## ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS".

ROADWAY DESIGN UNIT -	N.C. DEPARTMENT OF
TRANSPORTATION - RALEIG	H, N.C., DATED JANUARY 201
ARE APPLICABLE TO THIS P	ROJECT AND BY
REFERENCE HEREBY ARE CO	NSIDERED A PART
OF THESE PLANS:	
STD NO TITI	<b>E</b>

SID. NO.	IIILE	
1101.02	TEMPORARY LANE CLOSURES	
1101.03	TEMPORARY ROAD CLOSURES	
1101.04	TEMPORARY SHOULDER CLOSURES	
1700.01	ELECTRICAL SERVICE OPTIONS	
1700.02	ELECTRICAL SERVICE GROUNDING	
1715.01	UNDERGROUND CONDUIT	

# STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

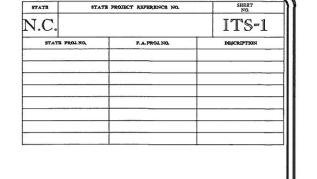
# NORTHAMPTON COUNTY

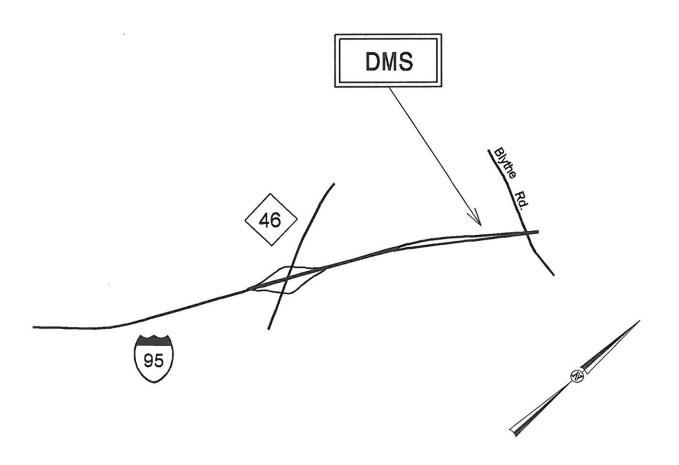
# PLANS FOR PROPOSED DYNAMIC MESSAGE SIGN REPLACEMENT

THIS PROJECT CONSISTS OF FURNISHING AND INSTALLING EQUIPMENT AND MATERIALS FOR THE INSTALLATION OF ONE (I)

DYNAMIC MESSAGE SIGN ON 1-95 NEAR MILE MARKER 176 IN NORTHAMPTON COUNTY, NORTH CAROLINA.

RELATED MATERIALS CONSIST OF DMS ASSEMBLIES, PEDESTAL STRUCTURES, WALKWAYS, LADDERS, LOCAL CABINET AND CONTROLLER.





### **LEGEND**

**NEW CONDUIT** EXISTING GUARDRAIL EXISTING ELECTRICAL SERVICE NEW WOOD POLE EXISTING WOOD POLE NEW DMS PEDESTAL STRUCTURE

#### 2012 STANDARD SPECIFICATION

INDEX OF SHEETS

SHEET 1 \_\_\_\_\_TITLE SHEET, INDEX OF SHEETS, ROADWAY STANDARD DRAWINGS, AND LEGEND

SHEET 2-3 PLAN SHEETS

SHEET 4.....TYPICAL DETAILS

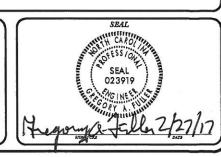
NCDOT CONTACT: TRANSPORTATION MOBILITY AND SAFETY

G.A. FULLER, P.E STATE ITS & SIGNALS ENGINEER





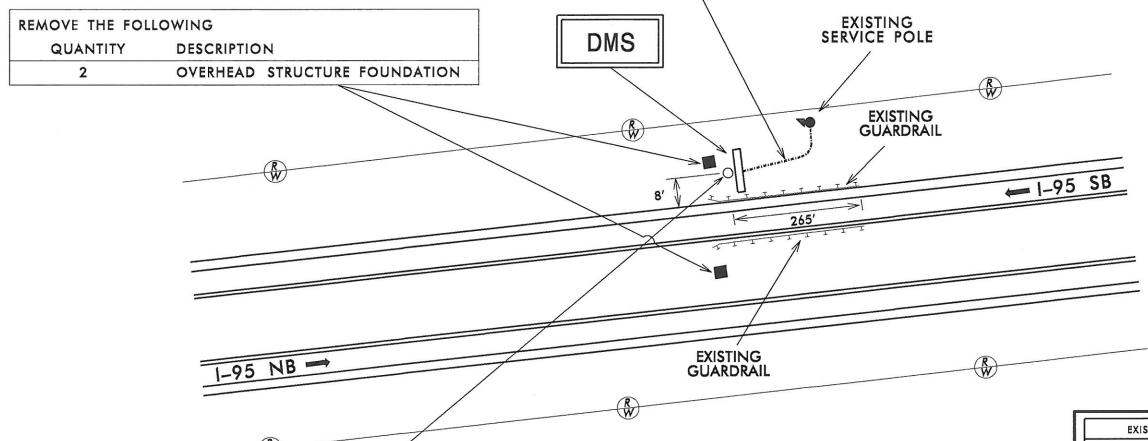
ALL DIMENSIONS IN THESE PLANS ARE IN FEET UNLESS OTHERWISE NOTED



