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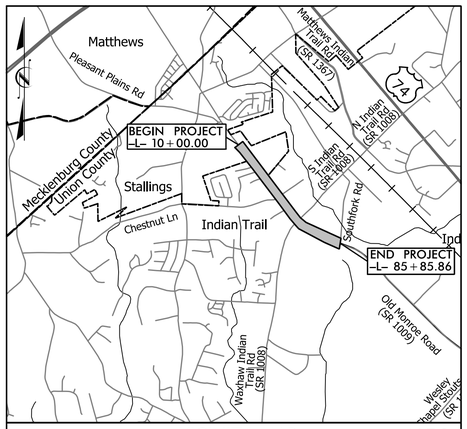
09/08/99

TIP PROJECT: U-4714BA

CONTRACT: C205184

ROW PLANS
10/8/2026

See Sheet 1A For Index of Sheets
See Sheet 1B For Standard Symbology Sheet



VICINITY MAP N.T.S.

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

UNION COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-4714BA	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
39078.1.9		PE
39078.2.6	STPDA-1009(18)	R /W
39078.2.11	STPDA-1009(18)	UTIL RELO.
39078.3.10		CONSTRUCTION

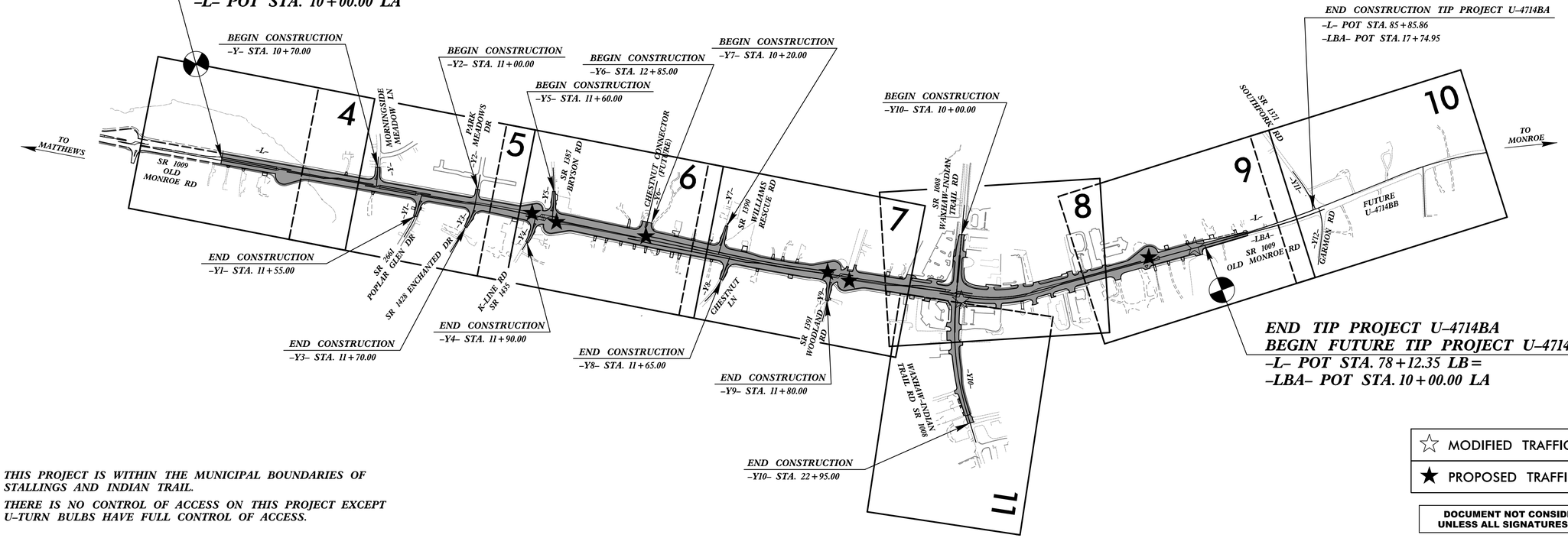
LOCATION: SR 1009 (OLD MONROE ROAD) FROM WEST OF MORNINGSIDE MEADOW LANE TO SR 1371 (SOUTHFORK RD)

TYPE OF WORK: GRADING, DRAINAGE, PAVING, SIGNALS, AND RETAINING WALLS

PART II OF II

NAD 83 / NA 2017

END TIP PROJECT U-4714AC
-L- POT STA. 193+50.61 LB =
BEGIN TIP PROJECT U-4714BA
-L- POT STA. 10+00.00 LA



END CONSTRUCTION TIP PROJECT U-4714BA
-L- POT STA. 85+85.86
-LBA- POT STA. 17+74.95

END TIP PROJECT U-4714BA
BEGIN FUTURE TIP PROJECT U-4714BB
-L- POT STA. 78+12.35 LB =
-LBA- POT STA. 10+00.00 LA

☆ MODIFIED TRAFFIC SIGNAL
★ PROPOSED TRAFFIC SIGNAL

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

THIS PROJECT IS WITHIN THE MUNICIPAL BOUNDARIES OF STALLINGS AND INDIAN TRAIL.

THERE IS NO CONTROL OF ACCESS ON THIS PROJECT EXCEPT U-TURN BULBS HAVE FULL CONTROL OF ACCESS.

GRAPHIC SCALES

50 25 0 50 100 — PLANS

50 25 0 50 100 — PROFILE (HORIZONTAL)

10 5 0 10 20 — PROFILE (VERTICAL)

DESIGN DATA

ADT 2026 = 37,800
ADT 2046 = 45,100
K = 9%
D = 55%
T = 6%*
V = 50 MPH
* (TTST = 2% + DUAL 4%)
FUNC CLASS = MINOR ARTERIAL
REGIONAL TIER

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT U-4714BA = 1.437 MILES

TOTAL LENGTH OF TIP PROJECT U-4714BA = 1.437 MILES

NCDOT CONTACT: RADHA ATTALURI, PE
PROJECT MANAGER

PLANS PREPARED FOR THE NCDOT BY:

STV Engineers, Inc.
2151 Hawkins St., Suite 1400
Charlotte, NC 28203
NC License Number F-0991

2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: MAY 24, 2021

LETTING DATE: JANUARY 19, 2027

SEAN C. STEPHENS, PE
PROJECT ENGINEER

WESTON D. MURPHY, PE
PROJECT DESIGNER

HYDRAULICS ENGINEERS

NORTH CAROLINA PROFESSIONAL SEAL 051699 ENGINEER TIFFANY A. PREDDY

Signed by: 10/20/2026
SIGNATURE: *P.E.*

ROADWAY DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL SEAL 043891 ENGINEER SEAN C. STEPHENS

DocuSigned by: 10/20/2026
SIGNATURE: *P.E.*

STATE OF NORTH CAROLINA · DEPARTMENT OF TRANSPORTATION ·

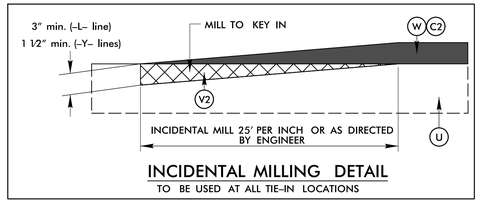
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6/2/99

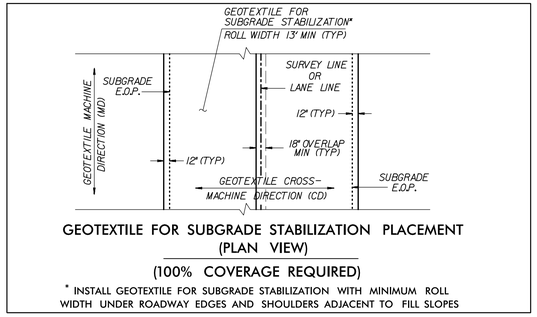
NOTE : PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.

PAVEMENT SCHEDULE
(FINAL PAVEMENT DESIGN)

C1	PROP. APPROX. 1.5″ ASPHALT CONCRETE SURFACE COURSE TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ.YD.
C2	PROP. APPROX. 3″ ASPHALT CONCRETE SURFACE COURSE TYPE S9.5C, AT AN AVERAGE RATE OF 168 LBS. PER SQ.YD. IN EACH OF TWO LAYERS.
C3	PROP. APPROX. 2″ ASPHALT CONCRETE SURFACE COURSE TYPE S9.5C, AT AN AVERAGE RATE OF 224 LBS. PER SQ.YD.
C4	PROP. VAR. DEPTH ASPHALT CONCRETE SURFACE COURSE, TYPE S9.5C, AT AN AVERAGE RATE OF 112 LBS. PER SQ.YD. PER 1″ DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 1.5″ IN DEPTH OR GREATER THAN 2″ IN DEPTH.
D1	PROP. APPROX. 4″ ASPHALT CONCRETE INTERMEDIATE COURSE TYPE I19.0C, AT AN AVERAGE RATE OF 456 LBS. PER SQ.YD.
D2	PROP. APPROX. 3″ ASPHALT CONCRETE INTERMEDIATE COURSE TYPE I19.0C, AT AN AVERAGE RATE OF 342 LBS. PER SQ.YD.
D3	PROP. APPROX. 2.5″ ASPHALT CONCRETE INTERMEDIATE COURSE TYPE I19.0C, AT AN AVERAGE RATE OF 285 LBS. PER SQ.YD.
D4	PROP. VAR. DEPTH ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ.YD. PER 1″ DEPTH TO BE PLACED IN LAYERS NOT LESS THAN 2.5″ IN DEPTH OR GREATER THAN 4″ IN DEPTH.
E1	PROP. APPROX. 3″ ASPHALT CONCRETE BASE COURSE TYPE B25.0C, AT AN AVERAGE RATE OF 342 LBS. PER SQ.YD.
E2	PROP. APPROX. 5.5″ ASPHALT CONCRETE BASE COURSE TYPE B25.0C, AT AN AVERAGE RATE OF 627 LBS. PER SQ.YD.
E3	PROP. VAR. DEPTH ASPHALT CONCRETE BASE COURSE, TYPE B25.0C, AT AN AVERAGE RATE OF 114 LBS. PER SQ. YD. PER 1″ DEPTH, TO BE PLACED IN LAYERS NOT LESS THAN 3″ IN DEPTH OR GREATER THAN 5.5″ IN DEPTH.
J1	6″ AGGREGATE BASE COURSE
J2	8″ AGGREGATE BASE COURSE
J3	3″ AGGREGATE BASE COURSE
K	8″ CLASS IV SUBGRADE STABILIZATION TYPE II
N	GEOTEXTILE FOR SUBGRADE STABILIZATION
R1	1′-6″ CONCRETE CURB AND GUTTER
R2	2′-6″ CONCRETE CURB AND GUTTER
R3	2′-9″ CONCRETE CURB AND GUTTER
R4	5″ MONOLITHIC CONCRETE ISLAND (SURFACE MOUNTED)
R5	9″x12″ CONCRETE CURB
S1	4″ CONCRETE SIDEWALK
S2	4″ CONCRETE MULTI-USE PATH WITH WIRE MESH
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V	MILLING ASPHALT PAVEMENT, 1 1/2″ DEPTH
V1	MILLING ASPHALT PAVEMENT, 3″ DEPTH
V2	INCIDENTAL MILLING (-L- 0″ TO 3″ AND -Y- LINES 0″ TO 1 1/2″)
W	VARIABLE DEPTH ASPHALT PAVEMENT (SEE WEDGING DETAILS THIS SHEET)



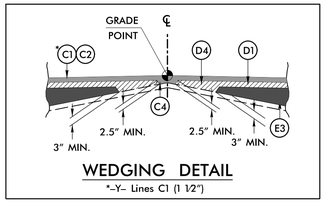
INCIDENTAL MILLING DETAIL
TO BE USED AT ALL TIE-IN LOCATIONS



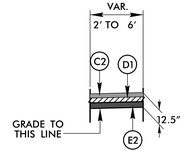
GEOTEXTILE FOR SUBGRADE STABILIZATION PLACEMENT
(PLAN VIEW)

(100% COVERAGE REQUIRED)

* INSTALL GEOTEXTILE FOR SUBGRADE STABILIZATION WITH MINIMUM ROLL WIDTH UNDER ROADWAY EDGES AND SHOULDERS ADJACENT TO FILL SLOPES

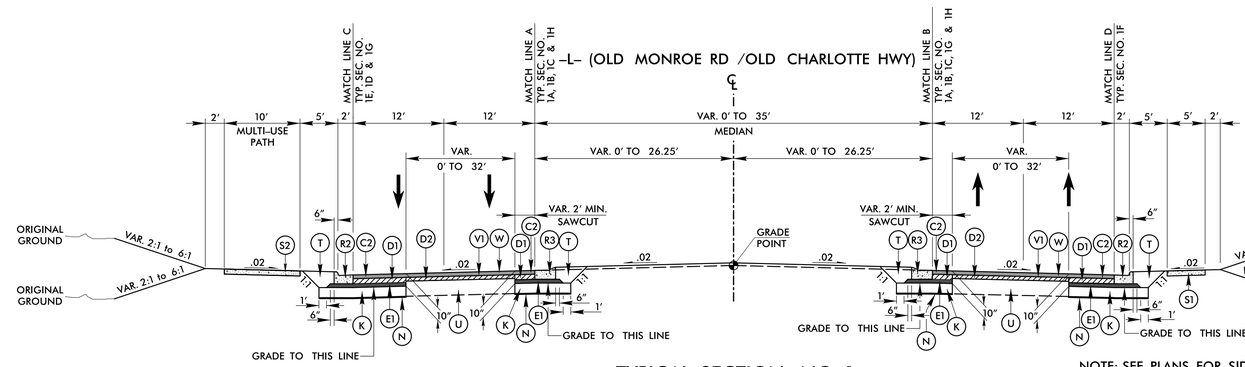


WEDGING DETAIL
*–Y– Lines C1 (1 1/2″)



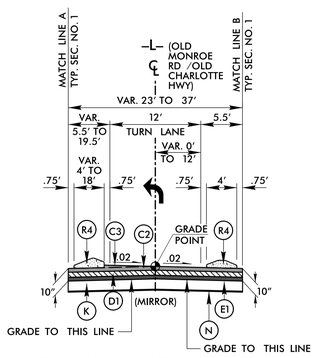
NARROW WIDENING DETAIL

MEDIAN LEFT	MEDIAN RIGHT	OUTSIDE EOT LEFT	OUTSIDE EOT RIGHT
–L– STA. 39+04.45 TO 39+49.75	–L– STA. 10+00.00 TO 13+78.00	–L– STA. 46+23.40 TO 51+06.45	–L– STA. 10+00.00 TO 13+74.95
–L– STA. 40+39.95 TO 52+08.00	–L– STA. 20+92.00 TO 23+40.00	–L– STA. 52+80.60 TO 54+54.45	–L– STA. 15+59.05 TO 23+07.00
–L– STA. 57+70.60 TO 60+00.10	–L– STA. 57+71.30 TO 60+00.10	–L– STA. 55+83.00 TO 56+09.05	–L– STA. 24+46.70 TO 26+79.20
		–L– STA. 57+10.50 TO 59+94.45	–L– STA. 28+15.60 TO 29+82.25
		–L– STA. 61+83.90 TO 68+64.40	–L– STA. 61+46.90 TO 63+90.00
		–L– STA. 68+94.65 TO 71+38.70	–L– STA. 66+90.00 TO 69+85.00
		–L– STA. 78+12.35 TO 79+85.10	–L– STA. 74+07.10 TO 77+38.80
			–L– STA. 79+01.70 TO 80+39.30

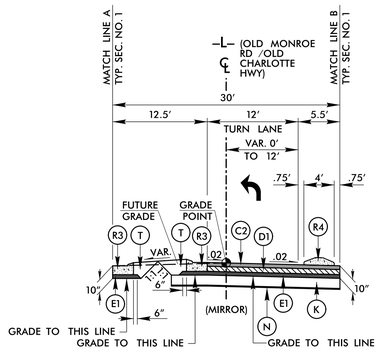


TYPICAL SECTION NO. 1
–L– STA. 10+00.00 TO 78+12.35

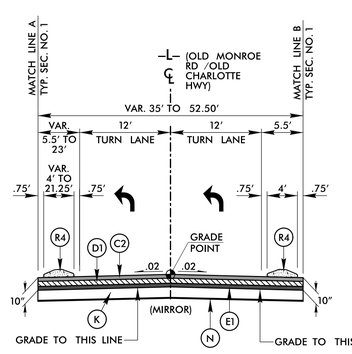
NOTE: SEE PLANS FOR SIDEWALK AND MUP LOCATIONS



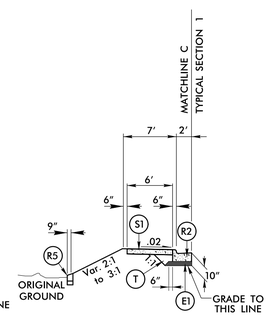
TYPICAL SECTION NO. 1A
–L– STA. 13+78.00 TO STA. 20+92.00
–L– STA. 23+40.00 TO STA. 32+35.57
–L– STA. 68+15.00 TO STA. 74+32.00



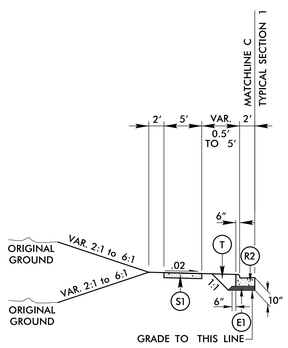
TYPICAL SECTION NO. 1B
–L– STA. 47+30.00 TO STA. 52+08.00
–L– STA. 57+71.26 TO STA. 60+00.09



TYPICAL SECTION NO. 1C
–L– STA. 32+35.57 TO STA. 38+65.00
–L– STA. 52+08.00 TO STA. 57+71.26
–L– STA. 61+38.26 TO STA. 65+40.00



TYPICAL SECTION NO. 1D
–L– STA. 57+64.00 TO 58+94.00



TYPICAL SECTION NO. 1E
–L– STA. 32+18.86 TO 86+03.47

PROJECT REFERENCE NO.	SHEET NO.
U-4714BA	2A-1

STV Engineers, Inc.
2151 Hawkins St., Suite 1400
Charlotte, NC 28203
NC License Number F-0991

ROADWAY DESIGN ENGINEER
Docusigned by: JOSEPH CARROLL JONES
NORTH CAROLINA PROFESSIONAL ENGINEER
SEAL 043891
SEAN C. STEPHENS ENGINEER
10/20/2026

PAVEMENT DESIGN ENGINEER
Signed by: JOSEPH T. HOLLAND
NORTH CAROLINA PROFESSIONAL
SEAL 024964
ENGINEER
JOSEPH T. HOLLAND
10/20/2026

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

10/9/2026
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stephens

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STV Engineers, Inc.
2151 Hawkins St., Suite 1400
Charlotte, NC 28203
NC License Number F-0991

PROJECT REFERENCE NO.	SHEET NO.
U-4714BA	2A-2

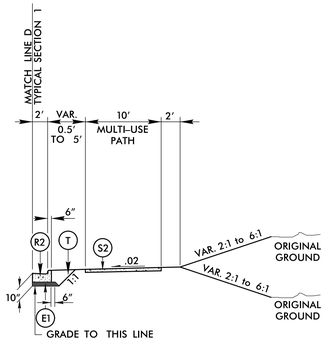
ROADWAY DESIGN ENGINEER

Docusigned by: Steven C. Stephens
NORTH CAROLINA PROFESSIONAL
SEAL 043891
ENGINEER
STEVEN C. STEPHENS
10/20/2026

PAVEMENT DESIGN ENGINEER

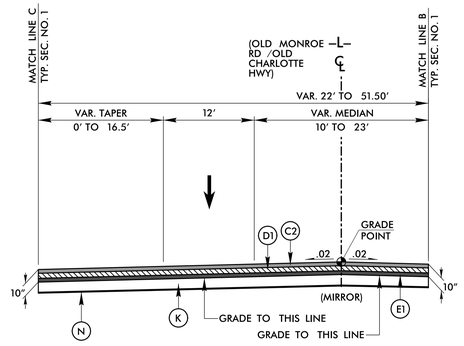
Signed by: Joseph T. Holland
NORTH CAROLINA PROFESSIONAL
SEAL 024964
ENG INEER
JOSEPH T. HOLLAND
10/20/2026

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED



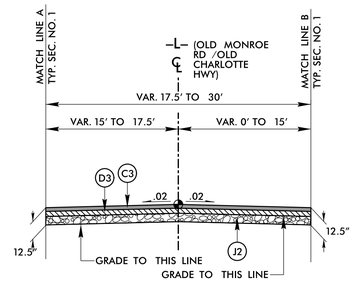
TYPICAL SECTION NO. 1F

–L– STA. 32+18.86 TO 86+03.47



TYPICAL SECTION NO. 1G

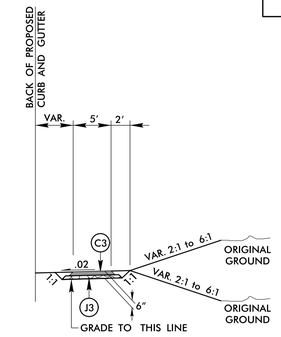
–L– STA. 74+92.42 TO STA. 78+12.35



TYPICAL SECTION NO. 1H
(TEMPORARY PAVEMENT DETAIL)

SEE TRAFFIC MANAGEMENT PLANS FOR TEMPORARY PAVEMENT LOCATIONS

–L– STA. 44+60.34 TO STA. 45+75.37
–L– STA. 57+71.32 TO STA. 60+00.00



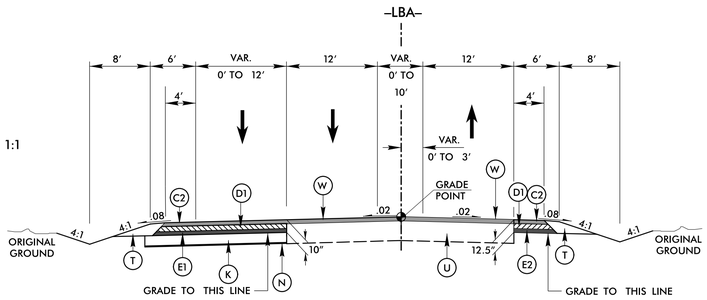
TYPICAL SECTION NO. 1I
(TEMPORARY SIDEWALK DETAIL)

SEE TRAFFIC MANAGEMENT PLANS FOR TEMPORARY SIDEWALK LOCATIONS

NOTE : PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.

C1	1.5″ S9.5B
C2	3.0″ S9.5C
C3	2.0″ S9.5C
C4	VAR. S9.5C
D1	4.0″ I19.0C
D2	3.0″ I19.0C
D3	2.5″ I19.0C
D4	VAR. I19.0C
E1	3.0″ B25.0C
E2	5.5″ B25.0C
E3	VAR. B25.0C
J1	6″ ABC
J2	8″ ABC
J3	3″ ABC
K	8″CLASS IV SUBGRADE STABILIZATION TYPE II
N	GEOTEXTILE FOR SUBGRADE STABILIZATION
R1	1′-6″ C&G
R2	2′-6″ C&G
R3	2′-9″ C&G
R4	5″ MONO. ISLAND
R5	9″X12″ CONC. CURB
S1	4″ CONC. SIDEWALK
S2	4″ CONC. MULTI-USE PATH WITH WIRE MESH
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V	1 1/2″ MILLING
V1	3″ MILLING
V2	INCIDENTAL MILLING
W	WEDGING

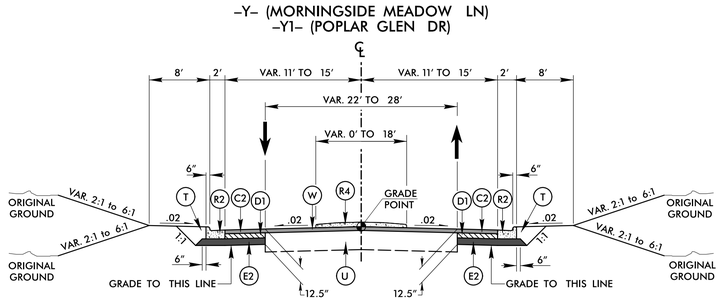
–LBA– (OLD MONROE RD /OLD CHARLOTTE HWY)



TYPICAL SECTION NO. 2

–LBA– STA. 10+00.00 TO 13+00.00

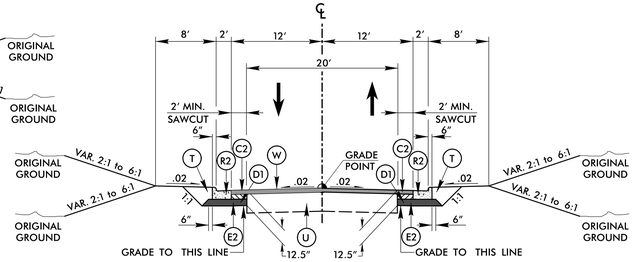
–Y– (MORNINGSIDE MEADOW LN)
–Y1– (POPLAR GLEN DR)



TYPICAL SECTION NO. 3

–Y– STA. 10+70.00 TO STA. 11+64.27
–Y1– STA. 10+35.72 TO STA. 11+55.00

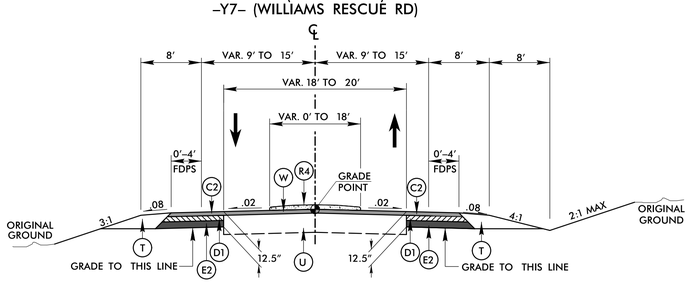
–Y2– (PARK MEADOW LN)



TYPICAL SECTION NO. 4

–Y2– STA. 11+00.00 TO STA. 11+64.50

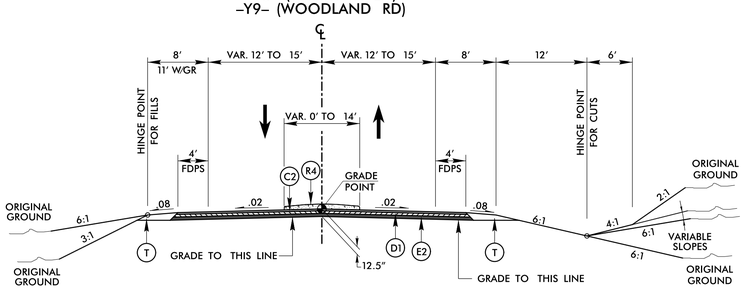
–Y3– (ENCHANTED DR)
–Y4– (K–LINE RD)
–Y5– (BRYSON RD)
–Y7– (WILLIAMS RESCUE RD)



TYPICAL SECTION NO. 5

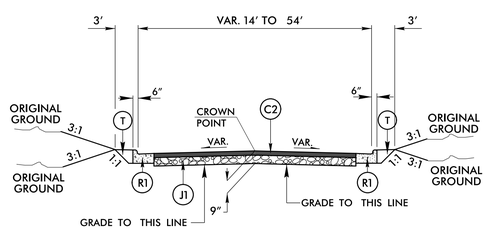
–Y3– STA. 10+35.55 TO STA. 11+70.00
–Y4– STA. 10+43.19 TO STA. 11+90.00
–Y5– STA. 11+60.00 TO STA. 13+04.20
–Y7– STA. 10+20.00 TO STA. 11+68.37

–Y8– (CHESTNUT LN)
–Y9– (WOODLAND RD)



TYPICAL SECTION NO. 6

–Y8– STA. 10+38.48 TO STA. 11+65.00
–Y9– STA. 10+41.50 TO STA. 11+80.00



TYPICAL SECTION NO. 7

APPLY TO ALL EXISTING ASPHALT DRIVEWAYS ALONG:
–L– (OLD MONROE RD /OLD CHARLOTTE HWY)
–Y10– (WAXHAW INDIAN TRAIL RD)

10/20/2026
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stephens

Docusign Envelope ID: 4E991284-EA82-8045-82C5-A8083F1F68D2

STV Engineers, Inc.
2151 Hawkins St., Suite 1400
Charlotte, NC 28203
NC License Number F-0991

PROJECT REFERENCE NO.	SHEET NO.
U-4714BA	2A-3

ROADWAY DESIGN ENGINEER

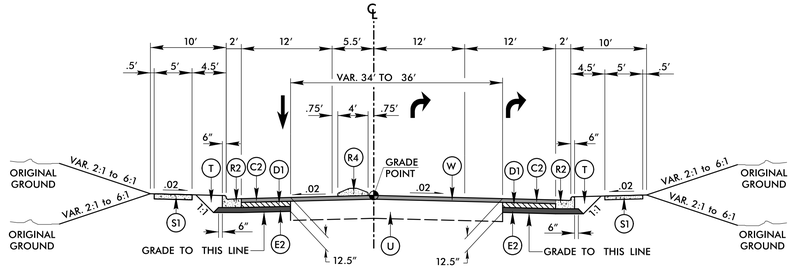
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 043891 ENGINEER SEAN C. STEPHENS
10/20/2026

PAVEMENT DESIGN ENGINEER

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 024964 ENGINEER JOSEPH T. HOLLAND
10/20/2026

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

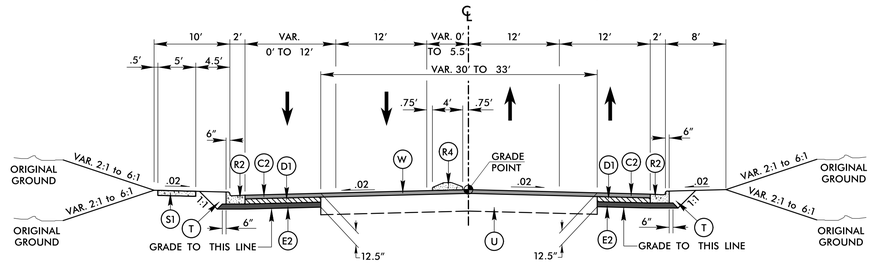
–Y10– (WAXHAW INDIAN TRAIL RD)



TYPICAL SECTION NO. 8

–Y10– STA. 10+80.00 TO STA. 13+49.25

–Y10– (WAXHAW INDIAN TRAIL RD)



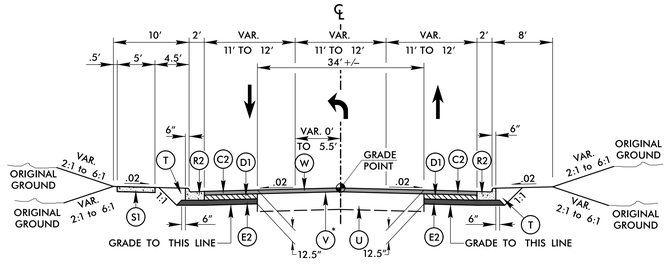
TYPICAL SECTION NO. 9

–Y10– STA. 14+56.46 TO STA. 20+85.00

NOTE : PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE.

