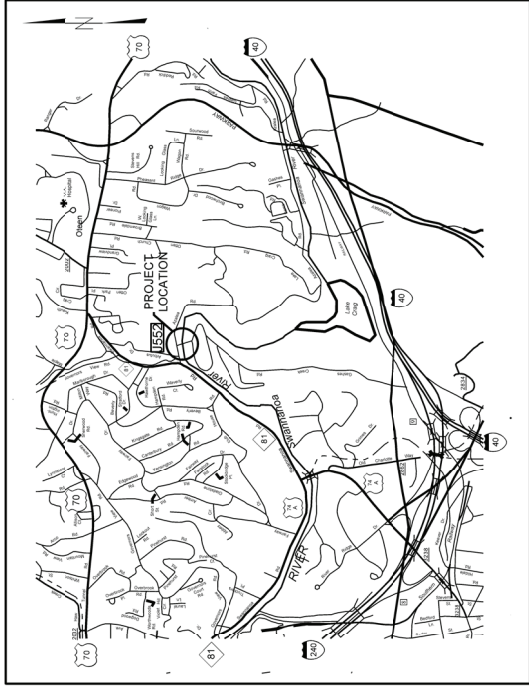


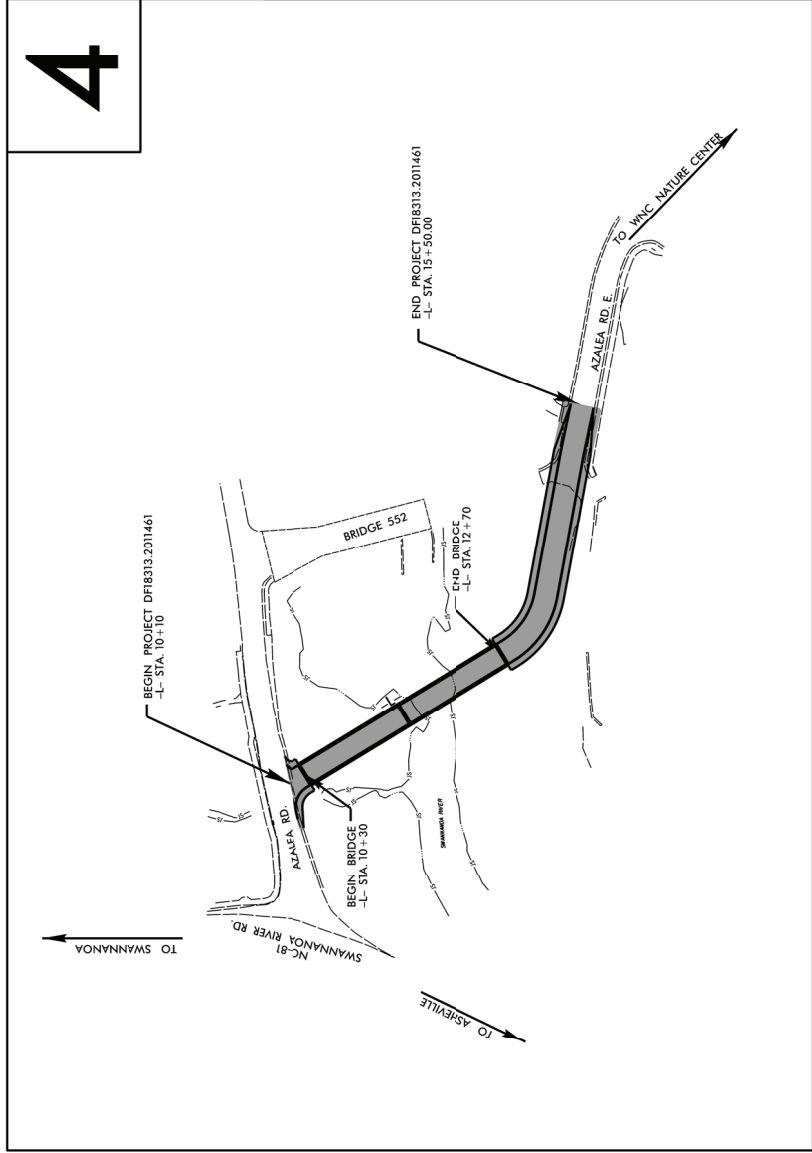


STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

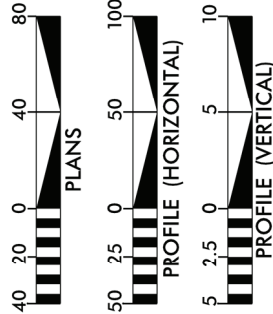
**BUNCOMBE COUNTY**

**LOCATION: AZALEA RD E. BETWEEN AZALEA RD.  
AND GASHES CREEK RD**

## TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND TEMPORARY STRUCTURE

[illegible]

## GRAPHIC SCALES



## PROJECT LENGTH

|                             |                 |   |       |       |
|-----------------------------|-----------------|---|-------|-------|
| LENGTH OF ROADWAY PROJECT   | DF18313.2011461 | = | 0.057 | MILES |
| LENGTH OF STRUCTURE PROJECT | DF18313.2011461 | = | 0.045 | MILES |
| TOTAL LENGTH OF PROJECT     | DF18313.2011461 | = | 0.102 | MILES |

*Prepared In the Office of:*  
**DIVISION OF HIGHWAYS**

55 Orange St., Asheville NC, 28801

**RIGHT OF WAY DATE:**  
N/A

**LETTING DATE:**  
JULY 15, 2026

**GABRIEL L. JOHNSON, PE**  
*PROJECT ENGINEER*

**WILLIAM CHASE CARVER, PE**  
*PROJECT DESIGN ENGINEER*

**HYDRAULICS ENGINEER**

Signed by: Marco T. Shoun, PE P.E.  
 \_\_\_\_\_  
 WPC5886C2A2491...  
 SIGNATURE.

**ROADWAY DESIGN  
ENGINEER**

Signed by: William C. Carver 06/17/2026 P.E.  
163520-0485-193488 ...  
**SIGNATURE**



**DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED**



Note: Not to Scale

BOUNDARIES AND PROPERTY:

State Line

County Line

Township Line

City Line

Reservation Line

Property Line

Existing Iron Pin (EIP)

Computed Property Corner

Existing Concrete Monument (ECM)

Parcel/Sequence Number

Existing Fence Line

Proposed Woven Wire Fence

Proposed Chain Link Fence

Proposed Barbed Wire Fence

Existing Wetland Boundary

Proposed Wetland Boundary

Existing Endangered Animal Boundary

Existing Endangered Plant Boundary

Existing Historic Property Boundary

Known Contamination Area: Soil

Potential Contamination Area: Soil

Known Contamination Area: Water

Potential Contamination Area: Water

Contaminated Site: Known or Potential

BUILDINGS AND OTHER CULTURE:

Gas Pump

Vent or UG Tank Cap

Sign

Well

Small Mine

Foundation

Area Outline

Cemetery

Building

School

Church

Dam

HYDROLOGY:

Stream or Body of Water

Hydro, Pool or Reservoir

Jurisdictional Stream

Buffer Zone 1

Buffer Zone 2

Flow Arrow

Disappearing Stream

Spring

Wetland

Proposed Lateral, Tail, Head Ditch

False Sump

STATE OF NORTH CAROLINA, DIVISION OF HIGHWAYS  
CONVENTIONAL PLAN SHEET SYMBOLS

RAILROADS:

Standard Gauge

RR Signal Milepost

Switch

RR Abandoned

RR Dismantled

RIGHT OF WAY & PROJECT CONTROL:

Primary Horiz Control Point

Primary Horiz and Vert Control Point

Secondary Horiz and Vert Control Point

Vertical Benchmark

Existing Right of Way Monument

Proposed Right of Way Monument

Proposed Right of Way Monument (Rebar and Cap)

Proposed Right of Way Monument (Concrete)

Existing Permanent Easement Monument

Proposed Permanent Easement Monument (Rebar and Cap)

Existing CA Monument

Proposed CA Monument (Rebar and Cap)

Proposed CA Monument (Concrete)

Existing Right of Way Line

Proposed Right of Way Line

Existing Control of Access Line

Proposed Control of Access Line

Proposed ROW and CA Line

Existing Easement Line

Proposed Temporary Construction Easement

Proposed Temporary Drainage Easement

Proposed Permanent Drainage Easement

Proposed Permanent Drainage/Utility Easement

Proposed Permanent Utility Easement

Proposed Temporary Utility Easement

Proposed Aerial Utility Easement

ROADS AND RELATED FEATURES:

Existing Edge of Pavement

Existing Curb

Proposed Slope Stakes Cut

Proposed Slope Stakes Fill

Proposed Curb Ramp

Existing Metal Guardrail

Proposed Guardrail

Existing Cable Guiderail

Proposed Cable Guiderail

Equality Symbol

Pavement Removal

VEGETATION:

Single Tree

Single Shrub

Hedge

Woods Line

Orchard

Vineyard

EXISTING STRUCTURES:

MAJOR:

Bridge, Tunnel or Box Culvert

Bridge Wing Wall, Head Wall and End Wall

MINOR:

Head and End Wall

Pipe Culvert

Footbridge

Drainage Box: Catch Basin, DI or JB

Paved Ditch Gutter

Storm Sewer Manhole

Storm Sewer

UTILITIES:

\* SUE - Subsurface Utility Engineering

LOS - Level of Service - A,B,C or D (Accuracy)

POWER:

Existing Power Pole

Proposed Power Pole

Existing Joint Use Pole

Proposed Joint Use Pole

Power Manhole

Power Line Tower

Power Transformer

UG Power Cable Hand Hole

H-Frame Pole

UG Power Line Test Hole (SUE - LOS A)\*

UG Power Line (SUE - LOS B)\*

UG Power Line (SUE - LOS C)\*

UG Power Line (SUE - LOS D)\*

TELEPHONE:

Existing Telephone Pole

Proposed Telephone Pole

Telephone Manhole

Telephone Pedestal

Telephone Cell Tower

UG Telephone Cable Hand Hole

UG Telephone Test Hole (SUE - LOS A)\*

UG Telephone Cable (SUE - LOS B)\*

UG Telephone Cable (SUE - LOS C)\*

UG Telephone Cable (SUE - LOS D)\*

UG Telephone Conduit (SUE - LOS B)\*

UG Telephone Conduit (SUE - LOS C)\*

UG Telephone Conduit (SUE - LOS D)\*

UG Fiber Optics Cable (SUE - LOS B)\*

UG Fiber Optics Cable (SUE - LOS C)\*

UG Fiber Optics Cable (SUE - LOS D)\*

WATER:

Water Manhole

Water Meter

Water Valve

Water Hydrant

U/G Water Line Test Hole (SUE - LOS A)\*

U/G Water Line (SUE - LOS B)\*

U/G Water Line (SUE - LOS C)\*

U/G Water Line (SUE - LOS D)\*

Above Ground Water Line

TV:

TV Pedestal

TV Tower

U/G TV Cable Hand Hole

U/G TV Test Hole (SUE - LOS A)\*

U/G TV Cable (SUE - LOS B)\*

U/G TV Cable (SUE - LOS C)\*

U/G TV Cable (SUE - LOS D)\*

U/G Fiber Optic Cable (SUE - LOS B)\*

U/G Fiber Optic Cable (SUE - LOS C)\*

U/G Fiber Optic Cable (SUE - LOS D)\*

GAS:

Gas Valve

Gas Meter

U/G Gas Line Test Hole (SUE - LOS A)\*

U/G Gas Line (SUE - LOS B)\*

U/G Gas Line (SUE - LOS C)\*

U/G Gas Line (SUE - LOS D)\*

Above Ground Gas Line

SANITARY SEWER:

Sanitary Sewer Manhole

Sanitary Sewer Cleanout

U/G Sanitary Sewer Line

Above Ground Sanitary Sewer

SS Force Main Line Test Hole (SUE - LOS A)\*

SS Force Main Line (SUE - LOS B)\*

SS Force Main Line (SUE - LOS C)\*

SS Force Main Line (SUE - LOS D)\*

MISCELLANEOUS:

Utility Pole

Utility Pole with Base

Utility Located Object

Utility Traffic Signal Box

Utility Unknown U/G Line (SUE - LOS B)\*

U/G Tank; Water, Gas, Oil

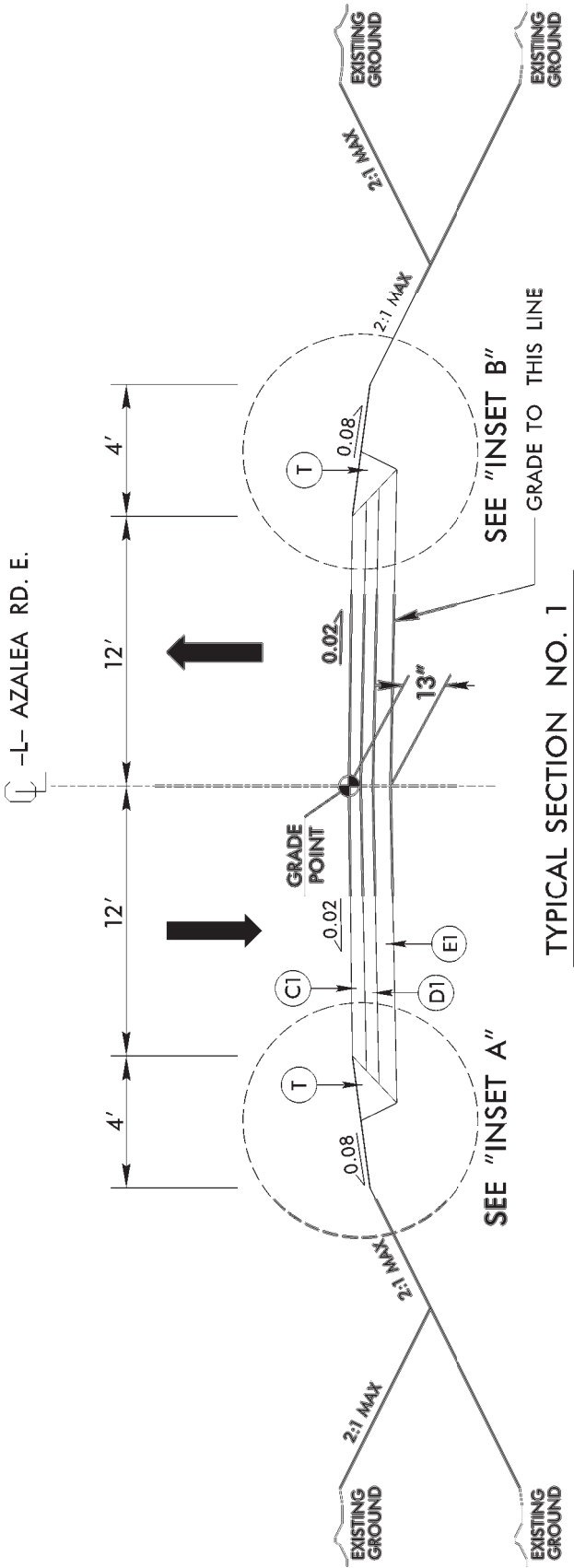
Underground Storage Tank, Approx. Loc.

A/G Tank; Water, Gas, Oil

Geoenvironmental Boring

Abandoned According to Utility Records

End of Information

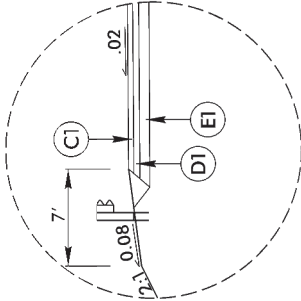


USE TYPICAL SECTION NO. 1

- L- STA. 10+10 TO 10+30
- L- STA. 12+70 TO 15+50

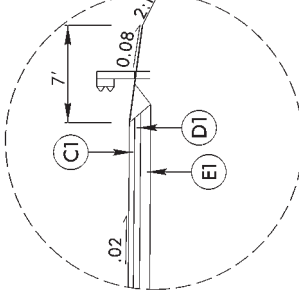
"INSET A"

- USE -L- STA. 10+10 TO -L- STA. 10+30
- L- STA. 12+70 TO -L- STA. 15+50

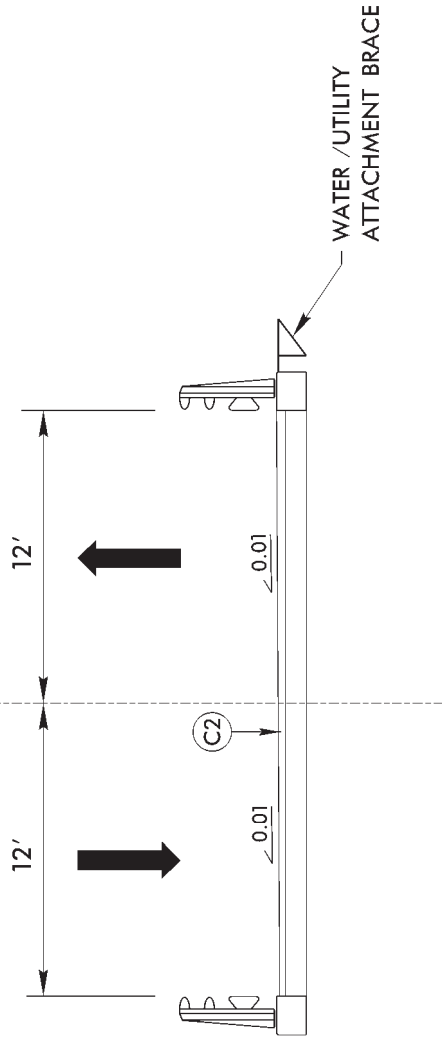


"INSET B"

- USE -L- STA. 10+10 TO -L- STA. 10+30
- L- STA. 12+70 TO -L- STA. 14+50

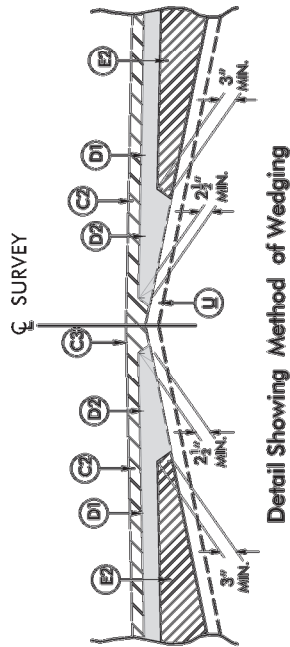


CL -L- AZALEA RD. E.



