CONTRACT #DD0075B WBS #17BP.4.R.20

HAZARDOUS SPILL BASIN CHECKLIST

RIVER BASIN: TAR-PAMLICO
STREAM CLASSIFICATION: C,NSW

WATER QUALITY CRITERIA:

| | YES | NO |
|---|---|---|
| STREAM CROSSING BLUE LINE ON USGS | X | |
| ORW | | X |
| WSI | | X |
| WS II,III OR IV, CROSSING WITHO.5mi OF W.S. CRITICAL AREA | | X |

ROADWAY CRITERIA:

| | YES | NO |
|---|---|---|
| ROUTE DESIGNATION - | | |
| ARTERIAL URBAN | X | |
| ARTERIAL RURAL | | |
| IS A HAZARDOUS SPILL BASIN REQUIRED? | | X |

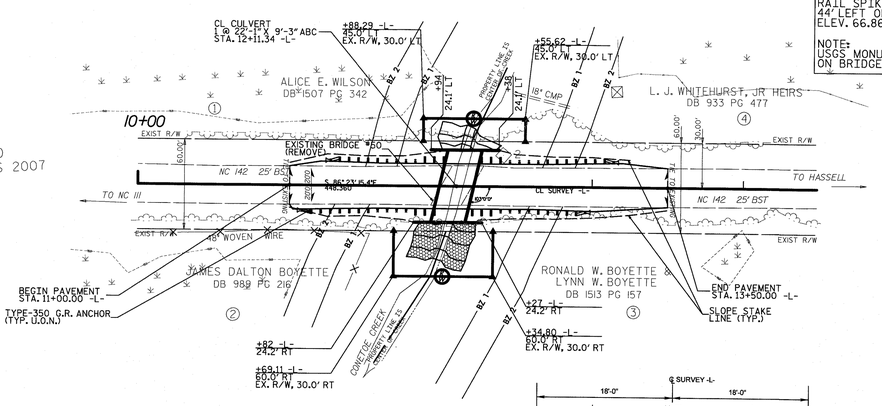
NOTES:

FOR SELECT BACKFILL AROUND CULVERT, USE TYPE IV - ABC

FILL RELATED JUST TO THE REMOVAL OF THE EXISTING STRUCTURE CAN FOLLOW STANDARD SELECT FILL MATERIALS.

RECOMMENDED STRUCTURE

1 @ 22'-1"X 9'-3" ALUMINUM BOX CULVERT (ABC), L=49'-6", 103° SKEW W/ US & DS HWs




PLAN
SCALE: 1"=50'

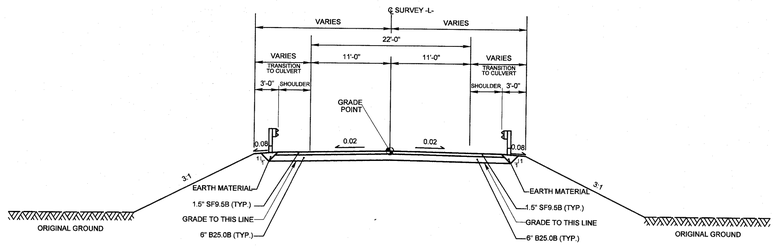
NC GRID
NAD 83/NSRS 2007

TBM: TBM-1
RAIL SPIKE IN BASE OF 26" SWEET GUM
44' LEFT OF BL STA 10+65.00
ELEV. 66.86'

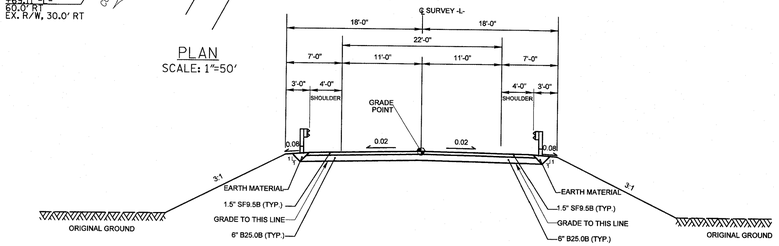
NOTE:
USGS MONUMENT '6 MEA 1978 70' ON BRIDGE

