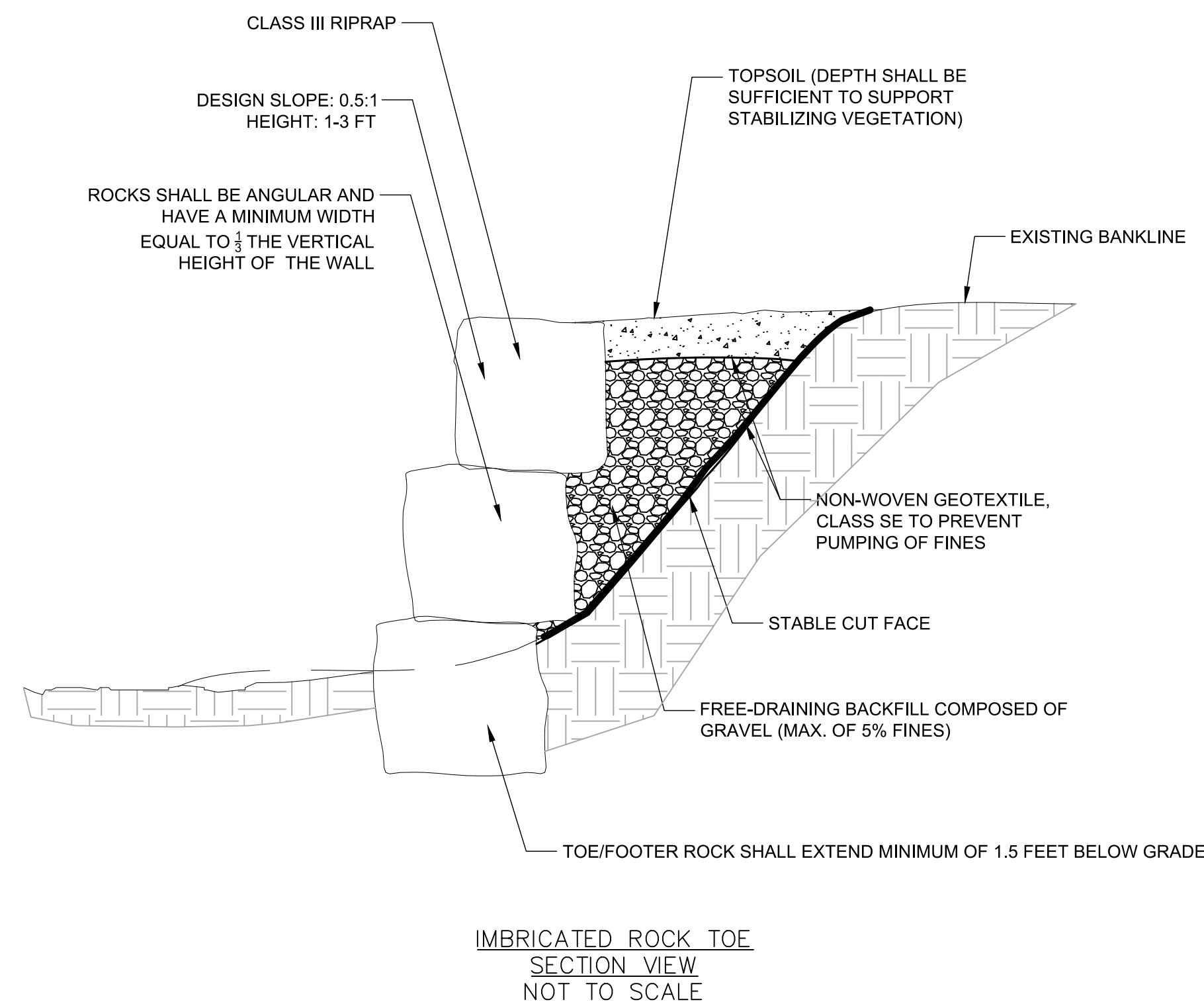
WETLAND STREAM COMPLEX RIFFLE STRUCTURE  
PROFILE VIEW  
NOT TO SCALE

WETLAND STREAM COMPLEX RIFFLE COBBLE GRADATION			
D50 MEDIAN STONE SIZE (INCHES)	% OF MATERIAL SMALLER THAN TYPICAL STONE	TYPICAL STONE EQUIVALENT DIAMETER (INCHES)	TYPICAL STONE WEIGHT (POUNDS)
9	70 - 100	15	160
	50 - 70	12	85
	35 - 50	9	35
	2 - 10	3	1.3

SOURCE: ANNE ARUNDEL COUNTY REGENERATIVE STEP POOL STORM CONVEYANCE DESIGN GUIDELINES

### WETLAND STREAM COMPLEX RIFFLE STRUCTURE DETAILS

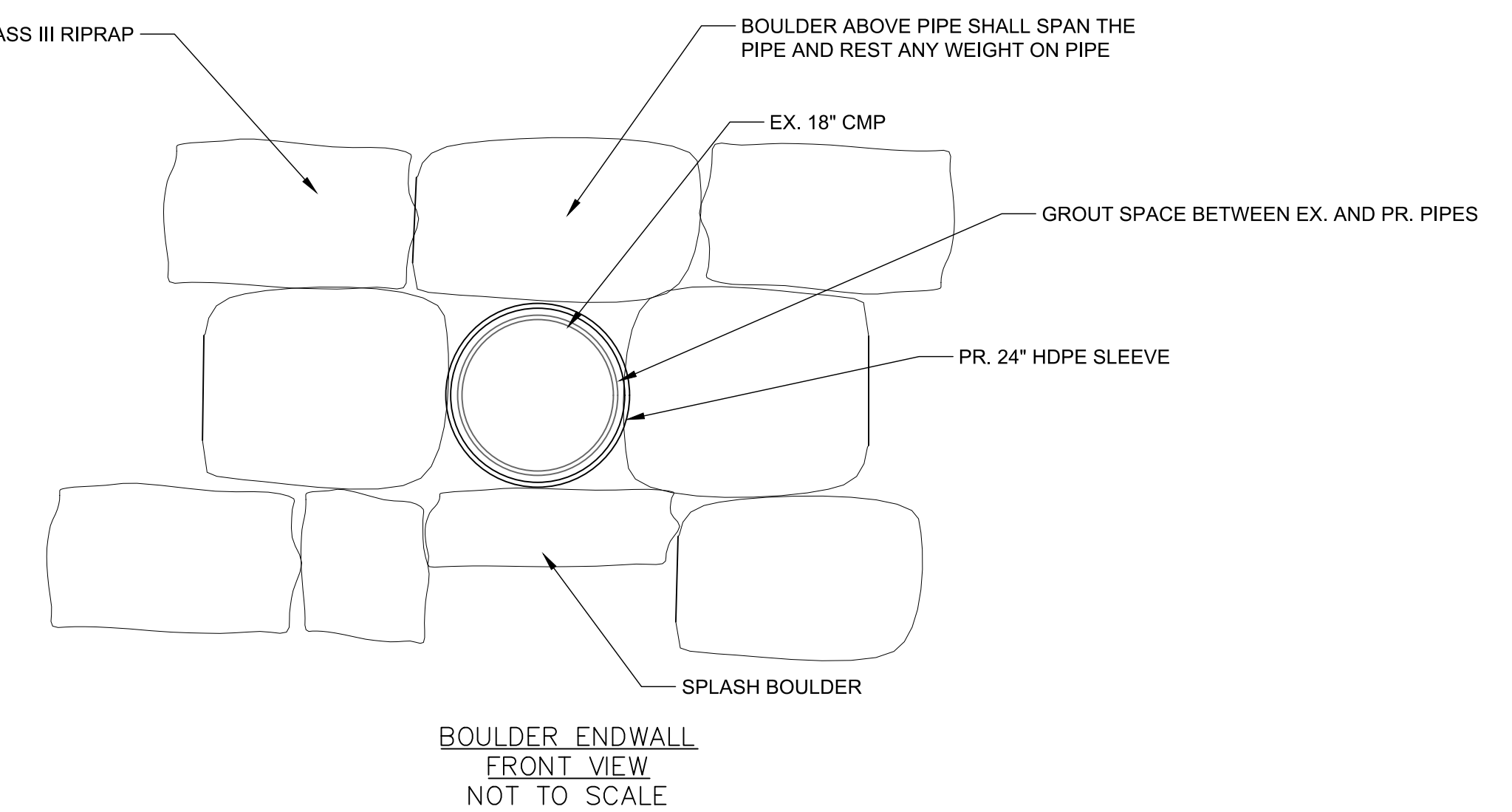
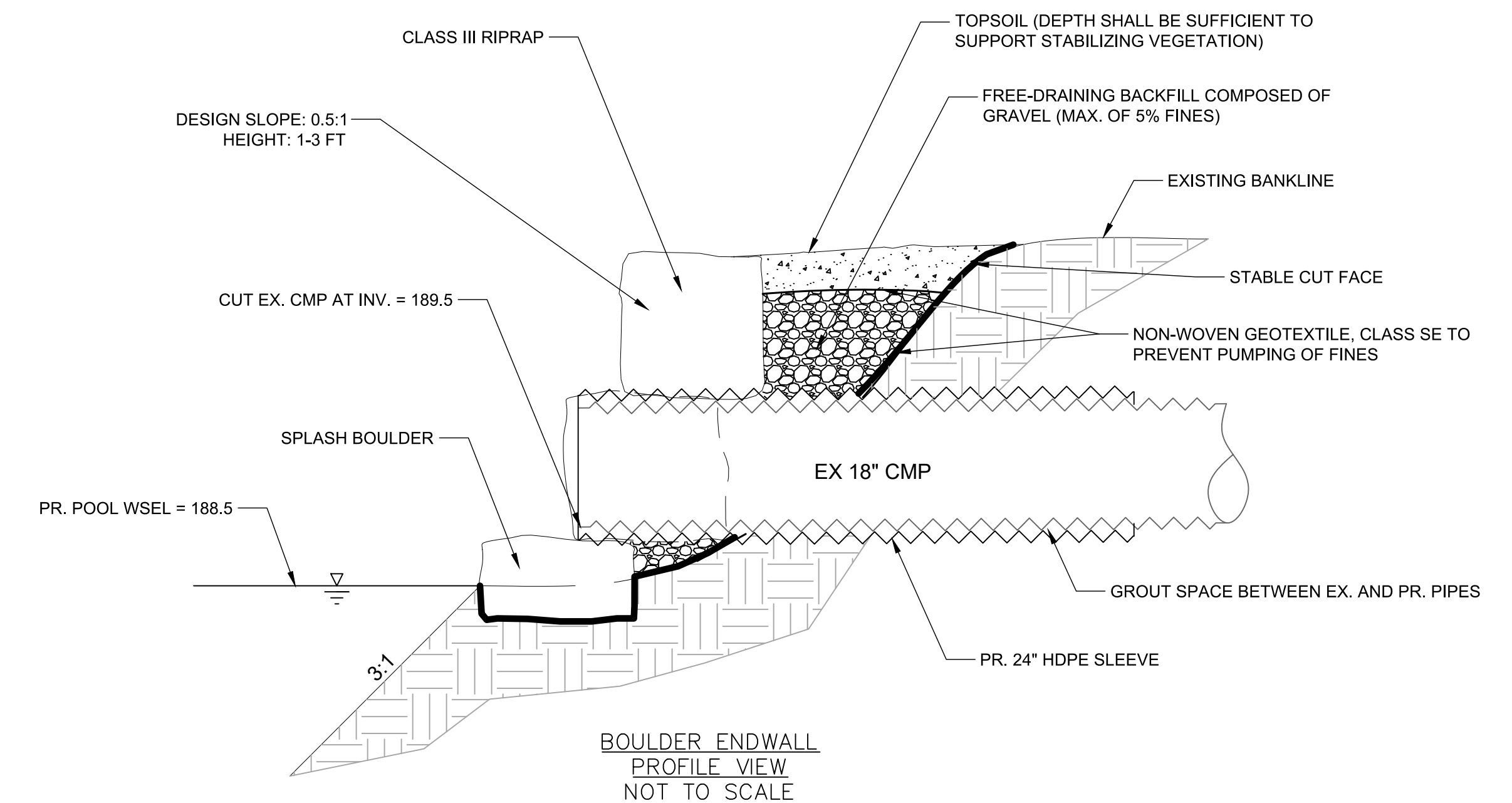
NOT TO SCALE



IMBRICATED ROCK TOE  
PLAN VIEW  
NOT TO SCALE

### IMBRICATED ROCK TOE DETAILS

NOT TO SCALE



BOULDER ENDWALL DETAILS  
NOT TO SCALE

NOT FOR CONSTRUCTION

8/6/19 J:\proj\1908\BRANCH AVE\BRANCH AVE\STREAM RESTORATION\CAD\DEL\_TYPICAL\_SECTIONS.DWG



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MURIEL BOWSER, MAYOR



DES:	BY:	NO.:	REVISIONS	DATE
JA/PC				
DRN: PC				
CHK: JA				
DATE: Aug-2019				

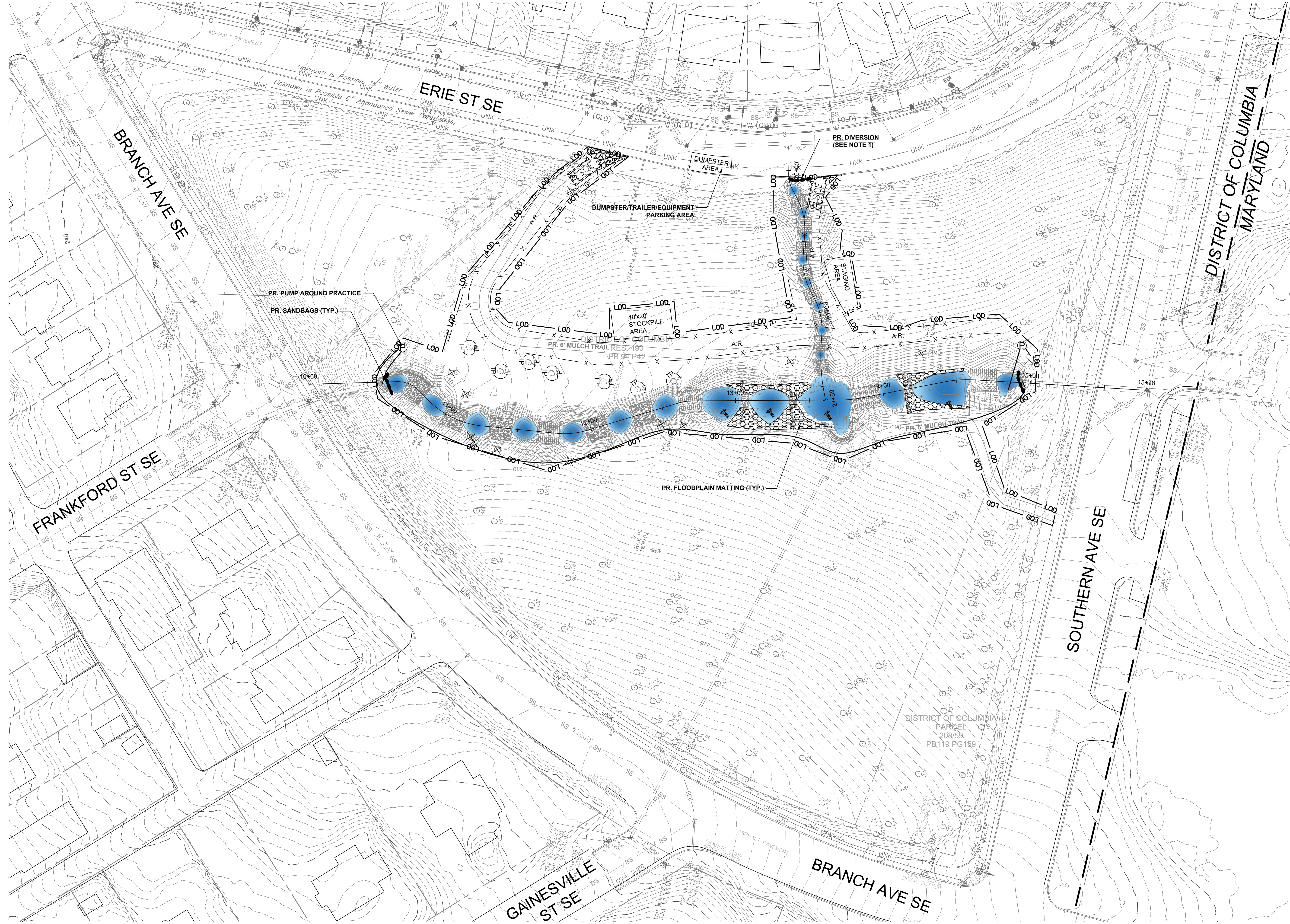
FINAL DESIGN PLANS  
TYPICAL SECTIONS  
TS-02

BRANCH AVE STREAM RESTORATION  
DISTRICT DEPARTMENT OF ENERGY AND ENVIRONMENT  
WASHINGTON, DC

SCALE  
See details  
SHEET  
7 OF 14

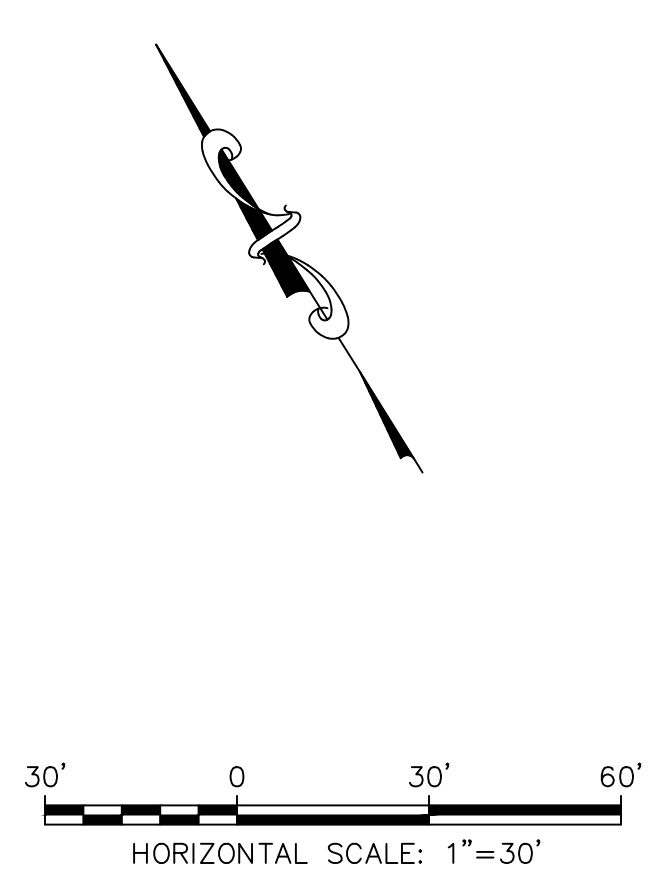
NAD83/NAVD88 MAP NO. XX BLOCK NO. N/A





- LEGEND:**
- LIMITS OF DISTURBANCE — LOD —
  - TREE PROTECTION FENCE — TP —
  - STABILIZED CONSTRUCTION ENTRANCE — SCE —
  - ACCESS ROAD — A.R. —
  - PUMP-AROUND FILTER BAG — FB —
  - SAND BAGS — SB —
  - WETLAND MATTING — WM —
  - SILT FENCE — SF —

- NOTES:**
1. THE EXISTING GULLY ALONG ERIE STREET SE IS EPHEMERAL AND ONLY FLOWS DURING EXTREME EVENTS. THE FLOW REACHES THE GULLY THROUGH A FAILURE IN THE EXISTING CURB. DURING CONSTRUCTION, THE CONTRACTOR SHALL BLOCK THIS CURB OPENING WITH SAND BAGS ALLOWING DRAINAGE TO REACH THE STORM DRAINAGE VIA THE EXISTING CURB AND GUTTER.
  2. CONTRACTOR IS PERMITTED TO ACCESS THE STREAM FREELY WITHIN THE LOD DURING CONSTRUCTION TO FACILITATE GRADING. THIS INCLUDES MOVEMENT OF MACHINES FROM THE ACCESS ROADS INTO THE CHANNEL THROUGHOUT THE LOD.
  3. PUMP AROUND LOCATIONS AND FLEXIBLE HOSE LAYOUT ARE "TYPICAL". THE CONTRACTOR SHALL ADJUST PUMP AROUND AND DEWATERING AS NECESSARY TO PROMOTE DRY WORK AREA.