USE TYPICAL SECTION NO. 2

- L- STA. 10+30 TO 12+70



| PAVEMENT SCHEDULE |                                                                                                                              |
|-------------------|------------------------------------------------------------------------------------------------------------------------------|
| C1                | PROP. APPROX. 4" ASPHALT CONCRETE SURFACE COURSE, TYPE 97.5C, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YARD                    |
| C2                | PROP. APPROX. 1 1/2" ASPHALT CONCRETE SURFACE COURSE, TYPE 97.5C, AT AN AVERAGE RATE OF 148 LBS. PER SQ. YARD                |
| D1                | PROP. APPROX. 4" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 89.9C, AT AN AVERAGE RATE OF 456 LBS. PER SQ. YD.                |
| E1                | PROP. APPROX. 4" ASPHALT CONCRETE BASE COURSE, TYPE 82.5C, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD. IN EACH OF TWO LAYERS. |
| T                 | SAME MATERIAL                                                                                                                |





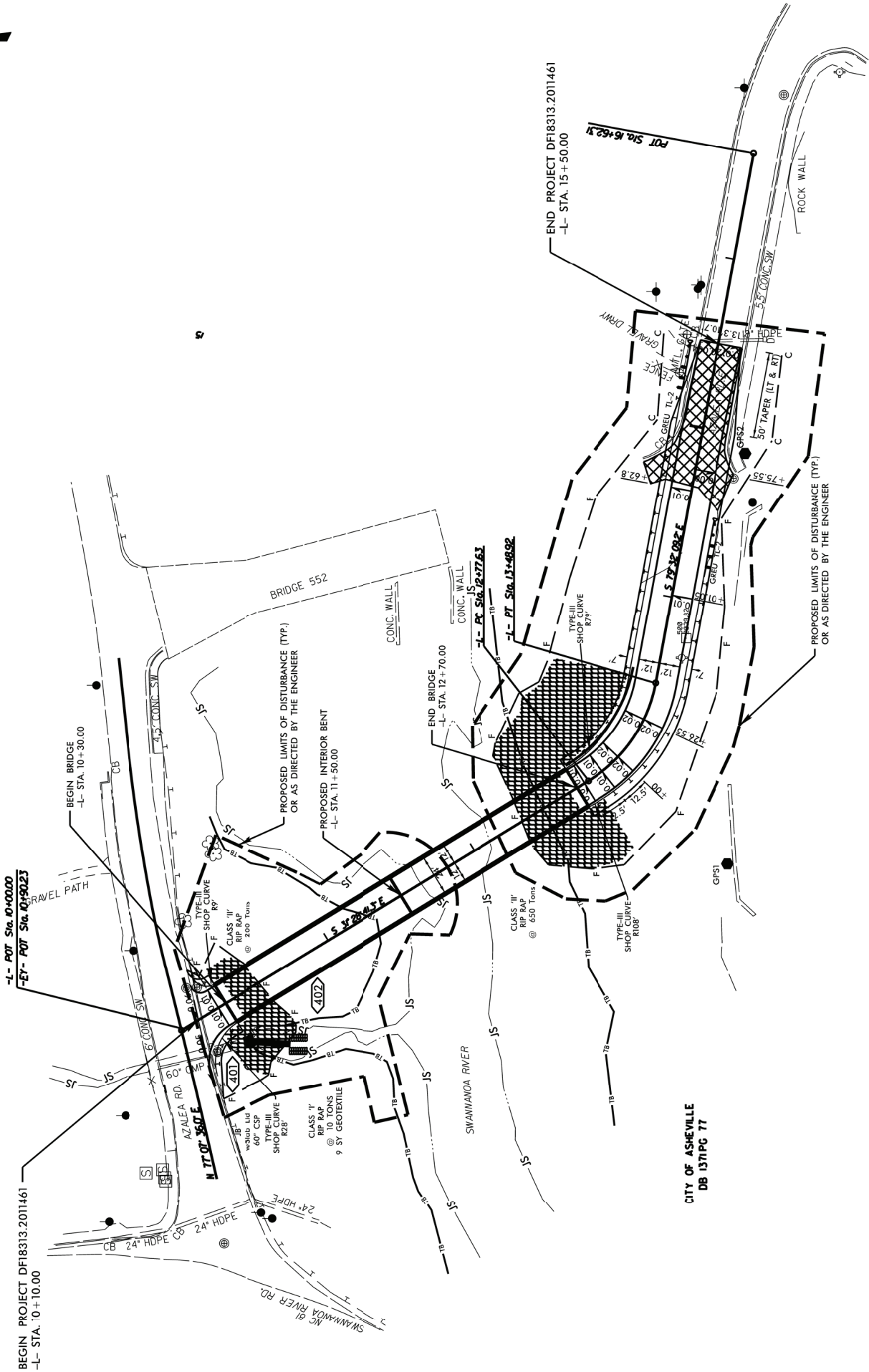




1-  
R 59 13459  
A = 48.03 28.017  
D = 6.24 24.5  
T = 1.12 1.07  
A = 85.00

REVISIONS

SEE SHEET 5 FOR -L- PROFILE



PAVEMENT REMOVAL



|                                                                  |                     |
|------------------------------------------------------------------|---------------------|
| PROJECT REFERENCE NO.                                            | SHEET NO.           |
| DF18313.2011461                                                  | 4                   |
| RW SHEET NO.                                                     |                     |
| ROADWAY DESIGN ENGINEER                                          | HYDRAULICS ENGINEER |
|                                                                  |                     |
| Signed by: <i>William C. Lauer</i> 5/17/2026                     |                     |
| Mason T. Shivers, PE                                             |                     |
| DOCUMENT NOT CONSIDERED FINAL<br>UNLESS ALL SIGNATURES COMPLETED |                     |



PROJECT REFERENCE NO.  
**DF18313.2011461**

ROADWAY DESIGN  
ENGINEER

SEAL  
041993

PROFESSIONAL  
ENGINEER

WILLIAM C. CARPENTER

SHEET NO.  
**5**

HYDRAULICS  
ENGINEER

SEAL  
020870

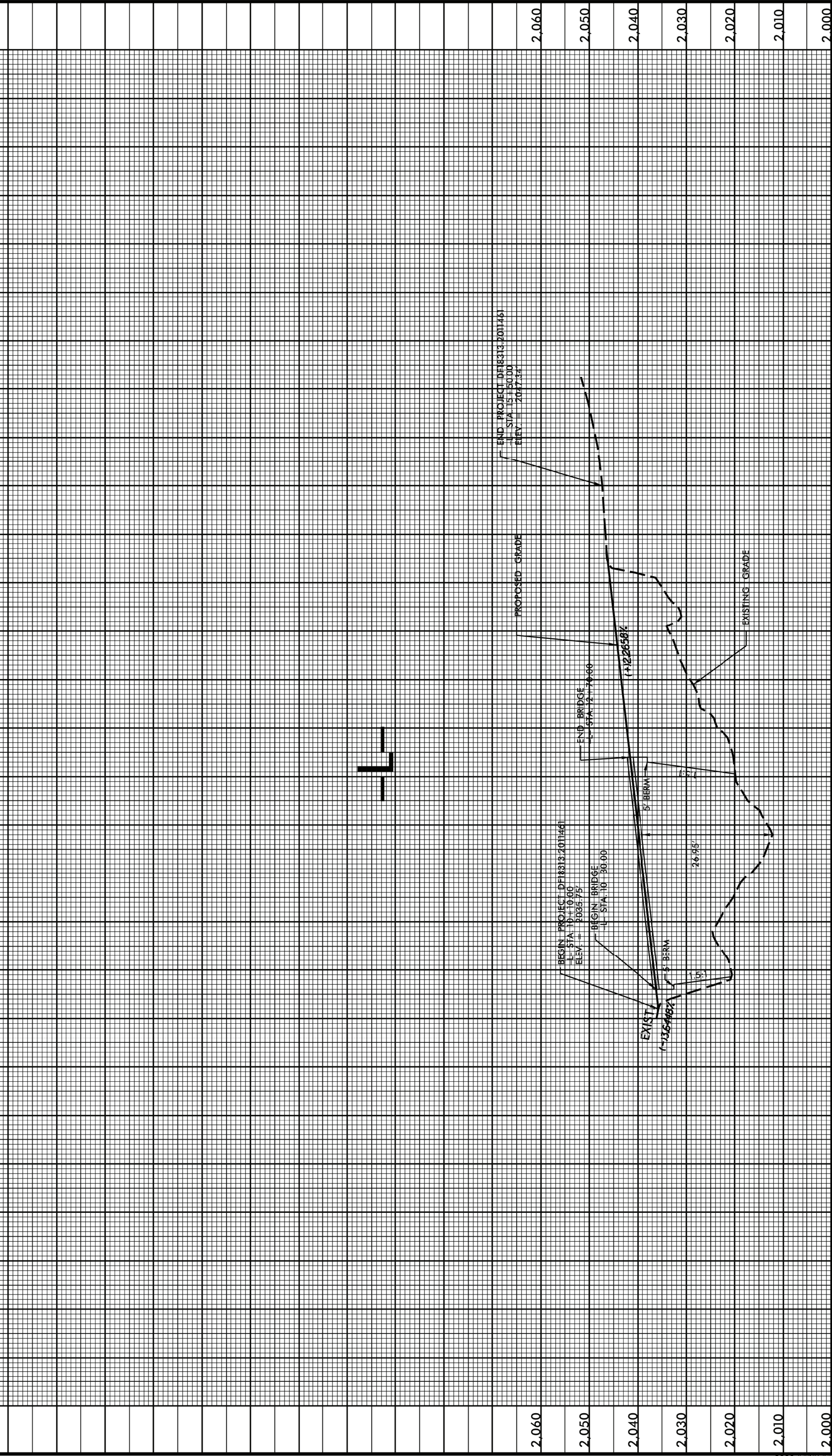
PROFESSIONAL  
ENGINEER

WILLIAM C. CARPENTER

Designed by  
*William C. Carpenter*  
06/17/2026  
00352657.DWG

Signed by  
*Mace T. Skamm, PE*  
06/17/2026  
00352657.DWG

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED



PROJECT REFERENCE NO.  
**DF18313.2011461**

ROADWAY DESIGN  
ENGINEER

SEAL  
041993

PROFESSIONAL  
ENGINEER

WILLIAM C. CARPENTER

SHEET NO.  
**5**

HYDRAULICS  
ENGINEER

SEAL  
020870

PROFESSIONAL  
ENGINEER

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Designed by  
*William C. Carpenter*  
06/17/2026  
00352657.DWG

