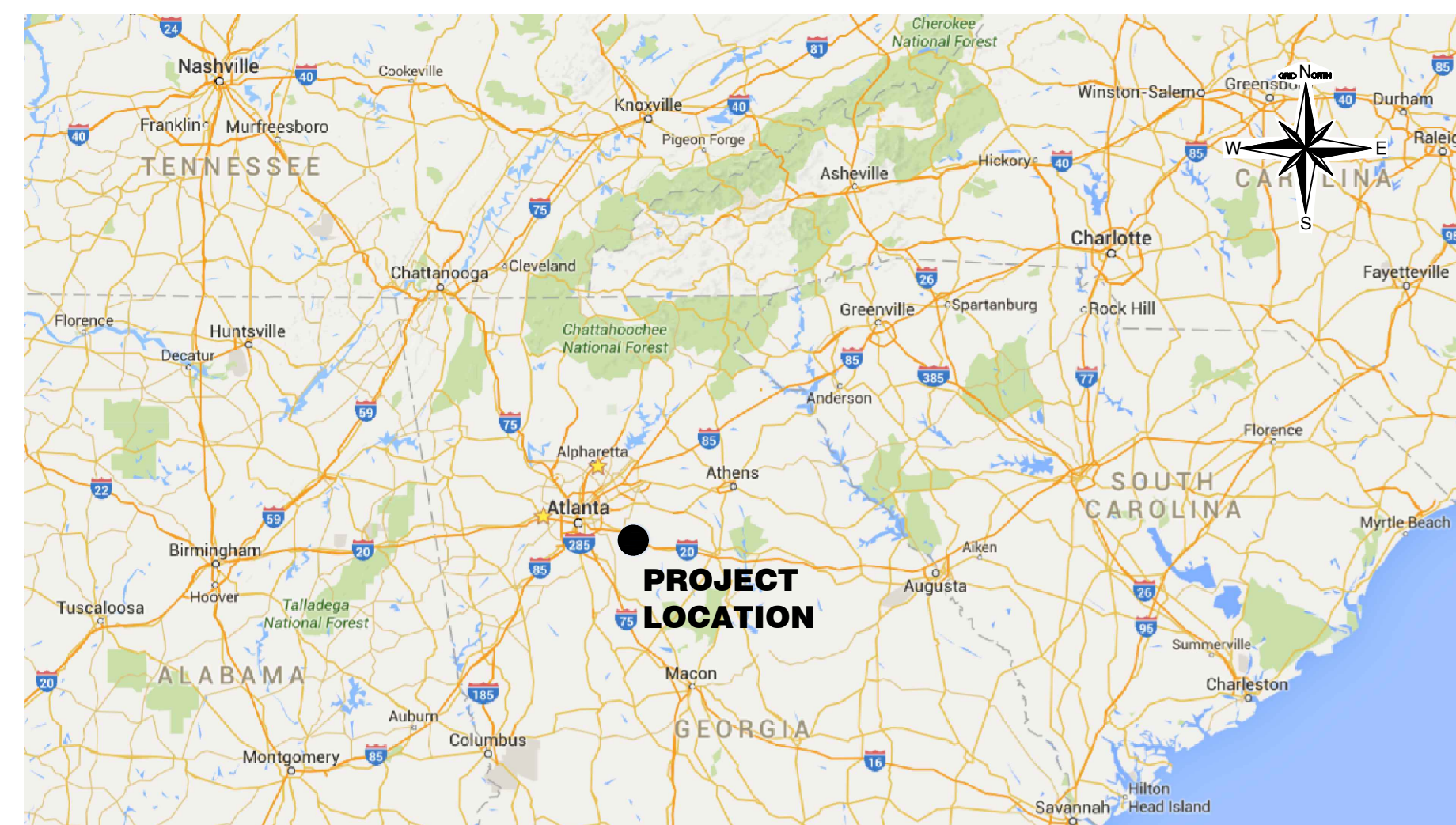


# ROCKDALE WATER RESOURCES

## COSTLEY MILL ROAD AND SALEM CHURCH ROAD

### 8 INCH WATER LINE EXTENSION AND SERVICE LINE CONNECTIONS

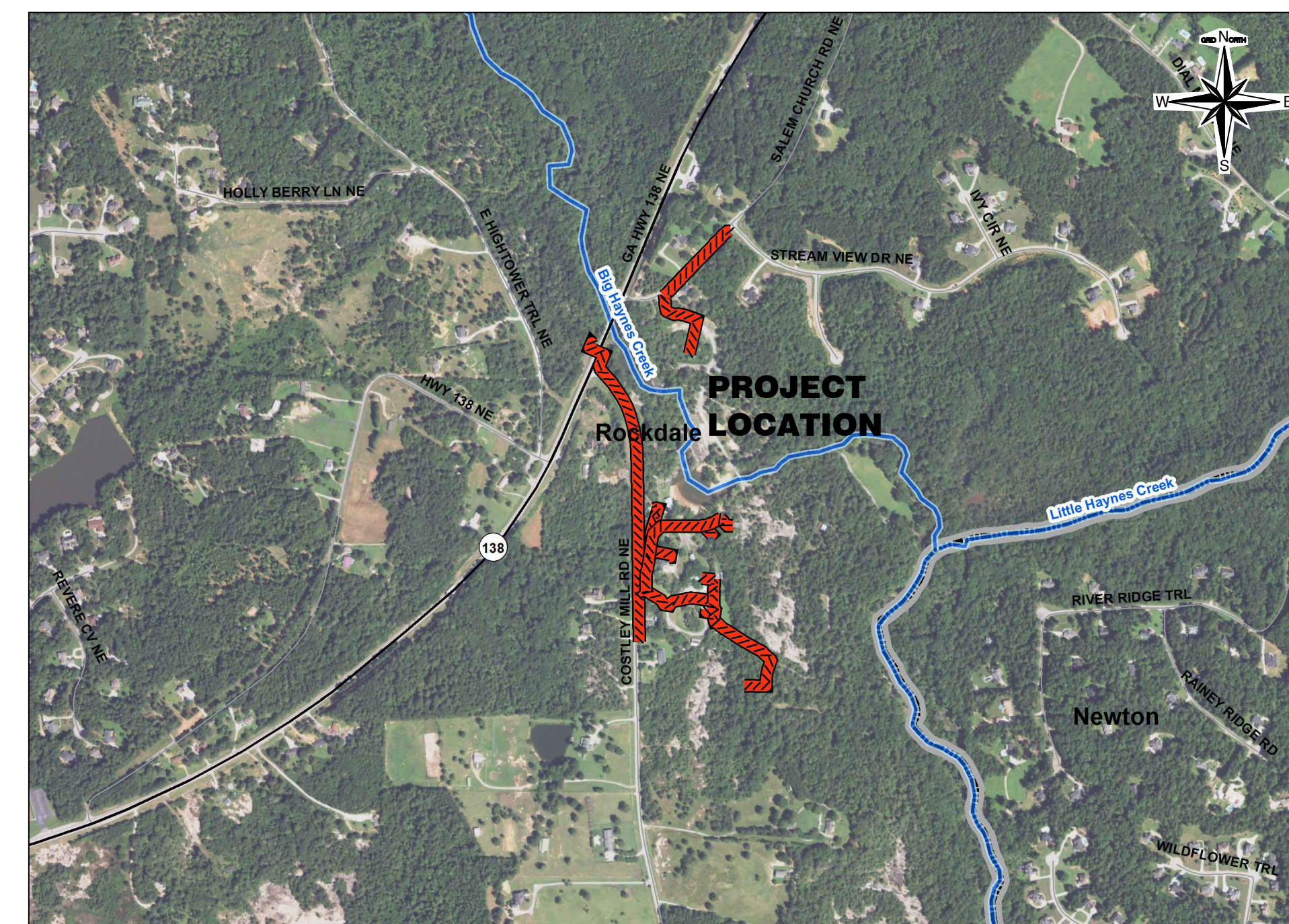


**VICINITY MAP**  
NTS

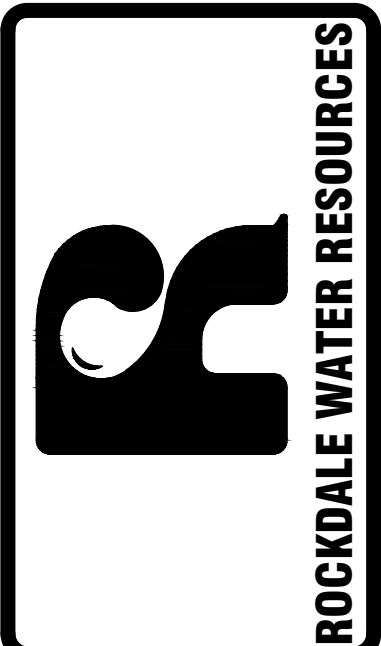
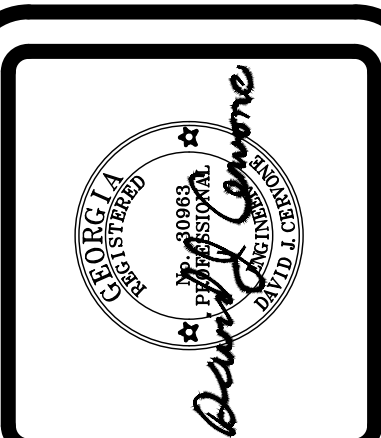
OWNER/DEVELOPER: ROCKDALE WATER RESOURCES  
958 MILSTEAD AVE.  
CONYERS, GA. 30012  
(770) 278-7432

DESIGN ENGINEER: ROCKDALE WATER RESOURCES  
1329 PORTMAN DRIVE, STE. H  
CONYERS, GA. 30012  
CONTACT: DAVID CERVONE  
(770) 278-7432

SITE ADDRESS: 2455 COSTLEY MILL ROAD  
CONYERS, GA. 30013



**LOCATION MAP**  
NTS



REVISION		No.	DATE	DESCRIPTION
		0	05/16/2018	ISSUED FOR BID

**TITLE, VICINITY AND LOCATION**

DESIGNED BY: DAVID CERVONE  
DRAWN BY: WALT BOBO  
CHECKED BY: DAVID CERVONE  
DATE: 03/22/2018  
FILE NAME: COSTLEY MILL

SHEET  
**G-00**





PIPELINE CONSTRUCTION NOTES:

1. PROVIDE TRAFFIC CONTROL IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
2. OPEN TRENCHES IN EXISTING ASPHALT SHALL BE PLATED OVERNIGHT WITH NON SKID STEEL PLATES.
3. UNLESS OTHERWISE NOTED, STATION ON PLANS REFERS TO CENTERLINE OF PIPELINE AND IS BASED ON HORIZONTAL DISTANCES.
4. VERIFY DIMENSIONS AND CONDITIONS AT THE SITE BEFORE STARTING WORK. CONFLICTS BETWEEN DETAILS OR DIMENSIONS ON THE DRAWINGS SHALL BE REPORTED PROMPTLY TO THE ENGINEER, WHO WILL DETERMINE THE INTENT OF THE DESIGN.
5. EXISTING UTILITY LOCATIONS ARE APPROXIMATE AND BASED ON RECORD DRAWINGS. POTHOLE AND SURVEY EXISTING UTILITIES THAT WILL BE AFFECTED BY TRENCHING OR EXCAVATIONS PRIOR TO ORDERING ANY MATERIALS. POTHOLE AND SURVEY DATA SHALL BE PROVIDED TO THE ENGINEER FOR REVIEW. POTHOLE DATA SHALL INCLUDE EXISTING UTILITY HORIZONTAL LOCATION, PIPE ELEVATION, PIPE ANGULAR CONFIGURATION, AND MATERIALS OF CONSTRUCTION. IDENTIFY POTENTIAL CONFLICTS WITH THE NEW PIPE LOCATION. PIPE ALIGNMENT ADJUSTMENTS THAT DO NOT INCREASE OVERALL PIPE OR FITTING QUANTITIES SHALL BE MADE AT NO ADDITIONAL COST TO THE RWR.
6. PROTECT ALL EXISTING UTILITIES DURING CONSTRUCTION.
7. FIELD VERIFY THE HORIZONTAL AND VERTICAL LOCATION, DIAMETER, AND ORIENTATION AT ALL CONNECTION POINTS AND COORDINATE WITH RWR PRIOR TO CONSTRUCTION. PROVIDE ALL PIPE MATERIALS AND FITTINGS, AS REQUIRED TO MEET EXISTING FIELD CONDITIONS FOR A COMPLETE INSTALLATION.
8. REPAIR DAMAGE TO LANDSCAPING, PAVING, UTILITIES, CURBS, GUTTERS, IRRIGATION, STRUCTURES, ETC., CAUSED BY THE WORK.
9. PAVEMENT CUTS SHALL BE PERFORMED BY SAW CUTTING OR GRINDING. RECUT PAVEMENT PRIOR TO REPAVING WHERE UNDERMINING HAS OCCURED.
10. REPLACE TRAFFIC STRIPING OR STENCILING THAT IS OBLITERATED BY CONSTRUCTION TO THE SATISFACTION OF RWR.
11. SCHEDULE WITH RWR LOCAL WATER SERVICE SHUTDOWNS NOT LESS THAN TWO WEEKS IN ADVANCE. SERVICE SHALL NOT BE INHIBITED FOR MORE THAN 6 HOURS. ONLY TWO (2) SHUTDOWNS WILL BE ALLOWED UNDER THIS CONTRACT FOR THE LOCAL WATER SERVICE. WORK INVOLVING CONNECTION TO THE 8" LINE SHALL BE SCHEDULED WITH RWR.
12. MAINTAIN 48" MINIMUM PIPELINE COVER PER RWR UNLESS OTHERWISE SHOWN ON THE PLANS OR UNLESS REDUCED DEPTH IS SPECIFICALLY APPROVED BY THE ENGINEER.
13. REMOVAL AND REPLACEMENT OF PAVEMENT SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS.
14. TRENCHES SHALL BE BACKFILLED IN ACCORDANCE WITH PLANS AND SPECIFICATIONS.
15. HORIZONTAL STATIONING ALONG THE PIPELINE ALIGNMENT IS FOR LEVEL LINE MEASUREMENT AND FOR PAYMENT OF THE PIPELINES. FURNISH AND INSTALL THE ACTUAL PIPE LENGTH TO BE DETERMINED BY THE SLOPE OR CURVE ON WHICH THE PIPE IS INSTALLED.
16. RESTRAINED JOINTS SHALL BE PROVIDED FOR BURIED PIPING AS INDICATED ON THE DRAWINGS OR AS SCHEDULED IN THE SPECIFICATIONS.
17. ALL VALVE BOXES SHALL BE SET TO FINISH GRADE.
18. ALL TRENCH EXCAVATION SHALL COMPLY WITH THE MOST CURRENT OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION STANDARDS.
19. DELETERIOUS MATERIALS AND EXCAVATED MATERIALS NOT USED IN BACKFILL OR GRADING SHALL BE REMOVED FROM SITE AND LEGALLY DISPOSED OF.
20. CONCRETE TRUCKS SHALL BE CLEANED IN DESIGNATED AREAS WITH WATER PROOF LINING IN COMPLIANCE WITH THE SWPPP AND OTHER PERMITS. ALL WASTE AND MATERIAL SHALL BE REMOVED FROM SITE AND LEGALLY DISPOSED OF.
21. ALL PIPES SHALL HAVE A CONSTANT SLOPE BETWEEN INVERT ELEVATIONS UNLESS A FITTING IS SHOWN.
22. ELEVATION ADJUSTMENTS AT CONNECTIONS MAY BE MADE WITH BENDS, OFFSETS OR JOINT DEFLECTIONS. JOINT DEFLECTIONS SHALL NOT EXCEED 75% MANUFACTURER'S RECOMMENDED DEFLECTION PER JOINT.
23. SERVICE LINES SHALL BE INSTALL AT A MINIMUM DEPTH OF 24 INCHES OR REQUIRED BY LOCAL BUILDING OFFICIAL WHICH EVER IS DEEPER.
24. CONTRACTOR MAY BE REQUIRED TO USE TEMPORARY TESTING OF PROPOSED WATER LINES. TEMPORARY PLUGS SHALL BE CONSIDERED SUBSIDIARY TO THE VARIOUS ITEMS BID.
25. PRESSURE TEST WATER LINES AFTER ALL UTILITIES ARE INSTALLED AND BACKFILL IS ACCEPTED. PRESSURE TEST SHALL BE IN ACCORDANCE WITH SPECIFICATION.
26. DISINFECTION OF WATER LINES SHALL BE IN ACCORDANCE WITH SPECIFICATION.
27. ALL NEW WATER PIPES SHALL BE PROPERLY FLUSHED, PRESSURE TESTED, CHLORINATED AND BACTERIOLOGICALLY TESTED, AS SPECIFIED.

GENERAL CONSTRUCTION NOTES:

1. WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
2. NOTIFY THE RWR REPRESENTATIVE AND ALL OTHER INTERESTED PARTIES AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO THE START OF WORK.
3. OBTAIN REQUIRED PERMITS AND NECESSARY DISTRICT BUSINESS LICENSE(S) PRIOR TO BEGINNING CONSTRUCTION.
4. TRAFFIC CONTROL COSTS SHALL BE INCLUDED IN THE BID. PROCEDURES SHALL CONFORM TO THE ROCKDALE COUNTY AND GEORGIA DEPARTMENT OF TRANSPORTATION, IF REQUIRED AND IN ACCORDANCE WITH ALL APPLICABLE PERMITS, AND WITH THE SPECIFICATIONS.
5. CONSTRUCTION ACTIVITY SHALL BE LIMITED TO THE HOURS REFERENCED IN THE SPECIFICATIONS AND PERMITS.
6. DURING CONSTRUCTION, INCLUDING SUSPENSION OF WORK, UNTIL FINAL ACCEPTANCE OF THE PROJECT, OBSERVE, FOLLOW AND IMPLEMENT THE REQUIREMENTS OF THE NPDES AND STORMWATER POLLUTION PREVENTION PROGRAM AND KEEP THE WORK SITE CLEAN FROM RUBBISH AND DEBRIS. ALSO ABATE DUST NUISANCE BY CLEANING, SWEEPING AND SPRINKLING WITH WATER AND USING DUST FENCES OR THEIR METHODS AS DIRECTED BY THE RWR'S REPRESENTATIVE THROUGHOUT THE CONSTRUCTION OPERATION.
7. KEEP A STRICT RECORD OF ALL CHANGES AND SUBMIT THIS RECORD TO THE RWR. ALSO COORDINATE TRANSFERRING "AS-BUILT" INFORMATION ON THE CONTRACT DRAWINGS AND DELIVER THE CERTIFIED "AS-BUILT" PLANS TO THE DISTRICT BEFORE THE RELEASE FOR FINAL ACCEPTANCE OF THE PROJECT SHALL BE FILED.
8. EXERCISE DUE CARE TO AVOID INJURY TO EXISTING IMPROVEMENTS OR FACILITIES, UTILITY FACILITIES, ADJACENT PROPERTY, AND TREES AND SHRUBBERY THAT ARE NOT TO BE REMOVED. ALL DAMAGE CAUSED TO COUNTY & CITY STREETS, INCLUDING HAUL ROUTES, SIDEWALKS, CURBS OR STREET FURNISHINGS, OR TO PRIVATE PROPERTY SHALL BE REPAIRED AT THE SOLE EXPENSE OF THE CONTRACTOR TO THE SATISFACTION OF THE RWR REPRESENTATIVE.
9. DESIGNATE AND KEEP ON THE PROJECT WHILE WORK IS BEING PERFORMED A COMPETENT SUPERINTENDENT WHO SHALL NOT BE REPLACED WITHOUT A WRITTEN NOTICE TO THE RWR'S REPRESENTATIVE. THE SUPERINTENDENT WILL BE THE CONTRACTOR'S REPRESENTATIVE AT THE SITE AND SHALL HAVE AUTHORITY TO ACT ON BEHALF OF THE CONTRACTOR. COMMUNICATIONS GIVEN TO THE SUPERINTENDENT SHALL BE AS BINDING AS IF GIVEN TO THE CONTRACTOR. DURING PERIODS WHEN THE WORK IS SUSPENDED, MAKE APPROPRIATE ARRANGEMENTS FOR EMERGENCY WORK WHICH WILL BE REQUIRED.

10. WHEN THE WORK ON ANY PORTION OF IT IS SUFFICIENTLY COMPLETE TO BE UTILIZED OR PLACED INTO SERVICE, RWR SHALL HAVE THE RIGHT UPON WRITTEN NOTIFICATION TO THE CONTRACTOR TO UTILIZE SUCH PORTIONS OF THE WORK AND TO PLACE THE OPERABLE PORTIONS INTO SERVICE AND TO OPERATE SAME. UPON SAID NOTICE AND COMMENCEMENT OF UTILIZATION OR OPERATION BY THE RWR, THE CONTRACTOR SHALL BE RELIEVED OF THE DUTY OF MAINTAINING THE PORTIONS SO UTILIZED OR PLACED INTO OPERATION; PROVIDED, HOWEVER, THAT NOTHING IN THIS NOTE SHALL BE CONSTRUED AS RELIEVING THE CONTRACTOR OF THE FULL RESPONSIBILITY FOR COMPLETING THE WORK IN ITS ENTIRETY, FOR MAKING GOOD DEFECTIVE WORK AND MATERIALS, FOR PROTECTING THE WORK FROM DAMAGE, AND FOR BEING RESPONSIBLE FOR DAMAGE.

11. IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK; AND FULLY COMPLY WITH STATE/FEDERAL AND OTHER LAWS, RULES, REGULATIONS, AND ORDER RELATING TO SAFETY OF WORKERS AND ALL OTHERS. THIS INCLUDES THE ISSUANCE OF PERSONAL PROTECTIVE EQUIPMENT.

12. UNDERGROUND UTILITIES OR STRUCTURES REPORTED BY RWR OR THOSE SHOWN ON RECORDS EXAMINED ARE INDICATED WITH THEIR APPROXIMATE LOCATION AND EXTENT. TAKE DUE PRECAUTIONARY MEASURES TO PROTECT THE UTILITIES OR STRUCTURES FOUND AT THE SITE. NOTIFY RWR OF THE UTILITIES CONCERNED BEFORE STARTING WORK.

13. TYPICAL DETAILS APPLY WHETHER OR NOT THEY ARE SPECIFICALLY REFERENCED ON INDIVIDUAL PLANS, DETAILS OR SECTIONS.

14. VERIFY DIMENSIONS AND CONDITIONS AT THE SITE BEFORE STARTING WORK. ANY CONFLICT BETWEEN DETAILS OR DIMENSIONS ON THE DRAWINGS SHALL BE REPORTED PROMPTLY TO RWR REPRESENTATIVE WHO WILL DETERMINE THE INTENT OF THE DRAWINGS.