**NOT FOR CONSTRUCTION**

8/6/19 JAMES MORGAN DISTRICT OF COLUMBIA BRANCH AVENUE PARK STREAM RESTORATION/CAVIL EROSION AND SEDIMENT CONTROL DWG



**WE ARE WASHINGTON**  
 GOVERNMENT OF THE DISTRICT OF COLUMBIA  
**MURIEL BOWSER, MAYOR**



DES:	BY:	NO.:	REVISIONS	DATE
JA/PC				
DRN: PC				
CHK: JA				
DATE: Aug-2019				

**FINAL DESIGN PLANS**  
**EROSION AND SEDIMENT CONTROL PLAN**  
**ES-01**

NAD83/NAVD88 MAP NO. XX BLOCK NO. N/A

**BRANCH AVE STREAM RESTORATION**  
 DISTRICT DEPARTMENT OF ENERGY AND ENVIRONMENT  
 WASHINGTON, DC

SCALE  
 1" = 30'  
 SHEET  
 8 OF 14



**PROJECT NARRATIVE**

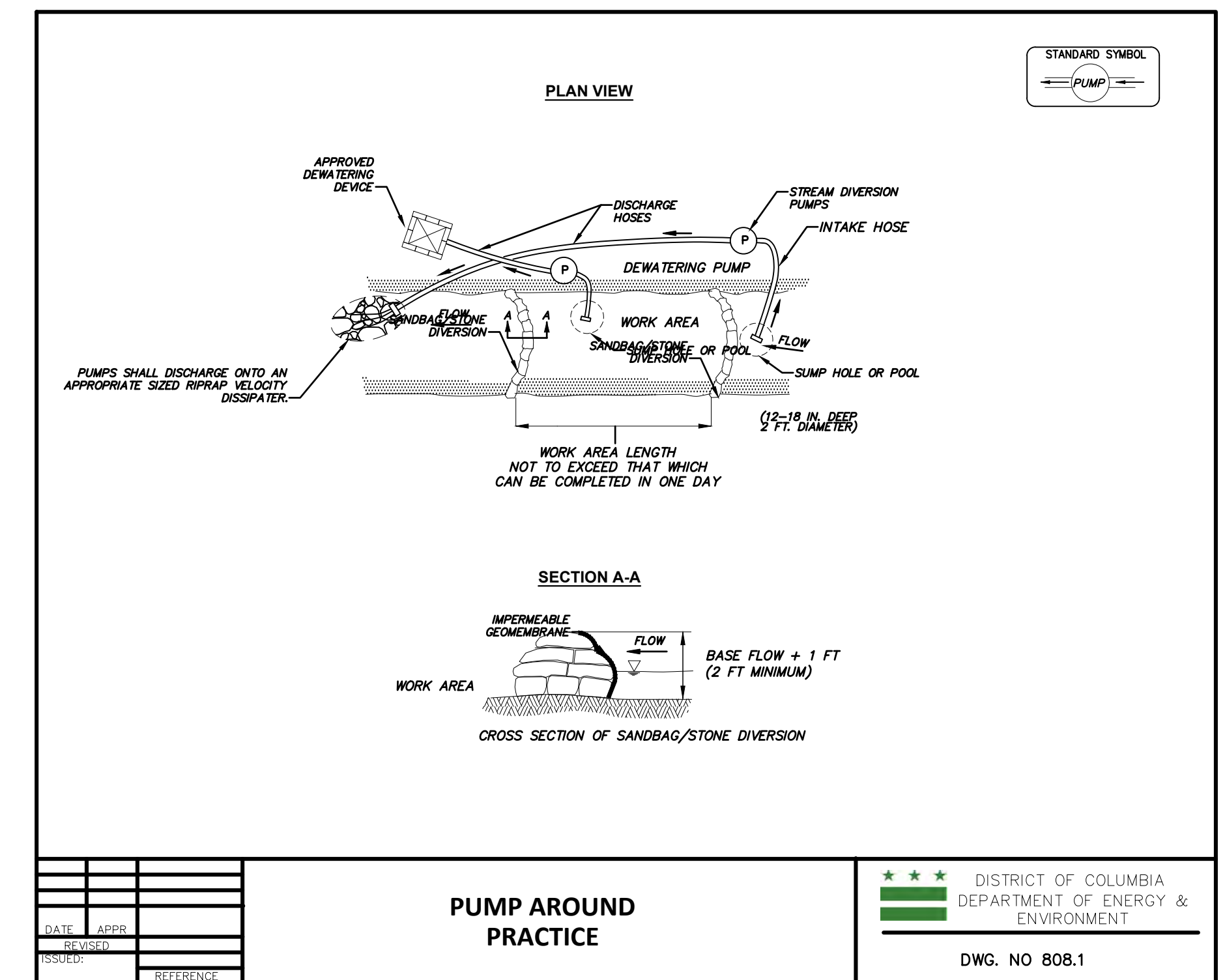
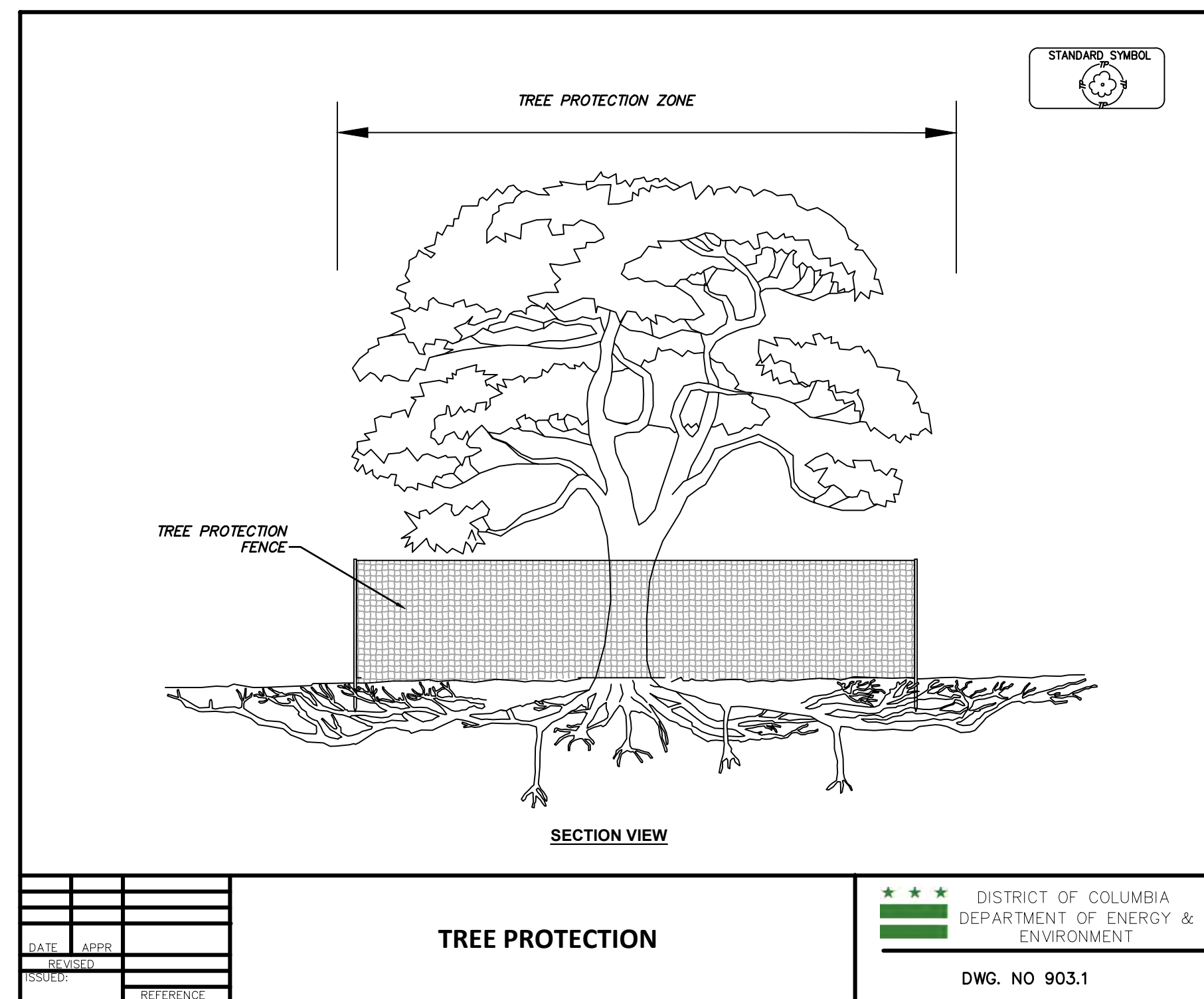
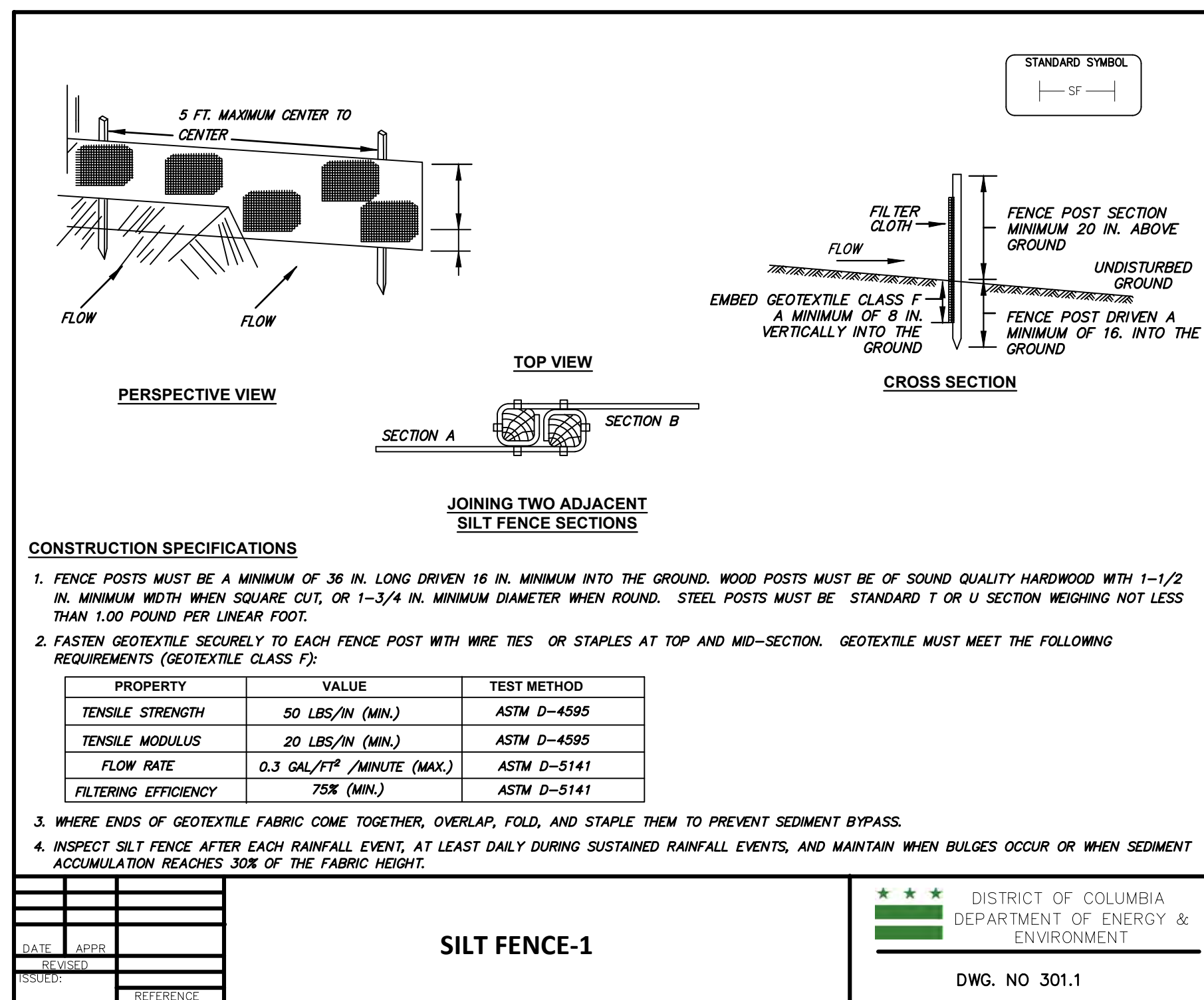
THE BRANCH AVENUE STREAM RESTORATION PROJECT WILL RESTORE AN ENTRENCHED UNNAMED TRIBUTARY TO OXON RUN IN SOUTHEAST DC. THE TRIBUTARY HAS A DRAINAGE AREA OF 46 ACRES OF SINGLE FAMILY HOMES. THE EXISTING TRIBUTARY IS APPROXIMATELY HAS 16-FOOT, NEARLY VERTICAL BANKS THAT ARE ACTIVELY ERODING. ADDITIONALLY, A 200 FOOT LONG GULLY IS ACTIVELY FORMING FROM ERIE ST SE TO THE UNNAMED TRIBUTARY.

THE PROJECT'S GOALS ARE TO REDUCE BANK EROSION AND INCREASE HABITAT IN THE TRIBUTARY. THE PROJECT WILL LIFT THE HYDROLOGIC, HYDRAULIC, GEOMORPHIC, AND PHYSICO-CHEMICAL PROCESSES OF THE STREAM. ADDITIONALLY, THE PROJECT WILL PROVIDE A SAFE WALKING PATH TO ALLOW THE COMMUNITY TO ACCESS THE STREAM

THE EROSION AND SEDIMENT CONTROL PLANS PROVIDE EROSION AND SEDIMENT CONTROL PRACTICES FOR CLEARING AND GRUBBING AND CONSTRUCTING THE STREAM RESTORATION ALONG THE UNNAMED TRIBUTARY.

**PROJECT LOCATION**

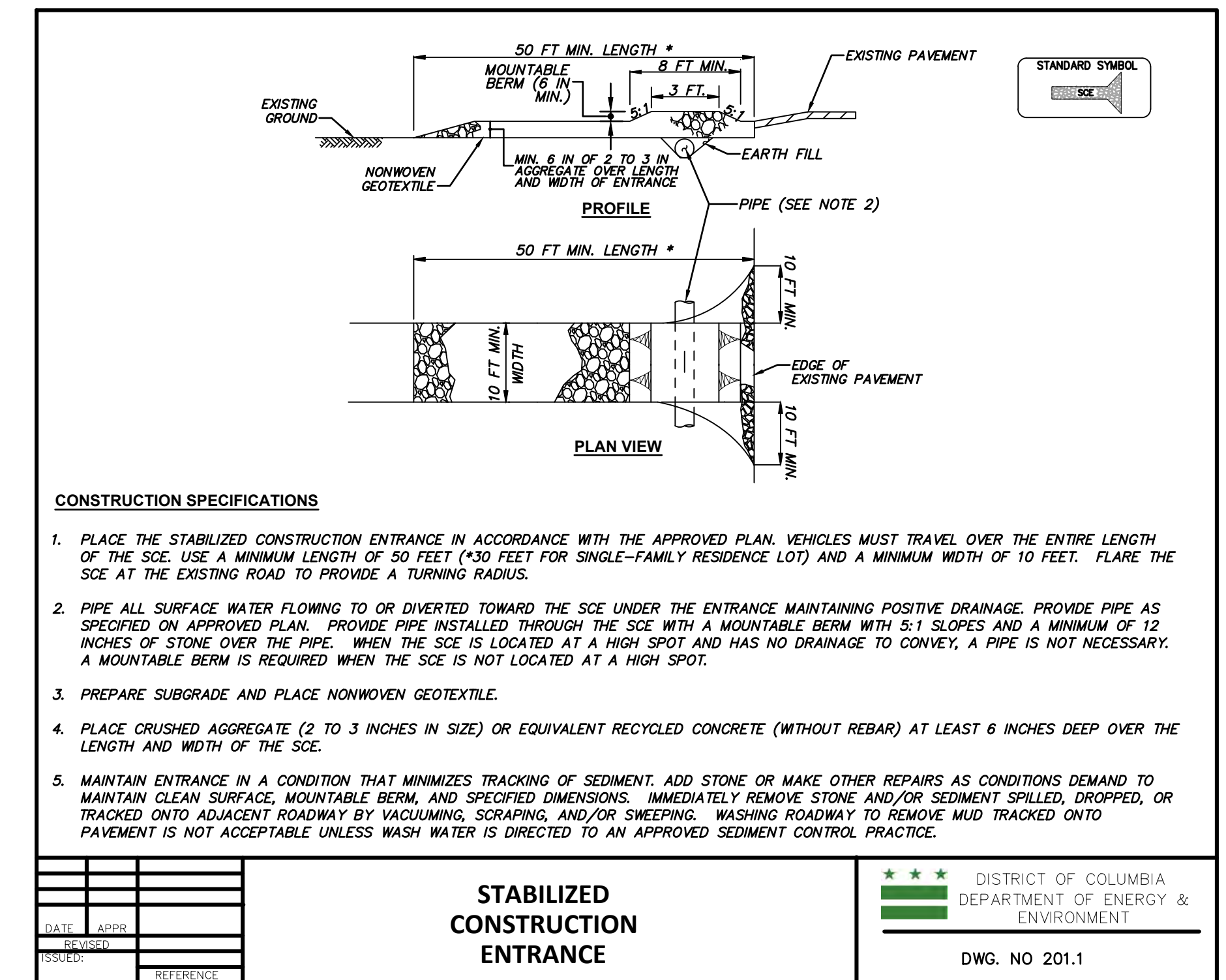
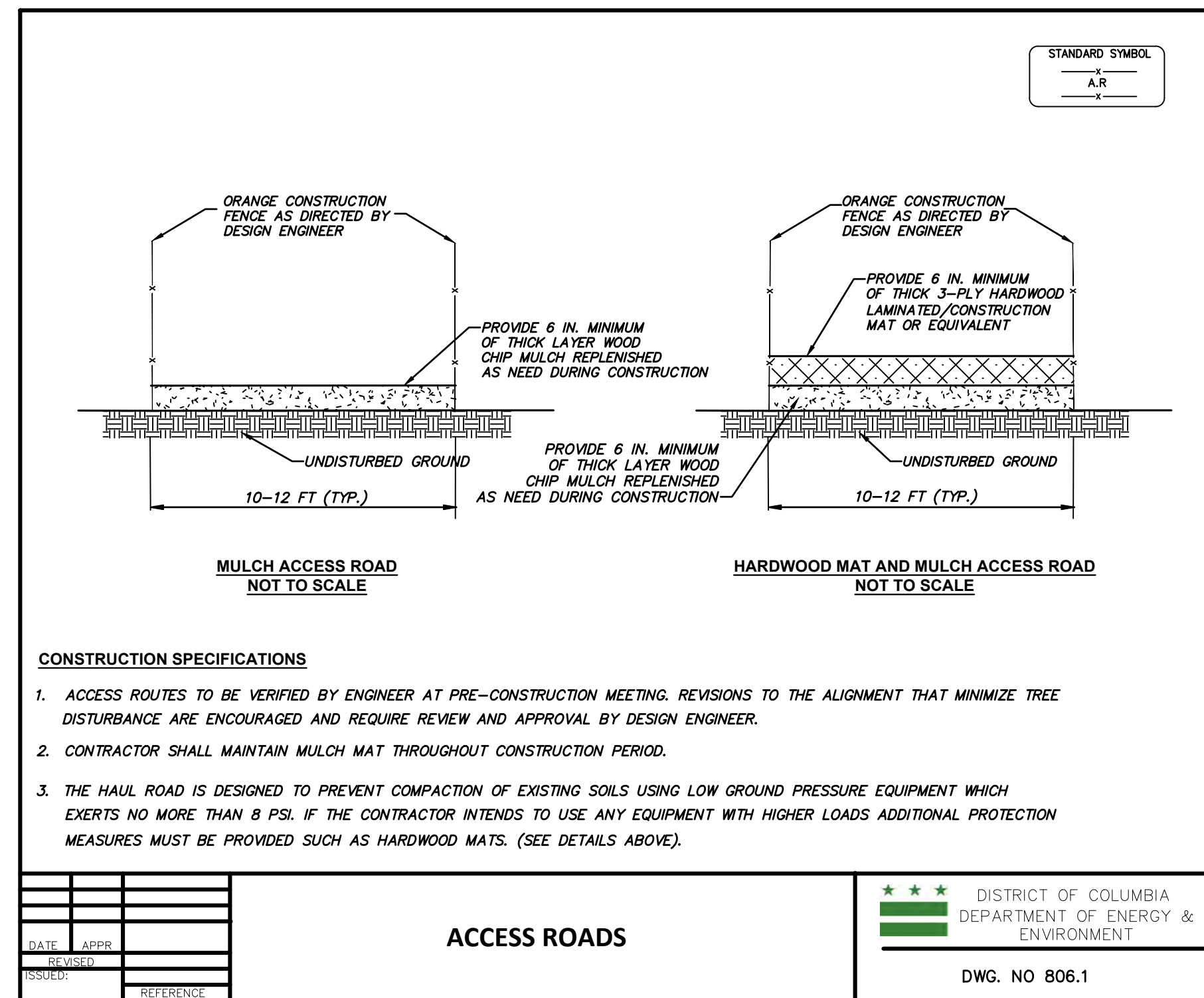
PARCEL 206 LOT 67 & LOT 59  
ERIE STREET SE  
WASHINGTON, D.C. 20020



**DOEE SOIL EROSION AND SEDIMENT CONTROL PLAN GENERAL NOTES**

- FOLLOWING INITIAL LAND DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR INTERIM STABILIZATION MUST BE COMPLETED WITHIN SEVEN (7) CALENDAR DAYS FOR THE SURFACES OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND SLOPES GREATER THAN THREE (3) HORIZONTAL TO ONE (1) VERTICAL (3:1); AND FOURTEEN (14) DAYS FOR ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE. THESE REQUIREMENTS DO NOT APPLY TO AREAS SHOWN ON THE PLAN THAT ARE USED FOR MATERIAL STORAGE OTHER THAN STOCKPILING, OR FOR THOSE AREAS ON THE PLAN WHERE ACTUAL CONSTRUCTION ACTIVITIES ARE BEING PERFORMED. MAINTENANCE SHALL BE PERFORMED AS NECESSARY SO THAT STABILIZED AREAS CONTINUOUSLY MEET THE APPROPRIATE REQUIREMENTS OF THE DISTRICT OF COLUMBIA STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL (ESC) [21 DCMR § 542.9 (O)]
- ESC MEASURES SHALL BE IN PLACE BEFORE AND DURING LAND DISTURBANCE. [21 DCMR § 543.6]
- CONTACT DOEE INSPECTION (202) 535-2977 TO SCHEDULE A PRECONSTRUCTION MEETING AT LEAST THREE (3) BUSINESS DAYS BEFORE THE COMMENCEMENT OF A LAND-DISTURBING ACTIVITY. [21 DCMR § 503.7 (A)]
- A COPY OF THE APPROVED PLAN SET WILL BE MAINTAINED AT THE CONSTRUCTION SITE FROM THE DATE THAT CONSTRUCTION ACTIVITIES BEGIN TO THE DATE OF FINAL STABILIZATION AND WILL BE AVAILABLE FOR DOEE INSPECTORS. [21 DCMR § 542.15]
- ESC MEASURES SHALL BE IN PLACE TO STABILIZE AN EXPOSED AREA AS SOON AS PRACTICABLE AFTER CONSTRUCTION ACTIVITY HAS TEMPORARILY OR PERMANENTLY CEASED BUT NO LATER THAN FOURTEEN (14) DAYS FOLLOWING CESSATION, EXCEPT THAT TEMPORARY OR PERMANENT STABILIZATION SHALL BE IN PLACE AT THE END OF EACH DAY OF UNDERGROUND UTILITY WORK THAT IS NOT CONTAINED WITHIN A LARGER DEVELOPMENT SITE. [21 DCMR § 543.7]
- STOCKPILED MATERIAL BEING ACTIVELY USED DURING A PHASE OF CONSTRUCTION SHALL BE PROTECTED AGAINST EROSION BY ESTABLISHING AND MAINTAINING PERIMETER CONTROLS AROUND THE STOCKPILE. [21 DCMR § 543.16 (A)]
- STOCKPILED MATERIAL NOT BEING ACTIVELY USED OR ADDED TO SHALL BE STABILIZED WITH MULCH, TEMPORARY VEGETATION, HYDRO-SEED OR PLASTIC WITHIN FIFTEEN (15) CALENDAR DAYS AFTER ITS LAST USE OR ADDITION. [21 DCMR § 543.16 (B)]
- FILL MATERIAL MUST BE FREE OF CONTAMINATION LEVELS OF ANY POLLUTANT THAT IS, OR MAY BE CONSIDERED TO REPRESENT, A POSSIBLE HEALTH HAZARD TO THE PUBLIC OR MAY BE DETRIMENTAL TO SURFACE OR GROUND WATER QUALITY, OR WHICH MAY CAUSE DAMAGE TO PROPERTY OR THE DRAINAGE SYSTEM. ALL FILL MATERIAL MUST BE FREE OF HAZARDOUS MATERIALS AND COMPLY WITH ALL APPLICABLE DISTRICT AND FEDERAL REGULATIONS.
- PROTECT BEST MANAGEMENT PRACTICES FROM SEDIMENTATION AND OTHER DAMAGE DURING CONSTRUCTION FOR PROPER POST CONSTRUCTION