Signed by  
*Mace T. Skamm, PE*  
06/17/2026  
00352657.DWG

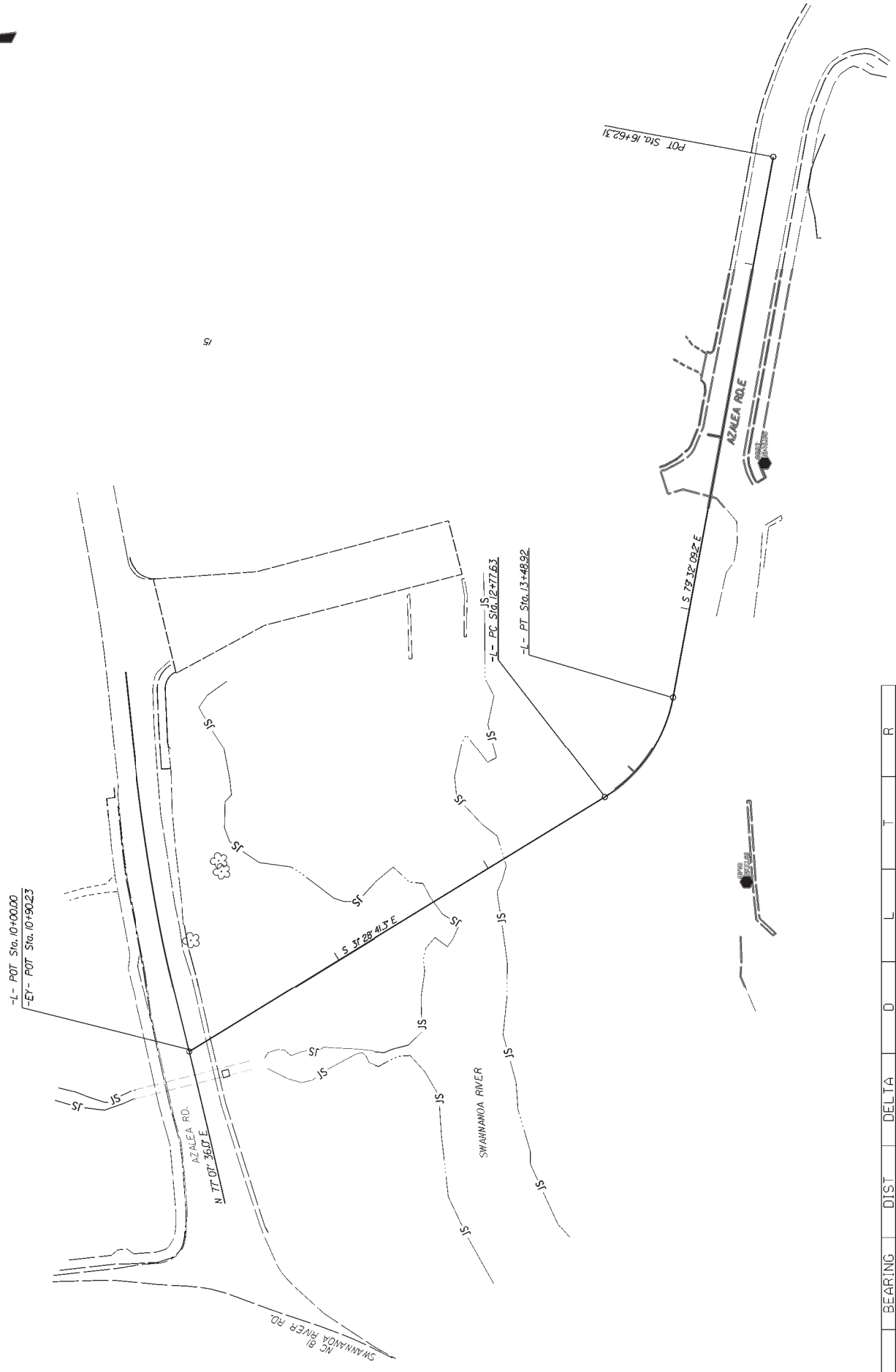
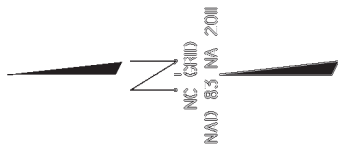
DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

SURVEY CONTROL SHEET

|                         |                     |
|-------------------------|---------------------|
| PROJECT REFERENCE NO.   | SHEET NO.           |
| DF18313201461           | RW01                |
| RW SHEET NO.            |                     |
| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

| BL   | POINT          | DESC. | NORTH       | EAST        | ELEVATION |
|------|----------------|-------|-------------|-------------|-----------|
| GPS1 | IRON PIN & CAP |       | 684744.8940 | 961372.8820 | 2033.607  |
| GPS2 | IRON PIN & CAP |       | 684734.6430 | 961611.9220 | 2046.561  |



| L     | NEW | POINT      | N          | E               | BEARING | DIST            | DELTA       | D     | L     | T     | R |
|-------|-----|------------|------------|-----------------|---------|-----------------|-------------|-------|-------|-------|---|
| POT   |     | 685062.619 | 961276.137 | S 31°28'41.3" E | 277.63  |                 |             |       |       |       |   |
| LINE  |     | 681825.850 | 961421.105 | S 55°30'25.3" E | 65.22   | 48°03'27.8" (L) | 67°21'24.5" | 71.30 | 37.50 | 85.00 |   |
| CURVE |     | 684786.648 | 961478.159 | S 79°32'09.2" E | 313.39  |                 |             |       |       |       |   |
| POT   |     | 684729.730 | 961786.338 |                 |         |                 |             |       |       |       |   |

| E     | Y | POINT      | N          | E               | BEARING | DIST            | DELTA       | D      | L     | T       | R |
|-------|---|------------|------------|-----------------|---------|-----------------|-------------|--------|-------|---------|---|
| POT   |   | 685042.212 | 961189.710 | N 77°07'36.0" E | 5.69    |                 |             |        |       |         |   |
| LINE  |   | 685043.479 | 961195.263 | N 76°26'38.2" E | 122.58  | 01°21'55.1" (L) | 01°06'49.5" | 122.59 | 61.30 | 5144.44 |   |
| CURVE |   | 685072.212 | 961314.422 | N 77°28'57.0" E | 35.09   | 03°26'32.3" (R) | 05°48'34.3" | 35.09  | 17.55 | 564.08  |   |
| PCC   |   | 685079.816 | 961348.674 | N 81°38'42.5" E | 182.15  | 04°52'58.6" (R) | 04°15'53.3" | 182.18 | 51.27 | 1202.18 |   |
| CURVE |   | 685074.703 | 961450.095 | N 83°56'24.0" E | 42.78   | 00°17'35.5" (L) | 00°41'07.1" | 42.78  | 21.39 | 3560.77 |   |
| PCC   |   | 685099.219 | 961492.578 |                 |         |                 |             |        |       |         |   |

NOTES:

- PROJECT CONTROL WAS ESTABLISHED USING GNSS. THE GLOBAL NAVIGATION SATELLITE SYSTEM.
- THE SURVEY CONTROL DATA FOR THIS PROJECT HAS BEEN COMPILED FROM VARIOUS SOURCES. IF FURTHER INFORMATION REGARDING PROJECT CONTROL IS NEEDED, PLEASE CONTACT THE DDC UNIT.



PAVEMENT MARKING AND  
SIGNING PLAN  
BUNCOMBE COUNTY

TIP NO.  
DF18313.2011461

SHEET NO.  
PMSIGN-1

APPROVED:  
Signed by: William C. Carr  
06/17/2016

DATE  
06/17/2016

SEAL

SEAL  
041993  
NORTH CAROLINA  
DIVISION OF HIGHWAYS

ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS" PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C. ARE DATE JANUARY 2024 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

| STD. NO. | TITLE                                                             |
|----------|-------------------------------------------------------------------|
| 904.10   | ORIENTATION OF GROUND MOUNTED SIGNS                               |
| 904.50   | MOUNTING OF SIGN TYPE 'D', 'E', AND 'F' SIGN ON 'U' CHANNEL POSTS |
| 1205.01  | PAVEMENT MARKINGS - LINE TYPES AND OFFSETS                        |
| 1205.02  | PAVEMENT MARKINGS - TWO-LANE AND MULTILANE ROADS                  |
| 1205.04  | PAVEMENT MARKINGS - INTERSECTIONS                                 |
| 1205.08  | PAVEMENT MARKINGS - SYMBOLS AND WORD MESSAGES                     |

INDEX

| SHEET NO.    | DESCRIPTION                                                                                                                                                |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PMP / SIGN-1 | PAVEMENT MARKING AND SIGNING PLAN TITLE, INDEX OF SHEETS, LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, GENERAL NOTES, AND FINAL PAVEMENT MARKING SCHEDULE |
| PMP / SIGN-2 | PAVEMENT MARKING AND SIGNING PLAN                                                                                                                          |

GENERAL NOTES

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT, EXCEPT WHEN OTHERWISE NOTED IN THE PLAN, OR DIRECTED BY THE ENGINEER.

PAVEMENT MARKINGS

A) INSTALL PAVEMENT MARKINGS AND PAVEMENT MARKERS ON THE FINAL SURFACE AS FOLLOWS:

| ROAD NAME           | MARKING       | MARKER |
|---------------------|---------------|--------|
| AZALEA ROAD E (-L-) | THERMOPLASTIC | NONE   |

USE THEROMPLASTICS FOR STOP BARS, SYMBOLS, CHARACTERS, AND DIAGONALS ALL ROADS.

B) TIE PROPOSED PAVEMENT MARKINGS LINES TO EXISTING PAVEMENT MARKING LINES.

C) REMOVE/REPLACE ANY CONFLICTING/DAMAGED PAVEMENT MARKINGS AND MARKERS.

D) STOP BAR LOCATION AT NON-SIGNALIZED INTERSECTIONS MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER.

E) UNLESS OTHERWISE SPECIFIED, HEATED-IN-PLACE THERMOPLASTIC MAY BE USED IN LIEU OF EXTRUDED THERMOPLASTIC FOR STOP BARS, SYMBOLS, CHARACTERS, AND DIAGONALS. IF HEATED-IN-PLACED IS USED, IT SHALL BE PAID FOR USING THE EXTRUDED THERMOPLASTIC PAY ITEM.

F)SIGNS FURNISHED BY THE CONTRACTOR.

G) ALL TYPE 'E' SIGNS SHALL BE MOUNTED ON ONE U-CHANNEL POST UNLESS OTHERWISE INDICATED ON THE PLANS.

H)WHEN NOT STATIOND OR DIMENSIONED ON THE PLANS, ALL TYPE 'E' ANE 'F' SIGNS SHALL BE LOCATED BY THE ENGINEER.

