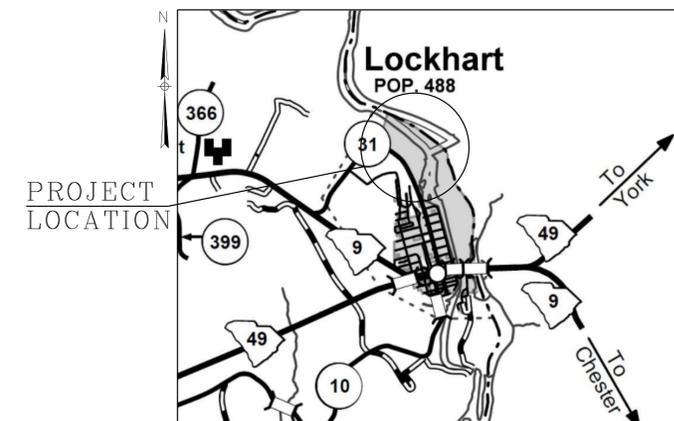


# CONSTRUCTION PLANS

## UNION COUNTY BOAT RAMP

START ACCESS ROAD: STA. 10+00.00 END ACCESS ROAD: STA. 16+93.42  
 START BOAT RAMP: STA. 10+00.00 END BOAT RAMP: STA. 11+00.00

STATE	COUNTY	ROAD/ROUTE NO.	SHEET NO.
SC	UNION	BOAT RAMP	1



VICINITY MAP  
SCALE = N.T.S.

UTILITIES

TELEPHONE & CABLE  
 TRUVISTA  
 112 YORK STREET  
 CHESTER, SC 29301  
 JAMIE MILLIS, SR. PROJECT MANAGER  
 803-581-9130

AT&T TELEPHONE  
 100 BELTON DRIVE  
 SPARTANBURG, SC 29301  
 MICHAEL NAT  
 864-573-4016

SPECTRUM  
 110 COMMERCIAL ROAD  
 SPARTANBURG, SC 29303  
 DONNY PATTERSON  
 864-762-6038

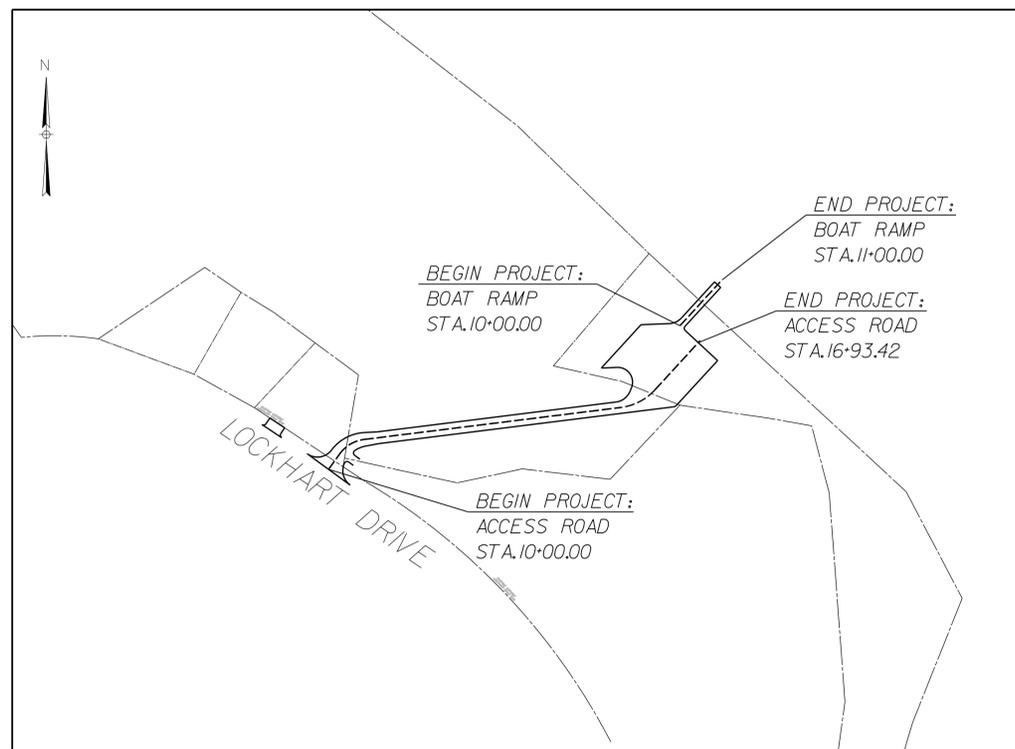
ELECTRIC

LOCKHART POWER  
 420 RIVER ST., P.O. BOX 10  
 LOCKHART, SC 29364  
 JIM SEAY  
 864-545-2211

WATER & SEWER

TOWN OF LOCKHART WATER  
 P.O. BOX 250  
 LOCKHART, SC 29364  
 CARL ALEXANDER  
 864-545-2103

TOWN OF LOCKHART SEWER  
 P.O. BOX 250  
 LOCKHART, SC 29364  
 CARL ALEXANDER  
 864-545-2103



LAYOUT  
NTS

PREPARED FOR  
UNION COUNTY BY:



SHEET INDEX

1	TITLE SHEET
2	QUANTITY
3-3A	TYPICAL SECTION
4-4F	STANDARD DETAIL
4G	SEDIMENT SHEET
5	UNION BOAT RAMP PLAN
6-7	PROFILE SHEETS
X1-X4	ACCESS ROAD CROSS SECTION SHEETS
X5	BOAT RAMP CROSS SECTION SHEETS
20	TOTAL

I HAVE PLACED MY SIGNATURE AND SEAL ON THE DESIGN DOCUMENTS SUBMITTED SIGNIFYING THAT I ACCEPT RESPONSIBILITY FOR THE DESIGN OF THE SYSTEM. FURTHER, I CERTIFY TO THE BEST OF MY KNOWLEDGE AND BELIEF THAT THE DESIGNS CONSISTENT WITH THE REQUIREMENTS OF TITLE 48, CHAPTER 14 OF THE CODE OF LAWS OF SC, 1976 AS AMENDED, PURSUANT TO REGULATION 72-300 ET SEQ. (IF APPLICABLE), AND IN ACCORDANCE WITH THE TERMS AND CONDITIONS OF SCRI00000.

3 DAYS BEFORE DIGGING IN  
SOUTH CAROLINA  
CALL 1-888-721-7877

**Mead & Hunt**  
878 SOUTH LAKE DRIVE  
LEXINGTON, SC 29072  
TELEPHONE: (803)685-2900

JOB NO. 170980.1  
DATE: 11/9/2021  
DRAWN BY: LMH  
CHECKED BY:  
SCALE: 30:1

BOAT RAMP  
UNION COUNTY, SOUTH CAROLINA  
TITLE SHEET

SOUTH CAROLINA  
MEAD & HUNT, INC.  
No. CM434  
CERTIFICATE OF AUTHORITY

SOUTH CAROLINA  
No. 28202  
K. ZACHARY HANBY

DATE	
REVISION	

SHEET  
1









STATE	COUNTY	ROAD/ROUTE NO.	SHEET NO.
SC	UNION	BOAT RAMP	4A

**Mead & Hunt**  
 878 SOUTH LAKE DRIVE  
 LEXINGTON, SC 29072  
 TELEPHONE: (803)685-2900

JOB NO. 170980.1  
 DATE: 11/9/2021  
 DRAWN BY: LHM  
 CHECKED BY:  
 SCALE: 30:1

BOAT RAMP  
 UNION COUNTY, SOUTH CAROLINA  
 STANDARD DETAIL



DATE	
REVISION	

**CHAIN DATA**

Beginning chain ALT1 description  
 =====  
 Point 1 N 1,078,774.6382 E 1,860,508.3950 Sta 10+00.00  
 Course from 1 to PC ALT11 N 35° 52' 27.80" E Dist 32.0393  
 Curve Data  
 \*-----\*  
 Curve ALT11  
 P.I. Station 10+58.16 N 1,078,821.7684 E 1,860,542.4795  
 Delta = 47° 03' 25.72" (RT)  
 Degree = 95° 29' 34.68"  
 Tangent = 26.1243  
 Length = 49.2781  
 Radius = 60.0000  
 External = 5.4407  
 Long Chord = 47.9048  
 Mid. Ord. = 4.9883  
 P.C. Station 10+32.04 N 1,078,800.5998 E 1,860,527.1704  
 P.T. Station 10+81.32 N 1,078,824.9832 E 1,860,568.4053  
 C.C. N 1,078,765.4392 E 1,860,575.7886  
 Back = N 35° 52' 27.80" E  
 Ahead = N 82° 55' 53.52" E  
 Chord Bear = N 59° 24' 10.66" E

Course from PT ALT11 to PC ALT12 N 82° 55' 53.52" E Dist 437.5795  
 Curve Data  
 \*-----\*  
 Curve ALT12  
 P.I. Station 15+53.72 N 1,078,883.1154 E 1,861,037.2219  
 Delta = 40° 15' 59.02" (LT)  
 Degree = 60° 18' 40.85"  
 Tangent = 34.8275  
 Length = 66.7642  
 Radius = 95.0000  
 External = 6.1828  
 Long Chord = 65.3987  
 Mid. Ord. = 5.8050  
 P.C. Station 15+18.90 N 1,078,878.8296 E 1,861,002.6591  
 P.T. Station 15+85.66 N 1,078,908.7249 E 1,861,060.8249  
 C.C. N 1,078,973.1076 E 1,860,990.9688  
 Back = N 82° 55' 53.52" E  
 Ahead = N 42° 39' 54.50" E  
 Chord Bear = N 62° 47' 54.01" E

Course from PT ALT12 to 2 N 42° 39' 54.50" E Dist 112.2014  
 Point 2 N 1,078,991.2297 E 1,861,136.8652 Sta 16+97.86  
 =====  
 Ending chain ALT1 description  
 =====

