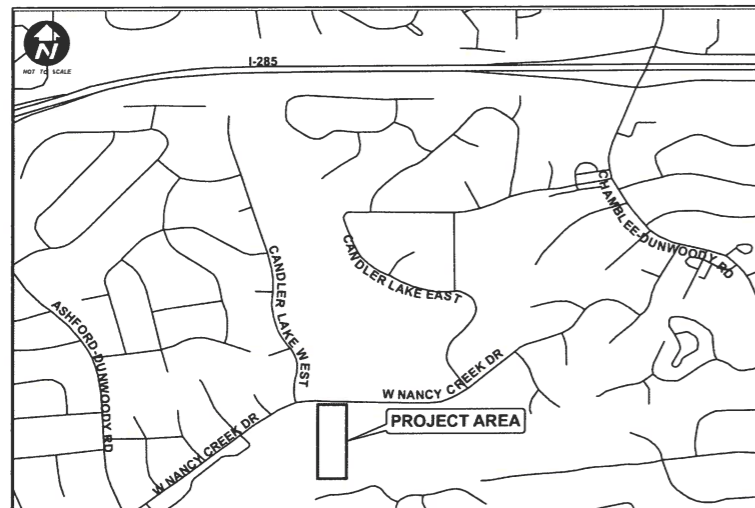


CITY OF BROOKHAVEN MURPHEY CANDLER STREAMBANK RESTORATION ISSUED FOR BID



VICINITY MAP
NOT TO SCALE



LOCATION MAP
NOT TO SCALE

THIS PROJECT IS PREPARED USING THE HORIZONTAL COORDINATE SYSTEM ON GEORGIA WEST ZONE (NAD83), AND NORTH AMERICAN VERTICAL DATUM (NAVD 1988).

DISTURBED AREA: 0.98 ACRES

SEPTEMBER 2019



360 Interstate North Parkway, Suite 250
Atlanta, GA 30339
Phone - (404) 334-4310
Web - www.freese.com



24 HOUR CONTACT:
CITY OF BROOKHAVEN
PUBLIC WORKS DEPARTMENT
404-637-0540

ISSUED FOR BID
NOT FOR CONSTRUCTION



Know what's below.
Call before you dig.

1551 WEST NANCY CREEK DRIVE
BROOKHAVEN, DEKALB COUNTY GA
LOT(S) 0326

PRIMARY PERMITTEE
CITY OF BROOKHAVEN
4362 PEACHTREE ROAD
BROOKHAVEN, GA 30019
(404)637-0500

SECOND PERMITTEE
N/A



Know what's below. Call before you dig.



FREESSE NICHOLS
360 Interstate North Parkway,
Suite 230
Atlanta, GA 30339
Phone - (404) 334-4310
Web - www.freesse.com

CITY OF BROOKHAVEN
MURPHEY CANDLER STREAMBANK RESTORATION
GENERAL

GENERAL NOTES

GENERAL NOTES

- THE PROJECT IS LOCATED SOUTH OF 1551 WEST NANCY CREEK DRIVE WITHIN THE CITY OF BROOKHAVEN IN LAND LOT(S) 0326 IN THE 1ST DISTRICT, DEKALB COUNTY, GEORGIA.
- THE PROJECT SITE IS FOR THE RESTORATION/STABILIZATION OF NORTH FORK NANCY CREEK RUNNING FROM MURPHY CANDLER DAM TO THE CONFLUENCE WITH NANCY CREEK. CONSTRUCTION ACTIVITY WILL INCLUDE INSTALLATION OF IN-STREAM STRUCTURES, ACCOMPANYING SITE GRADING, AND PLANTING OF NATIVE VEGETATION.
- HORIZONTAL CONTROL IS BASED UPON GEORGIA STATE PLANE COORDINATE SYSTEM, (GA WEST ZONE, NAD83). VERTICAL DATUM IS NAVD88
- THE TOTAL AREA OF DISTURBANCE IS +/- 0.98 AC.
- THIS PROPERTY LIES WITHIN A SPECIAL FLOOD HAZARD ZONE 'AE' AND LIES WITHIN THE FIRM MAPS OF THE DEKALB COUNTY FLOOD INSURANCE STUDY.
FIRM MAP NUMBER: 13089C0012J
EFFECTIVE DATE: AUGUST 15, 2019
- GRADE STAKES SHALL BE SET FOR ALL CURB AND GUTTER, CULVERT, AND STORM SEWER AT ALL TIMES OF CONSTRUCTION.
- THE STORMWATER RUNOFF FLOWS DIRECTLY INTO NORTH FORK NANCY CREEK AND NANCY CREEK. NORTH FORK NANCY CREEK AND NANCY CREEK ARE A PART OF THE NANCY CREEK WATERSHED IN DEKALB COUNTY.
- EXISTING UTILITIES SHOWN ON THE DRAWINGS ARE BASED ON THE BEST AVAILABLE INFORMATION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY EXISTING UTILITY LOCATIONS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL ALSO NOTIFY UTILITIES OF PROPOSED CONSTRUCTION AT LEAST (2), BUT NOT MORE THAN TEN (10) WORKING DAYS IN ADVANCE. FOR UTILITY LOCATES/NOTIFICATIONS CONTACT:
CITY OF BROOKHAVEN PUBLIC WORKS: 404-637-0500
DEKALB COUNTY PUBLIC WORKS: 404-371-2000
UTILITY PROTECTION CENTER: 811 OR 1-800-282-7411
- ALL CONSTRUCTION SHALL CONFORM TO APPLICABLE CITY OF BROOKHAVEN, DEKALB COUNTY, AND STATE OF GEORGIA STANDARDS AND SPECIFICATIONS.
- TO REPORT PUBLIC WORKS EMERGENCIES, CONTACT THE CITY OF BROOKHAVEN PUBLIC WORKS DEPARTMENT 24 HOURS-A-DAY NUMBER: 404-637-0540.
- PLACE MATERIAL FROM EXCAVATION AWAY FROM DRAINAGE FEATURES TO PREVENT OBSTRUCTION OF STORM DRAINAGE FLOW.
- THE SITE GRADE WILL BE RETURNED TO NATURALIZED CONTOURS TYPICAL OF A RIPARIAN ENVIRONMENT. ALL DISTURBED PAVEMENT, CURB, SIDEWALK, AND LANDSCAPING WILL BE REPLACED IN KIND.
- CONTRACTOR TO COORDINATE NECESSARY BYPASS PUMPING AND/OR TEMPORARY PIPING TO MAINTAIN CREEK FLOWS WITHOUT IMPACT TO THE ENVIRONMENT.
- CONSTRUCTION LAYOUT AND STAKING SHALL BE PROVIDED BY THE CONTRACTOR.
- CONTRACTOR TO ESTABLISH TEMPORARY SUPPORT FOR EXISTING UTILITIES AND MAINTAIN IT THROUGHOUT CONSTRUCTION, IF REQUIRED.
- DURING NON-WORKING HOURS OR DAYS, ALL EXCAVATED AREAS ARE TO BE BACKFILLED OR SECURED AND PROTECTED USING APPROVED SAFETY DEVICES AND MATERIALS.
- IF ANY CONFLICTS OR DISCREPANCIES ARE DISCOVERED, EITHER ON THE CONSTRUCTION DOCUMENTS OR THE FIELD CONDITIONS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER, AND SHALL NOT COMMENCE OPERATION UNTIL THE CONFLICTS OR DISCREPANCIES ARE RESOLVED.
- THE CONTRACTOR SHALL VERIFY ALL INFORMATION BEFORE PROCEEDING AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
- THE CONTRACTOR SHALL NOT MOVE OR DRIVE CONSTRUCTION MACHINERY OR HEAVY EQUIPMENT OVER THE PEDESTRIAN BRIDGE.
- SHOULD SIDEWALKS BE DAMAGED DURING CONSTRUCTION, THE CONTRACTOR SHALL REPAIR OR REPLACE TO MATCH PRE-PROJECT CONDITIONS.
- FAILURE TO INSTALL, OPERATE OR MAINTAIN ALL EROSION CONTROL MEASURES WILL RESULT IN ALL CONSTRUCTION BEING STOPPED ON THE JOB SITE UNTIL SUCH MEASURES ARE CORRECTED TO ENSURE NO VIOLATIONS TO CITY ORDINANCES OR STATE REQUIREMENTS OCCUR.
- THE SANITARY SEWER AERIAL CROSSING AT APPROXIMATE LOCATION OF STA 6+75 TO BE STABILIZED DURING CONSTRUCTION SO AS TO ELIMINATE/MINIMIZE ADVERSE EFFECTS.
- TREE PROTECTION FENCING SHALL BE INSTALLED PRIOR TO THE START OF ANY LAND DISTURBING ACTIVITY.
- THE CONTRACTOR CAN UTILIZE CLEARED TREES AS BARRIER BRUSH SEDIMENT CONTROL WHERE INITIAL GRADING ACTIVITIES WILL NOT OCCUR.
- THIS IS A FEDERAL COST-SHARE GRANT PROJECT. THEREFORE THE REQUIREMENTS OF THE DAVIS-BACON ACT AND OTHER FEDERAL LABOR LAWS ARE APPLICABLE. PLEASE REFER TO "DAVIS-BACON LABOR STANDARDS; A CONTRACTOR'S GUIDE TO PREVAILING WAGE REQUIREMENTS FOR FEDERALLY-ASSISTED CONSTRUCTION PROJECTS", LABOR RELATIONS DESK GUIDE LR01.DG

| DRAWING INDEX | |
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| GENERAL | |
| -- | COVER SHEET |
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| SITE CIVIL | |
| C-1 | OVERVIEW AND DEMOLITION PLAN |
| C-2 | PLAN AND PROFILE (1 OF 2) |
| C-3 | PLAN AND PROFILE (2 OF 2) |
| C-4 | CROSS SECTIONS |
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| PROJECT DETAILS | |
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| ES-1 | EROSION & SEDIMENT CONTROL NOTES |
| ES-2 | DURING CONSTRUCTION - PHASE 1 AND 2 |
| ES-3 | POST CONSTRUCTION - PHASE 3 |
| ES-4 | EROSION & SEDIMENT CONTROL DETAILS I |
| ES-5 | EROSION & SEDIMENT CONTROL DETAILS II |
| ES-6 | EROSION & SEDIMENT CONTROL DETAILS III |

LEGEND

- BOULDER CLUSTER
- STACKED ROCK WALL OR ROCK TOE
- ROCK TOE WITHOUT FOOTER
- ROCK AND ROLLER
- ROCK CROSS-VANE
- STEP - POOL
- CASCADE
- SOIL LAYER LIFTS
- STREAM ALIGNMENT
- LIMITS OF DISTURBANCE
- EXISTING MINOR CONTOURS
- EXISTING MAJOR CONTOURS
- CONCRETE DEBRIS REMOVAL AREA
- OVERBURDEN DEBRIS REMOVAL AREA
- GRASS AND SHRUB PLANTING ZONE
- WOODY VEGETATION PLANTING ZONE

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| DATE | 09/30/19 |
| DESIGNED | ECM |
| DRAWN | CKM |
| REVISIONS | CHECKED |
| VERIFIED | BMD |

Bar is one inch on original drawing. If not one inch on this sheet, adjust scale.

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G-1

1 OF 17



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MURPHEY CANDLER STREAMBANK RESTORATION
 CIVIL

OVERVIEW AND DEMOLITION PLAN

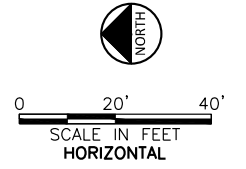
CITY OF BROOKHAVEN

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| DATE | 09/30/19 |
| DESIGNED | ECM |
| DRAWN | CKM |
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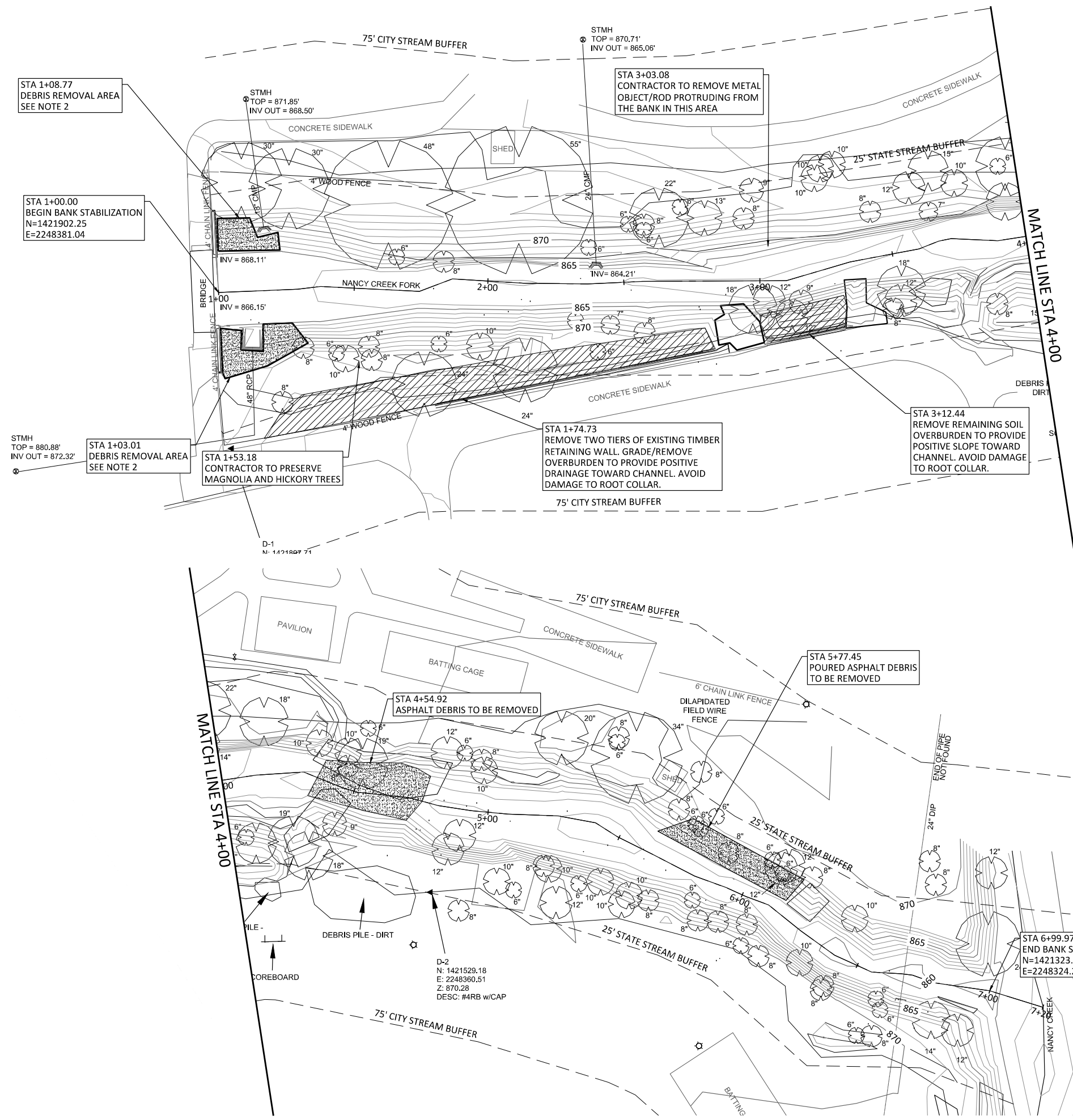
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| SHEET | C-1 |
| SEQ. | 2 OF 17 |

- NOTES:
- SPECIFIC ELEMENTS OF DESIGN ARE SUBJECT TO CHANGE FOR FINAL INSTALLATION.
 - DEBRIS REMOVAL TO BE COORDINATED WITH ENGINEER PRIOR TO CONSTRUCTION. EXISTING ROCK TO REMAIN.
 - OVERBURDEN AREAS TO BE REMOVED BY THE DEBRIS REMOVAL CONTRACTOR. AREA TO BE RESTORED TO PREVIOUS GROUND ELEVATION.
 - ANY AREA DISTURBED DURING DEBRIS AND OVERBURDEN REMOVAL SHALL BE STABILIZED WITH COIR MATTING AND VEGETATED WITH A TEMPORARY SEED MIX.
 - REMAINING MIMOSA TREES CAN BE REMOVED. PRESERVE ALL OTHER EXISTING TREES.



