

**JOINT**  
**PUBLIC NOTICE**

**CHARLESTON DISTRICT, CORPS OF ENGINEERS**  
**1835 Assembly Street Room 865 B1**  
**Columbia, South Carolina 29201**

and

**THE S.C. DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL**  
**Water Quality Certification and Wetlands Section**  
**2600 Bull Street**  
**Columbia, South Carolina 29201**

REGULATORY DIVISION

Refer to: P/N SAC-2012-00830 MODIFICATION

June 9, 2020

Pursuant to Sections 401 and 404 of the Clean Water Act (33 U.S.C. 1341), an application has been submitted to the Department of the Army and the S.C. Department of Health and Environmental Control by

**Mr. Andrew Weddle**  
**W-REI**  
**105 MacGregor Drive**  
**Stamford, Connecticut 06902**

for a permit modification to place fill material in a tributary to create an upland area for residential and retail development, replace an undersized culvert, conduct flood remediation activities within a stream, construct a permanent maintenance road along and within a portion of the stream proposed for flood remediation, and relocate utility lines and outfalls in

**Rocky Branch and an unnamed tributary to Rocky Branch**

at a location on South Assembly Street west of Ferguson Street and north of Bluff Road, Columbia, Richland County, South Carolina (Latitude: 33.9823 °, Longitude: -81.0287 °), Southwest Columbia Quad.

In order to give all interested parties an opportunity to express their views

**NOTICE**

is hereby given that written statements regarding the proposed work will be received by the **Corps** until

**15 Days from the Date of this Notice,**

and **SCDHEC** will receive written statements regarding the proposed work until

**30 Days from the Date of this Notice**

from those interested in the activity and whose interests may be affected by the proposed work.

PLEASE NOTE: The proposed project is a modification to a previously issued Department of Army (DA) permit number SAC-2012-00830, which was authorized on December 7, 2017. No

work in waters of the U.S. has been completed under the previous authorization. The previous permit was transferred to a new development team, which has proposed modifications that are the subject of this public notice. The original permit authorized fill impacts to 999 linear feet of stream and 0.18 acres of wetlands and the impoundment of 77 linear feet of stream and 0.125 acres of wetlands for construction of a residential and retail development that included a grocery store. The modified project as proposed includes a reduced fill pad for the development portion of the project and adds downstream flood remediation activities. The project as currently proposed would include rerouting a currently concrete-lined unnamed tributary to Rocky Branch into a newly constructed, natural-bottomed channel that would tie into Rocky Branch, to allow for the construction of a residential and retail mixed use development that does not include the grocery store. The project as currently proposed would also include downstream activities intended to reduce flooding from Rocky Branch during storm events, including adding an overflow culvert at a railroad embankment, replacing an undersized culvert at Olympia Avenue, altering stream morphology in a downstream portion of Rocky Branch for flood remediation, constructing a permanent maintenance road along and within a portion of Rocky Branch proposed for morphological alterations for flood remediation, and relocating utility lines and outfalls. The current proposal avoids previously authorized impacts to 0.305 acres of wetlands and 71 linear feet (0.01 acre) of stream. The updated Permittee-Responsible Mitigation Plan currently proposed to replace the previously approved plan no longer proposes to preserve and buffer wetlands. Only comments received in response to this current public notice will be considered in our evaluation of this modification request.

The proposed work consists of rerouting a currently concrete-lined tributary into a new, natural-bottomed channel for construction of a residential and retail mixed use development, and impacts including culvert upsizing, morphological alterations for flood remediation, and placement of rip rap for stream bank stabilization, within downstream portions of Rocky Branch for flood remediation. Total currently proposed impacts include 2,118 linear feet (1.409 acres) of stream and no wetland impacts. In detail, the applicant proposes to place fill material in 1,068 linear feet (0.396 acre) of a currently concrete-lined, unnamed tributary to Rocky Branch for retail and residential development, which would be rerouted on site into 930 linear feet of newly constructed natural-bottomed stream and would include one culvert crossing and one pedestrian bridge crossing. The project would also add a 72" culvert at the railroad grade immediately upstream of Olympia Park to reduce flooding, replace an 11.4' x 14' arch culvert with triple 10' x 10' box culverts to reduce flooding and to allow for a pedestrian walkway as part of a future greenway project in 100 linear feet (0.032 acre) of Rocky Branch at Olympia Avenue, and conduct morphological alterations for flood remediation within 950 linear feet (0.981 acre) of Rocky Branch downstream of Olympia Avenue through channel excavation, removal of restrictions that include an abandoned railroad trestle and a retaining wall, and armoring stream banks with rip rap. Additionally, a permanent maintenance access road is proposed within a portion of Rocky Branch proposed for flood remediation, and existing utility lines and outfalls would be relocated within Rocky Branch, as shown on the attached plans. Excess soil excavated from Rocky Branch is proposed to be permanently disposed as fill dirt at the retail and residential development site. According to the applicant, the placement of fill material in the unnamed tributary to Rocky Branch for construction of the proposed residential and retail development would result in increased peak discharges downstream of Olympia Railroad, so the flood remediation work downstream in Rocky Branch is proposed as part of the overall project. Avoidance and minimization measures include avoiding previously authorized impacts to 0.305 acre of wetlands and 71 linear feet (0.01 acre) of stream that are no longer proposed, relocating/constructing 930 linear feet of new stream channel on-site with natural bottom material, and limiting the duration of temporary stream crossings to less than 90 days. The applicant has proposed to mitigate for impacts to waters of the United States by

performing stream restoration activities that include benching stream banks, placing instream structures, and planting riparian vegetation in 947 linear feet (1.087 acre) of Rocky Branch within Olympia Park to alleviate erosional stress and near bank stress, provide grade control, increase stream bed diversity, and stabilize stream banks. Additionally, the compensatory mitigation plan includes the preservation of 1,240 linear feet (0.427 acre) of Griffins Creek with 300 foot wide riparian buffers. The District Engineer has not reached a decision as to the proposed plan's compliance with current regulations and the Charleston District's Guidelines for Preparing a Compensatory Mitigation Plan. The Permittee-Responsible Mitigation Plan is available upon request. The project purpose is to construct a residential and retail development to serve the downtown area of Columbia.

**NOTE: This public notice and associated plans are available on the Corps' website at:**  
<http://www.sac.usace.army.mil/Missions/Regulatory/PublicNotices>.

The District Engineer has concluded that the discharges associated with this project, both direct and indirect, should be reviewed by the South Carolina Department of Health and Environmental Control in accordance with provisions of Section 401 of the Clean Water Act. As such, this notice constitutes a request, on behalf of the applicant, for certification that this project will comply with applicable effluent limitations and water quality standards. This activity may also require evaluation for compliance with the S. C. Construction in Navigable Waters Permit Program. State review, permitting and certification is conducted by the S. C. Department of Health and Environmental Control. The District Engineer will not process this application to a conclusion until such certifications are received. The applicant is hereby advised that supplemental information may be required by the State to facilitate the review.

This notice initiates the Essential Fish Habitat (EFH) consultation requirements of the Magnuson-Stevens Fishery Conservation and Management Act. Implementation of the proposed project would impact 1.393 acres of freshwater habitat well inland of estuarine substrates and emergent wetlands utilized by various life stages of species comprising the shrimp, and snapper-grouper management complexes. The District Engineer's initial determination is that the proposed action would not have a substantial individual or cumulative adverse impact on EFH or fisheries managed by the South Atlantic Fishery Management Council and the National Marine Fisheries Service (NMFS). The District Engineer's final determination relative to project impacts and the need for mitigation measures is subject to review by and coordination with the NMFS.

Pursuant to the Section 7 of the Endangered Species Act of 1973 (as amended), the Corps has reviewed the project area, examined all information provided by the applicant, and the District Engineer has determined, based on the most recently available information that the project will have no effect on any Federally endangered, threatened, or proposed species and will not result in the destruction or adverse modification of designated or proposed critical habitat. This public notice serves as a request to the U.S. Fish and Wildlife Service and the National Marine Fisheries Service for any additional information they may have on whether any listed or proposed endangered or threatened species or designated or proposed critical habitat may be present in the area which would be affected by the activity.

Pursuant to Section 106 of the National Historic Preservation Act (NHPA), this public notice also constitutes a request to Indian Tribes to notify the District Engineer of any historic properties of religious and cultural significance to them that may be affected by the proposed undertaking.

In accordance with Section 106 of the NHPA, the District Engineer has consulted South Carolina ArchSite (GIS), for the presence or absence of historic properties (as defined in 36 C.F.R. 800.16)(l)(1)), and has initially determined that historic properties, are present; moreover, these historic properties may be affected by the undertaking. This public notice serves to notify the State Historic Preservation Office that the Corps plans to initiate Section 106 consultation on these historic properties. Individuals or groups who would like to be consulting parties for the purposes of the NHPA should make such a request to the Corps in writing within 30 days of this public notice. To ensure that other historic properties that the District Engineer is not aware of are not overlooked, this public notice also serves as a request to the State Historic Preservation Office and other interested parties to provide any information they may have with regard to historic properties.

The District Engineer's final eligibility and effect determination will be based upon coordination with the SHPO and/or THPO, as appropriate and required and with full consideration given to the proposed undertaking's potential direct and indirect effects on historic properties within the Corps-identified permit area.

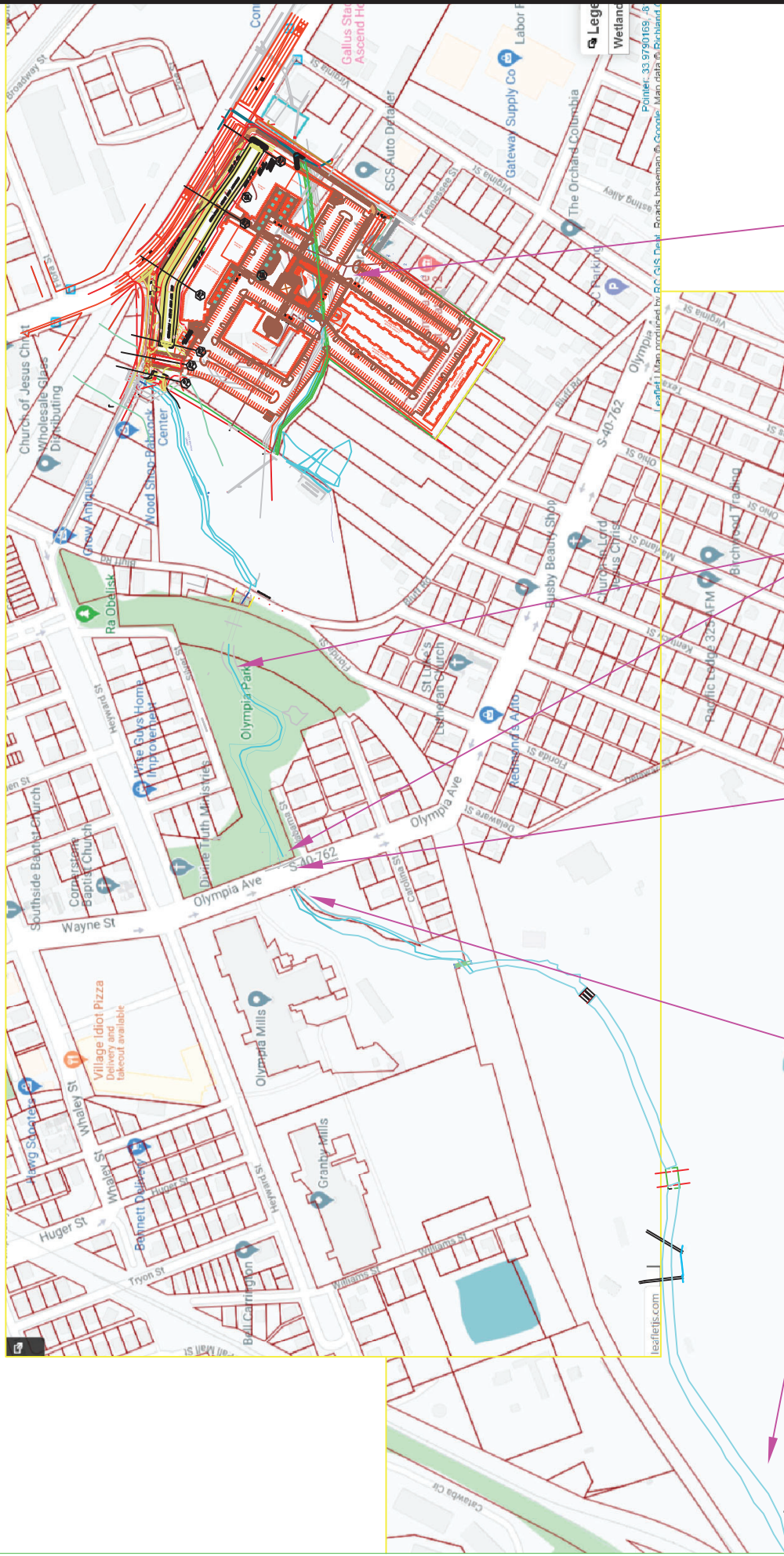
Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for a public hearing shall state, with particularity, the reasons for holding a public hearing.

The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the activity on the public interest and will include application of the guidelines promulgated by the Administrator, Environmental Protection Agency (EPA), under authority of Section 404(b) of the Clean Water Act and, as appropriate. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the project must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the project will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, flood plain values, land use, navigation, shoreline erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production and, in general, the needs and welfare of the people. A permit will be granted unless the District Engineer determines that it would be contrary to the public interest. In cases of conflicting property rights, the Corps cannot undertake to adjudicate rival claims.

The Corps is soliciting comments from the public; Federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this activity. Any comments received will be considered by the Corps to determine whether to issue, modify, condition or deny a permit for this project. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the activity. **Please submit comments in writing, identifying the project of interest by public notice number, to the following address:**

**U.S. Army Corps of Engineers  
ATTN: REGULATORY DIVISION  
1835 Assembly Street Room 865 B1  
Columbia, South Carolina 29201**

If there are any questions concerning this public notice, please contact Amy Cappellino, Project Manager, at (803) 253-3992, or by email at [Amy.e.Cappellino@usace.army.mil](mailto:Amy.e.Cappellino@usace.army.mil).



Rocky Branch  
Bank Stabilization

Olympia Ave.  
Culvert Replacement

Stream Restoration  
Olympia Park

Ballpark Site

GRAPHIC SCALE

1 inch = nts feet

Post Office Box 3744  
Greenville, SC 29608  
Phone: (864) 271-3040  
Fax: (864) 235-9299

DRAWN BY: LHB  
DATE: 30Apr12/20

EPC PROJECT NO.: 2012-00820-6F

SHEET NO.

10



TOTAL SITE ACERAGE: 17.35

CROSS SECTION S1

NON-WETLANDS  
WATERS E  
71 lin. ft.  
0.010 ac.

NON-WETLANDS  
WATERS A  
1086 lin. ft.  
0.396 ac.

WETLAND B  
0.054ac.

WETLAND C  
0.228 ac.



**GRAPHIC SCALE**

1 inch = 200 feet

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Greenville, SC 29608  
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Fax: (864) 235-9299

|                  |           |
|------------------|-----------|
| DRAWN BY:        | LHB       |
| DATE:            | 27feb2020 |
| EPC PROJECT NO.: | 1694      |

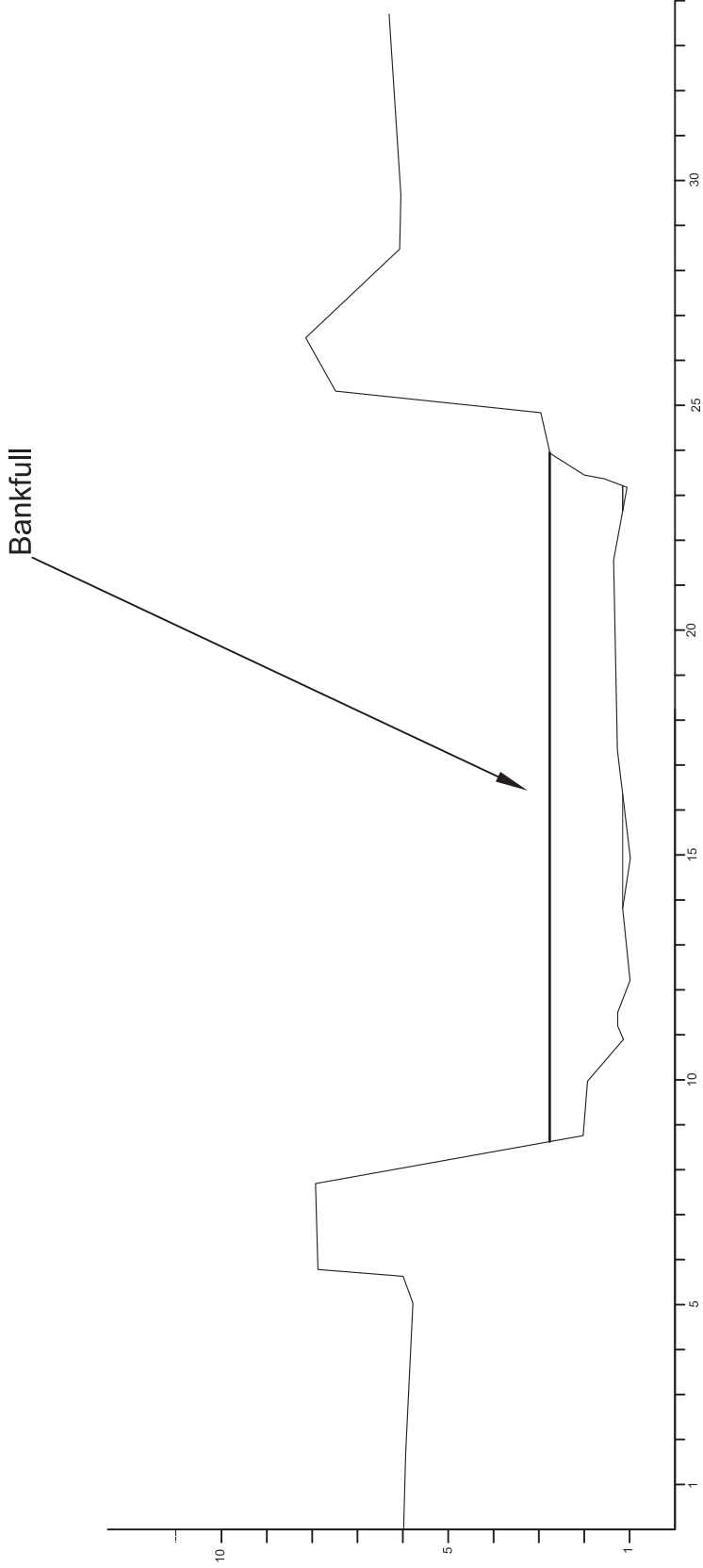
2012-00820-6F

**EXISTING CONDITIONS**

ASSEMBLY STREET  
W-REI  
RICHLAND COUNTY

SHEET NO.

**2**



SHEET NO.

5

S1 EXISTING CROSS SECTION

ASSEMBLY STREET  
W-REI  
RICHLAND COUNTY

GRAPHIC SCALE

1 inch = nts feet

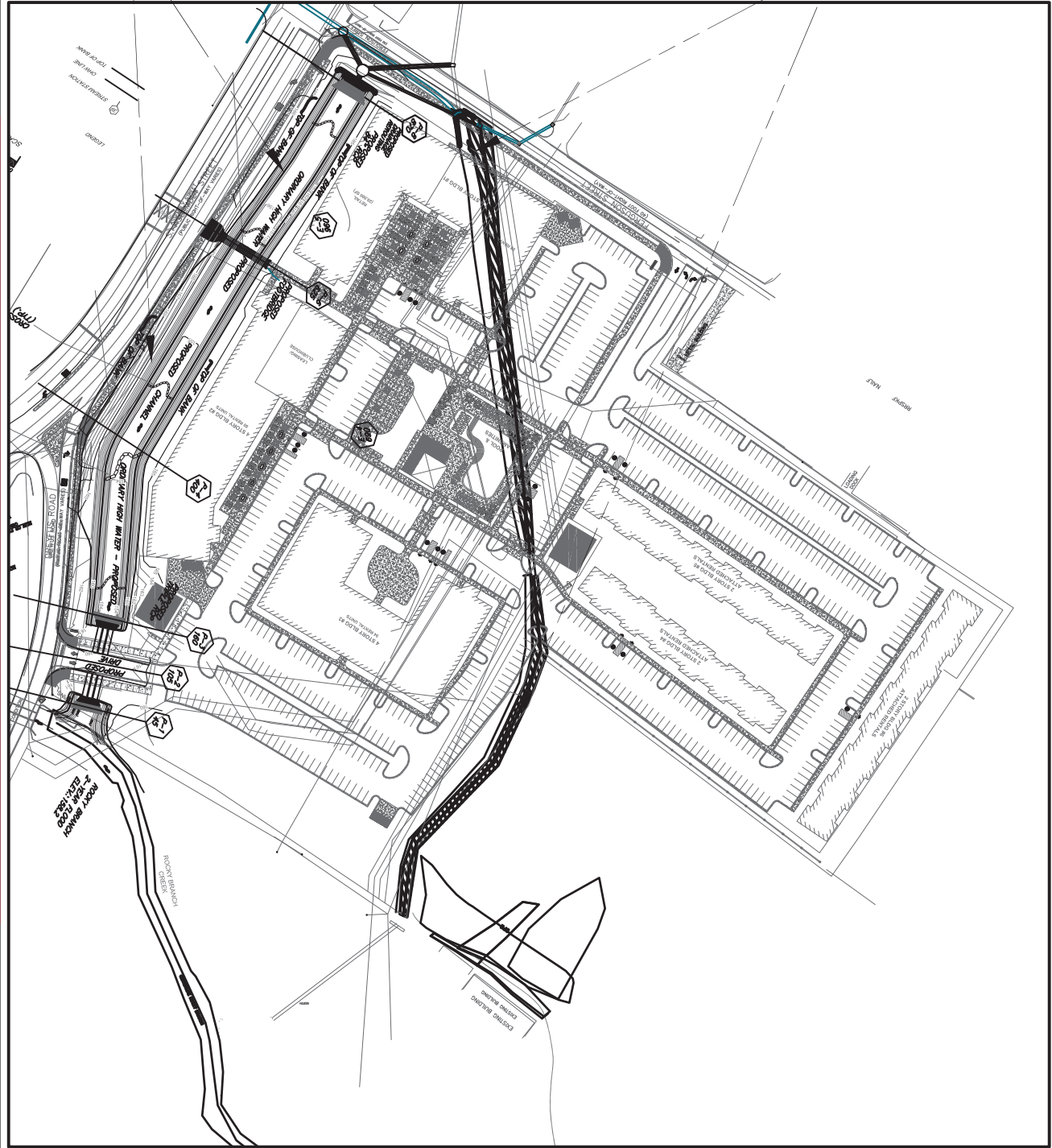
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| Post Office Box 3744  | DRAWN BY:        | LHB       |
| Greenville, SC 29608  | DATE:            | 27feb2020 |
| Phone: (864) 271-3640 | EPC PROJECT NO.: | 1694      |
| Fax: (864) 235-9299   |                  |           |

2012-00820-6F





Relocated Channel



W-REI  
TOTAL IMPACTS  
STREAM: 1068 I.f.

W-REI OVERVIEW  
ASSEMBLY STREET  
W-REI  
RICHLAND COUNTY

SHEET NO.

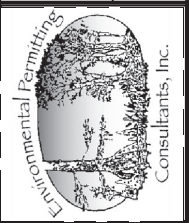
3

GRAPHIC SCALE

1 inch = 200 feet

|  |                  |                    |                          |
|--|------------------|--------------------|--------------------------|
| Post Office Box 3744<br>Greenville, SC 29608<br>Phone: (864) 271-3040<br>Fax: (864) 235-9599 | DRAWN BY:<br>LHB | DATE:<br>27Feb2020 | EPC PROJECT NO.:<br>1694 |
|  |                  |                    |                          |

2012-00820-6F



**ROAD CROSSING**  
Triple 72" RCP

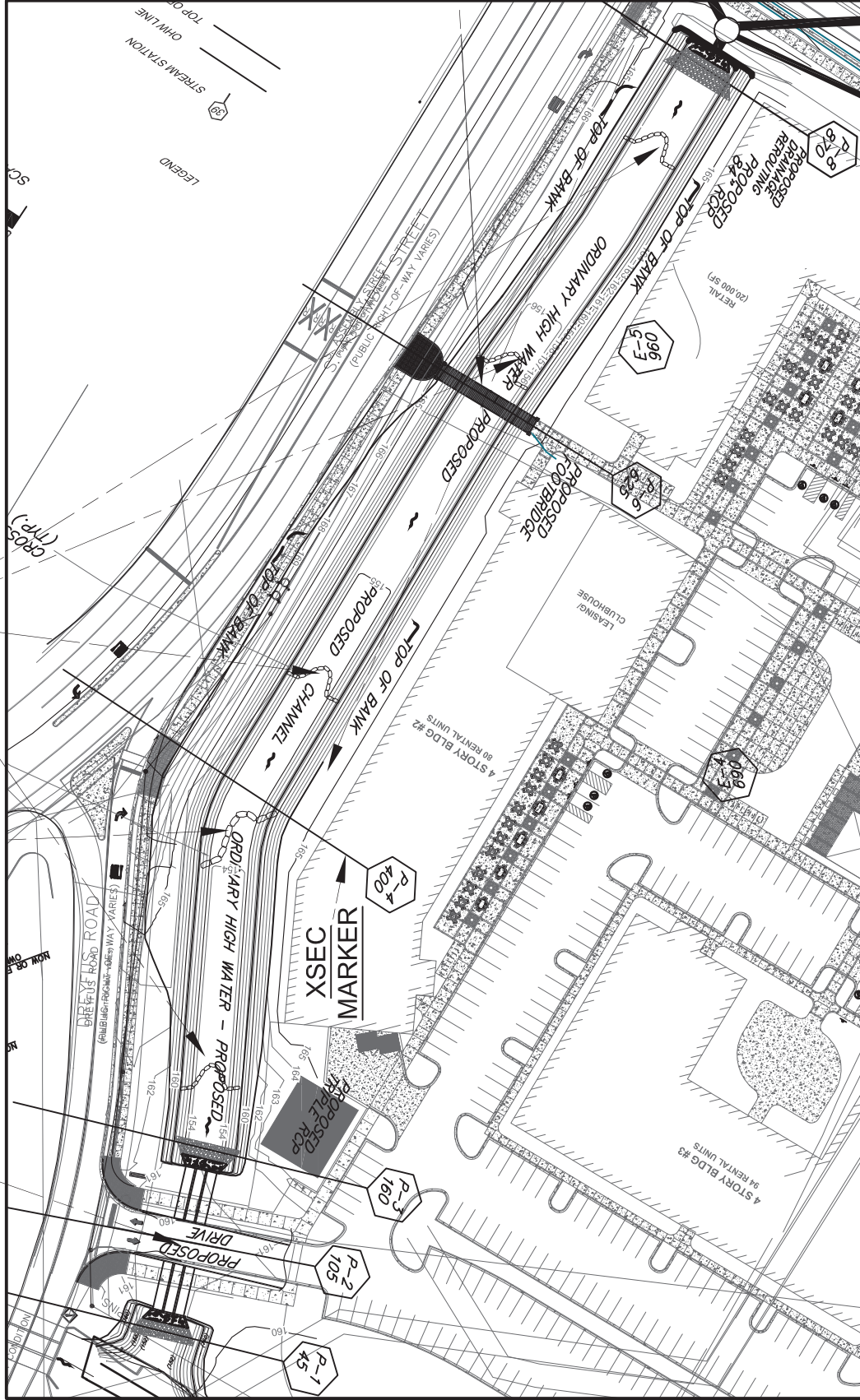
Relocated Channel  
930 lin. ft.

