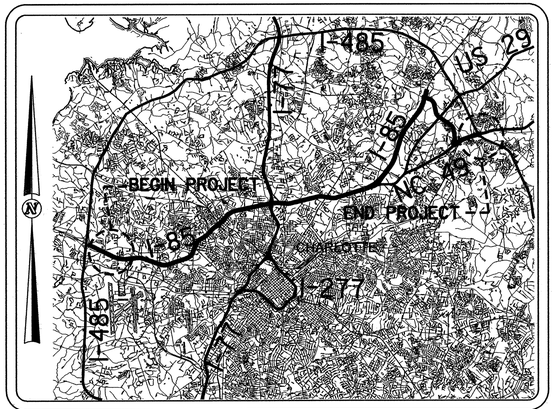
U-4754

PROJECT: C201460



VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

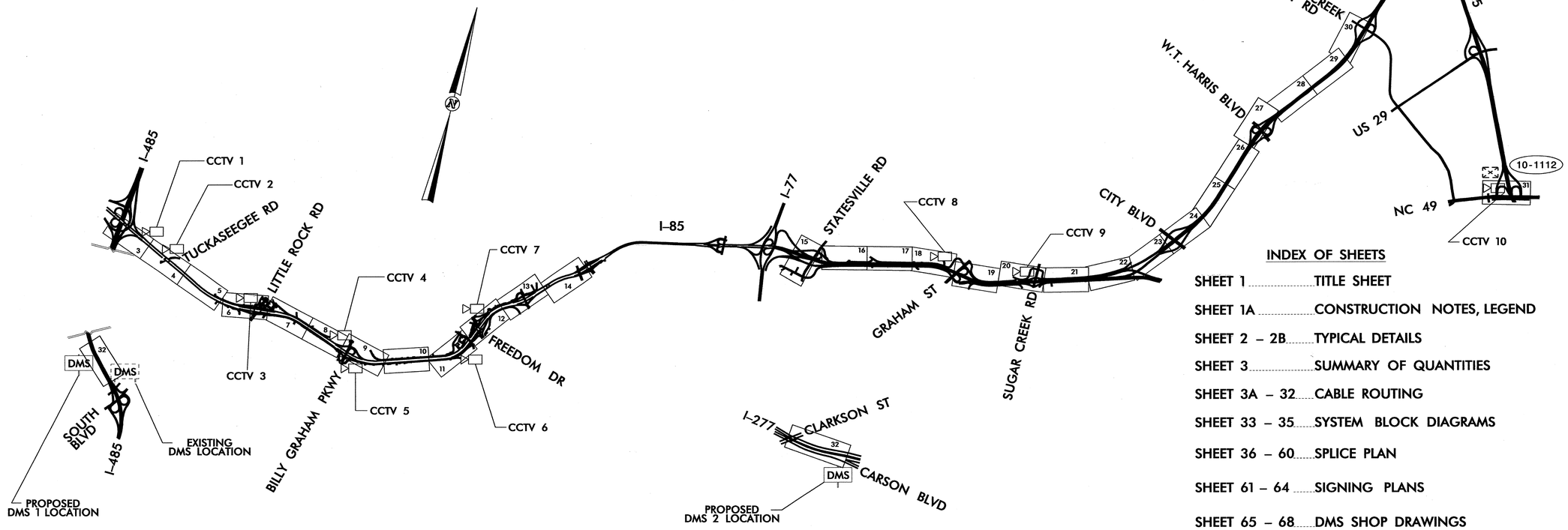
MECKLENBURG COUNTY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-4754	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
39549.1.1	ITS-NC04(3)	PE
39549.3.1	ITS-NC04(3)	CONSTRUCTION

LOCATION: I-85 FROM EAST OF I-485 TO MALLARD CREEK CHURCH ROAD, NC 49 (UNIVERSITY CITY BOULEVARD) AT I-485, I-485 NORTH OF SOUTH BOULEVARD, AND I-277 EAST OF CLARKSON STREET

TYPE OF WORK: FACILITY COMPONENTS (COMMUNICATIONS CABLE AND CONDUIT ROUTING, INSTALLATION OF CLOSED CIRCUIT TELEVISION CAMERAS, MICROWAVE VEHICLE DETECTORS, AND DYNAMIC MESSAGE SIGNS)



ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS APPEAR IN "ROADWAY STANDARD DRAWINGS". ROADWAY DESIGN UNIT – N.C. DEPARTMENT OF TRANSPORTATION – RALEIGH, N.C., DATED JULY 2006 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1700.02	ELECTRICAL SERVICE OPTIONS
1715.01	UNDERGROUND CONDUIT – TRENCHING
1716.01	JUNCTION BOXES
1720.01	WOOD POLES
1730.01	FIBER OPTIC CABLE – SPARE CABLE STORAGE
1751.02	CONTROLLERS AND CABINETS

LETTING DATE:
MARCH 18, 2008

NCDOT CONTACT:
TRAFFIC ENGINEERING AND SAFETY SYSTEMS BRANCH
G.G. MURR, JR., PE – INTELLIGENT TRANSPORTATION SYSTEMS ENGINEER

INDEX OF SHEETS

2006 STANDARD SPECIFICATIONS

Prepared in the Offices of:
Public Engineering and Safety Systems Branch
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0

COMMUNICATIONS CABLE AND CONDUIT ROUTING PLANS

DIVISION 10	MECKLENBURG CO.		CHARLOTTE
PLAN DATE: DECEMBER 2007		REVIEWED BY:	M.A. ASLAMI
PREPARED BY: S.C. WARDLE		REVIEWED BY:	T.G. PARKER

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 14543 ENGINEER GENE G. MURR, JR.
SIGNATURE 12-19-07 DATE
CADD FILE NAME

PROJECT REFERENCE NO.	SHEET NO.
U-4754	ITS 1A

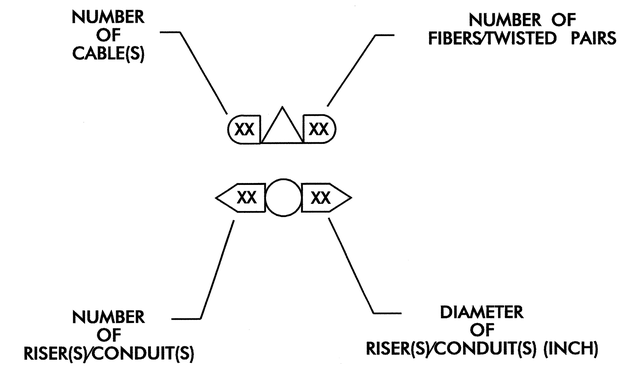
1. INSTALL REA, PE – 22, SHIELDED, TWISTED PAIR COMMUNICATIONS CABLE
2. INSTALL REA, PE – 38, (FIGURE – 8) SHIELDED, TWISTED PAIR COMMUNICATIONS CABLE
3. INSTALL REA, PE – 39, (UNDERGROUND) SHIELDED, TWISTED PAIR COMMUNICATIONS CABLE
4. INSTALL SMFO CABLE
5. INSTALL MMFO CABLE
6. INSTALL FIBER OPTIC DROP CABLE
7. INSTALL TRACER WIRE
8. TRENCH
9. INSTALL PVC CONDUIT
10. INSTALL RIGID, GALVANIZED STEEL CONDUIT
11. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
12. INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC CABLE SEAL
13. INSTALL OUTER–DUCT POLYETHYLENE CONDUIT
14. INSTALL POLYETHYLENE CONDUIT
15. DIRECTIONAL DRILL CONDUIT
16. BORE AND JACK CONDUIT
17. INSTALL CABLE(S) IN EXISTING CONDUIT
18. INSTALL CABLE(S) IN NEW CONDUIT
19. INSTALL CABLE(S) IN EXISTING RISER AND RESEAL RISER WITH HEAT SHRINK TUBING RETROFIT KIT
20. INSTALL CABLE(S) IN NEW RISER
21. INSTALL CABLE(S) IN EXISTING CONDUIT STUBOUTS
22. INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB–OUTS WHEN AVAILABLE)
23. INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB–OUTS WHEN AVAILABLE)
24. INSTALL NEW CONDUIT INTO EXISTING POLE MOUNTED CABINET
25. INSTALL NEW RISER INTO EXISTING POLE MOUNTED CABINET
26. TERMINATE COMMUNICATIONS CABLE ON EXISTING TELEMETRY INTERFACE PANEL IN TRAFFIC SIGNAL CONTROLLER CABINET
27. INSTALL NEW TELEMETRY INTERFACE PANEL IN TRAFFIC SIGNAL CONTROLLER CABINET
28. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
29. INSTALL UNDERGROUND SPLICE ENCLOSURE
30. INSTALL AERIAL SPLICE ENCLOSURE
31. INSTALL POLE MOUNTED SPLICE CABINET
32. INSTALL BASE MOUNTED SPLICE CABINET
33. REMOVE EXISTING SPLICE CABINET
34. INSTALL CABINET FOUNDATION
35. REMOVE EXISTING CABINET FOUNDATION
36. INSTALL CCTV CAMERA ASSEMBLY
37. INSTALL CCTV CAMERA WOOD POLE
38. INSTALL CCTV CAMERA METAL POLE WITH LOWERING DEVICE AND FOUNDATION
39. INSTALL JUNCTION BOX
40. INSTALL OVERSIZED JUNCTION BOX
41. REMOVE EXISTING JUNCTION BOX
42. INSTALL WOOD POLE
43. REMOVE EXISTING WOOD POLE
44. INSTALL AERIAL GUY ASSEMBLY
45. INSTALL STANDARD GUY ASSEMBLY
46. INSTALL SIDEWALK GUY ASSEMBLY
47. INSTALL MESSENGER CABLE
48. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
49. REMOVE EXISTING COMMUNICATIONS CABLE
50. INSTALL TELEPHONE SERVICE
51. INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
52. INSTALL DELINEATOR MARKER
53. STORE 20 FEET OF COMMUNICATIONS CABLE
54. LASH CABLE(S) TO EXISTING SIGNAL/COMMUNICATIONS CABLE
55. LASH CABLE(S) TO EXISTING MESSENGER CABLE
56. LASH CABLE(S) TO NEW MESSENGER CABLE
57. MODIFY EXISTING ELECTRICAL SERVICE
58. INSTALL NEW ELECTRICAL SERVICE
59. INSTALL MICROWAVE VEHICLE DETECTION (MVD) ASSEMBLY
60. INSTALL MVD METAL POLE AND FOUNDATION
61. INSTALL WIRELESS MVD WITH SOLAR POWER
62. INSTALL WIRELESS MVD CONTROLLER UNIT
63. INSTALL POLE MOUNTED CABINET
64. INSTALL ETHERNET SWITCH WITH FIBER OPTIC PORTS
65. INSTALL FIBER OPTIC VIDEO TRANSMITTER W/DATA
66. INSTALL FIBER OPTIC VIDEO RECEIVER W/DATA
67. MODIFY EXISTING SPLICE ENCLOSURE
68. INSTALL EXISTING CABLE IN NEW CABINET
69. MODIFY EXISTING INTERCONNECT CENTER