LEGEND

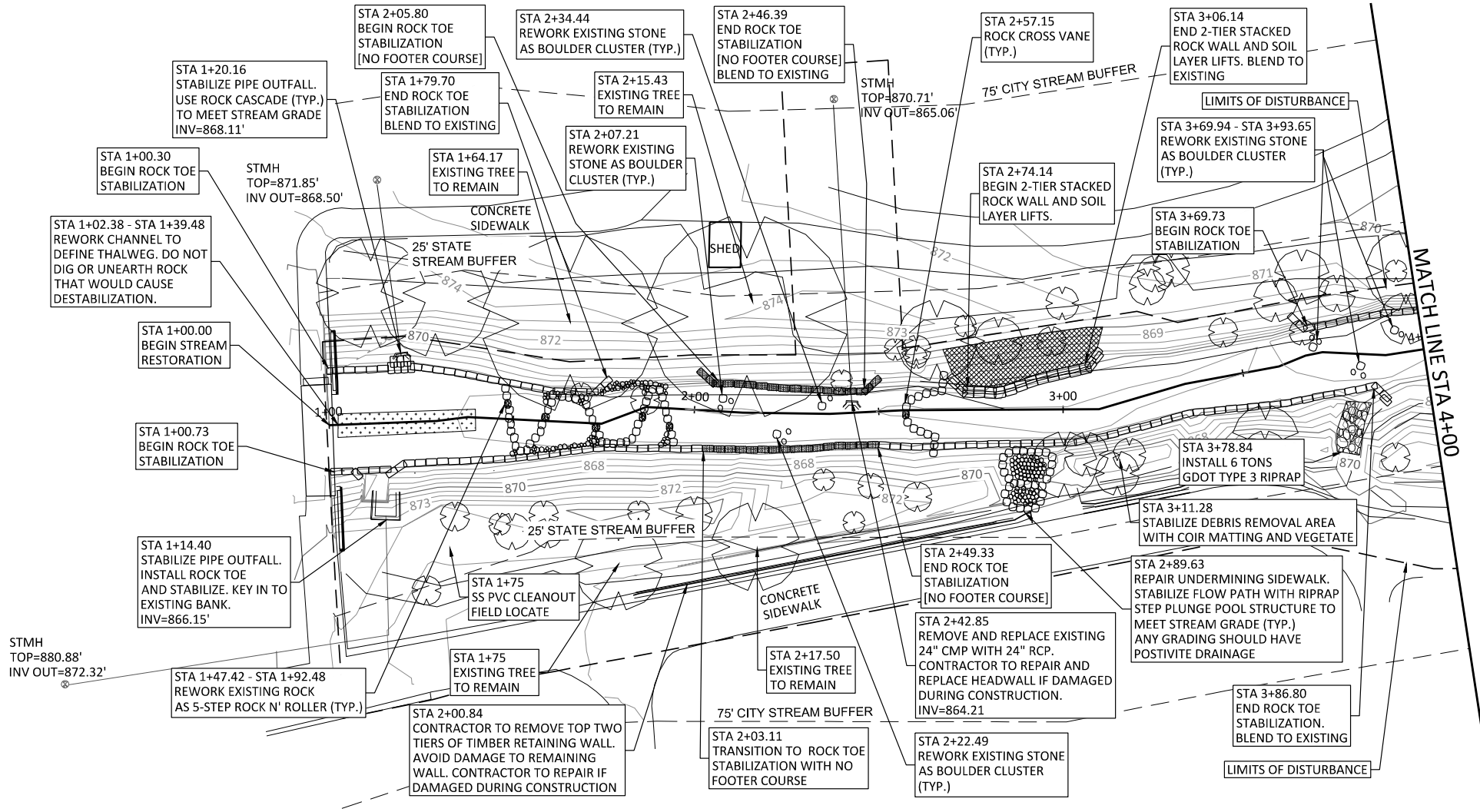
- BOULDER CLUSTER
- STACKED ROCK WALL OR ROCK TOE
- ROCK TOE WITHOUT FOOTER
- ROCK AND ROLLER
- ROCK CROSS-VANE
- STEP - POOL
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- LIMITS OF DISTURBANCE
- STREAM ALIGNMENT
- EXISTING MINOR CONTOURS
- EXISTING MAJOR CONTOURS
- CONCRETE DEBRIS REMOVAL AREA
- OVERBURDEN DEBRIS REMOVAL AREA



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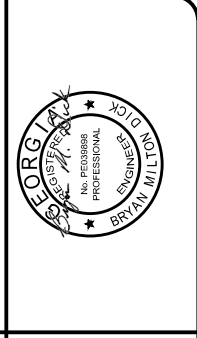
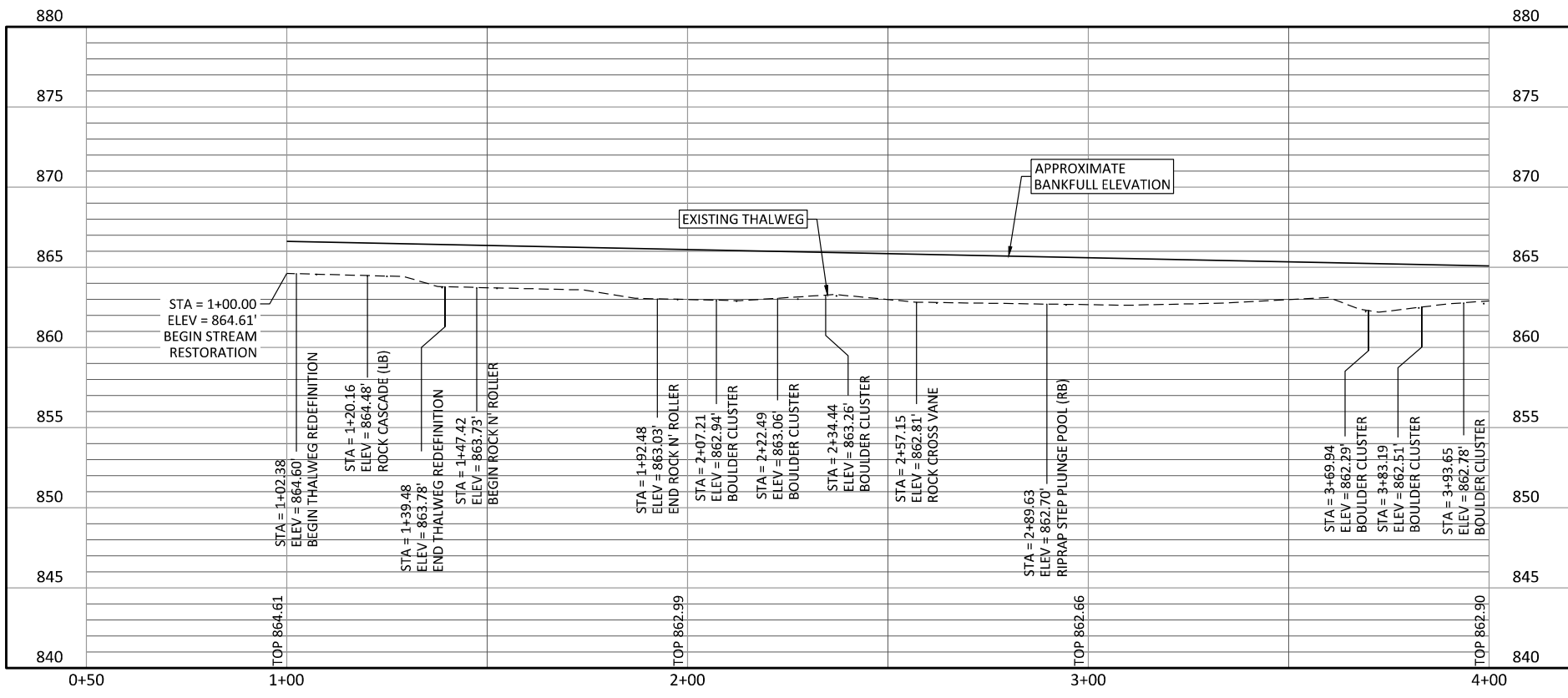
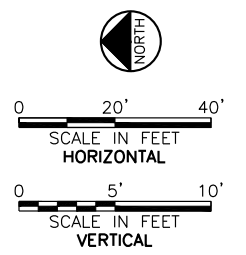
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- NOTES:
- DESIGN ELEMENTS MAY BE SUBSTITUTED WITH OTHER ELEMENTS ALREADY ON THE PLANS AND WILL BE BASED ON UNIT COSTS RECEIVED DURING BIDS AT DIRECTION OF THE ENGINEER OF RECORD.
 - TOE STABILIZATION AND STACKED ROCK WALL SHALL BE BACKFILLED, STABILIZED AND VEGETATED WHERE INDICATED ON THE PLANS. IN AREAS WHERE THE BANK IS UNDERCUT AND THERE IS NOT ROOM TO GRADE THE EXISTING BANK, SOIL LAYER LIFTS WILL BE USED TO BUILD BACK THE BANK ABOVE THE BACKFILL. SEE TOE STABILIZATION / STACKED ROCK WALL DETAIL (SEE C-7).
 - SURVEY WAS COMPLETED PRIOR TO DEBRIS REMOVAL, THEREFORE SPECIFIC ELEMENTS OF DESIGN ARE SUBJECT TO CHANGE BASED ON EXISTING CONDITIONS IF APPROVED BY THE ENGINEER OF RECORD.
 - CONTRACTOR SHALL SUPPLEMENT EXISTING ROCK AS NEEDED TO COMPLETE IN-CHANNEL STRUCTURES.
 - FIELD ADJUSTMENTS MAY BE REQUIRED IF APPROVED BY ENGINEER OF RECORD.

LEGEND

- BOULDER CLUSTER
- STACKED ROCK WALL OR ROCK TOE
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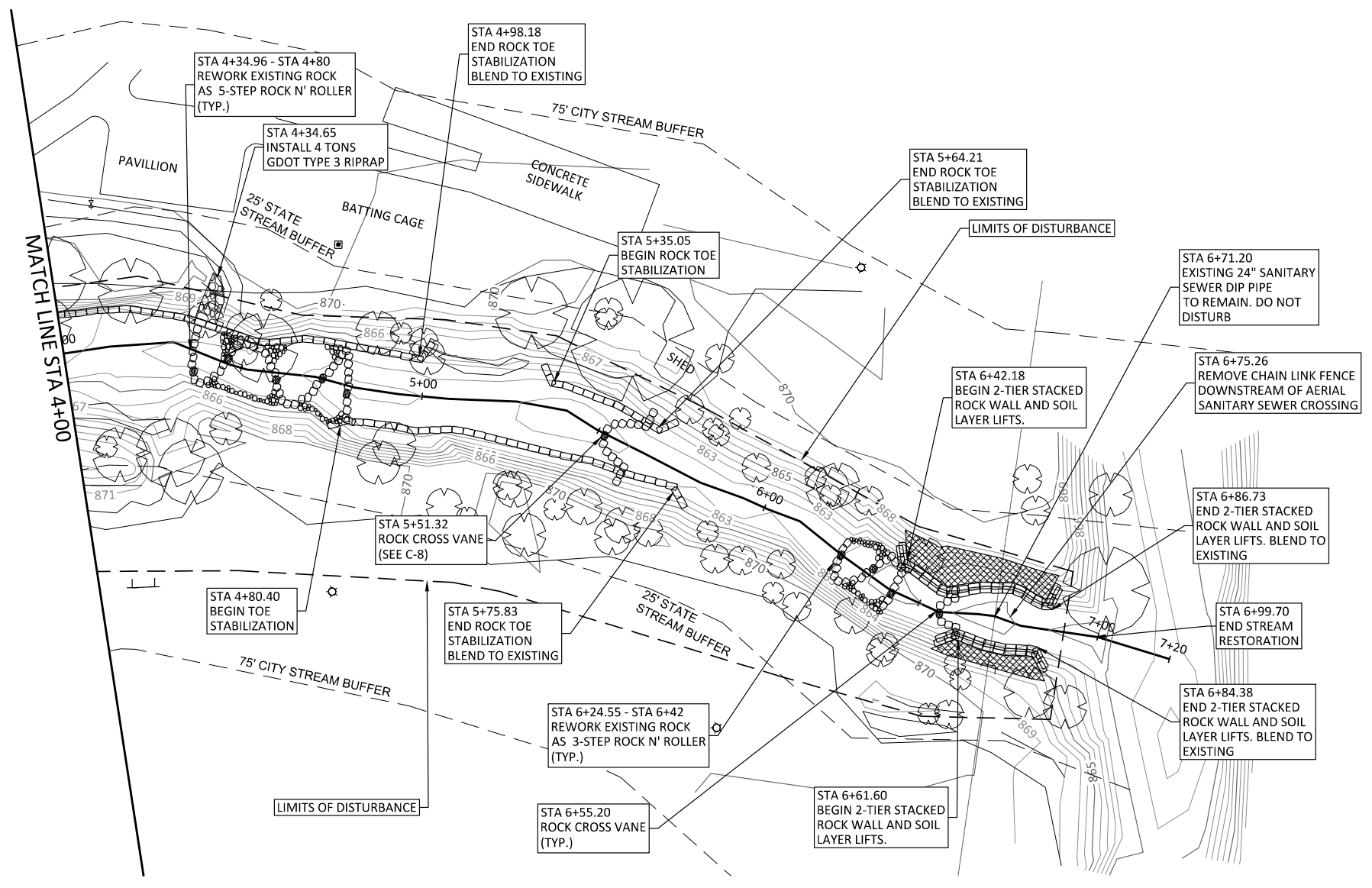
FRESE NICHOLS
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 Suite 230 Atlanta, GA 30339
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CITY OF BROOKHAVEN
MURPHEY CANDLER STREAMBANK RESTORATION
 CIVIL
PLAN AND PROFILE (1 OF 2)

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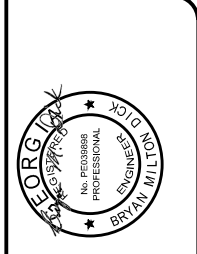
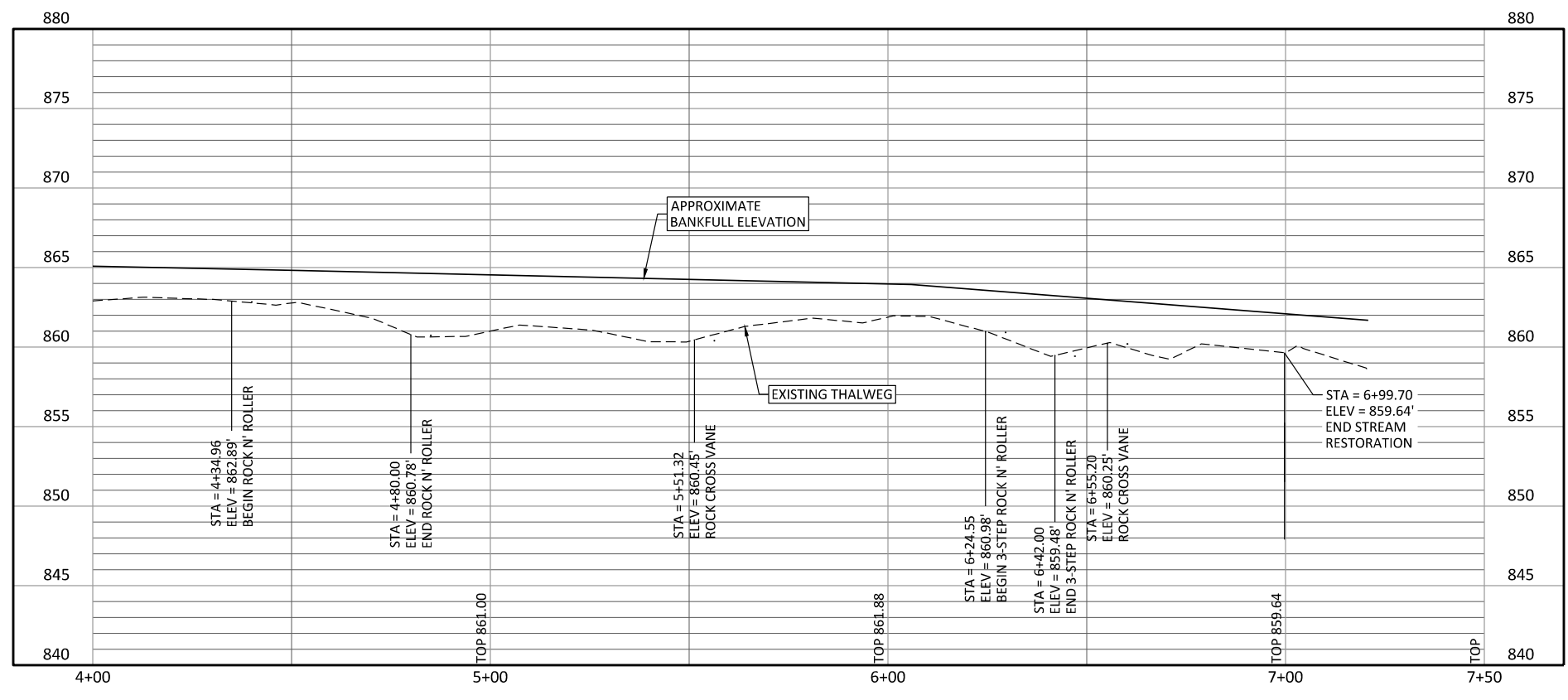
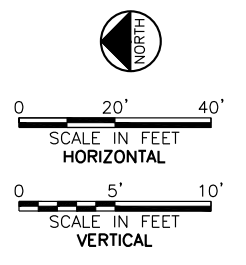
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- NOTES:
- DESIGN ELEMENTS MAY BE SUBSTITUTED WITH OTHER ELEMENTS ALREADY ON THE PLANS AND WILL BE BASED ON THE UNIT COSTS RECEIVED DURING BIDS AT THE DIRECTION OF THE ENGINEER OF RECORD.
 - TOE STABILIZATION AND STACKED ROCK WALL SHALL BE BACKFILLED, STABILIZED AND VEGETATED WHERE INDICATED ON THE PLANS. IN AREAS WHERE THE BANK IS UNDERCUT AND THERE IS NOT ROOM TO GRADE THE EXISTING BANK, SOIL LAYER LIFTS WILL BE USED TO BUILD BACK THE BANK ABOVE THE BACKFILL. SEE TOE STABILIZATION / STACKED ROCK WALL DETAIL (SEE C-7).
 - SURVEY WAS COMPLETED PRIOR TO DEBRIS REMOVAL, THEREFORE SPECIFIC ELEMENTS OF DESIGN ARE SUBJECT TO CHANGE BASED ON EXISTING CONDITIONS IF APPROVED BY THE ENGINEER OF RECORD.
 - CONTRACTOR SHALL SUPPLEMENT EXISTING ROCK AS NEEDED TO COMPLETE IN-CHANNEL STRUCTURES.
 - FIELD ADJUSTMENTS MAY BE REQUIRED IF APPROVED BY ENGINEER OF RECORD.