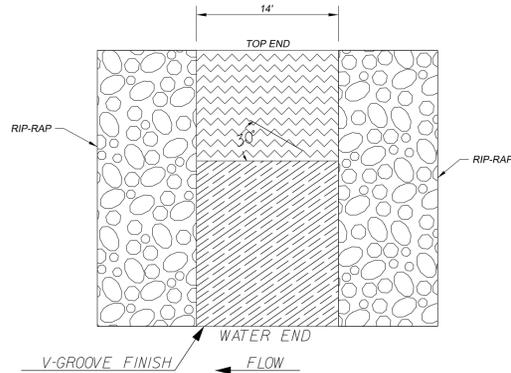
Beginning chain ALT1\_RAMP-NEW description  
 =====  
 Point 212 N 1,079,016.4734 E 1,861,102.9248 Sta 10+00.00  
 Course from 212 to 213 N 42° 39' 54.50" E Dist 100.0000  
 Point 213 N 1,079,090.0061 E 1,861,170.6961 Sta 11+00.00  
 =====  
 Ending chain ALT1\_RAMP-NEW description  
 =====

**CONSTRUCTION SEQUENCE**

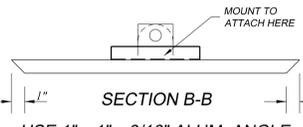
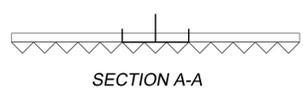
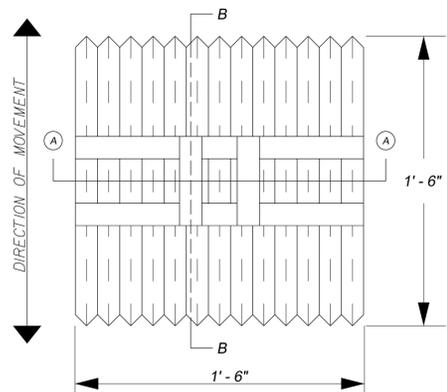
1. RECEIVE NPDES APPROVAL FROM SC DHEC
2. PRE-CONSTRUCTION MEETING
3. CLEARING & GRUBBING ONLY AS NECESSARY FOR INSTALLATION OF PERIMETER CONTROLS
4. INSTALL PERIMETER CONTROLS (E.G. SILT FENCE)
5. CLEARING & GRUBBING OF SITE
6. ROUGH GRADING
7. INSTALL STORM DRAINAGE, OUTLET STRUCTURES, AND OUTFALL DITCHES
8. INSTALL TEMPORARY SEDIMENT & EROSION CONTROL ITEMS
9. FINE GRADING & STONE APPLICATION
10. PERMANENT STABILIZATION
11. REMOVE TEMPORARY SEDIMENT & EROSION CONTROL MEASURES AFTER ENTIRE AREA DRAINING TO STRUCTURE MEETS FINAL STABILIZATION REQUIREMENTS
12. SUBMIT THE NOTICE OF TERMINATION (NOT) TO SC DHEC

**RAMP CONSTRUCTION NOTES**

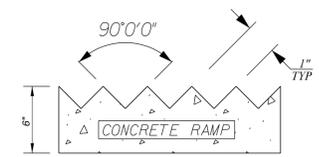
- 1) ALL EXCAVATED MATERIALS SHALL BE UTILIZED AS FILL MATERIAL. ANY UNSUITABLE MATERIAL SHALL BE REMOVED FROM THE SITE AND DISPOSED OF ON PROPER HIGH GROUNDS.
- 2) DIRT SUB-GRADES SHALL BE COMPACTED PRIOR TO PLACING ANY DIRT OR ROCK FILL MATERIAL. ALL ROCK FILL, INCLUDING RAILROAD BALLAST, SHALL BE COMPACTED PRIOR TO PLACING CONCRETE.
- 3) ALL CONCRETE USED IN CONSTRUCTION OF RAMP SHALL BE A MINIMUM OF 3000 PSI MIX DESIGN. CONCRETE SHALL BE SPRAYED WITH AN APPROVED CURING COMPOUND
- 4) ALL CONCRETE POURED SHALL BE COVERED WITH PLASTIC AFTER FINISHING AND INITIAL SETTING HAS OCCURRED. IT SHALL REMAIN COVERED FOR NO LESS THAN (7) DAYS THEREAFTER.
- 5) WHEN PLACING CONCRETE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR TAMPING FORM BOARDS TO ELIMINATE HONEY COMBS OR AIR BUBBLES ON ALL FORMED SURFACES. HE WILL BE REQUIRED TO RUB SURFACES WITH A GROUT MIX IF FINISH IS UNSATISFACTORY.
- 6) USE ONLY CONCRETE RAKES OR COME-ALONGS WHEN PLACING CONCRETE. (NO GARDEN RAKES)
- 7) IT IS RECOMMENDED THAT THE CONCRETE BE POURED IN THE MORNING HOURS OF THE DAY TO HELP PROTECT THE FINISHED SURFACE FROM ANY DAMAGE (I.E.-FOOTPRINTS, GRAFFITI, ETC.) TO THE SURFACE OF THE CONCRETE.
- 8) ALL GRADES AND REFERENCE LINES ARE TO BE SET BY THE CONTRACTOR AFTER INITIAL TAKE OFF POINTS ARE SET. BENCHMARKS AND ELEVATION REFERENCES SET BY SCDNR.
- 9) SILT FENCES SHALL BE IN PLACE PRIOR TO GRADING. IF ANY EXCAVATED MATERIALS THAT ARE TO BE STOCK PILED ON SITE, SILT FENCING (OR) HAY BALES SHALL BE PLACED AROUND THESE PILES TO PREVENT ANY SILT LADEN WATERS FROM ENTERING THE ADJACENT WATER BODY OR LANDS.
- 10) SEED ALL DISTURBED AREAS WITH A PERMANENT TYPE VEGETATION TO PREVENT EROSION. VEGETATION SHALL BE ESTABLISHED PRIOR TO THE COMPLETION OF PROJECT AND BEFORE SILT FENCES ARE REMOVED.
- 11) RIP-RAP SHALL BE CLEAN AND FREE OF OIL AND DEBRIS. IT SHALL BE ONE-MAN SIZED AND PLACED A MINIMUM ONE FOOT THICK OVER FILTER FABRIC. NO FABRIC SHALL BE SHOWING THROUGH THE RIP-RAP STABILIZATION.
- 12) CONTRACTOR SHALL TAKE THE NECESSARY PRECAUTIONS TO PROTECT THE TREES FROM DAMAGE ADJACENT TO THE PROJECT AREA.
- 13) ALL WORK SHALL COMPLY WITH THE SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION." SEE PAVING NOTES ON SHEET 2 OF 2



**RAMP GROOVING DETAIL**  
SCALE: N.T.S.



**TYPICAL V-GROOVE FINISHING TOOL**  
SCALE: N.T.S.



CONCRETE RAMP SHALL BE BULL FLOATED AND COMPACTED TO A UNIFORM LEVEL BEFORE GROOVING PROCEDURE TAKES PLACE

**TYPICAL "V" GROOVE**  
SCALE: N.T.S.

**RAMP GROOVING NOTES:**  
 THE GROOVING TOOL SHALL BE PUSHED OR PULLED ACROSS THE SURFACE OF THE CONCRETE IN A REASONABLY STRAIGHT LINE IN ONE CONTINUOUS PASS FROM OR TO THE CENTERLINE AT THE SPECIFIED ANGLE. THE TOOL SHALL PENETRATE THE SURFACE OF THE CONCRETE NO LESS THAN 3/4". CAUTION SHALL BE TAKEN IN PERFORMING THE V-GROOVE FINISH AT THE PROPER TIME SO THAT THE GROOVES SHALL BE RELATIVELY SMOOTH AND UNIFORM, WITHOUT UNNECESSARILY TEARING THE SURFACE OF THE CONCRETE. THE FINISHED SURFACE SHALL BE PROTECTED FROM RAINFALL AND RUNOFF, AND FREEZING WEATHER.

**PROHIBITIONS AT PUBLIC BOAT LANDING AND PARKS**

It shall be unlawful for any person to possess any of the following articles or commit any of the following acts at any public boat landing or park open to the general public:

- Destroying, defacing, disturbing or removing any public building, sign, structure or equipment;
- Killing or harming any animal or bird;
- Building any fire in any place other than those places specifically designated for the purpose;
- Disposing of garbage or other refuse in places or receptacles other than those provided for the purposes;
- Possession of any firearms, except as otherwise allowed by law: air guns, paintball guns, explosives, or fireworks;
- Operating vehicles in excess of posted speed limits or parking in restricted areas;
- Consuming or displaying in public any intoxicating beverage, narcotic drug, barbiturates, paralytic, or drug or other substance of the like character;
- Behaving in a disorderly or boisterous manner, or using obscene or profane language;
- Loitering on or about the premises.

CONTRACTOR TO WORK WITH COUNTY TO MATCH SIGN AS SHOW IN DETAIL.