- OPERATION. [21 DCMR § 543.5]  
REQUEST A DOEE INSPECTOR'S APPROVAL AFTER THE INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. [21 DCMR § 542.12 (A)]  
REQUEST A DOEE INSPECTOR'S APPROVAL AFTER FINAL STABILIZATION OF THE SITE AND BEFORE THE REMOVAL OF EROSION AND SEDIMENT CONTROLS. [21 DCMR § 542.12 (B)]
- FINAL STABILIZATION MEANS THAT ALL LAND-DISTURBING ACTIVITIES AT THE SITE HAVE BEEN COMPLETED AND EITHER OF THE FOLLOWING TWO CRITERIA HAVE BEEN MET: (1) A UNIFORM (FOR EXAMPLE, EVENLY DISTRIBUTED, WITHOUT LARGE BARE AREAS) PERENNIAL VEGETATIVE COVER WITH A DENSITY OF SEVENTY PERCENT (70%) OF THE NATIVE BACKGROUND VEGETATIVE COVER FOR THE AREA HAS BEEN ESTABLISHED ON ALL UNPAVED AREAS AND AREAS NOT COVERED BY PERMANENT STRUCTURES, OR (2) EQUIVALENT PERMANENT STABILIZATION MEASURES HAVE BEEN EMPLOYED (SUCH AS THE USE OF RIPRAP, GABIONS, OR GEOTEXTILES). [21 DCMR § 542.12 (B.1, B.2)]
- FOLLOW THE REQUIREMENTS OF THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY APPROVED STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AND MAINTAIN A LEGIBLE COPY OF THIS SWPPP ON SITE. [21 DCMR § 543.10 (B)]
- POST A SIGN THAT NOTIFIES THE PUBLIC TO CONTACT DOEE IN THE EVENT OF EROSION OR OTHER POLLUTION. THE SIGN WILL BE PLACED AT EACH ENTRANCE TO THE SITE OR AS DIRECTED BY THE DOEE INSPECTOR. EACH SIGN WILL BE NO LESS THAN 18X 24 INCHES IN SIZE AND MADE OF MATERIALS THAT WILL WITHSTAND WEATHER FOR THE DURATION OF THE PROJECT. LETTERING WILL BE AT LEAST 1 INCH IN HEIGHT AND EASILY READABLE BY THE PUBLIC FROM A DISTANCE OF TWELVE FEET (12 FT). THE SIGN MUST DIRECT THE PUBLIC, IN SUBSTANTIALLY THE FOLLOWING FORM: "TO REPORT EROSION, RUNOFF, OR STORMWATER POLLUTION" AND WILL PROVIDE THE CONSTRUCTION SITE ADDRESS, DOEE'S TELEPHONE NUMBER (202-535-2977), DOEE'S E-MAIL ADDRESS (IEB.SCHEDULING@DC.GOV), AND THE 311 MOBILE APP HEADING ("CONSTRUCTION-EROSION RUNOFF"). [21 DCMR § 543.22]
- A RESPONSIBLE PERSON MUST BE PRESENT OR AVAILABLE WHILE THE SITE IS IN A LAND-DISTURBING PHASE. THE RESPONSIBLE PERSON IS CHARGED WITH BEING AVAILABLE TO (A) INSPECT THE SITE AND ITS ESC MEASURES AT LEAST ONCE BIWEEKLY AND AFTER A RAINFALL EVENT TO IDENTIFY AND REMEDY EACH POTENTIAL OR ACTUAL EROSION PROBLEM, (B) RESPOND TO EACH POTENTIAL OR ACTUAL EROSION PROBLEM IDENTIFIED BY CONSTRUCTION PERSONNEL, AND (C) SPEAK ON SITE WITH DOEE TO REMEDY EACH POTENTIAL OR ACTUAL EROSION PROBLEM. A RESPONSIBLE PERSON SHALL BE (A) LICENSED IN THE DISTRICT OF COLUMBIA AS A CIVIL OR GEOTECHNICAL ENGINEER, A LAND SURVEYOR, OR ARCHITECT; OR (B) CERTIFIED THROUGH A TRAINING PROGRAM THAT DOEE APPROVES, INCLUDING A COURSE ON EROSION CONTROL PROVIDED BY ANOTHER JURISDICTION OR PROFESSIONAL ASSOCIATION. DURING CONSTRUCTION, THE RESPONSIBLE PERSON SHALL KEEP ON SITE PROOF OF PROFESSIONAL LICENSING OR OF SUCCESSFUL COMPLETION OF A DOEE-APPROVED TRAINING PROGRAM. [21 DCMR § 547]



**SEQUENCE OF CONSTRUCTION**

- CONTACT DOEE INSPECTION (202) 535-2977 TO SCHEDULE A PRECONSTRUCTION MEETING AT LEAST THREE (3) BUSINESS DAYS BEFORE THE COMMENCEMENT OF A LAND-DISTURBING ACTIVITY.
- INSTALL ENTRANCES AND E&S CONTROLS.
- BUILD ACCESS ROADS. SELECTIVELY CLEAR AND GRUB.
- INSTALL PUMP AROUND PRACTICE.
- CONSTRUCT THE PROJECT. FILL CHANNEL FROM UPSTREAM TO DOWNSTREAM, THEN CONSTRUCT STRUCTURES FROM DOWNSTREAM TO UPSTREAM.
- CONSTRUCT SPSC FROM DOWNSTREAM TO UPSTREAM. MAY BE DONE SIMULTANEOUSLY OR SEQUENTIALLY.
- STABILIZE ALL SIDE SLOPES WITH WOOD CHIPS AND SEED. CONTRACTOR SHALL MONITOR SIDE SLOPES CAREFULLY TO ENSURE VEGETATIVE ESTABLISHMENT IS SUCCESSFUL. IF PRIOR TO DEMOBILIZATION SIDE SLOPES ARE NOT STABLE TO THE SATISFACTION OF DOEE PROJECT MANAGER, THE CONTRACTOR SHALL INSTALL SOIL STABILIZATION MATTING.
- PLANT AS SHOWN ON THE LANDSCAPE PLANS.
- REMOVE E&S CONTROLS UPON APPROVAL BY INSPECTOR.

**OWNER INFORMATION**

JOSH BURCH  
ENVIRONMENTAL PROTECTION SPECIALIST  
RESTORATION BRANCH - WATERSHED PROTECTION DIVISION  
DISTRICT DEPARTMENT OF ENERGY & ENVIRONMENT  
1200 1ST ST. NE 5TH FLOOR  
WASHINGTON, DC 20002  
202-734-9527

**DESIGNER INFORMATION**

JOE ARROWSMITH, PE  
WATER RESOURCE ENGINEER  
STRAUGHAN ENVIRONMENTAL INC.  
10245 OLD COLUMBIA ROAD  
COLUMBIA, MD 21046  
301-539-2548

**PROJECT SITE INFORMATION**

DISTURBED AREA: 0.99 ACRES  
EARTHWORK VOLUMES: CUT: 823 CY  
FILL: 1,314 CY

**NOT FOR CONSTRUCTION**



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MURIEL BOWSER, MAYOR



DES:	JA/PC	BY	NO.	REVISIONS	DATE
DRN:	PC				
CHK:	JA				
DATE:	Aug-2019				

FINAL DESIGN PLANS  
EROSION AND SEDIMENT CONTROL NOTES  
EN-01

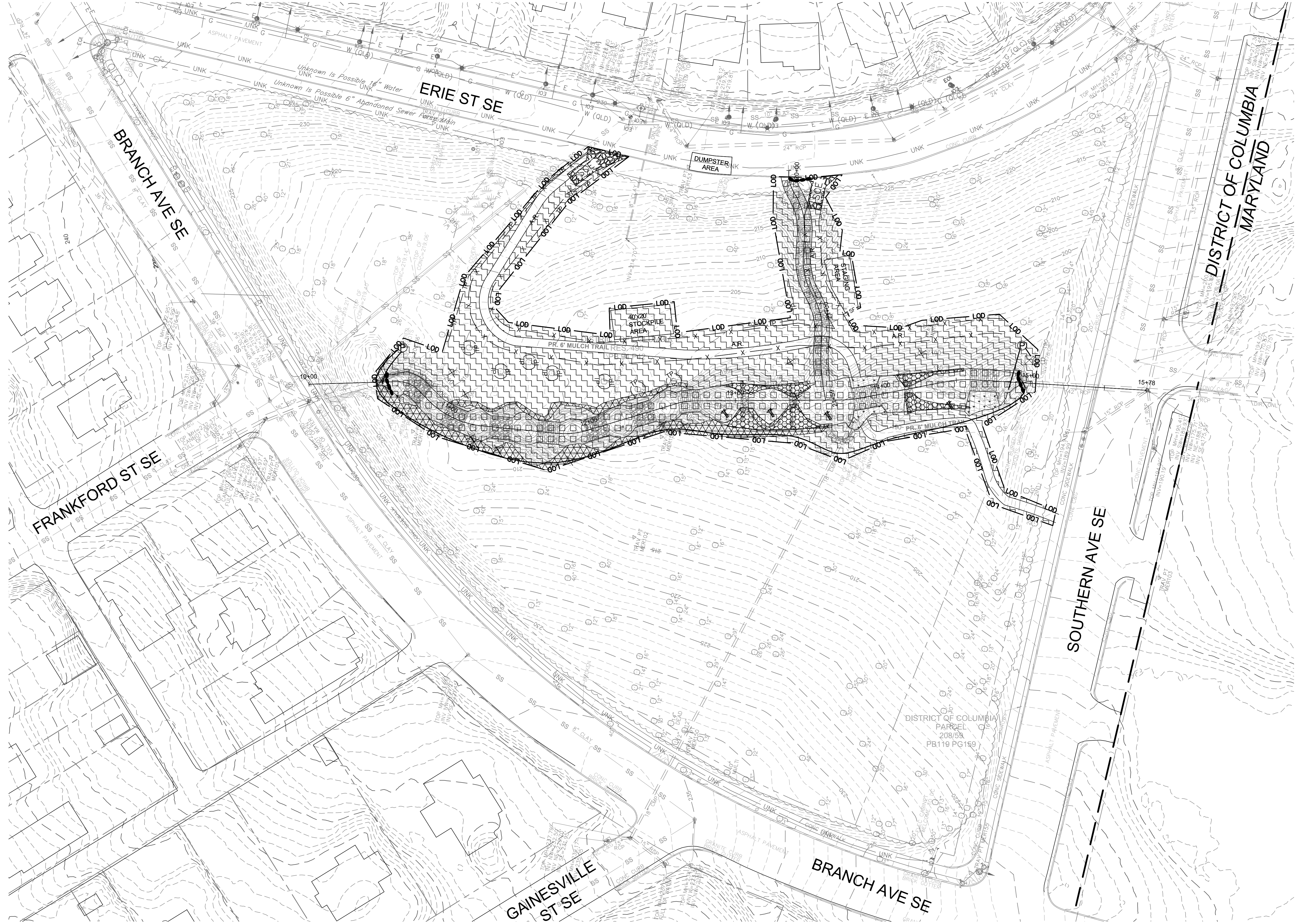
NAD83/NAVD88 MAP NO. XX BLOCK NO. N/A

**BRANCH AVE STREAM RESTORATION**

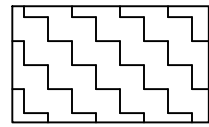
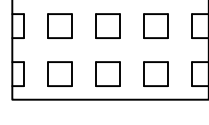
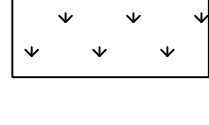
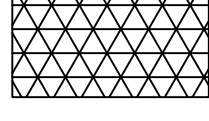
DISTRICT DEPARTMENT OF ENERGY AND ENVIRONMENT  
WASHINGTON, DC