LEGEND

- BOULDER CLUSTER
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CITY OF BROOKHAVEN
MURPHEY CANDLER STREAMBANK RESTORATION
 CIVIL
PLAN AND PROFILE (2 OF 2)

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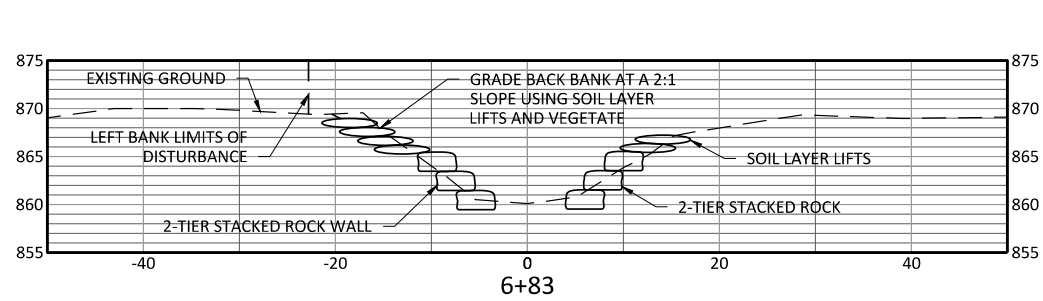
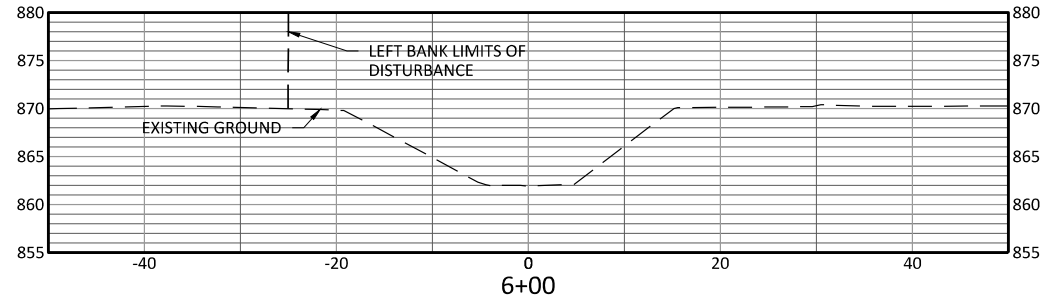
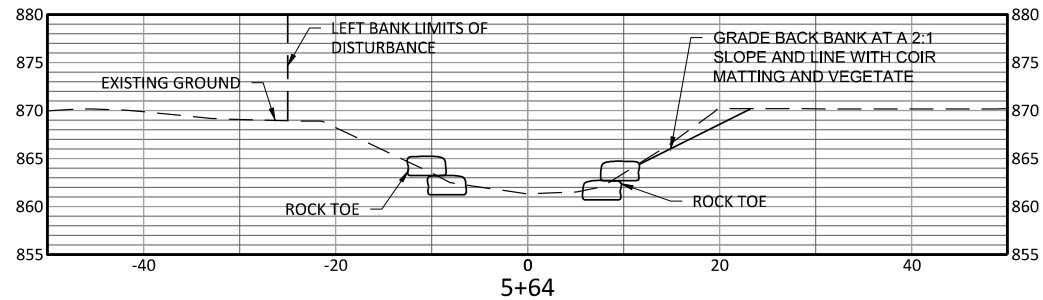
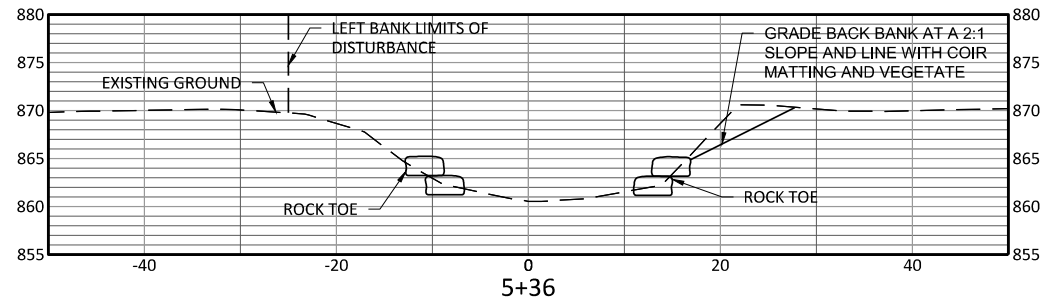
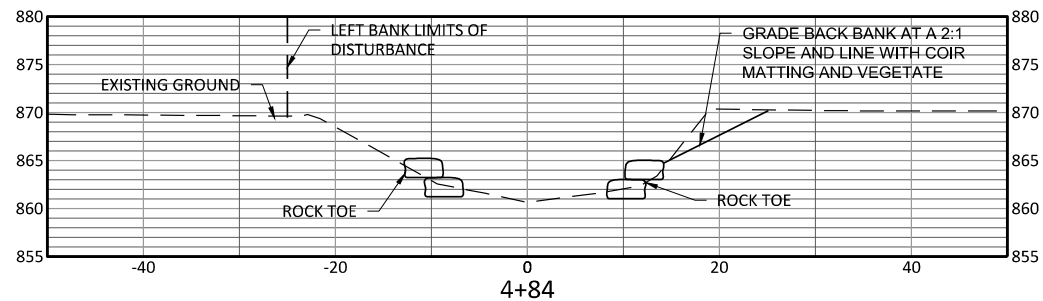
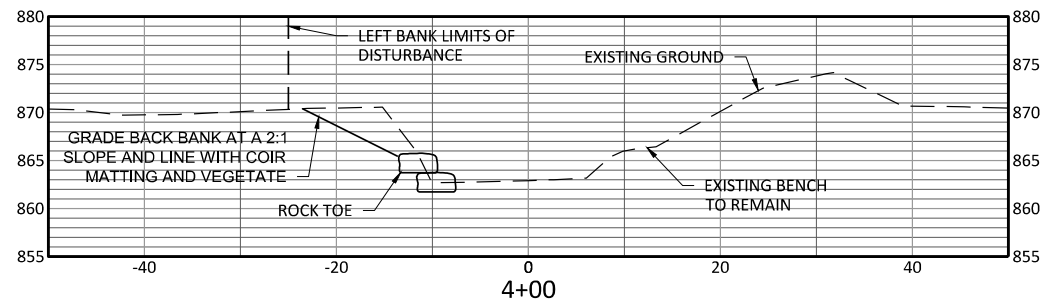
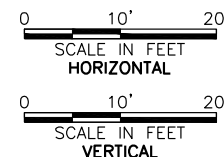
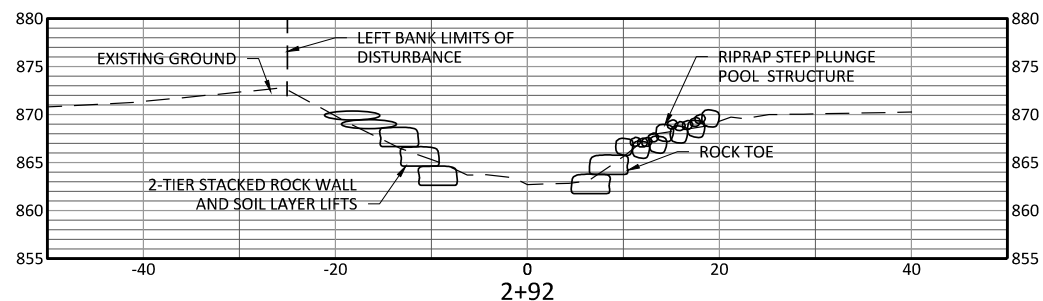
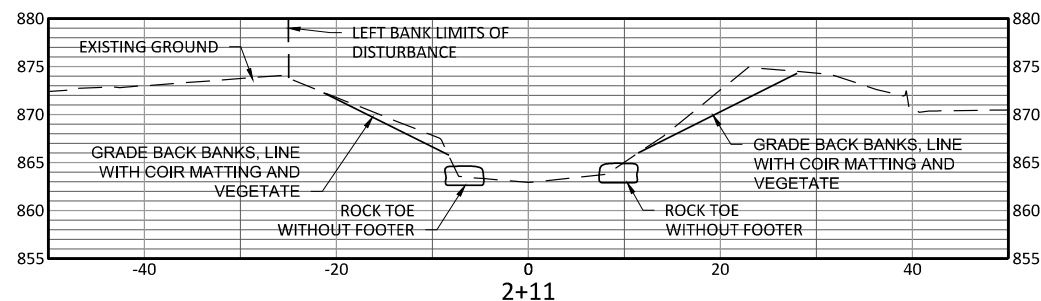
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NOTES:
 1. LIMITS OF DISTURBANCE ON THE LEFT BANK IS LIMITED TO 25' FROM THE CENTERLINE OF THE CHANNEL AND IS SHOWN ON THE CROSS SECTIONS. THE LIMITS OF DISTURBANCE ON THE RIGHT BANK IS 75' FROM THE CENTERLINE AND EXTENDED PAST THE AREA SHOWN ON THE CROSS SECTIONS.



MURPHEY CANDLER STREAMBANK RESTORATION
 CIVIL
 CROSS SECTIONS

CITY OF BROOKHAVEN



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SHEET C-4
 SEQ. 5 OF 17

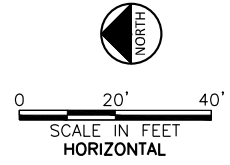
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- NOTES:
- SEE C-11 FOR PLANTING PLAN TO BE USED IN CONJUNCTION WITH THIS SHEET.
 - ALL REMAINING TREES TO BE PROTECTED.
 - CONTRACTOR TO GUARANTEE PLANT SURVIVAL DURING CONSTRUCTION ACTIVITIES. ANY PLANT AND VEGETATION DAMAGED DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.



LEGEND

- GRASS AND SHRUB PLANTING ZONE
- WOODY VEGETATION PLANTING ZONE



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 360 Interstate North Parkway,
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CITY OF BROOKHAVEN
MURPEY CANDLER STREAMBANK RESTORATION
 CIVIL
PLANTING ZONES

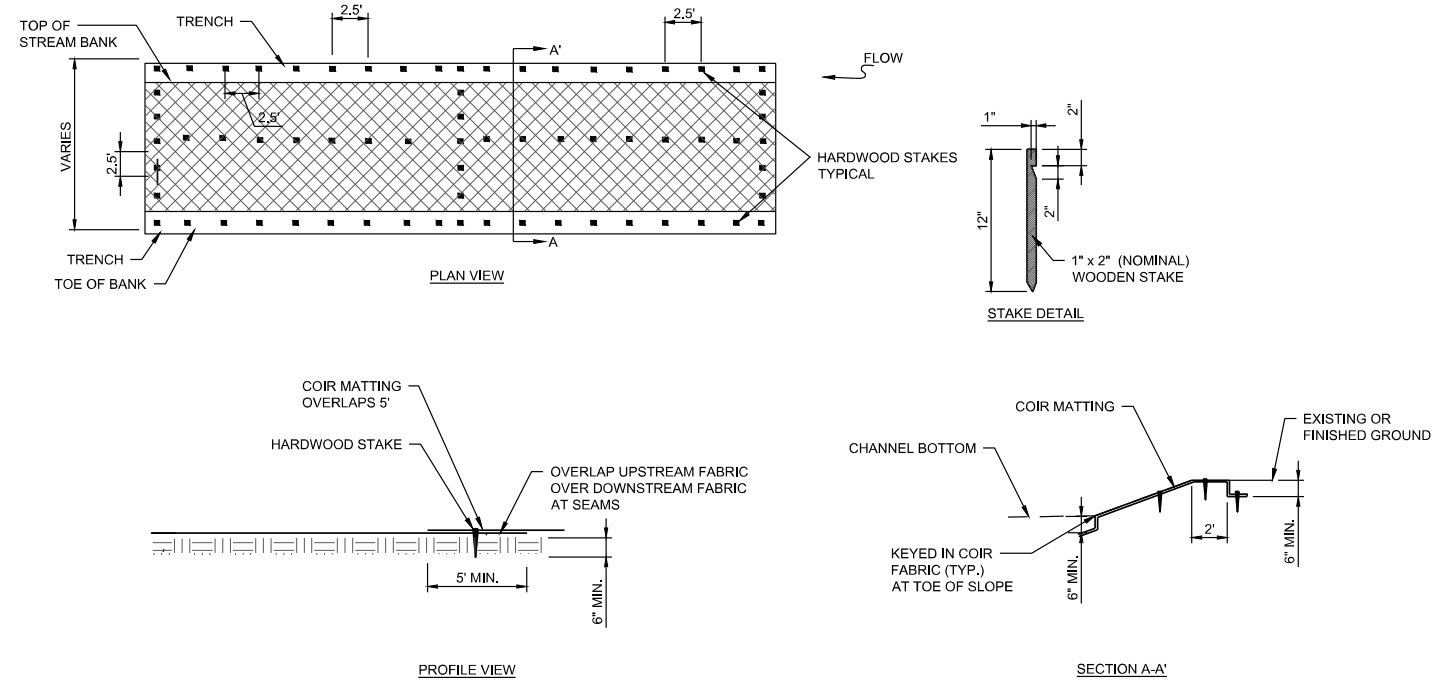
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SHEET **C-5**
 SEQ. 6 OF 17

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NOTES:

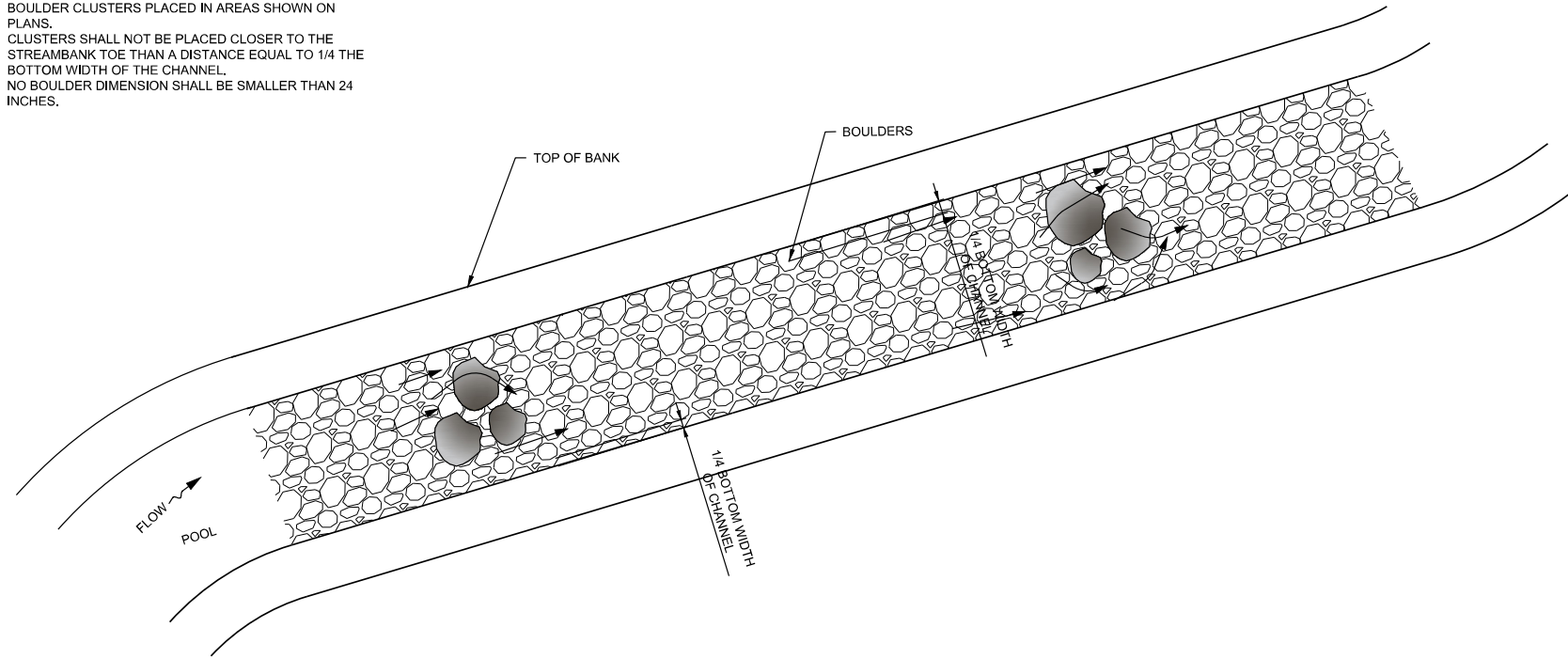
1. MAXIMUM SINGLE LENGTH OF MATTING/MESH IS 100'.
2. TOP AND BOTTOM EDGES OF MATTING/MESH SHALL BE KEYED IN.
3. COIR MATTING DETAIL SHOWN IS FOR PERMANENT INSTALLATION. TEMPORARY INSTALLATION FOR EROSION CONTROL PROTECTION AS STIPULATED SHALL BE TO THE EXTENT THAT THE PROJECT SITE NEEDS TO BE PROTECTED FOR EROSION AND SEDIMENT CONTROL DURING NON-WORKING HOURS.
4. SEE SPECIFICATION FOR MATERIAL REQUIREMENTS.



COIR FIBER MATTING
SCALE: NTS

NOTES:

1. BOULDER CLUSTERS PLACED IN AREAS SHOWN ON PLANS.
2. CLUSTERS SHALL NOT BE PLACED CLOSER TO THE STREAMBANK TOE THAN A DISTANCE EQUAL TO 1/4 THE BOTTOM WIDTH OF THE CHANNEL.
3. NO BOULDER DIMENSION SHALL BE SMALLER THAN 24 INCHES.