C1	1.5″ S9.5B
C2	3.0″ S9.5C
C3	2.0″ S9.5C
C4	VAR. S9.5C
D1	4.0″ I19.0C
D2	3.0″ I19.0C
D3	2.5″ I19.0C
D4	VAR. I19.0C
E1	3.0″ B25.0C
E2	5.5″ B25.0C
E3	VAR. B25.0C
J1	6″ ABC
J2	8″ ABC
J3	3″ ABC
K	8″CLASS IV SUBGRADE STABILIZATION TYPE II
N	GEOTEXTILE FOR SUBGRADE STABILIZATION
R1	1′-6″ C&G
R2	2′-6″ C&G
R3	2′-9″ C&G
R4	5″ MONO. ISLAND
R5	9″X12″ CONC. CURB
S1	4″ CONC. SIDEWALK
S2	4″ CONC. MULTI-USE PATH WITH WIRE MESH
T	EARTH MATERIAL
U	EXISTING PAVEMENT
V	1 1/2″ MILLING
V1	3″ MILLING
V2	INCIDENTAL MILLING
W	WEDGING

–Y10– (WAXHAW INDIAN TRAIL RD)

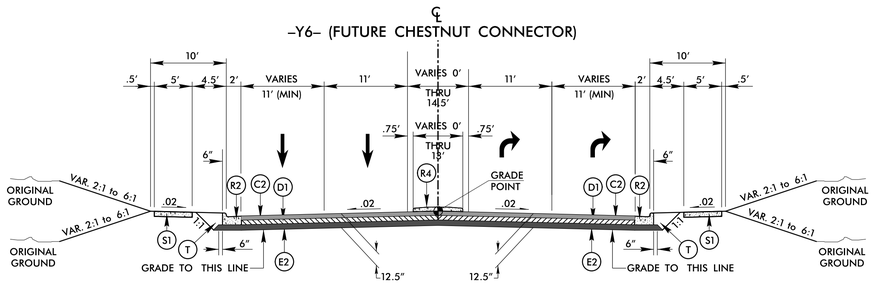


TYPICAL SECTION NO. 10

–Y10– STA. 20+85.00 TO STA. 22+40.00

*NOTE : 1 1/2″ MILLING AND OVERLAY ONLY
–Y10– STA. 22+40.00 TO STA. 22+95.00
(SEE PLAN FOR DETAIL)

–Y6– (FUTURE CHESTNUT CONNECTOR)



TYPICAL SECTION NO. 11

–Y6– STA. 12+85.00 TO STA. 13+55.32

10/8/2026
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Docusign Envelope ID: 4E991284-EA82-8045-82C5-A8083F1F68D2

6/2/99

STV Engineers, Inc.
2151 Hawkins St., Suite 1400
Charlotte, NC 28203
NC License Number F-0991

PROJECT REFERENCE NO.	SHEET NO.
U-4714BA	2B-1

ROADWAY DESIGN ENGINEER



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ALIGNMENT CURVE DATA

CURVE DATA -L-

PI Sta 29+13.11
△ = 1° 50' 41.1" (RT)
D = 0° 42' 58.3"
L = 257.58'
T = 128.80'
R = 8,000.00'
e = NC

PI Sta 48+06.68
△ = 3° 18' 44.3" (LT)
D = 0° 42' 58.3"
L = 462.48'
T = 231.31'
R = 8,000.00'
e = NC

PI Sta 63+94.15
△ = 23° 53' 31.5" (LT)
D = 5° 43' 46.5"
L = 417.00'
T = 211.57'
R = 1,000.00'
e = 6%
RUNOFF = 300'

PI Sta 82+86.07
△ = 6° 46' 39.8" (LT)
D = 0° 42' 58.3"
L = 946.35'
T = 473.73'
R = 8,000.00'
e = NC

CURVE DATA -LBA-

PI Sta 16+56.19
△ = 6° 46' 58.5" (LT)
D = 1° 45' 00.0"
L = 387.60'
T = 194.02'
R = 3,274.04'

CURVE DATA -Y1-

PI Sta 11+77.24
△ = 14° 35' 29.9" (RT)
D = 12° 27' 20.2"
L = 117.15'
T = 58.89'
R = 460.00'
e = 3.6%
RUNOFF = 75.6'

CURVE DATA -Y3-

PI Sta 10+71.82
△ = 21° 07' 56.1" (RT)
D = 14° 52' 55.3"
L = 142.00'
T = 71.82'
R = 385.00'
e = 3.8%
RUNOFF = 79.8'

CURVE DATA -Y4-

PI Sta 11+25.06
△ = 19° 31' 00.2" (RT)
D = 16° 22' 12.8"
L = 119.22'
T = 60.19'
R = 350.00'
e = 3.8%
RUNOFF = 79.8'

CURVE DATA -Y5-

PI Sta 11+48.99
△ = 7° 38' 51.3" (RT)
D = 3° 41' 47.4"
L = 206.89'
T = 103.60'
R = 1,550.00'
e = 2.4%
RUNOFF = 50.4'

CURVE DATA -Y10-

PI Sta 18+51.85
△ = 22° 04' 23.7" (LT)
D = 2° 51' 53.2"
L = 770.50'
T = 390.09'
R = 2,000.00'
e = 2.6%
RUNOFF = 70.2'

CURVE DATA -Y11-

PI Sta 11+87.05
△ = 15° 59' 09.4" (RT)
D = 7° 01' 48.6"
L = 227.39'
T = 114.44'
R = 815.00'
e = 3.8%
RUNOFF = 79.8'

CURVE DATA -Y8-

PI Sta 12+21.70
△ = 23° 46' 31.1" (RT)
D = 11° 56' 11.8"
L = 199.18'
T = 101.04'
R = 480.00'
e = 3.0%
RUNOFF = 48'

CURVE DATA -Y9-

PI Sta 12+27.21
△ = 7° 25' 02.2" (RT)
D = 6° 58' 13.0"
L = 106.41'
T = 53.28'
R = 822.00'
e = 2.8%
RUNOFF = 58.8'

7/28/2026
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FDrayas

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Charlotte, NC 28203
NC License Number F-0991

PROJECT REFERENCE NO.	SHEET NO.
U-4714BA	2B-2

PAVEMENT DESIGN ENGINEER

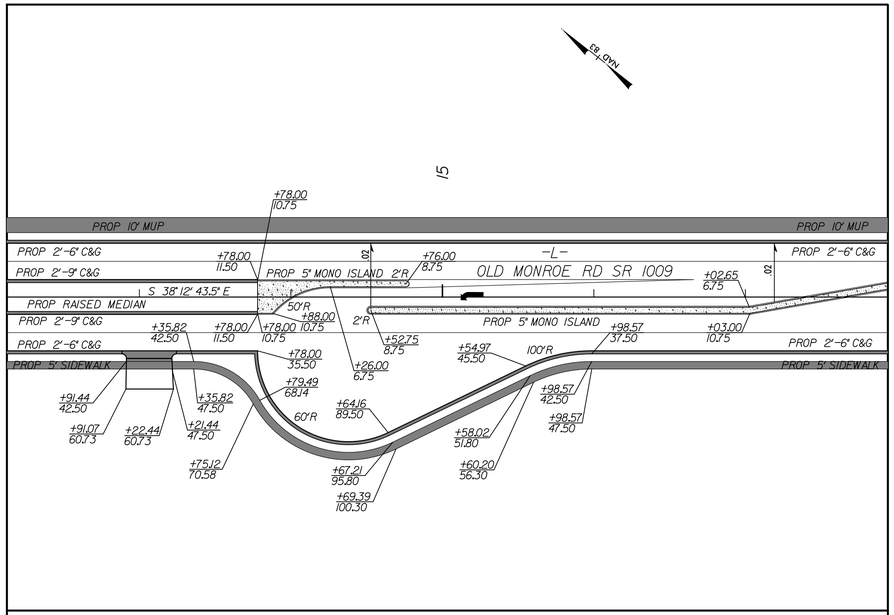
DocuSigned by: Sean C. Stephens
NORTH CAROLINA PROFESSIONAL SEAL 043891 ENGINEER SEAN C. STEPHENS
10/20/2026

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- 5" MONOLITHIC ISLAND
- CONCRETE CURB & GUTTER /SIDEWALK
- PAVED SHOULDER /MULTIUSE PATH

★ PROPOSED TRAFFIC SIGNAL

–L– OLD MONROE RD, & BULB OUT WEST OF MORNINGSIDE MEADOW LN

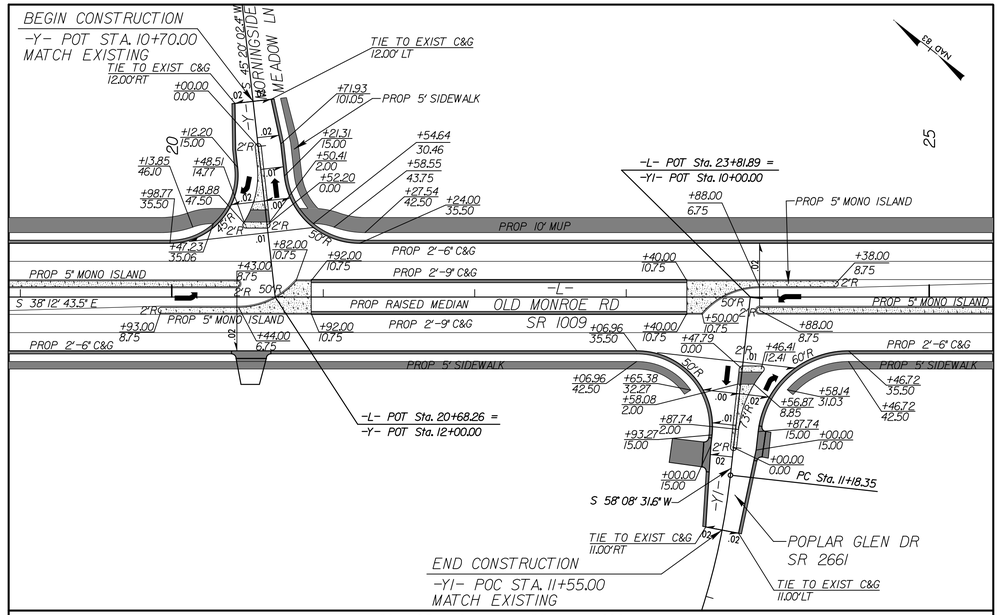


INTERSECTION DETAIL – A

50 25 0 50 100

SEE SHEET 5 FOR FULL PLAN VIEW
SCALE : 1" = 50'

–L– OLD MONROE RD, –Y– MORNINGSIDE MEADOW LN & POPLAR GLEN DR

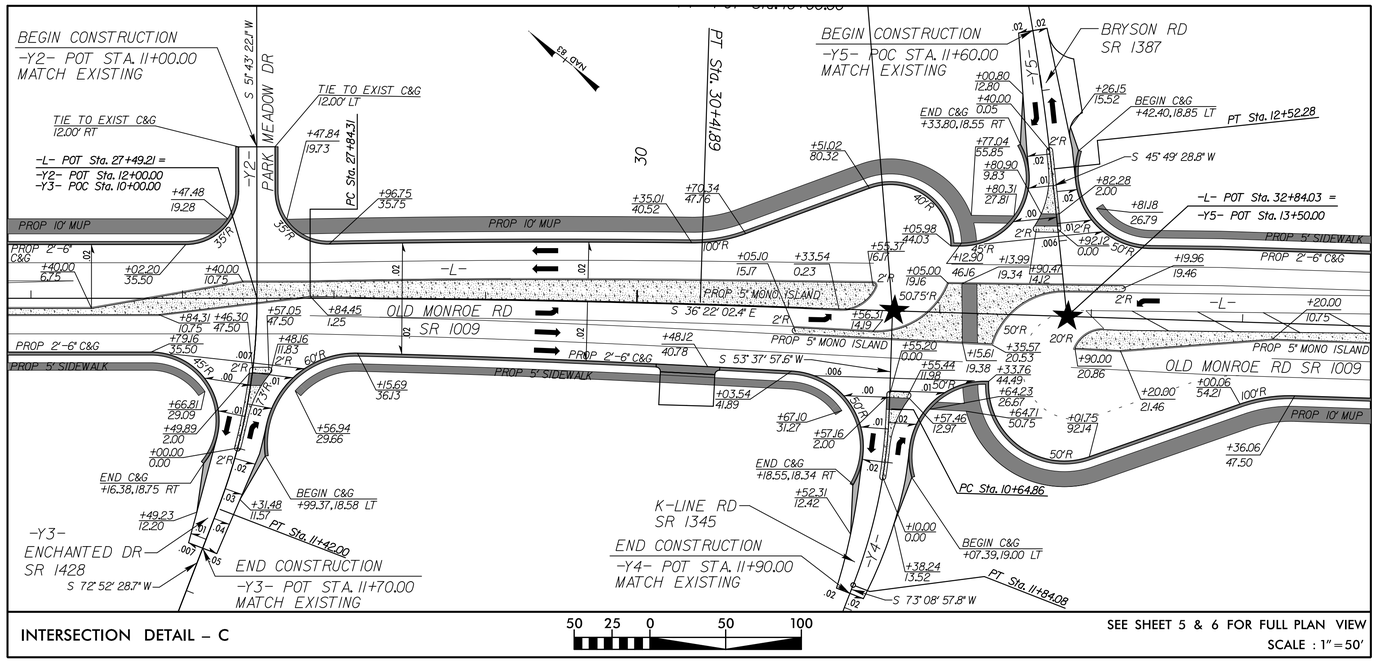


INTERSECTION DETAIL – B

50 25 0 50 100

SEE SHEET 5 FOR FULL PLAN VIEW
SCALE : 1" = 50'

–L– OLD MONROE RD, –Y2– PARK MEADOW DR, Y3 ENCHANTED DR, –Y4– K–LINE RD & –Y5– BRYSON RD



INTERSECTION DETAIL – C

50 25 0 50 100

SEE SHEET 5 & 6 FOR FULL PLAN VIEW
SCALE : 1" = 50'

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PROJECT REFERENCE NO.	SHEET NO.
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PAVEMENT DESIGN ENGINEER

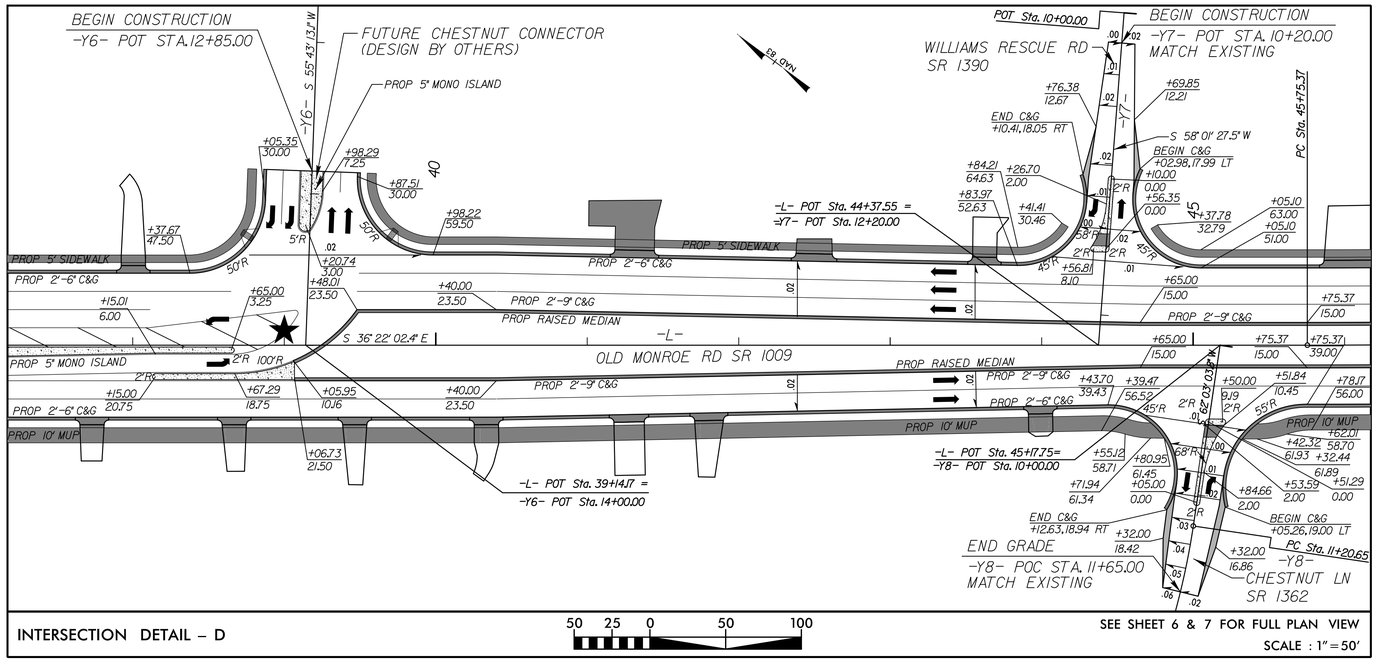
DocuSigned by: Sean C. Stephens
NORTH CAROLINA PROFESSIONAL SEAL 043891 ENGINEER SEAN C. STEPHENS
10/20/2026

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5" MONOLITHIC ISLAND
CONCRETE CURB & GUTTER /SIDEWALK
PAVED SHOULDER /MULTIUSE PATH

★ PROPOSED TRAFFIC SIGNAL

–L– OLD MONROE RD, FUTURE CHESTNUT CONNECTOR, –Y17– WILLIAMS RESCUE RD & –Y8– CHESTNUT LN



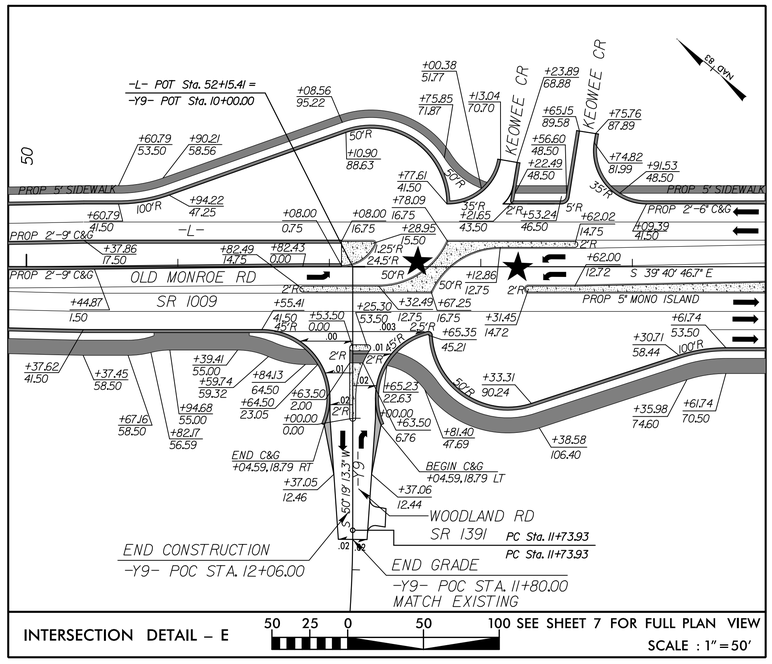
INTERSECTION DETAIL – D

50 25 0 50 100

SEE SHEET 6 & 7 FOR FULL PLAN VIEW

SCALE : 1" = 50'

–L– OLD MONROE RD & –Y9– WOODLAND RD



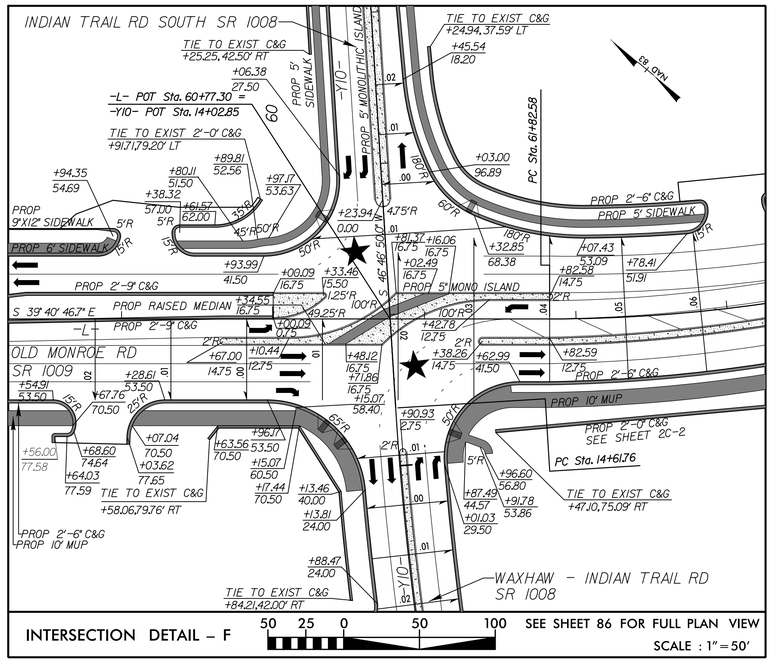
INTERSECTION DETAIL – E

50 25 0 50 100

SEE SHEET 7 FOR FULL PLAN VIEW

SCALE : 1" = 50'

–L– OLD MONROE RD & –Y10– WAXHAW–INDIAN TRAIL RD



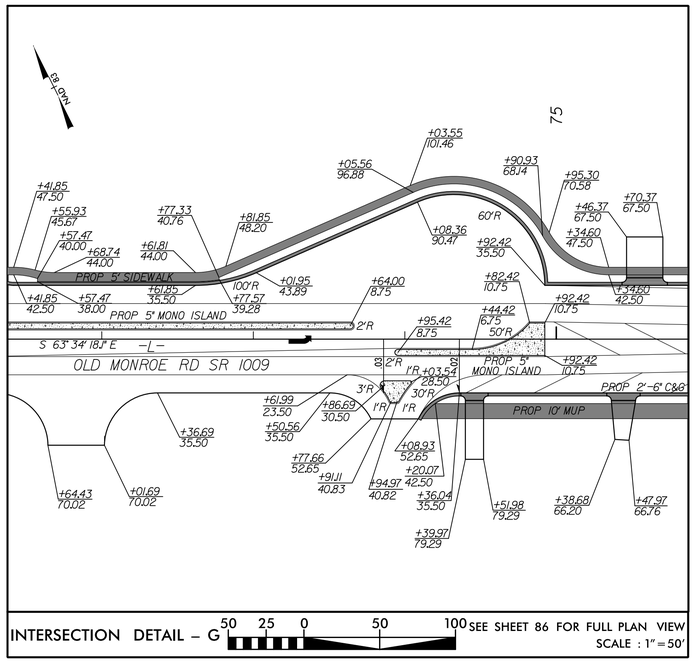
INTERSECTION DETAIL – F

50 25 0 50 100

SEE SHEET 86 FOR FULL PLAN VIEW

SCALE : 1" = 50'

–L– OLD MONROE RD & BULB OUT EAST OF WAXHAW–INDIAN TRAIL RD



INTERSECTION DETAIL – G

50 25 0 50 100

SEE SHEET 86 FOR FULL PLAN VIEW

SCALE : 1" = 50'

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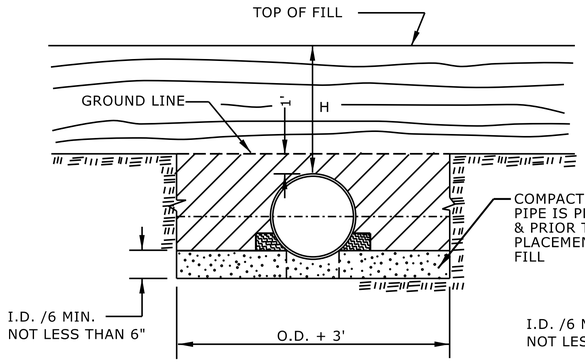
STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR

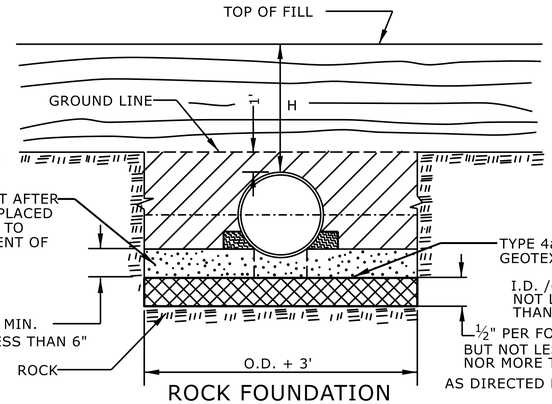
METHOD OF PIPE INSTALLATION

FLEXIBLE PIPE

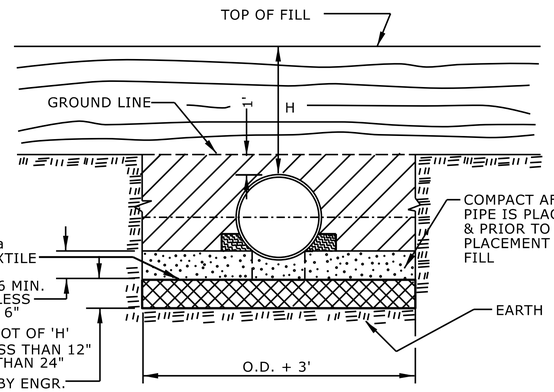
PIPE IN TRENCH



NORMAL EARTH FOUNDATION

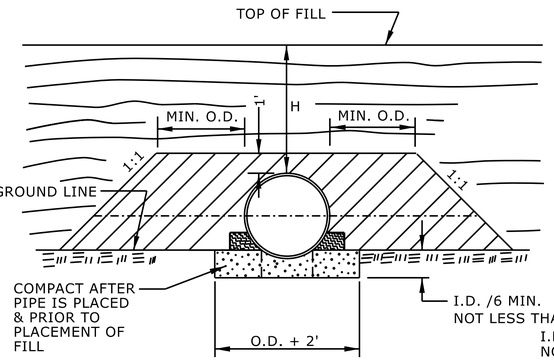


ROCK FOUNDATION

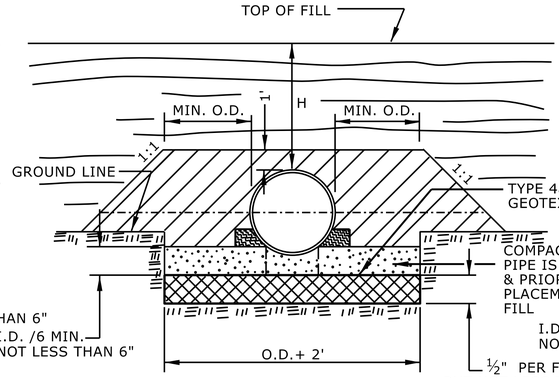


UNSUITABLE MATERIAL FOUNDATION

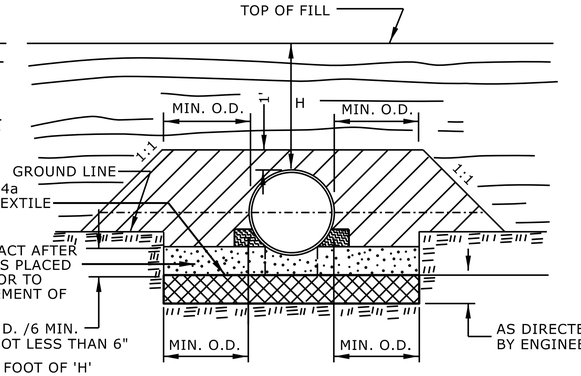
PIPE ABOVE GROUND



NORMAL EARTH FOUNDATION



ROCK FOUNDATION



UNSUITABLE MATERIAL FOUNDATION

GENERAL NOTES:

I.D. = THE MAXIMUM HORIZONTAL INSIDE DIAMETER DIMENSION.

O.D. = THE MAXIMUM HORIZONTAL OUTSIDE DIAMETER DIMENSION.

H = THE FILL HEIGHT MEASURED VERTICALLY AT ANY POINT ALONG THE PIPE FROM THE TOP OF THE PIPE TO THE TOP OF THE EMBANKMENT AT THAT POINT.

APPROVED SUITABLE LOCAL MATERIAL.

TAKE CARE TO FULLY COMPACT HAUNCH ZONE OF PIPE BACKFILL.

LOOSELY PLACED SELECT MATERIAL CLASS III OR CLASS II, TYPE 1 FOR PIPE BEDDING. LEAVE SECTION DIRECTLY BENEATH PIPE UNCOMPACTED AS PIPE SEATING AND BACKFILL WILL ACCOMPLISH COMPACTION.

DO NOT OPERATE HEAVY EQUIPMENT OVER ANY PIPE CULVERT UNTIL THE PIPE CULVERT HAS BEEN PROPERLY BACKFILLED AND COVERED WITH AT LEAST 3 FEET OF APPROVED MATERIAL.

REFER TO NCDOT PIPE MATERIAL SELECTION GUIDE AND STANDARD SPECIFICATIONS FOR ALLOWABLE PIPE FILL HEIGHTS AND PIPE SPECIFICATIONS.

SPRINGLINE OF PIPE

SELECT BACKFILL MATERIAL CLASS III OR CLASS II, TYPE 1 ABOVE AND BELOW SPRINGLINE.

UNDISTURBED EARTH MATERIAL

SELECT MATERIAL CLASS V OR VI FOR FOUNDATION CONDITIONING. ENCAPSULATE WITH TYPE IV GEOTEXTILE AS DIRECTED BY THE ENGINEER.

SHEET 1 OF 2

300.01

Signed by: Nicole M. Hacker
5B8A4E3B4E3E4E8...

NORTH CAROLINA PROFESSIONAL SEAL 033144 ENGINEER NICOLE M. HACKER

10/20/2026

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CONTRACTS STANDARDS AND DEVELOPMENT UNIT
Office 919-707-6950 FAX 919-250-4119

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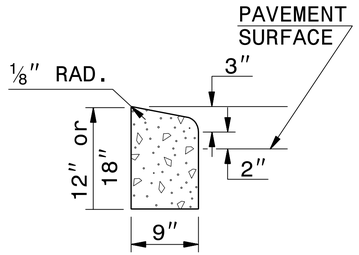
ORIGINAL BY: S.CALHOUN DATE: 7-25-2024
MODIFIED BY: _____ DATE: _____
CHECKED BY: _____ DATE: _____
FILE SPEC.: _____

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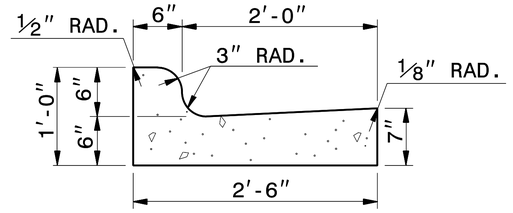
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U-4714BA	2C-2

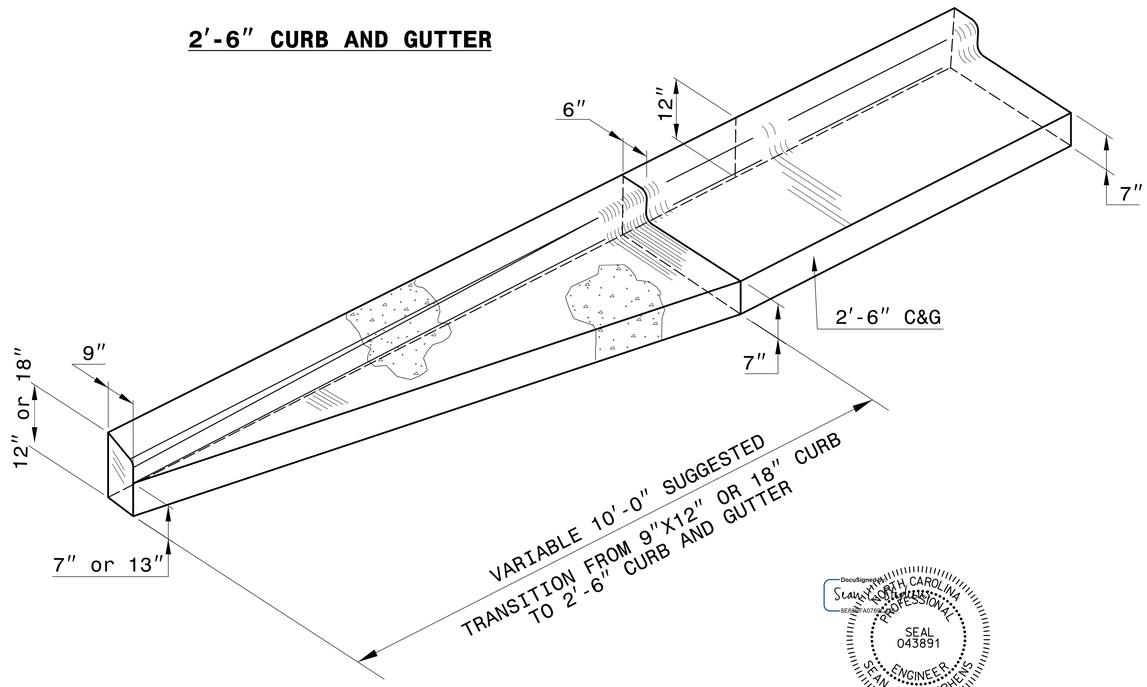
*NOTE: SEE STD. DWG. 846.01
FOR GENERAL NOTES



9" X 12" or 18" CONCRETE CURB



2'-6" CURB AND GUTTER



ISOMETRIC VIEW OF TRANSITION

DocuSigned by: Sean Stephens
BE5B3D1A07E4F8...

NORTH CAROLINA PROFESSIONAL SEAL 043891 ENGINEER SEAN C. STEPHENS

10/20/2026

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STV Engineers, Inc.
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Charlotte, NC 28203
NC License Number F-0991

DETAIL OF 9"x 12"or 18" CURB TO 2'-6" CURB & GUTTER TRANSITION SECTION

ORIGINAL BY: _____ DATE: _____
MODIFIED BY: S.STEPHENS DATE: 10-07-26
CHECKED BY: _____ DATE: _____
FILE SPEC.: doc/specialdetails/roadway/curbtocgtransit.dgn

10/7/2026
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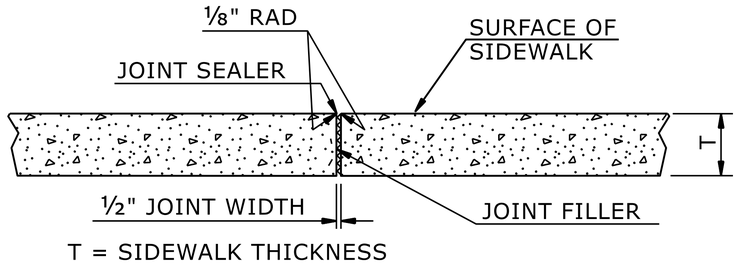
PROJECT REFERENCE NO.	SHEET NO.
U-4714BA	2C-3

NOTES:

CONSTRUCT STANDARD SIDEWALK 5' WIDE AND 4" THICK UNLESS OTHERWISE DENOTED ON PLANS.

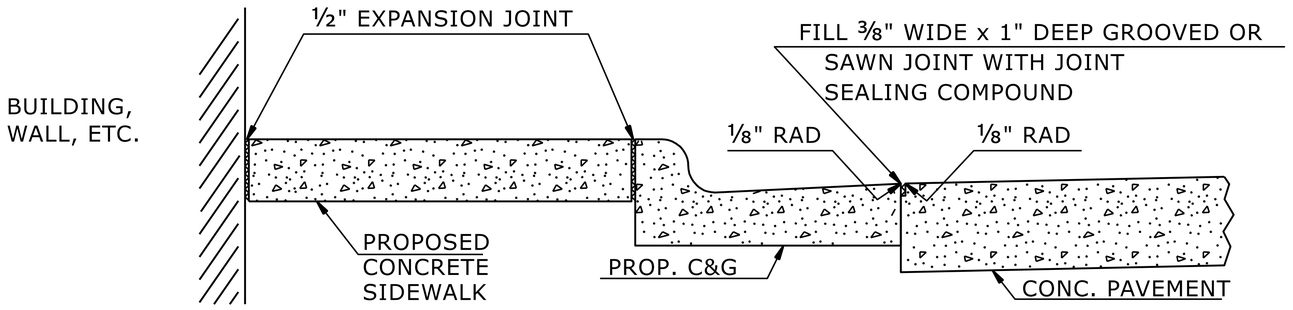
PLACE A GROOVE JOINT 1" DEEP WITH ⅛" RADII IN THE CONCRETE SIDEWALK AT 5' INTERVALS. ONE ½" EXPANSION JOINT WILL BE REQUIRED AT 50' INTERVALS. A ½" EXPANSION JOINT WILL BE REQUIRED WHERE THE SIDEWALK JOINS ANY RIGID STRUCTURE.

SEE STD. DWG. 848.06 FOR CURB RAMP LOCATION REQUIREMENTS AND CONSTRUCTION GUIDELINES.



T = SIDEWALK THICKNESS

TRANSVERSE EXPANSION JOINT IN SIDEWALK



DETAILS SHOWING JOINTS IN CONCRETE SIDEWALK

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
CONCRETE SIDEWALK

Signed by: Nicole M. Hacker
588E4B4A1E0E4B5...