RIGHT OF WAY AREA DATA

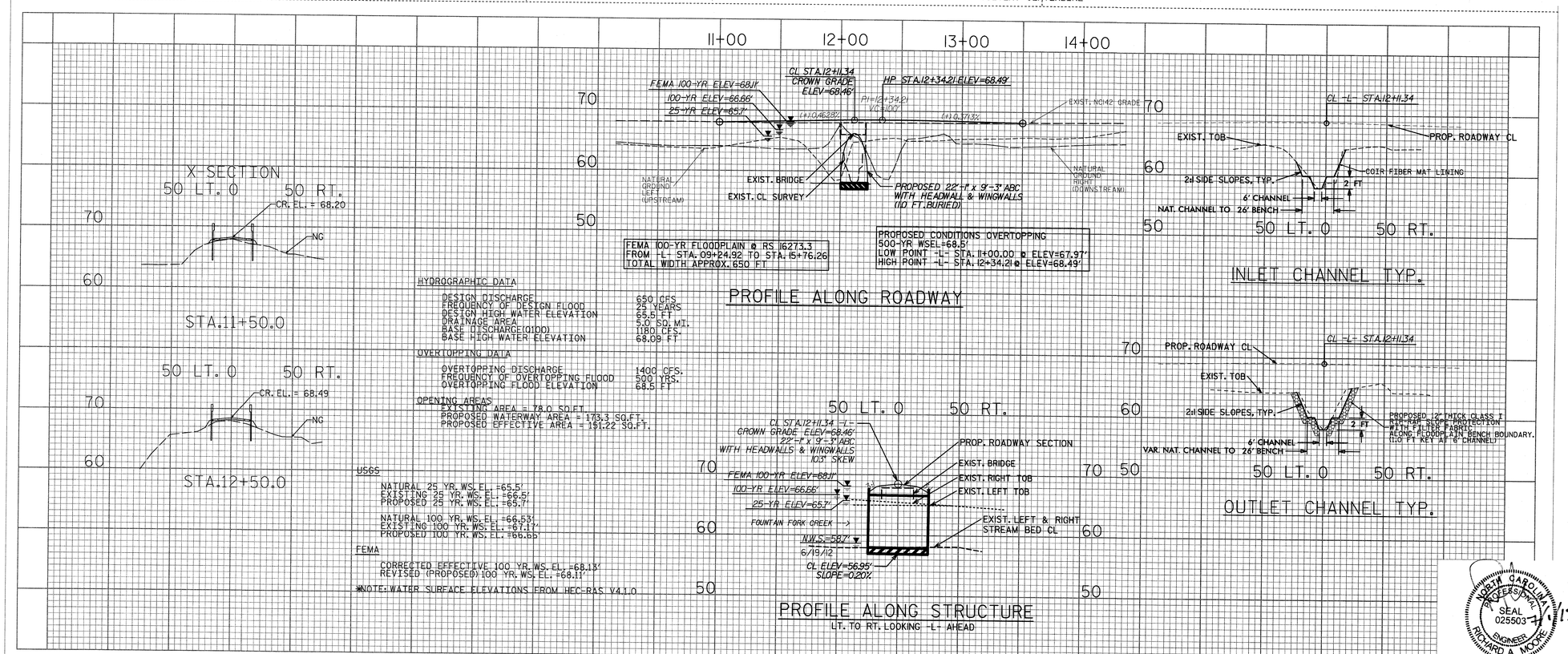
| PARCEL NO. | PROPERTY OWNERS NAMES | TOTAL AREA | AREA TAKEN | AREA REMAINING RT. | AREA REMAINING LT. | CONST. EASE. | PERM. DRAIN. EASE. | TEMP. DRAIN. EASE. |
|---|---|---|---|---|---|---|---|---|
| 1 | ALICE E. WILSON | 7.00 AC | 536 SF | | 6.99 AC | | | |
| 2 | JAMES DALTON BOYETTE | 4.48 AC | 885 SF | 4.46 AC | | | | |
| 3 | RONALD W. BOYETTE & LYNN W. BOYETTE | 91.97 AC | 1086 SF | 91.95 AC | | | | |
| 4 | L.J. WHITEHURST, JR HEIRS | 117.28 AC | 474 SF | | 117.27 AC | | | |




TYPICAL ROADWAY SECTION
WITHIN CONSTRUCTION LIMITS




TYPICAL ROADWAY SECTION
AT CULVERT CENTERLINE




NOTE: THIS SITE IS LOCATED IN A FLOOD ZONE, LIMITED DETAIL STUDY. (OAK CITY, NC QUAD)

D.A. = 5.0 SQ. MI.

