**ROADWAY DESIGN ENGINEER** 

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

8521 SIX FORKS ROAD, SUITE 400 RALEIGH, NC 27615 NC FIRM LICENSE No: F-0493

## STANDARD DRAWINGS

The following Roadway Standards as appearing in "Roadway Standard Drawings' Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated January, 2018 are applicable to this project and by reference hereby

EFF. 01-16-2018

REV.

are consid	dered a part of these plans:
STD.NO.	TITLE
DIVISION 2	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

DIVISION 3 - PIPE CULVERTS 300.01 Method of Pipe Installation DIVISION 4 - MAJOR STRUCTURES 422.01 Bridge Approach Fills - Type I Standard Approach Fill Reinforced Bridge Approach Fills - Type A Alternate Approach Fill for Integral Abutment

Guide for Shoulder and Ditch Transition at Grade Separations

DIVISION 5 - SUBGRADE, BASES AND SHOULDERS Method of Shoulder Construction - High Side of Superelevated Curve - Method I Method of Shoulder Construction - High Side of Superelevated Curve - Method II DIVISION 6 - ASPHALT BASES AND PAVEMENTS

610.03 Guide for Paving Shoulders Under Bridges - Method III 665.01 Asphalt Shoulders - Milled Rumble Strips DIVISION 8 - INCIDENTALS

Grading for False Cut at Grade Separations

Rock Plating (Use Special Detail)

815.02 Subsurface Drain Concrete Endwall for Single and Double Pipe Culverts - 15" thru 48" Pipe 90 Skew Brick Endwall for Single and Double Pipe Culverts - 15" thru 48" Pipe 90 Skew Reinforced Concrete Endwall - for Single 54" Pipe 90 Skew Reinforced Concrete Endwall - for Double and Triple 66" Pipes 90 Skew

Notes for Reinforced Concrete Endwall - Std. Dwg 838.21 thru 838.40 Reinforced Brick Endwall - for Single 54" Pipe 90 Skew 838.64 Reinforced Brick Endwall - for Double and Triple 66" Pipes 90 Skew Notes for Reinforced Brick Endwall - Std. Dwg 838.51 thru 838.70

838.80 Precast Endwalls - 12" thru 72" Pipe 90 Skew Concrete Base Pad for Drainage Structures 840.00 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 Concrete Grated Drop Inlet Type 'A' - 12" thru 72" Pipe

Concrete Grated Drop Inlet Type 'B' - 12" thru 36" Pipe Concrete Grated Drop Inlet Type 'D' - 12" thru 36" Pipe Frames and Wide Slot Flat Grates Frames and Wide Slot Sag Grates Brick Grated Drop Inlet Type 'A' - 12" thru 72" Pipe

Brick Grated Drop Inlet Type 'B' - 12" thru 36" Pipe Brick Grated Drop Inlet Type 'D' – 12" thru 36" Pipe Concrete Junction Box - 12" thru 66" Pipe 840.31 840.32 Brick Junction Box - 12" thru 66" Pipe

Traffic Bearing Grated Drop Inlet - for Steel (840.37) Double Frame and Grates 840.37 Steel Grate and Frame 840.45 Precast Drainage Structure 840.46 Traffic Bearing Precast Drainage Structure

840.54 Manhole Frame and Cover 840.66 Drainage Structure Steps 846.01 Concrete Curb, Gutter and Curb & Gutter 852.01 Concrete Islands Method for Placement of Drop Inlets in Concrete Islands

862.01 Guardrail Placement 862.02 Guardrail Installation 862.03 Structure Anchor Units Anchoring End of Guardrail - B-77 and B-83 Anchor Units 862.04

857.01 Precast Reinforced Concrete Barrier - 41" Single Faced

865.01 Cable Guiderail 876.02 Guide for Rip Rap at Pipe Outlets

876.04 Drainage Ditches with Class 'B' Rip Rap

866.02 Woven Wire Fence - with Wood Post

2018 ROADWAY ENGLISH STANDARD DRAWINGS

225.07

GRADING AND SURFACING OR RESURFACING AND WIDENING:

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.

2018 SPECIFICATIONS

REVISED:

THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED

EFFECTIVE: 01-16-2018

CLEARING:

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD III.

SUPERELEVATION:

GENERAL NOTES

GENERAL NOTES:

ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NOS. 225.04 AND 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. NOS. 560.01 AND 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.

SUBSURFACE DRAINS:

SUBSURFACE DRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 815.02 AT LOCATIONS 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 Robeson County Public Utiltities,

Town of Fairmont Water and Sewer, AT&T, MCNC, Brunswick EMC, and Spectrum ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS, EXCEPT AS SHOWN ON THE PLANS.

RIGHT-OF-WAY MARKERS:

ALL RIGHT-OF-WAY MARKERS ON THIS PROJECT SHALL BE PLACED BY OTHERS.

X-1 THRU X-67 S1-1 THRU S1-28

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TRANSITION DETAIL

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STANDARD NOTES