BOULDER CLUSTER
SCALE: NTS



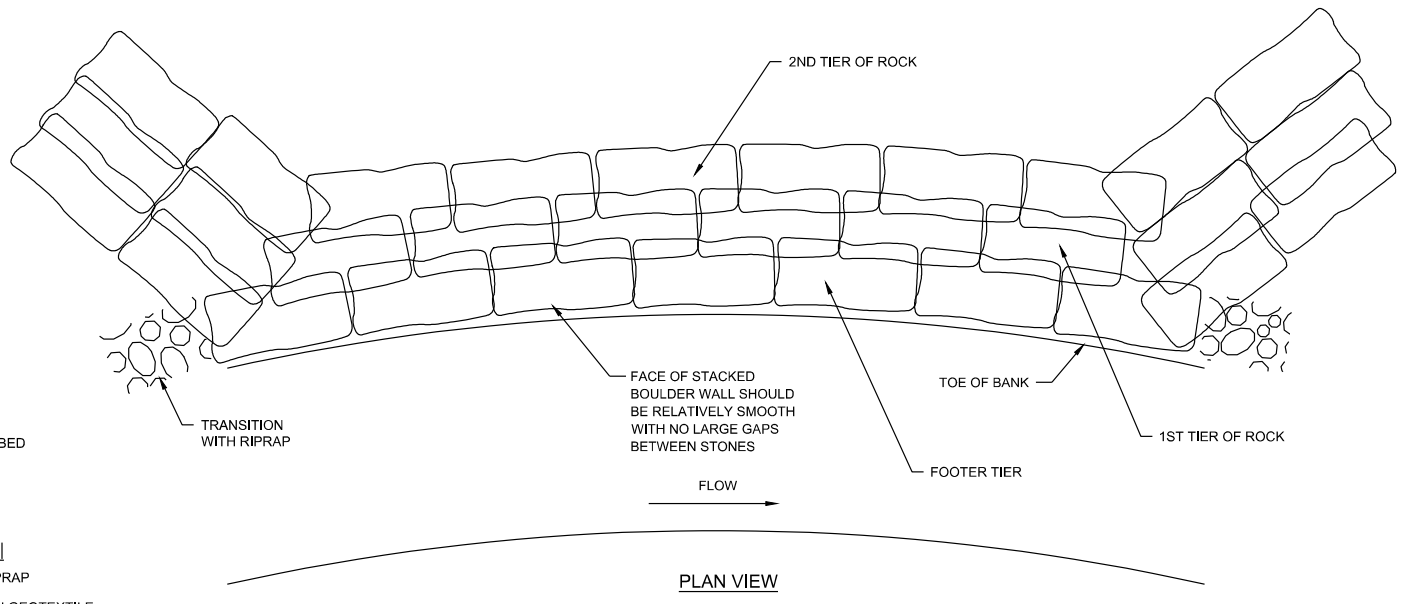
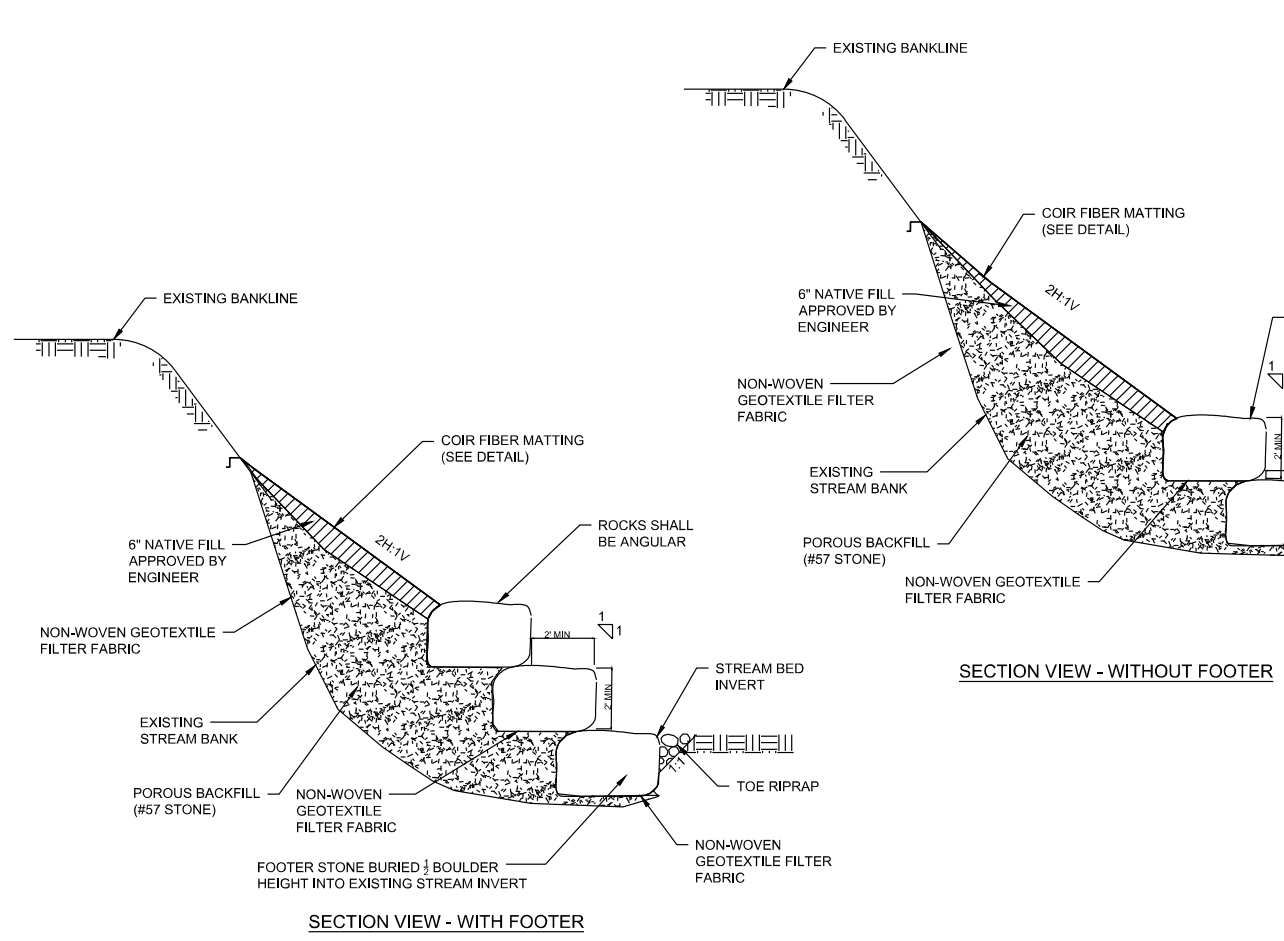
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360 Interstate North Parkway,
Suite 250
Atlanta, GA 30339
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CITY OF BROOKHAVEN
MURPHEY CANDLER STREAMBANK RESTORATION
CIVIL
GENERAL DETAILS

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SHEET **C-6**
SEQ. 7 OF 17

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NOT FOR CONSTRUCTION

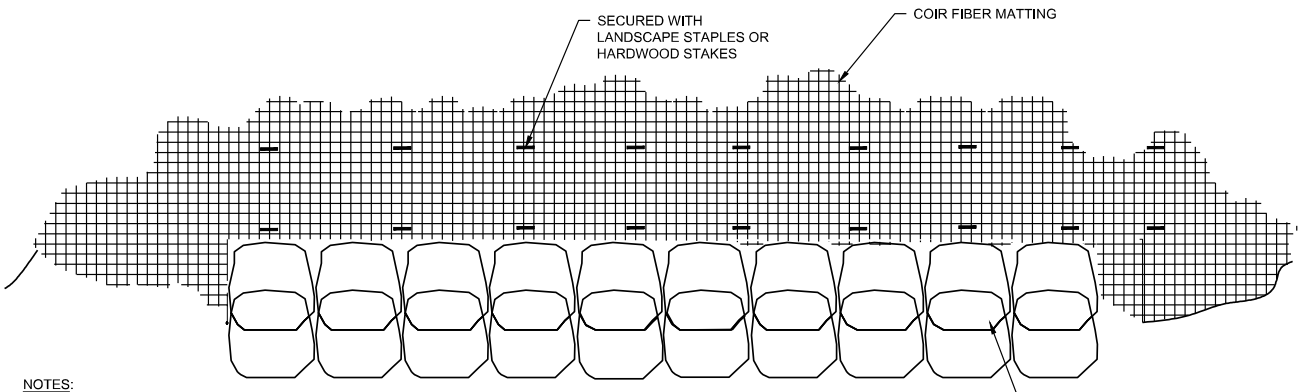
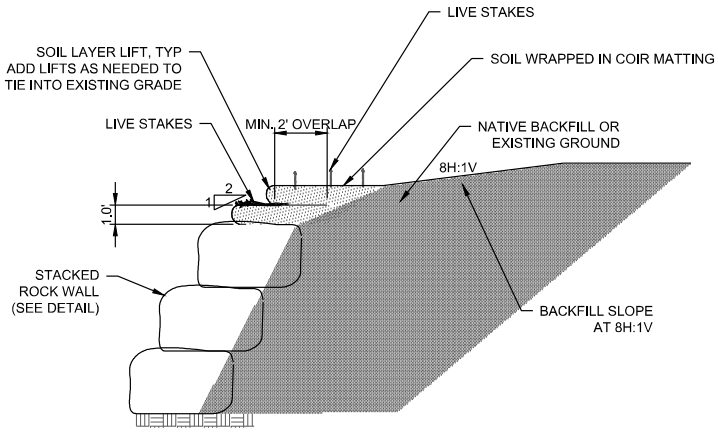
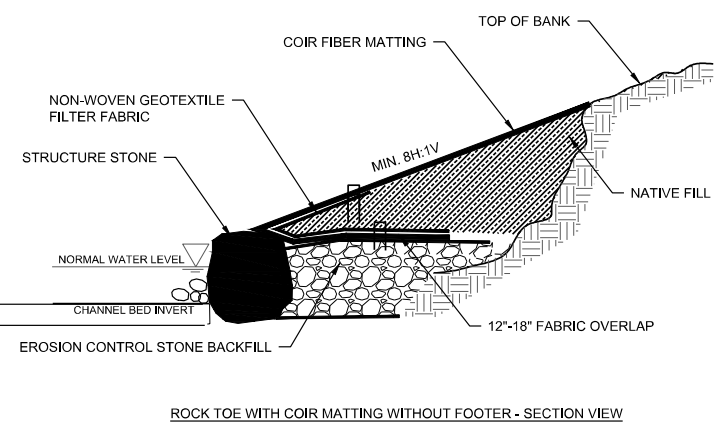
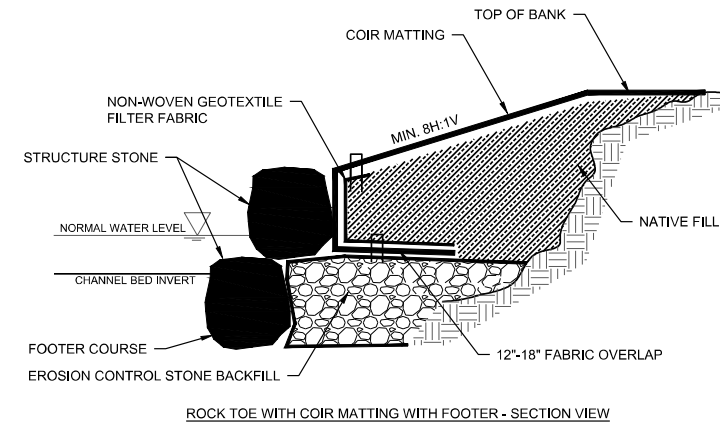


STACKED ROCK WALL & ROCK TOE PROTECTION

NOTE: STANDARD BOULDER SIZE IS 1.5'(L) X 1.5'(W) X 2'(H)

- NOTES:**
1. STACKED ROCK WALL SHALL HAVE 2 OR 3 TIERS ABOVE THE FOOTER TIER AND ROCK TOE PROTECTION HAS 1 TIER ABOVE THE FOOTER TIER.
 2. STACKED ROCK WALL CAN BE STACKED WITH A SLOPE BETWEEN 0.5:1 (H:V) AND 2:1 (H:V) STEEP.
 3. MINIMUM STONE SIZE IS 1.5(L) X 1.5(W) X 2(H) WITH THE REQUIREMENT THAT THE STONE MUST BE BLOCKY AND STACKABLE. COMMON SIZES FROM QUARRIES MAY RUN UP TO 2.5 (W) BY 2(H) OF VARYING LENGTHS.
 4. NON-WOVEN GEOTEXTILE FILTER FABRIC SHALL BE GDOT APPROVED.

- NOTES:**
1. SOIL LAYER LIFTS ARE TO BE PLACED ABOVE STACKED ROCK WALL AS INDICATED IN THE PLANS OR AT DIRECTION OF ENGINEER.
 2. SOIL LAYER LIFTS TO BE 1' HEIGHT.
 3. STONE DIMENSIONS TO BE MINIMUM SIZE OF 1.5'(L) X 1.5'(W) X 2'(H)



- NOTES:**
1. NON-WOVEN GEOTEXTILE FILTER FABRIC SHALL BE GDOT APPROVED.

ROCK TOE SCALE: NTS

SOIL LAYER LIFTS SCALE: NTS



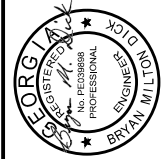
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MURPHEY CANDLER STREAMBANK RESTORATION
 CIVIL
GENERAL DETAILS

| | | | | | | | | | |
|-----|-------|----------|----|-------------|----------|-----------|-----|---|--------------------|
| NO. | ISSUE | DATE | BY | 8&V JOB NO. | BGA19284 | DESIGNED | ECM | CHECKED | BCM |
| | | 09/30/19 | | DATE | 09/30/19 | DRAWN | CKM | FILE NAME | CV-ALL-DETAILS.dwg |
| | | | | DESIGNED | ECM | REVISIONS | | VERIFY SCALE | 0 |
| | | | | DRAWN | CKM | | | Bar is one inch on original drawing. If not one inch on this sheet, adjust scale. | 1 |

SHEET **C-7**
 SEQ. 8 OF 17

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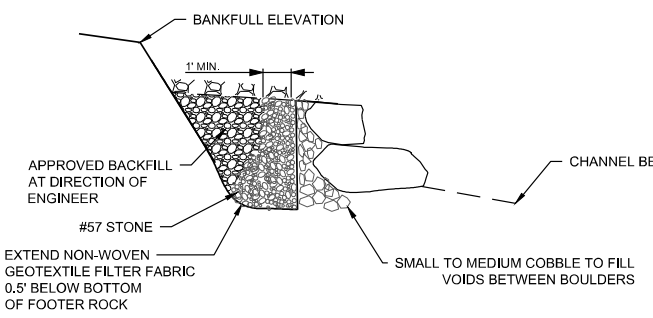
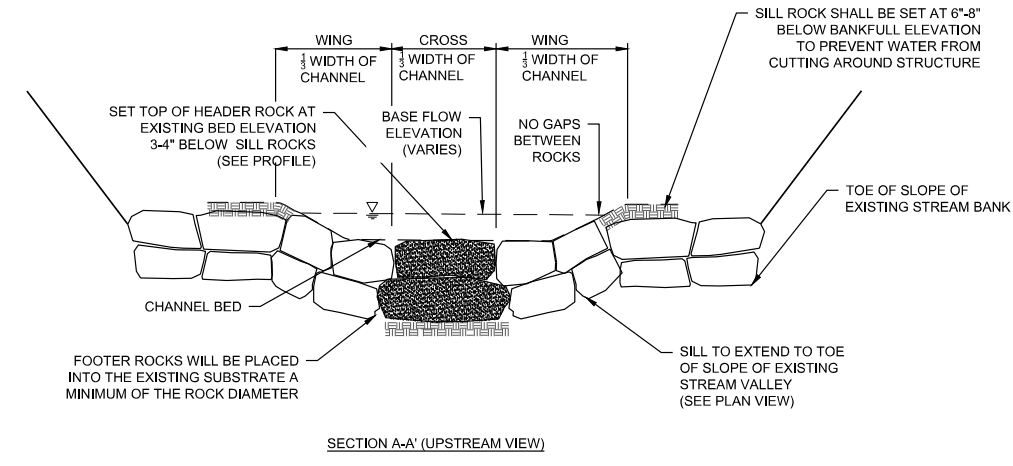
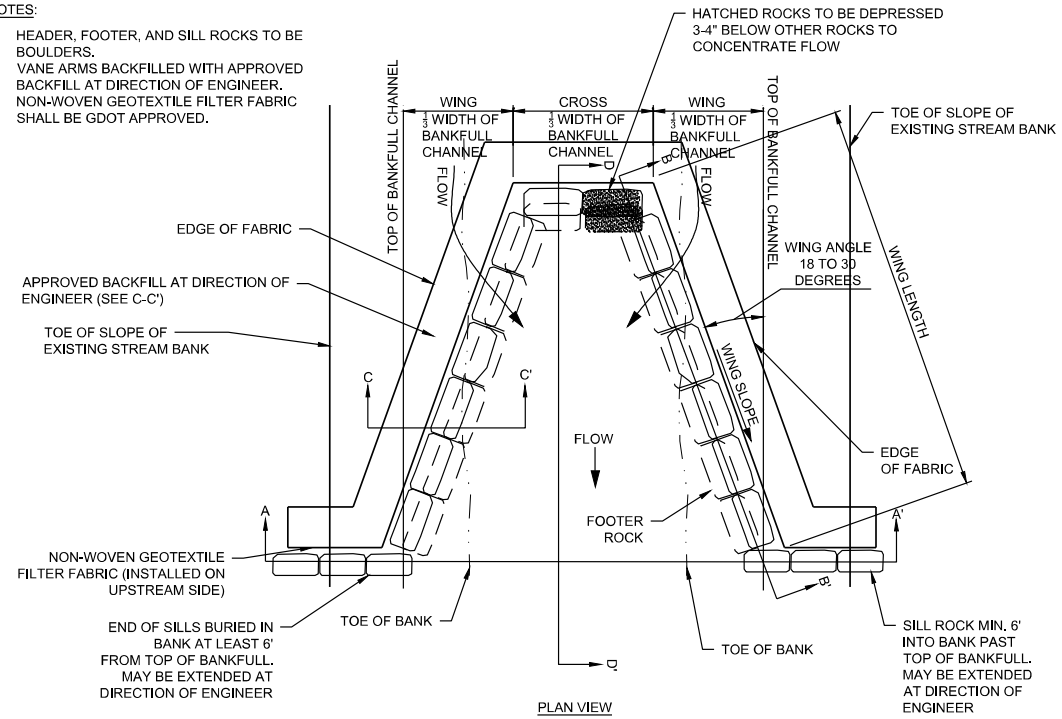


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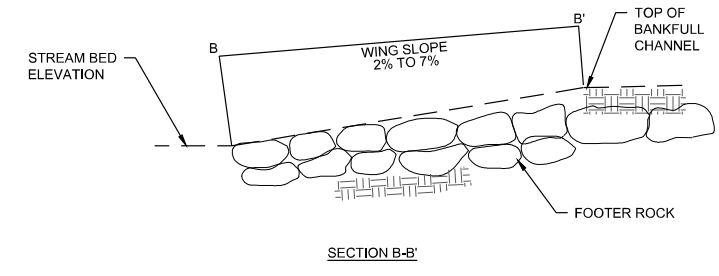
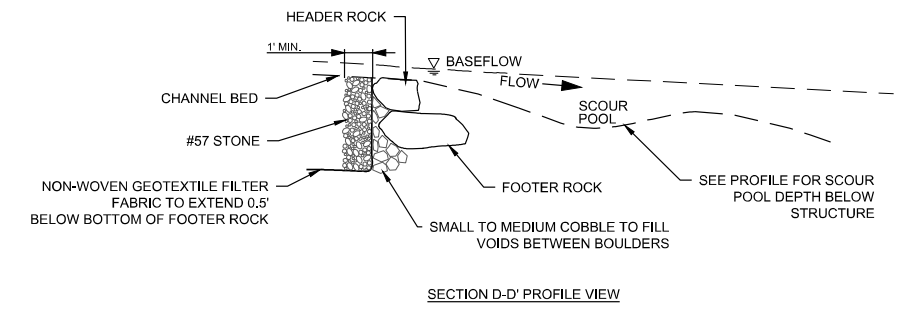
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NOTES:

1. HEADER, FOOTER, AND SILL ROCKS TO BE BOULDERS.
2. VANE ARMS BACKFILLED WITH APPROVED BACKFILL AT DIRECTION OF ENGINEER.
3. NON-WOVEN GEOTEXTILE FILTER FABRIC SHALL BE GDOT APPROVED.