Q10 = 500 CFS
Q25 = 650 CFS } USGS RURAL
Q100 = 1000 CFS

Q100 (FEMA) = 1180 CFS

HISTORIC HIGHWATER INFORMATION

LYNN BOYETTE LOCAL RESIDENT STATED THAT FLOYD OVERTOPPED NC 142 IN SEPTEMBER 1999. THE RESIDENT'S PERIOD OF KNOWLEDGE IS 41+ YEARS.

EXISTING BRIDGE NO. 50

26.6' CLEAR ROADWAY
REINFORCED CONCRETE BRIDGE DECK ON STEEL AND CONCRETE ENCASED I-BEAMS

1 - N=789133.26, E=2482503.31, ELEV.=68.66
2 - N=789141.01, E=2482993.89, ELEV.=66.73
3 - N=789114.04, E=2483364.37, ELEV.=69.14

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "2"
WITH NAD 83/NSRS 2007 STATE PLANE GRID COORDINATES OF
NORTHING: 789141.01(ft) EASTING: 2482993.89(ft)
ELEVATION: 66.73(ft)
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.999940302

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NAVD 88

PROJECT NO. 17BP.4.R.20

EDGECOMBE COUNTY

STATION: 12+11.34 -L-

REPLACES BRIDGE NO. 50

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

BRIDGE #50 ON NC 142
OVER FOUNTAIN FORK CREEK
BETWEEN NC 111 & SR 1530

24'-0" CLEAR ROADWAY - 103° SKEW

NORTH CAROLINA PROFESSIONAL SEAL 025503 ENGINEER RICHARD A. MOORE
4/1/13

McKIM & CREED
243 NORTH FRONT STREET
WILMINGTON, NC 28401
TEL. (910) 343-1048 FAX. (910) 790-8282
NC LICENSE F-1222

DRAWN BY : JBS/KE DATE : 10/12
CHECKED BY : RAM/CG DATE : 10/12

$DATE$ $TIME$ $FILE$

| REVISIONS | | | | | | SHEET NO. |
|---|---|---|---|---|---|---|
| NO. | BY: | DATE: | NO. | BY: | DATE: | 1 |
| 1 | | | 3 | | | TOTAL SHEETS |
| 2 | | | 4 | | | |

**WBS #17BP.4.R.20**

**CONTRACT #DD00075B**

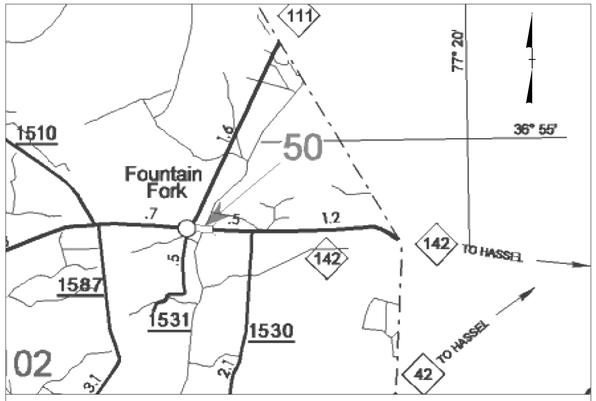
| STATE | STATE PROJECT REFERENCE NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| N.C. | 17BP.4.R.20 | EC-1 | 3 |