15. SUPPORT RWR IN OBTAINING A NOTICE OF INTENT, A STORM WATER POLLUTION CONTROL PLAN AND A SWPPP PLAN IN ACCORDANCE WITH NPDES REGULATIONS, SEE SPECIFICATIONS.

16. VIDEO RECORD AND DOCUMENT THE EXISTING CONDITION OF THE PROJECT LIMITS AND SUBMIT THE RECORDING AND DOCUMENT TO THE RWR PRIOR TO THE START OF CONSTRUCTION.

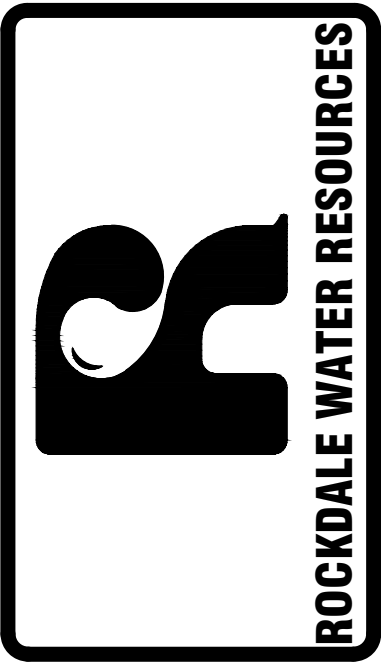
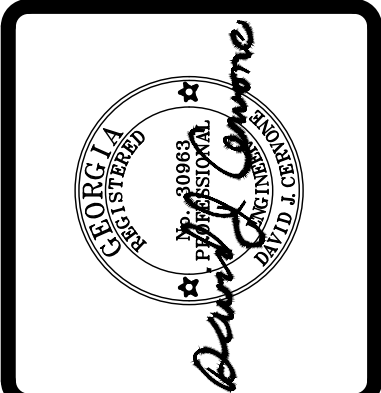
17. MAKE ARRANGEMENTS FOR EQUIPMENT, MATERIAL STORAGE & YARD SECURITY.

18. STAGING AREA SHALL BE FOR CONTRACTOR'S EMPLOYEE PARKING, CONTRACTOR'S TRAILERS AND ON-SITE STORAGE OF MATERIALS FOR THIS PROJECT ONLY.

19. CONDUCT OPERATIONS TO RESULT IN THE LEAST POSSIBLE OBSTRUCTION INCONVENIENCE TO THE PUBLIC, AND HAVE UNDER CONSTRUCTION NO GREATER LENGTH OR AMOUNT OF WORK THAT CAN BE PERFORMED PROPERLY WITH DUE REGARD TO THE RIGHTS OF THE PUBLIC OR AS STATED IN THE PERMITS. CONVIENENT ACCESS TO DRIVEWAYS, HOUSES AND BUILDINGS ALONG THE WORK SHALL BE MAINTAINED.

TOPOGRAPHIC MAPPING

THE TOPOGRAPHIC/PLANIMETRIC INFORMATION SHOWN HEREON WAS COMPILED FROM DATA COLLECTED FROM ROCKDALE WATER RESOURCES(RWR) GEOGRAPHIC INFORMATION SYSTEM MAP LAYERS, GPS SURVEY BY RWR AND CAD DRAWING FROM W.S. BODKIN DATED 4/27/2017.

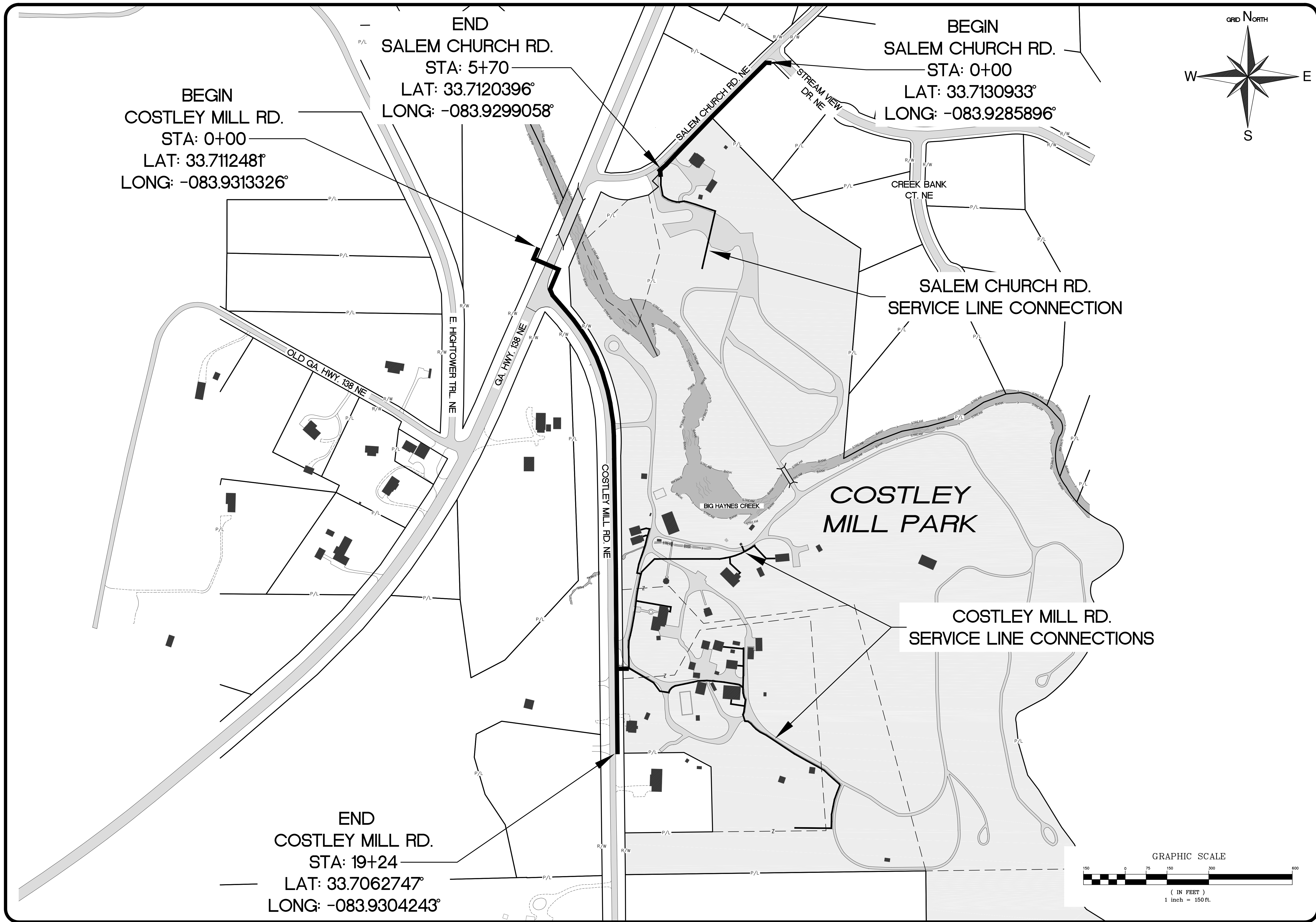


REVISION		DESCRIPTION	
No.	DATE	DESCRIPTION	ISSUED FOR BID
0	05/16/2018		

**GENERAL NOTES**

DESIGNED BY: DAVID CERVONE  
 DRAWN BY: WALT BOBO  
 CHECKED BY: DAVID CERVONE  
 DATE: 03/22/2018  
 FILE NAME: COSTLEY MILL



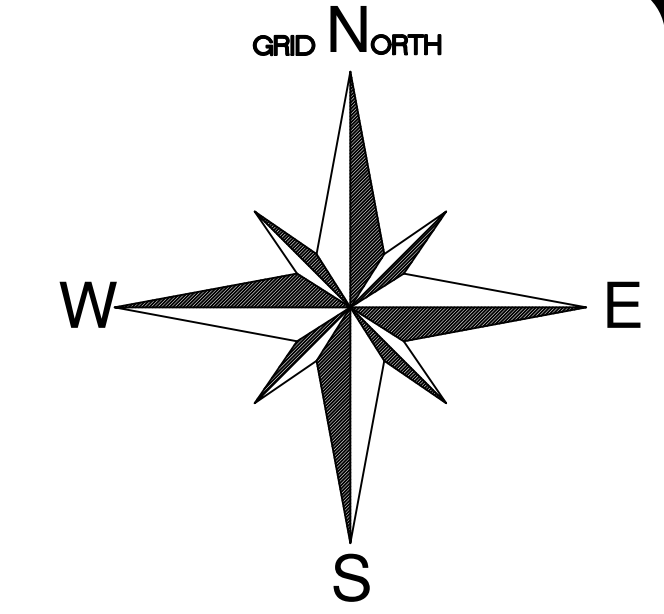


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END  
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STA: 5+70  
LAT: 33.7120396°  
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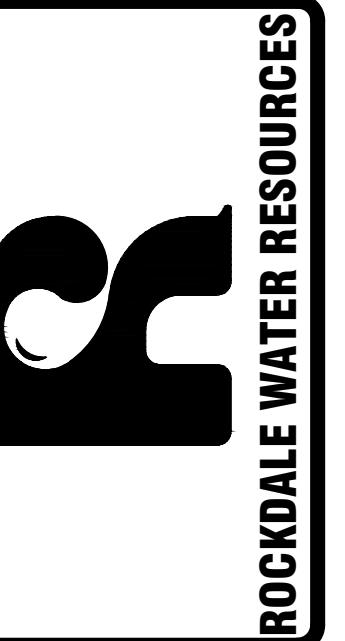
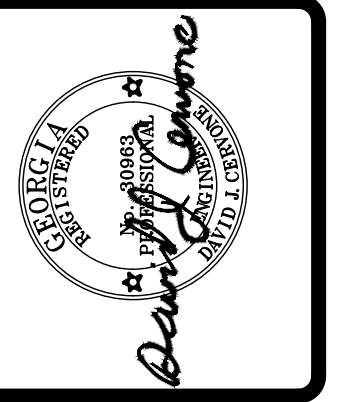
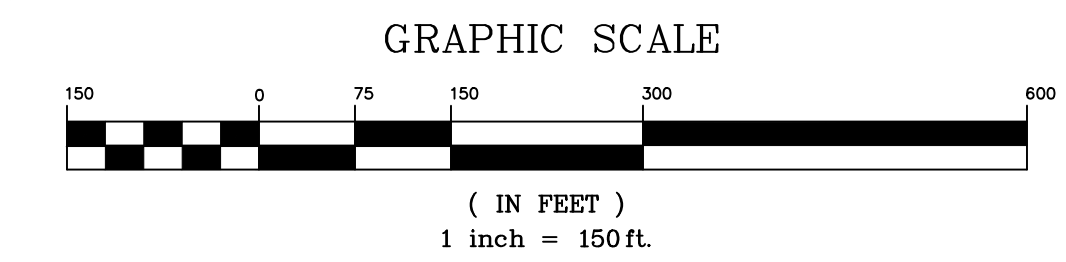
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SALEM CHURCH RD.  
SERVICE LINE CONNECTION

COSTLEY MILL RD.  
SERVICE LINE CONNECTIONS

COSTLEY  
MILL PARK



REVISION		DESCRIPTION	DATE
No.	DATE	DESCRIPTION	DATE
0	05/16/2018	ISSUED FOR BID	

**SITE PLAN**

DESIGNED BY: DAVID CERVONE  
DRAWN BY: WALT BOBO  
CHECKED BY: DAVID CERVONE  
DATE: 03/22/2018  
FILE NAME: COSTLEY MILL

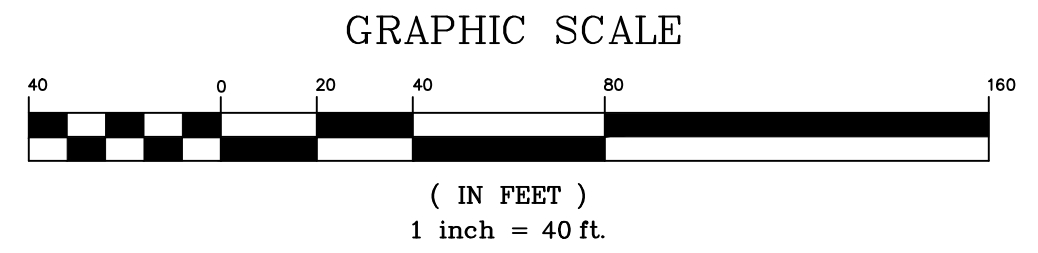
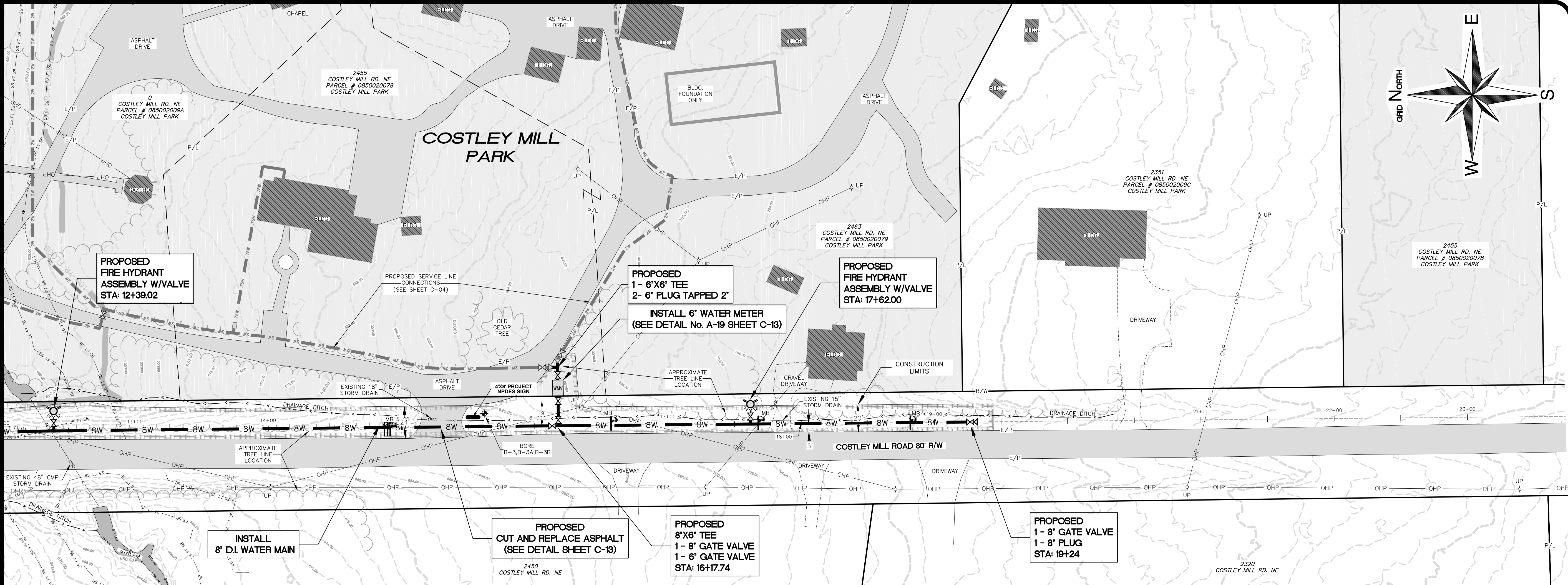
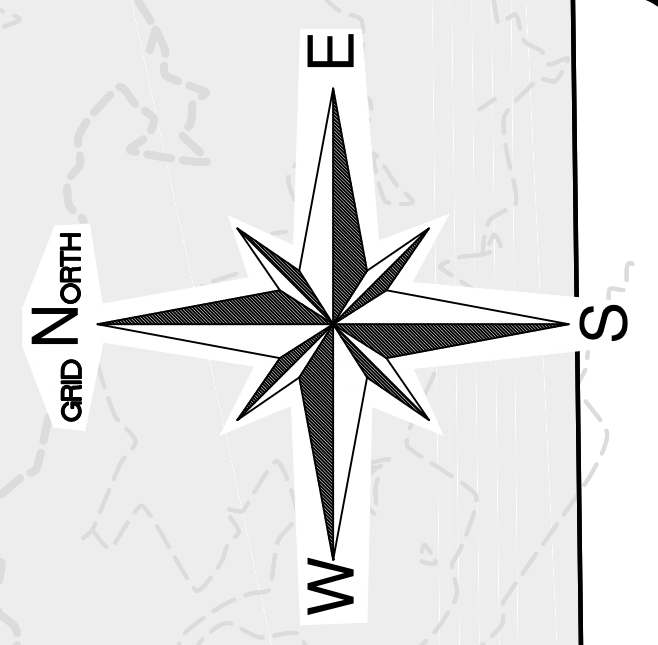
SHEET  
**G-03**





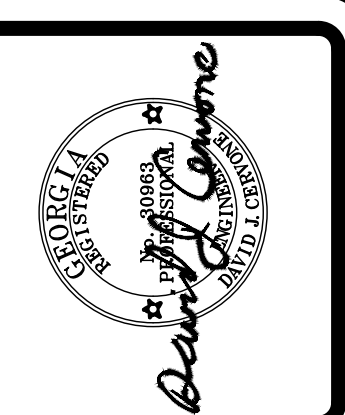
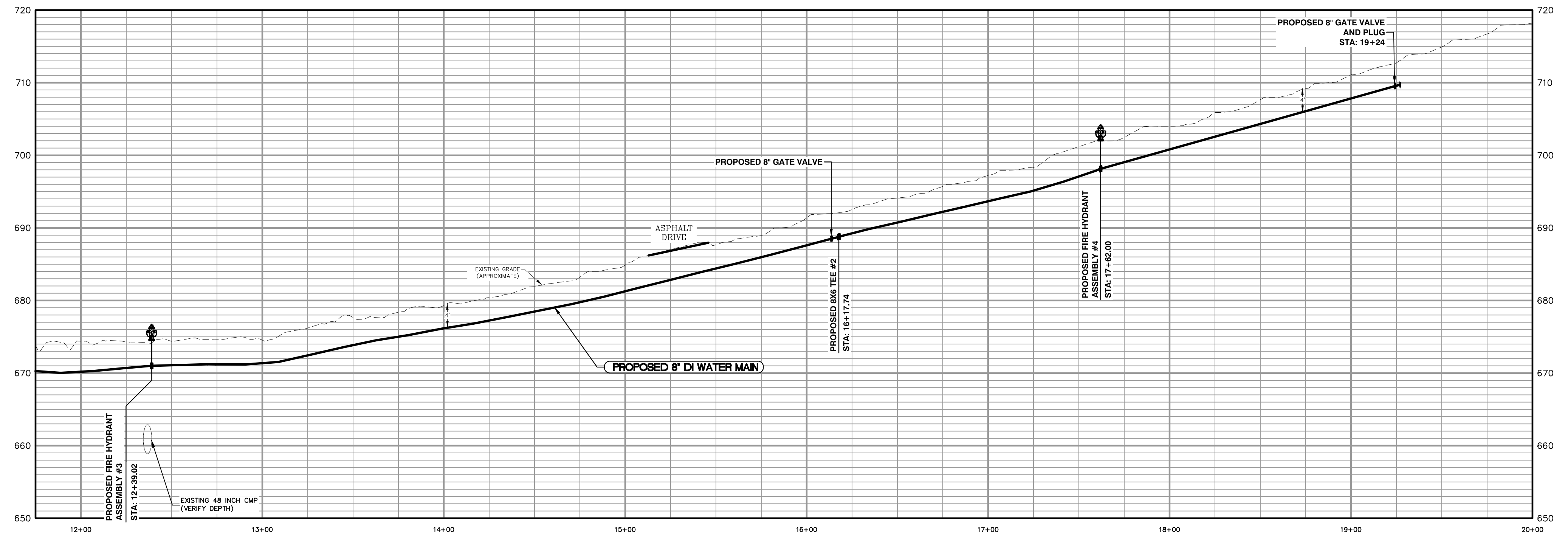


MATCH LINE STATION 12+00



PLAN  
SCALE: 1"=40"

PROFILE  
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SCALE VERTICAL: 1"=10'



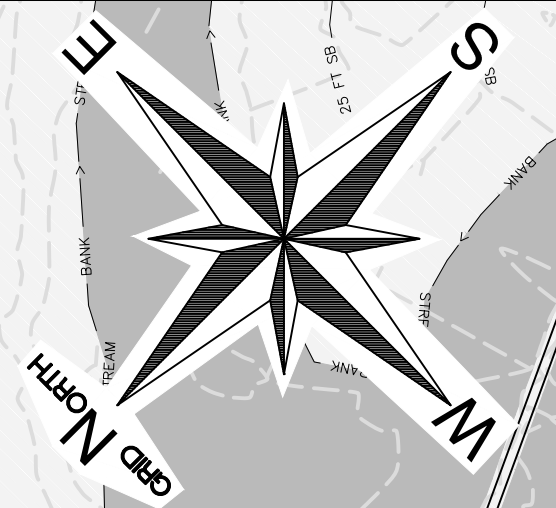
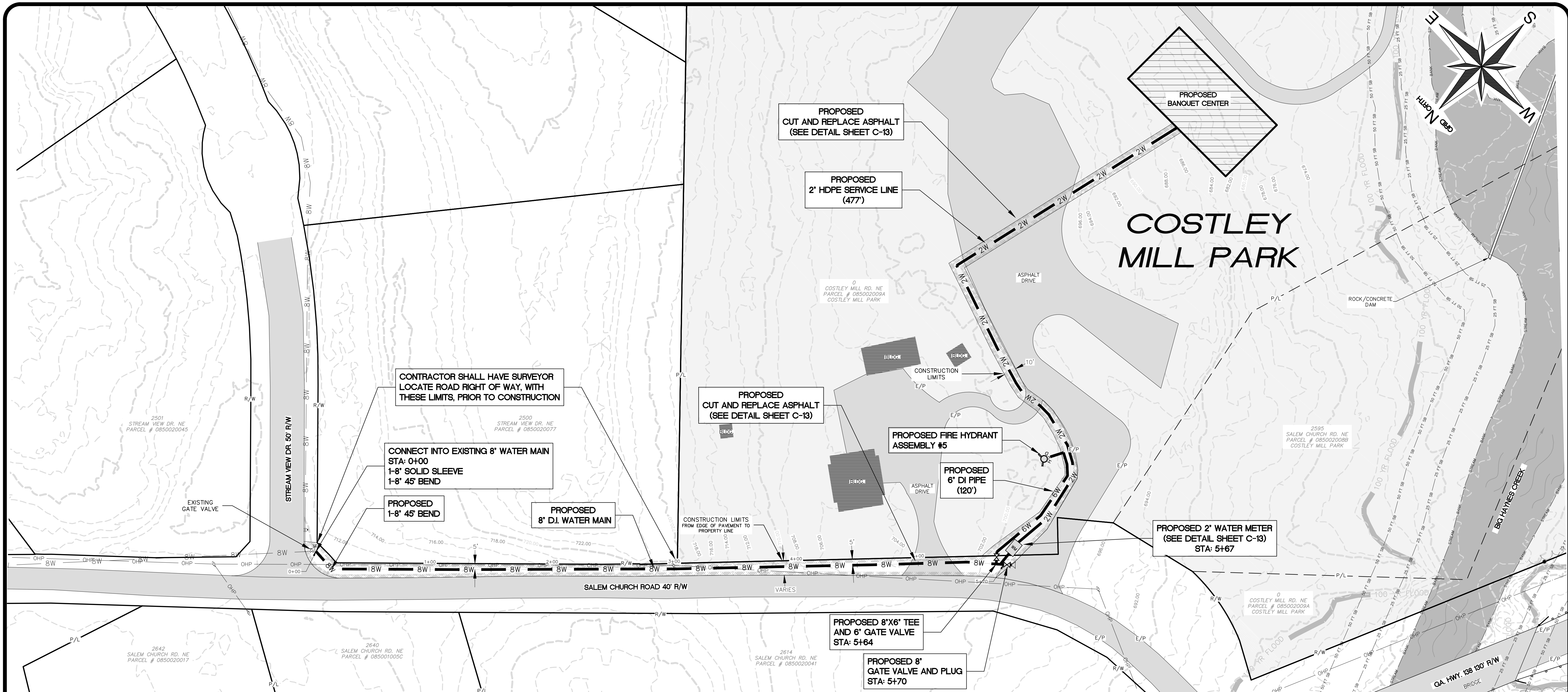
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**PLAN AND PROFILE  
COSTLEY MILL RD.**