Riprap: 75 cy

Rock vanes, J-hook: 65 cy  
Fill for crossing: 720 cy

**CROSS VANES**

**J HOOK**



**PEDESTRIAN BRIDGE**

**GRAPHIC SCALE**

1 inch = 100 feet

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Greenville, SC 29608  
Phone: (864) 271-3040  
Fax: (864) 235-9599

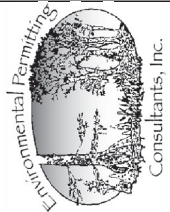
DRAWN BY: LHB  
DATE: 27Feb2020  
EPC PROJECT NO.: 1694

**RELOCATED CHANNEL DETAIL**

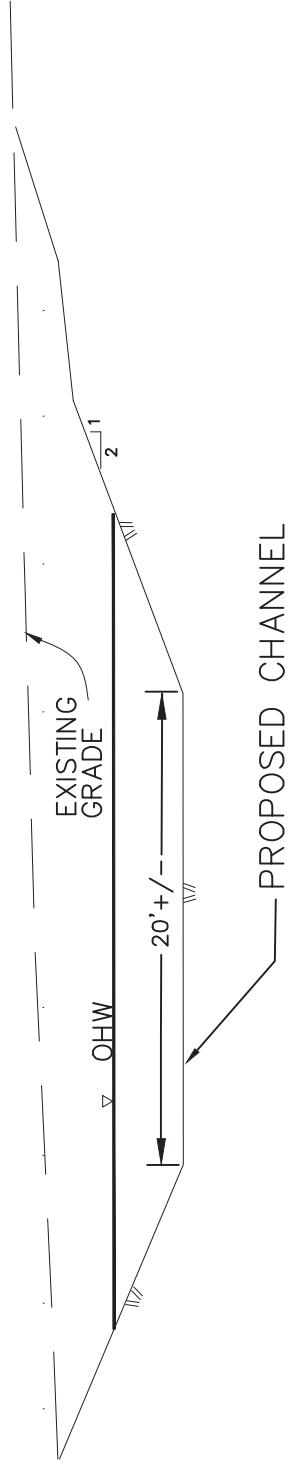
ASSEMBLY STREET  
W-REI  
RICHLAND COUNTY

SHEET NO.

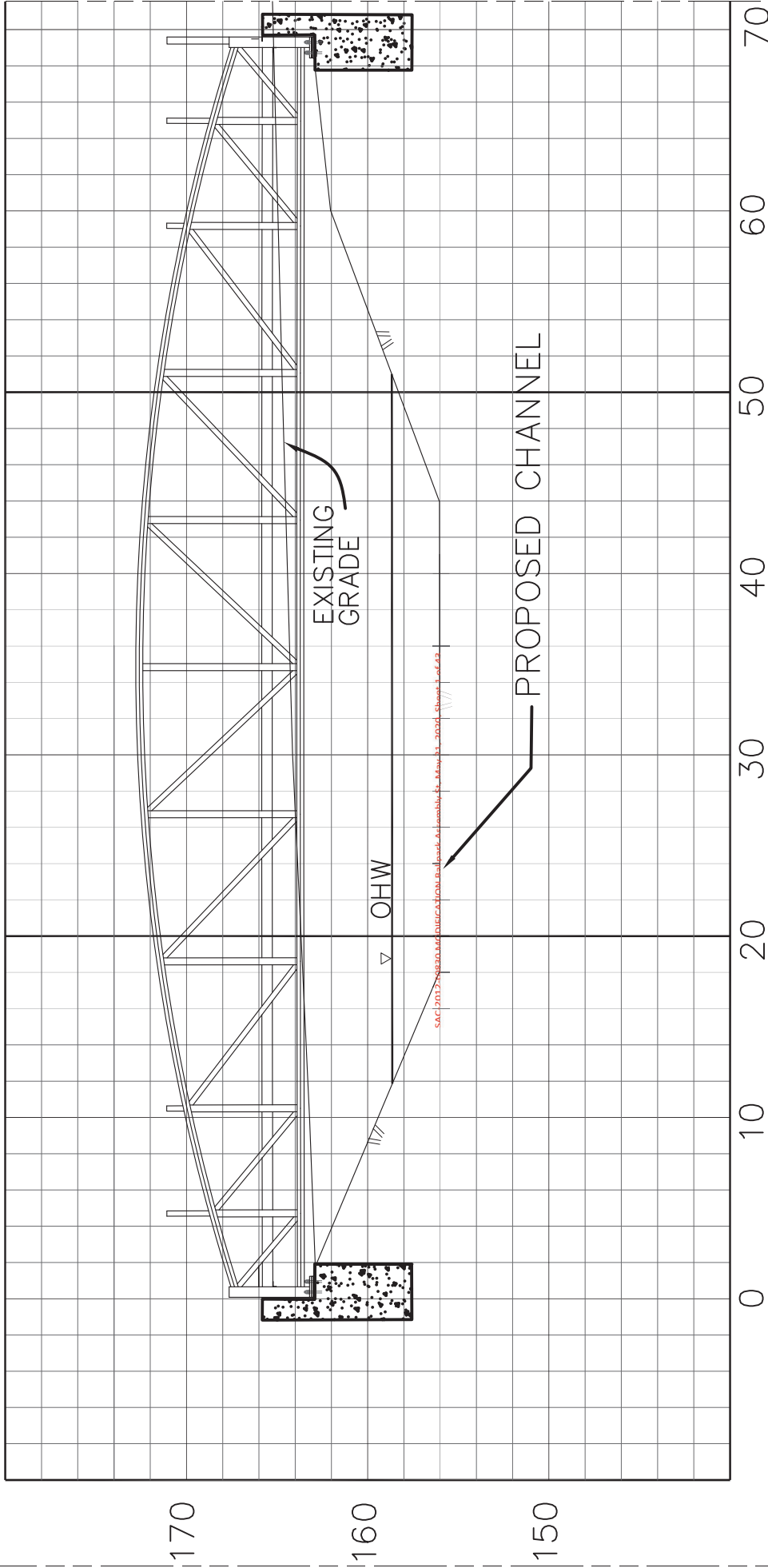
4



2012-00820-6F



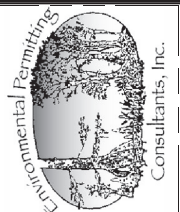
PROPOSED FOOTBRIDGE



GRAPHIC SCALE

1 inch = nts feet

|  |                          |
|--|--------------------------|
| Post Office Box 3744<br>Greenville, SC 29608<br>Phone: (864) 271-3640<br>Fax: (864) 235-9299 | DRAWN BY:<br>LHB         |
|  | DATE:<br>27Feb2020       |
|  | EPC PROJECT NO.:<br>1694 |



CROSS SECTION PEDESTRIAN BRIDGE

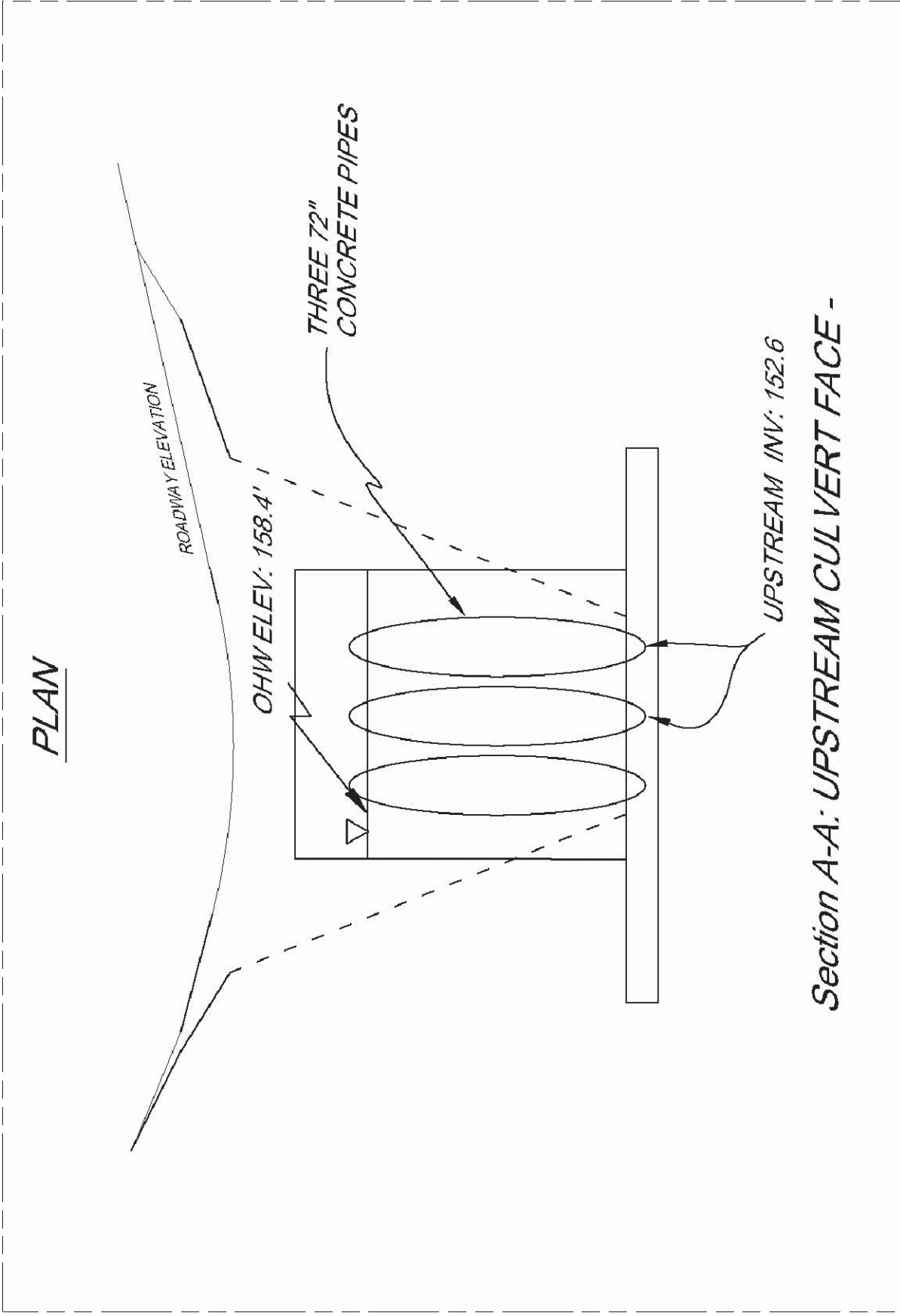
ASSEMBLY STREET  
W-REI  
RICHLAND COUNTY

SHEET NO.

6

2012-00820-6F

PLAN



*Section A-A: UPSTREAM CULVERT FACE -*

GRAPHIC SCALE

1 inch = nts feet

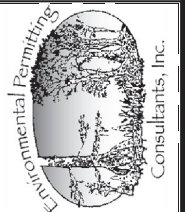
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| Post Office Box 3744<br>Greenville, SC 29608<br>Phone: (864) 271-3640<br>Fax: (864) 235-9299 | DRAWN BY: LHB<br>DATE: 27feb2020<br>EPC PROJECT NO.: 1694 |
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**CULVERT DETAILS**

ASSEMBLY STREET  
W-REI  
RICHLAND COUNTY

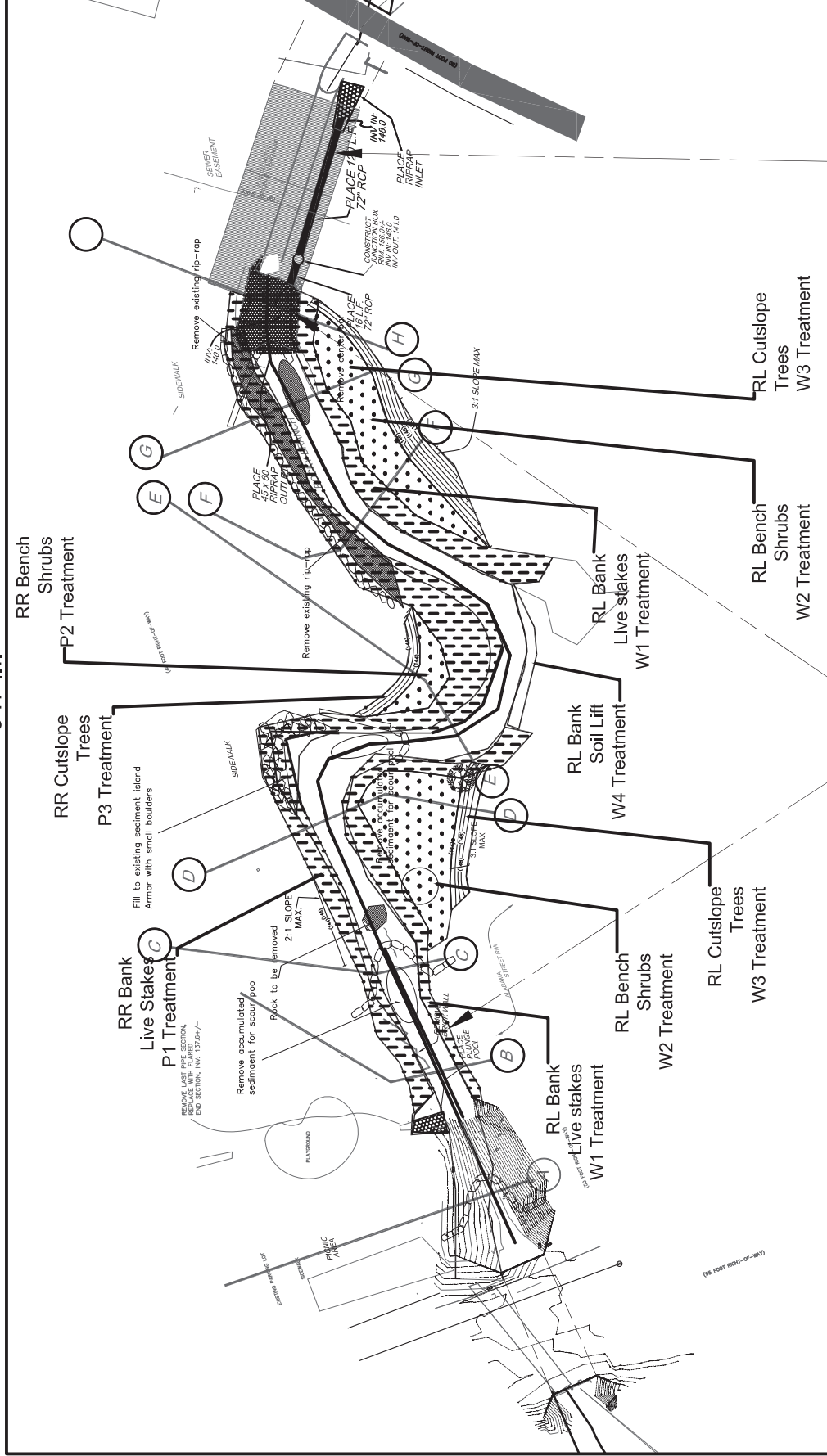
SHEET NO.

7



2012-00820-6F

**MITIGATION**  
**TOTAL LENGTH:**  
**947 l.f.**



**Olympia Park Stream Restoration**  
**947 l.f.**

**Addition of 72" RCP at RR**  
**Grade to improve flow**  
**conditions**

**GRAPHIC SCALE**

1 inch = 120 feet

|  |                          |
|--|--------------------------|
| Post Office Box 3744<br>Greenville, SC 29608<br>Phone: (864) 271-3040<br>Fax: (864) 235-9299 | LHB<br>27Feb2020<br>1694 |
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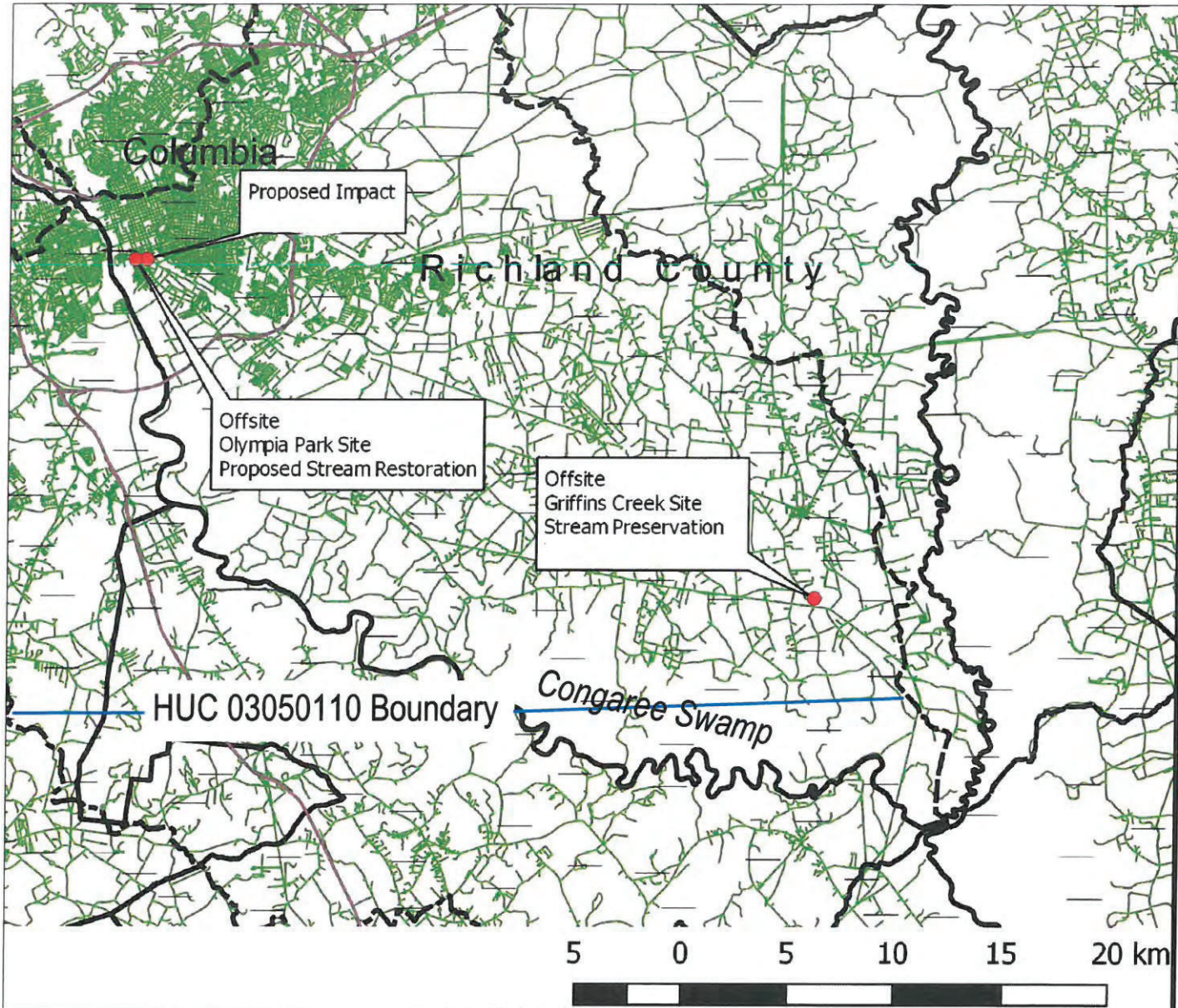
**MITIGATION OVERVIEW**

ASSEMBLY STREET  
 W-REI  
 RICHLAND COUNTY

SHEET NO.

**8**





**GRAPHIC SCALE**  
1 inch = NTS feet

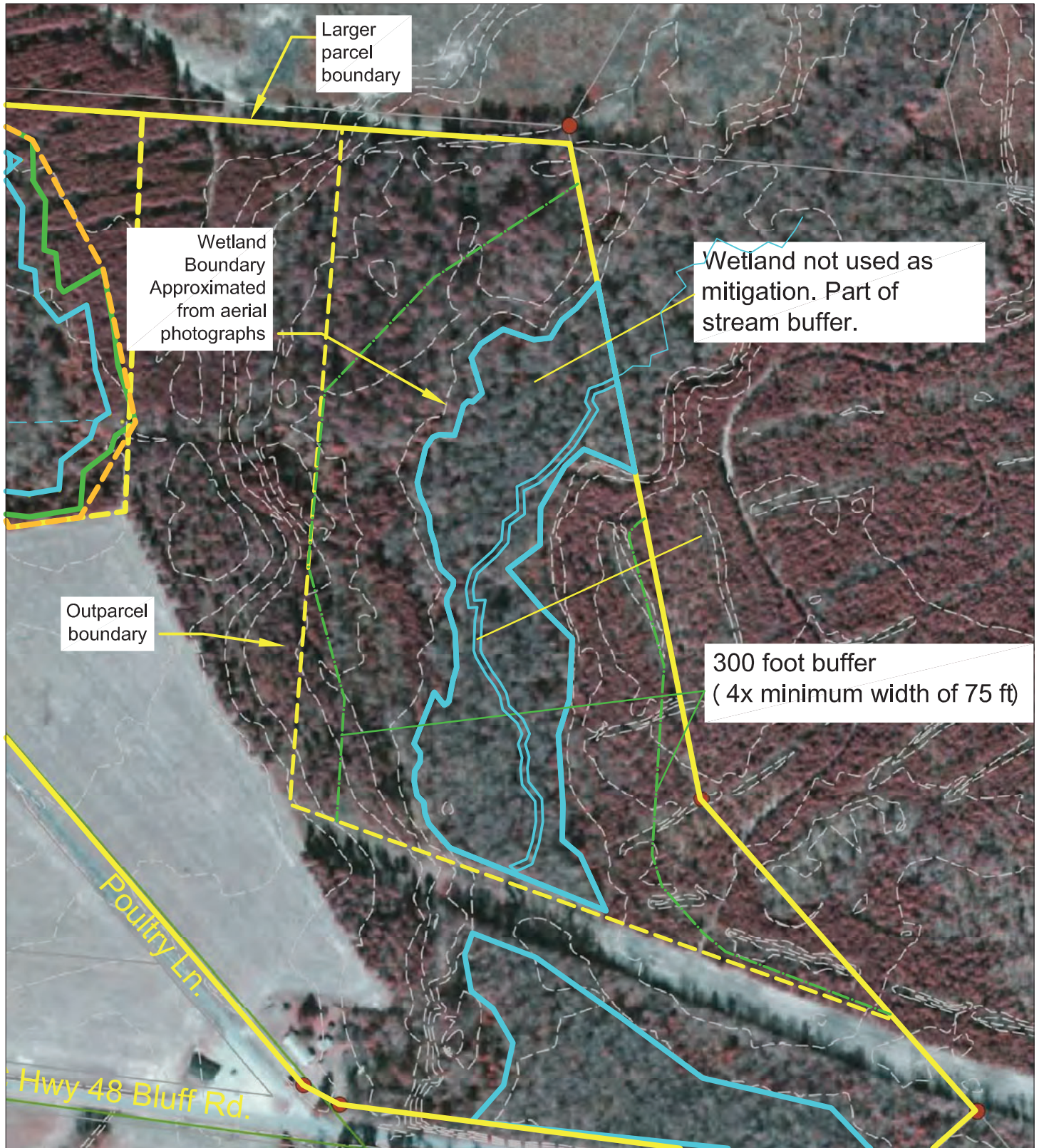
Post Office Box 3744  
Greenville, SC 29608  
Phone: (864) 271-3040  
Fax: (864) 235-9299

|                  |           |
|------------------|-----------|
| DRAWN BY:        | LHB       |
| DATE:            | 10oct2019 |
| EPC PROJECT NO.: | 1694      |


**Mitigation Location Map**  
ARMP Rocky Branch - Griffins Creek  
W-REI  
Richland County, SC

SHEET NO.