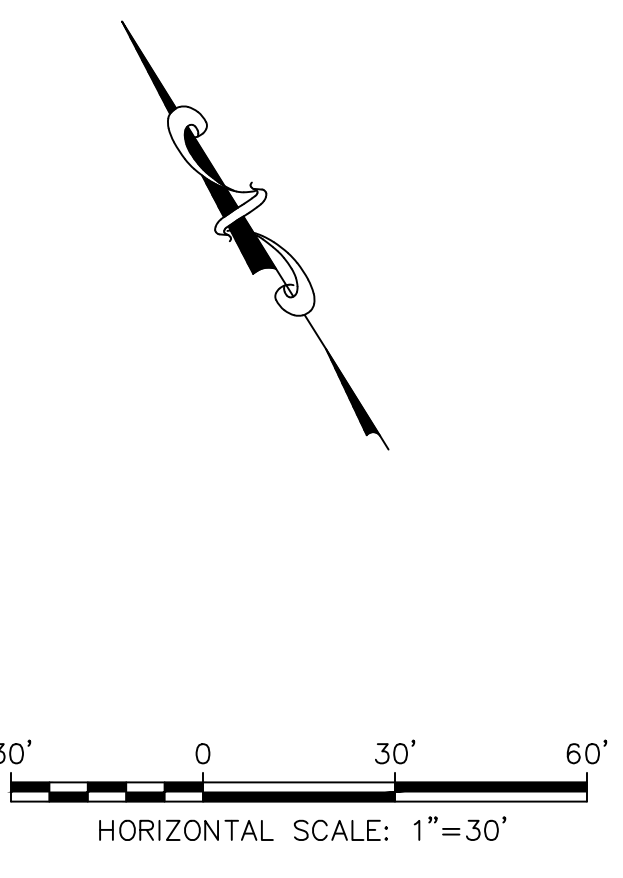
SCALE  
N.T.S.  
SHEET  
9 OF 14





**PLANTING ZONE LEGEND**

-  UPLAND FOREST
-  SHALLOW AQUATIC HABITAT
-  RIPARIAN FOREST
-  SLOPE STABILIZATION PLANTINGS



**NOT FOR CONSTRUCTION**

8/6/19 JAMES MORGAN DISTRICT OF COLUMBIA BRANCH AVENUE PARK STREAM RESTORATION/CD/02 PLANTING PLANS/DWG



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**MURIEL BOWSER, MAYOR**



DES:	BY:	NO.	REVISIONS	DATE
JA/PC				
DRN: PC				
CHK: JA				
DATE: Aug-2019				

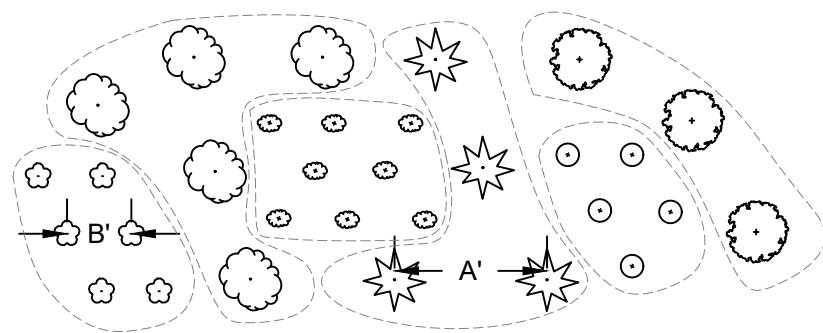
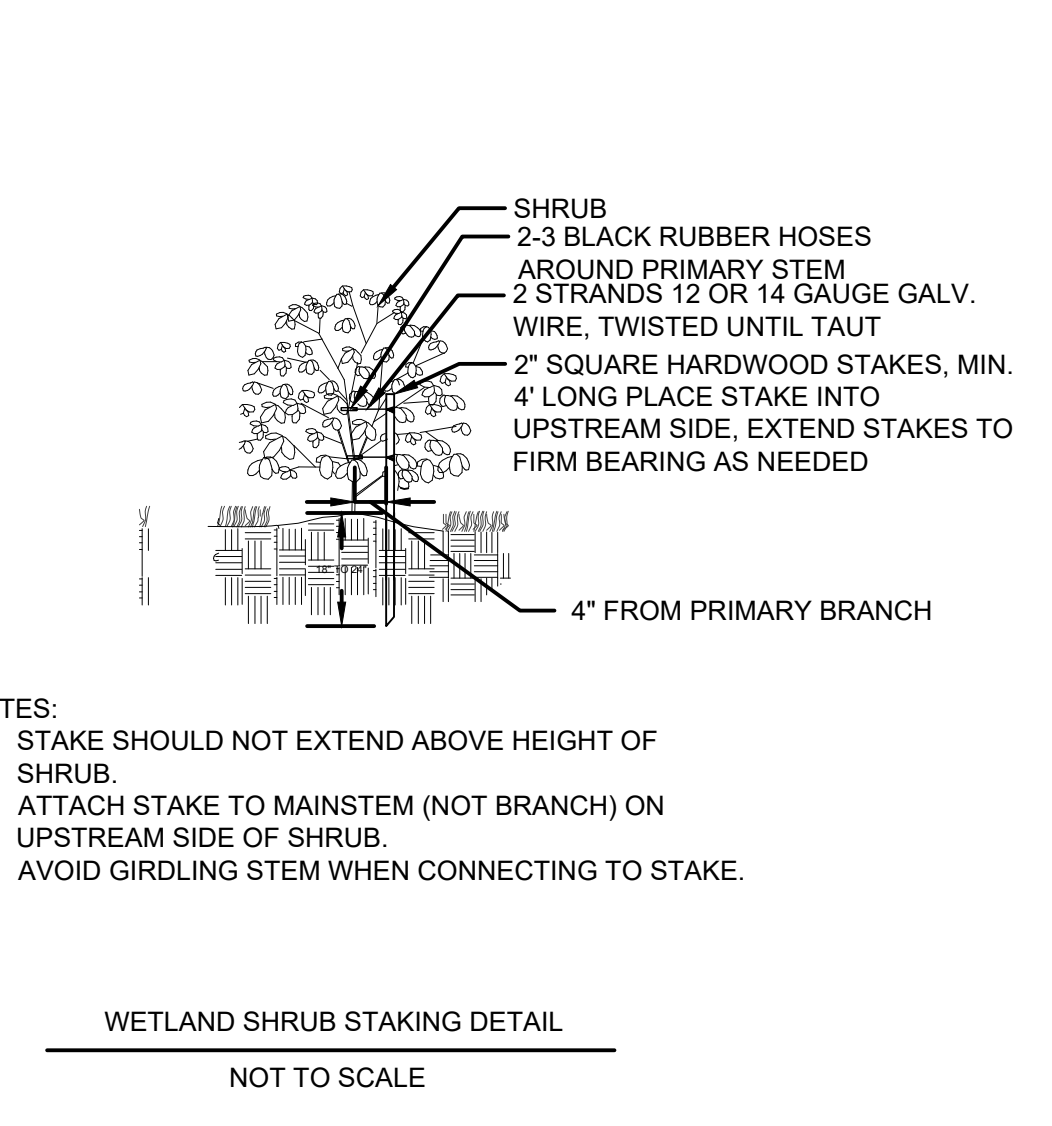
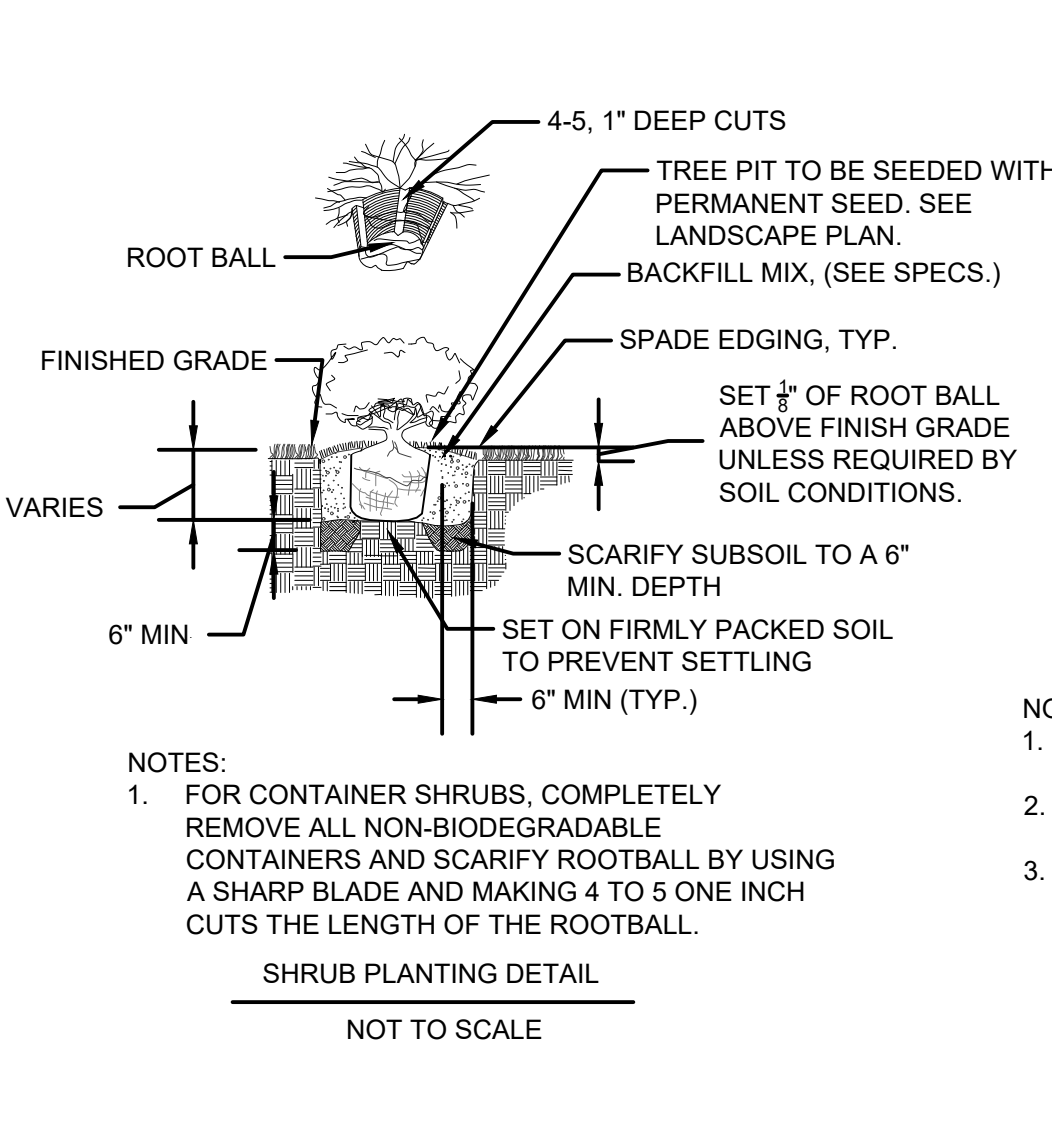
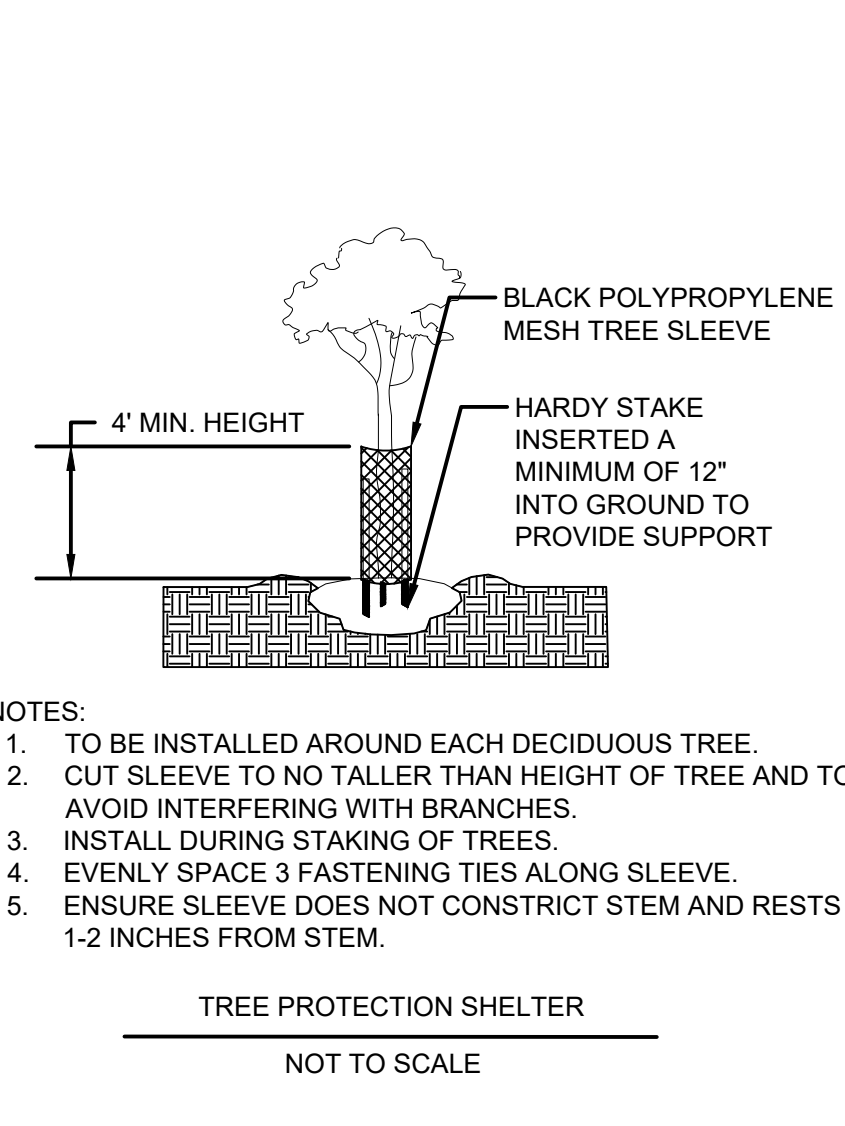
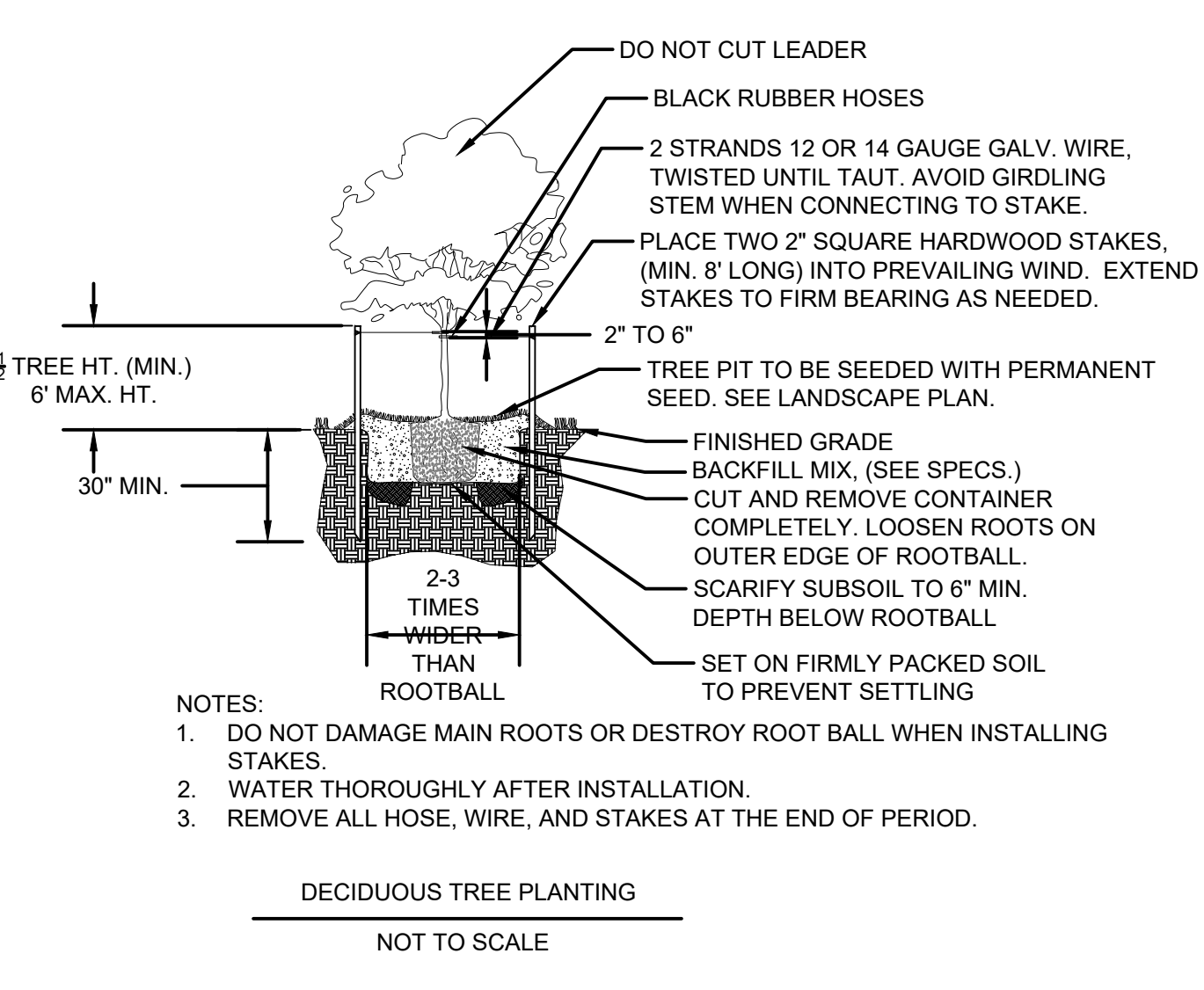
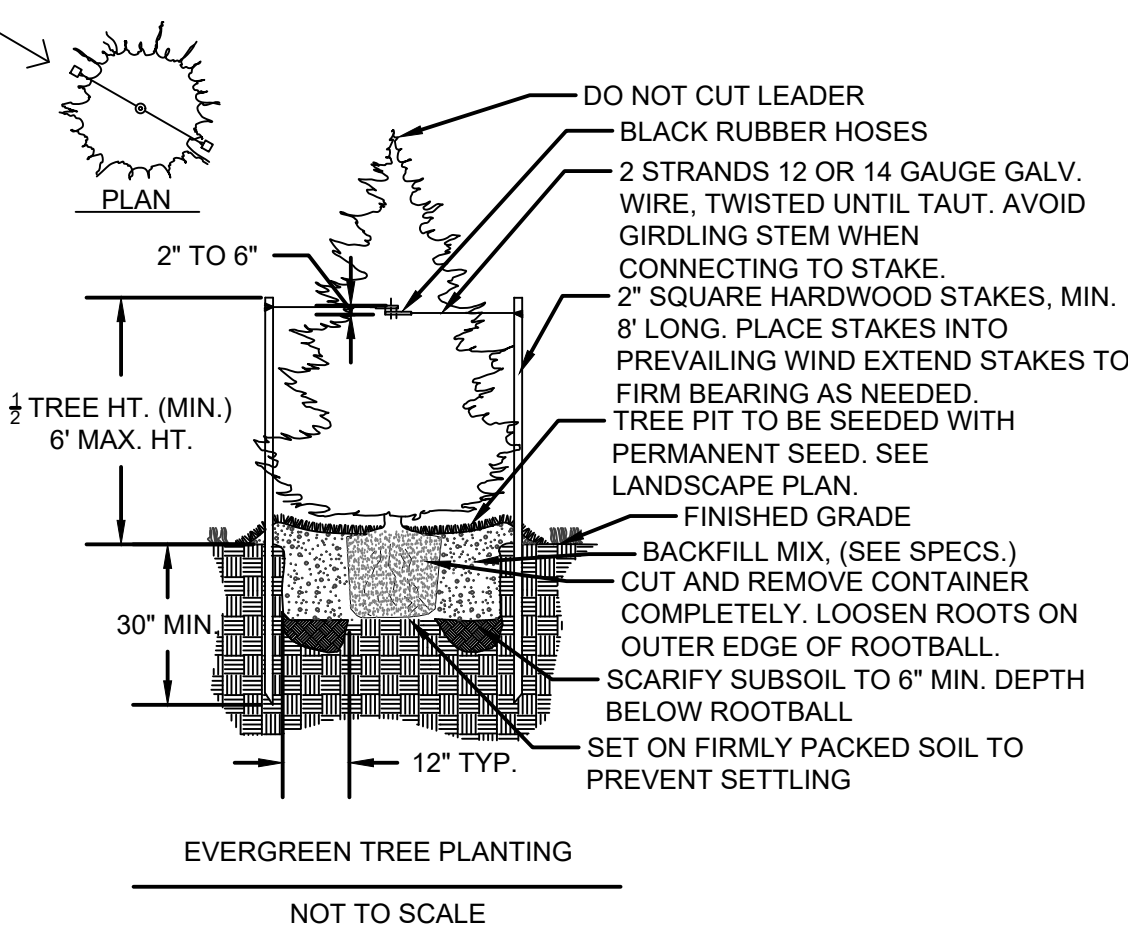
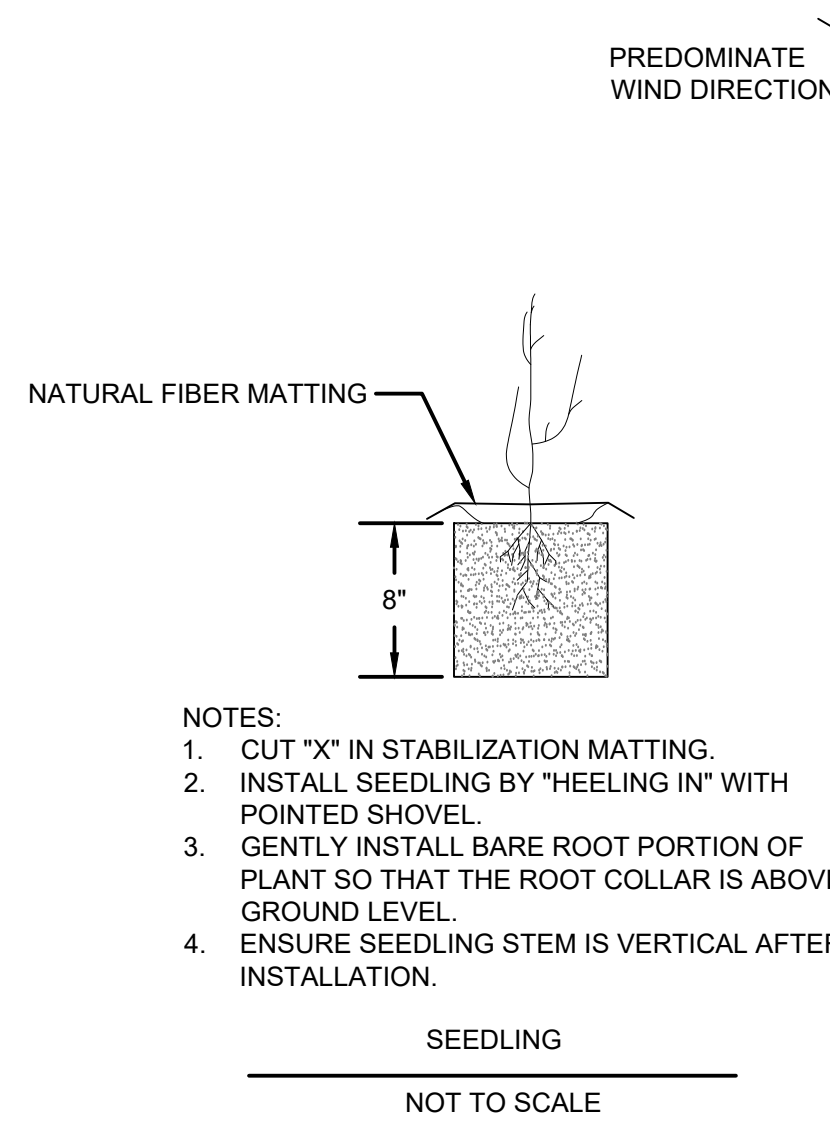
**FINAL DESIGN PLANS**  
**LANDSCAPE PLAN**  
 LS-01

NAD83/NAVD88 MAP NO. XX BLOCK NO. N/A

**BRANCH AVE STREAM RESTORATION**  
 DISTRICT DEPARTMENT OF ENERGY AND ENVIRONMENT  
 WASHINGTON, DC

SCALE  
 1" = 30'  
 SHEET  
 10 OF 14





- CANOPY/UNDERSTORY SPECIES   
 - SHRUB SPECIES  
 A' - TREE SPACING PER PLANT SCHEDULE  
 B' - SHRUB SPACING PER PLANT SCHEDULE

- NOTES:
- THIS PLANTING IS TO MIMIC NATURAL SEED DISPERSAL
  - EACH SPECIES IS TO BE PLANTED IN A GROUP OF COMMON VEGETATION SPECIES.
  - THE MINIMUM CLUSTER IS A GROUP OF 3 TREES/SHRUBS OF THE SAME SPECIES.
  - THE MAXIMUM CLUSTER IS A GROUP OF 15 TREES/SHRUBS OF THE SAME SPECIES.
  - SHRUB CLUSTERS ARE TO ENCLOSED IN TEMPORARY WILDLIFE EXCLUSION FENCING, PER DETAIL THIS PAGE.

**CLUSTER PLANTING DETAIL**  
NOT TO SCALE

PLANTING SCHEDULE		
ZONE	AREA (SF)	DESCRIPTION
UPLAND FOREST	27,166	NATIVE TREES, SHRUBS AND HERBACEOUS PLANTS SUITABLE FOR UPLAND HABITAT
RIPARIAN FOREST	1,401	NATIVE TREES, SHRUBS, AND HERBACEOUS PLANTS SUITABLE FOR FREQUENTLY WET SOILS
SHALLOW AQUATIC HABITAT	9,518	NATIVE SHRUBS, HERBACEOUS, AND AQUATIC PLANTS SUITABLE FOR SHALLOW WETLAND HABITAT
SLOPE STABILIZATION	2,568	NATIVE HERBACEOUS/GROUND COVER PLANTS SUITABLE FOR PLANTING ON STEEP SLOPES