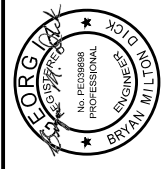
ROCK CROSS VANE
 SCALE: NTS



| | | | | | | | | | | | | | | | |
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| NO. | ISSUE | DATE | BY | 8&V JOB NO. | BGA19284 | DATE | 09/30/19 | DESIGNED | ECM | DRAWN | CKM | CHECKED | BCM | FILE NAME | CV-ALL-DETAILS.dwg |
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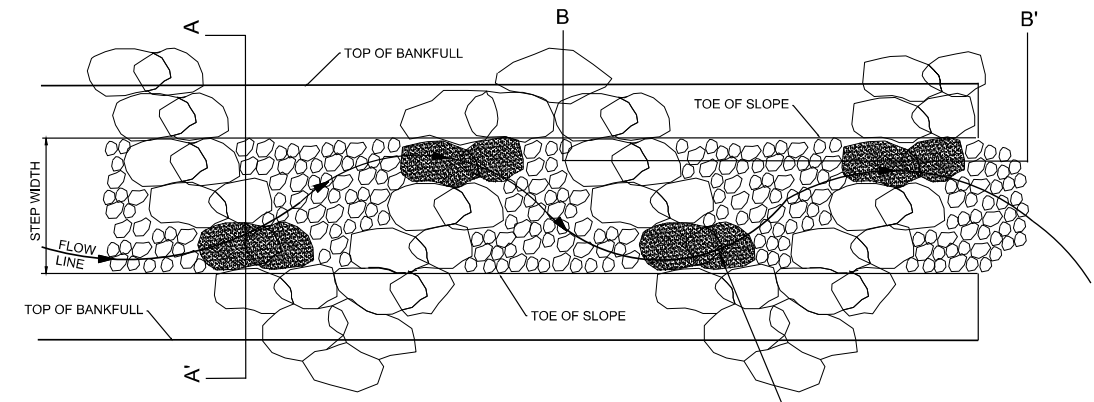


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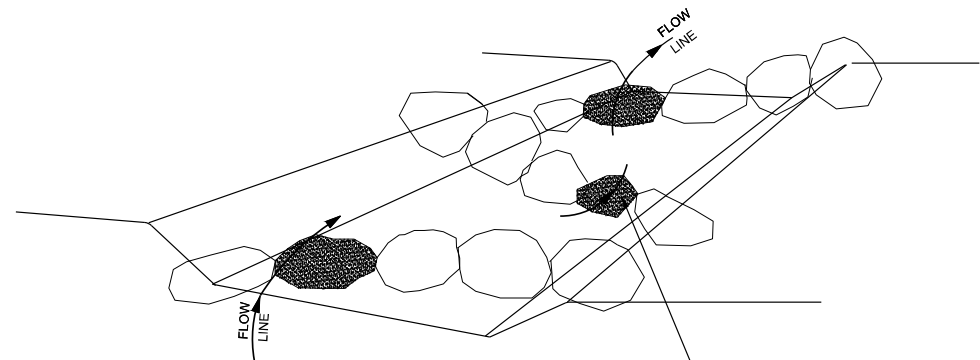
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| NO. | ISSUE | DATE | BY | 8&V JOB NO. | BGA19284 | DATE | 09/30/19 | DESIGNED | ECM | DRAWN | CKM | CHECKED | BCM | FILE NAME | CV-ALL-DETAILS.dwg |
| Bar is one inch on original drawing. If not one inch on this sheet, adjust scale. | | | | | | | | | | | | | | | |
| VERIFY SCALE 1" = 1' | | | | | | | | | | | | | | | |

- NOTES:
- VARY STEP HEIGHT AND STEP LENGTH WITHIN STATED RANGES FOR NATURAL APPEARANCE AND FUNCTION.
 - CHANNEL SIDE SLOPES 3:1 OR FLATTER.
 - CONSTRUCT ANGLES AS INDICATED ON THE PLAN SHEETS
 - STRUCTURE SHALL BE PARALLEL TO FLOW DIRECTION

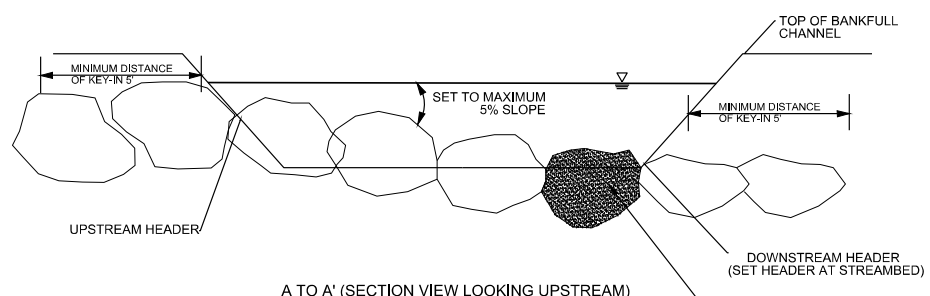


PLAN VIEW

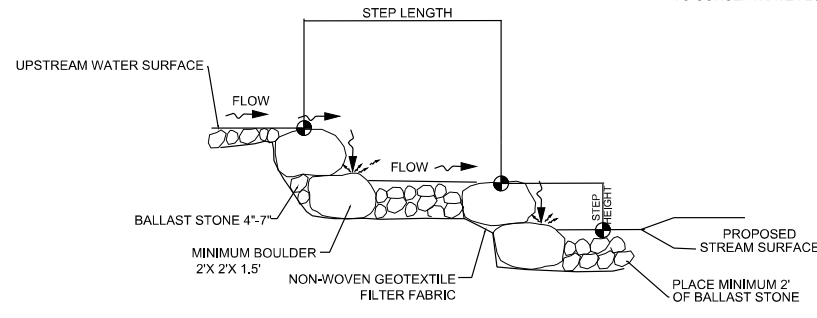
HATCHED ROCKS SHOULD BE DEPRESSED 3-4" LOWER THAN OTHER ROCKS IN THE STRUCTURE TO CONCENTRATE FLOW PATH



ISOMETRIC VIEW



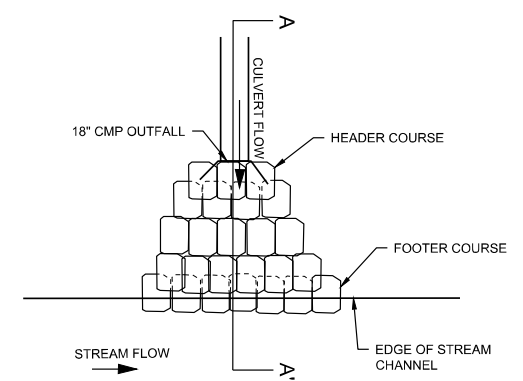
A TO A' (SECTION VIEW LOOKING UPSTREAM)



B TO B' (PROFILE VIEW)

ROCK AND ROLLER

SCALE: NTS

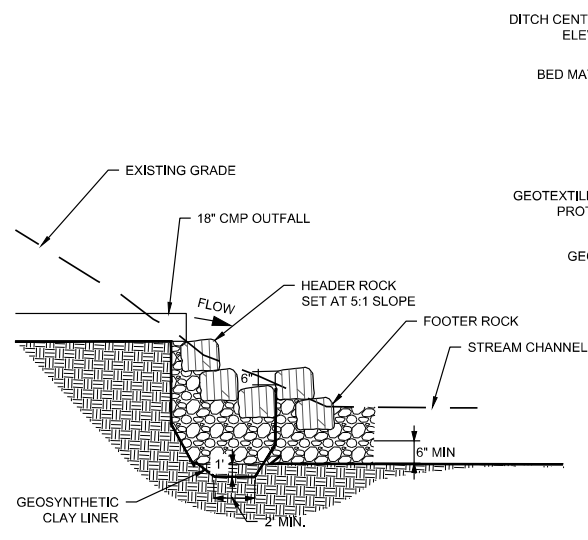


PLAN VIEW

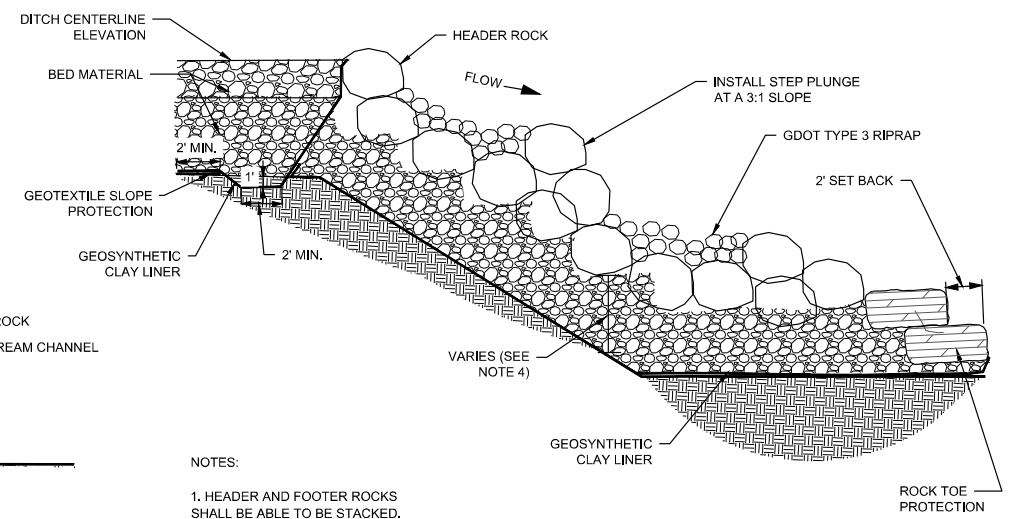
- NOTES:
- HEADER AND FOOTER ROCKS SHALL BE A MINIMUM OF 1.5'(L) X 1.5'(W) X 2'(H) AND ABLE TO BE STACKED.
 - BASE OF FOOTER ROCKS SHALL BE ATOP BED MATERIAL.
 - ROCKS SHALL BE INSTALLED TIGHTLY AGAINST EACH OTHER; GAPS ARE NOT ACCEPTABLE.
 - FINAL STRUCTURE SHALL BE APPROVED IN FIELD BY ENGINEER OF RECORD.

CASCADE

SCALE: NTS



A TO A' (PROFILE VIEW - ALONG CENTERLINE)

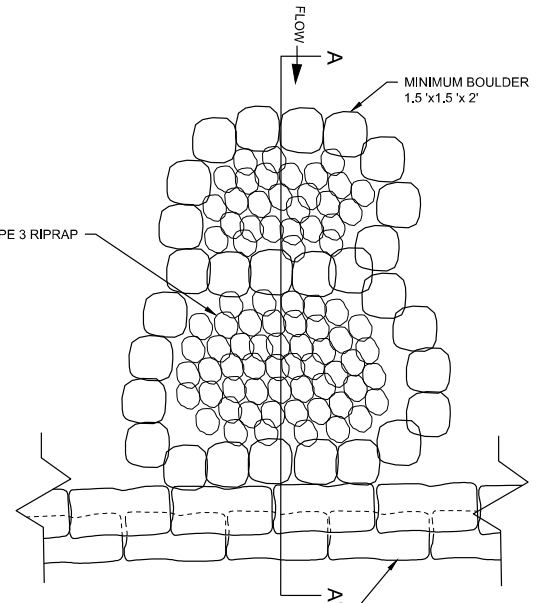


A TO A' (PROFILE VIEW - ALONG CENTERLINE)

- NOTES:
- HEADER AND FOOTER ROCKS SHALL BE ABLE TO BE STACKED.
 - SEE PROFILE FOR THALWEG SLOPES.
 - STEP PLUNGE POOL SHALL EXTEND ALONG THE BANK AND KEY INTO TOE OF SLOPE.
 - BASE OF FOOTER ROCKS SHALL BE ATOP BED MATERIAL.
 - REFER TO TYPICAL SECTION FOR CHANNEL WIDTH AND DEPTH DIMENSIONS.
 - ROCKS SHALL BE INSTALLED TIGHTLY AGAINST EACH OTHER; GAPS ARE NOT ACCEPTABLE.

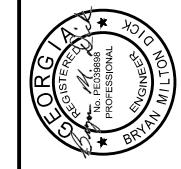
STEP PLUNGE POOL

SCALE: NTS



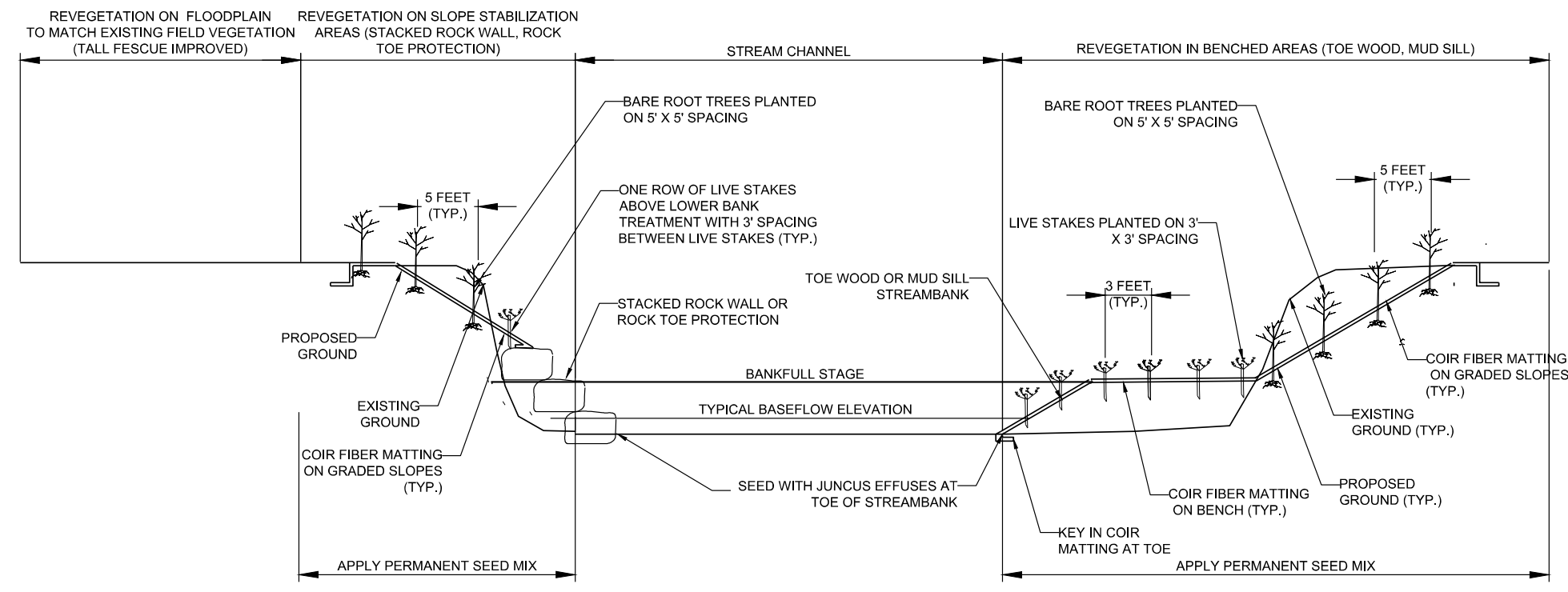
PLAN VIEW

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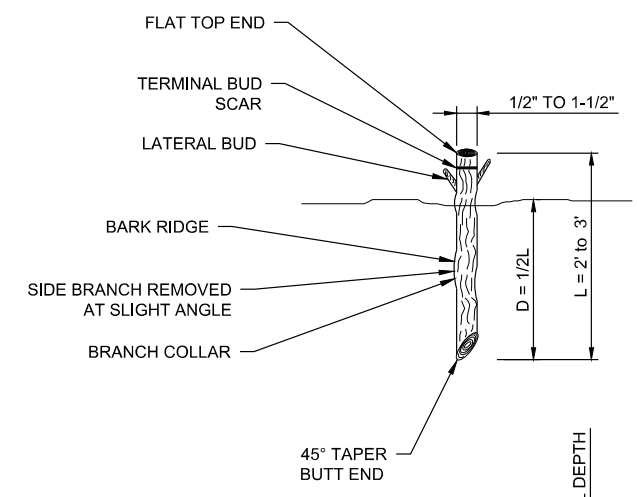


- NOTES:
1. THE LEFT SIDE OF THIS SECTION SHOWS PLANTING APPROACH TO BE APPLIED FOR STREAMBANKS WHERE ROCK TOE PROTECTION OR STACKED ROCK WALL ARE TO BE USED ON THE LOWER BANK WITH GRADING OR GEOBAG WALL ON THE UPPER BANK.
 2. THE RIGHT SIDE OF THIS SECTION SHOWS PLANTING APPROACH TO BE APPLIED WHERE TOE WOOD IS USED TO CREATE A BENCH WITH GRADING OR GEOBAG WALL ON THE UPPER BANK.
 3. IF CROSS-SECTIONS SHOW NO GRADING OR OTHER TREATMENT ON PARTS OF THE EXISTING STREAMBANKS (UPPER BANK, LOWER BANK OR BOTH) THEN EXISTING VEGETATION IS TO REMAIN UNDISTURBED.
 4. SEE PLANT LIST FOR SPECIES AND SIZE.

