

8/17/99

INDEX OF SHEETS	
SHEET NUMBER	SHEET
1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, AND STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
2A-1 THRU 2A-13	PAVEMENT SCHEDULE AND TYPICAL SECTIONS
2B-1 THRU 2B-22	ROADWAY DETAILS
2C-1 THRU 2C-29	SPECIAL DETAILS
2D-1 THRU 2D-38	DRAINAGE DETAILS
2G-1 THRU 2G-7	GEOTECHNICAL DETAILS
2N-1 THRU 2N-10	NOISE WALL ENVELOPES
3B-1 THRU 3B-5	ROADWAY SUMMARIES
3D-1 THRU 3D-31	DRAINAGE SUMMARIES
3G-1	GEOTECHNICAL SUMMARIES
3P-1	PARCEL INDEX SHEET
4 THRU 12	ROADWAY PLAN SHEETS
13 THRU 40	PROFILE SHEETS
RW-1 THRU RW-14	SURVEY CONTROL, EXISTING CENTERLINES, RIGHT OF WAY, EASEMENT AN PROPERTY TIES
TMP-1 THRU TMP-72	TRAFFIC MANAGEMENT PLANS
TMP-73 THRU TMP-182	TEMPORARY SIGNING PLAN
PMP-1 THRU PMP-15	PAVEMENT MARKING PLANS
E-1 THRU E-23	ELECTRICAL PLANS
EC-1 THRU EC-36	EROSION CONTROL PLANS
SIGN-1 THRU SIGN-23	SIGNING PLANS
SIG-1 THRU SIG-14.0	SIGNAL PLANS AND ELECTRICAL DETAILS
SIG-M1A THRU SIG-M9	METAL POLE STANDARD DRAWINGS
SCP-1 THRU SCP-24	SIGNAL COMMUNICATION PLANS
ITS-1 THRU ITS-30	ITS PLANS
UC-1 THRU UC-24	UTILITIES CONSTRUCTION PLANS
UD-1 THRU UD-13	UTILITIES BY OTHERS PLANS
X-0	CROSS SECTION INDEX
X-1A THRU X-15	CROSS-SECTION SUMMARY SHEETS
X-1 THRU X-363	CROSS-SECTIONS
S-1	STRUCTURE PLANS TITLE SHEET
S-2	STRUCTURE INDEX SHEET
S2-01 THRU S2-44	STRUCTURE 100905 PLANS
S3-01 THRU S3-57	STRUCTURE 100208 PLANS
S4-01 THRU S4-56	STRUCTURE 100206 PLANS
S5-01 THRU S5-45	STRUCTURE 100906 PLANS
S6-01 THRU S6-60	STRUCTURE 100242 PLANS
S7-01 THRU S7-41	STRUCTURE 100898 PLANS
S8-01 THRU S8-39	STRUCTURE 100899 PLANS
S9-01 THRU S9-46	STRUCTURE 100900 PLANS
S10-01 THRU S10-52	STRUCTURE 100901 PLANS
SN	STRUCTURE STANDARD NOTES
SBW-1 THRU SBW-6	SOUND BARRIER WALL PLANS
W-1 THRU W-83	WALL PLANS

2024 ROADWAY ENGLISH STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Contracts Standards and Development Unit, N. C. Department of Transportation - Raleigh, N. C., Dated January 16, 2024 are applicable to this project and by reference hereby are considered a part of these plans:

STD.NO. TITLE

DIVISION 2 - EARTHWORK

200.03 Method of Clearing - Method III

225.01 Guide for Grading Subgrade - Interstate and Freeway

225.02 Guide for Grading Subgrade - Secondary and Local

225.03 Deceleration and Acceleration Lanes

225.04 Method of Obtaining Superelevation - Two Lane Pavement

225.05 Method of Obtaining Superelevation - Divided Highways

225.06 Method of Grading Sight Distance at Intersections

225.07 Grading for False Cut at Grade Separations

225.09 Guide for Shoulder and Ditch Transition at Grade Separations

235.01 Embankment Monitoring

240.01 Guide for Berm Ditch Construction

275.01 Rock Plating

DIVISION 3 - PIPE CULVERTS

300.01 Method of Pipe Installation (Use Details in Lieu of Standards for Sheets 1 and 2 of 2)

310.10 Driveway Pipe Construction

DIVISION 4 - MAJOR STRUCTURES

423.01 Bridge Approach Fills - Type 1 Approach Fill for Bridge Abutment

423.02 Bridge Approach Fills - Type 1A Alternate Approach Fill for Integral Bridge Abutment

423.03 Bridge Approach Fills - Type 2 Approach Fill for Bridge Abutment with MSE Wall

423.04 Bridge Approach Fills - Type 2A Alternate Approach Fill for Integral Bridge Abutment with MSE Wall

DIVISION 5 - SUBGRADE, BASES AND SHOULDERS

560.01 Method of Shoulder Construction - High Side of Superelevated Curve - Method I

560.02 Method of Shoulder Construction - High Side of Superelevated Curve - Method II

DIVISION 6 - ASPHALT BASES AND PAVEMENTS

610.01 Guide for Paving Shoulders Under Bridges - Method I (Use Details in Lieu of Standards for Sheet 1 of 1)

610.02 Guide for Paving Shoulders Under Bridges - Method II

610.03 Guide for Paving Shoulders Under Bridges - Method III

610.04 Guide for Paving Shoulders Under Bridges - Method IV (Use Details in Lieu of Standards for Sheet 1 of 1)

654.01 Pavement Repairs

665.01 Asphalt Shoulders - Milled Rumble Strips

665.02 Limits for Asphalt Shoulders - Milled Rumble Strips

DIVISION 7 - CONCRETE PAVEMENTS AND SHOULDERS

700.01 Concrete Pavement Joints - Construction and Contraction Joints

700.02 Expansion Joint Layout - for Rigid Doweled Pavement at Bridges

700.03 Dowel Assembly

700.04 Concrete Pavement Header Board

700.05 Tying Proposed Pavement to Existing Pavement

710.01 Concrete Pavement - Station Marking

DIVISION 8 - INCIDENTALS

815.02 Subsurface Drain

816.01 Concrete Pads - for Shoulder Drain Installation

816.02 Aggregate Shoulder Drain

816.04 Markers for Drainage Structure and Concrete Pad (Use Detail in Lieu of Standard for Sheet 1 of 2)

838.01 Concrete Endwall for Single and Double Pipe Culverts - 15" thru 48" Pipe 90 Skew

838.11 Brick Endwall for Single and Double Pipe Culverts - 15" thru 48" Pipe 90 Skew

838.33 Reinforced Concrete Endwall - for Single 66" Pipe 90 Skew

838.39 Reinforced Concrete Endwall - for Single 72" Pipe 90 Skew

838.63 Reinforced Brick Endwall - for Single 66" Pipe 90 Skew

838.69 Reinforced Brick Endwall - for Single 72" Pipe 90 Skew

838.75 Notes for Reinforced Brick Endwall - Std. Dwg 838.51 thru 838.70

840.00 Concrete Base Pad for Drainage Structures

840.01 Brick Catch Basin - 12" thru 54" Pipe

840.02 Concrete Catch Basin - 12" thru 54" Pipe

840.03 Frame, Grates and Hood - for Use on Standard Catch Basin

840.04 Concrete Open Throat Catch Basin - 12" thru 48" Pipe