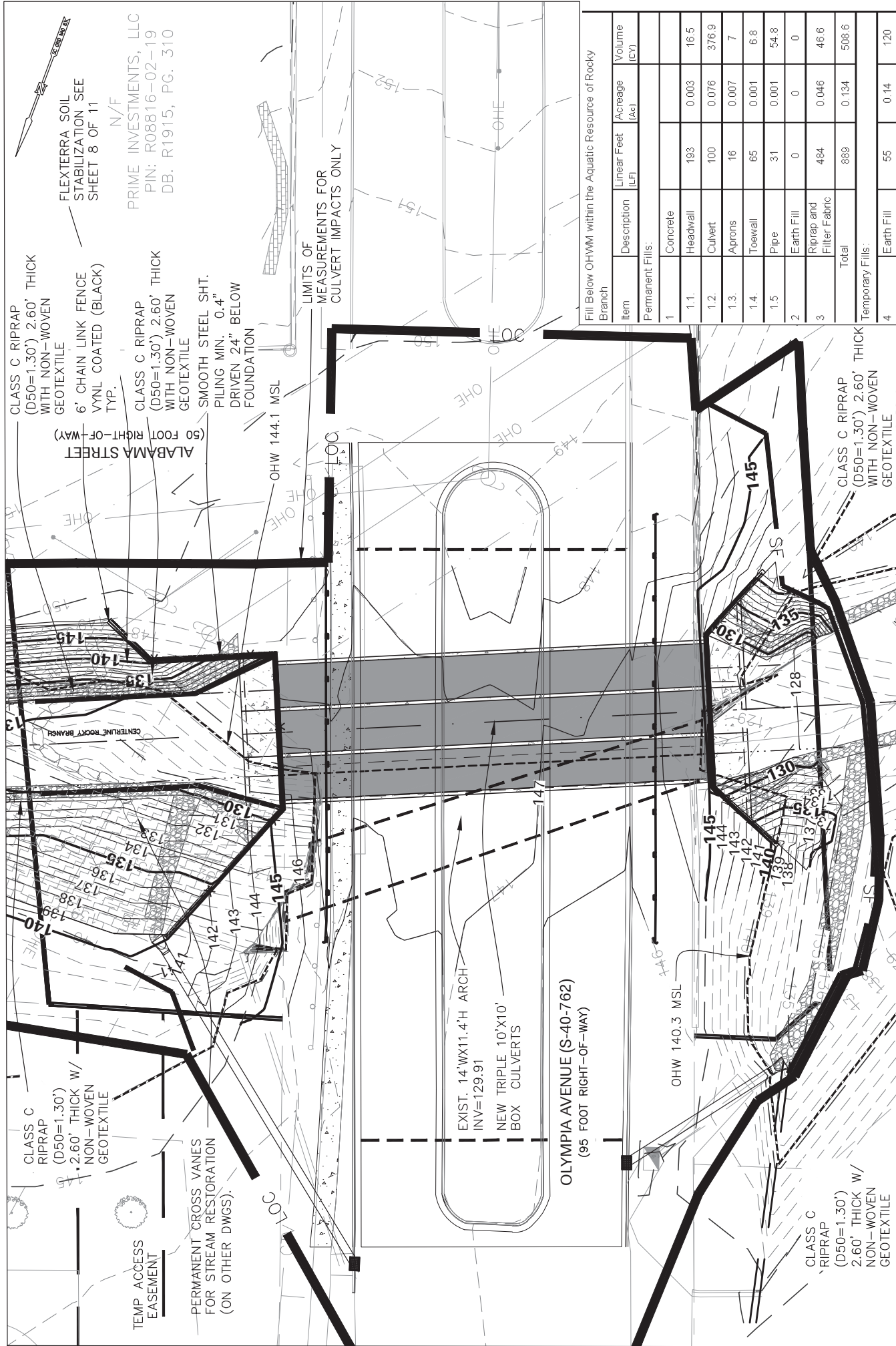
**3**



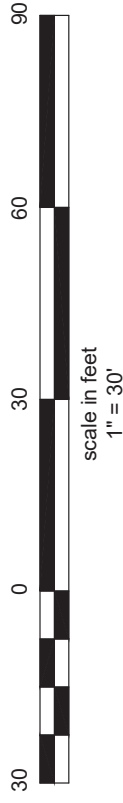
Source: 2016 Orthophotography Richland County GIS Accessed 20161108

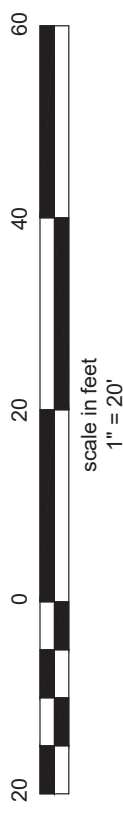
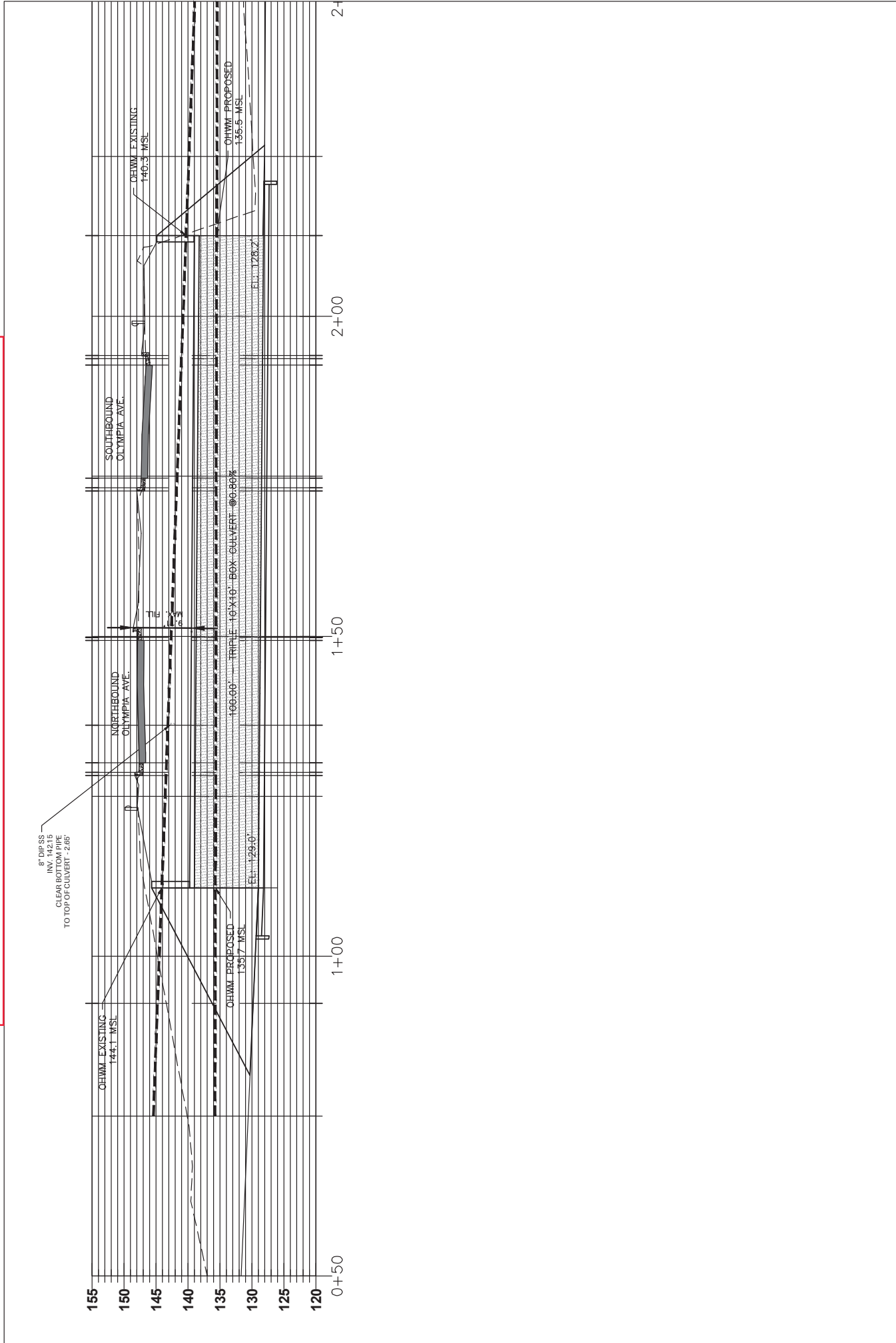
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|--|---|--|--|--------------------------------|
|  | <p><b>GRAPHIC SCALE</b></p> <p>1 inch = 300 feet</p>  |  | <p><b>Stream Preservation</b><br/>                 ARMP Rocky Branch - Griffins Creek<br/>                 W-REI<br/>                 Gadsden, Richland County, SC</p> | <p>SHEET NO.<br/><b>15</b></p> |
|  | <p>Post Office Box 3744<br/>                 Greenville, SC 29608<br/>                 Phone: (864) 271-3040<br/>                 Fax: (864) 235-9299</p> | <p>DRAWN BY: LHB<br/>                 DATE: 10oct2019<br/>                 EPC PROJECT NO.: 1694</p> |  |                                |

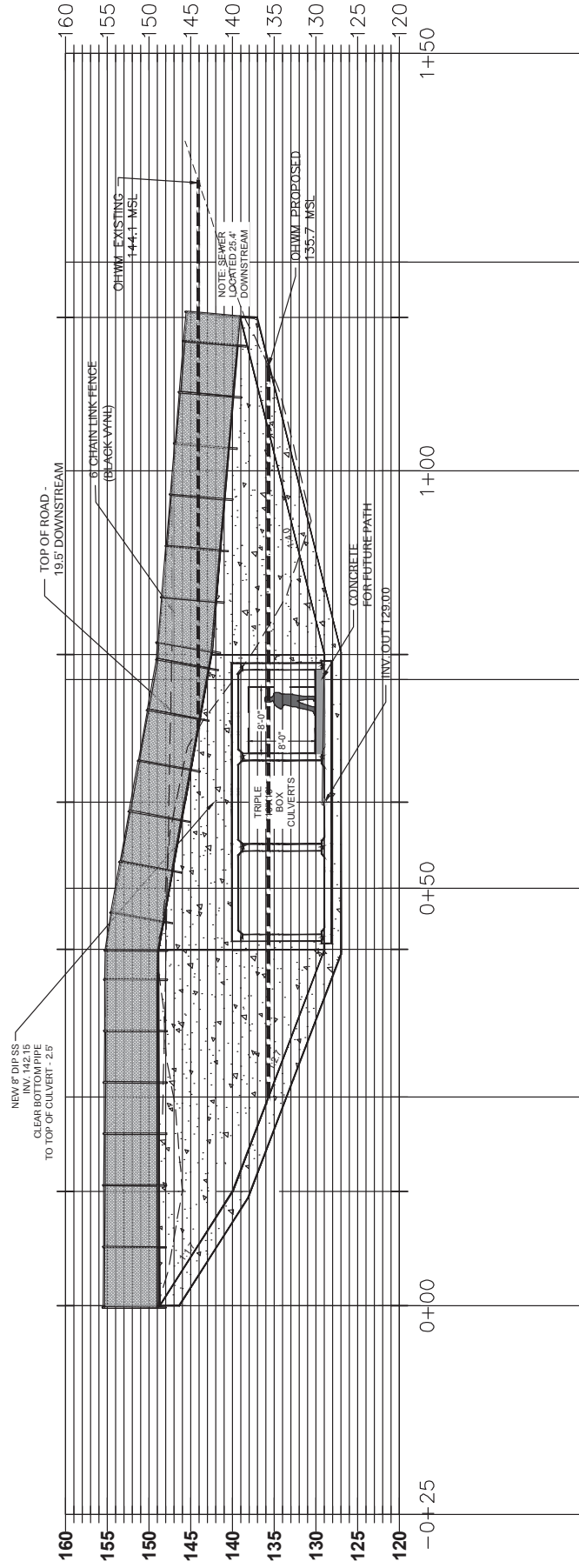




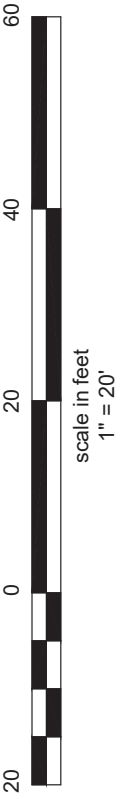
ROCKY BRANCH  
 OLYMPIA AVE. CULVERT REPLACEMENT  
 PLAN VIEW OF NEW TRIPLE 10X10 BOX CULVERT  
 SHEET 1 OF 11  
 MAY 14, 2020

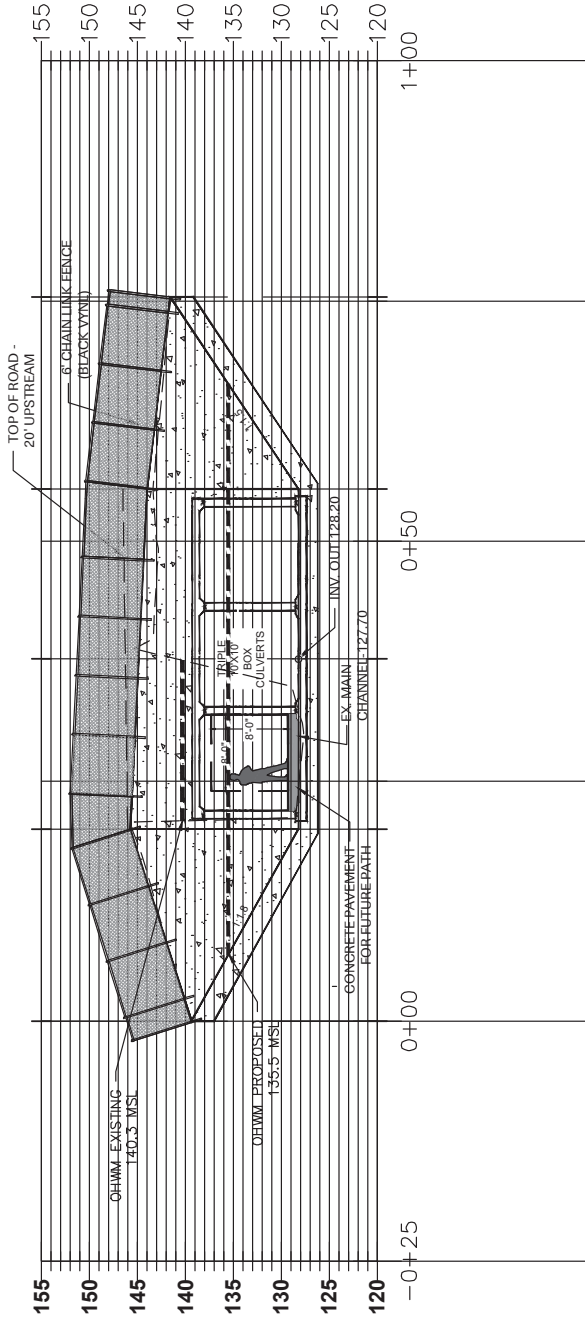




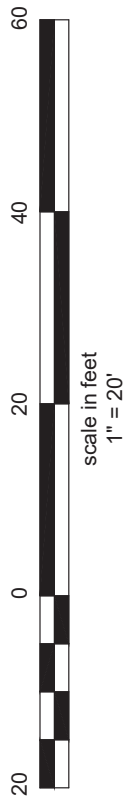


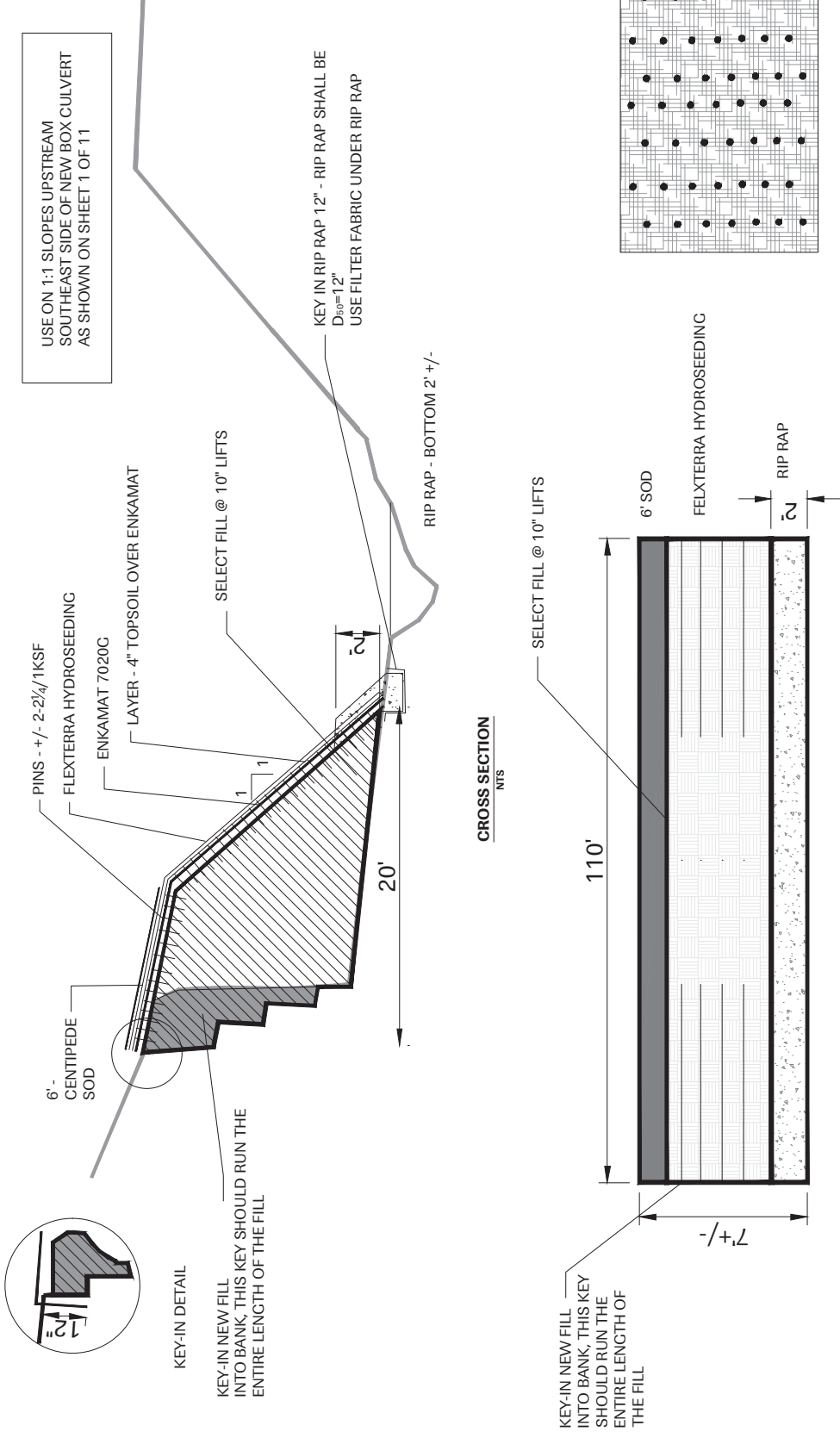
UPSTREAM CULVERT FACE (NORTH - STA. 0+50.00)





DOWNSTREAM CULVERT FACE (SOUTH - STA. 1+00.00)

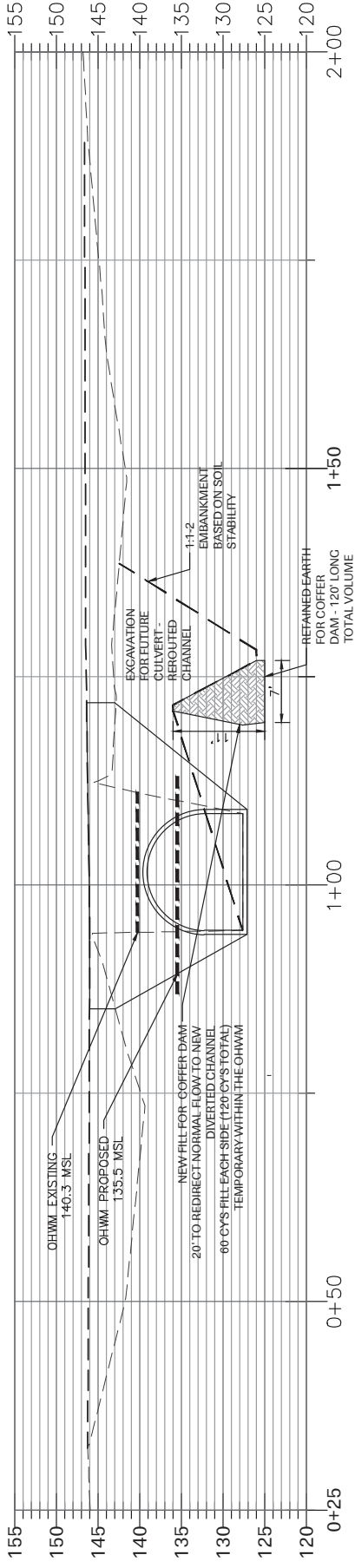




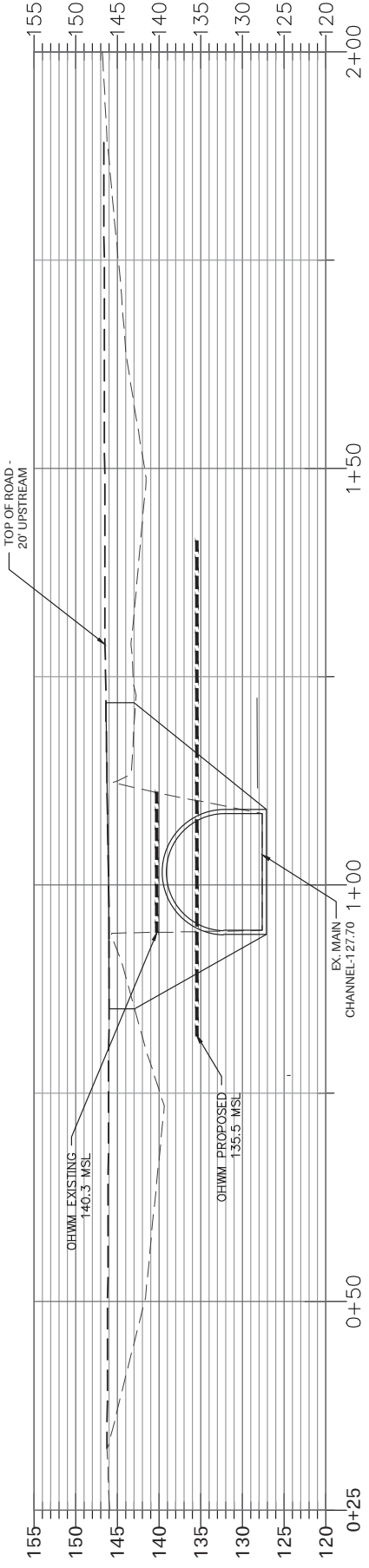
**SCOPE AND SEQUENCE OF WORK:**

1. CONTRACTOR SHALL REMOVE THE ROOT, GRASS, AND TREE MATERIAL FROM THE BANK AND DISPOSE OF OFF SITE.
2. CONTRACTOR SHALL KEY IN EXISTING BANK APPROXIMATELY 3-5 FEET TO DEVELOP A KEY FOR THE TOPSOIL MATERIAL.
3. TOP SOIL AND ANY FILL MATERIAL SHALL BE COMPACTED TO APPROXIMATELY 90% ASTM D-698, STANDARD PROCTOR
4. BANK SHALL BE RE-ESTABLISHED TO A SLOPE AS SHOWN ON THE GRADING PLANS.
5. ON TOP OF THE FILL, 6-INCHES OF TOPSOIL WILL BE PLACED.
6. ON TOP OF THE TOPSOIL, ENKAMAT PERMANENT EROSION CONTROL MATTING SHALL BE INSTALLED ON THE SLOPE. THE MATTING IS IN ROLLS AND SHALL BE PLACED TOP TO BOTTOM ROLLED OUT.
7. THE MATTING SHALL BE STAKED IN PLACE BY MANUFACTURER PROVIDED STAKES IN REPEATING PATTERNS AS DESCRIBED BY THE MANUFACTURER. STAKES ARE PROVIDED BY THE MANUFACTURER.
8. HAND PLACED RIP RAP SHALL BE PLACED ON THE BOTTOM 2' OF THE FILL OVER THE TOP OF THE MATTING MATERIAL
9. FROM THE EXISTING EDGE OF ROAD AND PARK, 6' OF CENTIPEDE SOD SHALL BE PLACED TO RE-ESTABLISH THE BANK AND TO HELP LOCK IN THE MATTING.
10. THE REMAINING TOPSOIL SHALL BE HYDROSEEDED WITH A COVERGROW MULCH AND PENNINGTON SEED SLOPEMASTER MIXTURE TO INCLUDE PERMANENT AND TEMPORARY GRASSING TO BEGIN TO ESTABLISH A GROUND COVER.
11. THE SITE WILL BE INSPECTED WEEKLY AND AFTER EVERY 1/2-INCH RAIN EVENT UNTIL GRASS IS ESTABLISHED.