I)WHEN EXISTING SIGNS ARE REMOVED AND INSTALLED ON NEW SUPPORTS, THE RE-ERECTION SHALL IMMEDIATELY FOLLOW THE REMOVAL.

J)THE BACKGROUND FOR THE TYPE 'E' SIGNS SHALL BE TYPE C REFLECTIVE SHEETING.

SUMMARY OF QUANTITIES

| ITEM NO.     |           | ITEM DESCRIPTION                  |  | QUANTITY | UNIT |
|--------------|-----------|-----------------------------------|--|----------|------|
| DESC. NO.    | SECT. NO. |                                   |  |          |      |
| 4025000000-E | 901       | CONTRACTOR FURNISHED, TYPE E SIGN |  |          | SF   |
| 4072000000-E | 903       | SUPPORTS, 3LB U-CHANNEL           |  |          | LF   |
| 4102000000-N | 904       | SIGN ERECTION, TYPE E             |  |          | EA   |
| 7636000000-N | 1745      | SIGN FOR SIGNAL                   |  |          | EA   |

FINAL PAVEMENT MARKING SCHEDULE

PAVEMENT MARKINGS

THERMOPLASTICS (24", 90 MILS)

|                     |                          |
|---------------------|--------------------------|
| T61                 | WHITE STOP               |
| THERMO (4", 90MILS) |                          |
| T1                  | WHITE EDGE LINE          |
| T2                  | WHITE LANE LINE          |
| T5                  | 2'-6"/SP WHITE MINI SKIP |

|                     |                      |
|---------------------|----------------------|
| THERMO (6", 90MILS) |                      |
| T33                 | YELLOW DOUBLE CENTER |

PAVEMENT MARKINGS

THERMOPLASTIC PAVEMENT MARKING SYMBOLS (90 MILS)

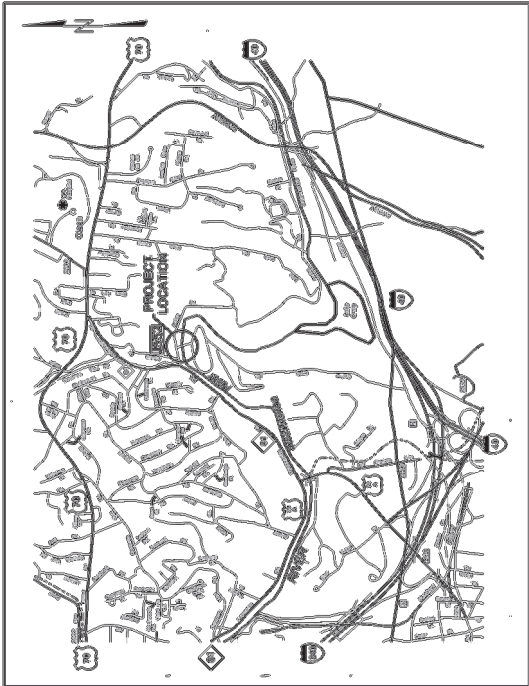
|     |                        |
|-----|------------------------|
| T71 | RIGHT ARROW            |
| T72 | STRAIGHT ARROW         |
| T73 | LEFT ARROW             |
| T75 | COMBO LEFT RIGHT ARROW |







PROJECT: DF18313.2011461

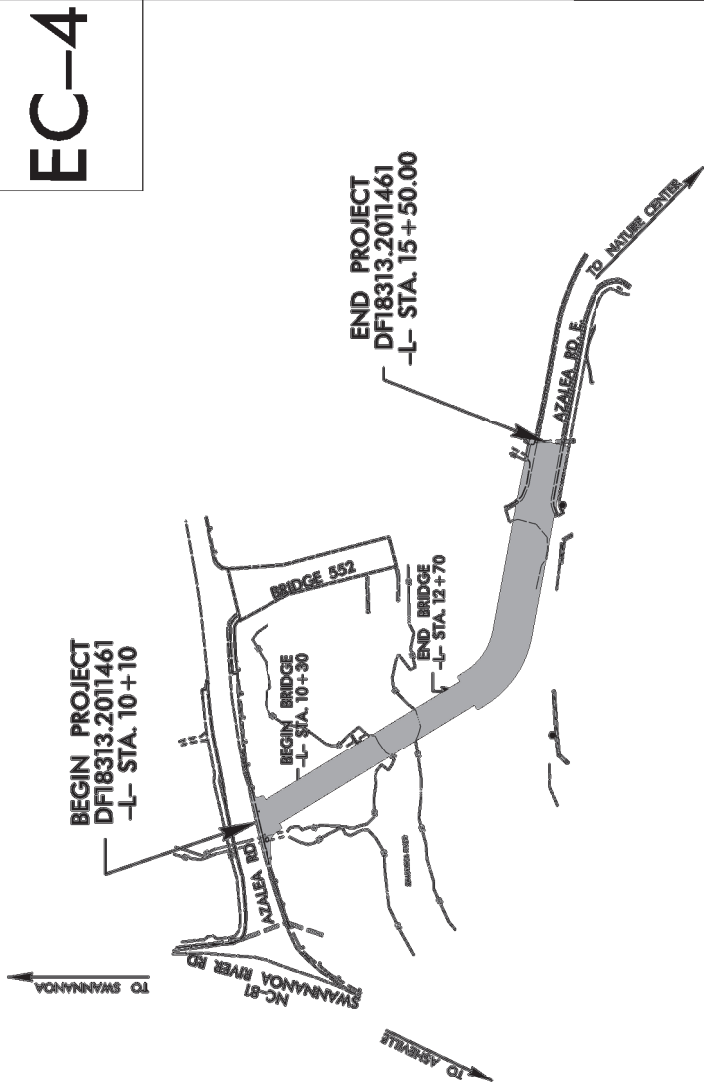


VICINITY MAP

NOT TO SCALE

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS  
PLAN FOR PROPOSED  
HIGHWAY EROSION CONTROL

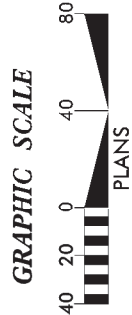
LOCATION: AZALEA RD E. BETWEEN AZALEA RD.  
AND GASHES CREEK RD  
TYPE OF WORK: TEMPORARY BRIDGE CONSTRUCTION, GRADING,  
AND PAVING



EC-4

THIS PROJECT CONTAINS  
EROSION CONTROL PLANS  
FOR CLEARING AND  
GRUBBING PHASE OF  
CONSTRUCTION.

|                 |                             |             |              |
|-----------------|-----------------------------|-------------|--------------|
| STATE           | STATE PROJECT REFERENCE NO. | SHEET NO.   | TOTAL SHEETS |
| N.C.            | DF18313.2011461             | EC-1        |              |
| STATE PROJ. NO. | F.A. PROJ. NO.              | DESCRIPTION |              |
|                 |                             |             |              |
|                 |                             |             |              |
|                 |                             |             |              |
|                 |                             |             |              |



THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY  
WITH THE REGULATIONS SET FORTH BY THE NCG 010000  
GENERAL STORMWATER CONSTRUCTION PERMIT ISSUED BY THE NORTH  
CAROLINA DEPARTMENT OF ENVIRONMENTAL QUALITY DIVISION  
OF ENERGY, MINERAL, AND LAND RESOURCES.

Prepared In the Office of:  
**DIVISION 13 DDC**  
55 Orange St.  
Asheville, NC 28801  
**2024 STANDARD SPECIFICATIONS**  
Designed by:  
**Hampton Fletcher**  
NAME  
LEVEL III CERTIFICATION NO. 3382

Roadway Standard Drawings  
The "Roadway Standard Drawings"- Roadway Design Unit - N. C.  
Department of Transportation - Raleigh, N. C., dated January 2024  
and the latest revision thereto are applicable to this project and by  
reference hereby are considered a part of these plans.

DIVISION OF HIGHWAYS

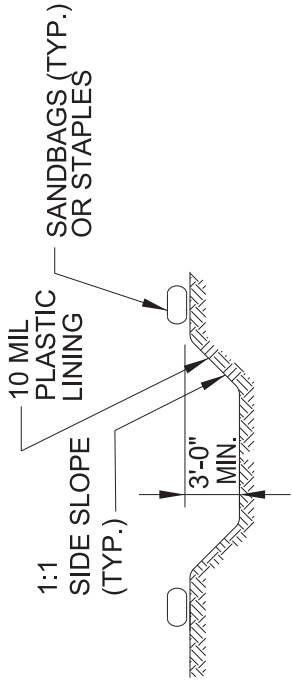
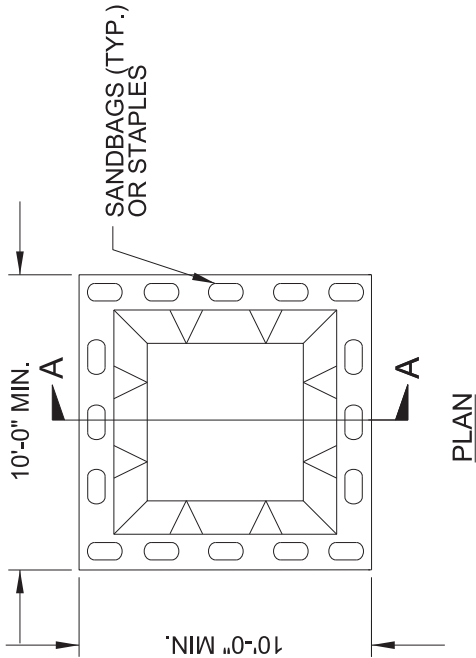
STATE OF NORTH CAROLINA

|                            |                        |
|----------------------------|------------------------|
| PROJECT REFERENCE NO.      | SHEET NO.              |
| DF18313.2011461            | EC-02                  |
| ROADWAY DESIGN<br>ENGINEER | HYDRAULICS<br>ENGINEER |