ITEM TO BE PAID BY  
 6510106 - FLAT SHEET, TYPE III, SIZE DETERMINED BY MESSAGE - 8 SF

**CONTROL POINTS**

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
101	1078613	1860672	438.161	CP-REBAR
102	1078780	1860446	453.1326	CP-REBAR
103	1078768	1860757	447.2965	CP-NAIL
104	1078876	1860631	440.2241	CP-NAIL
105	1078899	1860747	430.5091	CP-NAIL
106	1078903	1860825	419.5991	CP-NAIL
107	1078958	1860914	405.6484	CP-NAIL
108	1079077	1861060	399.881	CP-NAIL
109	1079010	1861015	399.7301	CP-NAIL
110	1078735	1861007	463.3385	CP-NAIL

# STANDARD NOTES

- IF NECESSARY, SLOPES, WHICH EXCEED EIGHT (8) VERTICAL FEET SHOULD BE STABILIZED WITH SYNTHETIC OR VEGETATIVE MATS, IN ADDITION TO HYDROSEEDING. IT MAY BE NECESSARY TO INSTALL TEMPORARY SLOPE DRAINS DURING CONSTRUCTION. TEMPORARY BERMS MAY BE NEEDED UNTIL THE SLOPE IS BROUGHT TO GRADE.
- STABILIZATION MEASURES SHALL BE INITIATED AS SOON AS PRACTICABLE IN PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, BUT NO CASE MORE THAN FOURTEEN (14) DAYS AFTER WORK HAS CEASED, EXCEPT AS STATED BELOW
  - WHERE STABILIZATION BY THE 14<sup>TH</sup> DAY IS PRECLUDED BY SNOW OR FROZEN GROUND CONDITIONS STABILIZATION MEASURES MUST BE INITIATED AS SOON AS PRACTICABLE
  - WHERE CONSTRUCTION ACTIVITY ON A PORTION OF THE SITE IS TEMPORARILY CEASED, AND EARTH-DISTURBING ACTIVITIES WILL BE RESUMED WITHIN 14 DAYS, TEMPORARY STABILIZATION MEASURES DO NOT HAVE TO BE INITIATED ON THAT PORTION OF THE SITE
- ALL SEDIMENT AND EROSION CONTROL DEVICES SHALL BE INSPECTED ONCE EVERY CALENDAR WEEK, IF PERIODIC INSPECTION OR OTHER INFORMATION INDICATES THAT A BPM HAS BEEN INAPPROPRIATELY, OR INCORRECTLY, PERMITTED. MUST ADDRESS THE NECESSARY REPLACEMENT OR MODIFICATION REQUIRED TO CORRECT THE BPM WITHIN 48 HOURS OF IDENTIFICATION.
- PROVIDE SILT FENCE AND/OR OTHER CONTROL DEVICES, AS MAY BE REQUIRED, TO CONTROL SOIL EROSION DURING UTILITY CONSTRUCTION. ALL DISTURBED AREAS SHALL BE CLEANED, GRADED, AND STABILIZED WITH GRASSING IMMEDIATELY AFTER THE UTILITY INSTALLATION. FILL, COVER, AND TEMPORARY SEEDING AT THE END OF EACH DAY ARE RECOMMENDED. IF WATER IS ENCOUNTERED WHILE TRENCHING, THE WATER SHOULD BE FILTERED TO REMOVE SEDIMENT BEFORE BEING PUMPED BACK INTO ANY WATERS OF THE STATE.
- ALL EROSION CONTROL DEVICES SHALL BE PROPERLY MAINTAINED DURING ALL PHASES OF CONSTRUCTION ACTIVITIES AND ALL DISTURBED AREAS HAVE BEEN STABILIZED. ADDITIONAL CONTROL DEVICES MAY BE REQUIRED DURING CONSTRUCTION IN ORDER TO CONTROL EROSION AND/OR OFF-SITE SEDIMENTATION. ALL TEMPORARY CONTROL DEVICES SHALL BE REMOVED ONCE CONSTRUCTION IS COMPLETE AND THE SITE IS STABILIZED.
- THE CONTRACTOR MUST TAKE NECESSARY ACTION TO MINIMIZE THE TRACKING OF MUD ON THE PAVED ROADWAY(S) FROM CONSTRUCTION AREAS AND THE GENERATION OF DUST. THE CONTRACTOR SHALL DAILY REMOVE MUD/SOIL FROM PAVEMENT, AS MAY BE REQUIRED.
- TEMPORARY DIVERSION BERMS AND/OR DITCHES WILL BE PROVIDED AS NEEDED DURING CONSTRUCTION TO PROTECT WORK AREAS FROM UPSLOPE RUNOFF AND/OR TO DIVERT SEDIMENT-LADEN WATER TO APPROPRIATE TRAPS OR STABLE OUTLETS
- ALL WATERS OF THE STATE (WOS), INCLUDING WETLANDS, ARE TO BE FLAGGED OR OTHERWISE CLEARLY MARKED IN THE FIELD. A DOUBLE ROW OF SILT FENCE IS TO BE INSTALLED IN ALL AREAS WHERE A 50-FOOT BUFFER CAN'T BE MAINTAINED BETWEEN THE DISTURBED AREA AND ALL WOS. A 10-FOOT BUFFER SHOULD BE MAINTAINED BETWEEN THE LAST ROW OF SILT FENCE AND ALL WOS.
- LITTER, CONSTRUCTION DEBRIS, OILS, FUELS, AND BUILDING PRODUCTS WITH SIGNIFICANT POTENTIAL FOR IMPACT (SUCH AS STOCKPILES OF FRESHLY TREATED LUMBER) AND CONSTRUCTION CHEMICALS THAT COULD BE EXPOSED TO STORM WATER MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE IN STORM WATER DISCHARGES.
- A COPY OF THE SWPPP, INSPECTION RECORDS, AND RAINFALL DATA MUST BE RETAINED AT THE CONSTRUCTION SITE OR A NEARBY LOCATION EASILY ACCESSIBLE DURING NORMAL BUSINESS HOURS, FROM THE DATE OF COMMENCEMENT OF CONSTRUCTION ACTIVITIES TO THE DATE THAT FINAL STABILIZATION IS REACHED.
- INITIATE STABILIZATION MEASURES ON ANY EXPOSED STEEP SLOPE (3H:1V OR GREATER) WHERE LAND-DISTURBING ACTIVITIES HAVE PERMANENTLY OR TEMPORARILY CEASED, AND WILL NOT RESUME FOR A PERIOD OF 7 CALENDAR DAYS.
- MINIMIZE SOIL COMPACTION AND, UNLESS INFEASIBLE, PRESERVE TOPSOIL.
- MINIMIZE THE DISCHARGE OF POLLUTANTS FROM EQUIPMENT AND VEHICLE WASHING, WHEEL WASH WATER, AND OTHER WASH WATERS. WASH WATERS MUST BE TREATED IN A SEDIMENT BASIN OR ALTERNATIVE CONTROL THAT PROVIDES EQUIVALENT OR BETTER TREATMENT PRIOR TO DISCHARGE.
- MINIMIZE THE DISCHARGE OF POLLUTANTS FROM DEWATERING OF TRENCHES AND EXCAVATED AREAS. THESE DISCHARGE ARE TO BE ROUTED THROUGH APPROPRIATE BMPs (SEDIMENT BASIN, FILTER BAG, ECT.).
- THE FOLLOWING DISCHARGES FROM SITES ARE PROHIBITED:
  - WASTEWATER FROM WASHOUT OF CONCRETE, UNLESS MANAGED BY AN APPROPRIATE CONTROL
  - WASTEWATER FROM WASHOUT AND CLEANOUT OF STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS AND OTHER CONSTRUCTION MATERIALS;
  - FUEL, OILS, OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE; AND
  - SOAPS OR SOLVENTS USED IN VEHICLES AND EQUIPMENT WASHING
- AFTER CONSTRUCTION ACTIVITIES BEGIN, INSPECTIONS MUST BE CONDUCTED AT A MINIMUM OF AT LEAST ONCE EVERY CALENDAR WEEK AND MUST BE CONDUCTED UNTIL FINAL STABILIZATION IS REACHED ON ALL AREAS OF THE CONSTRUCTION SITE.
- IF EXISTING BMPs NEED TO BE MODIFIED OR IF ADDITIONAL BMPs ARE NECESSARY TO COMPLY WITH THE REQUIREMENTS OF THIS PERMIT AND/OR SC'S WATER QUALITY STANDARDS, IMPLEMENTATIONS MUST BE COMPLETED BEFORE THE NEXT STORM EVENT WHENEVER PRACTICABLE, IF IMPLEMENTATION BEFORE THE NEXT STORM EVENT IS IMPRACTICABLE, THE SITUATION MUST BE DOCUMENTED IN THE SWPPP AND ALTERNATIVE BMPs MUST BE IMPLEMENTED AS SOON AS REASONABLY POSSIBLE.
- A PRE-CONSTRUCTION CONFERENCE MUST BE HELD FOR EACH CONSTRUCTION SITE WITH AN APPROVED ON-SITE SWPPP PRIOR TO THE IMPLEMENTATION OF CONSTRUCTION ACTIVITIES. FOR NON-LINEAR PROJECTS THAT DISTURB 10 ACRES OR MORE THIS CONFERENCE MUST BE HELD ON-SITE UNLESS THE DEPARTMENT HAS APPROVED OTHERWISE.