| STATE PROJ. NO. | F. A. PROJ. NO. | DESCRIPTION |
|---|---|---|
| 17BP.4.R.20 | N/A | BRIDGE REPLACEMENT |

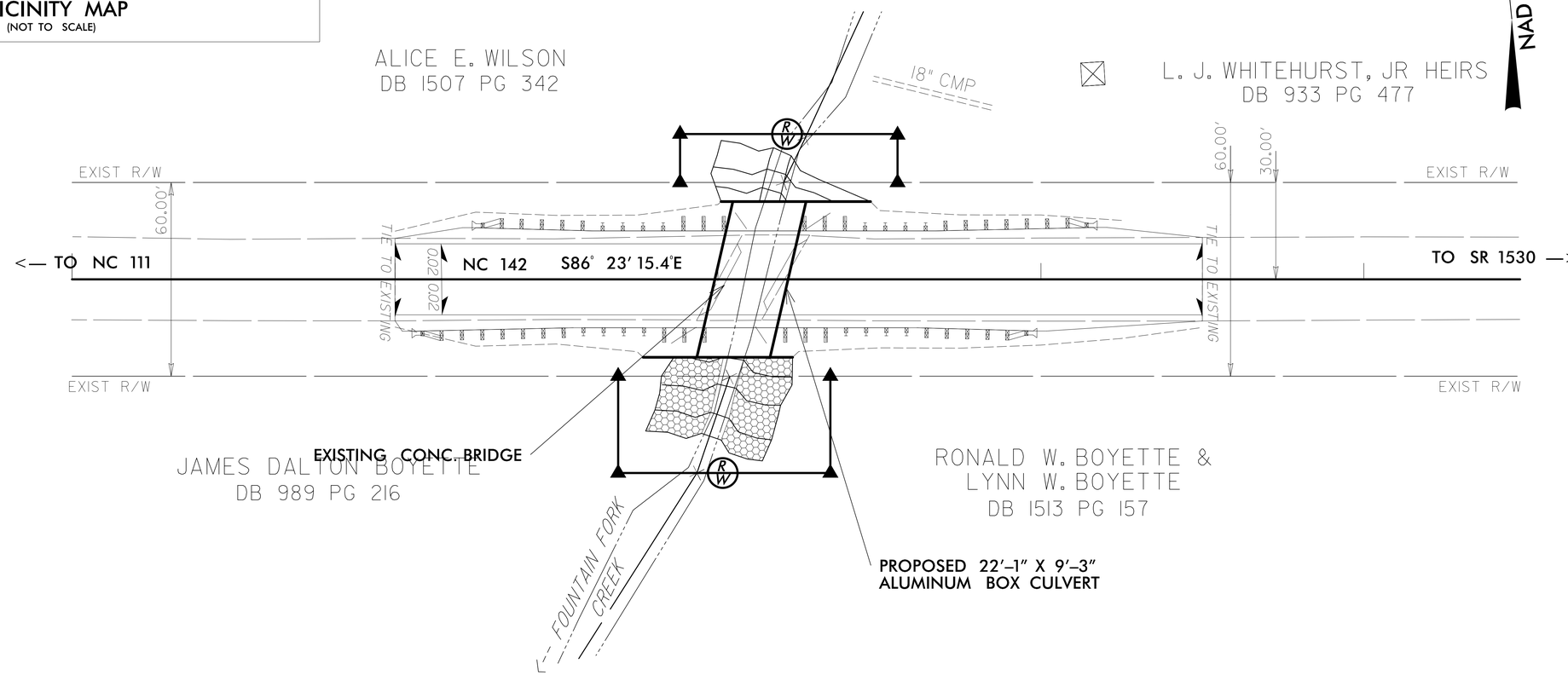
# STATE OF NORTH CAROLINA
# DIVISION OF HIGHWAYS

# *EDGECOMBE COUNTY*

## PLAN FOR PROPOSED
## HIGHWAY EROSION CONTROL




VICINITY MAP
(NOT TO SCALE)




***GRAPHIC SCALE***

10 0 20

***EXISTING STRUCTURE:*** *SINGLE SPAN REINFORCED CONCRETE DECK ON STEEL AND CONCRETE ENCASED I-BEAMS ON CONC. END BENTS WITH CONC. WINGWALLS WITH CONC. FOOTING ABUTMENTS ALONG INTERIOR END BENT WALLS*

***PROPOSED STRUCTURE:*** *SINGLE 22'-1" X 9'-3" ALUMINUM BOX CULVERT 103° SKEW WITH HEADWALLS AND WINGWALLS BURIED 1-FT*

ROADSIDE ENVIRONMENTAL UNIT
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