NORTH CAROLINA PROFESSIONAL SEAL 033144 ENGINEER NICOLE M. HACKER

10/20/2026

SHEET 1 OF 1

848D01

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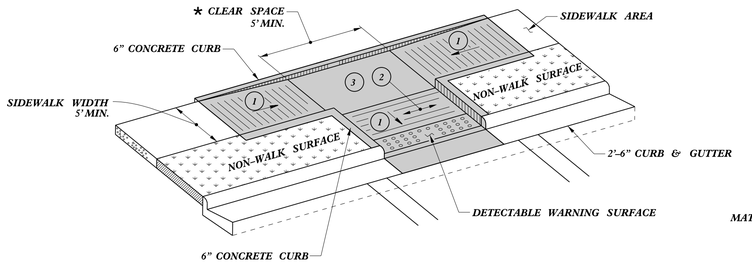
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ORIGINAL BY: S.CALHOUN DATE: 7-25-2024
MODIFIED BY: _____ DATE: _____
CHECKED BY: _____ DATE: _____
FILE SPEC.: _____

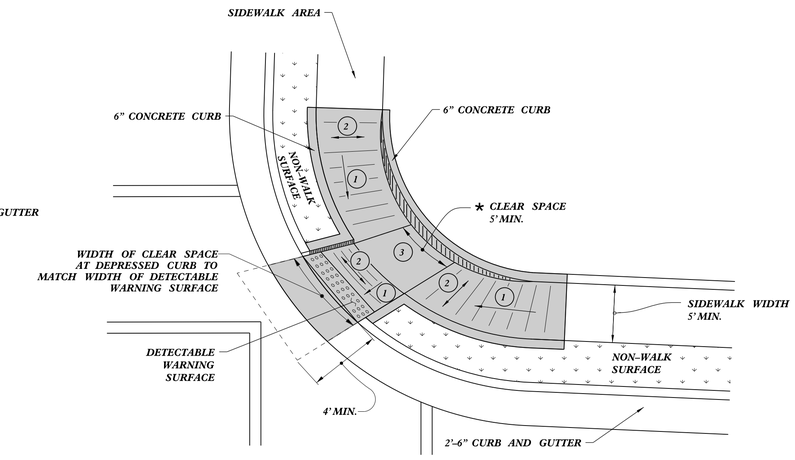
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U-4714BA	2C-4

* – *WHERE CLEAR SPACE IS CONSTRAINED ON TWO OR MORE SIDES, THE CLEAR SPACE SHALL BE 4'MINIMUM X 5'MINIMUM, WITH 5' PROVIDED IN THE DIRECTION OF THE PEDESTRIAN STREET CROSSING.*



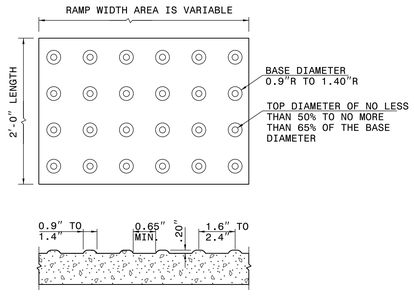
TYPE 3



TYPE 3 MODIFIED
INSTALLATION IN A RADIUS

NOTES:
DETECTABLE WARNING SURFACE SHALL COVER 2'-0" LENGTH AND FULL WIDTH OF THE RAMP FLOOR AS SHOWN ON THE DETAILS.

DETECTABLE WARNING SURFACE SHALL CONTRAST VISIBLY WITH ADJOINING SURFACE, EITHER LIGHT-ON-DARK, OR DARK-ON-LIGHT SEQUENCE COVERING THE ENTIRE RAMP.



DETECTABLE WARNING SURFACE

(1) *8.33% (12:1) MAX RAMP SLOPE*

(2) *CROSS SLOPE: 2.00%*

(3) *MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00%.*

PAY LIMITS FOR 1 CURB RAMP

STATE OF
NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR
CURB RAMP
PARALLEL RAMP

Signed by: Nicole Hackler
5884323D5F1E4D8...
10/20/2026

NORTH CAROLINA PROFESSIONAL SEAL 033144 ENGINEER NICOLE M HACKLER

SHEET 9 OF13

848D06

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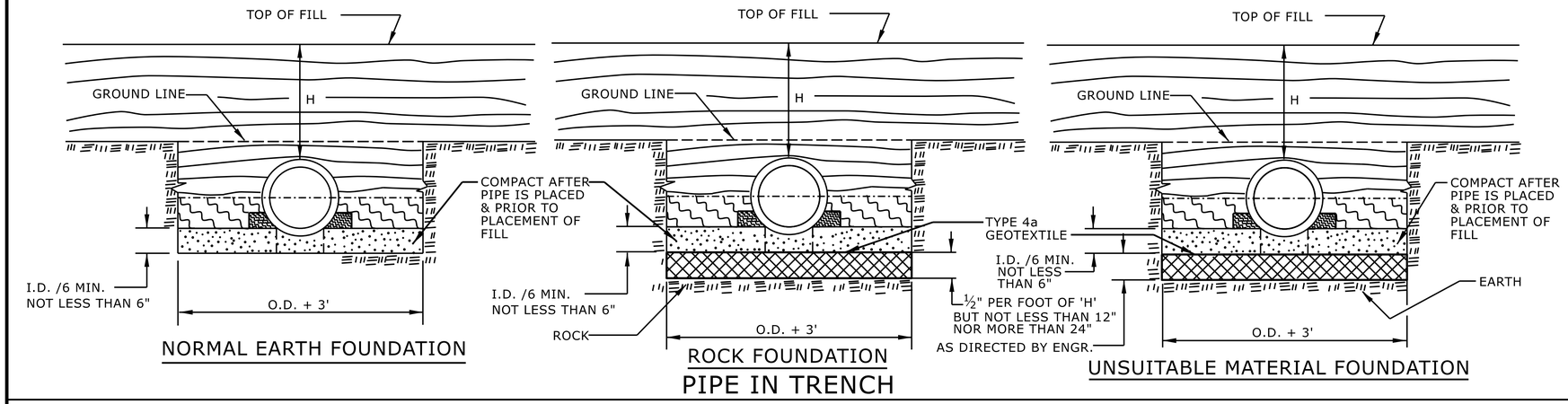
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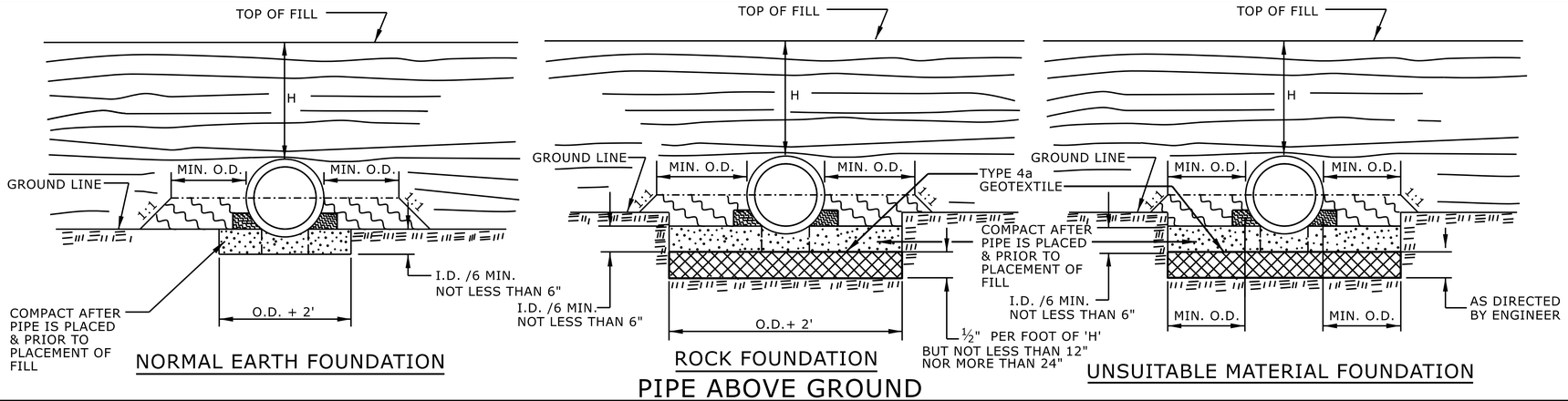
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PIPE IN TRENCH



PIPE ABOVE GROUND

GENERAL NOTES:

I.D. = THE MAXIMUM HORIZONTAL INSIDE DIAMETER DIMENSION.

O.D. = THE MAXIMUM HORIZONTAL OUTSIDE DIAMETER DIMENSION.

H = THE FILL HEIGHT MEASURED VERTICALLY AT ANY POINT ALONG THE PIPE FROM THE TOP OF THE PIPE TO THE TOP OF THE EMBANKMENT AT THAT POINT.

APPROVED SUITABLE LOCAL MATERIAL.

TAKE CARE TO FULLY COMPACT HAUNCH ZONE OF PIPE BACKFILL.

LOOSELY PLACED SELECT MATERIAL CLASS III OR CLASS II, TYPE 1 FOR PIPE BEDDING. LEAVE SECTION DIRECTLY BENEATH PIPE UNCOMPACTED AS PIPE SEATING AND BACKFILL WILL ACCOMPLISH COMPACTION.

DO NOT OPERATE HEAVY EQUIPMENT OVER ANY PIPE CULVERT UNTIL THE PIPE CULVERT HAS BEEN PROPERLY BACKFILLED AND COVERED WITH AT LEAST 3 FEET OF APPROVED MATERIAL.

REFER TO NCDOT PIPE MATERIAL SELECTION GUIDE AND STANDARD SPECIFICATIONS FOR ALLOWABLE PIPE FILL HEIGHTS AND PIPE SPECIFICATIONS.

SPRINGLINE OF PIPE

SELECT BACKFILL MATERIAL CLASS III OR CLASS II, BELOW SPRINGLINE.

UNDISTURBED EARTH MATERIAL

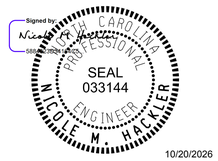
SELECT MATERIAL CLASS V OR VI FOR FOUNDATION CONDITIONING. ENCAPSULATE WITH TYPE IV GEOTEXTILE AS DIRECTED BY THE ENGINEER.

STATE OF
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RALEIGH, N.C.

ROADWAY DETAIL DRAWING FOR

METHOD OF PIPE INSTALLATION

RIGID PIPE



SHEET 2 OF 2

300.01

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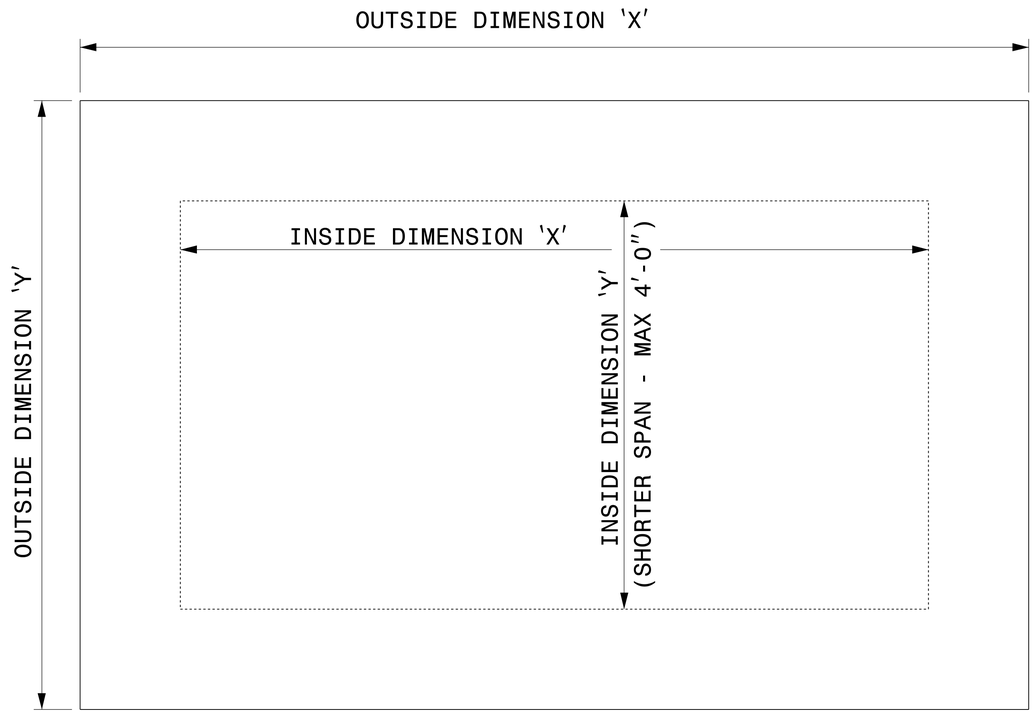
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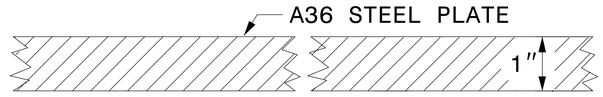
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U-4714BA	2C-6



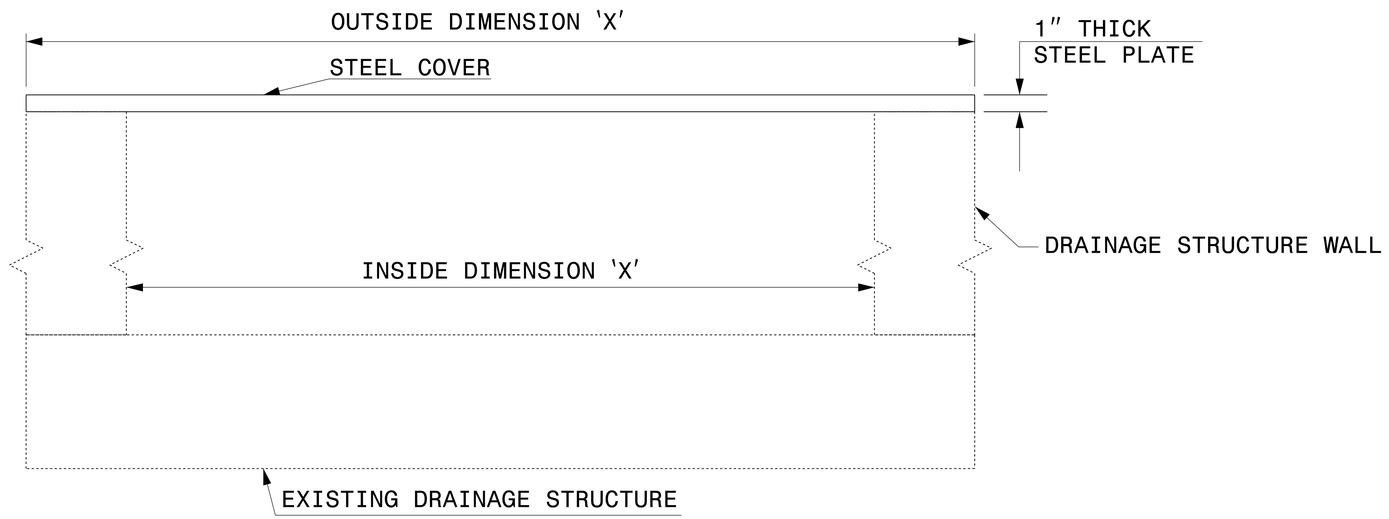
PLAN VIEWS

GENERAL NOTES:

-USE GRADE A36 STEEL
-STEEL COVERS ARE FOR TEMPORARY USE DURING PHASE CONSTRUCTION.
-FILL SHALL BE PLACED DIRECTLY OVER THE STEEL PLATES.
-SEE ROADWAY PLANS AND PROVISIONS FOR LOCATIONS
-QUANTITES TO BE PAID FOR AT THE UNIT PRICE BID PER EACH.



SECTION VIEW OF STEEL TOP PLATE



ELEVATION VIEWS

Signed by: Nicholas Tennyson
5884E0D0F2C6465...
10/20/2026

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DETAIL OF TEMPORARY 1" STEEL COVER OVER DRAINAGE STRUCTURE

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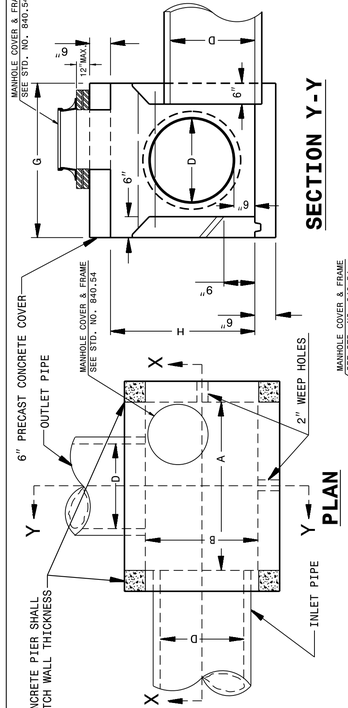
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STATE OF
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DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
CONCRETE CATCH BASIN
(3 OR 4 SIDE OPEN THROAT)
(MANHOLE OPTIONAL)

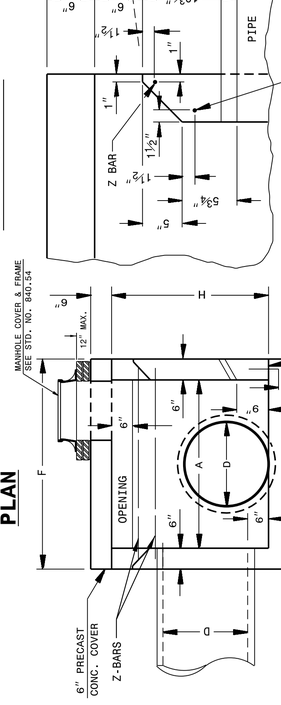
SHEET 1 OF 2 — **840D04**

GENERAL NOTES:
ALL CATCH BASINS OVER 3'-6" IN DEPTH TO BE PROVIDED WITH STEPS 12" ON CENTERS. STEPS SHALL BE IN ACCORDANCE WITH STD. 840.66.
ALL EXPOSED CORNERS TO BE CHAMFERED 1".
CLASS "B" CONCRETE TO BE USED THROUGHOUT.
2" PIPE WEEPHOLES TO BE PLACED AS DIRECTED BY ENGINEER.
THE 6" OPENING SHOWN MAY BE INCREASED TO 8" MAXIMUM IF DEEMED TO BE NECESSARY BY THE ENGINEER.
OPTIONAL CONSTRUCTION - MONOLITHIC POUR, 2" KEYWAY, OR #5 BAR DOWELS AT 12" CENTERS AS DIRECTED BY THE ENGINEER.
FORMS ARE TO BE USED FOR THE CONSTRUCTION OF THE BOTTOM SLAB.
IF REINFORCED CONCRETE PIPE IS SET IN BASE SLAB OF BOX, ADD TO BASE AS SHOWN ON STD. DWG. 840.00.
A STONE DRAIN CONSISTING OF 1 CUBIC FOOT OF NO. 78M STONE CONTAINED IN A BAG OF POROUS FABRIC SHALL BE PLACED AT EACH WEEP HOLE.
FOR 8' IN HEIGHT OR LESS USE 6" WALLS AND BOTTOM SLAB.
OVER 8' IN HEIGHT USE 8" WALLS AND BOTTOM SLAB. QUANTITIES TO BE ADJUSTED ACCORDINGLY.
DIMENSIONS MAY BE ADJUSTED AS DIRECTED BY THE ENGINEER.

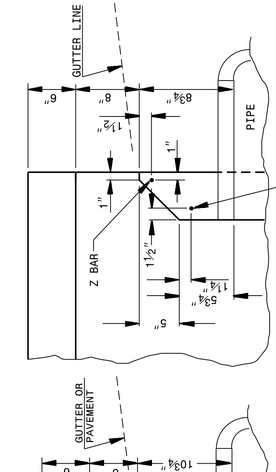


SECTION Y-Y

PLAN



SECTION X-X



PART SECTION Y-Y
SHOWING METHOD OF CONSTRUCTION IF INCREASED OPENING IS USED

PART SECTION Y-Y
SHOWING METHOD OF CONSTRUCTION FOR 6" OPENING

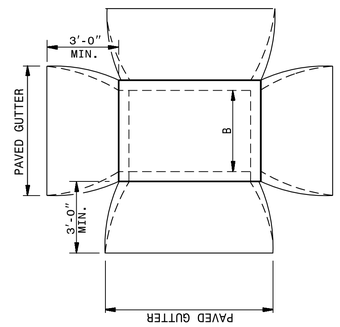
DIMENSIONS AND QUANTITIES FOR CONCRETE CATCH BASIN (BASED ON MIN. HEIGHT, H)

DIM'S OF BOX & PIPE				*MIN. DIMENSIONS AND REINFORCING*							*CU. YDS. CONC. IN BOX*		*TOTAL QUANTITIES BOX & SLABS*		*DEDUCTION ONE PIPE*		*DED. ONE (1) THROAT OPENING*
PIPE	*SPAN*	*WIDTH*	*HEIGHT*	*BARS - X*		*BARS - Y*		*BARS - Z*			*TOP & BOT. SLAB DIMENSIONS*						
D	A	B	H	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	F	G	TOP SLAB	BOT. SLAB	WALL/FT.	HT.	LBS. REINF.	YD^3 MIN. H	C.S.	R.C.	YD^3
12"	3'-6"	2'-3"	1'-10"	4	3'-0"	6	4'-3"	2	4'-3"	4'-6"	3'-3"	0.181	0.271	0.250	27	1.046	0.015	0.032	0.046
15"	3'-6"	2'-3"	2'-1"	4	3'-0"	6	4'-3"	2	4'-3"	4'-6"	3'-3"	0.181	0.271	0.250	27	1.108	0.023	0.036	0.046
18"	4'-0"	2'-8"	2'-4"	5	3'-5"	7	4'-9"	2	4'-9"	5'-0"	3'-8"	0.226	0.340	0.284	35	1.379	0.033	0.049	0.053
24"	4'-0"	2'-8"	2'-10"	5	3'-5"	7	4'-9"	2	4'-9"	5'-0"	3'-8"	0.226	0.340	0.284	35	1.521	0.059	0.085	0.053
30"	4'-0"	3'-6"	3'-4"	5	4'-3"	9	4'-9"	2	4'-9"	5'-6"	4'-6"	0.278	0.417	0.315	43	1.916	0.092	0.127	0.053
36"	4'-6"	4'-0"	3'-10"	5	4'-9"	10	5'-3"	2	5'-3"	5'-6"	5'-0"	0.340	0.510	0.352	51	2.390	0.132	0.178	0.059
42"	5'-0"	4'-6"	4'-4"	5	5'-3"	12	5'-9"	2	5'-9"	6'-0"	6'-0"	0.407	0.611	0.389	64	2.914	0.180	0.243	0.066
48"	5'-0"	5'-0"	4'-10"	5	5'-9"	13	5'-9"	2	5'-9"	6'-0"	6'-0"	0.444	0.666	0.407	68	3.298	0.235	0.317	0.066

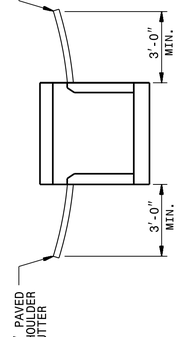
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ENGLISH DETAIL DRAWING FOR
CONCRETE CATCH BASIN
(3 OR 4 SIDE OPEN THROAT)
(MANHOLE OPTIONAL)

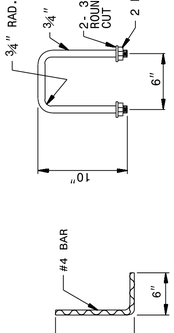
SHEET 2 OF 2 — **840D04**



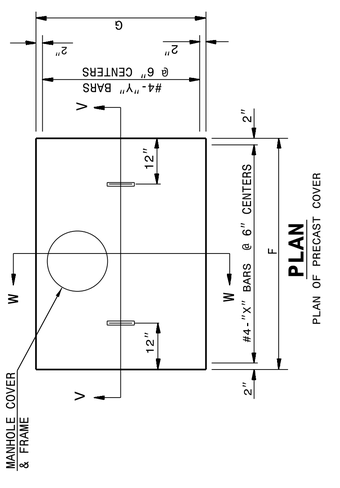
PLAN OF CATCH BASIN IN MEDIAN STRIP



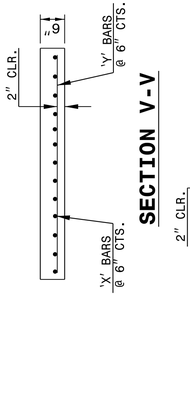
SECTION OF CATCH BASIN MEDIAN STRIP
DETAIL SHOWING METHOD OF PLACING CATCH BASIN AND PAVED SHOULDER GUTTER



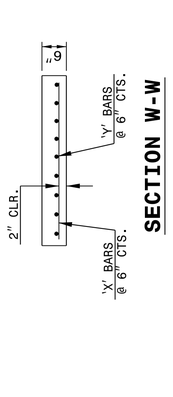
DOWEL **DETAIL OF HANDLE**



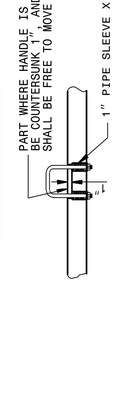
PLAN
PLAN OF PRECAST COVER



SECTION V-V



SECTION W-W



PART SECTION
THRU COVER SHOWING HANDLE

Signed by: NICHOLAS BRITT
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 33144
10/20/2026

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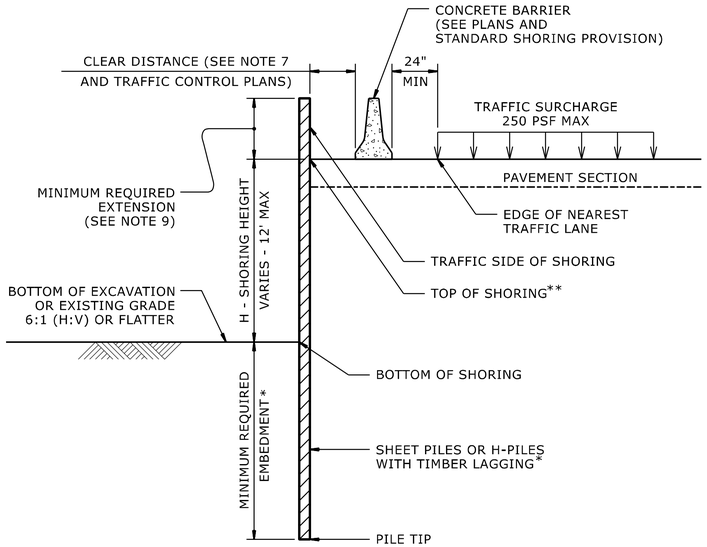
GROUNDWATER CONDITION (SEE NOTE 6)	H SHORING HEIGHT (FT)	SLOPE OR SURCHARGE CASE WITH NO TRAFFIC IMPACT					SURCHARGE CASE WITH TRAFFIC IMPACT				
		SHEET PILES		H-PILES WITH TIMBER LAGGING			SHEET PILES		H-PILES WITH TIMBER LAGGING		
		MINIMUM REQUIRED EMBEDMENT (FT)	MINIMUM REQUIRED SECTION MODULUS (IN^3/FT)	MINIMUM REQUIRED EMBEDMENT* (FT) (SEE NOTE 10)			MINIMUM REQUIRED EMBEDMENT (FT)	MINIMUM REQUIRED SECTION MODULUS (IN^3/FT)	MINIMUM REQUIRED EMBEDMENT* (FT) (SEE NOTE 10)		
				HP 10x42	HP 12x53	HP 14x73			HP 10x42	HP 12x53	HP 14x73
GROUNDWATER ELEVATION BEWTEEN BOTTOM OF SHORING AND PILE TIP	< 6	11.5	4.5	11.5	11.5	11.5	16.0	12.0	13.0	13.0	13.0
	7	13.0	7.0	13.0	13.0	13.0	17.0	14.5	14.5	14.5	14.5
	8	15.0	10.0	--	15.0	15.0	18.0	17.0	--	15.5	15.5
	9	17.0	14.0	--	17.0	17.0	19.0	20.0	--	17.0	17.0
	10	18.5	19.5	--	--	18.5	20.0	23.5	--	--	18.5
	11	20.5	26.0	--	--	--	21.0	28.0	--	--	20.0
	12	22.5	33.0	--	--	--	22.0	33.0	--	--	21.5
GROUNDWATER ELEVATION BELOW PILE TIP	< 6	7.5	3.0	8.0	8.0	8.0	11.0	10.0	9.5	9.5	9.5
	7	8.5	4.5	9.5	9.5	9.5	12.0	12.0	10.5	10.5	10.5
	8	10.0	6.5	10.5	10.5	10.5	12.5	14.0	11.5	11.5	11.5
	9	11.0	9.5	--	12.0	12.0	13.5	16.5	--	12.5	12.5
	10	12.5	13.0	--	--	13.5	14.0	19.5	--	13.5	13.5
	11	13.5	17.0	--	--	14.5	15.0	22.5	--	--	14.5
	12	15.0	21.5	--	--	16.0	16.0	25.5	--	--	15.5

MINIMUM REQUIRED EMBEDMENT AND SECTION MODULUS

*DO NOT USE H-PILES WITH TIMBER LAGGING FOR GROUNDWATER CONDITION, SHORING HEIGHT AND H-PILE SIZE SHOWN IF MINIMUM REQUIRED EMBEDMENT IS "--".

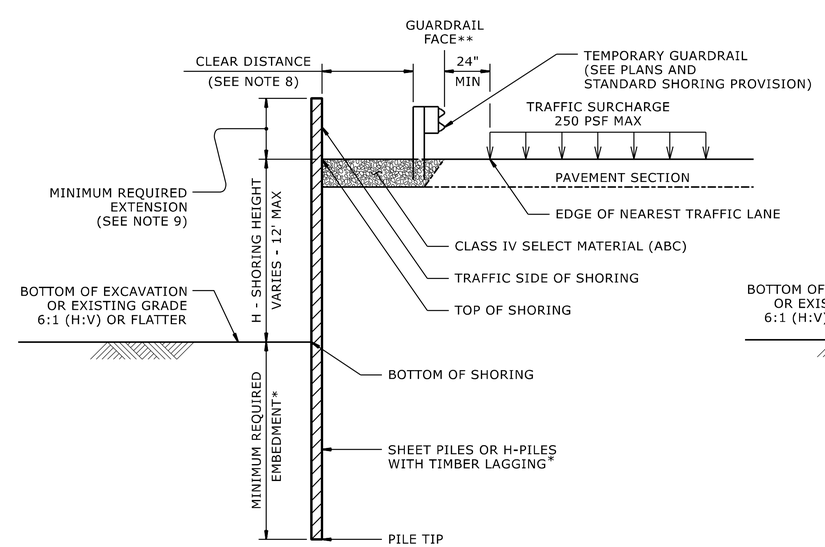
NOTES:

1. AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY SHORING AS NOTED IN THE PLANS.
2. FOR STANDARD TEMPORARY SHORING, SEE STANDARD SHORING PROVISION.
3. STANDARD TEMPORARY SHORING IS BASED ON THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:
   UNIT WEIGHT, γ = 120 PCF
   FRICTION ANGLE, φ = 30 DEGREES
   COHESION, c = 0 PSF
4. DO NOT USE STANDARD TEMPORARY SHORING IF ASSUMED SOIL PARAMETERS ARE NOT APPLICABLE.
5. DO NOT USE STANDARD TEMPORARY SHORING WHEN VERY LOOSE OR SOFT SOIL OR MUCK IS WITHIN THE EMBEDMENT DEPTH.
6. USE GROUNDWATER ELEVATION NOTED IN THE PLANS. IF NO GROUNDWATER ELEVATION IS SHOWN IN THE PLANS, USE "GROUNDWATER ELEVATION BETWEEN BOTTOM OF SHORING AND PILE TIP" FOR GROUNDWATER CONDITION. DO NOT USE STANDARD TEMPORARY SHORING IF GROUNDWATER IS ABOVE BOTTOM OF SHORING.
7. AT THE CONTRACTOR'S OPTION OR IF AVAILABLE CLEAR DISTANCE IS LESS THAN THE MINIMUM REQUIRED FOR CONCRETE BARRIER, SET BARRIER NEXT TO AND UP AGAINST TRAFFIC SIDE OF PILES AND USE "SURCHARGE CASE WITH TRAFFIC IMPACT".
8. AT THE CONTRACTOR'S OPTION OR IF AVAILABLE CLEAR DISTANCE IS LESS THAN 4' FOR TEMPORARY GUARDRAIL, ATTACH GUARDRAIL TO TRAFFIC SIDE OF PILES AS SHOWN IN THE PLANS AND USE "SURCHARGE CASE WITH TRAFFIC IMPACT".
9. MINIMUM REQUIRED EXTENSION IS 6" FOR "SLOPE OR SURCHARGE CASE WITH NO TRAFFIC IMPACT" AND 32" FOR "SURCHARGE CASE WITH TRAFFIC IMPACT".
10. MINIMUM REQUIRED EMBEDMENT FOR H-PILES WITH TIMBER LAGGING IS BASED ON DRIVEN H-PILES AT MAXIMUM 6' SPACING. AT THE CONTRACTOR'S OPTION, EMBEDMENT DEPTHS MAY BE REDUCED BY 25% FOR DRILLED-IN H-PILES.
11. SUBMIT A "STANDARD TEMPORARY SHORING SELECTION FORM" AT LEAST 7 DAYS BEFORE STARTING TEMPORARY SHORING CONSTRUCTION. UP TO 3 SHORING LOCATIONS MAY BE INCLUDED ON EACH FORM. STANDARD SHORING SELECTION FORMS ARE AVAILABLE FROM: connect.ncdot.gov/resources/Geological/Pages/Geotech_Forms_Details.aspx
12. CONTACT THE ENGINEER IF PILES DO NOT ATTAIN THE MINIMUM REQUIRED EMBEDMENT.



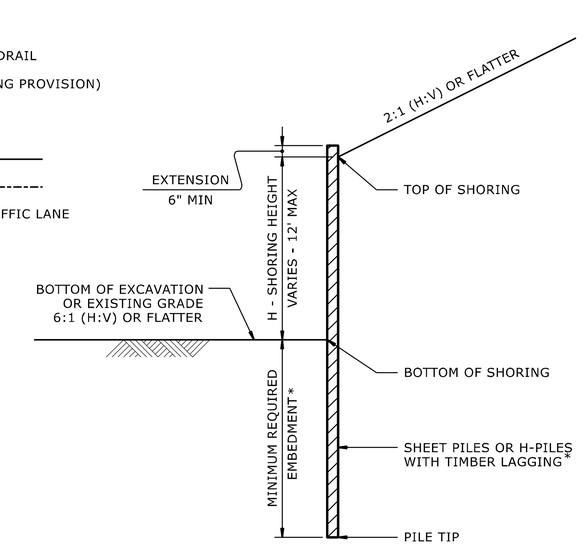
CONCRETE BARRIER

**TOP OF SHORING = EDGE OF PAVEMENT



TEMPORARY GUARDRAIL

**GUARDRAIL FACE = EDGE OF PAVEMENT



STANDARD TEMPORARY SHORING

(SLOPE CASE)
*SEE TABLE ABOVE.

STANDARD TEMPORARY SHORING

(SURCHARGE CASE)
*SEE TABLE ABOVE.