STATE	COUNTY	ROAD/ROUTE NO.	SHEET NO.
SC	UNION	BOAT RAMP	4B

**REFERENCES**

NATIONAL DOCUMENTS

SCDOT DOCUMENTS

SC-W-815-10

RELATED DRAWINGS & REVIEWS

**PRECONSTRUCTION SUPPORT ENGINEER**

**SOUTH CAROLINA PROFESSIONAL ENGINEER**

REGISTERED No. 21242

JAMES W. KENDALL, III

Signature: *James W. Kendall, III*

DATE: AUGUST 23, 2012

REVISIONS

1	1/2/2012	DSB	ADD CHART 815-505
2	1/2/2008	DSB	GENERAL REVISIONS
3	1/1/01	DSB	DESCRIPTION

**SCDOT**

SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

DESIGN STANDARDS OFFICE

955 PARK STREET

ROOM 405

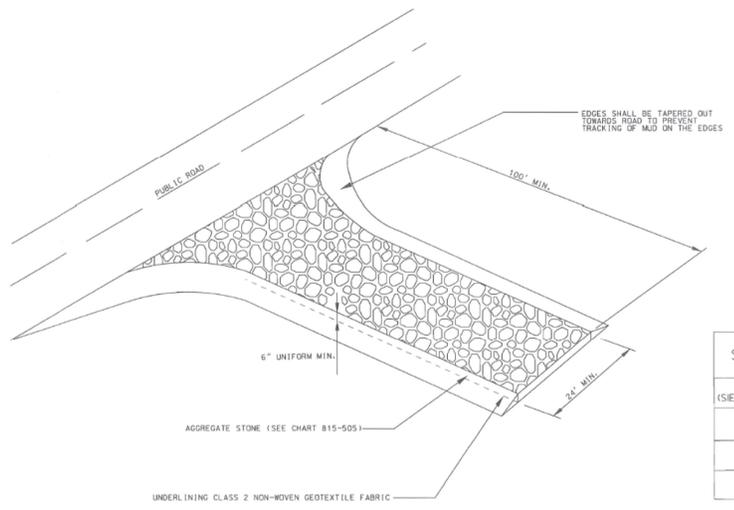
COLUMBIA, SC 29201

**STANDARD DRAWING**

STABILIZED CONSTRUCTION ENTRANCE

815-505-00

EFFECTIVE LETTING DATE: JAN 2013 THIS DRAWING IS NOT TO SCALE



**CHART 815-505**

**STABILIZED CONSTRUCTION ENTRANCE STONE AGGREGATE**

NOMINAL SIZE (SIEVES WITH SQUARE OPENINGS)	PERCENT PASSING (%)
3"	100
1 1/2"	35 TO 100
3/4"	0 TO 15

- NOTES:**
- STABILIZED CONSTRUCTION ENTRANCES SHOULD BE USED AT ALL POINTS WHERE TRAFFIC WILL BE LEAVING A CONSTRUCTION SITE AND MOVING DIRECTLY ONTO A PUBLIC ROAD.
  - IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF-SITE. WASHBOUN BY SCOOT AS NEEDED. WASHBOUN AREAS IN GENERAL MUST BE ESTABLISHED BY CRUSHED GRAVEL AND GRADED INTO A TRAP. TRAP SHOULD BE MAINTAINED AND WASHBOUN ENTRANCES SHOULD BE USED IN CONJUNCTION WITH THE STABILIZED CONSTRUCTION ROADS TO REDUCE THE AMOUNT OF MUD PICKED UP BY VEHICLES.
  - REMOVE ALL VEGETATION AND ANY OBJECTIONABLE MATERIAL FROM THE FOUNDATION AREA.
  - DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM STONES TO A SEDIMENT TRAP OR BASIN.
  - INSTALL A CLASS 2 NON-WOVEN GEOTEXTILE FABRIC THAT MEETS THE REQUIREMENTS OF SECTION 804 OF THE STANDARD SPECIFICATION FOR HIGHWAY CONSTRUCTION, LATEST EDITION, PRIOR TO PLACING ANY STONE.
  - MINIMUM DIMENSIONS OF THE ENTRANCE SHALL BE 24" H, 100' L, AND 100' W. AND MAY BE MODIFIED AS NECESSARY TO ACCOMMODATE SITE CONSTRAINTS.
  - INSPECT CONSTRUCTION ENTRANCES EVERY SEVEN (7) CALENDAR DAYS. CHECK FOR MUD AND SEDIMENT BUILDUP. AS WELL AS PAVID INTENSITY. MAINTENANCE IS REQUIRED MORE FREQUENTLY IN WET WEATHER CONDITIONS. RESHAPE THE STONE PAD AS NEEDED FOR DRAINAGE AND RUNOFF CONTROL.
  - WASH OR REPLACE STONES AS NEEDED AND AS DIRECTED BY THE ENGINEER. THE SIZE IN THE ENTRANCE SHALL BE MAINTAINED OR REPLACED WHENEVER THE ENTRANCE FAILS TO REDUCE MUD BEING CARRIED OFF-SITE BY VEHICLES. FREQUENT WASHING WILL EXTEND THE USEFUL LIFE OF STONE.
  - IMMEDIATELY REMOVE MUD AND SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROADS BY BRUSHING OR SWEEPING. FLUSHING SHOULD ONLY BE USED WHEN THE WATER CAN BE DISCHARGED TO A SEDIMENT TRAP OR BASIN.
  - REPAIR ANY BROKEN PAVEMENT IMMEDIATELY.
  - THE PAY ITEM SHALL BE: STABILIZED CONSTRUCTION ENTRANCE.....S.F.

**Mead & Hunt**

878 SOUTH LAKE DRIVE  
LEXINGTON, SC 29072  
TELEPHONE: (803)986-2900

JOB NO. 170080.1  
DATE: 11/9/2021  
DRAWN BY: LHM  
CHECKED BY:  
SCALE: 30:1

**BOAT RAMP**

**UNION COUNTY, SOUTH CAROLINA**

**STANDARD DETAIL**



DATE

REVISION

4	
3	
2	
1	

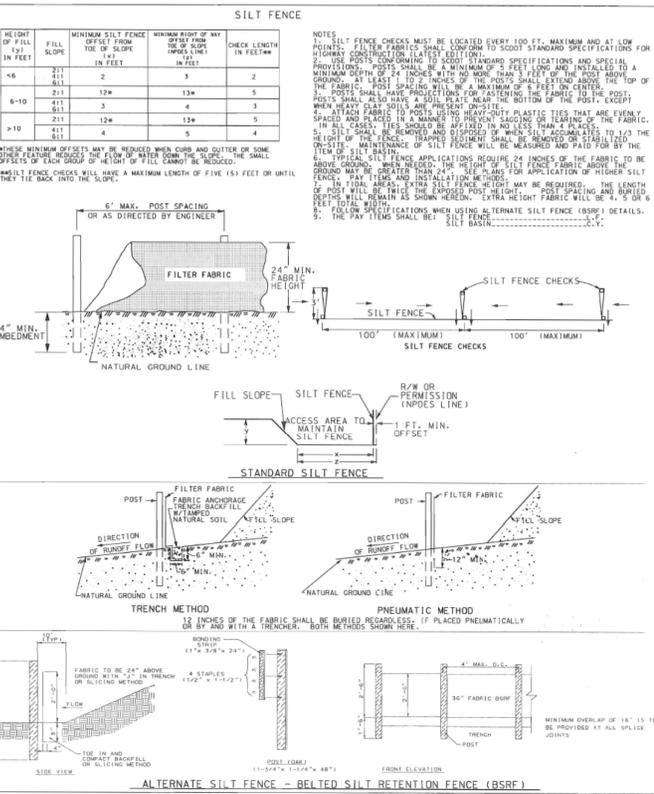
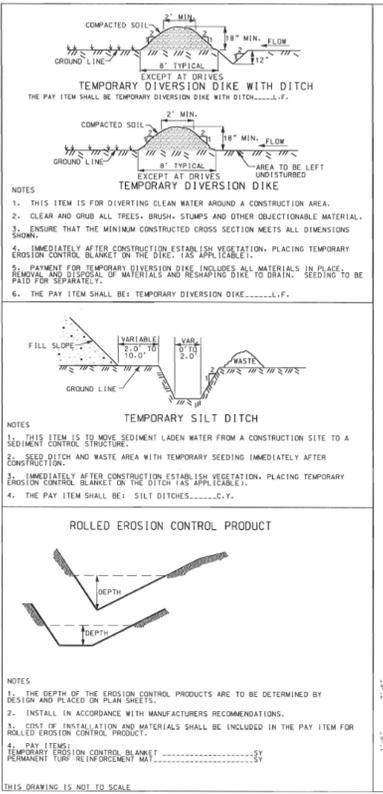
**STANDARD DRAWING**

TEMPORARY EROSION & SEDIMENTATION CONTROL

815-605-00

EFFECTIVE LETTING DATE: JAN, 2013

**SHEET 4B**



**REFERENCES**

NATIONAL DOCUMENTS

SCDOT DOCUMENTS

SC-W-815-10

RELATED DRAWINGS & REVIEWS

**PRECONSTRUCTION SUPPORT ENGINEER**

**SOUTH CAROLINA PROFESSIONAL ENGINEER**

REGISTERED No. 21242

JAMES W. KENDALL, III

Signature: *James W. Kendall, III*

DATE: AUGUST 23, 2012

REVISIONS

4	
3	
2	
1	

**SCDOT**

SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

DESIGN STANDARDS OFFICE

955 PARK STREET

ROOM 405

COLUMBIA, SC 29201

**STANDARD DRAWING**

TEMPORARY EROSION & SEDIMENTATION CONTROL

815-605-00

EFFECTIVE LETTING DATE: JAN, 2013

STATE	COUNTY	ROAD/ROUTE NO.	SHEET NO.
SC	UNION	BOAT RAMP	4C

REFERENCES

NATIONAL DOCUMENTS

SCDOT DOCUMENTS

RELATED DRAWINGS & KEYWORDS


  
 James W. Kendall  
 SIGNATURE  
 2-9-2015  
 DATE

NO.	DATE	DESCRIPTION
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 SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION  
 DESIGN STANDARDS OFFICE  
 955 PARK STREET  
 ROOM 405  
 COLUMBIA, SC 29201

STANDARD DRAWING

OUTLET PROTECTION WITH NO DEFINED CHANNEL

804-305-01

EFFECTIVE LITING DATE: MAY 2015

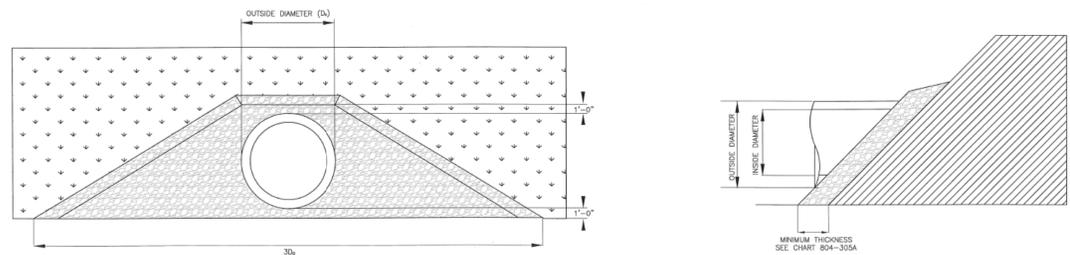
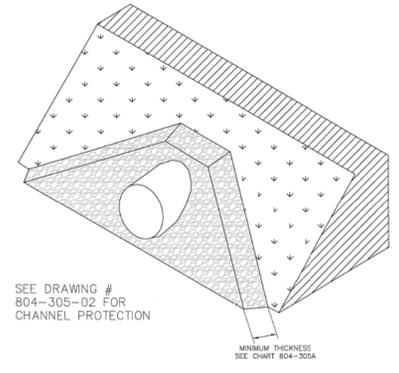