ROCKY BRANCH  
 OLYMPIA AVE. CULVERT REPLACEMENT  
 SOIL REINFORCEMENT SOUTHEAST BANK  
 SHEET 5 OF 11  
 MAY 14, 2020

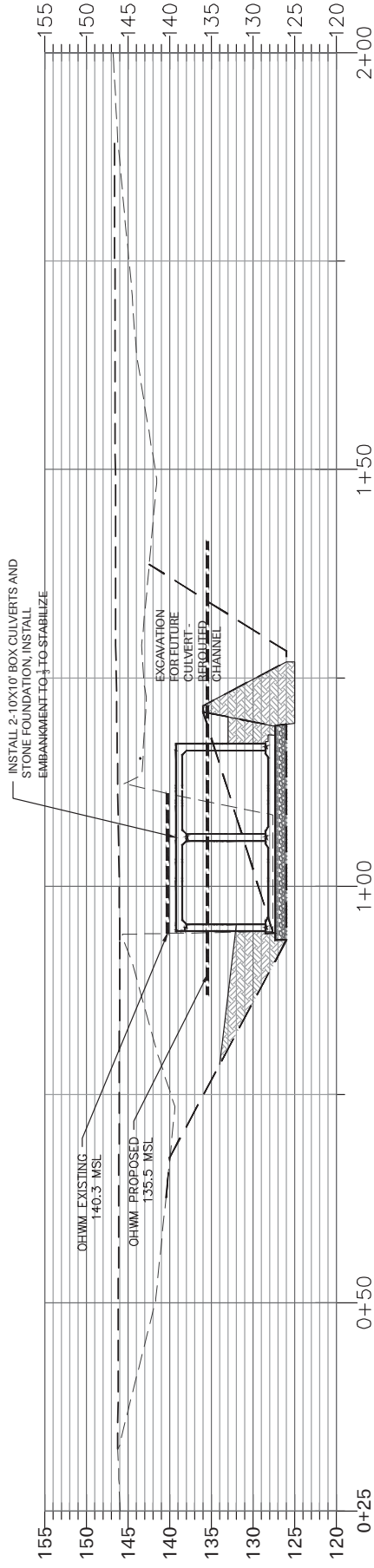


DOWNSTREAM CULVERT FACE (SOUTH - STA. 1+00.00)  
STEPS 4-6

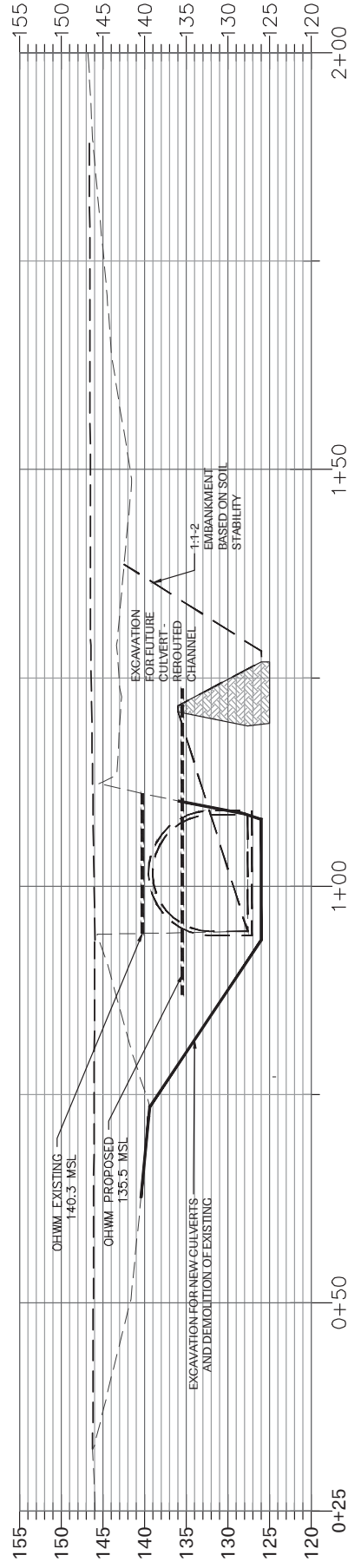


DOWNSTREAM CULVERT FACE (SOUTH - STA. 1+00.00)  
EXISTING CONDITIONS

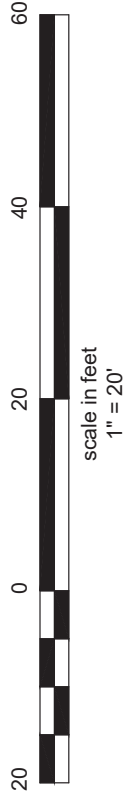


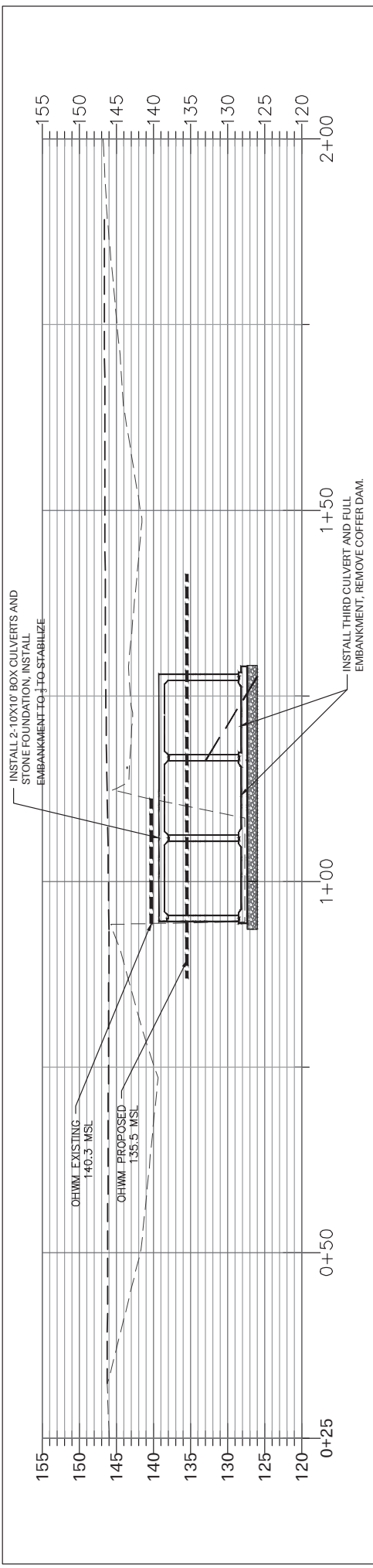


DOWNSTREAM CULVERT FACE (SOUTH - STA. 1+00.00)  
STEPS 10-11

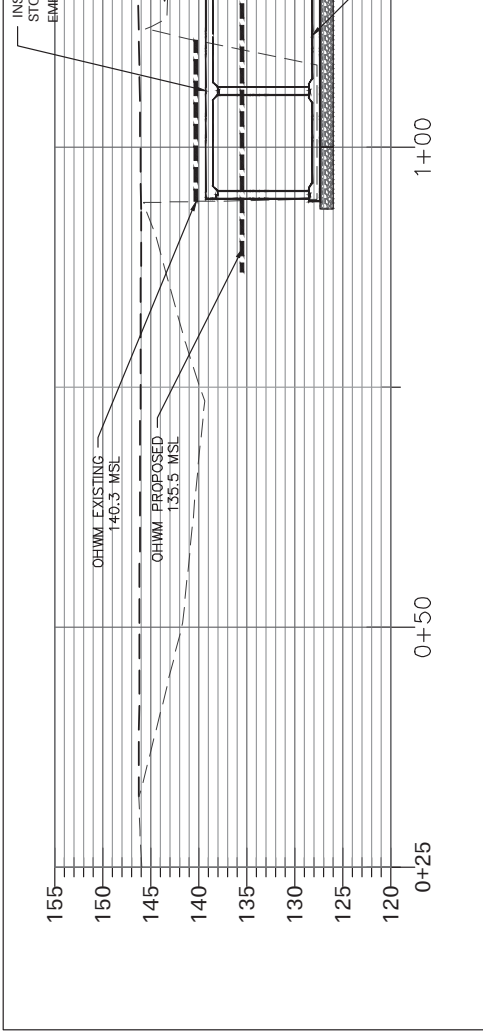


DOWNSTREAM CULVERT FACE (SOUTH - STA. 1+00.00)  
STEPS 7-9

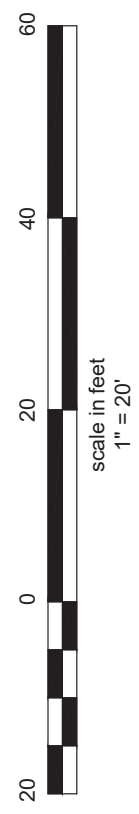




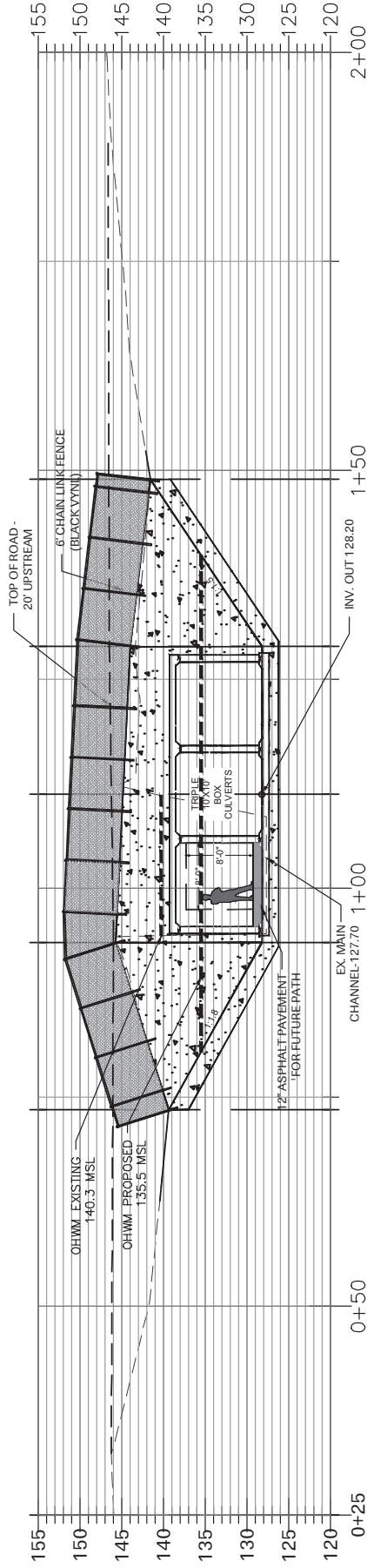
DOWNSTREAM CULVERT FACE (SOUTH - STA. 1+00.00)  
STEPS 14-17



DOWNSTREAM CULVERT FACE (SOUTH - STA. 1+00.00)  
STEPS 12-13

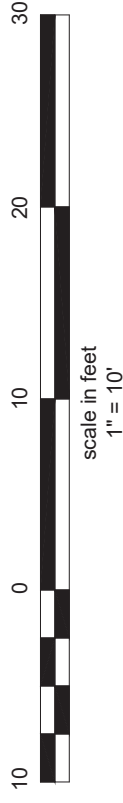
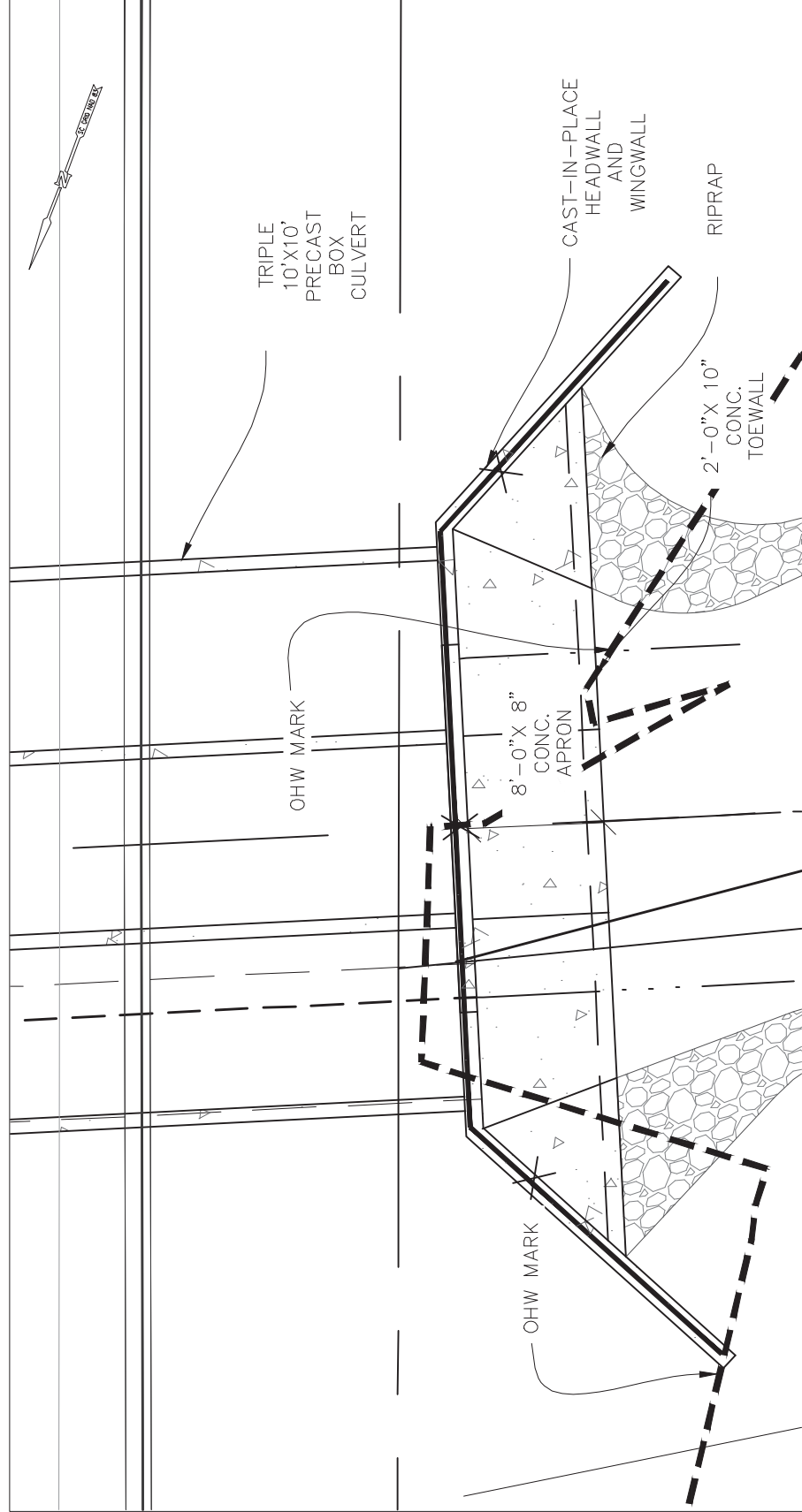
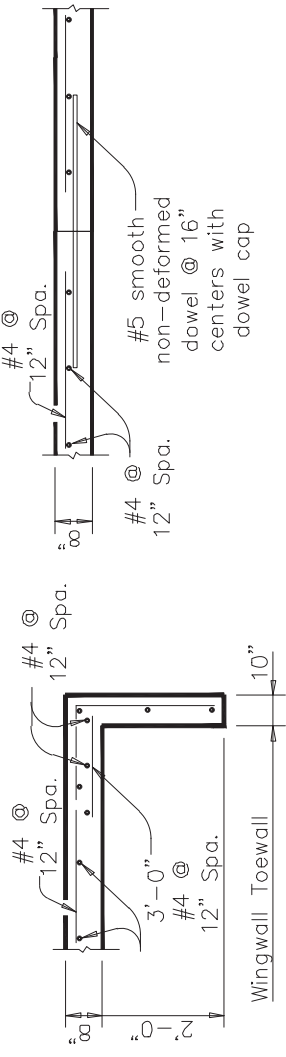






DOWNSTREAM CULVERT FACE (SOUTH - STA. 1+00.00)  
STEPS 18-20



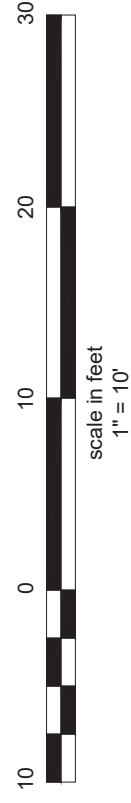
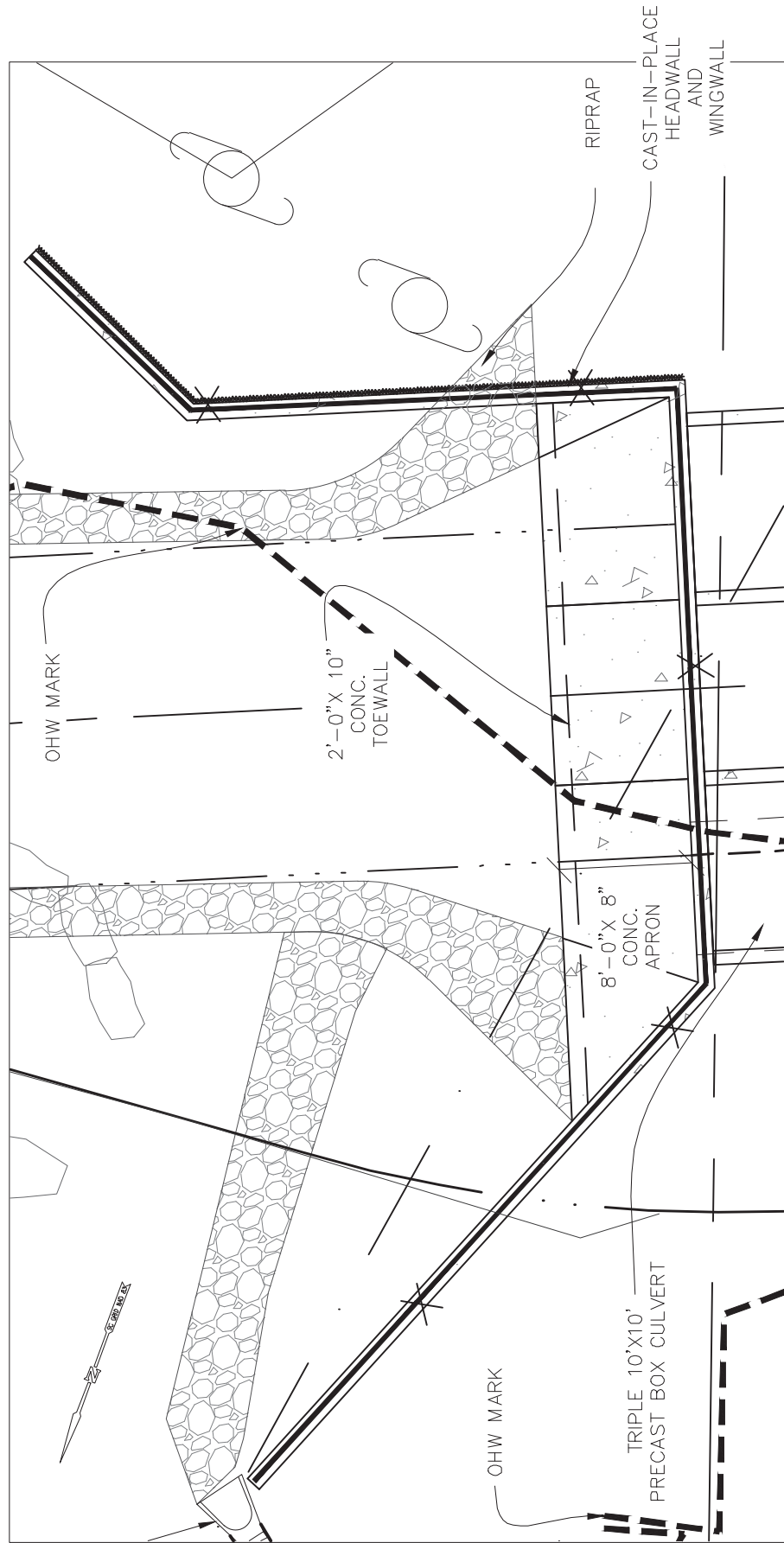
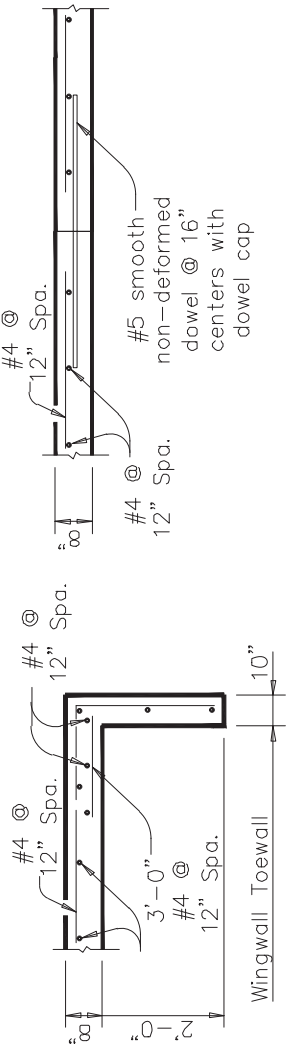


**DOWNSTREAM APRON DETAIL**

NOT TO SCALE

ROCKY BRANCH  
OLYMPIA AVE. CULVERT REPLACEMENT  
DOWNSTREAM APRON AND RIPRAP DETAIL

SHEET 10 OF 11  
MAY 14, 2020



**UPSTREAM APRON DETAIL**

NOT TO SCALE

ROCKY BRANCH  
OLYMPIA AVE. CULVERT REPLACEMENT  
UPSTREAM APRON AND RIPRAP DETAIL

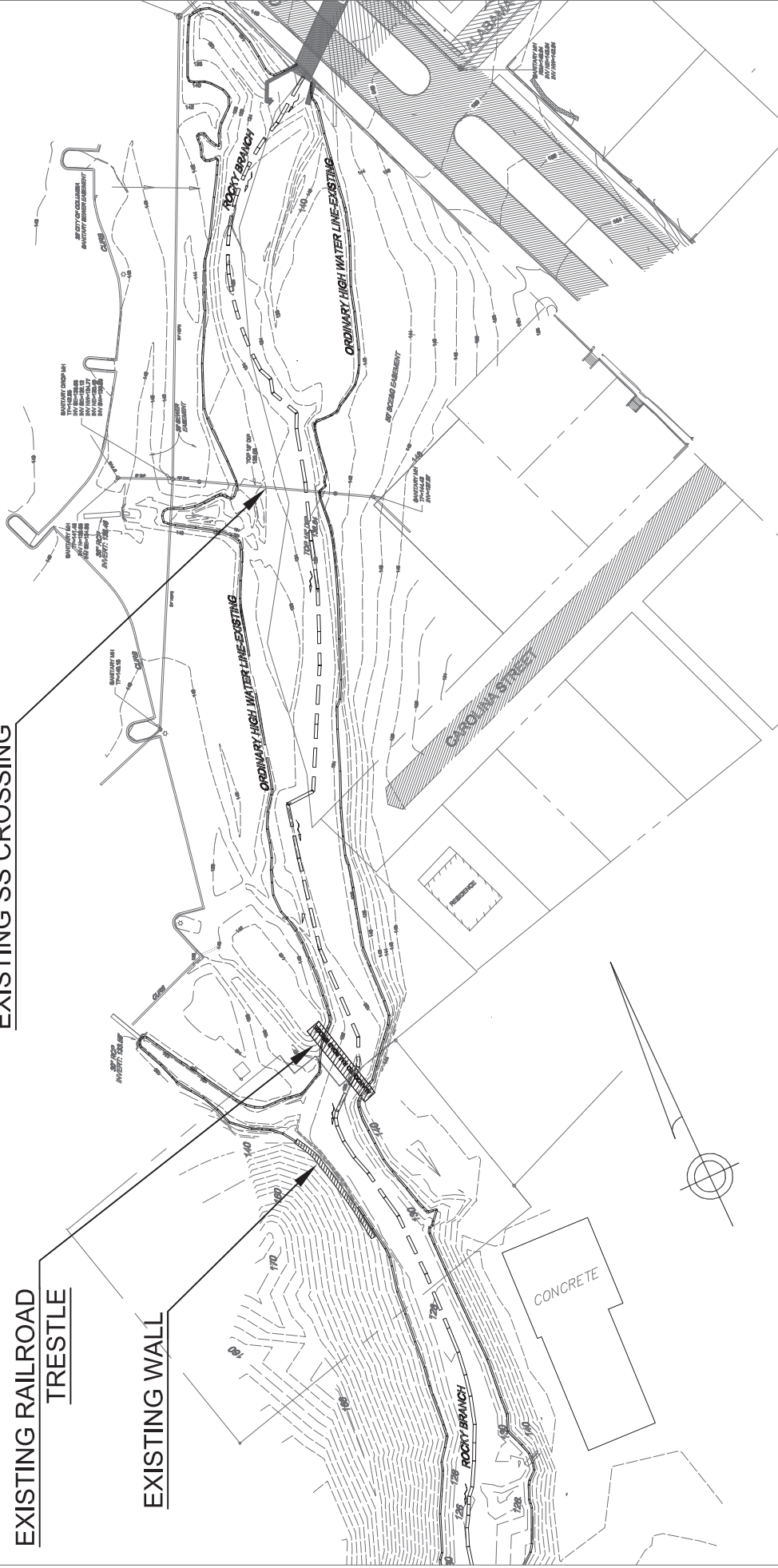
SHEET 11 OF 11  
MAY 14, 2020

SAC-2012-00830 MODIFICATION Ballpark Assembly St, May 21, 2020, Sheet 23 of 43

EXISTING SS CROSSING

EXISTING RAILROAD  
TRESTLE

EXISTING WALL



GRAPHIC SCALE

1 inch = 100 feet

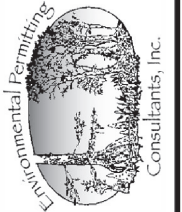
Post Office Box 3744  
Greenville, SC 29608  
Phone: (864) 271-3040  
Fax: (864) 235-9299

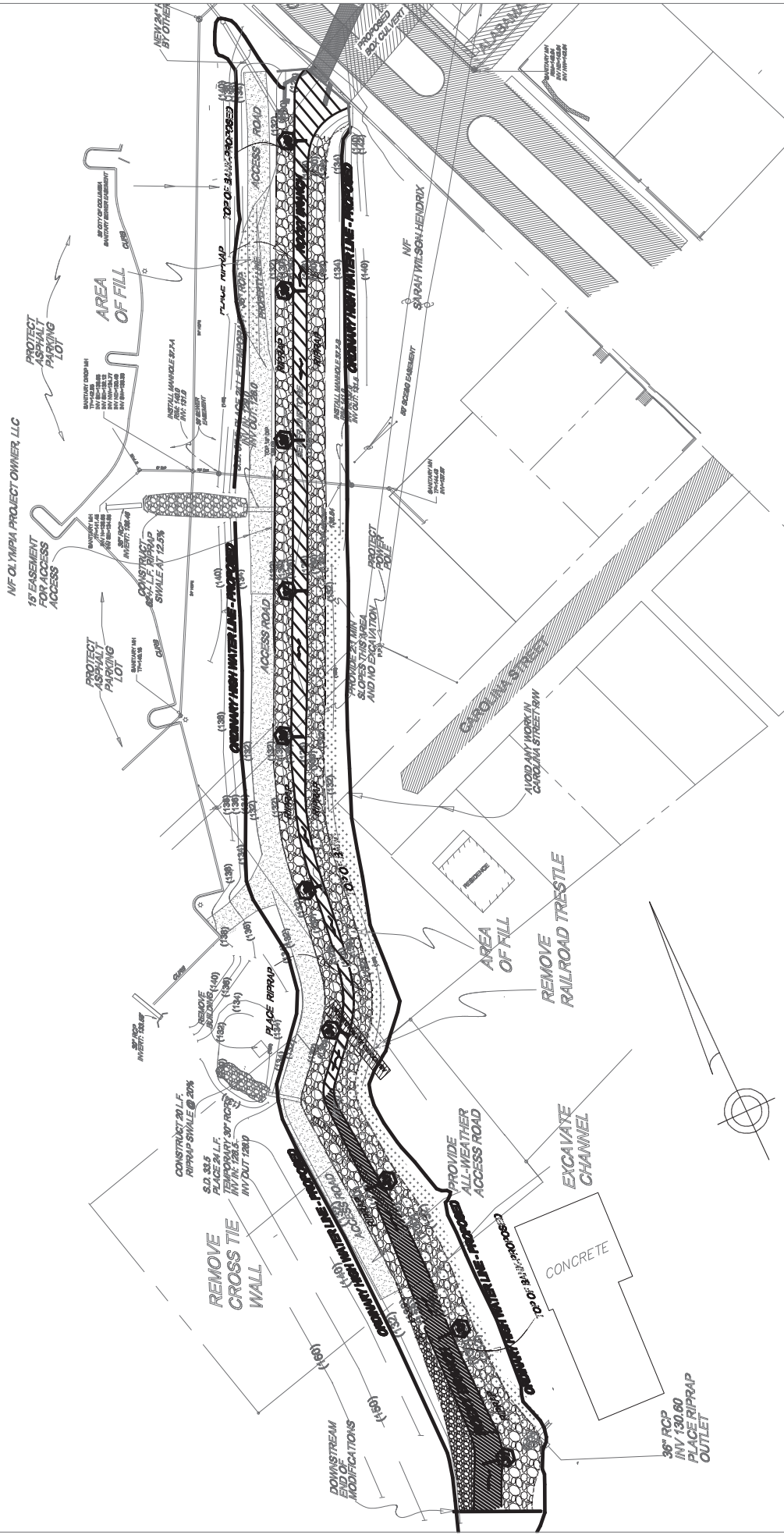
DRAWN BY: LHB  
DATE: 12Feb2020  
EPC PROJECT NO.: 1694c

EXISTING CONDITIONS  
ROCKY BRANCH BANK STABILIZATION  
W-REI  
RICHLAND COUNTY

SHEET NO.