EROSION & SEDIMENT CONTROL LEGEND

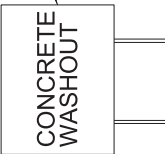
| Std. #  | Description                      | Symbol | Std. #  | Description                                                            | Symbol |
|---------|----------------------------------|--------|---------|------------------------------------------------------------------------|--------|
| 1605.01 | Temporary Silt Fence             |        | 1633.01 | Temporary Rock Silt Check Type A                                       |        |
| 1606.01 | Special Sediment Control Fence   |        | 1633.02 | Temporary Rock Silt Check Type B                                       |        |
| 1622.01 | Temporary Berms and Slope Drains |        | 1633.03 | Temporary Rock Silt Check Type A with Excelsior Matting and Flocculant |        |
| 1630.02 | Silt Basin Type B                |        | 1634.01 | Temporary Rock Sediment Dam Type A                                     |        |
| 1630.03 | Temporary Silt Ditch             |        | 1634.02 | Temporary Rock Sediment Dam Type B                                     |        |
| 1630.04 | Stilling Basin                   |        | 1635.01 | Rock Pipe Inlet Sediment Trap Type A                                   |        |
| 1630.05 | Temporary Diversion              |        | 1635.02 | Rock Pipe Inlet Sediment Trap Type B                                   |        |
| 1630.06 | Special Stilling Basin           |        | 1636.01 | Excelsior Wattle Check                                                 |        |
| 1630.07 | Skimmer Basin                    |        | 1636.01 | Excelsior Wattle Check with Flocculant                                 |        |
| 1630.08 | Tiered Skimmer Basin             |        | 1636.01 | Coir Fiber Wattle Check                                                |        |
| 1630.09 | Earthen Dam with Skimmer         |        | 1636.01 | Coir Fiber Wattle Check with Flocculant                                |        |
|         | Infiltration Basin               |        | 1636.02 | Silt Fence Excelsior Wattle Break                                      |        |
|         | Rock Inlet Sediment Trap:        |        |         | Silt Fence Coir Fiber Wattle Break                                     |        |
| 1632.01 | Type A                           |        |         | Excelsior Wattle Barrier                                               |        |
| 1632.02 | Type B                           |        | 1636.03 | Coir Fiber Wattle Barrier                                              |        |
| 1632.03 | Type C                           |        |         |                                                                        |        |

# ONSITE CONCRETE WASHOUT STRUCTURE WITH LINER



SECTION A-A

CLEARLY MARKED SIGNAGE  
NOTING DEVICE (18"X24" MIN.)

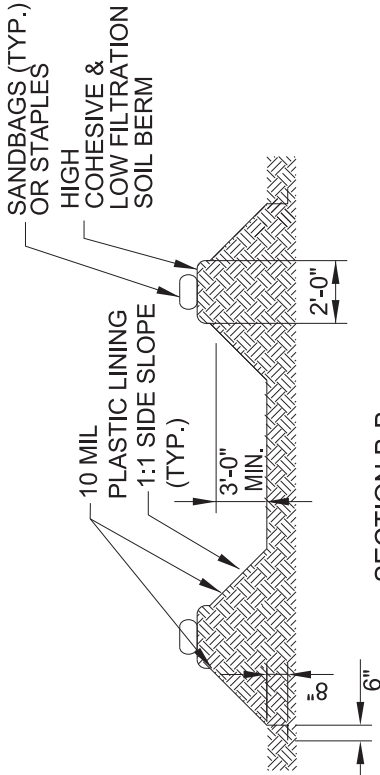
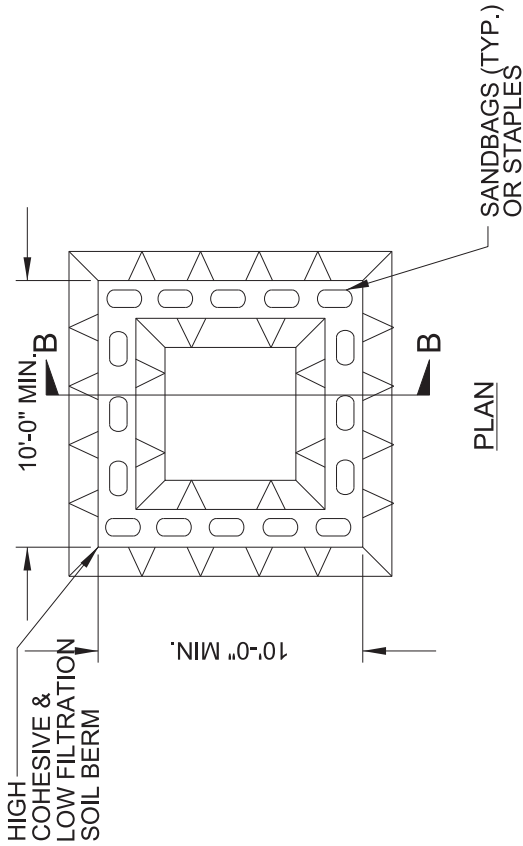


NOTES:

1. ACTUAL LOCATION DETERMINED IN FIELD
2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.
3. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.

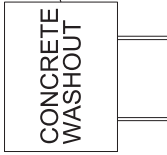
## BELOW GRADE WASHOUT STRUCTURE

NOT TO SCALE



SECTION B-B

CLEARLY MARKED SIGNAGE  
NOTING DEVICE (18"X24" MIN.)



NOTES:

1. ACTUAL LOCATION DETERMINED IN FIELD
2. THE CONCRETE WASHOUT STRUCTURES SHALL BE MAINTAINED WHEN THE LIQUID AND/OR SOLID REACHES 75% OF THE STRUCTURES CAPACITY TO PROVIDE ADEQUATE HOLDING CAPACITY WITH A MINIMUM 12 INCHES OF FREEBOARD.
3. CONCRETE WASHOUT STRUCTURE NEEDS TO BE CLEARLY MARKED WITH SIGNAGE NOTING DEVICE.