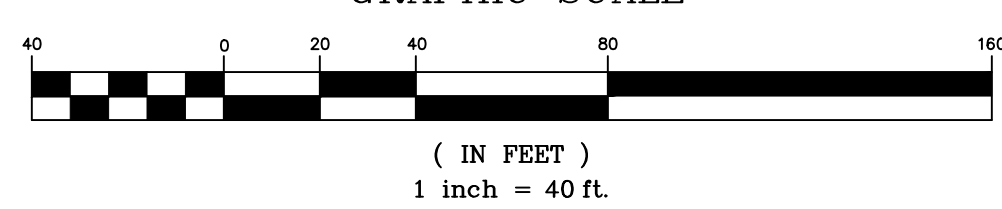
DESIGNED BY: DAVID CERVONE  
DRAWN BY: WALT BOBO  
CHECKED BY: DAVID CERVONE  
DATE: 03/22/2018  
FILE NAME: COSTLEY MILL

SHEET  
**C-02**

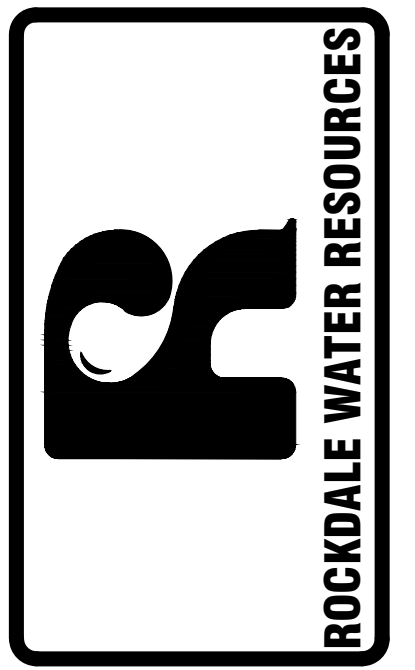
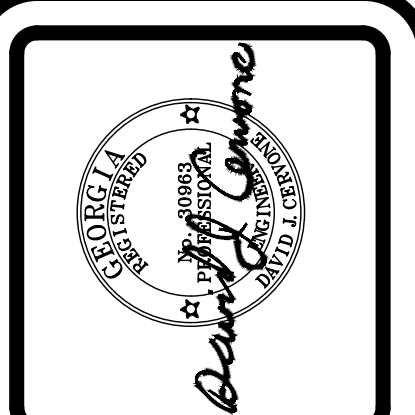
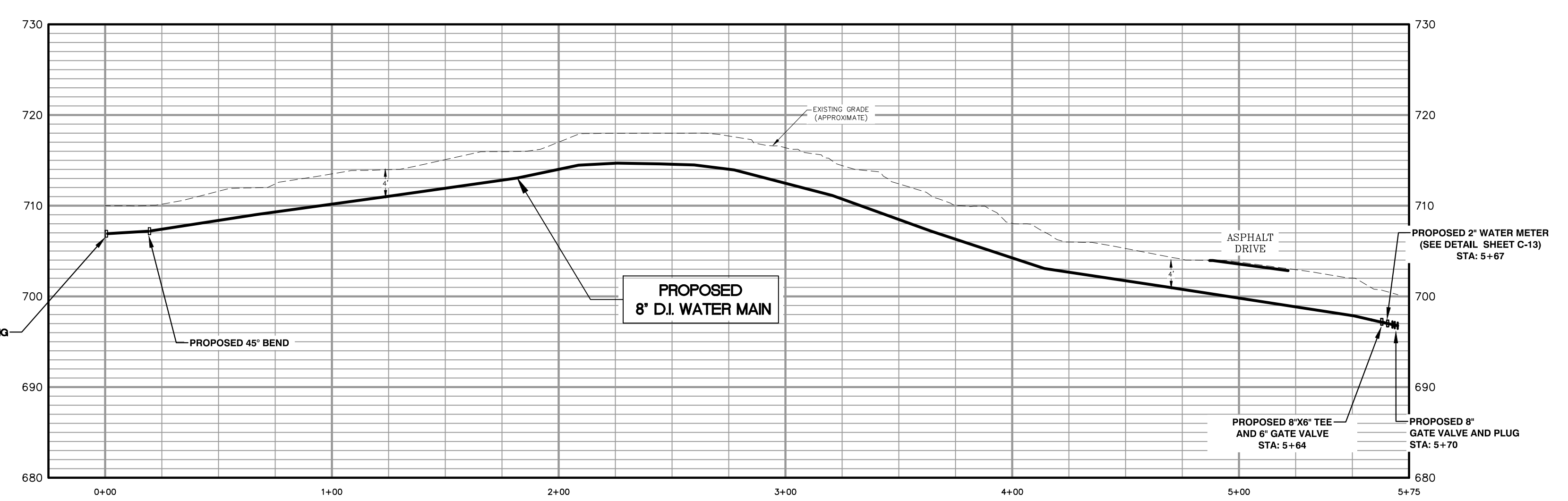




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**PROFILE**  
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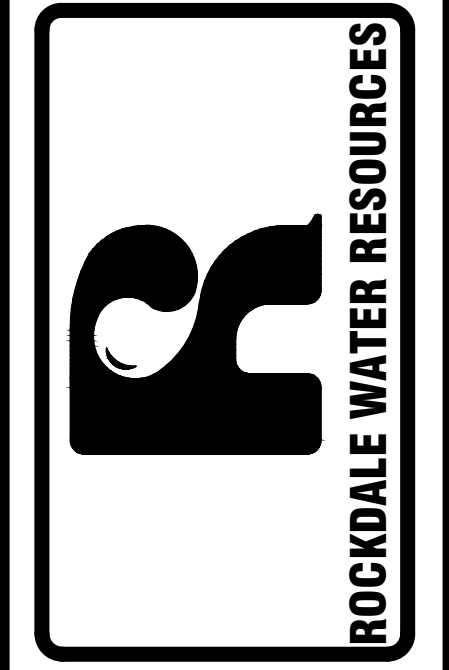
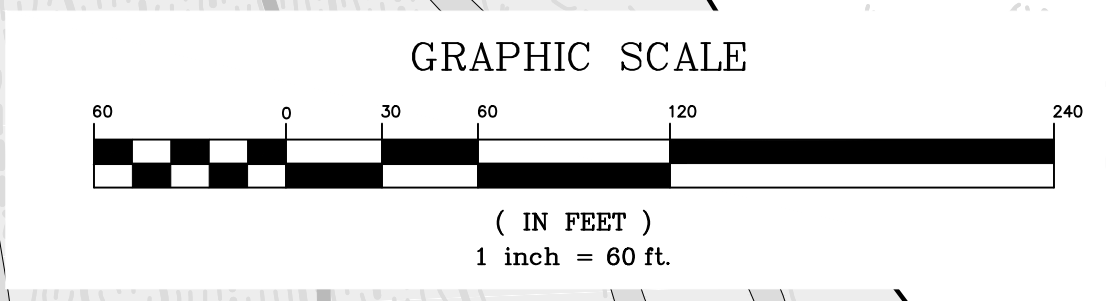
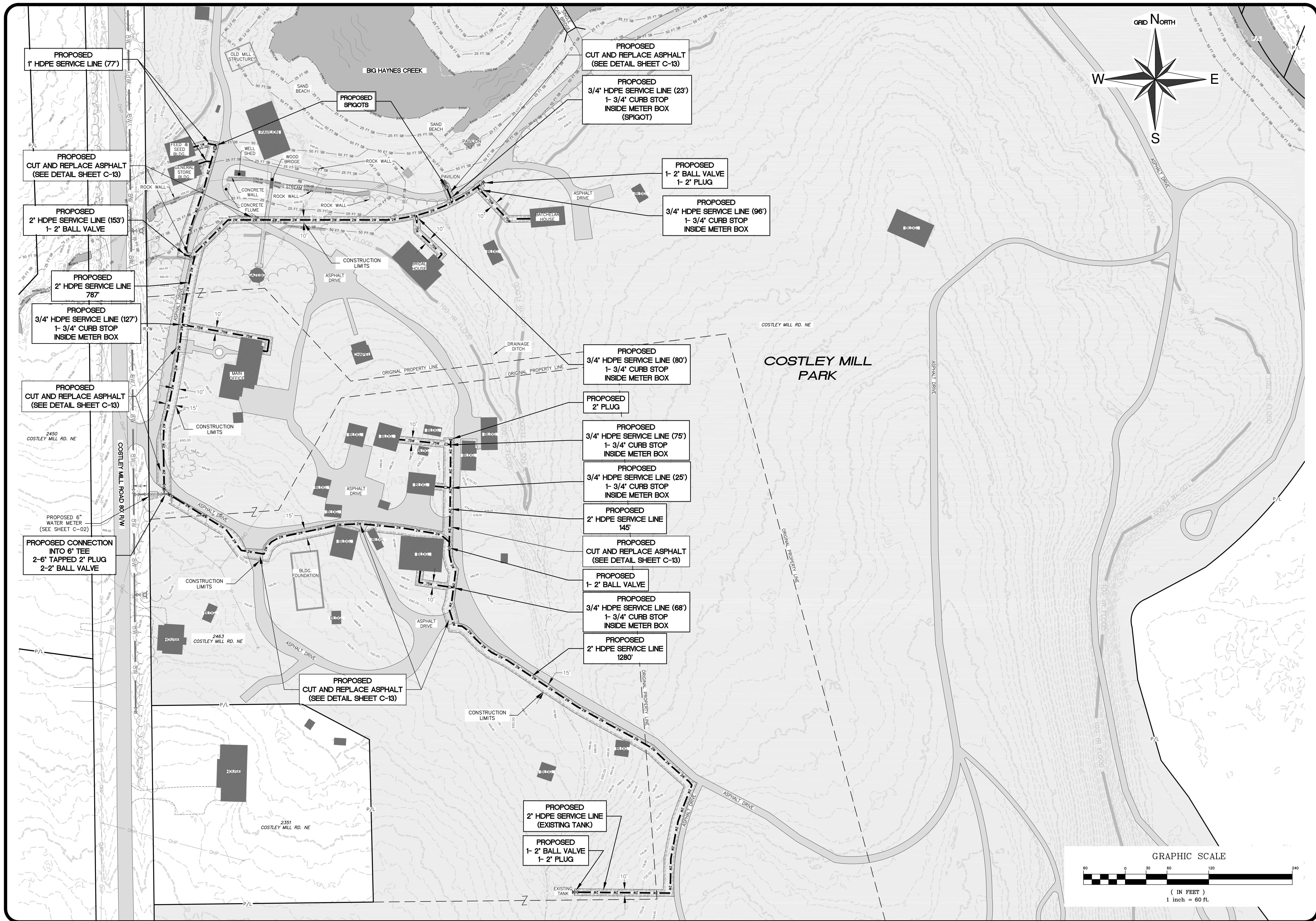
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**PLAN AND PROFILE**  
**SALEM CHURCH ROAD**

DESIGNED BY: DAVID CERVONE  
DRAWN BY: WALT BOBO  
CHECKED BY: DAVID CERVONE  
DATE: 03/22/2018  
FILE NAME: COSTLEY MLL

SHEET  
**C-03**



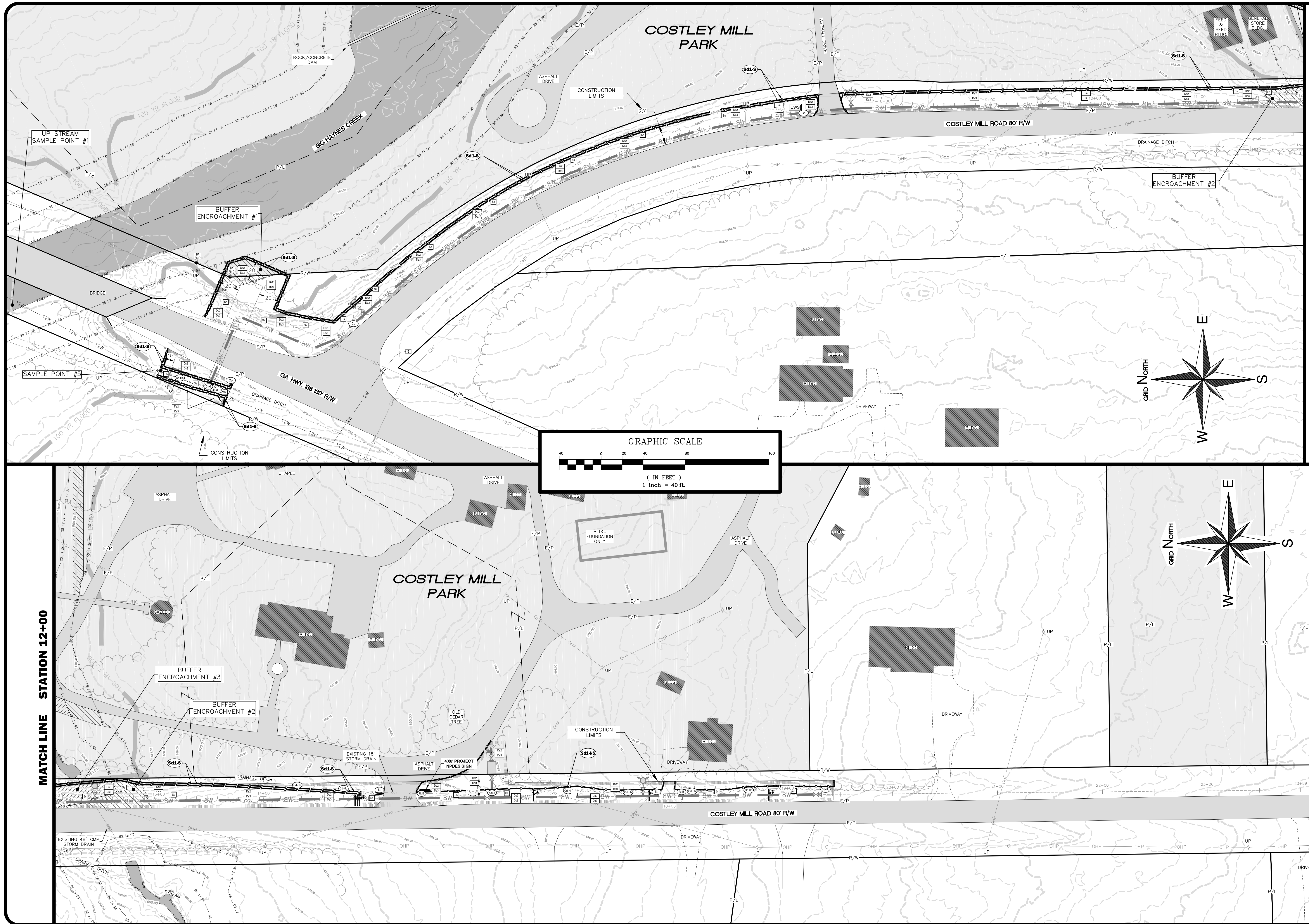


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**SERVICE LINE CONNECTIONS  
COSLEY MILL ROAD**

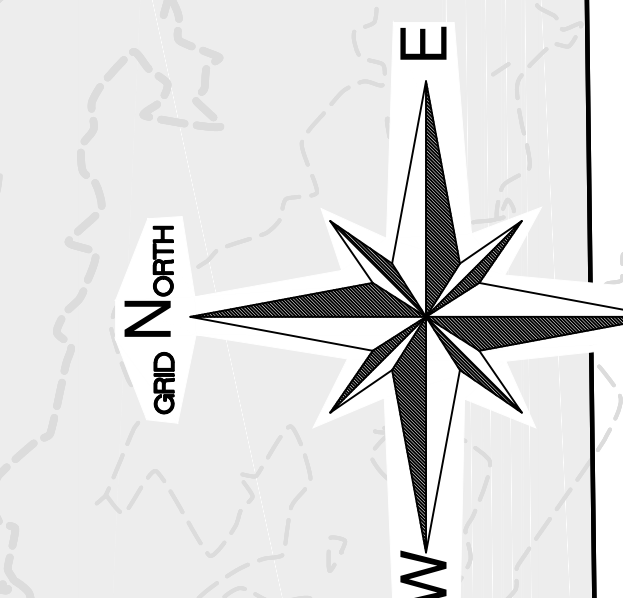
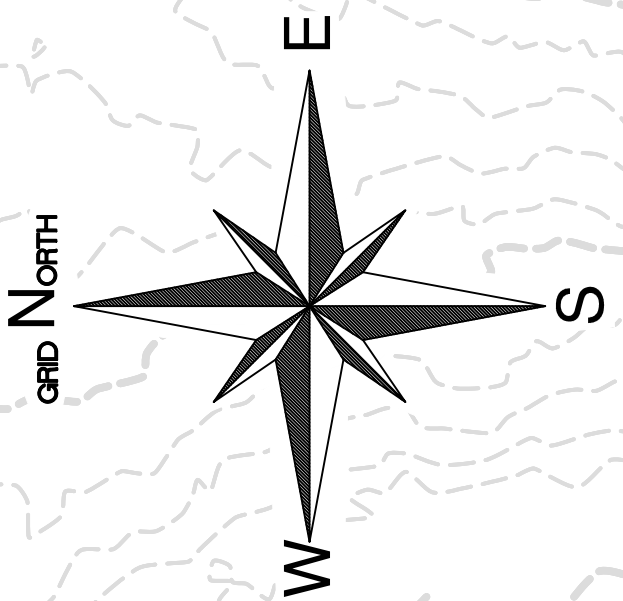
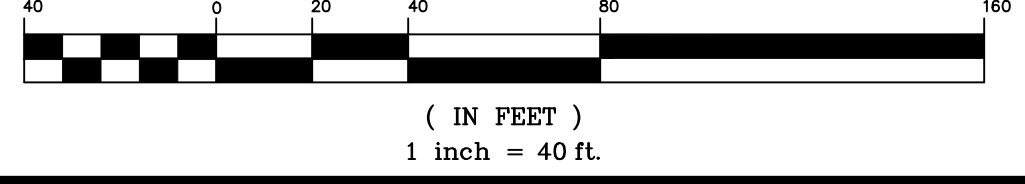
DESIGNED BY: DAVID CERVONE  
 DRAWN BY: WALT BOBO  
 CHECKED BY: DAVID CERVONE  
 DATE: 03/22/2018  
 FILE NAME: COSLEY MILL