2012 STANDARD SPECIFICATIONS

J. BRANCH SMITH
LEVEL III NAME

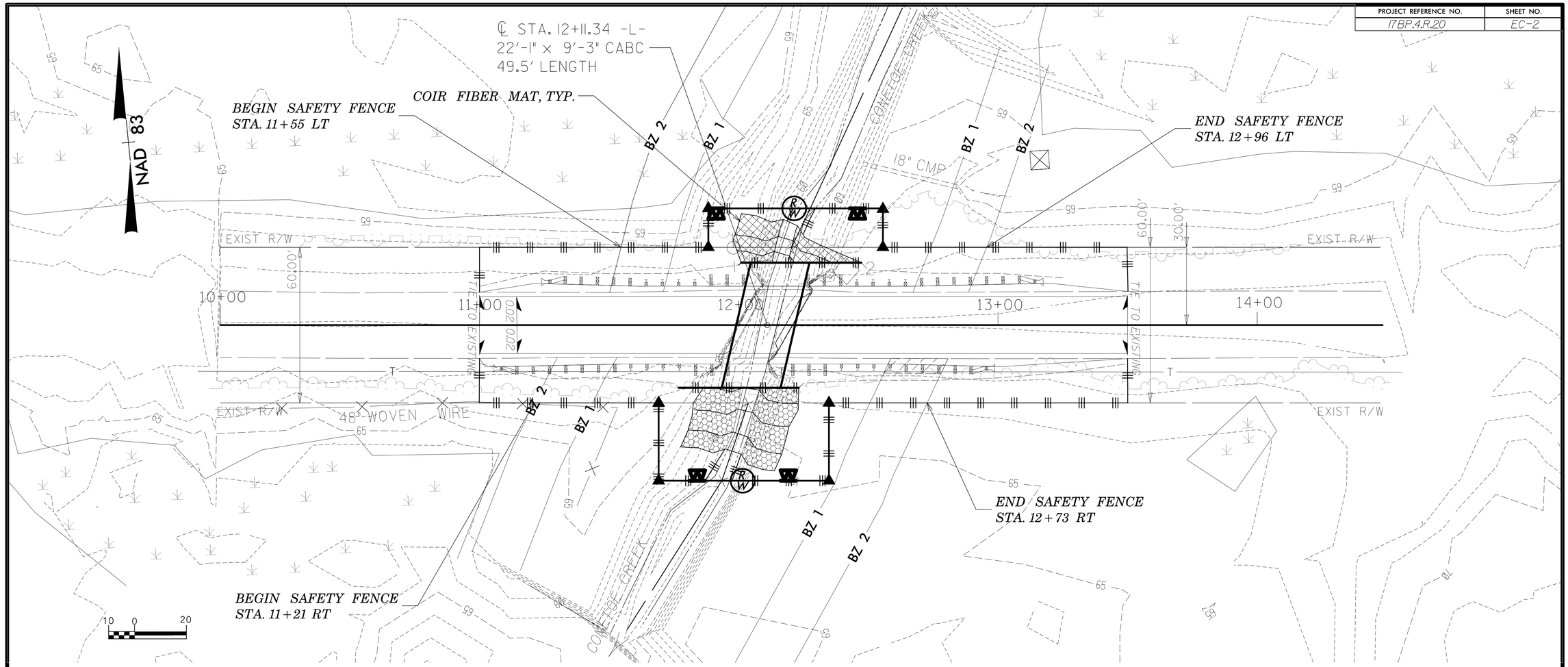
3355
LEVEL III CERTIFICATION NO.

Roadway Standard Drawings

The following roadway english standards as appear in "Roadway Standard Drawings"– Roadway Design Unit – N. C. Department of Transportation – Raleigh, N. C., dated January 2012 and the latest revison thereto are applicable to this project and by reference hereby are considered a part of these plans.