U-4714BA

2G-1 | -

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL ENGINEERING UNIT

GEOTECHNICAL ENGINEER

DocuSigned by: Scott A. Hidden 5/23/2026

NORTH CAROLINA PROFESSIONAL SEAL 022246 ENGINEER SCOTT A. HIDDEN

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STANDARD DETAIL NO. 1801.01

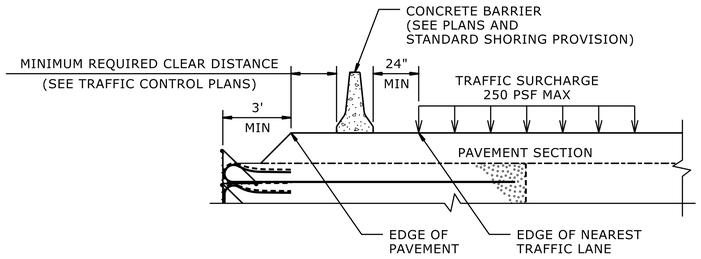
GEOTECHNICAL STANDARD DETAIL FOR

TEMPORARY SHORING

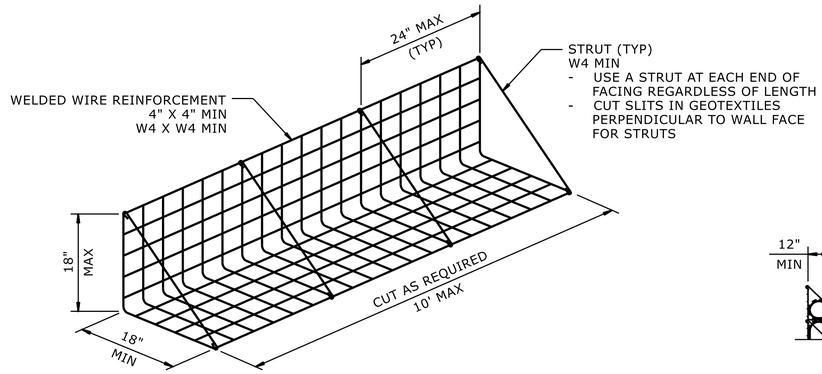
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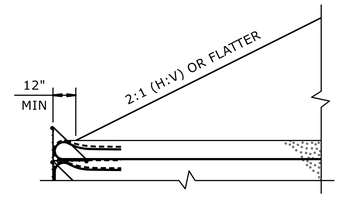
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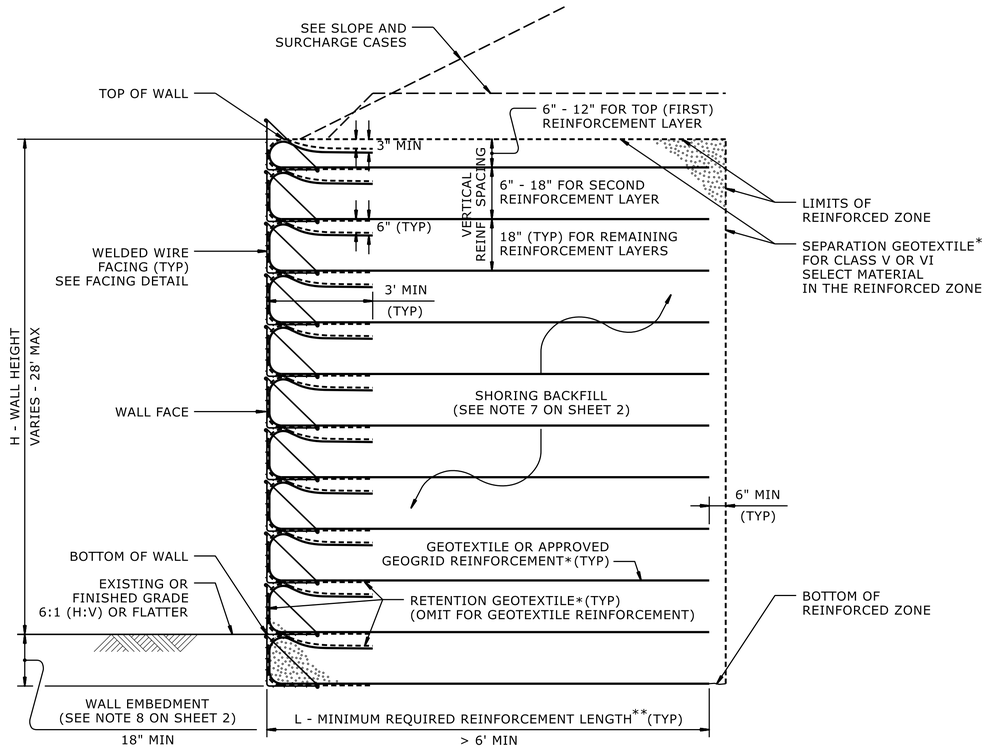
SURCHARGE CASE



FACING DETAIL

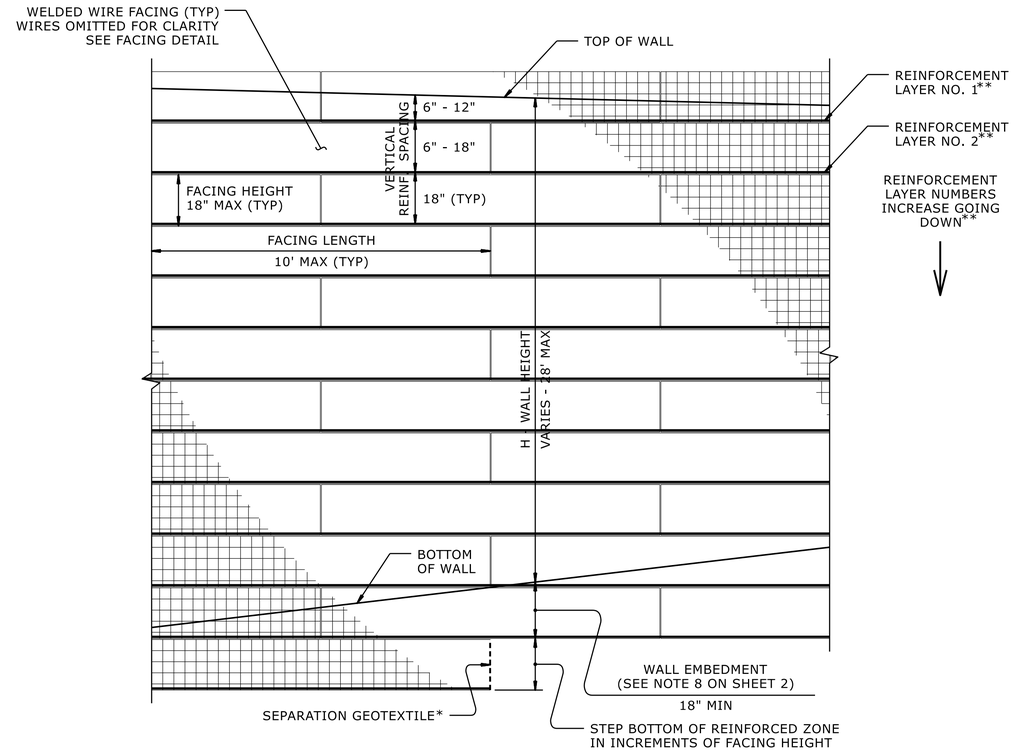


SLOPE CASE



STANDARD TEMPORARY WALL

(FOR STANDARD TEMPORARY WALLS ON STRUCTURES,
SEE TEMPORARY WALL ON STRUCTURE DETAIL ON SHEET 2.)
*SEE GEOSYNTHETIC PLACEMENT DETAILS ON SHEET 2.
**SEE REINFORCEMENT TABLES ON SHEET 3.



STANDARD TEMPORARY WALL - PARTIAL ELEVATION

*SEE GEOSYNTHETIC PLACEMENT DETAILS ON SHEET 2.
**SEE REINFORCEMENT TABLES ON SHEET 3.

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2G-2 | -

NORTH CAROLINA
DEPARTMENT
OF TRANSPORTATION

GEOTECHNICAL
ENGINEERING UNIT

GEOTECHNICAL
ENGINEER

Docusigned by:
Scott A. Hidden 2/23/2026

NORTH CAROLINA
PROFESSIONAL
SEAL
022246
ENGINEER
SCOTT A. HIDDEN

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

STANDARD
DETAIL NO. 1801.02

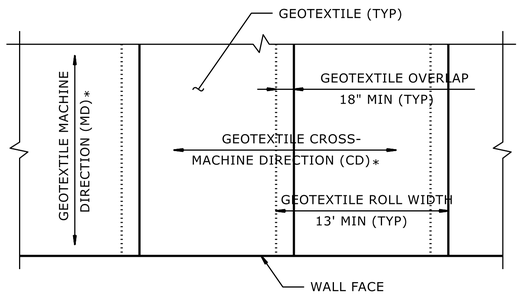
GEOTECHNICAL STANDARD DETAIL FOR

TEMPORARY WALL (SHEET 1 OF 3)

DATE: 02-18-2025

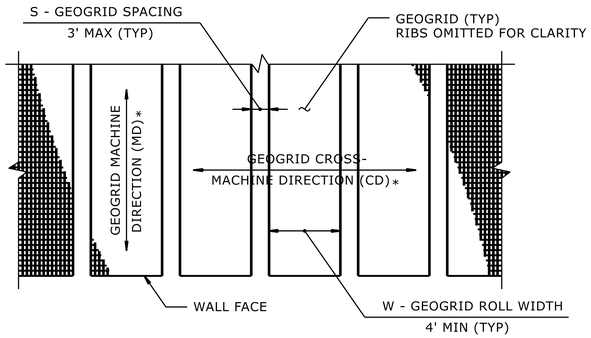
Docusign Envelope ID: 4E991284-EA82-8045-82C5-A8083F1F68D2

5/26/20



GEOTEXTILE PLACEMENT

(100% COVERAGE MIN FOR GEOTEXTILE REINFORCEMENT)

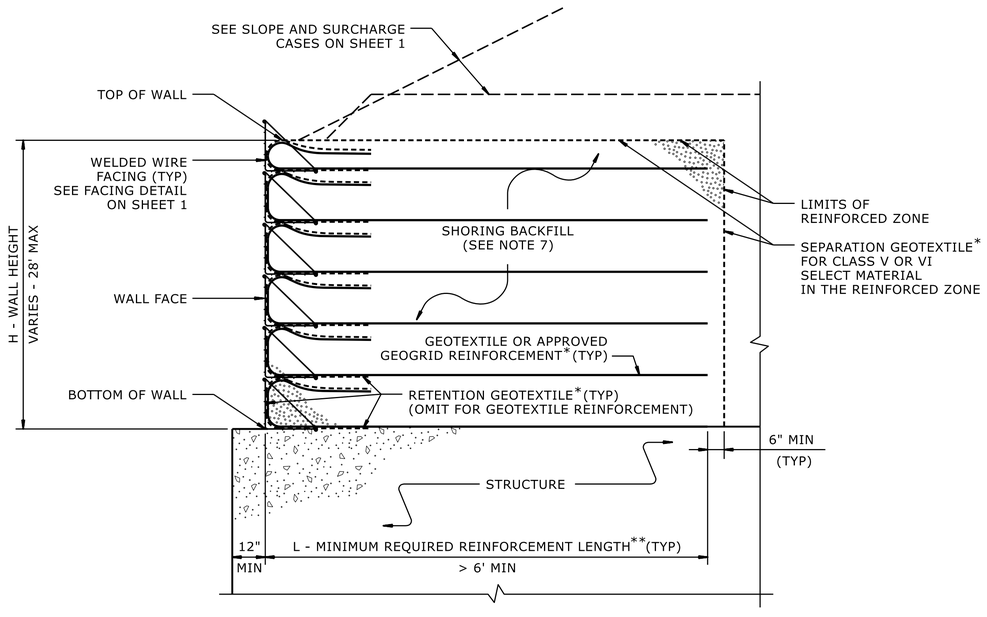


GEOGRID PLACEMENT

(80% COVERAGE MIN FOR GEOGRID REINFORCEMENT - $\frac{W}{W+S} \times 100 \geq 80\%$, SEE NOTE 11)

GEOSYNTHETIC PLACEMENT DETAILS

(PLAN VIEW)
*SEE NOTE 12.



TEMPORARY WALL ON STRUCTURE DETAIL

*SEE GEOSYNTHETIC PLACEMENT DETAILS.
**SEE REINFORCEMENT TABLES ON SHEET 3.

NOTES:

1. AT THE CONTRACTOR'S OPTION, USE STANDARD TEMPORARY WALLS AS NOTED IN THE PLANS.
2. FOR STANDARD TEMPORARY WALLS, SEE STANDARD SHORING PROVISION.
3. STANDARD TEMPORARY WALLS ARE BASED ON THE FOLLOWING IN-SITU ASSUMED SOIL PARAMETERS:
   UNIT WEIGHT, γ = 120 PCF
   FRICTION ANGLE, φ = 30 DEGREES
   COHESION, c = 0 PSF
4. DO NOT USE STANDARD TEMPORARY WALLS IF ASSUMED SOIL PARAMETERS ARE NOT APPLICABLE.
5. DO NOT USE STANDARD TEMPORARY WALLS WHEN VERY LOOSE OR SOFT SOIL OR MUCK IS BELOW TEMPORARY WALLS.
6. USE GROUNDWATER ELEVATION NOTED IN THE PLANS. IF NO GROUNDWATER ELEVATION IS SHOWN IN THE PLANS, ASSUME GROUNDWATER DEPTH IS LESS THAN 7' BELOW BOTTOM OF REINFORCED ZONE. DO NOT USE STANDARD TEMPORARY WALLS IF GROUNDWATER OR FLOOD ELEVATION IS ABOVE BOTTOM OF REINFORCED ZONE.
7. DO NOT USE A-2-4 SOIL FOR STANDARD TEMPORARY WALLS AROUND CULVERTS OR IN THE REINFORCED ZONE OF STANDARD TEMPORARY WALLS FOR SLOPE CASES. DO NOT USE CLASS VI SELECT MATERIAL IN THE REINFORCED ZONE OF STANDARD TEMPORARY WALLS WITH GEOTEXTILE REINFORCEMENT.
8. WALL EMBEDMENT IS NOT REQUIRED FOR STANDARD TEMPORARY WALLS ON STRUCTURES OR ROCK AS DETERMINED BY THE ENGINEER.
9. DO NOT USE MORE THAN 4 DIFFERENT REINFORCEMENT STRENGTHS FOR EACH STANDARD TEMPORARY WALL.
10. GEOGRIDS FOR GEOGRID REINFORCEMENT ARE APPROVED FOR SHORT TERM DESIGN STRENGTHS (3-YEAR DESIGN LIFE) IN THE MD AND CD BASED ON MATERIAL TYPE. THE LIST OF APPROVED GEOGRIDS WITH DESIGN STRENGTHS IS AVAILABLE FROM: connect.ncdot.gov/resources/Geological/Pages/Products.aspx
    DEFINE MATERIAL TYPE FROM THE WEBSITE ABOVE FOR SHORING BACKFILL AS FOLLOWS:

MATERIAL TYPE	SHORING BACKFILL
BORROW	A-2-4 SOIL
FINE AGGREGATE	CLASS II, TYPE 1 OR CLASS III SELECT MATERIAL
COARSE AGGREGATE	CLASS V OR VI SELECT MATERIAL

11. FOR GEOGRID REINFORCEMENT WITH LESS THAN 100% COVERAGE, STAGGER REINFORCEMENT SO GEOGRIDS ARE CENTERED OVER GAPS IN THE REINFORCEMENT LAYER BELOW.
12. AT THE CONTRACTOR'S OPTION, REINFORCEMENT MAY BE INSTALLED WITH THE MD PARALLEL TO THE WALL FACE IF BOTH OF THE FOLLOWING CONDITIONS OCCUR:
    - W (REINFORCEMENT ROLL WIDTH) > (MINIMUM REQUIRED REINFORCEMENT LENGTH) + 4.5' AND
    - REINFORCEMENT STRENGTH IN CD > MINIMUM REQUIRED REINFORCEMENT STRENGTH IN MD.
13. SUBMIT A "STANDARD TEMPORARY WALL SELECTION FORM" AT LEAST 7 DAYS BEFORE STARTING TEMPORARY WALL CONSTRUCTION. STANDARD SHORING SELECTION FORMS ARE AVAILABLE FROM: connect.ncdot.gov/resources/Geological/Pages/Geotech_Forms_Details.aspx
14. DO NOT PLACE SHORING BACKFILL OR REINFORCEMENT UNTIL EXCAVATION DIMENSIONS AND FOUNDATION MATERIAL ARE APPROVED.
15. FOR STANDARD TEMPORARY WALLS WITH PILE FOUNDATIONS IN THE REINFORCED ZONE, DRIVE PILES THROUGH REINFORCEMENT AFTER CONSTRUCTING TEMPORARY WALLS.
16. DO NOT SPLICE OR OVERLAP REINFORCEMENT SO SEAMS ARE PARALLEL TO THE WALL FACE.
17. CONTACT THE ENGINEER WHEN EXISTING OR FUTURE OBSTRUCTIONS SUCH AS FOUNDATIONS, PAVEMENTS, PIPES, INLETS OR UTILITIES WILL INTERFERE WITH REINFORCEMENT.
18. FOR STANDARD TEMPORARY WALLS WITH INTERIOR ANGLES LESS THAN 90 DEGREES, WRAP GEOSYNTHETICS AT ACUTE CORNERS AS DIRECTED BY THE ENGINEER.
19. FOR STANDARD TEMPORARY WALLS WITH TOP OF WALL WITHIN 5' OF FINISHED GRADE, REMOVE TOP FACING AND INCORPORATE TOP REINFORCEMENT LAYER INTO FILL WHEN PLACING FILL IN FRONT OF WALL.

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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL ENGINEERING UNIT

GEOTECHNICAL ENGINEER
Docusigned by: Scott A. Hidden 02/23/2026
F7000F7F4C6C4E8...
NORTH CAROLINA PROFESSIONAL SEAL 022246 ENGINEER SCOTT A. HIDDEN

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

STANDARD DETAIL NO. 1801.02

TEMPORARY WALL (SHEET 2 OF 3)

GEOTECHNICAL STANDARD DETAIL FOR

DATE: 02-18-2025

Docusign Envelope ID: 4E991284-EA82-8045-82C5-A8083F1F68D2

5/26/20

SLOPE OR SURCHARGE CASE	GROUNDWATER DEPTH BELOW BOTTOM OF REINFORCED ZONE (SEE NOTE 6 ON SHEET 2) (FT)	SHORING BACKFILL TYPE IN THE REINFORCED ZONE (SEE NOTE 7 ON SHEET 2)	H - WALL HEIGHT (FT)																								
			< 4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
SLOPE CASE	> 0	CLASS II, TYPE 1, CLASS III, CLASS V OR CLASS VI SELECT MATERIAL	6	6	7	8	9	11	12	13	13	14	15	16	17	18	19	20	21	22	23	24	24	25	26	27	27
SURCHARGE CASE	> 0 TO 7 FOR H < 20' > 0 TO 10 FOR H > 20'	ALL SHORING BACKFILL TYPES	6	7	7	8	8	9	9	10	11	11	12	12	13	14	14	15	16	17	17	18	19	19	20	21	22
	> 7 FOR H < 20' > 10 FOR H > 20'	A-2-4 SOIL	6	6	7	8	8	9	9	10	11	11	12	12	13	14	14	15	16	16	17	18	18	19	20	20	21
		CLASS II, TYPE 1 OR CLASS III SELECT MATERIAL	6	6	7	7	8	8	9	10	10	11	11	12	12	13	14	15	15	16	16	17	17	18	18	19	20
		CLASS V OR CLASS VI SELECT MATERIAL	6	6	7	7	7	8	8	9	9	10	10	11	12	13	13	14	14	15	15	16	17	17	18	19	19

L - MINIMUM REQUIRED REINFORCEMENT LENGTH (FT)

(FOR ALL REINFORCEMENT TYPES)

WALL HEIGHT (H) + WALL EMBEDMENT (FT)	NUMBER OF REINFORCEMENT LAYERS*
2.5 - 4	3
4 - 5.5	4
5.5 - 7	5
7 - 8.5	6
8.5 - 10	7
10 - 11.5	8
11.5 - 13	9
13 - 14.5	10
14.5 - 16	11
16 - 17.5	12
17.5 - 19	13
19 - 20.5	14
20.5 - 22	15
22 - 23.5	16
23.5 - 25	17
25 - 26.5	18
26.5 - 28	19
28 - 29.5	20

*BASED ON VERTICAL REINFORCEMENT SPACING SHOWN ON SHEET 1.

REINFORCEMENT LAYER NUMBER *	SHORING BACKFILL TYPE IN THE REINFORCED ZONE (SEE NOTE 7 ON SHEET 2)				
	SLOPE CASE		SURCHARGE CASE		
	CLASS II, TYPE 1 OR CLASS III SELECT MATERIAL	CLASS V SELECT MATERIAL	A-2-4 SOIL	CLASS II, TYPE 1 OR CLASS III SELECT MATERIAL	CLASS V SELECT MATERIAL
1	2400	2400	2400	2400	2400
2	2400	2400	2400	2400	2400
3	2400	2400	2400	2400	2400
4	2400	2400	2500	2400	2400
5	2500	2400	3000	2400	2400
6	3000	2400	3500	2800	2400
7	3500	2700	4000	3200	2600
8	4000	3100	4500	3600	2900
9	4500	3500	5000	4000	3200
10	5000	3900	5500	4400	3500
11	5500	4300	6000	4800	3800
12	6000	4700	6500	5200	4100
13	6500	5100	7000	5600	4400
14	7000	5400	7500	6000	4700
15	7500	5800	8000	6400	5000
16	8000	6200	8500	6800	5300
17	8500	6600	9000	7200	5600
18	9000	7000	9500	7600	5900
19	9500	7400	10000	8000	6200
20	10000	7800	10500	8400	6500

GEOTEXTILE REINFORCEMENT ULTIMATE TENSILE STRENGTH (LB/FT)

REINFORCEMENT LAYER NUMBER*	SHORING BACKFILL TYPE IN THE REINFORCED ZONE (SEE NOTE 7 ON SHEET 2)				
	SLOPE CASE		SURCHARGE CASE		
	CLASS II, TYPE 1 OR CLASS III SELECT MATERIAL	CLASS V OR CLASS VI SELECT MATERIAL	A-2-4 SOIL	CLASS II, TYPE 1 OR CLASS III SELECT MATERIAL	CLASS V OR CLASS VI SELECT MATERIAL
1	240	200	340	290	240
2	380	310	520	430	350
3	530	420	700	570	460
4	690	550	870	720	570
5	860	690	1050	860	680
6	1030	830	1220	1000	790
7	1200	970	1400	1150	900
8	1370	1110	1580	1290	1010
9	1550	1240	1750	1430	1120
10	1720	1380	1930	1580	1230
11	1890	1520	2100	1720	1340
12	2060	1660	2280	1860	1450
13	2240	1800	2450	2010	1560
14	2410	1940	2630	2150	1670
15	2580	2080	2800	2290	1780
16	2750	2220	2980	2440	1890
17	2930	2360	3160	2580	2000
18	3100	2500	3330	2720	2110
19	3270	2640	3510	2860	2220
20	3440	2780	3690	3000	2330

GEOGRID REINFORCEMENT SHORT-TERM DESIGN STRENGTH (LB/FT)

(SEE NOTE 10 ON SHEET 2.)

MINIMUM REQUIRED REINFORCEMENT STRENGTH IN MD

(SEE NOTE 9 ON SHEET 2.)
*SEE PARTIAL ELEVATION ON SHEET 1
FOR REINFORCEMENT LAYER NUMBERING.

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2G-4 | -

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

GEOTECHNICAL ENGINEERING UNIT

GEOTECHNICAL ENGINEER

DocuSigned by: Scott A. Hidden 12/23/2026

NORTH CAROLINA PROFESSIONAL SEAL 022246 ENGINEER SCOTT A. HIDDEN

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

STANDARD DETAIL NO. 1801.02

GEOTECHNICAL STANDARD DETAIL FOR TEMPORARY WALL (SHEET 3 OF 3)

DATE: 02-18-2025

Docusign Envelope ID: 4E991284-EA82-8045-82C5-A8083F1F68D2

6/2/99

COMPUTED BY: WDM DATE: 06/16/2026
CHECKED BY: GAM DATE: 07/06/2026

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT REFERENCE NO.	SHEET NO.
U-4714BA	3B-1

STV Engineers, Inc.
2151 Hawkins St., Suite 1400
Charlotte, NC 28203
NC License Number F-0991

SUMMARY OF EARTHWORK
IN CUBIC YARDS

SURVEY LINE	FROM STATION	TO STATION	UNCLASSIFIED EXCAVATION	UNDERCUT	EMBANK +%	BORROW	WASTE
–L–	10+00.00 LT	40+00.00 LT	3,377	1,690	8,741	6,443	2,769
–L–	40+00.00 LT	45+90.00 LT	503	241	982	479	241
–L–	45+75.00 RT	60+70.00 RT	4,124	1,782	467		5,439
–L–	61+10.00 RT	69+85.00 RT	293	218	1,920	1,627	218
–L–	74+10.00 RT	81+12.35 RT	338	36	299		75
–L–	32+00.00 POND	34+00.00 POND	1,028		414		614
–Y–	10+70.00	11+64.27	58		10		48
–Y2–	11+00.00	11+64.50	19		36	17	
–Y4–	10+43.19	11+90.00	48		76	28	
–Y5–	11+60.00	13+04.20	27		30	3	
–Y7–	10+20.00	11+68.37	25		23		2
–Y9–	10+41.50	11+80.00	228		16		212
–Y10–	10+00.00 RT	13+49.25 RT	30		455	425	
–Y10–	14+56.46 RT	22+40.00 RT	11		804	793	
SUBTOTAL 1 (TMP PHASES 1)			10,109	3,967	14,270	9,814	9,620
–L–	10+00.00 RT	40+00.00 RT	980	690	5,090	4,331	911
–L–	40+00.00 RT	45+75.00 RT	262	177	2,065	1,803	177
–L–	50+90.00 LT	81+12.35 LT	2,647	1,485	2,460		1,672
–Y1–	10+35.72	11+55.00	47		5		42
–Y3–	10+35.55	11+70.00	31		103	72	
–Y8–	10+38.48	11+65.00	282		31		251
–Y10–	10+00.00 LT	13+49.25 LT	22		148	126	
–Y10–	14+56.46 LT	22+40.00 LT	332		289		43
SUBTOTAL 2 (TMP PHASE 2)			4,603	2,352	10,192	6,332	3,096
–L–	45+75 LT	50+90 LT	99	73	908	809	73
SUBTOTAL 3 (TMP PHASE 3)			99	73	908	809	73
TOTAL			14,811	6,392	25,370	16,955	12,789
MATERIAL FOR SHOULDER CONSTRUCTION					84	84	
LOSS DUE TO CLEARING & GRUBBING			–1,200			1,200	
ADDITIONAL UNDERCUT				2,300	840	840	700
WASTE IN LIEU OF BORROW						–5,097	–5,097
PROJECT TOTAL			13,611	8,692	26,294	13,982	8,392
EST. 5% TO REPLACE TOP SOIL ON BORROW PIT						699	
GRAND TOTAL			13,611	8,692	26,294	14,681	8,392
SAY			13,650	8,700		14,700	

DDE = 590 CY

NOTE: Approximate quantities only. Unclassified Excavation, Borrow Excavation, Fine Grading, Clearing and Grubbing, and Removal of Existing Pavement will be paid for at the contract lump sum price for "Grading."

ASPHALT PAVEMENT REMOVAL SUMMARY

SURVEY LINE	STATION	STATION	LOCATION LT/RT/CL	YD^2
–L–	10+00	13+78	RT	135.82
–L–	15+72	23+47	RT	414.09
–L–	20+92	23+40	LT /RT	154.59
–L–	24+05	27+18	RT	220.82
–L–	27+52	29+12	RT	72.22
–L–	33+06	34+71	RT	717.98
–L–	39+16	46+09	LT	1,188.48
–L–	46+50	50+93	LT	435.88
–L–	49+87	52+26	LT /RT	274.62
–L–	56+93	60+14	LT /RT	2,322.36
–L–	61+41	71+32	LT	983.90
–L–	61+67	63+46	RT	375.59
–L–	66+97	67+87	RT	328.44
–L–	77+37	77+39	RT	1.82
–Y4–	10+65	11+01	LT	11.92
–Y5–	12+18	12+83	LT	54.91
–Y9–	10+42	11+80	LT /RT	287.05
–Y10–	11+50	13+39	LT	319.41
–Y10–	14+70	15+87	RT	156.91
REMOVAL OF TEMPORARY ASPHALT PAVEMENT				
–L–	41+70	45+75	LT	255.52
–Y8–	10+00	10+18	LT /RT	244.73
			TOTAL:	8,665.11
			SAY:	8,670

10/3/2026
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COMPUTED BY: JMS DATE: 09/28/2026

CHECKED BY: TAP DATE: 09/29/2026

DG1Y184

PROJECT NO.	SHEET NO.
U-4714BA	3D-1

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout. See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

Line & Station / Size / Thickness or Gauge	Offset	Structure Number From	Structure Number To	Top Elevation FT.	Invert Elevation FT.	Invert Elevation FT.	Minimum Required Slope %	C.S. Pipe 12 (.064)	C.S. Pipe 15 (.064)	C.S. Pipe 18 (.064)	C.S. Pipe 24 (.064)	R.C. Pipe Class III 12	Class III 15	Class III 18	Class III 24	Class III 30	Class III 36	Class III 42	Class III 48	R.C. Pipe Class IV 12	Class IV 15	Class IV 18	Class IV 24	Class IV 30	Class IV 36	Class IV 42	Class IV 48	R.C. Pipe Class V 12	Class V 15	Class V 18	Class V 24	Class V 30	Class V 36	Class V 42	Class V 48
L 10+02	37 LT	0401		741.9																															
		0401	0402		738.0	727.3	0.4															296													
L 13+00	37 LT	0402		730.7																															
		0402	0404		727.3	722.3	0.6															128													
L 14+28	37 LT	0404		727.4																															
		0404	0406		721.8	721.6									32																				
L 14+28	69 LT	0406		723.6																															
L 14+74	9 LT	0405		727.4																															
		0405	0404		724.2	722.6															52														
L 10+35	38 RT	0408		740.8																															
		0408	0410		736.7	733.0	1.7															104													
L 10+35	57 RT	0409		741.7																															
		0409	0408		737.1	737.0							20																						
L 11+41	38 RT	0410		736.8																															
		0410	0412		733.0	727.8	2.1															136													
L 11+41	61 RT	0411		737.6																															
		0411	0410		734.1	733.3							24																						
L 12+78	38 RT	0412		731.8																															
		0412	0414		727.3	724.7	0.5																96												
L 12+78	65 RT	0413		730.5																															
		0413	0412		728.2	728.1							28																						
L 13+74	38 RT	0414		728.6																															
		0414	0415		724.7	723.4	0.6																64												
L 14+10	91 RT	0415		727.3																															
		0415	0416		723.4	721.7	0.6																108												
L 15+16	67 RT	0416		725.8																															
		0416	0418		721.7	719.6										28																			
L 15+64	84 RT	0418		722.1																															
L 15+45	37 LT	0420		725.8																															
		0420	0425		722.1	721.8															56														
L 16+53	72 RT	0421		720.4																															
L 16+53	38 RT	0422		725.5																															
		0422	0421		722.4	719.1	0.4						36																						
L 16+11	38 RT	0423		725.5																															
		0423	0422		722.6	722.4															40														
L 16+11	37 LT	0424		725.5																															
		0424	0425		721.9	721.8	0.3														8														
L 16+03	37 LT	0425		725.5																															
		0425	0426		721.8	721.6	0.5						48																						
L 16+03	82 LT	0426		722.9																															
L 17+02	37 LT	0501		725.8																															
		0501	0424		722.3	721.9															88														
L 18+63	37 LT	0502		727.9																															
		0502	0501		723.8	722.3															160														
L 19+91	37 LT	0503		729.1																															
		0503	0502		724.4	723.8															128														
Y 11+13	17 RT	0504		728.4																															
		0504	0503		724.8	724.4															72														
Y 11+13	17 LT	0505		728.6																															
		0505	0504		724.9	724.8															32														
SHEET TOTALS													156		32	28					636	664	268												

Line & Station	From	To	Endwalls Std. 838.01 or Std. 838.11 (Unless Noted Otherwise) CY	Reinforced Endwalls CY	Drainage Structure Masonry CY	Quantities for Drainage Structures 0' thru 5' EACH	A: 5' thru 10' LIN. FT.	B: 10' and Above LIN. FT.	C.B. Std. 840.01 or Std. 840.02	Frame, Grates, and Hood Std. 840.03 Grate Type E	Grate Type F	Grate Type G
L 10+02	0401					1			1			1
	0401	0402										
L 13+00	0402					1			1			1
	0402	0404										
L 14+28	0404					1	0.6		1			1
	0404	0406										
L 14+28	0406											
L 14+74	0405					1						
	0405	0404										
L 10+35	0408					1			1		1	
	0408	0410										
L 10+35	0409					1						
	0409	0408										
L 11+41	0410					1			1		1	
	0410	0412										
L 11+41	0411					1						
	0411	0410										
L 12+78	0412					1			1		1	
	0412	0414										
L 12+78	0413					1						
	0413	0412										
L 13+74	0414					1			1		1	
	0414	0415										
L 14+10	0415					1			1		1	
	0415	0416										
L 15+16	0416					1			1	1		
	0416	0418										
L 15+64	0418											
L 15+45	0420					1			1			1
	0420	0425										
L 16+53	0421											
L 16+53	0422					1			1			1
	0422	0421										
L 16+11	0423					1			1	1		
	0423	0422										
L 16+11	0424					1			1	1		
	0424	0425										
L 16+03	0425					1			1	1		
	0425	0426										
L 16+03	0426											
L 17+02	0501					1			1		1	
	0501	0424										
L 18+63	0502					1			1		1	
	0502	0501										
L 19+91	0503					1			1		1	
	0503	0502										
Y 11+13	0504					1			1			1
	0504	0503										
Y 11+13	0505					1			1		1	
	0505	0504										
SHEET TOTALS						23	0.6		19	4	9	6

NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)