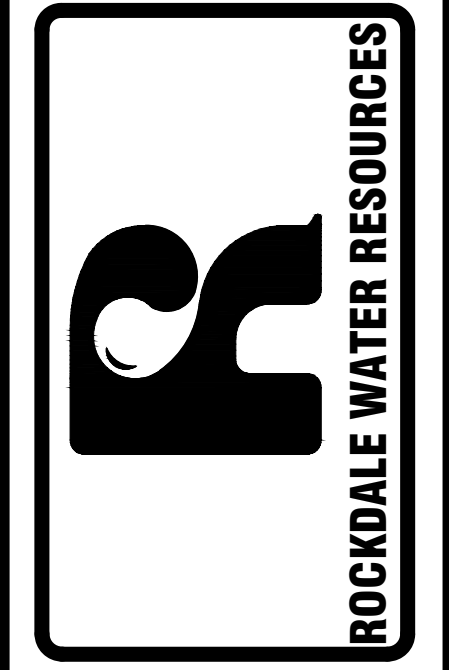
**COSTLEY MILL PARK**

**GRAPHIC SCALE**



**MATCH LINE STATION 12+00**

**MATCH LINE STATION 12+00**



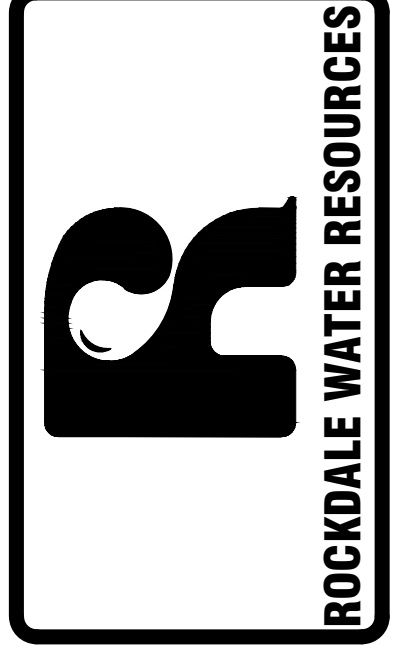
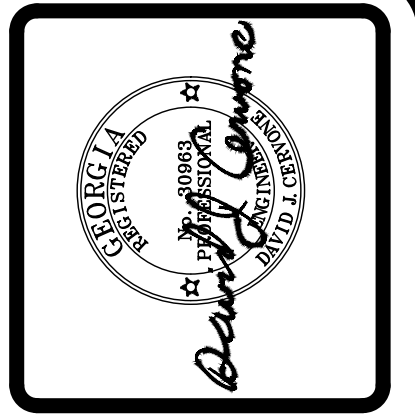
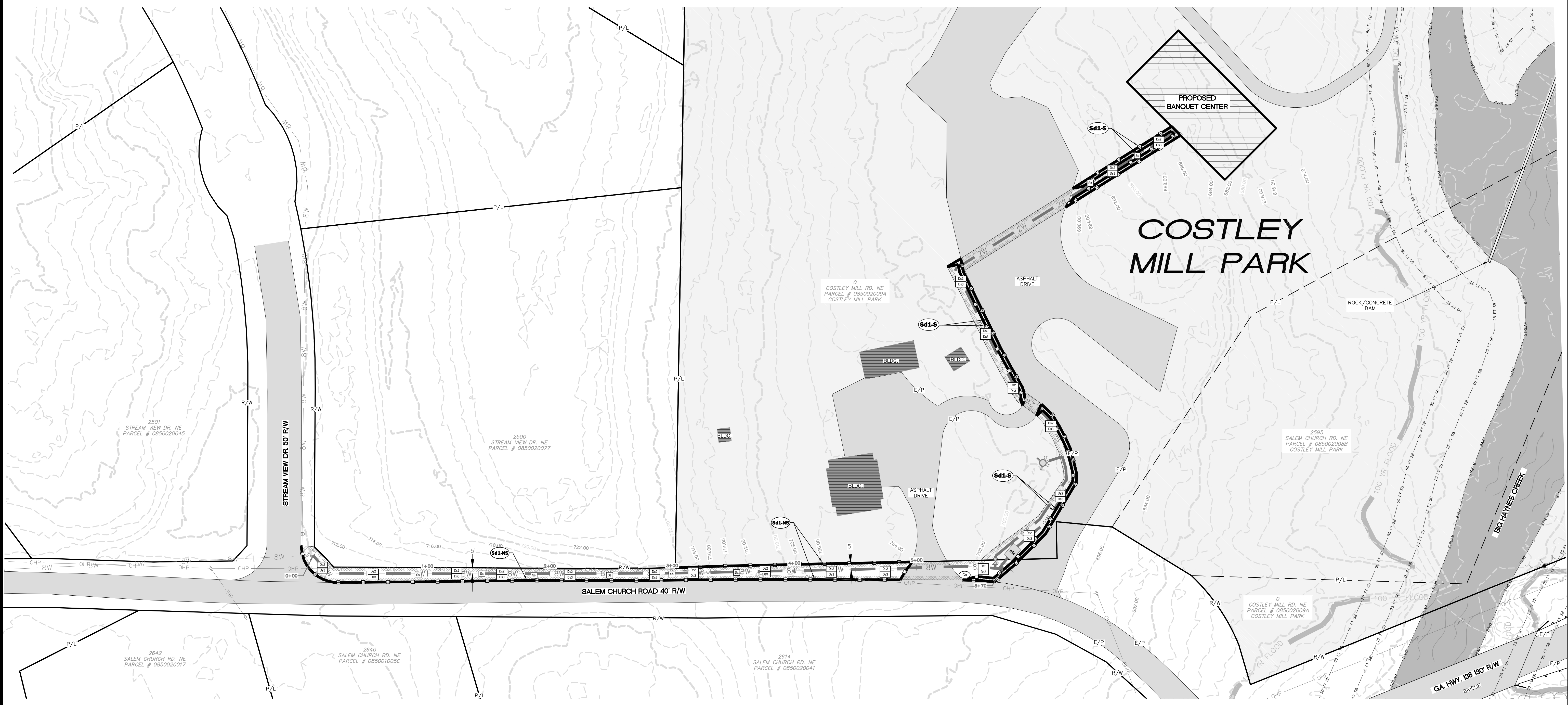
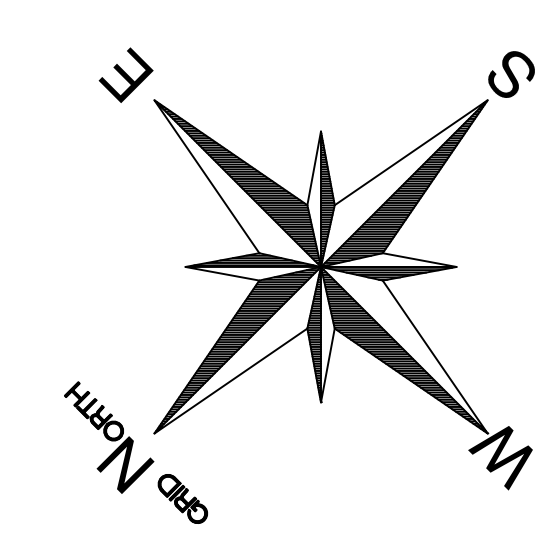
REVISION		No.	DATE	DESCRIPTION
0	05/16/2018			ISSUED FOR BID

**EROSION CONTROL PLAN  
COSTLEY MILL RD.**

DESIGNED BY: DAVID CERVONE  
 DRAWN BY: WALT BOBO  
 CHECKED BY: DAVID CERVONE  
 DATE: 03/22/2018  
 FILE NAME: COSTLEY MILL

SHEET  
**C-05**



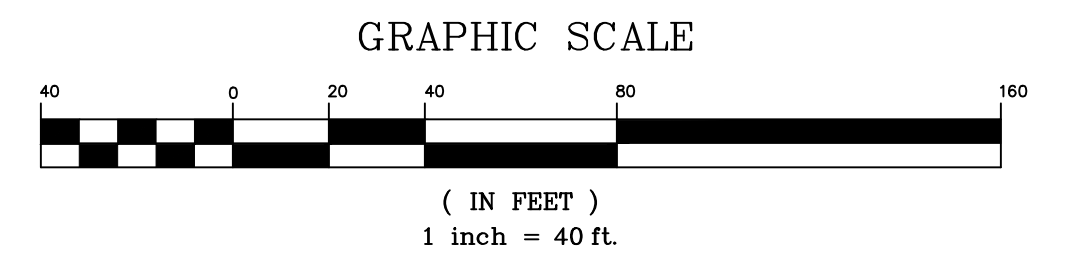


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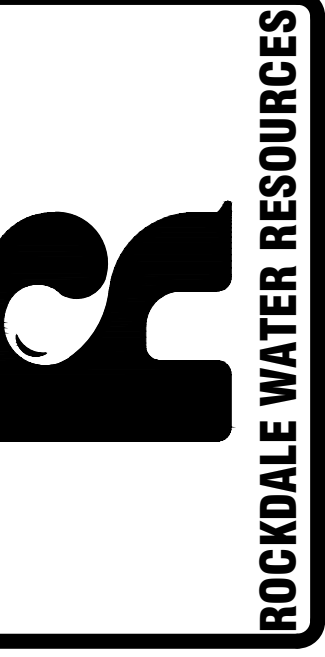
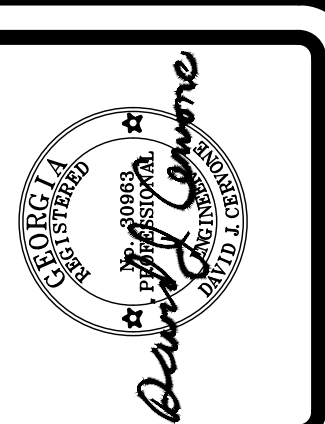
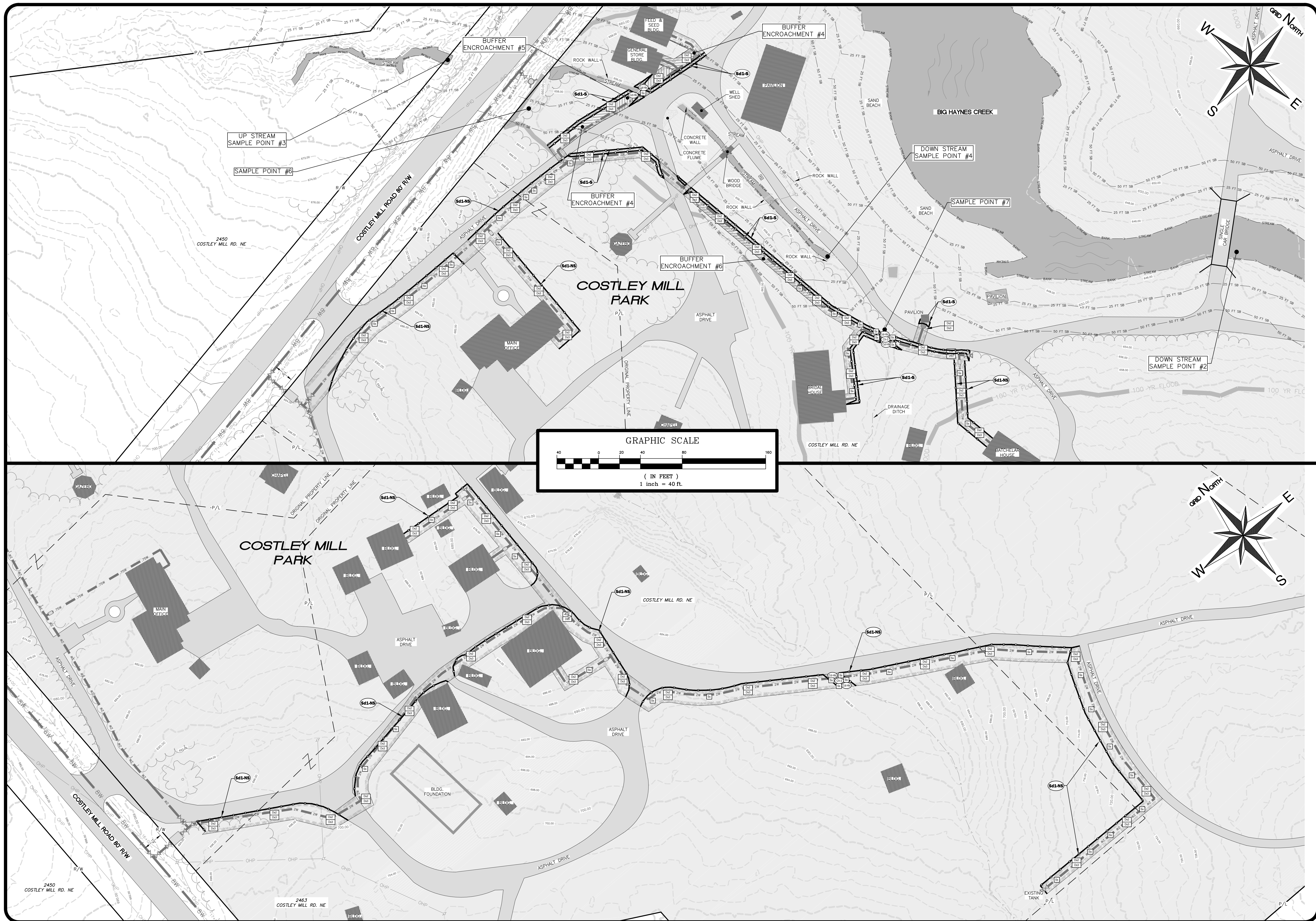
**EROSION CONTROL PLAN  
SALEM CHURCH ROAD**

DESIGNED BY: DAVID CERVONE  
 DRAWN BY: WALT BOBO  
 CHECKED BY: DAVID CERVONE  
 DATE: 03/22/2018  
 FILE NAME: COSTLEY MLL

SHEET  
**C-06**







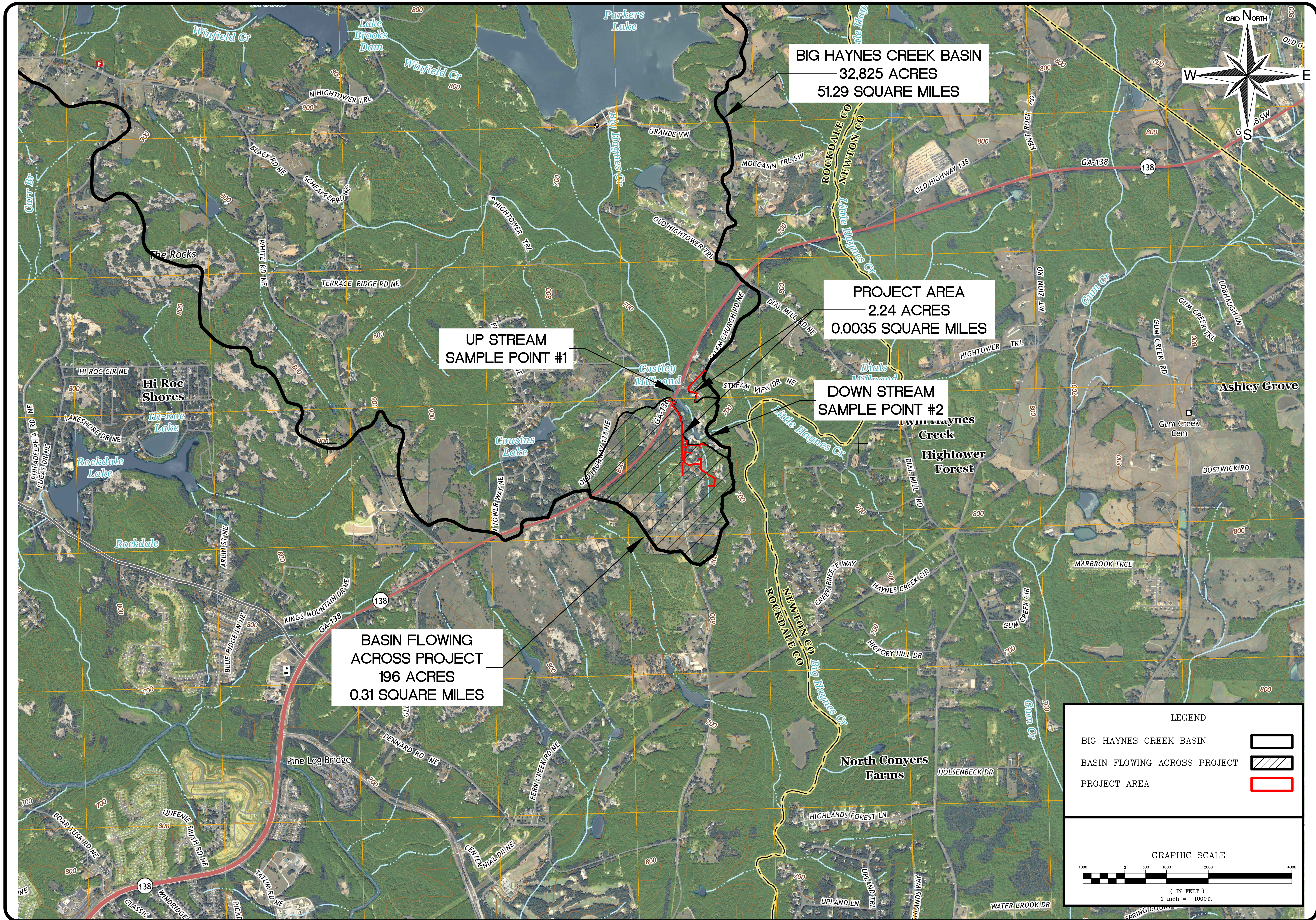
REVISION		No.	DATE	DESCRIPTION
0	05/16/2018			ISSUED FOR BID

**EROSION CONTROL PLAN  
SERVICE LINE CONNECTIONS  
COSTLEY MILL RD.**

DESIGNED BY: DAVID CERVONE  
 DRAWN BY: WALT BOBO  
 CHECKED BY: DAVID CERVONE  
 DATE: 03/22/2018  
 FILE NAME: COSTLEY MILL

SHEET  
**C-07**





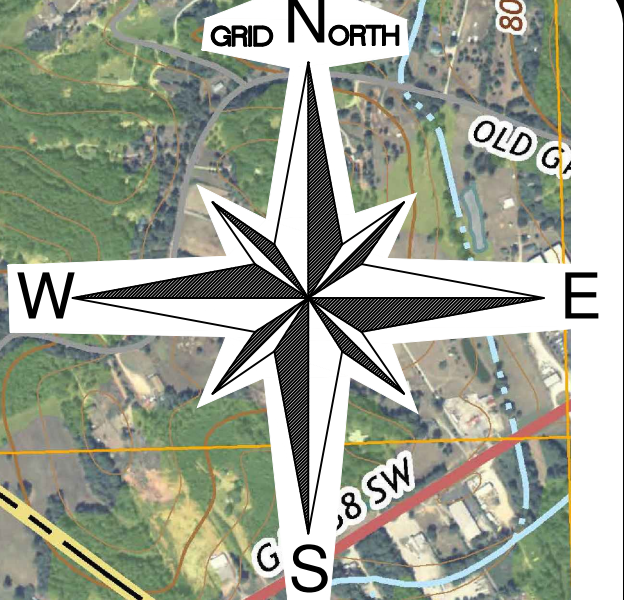
**BIG HAYNES CREEK BASIN**  
 32,825 ACRES  
 51.29 SQUARE MILES

**PROJECT AREA**  
 2.24 ACRES  
 0.0035 SQUARE MILES

**UP STREAM  
 SAMPLE POINT #1**

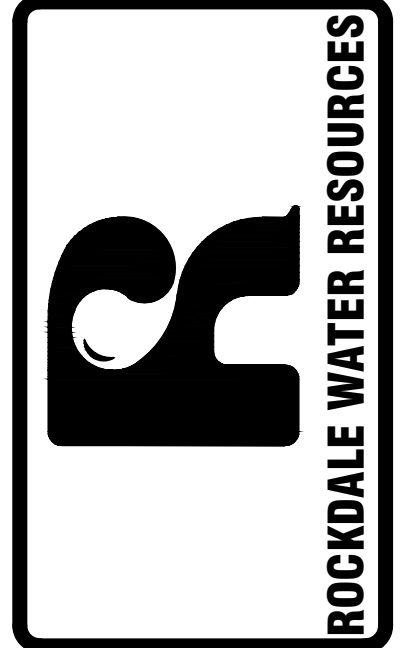
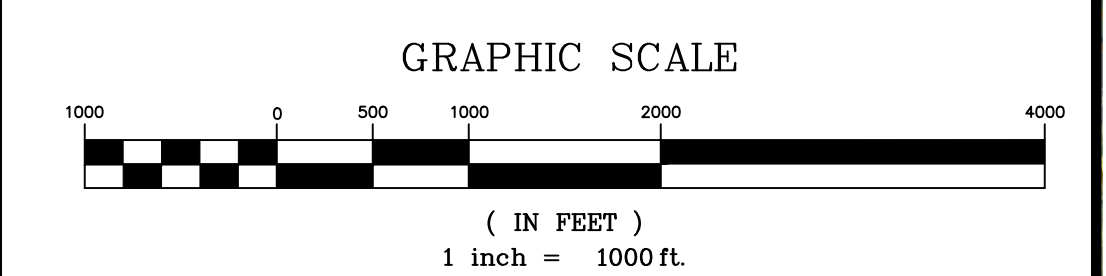
**DOWN STREAM  
 SAMPLE POINT #2**

**BASIN FLOWING  
 ACROSS PROJECT**  
 196 ACRES  
 0.31 SQUARE MILES

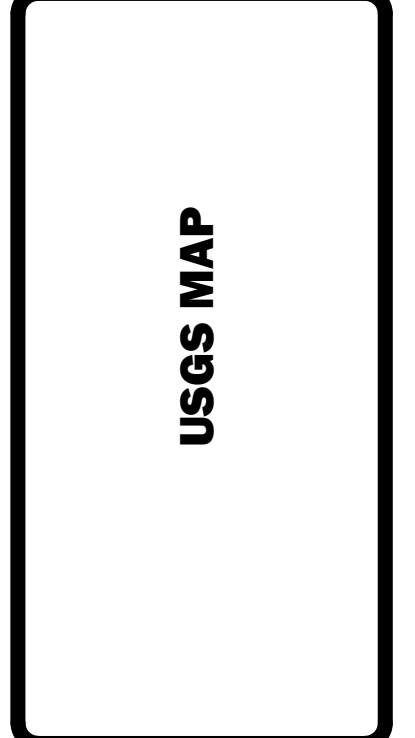


**LEGEND**

BIG HAYNES CREEK BASIN	
BASIN FLOWING ACROSS PROJECT	
PROJECT AREA	



REVISION		DESCRIPTION
No.	DATE	
0	05/16/2018	ISSUED FOR BID



DESIGNED BY: DAVID CERVONE  
 DRAWN BY: WALT BOBO  
 CHECKED BY: DAVID CERVONE  
 DATE: 03/22/2018  
 FILE NAME: COSLEY MILL

SHEET  
**C-08**



Map Unit Legend

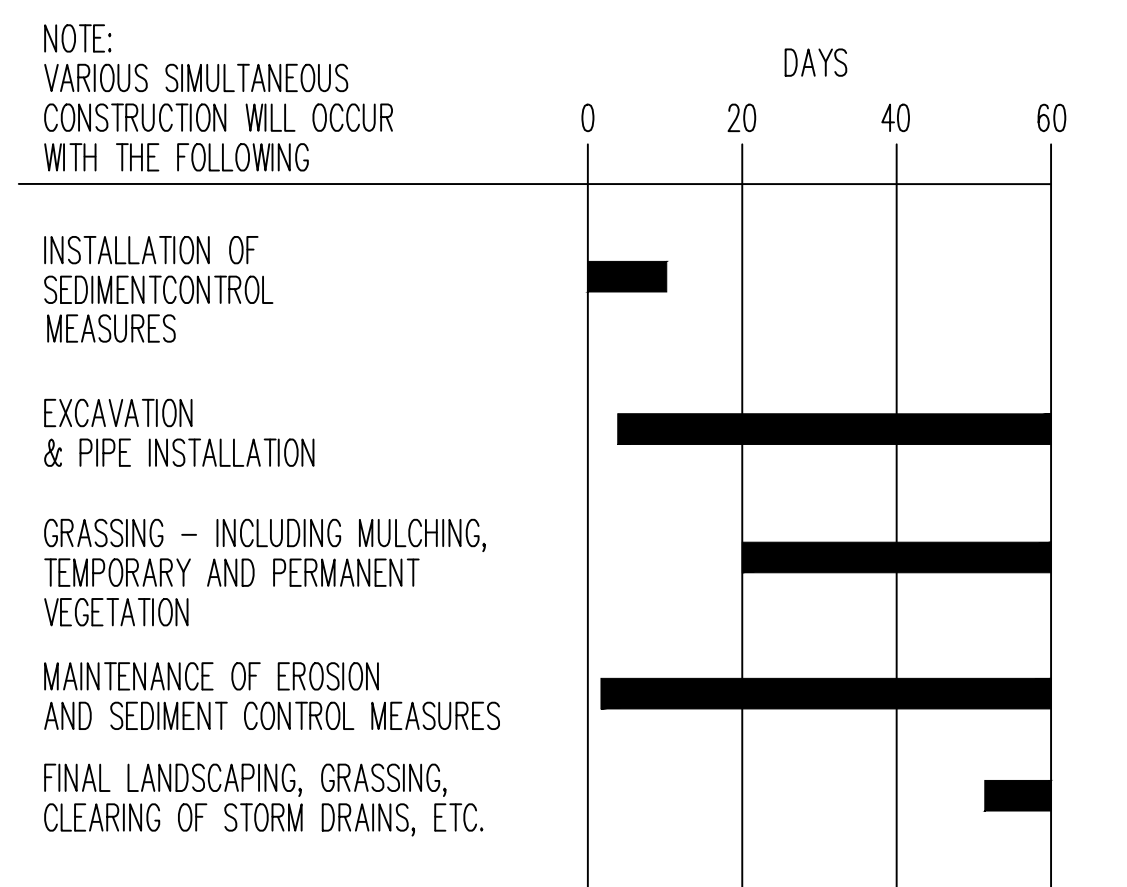
Table with 4 columns: Map Unit Symbol, Map Unit Name, Acres in AOI, Percent of AOI. Lists various soil types like AsC, AwC, AwE, CCA, GeC, etc.