REVEGETATION SECTION
SCALE: NTS

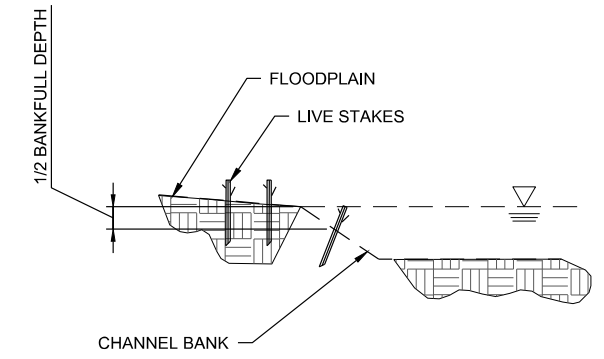
| | Scientific Name | Common Name | Quantity | Remarks |
|--|--|--------------------|----------|---|
| BARE ROOT TREES | <i>Acer rubrum</i> | Red maple | 43 | Bare root 1/0 seedlings placed on 5-ft centers, alternating plants between rows and species randomly distributed. |
| | <i>Carya glabra</i> | Pignut hickory | 43 | |
| | <i>Liriodendron tulipifera</i> | Tulip tree | 43 | |
| | <i>Fagus grandifolia</i> | American beech | 43 | |
| | <i>Ulmus americana</i> | American elm | 43 | |
| BARE ROOT SHRUBS | <i>Hamamelis virginiana</i> | Witch hazel | 229 | |
| | <i>Lindera benzoin</i> | Spice bush | 229 | |
| LIVE STAKES | <i>Alnus serrulata</i> | Tag alder | 632 | Stakes placed on 3' centers, alternating stakes between rows and with species randomly distributed. One row of live stakes planted above staked rock wall and rock toe protection, with stakes spaced 3' apart. |
| | <i>Cornus amomum</i> | Silky dogwood | 632 | |
| PERMANENT SEEDING ON SLOPE STABILIZATION AND BENCH AREAS | <i>Panicum virgatum</i> | Switchgrass | 25% | Apply at 25 lbs/acre |
| | <i>Panicum clandestinum</i> | Deer Tongue | 15% | |
| | <i>Elymus virginicus</i> | Virginia Wild Rye | 10% | |
| | <i>Tridens flavus</i> | Purple Top | 10% | |
| | <i>Verbisina alternifolia</i> | Wingstem | 10% | |
| | <i>Juncus effuses</i> | Soft Rush | 10% | |
| | <i>Chasmanthium</i> | Slender Spikegrass | 5% | |
| | <i>Polygonum persicaria</i> | Lady's Thumb | 5% | |
| TEMPORARY SEEDING | Summer: Brown-top millet | | | Apply at 50 lbs/acre to all disturbed areas |
| | Winter: Wrens-abruzzi winter rye or Winter Wheat | | | |

PLANT LIST



- NOTES:
1. ALL LATERAL BRANCHES SHALL BE TRIMMED TO AVOID DAMAGE TO THE BARK RIDGE AND BRANCH COLLAR.
 2. A MINIMUM OF TWO BUDS (ONE LATERAL PLUS ONE TERMINAL OR TWO TERMINAL) SHALL BE ABOVE THE PLANTING DEPTH.

LIVE STAKE
SCALE: NTS



- NOTES:
1. UTILIZE JUNCUS EFFUSES MORE HEAVILY IN AREAS AROUND PEDESTRIAN BRIDGES
 2. PERMANENT SEEDING SHALL BE PLANTED FROM STA 1+00 THROUGH STA 4+00 ON THE LEFT AND RIGHT STREAMBANKS CORRESPONDING TO THE REVEGETATION SECTION. SEE C-5 FOR PLANTING ZONES.
 3. LIVE STAKES, BARE ROOT TREES, AND BARE ROOT SHRUBS SHALL BE PLANTED FROM STA 4+00 TO STA 7+00 ON THE LEFT AND RIGHT STREAMBANKS CORRESPONDING TO THE REVEGETATION SECTION.

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| NO. | ISSUE | DATE | BY | 8&V JOB NO. | BGA19284 | DATE | DESIGNED | ECM | DRAWN | CKM | CHECKED | BCM | FILE NAME | CV-ALL-DETAILS.dwg |
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SHEET **C-10**
 SEQ. 11 OF 17

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CERTIFICATION STATEMENT

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.

JAMIE L. JOYNER, P.E.
LEVEL II CERTIFIED DESIGN PROFESSIONAL
GSWCC CERTIFICATION NO. 0000076493

ESCP GENERAL NOTES

- THIS SITE IS LOCATED AT 33.909361, -84.325798. THE DISTURBED AREA IS 0.98 ACRES.
- THE NATURE OF CONSTRUCTION ACTIVITY INCLUDES REMOVAL OF INVASIVE SPECIES, CONSTRUCTION DEBRIS REMOVAL, RESTORATION OF STREAM BANKS, INSTALLATION OF ROCK VANES TO CREATE A SERIES OF POOLS, AND HYDROSEEDING AND LIVE STAKE PLANTINGS OF NATIVE VEGETATION.
- THE PROJECT IS LOCATED DOWNSTREAM OF MURPHEY CANDLER LAKE DAM. THE PROJECT'S RECEIVING WATERS ARE NORTH FORK NANCY CREEK. THE CONFLUENCE WITH NANCY CREEK IS LOCATED IMMEDIATELY DOWNSTREAM OF THE PROJECT AREA. NO ADDITIONAL SENSITIVE ADJACENT AREAS ARE KNOWN TO EXIST.
- 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.
- A BUFFER VARIANCE IS REQUIRED DUE TO THE NATURE OF THE PROJECT BEING STREAM RESTORATION.
- THE ESCAPE OF SEDIMENT FROM THE SITE SHALL BE PREVENTED BY THE INSTALLATION OF EROSION AND SEDIMENT CONTROL MEASURES AND PRACTICES PRIOR TO ANY DISTURBING 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.
- PETROLEUM BASED PRODUCTS - CONTAINERS FOR PRODUCTS SUCH AS FUELS, LUBRICANTS, TARS WILL BE INSPECTED DAILY FOR LEAKS AND SPILLS. THIS INCLUDES ON-SITE VEHICLE AND MACHINERY DAILY INSPECTIONS AND REGULATIVE PREVENTATIVE MAINTENANCE OF SUCH EQUIPMENT. EQUIPMENT MAINTENANCE AREAS WILL BE LOCATED AWAY FROM STATE WATER, NATURAL DRAINS AND STORM WATER DRAINAGE INLETS. IN ADDITION, TEMPORARY FUELING TANKS SHALL HAVE A SECONDARY CONTAINMENT LINER TO PREVENT/MINIMIZE SITE CONTAMINATION. DISCHARGE OF OILS, FUELS, AND LUBRICANTS IS PROHIBITED. PROPER DISPOSAL METHODS WILL INCLUDE COLLECTION IN A SUITABLE CONTAINER AND DISPOSAL AS REQUIRED BY LOCAL AND STATE REGULATIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR DEVELOPING A CONSTRUCTION SCHEDULE. A COPY OF THE CONSTRUCTION SCHEDULE SHALL BE MAINTAINED AT THE PROJECT SITE. THE MAJOR SEQUENCE OF ACTIVITIES AS THEY RELATED TO THE ESCP ARE:
 - PHASE 1 - DEMOLITION AND CLEARING. THE CONTRACTOR SHALL INSTALL SILT FENCING AND TREE PROTECTION AS REQUIRED BEFORE THE START OF ANY LAND DISTURBING ACTIVITY.
 - PHASE 2 - GRADING AND CONSTRUCTION. THE CONTRACTOR SHALL MAINTAIN BMPs AS NEEDED. IF A BMP IS REMOVED DUE TO CHANGING SITE CONDITIONS, IT SHALL BE REPLACED WITH ANOTHER MEASURE TO CONTROL AND PREVENT SEDIMENT FROM LEAVING THE SITE.
 - PHASE 3 - FINISH GRADING AND LANDSCAPING. ALL FACILITIES FROM PHASE 1 AND PHASE 2 WILL BE MAINTAINED AS APPROPRIATE AND REMOVED WHEN THE NEED NO LONGER EXISTS. ONCE ALL DISTURBED AREAS HAVE BEEN STABILIZED, REMOVE ALL ACCUMULATED SILT. REFER TO DETAIL SHEETS FOR LANDSCAPING AND PLANTING INSTALLATION REQUIREMENTS.

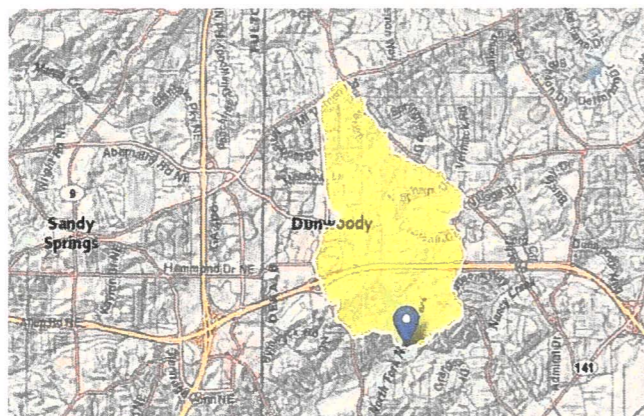
- THE ESTIMATED RUNOFF COEFFICIENT OF THE SITE IS 79, WHICH CORRESPONDS TO TR-55 "OPEN SPACE - FAIR CONDITION (LAWNS, PARKS, GOLF COURSES, CEMETARIES, ETC.)" FOR TYPE C SOILS. NO CHANGE IN RUNOFF COEFFICIENT WILL RESULT FROM THE PROJECT, AS NO ADDITIONAL IMPERVIOUS AREA IS PROPOSED.
- THE SOIL SERIES DATA ARE AVAILABLE ONLINE AT [HTTP://WEBSOILSURVEY.NRC.USDA.GOV](http://websoilsurvey.nrcs.usda.gov). SOIL MAP AND INFORMATION ARE PROVIDED AS EXHIBIT Z AND TABLE Z.
- NO SEDIMENT BASINS ARE WARRANTED FOR THIS PROJECT. LAND DISTURBING ACTIVITIES ASSOCIATED WITH THE CONSTRUCTION AND REMOVAL OF A SEDIMENT BASIN WOULD CAUSE ADDITIONAL ADVERSE IMPACT TO THE EXISTING STREAM.

OTHER NOTES

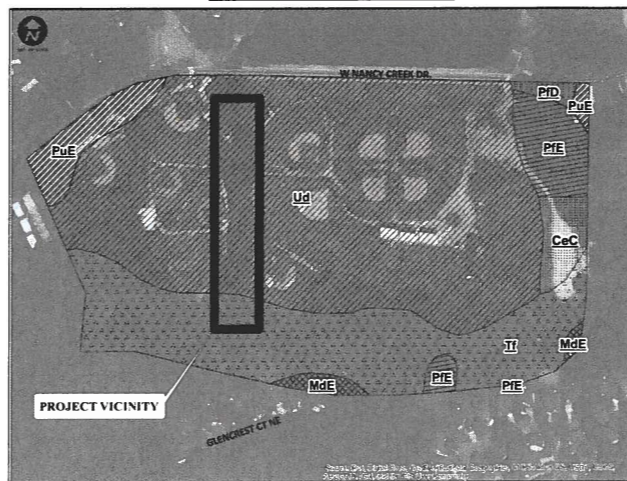
- SEDIMENT CONTROL MEASURES MAY REQUIRE MINOR FIELD ADJUSTMENTS AT THE TIME OF CONSTRUCTION TO ENSURE THEIR INTENDED PURPOSES ARE ACCOMPLISHED. MAJOR MODIFICATION OF THE PLAN OR DELETION OF SPECIFIED BMPs WILL REQUIRE A FORMAL REVISION OF THE ESCP AND THE SIGNATURE OF A GSWCC LEVEL II DESIGN PROFESSIONAL. ADDITIONAL BMPs MAY BE ADDED AS DIRECTED BY THE ENGINEER.
- SILT FENCE SHOULD NEVER RUN CONTINUOUSLY WITHOUT J-HOOKS OR SPURS. THE SILT FENCE SHOULD TURN BACK INTO THE FILL OR SLOPE TO CREATE SMALL POCKETS THAT TRAP SILT AND FORCE STORMWATER TO FLOW THROUGH THE SILT FENCE. THE J-HOOKS OR SPURS SHALL BE SPACED

IN ACCORDANCE WITH THE TYPICAL LOCATION DETAILS FOR SILT FENCE/BALED STRAW. SPACING FOR J-HOOKS OR SPURS SHALL NOT BE LESS THAN 50 FEET EXCEPT AS NOTED. SILT FENCES THAT ARE NEAR THE OUTLET OF CULVERTS OR STORM DRAINS SHALL HAVE A MINIMUM OF 3 J-HOOKS OR SPURS ON BOTH SIDES OF THE STRUCTURE AT A SPACING THAT SHALL NOT EXCEED 30 FEET. J-HOOKS OR SPURS SHALL BE PAID FOR AS SILT FENCE ITEMS PER FOOT. ALL COSTS AND OTHER INCIDENTAL ITEMS ARE INCLUDED IN THE COST OF INSTALLING AND MAINTAINING THE SILT FENCE. THE SILT FENCING SHOULD BE CHECKED REGULARLY FOR UNDERMINING OR DETERIORATION OF THE FABRIC. SEDIMENT SHALL BE REMOVED WHEN THE LEVEL OF SEDIMENT DEPOSITION REACHES HALF WAY TO THE TOP OF THE BARRIER.

- WHEREVER FEASIBLE, NATURAL VEGETATION SHALL BE RETAINED, PROTECTED, AND SUPPLEMENTED.
- DISTURBED SOILS SHALL BE STABILIZED AS QUICKLY AS PRACTICABLE.
- WHERE ATTAINABLE, LOCATE WASTE COLLECTION AREAS, DUMPSTERS, TRASH CANS, AND PORTABLE TOILETS SHALL BE AT LEAST 50 FEET AWAY FROM STREETS, GUTTERS, WATERCOURSES, AND STORM DRAINS.
- SECONDARY CONTAINMENT SHALL BE PROVIDED AROUND ANY LIQUID WASTE COLLECTION AREAS TO MINIMIZE THE LIKELIHOOD OF CONTAMINATED DISCHARGES. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE STATE AND LOCAL WASTE STORAGE AND DISPOSAL REGULATIONS, AND OBTAIN ALL NECESSARY PERMITS. SOLID MATERIALS, INCLUDING BUILDING MATERIALS, SHALL NOT BE DISCHARGED TO WATERS OF THE STATE, EXCEPT AS AUTHORIZED BY A SECTION 404 PERMIT.
- THE CONTRACTOR SHALL COMPLY WITH STATE AND/OR LOCAL REGULATIONS RELATED TO WASTE DISPOSAL AND/OR ACTIVITIES RELATED TO SANITARY SEWERS.
- ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS SHALL BE PROTECTED BY A TEMPORARY CONSTRUCTION ENTRANCE TO PREVENT TRACKING OR MUD ONTO PUBLIC RIGHT-OF-WAYS. THE CONSTRUCTION ENTRANCE SHALL BE MAINTAINED WITH PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR THE WASHING AND REWORKING OF EXISTING STONE AS CONDITIONS DEMAND. ALL MATERIAL SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS SHALL BE REMOVED IMMEDIATELY.
- ALL MULCHES AND SOIL COVERINGS SHALL BE INSPECTED PERIODICALLY (PARTICULARLY AFTER RAIN EVENTS) TO CHECK FOR EROSION. WHERE EROSION IS OBSERVED, ADDITIONAL MULCH SHALL BE APPLIED. INSPECTIONS SHALL TAKE PLACE UNTIL GRASSES ARE FIRMLY ESTABLISHED.
- SLOPES 3:1 OR STEEPER THAN 3:1 SHALL REQUIRE MATTING TO AID IN THE ESTABLISHMENT OF A VEGETATIVE COVER. THEY SHALL BE INSPECTED PERIODICALLY, ESPECIALLY AFTER RAIN EVENTS, FOR EROSION AND UNDERMINING. IF WASHOUTS OR BREAKAGE OCCURS, REINSTALL THE MATERIAL AFTER REPAIRING THE DAMAGE TO THE SLOPE OR DITCH. CONTINUE TO MONITOR THESE AREAS UNTIL WHICH TIME THEY BECOME PERMANENTLY STABILIZED; AT THAT TIME AN ANNUAL INSPECTION SHOULD BE ADEQUATE.
- IN NO CASE DURING CONSTRUCTION SHALL WATER RUNOFF BE DIVERTED OR ALLOWED TO FLOW TO LOCATIONS WHERE ADEQUATE PROTECTION HAS NOT BEEN PROVIDED.
- THE SYMBOLS REFERRED TO IN THE PLAN REFERENCE THE GEORGIA UNIFORM CODING SYSTEM PER THE LATEST EDITION MANUAL FOR EROSION AND SEDIMENT CONTROL IN GEORGIA (CURRENTLY 2016 EDITION).
- A TURBIDITY CURTAIN SHALL BE USED DOWNSTREAM OF ACTIVE CHANNEL DISTURBING ACTIVITY. IT CAN BE MOVED IF CONSTRUCTION SEQUENCING WARRANTS.
- ALL TREES ON SITE GREATER THAN 6" SHALL BE PROTECTED FROM DAMAGE USING A TREE PROTECTION FENCE.
- THE ESTIMATED DRAINAGE AREA TO THE PROJECT SITE IS 2.42 SQ MI. THE DELINEATION IS SHOWN BELOW.