Line & Station	From	To	Concrete Transitional Section: D.I. Std. 852.04 or Std. 852.06	Concrete Transitional Section: C.B. Std. 852.05	Open Throat C.B. Std. 840.04 or Std. 840.05	Concrete Bridge Approach D.I. Std. 840.13	D.I. Std. 840.14 or Std. 840.15	D.I. Frame and Grates Std. 840.16	G.D.I. Type "A" Std. 840.17 or Std. 840.26	G.D.I. Type "B" Std. 840.18 or Std. 840.27	G.D.I. Type "D" Std. 840.19 or Std. 840.28	G.D.I. (W.S. Flat) Frame with Grate Std. 840.20	G.D.I. (W.S. Flat) Frame w/ 2 Grates Std. 840.20	G.D.I. (W.S. Sag) Frame w/ Grate Std. 840.22	G.D.I. (W.S. Sag) Frame w/ 2 Grates Std. 840.22	G.D.I. (N.S. Sag) Frame w/ Grate Std. 840.24	G.D.I. (N.S. Sag) Frame w/ 2 Grates Std. 840.24	G.D.I. (N.S. Flat) Frame w/ Grate Std. 840.29	G.D.I. (N.S. Flat) Frame w/ 2 Grates Std. 840.29	Driveway D.I. Std. 840.30	Frame w/ Grate for Driveway Std. 840.30	J.B. Std. 840.31 or Std. 840.32	Angled Vane Grates and Frames Std. 840.33	T.B.J.B. Std. 840.34	T.B.D.I. Std. 840.35	T.B.D.I. for Steel Grates Std. 840.36	Steel Frame with Two Grates Std. 840.37	Temp Steel Plate Cover Masonry Drainage	Open Throat C.B. (3 or 4 Sided) Std. 840D04	M.H. Std. 840.51, Std. 840.52, or Std. 840.53	M.H. Frame and Cover Std. 840.54	M.H. Frame and Cover for OTCB Std. 840.55	Convert Existing J.B. to D.I.	Adjust C.B.	Adjust D.I.	15" C.S. Elbow	18" C.S. Elbow	24" C.S. Elbow	Flowable Fill CY	Concrete Collars Cl. "B" Std. 840.72 CY	Concrete and Brick Pipe Plug Std. 840.71 CY	Pipe Removal LIN. FT.	Remarks
L 10+02	0401																																										
	0401	0402																																									
L 13+00	0402																																										
	0402	0404																																									
L 14+28	0404																																										
	0404	0406																																									
L 14+28	0406																																										
L 14+74	0405		1										1												1																		
	0405	0404																																									
L 10+35	0408																																										
	0408	0410																																									
L 10+35	0409						1	1																																			
	0409	0408																																									
L 11+41	0410																																										
	0410	0412																																									
L 11+41	0411						1	1																																			
	0411	0410																																									
L 12+78	0412																																										
	0412	0414																																									
L 12+78	0413						1	1																																			
	0413	0412																																									
L 13+74	0414																																										
	0414	0415																																									
L 14+10	0415																																										
	0415	0416																																									
L 15+16	0416																																										
	0416	0418																																									
L 15+64	0418																																										
L 15+45	0420																																										
	0420	0425																																									
L 16+53	0421																																										
L 16+53	0422																																										
	0422	0421																																									
L 16+11	0423																																										
	0423	0422																																									
L 16+11	0424																																										
	0424	0425																																									
L 16+03	0425																																										
	0425	0426																																									
L 16+03	0426																																										
L 17+02	0501																																										
	0501	0424																																									
L 18+63	0502																																										
	0502	0501																																									
L 19+91	0503																																										
	0503	0502																																									
Y 11+13	0504																																										
	0504	0503																																									
Y 11+13	0505																																										
	0505	0504																																									
SHEET TOTALS			1				3	3					1												1																		

ABBREVIATIONS

C.A.A.	CORRUGATED ALUMINIUM ALLOY
C.B.	CATCH BASIN
C.S.	CORRUGATED STEEL
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
H.D.P.E.	HIGH DENSITY POLYETHYLENE
J.B.	JUNCTION BOX
M.H.	MANHOLE
N.S.	NARROW SLOT
P.V.C.	POLYVINYL CHLORIDE
R.C.	REINFORCED CONCRETE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX
W.S.	WIDE SLOT

DG1Y184

COMPUTED BY: JMS DATE: 09/28/2026

CHECKED BY: TAP DATE: 09/29/2026

PROJECT NO.	SHEET NO.
U-4714BA	3D-2

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout. See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

LINE & STATION / SIZE / THICKNESS OR GAUGE	OFFSET	STRUCTURE NUMBER FROM	STRUCTURE NUMBER TO	TOP ELEVATION FT.	INVERT ELEVATION FT.	INVERT ELEVATION FT.	MINIMUM REQUIRED SLOPE %	C. S. PIPE 12 (.064)	C. S. PIPE 15 (.064)	C. S. PIPE 18 (.064)	C. S. PIPE 24 (.064)	R. C. PIPE CLASS III 12	III 15	III 18	III 24	III 30	III 36	III 42	III 48	R. C. PIPE CLASS IV 12	IV 15	IV 18	IV 24	IV 30	IV 36	IV 42	IV 48	R. C. PIPE CLASS V 12	V 15	V 18	V 24	V 30	V 36	V 42	V 48
L 17+02	38 RT	0506		725.8																															
		0506	0422		723.0	722.4	0.3														48														
L 18+63	38 RT	0507		727.7																															
		0507	0506		724.8	723.0															160														
L 21+26	37 LT	0508		730.7																															
		0508	0505		727.1	724.9															72														
L 20+70	38 RT	0510		730.3																															
		0510	0507		727.4	724.8															208														
L 20+70	62 RT	0511		731.1																															
		0511	0510		727.5	727.4							24																						
L 20+05	8 RT	0512		730.1																															
		0512	0503		727.0	724.4															44														
L 24+26	8 LT	0513		731.2																															
		0513	0514		727.9	727.3															32														
L 24+36	37 LT	0514		730.3																															
		0514	0516		727.3	726.4															120														
L 24+18	61 LT	0515		730.8																															
		0515	0514		728.5	727.3															32														
L 25+56	37 LT	0516		729.4																															
		0516	0518		726.4	725.6															124														
L 26+82	37 LT	0518		728.6																															
		0518	0520		725.6	724.4															204														
L 28+85	40 LT	0520		727.4																															
		0520	0601		724.4	723.8	0.4														116														
L 23+06	38 RT	0523		731.1																															
		0523	0524		728.1	728.0							20																						
L 23+11	59 RT	0524		732.2																															
		0524	0525		726.6	726.4							52																						
Y1 10+91	17 RT	0525		729.9																															
		0525	0527		726.9	726.7															32														
L 24+47	38 RT	0526		730.2																															
		0526	0528		726.3	725.8															108														
Y1 10+82	17 LT	0527		729.9																															
		0527	0526		726.7	726.3							76																						
L 25+56	37 RT	0528		729.4																															
		0528	0530		725.8	725.2															124														
L 25+56	59 RT	0529		728.4																															
		0529	0528		726.0	725.8							20																						
L 26+80	38 RT	0530		728.6																															
		0530	0533		724.9	724.8																28													
L 26+80	62 RT	0531		728.3																															
		0531	0530		726.0	725.2							24																						
Y3 11+69	20 RT	0532		730.3																															
		0532	0534		727.3	724.6								80																					
L 27+06	47 RT	0533		728.3																															
		0533	0534		724.8	724.6																40													
Y3 10+87	17 RT	0534		728.5																															
		0534	0536		724.6	724.4	0.4															32													
Y3 11+68	21 LT	0535		727.0																															
		0535	0536		725.5	724.4								84																					
SHEET TOTALS													216	164							1424	100													

LINE & STATION	STRUCTURE NUMBER	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY	REINFORCED ENDWALLS CY	DRAINAGE STRUCTURE MASONRY CY	QUANTITIES FOR DRAINAGE STRUCTURES (NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)) 0' THRU 5' EACH	A 5' THRU 10' LIN. FT.	B 10' AND ABOVE LIN. FT.	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E	F	G
L 17+02	0506				1			1			1
L 18+63	0507				1			1			1
L 21+26	0508				1			1		1	
L 20+70	0510				1			1			1
L 20+70	0511				1						
L 20+05	0512				1						
L 24+26	0513				1						
L 24+36	0514				1			1			1
L 24+18	0515				1						
L 25+56	0516				1			1			1
L 26+82	0518				1			1			1
L 28+85	0520				1			1			1
L 23+06	0523				1			1		1	
L 23+11	0524				1	0.6					
Y1 10+91	0525				1			1		1	
L 24+47	0526				1			1		1	
Y1 10+82	0527				1			1			1
L 25+56	0528				1			1		1	
L 25+56	0529				1						
L 26+80	0530				1			1		1	
L 26+80	0531				1						
Y3 11+69	0532										
L 27+06	0533				1			1	1		
Y3 10+87	0534				1			1			1
Y3 11+68	0535										
SHEET TOTALS					23	0.6		16	1	6	9

LINE & STATION	STRUCTURE NUMBER	CONCRETE TRANSITIONAL SECTION D.I. STD. 852.04 OR STD. 852.06	C.B. STD. 852.05	OPEN THROAT C.B. STD. 840.04 OR STD. 840.05	CONCRETE BRIDGE APPROACH D.I. STD. 840.13	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATES STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26	G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27	G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28	G.D.I. (W.S. FLAT) FRAME WITH GRATE STD. 840.20	G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20	G.D.I. (W.S. SAG) FRAME W/ GRATE STD. 840.22	G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22	G.D.I. (N.S. SAG) FRAME W/ GRATE STD. 840.24	G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24	G.D.I. (N.S. FLAT) FRAME W/ GRATE STD. 840.29	G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29	DRIVEWAY D.I. STD. 840.30	FRAME W/ GRATE FOR DRIVEWAY STD. 840.30	J.B. STD. 840.31 OR STD. 840.32
L 20+70	0511					1	1														
L 20+05	0512	1										1									
L 24+26	0513	1										1									
L 24+18	0515					1	1														
L 23+11	0524					1	1														
L 25+56	0529					1	1														
L 26+80	0531					1	1														
SHEET TOTALS		2				5	5					2									

LINE & STATION	STRUCTURE NUMBER	ANGLED VANE GRATES AND FRAMES STD. 840.33	T.B.J.B. STD. 840.34	T.B.D.I. STD. 840.35	T.B.D.I. FOR STEEL GRATES STD. 840.36	STEEL FRAME WITH TWO GRATES STD. 840.37	TEMP STEEL PLATE COVER MASONRY DRAINAGE	OPEN THROAT C.B. (3 OR 4 SIDED) STD. 840D04	M.H. STD. 840.51, STD. 840.52, OR STD. 840.53	M.H. FRAME AND COVER STD. 840.54	M.H. FRAME AND COVER FOR OTCB STD. 840.55	CONVERT EXISTING J.B. TO D.I.	ADJUST C.B.	ADJUST D.I.	15" C.S. ELBOW	18" C.S. ELBOW	24" C.S. ELBOW	FLOWABLE FILL CY	CONCRETE COLLARS CL. "B" STD. 840.72 CY	CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY	PIPE REMOVAL LIN. FT.	REMARKS
L 20+05	0512			1																		
L 24+26	0513			1																		
SHEET TOTALS				2																		

ABBREVIATIONS

C.A.A.	CORRUGATED ALUMINIUM ALLOY
C.B.	CATCH BASIN
C.S.	CORRUGATED STEEL
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
H.D.P.E.	HIGH DENSITY POLYETHYLENE
J.B.	JUNCTION BOX
M.H.	MANHOLE
N.S.	NARROW SLOT
P.V.C.	POLYVINYL CHLORIDE
R.C.	REINFORCED CONCRETE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX
W.S.	WIDE SLOT

DG1Y184

COMPUTED BY: JMS DATE: 09/28/2026

CHECKED BY: TAP DATE: 09/29/2026

PROJECT NO.	SHEET NO.
U-4714BA	3D-3

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout. See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

LINE & STATION / SIZE / THICKNESS OR GAUGE	OFFSET		STRUCTURE NUMBER FROM	STRUCTURE NUMBER TO	TOP ELEVATION FT.	INVERT ELEVATION FT.	INVERT ELEVATION FT.	MINIMUM REQUIRED SLOPE %	C. S. PIPE 12 .064	C. S. PIPE 15 .064	C. S. PIPE 18 .064	C. S. PIPE 24 .064	R. C. PIPE CLASS III 12	15	18	24	30	36	42	48	R. C. PIPE CLASS IV 12	15	18	24	30	36	42	48	R. C. PIPE CLASS V 12	15	18	24	30	36	42	48
Y3 10+87	17	LT	0536		728.3																															
			0536	0537		723.9	723.7																	48												
L 27+81	49	RT	0537		727.9																															
			0537	0539		723.7	723.2																	96												
L 28+78	61	RT	0538		728.2																															
			0538	0539		724.9	723.9							24																						
L 28+78	39	RT	0539		727.4																															
			0539	0630		723.2	722.5	0.3																132												
L 30+00	42	LT	0601		726.9																															
			0601	0603		722.6	722.2																		156											
Y5 11+64	18	RT	0602		727.8																															
			0602	0608		724.9	723.1															36														
L 31+50	82	LT	0603		726.0																															
			0603	0648		721.7	721.4																			72										
L 32+32	87	LT	0605		725.1																															
			0605	0606		721.6	721.5																24													
Y5 12+68	20	RT	0606		726.6																															
			0606	0607		721.5	721.3																36													
Y5 12+62	17	LT	0607		726.4																															
			0607	0612		721.3	721.1																40													
Y5 11+61	21	LT	0608		725.9																															
			0608	0607		723.1	721.6															100														
L 32+39	56	LT	0609		725.8																															
			0609	0606		722.8	721.7															24														
L 31+79	10	RT	0610		727.1																															
			0610	0629		721.2	720.9																			40										
L 33+01	17	LT	0611		726.5																															
			0611	0612		723.2	721.3															36														
L 33+11	56	LT	0612		725.5																															
			0612	0615		721.1	720.7																68													
L 33+80	69	LT	0614		725.2																															
			0614	0615		722.9	721.0							20																						
L 33+80	49	LT	0615		725.3																															
			0615	0617		720.7	719.7																	108												
L 34+88	68	LT	0616		725.9																															
			0616	0617		722.4	720.4							20																						
L 34+88	50	LT	0617		724.8																															
			0617	0618		719.7	719.2																	100												
L 35+87	49	LT	0618		724.2																															
			0618	0619		719.2	718.8																	88												
L 36+75	49	LT	0619		723.7																															
			0619	0621		718.8	718.2																	104												
L 37+91	72	LT	0620		723.3																															
			0620	0622		718.1	717.8									64																				
L 37+81	49	LT	0621		722.8																															
			0621	0620		718.2	718.1									24																				
Y6 13+04	66	RT	0622		722.9																															
			0622	0623		717.2	715.1									40																				
Y6 12+87	32	RT	0623		718.8																															
			0623	0625		715.1	714.6	0.3																64												
SHEET TOTALS														64		128						196	168	740	156	112										

LINE & STATION	STRUCTURE NO.	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY	REINFORCED ENDWALLS CY	DRAINAGE STRUCTURE MASONRY CY	QUANTITIES FOR DRAINAGE STRUCTURES 0' THRU 5' EACH	5' THRU 10' (A) LIN. FT.	10' AND ABOVE (B) LIN. FT.	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E	F	G		CONCRETE TRANSITIONAL SECTION D.I. STD. 852.04 OR STD. 852.06	C.B. STD. 852.05	OPEN THROAT C.B. STD. 840.04 OR STD. 840.05	CONCRETE BRIDGE APPROACH D.I. STD. 840.13	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATES STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26	G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27	G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28	G.D.I. (W.S. FLAT) FRAME WITH GRATE STD. 840.20	G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20	G.D.I. (W.S. SAG) FRAME W/ GRATE STD. 840.22	G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22	G.D.I. (N.S. SAG) FRAME W/ GRATE STD. 840.24	G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24	G.D.I. (N.S. FLAT) FRAME W/ GRATE STD. 840.29	G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29	DRIVEWAY D.I. STD. 840.30	FRAME W/ GRATE FOR DRIVEWAY STD. 840.30	J.B. STD. 840.31 OR STD. 840.32	ANGLED VANE GRATES AND FRAMES STD. 840.33	T.B.J.B. STD. 840.34	T.B.D.I. STD. 840.35	T.B.D.I. FOR STEEL GRATES STD. 840.36	STEEL FRAME WITH TWO GRATES STD. 840.37	TEMP STEEL PLATE COVER MASONRY DRAINAGE	OPEN THROAT C.B. (3 OR 4 SIDED) STD. 840D04	M.H. STD. 840.51, STD. 840.52, OR STD. 840.53	M.H. FRAME AND COVER STD. 840.54	M.H. FRAME AND COVER FOR OTCB STD. 840.55	CONVERT EXISTING J.B. TO D.I.	ADJUST C.B.	ADJUST D.I.	15" C.S. ELBOW	18" C.S. ELBOW	24" C.S. ELBOW	FLOWABLE FILL CY	CONCRETE COLLARS CL. "B" STD. 840.72 CY	CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY	PIPE REMOVAL LIN. FT.	REMARKS
Y3 10+87	0536				1			1		1																																											
L 27+81	0537				1			1	1																																												
L 28+78	0538				1												1	1																																			
L 28+78	0539				1			1		1																																											
L 30+00	0601				1			1			1																																										
Y5 11+64	0602				1															1							1																										
L 31+50	0603				1			1	1																																												
L 32+32	0605				1												1	1																																			
Y5 12+68	0606				1	0.1		1		1																																											
Y5 12+62	0607				1	0.1		1			1																																										
Y5 11+61	0608				1															1							1																										
L 32+39	0609				1			1	1																																												
L 31+79	0610				1	0.9							1										1												1																		
L 33+01	0611				1								1										1												1																		
L 33+11	0612				1			1	1																																												
L 33+80	0614				1												1	1																																			
L 33+80	0615				1			1			1																																										
L 34+88	0616				1												1	1																																			
L 34+88	0617				1	0.1		1			1																																										
L 35+87	0618				1			1			1																																										
L 36+75	0619				1			1			1																																										
L 37+91	0620				1	0.2											1	1																																			
L 37+81	0621				1			1			1																																										
Y6 13+04	0622				1	0.6											1	1																																			
Y6 12+87	0623				1			1			1																																										
SHEET TOTALS					25	2.0		15	4	3	8		2				6	6		2			2				2								2																		

ABBREVIATIONS

C.A.A.	CORRUGATED ALUMINIUM ALLOY
C.B.	CATCH BASIN
C.S.	CORRUGATED STEEL
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
H.D.P.E.	HIGH DENSITY POLYETHYLENE
J.B.	JUNCTION BOX
M.H.	MANHOLE
N.S.	NARROW SLOT
P.V.C.	POLYVINYL CHLORIDE
R.C.	REINFORCED CONCRETE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX
W.S.	WIDE SLOT

DG1Y184

COMPUTED BY: JMS DATE: 09/28/2026

CHECKED BY: TAP DATE: 09/29/2026

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
U-4714BA	3D-4

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.
See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

LINE & STATION / SIZE / THICKNESS OR GAUGE	OFFSET		STRUCTURE NUMBER FROM	STRUCTURE NUMBER TO	TOP ELEVATION FT.	INVERT ELEVATION FT.	INVERT ELEVATION FT.	MINIMUM REQUIRED SLOPE %
L 40+06	62	LT	0624		718.7			
			0624	0626		714.3	712.4	0.4
Y6 12+87	32	LT	0625		718.8			
			0625	0624		714.6	714.3	0.4
L 41+08	60	LT	0626		716.2			
			0626	0628		712.4	709.2	0.4
L 42+33	75	LT	0627		714.1			
			0627	0628		711.2	710.0	
L 42+33	58	LT	0628		713.0			
			0628	0701		709.2	705.4	0.5
L 31+80	50	RT	0629		726.3			
			0629	0634		720.9	720.7	
L 30+11	42	RT	0630		727.2			
			0630	0636		721.7	721.2	
L 30+11	70	RT	0631		729.4			
			0631	0630		724.6	723.3	
L 31+26	88	RT	0632		725.6			
			0632	0633		723.3	722.8	0.4
Y4 10+90	18	RT	0633		725.8			
			0633	0634		722.1	721.6	
Y4 10+90	17	LT	0634		725.8			
			0634	BMP01		720.7	720.5	
Y4 11+35	69	LT	BMP01		723.5			
L 33+00	95	RT	0635		724.7			
			0635	0637		720.1	719.1	
L 33+25	173	RT	BMP02		722.5			
			0635	BMP02		720.1	720.5	
L 31+03	44	RT	0636		726.5			
			0636	0629		721.2	720.9	
L 34+46	50	RT	0637		724.8			
			0637	0638		719.1	718.6	
L 35+83	50	RT	0638		724.3			
			0638	0639		718.6	717.7	
L 37+60	50	RT	0639		723.0			
			0639	0640		717.7	716.7	0.3
L 39+10	50	RT	0640		720.9			
			0640	0642		716.7	710.6	0.4
L 38+97	14	RT	0641		722.1			
			0641	0640		718.9	717.9	
L 41+61	47	RT	0642		714.9			
			0642	0645		710.6	707.0	0.5
L 41+61	80	RT	0643		716.1			
			0643	0642		712.0	711.8	0.4
L 41+06	87	RT	0644		717.6			
			0644	0643		712.5	712.0	
L 42+95	44	RT	0645		711.3			
			0645	0708		707.0	704.0	0.6
L 42+95	73	RT	0646		711.4			
			0646	0645		708.5	708.3	
L 31+72	12	LT	0648		724.8			

FROM	TO	C. S. PIPE				R. C. PIPE CLASS III								R. C. PIPE CLASS IV								R. C. PIPE CLASS V							
		12	15	18	24	12	15	18	24	30	36	42	48	12	15	18	24	30	36	42	48	12	15	18	24	30	36	42	48
		.064	.064	.064	.064																								
0624	0626																100												
0625	0624								76																				
0626	0628																124												
0627	0628						16																						
0628	0701																112												
0629	0634																		40										
0630	0636																		92										
0631	0630						28																						
0632	0633						24																						
0633	0634																32												
0634	BMP01																		72										
0635	0637																	152											
0635	BMP02																84												
0636	0629																		76										
0637	0638																	136											
0638	0639																	176											
0639	0640																	148											
0640	0642																	248											
0641	0640														36														
0642	0645																	132											
0643	0642						32																						
0644	0643						52																						
0645	0708																	88											
0646	0645						28																						
SHEET TOTALS							180		76						36		452	1080	280										

LINE & STATION	STRUCTURE	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE)	REINFORCED ENDWALLS	DRAINAGE STRUCTURE	QUANTITIES FOR DRAINAGE STRUCTURES NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)			C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE			CONCRETE TRANSITIONAL SECTION	
		CY	CY	MASONRY CY	0' THRU 5' EACH	A 5' THRU 10' LIN. FT.	B 10' AND ABOVE LIN. FT.		E	F	G	D.I. STD. 852.04 OR STD. 852.06	C.B. STD. 852.05
L 40+06	0624				1			1			1		
Y6 12+87	0625				1			1		1			
L 41+08	0626				1			1			1		
L 42+33	0627				1								
L 42+33	0628				1			1			1		
L 31+80	0629				1	0.4							
L 30+11	0630				1	0.6		1		1			
L 30+11	0631				1								
L 31+26	0632				1								
Y4 10+90	0633				1			1	1				
Y4 10+90	0634				1	0.1		1	1				
Y4 11+35	BMP01												
L 33+00	0635				1			1	1				
L 33+25	BMP02				1								
L 31+03	0636				1	0.2		1		1			
L 34+46	0637				1	0.7		1		1			
L 35+83	0638				1	0.6		1		1			
L 37+60	0639				1	0.3		1		1			
L 39+10	0640				1			1		1			
L 38+97	0641				1							1	
L 41+61	0642				1			1		1			
L 41+61	0643				1								
L 41+06	0644				1	0.2							
L 42+95	0645				1			1		1			
L 42+95	0646				1								
L 31+72	0648												
SHEET TOTALS					24	3.1		15	3	9	3	1	

LINE & STATION	STRUCTURE	OPEN THROAT C.B. STD. 840.04 OR STD. 840.05	CONCRETE BRIDGE APPROACH D.I. STD. 840.13	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATES STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26	G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27	G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28	G.D.I. (W.S. FLAT) FRAME WITH GRATE STD. 840.20	G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20	G.D.I. (W.S. SAG) FRAME W/ GRATE STD. 840.22	G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22	G.D.I. (N.S. SAG) FRAME W/ GRATE STD. 840.24	G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24	G.D.I. (N.S. FLAT) FRAME W/ GRATE STD. 840.29	G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29
L 42+33	0627			1	1											
L 30+11	0631			1	1											
L 31+26	0632			1	1											
L 33+25	BMP02									1						
L 38+97	0641									1						
L 41+61	0643			1	1											
L 41+06	0644			1	1											
L 42+95	0646			1	1											
SHEET TOTALS				6	6					2						

LINE & STATION	STRUCTURE	DRIVEWAY D.I. STD. 840.30	FRAME W/ GRATE FOR DRIVEWAY STD. 840.30	J.B. STD. 840.31 OR STD. 840.32	ANGLED VANE GRATES AND FRAMES STD. 840.33	T.B.J.B. STD. 840.34	T.B.D.I. STD. 840.35	T.B.D.I. FOR STEEL GRATES STD. 840.36	STEEL FRAME WITH TWO GRATES STD. 840.37	TEMP STEEL PLATE COVER MASONRY DRAINAGE	OPEN THROAT C.B. (3 OR 4 SIDED) STD. 840D04	M.H. STD. 840.51, STD. 840.52, OR STD. 840.53	M.H. FRAME AND COVER STD. 840.54	M.H. FRAME AND COVER FOR OTCB STD. 840.55	CONVERT EXISTING J.B. TO D.I.	ADJUST C.B.	ADJUST D.I.	15" C.S. ELBOW	18" C.S. ELBOW	24" C.S. ELBOW	FLOWABLE FILL CY	CONCRETE COLLARS CL. "B" STD. 840.72 CY	CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY	PIPE REMOVAL LIN. FT.	REMARKS
L 31+80	0629					1							1												
L 38+97	0641						1																		
L 31+72	0648																					0.7640			
SHEET TOTALS						1	1						1									0.7640			

ABBREVIATIONS

C.A.A.	CORRUGATED ALUMINIUM ALLOY
C.B.	CATCH BASIN
C.S.	CORRUGATED STEEL
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
H.D.P.E.	HIGH DENSITY POLYETHYLENE
J.B.	JUNCTION BOX
M.H.	MANHOLE
N.S.	NARROW SLOT
P.V.C.	POLYVINYL CHLORIDE
R.C.	REINFORCED CONCRETE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX
W.S.	WIDE SLOT

DG1Y184

COMPUTED BY:	JMS	DATE:	09/28/2026
CHECKED BY:	TAP	DATE:	09/29/2026

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
U-4714BA	3D-5

**Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.
See "Standard Specifications For Roads and Structures, Section 300-5".**

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

LINE & STATION	OFFSET		STRUCTURE NUMBER FROM	TO	TOP ELEVATION FT.	INVERT ELEVATION FT.	INVERT ELEVATION FT.	MINIMUM REQUIRED SLOPE %	C. S. PIPE 12 (.064)	C. S. PIPE 15 (.064)	C. S. PIPE 18 (.064)	C. S. PIPE 24 (.064)	R. C. PIPE CLASS III 12	15	18	24	30	36	42	48	R. C. PIPE CLASS IV 12	15	18	24	30	36	42	48	R. C. PIPE CLASS V 12	15	18	24	30	36	42	48
			0648	0610		721.4	721.2																			24										
L 43+46	55	LT	0701		709.9																															
			0701	0703		705.4	704.0	0.6																36												
L 43+46	81	LT	0702		709.7																															
			0702	0701		706.3	706.2							28																						
L 43+84	55	LT	0703		709.1																															
			0703	0704		703.0	702.4	0.5																		48										
Y7 11+22	42	RT	0704		706.8																															
			0704	0705		702.4	701.4	0.6										24																		
Y7 11+17	18	RT	0705		706.0																															
			0705	0706		701.6	701.5	0.6																		32										
Y7 11+15	17	LT	0706		706.0																															
			0706	0707		701.5	700.6	0.6										24																		
L 44+84	114	LT	0707		703.6																															
L 43+84	43	RT	0708		709.4																															
			0708	0703		703.5	703.0																			96										
L 43+84	66	RT	0709		712.8																															
			0709	0708		707.7	705.3							24																						
L 44+42	41	RT	0710		708.6																															
			0710	0708		705.6	705.3															56														
L 44+42	64	RT	0711		710.1																															
			0711	0710		707.8	705.6							24																						
L 45+71	53	LT	0715		707.5																															
			0715	0717		703.9	703.1															64														
L 46+35	52	LT	0717		707.8																															
			0717	0714		701.4	701.2	0.7										40																		
			0714		704.2																															
L 47+40	41	LT	0718		708.9																															
			0718	0717		705.2	703.1															104														
L 48+90	41	LT	0719		710.2																															
			0719	0718		706.6	705.2															148														
L 44+66	47	RT	0721		708.3																															
			0721	0723		704.8	704.7							28																						
Y8 11+15	25	RT	0722A		708.3																															
			0722A	0723		703.8	703.4																		44											
Y8 10+72	23	RT	0723		709.7																															
			0723	0725		702.9	702.7																			40										
Y8 11+61	23	LT	0724		714.6																															
			0724	0725		711.5	704.0				88																									
Y8 10+76	18	LT	0725		710.1																															
			0725	0726		702.7	702.5																			36										
L 45+46	49	RT	0726		707.8																															
			0726	0727		702.5	702.4	0.3																		28										
L 45+71	41	RT	0727		707.8																															
			0727	0731		702.4	702.1	0.3																		64										
L 46+35	41	RT	0731		708.0																															
			0731	0717		702.1	701.4	0.6																		92										
L 46+35	62	RT	0732		708.5																															
			0732	0731		704.6	703.6	1.0						20																						
L 47+48	41	RT	0733		709.0																															
								SHEET TOTALS			88			124				88				372		36	44	460										

LINE & STATION	FROM	TO	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY	REINFORCED ENDWALLS CY	DRAINAGE STRUCTURE MASONRY CY	QUANTITIES FOR DRAINAGE STRUCTURES (NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)) 0' THRU 5' EACH	A 5' THRU 10' LIN. FT.	B 10' AND ABOVE LIN. FT.	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E	F	G	CONCRETE TRANSITIONAL SECTION D.I. STD. 852.04 OR STD. 852.06	CONCRETE TRANSITIONAL SECTION C.B. STD. 852.05	OPEN THROAT C.B. STD. 840.04 OR STD. 840.05	CONCRETE BRIDGE APPROACH D.I. STD. 840.13	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATES STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26	G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27	G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28
	0648	0610																			
L 43+46	0701					1			1			1									
	0701	0703																			
L 43+46	0702					1											1	1			
	0702	0701																			
L 43+84	0703					1	1.1		1			1									
	0703	0704																			
Y7 11+22	0704					1											1	1			
	0704	0705																			
Y7 11+17	0705					1			1			1									
	0705	0706																			
Y7 11+15	0706					1			1		1										
	0706	0707																			
L 44+84	0707																				
L 43+84	0708					1	0.9		1		1										
	0708	0703																			
L 43+84	0709					1	0.1										1	1			
	0709	0708																			
L 44+42	0710					1			1		1										
	0710	0708																			
L 44+42	0711					1											1	1			
	0711	0710																			
L 45+71	0715					1			1	1											
	0715	0717																			
L 46+35	0717					1	1.3		1		1										
	0717	0714																			
	0714																				
L 47+40	0718					1			1		1										
	0718	0717																			
L 48+90	0719					1			1		1										
	0719	0718																			
L 44+66	0721					1			1	1											
	0721	0723																			
Y8 11+15	0722A					1											1	1			
	0722A	0723																			
Y8 10+72	0723					1	1.8		1			1									
	0723	0725																			
Y8 11+61	0724																				
	0724	0725																			
Y8 10+76	0725					1	2.5		1		1										
	0725	0726																			
L 45+46	0726					1	0.3		1	1											
	0726	0727																			
L 45+71	0727					1	0.4		1	1											
	0727	0731																			
L 46+35	0731					1	0.9		1			1									
	0731	0717																			
L 46+35	0732					1															
	0732	0731																			
L 47+48	0733					1			1			1									
SHEET TOTALS						23	9.3		17	4	7	6					5	5			

LINE & STATION	FROM	TO	G.D.I. (W.S. FLAT) FRAME WITH GRATE STD. 840.20	G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20	G.D.I. (W.S. SAG) FRAME W/ GRATE STD. 840.22	G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22	G.D.I. (N.S. SAG) FRAME W/ GRATE STD. 840.24	G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24	G.D.I. (N.S. FLAT) FRAME W/ GRATE STD. 840.29	G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29	DRIVEWAY D.I. STD. 840.30	FRAME W/ GRATE FOR DRIVEWAY STD. 840.30	J.B. STD. 840.31 OR STD. 840.32	ANGLED VANE GRATES AND FRAMES STD. 840.33	T.B.J.B. STD. 840.34	T.B.D.I. STD. 840.35	T.B.D.I. FOR STEEL GRATES STD. 840.36	STEEL FRAME WITH TWO GRATES STD. 840.37	TEMP STEEL PLATE COVER MASONRY DRAINAGE	OPEN THROAT C.B. (3 OR 4 SIDED) STD. 840D04	M.H. STD. 840.51, STD. 840.52, OR STD. 840.53	M.H. FRAME AND COVER STD. 840.54	M.H. FRAME AND COVER FOR OTCB STD. 840.55	CONVERT EXISTING J.B. TO D.I.	ADJUST C.B.	ADJUST D.I.	15" C.S. ELBOW	18" C.S. ELBOW	24" C.S. ELBOW	FLOWABLE FILL CY	CONCRETE COLLARS CL. "B" STD. 840.72 CY	CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY	PIPE REMOVAL LIN. FT.	REMARKS
	0648	0610																																
L 43+46	0701																																	
	0701	0703																																
L 43+46	0702																																	
	0702	0701																																
L 43+84	0703																																	
	0703	0704																																
Y7 11+22	0704																																	CONTRACTOR DESIGN YARD INLET (STD. 840.45)
	0704	0705																																
Y7 11+17	0705																																	
	0705	0706																																
Y7 11+15	0706																																	
	0706	0707																																
L 44+84	0707																																	
L 43+84	0708																																	
	0708	0703																																
L 43+84	0709																																	
	0709	0708																																
L 44+42	0710																																	
	0710	0708																																
L 44+42	0711																																	
	0711	0710																																
L 45+71	0715																																	
	0715	0717																																
L 46+35	0717																																	
	0717	0714																																
	0714																																	
L 47+40	0718																																	
	0718	0717																																
L 48+90	0719																																	
	0719	0718																																
L 44+66	0721																																	
	0721	0723																																
Y8 11+15	0722A																																	
	0722A	0723																																
Y8 10+72	0723																																	
	0723	0725																																
Y8 11+61	0724																																	
	0724	0725																										2						
Y8 10+76	0725																																	
	0725	0726																																
L 45+46	0726																																	
	0726	0727																																
L 45+71	0727																																	
	0727	0731																																
L 46+35	0731																																	
	0731	0717																																
L 46+35	0732																				1		1											4-SIDED OTCB SEE SHEET 2C-7
	0732	0731																																
L 47+48	0733																																	
SHEET TOTALS																					1		1						2					