## ABOVE GRADE WASHOUT STRUCTURE

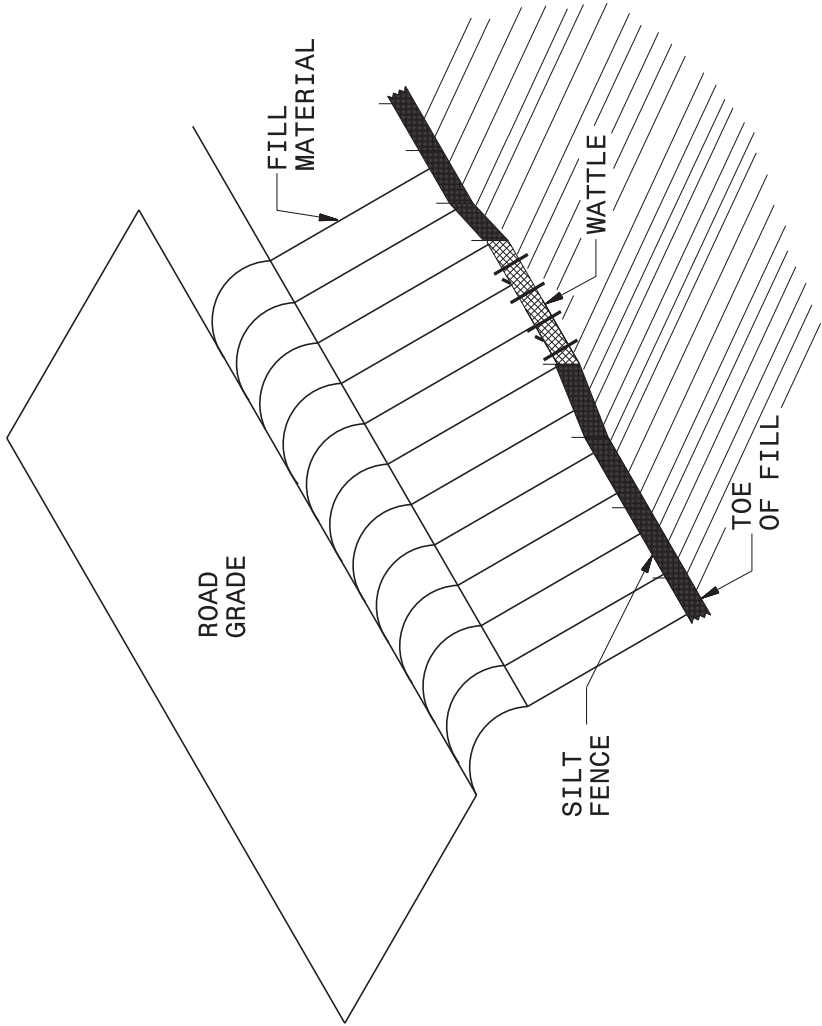
NOT TO SCALE

# SILT FENCE COIR FIBER WATTLE BREAK DETAIL

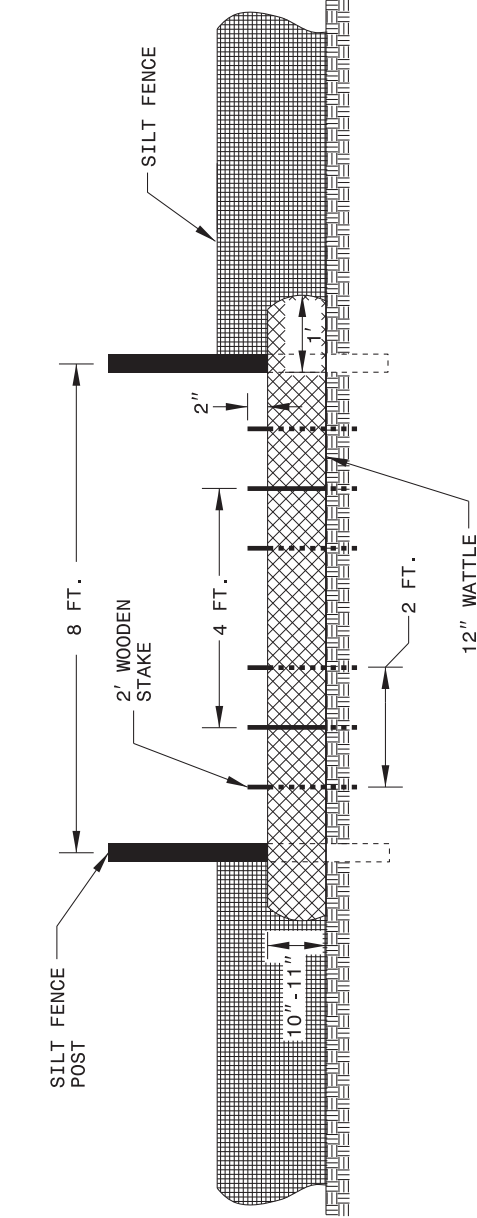
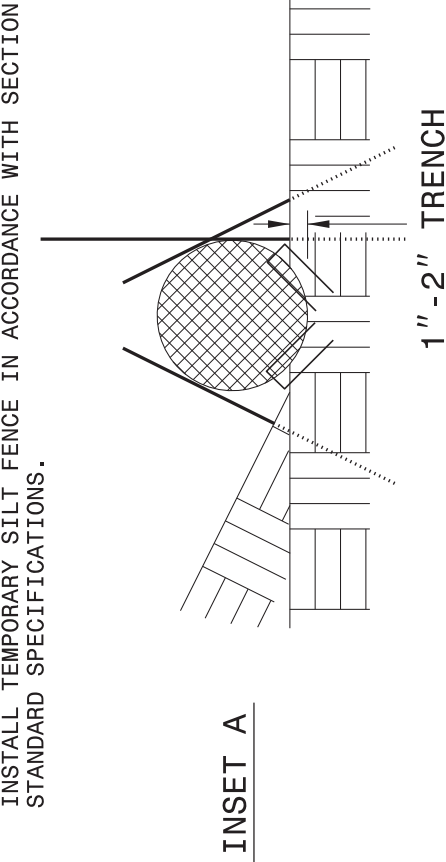
|                            |                        |
|----------------------------|------------------------|
| PROJECT REFERENCE NO.      | SHEET NO.              |
| DF183132011461             | EC-2B                  |
| RW SHEET NO.               |                        |
| ROADWAY DESIGN<br>ENGINEER | HYDRAULICS<br>ENGINEER |

## NOTES:

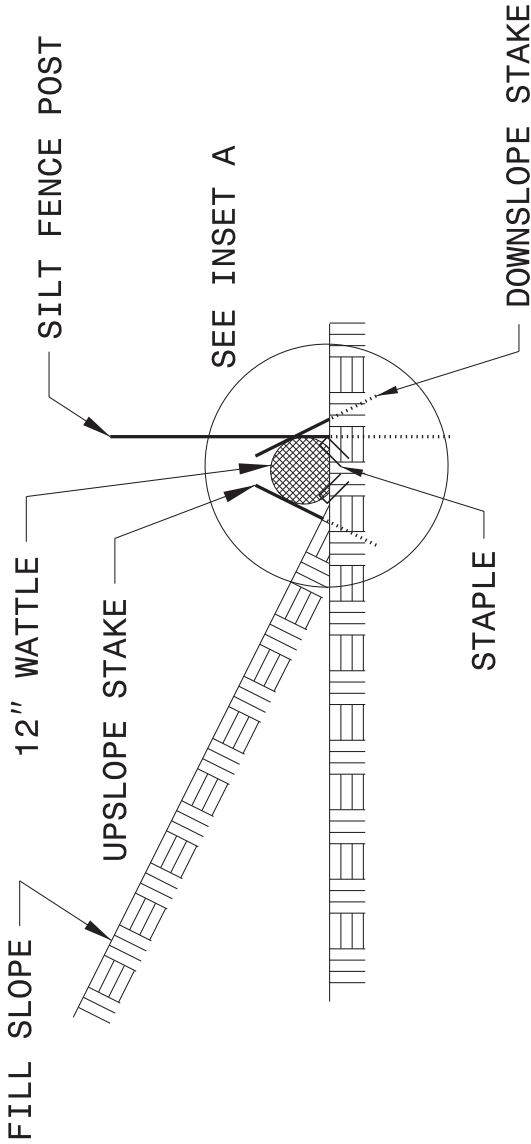
- USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE AND LENGTH OF 10 FT.
- EXCAVATE A 1 TO 2 INCH TRENCH FOR WATTLE TO BE PLACED.
- DO NOT PLACE WATTLE ON TOE OF SLOPE.
- USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.
- INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.
- PROVIDE STAPLES MADE OF 11 GUAGE STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 6" IN LENGTH.
- INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.
- WATTLE INSTALLATION CAN BE ON OUTSIDE OF THE SILT FENCE AS DIRECTED.
- INSTALL TEMPORARY SILT FENCE IN ACCORDANCE WITH SECTION 1605 OF THE STANDARD SPECIFICATIONS.



ISOMETRIC VIEW



VIEW FROM SLOPE



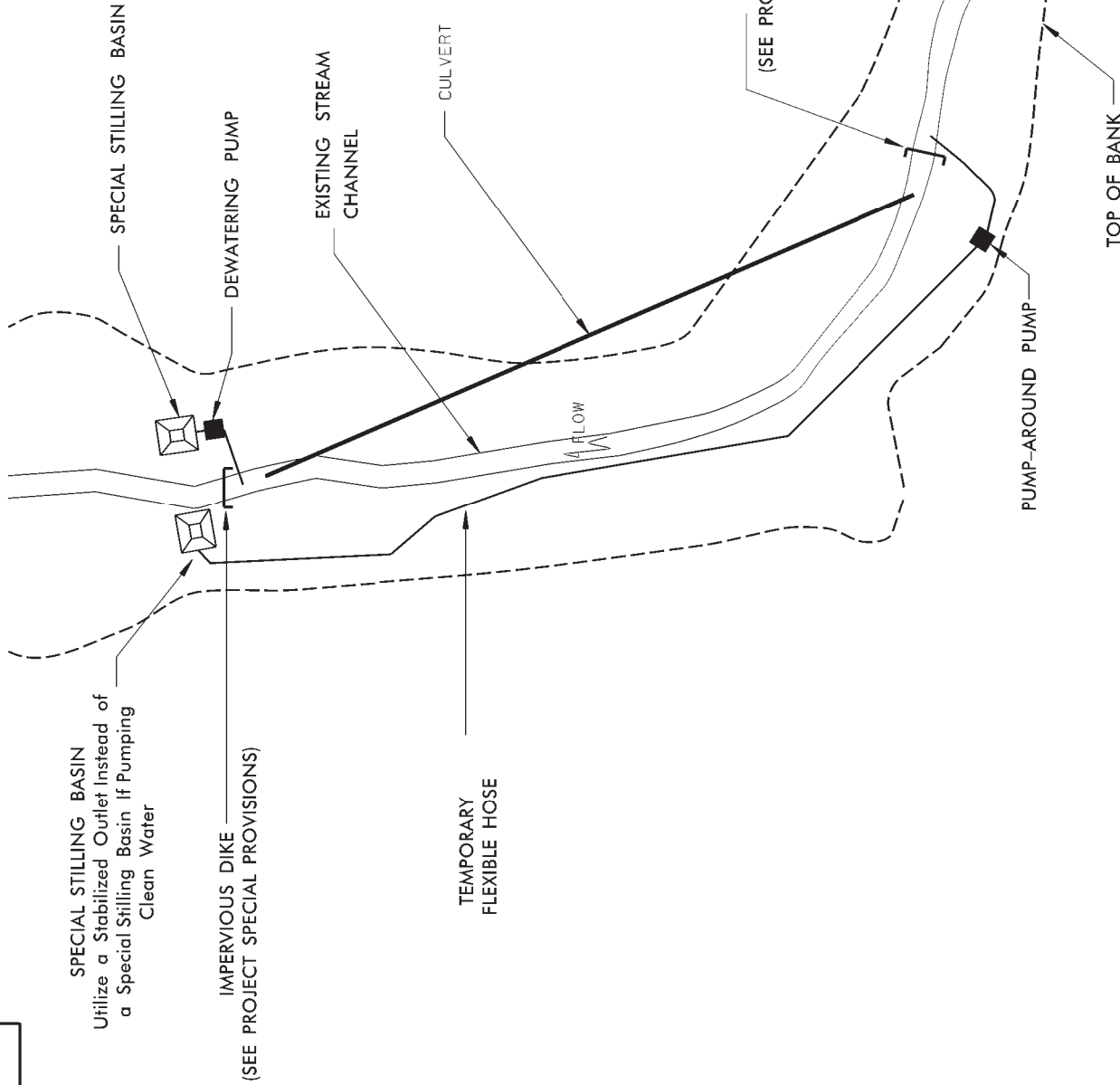
SIDE VIEW



# EXAMPLE OF PUMP-AROUND OPERATION

NOTES:

- 1) All excavation shall be performed in only dry or isolated areas of the work zone.
- 2) Impervious dikes are to be used to isolate work from stream flow when necessary.
- 3) Maintenance of stream flow operations shall be incidental to the work. This includes polyethylene sheeting, diversion pipes, pumps and hoses.
- 4) Pumps and hoses shall be of sufficient size and quantity to dewater the work area and maintain stream bypass flow.



SEQUENCE OF CONSTRUCTION FOR TYPICAL WORK AREA

1. INSTALL SPECIAL STILLING BASIN(S).
2. INSTALL UPSTREAM PUMP AND TEMPORARY FLEXIBLE HOSE.
3. PLACE UPSTREAM IMPERVIOUS DIKE AND BEGIN PUMPING OPERATIONS FOR STREAM DIVERSION.
4. PLACE DOWNSTREAM IMPERVIOUS DIKE AND PUMPING APPARATUS. DEWATER ENTRAPPED AREA. AREA TO BE DEWATERED SHALL BE EQUAL TO ONE DAY'S WORK.
5. INSTALL CULVERT(S) IN ACCORDANCE WITH THE PLANS.
6. EXCAVATE ANY ACCUMULATED SILT AND DEWATER BEFORE REMOVAL OF IMPERVIOUS DIKES. REMOVE IMPERVIOUS DIKES, PUMPS, AND TEMPORARY FLEXIBLE HOSE. (DOWNSTREAM IMPERVIOUS DIKES FIRST).
7. REMOVE SPECIAL STILLING BASIN(S) AND BACKFILL. STABILIZE DISTURBED AREA WITH SEED AND MULCH.

DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

|                            |                        |
|----------------------------|------------------------|
| PROJECT REFERENCE NO.      | SHEET NO.              |
| DF18313.2011461            | EC-3                   |
|                            |                        |
| ROADWAY DESIGN<br>ENGINEER | HYDRAULICS<br>ENGINEER |

| 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.                                             |

DIVISION OF HIGHWAYS  
STATE OF NORTH CAROLINA

# SOIL STABILIZATION SUMMARY SHEET

|                         |                     |
|-------------------------|---------------------|
| SHEET NO.               | EC-3A               |
| PROJECT REFERENCE NO.   | DF 18313.2011461    |
| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |

# MATTING FOR EROSION CONTROL

[illegible]

# MATTING FOR EROSION CONTROL

[illegible]

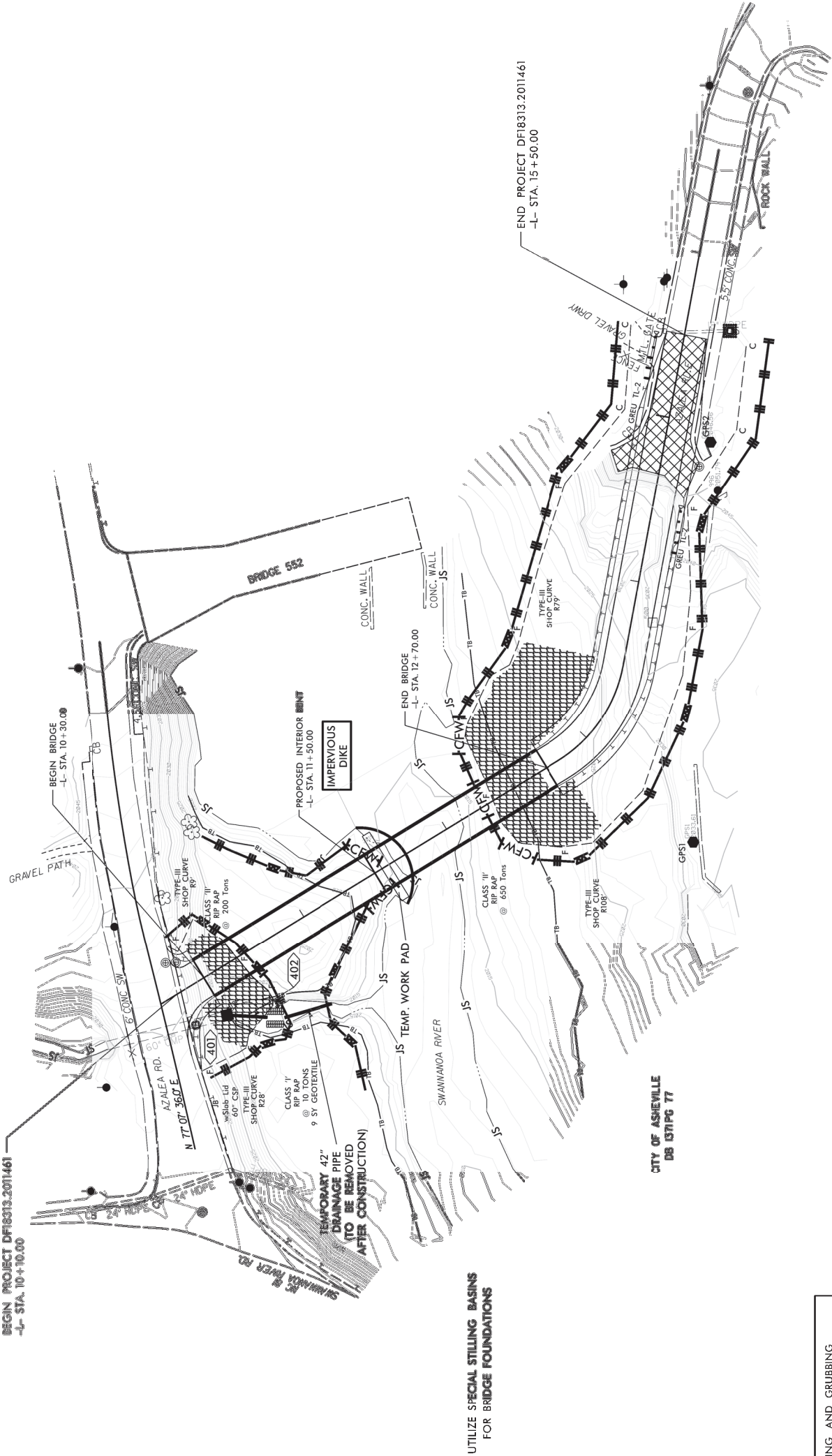




|                         |                     |
|-------------------------|---------------------|
| PROJECT REFERENCE NO.   | SHEET NO.           |
| DF18313.2011461         | EC-5                |
| BY SHEET NO.            |                     |
| ROADWAY DESIGN ENGINEER | HYDRAULICS ENGINEER |

DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

PHASE 2



CLEARING AND GRUBBING  
EROSION CONTROL FOR  
CONSTRUCTION SHEET 4



PAVEMENT REMOVAL

SEE SHEET 5 FOR -L- PROFILE

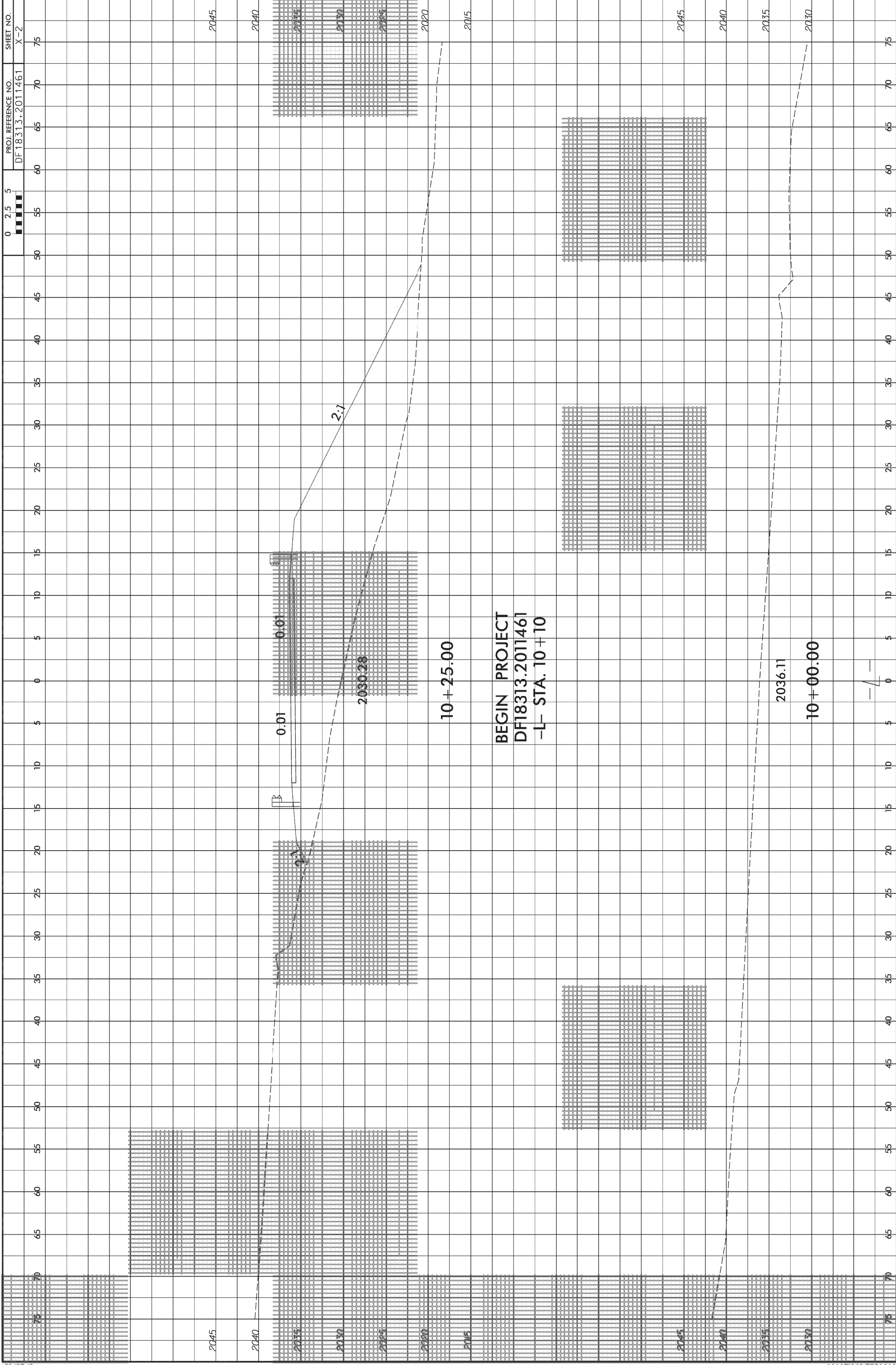
REVISIONS

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

|                       |           |
|-----------------------|-----------|
| PROJECT REFERENCE NO. | SHEET NO. |
| DF1833.201461         | X-1       |

|                               |                          |              |
|-------------------------------|--------------------------|--------------|
| CROSS SECTION INDEX OF SHEETS |                          |              |
|                               | CROSS-SECTION SUMMARY    | X-1A         |
| -L-                           | 10 + 10.00 TO 15 + 50.00 | X-2 THRU X-9 |







6/23/16

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