**NOT FOR CONSTRUCTION**

8/6/19 JAMES WILSON BRANCH AVENUE PARK STREAM RESTORATION/CA/02 PLANTING PLANS.DWG



**GOVERNMENT OF THE DISTRICT OF COLUMBIA**  
**MURIEL BOWSER, MAYOR**



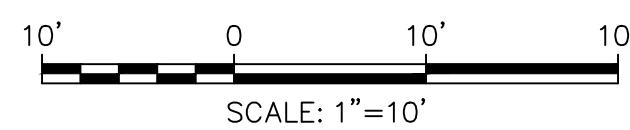
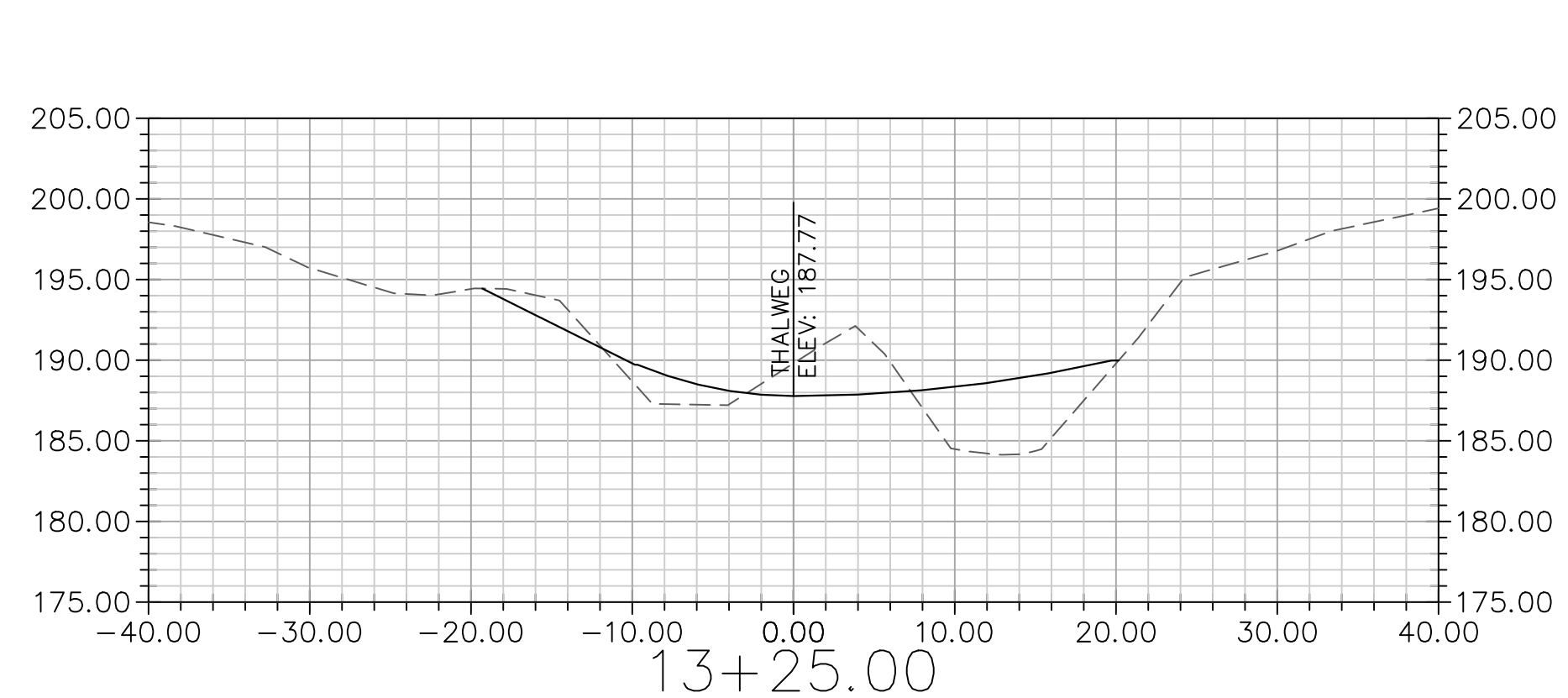
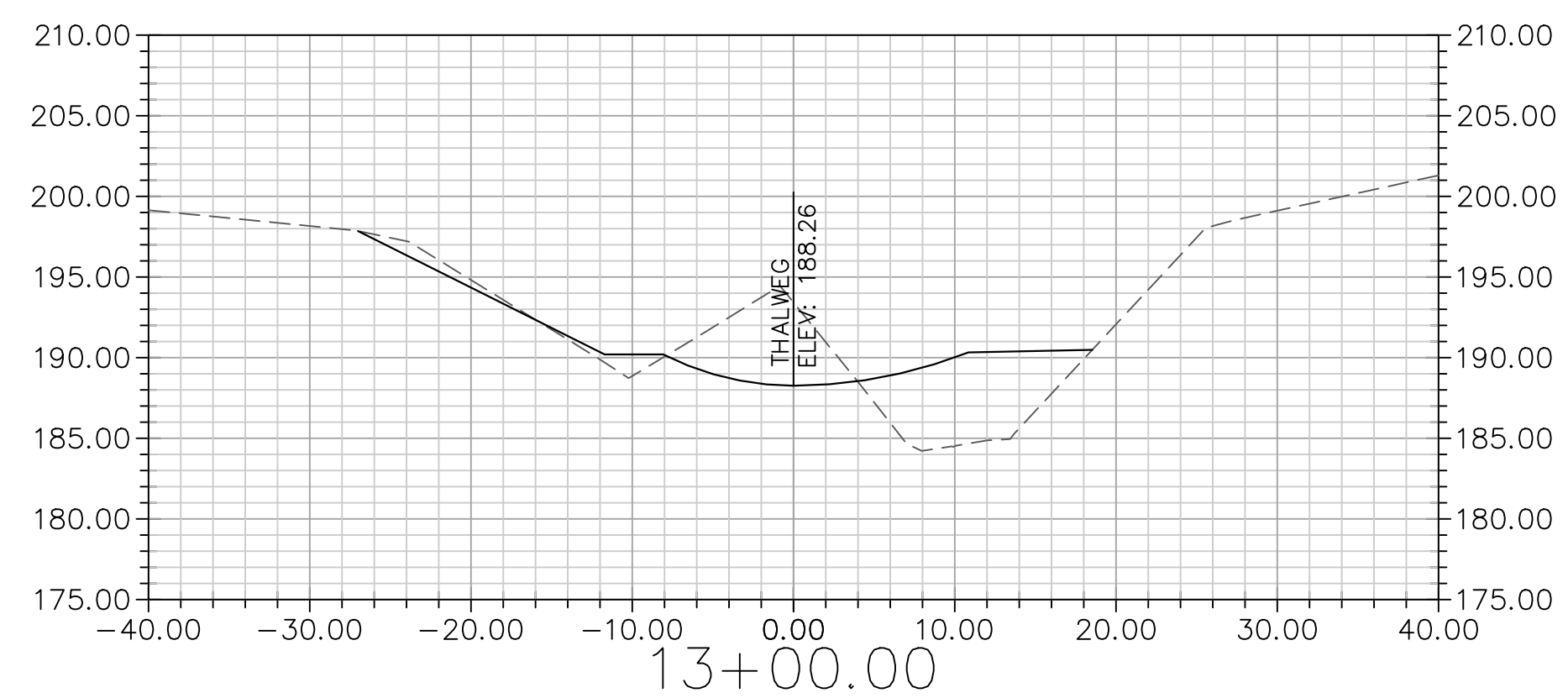
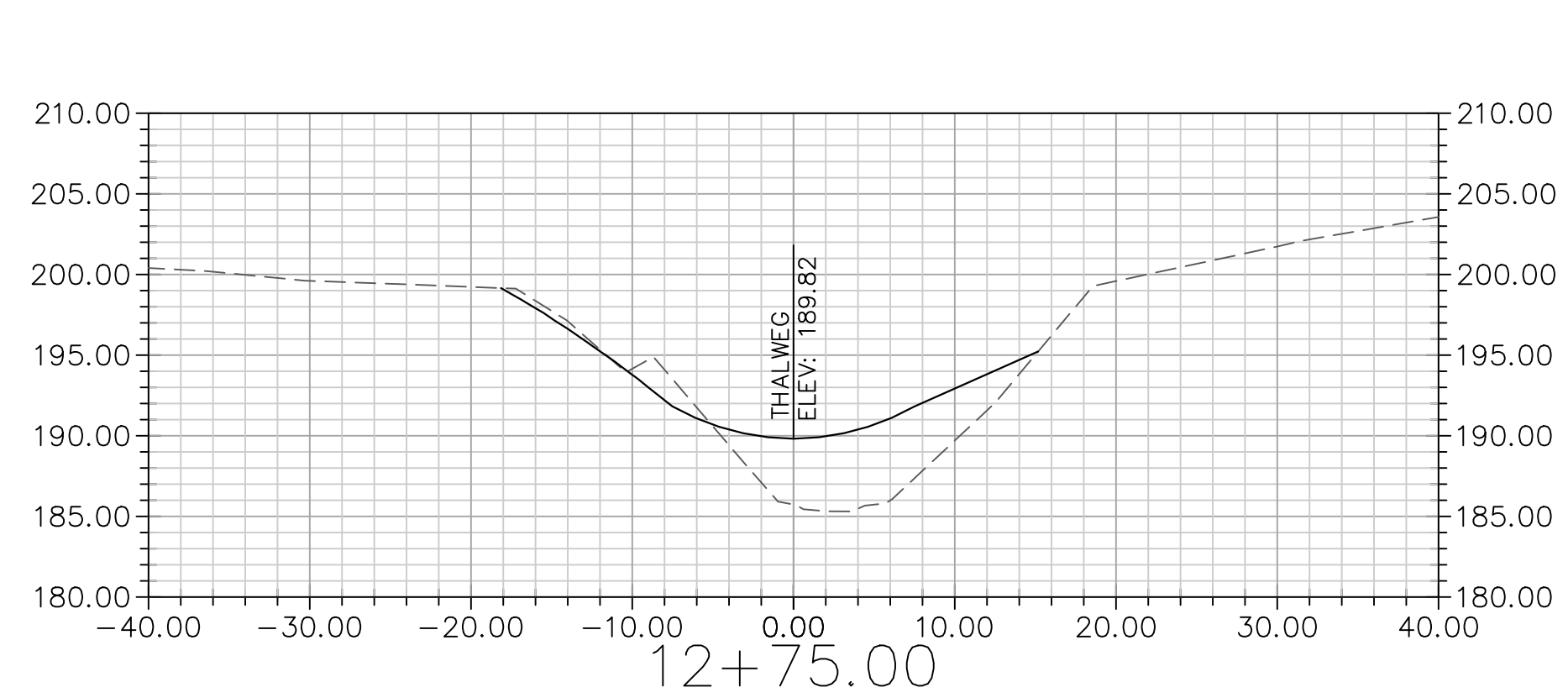
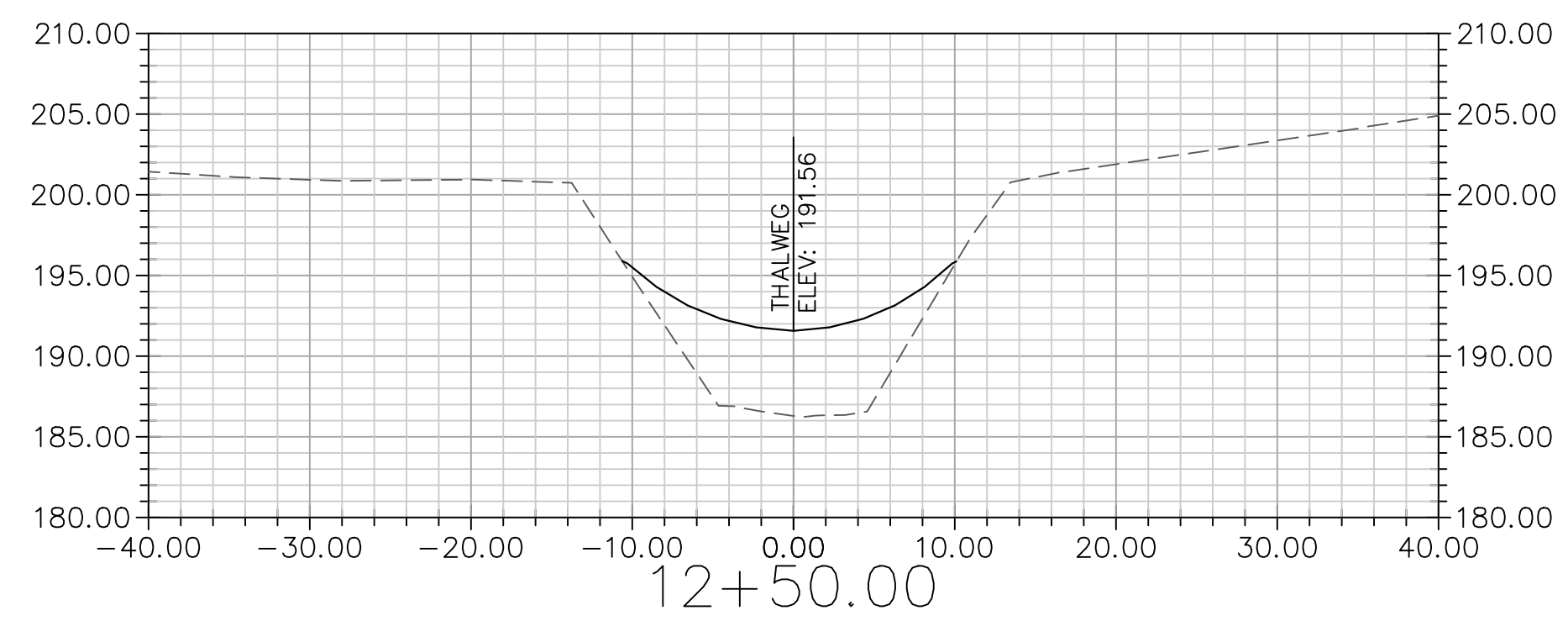