Table titled 'BUFFER ENCROACHMENT' with columns: Encroachment Number, Sheet, 50 ft. Buffer (County), 25 ft. Buffer (State), Encroachment Type, Encroachment Activity.

APPENDIX B  
Nephelometric Turbidity Unit (NTU) TABLES

Two tables: 'Cold Water (Trout Stream)' and 'Warm Water (Supporting Warm Water Fisheries)'. Both show NTU values for different site sizes and drainage areas.

ANTICIPATED START OF CONSTRUCTION –  
JUNE 1, 2018



ACTIVITY SCHEDULE OF EROSION AND  
SEDIMENTATION CONTROL MEASURES



Map Scale: 1:8,210 if printed on a portrait (8.5" x 11") sheet.  
Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 17N WGS84

MAP LEGEND

- Area of Interest (AOI)
Soils
Water Features
Special Point Features

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000. Please rely on the bar scale on each map sheet for map measurements. Source of Map: Natural Resources Conservation Service Web Soil Survey URL: Coordinate System: Web Mercator (EPSG:3857)

EROSION, SEDIMENTATION & POLLUTION CONTROL PLAN CHECKLIST

Project Name: COSLEY MILL RD. WATER LINE EXTENSION Address: 2455 COSLEY MILL RD. CONYERS, GA 30013 City/County: ROCKDALE Date on Plans: 12/23/2017

Checklist table with columns: Plan #, Included, Y/N, and description of requirements for erosion control, sedimentation, and pollution control.

Checklist table with columns: Plan #, Included, Y/N, and description of requirements for BMPs, site preparation, and construction practices.

Checklist table with columns: Plan #, Included, Y/N, and description of requirements for site stabilization, erosion control, and sedimentation measures.

APPENDIX 1  
THE ES&SP PLAN MUST INCLUDE AT LEAST FOUR (4) OF THE FOLLOWING BMPs FOR THOSE AREAS OF THE SITE WHICH DISCHARGE TO AN IMPAIRED STREAM SEGMENT AND FOR SITES WHICH DISCHARGE TO A TRIBUTARY OF AN IMPAIRED STREAM SEGMENT TO OBTAIN A PERMIT TO CONSTRUCT AT ANY ONE TIME.

Table with columns: Plan #, Included, Y/N, and description of various Best Management Practices (BMPs) for erosion and sedimentation control.

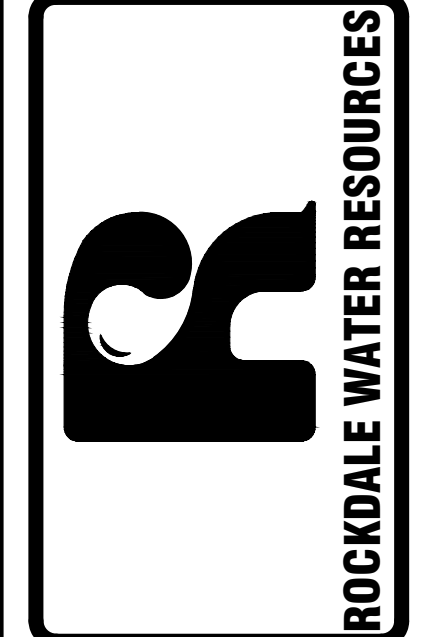


Table titled 'REVISION' with columns: No., Date, Description, and Issued For Bid.

DESIGNED BY: DAVID CERVONE  
DRAWN BY: WALT BOBO  
CHECKED BY: DAVID CERVONE  
DATE: 03/22/2018  
FILE NAME: COSLEY MILL

SHEET  
C-09



**Section 1: General Required Notes**

- A. ES&PC plan prepared by: David Cervone (RWR) GSWCC Level II Certified Design Professional Certification Number: 0000074205
- B. ES&PC 24-Hour Contact: David Cervone (RWR) GSWCC Level II Certified Design Professional Certification Number: 0000074205 Office (770) 278-7486 Mobile (678) 476-4728
- C. The person ultimately responsible for the installation and maintenance of erosion and sedimentation control practices on this site and who is to be contacted in the event of a Stop Work Order is: David Cervone (RWR) GSWCC Level II Certified Design Professional Certification Number: 0000074205 Office (770) 278-7486 Mobile (678) 476-4728
- D. Plans are reviewed in general. Specific details and calculations may not be checked. The engineer's stamp and signature guarantees the accuracy of the calculations and design. Plan approval does not obligate the county to accept the work, nor does it relieve the developer and/or engineer from compliance with any other county, state or federal ordinances and laws. Plan approval does not relieve the developer from the responsibility for damages to adjacent or downstream property resulting from this development.

E. Any revisions to the plans after the initial submittal, other than the response to the plan review comments, will be indicated as revisions and submitted with a written explanation of the revisions and the reasons therefore.

F. Any variations from the permitted plans, changes in design resulting from field conditions, or substitution of construction materials are to be reviewed and approved by the responsible design engineer and Rockdale County Department of Planning & Development.

G. The owner/Developer and Engineer have reviewed the appropriate local, state and federal regulations regarding development activities adjacent to flood plains, state waters and wetlands and have determined that this development plan satisfies all the applicable standards.

H. There is established a 25 foot buffer along the banks of all state waters, as measured horizontally from the point where vegetation has been wrested by normal stream flow or wave action. No land disturbing activities shall be conducted within a buffer and a buffer shall remain in its natural, undisturbed, state of vegetation until all land disturbing activities on the construction site are completed. Once the final stabilization of the site is achieved, a buffer may be thinned or trimmed of vegetation as long as a protective vegetative cover remains to protect water quality and aquatic habitat and a natural canopy is left in sufficient quantity to keep shade on the stream bed; provided, however, that any person constructing a single-family residence, when such residence is constructed by or under contract with the owner for his or her own occupancy, may thin or trim vegetation in a buffer at any time as long as protective vegetative cover remains to protect water quality and aquatic habitat and a natural canopy is left in sufficient quantity to keep shade on the stream bed.

Stream bank restoration and stabilization are required in all disturbed state waters buffers. The stream bank canopy is to be restored within the state waters buffers. Geomat and rip rap are to be placed as necessary to prevent erosion within the stream banks. Georgia House Bill 1426

**Section 2: NPDES Notes**

**Part 1.0 Permit Conditions**

**General**  
A. A National Pollutant Discharge Elimination System (NPDES) Monitoring Program has been prepared for the project as a requirement of the State of Georgia, Department of Natural Resources, Environmental Protection Division (Georgia EPD) due to more than one (1) acre of land will be disturbed during construction. Because of the area of soil disturbance, erosion and sedimentation control practices and monitoring as set forth by Georgia EPD's General Permit No. GAR 100002 are required for this project and shall be implemented as described herein and in accordance with the Construction Plan and the "Manual for Erosion and Sediment Control in Georgia" (Manual), latest edition, published by the State Soil and Water Conservation Commission.

B. The following NPDES information has been prepared in general accordance to Georgia EPD's General Permit No. GAR 100002, "Authorization to Discharge Under the National Pollutant Discharge Elimination System, Storm Water Discharges Associated with Construction Activity For Infrastructure Construction Projects", effective 24 September 2013.

**Notice of Intent**  
The owner (RWR) is the Primary Permittee and shall obtain coverage under Georgia EPD's General Permit No. GAR 100002. No later than 14 days prior to commencing construction, the RWR shall submit a Notice of Intent to the Georgia EPD and to Rockdale County Department of Planning & Development who are the issuing authorities of the Land Disturbance Activity Permit.

**Target NTU and Permit Violation**  
A. A maximum increase of 75 nephelometric turbidity units (NTUs) in storm water affected by construction is the Target NTU for the project.

B. Proper design, installation and maintenance of erosion and sedimentation control practices shall constitute a complete defense to any allegation of noncompliance. A copy of this document and all reporting shall remain at the site of construction or at an easily accessible location for review by the Georgia EPD.

C. A discharge of storm water runoff from disturbed areas where erosion and sedimentation control practices have not been properly designed, installed or maintained shall constitute a violation of the referenced permit for each day on which such discharge results in the turbidity of construction related storm water being increased more than 75 NTUs. Maintenance of erosion and sedimentation control practices as a result of routine inspections shall not be considered a violation.

**Notice of Termination**

The GCWA shall terminate coverage under Georgia EPD's General Permit No. GAR 100002 when soil disturbance activities at the site cease, storm water sampling criteria are met, all temporary BMPs have been removed and final stabilization is complete. A Notice of Termination shall be submitted by the RWR to the Georgia EPD and to Rockdale County Department of Planning & Development who are the issuing authorities of the Land Disturbance Activity Permit.

**Part 2.0 ES&PC Plan Certifications and Statements**

A. "I certify that the permittee's Erosion, Sedimentation and Pollution Control Plan provides for an appropriate and comprehensive system of best management practices required by the Georgia Water Quality Control Act and the document "Manual for Erosion and Sediment Control in Georgia" (Manual) published by the State Soil and Water Conservation Commission as of January 1 of the year in which the land-disturbing activity was permitted, provides for the sampling of the receiving water(s) or the sampling of the storm water outfalls and that the designed system of best management practices meets and sampling methods is expected to meet the requirements contained in the General NPDES Permit No. GAR 100002.

*David Cervone*  
David Cervone, P.E.  
Rockdale Water Resources  
GSWCC Level II Certified Design Professional  
Certification Number: 0000074205  
Issued: 04/20/2015 Expires: 04/20/2018

B. "I certify under the penalty of law that this plan was prepared after a site visit to the locations described herein by myself or my authorized agent, under my direct supervision.

*David Cervone*  
David Cervone, P.E.  
Rockdale Water Resources  
GSWCC Level II Certified Design Professional  
Certification Number: 0000074205  
Issued: 04/20/2015 Expires: 04/20/2018

C. "The design professional who prepare the ES&PC Plan is to inspect the installation of the initial sediment storage requirements, perimeter control BMPs, and sediment basins in accordance with part IV.A.5 within 7 days after installation."

**Part 3.0 Site Information**

**Description and Construction Activity**  
The project consists of installing approximately 1,950 linear feet of 8-inch water main and a 6-inch water meter. The pipe will be installed under SR 138 to Costley Mill Road and laid along the east side of the Road then into the Park. Approximately 564 linear feet of 8-inch water main will be installed along the south side of Salem Church Road southwest from Stream View Drive ending with a 2-inch water meter. The project also consist of installing approximately 2,936 linear feet of service mains (2-inch(2365lf), 1-inch(77lf) and 3/4-inch(494lf)) to serve structures within Costley Mill Park. Total project acreage and disturbed acreage is 2.24 in Rockdale County currently stabilized with grass.

**Storm Water Discharge**  
A. Based on a reconnaissance of the project route, performed on 31 October 2017 surface waters were observed along the proposed route.

B. Peak Runoff Discharges are not estimated for the project because the pipe route is not being developed with impervious surface. Final grades and vegetation will match existing.

**Non-Storm Water Discharge**  
Non-storm water discharges associated with construction activity at the site shall include the use of potable water to flush clean the interior of the laid pipe. Silt fence and hay bales shall be utilized to prevent soil erosion.

**Part 4.0 Storm Water Pollution Controls**

**Erosion and Sedimentation**  
A. Initial Perimeter Control BMPs will consist of installing silt fence prior to and concurrent with construction activities.

B. Intermediate Grading and Drainage BMPs.  
1. Where pavement is removed and excavation completed, No. 57 stone will be installed level with adjacent grades.  
2. Silt fence, hay bales and blankets shall be utilized as intermediate BMPs where applicable.

C. Final BMPs.  
1. All disturbed areas shall be permanently stabilized with paving and vegetation where applicable.

**Storm Water Management**  
The majority of the site area will be stabilized as existing using temporary and permanent grassing in accordance with the Construction Drawings. Temporary silt fence, installed during construction, shall be left in-place until grassed areas of soil have gone through final stabilization. Final stabilization means that all soil disturbing activities at the site have been completed, and that for unpaired areas not covered by permanent structures, 100% of the soil surface is uniformly covered in permanent vegetation with a density of 70% or as required by the Construction Drawings.

**Other Controls**  
A. Off-site vehicle tracking of dirt, soils and sediments and the generation of dust shall be minimized or eliminated to the maximum extent practical.

B. Petroleum containers shall be double-walled and placed in locations that produce the least opportunity for accidents. No petroleum products will be intentionally drained onto the ground surface. Free-phase petroleum products accidentally spilled onto the ground surface will be immediately removed using an absorbent material. Absorbent material will subsequently be placed in a sealable container for off site disposal

**Part 5.0 Inspections and Maintenance**

**General**  
The Contractor shall perform all inspections as indicated in the following schedule using certified Personnel. Certified Personnel means a person who has successfully completed an erosion and sediment control short course eligible for continuing education units, or an equivalent course approved by Georgia EPD and the State Soil and Water Conservation Commission.

**Inspection Schedule**

A. Each day when any construction activity occurs on the site, the following items shall be inspected:

1. Areas where petroleum products are stored, used or handled to determine whether spills and leaks have occurred from vehicles and equipment; and
2. Construction site entrance/exit to determine whether off-site tracking of soil is occurring.

B. At least once every fourteen (14) calendar days and within 24 hours of 0.5 inches or greater rainfall event, the following items shall be inspected:

1. Disturbed areas that have not undergone final stabilization to determine whether erosion is occurring;
2. Areas used for storage of materials that are exposed to precipitation that have not undergone final stabilization to determine whether erosion is occurring; and
3. Erosion control and sedimentation measures identified in Contract Documents to ensure that they are functioning properly.

C. Once per month, the following items shall be inspected:

1. The areas that have undergone final stabilization to determine the evidence or the potential for erosion and sedimentation;
2. Erosion control and sedimentation measures identified in Contract Documents to ensure that they are functioning properly; and
3. Discharge/outfall locations to determine whether erosion and sedimentation control measures are being effective.

**Rainfall Data**

At the time soil disturbance begins (after clearing and grubbing is completed for a particular drainage area), the Contractor shall measure and record rainfall once every 24-hour period until a Notice of Termination is submitted to the Georgia EPD.

**Records**

A. The Contractor shall record results of each inspection on a daily inspection log. Inspection logs shall be maintained on-site until a Notice of Termination has been submitted to the Georgia EPD.

B. Should results of any inspection indicate the need to amend the Erosion Control and Sedimentation Plan, then said actions shall be performed as soon as practical but no later than seven (7) days of that particular inspection.

C. All records associated with the NPDES Permit shall be retained by the Primary Permittee for a period of (3) years from the date of the Notice of Termination.

**Sample Frequency**

A. Storm water samples shall be collected within 45 minutes of:  
1. The accumulation of the minimum amount of rainfall for the qualifying event, if the storm water discharge from a monitored outfall has begun at or prior to the accumulation, or  
2. The beginning of any storm water discharge from a monitored outfall, if the discharge begins after the accumulation of the minimum amount of rainfall for the qualifying event.

B. Storm water samples shall be collected for the following rainfall events (Monday thru Friday, 8:00 AM to 5:00 PM and Saturday, 8:00 AM to 5:00 PM when construction is being conducted by the Primary permittee):

1. The first rain event that reaches or exceeds 0.5 inch that occurs after all clearing and grubbing operations have been completed in the drainage area of the location selected as the representative sampling location.
2. In addition to (1) above, the first rain event that reaches or exceeds 0.5 inch that occurs either 90 days after (1) above or after all mass grading or excavation/backfilling operations have been completed for each phase.

C. At the time of sampling performed pursuant to B. 1 and B.2 above, if erosion control measures are found to be properly designed, installed and maintained, no further turbidity sampling is required for that phase of work.

D. If erosion control measures in a phase of work are found not to be properly designed, installed and maintained, then turbidity samples shall be collected for that phase of work for the next 0.5 inch rain event and subsequent rain events until erosion control measures are found to be properly designed, installed and maintained.

**Sample Analysis and Records**

A. Each storm water sample shall be analyzed for Nephelometric Turbidity Units (NTUs) using methodologies and procedures established by 40 CFR Part 136; the guidance document titled "NPDES Storm Water Sampling Guidance Document, EPA 833-B-92-001" or procedures described in the publication "Standard Methods, Edition 18".

B. Should samples be transported from the job site for analysis, a chain-of-custody record shall be prepared to accompany the samples to the laboratory. Results of each analyses shall be recorded. The Contractor shall provide the RWR with copies of all documentation pertaining to storm water sampling on a monthly basis.

**Reporting to the Georgia EPD**

The RWR shall report storm water monitoring analytical results to the Georgia EPD for only those months when storm water samples are collected. The summary of analytical results shall be submitted to Georgia EPD by the 15th day of each month following a qualifying reporting period via return receipt certified mail. Monthly monitoring reports shall be submitted to the Georgia EPD at the address listed below.

Mountain District - Atlanta Satellite  
Georgia Environmental Protection Division  
4244 International Parkway, Suite 114  
Atlanta, GA 30354-3906

The RWR shall certify each monthly monitoring report as follows:

"I certify under the penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that certified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

**Section 3: Erosion and Sedimentation Control Notes**

**Part 1.0 General**

A. A copy of the approved land disturbance plan and permit shall be present on the site whenever work is in progress.

B. Erosion and Sediment control shall be the Contractor's responsibility for compliance, installation, maintenance, and removal as required by the State of Georgia Manual for Erosion and Sediment Control in Georgia 2016 Edition as published by the Georgia Soil and Water Conservation Commission. The Contractor shall become familiar with these specifications prior to any construction activities. The installation of the required erosion and sediment control measures shall be installed as a first step in construction.

C. Any amendments/revisions to the ES&PC plan which have significant effect on BMPs with a hydraulic component must be certified by the design professional.

D. Failure to install, operate and/or maintain all erosion control measures shall be a justification to stop construction on the job site until such measures are corrected in a accordance with the approved plans or as directed by the Engineer.

**Part 2.0 Site Preparation**

A. Prior to commencing land disturbance activity, the limits of land disturbance shall be clearly and accurately demarcated with stakes ribbons, or other appropriate means. The location and extent of all authorized and disturbance activity shall be demarcated for the duration of the construction activity. No land disturbance shall occur outside the approve limits indicated on the approved plans.

B. Material staging area shall be encompassed with referenced silt fence.

**Part 3.0 During Construction**

A. The escape of sediment from the site shall be prevented by the installation of erosion and sediment control measures and practices prior to land disturbing activities.

B. Erosion control measures will be maintained at all times. If full implementation of the approved plan does not provide for the effective erosion control, additional erosion and sediment control measures shall be implemented to control or treat the sediment source.

C. Any disturbed area left exposed for a period greater than 14 days shall be stabilized with mulch or temporary seeding.

D. 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.

E. Amendments/revisions to the ES&PC Plan which have a significant effect on BMPs with a hydraulic component must be certified by the design professional.

F. Waste materials shall not be discharged to waters of the state, except as authorized by a section 404 permit.

G. The location of some erosion control devices may be altered from that shown on plans as approved by the Inspector.

H. Mud and silt are strictly prohibited from leaving the site and depositing on the public thoroughfare.

I. Construction exits shall be maintained in a condition which will prevent tracking or flow of mud onto public right of way. This may require periodic dressing with stone, as conditions demand, and repair and/or clean out of any structures used to trap sediment. All materials spilled, dropped, washed, or tracked from vehicle or site onto public roadway or into storm drain shall be removed immediately.

J. Control dust using water or other methods as required to prevent dust from being a nuisance to the public and concurrent with on site work.

K. Disturbed soil shall be stabilized with erosion and sediment control measures each day and prior to any rain event as follows: (A) Disturbed soil shall be returned to final grade, (B) Erosion and Sediment Control devices shall be installed, (C) Graded soil shall be treated with lime and fertilizer, (D) Apply temporary and/or permanent vegetation as required.

L. Straw mulching shall be used with temporary and permanent vegetation applications and shall be free of weed seeds and spread at a rate of 90 pounds per 1,000 square feet. Where matting and blankets symbols are shown along with temporary seeding and permanent vegetation symbol, matting and blankets shall be installed in place of straw mulching.

M. The Contractor shall install matting and blankets within all drainage ditches unless noted otherwise.

N. Erosion and sediment control devices shall be inspected by the contractor at the end of each days work and at the end of each and every rain in event. The Contractor shall be responsible for the repair and/or replacement of any failed or inadequately installed sediment control device. The Contractor shall be responsible for all maintenance of erosion and sediment control devices.

O. The Contractor shall remove accumulated silt when the silt is within 12-inches of the top of the silt fence utilized for erosion control.

P. All silts and/or sediment removed from the erosion/sediment control devices shall be disposed of onsite in such a manner as to prevent said silts and/or sediments from reentering the control devices and/or exiting the site through the storm drainage systems and/or surface drainage.

Q. Concrete truck washout location shall be in a temporary truck wash area located at the site entrance. Washout shall be contained within a pit or trench with no material leaving the site or impacting vegetated or non-disturbed areas. Disposal of material shall include the breaking of material into small amounts for trash disposal or removal from site to an appropriate landfill. **Washout of the drum at the construction site is prohibited.**

R. Paint and/or other chemicals shall be stored in secured facilities with restricted access to employees only. Cleanup and disposal of this material shall be in accordance with all recognized local and federal requirements. All disposal shall be approved to off-site waste facilities classified to accept that material.