ABBREVIATIONS

C.A.A.	CORRUGATED ALUMINIUM ALLOY
C.B.	CATCH BASIN
C.S.	CORRUGATED STEEL
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
H.D.P.E.	HIGH DENSITY POLYETHYLENE
J.B.	JUNCTION BOX
M.H.	MANHOLE
N.S.	NARROW SLOT
P.V.C.	POLYVINYL CHLORIDE
R.C.	REINFORCED CONCRETE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX
W.S.	WIDE SLOT

DG1Y184

COMPUTED BY:	JMS	DATE:	09/28/2026
CHECKED BY:	TAP	DATE:	09/29/2026

PROJECT NO.	SHEET NO.
U-4714BA	3D-6

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.
See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

LINE & STATION / SIZE / THICKNESS OR GAUGE	OFFSET	STRUCTURE NUMBER FROM	TO	TOP ELEVATION FT.	INVERT ELEVATION FT.	INVERT ELEVATION FT.	MINIMUM REQUIRED SLOPE %	C. S. PIPE 12 (.064)	C. S. PIPE 15 (.064)	C. S. PIPE 18 (.064)	C. S. PIPE 24 (.064)	R. C. PIPE CLASS III 12	CLASS III 15	CLASS III 18	CLASS III 24	CLASS III 30	CLASS III 36	CLASS III 42	CLASS III 48	R. C. PIPE CLASS IV 12	CLASS IV 15	CLASS IV 18	CLASS IV 24	CLASS IV 30	CLASS IV 36	CLASS IV 42	CLASS IV 48	R. C. PIPE CLASS V 12	CLASS V 15	CLASS V 18	CLASS V 24	CLASS V 30	CLASS V 36	CLASS V 42	CLASS V 48
		0733	0731		705.1	703.3	0.7															112													
L 47+48	66 RT	0734		710.0																															
		0734	0733		706.5	705.3							24																						
L 49+03	41 RT	0735		710.4																															
		0735	0733		706.7	705.3	0.4														156														
L 50+45	43 RT	0737		711.0																															
		0737	0735		707.4	706.7															140														
L 50+45	66 RT	0738		713.6																															
		0738	0737		708.7	707.4							24																						
L 51+67	70 RT	0739		712.4																															
		0739	0742		708.8	707.6							36																						
L 51+56	44 RT	0740		711.0																															
		0740	0741		708.0	707.8															28														
L 51+82	53 RT	0741		710.8																															
		0741	0742		707.8	707.6															36														
Y9 10+85	17 RT	0742		712.1																															
		0742	0745		707.4	707.2																32													
Y9 12+06	17 RT	0743		714.9																															
		0743	0742		713.4	707.4								120																					
Y9 11+83	15 LT	0744		714.7																															
		0744	0745		713.2	707.2								100																					
Y9 10+85	17 LT	0745		712.0																															
		0745	0747		707.2	707.0																40													
L 52+46	11 RT	0746		711.6																															
		0746	0751		706.8	704.7																100													
L 52+51	51 RT	0747		710.6																															
		0747	0746		707.0	706.8																40													
L 52+38	92 LT	0749		709.8																															
		0749	0751		706.8	705.0							76																						
L 53+10	67 LT	0751		708.5																															
		0751	0750		704.7	704.1																124													
L 53+20	188 LT	0750		705.6																															
L 53+77	83 LT	0752		708.3																															
		0752	0751		705.3	705.0															68														
L 52+69	102 RT	0755		711.5																															
		0755	0756		709.7	706.7							48																						
L 53+16	95 RT	0756		709.7																															
		0756	0758		706.7	706.2															108														
L 54+22	63 RT	0758		709.9																															
		0758	0760		705.9	705.7																48													
L 54+30	86 RT	0759		711.0																															
		0759	0758		708.0	706.2							24																						
L 54+71	56 RT	0760		709.9																															
		0760	0764		705.2	704.7	0.5																96												
L 55+68	56 RT	0761		710.1																															
		0761	0760		706.9	705.7	1.0															96													
L 55+68	78 RT	0762		711.2																															
		0762	0761		707.8	707.1	0.3						24																						
L 54+25	44 LT	0763		710.2																															
		0763	0764		707.2	705.4															44														
SHEET TOTALS													256	220							580	592	96												

FROM	TO	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY	REINFORCED ENDWALLS CY	DRAINAGE STRUCTURE MASONRY CY	QUANTITIES FOR DRAINAGE STRUCTURES (NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)) 0' THRU 5' EACH	A 5' THRU 10' LIN. FT.	B 10' AND ABOVE LIN. FT.	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E	F	G	
0733	0731											
0734					1							
0734	0733											
0735					1			1			1	
0735	0733											
0737					1			1			1	
0737	0735											
0738					1							
0738	0737											
0739					1							
0739	0742											
0740					1			1		1		
0740	0741											
0741					1			1	1			
0741	0742											
0742					1			1			1	
0742	0745											
0743												
0743	0742											
0744												
0744	0745											
0745					1			1		1		
0745	0747											
0746					1							
0746	0751											
0747					1			1	1			
0747	0746											
0749					1			1	1			
0749	0751											
0751					1			1			1	
0751	0750											
0750												
0752					1			1		1		
0752	0751											
0755					1							
0755	0756											
0756					1			1	1			
0756	0758											
0758					1			1	1			
0758	0760											
0759					1							
0759	0758											
0760					1			1	1			
0760	0764											
0761					1			1			1	
0761	0760											
0762					1							
0762	0761											
0763					1			1			1	
0763	0764											
SHEET TOTALS					22			15	6	3	6	

FROM	TO	CONCRETE TRANSITIONAL SECTION D.I. STD. 852.04 OR STD. 852.06	C.B. STD. 852.05	OPEN THROAT C.B. STD. 840.04 OR STD. 840.05	CONCRETE BRIDGE APPROACH D.I. STD. 840.13	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATES STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26	G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27	G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28	G.D.I. (W.S. FLAT) FRAME WITH GRATE STD. 840.20	G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20	G.D.I. (W.S. SAG) FRAME W/ GRATE STD. 840.22	G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22	G.D.I. (N.S. SAG) FRAME W/ GRATE STD. 840.24	G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24	G.D.I. (N.S. FLAT) FRAME W/ GRATE STD. 840.29	G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29	DRIVEWAY D.I. STD. 840.30	FRAME W/ GRATE FOR DRIVEWAY STD. 840.30	J.B. STD. 840.31 OR STD. 840.32	ANGLED VANE GRATES AND FRAMES STD. 840.33	T.B.J.B. STD. 840.34	T.B.D.I. STD. 840.35	T.B.D.I. FOR STEEL GRATES STD. 840.36	STEEL FRAME WITH TWO GRATES STD. 840.37	TEMP STEEL PLATE COVER MASONRY DRAINAGE	OPEN THROAT C.B. (3 OR 4 SIDED) STD. 840D04	M.H. STD. 840.51, STD. 840.52, OR STD. 840.53	M.H. FRAME AND COVER STD. 840.54	M.H. FRAME AND COVER FOR OTCB STD. 840.55	CONVERT EXISTING J.B. TO D.I.	ADJUST C.B.	ADJUST D.I.	15" C.S. ELBOW	18" C.S. ELBOW	24" C.S. ELBOW	FLOWABLE FILL CY	CONCRETE COLLARS CL. "B" STD. 840.72 CY	CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY	PIPE REMOVAL LIN. FT.	REMARKS
0733	0731																																									
0734						1	1																																			
0734	0733																																									
0735																																										
0735	0733																																									
0737																																										
0737	0735																																									
0738						1	1																																			
0738	0737																																									
0739						1	1																																			
0739	0742																																									
0740																																										
0740	0741																																									
0741																																										
0741	0742																																									
0742																																										
0742	0745																																									
0743																																										
0743	0742																																									
0744																																										
0744	0745																																									
0745																																										
0745	0747																																									
0746		1										1												1																		
0746	0751																																									
0747																																										
0747	0746																																									
0749																																										
0749	0751																																									
0751																																										
0751	0750																																									
0750																																										
0752																																										
0752	0751																																									
0755						1	1																																			
0755	0756																																									
0756																																										
0756	0758																																									
0758																																										
0758	0760																																									
0759						1	1																																			
0759	0758																																									
0760																																										
0760	0764																																									
0761																																										
0761	0760																																									
0762						1	1																																			
0762	0761																																									
0763																																										
0763	0764																																									
SHEET TOTALS		1				6	6					1												1																		

ABBREVIATIONS

C.A.A.	CORRUGATED ALUMINIUM ALLOY
C.B.	CATCH BASIN
C.S.	CORRUGATED STEEL
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
H.D.P.E.	HIGH DENSITY POLYETHYLENE
J.B.	JUNCTION BOX
M.H.	MANHOLE
N.S.	NARROW SLOT
P.V.C.	POLYVINYL CHLORIDE
R.C.	REINFORCED CONCRETE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX
W.S.	WIDE SLOT

DG1Y184

COMPUTED BY: JMS DATE: 09/28/2026

CHECKED BY: TAP DATE: 09/29/2026

PROJECT NO.	SHEET NO.
U-4714BA	3D-7

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout. See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

LINE & STATION	OFFSET		STRUCTURE NUMBER FROM	STRUCTURE NUMBER TO	TOP ELEVATION FT.	INVERT ELEVATION FT.	INVERT ELEVATION FT.	MINIMUM REQUIRED SLOPE %	C. S. PIPE 12 (.064)	C. S. PIPE 15 (.064)	C. S. PIPE 18 (.064)	C. S. PIPE 24 (.064)	R. C. PIPE CLASS III 12	R. C. PIPE CLASS III 15	R. C. PIPE CLASS III 18	R. C. PIPE CLASS III 24	R. C. PIPE CLASS III 30	R. C. PIPE CLASS III 36	R. C. PIPE CLASS III 42	R. C. PIPE CLASS III 48
L 54+71	44	LT	0764		710.1															
			0764	0766		704.7	704.4	0.5												
L 53+49	15	LT	0765		711.2															
			0765	0763		708.0	707.2													
L 55+19	44	LT	0766		710.2															
			0766	0772		704.4	704.2	0.5								32				
L 55+73	44	LT	0767		710.4															
			0767	0766		707.3	705.2													
L 56+19	44	LT	0768		710.6															
			0768	0767		707.6	707.3													
L 56+19	68	LT	0769		711.4															
			0769	0768		707.9	707.6							24						
L 56+42	56	RT	0771		710.5															
			0771	0761		707.2	706.9	0.3												
L 55+19	73	LT	0772		711.3															
L 57+32	56	RT	0802		711.3															
			0802	0771		708.3	707.5	0.7												
L 58+05	56	RT	0803		712.1															
			0803	0802		708.9	708.3	0.4												
L 58+54	56	RT	0804		712.6															
			0804	0803		709.6	708.9													
L 58+59	76	RT	0805		714.6															
			0805	0804		711.3	709.6							20						
L 57+77	44	LT	0806		712.1															
			0806	0807		709.1	708.2													
L 59+69	44	LT	0807		714.1															
			0807	0851		707.9	707.5	0.6												
Y10 13+19	31	RT	0808		712.7															
			0808	0811		707.3	703.2	0.9												
Y10 12+68	22	LT	0809		709.7															
			0809	0810		706.7	703.7													
Y10 12+06	19	LT	0810		706.7															
			0810	0811		703.7	703.4													
Y10 12+06	29	RT	0811		706.6															
			0811	0814		702.7	701.0													
Y10 10+68	34	LT	0812		704.8															
			0812	0849		699.6	698.8													
Y10 12+67	39	LT	0813		710.2															
			0813	0809		707.2	706.7							16						
Y10 10+86	23	RT	0814		706.0															
			0814	0812		700.5	700.1	0.4												
L 61+73	58	LT	0815		715.0															
			0815	0808		711.8	707.6													
L 63+50	53	LT	0816		715.7															
			0816	0815		712.7	711.8													
L 59+69	71	RT	0820		714.7															
			0820	0821		711.7	710.8	0.4												
L 59+69	56	RT	0821		713.8															
			0821	0822		710.6	710.5													
L 59+69	15	RT	0822		715.2															
								SHEET TOTALS						60		32				

FROM	TO	R. C. PIPE CLASS IV 12	R. C. PIPE CLASS IV 15	R. C. PIPE CLASS IV 18	R. C. PIPE CLASS IV 24	R. C. PIPE CLASS IV 30	R. C. PIPE CLASS IV 36	R. C. PIPE CLASS IV 42	R. C. PIPE CLASS IV 48	R. C. PIPE CLASS V 12	R. C. PIPE CLASS V 15	R. C. PIPE CLASS V 18	R. C. PIPE CLASS V 24	R. C. PIPE CLASS V 30	R. C. PIPE CLASS V 36	R. C. PIPE CLASS V 42	R. C. PIPE CLASS V 48	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY	REINFORCED ENDWALLS CY	DRAINAGE STRUCTURE MASONRY CY	QUANTITIES FOR DRAINAGE STRUCTURES (NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)) 0' THRU 5' EACH	A 5' THRU 10' LIN. FT.	B 10' AND ABOVE LIN. FT.	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E	F	G
0764																					1	0.5		1	1		
0764	0766				48																						
0765																					1						
0765	0763		80																								
0766																					1	0.8		1		1	
0766	0772																										
0767																					1			1		1	
0767	0766		52																								
0768																					1			1		1	
0768	0767		44																								
0769																					1						
0769	0768																										
0771																					1			1			1
0771	0761			72																							
0772																					1	1.7					
0802																					1			1			1
0802	0771		88																								
0803																					1			1			1
0803	0802		72																								
0804																					1			1			1
0804	0803		48																								
0805																					1			1	1		
0805	0804																										
0806																					1			1		1	
0806	0807		192																								
0807																					1	1.1		1		1	
0807	0851			56																							
0808																					1	0.4		1			1
0808	0811			112																							
0809																					1			1		1	
0809	0810		60																								
0810																					1			1		1	
0810	0811		48																								
0811																					1			1			1
0811	0814				120																						
0812																					1	0.3					
0812	0849						16																				
0813																					1			1			1
0813	0809																										
0814																					1	0.4					
0814	0812					60																					
0815																					1			1		1	
0815	0808		132																								
0816																					1			1		1	
0816	0815		168																								
0820																					1			1	1		
0820	0821		16																								
0821																					1			1			1
0821	0822			40																							
0822																					1						
SHEET TOTALS			1000	280	168	60	16														26	5.2		20	3	9	8

FROM	TO	CONCRETE TRANSITIONAL SECTION D.I. STD. 852.04 OR STD. 852.06	CONCRETE TRANSITIONAL SECTION C.B. STD. 852.05	OPEN THROAT C.B. STD. 840.04 OR STD. 840.05	CONCRETE BRIDGE APPROACH D.I. STD. 840.13	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATES STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26	G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27	G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28	G.D.I. (W.S. FLAT) FRAME WITH GRATE STD. 840.20	G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20	G.D.I. (W.S. SAG) FRAME W/ GRATE STD. 840.22	G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22	G.D.I. (N.S. SAG) FRAME W/ GRATE STD. 840.24	G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24	G.D.I. (N.S. FLAT) FRAME W/ GRATE STD. 840.29	G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29
0764																		
0764	0766																	
0765		1										1						
0765	0763																	
0766																		
0766	0772																	
0767																		
0767	0766																	
0768																		
0768	0767																	
0769						1	1											
0769	0768																	
0771																		
0771	0761																	
0772									1									1
0802																		
0802	0771																	
0803																		
0803	0802																	
0804																		
0804	0803																	
0805																		
0805	0804																	
0806																		
0806	0807																	
0807																		
0807	0851																	
0808																		
0808	0811																	
0809																		
0809	0810																	
0810																		
0810	0811																	
0811																		
0811	0814																	
0812																		
0812	0849																	
0813																		
0813	0809																	
0814		1																1
0814	0812																	
0815																		
0815	0808																	
0816																		
0816	0815																	
0820																		
0820	0821																	
0821																		
0821	0822																	
0822		1										1						
SHEET TOTALS		3				1	1		1			2						2

FROM	TO	DRIVEWAY D.I. STD. 840.30	FRAME W/ GRATE FOR DRIVEWAY STD. 840.30	J.B. STD. 840.31 OR STD. 840.32	ANGLED VANE GRATES AND FRAMES STD. 840.33	T.B.J.B. STD. 840.34	T.B.D.I. STD. 840.35	T.B.D.I. FOR STEEL GRATES STD. 840.36	STEEL FRAME WITH TWO GRATES STD. 840.37	TEMP STEEL PLATE COVER MASONRY DRAINAGE	OPEN THROAT C.B. (3 OR 4 SIDED) STD. 840D04	M.H. STD. 840.51, STD. 840.52, OR STD. 840.53	M.H. FRAME AND COVER STD. 840.54	M.H. FRAME AND COVER FOR OTCB STD. 840.55	CONVERT EXISTING J.B. TO D.I.	ADJUST C.B.	ADJUST D.I.	15" C.S. ELBOW	18" C.S. ELBOW	24" C.S. ELBOW	FLOWABLE FILL CY	CONCRETE COLLARS CL. "B" STD. 840.72 CY	CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY	PIPE REMOVAL LIN. FT.	REMARKS
0764																									
0764	0766																								
0765							1			1															
0765	0763																								
0766																									
0766	0772																								
0767																									
0767	0766																								
0768																									
0768	0767																								
0769																									
0769	0768																								
0771																									
0771	0761																								
0772																									
0802																									
0802	0771																								
0803																									
0803	0802																								
0804																									
0804	0803																								
0805																									
0805	0804																								
0806																									
0806	0807																								
0807																									
0807	0851																								
0808																									
0808	0811																								
0809																									
0809	0810																								
0810																									
0810	0811																								
0811																									
0811	0814																								
0812				1									1												
0812	0849																								
0813																									
0813	0809																								
0814							1			1															
0814	0812																								
0815																									
0815	0808																								
0816																									
0816	0815																								
0820																									
0820	0821																								
0821																									
0821	0822																								
0822							1			1															
SHEET TOTALS				1			3			3			1												

ABBREVIATIONS

C.A.A.	CORRUGATED ALUMINIUM ALLOY
C.B.	CATCH BASIN
C.S.	CORRUGATED STEEL
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
H.D.P.E.	HIGH DENSITY POLYETHYLENE
J.B.	JUNCTION BOX
M.H.	MANHOLE
N.S.	NARROW SLOT
P.V.C.	POLYVINYL CHLORIDE
R.C.	REINFORCED CONCRETE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX
W.S.	WIDE SLOT

DG1Y184

COMPUTED BY: JMS DATE: 09/28/2026

CHECKED BY: TAP DATE: 09/29/2026

PROJECT NO.	SHEET NO.
U-4714BA	3D-8

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.
See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

LINE & STATION	OFFSET	STRUCTURE NUMBER FROM	STRUCTURE NUMBER TO	TOP ELEVATION FT.	INVERT ELEVATION FT.	INVERT ELEVATION FT.	MINIMUM REQUIRED SLOPE %	C. S. PIPE SIZE 12	C. S. PIPE SIZE 15	C. S. PIPE SIZE 18	C. S. PIPE SIZE 24	C. S. PIPE THICKNESS OR GAUGE 12	C. S. PIPE THICKNESS OR GAUGE 15	C. S. PIPE THICKNESS OR GAUGE 18	C. S. PIPE THICKNESS OR GAUGE 24
								.064	.064	.064	.064				
		0822	0807		710.5	708.0	0.5								
L 60+14	71 RT	0823		715.8											
		0823	0820		712.8	711.7	0.4								
L 60+37	101 RT	0824		716.1											
		0824	0823		713.1	712.8	0.3								
Y10 14+88	32 RT	0825		717.4											
		0825	0824		714.2	713.1	0.3								
Y10 14+86	34 LT	0826		718.0											
		0826	0825		714.6	714.2									
L 61+51	73 RT	0827		718.8											
		0827	0826		714.8	714.6									
L 63+46	63 RT	0828		719.0											
		0828	0827		715.8	714.8									
L 63+81	66 RT	0829		719.0											
		0829	0828		716.0	715.8									
L 61+02	8 LT	0830		716.5											
		0830	0822		713.2	710.7									
L 61+50	14 RT	0831		717.6											
		0831	0830		714.4	713.2									
L 62+04	14 RT	0832		718.4											
		0832	0831		715.1	714.4									
Y10 15+76	32 LT	0833		720.4											
		0833	0826		717.4	714.6									
L 63+21	12 RT	0834		719.6											
		0834	0832		716.4	715.1									
L 65+93	47 LT	0836		716.6											
		0836	0837		713.6	712.4									
L 68+45	37 LT	0837		716.0											
		0837	0838		712.4	711.7									
L 69+76	37 LT	0838		715.3											
		0838	0845		711.5	711.1									
L 69+76	66 LT	0839		714.5											
		0839	0838		713.0	711.5									
L 65+93	12 RT	0840		719.3											
		0840	0836		714.6	713.6									
L 66+35	12 RT	0841		718.9											
		0841	0840		714.8	714.6									
L 66+65	14 RT	0842		718.7											
		0842	0841		714.9	714.8									
L 69+59	38 RT	0843		715.4											
L 69+77	38 RT	0845		715.3											
		0845	0843		711.1	709.8									
L 66+88	13 RT	0847		718.4											
		0847	0842		715.0	714.9									
Y10 10+53	38 LT	0849		701.0											
L 61+05	335 LT	0850		715.7											
		0850	0812		699.6	699.6									
Y10 13+45	49 RT	0851		715.0											
		0851	0808		707.5	707.3	0.6								
L 70+36	37 LT	0901		715.1											
						SHEET TOTALS									

LINE & STATION	OFFSET	STRUCTURE NUMBER FROM	STRUCTURE NUMBER TO	R. C. PIPE CLASS III 12	15	18	24	30	36	42	48	R. C. PIPE CLASS IV 12	15	18	24	30	36	42	48	R. C. PIPE CLASS V 12	15	18	24	30	36	42	48
		0822	0807											56													
L 60+14	71 RT	0823																									
		0823	0820											44													
L 60+37	101 RT	0824																									
		0824	0823											36													
Y10 14+88	32 RT	0825																									
		0825	0824											20													
Y10 14+86	34 LT	0826																									
		0826	0825											64													
L 61+51	73 RT	0827																									
		0827	0826											36													
L 63+46	63 RT	0828																									
		0828	0827											204													
L 63+81	66 RT	0829																									
		0829	0828											36													
L 61+02	8 LT	0830																									
		0830	0822											132													
L 61+50	14 RT	0831																									
		0831	0830											52													
L 62+04	14 RT	0832																									
		0832	0831											52													
Y10 15+76	32 LT	0833																									
		0833	0826											88													
L 63+21	12 RT	0834																									
		0834	0832											116													
L 65+93	47 LT	0836																									
		0836	0837											252													
L 68+45	37 LT	0837																									
		0837	0838											132													
L 69+76	37 LT	0838																									
		0838	0845												72												
L 69+76	66 LT	0839																									
		0839	0838			32																					
L 65+93	12 RT	0840																									
		0840	0836											60													
L 66+35	12 RT	0841																									
		0841	0840											40													
L 66+65	14 RT	0842																									
		0842	0841											28													
L 69+59	38 RT	0843																									
L 69+77	38 RT	0845																									
		0845	0843												16												
L 66+88	13 RT	0847																									
		0847	0842											20													
Y10 10+53	38 LT	0849																									
L 61+05	335 LT	0850																									
		0850	0812			12																					
Y10 13+45	49 RT	0851																									
		0851	0808												32												
L 70+36	37 LT	0901																									
						12	32							1412	176												

LINE & STATION	OFFSET	STRUCTURE NUMBER FROM	STRUCTURE NUMBER TO	ENDWALLS STD. 838.11 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY	REINFORCED ENDWALLS CY	DRAINAGE STRUCTURE MASONRY CY	QUANTITIES FOR DRAINAGE STRUCTURES NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B) A: 0' THRU 5' EACH	A: 5' THRU 10' LIN. FT.	A: 10' AND ABOVE LIN. FT.	B LIN. FT.	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E	GRATE TYPE F	GRATE TYPE G	CONCRETE TRANSITIONAL SECTION D.I. STD. 852.06 OR STD. 852.06	CONCRETE TRANSITIONAL SECTION C.B. STD. 852.05	OPEN THROAT C.B. STD. 840.04 OR STD. 840.05
		0822	0807														
L 60+14	71 RT	0823					1				1		1				
		0823	0820														
L 60+37	101 RT	0824					1				1		1				
		0824	0823														
Y10 14+88	32 RT	0825					1				1			1			
		0825	0824														
Y10 14+86	34 LT	0826					1				1		1				
		0826	0825														
L 61+51	73 RT	0827					1				1	1					
		0827	0826														
L 63+46	63 RT	0828					1				1			1			
		0828	0827														
L 63+81	66 RT	0829					1				1		1				
		0829	0828														
L 61+02	8 LT	0830					1								1		
		0830	0822														
L 61+50	14 RT	0831					1								1		
		0831	0830														
L 62+04	14 RT	0832					1								1		
		0832	0831														
Y10 15+76	32 LT	0833					1				1		1				
		0833	0826														
L 63+21	12 RT	0834					1								1		
		0834	0832														
L 65+93	47 LT	0836					1				1			1			
		0836	0837														
L 68+45	37 LT	0837					1				1			1			
		0837	0838														
L 69+76	37 LT	0838					1				1			1			
		0838	0845														
L 69+76	66 LT	0839															
		0839	0838														
L 65+93	12 RT	0840					1								1		
		0840	0836														
L 66+35	12 RT	0841					1								1		
		0841	0840														
L 66+65	14 RT	0842					1								1		
		0842	0841														
L 69+59	38 RT	0843					1	1.1			1		1				
L 69+77	38 RT	0845					1				1		1				
		0845	0843														
L 66+88	13 RT	0847					1								1		
		0847	0842														
Y10 10+53	38 LT	0849															
L 61+05	335 LT	0850					1	5.0	6.1		1			1			
		0850	0812														
Y10 13+45	49 RT	0851					1	2.5			1			1			
		0851	0808														
L 70+36	37 LT	0901					1				1			1			
							24	8.6	6.1		16	1	7	8	8		

LINE & STATION	OFFSET	STRUCTURE NUMBER FROM	STRUCTURE NUMBER TO	D.I. STD. 852.04 OR STD. 852.06	C.B. STD. 852.05	OPEN THROAT C.B. STD. 840.04 OR STD. 840.05	CONCRETE BRIDGE APPROACH D.I. STD. 840.13	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATES STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26	G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27	G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28	G.D.I. (W.S. FLAT) FRAME WITH GRATE STD. 840.20	G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20	G.D.I. (W.S. SAG) FRAME W/ GRATE STD. 840.22	G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22	G.D.I. (W.S. SAG) FRAME W/ GRATE STD. 840.24	G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24	G.D.I. (N.S. FLAT) FRAME W/ GRATE STD. 840.29	G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29	DRIVEWAY D.I. STD. 840.30	FRAME W/ GRATE FOR DRIVEWAY STD. 840.30	J.B. STD. 840.31 OR STD. 840.32	ANGLED VANE GRATES AND FRAMES STD. 840.33	T.B.J.B. STD. 840.34	T.B.D.I. STD. 840.35	T.B.D.I. FOR STEEL GRATES STD. 840.36	STEEL FRAME WITH TWO GRATES STD. 840.37	TEMP STEEL PLATE COVER MASONRY DRAINAGE	OPEN THROAT C.B. (3 OR 4 SIDED) STD. 840D04	M.H. STD. 840.51, STD. 840.52, OR STD. 840.53	M.H. FRAME AND COVER STD. 840.54	M.H. FRAME AND COVER FOR OTCB STD. 840.55	CONVERT EXISTING J.B. TO D.I.	ADJUST C.B.	ADJUST D.I.	15" C.S. ELBOW	18" C.S. ELBOW	24" C.S. ELBOW	FLOWABLE FILL CY	CONCRETE COLLARS CL. "B" STD. 840.72 CY	CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY	PIPE REMOVAL LIN. FT.	REMARKS
		0822	0807																																											
L 60+14	71 RT	0823												1																															
		0823	0820																																										
L 60+37	101 RT	0824												1																															
		0824	0823																																										
Y10 14+88	32 RT	0825																																											
		0825	0824																																										
Y10 14+86	34 LT	0826												1																															
		0826	0825																																										
L 61+51	73 RT	0827												1																															
		0827	0826																																										
L 63+46	63 RT	0828												1																															
		0828	0827																																										
L 63+81	66 RT	0829												1																															
		0829	0828																																										
L 61+02	8 LT	0830													1																															
		0830	0822																																										
L 61+50	14 RT	0831													1																															
		0831	0830																																										
L 62+04	14 RT	0832													1																															
		0832	0831																																										
Y10 15+76	32 LT	0833														1																														
		0833	0826																																										
L 63+21	12 RT	0834													1																															
		0834	0832																																										
L 65+93	47 LT	0836														1																														
		0836	0837																																										
L 68+45	37 LT	0837														1																														
		0837	0838																																										
L 69+76	37 LT	0838														1																														
		0838	0845																																										
L 69+76	66 LT	0839																																											
		0839	0838																																										
L 65+93	12 RT	0840													1																															
		0840	0836																																										
L 66+35	12 RT	0841													1																															
		0841	0840																																										
L 66+65	14 RT	0842													1																															
		0842	0841																																										
L 69+59	38 RT	0843													1																															
L 69+77	38 RT	0845													1																															
		0845	0843																																										
L 66+88	13 RT	0847													1																															
		0847	0842																																										
Y10 10+53	38 LT	0849																																										0.7640		
L 61+05	335 LT	0850												1																															
		0850	0812																																										
Y10 13+45	49 RT	0851												1																															
		0851	0808																																										
L 70+36	37 LT	0901												1																															
														8																												0.7640		

ABBREVIATIONS

C.A.A.	CORRUGATED ALUMINIUM ALLOY
C.B.	CATCH BASIN
C.S.	CORRUGATED STEEL
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
H.D.P.E.	HIGH DENSITY POLYETHYLENE
J.B.	JUNCTION BOX
M.H.	MANHOLE
N.S.	NARROW SLOT
P.V.C.	POLYVINYL CHLORIDE
R.C.	REINFORCED CONCRETE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX
W.S.	WIDE SLOT

DG1Y184

COMPUTED BY: JMS DATE: 09/28/2026

CHECKED BY: TAP DATE: 09/29/2026

PROJECT NO.	SHEET NO.
U-4714BA	3D-9

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.
See "Standard Specifications For Roads and Structures, Section 300-5".**

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

LINE & STATION	OFFSET		STRUCTURE NUMBER FROM	STRUCTURE NUMBER TO	TOP ELEVATION FT.	INVERT ELEVATION FT.	INVERT ELEVATION FT.	MINIMUM REQUIRED SLOPE %	C. S. PIPE 12 (.064)	C. S. PIPE 15 (.064)	C. S. PIPE 18 (.064)	C. S. PIPE 24 (.064)
			0901	0902		712.1	711.7					
L 70+99	40	LT	0902		715.3							
			0902	0903		711.7	711.7					
L 71+05	50	LT	0903		715.8							
			0903	0904		711.7	711.6					
L 71+29	50	LT	0904		715.5							
			0904	0906		711.6	711.1					
L 71+91	66	LT	0905		714.5							
			0905	0906		711.3	711.1					
L 71+92	38	LT	0906		714.3							
			0906	0908		711.1	710.2	0.5				
L 73+05	47	LT	0908		713.2							
			0908	0909		710.2	706.4	0.6				
L 74+30	97	LT	0909		709.4							
			0909	0931		706.4	706.0	0.9				
L 74+96	38	LT	0910		709.5							
			0910	0911		705.4	700.1	1.1				
L 76+93	38	LT	0911		703.1							
			0911	0913		700.1	694.9	1.3				
L 78+50	57	LT	0912		698.6							
			0912	0913		695.9	694.9					
L 78+50	37	LT	0913		697.9							
			0913	0914		694.9	689.8	1.5				
L 80+91	38	LT	0914		692.8							
			0914	0915		689.5	688.0	0.8				
L 82+25	38	LT	0915		691.2							
			0915	1001		688.0	685.2	0.9				
L 74+28	37	RT	0921		711.2							
L 74+12	7	RT	0922		712.4							
			0922	0921		708.5	707.8					
L 77+16	37	RT	0924		702.1							
			0924	0925		699.1	697.6					
L 77+99	37	RT	0925		700.9							
L 74+75	81	LT	0931		709.4							
			0931	0910		706.0	705.4	1.0				
L 85+15	38	LT	1001		688.5							
			1001	1004		685.2	683.5	1.1				
Y11 12+12	17	RT	1002		684.6							
			1002	1000		679.1	678.9					
Y11 11+50	27	RT	1000		680.9							
Y11 12+44	32	RT	1004		687.4							
			1004	1002		683.1	679.6	1.1				
Y10 20+49	39	RT	1102		721.4							
			1102	1103		713.8	712.8					
Y10 20+49	14	LT	1103		715.8							
			1103	1105		712.8	708.5					
Y10 21+99	28	RT	1104		711.9							
			1104	1105		709.4	708.5					
Y10 21+99	18	LT	1105		711.5							
			1105	1106		708.3	707.0	0.4				
SHEET TOTALS												

(SIZE / THICKNESS OR GAUGE)

FROM	TO	R. C. PIPE CLASS III 12	15	18	24	30	36	42	48	R. C. PIPE CLASS IV 12	15	18	24	30	36	42	48
0901	0902										64						
0902																	
0902	0903										12						
0903																	
0903	0904										20						
0904																	
0904	0906										64						
0905																	
0905	0906		28														
0906																	
0906	0908										112						
0908																	
0908	0909										132						
0909																	
0909	0931										48						
0910																	
0910	0911										196						
0911																	
0911	0913										156						
0912																	
0912	0913		20														
0913																	
0913	0914										240						
0914																	
0914	0915											132					
0915																	
0915	1001											288					
0921																	
0922																	
0922	0921																
0924																	
0924	0925										84						
0925																	
0931																	
0931	0910										48						
1001																	
1001	1004											56					
1002																	
1002	1000												64				
1000																	
1004																	
1004	1002											36					
1102																	
1102	1103										52						
1103																	
1103	1105										148						
1104																	
1104	1105										44						
1105																	
1105	1106											88					
SHEET TOTALS			48								1420	600	64				