1 of 21





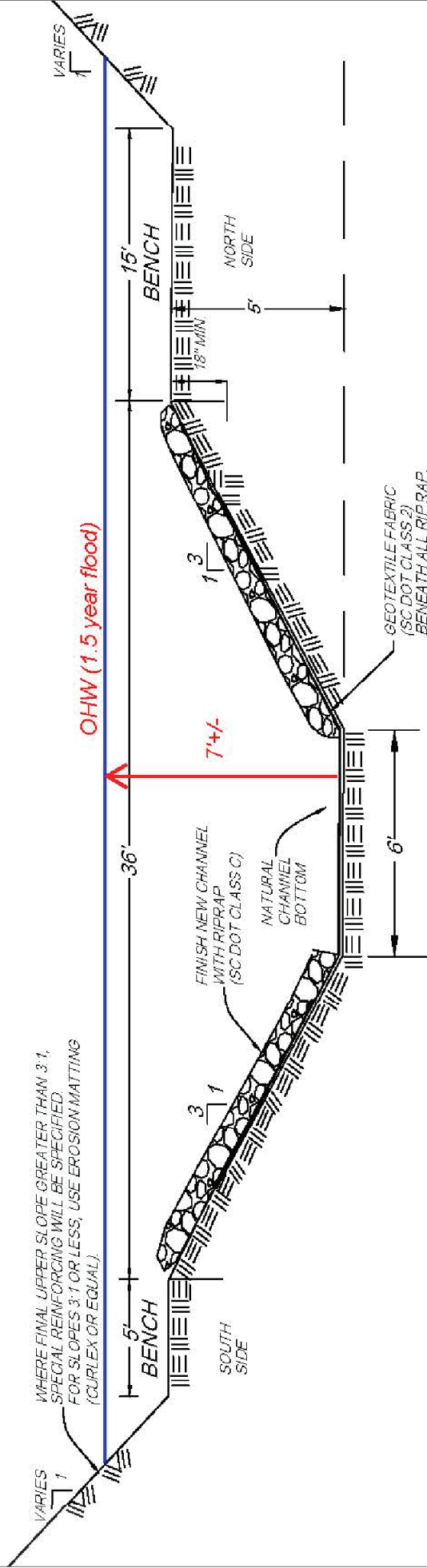
**GRAPHIC SCALE**  
1 inch = 100 feet

Post Office Box 3744  
Greenville, SC 29608  
Phone: (864) 271-3040  
Fax: (864) 235-9299

DRAWN BY: LHB  
DATE: 12Feb2020  
EPC PROJECT NO.: 1694c

**PROPOSED CONDITIONS**  
ROCKY BRANCH BANK STABILIZATION  
W-REI  
RICHLAND COUNTY





EXCAVATED CHANNEL DETAIL - STA 31+00 TO 40+50

NTS

GRAPHIC SCALE

1 inch = nts feet

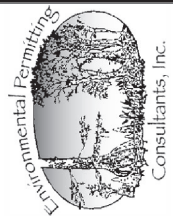
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|--|---------------------------|
| Post Office Box 3744<br>Greenville, SC 29608<br>Phone: (864) 271-3040<br>Fax: (864) 235-9299 | DRAWN BY:<br>LHB          |
|  | DATE:<br>12feb2020        |
|  | EPC PROJECT NO.:<br>1694c |

TYPICAL CROSS SECTION  
ROCKY BRANCH BANK STABILIZATION

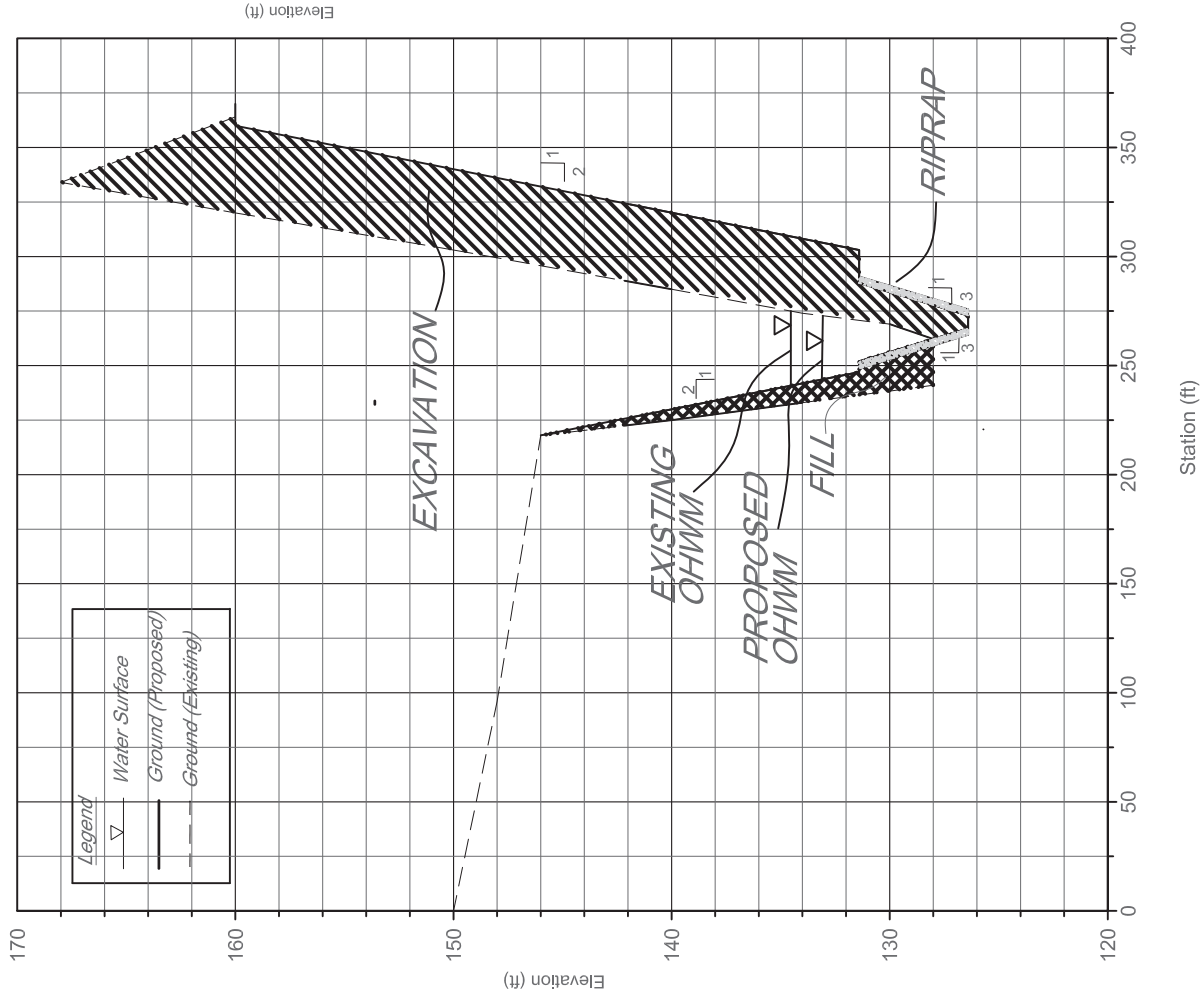
W-REI  
RICHLAND COUNTY

SHEET NO.

3 of 21



Rocky Branch  
Cross Section 32+00



| Legend |                   |
|--------|-------------------|
|        | Water Surface     |
|        | Ground (Proposed) |
|        | Ground (Existing) |

**GRAPHIC SCALE**

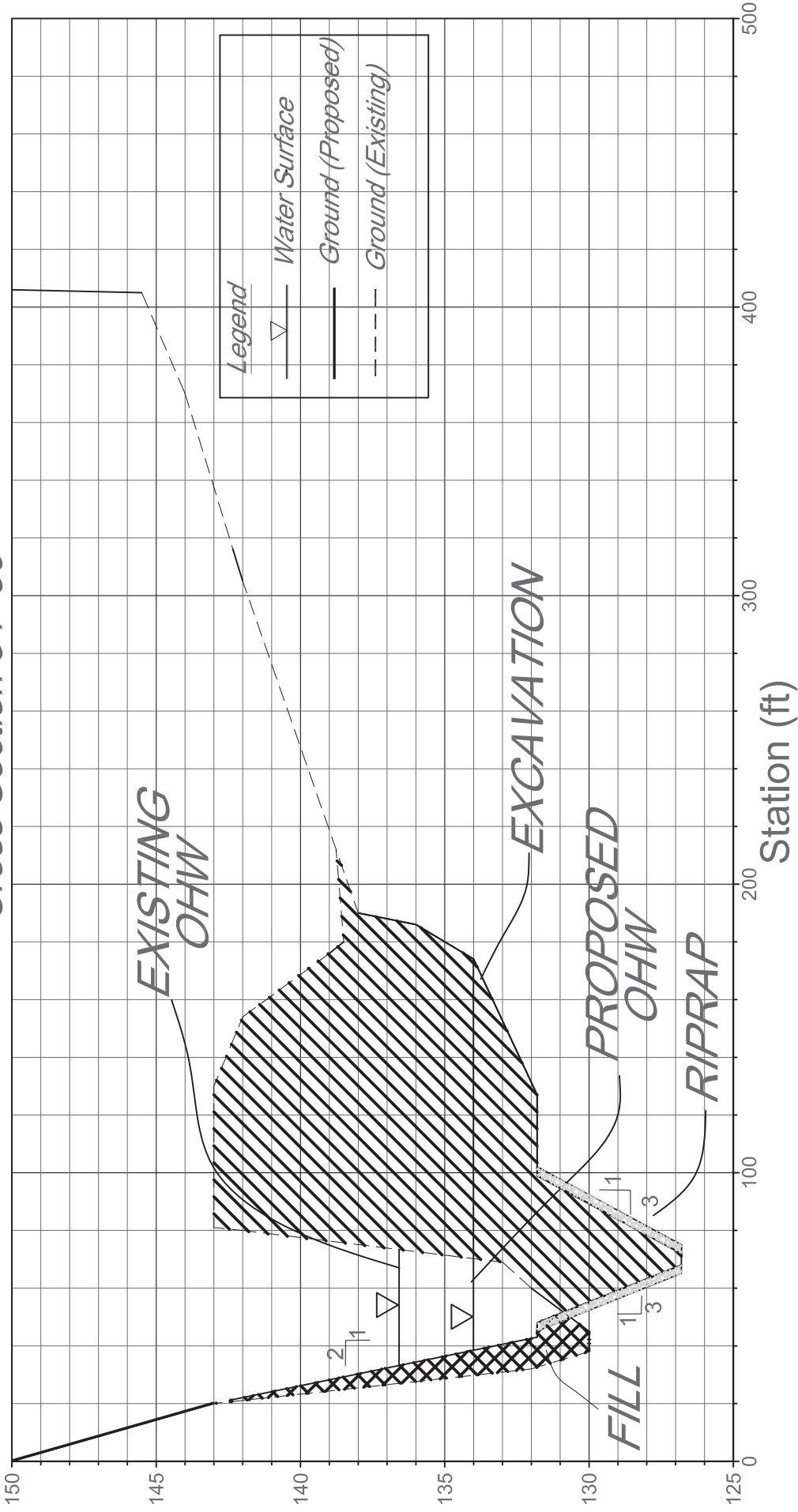
1 inch = nts feet

|  |                           |
|--|---------------------------|
| Post Office Box 3744<br>Greenville, SC 29608<br>Phone: (864) 271-3040<br>Fax: (864) 235-9299 | DRAWN BY:<br>LHB          |
|  | DATE:<br>12Feb2020        |
|  | EPC PROJECT NO.:<br>1694c |



**CROSS SECTION 32 + 00**  
ROCKY BRANCH BANK STABILIZATION  
W-REI  
RICHLAND COUNTY

# Rocky Branch Cross Section 34+30



**GRAPHIC SCALE**

1 inch = nts feet

|  |               |                 |                        |
|--|---------------|-----------------|------------------------|
| Post Office Box 3744<br>Greenville, SC 29608<br>Phone: (864) 271-3040<br>Fax: (864) 235-9299 | DRAWN BY: LHB | DATE: 12Feb2020 | EPC PROJECT NO.: 1694c |
|--|---------------|-----------------|------------------------|



**CROSS SECTION 34 + 30**  
**ROCKY BRANCH BANK STABILIZATION**  
 W-REI  
 RICHLAND COUNTY

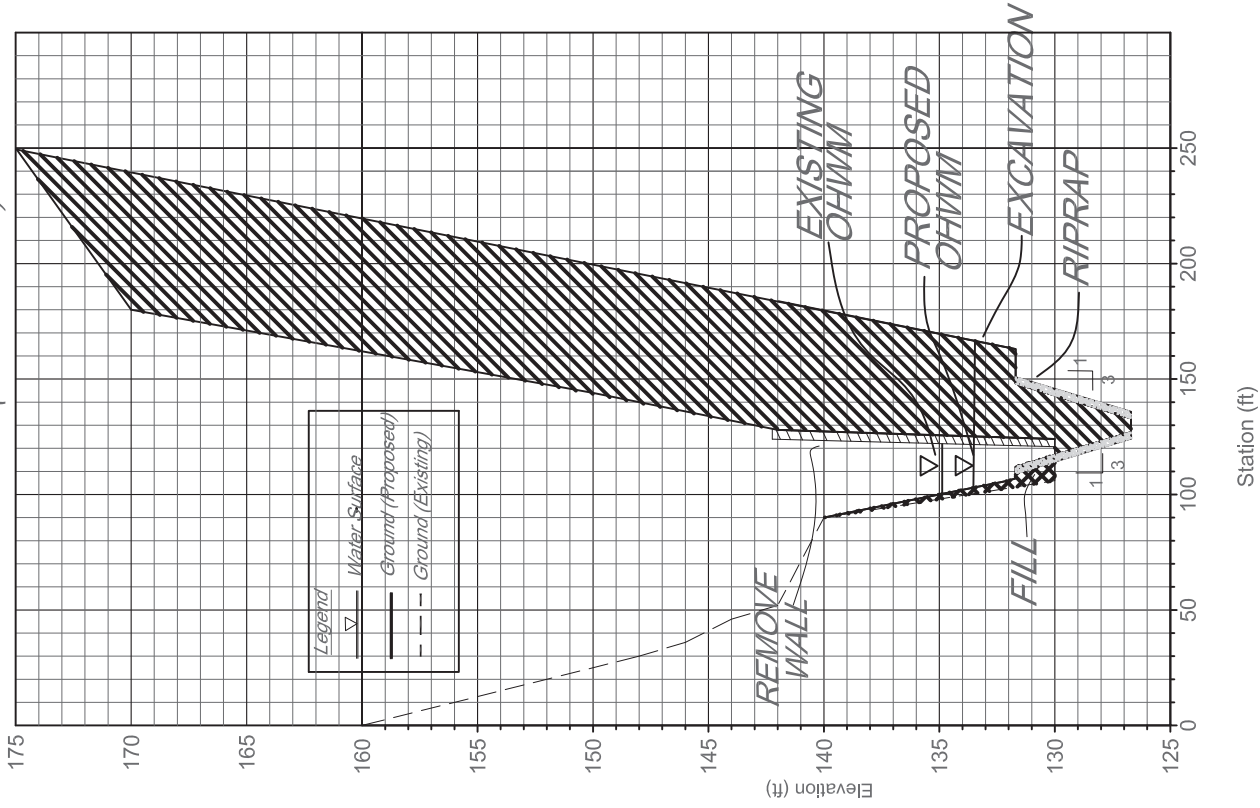
SHEET NO.

**6** of 21



Rocky Branch

Cross Section 33+40 (On CSX tract)



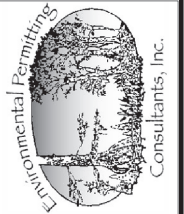
Station (ft)

GRAPHIC SCALE

1 inch = nts feet

Post Office Box 3744  
 Greenville, SC 29608  
 Phone: (864) 271-3340  
 Fax: (864) 235-6238

LHB  
 12Feb2020  
 EPC PROJECT NO.: 1694c

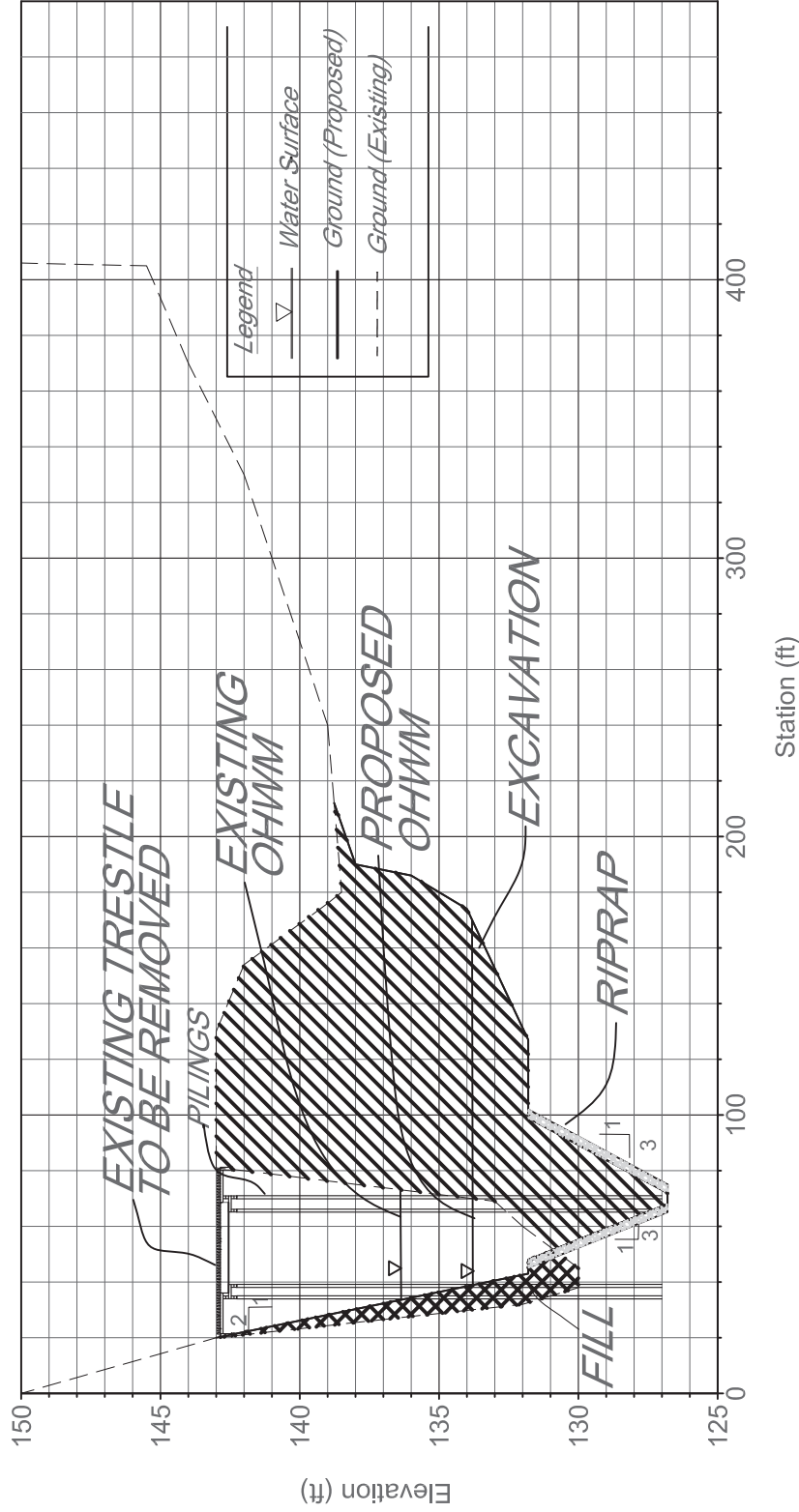


CROSS SECTION 34 + 40 WALL  
 ROCKY BRANCH BANK STABILIZATION  
 W-REI  
 RICHLAND COUNTY

SHEET NO.