S. All petroleum products shall be stored and used in an area that provides a secondary containment feature, and shall be located in an area with the least foreseeable impact if a catastrophic event should occur. Emergency contact numbers and procedures for spills shall be available on-site.

T. Erosion Control measures will be maintained until all disturbed soil within the construction area has been completely stabilized with permanent vegetation and all roads/driveways have been paved.

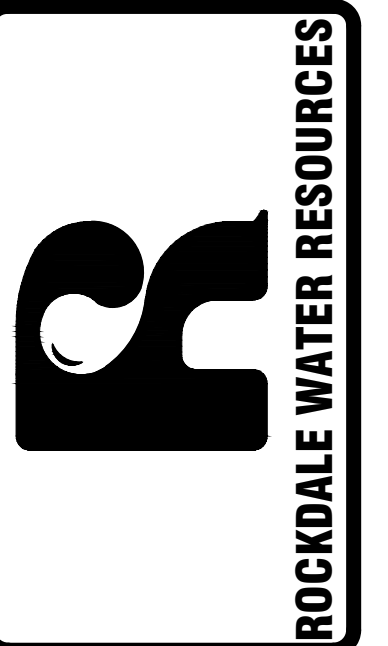
U. Limit the amount of disturbed area at any one time to no greater than 1.12 acres, which is 50% of the total disturbed site.

**Part 4.0 Site Completion**

A. Final stabilization means that 100% of the soil surface is uniformly covered in permanent vegetation with a density of 70% or greater, or landscaped according to the plan (uniformly covered landscaping materials in planned landscaped areas), or equivalent permanent stabilization measures.

B. The Contractor shall remove silt fence in areas that have undergone stabilization as determined by RWR inspector. Contractor shall dispose said silt fence in accordance with local regulations.

C. The Contractor shall be responsible for repairing and/or maintaining all job site work areas that are being stabilized or have undergone final stabilization until RWR has issued a letter of final acceptance.



No.	DATE	DESCRIPTION	REVISION					
			No.	DATE	DESCRIPTION			
0	05/16/2018	ISSUED FOR BID	-	-	-	-	-	-
			-	-	-	-	-	-
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			-	-	-	-	-	-
			-	-	-	-	-	-
			-	-	-	-	-	-

**EROSION CONTROL NPDES NOTES**

DESIGNED BY: DAVID CERVONE  
DRAWN BY: WALT BOBO  
CHECKED BY: DAVID CERVONE  
DATE: 03/22/2018  
FILE NAME: COSTLEY MILL



# GEORGIA UNIFORM CODING SYSTEM

## FOR SOIL EROSION AND SEDIMENT CONTROL PRACTICES GEORGIA SOIL AND WATER CONSERVATION COMMISSION

### STRUCTURAL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Cd	CHECKDAM			A small temporary barrier or dam constructed across a swale, drainage ditch or area of concentrated flow.
Ch	CHANNEL STABILIZATION			Improving, constructing or stabilizing an open channel, existing stream, or ditch.
Co	CONSTRUCTION EXIT			A crushed stone pad located at the construction site exit to provide a place for removing mud from tires thereby protecting public streets.
Cr	CONSTRUCTION ROAD STABILIZATION			A travelway constructed as part of a construction plan including access roads, subdivision roads, parking areas and other on-site vehicle transportation routes.
Dc	STREAM DIVERSION CHANNEL			A temporary channel constructed to convey flow around a construction site while a permanent structure is being constructed.
Di	DIVERSION			An earth channel or dike located above, below or across a slope to divert runoff. This may be a temporary or permanent structure.
Dn1	TEMPORARY DOWNDRAIN STRUCTURE			A flexible conduit of heavy-duty fabric or other material designed to safely conduct surface runoff down a slope. This is temporary and inexpensive.
Dn2	PERMANENT DOWNDRAIN STRUCTURE			A paved chute, pipe, sectional conduit or similar material designed to safely conduct surface runoff down a slope.
Fr	FILTER RING			A temporary stone barrier constructed at storm drain inlets and pond outlets.
Ga	GABION			Rock filter baskets which are hand-placed into position forming soil stabilizing structures.
Gr	GRADE STABILIZATION STRUCTURE			Permanent structures installed to protect channels or waterways where otherwise the slope would be sufficient for the running water to form gullies.
Lv	LEVEL SPREADER			A structure to convert concentrated flow of water into less erosive sheet flow. This should be constructed only on undisturbed soils.
Rd	ROCK FILTER DAM			A permanent or temporary stone filter dam installed across small streams or drainageways.
Re	RETAINING WALL			A wall installed to stabilize cut and fill slopes where maximum permissible slopes are not obtainable. Each situation will require special design.
Rt	RETRO FITTING			A device or structure placed in front of a permanent stormwater detention pond outlet structure to serve as a temporary sediment filter.
Sd1	SEDIMENT BARRIER			A barrier to prevent sediment from leaving the construction site. It may be sandbags, bales of straw or hay, brush, logs and poles, gravel, or a silt fence.
Sd2	INLET SEDIMENT TRAP			An impounding area created by excavating around a storm drain drop inlet. The excavated area will be filled and stabilized on completion of construction activities.
Sd3	TEMPORARY SEDIMENT BASIN			A basin created by excavation or a dam across a waterway. The surface water runoff is temporarily stored allowing the bulk of the sediment to drop out.
Sd4	TEMPORARY SEDIMENT TRAP			A small temporary pond that drains a disturbed area so that sediment can settle out. The principle feature distinguishing a temporary sediment trap from a temporary sediment basin is the lack of a pipe or riser.
Sk	FLOATING SURFACE SKIMMER			A buoyant device that releases/draws water from the surface of sediment ponds, traps, or basins at a controlled rate of flow.
Spb	SEEP BERM			Linear control device constructed as a diversion perpendicular to the direction of runoff to enhance dissipation and infiltration, while creating multiple sedimentation chambers with the employment of intermediate dikes.

### STRUCTURAL PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Sr	TEMPORARY STREAM CROSSING			A temporary bridge or culvert-type structure protecting a stream or watercourse from damage by crossing construction equipment.
St	STORMRAIN OUTLET PROTECTION			A paved or short section of riprap channel at the outlet of a storm drain system preventing erosion from the concentrated runoff.
Su	SURFACE ROUGHENING			A rough soil surface with horizontal depressions on a contour or slopes left in a roughened condition after grading.
Tc	TURBIDITY CURTAIN			A floating or staked barrier installed within the water (it may also be referred to as a floating boom, silt barrier, or silt curtain).
Tp	TOPSOILING			The practice of stripping off the more fertile soil, storing it, then spreading it over the disturbed area after completion of construction activities.
Tr	TREE PROTECTION			To protect desirable trees from injury during construction activity.
Wt	VEGETATED WATERWAY OR STORMWATER CONVEYANCE CHANNEL			Paved or vegetative water outlets for diversions, terraces, berms, dikes or similar structures.

### VEGETATIVE PRACTICES

CODE	PRACTICE	DETAIL	MAP SYMBOL	DESCRIPTION
Bf	BUFFER ZONE			Strip of undisturbed original vegetation, enhanced or restored existing vegetation or the reestablishment of vegetation surrounding an area of disturbance or bordering streams.
Cs	COASTAL DUNE STABILIZATION (WITH VEGETATION)			Planting vegetation on dunes that are denuded artificially constructed, or re-nourished.
Ds1	DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)			Establishing temporary protection for disturbed areas where seedlings may not have a suitable growing season to produce an erosion retarding cover.
Ds2	DISTURBED AREA STABILIZATION (WITH TEMP SEEDING)			Establishing a temporary vegetative cover with fast growing seedlings on disturbed areas.
Ds3	DISTURBED AREA STABILIZATION (WITH PERM SEEDING)			Establishing a permanent vegetative cover such as trees, shrubs, vines, grasses, or legumes on disturbed areas.
Ds4	DISTURBED AREA STABILIZATION (SODDING)			A permanent vegetative cover using sods on highly erodible or critically eroded lands.
Du	DUST CONTROL ON DISTURBED AREAS			Controlling surface and air movement of dust on construction site, roadways and similar sites.
Fi-Co	FLOCCULANTS AND COAGULANTS			Substance formulated to assist in the solids/liquid separation of suspended particles in solution.
Sb	STREAMBANK STABILIZATION (USING PERM VEGETATION)			The use of readily available native plant materials to maintain and enhance streambanks, or to prevent, or restore and repair small streambank erosion problems.
Ss	SLOPE STABILIZATION			A protective covering used to prevent erosion and establish temporary or permanent vegetation on steep slopes, shore lines, or channels.
Tac	TACKIFIERS AND BINDERS			Substance used to anchor straw or hay mulch by causing the organic material to bind together.

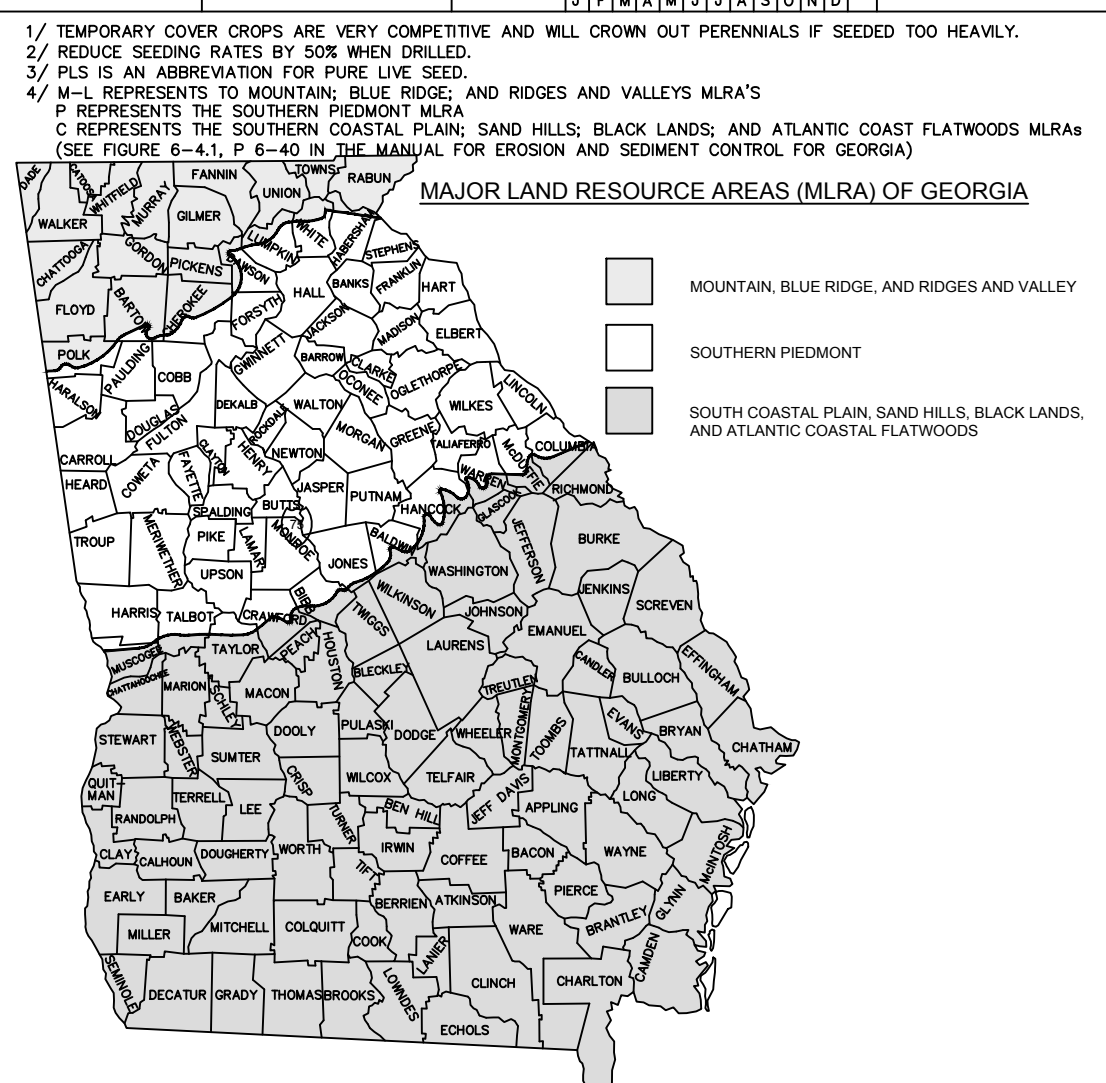
EROSION CONTROL ACTIVITIES										
Co	Construction Exit	Ds1	Disturbed Area Stabilization (Mulching Only)	Ds2	Disturbed Area Stabilization (Temp Seeding)	Ds3	Disturbed Area Stabilization (Perm Seeding)	Du	Mulch and Barkers	M
Sd1	Sediment Barrier	Du	Dust Control on Disturbed Areas							
Ds1	Disturbed Area Stabilization (Mulching Only)	Du	Dust Control on Disturbed Areas							
Ds2	Disturbed Area Stabilization (Temp Seeding)	Du	Dust Control on Disturbed Areas							

FOR TEMPORARY PROTECTION OF CRITICAL AREAS WITHOUT SEEDING, THIS STANDARD APPLIES TO GRADES OR CLEARED AREAS WHICH MAY BE SUBJECTED TO EROSION FOR 6 MONTHS OR LESS, WHERE SEEDINGS MAY NOT HAVE A SUITABLE GROWING SEASON TO PRODUCE AN EROSION RETARDANT COVER, BUT WHICH CAN BE STABILIZED WITH A MULCH COVER.

MATERIALS	INSTALLATION
DRY STRAW OR HAY	DEPTH OF 2 TO 4 INCHES PROVIDING COMPLETE SOIL COVERAGE
WOOD WASTE (CHIPS SAWDUST OR BARK)	DEPTH OF 2 TO 3 INCHES
EROSION CONTROL MATTING OR NETTING	APPLY IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS
CUTBACK ASPHALT (SLOW CURING)	1200 GALLONS PER ACRE, OR 1/4 GALLON PER SQUARE YARD
POLYETHYLENE FILM	SECURED OVER BANKS OR STOCKPILED SOIL MATERIAL FOR TEMPORARY PROTECTION

Ds1 DISTURBED AREA STABILIZATION (WITH MULCHING ONLY)	
2014 MANUAL FOR EROSION AND SEDIMENT CONTROL (GREEN BOOK)	

PLANTS, PLANTING RATES, AND PLANTING DATES FOR TEMPORARY COVER OR COMPANION CROPS 1/											
SPECIES	BROADCAST RATES 1/2" PLS 3/4" PER 1000 SF	RESOURCE AREA	PLANTING DATES	REMARKS							
BARLEY (Hordeum vulgare)	3 bu. (144 LBS.) ALONE IN MIXTURES 1/2 bu. (24 LBS.)	M-L P C	J F M A M J J A S O N D	14,000 SEED PER POUND. WINTERBERRY. USE ON PRODUCTIVE SOILS.							
LESPEDEZA, ANNUAL (Lespedeza bicolor)	40 LBS. 10 LBS.	M-L P C	J F M A M J J A S O N D	200,000 SEED PER POUND. MAY WINTERBERRY FOR SEVERAL YEARS. USE INOCULANT EL.							
LOVEGRASS, WEEPING (Eragrostis curvula)	4 LBS. 2 LBS.	M-L P C	J F M A M J J A S O N D	1,500,000 SEED PER POUND. MAY LAST FOR SEVERAL YEARS. MIX WITH SERICIA LESPEDEZA.							
MILLET, BROWNTOP (Panicum fasciculatum)	40 LBS. 10 LBS.	M-L P C	J F M A M J J A S O N D	173,000 SEED PER POUND. QUICK DENSE COVER. WILL PROVIDE SOO HIGH COMPETITION IN MIXTURES IF SEEDING AT HIGH RATES.							
MILLET, PEARL (Panicum glaucum)	50 LBS. 1.1 LBS.	M-L P C	J F M A M J J A S O N D	88,000 SEED PER POUND. QUICK DENSE COVER. MAY REACH 9 FEET IN HEIGHT. NOT RECOMMENDED FOR MIXTURES.							
OATS (Avena sativa)	4bu. (128 LBS.) ALONE IN MIXTURES (32 LBS.)	M-L P C	J F M A M J J A S O N D	13,000 SEED PER POUND. USE ON PRODUCTIVE SOILS. NOT AS WINTERBERRY AS RYE OR BARLEY.							
RYE (Secale cereale)	3 bu. (168 LBS.) ALONE IN MIXTURES (28 LBS.)	M-L P C	J F M A M J J A S O N D	18,000 SEED PER POUND. QUICK COVER. DROUGHT TOLERANT AND WINTERBERRY.							
RYEGRASS, ANNUAL (Lolium temulentum)	40 LBS. 0.9 LBS.	M-L P C	J F M A M J J A S O N D	27,000 SEED PER POUND. DENSE COVER. DROUGHT TOLERANT AND NOT TO BE USED IN MIXTURES.							
SUDAN GRASS (Sorghum sudanense)	60 LBS. 1.4 LBS.	M-L P C	J F M A M J J A S O N D	55,000 SEED PER POUND. GOOD ON DROUGHT SITES. NOT RECOMMENDED FOR MIXTURES.							
TRIFOLIUM (X-trifoliosides)	3 bu. (144 LBS.) ALONE IN MIXTURES (24 LBS.)	M-L P C	J F M A M J J A S O N D	USE ON LOWER PART OF SOUTHERN COASTAL PLAIN AND IN ATLANTIC COASTAL FLATWOODS ONLY.							
WHEAT (Triticum aestivum)	3 bu. (180 LBS.) ALONE IN MIXTURES (30 LBS.)	M-L P C	J F M A M J J A S O N D	15,000 SEED PER POUND.							

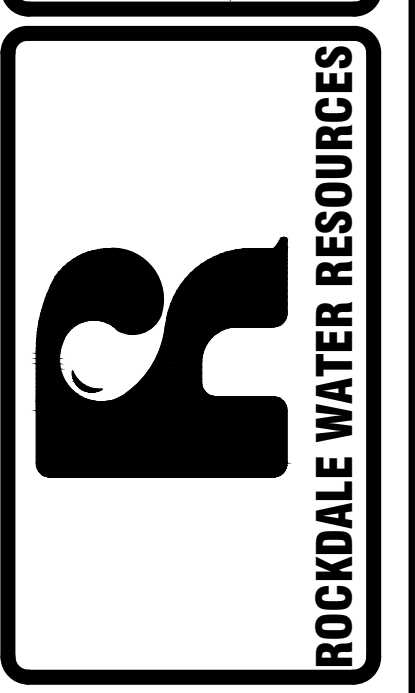
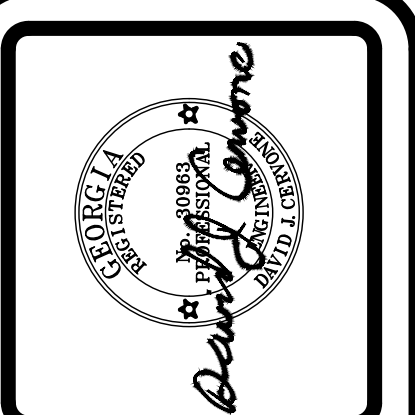


**Ds2 DISTURBED AREA STABILIZATION (TMP. SEEDING)**  
2014 MANUAL FOR EROSION AND SEDIMENT CONTROL (GREEN BOOK)  
Figure 6-27.2

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

SPECIES	BROADCAST RATES 1/2" PLS 3/4" PER 1000 SF	RESOURCE AREA	PLANTING DATES	REMARKS
BAHA, PENSACOLA (Paspalum notatum)	60 LBS. 30 LBS.	M-L P C	J F M A M J J A S O N D	ALONE OR W/ TEMPORARY COVER WITH OTHER PERENNIALS
BAHA, WILMINGTON (Paspalum notatum)	60 LBS. 30 LBS.	M-L P C	J F M A M J J A S O N D	ALONE OR W/ TEMPORARY COVER WITH OTHER PERENNIALS
BERNADA, COMMON (Cynodon dactylon)	10 LBS. 6 LBS.	M-L P C	J F M A M J J A S O N D	HULLED SEED ALONE OR W/ OTHER PERENNIALS
BERNADA, COMMON (Cynodon dactylon)	10 LBS. 6 LBS.	M-L P C	J F M A M J J A S O N D	W/ TEMP. COVER WITH OTHER PERENNIALS
BERNADA SPRIGS (Cynodon dactylon)	40 CF. 0.9 CF. OR 500 PLOVS 3' x 3'	M-L P C	J F M A M J J A S O N D	A CUBIC FOOT CONTAINS APPROXIMATELY 630 SPRIGS. A BUSHEL CONTAINS 1.57 CUBIC FEET OR APPROXIMATELY 630 SPRIGS. PLANT WITH WINTER ANNUALS PLANT WITH TALL PERENNIALS IN SOUTHERN COASTAL PLAIN ONLY.
CENTPEEDE (Centropogon ophioides)	BLOCK 500 ONLY	M-L P C	J F M A M J J A S O N D	DROUGHT TOLERANT. FULL SUN OR PARTIAL SHADE. EFFECTIVE AGAINST TOXIC AND CONCENTRATED FLOW. IRRIGATION IS NEEDED UNTIL FULLY ESTABLISHED. DO NOT PLANT NEAR PATHWAYS. WINTERBERRY AS FAR NORTH AS ATHENS AND ATLANTA.
CROWNVEITCH (Cenchrus ciliaris)	15 LBS. 0.3 LBS.	M-L P C	J F M A M J J A S O N D	100,000 SEED PER POUND. DENSE GROWTH. ATTRACTIVE TO PINE AND WHITE BLOSSOM SPRINGS TO LATE FALL. MIX W/ 30 LBS. OF TALL FESCUE OR 15 LBS. OF RYE INOCULATED SEED WITH INOCULANT. USE FROM NORTH ATLANTA AND NORTHWARD.
FESCUE, TALL (Festuca arundinacea)	50 LBS. 30 LBS.	M-L P C	J F M A M J J A S O N D	227,000 SEED PER POUND. USE ALONE ONLY ON BETTER SITES. NOT FOR DROUGHTY SOILS. MIX WITH PERENNIAL LESPEDEZAS OR CROWNVEITCH NOT FOR HEAVY USE AREAS OR ATHLETIC FIELDS.
KUDZU (Pueraria thurbergiana)	3' - 7' APART	ALL	J F M A M J J A S O N D	RAPID AND VIGOROUS GROWTH. EXCELLENT AREA GULLY EROSION CONTROL. WILL CLIMB. GOOD LIVESTOCK GRAZE.
LESPEDEZA, SERICIA (Lespedeza curvata)	60 LBS. 1.4 LBS.	M-L P C	J F M A M J J A S O N D	305,000 SEED PER POUND. WELLY ADAPTED. LOW MAINTENANCE. MIX WITH SERICIA LESPEDEZA, COMMON BERNADA, BAHIA, OR TALL FESCUE. TAKES 2 TO 3 YEARS TO BECOME FULLY ESTABLISHED. EXCELLENT ON ROADWAYS. INOCULATE SEED W/ EL INOCULANT.
SCARIFIED	75 LBS. 1.7 LBS.	M-L P C	J F M A M J J A S O N D	UNSCARIFIED
SEED-BEARING HAY	3 TONS 138 LBS.	M-L P C	J F M A M J J A S O N D	CUT WHEN SEED IS MATURE, BUT BEFORE IT SHATTERS. ADD TALL FESCUE OR WINTER ANNUALS.
LESPEDEZA, AMBRO VIRGATA (Lespedeza virginica)	60 LBS. 1.4 LBS.	M-L P C	J F M A M J J A S O N D	300,000 SEED PER POUND. HEIGHT OF GROWTH IS 18 TO 24 INCHES. SPREADING TYPE GROWTH. NEW GROWTH IS BRONZE COLOR. MIX W/ WEEPING LOVEGRASS, COMMON BERNADA, BAHIA, TALL FESCUE, OR WINTER ANNUALS. DO NOT MIX W/ LESPEDEZA LESPEDEZA. SLOW TO DEVELOP SOLID STANDS. INOCULATE SEED W/ EL INOCULANT.
LESPEDEZA, SHRUB (Lespedeza thurbergii)	60 LBS. 1.4 LBS.	M-L P C	J F M A M J J A S O N D	3' x 3'
LOVEGRASS, WEEPING (Eragrostis curvula)	4 LBS. 2 LBS.	M-L P C	J F M A M J J A S O N D	ALONE W/ OTHER PERENNIALS
MADONNACARE (Panicum hemitomon)	2' x 3' SPACING	ALL	J F M A M J J A S O N D	FOR VERY WET SITES. MAY LOGG BURNED. USE SPRING FROM LOCAL SOURCES. USE ALONG RIVER BANKS AND SHORELINES.
PANICGRASS, ATLANTIC COASTAL (Panicum amaranthifolium)	20 LBS. 0.5 LBS.	M-L P C	J F M A M J J A S O N D	GROWS WELL ON COASTAL SAND DUNES, BROWN AREAS, GRAVEL PITS. PROVIDES WINTER COVER FOR WILDS. MIX WITH SERICIA LESPEDEZA EXCEPT ON SAND DUNES.
REED CANARY GRASS (Phalaris arundinacea)	50 LBS. 30 LBS.	M-L P C	J F M A M J J A S O N D	GROWS SIMILAR TO TALL FESCUE.
SUNFLOWER, "AZTEC" MAXIMUMUM (Helianthus maximiliani)	10 LBS. 0.2 LBS.	M-L P C	J F M A M J J A S O N D	