FROM	TO	R. C. PIPE CLASS V 12	15	18	24	30	36	42	48	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY	REINFORCED ENDWALLS CY	DRAINAGE STRUCTURE MASONRY CY	QUANTITIES FOR DRAINAGE STRUCTURES (NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)) 0' THRU 5' EACH	A: 5' THRU 10' LIN. FT.	B: 10' AND ABOVE LIN. FT.	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E	F	G	
0901	0902																			
0902													1			1	1			
0902	0903																			
0903													1			1		1		
0903	0904																			
0904													1			1			1	
0904	0906																			
0905													1							
0905	0906																			
0906													1			1			1	
0906	0908																			
0908													1			1			1	
0908	0909																			
0909													1			1	1			
0909	0931																			
0910													1			1			1	
0910	0911																			
0911													1			1			1	
0911	0913																			
0912													1							
0912	0913																			
0913													1			1			1	
0913	0914																			
0914													1			1			1	
0914	0915																			
0915													1			1			1	
0915	1001																			
0921																				
0922													1							
0922	0921		32																	
0924													1			1		1		
0924	0925																			
0925																				
0931													1			1			1	
0931	0910																			
1001													1			1			1	
1001	1004																			
1002													1	0.5		1			1	
1002	1000																			
1000																				
1004													1			1			1	
1004	1002																			
1102													1	2.7						
1102	1103																			
1103													1			1			1	
1103	1105																			
1104													1							
1104	1105																			
1105													1			1			1	
1105	1106																			
SHEET TOTALS			32										23	3.2		18	2	2	14	

FROM	TO	CONCRETE TRANSITIONAL SECTION D.I. STD. 852.04 OR STD. 852.06	CONCRETE TRANSITIONAL SECTION C.B. STD. 852.05	OPEN THROAT C.B. STD. 840.04 OR STD. 840.05	CONCRETE BRIDGE APPROACH D.I. STD. 840.13	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATES STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26	G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27	G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28	G.D.I. (W.S. FLAT) FRAME WITH GRATE STD. 840.20	G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20	G.D.I. (W.S. SAG) FRAME W/ GRATE STD. 840.22	G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22	G.D.I. (N.S. SAG) FRAME W/ GRATE STD. 840.24	G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24	G.D.I. (N.S. FLAT) FRAME W/ GRATE STD. 840.29	G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29
0901	0902																	
0902																		
0902	0903																	
0903																		
0903	0904																	
0904																		
0904	0906																	
0905																		
0905	0906																	
0906																		
0906	0908																	
0908																		
0908	0909																	
0909																		
0909	0931																	
0910																		
0910	0911																	
0911																		
0911	0913																	
0912						1	1											
0912	0913																	
0913																		
0913	0914																	
0914																		
0914	0915																	
0915																		
0915	1001																	
0921																		
0922		1										1						
0922	0921																	
0924																		
0924	0925																	
0925																		
0931																		
0931	0910																	
1001																		
1001	1004																	
1002																		
1002	1000																	
1000																		
1004																		
1004	1002																	
1102						1	1											
1102	1103																	
1103																		
1103	1105																	
1104									1									1
1104	1105																	
1105																		
1105	1106																	
SHEET TOTALS		1				2	2		1			1						1

FROM	TO	DRIVEWAY D.I. STD. 840.30	FRAME W/ GRATE FOR DRIVEWAY STD. 840.30	J.B. STD. 840.31 OR STD. 840.32	ANGLED VANE GRATES AND FRAMES STD. 840.33	T.B.J.B. STD. 840.34	T.B.D.I. STD. 840.35	T.B.D.I. FOR STEEL GRATES STD. 840.36	STEEL FRAME WITH TWO GRATES STD. 840.37	TEMP STEEL PLATE COVER MASONRY DRAINAGE	OPEN THROAT C.B. (3 OR 4 SIDED) STD. 840D04	M.H. STD. 840.51, STD. 840.52, OR STD. 840.53	M.H. FRAME AND COVER STD. 840.54	M.H. FRAME AND COVER FOR OTCB STD. 840.55	CONVERT EXISTING J.B. TO D.I.	ADJUST C.B.	ADJUST D.I.	15" C.S. ELBOW	18" C.S. ELBOW	24" C.S. ELBOW	FLOWABLE FILL CY	CONCRETE COLLARS CL. "B" STD. 840.72 CY	CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY	PIPE REMOVAL LIN. FT.	REMARKS
0901	0902																								
0902																									
0902	0903																								
0903																									
0903	0904																								
0904																									
0904	0906																								
0905											1		1												4-SIDED OTCB SEE SHEET 2C-7
0905	0906																								
0906																									
0906	0908																								
0908																									
0908	0909																								
0909																									
0909	0931																								
0910																									
0910	0911																								
0911																									
0911	0913																								
0912																									
0912	0913																								
0913																									
0913	0914																								
0914																									
0914	0915																								
0915																									
0915	1001																								
0921																1									
0922							1																		
0922	0921																								
0924																									
0924	0925																								
0925																									
0931																									
0931	0910																								
1001																									
1001	1004																								
1002																									
1002	1000																								
1000																									
1004																									
1004	1002																								
1102																									
1102	1103																								
1103																									
1103	1105																								
1104																									
1104	1105																								
1105																									
1105	1106																								
SHEET TOTALS							1				1		1			1									

ABBREVIATIONS

C.A.A.	CORRUGATED ALUMINIUM ALLOY
C.B.	CATCH BASIN
C.S.	CORRUGATED STEEL
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
H.D.P.E.	HIGH DENSITY POLYETHYLENE
J.B.	JUNCTION BOX
M.H.	MANHOLE
N.S.	NARROW SLOT
P.V.C.	POLYVINYL CHLORIDE
R.C.	REINFORCED CONCRETE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX
W.S.	WIDE SLOT

DG1Y184

COMPUTED BY: JMS DATE: 09/28/2026

CHECKED BY: TAP DATE: 09/29/2026

PROJECT NO.	SHEET NO.
U-4714BA	3D-10

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.
See "Standard Specifications For Roads and Structures, Section 300-5".**

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

LINE & STATION	STRUCTURE NUMBER FROM	STRUCTURE NUMBER TO	TOP ELEVATION FT.	INVERT ELEVATION FT.	INVERT ELEVATION FT.	MINIMUM REQUIRED SLOPE %	C. S. PIPE 12 (.064)	C. S. PIPE 15 (.064)	C. S. PIPE 18 (.064)	C. S. PIPE 24 (.064)	R. C. PIPE CLASS III 12	R. C. PIPE CLASS III 15	R. C. PIPE CLASS III 18	R. C. PIPE CLASS III 24	R. C. PIPE CLASS III 30	R. C. PIPE CLASS III 36	R. C. PIPE CLASS III 42	R. C. PIPE CLASS III 48	R. C. PIPE CLASS IV 12	R. C. PIPE CLASS IV 15	R. C. PIPE CLASS IV 18	R. C. PIPE CLASS IV 24	R. C. PIPE CLASS IV 30	R. C. PIPE CLASS IV 36	R. C. PIPE CLASS IV 42	R. C. PIPE CLASS IV 48	R. C. PIPE CLASS V 12	R. C. PIPE CLASS V 15	R. C. PIPE CLASS V 18	R. C. PIPE CLASS V 24	R. C. PIPE CLASS V 30	R. C. PIPE CLASS V 36	R. C. PIPE CLASS V 42	R. C. PIPE CLASS V 48
L 15+50																																130		
L 44+86													20																					
L 30+90												24																						
L 10+52																																		
L 11+59																																		
L 13+04																																		
L 18+46																																		
L 20+66																																		
L 20+55																																		
L 25+63																																		
L 27+50																																		
L 27+49																																		
L 28+38																																		
L 30+38																																		
L 31+70																																		
L 31+82																																		
L 31+25																																		
L 32+34																																		
L 32+79																																		
L 33+20																																		
Y5 12+82																																		
L 33+36																																		
Y5 11+96																																		
L 34+23																																		
L 35+22																																		
L 35+93																																		
L 36+79																																		
L 37+72																																		
L 38+66																																		
L 39+49																																		
L 40+32																																		
L 41+24																																		
L 41+96																																		
L 42+50																																		
L 42+66																																		
L 41+31																																		
L 39+61																																		
L 38+76																																		
L 38+29																																		
L 36+49																																		
L 43+73																																		
Y7 11+33																																		
Y7 11+47																																		
L 43+96																																		
L 47+19																																		
L 46+38																																		
L 46+73																																		
L 47+63																																		
L 48+52																																		
L 49+40																																		
SHEET TOTALS												24	20																			130		

ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY	REINFORCED ENDWALLS CY	DRAINAGE STRUCTURE MASONRY CY	QUANTITIES FOR DRAINAGE STRUCTURES (NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)) 0' THRU 5' EACH	A: 5' THRU 10' LIN. FT.	B: 10' AND ABOVE LIN. FT.	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E	F	G		CONCRETE TRANSITIONAL SECTION D.I. STD. 852.04 OR STD. 852.06	CONCRETE TRANSITIONAL SECTION C.B. STD. 852.05	OPEN THROAT C.B. STD. 840.04 OR STD. 840.05	CONCRETE BRIDGE APPROACH D.I. STD. 840.13	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATES STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26	G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27	G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28	G.D.I. (W.S. FLAT) FRAME WITH GRATE STD. 840.20	G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20	G.D.I. (W.S. SAG) FRAME W/ GRATE STD. 840.22	G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22	G.D.I. (N.S. SAG) FRAME W/ GRATE STD. 840.24	G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24	G.D.I. (N.S. FLAT) FRAME W/ GRATE STD. 840.29	G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29	DRIVEWAY D.I. STD. 840.30	FRAME W/ GRATE FOR DRIVEWAY STD. 840.30	J.B. STD. 840.31 OR STD. 840.32	ANGLED VANE GRATES AND FRAMES STD. 840.33	T.B.J.B. STD. 840.34	T.B.D.I. STD. 840.35	T.B.D.I. FOR STEEL GRATES STD. 840.36	STEEL FRAME WITH TWO GRATES STD. 840.37	TEMP STEEL PLATE COVER MASONRY DRAINAGE	OPEN THROAT C.B. (3 OR 4 SIDED) STD. 840D04	M.H. STD. 840.51, STD. 840.52, OR STD. 840.53	M.H. FRAME AND COVER STD. 840.54	M.H. FRAME AND COVER FOR OTCB STD. 840.55	CONVERT EXISTING J.B. TO D.I.	ADJUST C.B.	ADJUST D.I.	15" C.S. ELBOW	18" C.S. ELBOW	24" C.S. ELBOW

LINE & STATION	OFFSET	FLOWABLE FILL CY	CONCRETE COLLARS CL. "B" STD. 840.72 CY	CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY	PIPE REMOVAL LIN. FT.	REMARKS
L 15+50	LT		0.7640		130	TEMPORARY 36" RCP (SEE EC-4A and EC-4B)
L 44+86	LT		0.4465		20	TEMPORARY 18" RCP (SEE TMP-7)
L 30+90	RT				24	TEMPORARY 15" RCP (SEE TMP-6)
L 10+52	49 RT				29	EXISTING 15" CMP
L 11+59	49 RT				29	EXISTING 15" CMP
L 13+04	48 RT				39	EXISTING 15" CMP
L 18+46	6 LT				28	EXISTING 15" CMP
L 20+66	10 LT				121	EXISTING 18" RCP
L 20+55	49 RT				40	EXISTING 15" CMP
L 25+63	3 LT				29	EXISTING 18" RCP
L 27+50	17 LT				72	EXISTING 18" RCP
L 27+49	51 RT				89	EXISTING 15" CMP
L 28+38	49 RT				33	EXISTING 15" CMP
L 30+38	46 RT				45	EXISTING 15" CMP
L 31+70						
L 31+82	40 RT				65	EXISTING 15" RCP
L 31+25	10 LT				29	EXISTING 15" CMP
L 32+34	22 LT				17	EXISTING 15" RCP
L 32+79	14 LT				93	EXISTING 15" RCP
L 33+20	22 LT				18	EXISTING 15" RCP
Y5 12+82	20 LT				23	EXISTING 15" HDPE
L 33+36	36 RT				29	EXISTING 15" RCP
Y5 11+96	20 LT				41	EXISTING 15" CMP
L 34+23	19 LT				49	EXISTING 15" RCP
L 35+22	22 LT				33	EXISTING 15" RCP
L 35+93	28 RT				28	EXISTING 15" RCP
L 36+79	25 RT				28	EXISTING 15" HDPE
L 37+72	22 RT				28	EXISTING 15" CMP
L 38+66	19 RT				29	EXISTING 15" CMP
L 39+49	16 RT				28	EXISTING 15" CMP
L 40+32	13 RT				28	EXISTING 15" CMP
L 41+24	10 RT				28	EXISTING 18" CMP
L 41+96	8 RT				22	EXISTING 15" RCP
L 42+50	46 LT				28	EXISTING 15" CMP
L 42+66	54 LT				9	EXISTING 12" RCP
L 41+31	42 LT				40	EXISTING 15" CMP
L 39+61	36 LT				29	EXISTING 15" CMP
L 38+76	34 LT				29	EXISTING 15" CMP
L 38+29	32 LT				29	EXISTING 15" CMP
L 36+49	17 LT				14	EXISTING 8" HDPE
L 43+73	36 LT				114	EXISTING 18" RCP
Y7 11+33	0 CL				58	EXISTING 18" RCP
Y7 11+47	35 RT				136	EXISTING 18" RCP
L 43+96	2 RT				28	EXISTING 15" CMP
L 47+19	8 LT				28	EXISTING 18" RCP
L 46+38	34 LT				49	EXISTING 18" RCP
L 46+73	60 LT				64	EXISTING 18" RCP
L 47+63	60 LT				108	EXISTING 15" RCP
L 48+52	60 LT				64	EXISTING 15" RCP
L 49+40	59 LT				104	EXISTING 15" RCP
SHEET TOTALS			1.2105		2275	

SIZE / THICKNESS OR GAUGE

ABBREVIATIONS

C.A.A.	CORRUGATED ALUMINIUM ALLOY
C.B.	CATCH BASIN
C.S.	CORRUGATED STEEL
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
H.D.P.E.	HIGH DENSITY POLYETHYLENE
J.B.	JUNCTION BOX
M.H.	MANHOLE
N.S.	NARROW SLOT
P.V.C.	POLYVINYL CHLORIDE
R.C.	REINFORCED CONCRETE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX
W.S.	WIDE SLOT

DG1Y184

COMPUTED BY: JMS DATE: 09/28/2026

CHECKED BY: TAP DATE: 09/29/2026

PROJECT NO.	SHEET NO.
U-4714BA	3D-11

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.
See "Standard Specifications For Roads and Structures, Section 300-5".**

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

ABBREVIATIONS
- C.A.A. CORRUGATED ALUMINIUM ALLOY
- C.B. CATCH BASIN
- C.S. CORRUGATED STEEL
- D.I. DROP INLET
- G.D.I. GRATED DROP INLET
- H.D.P.E. HIGH DENSITY POLYETHYLENE
- J.B. JUNCTION BOX
- M.H. MANHOLE
- N.S. NARROW SLOT
- P.V.C. POLYVINYL CHLORIDE
- R.C. REINFORCED CONCRETE
- T.B.D.I. TRAFFIC BEARING DROP INLET
- T.B.J.B. TRAFFIC BEARING JUNCTION BOX
- W.S. WIDE SLOT

LINE & STATION / SIZE / THICKNESS OR GAUGE	OFFSET		STRUCTURE NUMBER FROM	STRUCTURE NUMBER TO	TOP ELEVATION FT.	INVERT ELEVATION FT.	INVERT ELEVATION FT.	MINIMUM REQUIRED SLOPE %	C. S. PIPE 12 .064	C. S. PIPE 15 .064	C. S. PIPE 18 .064	C. S. PIPE 24 .064	R. C. PIPE CLASS III 12	15	18	24	30	36	42	48	R. C. PIPE CLASS IV 12	15	18	24	30	36	42	48	R. C. PIPE CLASS V 12	15	18	24	30	36	42	48	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY	REINFORCED ENDWALLS CY	DRAINAGE STRUCTURE MASONRY CY	QUANTITIES FOR DRAINAGE STRUCTURES (NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)) 0' THRU 5' EACH	A 5' THRU 10' LIN. FT.	B 10' AND ABOVE LIN. FT.	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E	F	G		CONCRETE TRANSITIONAL SECTION D.I. STD. 852.04 OR STD. 852.06	C.B. STD. 852.05	OPEN THROAT C.B. STD. 840.04 OR STD. 840.05	CONCRETE BRIDGE APPROACH D.I. STD. 840.13	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATES STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26	G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27	G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28	G.D.I. (W.S. FLAT) FRAME WITH GRATE STD. 840.20	G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20	G.D.I. (W.S. SAG) FRAME W/ GRATE STD. 840.22	G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22	G.D.I. (N.S. SAG) FRAME W/ GRATE STD. 840.24	G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24	G.D.I. (N.S. FLAT) FRAME W/ GRATE STD. 840.29	G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29	DRIVEWAY D.I. STD. 840.30	FRAME W/ GRATE FOR DRIVEWAY STD. 840.30	J.B. STD. 840.31 OR STD. 840.32	ANGLED VANE GRATES AND FRAMES STD. 840.33	T.B.J.B. STD. 840.34	T.B.D.I. STD. 840.35	T.B.D.I. FOR STEEL GRATES STD. 840.36	STEEL FRAME WITH TWO GRATES STD. 840.37	TEMP STEEL PLATE COVER MASONRY DRAINAGE	OPEN THROAT C.B. (3 OR 4 SIDED) STD. 840D04	M.H. STD. 840.51, STD. 840.52, OR STD. 840.53	M.H. FRAME AND COVER STD. 840.54	M.H. FRAME AND COVER FOR OTCB STD. 840.55	CONVERT EXISTING J.B. TO D.I.	ADJUST C.B.	ADJUST D.I.	15" C.S. ELBOW	18" C.S. ELBOW	24" C.S. ELBOW	FLOWABLE FILL CY	CONCRETE COLLARS CL. "B" STD. 840.72 CY	CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY	PIPE REMOVAL LIN. FT.	REMARKS
L 49+46	8	LT																																																																																							28	EXISITNG 15" CMP
L 51+72	52	LT																																																																																								64	EXISTING 15" RCP
L 52+42	51	LT																																																																																									72	EXISTING 15" RCP
L 52+14	0	CL																																																																																									61	EXISTING 15" RCP
L 52+73	27	LT																																																																																									68	EXISTING 18" RCP
L 53+11	120	LT																																																																																									137	EXISTING 15" RCP
Y9 10+89	17	LT																																																																																								20	EXISTING 18" CMP
L 54+02	51	LT																																																																																									9	EXISTING 12" RCP
L 54+79	5	RT																																																																																									29	EXISTING 15" CMP
L 55+34	19	LT																																																																																								59	EXISTING 18" RCP
L 55+73	43	LT																																																																																								105	EXISTING 12" RCP
L 56+68	38	LT																																																																																								81	EXISTING 12" RCP
Y10 10+78	4	LT																																																																																							51	EXISTING 30" CMP
Y10 10+76	24	LT																																																																																								5	EXISTING 15" CMP
Y10 10+87	19	LT																																																																																								18	EXISTING 15" CMP
Y10 14+83	20	RT																																																																																							115	EXISTING 15" CMP
Y10 13+31	48	RT																																																																																							50	EXISTING 15" CMP
L 61+81	34	RT																																																																																							32	EXISTING 15" RCP
L 61+16	21	RT																																																																																								124	EXISTING 15" RCP
L 62+60	33	LT																																																																																								177	EXISTING 15" RCP
L 66+33	29	LT																																																																																								66	EXISTING 15" RCP
L 65+22	23	RT																																																																																								29	EXISTING 15" CMP
L 65+85	28	RT																																																																																								30	EXISTING 15" CMP
L 60+25	25	RT																																																																																								55	EXISTING 8" HDPE
L 60+34	2	LT																																																																																							59	EXISTING 15" RCP
L 60+16	36	LT																																																																																								16	EXISTING 15" RCP
L 60+52	54	RT																																																																																								61	EXISTING 15" RCP
L 68+78	30	LT																																																																																							52	EXISTING 18" RCP
L 69+68	52	LT																																																																																								30	EXISTING 18" RCP
L 71+82	24	RT																																																																																								26	
L 72+29	24	RT																																																																																								25	
L 73+42	27	LT																																																																																								28	EXISTING 15" CMP
L 72+41	44	LT																																																																																							20	EXISTING 12" RCP
L 74+45	27	LT																																																																																							28	EXISTING 15" CMP
L 74+54	25	RT																																																																																							28	EXISTING 15" CMP
L 75+43	25	RT																																																																																							14	EXISTING 15" CMP
L 76+44	25	RT																																																																																							20	EXISTING 15" CMP
L 76+96	22	RT																																																																																							28	EXISTING 15" RCP
L 78+05	18	RT																																																																																							186	EXISTING 15" RCP
L 78+94	37	RT																																																																																							34	EXISTING 15" RCP
L 79+34	26	RT																																																																																							28	EXISTING 15" CMP
L 79+09	23	RT																																																																																							19	EXISTING 15" RCP
L 78+73	26	LT																																																																																							33	EXISTING 15" CMP
L 77+05	27	LT																																																																																							29	EXISTING 15" CMP
L 80+40	23	LT																																																																																							29	EXISTING 15" CMP
L 81+02	21	LT																																																																																							29	EXISTING 15" CMP
L 82+44	19	LT																																																																																							33	EXISTING 15" RCP
Y10 21+47	25	RT																																																																																							59	EXISTING 15" RCP
L 69+42	36	LT																																																																																							37	EXISITING 18" RCP
L 70+00	39	LT																																																																																							77	EXISITING 18" RCP
SHEET TOTALS																																																																																												2513	

DG1Y184

COMPUTED BY: JMS DATE: 09/28/2026

CHECKED BY: TAP DATE: 09/29/2026

PROJECT NO.	SHEET NO.
U-4714BA	3D-12

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout. See "Standard Specifications For Roads and Structures, Section 300-5".

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 48 INCHES & UNDER)

LINE & STATION / SIZE / THICKNESS OR GAUGE	OFFSET	STRUCTURE NUMBER FROM	STRUCTURE NUMBER TO	TOP ELEVATION FT.	INVERT ELEVATION FT.	INVERT ELEVATION FT.	MINIMUM REQUIRED SLOPE %	C. S. PIPE 12 .064	C. S. PIPE 15 .064	C. S. PIPE 18 .064	C. S. PIPE 24 .064	R. C. PIPE CLASS III 12	R. C. PIPE CLASS III 15	R. C. PIPE CLASS III 18	R. C. PIPE CLASS III 24	R. C. PIPE CLASS III 30	R. C. PIPE CLASS III 36	R. C. PIPE CLASS III 42	R. C. PIPE CLASS III 48	R. C. PIPE CLASS IV 12	R. C. PIPE CLASS IV 15	R. C. PIPE CLASS IV 18	R. C. PIPE CLASS IV 24	R. C. PIPE CLASS IV 30	R. C. PIPE CLASS IV 36	R. C. PIPE CLASS IV 42	R. C. PIPE CLASS IV 48	R. C. PIPE CLASS V 12	R. C. PIPE CLASS V 15	R. C. PIPE CLASS V 18	R. C. PIPE CLASS V 24	R. C. PIPE CLASS V 30	R. C. PIPE CLASS V 36	R. C. PIPE CLASS V 42	R. C. PIPE CLASS V 48
Y4 11+16	19 RT																																		
L 15+98	20 LT																																		
L 16+08	26 RT																																		
L 44+79	33 LT																																		
L 34+53	9 RT																																		
L 31+09	18 RT																																		
Y10 11+27	20 LT																																		
Y10 16+17	16 RT																																		
L 69+60	4 LT																																		
SHEET TOTALS																																			
PROJECT TOTALS										88			1140	436	268	28	88				7076	2580	1824	1340	868				32				130		

LINE & STATION	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY	REINFORCED ENDWALLS CY	DRAINAGE STRUCTURE MASONRY CY	QUANTITIES FOR DRAINAGE STRUCTURES 0' THRU 5' EACH	A 5' THRU 10' LIN. FT.	B 10' AND ABOVE LIN. FT.	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E	F	G		D.I. STD. 852.04 OR STD. 852.06	C.B. STD. 852.05	OPEN THROAT C.B. STD. 840.04 OR STD. 840.05	CONCRETE BRIDGE APPROACH D.I. STD. 840.13	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATES STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26	G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27	G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28	G.D.I. (W.S. FLAT) FRAME WITH GRATE STD. 840.20	G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20	G.D.I. (W.S. SAG) FRAME W/ GRATE STD. 840.22	G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22	G.D.I. (N.S. SAG) FRAME W/ GRATE STD. 840.24	G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24	G.D.I. (N.S. FLAT) FRAME W/ GRATE STD. 840.29	G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29	DRIVEWAY D.I. STD. 840.30	FRAME W/ GRATE FOR DRIVEWAY STD. 840.30
Y4 11+16																														
L 15+98																														
L 16+08																														
L 44+79																														
L 34+53																														
L 31+09																														
Y10 11+27																														
Y10 16+17																														
L 69+60																														
SHEET TOTALS																														
PROJECT TOTALS				213	40.5		151	28	55	68		19				34	34		4			19				2		3		

NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)

LINE & STATION	J.B. STD. 840.31 OR STD. 840.32	ANGLED VANE GRATES AND FRAMES STD. 840.33	T.B.J.B. STD. 840.34	T.B.D.I. STD. 840.35	T.B.D.I. FOR STEEL GRATES STD. 840.36	STEEL FRAME WITH TWO GRATES STD. 840.37	TEMP STEEL PLATE COVER MASONRY DRAINAGE	OPEN THROAT C.B. (3 OR 4 SIDED) STD. 840D04	M.H. STD. 840.51, STD. 840.52, OR STD. 840.53	M.H. FRAME AND COVER STD. 840.54	M.H. FRAME AND COVER FOR OTCB STD. 840.55	CONVERT EXISTING J.B. TO D.I.	ADJUST C.B.	ADJUST D.I.	15" C.S. ELBOW	18" C.S. ELBOW	24" C.S. ELBOW	FLOWABLE FILL CY	CONCRETE COLLARS CL. "B" STD. 840.72 CY	CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY	PIPE REMOVAL LIN. FT.	REMARKS
Y4 11+16																		2		0.045		Plug and Fill 15" RCP
L 15+98																		7		0.262		Plug and Fill 36" RCP
L 16+08																		16		0.262		Plug and Fill 36" RCP
L 44+79																		4		0.065		Plug and Fill 18" RCP
L 34+53																		3		0.065		Plug and Fill 18" RCP
L 31+09																		3		0.045		Plug and Fill 15" RCP
Y10 11+27																		3		0.045		Plug and Fill 15" CMP
Y10 16+17																		2		0.045		Plug and Fill 15" RCP
L 69+60																					67	
SHEET TOTALS																		40		0.834	67	
PROJECT TOTALS	1		1	19			3	2		4			1			2		40	2.7385	0.834	4855	

ABBREVIATIONS

- C.A.A. CORRUGATED ALUMINIUM ALLOY
- C.B. CATCH BASIN
- C.S. CORRUGATED STEEL
- D.I. DROP INLET
- G.D.I. GRATED DROP INLET
- H.D.P.E. HIGH DENSITY POLYETHYLENE
- J.B. JUNCTION BOX
- M.H. MANHOLE
- N.S. NARROW SLOT
- P.V.C. POLYVINYL CHLORIDE
- R.C. REINFORCED CONCRETE
- T.B.D.I. TRAFFIC BEARING DROP INLET
- T.B.J.B. TRAFFIC BEARING JUNCTION BOX
- W.S. WIDE SLOT

DG1Y184

COMPUTED BY: JMS DATE: 09/28/2026

CHECKED BY: TAP DATE: 09/29/2026

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROJECT NO.	SHEET NO.
U-4714BA	3D-13

**Note: Invert Elevations indicated are for Bid Purposes only and shall not be used for project construction stakeout.
See "Standard Specifications For Roads and Structures, Section 300-5".**

LIST OF PIPES, ENDWALLS, ETC. (FOR PIPES 54 INCHES & OVER)

LINE & STATION / SIZE / THICKNESS OR GAUGE	OFFSET	STRUCTURE NUMBER FROM	STRUCTURE NUMBER TO	TOP ELEVATION FT.	INVERT ELEVATION FT.	INVERT ELEVATION FT.	MINIMUM REQUIRED SLOPE %
L 14+86	74 LT	0419					
		0419	0427		718.0	716.2	
L 16+31	71 RT	0427					
SHEET TOTALS							
PROJECT TOTALS							

LINE & STATION	R. C. PIPE CLASS III 12	15	18	24	30	36	42	48	54	60	66	72	78	84	R. C. PIPE CLASS IV 12	30	36	42	48	54	R. C. PIPE CLASS V 12	18	24	30	36	42	48	54	60	66	72	78	84
L 14+86																																	
																															208		
L 16+31																																	
SHEET TOTALS																															208		
PROJECT TOTALS																															208		

LINE & STATION	ENDWALLS STD. 838.01 OR STD. 838.11 (UNLESS NOTED OTHERWISE) CY	REINFORCED ENDWALLS CY	DRAINAGE STRUCTURE MASONRY CY	QUANTITIES FOR DRAINAGE STRUCTURES (NOTE: TOTAL LIN. FT. FOR PAY QUANTITY SHALL BE A + (1.3 X B)) 0' THRU 5' EACH	A 5' THRU 10' LIN. FT.	B 10' AND ABOVE LIN. FT.	C.B. STD. 840.01 OR STD. 840.02	FRAME, GRATES, AND HOOD STD. 840.03 GRATE TYPE E	F	G		CONCRETE TRANSITIONAL SECTION D.I. STD. 852.04 OR STD. 852.06	C.B. STD. 852.05
L 14+86		7.100											
L 16+31		7.100											
SHEET TOTALS		14.200											
PROJECT TOTALS		14.200											

LINE & STATION	OPEN THROAT C.B. STD. 840.04 OR STD. 840.05	CONCRETE BRIDGE APPROACH D.I. STD. 840.13	D.I. STD. 840.14 OR STD. 840.15	D.I. FRAME AND GRATES STD. 840.16	G.D.I. TYPE "A" STD. 840.17 OR STD. 840.26	G.D.I. TYPE "B" STD. 840.18 OR STD. 840.27	G.D.I. TYPE "D" STD. 840.19 OR STD. 840.28	G.D.I. (W.S. FLAT) FRAME WITH GRATE STD. 840.20	G.D.I. (W.S. FLAT) FRAME W/ 2 GRATES STD. 840.20	G.D.I. (W.S. SAG) FRAME W/ GRATE STD. 840.22	G.D.I. (W.S. SAG) FRAME W/ 2 GRATES STD. 840.22	G.D.I. (N.S. SAG) FRAME W/ GRATE STD. 840.24	G.D.I. (N.S. SAG) FRAME W/ 2 GRATES STD. 840.24	G.D.I. (N.S. FLAT) FRAME W/ GRATE STD. 840.29	G.D.I. (N.S. FLAT) FRAME W/ 2 GRATES STD. 840.29	DRIVEWAY D.I. STD. 840.30	FRAME W/ GRATE FOR DRIVEWAY STD. 840.30	J.B. STD. 840.31 OR STD. 840.32	ANGLED VANE GRATES AND FRAMES STD. 840.33	T.B.J.B. STD. 840.34	T.B.D.I. STD. 840.35	T.B.D.I. FOR STEEL GRATES STD. 840.36	STEEL FRAME WITH TWO GRATES STD. 840.37	TEMP STEEL PLATE COVER MASONRY DRAINAGE	OPEN THROAT C.B. (3 OR 4 SIDED) STD. 840D04	MODIFIED CONC. FLUME	PREFORMED SCOUR HOLE (PER EACH)	ENERGY DISSIPATION BASIN		FLOWABLE FILL CY	CONCRETE COLLARS CL. "B" STD. 840.72 CY	CONCRETE AND BRICK PIPE PLUG STD. 840.71 CY	PIPE REMOVAL LIN. FT.	REMARKS
L 14+86																																		
L 16+31																																		
SHEET TOTALS																																		
PROJECT TOTALS																																		

ABBREVIATIONS

C.A.A.	CORRUGATED ALUMINIUM ALLOY
C.B.	CATCH BASIN
C.S.	CORRUGATED STEEL
D.I.	DROP INLET
G.D.I.	GRATED DROP INLET
H.D.P.E.	HIGH DENSITY POLYETHYLENE
J.B.	JUNCTION BOX
M.H.	MANHOLE
N.S.	NARROW SLOT
P.V.C.	POLYVINYL CHLORIDE
R.C.	REINFORCED CONCRETE
T.B.D.I.	TRAFFIC BEARING DROP INLET
T.B.J.B.	TRAFFIC BEARING JUNCTION BOX
W.S.	WIDE SLOT

Docusign Envelope ID: 4E991284-EA82-8045-82C5-A8083F1F68D2

COMPUTED BY: WDM DATE: 4/9/2026 CHECKED BY: TLS DATE: 4/9/2026	(9-17-24)	PROJECT NO. 39078.1.6(U-4714BA)	SHEET NO. 3G-1

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

SUMMARY OF SUBSURFACE DRAINAGE

LINE	Station	Station	Location LT/RT/CL	Drain Type* UD/BD/SD	LF
CONTINGENCY				SD	300
				TOTAL LF:	300

***UD = Underdrain**
***BD = Blind Drain**
***SD = Subsurface Drain**

SUMMARY OF AGGREGATE SUBGRADE/STABILIZATION

LINE	Station	Station	Aggregate Type* ASU(1/2)/ AST	Aggregate Thickness INCHES [8" for ASU(2)]	Shallow Undercut CY	Class IV Subgrade Stabilization TONS	Geotextile for Subgrade Stabilization SY	Stabilizer Aggregate TONS	Class IV Aggregate Stabilization TONS
-L-	10+00	78+12.35	ASU(2)	8		17100	37900		
CONTINGENCY							1600	150	
			TOTAL CY/TONS/SY:		0	17100**	39500**	150	0

***ASU(1/2) = Aggregate Subgrade (Type 1 or 2)**

***AST = Aggregate Stabilization**

****Total tons of "Class IV Subgrade Stabilization" and total square yards of "Geotextile for Subgrade Stabilization" are only the estimated quantities for ASU(1/2)/AST and may only represent a portion of the subgrade stabilization and geotextile quantities shown in the Item Sheets of the Proposal.**

Docusign Envelope ID: 4E991284-EA82-8045-82C5-A8083F1F68D2

PROJ. REFERENCE NO.	SHEET NO.
U-4714BA	3P-1

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PARCEL INDEX SHEET

PARCEL No.	SHEET No.	PROPERTY OWNER NAME
1	4	STALLINGS POINTE LLC
2	4,5	MARK DAVID BROOME
3	4	317 PROPERTIES, LLC
4	4	POLE HELENA B.
5	4	DANNY F. DUNN AND WIFE, JENNIFER J DUNN
6	4	JAMES HAMILTON TURNER, JR
7	4	ANTONIOS K. PANOU
8	4,5	DEPARTMENT OF TRANSPORTATION
8Z	4,5	DEPARTMENT OF TRANSPORTATION
9	5	MORNINGSIDE MEADOWS HOMEOWNERS ASSOCIATION, INC
10	5	CHRISTINE S GOODSON & DAVIS A GOODSON
11	5	KIMBERLY A ELSASSER
12	5	MORNINGSIDE MEADOWS HOMEOWNERS ASSOCIATION, INC
13	5,6	PARK MEADOWS DEVELOPMENT, LLC
14	5,6	PARK MEADOWS DEVELOPMENT, LLC
15	5	RICHARD P BROOME
16	5	2015A PROPERTY OWNER, LLC
17	5	GERALD ANDERSON AND BELINDA ANDERSON
18	5	SHAWN D. STEAGALL AND WIFE MELINDA C. STEAGALL
19	5	TAMARA J. HARLE
20	5,6	MANTIS BILL AND ELISAVET H.
21	6	CODY RAY ANDERSEN & SARAH C WADE
22	6	CODY RAY ANDERSEN & SARAH C WADE
23	6	MV COMMERCIAL 3901, LLC
25	6	JOHN KENNETH HINSON
26	6	JAMES EVERETTE HINSON & SUSAN H. HINSON
27	6	ELIZABETH QUILES & RENE QUILES
28	6	WADE BERDETTE WILSON & WIFE JUDY H. WILSON
29	6	PHONE CARDS R US US, INC
30	6	JERRY C. LANEY HEIRS
31	6,7	LINDA W. STINES
32	6	MANTIS BILL AND ELISAVET H.
33	6	WAYNE PHILLIP COHEN AND WIFE WEND E. COHEN
34	6	WINDEE SANDERSON
35	6	JACALYN PRIVETTE
36	6	TOM GIANNIBAS
37	6	TOM GIANNIBAS AND WIFE HRISTOULA G. GIANNIBAS
38	6	MEGHAN HELMS
39	6	TONY A. MILLER AND MARY ALICE
40	6	ROBERT GARY LOVETTE AND DIANNA K.
41	6	DALE S. WALKER
42	6	NO NAME SHOWN ON DRAWING
43	6,7	TOWN OF INDIAN TRAIL
44	7	CAROLINAS UNION HEALTHCARE, INC.
44A	7	CSL NORTH CAROLINA SYSTEM, LP
45	7	VIRGINIA C. FOARD, TRUSTEE
46	7	VIRGINIA C. FOARD, TRUSTEE
47	7	DAWN MACOMB SCHNEIDER & RANDY SCHNEIDER
48	7	DONNA NELSON HAMMOND
49	7	MALEK MACARON
50	7	JAMES T. & ANITA WEBB
51	7	JERRY EDMOND HARTIS & DOROTHY K. HARTIS
52	7	KENNETH W. STILWELL
53	7,8	ESTHER G. NARRON
55	7	WILLIAM J. PRESSLY, ET AL
55A	7	BILLY F AYCOTH, JR.
56	7	LARRY J. VICKERY
57	7	RONDO ELIZONDO AND WIFE CHRISTY B ELIZONDO
58	7	FONDA HINSON MAYNOR & JERRY MAYNOR
58A	7	STEVE MAYNARD CLAYTON, JR.