| | | | |
|---|---|---|---|
| 1604.01 | Railroad Erosion Control Detail | 1632.01 | Rock Inlet Sediment Trap Type A |
| 1605.01 | Temporary Silt Fence | 1632.02 | Rock Inlet Sediment Trap Type B |
| 1606.01 | Special Sediment Control Fence | 1632.03 | Rock Inlet Sediment Trap Type C |
| 1607.01 | Gravel Construction Entrance | 1633.01 | Temporary Rock Silt Check Type A |
| 1622.01 | Temporary Berms and Slope Drains | 1633.02 | Temporary Rock Silt Check Type B |
| 1630.01 | Riser Basin | 1634.01 | Temporary Rock Sediment Dam Type A |
| 1630.02 | Silt Basin Type B | 1634.02 | Temporary Rock Sediment Dam Type B |
| 1630.03 | Temporary Silt Ditch | 1635.01 | Rock Pipe Inlet Sediment Trap Type A |
| 1630.04 | Stilling Basin | 1635.02 | Rock Pipe Inlet Sediment Trap Type B |
| 1630.05 | Temporary Diversion | 1640.01 | Coir Fiber Baffle |
| 1630.06 | Special Stilling Basin | 1645.01 | Temporary Stream Crossing |
| 1631.01 | Matting Installation | | |

| PROJECT REFERENCE NO. | SHEET NO. |
|---|---|
| 17BP.4.R.20 | EC-2 |




**ENVIRONMENTALLY SENSITIVE AREA(S) EXIST ON THIS PROJECT**

*Refer To E. C. Special Provisions for Special Considerations.*

***THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 3, 2011 ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER QUALITY.***

## EROSION CONTROL MEASURES

| Std. # | Description | Symbol |
|---|---|---|
| 1605.01 | Temporary Silt Fence | |
| 1606.01 | Special Sediment Control Fence | |

## *SOIL STABILIZATION TIMEFRAMES*

| SITE DESCRIPTION | STABILIZATION TIME | TIMEFRAME EXCEPTIONS |
|---|---|---|
| PERIMETER DIKES, SWALES, DITCHES AND SLOPES | 7 DAYS | NONE |
| HIGH QUALITY WATER (HQW) ZONES | 7 DAYS | NONE |
| SLOPES STEEPER THAN 3:1 | 7 DAYS | IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED. |
| SLOPES 3:1 OR FLATTER | 14 DAYS | 7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH. |
| ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1 | 14 DAYS | NONE, EXCEPT FOR PERIMETERS AND HQW ZONES. |

GENERAL EROSION CONTROL NOTES:

INSTALL EROSION/SEDIMENT CONTROL MEASURES ACCORDING TO PLANS, CONTRACT, AND SPECIAL PROVISIONS.

TEMPORARY SILT FENCE SHALL BE INSTALLED AT ROW AS SHOWN. SILT FENCE OUTLETS MUST ALLOW FOR SEDIMENT TO DISCHARGE WITHIN ROW AND NOT OFFSITE.

ANY DEVIATION FROM OPTIONS GIVEN WILL REQUIRE PRIOR APPROVAL BY ENGINEER.

ADDITIONAL EROSION CONTROL DEVICES MAY NEED TO BE INSTALLED AS DIRECTED BY THE ENGINEER.

SEED ALL DISTURBED AREAS ACCORDING TO THE SITE STABILIZATION TIMEFRAMES.

INSTALLATION SCHEDULE:

INSTALL TEMPORARY IMPERVIOUS DIKE PER SPECIAL PROVISIONS.

INSTALL SILT FENCE PRIOR TO DEMOLITION OF EXISTING STRUCTURE.

PREPARE CULVERT FOUNDATION WHILE LIMITING MATERIAL AND SEDIMENT FROM ENTERING THE CHANNEL.

PREPARE CULVERT INLET AND OUTLET GRADING AS SHOWN AND COVER WITH COIR FIBER MATTING OR RIP-RAP STONE.

INSTALL PROPOSED ALUMINUM BOX CULVERT, HEADWALLS, AND WINGWALLS.

COMPLETE BACKFILL OF PROPOSED BOX CULVERT AND INSTALL SILT FENCE ALONG EACH HEADWALL AS SHOWN TO PREVENT BACKFILL FROM ENTERING CHANNEL.

REMOVE ALL SEDIMENT CONTROL DEVICES AFTER PERMANENT VEGETATIVE COVER HAS BEEN ESTABLISHED.