CHART 804-305A  
RIPRAP PLACEMENT WITH MINIMUM TAILWATER

MINIMUM CLASS	D <sub>50</sub> (FT)	MINIMUM THICKNESS (FT)	OUTSIDE PIPE DIAMETER
A	0.50	1.00	UP TO 24"
B	0.75	1.50	UP TO 36"
C	1.30	2.60	LARGER THAN 36"



- NOTES:
- DESIGN OUTLET PROTECTION IN ACCORDANCE WITH THE SCDOT WATER QUALITY MANUAL.
  - OUTLET PROTECTION WILL HAVE A WIDTH THREE TIMES THE OUTSIDE DIAMETER OF THE OUTLET PIPE AT TOE OF SLOPE.
  - ADVANCE OUTLET PROTECTION UP THE SLOPE A MINIMUM OF 1 FOOT ABOVE THE PIPE INVERT.
  - THE PAYMENT ITEMS MAY INCLUDE:
- |         |                         |     |
|---------|-------------------------|-----|
| 2031000 | UNCLASSIFIED EXCAVATION | CY  |
| 8151101 | TRM TYPE 1              | MSY |
| 8151102 | TRM TYPE 2              | MSY |
| 8151103 | TRM TYPE 3              | MSY |
| 8151104 | TRM TYPE 4              | MSY |
| 8041015 | RIPRAP CLASS A          | CY  |
| 8041025 | RIPRAP CLASS B          | CY  |
| 8041035 | RIPRAP CLASS C          | CY  |
| 80482XX | CLASS 2 GEOTEXTILE      | SY  |

### RIPRAP: INSPECTION AND MAINTENANCE

ONCE A RIPRAP INSTALLATION HAS BEEN COMPLETED, IT SHOULD REQUIRE VERY LITTLE MAINTENANCE

IT SHOULD, HOWEVER, BE INSPECTED PERIODICALLY TO DETERMINE IF HIGH FLOWS HAVE CAUSED SCOUR BENEATH THE RIPRAP AND FILTER FABRIC OR DISLODGED ANY OF THE STONE

CARE MUST BE TAKEN TO PROPERLY CONTROL SEDIMENT-LADEN CONSTRUCTION RUNOFF THAT MAY DRAIN TO THE POINT OF THE NEW INSTALLATION. IF REPAIRS ARE NEEDED, THEY SHOULD BE PERFORMED IMMEDIATELY

REFERENCES

NATIONAL DOCUMENTS

SCDOT DOCUMENTS

RELATED DRAWINGS & KEYWORDS


  
 James W. Kendall  
 SIGNATURE  
 2-9-2015  
 DATE

NO.	DATE	DESCRIPTION
1		
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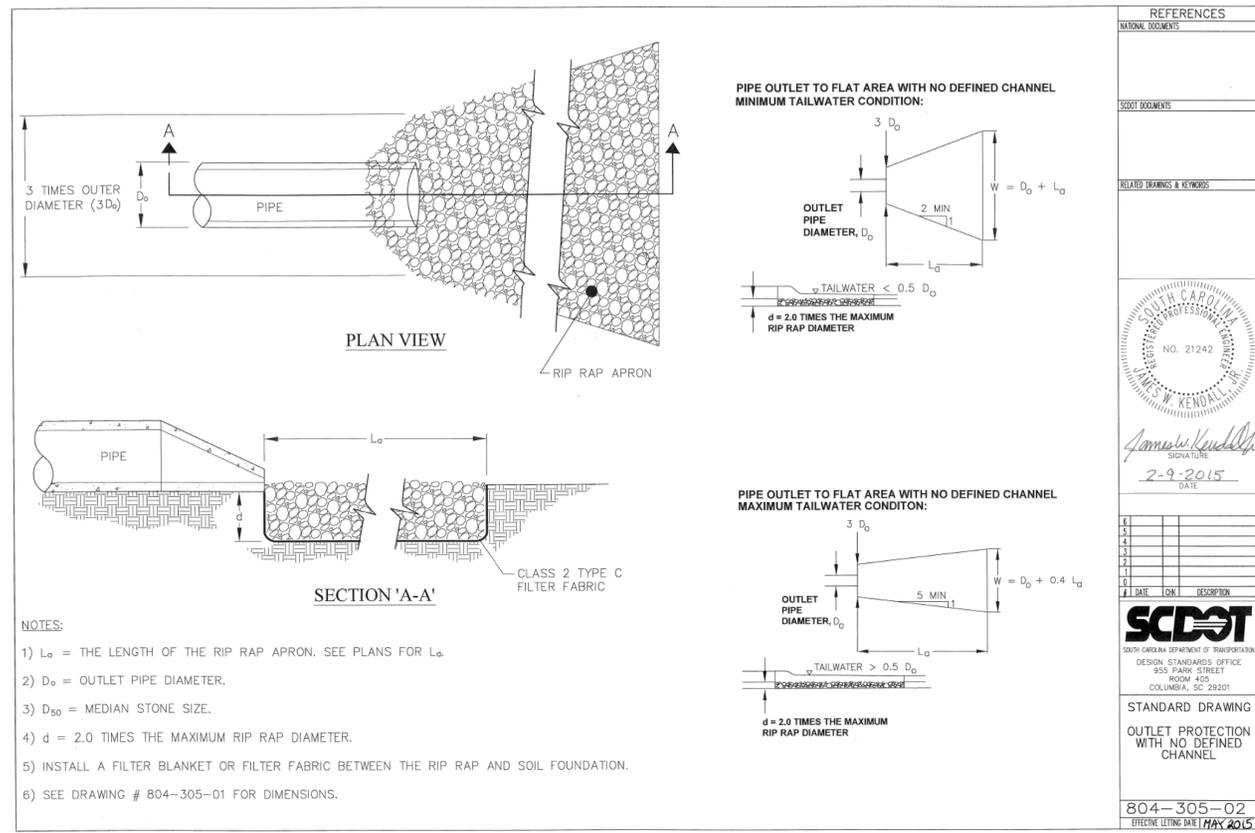
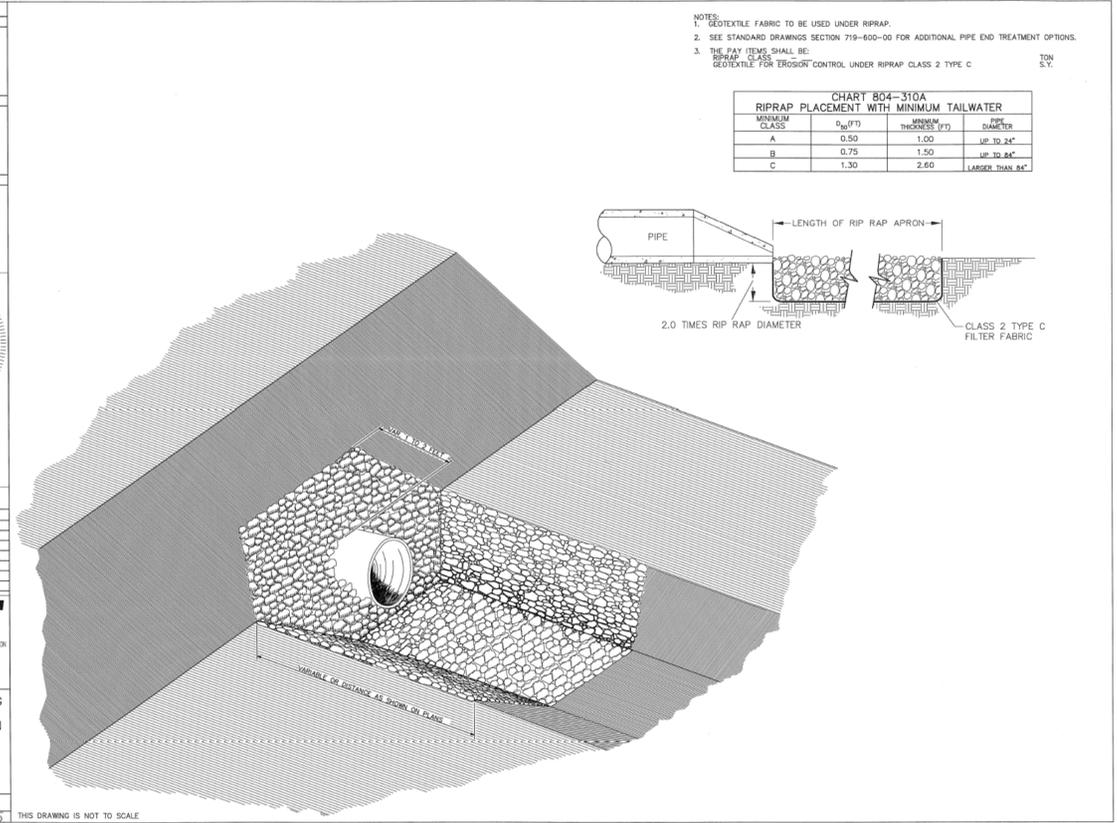

  
 SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION  
 DESIGN STANDARDS OFFICE  
 955 PARK STREET  
 ROOM 405  
 COLUMBIA, SC 29201