840.05 Brick Open Throat Catch Basin - 12" thru 48" Pipe

840.14 Concrete Drop Inlet - 12" thru 30" Pipe

840.15 Brick Drop Inlet - 12" thru 30" Pipe

840.16 Drop Inlet Frame and Grates - for use with Std. Dwg 840.14 and 840.15

840.17 Concrete Grated Drop Inlet Type 'A' - 12" thru 72" Pipe

840.18 Concrete Grated Drop Inlet Type 'B' - 12" thru 36" Pipe

840.19 Concrete Grated Drop Inlet Type 'D' - 12" thru 36" Pipe

840.20 Frames and Wide Slot Flat Grates

840.22 Frames and Wide Slot Sag Grates

840.24 Frames and Narrow Slot Sag Grates

840.25 Anchorage for Frames - Brick or Concrete or Precast

840.26 Brick Grated Drop Inlet Type 'A' - 12" thru 72" Pipe

840.27 Brick Grated Drop Inlet Type 'B' - 12" thru 36" Pipe

840.28 Brick Grated Drop Inlet Type 'D' - 12" thru 36" Pipe

840.29 Frames and Narrow Slot Flat Grates

840.31 Concrete Junction Box - 12" thru 66" Pipe

840.32 Brick Junction Box - 12" thru 66" Pipe

840.34 Traffic Bearing Junction Box - for Use with Pipes 42" and Under

840.35 Traffic Bearing Grated Drop Inlet - for Cast Iron Double Frame and Grates

840.36 Traffic Bearing Grated Drop Inlet - for Steel (840.37) Double Frame and Grates

840.37 Steel Gate and Frame

840.45 Precast Drainage Structure

840.46 Traffic Bearing Precast Drainage Structure

840.54 Manhole Frame and Cover

840.55 Manhole Frame and Cover (Flush with Slab for Open Throat Catch Basin)

840.66 Drainage Structure Steps

840.72 Pipe Collar

EFF. 08-11-2025
REV.

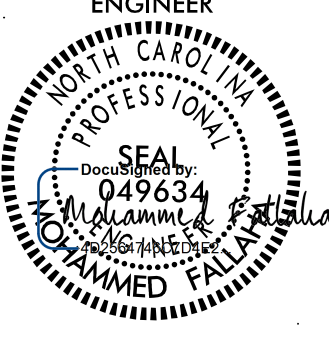
- 846.01 Concrete Curb, Gutter and Curb & Gutter
- 846.02 Drop Inlet Installation in Expressway Gutter
- 846.04 Drop Inlet Installation in Shoulder Berm Gutter
- 848.01 Concrete Sidewalk (Use Detail in Lieu of Standard for Sheet 1 of 1)
- 848.02 Driveway Turnout - Radius Type
- 848.03 Driveway Turnout - Drop Curb Type
- 848.04 Street Turnout
- 848.06 Curb Ramp (Use Details in Lieu of Standards for Sheets 9 and 10 of 13)
- 848.07 Concrete Sidepath / Shared Use Path / Greenway Construction
- 850.01 Concrete Paved Ditches
- 850.10 Guide for Berm Drainage Outlet - 15" and 18" Pipe
- 852.01 Concrete Islands
- 852.04 Method for Placement of Drop Inlets in Grassed Median - Using 1'-6" Curb and Gutter
- 852.05 Median Curb for Catch Basin - for Use with 1'-6" Curb and Gutter
- 852.06 Method for Placement of Drop Inlets in Concrete Islands
- 854.01 Double Faced Concrete Barrier - Types I, II, III and IV
- 854.02 Double Faced Concrete Barrier - Types T, T1 and T2
- 854.06 Median Hazard Protection
- 854.07 Single Slope Concrete Barrier
- 857.01 Precast Reinforced Concrete Barrier - 41" Single Faced
- 862.01 Guardrail Placement (Use Details in Lieu of Standards for Sheets 4, 6, 11, 12, and 14 of 15)
- 862.02 Guardrail Installation (Use Detail in Lieu of Standard for Sheet 5 of 9)
- 862.03 Structure Anchor Units (Use Detail in Lieu of Standards for Sheet 6 and 8 of 9)
- 862.04 Anchoring End of Guardrail - B-77 and B-83 Anchor Units
- 866.01 Chain Link Fence - 4', 5' and 6' High Fence
- 866.02 Woven Wire Fence - with Wood Post
- 866.06 Chain Link Fence on Retaining Wall
- 867.02 Steel Bollards
- 876.01 Rip Rap in Channels
- 876.02 Guide for Rip Rap at Pipe Outlets
- 876.04 Drainage Ditches with Class 'B' Rip Rap