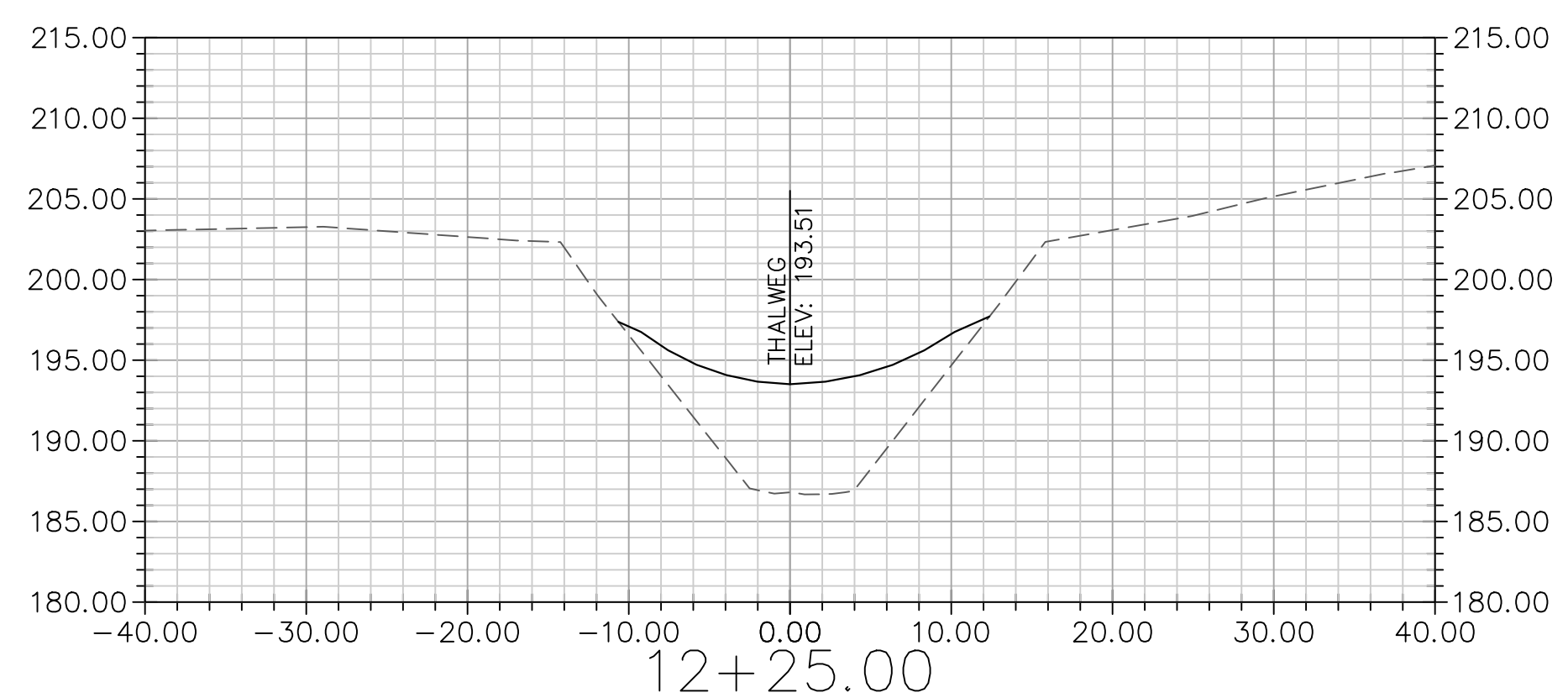
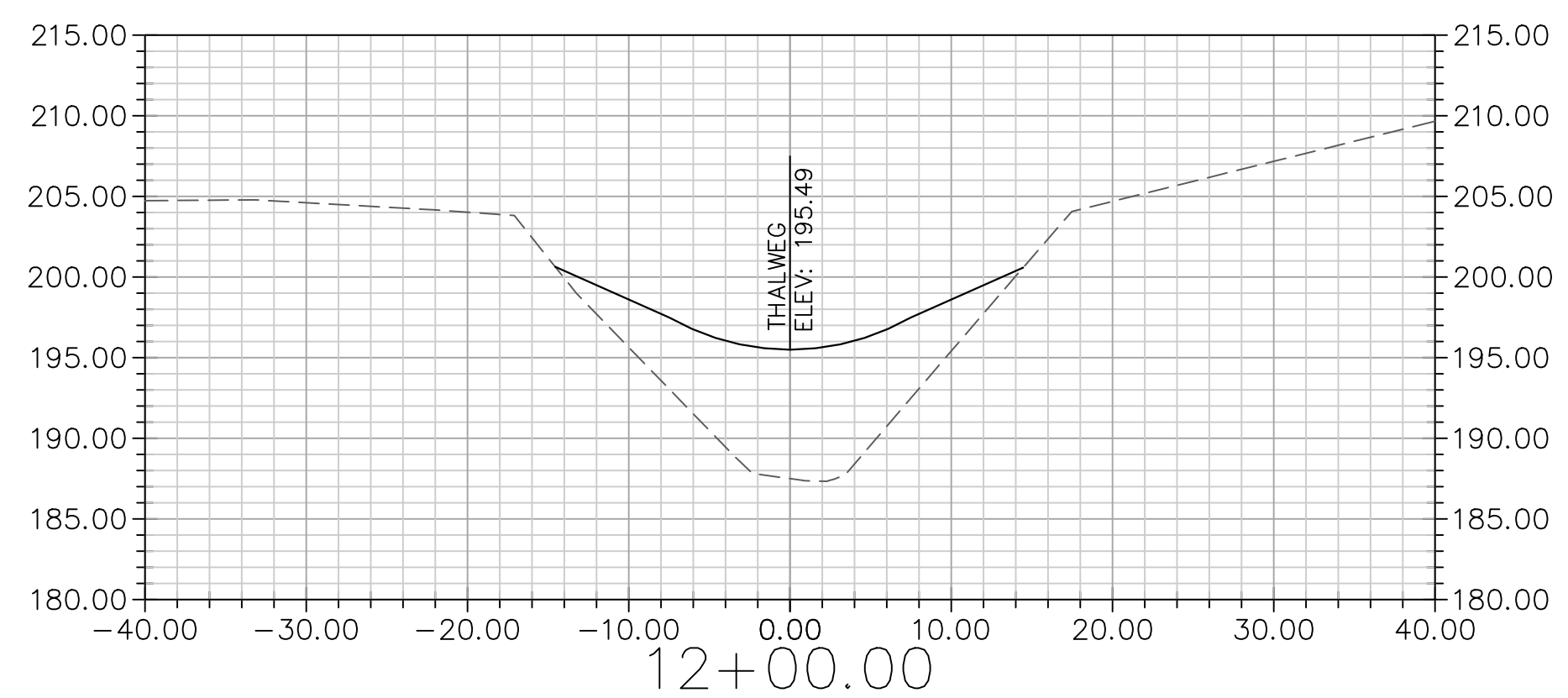
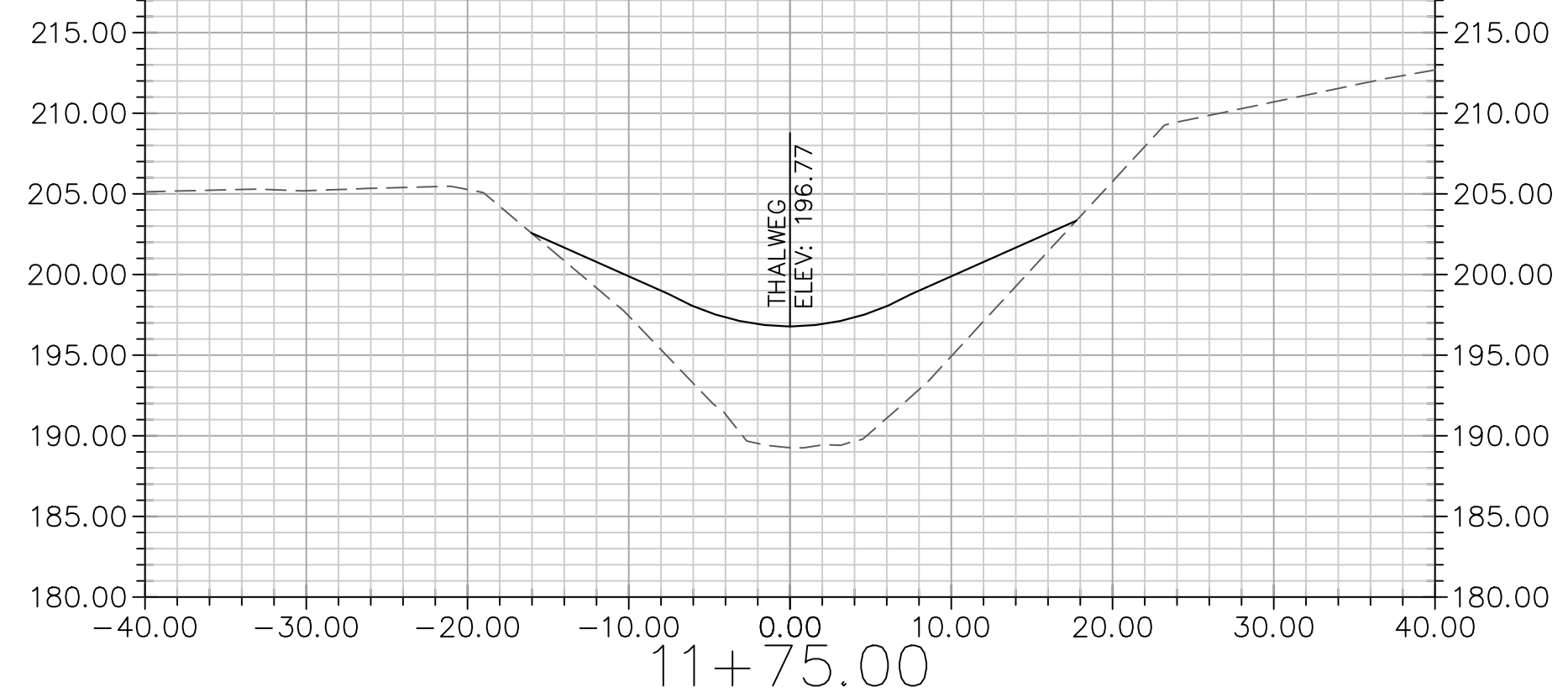
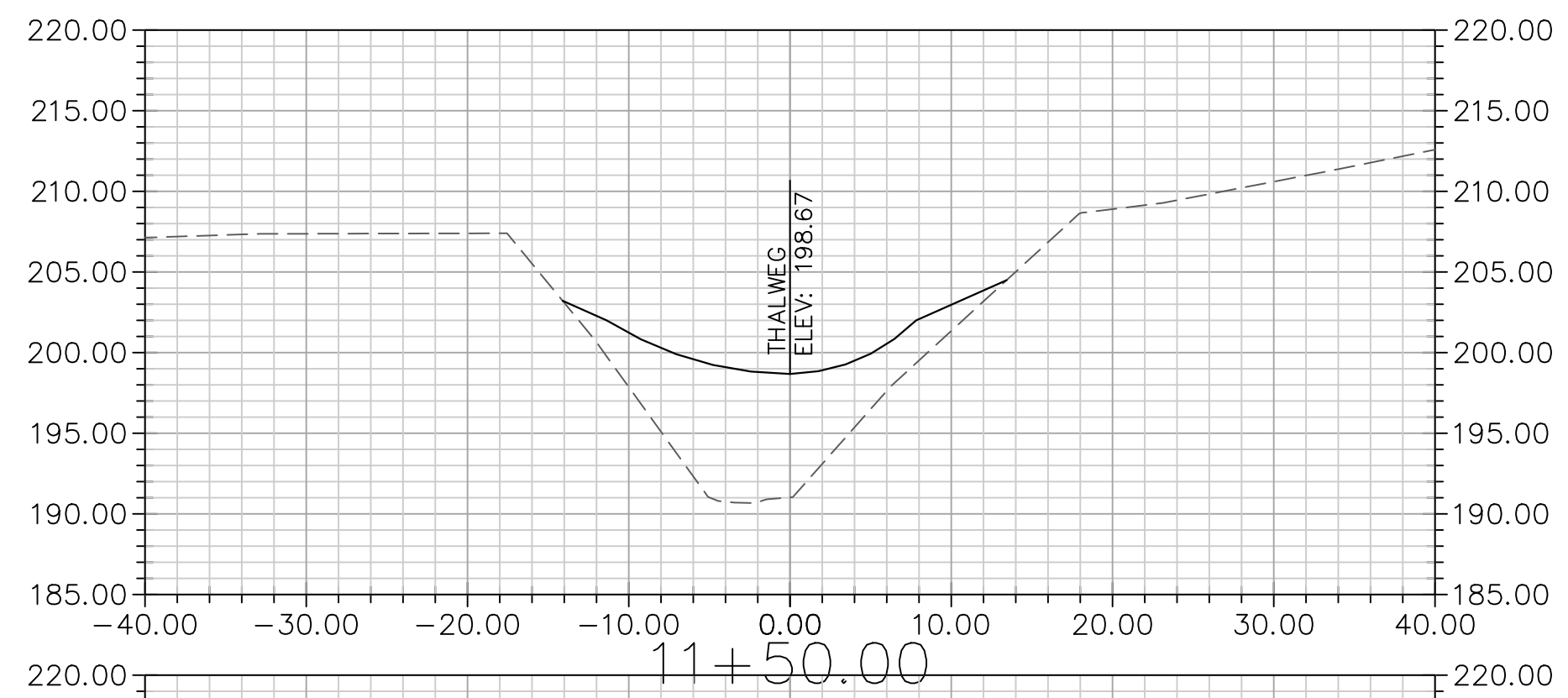
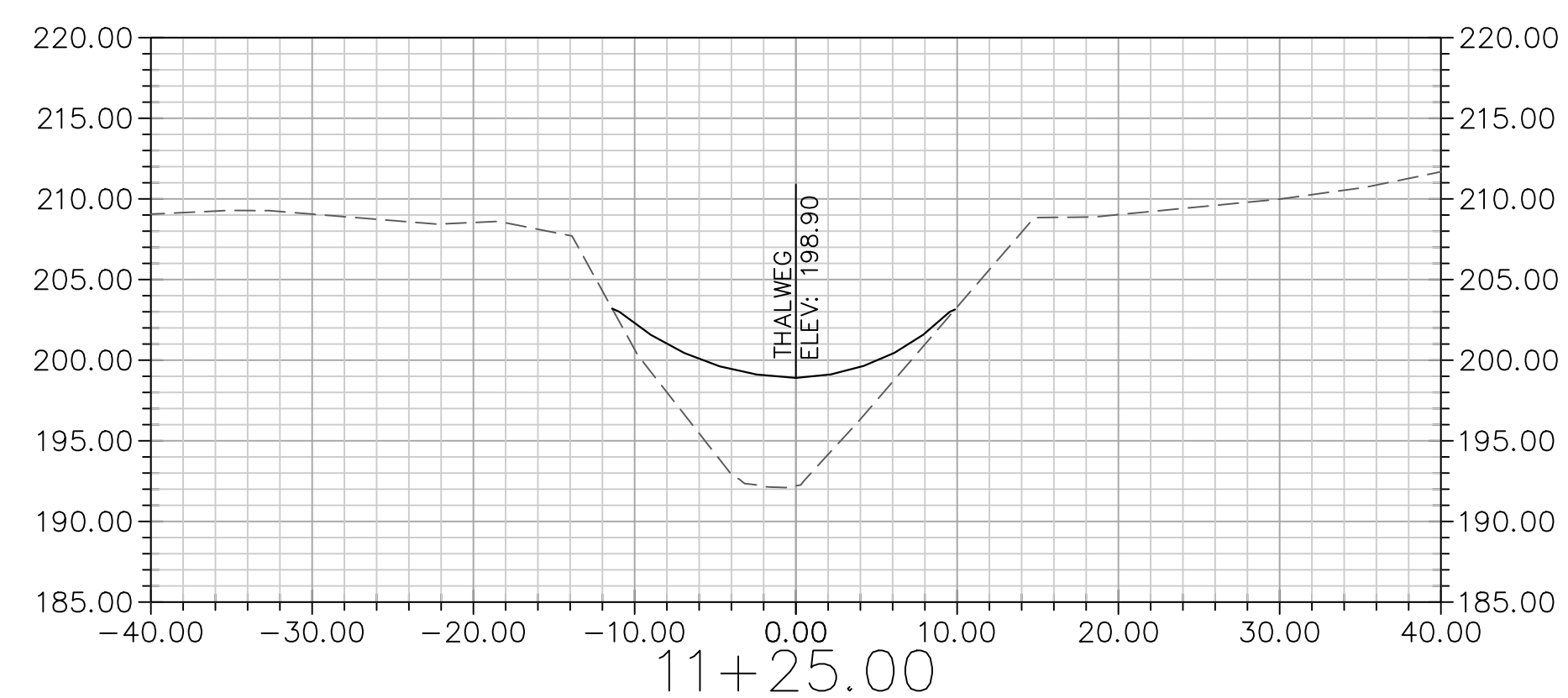
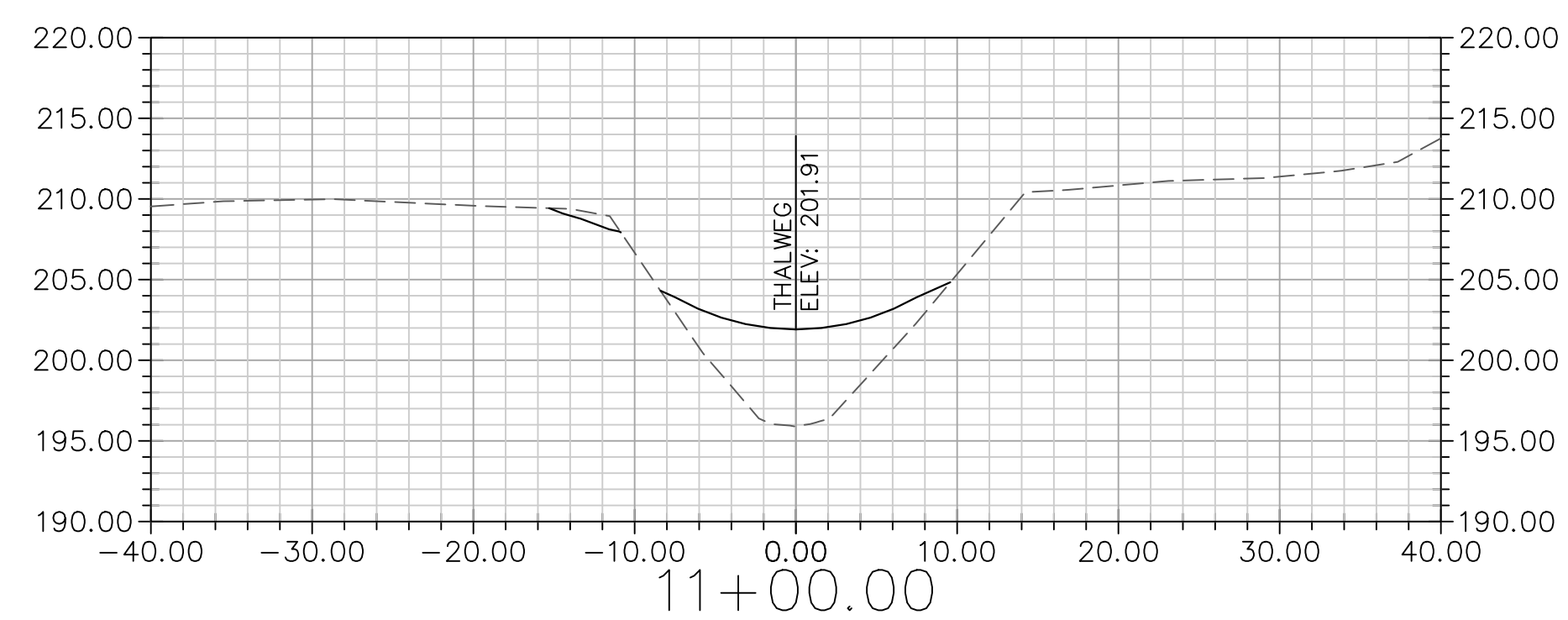
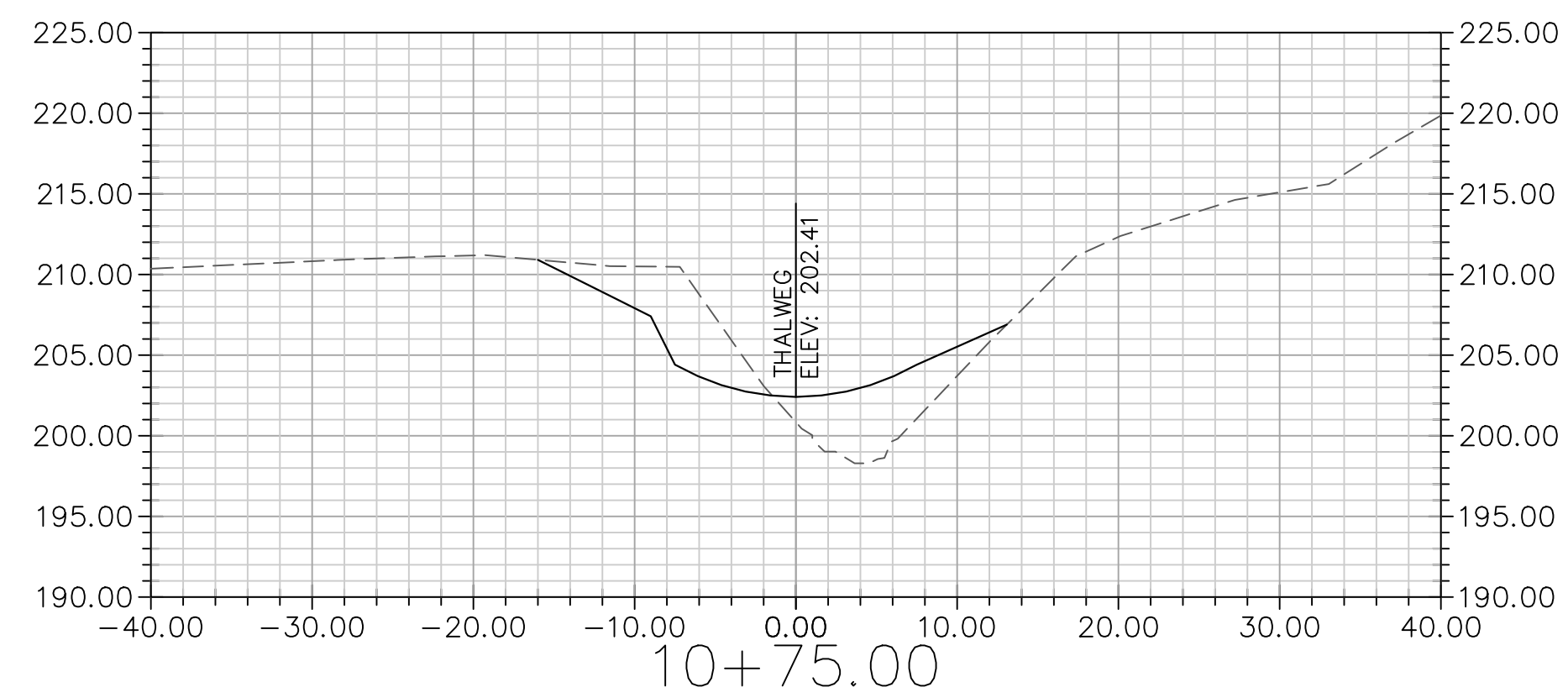
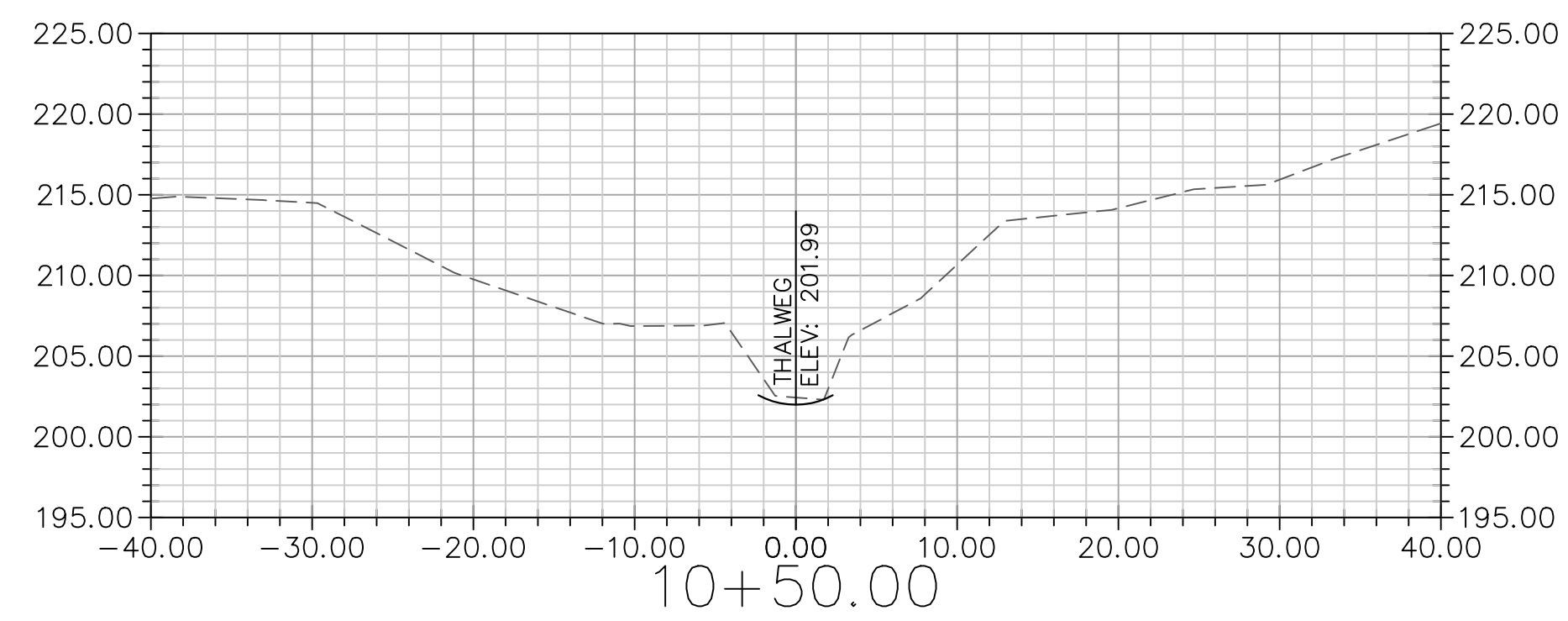
DES:	JA/PC	BY	NO.	REVISIONS	DATE
DRN:	PC				
CHK:	JA				
DATE:	Aug-2019				