STANDARD DRAWING

OUTLET PROTECTION WITH DEFINED CHANNEL

804-310-00

EFFECTIVE LITING DATE: MAY 2015



**Mead & Hunt**

878 SOUTH LAKE DRIVE  
LEXINGTON, SC 29072  
TELEPHONE: (803) 965-2900

JOB NO. 170080.1  
DATE: 11/9/2021  
DRAWN BY: LMH  
CHECKED BY:  
SCALE: 30:1

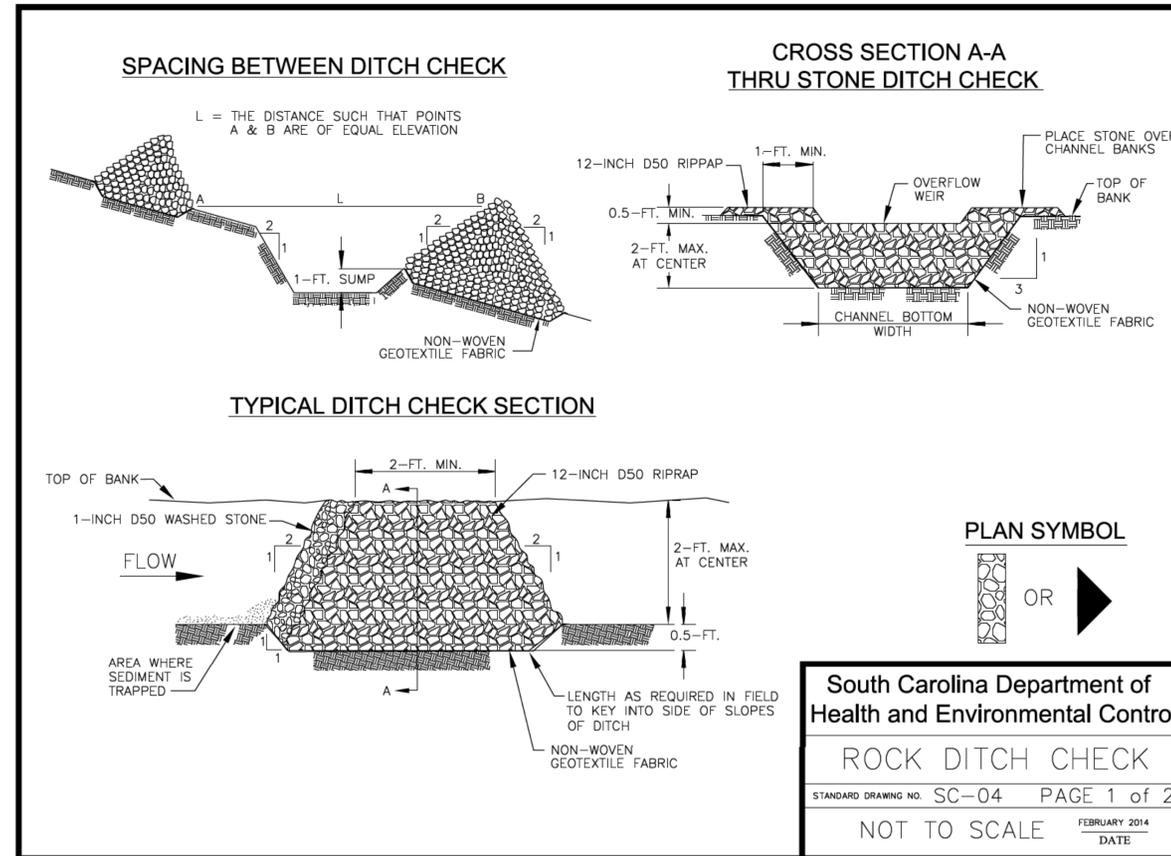
BOAT RAMP  
UNION COUNTY, SOUTH CAROLINA  
STANDARD DETAIL


  
 MEAD & HUNT, INC.  
 No. 04334


  
 ZACHARY HANLEY  
 No. 28202

DATE	REVISION

STATE	COUNTY	ROAD/ROUTE NO.	SHEET NO.
SC	UNION	BOAT RAMP	4D



**ROCK DITCH CHECK – GENERAL NOTES**

1. Rock Ditch Checks should not be placed in Waters of the State or USGS blue-line streams (unless approved by Federal Authorities).
2. Rock Ditch Checks should be installed in steeply sloped channels where adequate vegetation cannot be established. This BMP measure should only be used in small open channels.
3. A non-woven geotextile fabric shall be installed over the soil surface where the rock ditch check is to be placed.
4. The body of the rock ditch check shall be composed of 12-inch D50 Riprap. The upstream face may be composed of 1-inch D50 washed stone.
5. Rock Ditch Checks should not exceed a height of 2-feet at the centerline of the channel.
6. Rock Ditch Checks should have a minimum top flow length of 2-feet.
7. Riprap should be placed over channel banks to prevent water from cutting around the ditch check.
8. The riprap should be placed by hand or mechanical placement (no dumping of rock to form dam) to achieve complete coverage of the channel. Doing so will also ensure that the center of the check is lower than the edges.
9. The maximum spacing between the dams should be such that the toe of the upstream check is at the same elevation as the top of the downstream check.

**ROCK DITCH CHECK – INSPECTION & MAINTENANCE**

1. The key to functional rock ditch check is weekly inspections, routine maintenance, and regular sediment removal.
2. Regular inspections of rock ditch checks shall be conducted once every calendar week and, as recommended, within 24-hours after each rainfall even that produces 1/2-inch or more of precipitation.
3. Attention to sediment accumulations in front of the rock ditch check is extremely important. Accumulated sediment should be continually monitored and removed when necessary.
4. Remove accumulated sediment when it reaches 1/3 the height of the rock ditch check.
5. Removed sediment shall be placed in stockpile storage areas or spread thinly across disturbed area. Stabilize the removed sediment after it is relocated.
6. Inspect Rock Ditch Checks' edges for erosion and evidence of runoff bypassing the installed check. If evident repair promptly as necessary to prevent erosion and bypassing.
7. In the case of grass-lined ditches, channels, and swales, rock ditch checks should be removed when the grass has matured sufficiently to protect the ditch or swale unless the slope of the swale is greater than 4%.
8. After construction is completed and final stabilization is reached, the entirety of the rock ditch check should be removed if vegetation will be used for permanent erosion control measures. The area beneath the removed rock ditch check must be addressed with permanent stabilization measures.

**South Carolina Department of Health and Environmental Control**

**ROCK DITCH CHECK**

STANDARD DRAWING NO. SC-04 PAGE 2 of 2

GENERAL NOTES FEBRUARY 2014 DATE

**Mead & Hunt**

878 SOUTH LAKE DRIVE  
LEXINGTON, SC 29072  
TELEPHONE: (803) 685-2000

JOB NO. 170080.1  
DATE: 11/9/2021  
DRAWN BY: LMH  
CHECKED BY:  
SCALE: 30:1

BOAT RAMP  
UNION COUNTY, SOUTH CAROLINA  
STANDARD DETAIL



DATE									
REVISION									

STATE	COUNTY	ROAD/ROUTE NO.	SHEET NO.
SC	UNION	BOAT RAMP	4E

### SILT FENCE INSTALLATION

**PLAN SYMBOL**  
  
 —SF—SF—

**FLAT-BOTTOM TRENCH DETAIL**  
 Labels: FILTER FABRIC, COMPACTED EARTH, RUNOFF, HEAVY DUTY PLASTIC TIES, 18-IN. TO 24-IN., 6-IN., 24-IN. (MINIMUM), 6-IN.

**V-SHAPED TRENCH DETAIL**  
 Labels: FILTER FABRIC, COMPACTED EARTH, RUNOFF, HEAVY DUTY PLASTIC TIES, 18-IN. TO 24-IN., 6-IN., 24-IN. (MINIMUM), BURY FILTER FABRIC AT LEAST 12-INCHES

**SILT FENCE — GENERAL NOTES**

- Do not place silt fence across channels or in other areas subject to concentrated flows. Silt fence should not be used as a velocity control BMP. Concentrated flows are any flows greater than 0.5 cfs.
- Maximum sheet or overland flow path length to the silt fence shall be 100-feet.
- Maximum slope steepness (normal [perpendicular] to the fence line) shall be 2:1.
- Silt fence joints, when necessary, shall be completed by one of the following options:
  - Wrap each fabric together at a support post with both ends fastened to the post, with a 1-foot minimum overlap;
  - Overlap silt fence by installing 3-feet passed the support post to which the new silt fence roll is attached. Attach old roll to new roll with heavy-duty plastic ties; or,
  - Overlap entire width of each silt fence roll from one support post to the next support post.
- Attach filter fabric to the steel posts using heavy-duty plastic ties that are evenly spaced within the top 8-inches of the fabric.
- Install the silt fence perpendicular to the direction of the stormwater flow and place the silt fence the proper distance from the toe of steep slopes to provide sediment storage and access for maintenance and cleanout.
- Install Silt Fence Checks (Tie-Backs) every 50-100 feet, dependent on slope, along silt fence that is installed with slope and where concentrated flows are expected or are documented along the proposed/installed silt fence.

South Carolina Department of Health and Environmental Control

**SILT FENCE**

STANDARD DRAWING NO. SC-03 Page 1 of 2

NOT TO SCALE FEBRUARY 2014 DATE

### SILT FENCE — POST REQUIREMENTS

- Silt Fence posts must be 48-inch long steel posts that meet, at a minimum, the following physical characteristics:
  - Composed of a high strength steel with a minimum yield strength of 50,000 psi.
  - Include a standard "T" section with a nominal face width of 1.38-inches and a nominal "T" length of 1.48-inches.
  - Weigh 1.25 pounds per foot ( $\pm 8\%$ )
- Posts shall be equipped with projections to aid in fastening of filter fabric.
- Steel posts may need to have a metal soil stabilization plate welded near the bottom when installed along steep slopes or installed in loose soils. The plate should have a minimum cross section of 17-square inches and be composed of 15 gauge steel, at a minimum. The metal soil stabilization plate should be completely buried.
- Install posts to a minimum of 24-inches. A minimum height of 1- to 2-inches above the fabric shall be maintained, and a maximum height of 3 feet shall be maintained above the ground.
- Post spacing shall be at a maximum of 6-feet on center.

### SILT FENCE — FABRIC REQUIREMENTS

- Silt fence must be composed of woven geotextile filter fabric that consists of the following requirements:
  - Composed of fibers consisting of long chain synthetic polymers of at least 85% by weight of polyolefins, polyesters, or polyamides that are formed into a network such that the filaments or yarns retain dimensional stability relative to each other;
  - Free of any treatment or coating which might adversely alter its physical properties after installation;
  - Free of any defects or flaws that significantly affect its physical and/or filtering properties; and,
  - Have a minimum width of 36-inches.
- Use only fabric appearing on SC DOT's Qualified Products Listing (QPL), Approval Sheet #34, meeting the requirements of the most current edition of the SC DOT Standard Specifications for Highway Construction.
- 12-inches of the fabric should be placed within excavated trench and toed in when the trench is backfilled.
- Filter Fabric shall be purchased in continuous rolls and cut to the length of the barrier to avoid joints.
- Filter Fabric shall be installed at a minimum of 24-inches above the ground.