# DMS-1 GPS COORDINATES

36° 28.925 N 77° 36.319 W

INSTALL THE FOL	NSTALL THE FOLLOWING		
QUANTITY	DESCRIPTION		
140′	UNPAVED TRENCHING (1)(1 1/4")		
150′	4-WIRE COPPER FEEDER CONDUCTORS		



INSTALL THE	FOLLOWING
QUANTITY	DESCRIPTION
1	DMS
1	STRUCTURE FOUNDATION
i	LADDER
1	5/8" x 10' COPPER CLAD GROUNDING ELECTRODE
10′	#4 AWG SOLID BARE COPPER GROUNDING CONDUCTOR

# EXISTING ELECTRICAL SERVICE EQUIPMENT EXISTING METER BASE & DISCONNECT INSTALL ONE 1 1/4" CONDUIT WITH FOUR #6 COPPER FEEDER CONDUCTORS TO EQUIPMENT CABINET

NEAR MM 176

#### NOTES

- 1. DMS LOCATION TO BE STAKED AND APPROVED BY THE DIVISION INCIDENT MANAGEMENT ENGINEER BEFORE FOUNDATION IS INSTALLED.
- 2. INSTALL NEW DMS, WALKWAY, AND LADDER ON NEW DMS STRUCTURE.
- 3. INSTALL NEW DMS POLE MOUNTED CABINET ON NEW DMS STRUCTURE.
- 4. INSTALL NEW GROUNDING SYSTEM AS SHOWN ON SHEET ITS-4 AND AS DESCRIBED IN THE PROJECT SPECIAL PROVISIONS.



#### DMS REPLACEMENT

DIVISION 04 NORTHAMPTON CO. NEAR ROANOKE RAPIDS
PLAN DATE: FEBRUARY 2017 REVIEWED BY:
PREPARED BY: GREEN REVIEWED BY: PARKER

D SCALE

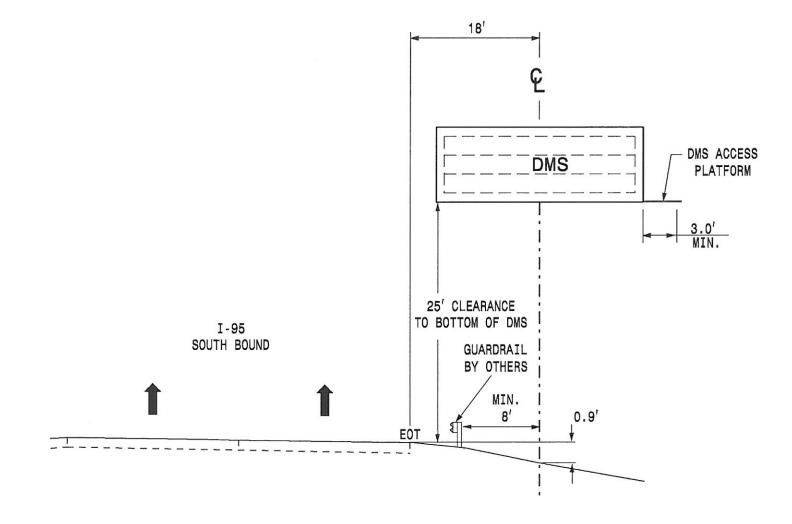
BY: GREEN REVIEWED BY: PARKER
REVISIONS INIT. DATE



PROJECT REFERENCE NO. SHEET NO. ITS-3

ESTIMATED DIMENSION : 27' X 10'

MAXIMUM DEADLOAD OF 5200 LBS



#### NOTES

- 1. PROVIDE A FIXED LADDER LEADING TO THE ACCESS PLATFORM.
- 2. EQUIP THE LADDER WITH A SECURITY COVER (LADDER GUARD).