Ds3 DISTURBED AREA STABILIZATION (PERMANENT VEGETATION)	
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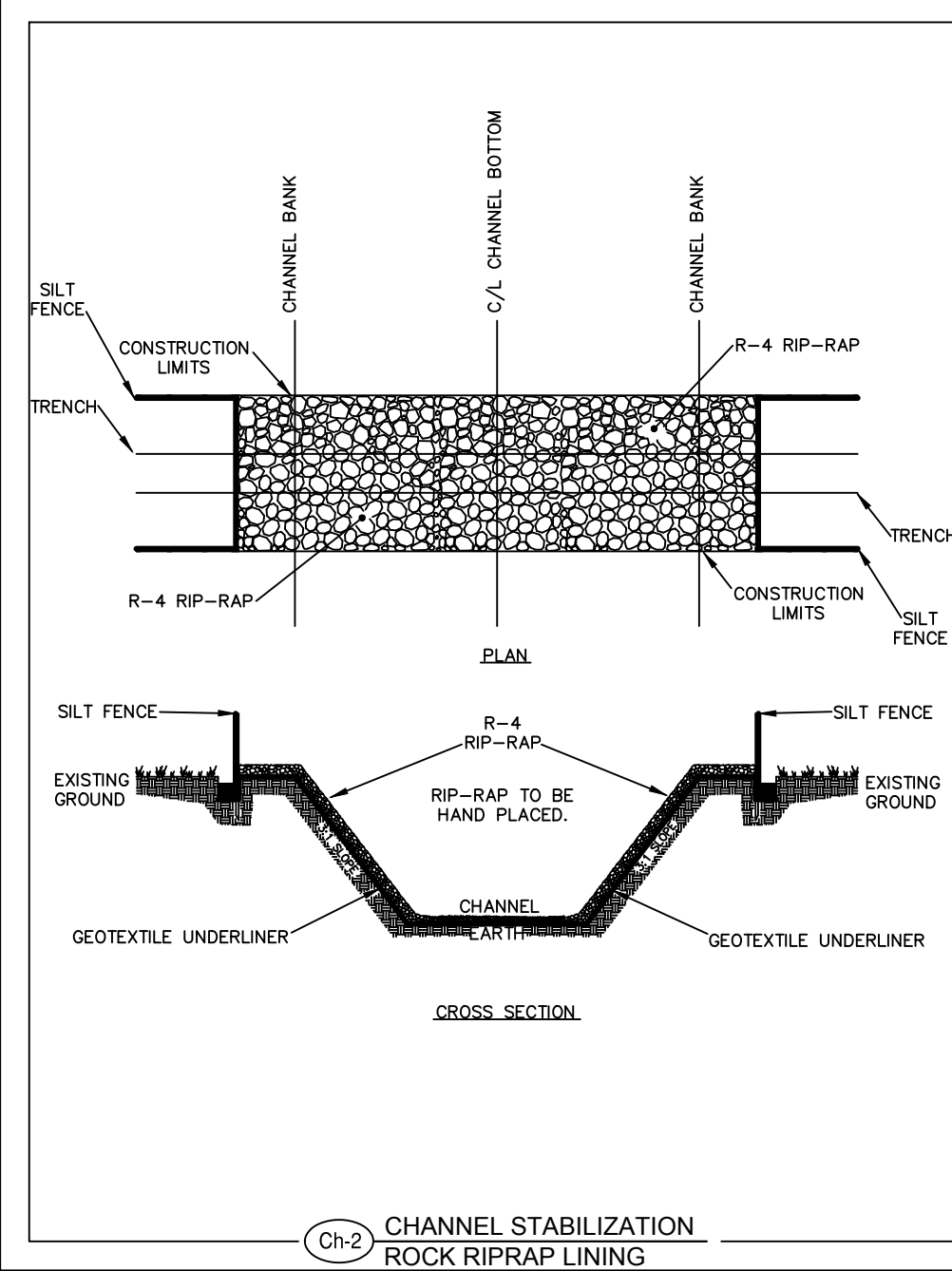
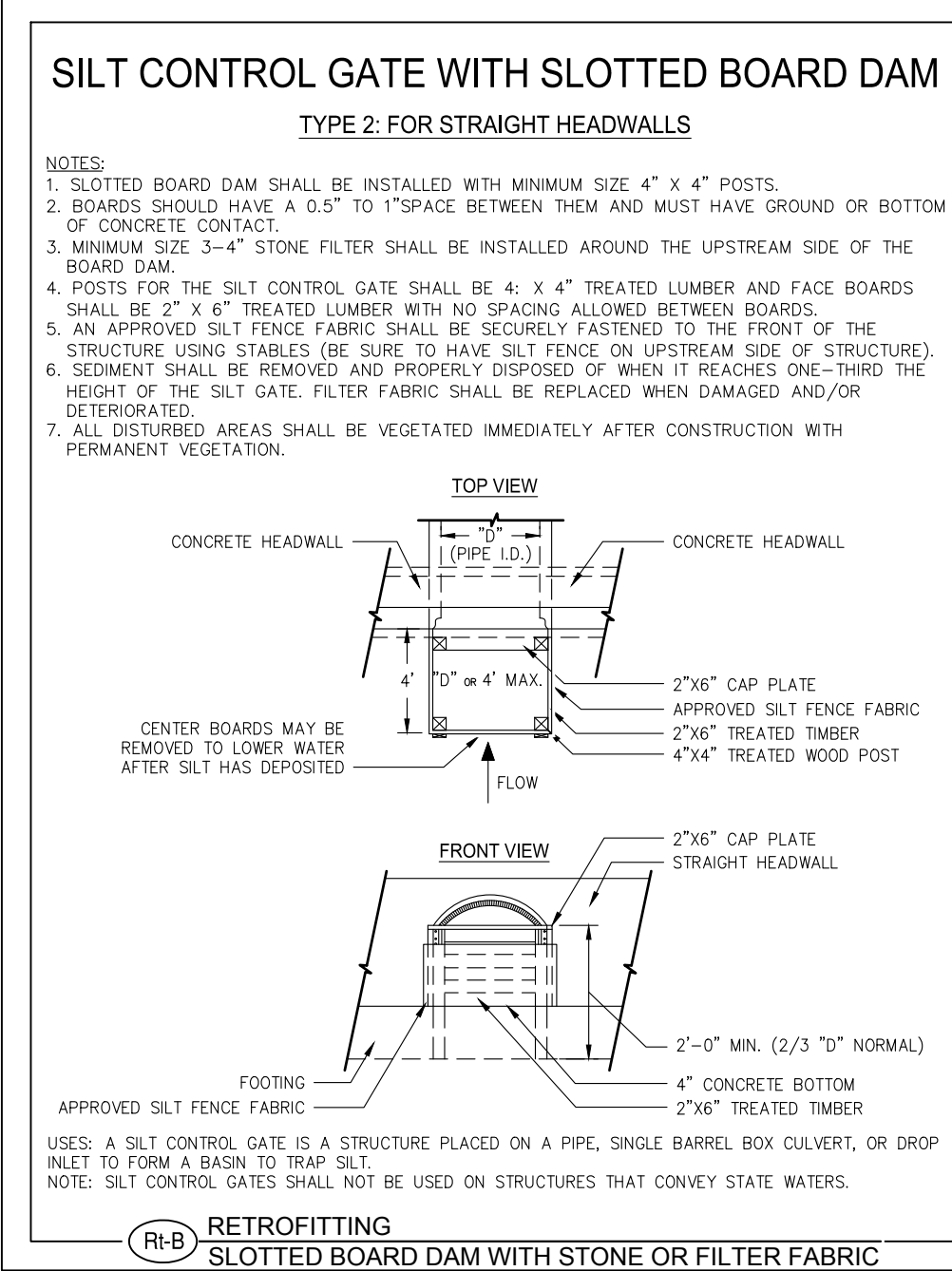
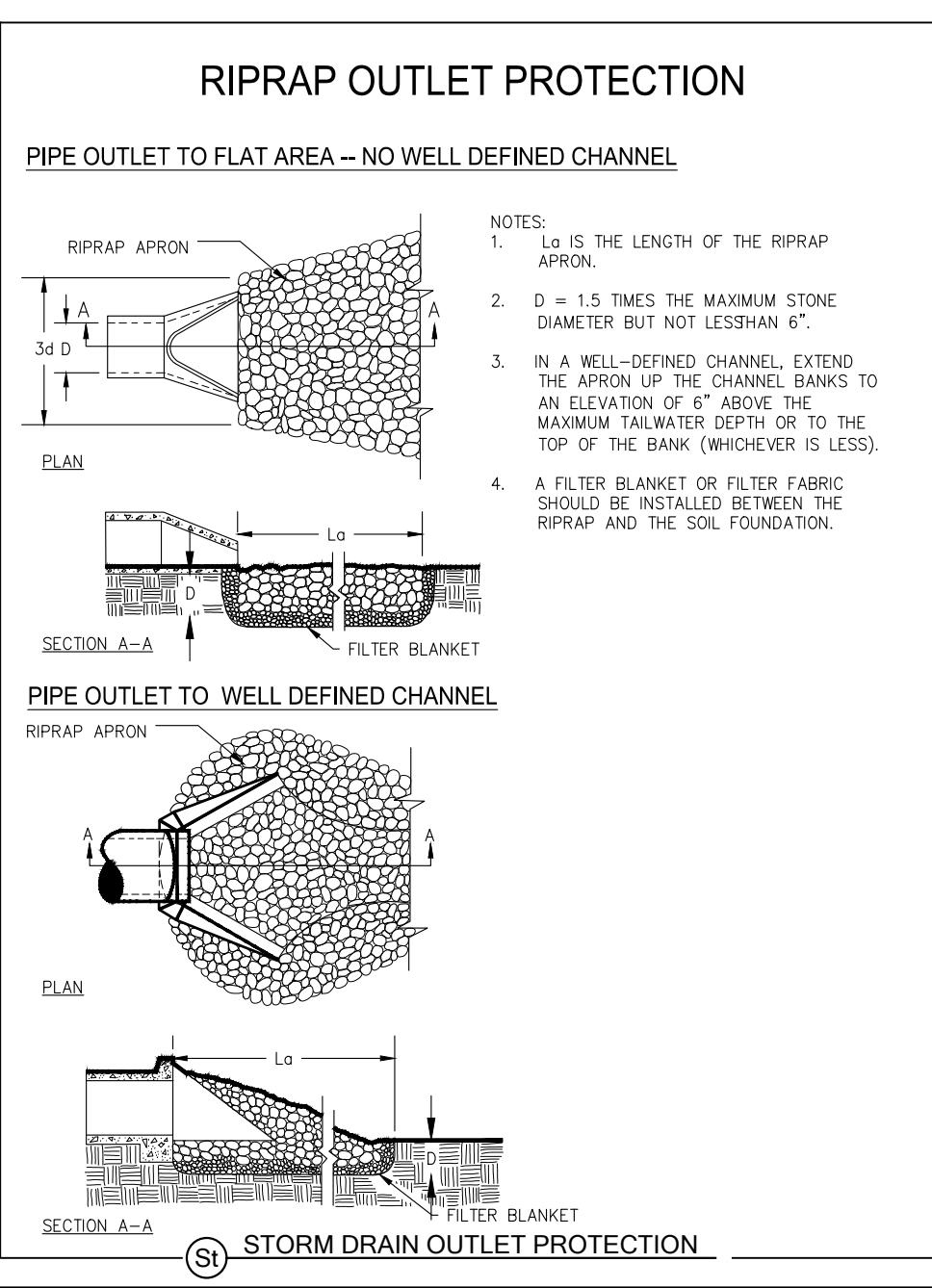
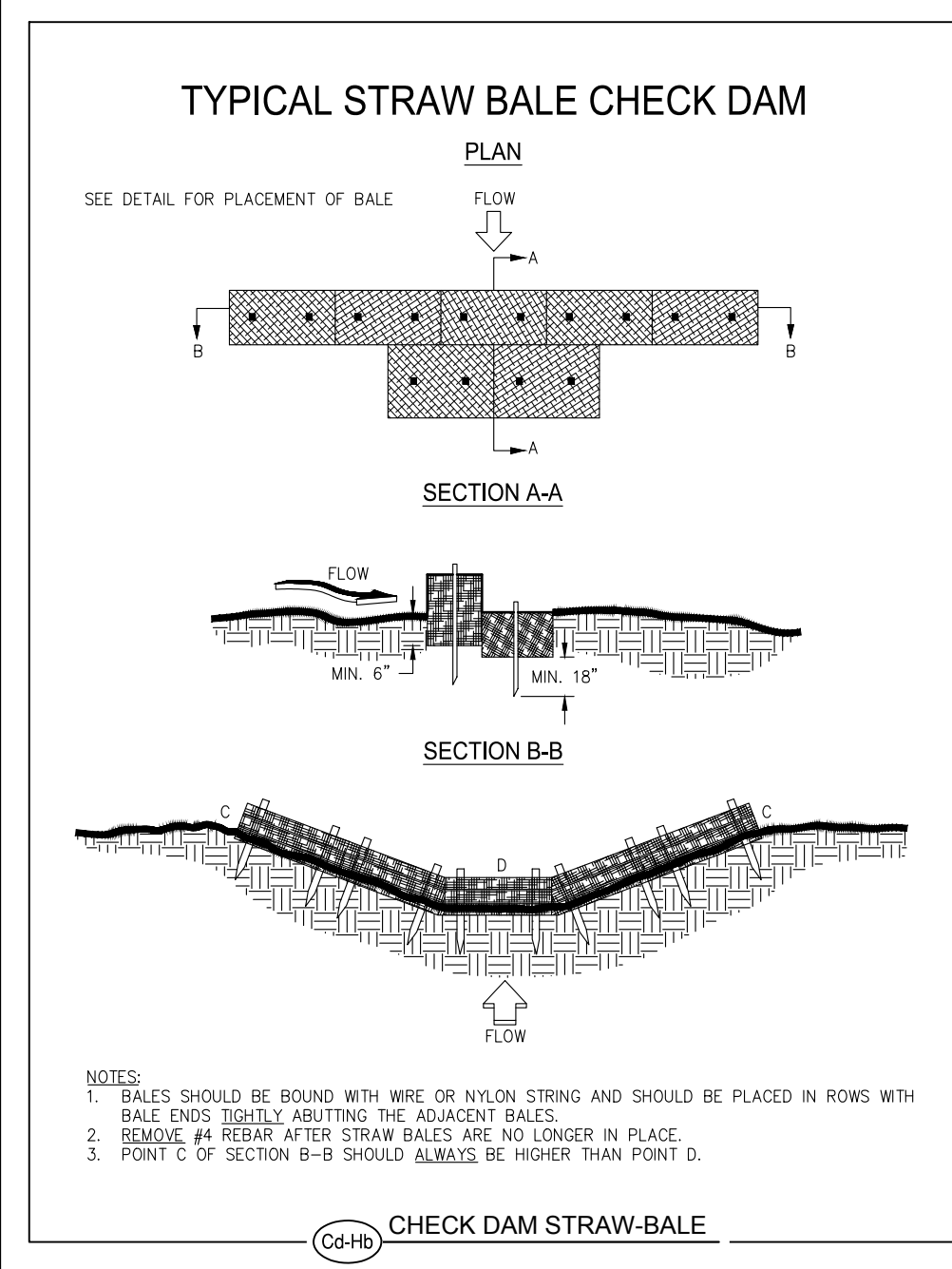
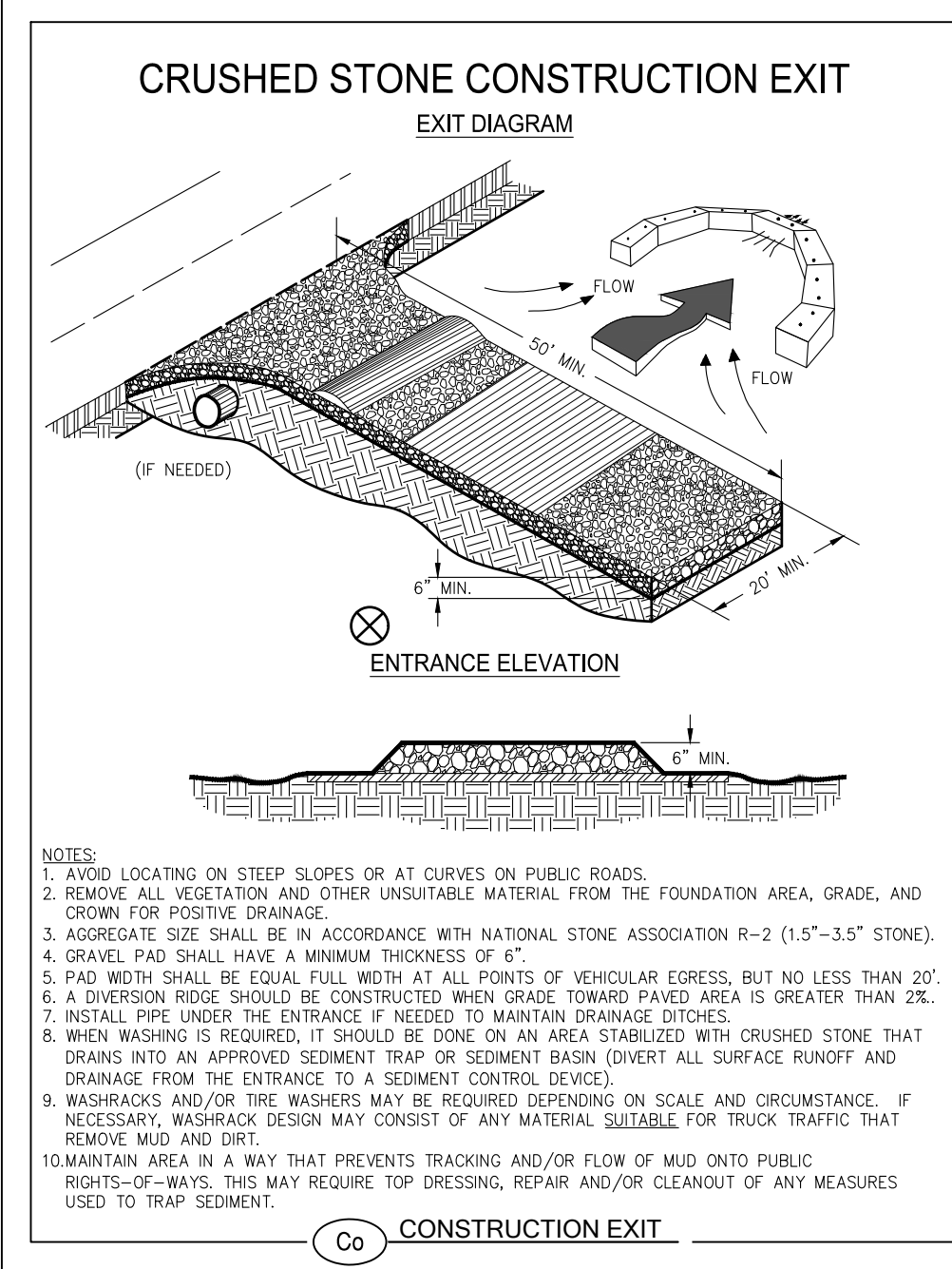
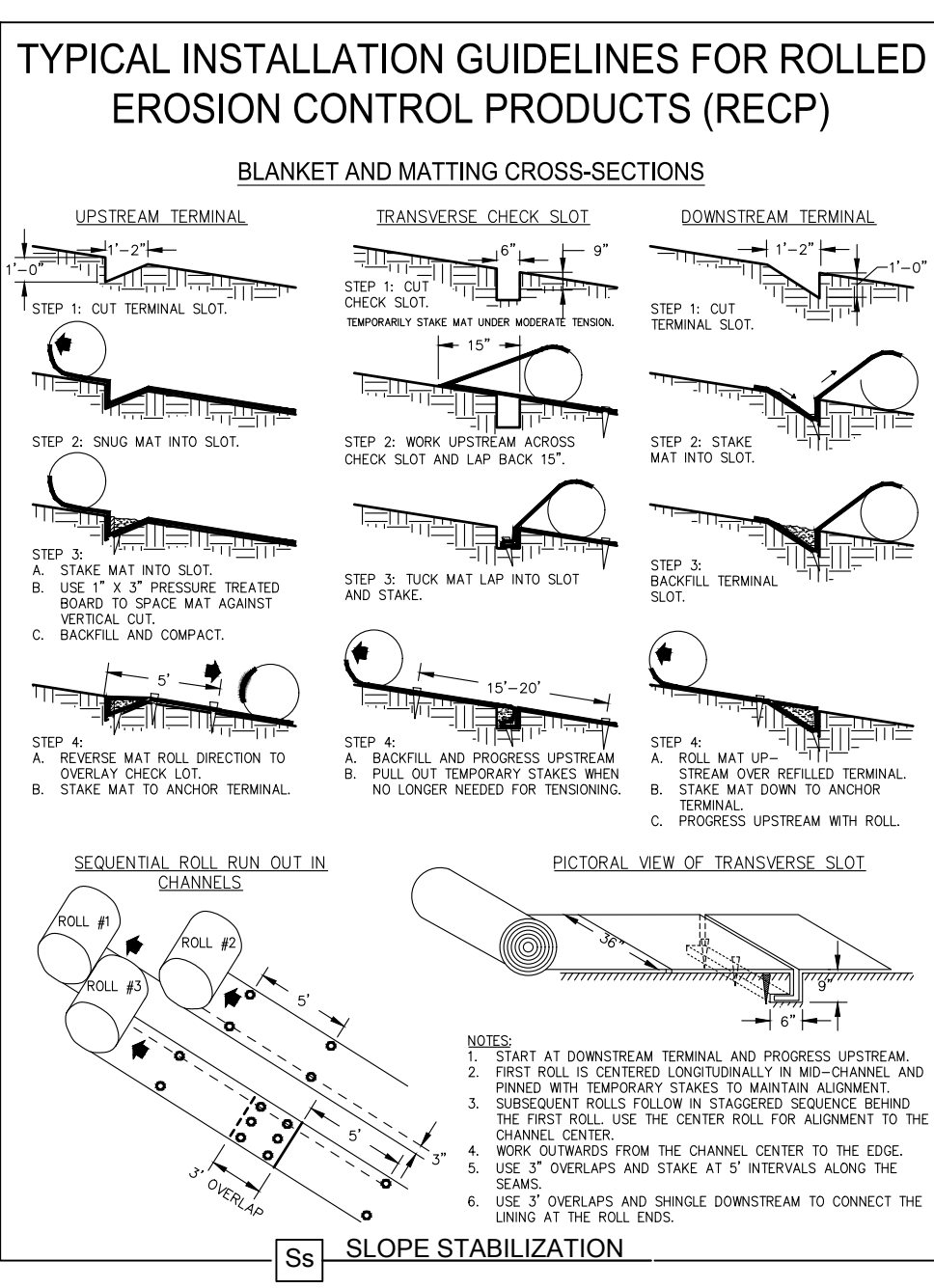
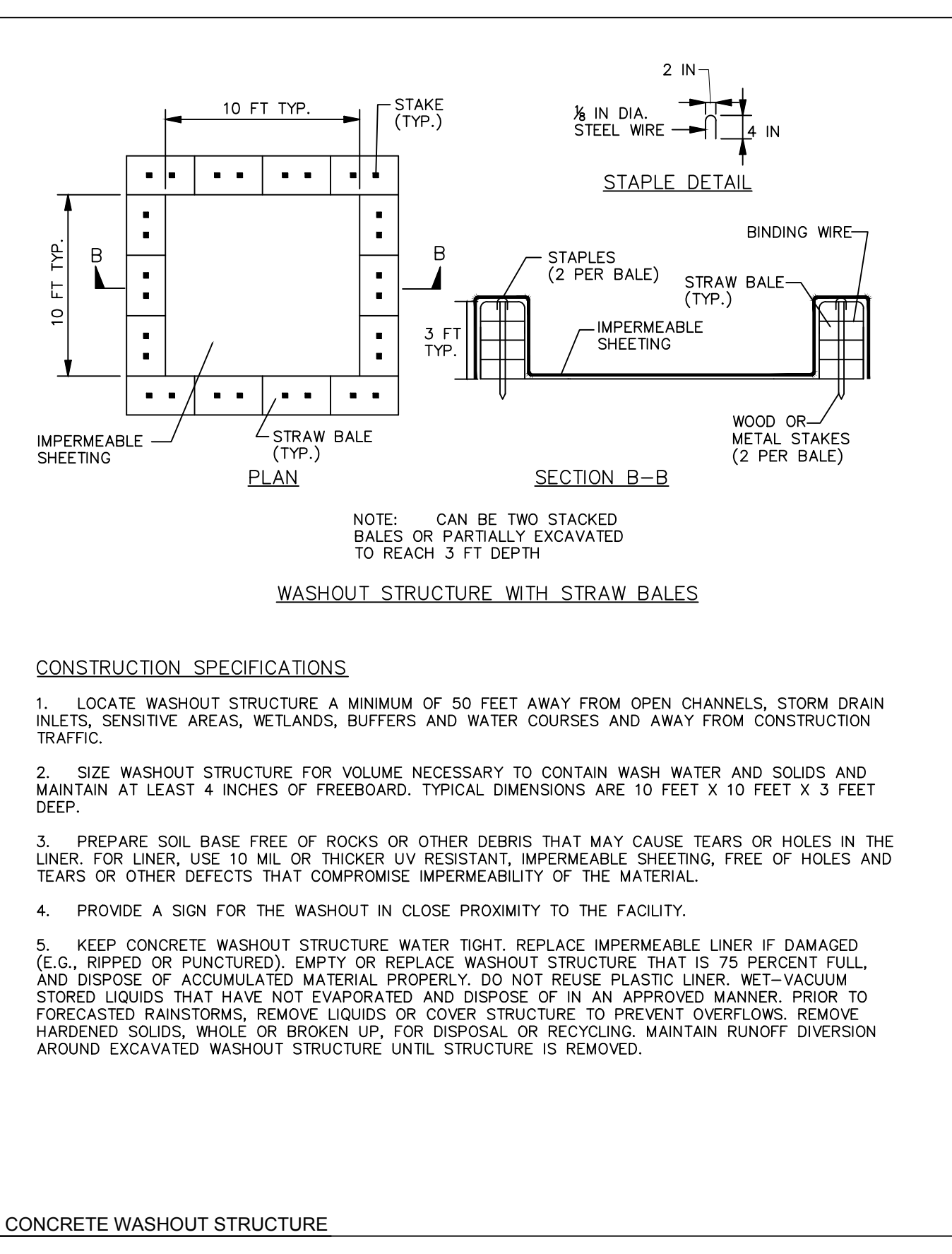
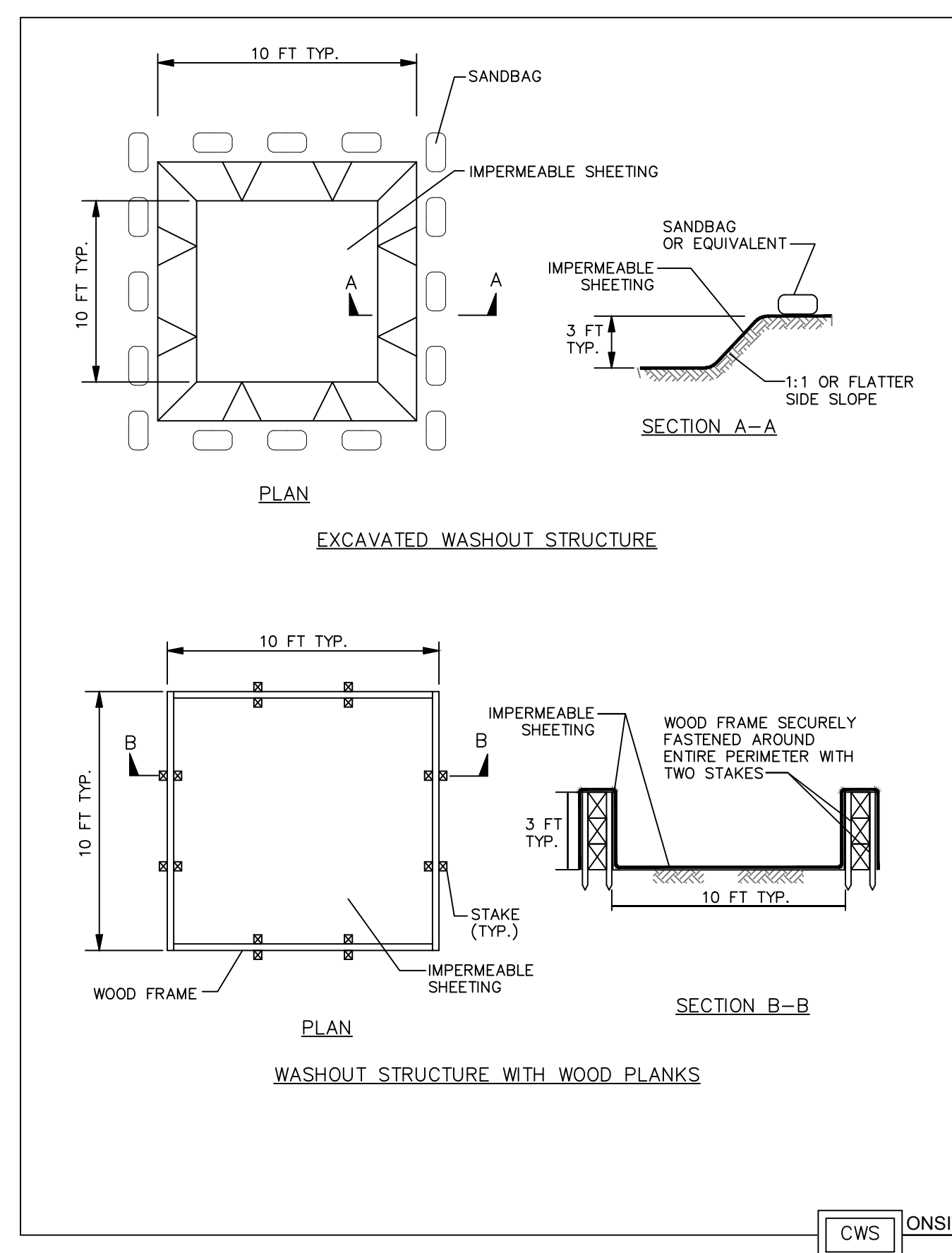
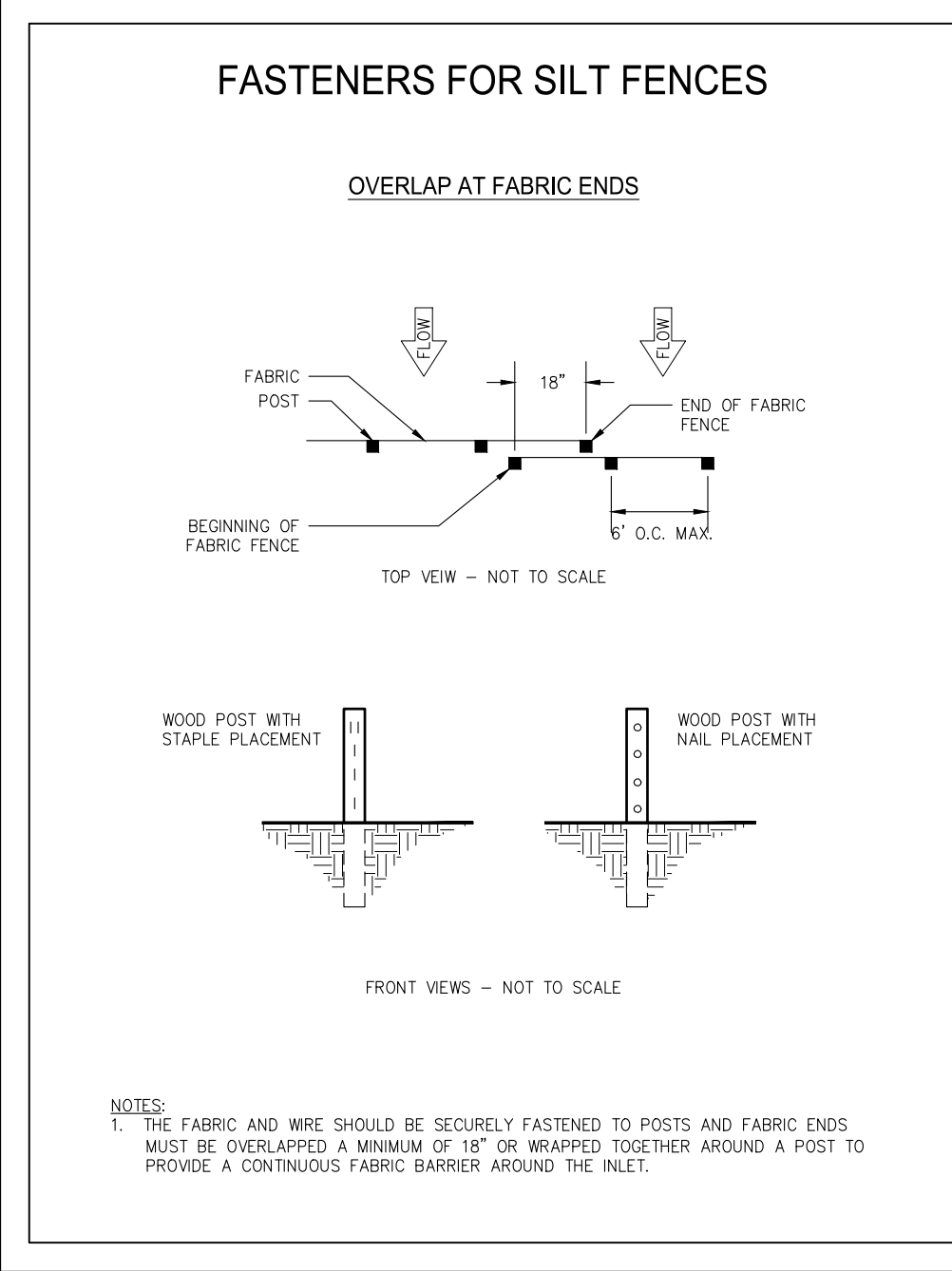
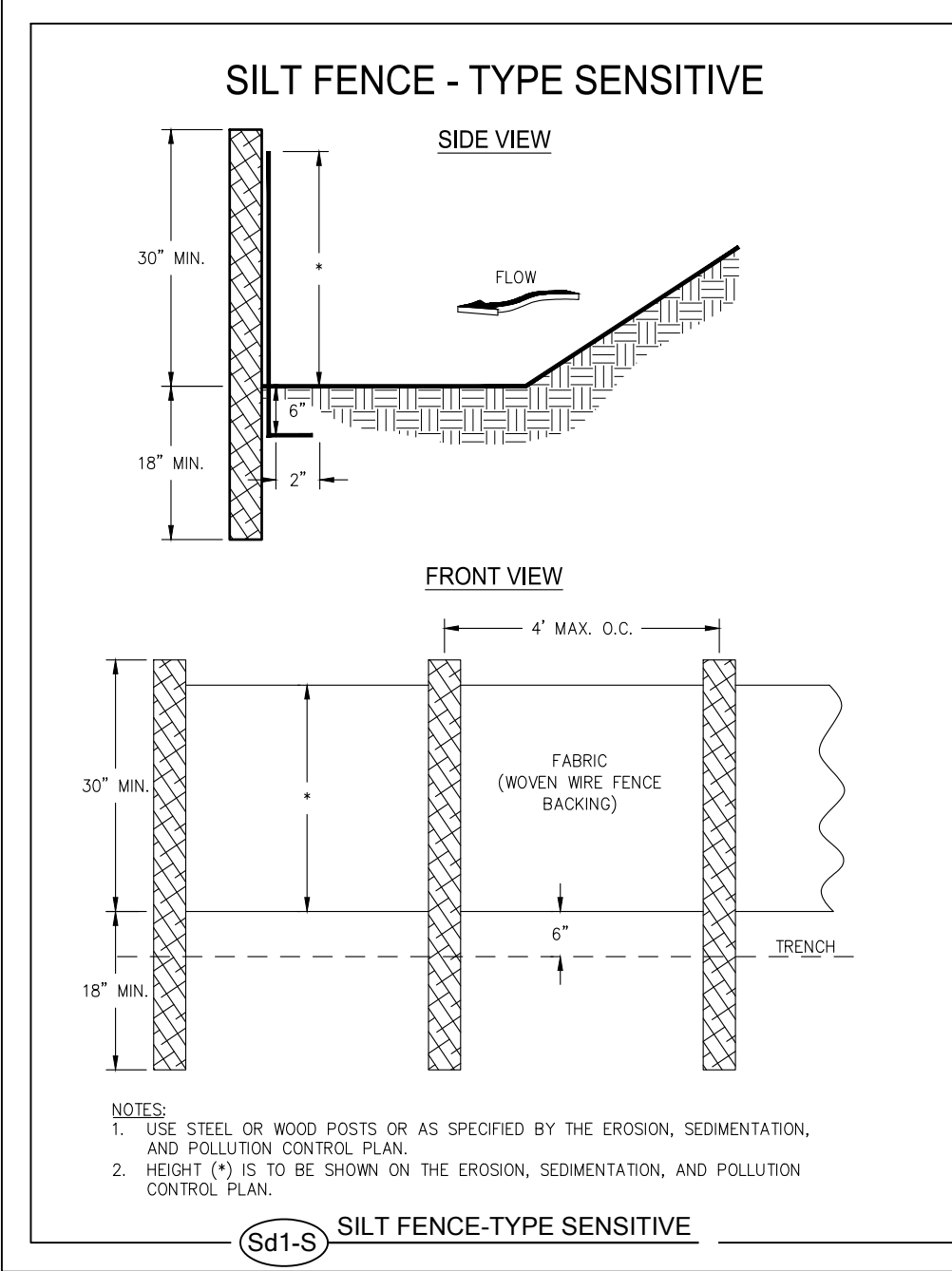
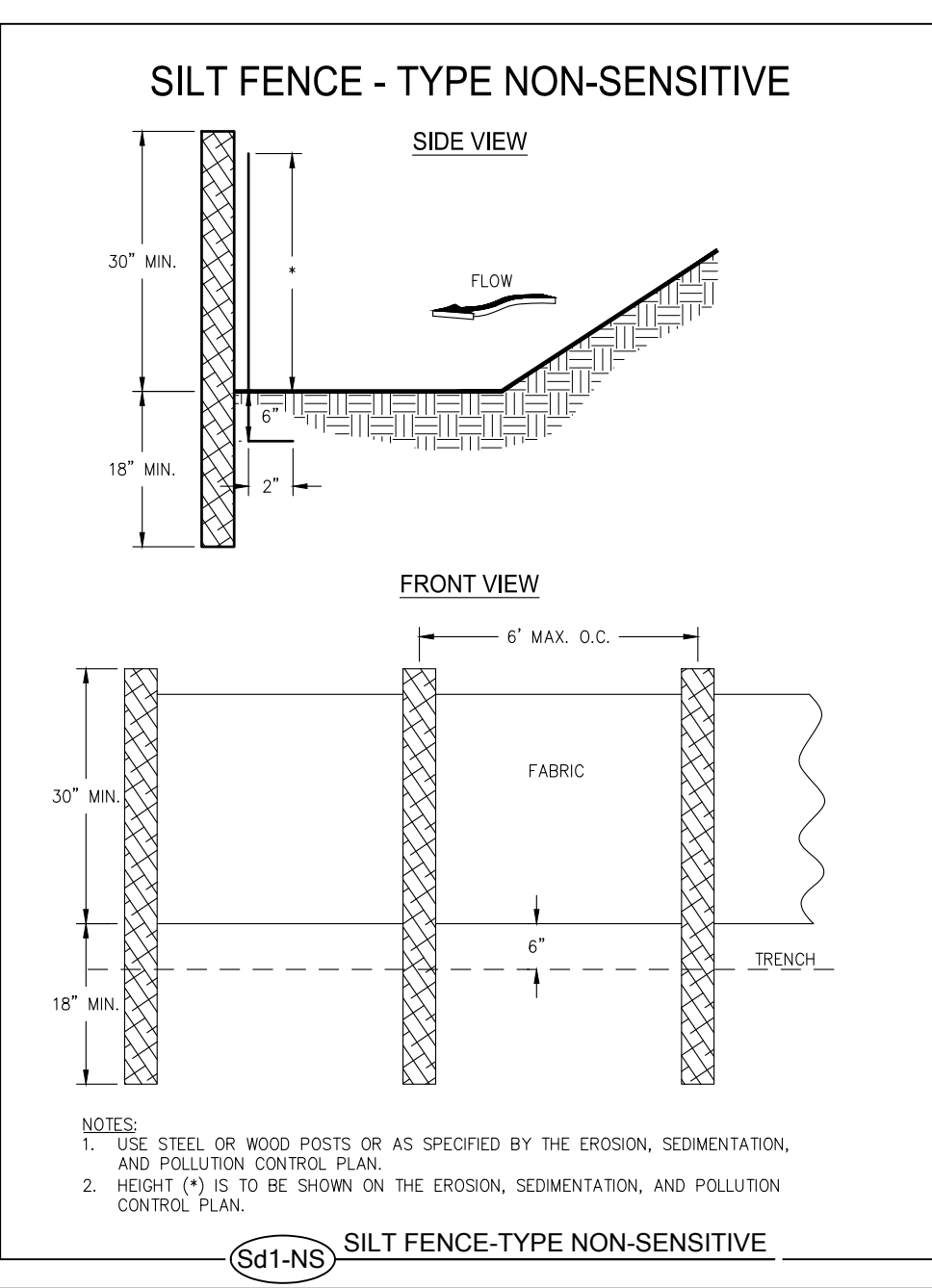


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EROSION CONTROL DETAILS	
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DESIGNED BY: DAVID CERVONE  
DRAWN BY: WALT BOBO  
CHECKED BY: DAVID CERVONE  
DATE: 03/22/2018  
FILE NAME: COSTLEY MILL





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**EROSION CONTROL DETAILS**

DESIGNED BY: DAVID CERVONE  
 DRAWN BY: WALT BOBO  
 CHECKED BY: DAVID CERVONE  
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 FILE NAME: COSTLEY MILL

SHEET  
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