### SILT FENCE — INSPECTION & MAINTENANCE

- The key to functional silt fence is weekly inspections, routine maintenance, and regular sediment removal.
- Regular inspections of silt fence shall be conducted once every calendar week and, as recommended, within 24-hours after each rainfall even that produces 1/2-inch or more of precipitation.
- Attention to sediment accumulations along the silt fence is extremely important. Accumulated sediment should be continually monitored and removed when necessary.
- Remove accumulated sediment when it reaches 1/3 the height of the silt fence.
- Removed sediment shall be placed in stockpile storage areas or spread thinly across disturbed area. Stabilize the removed sediment after it is relocated.
- Check for areas where stormwater runoff has eroded a channel beneath the silt fence, or where the fence has sagged or collapsed due to runoff overtopping the silt fence. Install checks/tie-backs and/or reinstall silt fence, as necessary.
- Check for tears within the silt fence, areas where silt fence has begun to decompose, and for any other circumstance that may render the silt fence ineffective. Removed damaged silt fence and reinstall new silt fence immediately.
- Silt fence should be removed within 30 days after final stabilization is achieved and once it is removed, the resulting disturbed area shall be permanently stabilized.

South Carolina Department of Health and Environmental Control

**SILT FENCE**

STANDARD DRAWING NO. SC-03 PAGE 2 of 2

GENERAL NOTES FEBRUARY 2014 DATE

# Mead & Hunt

878 SOUTH LAKE DRIVE  
LEXINGTON, SC 29072  
TELEPHONE: (803) 685-2900

JOB NO. 170980.1  
DATE: 11/9/2021  
DRAWN BY: LMH  
CHECKED BY:  
SCALE: 30:1

BOAT RAMP  
UNION COUNTY, SOUTH CAROLINA  
STANDARD DETAIL



DATE	
REVISION	

### Temporary Seeding - Upstate

Species	lbs./ac	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Browntop Millet (Alone)	40				████████████████████								
Browntop Millet (Mix)	10				████████████████████								
Rye Grain (Alone)	56		████████							████████████████████			
Rye Grain (Mix)	10		████████							████████████████████			
Rye Grass (Alone)	50									████████			
Rye Grass (Mix)	8									████████			
<b>For Steep Slopes/Cut Slopes</b>													
Weeping Lovegrass (Alone)	4				████████								
Weeping Lovegrass (Mix)	2				████████								

### Permanent Seeding - Upstate

Species	Lbs/Ac	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Bahia Grass (Alone)	40				████████████████████								
Bahia Grass (Mix)	30				████████████████████								
Bermuda Grass (hulled) (Alone)	8-12					████████████████████							
Bermuda Grass (hulled) (Mix)	4-6					████████████████████							
Fescue, Tall (KY31) Alone	40									████████			
Fescue, Tall (KY31) mix	20									████████			
Sericea Lespedeza (Scarified) Alone or Mix (inoculate with EL Inoculant)	40					████████							
Ladino Clover (mix only) Inoculate with AB Inoculant	2									████████			
<b>For Steep Slopes/Cut Slopes</b>													
Weeping Lovegrass (Alone)	4					████████							
Weeping Lovegrass (Mix)	2					████████							
Crownvetch (Mix) (Inoculate with Type M Inoculant)	8-10				████████								

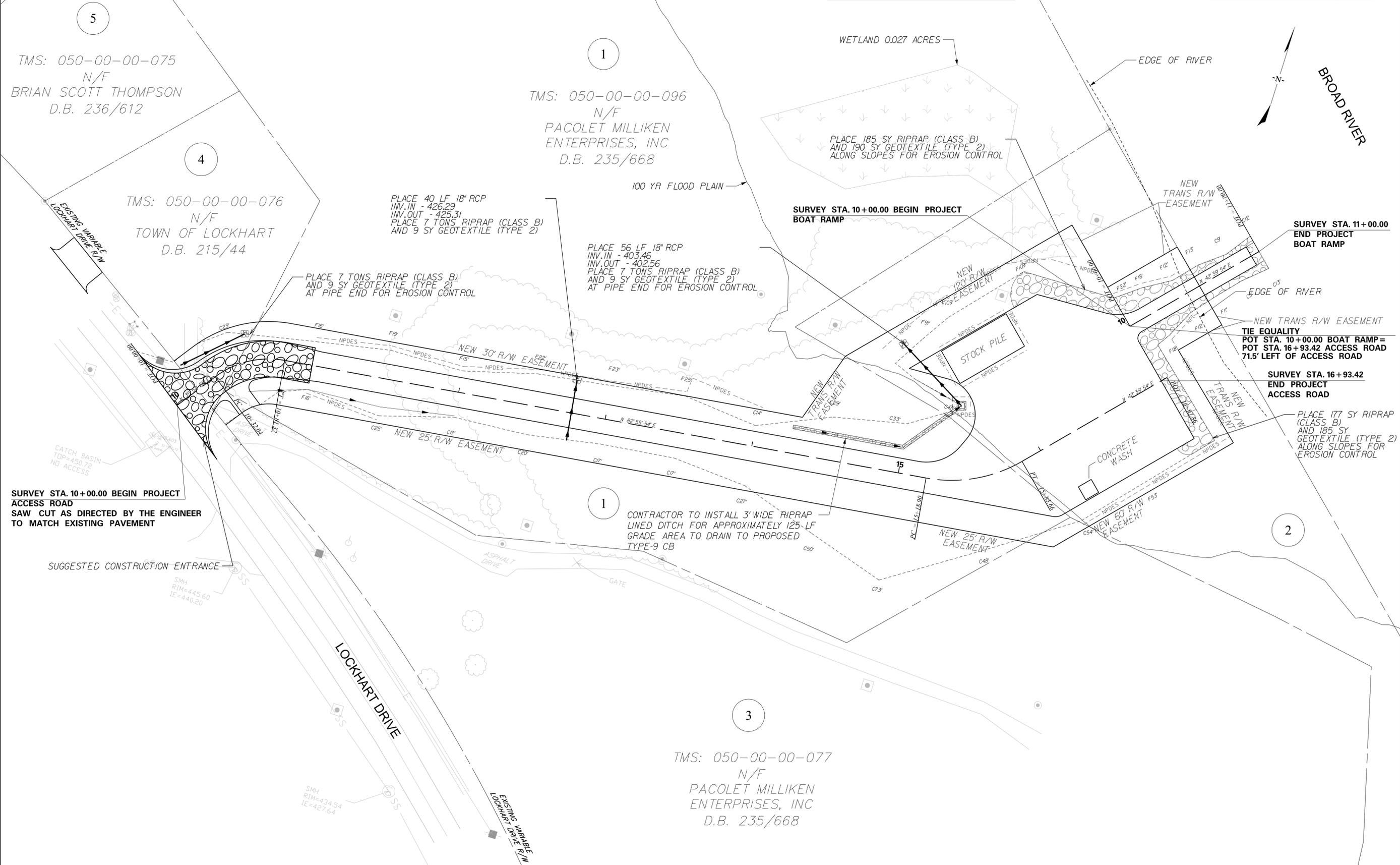


DATE	
REVISION	

**LEGEND**  
 RIP-RAP

ALL STATION OFFSETS ARE MEASURED FROM THE ACCESS ROAD BASE LINE

STATE	COUNTY	ROAD/ROUTE NO.	SHEET NO.
SC	UNION	BOAT RAMP	4G



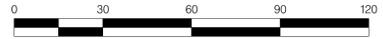
**Mead & Hunt**  
 878 SOUTH LAKE DRIVE  
 LEXINGTON, SC 29072  
 TELEPHONE: (803) 685-2900