SOILS MAP EXHIBIT "Z"



SOILS TABLE "Z"

| Map Unit Symbol | Map Unit Name | Rating |
|-----------------|--|--------|
| CeC | Cecil sandy loam, 6 to 10 percent slopes | B |
| MdE | Madison sandy loam, 15 to 30 percent slopes | B |
| PFD | Pacolet sandy loam, 10 to 15 percent slopes | B |
| PFE | Pacolet sandy loam, 15 to 30 percent slopes | B |
| PuE | Pacolet-Urban land complex, 10 to 25 percent slopes | B |
| Tf | Toccoa sandy loam, 0 to 2 percent slopes, frequently flooded | A |
| Ud | Urban land | |



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EROSION & SEDIMENT CONTROL NOTES

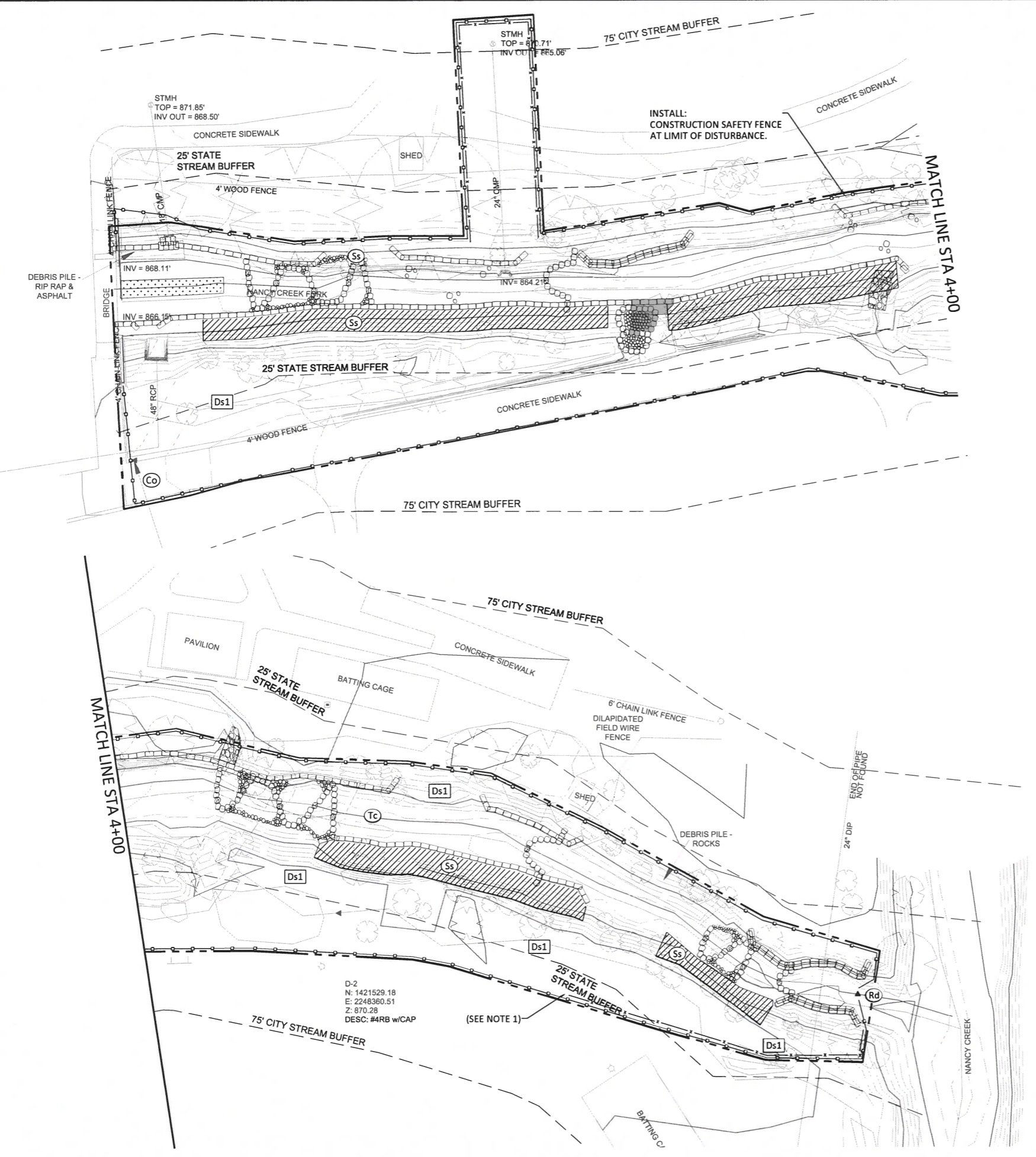
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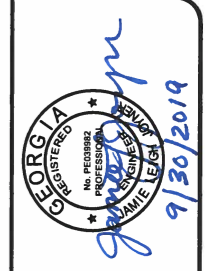
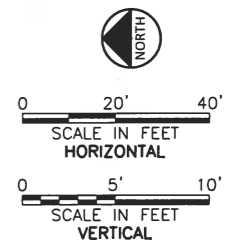
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 Last Saved: 9/30/2019 7:00 PM Saved By: 02418

Plot Date: 9/30/2019 7:15 PM Plot By: 02418 Filename: N:\STANDARD\CV-ERSN-CNTRL.dwg



- NOTES:
1. MATERIAL STORAGE OR CONSTRUCTION LAYOUT CAN TAKE PLACE IN THIS LOCATION. MATERIAL PILES SHALL BE SURROUNDED BY SILT FENCING AND COVERED WHEN ACCESS IS NOT ACTIVELY NEEDED, AND OVERNIGHT.
 2. ALL TREES ON THE SITE GREATER THAN 6" SHALL BE PROTECTED USING TREE PROTECTION FENCING.
 3. INSTALL EROSION CONTROL MATS ON ALL SLOPES STEEPER THAN 2.5:1 OR GREATER THAN 10 FEET IN HEIGHT IN AREAS OF CONCENTRATED FLOW.

- LIMITS OF DISTURBANCE
- [Ds1] DISTURBED AREA - MULCH
- [Ss] EROSION CONTROL MATS (SEE NOTE 3)
- SILT FENCE - TYPE S
- CONSTRUCTION SAFETY FENCE
- [Rd] ROCK FILTER DAM
- [Tr] TREE PROTECTION (SEE NOTE 2)
- [Co] CONSTRUCTION EXIT



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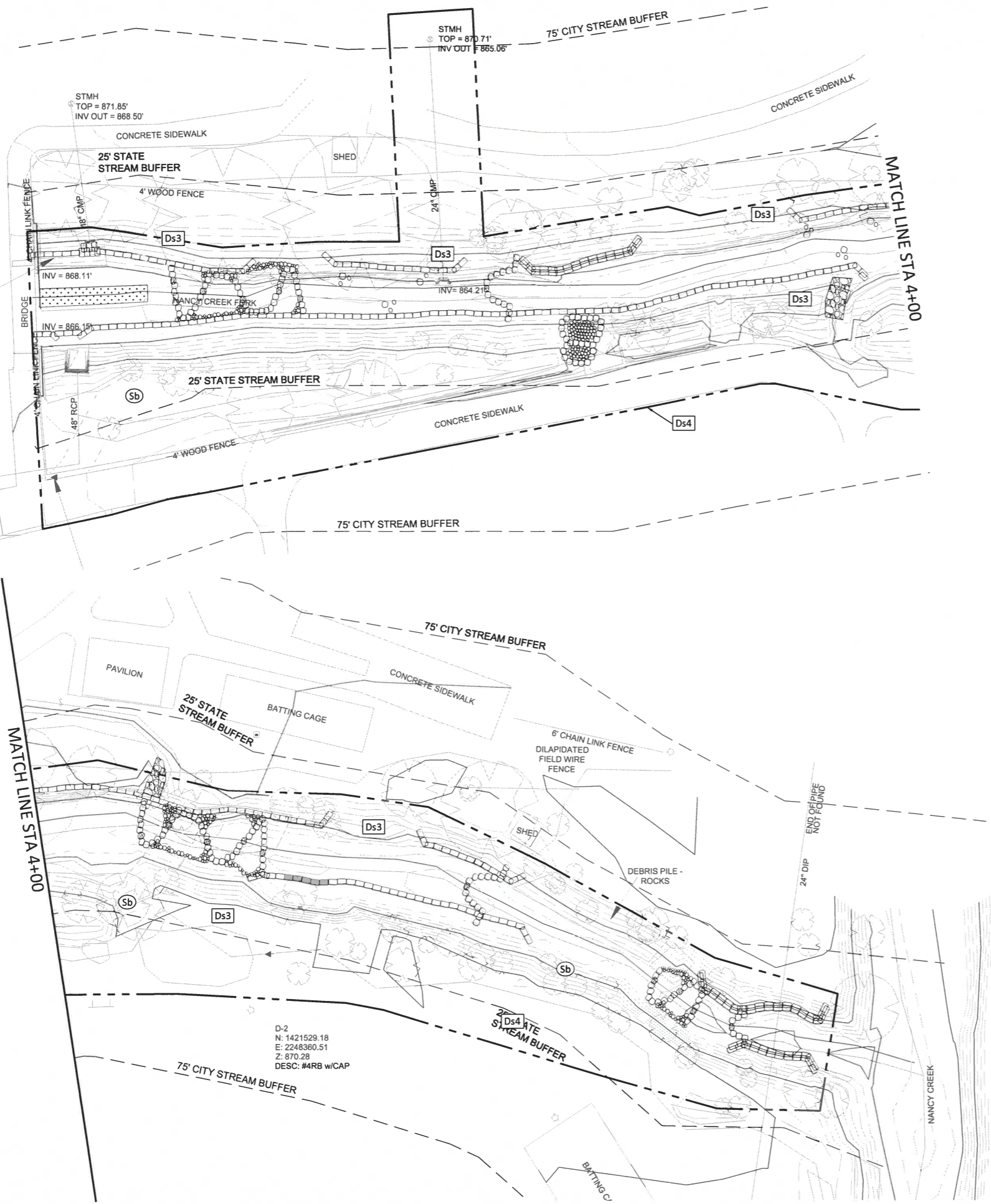
CITY OF BROOKHAVEN

MURPHEY CANDLER STREAMBANK RESTORATION
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EROSION & SEDIMENT CONTROL PLAN
DURING CONSTRUCTION - PHASE 1 AND 2

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| SEQ. | | 13 OF 17 | | | |

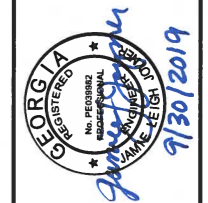
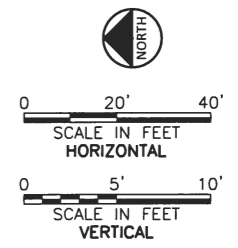
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NOTES:
 1. ALL SIDEWALKS SHALL BE CLEANED (MUD OR DEBRIS REMOVED) DURING FINAL SITE STABILIZATION, AS REQUIRED.

- LIMITS OF DISTURBANCE
- [Ds3] DISTURBED AREA - PERM SEED
*SEE PLANTING MIX DETAILS
- (Sb) STREAMBANK STABILIZATION (PERM VEGETATION)
*SEE PLANTING MIX DETAILS
- [Ds4] DISTURBED AREA - PERM SOD



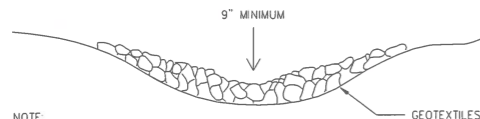
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POST CONSTRUCTION - PHASE 3

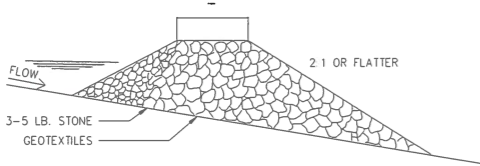
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"Rd" ROCK FILTER DAM



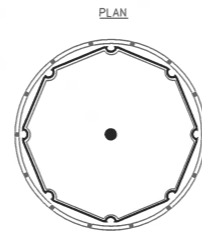
NOTE:
ROCK FILTER DAM IS TO BE CLEANED OUT WHEN VOLUME BECOMES HALF FULL



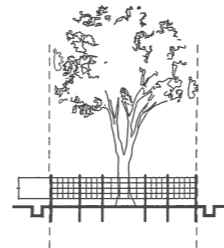
NOTE:
ROCK SIZE DETERMINED ACCORDING TO SPECIFICATIONS SET FORTH IN APPENDIX C

"Tr" TREE PROTECTION

"SNOW" FENCE

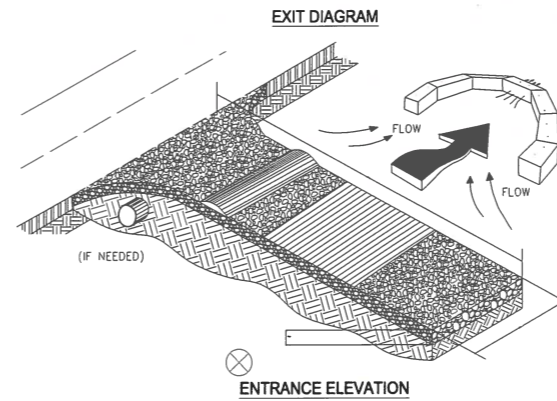


CROSS-SECTION



- NOTES**
1. USE TRENCHER (I.E. DITCH WHICH) TO CUT A 4"-5" W X 18" D TRENCH ALONG DRIP LINE (LIMIT OF CLEARING) AND BACKFILL WITH SAND AND LIGHTLY COMPACT
 2. SPACE STAKES AT INTERVALS SUFFICIENT TO MAINTAIN ALL FENCING OUT OF DRIP LINE OR AS SHOWN BY ENGINEER (SET STAKES NO GREATER THAN 6 FEET ON CENTER-REBAR IS NOT TO BE USED FOR STAKES)
 3. MAINTAIN FENCE BY REPAIRING AND/OR REPLACING DAMAGED FENCE. DO NOT REMOVE FENCING PRIOR TO LANDSCAPING OPERATIONS.
 4. DO NOT STORE OR STACK MATERIALS, EQUIPMENT, OR VEHICLES WITHIN FENCED AREA.
 5. FENCE SHALL BE ORANGE VINYL "SNOW FENCE" 4' HIGH MINIMUM.

CRUSHED STONE CONSTRUCTION EXIT



- NOTES**
1. AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS
 2. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE
 3. AGGREGATE SIZE SHALL BE IN ACCORDANCE WITH NATIONAL STONE ASSOCIATION R-2 (1.5"-3.5" STONE)
 4. GRAVEL PAD SHALL HAVE A MINIMUM THICKNESS OF 6"
 5. PAD WIDTH SHALL BE EQUAL FULL WIDTH AT ALL POINTS OF VEHICULAR EGRESS, BUT NO LESS THAN 20'
 6. A DIVERSION RIDGE SHOULD BE CONSTRUCTED WHEN GRADE TOWARD PAVED AREA IS GREATER THAN 2%
 7. INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES
 8. 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)
 9. 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.
 10. 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



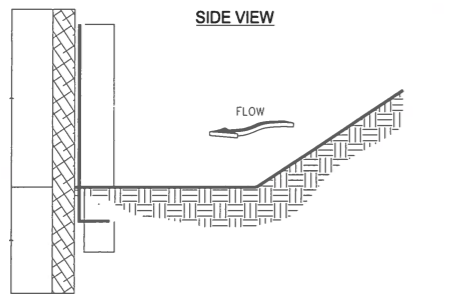
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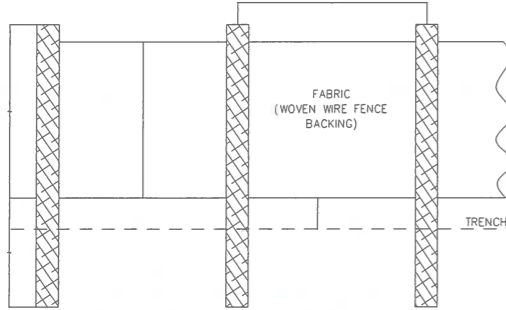
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"Sd1" SILT FENCE - TYPE SENSITIVE



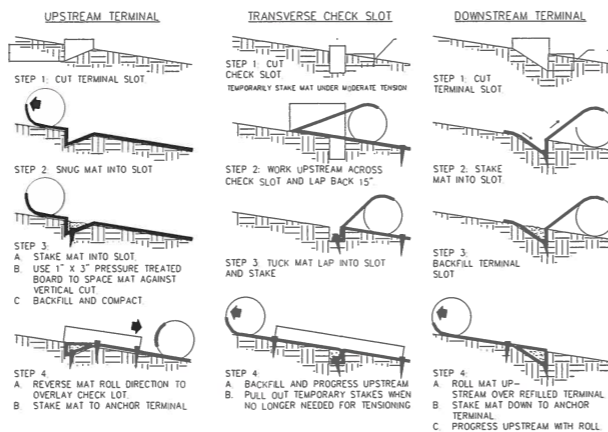
FRONT VIEW



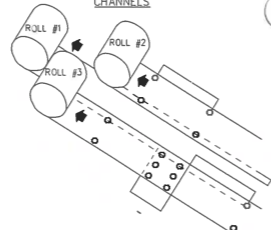
- NOTES**
1. USE STEEL OR WOOD POSTS OR AS SPECIFIED BY THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.
 2. HEIGHT (H) IS TO BE SHOWN ON THE EROSION, SEDIMENTATION, AND POLLUTION CONTROL PLAN.