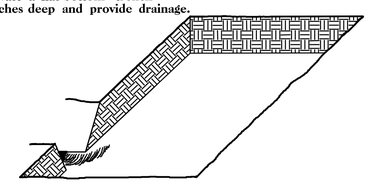
| STATE | STATE PROJECT REFERENCE NO. | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|
| N.C. | 17BP.4.R.20 | RF-1 | |
| STATE PROJ. NO. | F. A. PROJ. NO. | DESCRIPTION | |
| | | | |

# PLANTING DETAILS

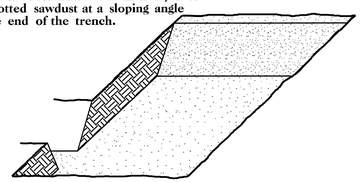
## SEEDLING / LINER BAREROOT PLANTING DETAIL

### HEALING IN

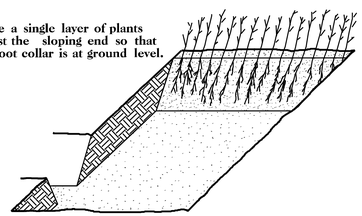
1. Locate a healing-in site in a shady, well protected area.
2. Excavate a flat bottom trench 12 inches deep and provide drainage.



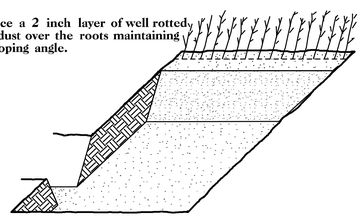
3. Backfill the trench with 2 inches well rotted sawdust. Place a 2 inch layer of well rotted sawdust at a sloping angle at one end of the trench.



4. Place a single layer of plants against the sloping end so that the root collar is at ground level.

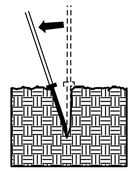


5. Place a 2 inch layer of well rotted sawdust over the roots maintaining a sloping angle.

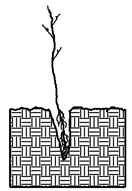


6. Repeat layers of plants and sawdust as necessary and water thoroughly.

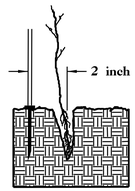
### DIBBLE PLANTING METHOD
### USING THE KBC PLANTING BAR



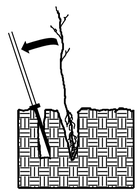
1. Insert planting bar as shown and pull handle toward planter.



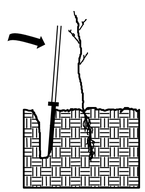
2. Remove planting bar and place seedling at correct depth.



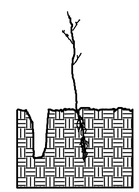

3. Insert planting bar 2 inches toward planter from seedling.



4. Pull handle of bar toward planter, firming soil at bottom.



5. Push handle forward firming soil at top.



6. Leave compaction hole open. Water thoroughly.

### PLANTING NOTES:

PLANTING BAG
During planting, seedlings shall be kept in a moist canvas bag or similar container to prevent the root systems from drying.

KBC PLANTING BAR
Planting bar shall have a blade with a triangular cross section, and shall be 12 inches long, 4 inches wide and 1 inch thick at center.

ROOT PRUNING
All seedlings shall be root pruned, if necessary, so that no roots extend more than 10 inches below the root collar.

# REFORESTATION

☐ TREE REFORESTATION SHALL BE PLANTED 6 FT. TO 10 FT. ON CENTER, RANDOM SPACING, AVERAGING 8 FT. ON CENTER, APPROXIMATELY 680 PLANTS PER ACRE.

**REFORESTATION**

MIXTURE, TYPE, SIZE, AND FURNISH SHALL CONFORM TO THE FOLLOWING:

| | | |
|---|---|---|
| 25% LIRIODENDRON TULIPIFERA | TULIP POPLAR | 12 in – 18 in BR |
| 25% PLATANUS OCCIDENTALIS | SYCAMORE | 12 in – 18 in BR |
| 25% FRAXINUS PENNSYLVANICA | GREEN ASH | 12 in – 18 in BR |
| 25% BETULA NIGRA | RIVER BIRCH | 12 in – 18 in BR |

# REFORESTATION DETAIL SHEET

N.C.D.O.T. - ROADSIDE ENVIRONMENTAL UNIT