7 of 21

Rocky Branch  
Cross Section 34+00 - TRESTLE



GRAPHIC SCALE

1 inch = nts feet

|  |                        |
|--|------------------------|
| Post Office Box 3744<br>Greenville, SC 29608<br>Phone: (864) 271-3040<br>Fax: (864) 235-9299 | DRAWN BY: LHB          |
|  | DATE: 12Feb2020        |
|  | EPC PROJECT NO.: 1694c |

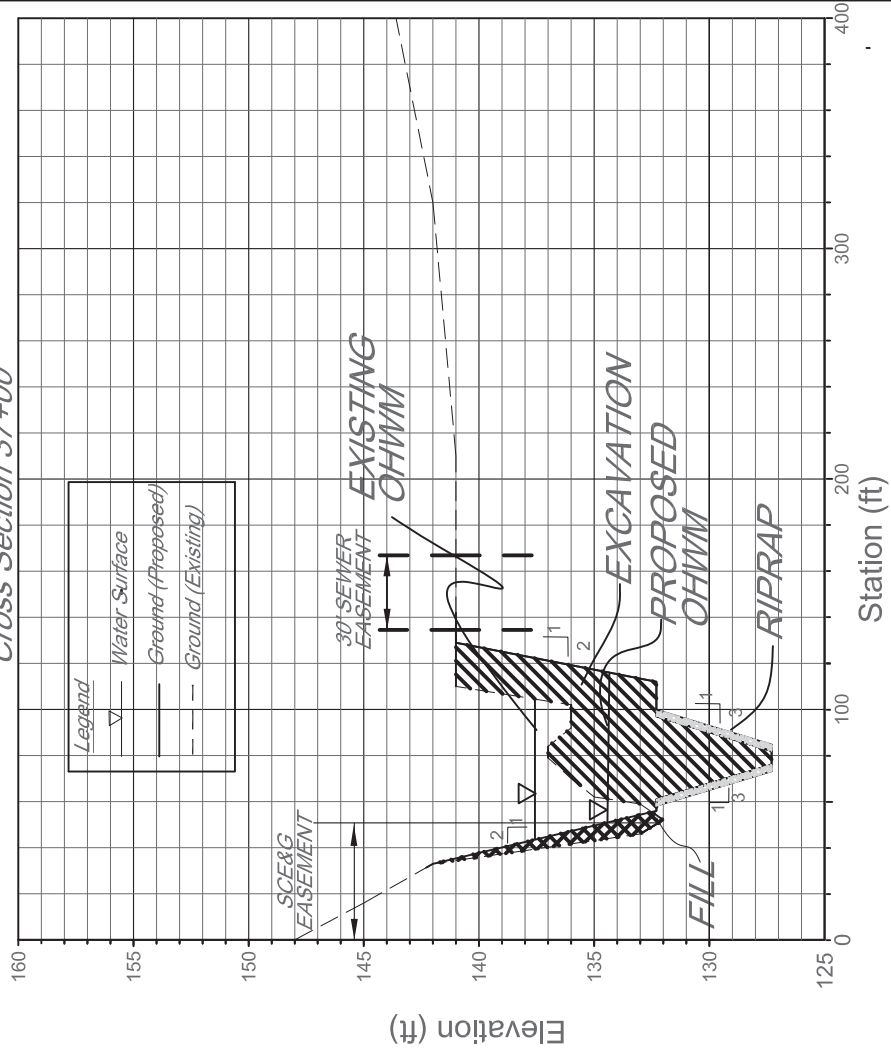


CROSS SECTIONS 34 + 00 TRESTLE  
ROCKY BRANCH BANK STABILIZATION  
W-REI  
RICHLAND COUNTY

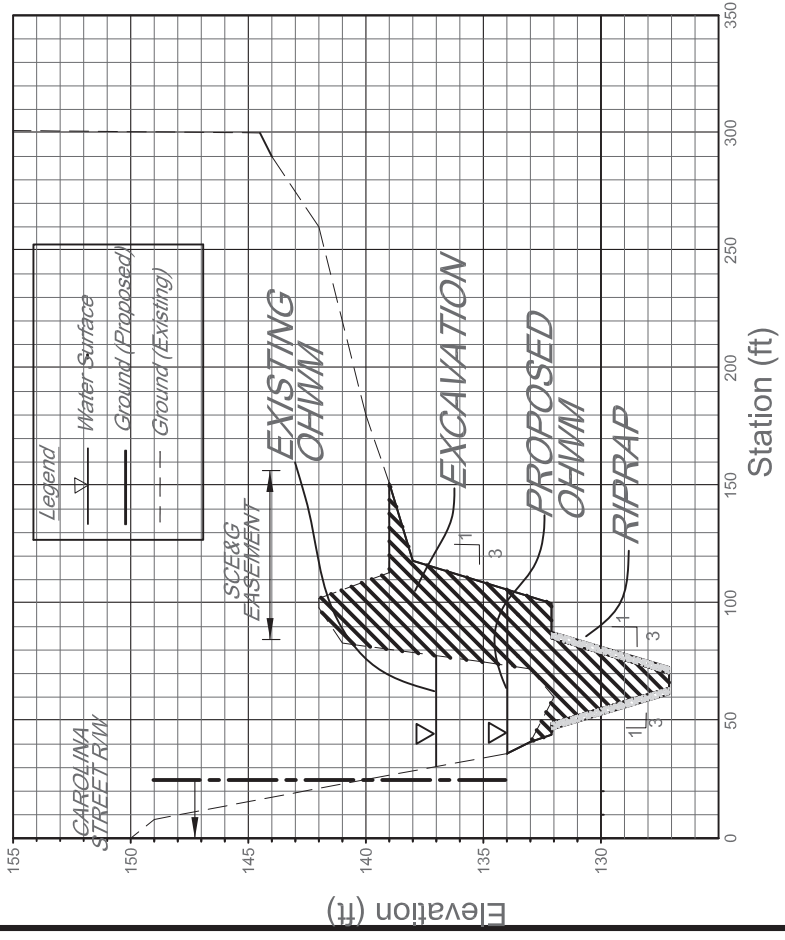
SHEET NO.

5 of 21

Rocky Branch  
Cross Section 37+00



Rocky Branch  
Cross Section 35+70

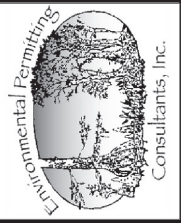


**GRAPHIC SCALE**  
1 inch = nts feet

**CROSS SECTIONS 35 + 70 AND 37 + 00**  
ROCKY BRANCH BANK STABILIZATION  
W-REI  
RICHLAND COUNTY

SHEET NO.

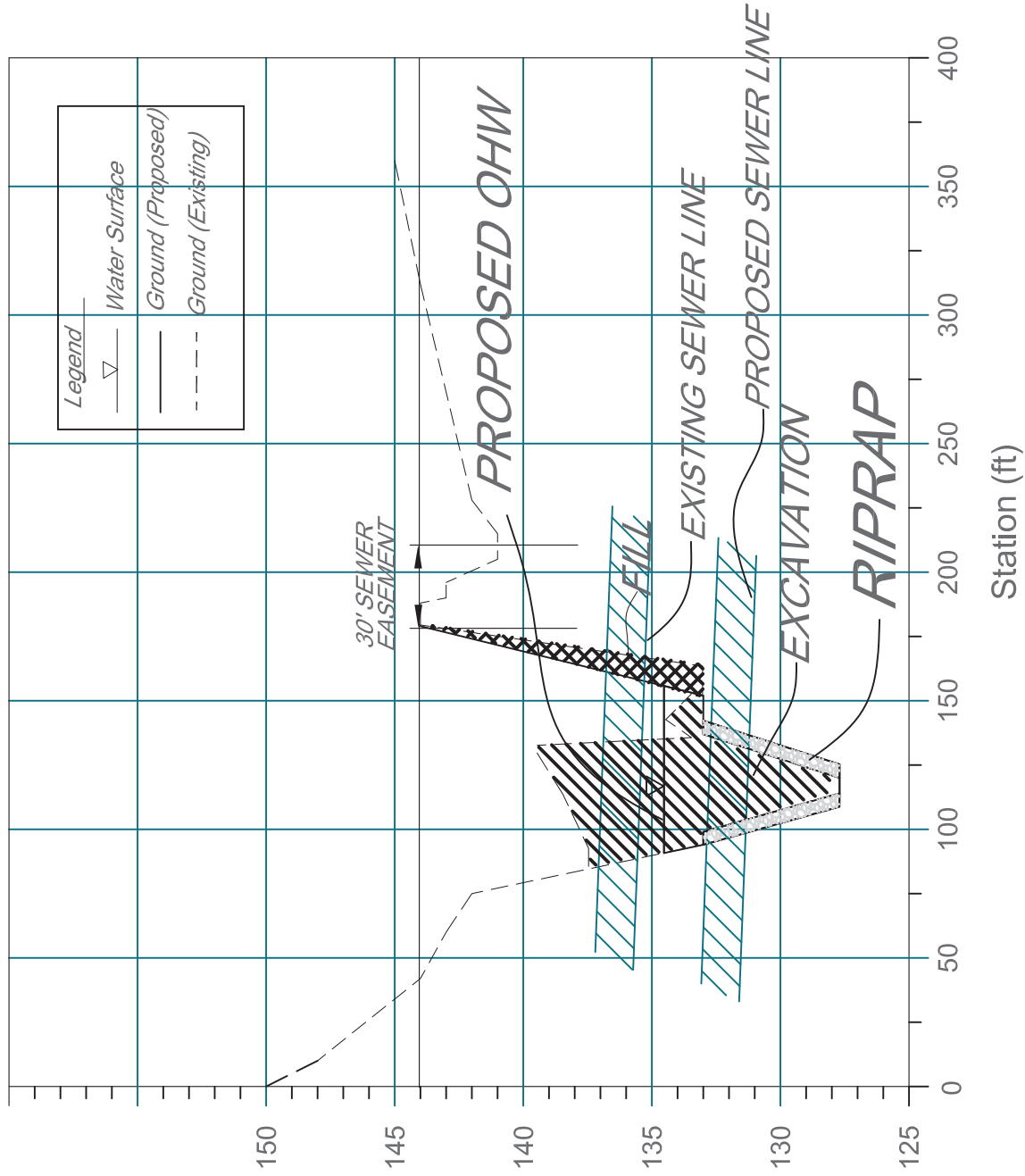
8 of 21



Post Office Box 3744  
Greenville, SC 29608  
Phone: (864) 271-3040  
Fax: (864) 235-9299

DRAWN BY: LHB  
DATE: 12Feb2020  
EPC PROJECT NO.: 1694c

# Rocky Branch Cross Section 38+00- Sewer Crossing



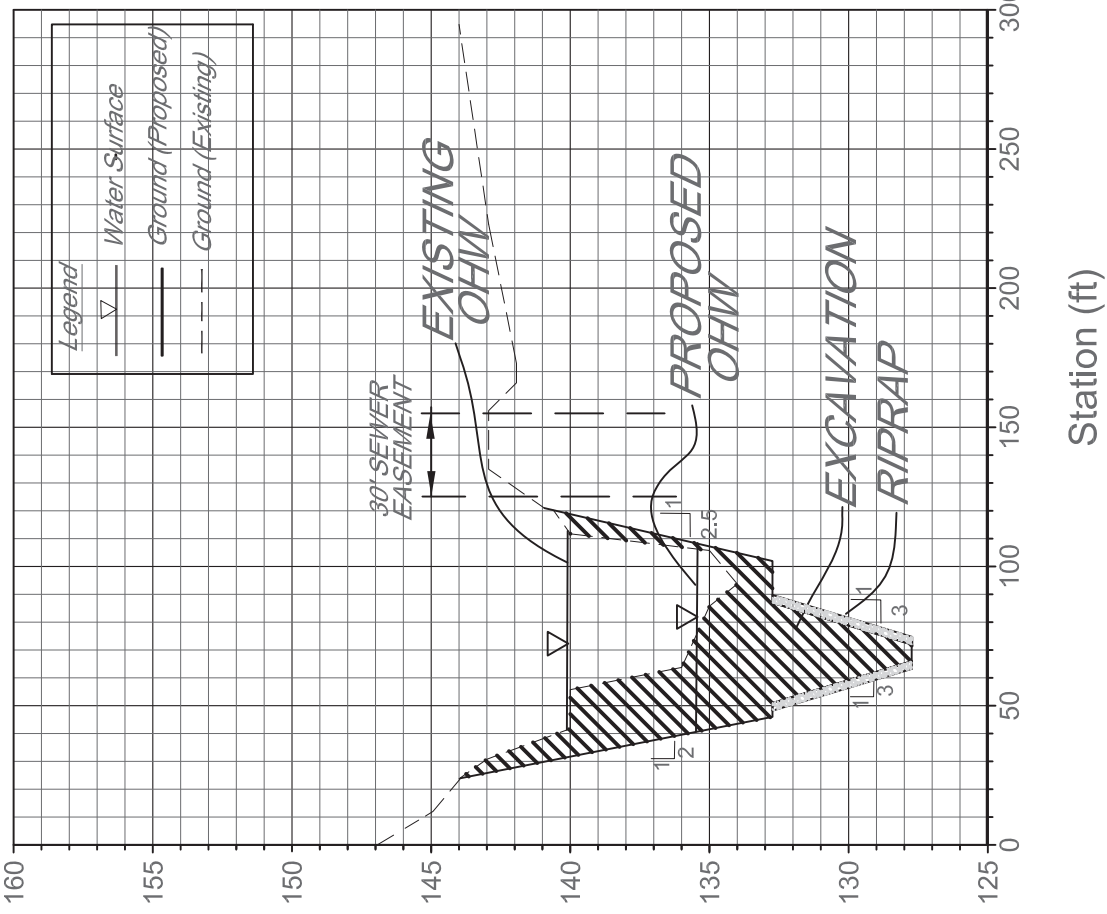
**GRAPHIC SCALE**  
1 inch = nts feet

|  |                        |
|--|------------------------|
| Post Office Box 3744<br>Greenville, SC 29608<br>Phone: (864) 271-3040<br>Fax: (864) 235-9299 | DRAWN BY: LHB          |
|  | DATE: 12Feb2020        |
|  | EPC PROJECT NO.: 1694c |

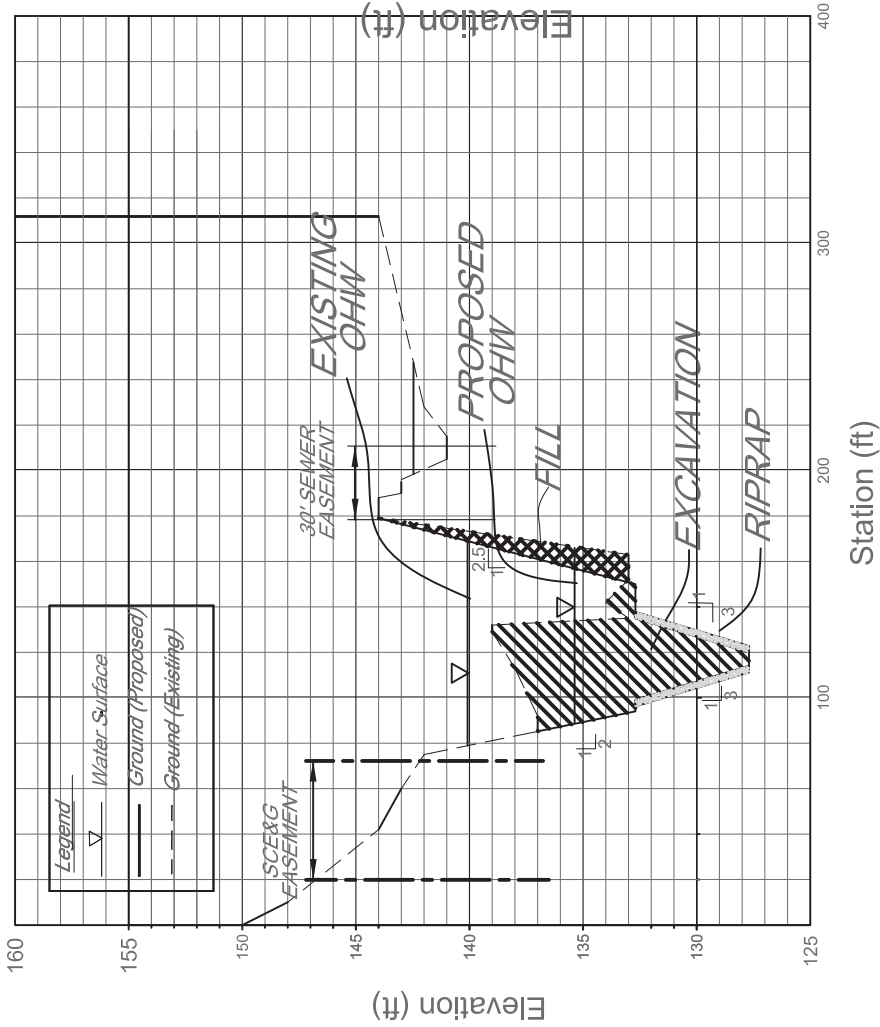
**CROSS SECTION 38 + 00 SS**  
ROCKY BRANCH BANK STABILIZATION  
W-REI  
RICHLAND COUNTY



Rocky Branch  
Cross Section 39+90



Rocky Branch  
CROSS SECTION 39+00



GRAPHIC SCALE

1 inch = nts feet

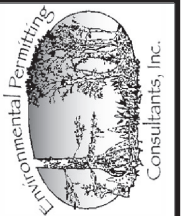
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| DRAWN BY:        | LHB       |
| DATE:            | 12Feb2020 |
| EPC PROJECT NO.: | 1694c     |

CROSS SECTIONS 39 + 00 AND 39 + 90  
ROCKY BRANCH BANK STABILIZATION  
W-REI

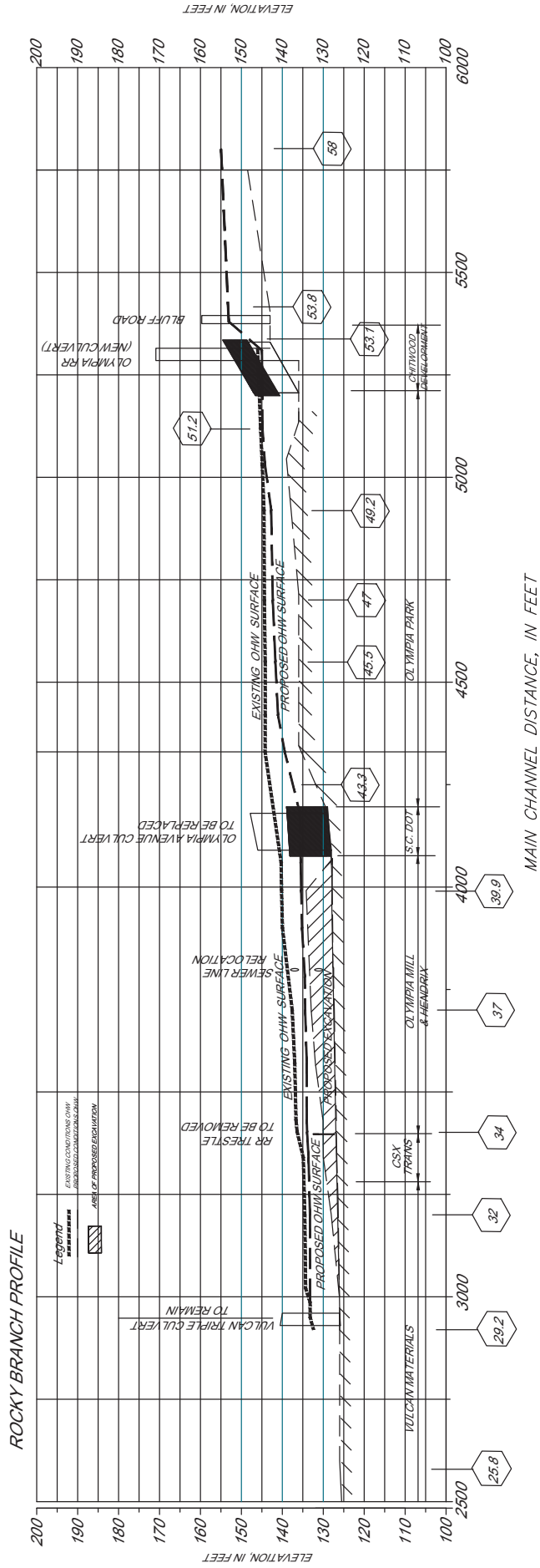
RICHLAND COUNTY

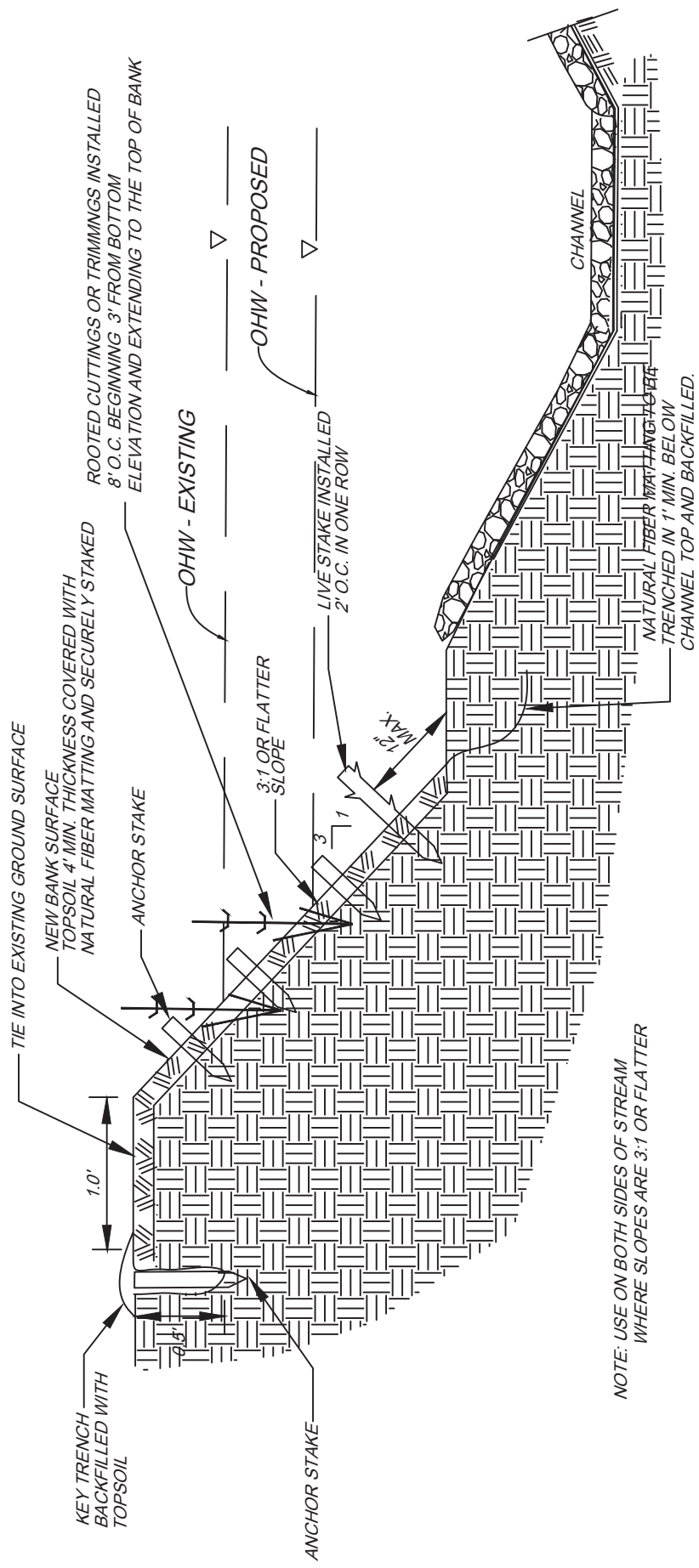
SHEET NO.

10  
of 21



SAC-2012-00830 MODIFICATION Bailpark Assembly St, May 21, 2020, Sheet 33 of 43





NOTE: USE ON BOTH SIDES OF STREAM WHERE SLOPES ARE 3:1 OR FLATTER

UPPER SLOPE STABILIZATION DETAIL - STA 31+00 TO 40+50

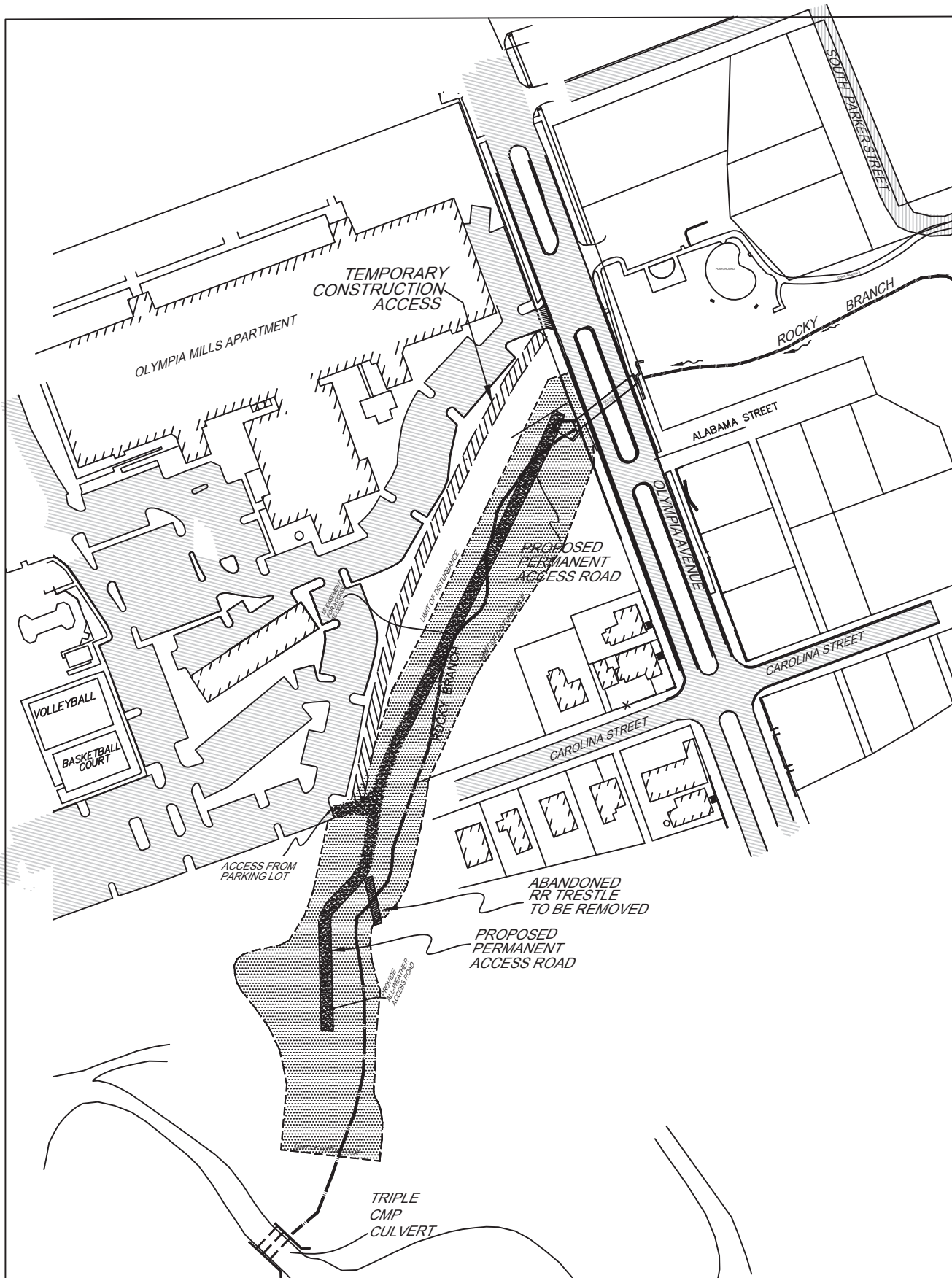
NTS

- REFERENCE 1. BOUNDARY AND TOPOGRAPHIC SURVEY OF ROCKY BRANCH,  
PREPARED BY SURVEY MATTERS, LLC., DATED AUGUST 29, 2014. WITH REVISIONS  
THROUGH APRIL 15, 2016.
2. TOPOGRAPHIC SURVEY OF A PORTION OF ROCKY BRANCH, PREPARED BY SMITH  
SURVEYORS, INC., DATED APRIL 20, 2016.