"Ss" TYPICAL INSTALLATION GUIDELINES FOR ROLLED EROSION CONTROL PRODUCTS (RECP)

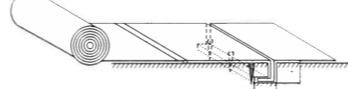
BLANKET AND MATTING CROSS-SECTIONS



SEQUENTIAL ROLL RUN OUT IN CHANNELS



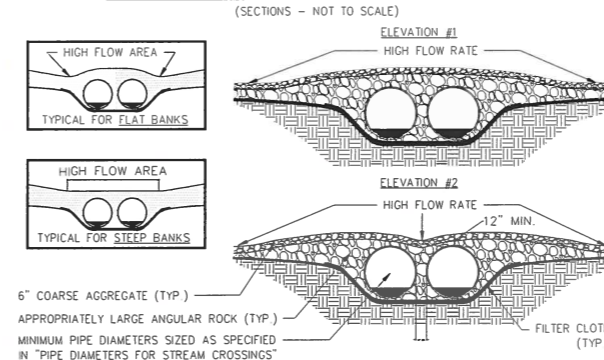
PICTORIAL VIEW OF TRANSVERSE SLOT



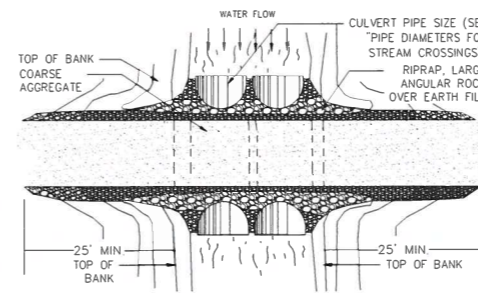
- NOTES**
1. START AT DOWNSTREAM TERMINAL AND PROGRESS UPSTREAM
 2. FIRST ROLL IS CENTERED LONGITUDINALLY IN MID-CHANNEL AND PINNED WITH TEMPORARY STAKES TO MAINTAIN ALIGNMENT
 3. SUBSEQUENT ROLLS FOLLOW IN STAGGERED SEQUENCE BEHIND THE FIRST ROLL. USE THE CENTER ROLL FOR ALIGNMENT TO THE CHANNEL CENTER
 4. WORK OUTWARDS FROM THE CHANNEL CENTER TO THE EDGE
 5. USE 3" OVERLAPS AND STAKE AT 5' INTERVALS ALONG THE SEAMS
 6. USE 3" OVERLAPS AND SHINGLE DOWNSTREAM TO CONNECT THE LINING AT THE ROLL ENDS

TEMPORARY STREAM CROSSING

CONFIGURATION OF TEMPORARY CULVERT CROSSINGS



TYPICAL CULVERT CROSSING PLAN (NOT TO SCALE)



- NOTES**
1. THIS TYPE OF CROSSING CAN BE INSTALLED IN BOTH A WET OR DRY WEATHER STREAM CONDITION WHERE THE DRAINAGE AREA EXCEEDS 10 ACRES
 2. REMOVE DURING CLEANUP

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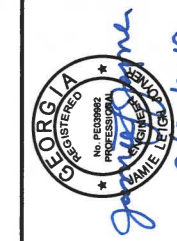
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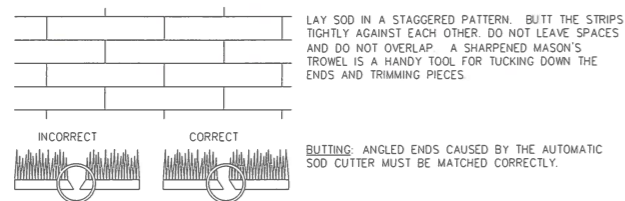


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"Ds4" SOD MAINTENANCE AND INSTALLATION

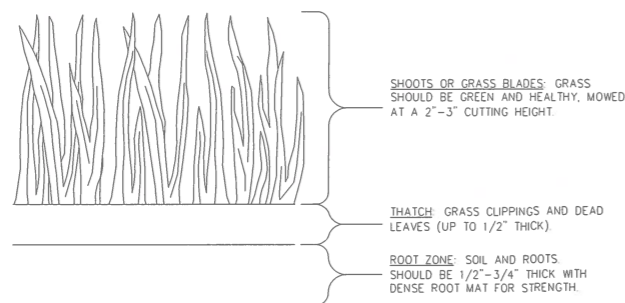
SOD LAYOUT AND PREPARATION



DIRECTIONS FOR INITIAL MAINTENANCE

- Step 1. ROLL SOD IMMEDIATELY TO ACHIEVE FIRM CONTACT WITH THE SOIL
- Step 2. WATER TO A DEPTH OF 4" AS NEEDED. WATER WELL AS SOON AS THE SOD IS LAID
- Step 3. MOW WHEN THE SOD IS ESTABLISHED -- IN 2-3 WEEKS SET THE MOWER HIGH (2"-3")

APPEARANCE OF GOOD SOD



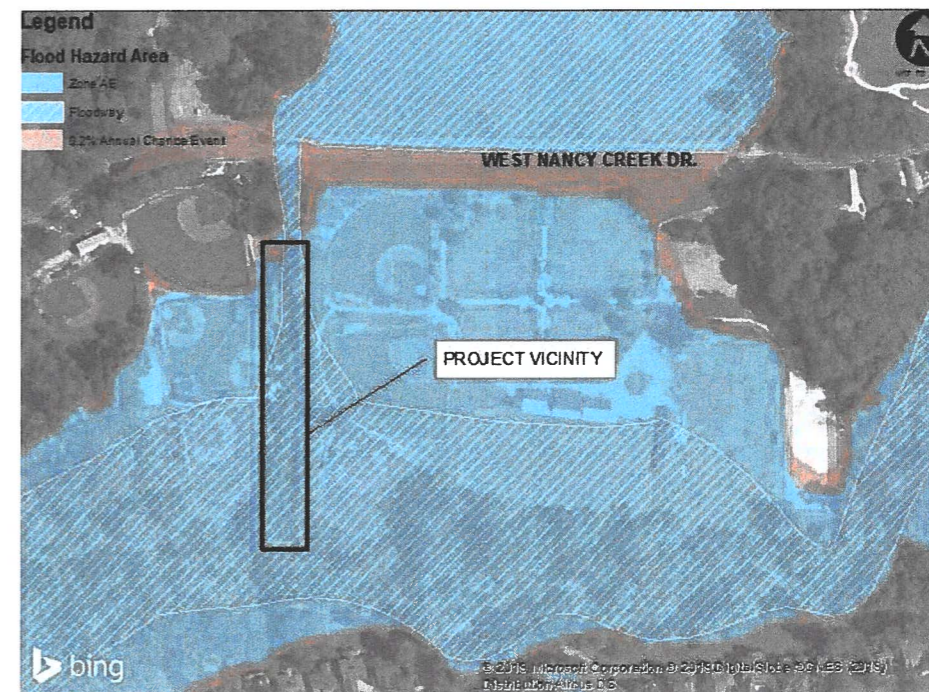
"Ds3" - DISTURBED AREA STABILIZATION (WITH PERMANENT SEEDING)

- SCARIFY, PIT OR RENCH SEALED OR CRUSTED SOIL.
- APPLY TALL FESCUE SEED AT A RATE OF 1.1 LBS PER 1000 SQ. FT. WHEN PLANTED ON ITS OWN. APPLY AT A RATE OF 30 LBS PER 1000 SQ. FT. WHEN PLANTED WITH OTHER PERENNIALS.
- FIRST PLANTING YEAR FERTILIZER APPLICATION FOR TALL FESCUE SHOULD BE USING 6-12-12 (N-P-K) AT A RATE OF 1500 LBS/ACRE. N TOP DRESSING RATE SHOULD BE 50-100 LBS/ACRE. CONTRACTOR MAY ALTERNATIVELY FERTILIZE BASED ON SOIL TEST RESULTS.
- APPLY AGRICULTURAL LIME AS PRESCRIBED BY SOIL TESTS OR AT A RATE OF 1 TO 2 TONS PER ACRE. APPLY SEED BY HAND, CYCLONE SEEDER, DRILL OR HYDRO-SEEDER. SEED PLANTED WITH A DRILL SHOULD BE PLANTED 1/4" - 1/2" DEEP.
- STRAW OR HAY MULCH SHALL BE APPLIED AT A RATE OF 2 OR 2.5 TONS PER ACRE.
- IRRIGATION SHOULD BE USED TO SUPPLEMENT RAINFALL, BUT NOT TO THE EXTENT TO CAUSE EROSION.

FERTILIZER REQUIREMENTS FOR SOD

| TYPE OF SPECIES | YEAR | ANALYSIS OR EQUIVALENT N-P-K | RATE | N TOP DRESSING RATE |
|---------------------------------------|--------------------|------------------------------|---|-----------------------|
| 1. COOL SEASON GRASSES | FIRST | 6-12-12 | 1500 LBS/AC | 50-100 LBS/AC |
| | SECOND MAINTENANCE | 6-12-12 10-10-10 | 1000 LBS/AC 400 LBS/AC | 1/2/ 30 |
| 2. COOL SEASON GRASSES AND LEGUMES | FIRST | 6-12-12 | 1500 LBS/AC | 0-50 LBS/AC |
| | SECOND MAINTENANCE | 0-10-10 0-10-10 | 1000 LBS/AC 400 LBS/AC | 1/ - |
| 3. GROUND COVERS | FIRST | 10-10-10 | 1300 LBS/AC | - |
| | SECOND MAINTENANCE | 10-10-10 10-10-10 | 1300 LBS/AC 1100 LBS/AC | - - |
| 4. PINE SEEDLINGS | FIRST | 20-10-5 | ONE 21-GRAM PELLETT PER SEEDLING PLACED IN THE CLOSING HOLE | - |
| 5. SHRUBS LESPEDEZA | FIRST | 0-10-10 | 700 LBS/AC | - |
| | MAINTENANCE | 0-10-10 | 700 LBS/AC | - |
| 6. TEMPORARY COVER CROPS SEEDED ALONE | FIRST | 10-10-10 | 500 LBS/AC | 30 LBS/AC 5/ |
| 7. WARM SEASON GRASSES | FIRST | 6-12-12 | 1500 LBS/AC | 50-100 LBS/AC |
| | SECOND MAINTENANCE | 6-12-12 10-10-10 | 800 LBS/AC 400 LBS/AC | 2/6/ 50-100 LBS/AC |
| 8. WARM SEASON GRASSES AND LEGUMES | FIRST | 6-12-12 | 1500 LBS/AC | 2/ 30 LBS/AC |
| | SECOND MAINTENANCE | 0-10-10 0-10-10 | 1000 LBS/AC 400 LBS/AC | 50 LBS/AC 6/ - |

FLOOD HAZARD MAP



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EFFECTIVE DATE AUGUST 15, 2019

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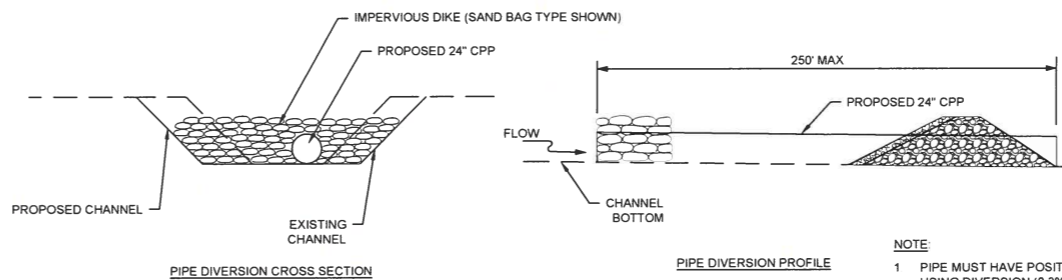
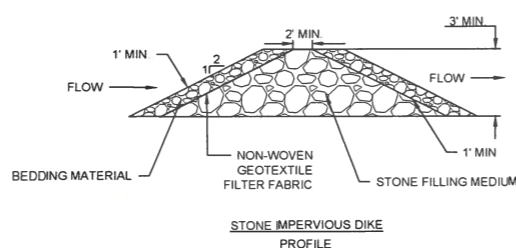
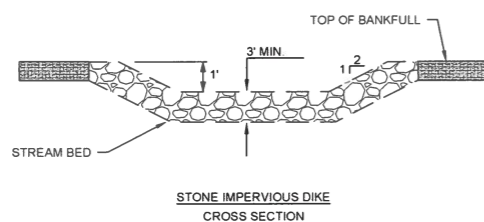
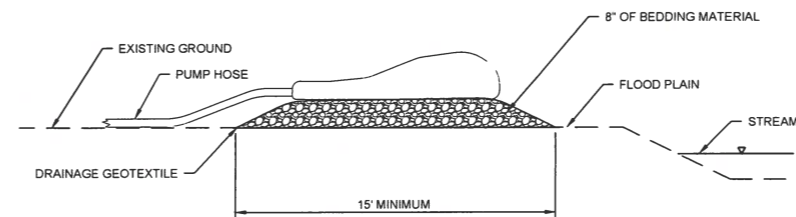
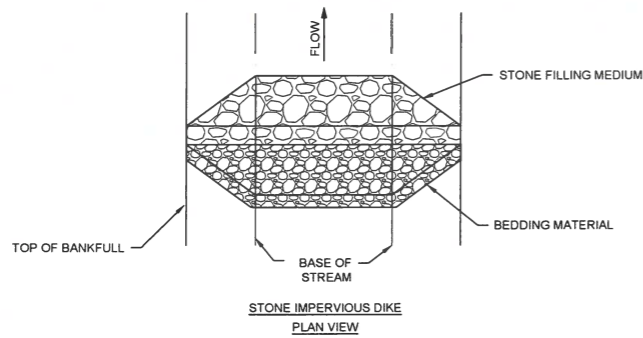
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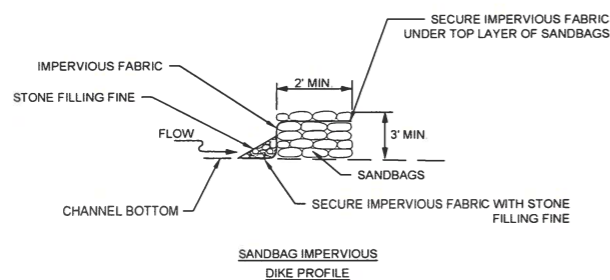
EROSION & SEDIMENT CONTROL DETAILS II

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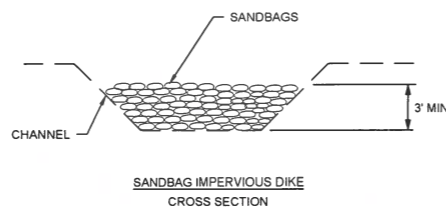
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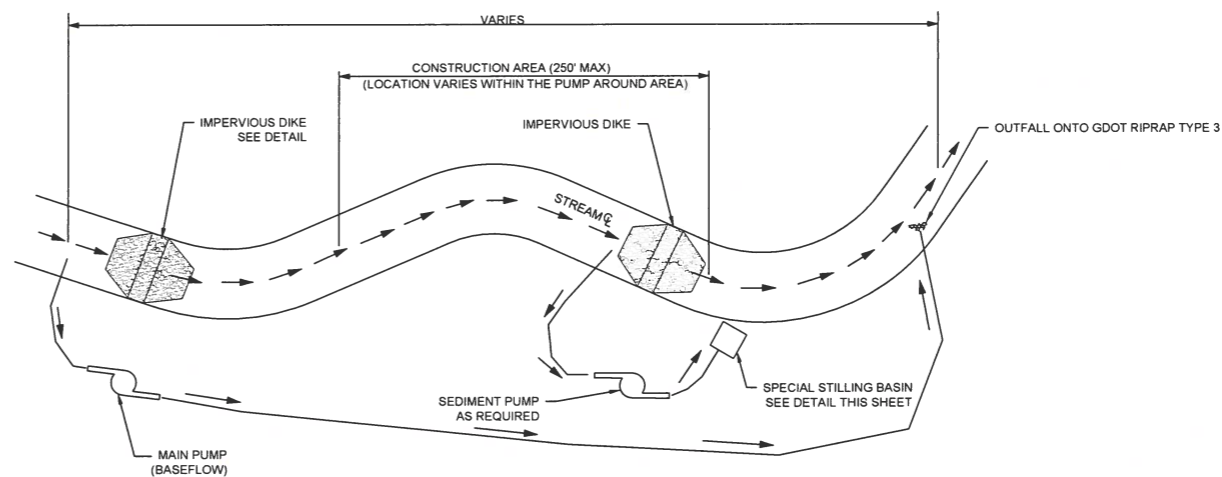
NOTE:
1 PIPE MUST HAVE POSITIVE DRAINAGE WHEN USING DIVERSION (0.3% TO 2.0% PIPE SLOPE IS RECOMMENDED)



NOTE:
1 THE STRUCTURE SHALL BE USED FOR DIVERTING AND PUMPING ONLY. THE STRUCTURE SHALL BE RELOCATED OR REMOVED ONCE PUMPING/DIVERTING IS COMPLETE.
2 EITHER TYPE OF IMPERVIOUS DIKE (SANDBAG OR STONE) MAY BE USED.

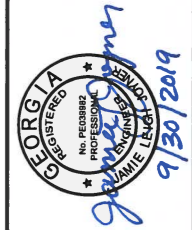


**IMPERVIOUS DIKE
SCALE: NTS**



NOTE:
1 CHANNEL SHALL BE MATTED WITH COIR FIBER MATTING PRIOR TO THE CLOSE OF EACH WORK DAY.
2 IF FINAL CHANNEL GRADING HAS NOT BEEN PERFORMED, TEMPORARILY SECURE COIR MATTING WITH STAKES OR ROCK

**PUMP-AROUND/PIPE DIVERSION
SCALE: NTS**



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