JOB NO. 170980.1  
 DATE: 11/9/2021  
 DRAWN BY: LMH  
 CHECKED BY:  
 SCALE: 30:1

BOAT RAMP  
 UNION COUNTY, SOUTH CAROLINA  
 SEDIMENT SHEET



DATE	
REVISION	



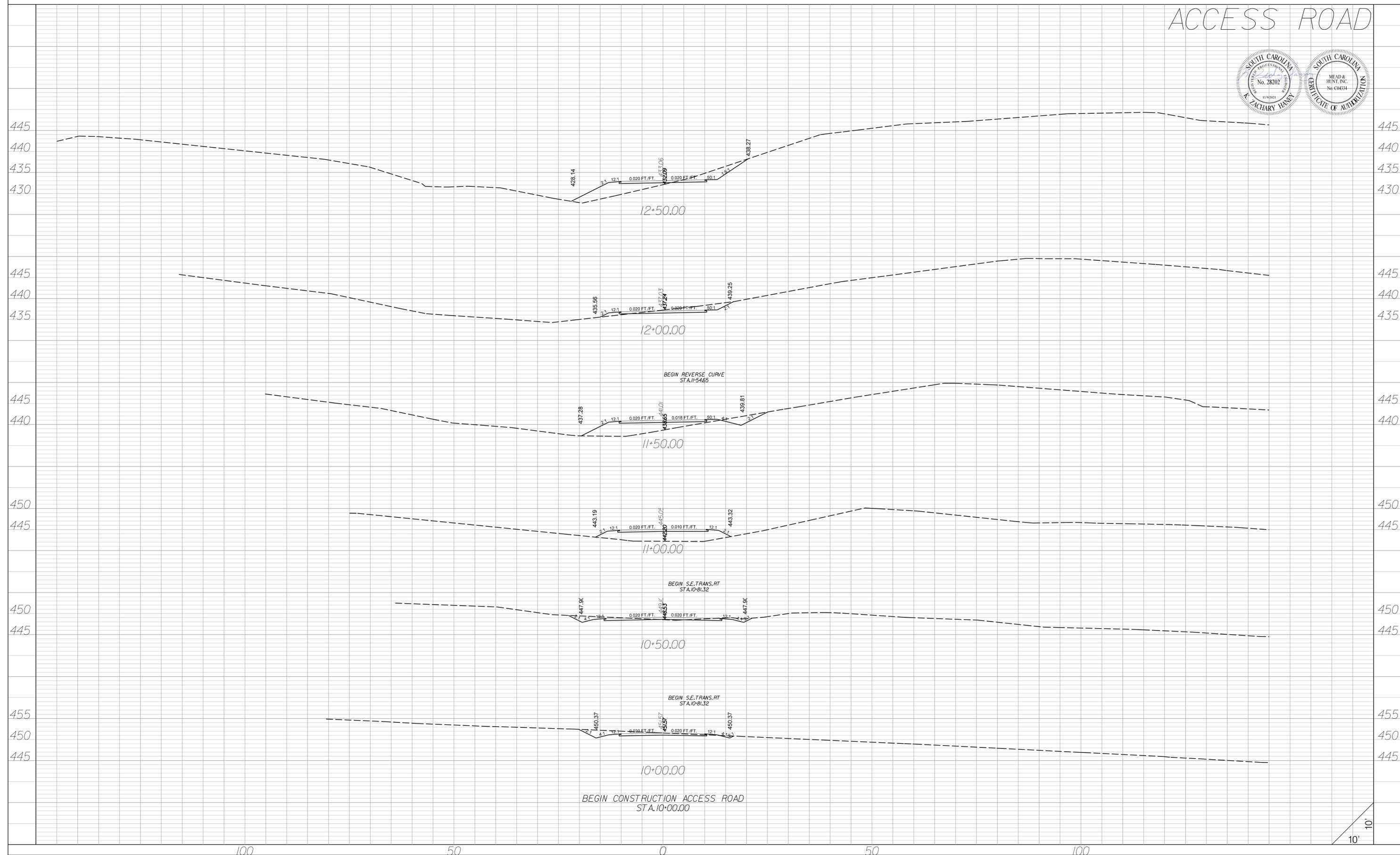






FED. RD. DIV. NO.	STATE	COUNTY	PROJECT NO.	ROUTE NO.	SHEET NO.
3	S.C.	UNION	I90972.01		XI

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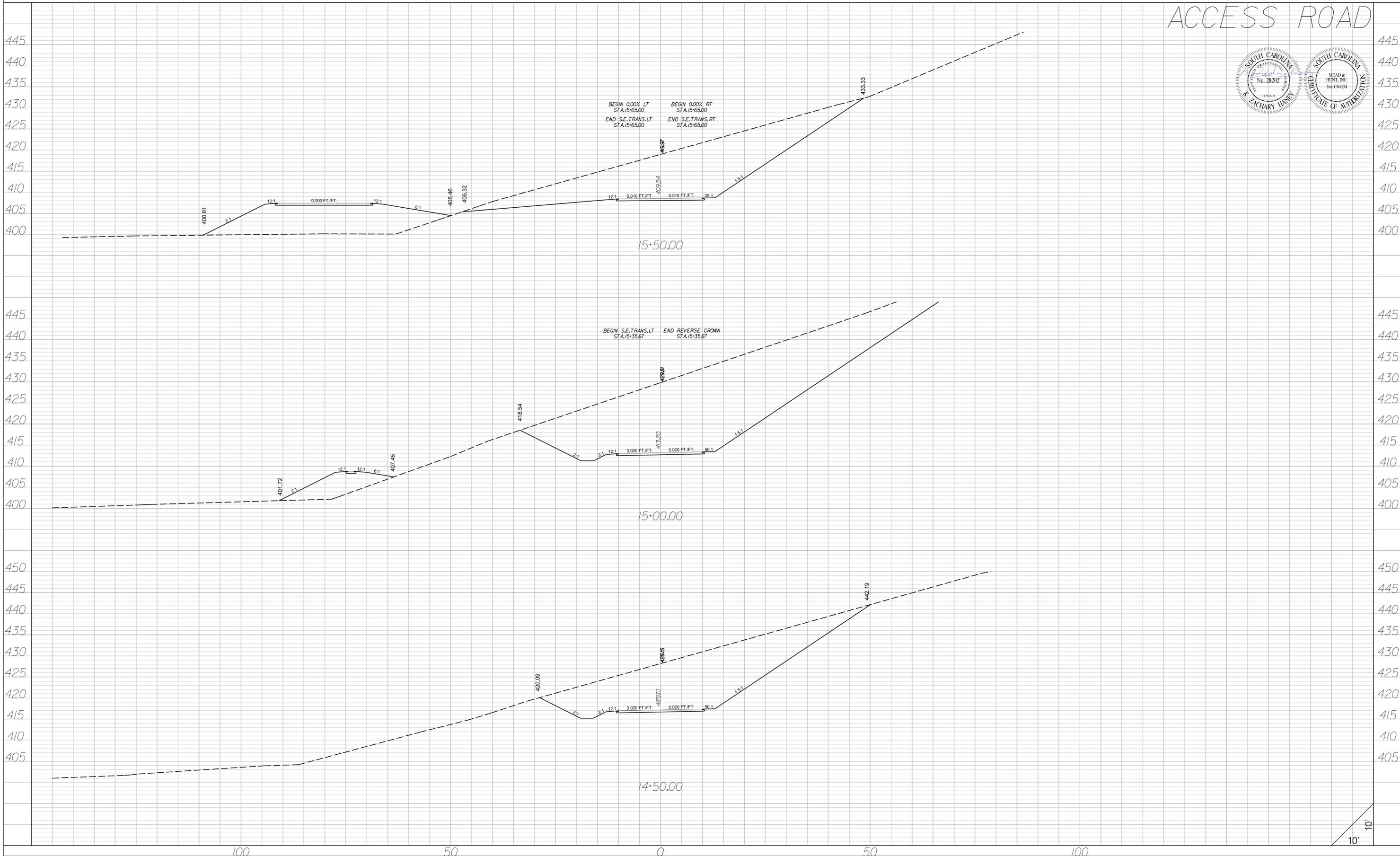
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3	S.C.	UNION	I90972.01		X2

# ACCESS ROAD



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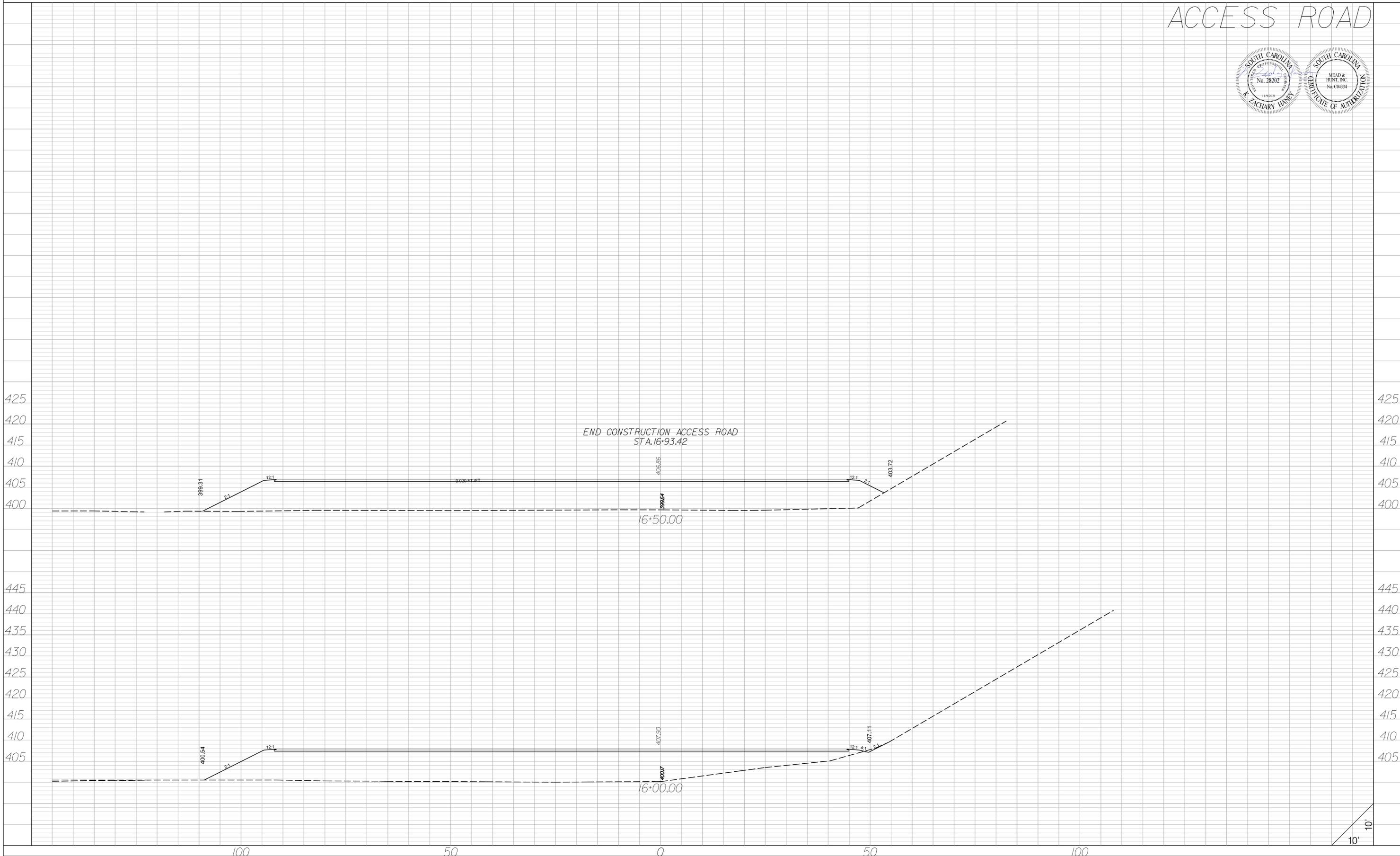
# ACCESS ROAD



10'  
10'

FED. RD. DIV. NO.	STATE	COUNTY	PROJECT	ROUTE NO.	SHEET NO.
3	S.C.	UNION	190972.01		X4

# ACCESS ROAD



FED. RD. DIV. NO.	STATE	COUNTY	PROJECT NO.	ROUTE NO.	SHEET NO.
3	S.C.	UNION	190972.01		X5

# BOAT RAMP