  START THE FIRST LADDER RUNG NO MORE THAN 18 INCHES ABOVE
  A CONCRETE LANDING PAD. DESIGN RUNGS ON 12 INCH CENTER-TO-CENTER
  TYPICAL SPACING.
- 3. INSTALL A CONCRETE LANDING PAD MEASURING A MINIMUM 4 INCHES DEEP, 24 INCHES WIDE, AND 36 INCHES LONG DIRECTLY BENEATH THE LADDER.
- 4. USE ACTUAL DIMENSIONS AND WEIGHT OF THE DMS TO COMPLETE THE DESIGN OF THE DMS STRUCTURE.
- 5. FIELD VERIFY ALL FOOTING ELEVATIONS AND GROUND SLOPES AT THE FOOTING USING THE LATEST NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES.
- 6. ENSURE THAT THE TOP OF THE FOOTING EXTENDS AT LEAST 6 INCHES AND NOT MORE THAN 24 INCHES ABOVE THE HIGHEST POINT OF THE GROUND SURFACE AT THE FOOTING.
- 7. DESIGN AND CONSTRUCT THE PEDESTAL STRUCTURE AND DMS ENCLOSURE TO WITHSTAND WIND VELOCITIES OF 110 MPH.
- 8. VERIFY ALL UNDERGROUND UTILITY LOCATIONS BEFORE BEGINNING ANY UNDERGROUND WORK. DO NOT DAMAGE ANY EXISTING UTILITIES OR NCDOT CABLES DURING CONSTRUCTION.



DMS REPLACEMENT

DIVISION D4 NORTHAMPTON CO. NEAR ROANOKE RAPIDS PLAN DATE: FEBRUARY 2017 REVIEWED BY:

SCALE

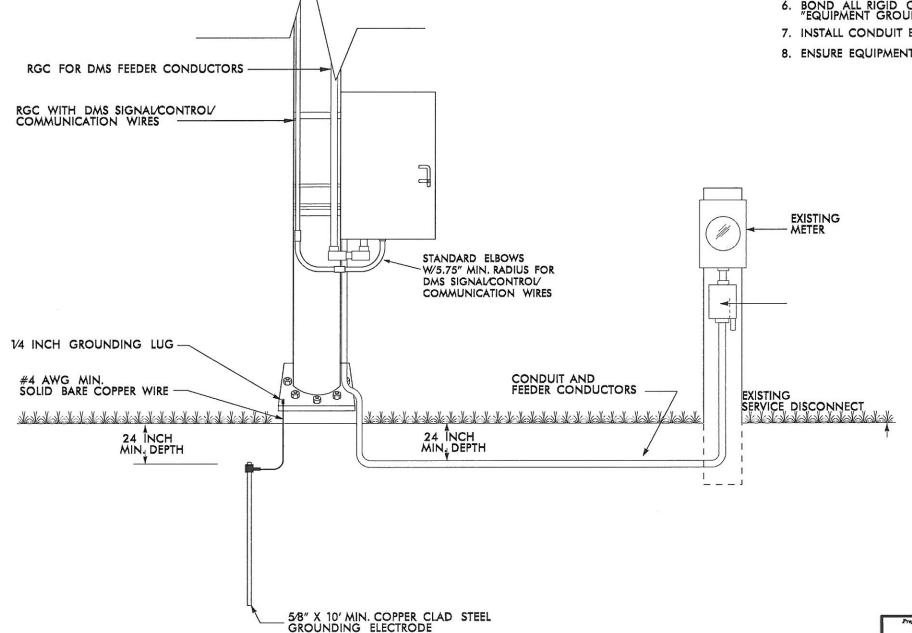
PREPARED BY: GREEN REVIEWED BY: PARKER
REVISIONS INIT.

agorya Jella 2/27/1

ROJECT	REFERENCE NO.	SHEET NO.
		170.4

#### **NOTES**

- 1. INSTALL A MINIMUM OF ONE (1) GROUNDING ELECTRODE. ENSURE THAT EXISTING UNDERGROUND FACILITIES ARE NOT DAMAGED DURING INSTALLATION.
- TEST GROUNDING SYSTEM USING AN APPROVED METHOD. SYSTEM SHOULD MEASURE TWENTY (20) OHMS OR LESS. ADDITIONAL GROUNDING ELECTRODES SHALL BE INSTALLED AS DIRECTED BY THE ENGINEER TO MEET THIS REQUIREMENT.
- 3. EXOTHERMICALLY WELD ALL CONNECTIONS TO GROUND RODS.
- 4. INSTALL MARKER TAPE DIRECTLY ABOVE ALL GROUNDING ELECTRODES AND CONDUCTORS AT A DEPTH OF 12 INCHES.
- 5. REMOVE BONDING JUMPER IN EQUIPMENT CABINET IF INSTALLED BETWEEN AC NEUTRAL AND EQUIPMENT GROUND.
- 6. BOND ALL RIGID GALVANIZED STEEL CONDUITS ENTERING THE CABINET TO "EQUIPMENT GROUND".
- 7. INSTALL CONDUIT BETWEEN DISCONNECT AND CABINET.
- 8. ENSURE EQUIPMENT GROUND IS ELECTRICALLY BONDED TO CABINET.



EXIST

DMS
EXISTING ELECTRICAL SERVICE
AND GROUNDING DETAIL

PLAN DATE: FEBRUARY 2017 REVIEWED BT:

PREPARED BY: GREEN REVIEWED BT: PARKER

SCALE

SCALE

REVISIONS

INIT.

ARED BY: GREEN REVIEWED BY: PARKER
REVISIONS INIT. DATE

SEAL