- GENERAL NOTES:
- 2024 SPECIFICATIONS
EFFECTIVE: 01-16-2024
REVISED:
- GRADING AND SURFACING OR RESURFACING AND WIDENING:
- THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. WHERE NO GRADE LINES ARE SHOWN THE PROFILES SHOWN DENOTE THE TOP ELEVATION OF THE EXISTING PAVEMENT ALONG THE CENTER LINE OF SURVEY ON WHICH THE PROPOSED RESURFACING WILL BE PLACED. GRADE LINES MAY BE ADJUSTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.
- CLEARING:
- CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.
- SUPERELEVATION:
- ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.04 AND STD. NO. 225.05 USING THE RATE OF SUPERELEVATION AND RUNOFF SHOWN ON THE PLANS. SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS.
- SHOULDER CONSTRUCTION:
- ASPHALT, EARTH, AND CONCRETE SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH STD. NO. 560.01 AND STD. NO. 560.02
- SIDE ROADS:
- THE CONTRACTOR WILL BE REQUIRED TO DO ALL NECESSARY WORK TO PROVIDE SUITABLE CONNECTIONS WITH ALL ROADS, STREETS, AND DRIVES ENTERING THIS PROJECT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PARTICULAR ITEMS INVOLVED.
- BERM DITCHES:
- BERM DITCHES SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 240.01 AT LOCATIONS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
- SUBSURFACE DRAINS:
- SUBSURFACE DRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 815.02 AT LOCATIONS DIRECTED BY THE ENGINEER.
- SHOULDER DRAINS:
- SHOULDER DRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 816.02 AND DETAILS IN PLANS AT LOCATIONS DIRECTED BY THE ENGINEER.
- DRIVEWAYS:
- DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. 848.02 USING 3 FOOT RADIi OR RADIi AS SHOWN ON THE PLANS. LOCATIONS OF DRIVES WILL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
- DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. 848.03 AT LOCATIONS SHOWN ON PLANS OR AS DIRECTED BY THE ENGINEER.
- STREET TURNOUT:
- STREET RETURNS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 848.04 USING THE RADIi NOTED ON PLANS.
- GUARDRAIL:
- THE GUARDRAIL LOCATIONS SHOWN ON THE PLANS MAY BE ADJUSTED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHOULD CONSULT WITH THE ENGINEER PRIOR TO ORDERING GUARDRAIL MATERIAL.
- TEMPORARY SHORING:
- SHORING REQUIRED FOR THE MAINTENANCE OF TRAFFIC NOT SHOWN ON THE PLANS WILL BE PAID FOR AT THE CONTRACT PRICE FOR "TEMPORARY SHORING".
- END BENTS:
- THE ENGINEER SHALL CHECK THE STRUCTURE END BENT PLANS, DETAILS, AND CROSS-SECTION PRIOR TO SETTING OF THE SLOPE STAKES FOR THE EMBANKMENT OR EXCAVATION APPROACHING A BRIDGE.
- UTILITIES:
- UTILITY OWNERS ON THIS PROJECT ARE DUKE ENERGY, CHARTER SPECTRUM, ERC BROADBAND, AT&T, AT&T LONG DISTANCE, ENBRIDGE/DOMINION ENERGY, CITY OF ASHEVILLE, & METROPOLITAN SEWER DISTRICT (MSD)
- RIGHT-OF-WAY MARKERS:
- ALL RIGHT-OF-WAY MARKERS ON THIS PROJECT SHALL BE PLACED BY OTHERS.
- CURB RAMPS:
- CURB RAMPS ARE SHOWN ON THE PLANS AT APPROXIMATE LOCATIONS. CONSTRUCT ALL CURB RAMPS IN ACCORDANCE WITH STD 848.06.

PROJECT REFERENCE NO.
1-2513AC

SHEET NO.
1A

ROADWAY DESIGN
ENGINEER



8/31/2026

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

8/23/2026
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