**FINAL DESIGN PLANS**  
**PLANTING NOTES**  
 LN-01  
 NAD83/NAVD88    MAP NO. XX    BLOCK NO. N/A

**BRANCH AVE STREAM RESTORATION**  
 DISTRICT DEPARTMENT OF ENERGY AND ENVIRONMENT  
 WASHINGTON, DC

SCALE  
 N.T.S.  
 SHEET  
 11 OF 14





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MURIEL BOWSER, MAYOR



DES:	BY:	NO.:	REVISIONS	DATE
JA/PC				
DRN: PC				
CHK: JA				
DATE: Aug-2019				

FINAL DESIGN PLANS  
CROSS SECTIONS - STREAM  
CS-01

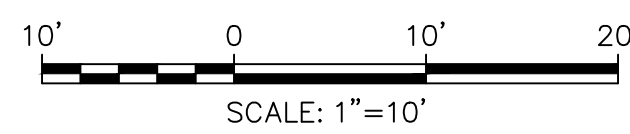
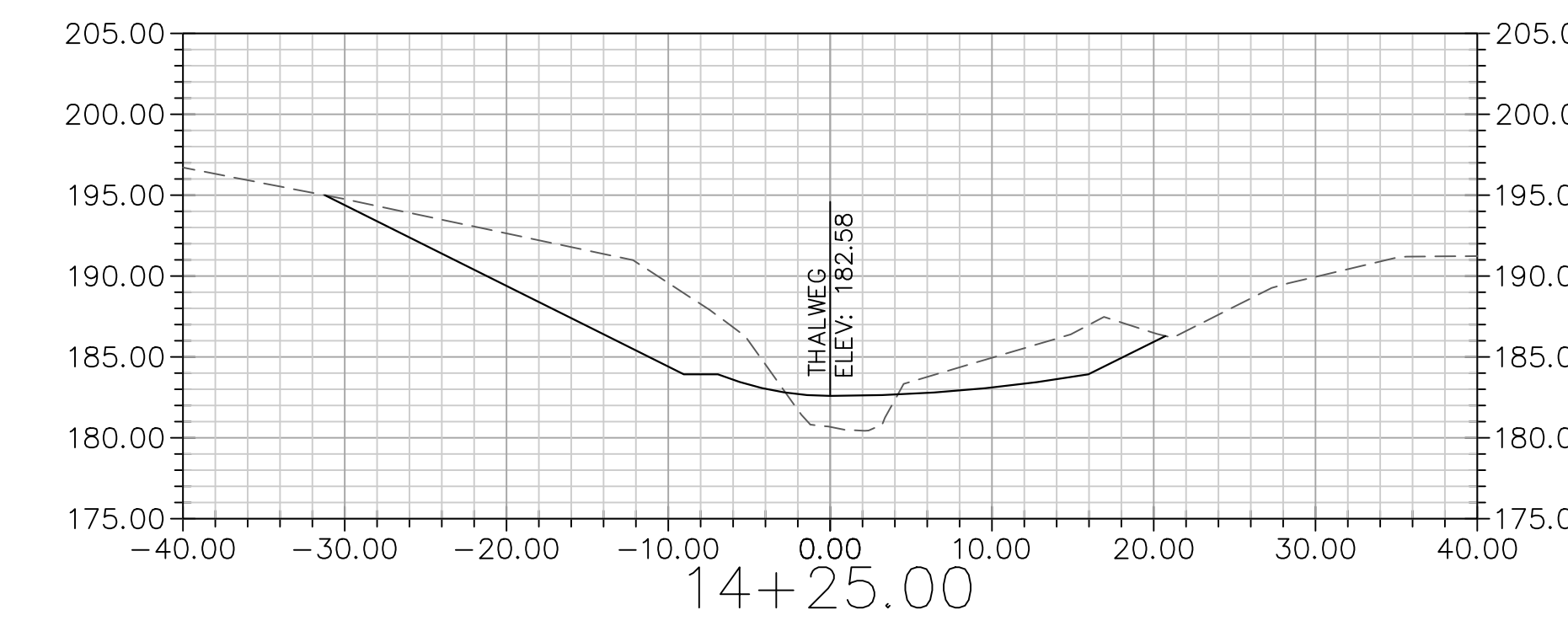
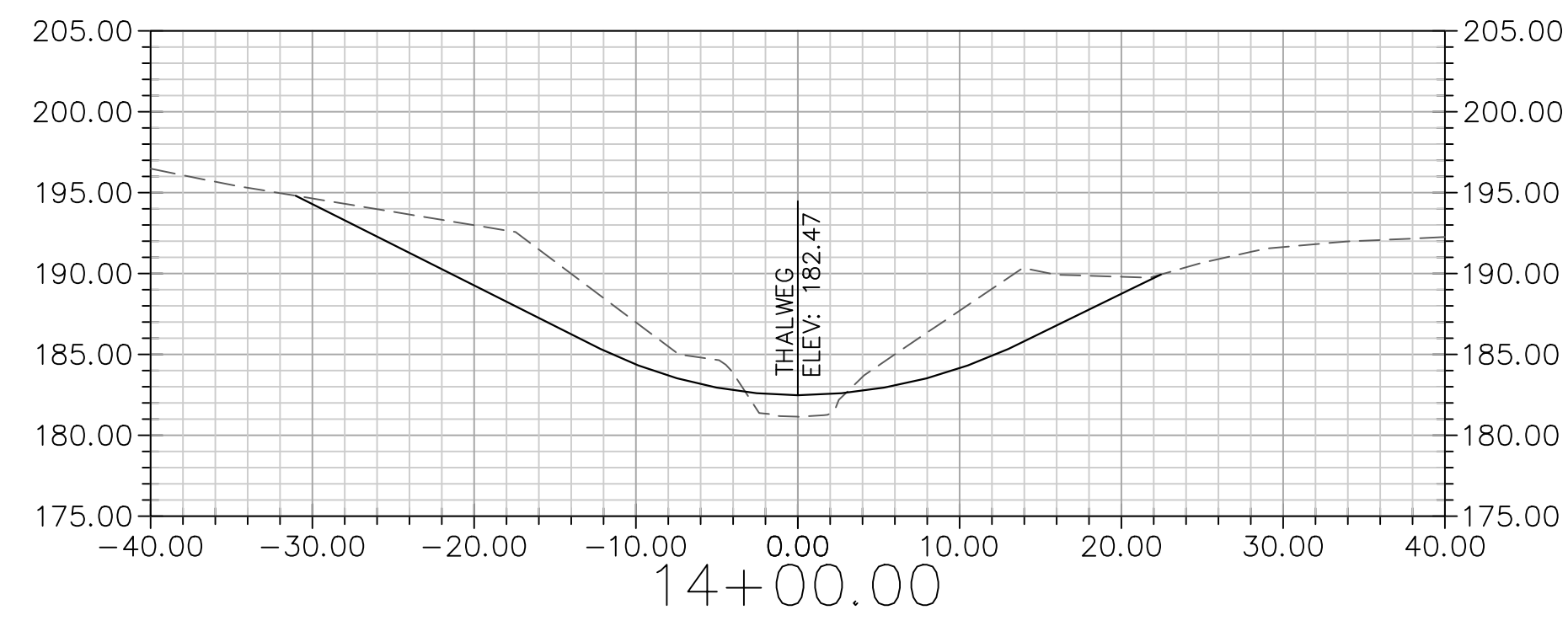
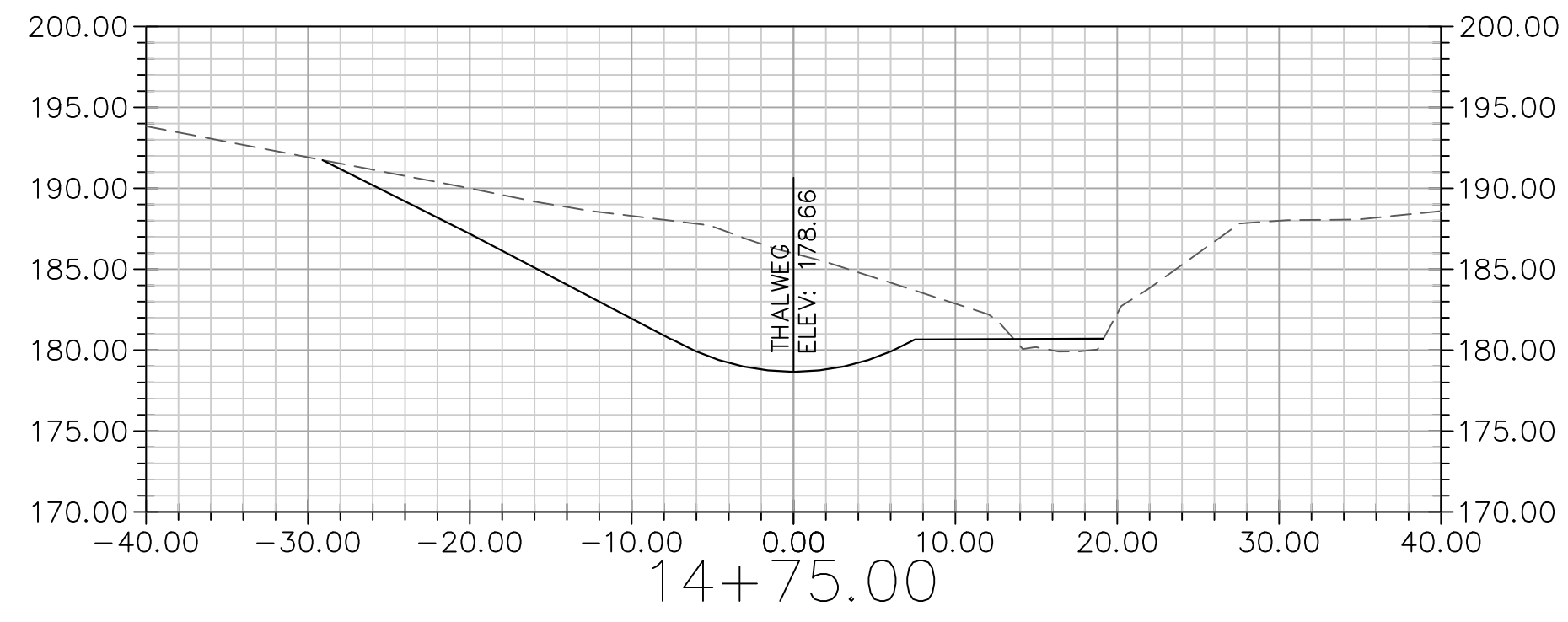
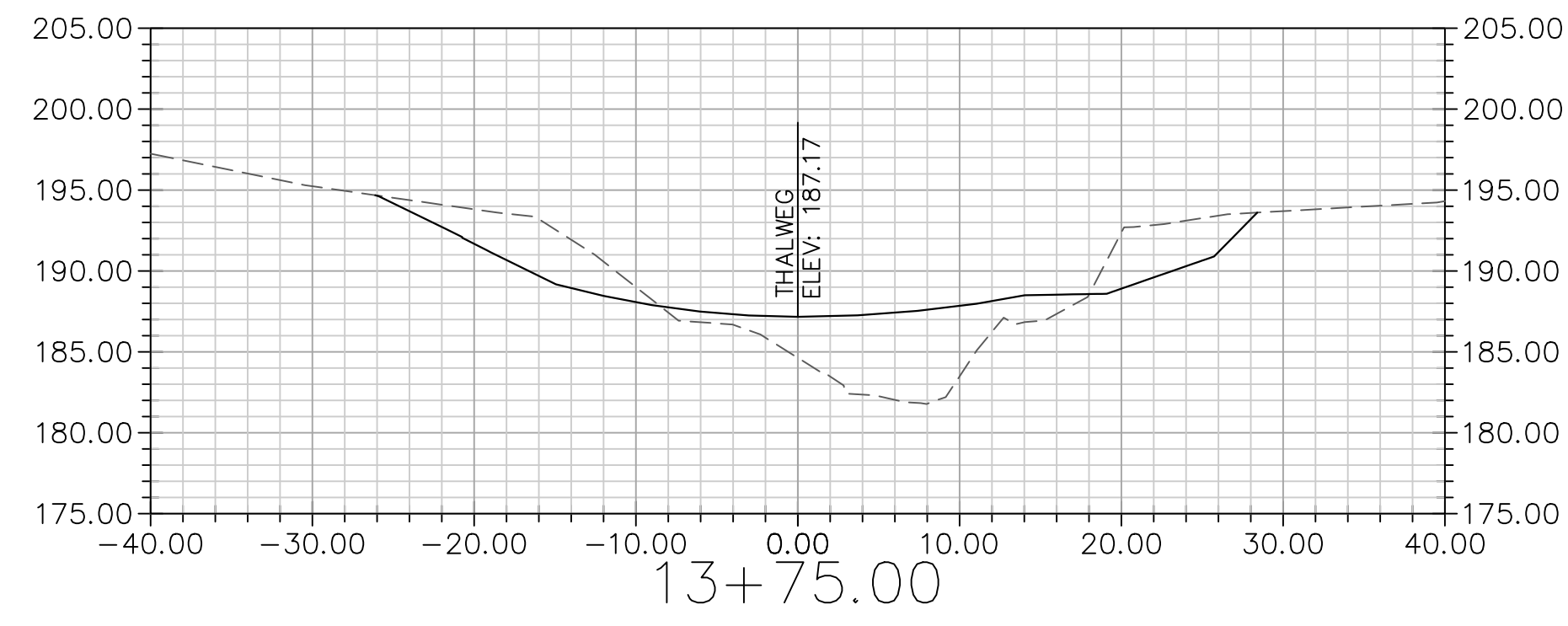
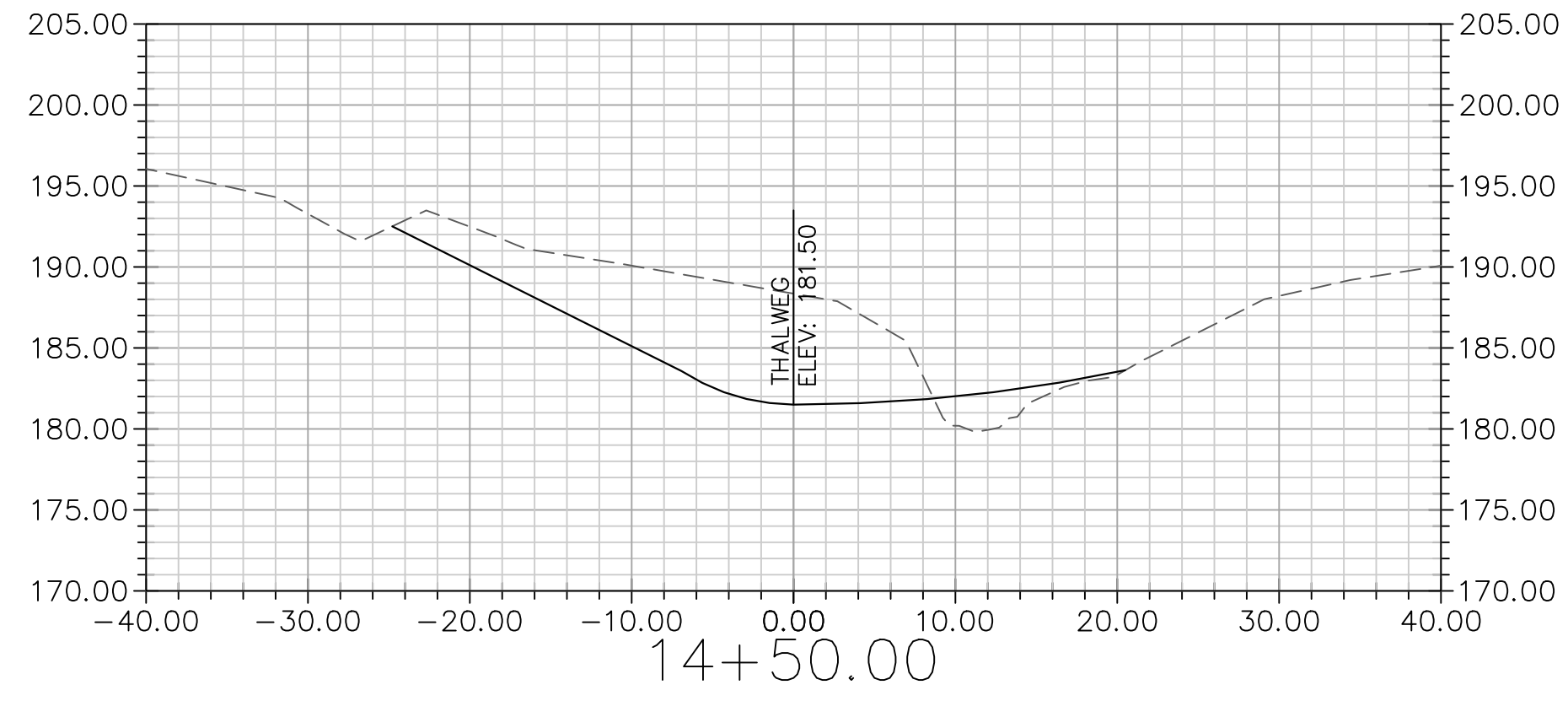
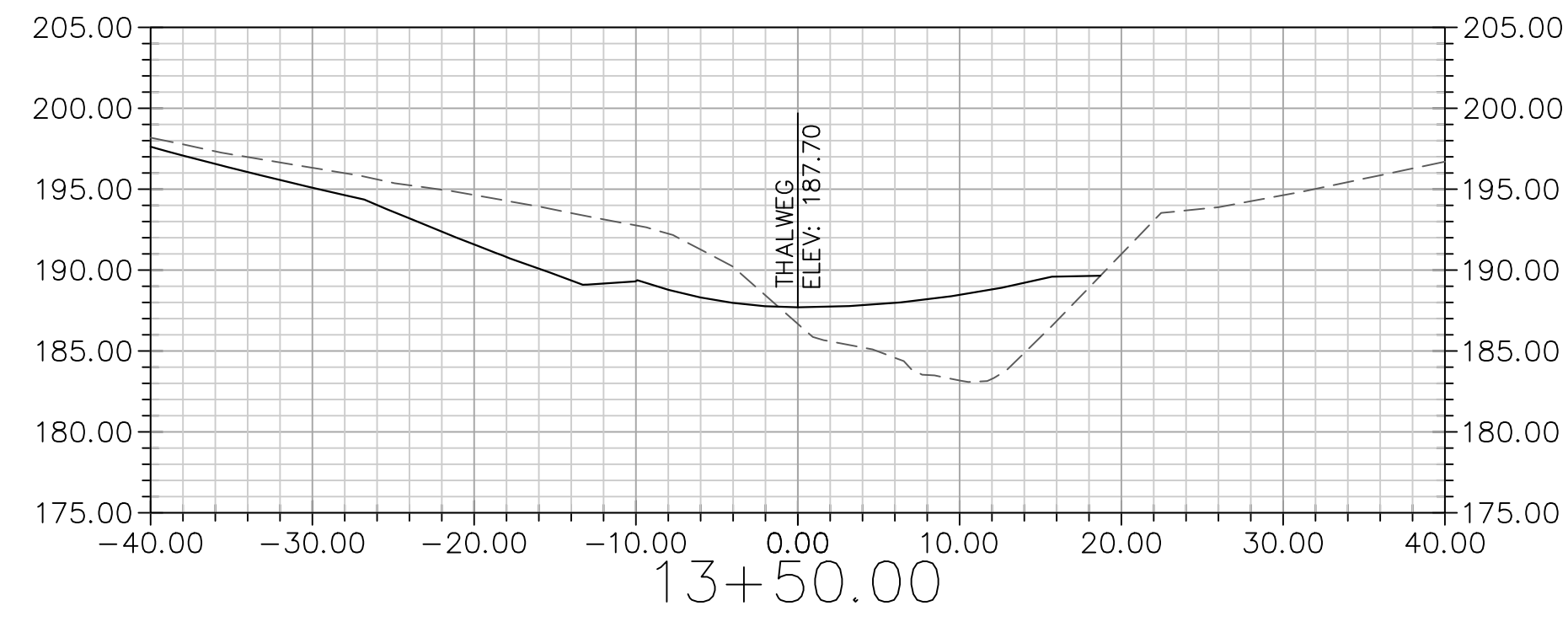
NAD83/NAVD88 MAP NO. XX BLOCK NO. N/A

BRANCH AVE STREAM RESTORATION

DISTRICT DEPARTMENT OF ENERGY AND ENVIRONMENT  
WASHINGTON, DC

SCALE  
1" = 10'  
SHEET  
12 OF 14





**NOT FOR  
CONSTRUCTION**

8/6/19 JAMES WOODS BRANCH AVENUE PARK STREAM RESTORATION/CAD/DE DESIGN CROSS SECTIONS.DWG



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DES:	BY:	NO.	REVISIONS	DATE
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DRN: PC				
CHK: JA				
DATE: Aug-2019				