### NOTES:

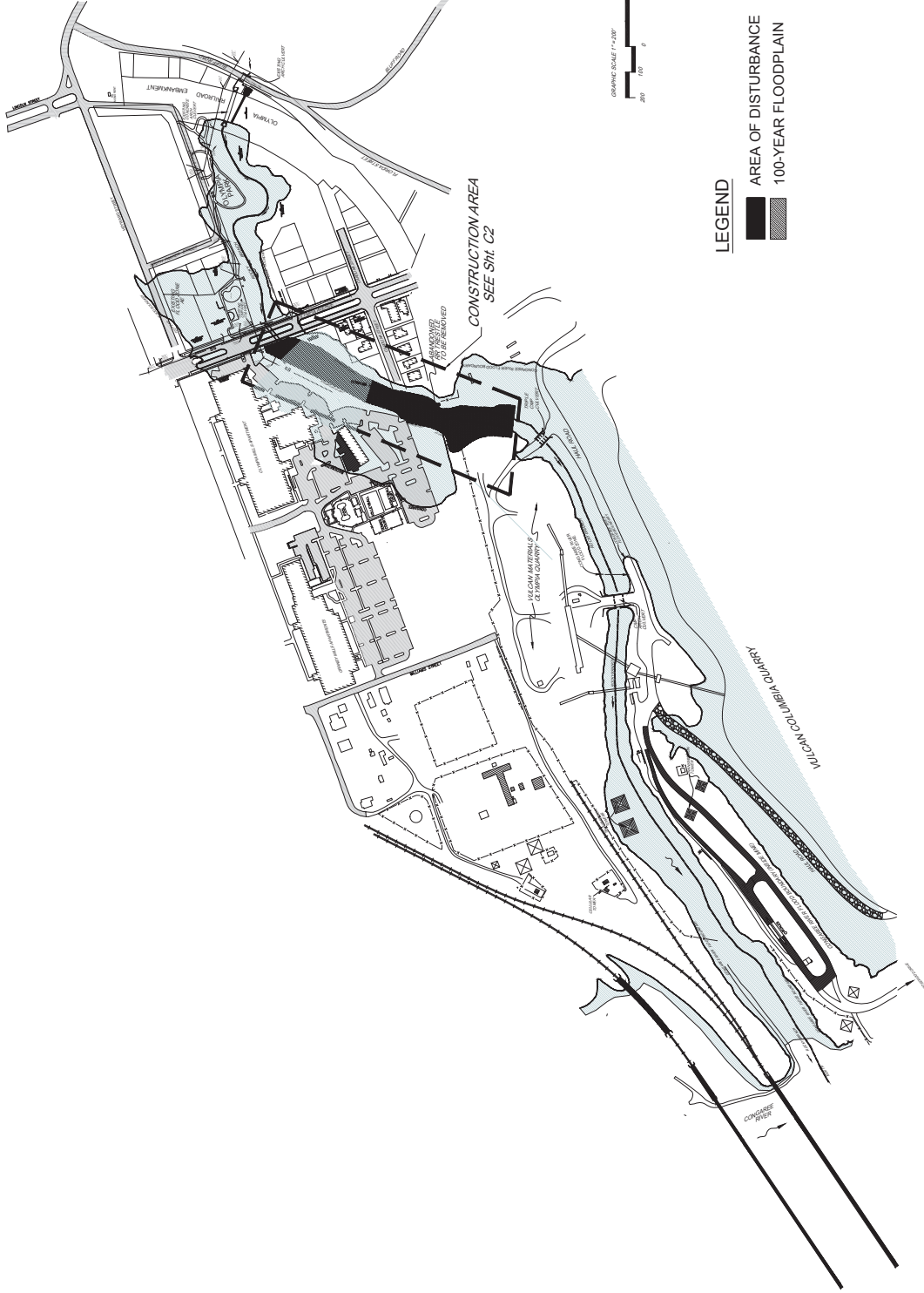
1. PROPERTY OWNERS: VULCAN MATERIALS, SARAH W. HENDRIX, OLYMPIA PROJECT OWNER, LLC (OLYMPIA MILLS), CSX TRANSPORTATION, RICHLAND COUNTY RECREATION COMMISSION, AND CHITWOOD DEVELOPMENT, LLC.
2. ADDRESS: VARIES  
TMS: 08816-02-05, 8814-01-01, 8816-09-11, 8816-09-14A, 8816-02-20  
ZONED: RM-HD
3. THE SITES WILL BE ACCESSIBLE FOR THIS WORK ONLY ON DAYS SPECIFIED BY THE PROPERTY OWNERS.
4. CONTRACTOR TO SCHEDULE A SITE VISIT BY OWNER, STREAM RESTORATION CONSULTANT, AND ENGINEER PRIOR TO BEGINNING WORK.
5. CONTRACTOR TO PROTECT EXISTING PAVEMENT AND FACILITIES AND REPAIR ANY DAMAGE.
6. CONTRACTOR TO RELOCATE ANY AFFECTED STRUCTURES AS DIRECTED BY OWNER.
7. CONTRACTOR TO PAY ALL RICHLAND COUNTY RE-INSPECTION FEES.
8. EXCEPT IN THE DESIGNATED AREA OF DISTURBANCE, ALL HARDWOOD TREES ARE TO BE PROTECTED AND SAVED.
9. ALL RIPRAP IS TO BE PLACED ON FILTER CLOTH.
10. CLEARING IS TO BE LIMITED TO THE LEAST AREA PRACTICAL.
11. CONTRACTOR TO EMPLOY A CERTIFIED EROSION CONTROL INSPECTOR TO MONITOR SITE GRADING AND ADMINISTER THE SWPPP.
12. CONTRACTOR IS TO FOLLOW THE STREAM RESTORATION PLANS AND PERMITS, ALONG WITH THESE PLANS.
13. ALL WORK IS TO BE PERFORMED IN ACCORDANCE WITH ALL PERMITS.
14. CONTRACTOR IS TO NOTIFY CITY OF COLUMBIA PRIOR TO ANY WORK IN A CITY EASEMENT.
15. AFTER COMPLETION, CONTRACTOR IS TO PROVIDE AN AS-BUILT SURVEY PREPARED BY A REGISTERED LAND SURVEYOR.
16. SEE PLANS OF GENESIS CONSULTING GROUP FOR OLYMPIA AVENUE CULVERT REPLACEMENT FOR ADDITIONAL INFORMATION.
17. ALL SIDEWALKS, STRIPING & SIGNAGE TO BE ADA & MUTCD COMPLIANT
18. CONTRACTOR TO MAINTAIN CONTINUOUS STREAM FLOW DURING THE WORK.
19. ALL EXCAVATED MATERIAL IS TO BE REMOVED FROM THE SITE AND DISPOSED OF PROPERLY.
20. CONTRACTOR TO COMPLY WITH ALL SPECIAL CONDITIONS IMPOSED BY THE AFFECTED PROPERTY OWNERS.
21. STRUCTURAL MATERIALS ARE TO BE CLEAN AND FREE OF TOXINS WHICH WILL IMPACT AQUATIC ORGANISMS.





CONSTRUCTION ACCESS PLAN

SAC-2012-00830 MODIFICATION Ballpark Assembly St, May 21, 2020, Sheet 37 of 43



| REVISIONS | DATE |
|-----------|------|
|           |      |
|           |      |
|           |      |
|           |      |
|           |      |

**PACE** ENGINEERING CONSULTANTS, INC.  
 PO BOX 7861, COLUMBIA, SC 29202  
 PHONE: (803) 487-2833  
 ATTN: GERALD E LONDON  
 GELONDON@GMAIL.COM  
 BALLPARK, LLC  
 105 MACCREGOR DRIVE  
 STAFFORD, CT 06092  
 ATTN: ANDREW WEDDLE  
 AWEDDLE@W-R-E1.COM  
 PHONE: (415) 927-4335

PROJECT ENG. GEL  
 DESIGNED BY: GEL  
 DRAWN BY: AM  
 CHECKED BY: GEL  
 APPROVED BY: GEL  
 DATE: FEBRUARY 21, 2020

PROJECT  
**ROCKY BRANCH  
 STREAM EXCAVATION  
 & RESTORATION PLAN**  
 OVERALL  
 CONSTRUCTION PLAN

SEAL  
 SHEET NO. **C1** OF **7**  
 PROJECT NO. 14004

SAC-2012-00830 MODIFICATION Ballpark Assembly St, May 21, 2020, Sheet 38 of 43

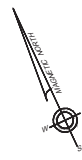
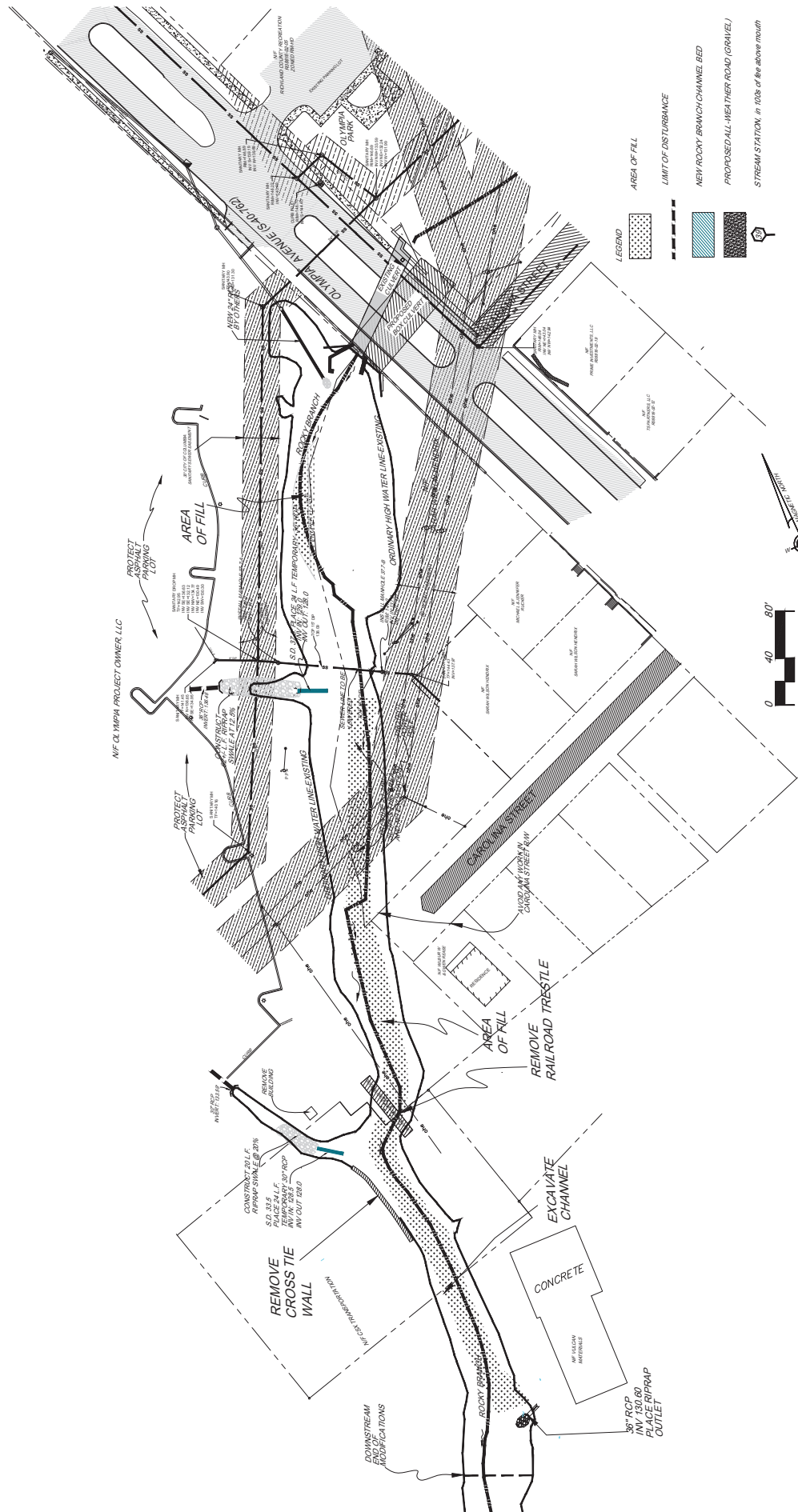
REVISIONS  
DATE

**PACE** ENGINEERING CONSULTANTS, INC.  
PO BOX 7861 COLLEEN, SC 29202  
ATTN: GERALD E. LONDON  
GELONDON@GMAIL.COM  
105 MARGREGOR DRIVE  
STAMFORD, CT 06902  
ATTN: ANDREW WEDDE  
AWEDDE@W-REL.COM  
PHONE: (419) 872-5585

PROJECT ENG. GEL  
DESIGNED BY: GEL  
DRAWN BY: AML  
CHECKED BY: GEL  
APPROVED BY: GEL  
DATE: FEBRUARY 12, 2020

PROJECT  
**ROCKY BRANCH  
STREAM EXCAVATION  
& RESTORATION PLAN**  
SHEET TITLE  
EXISTING CONDITIONS PLAN

SEAL  
PROJECT No. 14004  
SHEET No. C2 | 7 OF 7



- LEGEND
- AREA OF FILL
  - LIMIT OF DISTURBANCE
  - NEW ROCKY BRANCH CHANNEL BED
  - PROPOSED ALL-WEATHER ROAD (GRAVEL)
  - STREAM STATION, in 100's of the above mouth

16 of 21  
FOR PERMITTING REVIEW

| DATE | REVISIONS |
|------|-----------|
|      |           |
|      |           |
|      |           |
|      |           |
|      |           |

**PACE ENGINEERING CONSULTANTS, INC.**  
PA BOX 7681, COLUMBIA, SC 29202  
ATTN: GERALD E. LONON  
GELONON@GMAIL.COM  
GELONON@PACE.COM

**PROJECT ENG. REG.**  
PROJECT NO. 14004

**DESIGNED BY, REG.**  
G. LONON

**DRAWN BY, REG.**  
M. W. WOODRUFF

**CHECKED BY, REG.**  
M. W. WOODRUFF

**APPROVED BY, REG.**  
M. W. WOODRUFF

**DATE (REVISION 1) 2020**

**GRADING PLAN**

**STREAM EXCAVATION & RESTORATION PLAN**

**ROCKY BRANCH**

**PROJECT**

**SEAL**

**SHEET TITLE**

**DATE**

**PROJECT NO.** 14004

**SHEET No.** C3 OF 7

**ESTIMATED CONSTRUCTION SCHEDULE**

**17 OF 21**

**3 DAYS BEFORE COGGING IN SOUTH CAROLINA CALL 811 PALMETTO UTILITY PROTECTION SERVICE**

**FOR PERMITTING REVIEW**

**CONTRACTOR CERTIFICATION:**  
I, THE UNDERSIGNED, HAVE BEEN A PERSONALLY QUALIFIED AS AN INDEPENDENT CONTRACTOR TO THE MAXIMUM EXTENT. TO PROVIDE THAT THE PROJECT OF THE DRAWINGS ARE FOR THE LAND DISTURBANCE AND TO BE COMPLETED THROUGHOUT THE PROJECT PERIOD AND TO BE COMPLETED THROUGHOUT THE PROJECT PERIOD AND TO BE COMPLETED THROUGHOUT THE PROJECT PERIOD. I AM NOT PROVIDING ANY GUARANTEE OR WARRANTY FOR THE LAND DISTURBANCE AND TO BE COMPLETED THROUGHOUT THE PROJECT PERIOD AND TO BE COMPLETED THROUGHOUT THE PROJECT PERIOD.

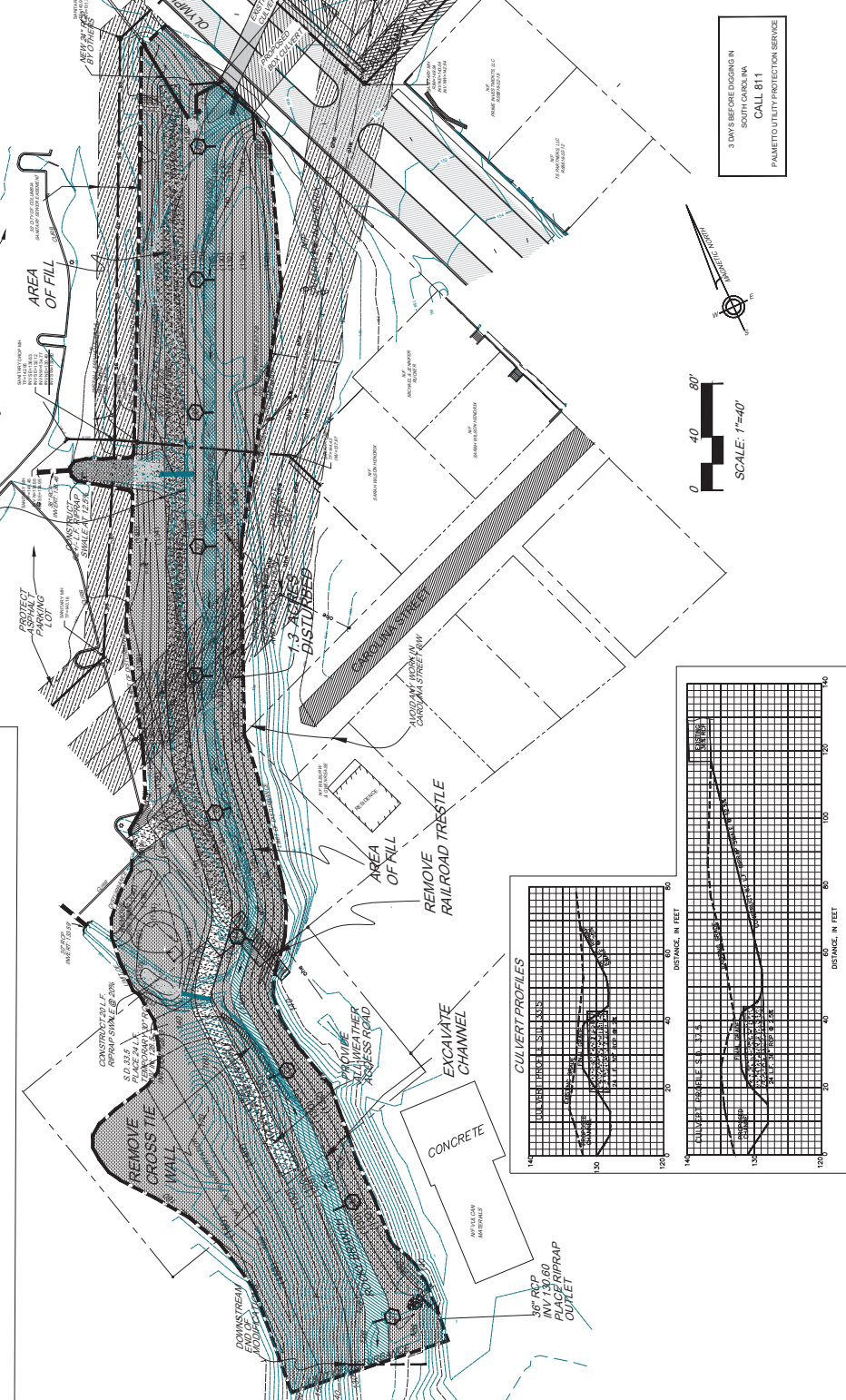
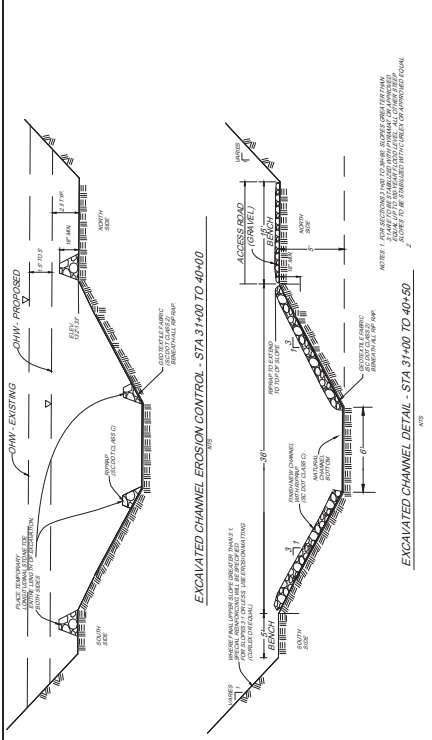
**APPLICANT:** [Blank]

**DATE:** [Blank]

**APPROVED:** [Blank]

**DATE:** [Blank]

- NOTES:**
1. PROPERTY OWNERS: TALLMAN INVESTMENT SERVICES, INC. AND COLLEGE PARK, INC. ARE THE PROPERTY OWNERS. ALL CONTRACTORS MUST OBTAIN WRITTEN PERMISSION FROM THE PROPERTY OWNERS BEFORE ANY CONSTRUCTION ACTS.
  2. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF COLUMBIA REGULATIONS AND ORDINANCES.
  3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF COLUMBIA.
  4. ALL EXCAVATION SHALL BE PERFORMED IN ACCORDANCE WITH ALL PERMITS AND APPROVALS FROM THE CITY OF COLUMBIA.
  5. ALL EXCAVATION SHALL BE PERFORMED IN ACCORDANCE WITH ALL PERMITS AND APPROVALS FROM THE CITY OF COLUMBIA.
  6. ALL EXCAVATION SHALL BE PERFORMED IN ACCORDANCE WITH ALL PERMITS AND APPROVALS FROM THE CITY OF COLUMBIA.
  7. ALL EXCAVATION SHALL BE PERFORMED IN ACCORDANCE WITH ALL PERMITS AND APPROVALS FROM THE CITY OF COLUMBIA.
  8. ALL EXCAVATION SHALL BE PERFORMED IN ACCORDANCE WITH ALL PERMITS AND APPROVALS FROM THE CITY OF COLUMBIA.
  9. ALL EXCAVATION SHALL BE PERFORMED IN ACCORDANCE WITH ALL PERMITS AND APPROVALS FROM THE CITY OF COLUMBIA.
  10. ALL EXCAVATION SHALL BE PERFORMED IN ACCORDANCE WITH ALL PERMITS AND APPROVALS FROM THE CITY OF COLUMBIA.
  11. ALL EXCAVATION SHALL BE PERFORMED IN ACCORDANCE WITH ALL PERMITS AND APPROVALS FROM THE CITY OF COLUMBIA.
  12. ALL EXCAVATION SHALL BE PERFORMED IN ACCORDANCE WITH ALL PERMITS AND APPROVALS FROM THE CITY OF COLUMBIA.
  13. ALL EXCAVATION SHALL BE PERFORMED IN ACCORDANCE WITH ALL PERMITS AND APPROVALS FROM THE CITY OF COLUMBIA.
  14. ALL EXCAVATION SHALL BE PERFORMED IN ACCORDANCE WITH ALL PERMITS AND APPROVALS FROM THE CITY OF COLUMBIA.
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  16. ALL EXCAVATION SHALL BE PERFORMED IN ACCORDANCE WITH ALL PERMITS AND APPROVALS FROM THE CITY OF COLUMBIA.
  17. ALL EXCAVATION SHALL BE PERFORMED IN ACCORDANCE WITH ALL PERMITS AND APPROVALS FROM THE CITY OF COLUMBIA.
  18. ALL EXCAVATION SHALL BE PERFORMED IN ACCORDANCE WITH ALL PERMITS AND APPROVALS FROM THE CITY OF COLUMBIA.
  19. ALL EXCAVATION SHALL BE PERFORMED IN ACCORDANCE WITH ALL PERMITS AND APPROVALS FROM THE CITY OF COLUMBIA.
  20. ALL EXCAVATION SHALL BE PERFORMED IN ACCORDANCE WITH ALL PERMITS AND APPROVALS FROM THE CITY OF COLUMBIA.
  21. ALL EXCAVATION SHALL BE PERFORMED IN ACCORDANCE WITH ALL PERMITS AND APPROVALS FROM THE CITY OF COLUMBIA.