PARCEL No.	SHEET No.	PROPERTY OWNER NAME
59	7	RICHARD H. TOMBERLIN
60	7,8	ALPHA OMEGA LAND DEVELOPMENT, INC.
61	8	GEORGE ANTHANS AND WIFE DENISE P. ANTHANS
63	8	SUBHASYS ESTATES, LLC
64	8	HENDLEY-BREWER PROPERTIES
65	8	GREGORY PLAZA, LLC
66	8	INDIAN TRAIL PROPERTIES
67	8,9	WILLIAMS HARRIS PROPERTIES, LLC
69	8	RUSHING CONSTRUCTION
70	8,11	INDIAN TRAIL PLAZA, LLC
71	8	J.J. CLARK, JR., STEPHEN G. SIMMS, & ANTHONY A WENDELL
72	8	TWO COUSINS PROPERTIES, LLC
73	8	CAH HOLDINGS, LLC
74	8	CAH HOLDINGS, LLC
75	8	BOULEVARD EAST, LLC
76	8,9	FAMILY TYME, LLC
77	9	UNION MEMORIAL HOSPITAL, INC.
78	9	SANDRA E. PETERSON & WENDY D. EDWARDS
79	9	SHARON PRICE & JOYCE PRICE
80	9	LOT 2 WALLACE CROWELL
81	9,10	LOT 1 BILLIE P. CROWELL
82	9	CARLTON'S RENTALS, LLC AND GLEN OAKS INVESTMENTS, LLC
83	9	BO-TY, LLC
84	9	JORDAN'S PLACE, LLC
86	9	TAE KYU PARK & OH SEON PARK
87	9	STALLINGS VOLUNTEER FIRE DEPARTMENT, INC.
88	9	ROGER MAC HELMS
89	9	BARBARA HELMS
194	11,8	UNION COUNTY PUBLIC WORKS
195	11	TRACT 1 CUBE HHF LIMITED PARTNERSHIP
196	11	TAE KYU PARK AND SPOUSE OH SEON PARK AND MEE AE PARK
198	11	ALPHA OMEGA LAND DEVELOPMENT, INC.
199	11	ALPHA OMEGA LAND DEVELOPMENT, INC.
200	11	ROBERT CHARLES MULLIS
201	11	MICHAEL O. RADESKY AND WIFE PAMELA G. RADESKY

Docusign Envelope ID: C93BD3C5-2128-834E-80F4-72617387D83B

STV Engineers, Inc.
2151 Hawkins St., Suite 1400
Charlotte, NC 28203
NC License Number F-0991

PROJECT REFERENCE NO.	SHEET NO.
U-4714BA	4
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER

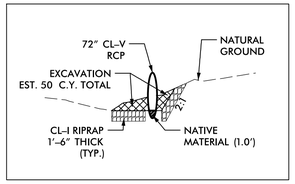
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 043891 11/10/2026 ENGINEER STEPHEN C. STEPHENS

HYDRAULICS ENGINEER

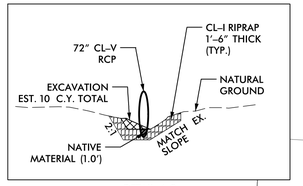
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 051699 11/10/2026 ENGINEER TIFFANY A. PREDOVICH

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

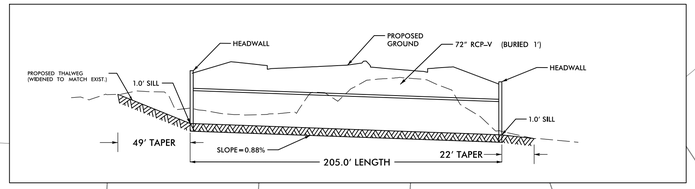
5" MONOLITHIC ISLAND
CONCRETE CURB & GUTTER /SIDEWALK
PAVED SHOULDER /MULTIUSE PATH



DETAIL 4-1
CULVERT GRADING PLAN
INLET CHANNEL



DETAIL 4-2
CULVERT GRADING PLAN
OUTLET CHANNEL



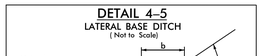
DETAIL 4-3
CULVERT GRADING PLAN
PROPOSED PROFILE

DETAIL 4-4
STANDARD 'V' DITCH
(Not to Scale)



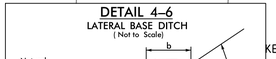
FROM -L- STA. 14+27 LT. TO STA. 14+53 LT.

DETAIL 4-5
LATERAL BASE DITCH
(Not to Scale)



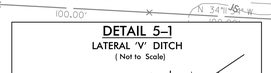
FROM -L- STA. 15+20 LT TO STA. 16+00 LT

DETAIL 4-6
LATERAL BASE DITCH
(Not to Scale)



FROM STA. 15+28 RT. TO STA. 16+27 RT.

DETAIL 5-1
LATERAL 'V' DITCH
(Not to Scale)



FROM STA. 16+00 LT. TO STA. 18+40 LT.

END TIP PROJECT U-4714AC
-L- POT STA. 193+50.61 LB=
BEGIN TIP PROJECT U-4714BA
-L- POT STA. 10+00.00 LA

SHENITA DEBERRY AND DANIEL DEBERRY
DB 3836 PG 464
PB A PG 50B
LOT 16

DAVID AARON FREED AND WIFE STEPHANIE FREED
DB 3744 PG 322
PB A PG 50B
LOT 15

FREDERICK M. BUNICK AND WIFE PATRICIA G. GABRIEL-BURNICK
DB 1639 PG 0293
PB A PG 50B
LOT 14

ERIK K ROWLETT AND WIFE ISABEL RUEDA ABAD
DB 6005 PG 222

ROBERT M. SULLIVAN AND WIFE SHARON L. SULLIVAN
DB 1653 PG 327

RUSSELL DANNY K AND VIRGINIA
DB N/F PG N/F
PB A PG 50B
LOT 12

PHIFER BRENDA E
DB N/F PG N/F
PB A PG 50B
LOT 13

KENS JUDY E
6706 PG 257
B A PG 50B
LOT 11

NAD 83/NA 2011

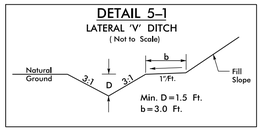
MATCHLINE -L- STA 17+00 (SHEET 5)

SEE SHEET 2B-1 FOR CURVE DATA
SEE SHEET 12 FOR -L- PROFILE

11/10/2026
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DETAIL 5-1
LATERAL 'V' DITCH
(Not to Scale)



FROM STA. 16+00 LT. TO STA. 18+40 LT.

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Charlotte, NC 28203
NC License Number F-0991

PROJECT REFERENCE NO.	SHEET NO.
U-4714BA	5
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER
Docusigned by: Stephen C. Stephens
NORTH CAROLINA PROFESSIONAL SEAL 043891 ENGINEER STEPHEN C. STEPHENS
10/20/2026

HYDRAULICS ENGINEER
Signed by: Tiffany A. Preddy
NORTH CAROLINA PROFESSIONAL SEAL 051699 ENGINEER TIFFANY A. PREDDY
10/20/2026

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NAD 83/NA 2011

5" MONOLITHIC ISLAND
CONCRETE CURB & GUTTER /SIDEWALK
PAVED SHOULDER /MULTIUSE PATH

MATCHLINE -L- STA 17+00 (SHEET 4)

MATCHLINE -L- STA 29+00 (SHEET 6)

MAXIMILLIAN CHESTER QUENTIN VUURMANS DB 5117 PG 448 PB F PG 844

JACEK RUDZIEWICZ DANKA RUDZIEWICZ DB 3792 PG 326 PB F PG 844

10 CHRISTINE S GOODSON DAVIS A GOODSON DB 3187 PG 441 PB F PG 844

2 MARK DAVID BROOME DB 7235 PG 204

9 MORNINGSIDE MEADOWS HOMEOWNERS ASSOCIATION, INC DB 1414 PG 136

DAVID L RAY SUSAN A RAY DB 1925 PG 671 PB F PG 844

2014-1 IH BORROWER, LP DB 6236 PG 590 PB F PG 844 (EXHIBIT A-12)

JOHNATHAN M WILSON JACQUELINE W WILSON DB 1583 PG 535 PB F PG 844

JEFFREY A ALRED DB 3527 PG 548 PB F PG 844

KORRY L HUMPHREY DB 6018 PG 858 PB F PG 844

SEAN ERIC WILLIAMS MALIA WILLIAMS DB 3763 PG 122 PB F PG 844

11 KIMBERLY A ELSASSER DB 3681PG 307 PB F PG 844

12 MORNINGSIDE MEADOWS HOMEOWNERS ASSOCIATION, INC DB 1414 PG 136 PB F PG 844

13 PARK MEADOWS DEVELOPMENT, LLC DB 6788 PG 279 PB F PG 433

14 PARK MEADOWS DEVELOPMENT, LLC DB 6788 PG 279 PB F PG 433

17 GERALD ANDERSON AND WIFE BELINDA ANDERSON DB 4862 PG 513

18 SHAWN D. STEAGALL AND WIFE MELINDA C. STEAGALL DB 6262 PG 577

19 TAMARA J. HARLE DB 5228 PG 034

20 MANTIS BILL AND ELISAVET H DB N/F PG N/F

JORNAN JOHNSON DB 7105 PG 1

EDNA MAY BROOME DB 6788 PG 279

NVR INC DB 7133 PG 718

PARK MEADOWS DEVELOPMENT, LLC DB N/F PG N/F

8Z DEPARTMENT OF TRANSPORTATION DB 8501PG 0722

16 2015A PROPERTY OWNER LLC DB 6384 PG 217

15 RICHARD P. BROOME

BRUCE R. MARX AND SPOUSE, LINDA L MARX DB 5944 PG 570

DAMON S. BUTCHER AND WIFE, TIFFANY M. BUTCHER DB 1349 PG 699

EDWARD R. BENVENUTI, JR. & WIFE DIANA K. BENVENUTI DB 5164 PG 730

ERIC W. GARTON AND WIFE TARA A. GARTON DB 4384 PG 168

FULCRUM PROPERTY MANAGEMENT, LLC DB 4772 PG 275

TODD SHANE LAMBERT DB 4383 PG 049

CLAYTOM A. HAILE AND WIFE MELANIE S. HAILE DB 748 PG 242

JOHN H. GRAY DB 6633 PG 613

TAYLOR ARMEN WORTH DB N/F PG N/F

HUNT FREDRICK G. AND WIFE CINDI S DB N/F PG N/F

DANIEL R. HANKINS AND TABITHA N. HANKINS DB 5654 PG 477

SHOALS RUN DR

MORNINGSIDE MEADOW LN

POPLAR GLEN DR SR 2266

ENCHANTED DR SR 1428

OLD MONROE RD SR 1009

BLUEBONNET LN

-L- POT Sta. 10+00.00

BEGIN CONSTRUCTION -Y- POT STA. 10+70.00 MATCH EXISTING

TIE TO EXIST C&G 12.00' RT

TIE TO EXIST C&G 12.00' LT

-L- POT Sta. 23+81.89 = -Y1- POT Sta. 10+00.00

BEGIN CONSTRUCTION -Y2- POT STA. 11+00.00 MATCH EXISTING

-L- POT Sta. 27+49.21 = -Y2- POT Sta. 12+00.00 -Y3- POC Sta. 10+00.00

-L- POT Sta. 20+68.26 = -Y- POT Sta. 12+00.00

PC Sta. 11+18.35

PT Sta. 11+42.00

END CONSTRUCTION -Y3- POT STA. 11+70.00 MATCH EXISTING

END CONSTRUCTION -X1- POC STA. 11+55.00 MATCH EXISTING

PT Sta. 12+35.50

POT Sta. 13+15.00

POT Sta. 13+70.00

PC Sta. 27+84.31

PROP 10' MUP

PROP 5' SIDEWALK

PROP 5' MONO ISLAND

PROP RAISED MEDIAN

PROP 2'-6" C&G

PROP 2'-9" C&G

PROP 5' PROP SIDEWALK

PROP 5' SIDEWALK

100' BAY TAPER (LT & RT)

100' BAY TAPER (LT)

100' BAY TAPER (RT)

600' SHIFT TAPER (LT & RT)

55' LANE TAPER

70' LANE TAPER

50' LANE TAPER

15" RCP-IV

15" RCP-III

24" RCP-IV

SEE SHEET 2B-1 FOR CURVE DATA
SEE SHEET 12 FOR -L- PROFILE
SEE SHEET 16 FOR -Y-, -Y1-, -Y2-, -Y3- PROFILE

10/8/2026
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stephens

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PROJECT REFERENCE NO.	SHEET NO.
U-4714BA	6
RW SHEET NO.	

STV Engineers, Inc.
2151 Hawkins St., Suite 1400
Charlotte, NC 28203
NC License Number F-0991

ROADWAY DESIGN ENGINEER
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 043891 KEVIN C. STEPHENS
10/20/2026

HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 051699 TIFFANY A. PREDOT
10/20/2026

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

5" MONOLITHIC ISLAND
CONCRETE CURB & GUTTER /SIDEWALK
PAVED SHOULDER /MULTIUSE PATH

CHESNUT CTR.
0 / 254
0 / 4,800
0 / 16,700
OLD MONROE RD — 20,000 / 28,600
OLD MONROE RD — 25,000 / 44,600 — 2021 / 2041

SPECIAL DETAIL 6-1
SPECIAL CUT DITCH
(Not to Scale)
3:1 D 3:1 DRIVEWAY
Min. D=1.0 Ft.
AT -L- STA. 37+90 LT.
EST. LENGTH = 60 L.F.

DETAIL 6-2
SPLITTER CATCH BASIN
AT -L- STA. 34+46 RT.
(Not to Scale)
PROP. GROUND
15" RCP-III
30" RCP-IV INV= 719.1
INV= 722.1
INV= 721.8
USE NCDOT STD. 840.01 OR 840.02
EXIST. DITCH

NAD 83/NA 2011

MATCHLINE -L- STA 29+00 (SHEET 5)

MATCHLINE -L- STA 43+00 (SHEET 7)

BEGIN CONSTRUCTION -Y5- POC STA. 11+60.00 MATCH EXISTING

END CONSTRUCTION -Y4- POT STA. 11+90.00 MATCH EXISTING

-L- POT Sta. 31+68.82 = -Y4- POT Sta. 10+00.00

-L- POT Sta. 32+84.03 = -Y5- POT Sta. 13+50.00

POT Sta. 10+00.00

PC Sta. 10+45.39

PC Sta. 10+64.86

POT Sta. 12+50.00

PT Sta. 12+52.28

PT Sta. 11+84.08

BEGIN CONSTRUCTION -Y6- POT STA. 12+85.00

-L- POT Sta. 39+14.17 = -Y6- POT Sta. 14+00.00

PROP. GROUND
CL-B RIPRAP EST. 2 TONS 7 SY GEOTEXTILE
CL-B RIPRAP +08.07 EST. 17 TONS 173.30 40 SY GEOTEXTILE
PROP. SPLITTER CATCH BASIN SEE DETAIL 6-2

DRIVEWAY CUT DITCH (SEE SPECIAL DETAIL 6-1) EST. 4 C.Y. DDE

PROP 5' MONO ISLAND
DO NOT DISTURB STRUCTURE
FUTURE CHESTNUT CONNECTOR (DESIGN BY OTHERS)

PROP 10' MUP
PROP 5' SIDEWALK
PROP 2'-6" C&G
PROP 2'-9" C&G
PROP RAISED MEDIAN
100' BAY TAPER (RT)
600' SHIFT TAPER (LT & RT)
425' SHIFT TAPER (LT & RT)
100' BM#12
OLD MONROE RD -SR 1009-
BRYSON RD -SR 1387-
MOSS LANE -SR 1345-

NELSON O'NEAL & WIFE ANNA DB 3115 PG 568 PB 4 PG 103
MV COMMERCIAL 3901, LLC DB 7206 PG 880 PB 4 PG 103
CODY RAY ANDERSEN SARAH C WADE DB 6861 PG 861 PB 4 PG 103
JORNAN JOHNSON DB 7105 PG 1
SYED ADNAN & ASHA MOHAMMED DB 7104 PG 1
MAHESWARA SURAPUNENI DB 7101 PG 294
MIGUEL & CABRERA ROMAN DB 7109 PG 110
LARRY & ELAINE HAYES DB 7111 PG 427
PARK MEADOWS DEVELOPMENT, LLC DB 6788 PG 279 PB F PG 433
JOHN KENNETH HINSON DB N/F PG N/F
JAMES EVERETTE HINSON SUSAN H HINSON DB 4186 PG 815
ELIZABETH QUILES RENEE QUILES DB 5759 PG 740
WADE BERDETTE WILSON & WIFE JUDY H WILSON DB 1138 PG 109
PHONE CARDS R US, INC. DB 4700 PG 396
JERRY C LANEY HEIRS DB 183 PG 76
LINDA W STINES DB 155 PG 369
TOWN OF INDIAN TRAIL DB 6183 PG 55 PB 1PG 100
MANTIS BILL AND ELISAVET H. DB N/F PG N/F
WAYNE PHILLIP COHEN AND WIFE WEND E. COREN DB 7915 PG 477
JAMES L. INNIS DB 4830 PG 266
WINDEE SANDERSON DB 5778 PG 295
JACALYN PRIVETTE DB 5727 PG 192
JO ANN WEST AND HUSBAND JAMES W. WEST IV DB 3463 PG 318
JOHN IFASTJE DB 926 PG 697
TOM GIANNIBIS DB 5551 PG 702
TOM GIANNIBAS AND WIFE HRISTOULA G. GIANNIBAS DB 6704 PG 216
MEGHAN HELMS DB W14E PG 135 PB 1PG 100
TONY A MILLER AND MARY ALICE PB 1PG 100
ROBERT GARY LOVETTE AND DIANNA K PB 1PG 100
DALE S. WALKER DB 4582 PG 0022

OCS +10.00 130.00

RISER TRASH RACK NOTES:
1. ALL JOINTS SHALL BE FULLY WELDED AROUND JOINT WITH A MINIMUM OF A 1" BEAD.
2. IF BOLTS ARE ANCHORED IN CONCRETE, FOLLOW STD. DWG. 862.03 AND 862.04 FOR ANCHORING PROCEDURE.
3. EYEBOLT FOR CHAIN CLOSURE SHALL BE INSTALLED BY THE SAME METHOD AS THE HINGE PLATE BOLTS.
4. RACK AND HARDWARE SHALL BE ALUMINUM OR REBAR GALVANIZED IN ACCORDANCE WITH ASTM A-153.
5. PROVIDE OPENING IN TRASH RACK TO ACCOMODATE SLUICE GATE ON THE OUTLET PIPE. ENSURE TRASH RACK OPENS FREELY AND WITHOUT INTERFERENCE WITH SLUICE GATES.

HINGE, SLUICE GATE OPENING (SEE NOTES), EYEBOLT (MOVE AS NECESSARY), REBAR TRASH RACK NOT TO SCALE, PLAN

#4 REBAR, #5 REBAR, 1/2" x 5" EYEBOLT FOR ATTACHING CHAIN CLOSURE, SECTION A-A

12 HOLE GRATE, FRAME, HANDLE, PLAN, SECTION A-A

ORIFICE TRASH RACK NOTES:
1. ALL JOINTS SHALL BE FULLY WELDED AROUND JOINT WITH A MINIMUM OF A 1" BEAD.
2. IF BOLTS ARE ANCHORED IN CONCRETE, FOLLOW STD. DWG. 862.03 AND 862.04 FOR ANCHORING PROCEDURE.
3. TOP OF RACK SHALL BE FLUSH WITH TOP OF CONCRETE BOX BY HINGE OR SLIDE RAIL SYSTEM.
4. RACK AND HARDWARE SHALL BE ALUMINUM OR GALVANIZED IN ACCORDANCE WITH ASTM A-153.

OUTLET CONTROL STRUCTURE DETAIL

GATE VALVE SYSTEM, TRASH RACK HINGES ON THIS SIDE = TYPICAL, 24" RCP OUTFALL 76.4' LONG, US = 720.50 DS = 720.08, 10" x 15" SLOT ON ONE SIDE ONLY, 8" ROUND HOLE FOR GATE VALVE, 24" RCP OUTFALL PIPE, POND BOTTOM 720.50, 4" THICK, 4000 PSI CONCRETE PAD WITH 6X6X10/10 WWM, ORIFICE INVERT 720.50, ORIFICE TRASH RACK (SEE DETAIL), 719.00 STRUCTURE BTM, GROUT STRUCTURE BTM TO PIPE WALL, 719.33 PAD BOTTOM

TRASH GRATE WITH LOCKING SYSTEM (SEE DETAIL), GATE VALVE SYSTEM INVERT AT PIPE OUTLET INVERT, 10" x 15" SLOT ON ONE SIDE ONLY, STEPS @ 12" O.C. (STD. DWG. 840.66), 3x3 CONCRETE BOX WITH TRASH GRATE, 1/4"x8"x8" GALVANIZED STEEL PLATE WITH GALVANIZED BOLTS EPOXY CEMENTED TO STRUCTURE. DRILL 3" ORIFICE THROUGH STRUCTURE WALL. DRILL 3" ORIFICE WITH INVERT AS NOTED.

+66.72 353.38

★ PROPOSED TRAFFIC SIGNAL

SEE SHEET 2B-1 FOR CURVE DATA
SEE SHEET 13 FOR -L- PROFILE
SEE SHEET 17 FOR -Y4-, -Y5- PROFILE

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STV Engineers, Inc.
2151 Hawkins St., Suite 1400
Charlotte, NC 28203
NC License Number F-0991

PROJECT REFERENCE NO.	SHEET NO.
U-4714BA	7
R/W SHEET NO.	

ROADWAY DESIGN ENGINEER — DocuSigned by: 8E63B7B1... — 10/29/2026
NORTH CAROLINA PROFESSIONAL SEAL 043891 ENGINEER SEAN C. STEPHENS

HYDRAULICS ENGINEER — Signed by: 867D6E... — 10/29/2026
NORTH CAROLINA PROFESSIONAL SEAL 051699 ENGINEER TIFFANY A. PREDDY

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

★ PROPOSED TRAFFIC SIGNAL

5" MONOLITHIC ISLAND
CONCRETE CURB & GUTTER /SIDEWALK
PAVED SHOULDER /MULTIUSE PATH

NAD 83/NA 2011

MATCHLINE -L- STA 43+00 (SHEET 6)

MATCHLINE -L- STA 57+00 (SHEET 8)

WILLIAMS RESCUE RD SR 1390

CHESTNUT LN SR 1362

KEOWEE CR

WOODLAND RD SR 1391

OLD MONROE RD SR 1009

CHEROKEE LN

BY45-163

DETAIL 7-6
STANDARD 'V' DITCH
(Not to Scale)
Natural Ground — 2:1 — D — 2:1 — Natural Ground
Min. D=1.0 Ft.
AT -L- STA. 53+18 LT. (KEONEE CR.)
EST. 115 L.F.

NOTE: CHANNEL DOES NOT MATCH CONTOURS (SEE EXIST. DITCH DETAIL E3A) WIDEN & CLEAN OUT WHERE APPROPRIATE. (SEE DETAIL E3A)

STANDARD BASE DITCH (SEE DETAIL 7-4) CL-I RIP RAP EST. 30 TONS 70 S.Y. GEOTEXTILE 10 C.Y. DDE

STANDARD BASE DITCH (SEE DETAIL 7-2) CL-I RIP RAP: EST. 150 TONS 340 S.Y. GEOTEXTILE 50 C.Y. DDE

STANDARD BASE DITCH (SEE DETAIL 7-3) CL-I RIP RAP EST. 115 TONS 285 S.Y. GEOTEXTILE 80 C.Y. DDE

STANDARD 'V' DITCH (SEE DETAIL 7-6) EST. 25 C.Y. DDE

CL-B RIP RAP EST. 3 TONS 10 S.Y. GEOTEXTILE

BEGIN CONSTRUCTION -Y7- POT STA. 10+20.00 MATCH EXISTING

CONTRACTOR DESIGN YARD INLET UTILIZE PRECAST DRAINAGE STRUCTURE STD. 840.45

36" RCP-III

POT Sta. 10+00.00

PROP. SPLITTER CATCH BASIN

GEOFF HAWK PATRICIA HAWK DB 6301PG 222

CAROLINAS UNION HEATHCARE, INC. DB 3282 PG 752

VIRGINIA C FOARD, TRUSTEE DB 4522 PG 359 DEED DESCRIPTION INCOMPLETE

DAWN MACOMB SCHNEIDER RANDY SCHNEIDER DB 6707 PG 706

ROBERT L ROLLINS MARY BETH ROLLINS DB 902 PG 799 PB 5 PG 190 LOT 6 BLOCK A

MALEK MACARON DB 6889 PG 125 PB 5 PG 190 LOT 5 BLOCK A

NORMAN E ESTEP JACQUELYN ESTEP DB 3472 PG 767 PB 5 PG 190 LOT 4 BLOCK A

TERRY M & NANCY HENDERSON DB N/F PG N/F PB 5 PG 190 LOT 4 BLOCK B

DONALD & FRANCIS YELTON DB N/F PG N/F PB 5 PG 190 LOT 5 BLOCK B

VANESSA D PARKER DB 5894 PG 747 PB 5 PG 190 LOT 6 BLOCK B

LINDA W STINES DB 155 PG 369

DONNA NELSON HAMMOND DB 1014 PG 756 PB 5 PG 190 LOT 3 BLOCK A

MALEK MACARON DB 6889 PG 127 PB 5 PG 190 LOT 2 BLOCK A

JAMES T & ANITA WEBB DB 5104 PG 356 PB 5 PG 190 LOT 1BLOCK A

JERRY EDMOND HARTIS DOROTHY K HARTIS DB N/F PG N/F PB 5 PG 190 LOT 1BLOCK B

KENNETH W STILWELL DB 6489 PG 715 PB 5 PG 190 LOT 2 BLOCK B

ESTHER G NARRON DB N/F PG N/F PB 5 PG 190 LOT 3 BLOCK B

TOWN OF INDIAN TRAIL DB 6183 PG 55 PB 190 PG 100

TOWN OF INDIAN TRAIL DB 3284 PG 842

WILLIAM J. PRESSLY, ET AL DB 7411PG 0588

DEED DRAWN BASED ON FOUND FIELD INFORMATION & GIS

TRACT 2 GERALD D RIGGINS DB 3130 PG 618

BILLY F AYCOTH, JR. DB 407 PG 465

LARRY J VICKERY DB 6398 PG 191

RONDO ELIZONDO AND WIFE CHRISTY B. ELIZONDO DB 645 PG 68

STEVE & DONNA CLAYTON DB 3198 PG 27 PB G PG 824

WAYNE P COHEN WENDY E COHEN DB 3108 PG 652 PB G PG 824

FONDA HINSON MAYNOR JERRY MAYNOR DB 6514 PG 152

STEVE MAYNARD CLAYTON, JR. DB 1211PG 543

MINH PHAM LIEN LIEN DB 6604 PG 204

RICHARD H TOMBERLIN DB 414 PG 749

ALPHA OMEGA LAND DEVELOPMENT INC DB 4373 PG 786

ALPHA OMEGA LAND DEVELOPMENT INC DB 4373 PG 786

POT Sta. 11+75.37 = -L- POT Sta. 44+37.55 = -Y7- POT Sta. 12+20.00

PC Sta. 11+20.65 BEGIN C&G +05.26,19.00 LT

-L- POT Sta. 45+17.75 = -Y8- POT Sta. 10+00.00

-L- POT Sta. 52+15.41 = -Y9- POT Sta. 10+00.00

PT Sta. 50+37.86 -L- POT Sta. 50+37.86 = -Y9- POT Sta. 11+80.00

PC Sta. 11+73.93

END GRADE -Y8- POC STA. 11+65.00 MATCH EXISTING

END CONSTRUCTION -Y8- POC STA. 12+90.00

END GRADE -Y9- POC STA. 11+80.00 MATCH EXISTING

END CONSTRUCTION -Y9- POC STA. 12+06.00

PT Sta. 13+19.83

POT Sta. 13+50.00

PT Sta. 12+80.34

POT Sta. 13+25.00

BEGIN C&G +02.98,17.99 LT

END C&G +10.41,18.05 RT

END C&G +12.63,18.94 RT

BEGIN C&G +04.59,18.79 LT

END C&G +04.59,18.79 RT

BEGIN C/A +61.00,Exist R/W

END C/A +62.00,72.50

BEGIN C/A -Y9- +28.00, EX R/W

END C/A +95.00,Exist R/W

425' SHIFT TAPER (LT & RT)

125' SHIFT TAPER (LT & RT)

100' BAY TAPER (LT)

200' BAY TAPER (LT)

PROP 5' SIDEWALK

PROP 2'-6" C&G

PROP 2'-9" C&G

PROP 5' MONO ISLAND

PROP RAISED MEDIAN

PROP 10' MUP

REMOVE -2 CROSS PIPES

OPEN END PIPE

GRADE TO DRAIN

TB 2GI

DETAIL 7-1
STANDARD 'V' DITCH
(Not to Scale)
Natural Ground — 4:1 — D — 6:1 — Natural Ground
Min. D=1.5 Ft.
FROM -Y8- STA. 11+15 RT. TO STA. 12+90 RT.

DETAIL 7-2
STANDARD BASE DITCH
(Not to Scale)
Natural Ground — 2:1 — d — D — 2:1 — Natural Ground
Geotextile — B
Min. D=2.5 Ft.
Max. d=2.5 Ft.
B=2.0 Ft.
*When B is < 6.0'
Type of Liner= CL-I Rip-Rap
AT -L- STA. 44+83 LT. EST. 210 L.F.

DETAIL 7-3
STANDARD BASE DITCH
(Not to Scale)
Natural Ground — 2:1 — d — D — 2:1 — Natural Ground
Geotextile — B
Min. D=2.0 Ft.
Max. d=2.0 Ft.
B=2.0 Ft.
*When B is < 6.0'
Type of Liner= CL-I Rip-Rap
AT -L- STA. 46+35 LT. EST. 166 L.F.

DETAIL 7-4
STANDARD BASE DITCH
(Not to Scale)
Natural Ground — 2:1 — d — D — 2:1 — Natural Ground
Geotextile — B
Min. D=MATCH EX.
Max. d=3.0 Ft.
B=3.0 Ft.
*When B is < 6.0'
Type of Liner= CL-I Rip-Rap
FROM STA. 46+35 LT. EST. 30 L.F.

DETAIL 7-5
STANDARD 'V' DITCH
(Not to Scale)
Natural Ground — 2:1 — D — 2:1 — Natural Ground
Min. D=1.5 Ft.
FROM -Y7- STA. 9+10 RT. TO STA. 9+40 RT.
FROM -Y7- STA. 9+90 RT. TO STA. 10+50 RT.

SEE SHEET 2B-1 FOR CURVE DATA
SEE SHEET 13 FOR -L- PROFILE
SEE SHEET 17 FOR -Y7-, -Y8- PROFILE
SEE SHEET 18 FOR -Y9- PROFILE

10/28/2026
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rtaylor