**FINAL DESIGN PLANS  
CROSS SECTIONS - STREAM  
CS-02**

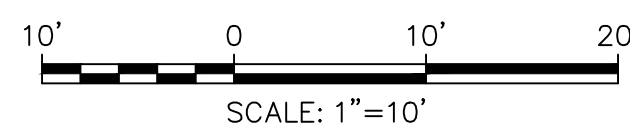
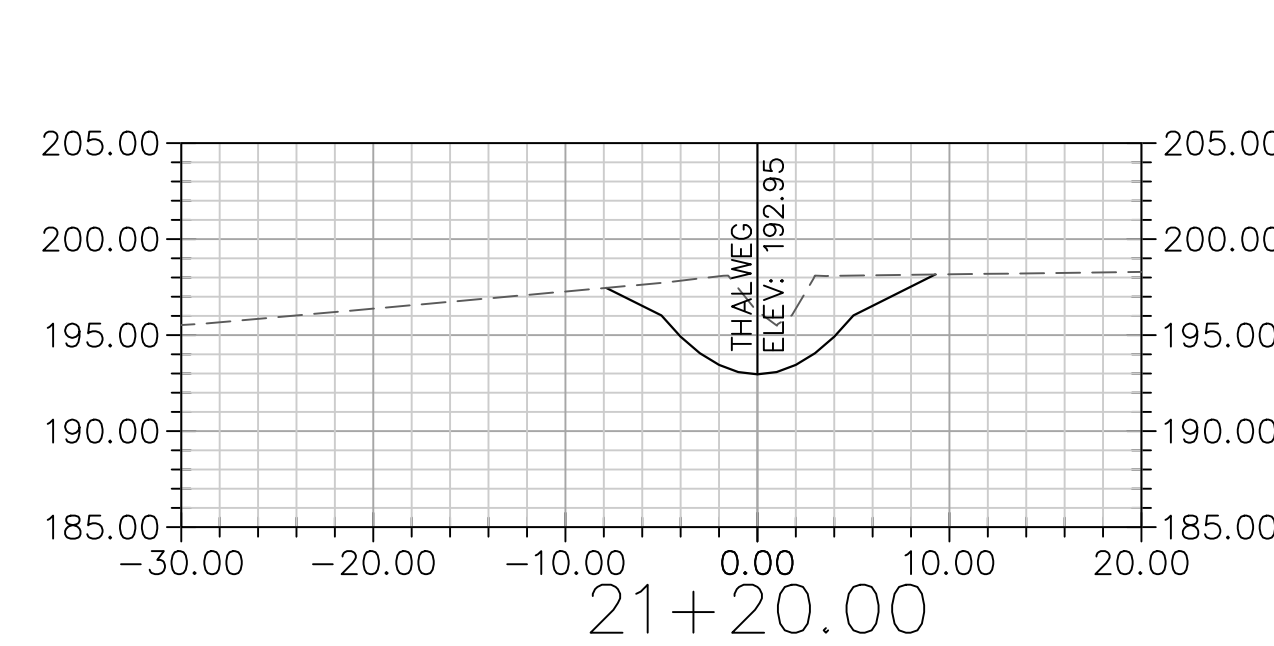
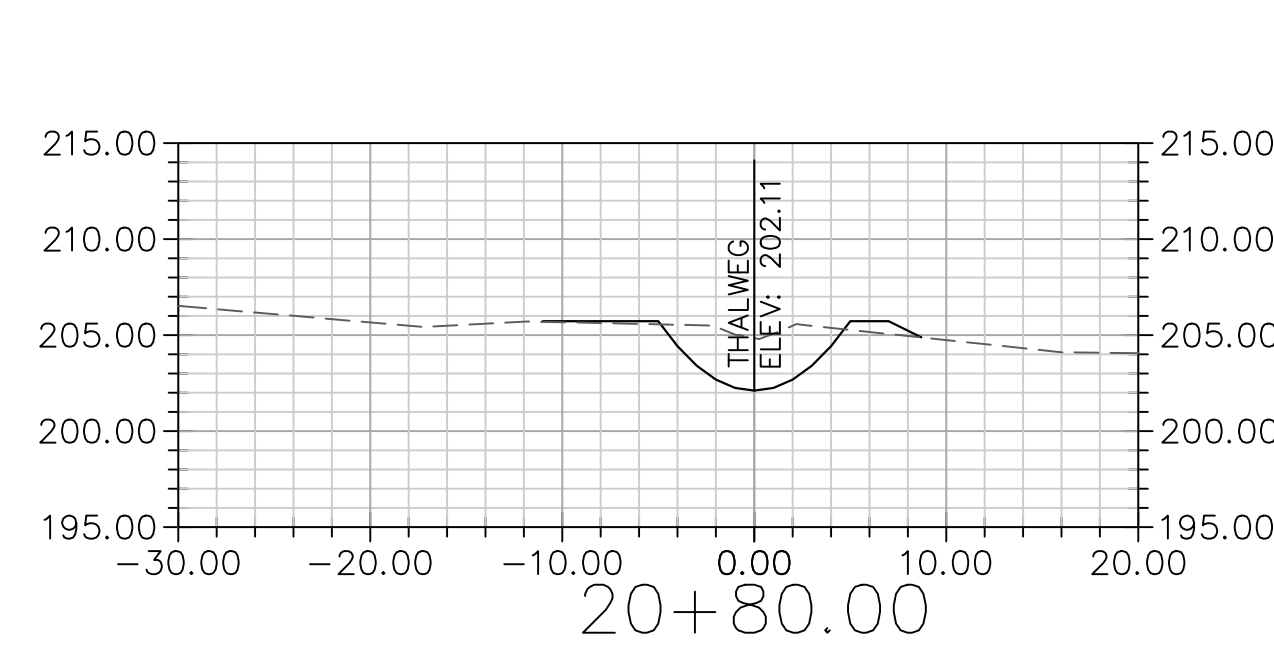
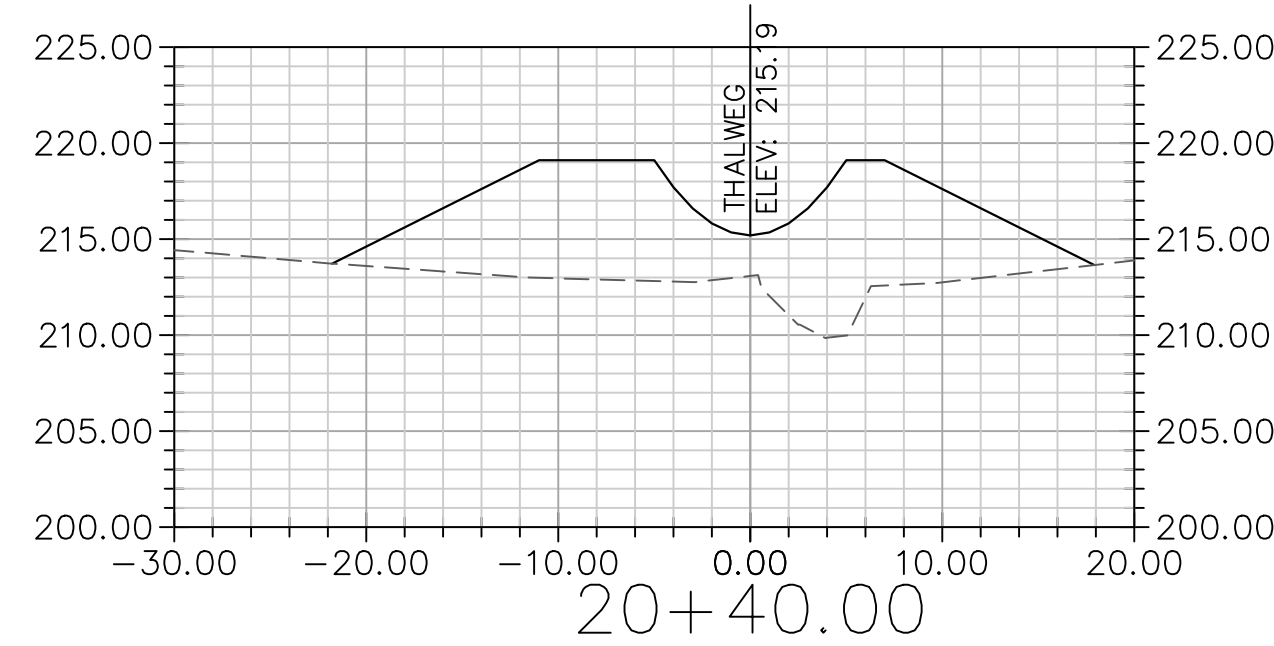
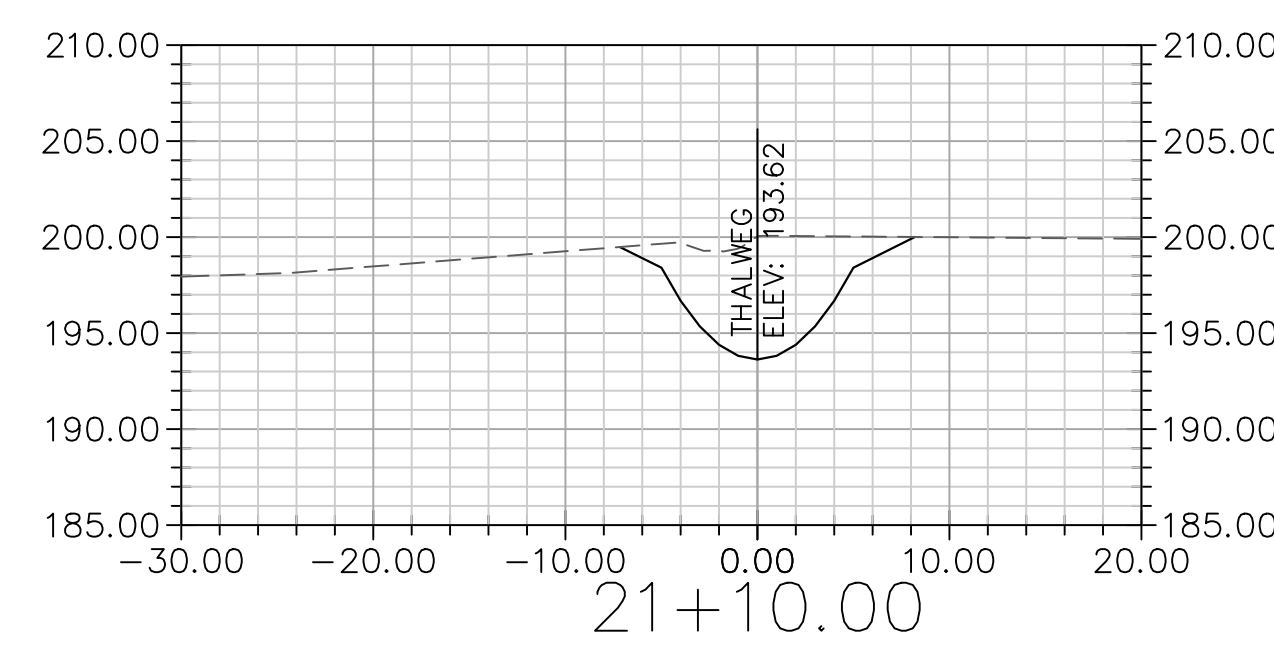
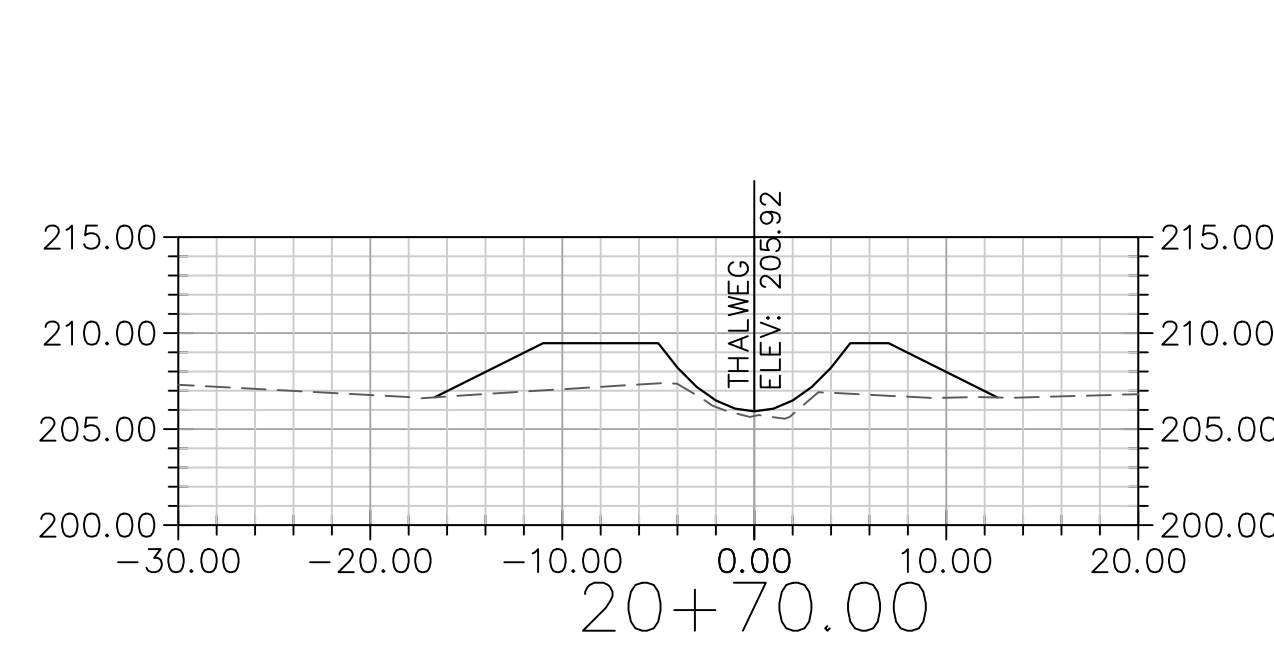
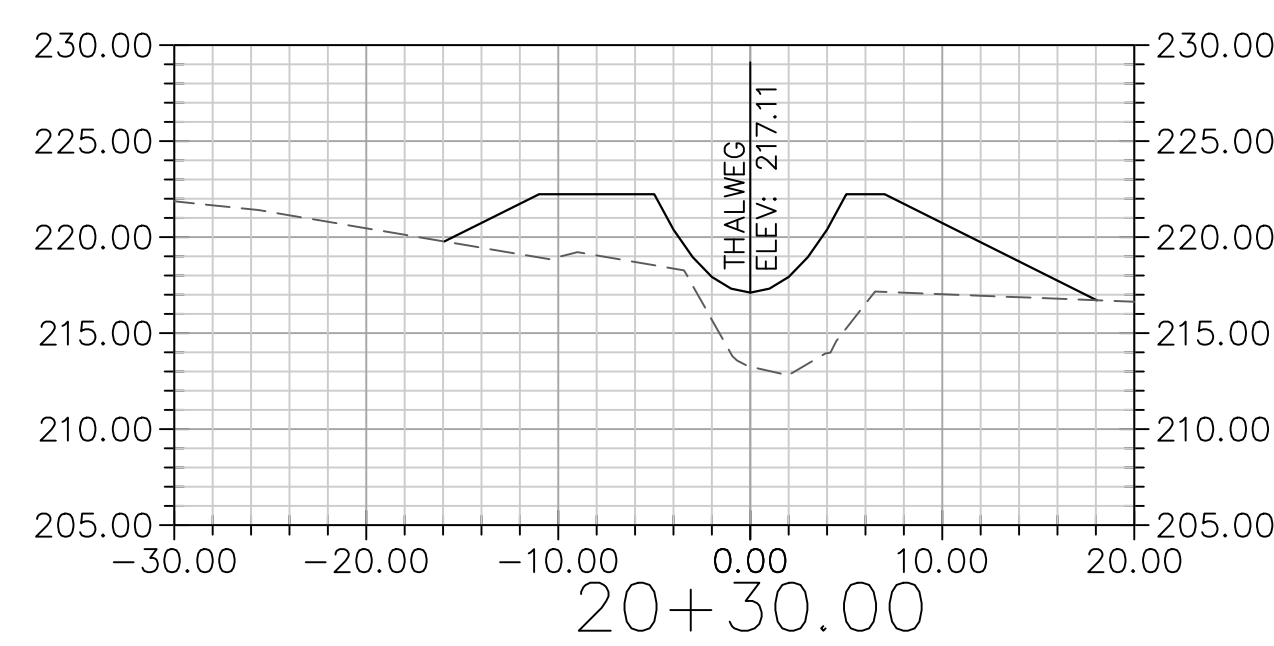
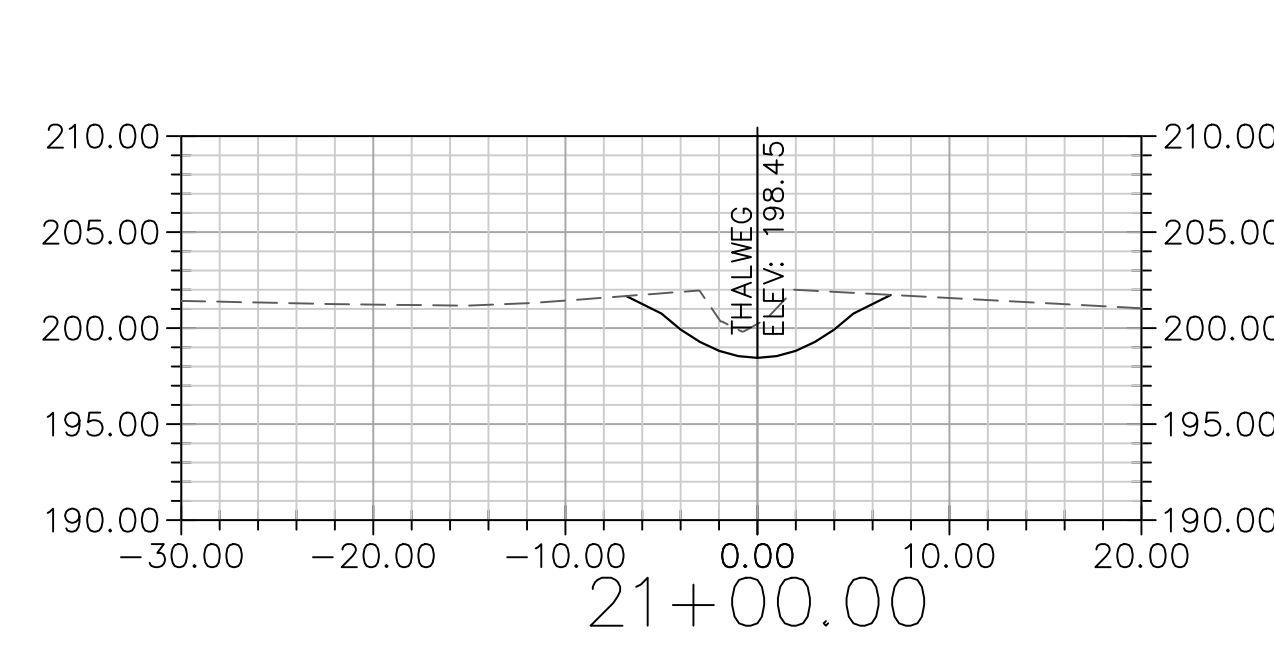
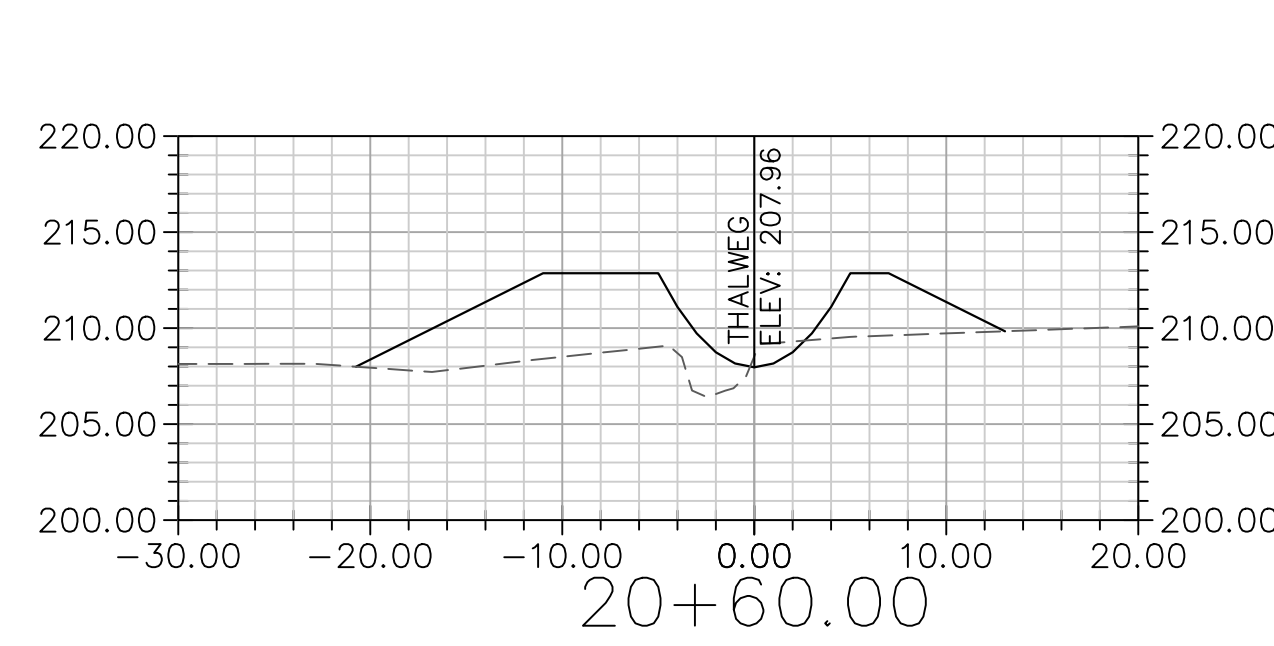
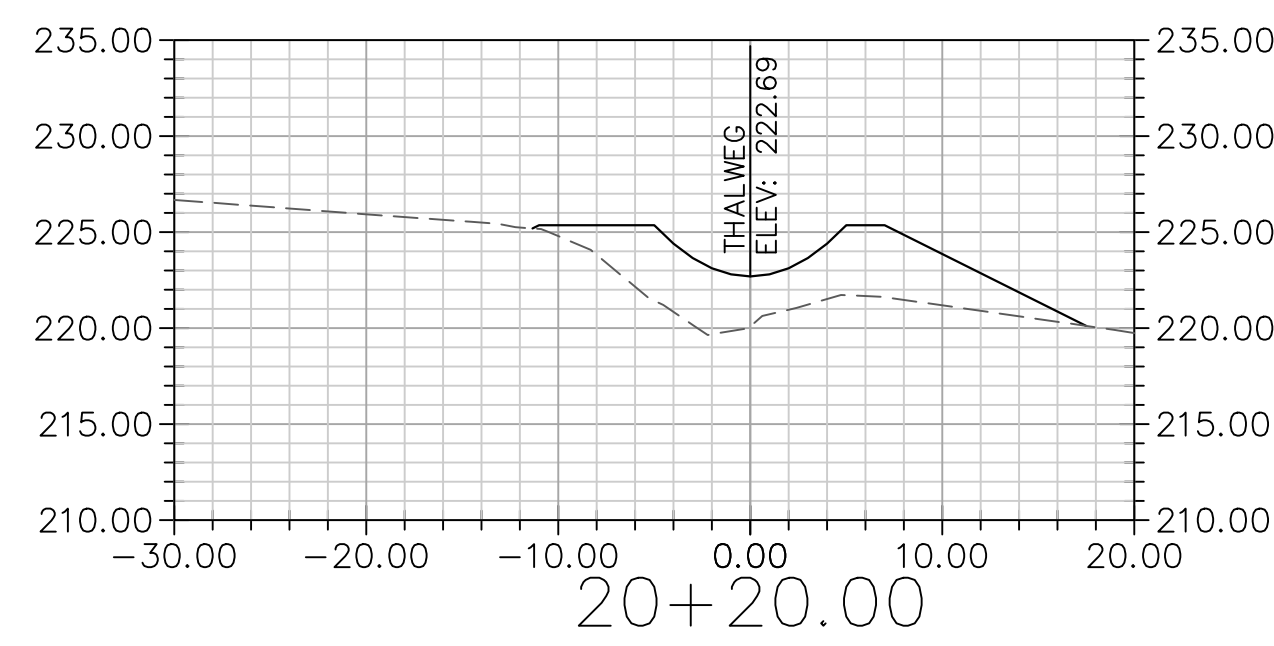
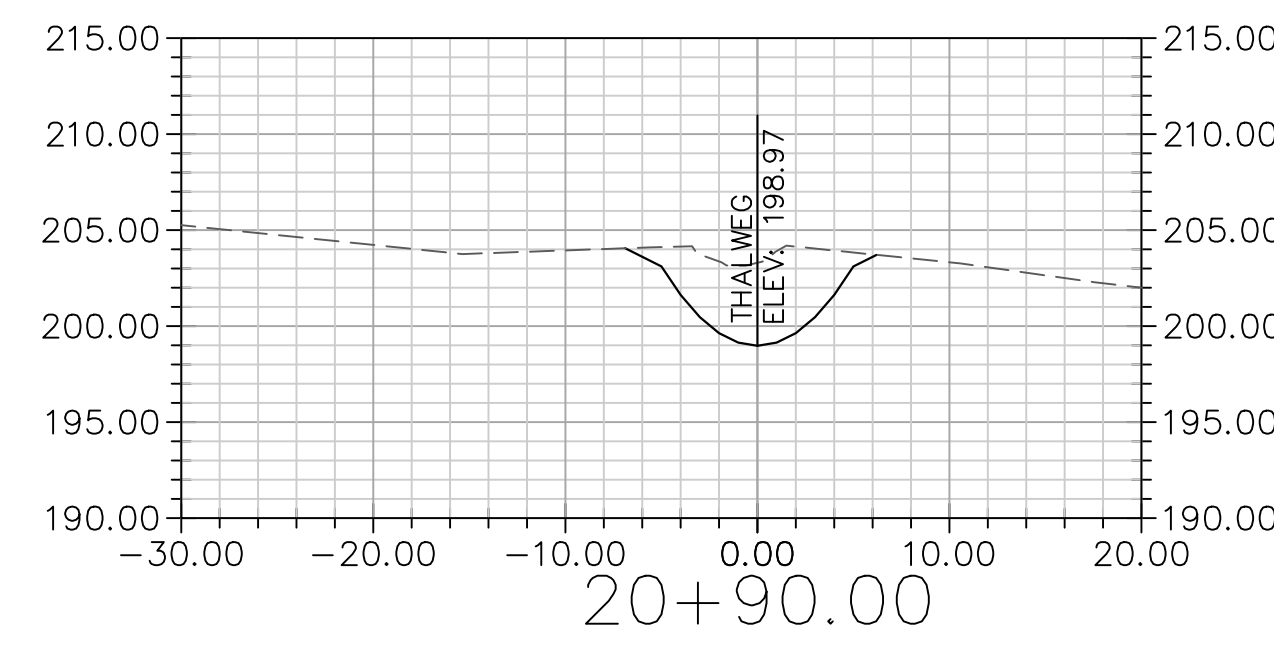
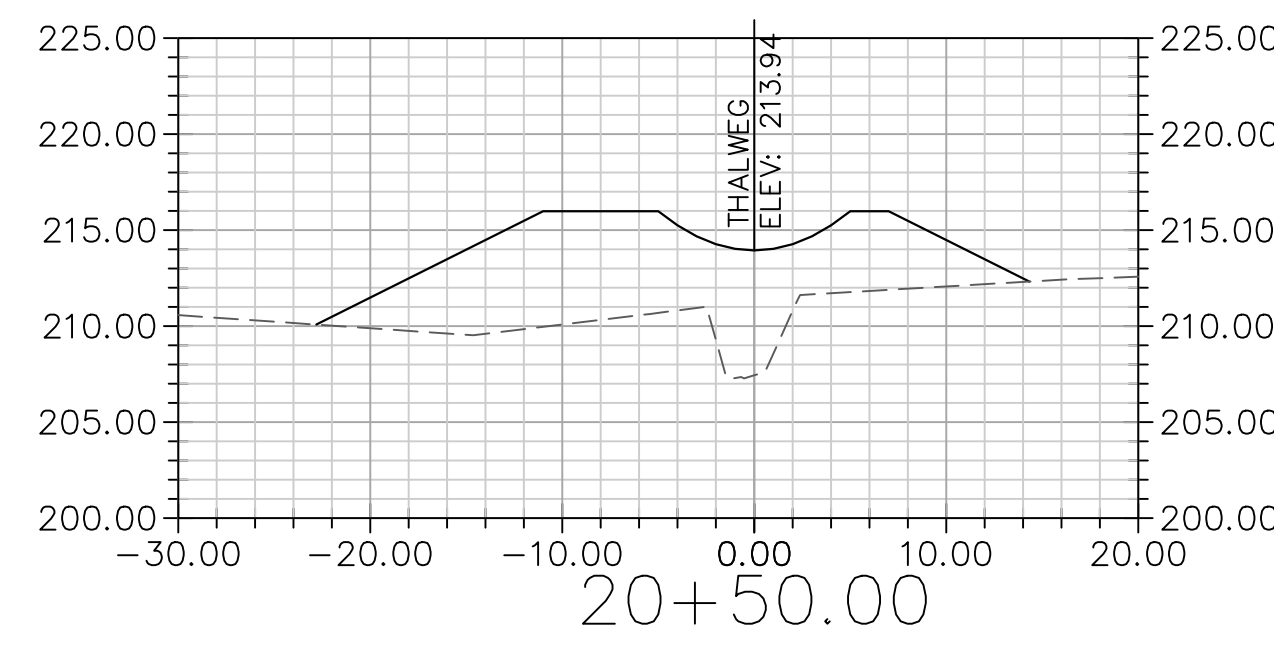
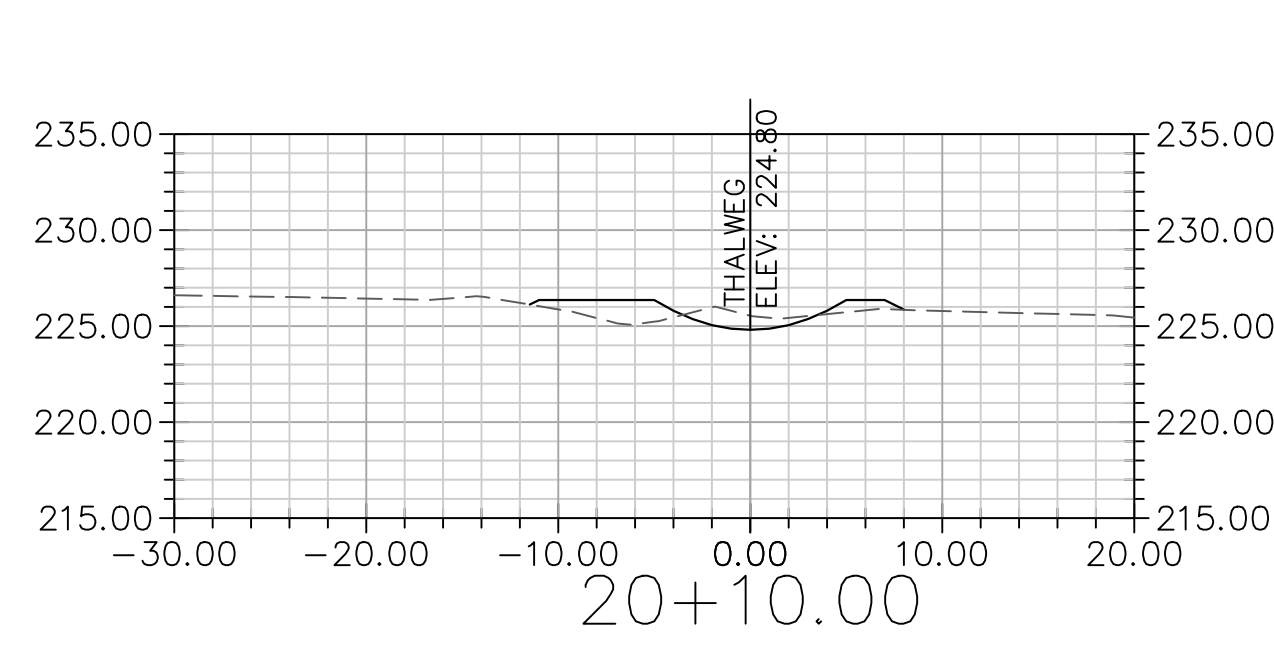
**BRANCH AVE STREAM RESTORATION**

DISTRICT DEPARTMENT OF ENERGY AND ENVIRONMENT  
WASHINGTON, DC

NAD83/NAVD88 MAP NO. XX BLOCK NO. N/A

SCALE  
1" = 10'  
SHEET  
13 OF 14





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CONSTRUCTION**

8/6/19 J:\m\p\branch\_ave\branch\_ave\_stream\_restoration\cadd\design\_cross\_sections.dwg



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DATE:	Aug-2019				

**FINAL DESIGN PLANS  
CROSS SECTIONS - SPSC  
CS-03**

NAD83/NAVD88 MAP NO. XX BLOCK NO. N/A

**BRANCH AVE STREAM RESTORATION**

DISTRICT DEPARTMENT OF ENERGY AND ENVIRONMENT  
WASHINGTON, DC

SCALE  
1" = 10'

SHEET  
14 OF 14