**CULVERT PROFILES**

**CULVERT #1: 24\"/>**

SAC-2012-00830 MODIFICATION Ballpark Assembly St, May 21, 2020, Sheet 40 of 43

REVISIONS  
DATE

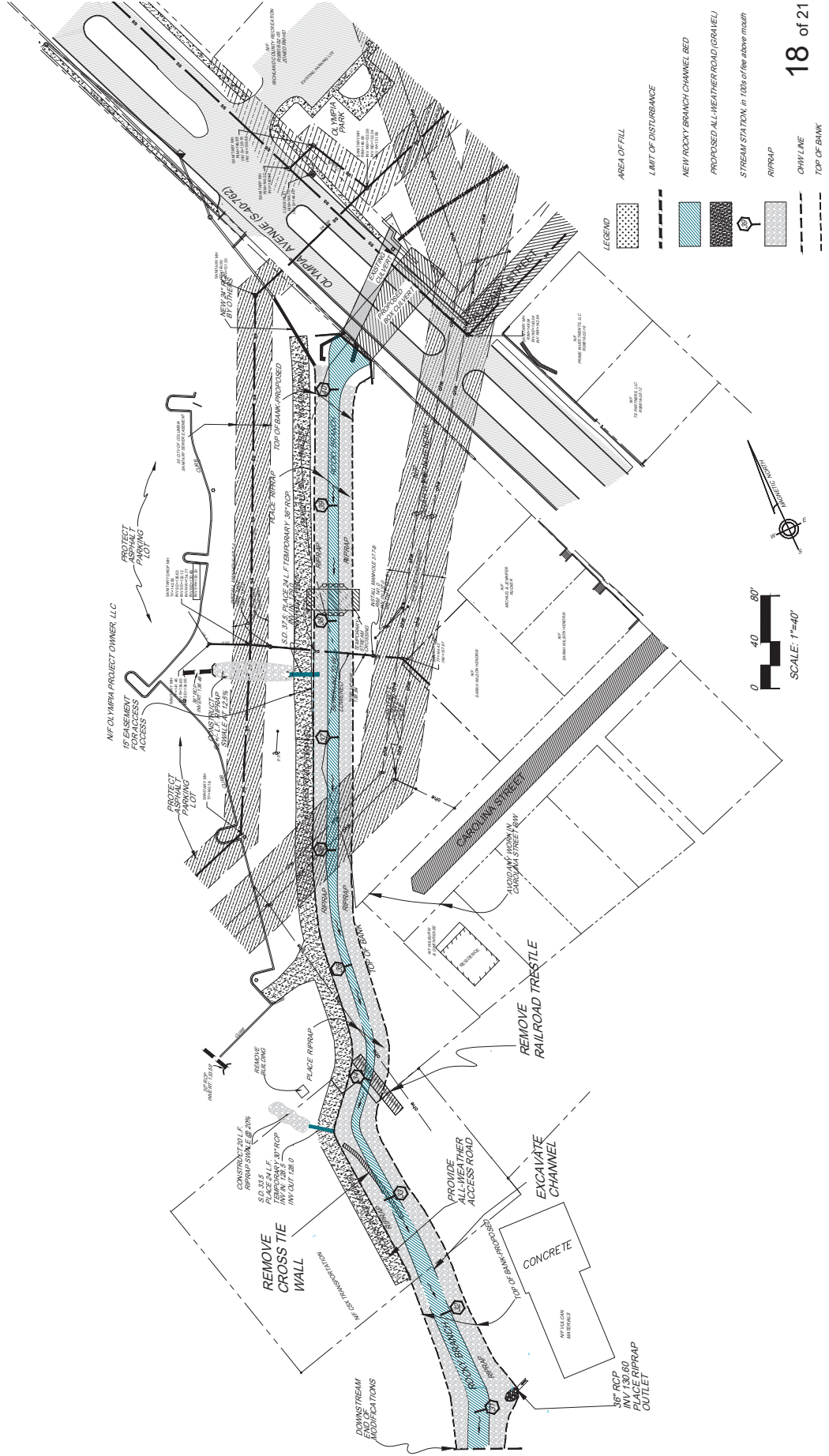
**PACE**  
ENGINEERING CONSULTANTS, INC.  
PO BOX 7861 COLUMBIA, SC 29202  
ATTN: GERALD E. LONON  
GELONONG@GMAIL.COM  
105 MARCEGOR DRIVE  
STAFFORD, CT 06062  
ATTN: ANDREW WEDDE  
AWEDDE@W-REL.COM  
PHONE: (415) 972-5585

PROJECT ENG. GEL  
DESIGNED BY GEL  
DRAWN BY MGL  
CHECKED BY GEL  
APPROVED BY GEL  
DATE: FEBRUARY 12, 2020

**ROCKY BRANCH  
STREAM EXCAVATION  
& RESTORATION PLAN**  
RIPRAP PLAN

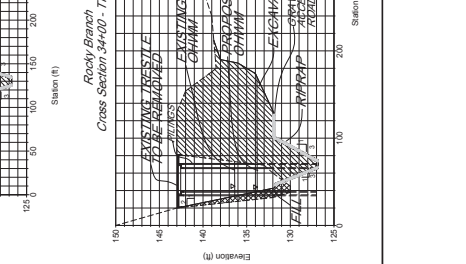
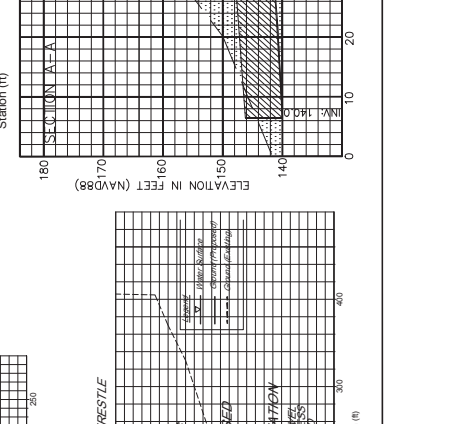
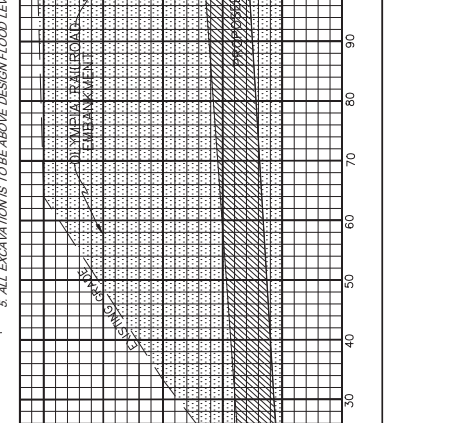
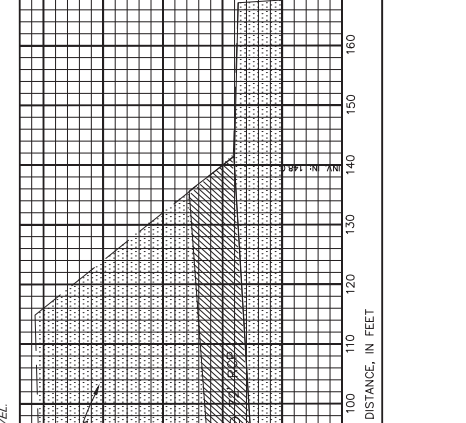
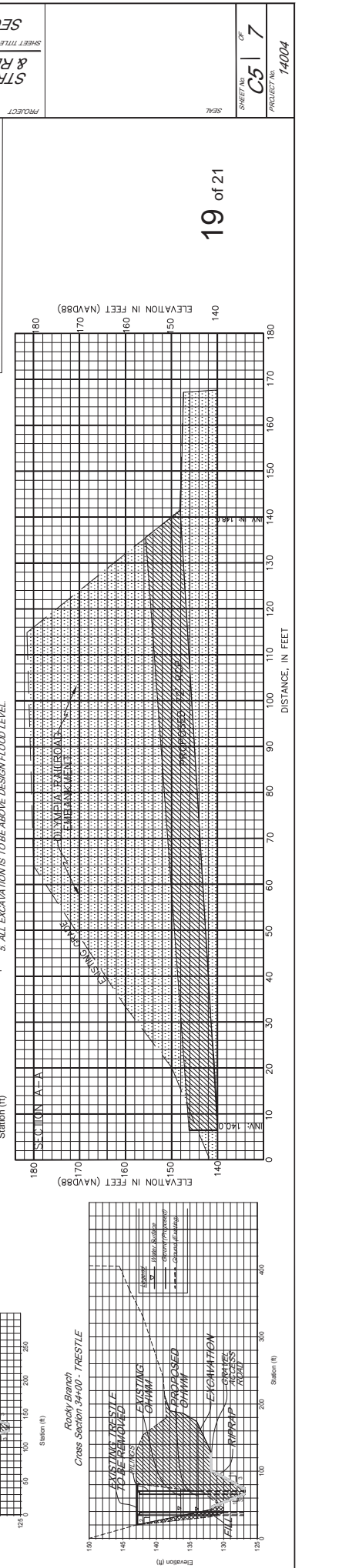
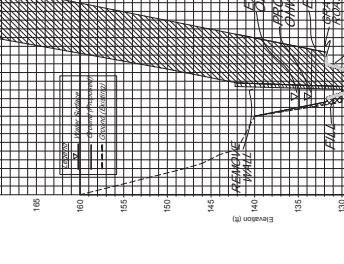
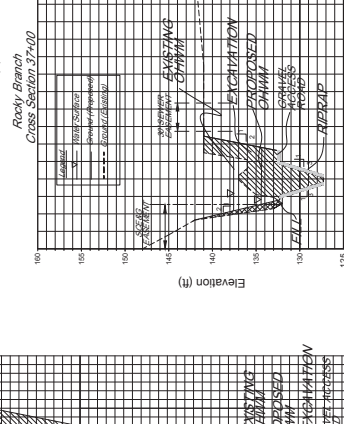
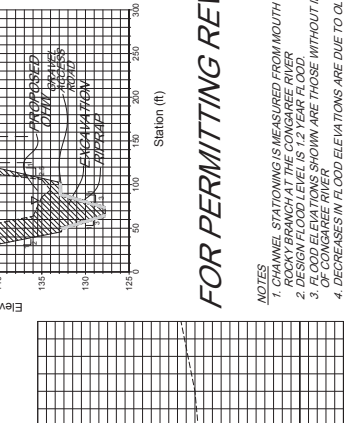
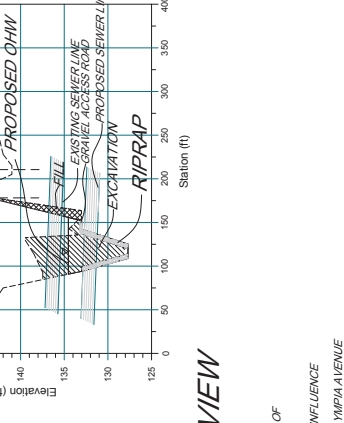
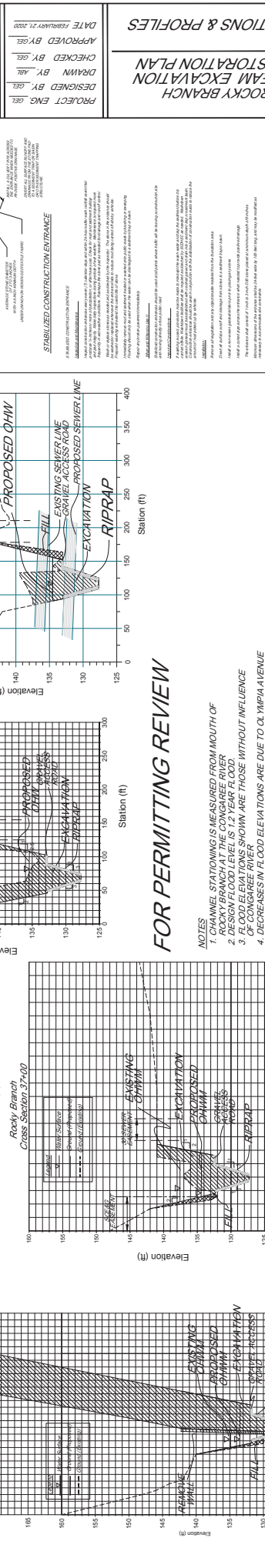
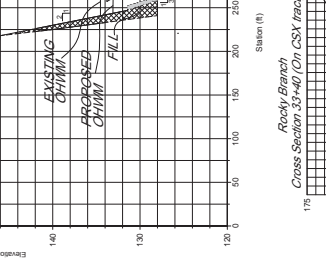
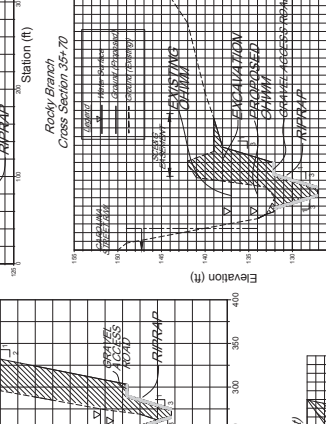
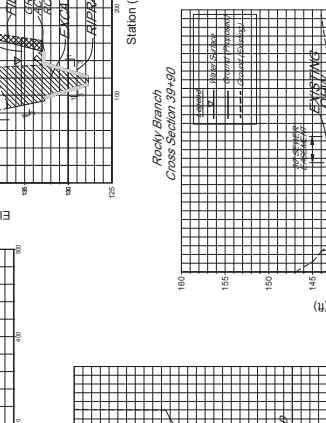
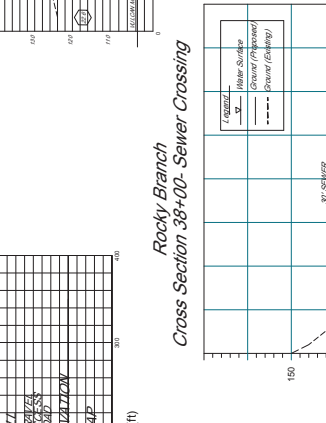
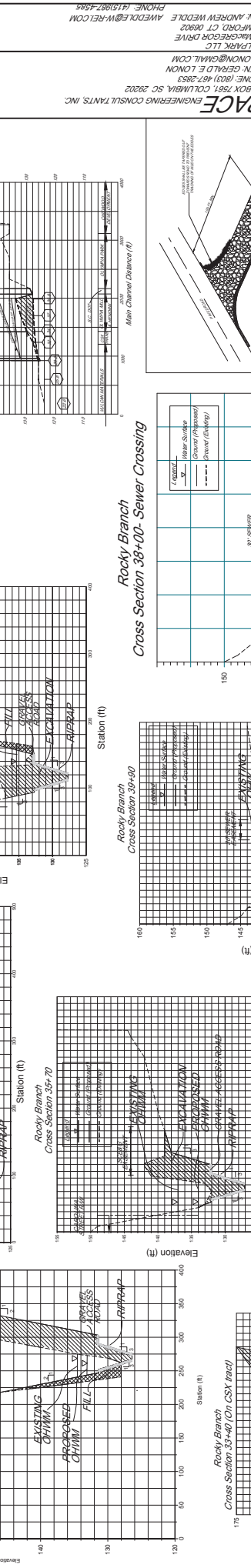
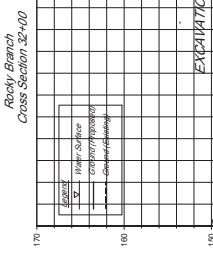
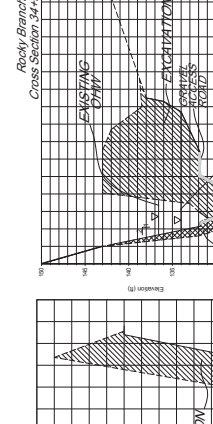
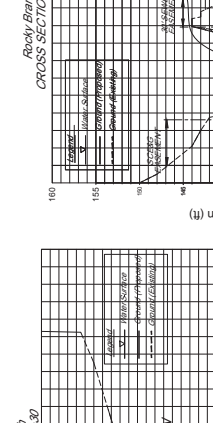
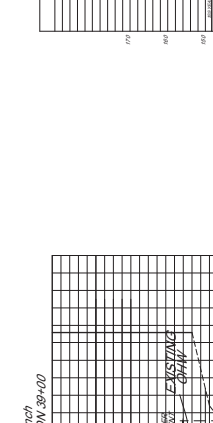
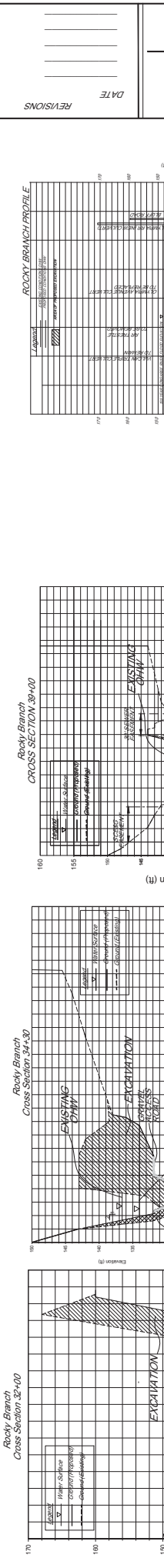
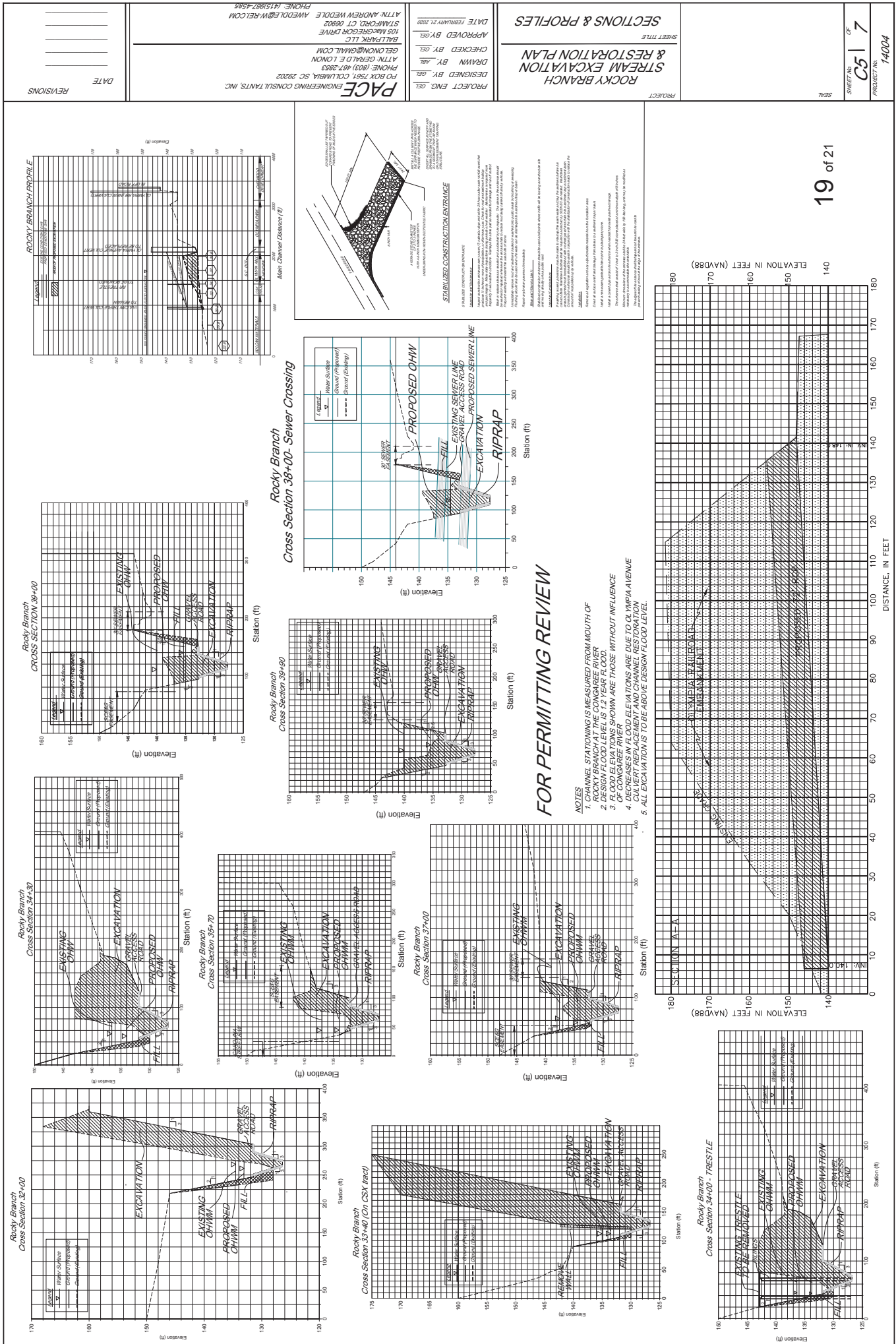
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SHEET No. **C4** OF **7**  
PROJECT No. **14004**



18 of 21

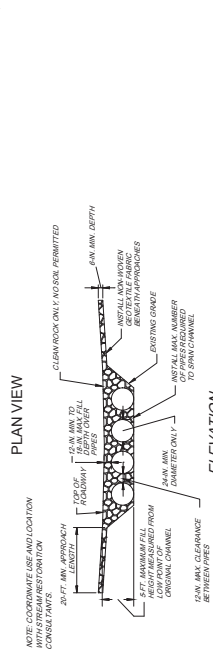
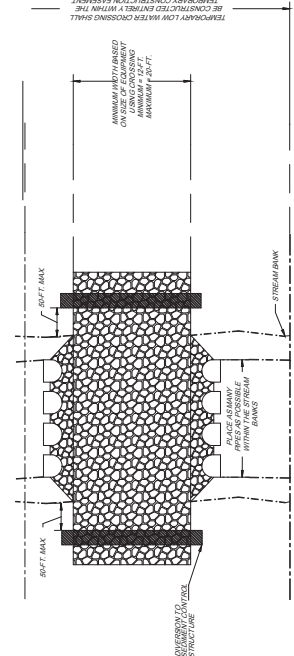
FOR PERMITTING REVIEW



FOR PERMITTING REVIEW

- NOTES
1. CHANNEL STATIONING IS MEASURED FROM MOUTH OF ROCKY BRANCH AT THE CONGARREE RIVER
  2. DESIGN FLOOD LEVEL IS 1.2 YEAR FLOOD
  3. FLOOD ELEVATIONS SHOWN ARE THOSE WITHOUT INFLUENCE OF CONGARREE RIVER FLOOD ELEVATIONS ARE DUE TO CLYMPIA AVENUE CULVERT REPLACEMENT AND CHANNEL RESTORATION
  4. ALL EXCAVATION IS TO BE ABOVE DESIGN FLOOD LEVEL

**PROJECT**  
 ROCKY BRANCH  
 STREAM EXCAVATION  
 & RESTORATION PLAN  
**SECTION & PROFILES**  
**SHEET TITLE**  
 PROJECT NO. 14004  
 SHEET NO. C5 OF 7  
 DATE FEBRUARY 21, 2020  
 APPROVED BY: [Signature]  
 CHECKED BY: [Signature]  
 DRAWN BY: [Signature]  
 DESIGNED BY: [Signature]  
**PROJECT ENG.:** [Signature]  
**PAPE ENGINEERING CONSULTANTS, INC.**  
 PO BOX 7861 COLUMBIA, SC 29202  
 ATTN: GEORGE S. LONDON  
 PHONE: (803) 467-2853  
 BALL PARK, LLC  
 105 MARGARET DRIVE  
 STAMFORD, CT 06902  
 ATTN: ANDREW WEDDLE  
 AWEDD@W-R-L.COM  
 PHONE: (415)887-5588



**TEMPORARY STREAM CROSSING**

**TEMPORARY STREAM LOW WATER CROSSING**  
 Prior to constructing a temporary stream crossing, the contractor shall be responsible for the project to submit an application for a permit to the local authority having jurisdiction. The permit shall be obtained prior to construction. The permit shall include all applicable regulations for information on permitting requirements.

**ASSEMBLY:**  
 Crossings shall be installed prior to any excavation and during the installation of the crossing.

The temporary stream crossing shall be 15 feet wide by 12 feet high. The structure shall be constructed of concrete or steel. The structure shall be installed on a firm, level surface. The structure shall be installed on a firm, level surface.

Anchor stakes shall be installed on the apron and on the stream. The anchor stakes shall be installed on the apron and on the stream. The anchor stakes shall be installed on the apron and on the stream.

The apron shall be constructed of concrete or steel. The apron shall be constructed of concrete or steel. The apron shall be constructed of concrete or steel.

The stream bank shall be protected with rip rap. The stream bank shall be protected with rip rap. The stream bank shall be protected with rip rap.

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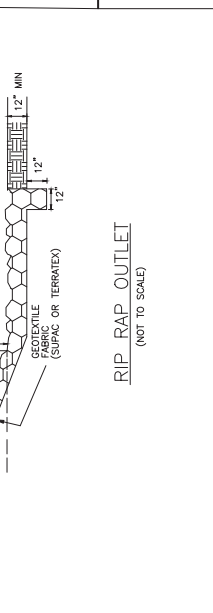
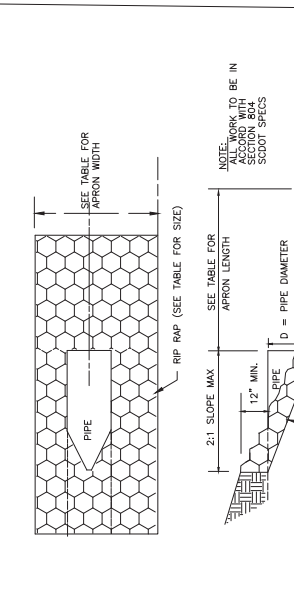
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**RIP RAP OUTLET**

NOTE: ALL WORK TO BE IN ACCORD WITH SCOOT SPECS

NOTE: USE TABLE FOR SIZE

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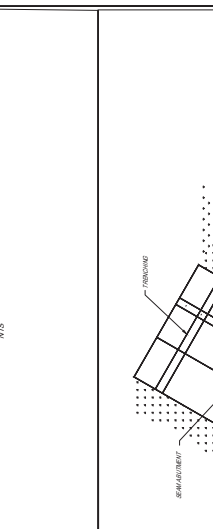
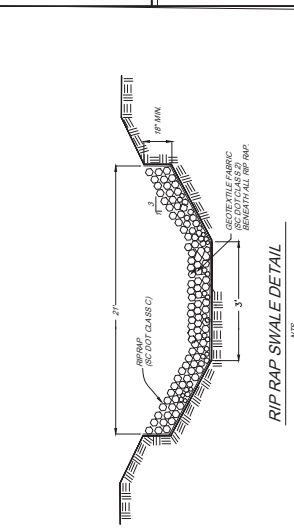
NOTE: USE TABLE FOR SIZE

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NOTE: USE TABLE FOR SIZE



**SLOPE DETAIL**

NOTE: FENCE ON UPPER SLOPE OF 1:1 TO 1.5:1

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| DATE | REVISIONS |
|------|-----------|
|      |           |
|      |           |
|      |           |
|      |           |
|      |           |

**PAGE ENGINEERING CONSULTANTS, INC.**  
 PO BOX 7981, COLUMBIA, SC 29202  
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 GELON@PAGEENGINEERING.COM  
 105 MARGARET DRIVE  
 STAMFORD, CT 06902  
 A/TN, ANDREW WEDDLE  
 PHONE: (415) 987-1888

**PROJECT ENG. GEL**  
 DESIGNED BY: GEL  
 DRAWN BY: GEL  
 CHECKED BY: GEL  
 APPROVED BY: GEL  
 DATE: FEBRUARY 21, 2020

**ROCKY BRANCH  
 & STREAM EXCAVATION  
 RESTORATION PLAN**  
 CONSTRUCTION  
 SHEET NO. C6 | 7 OF 14004

**SLOPE STABILIZATION DETAIL**  
 END ROLL OVERLAP  
 SIDE SEAM OVERLAP STABLE DETAIL  
 BOTTOM OF SLOPE TERMINATION  
 SIZE SEAM ABUT STABLE DETAIL