LEGEND

- FO — NEW FIBER OPTIC COMMUNICATIONS CABLE
- TWIST PR — NEW TWISTED PAIR COMMUNICATIONS CABLE
- EXI — EXISTING COMMUNICATIONS CABLE
- REM — EXISTING COMMUNICATIONS CABLE TO BE REMOVED
- NEW AERIAL GUY ASSEMBLY
- NEW CONDUIT
- EXISTING CONDUIT
- DD — NEW DIRECTIONAL DRILLED CONDUIT
- B&J — NEW BORED AND JACKED CONDUIT
- NEW JUNCTION BOX
- EXISTING JUNCTION BOX
- EXISTING WOOD POLE
- NEW WOOD POLE
- (S) NEW SPLICE ENCLOSURE
- (S) EXISTING SPLICE ENCLOSURE
- NEW METAL POLE
- EXISTING METAL POLE
- NEW CCTV CAMERA ASSEMBLY
- EXISTING CCTV CAMERA ASSEMBLY
- DMS EXISTING OVERHEAD DMS STRUCTURE
- DMS NEW PEDESTAL MOUNTED DMS STRUCTURE
- NEW MVD ASSEMBLY
- EXISTING MVD ASSEMBLY
- NEW CABLE STORAGE RACKS (SNOW SHOES)
- NEW CONTROLLER AND CABINET
- EXISTING CONTROLLER AND CABINET
- S NEW SPLICE CABINET
- S EXISTING SPLICE CABINET
- SP SIGNAL POLE
- XX–XXXX SIGNAL INVENTORY NUMBER

CONSTRUCTION NOTE SYMBOLOGY KEY

- (XX) INDICATES NUMBER OF CABLES, LOOPS, ETC.
- [XX] INDICATES NUMBER OF FIBERS PER CABLE, TWISTED PAIRS PER CABLE, ETC.
- <XX INDICATES NUMBER OF RISER(S)/CONDUIT(S)
- XX> INDICATES DIAMETER OF RISER(S)/CONDUIT(S) (INCH)



Prepared in the Offices of:
Traffic Engineering and Safety Systems Branch
North Carolina Department of Transportation
Intelligent Transportation Systems
750 N. Greenfield Pkwy., Garner, NC 27529

CONSTRUCTION NOTES

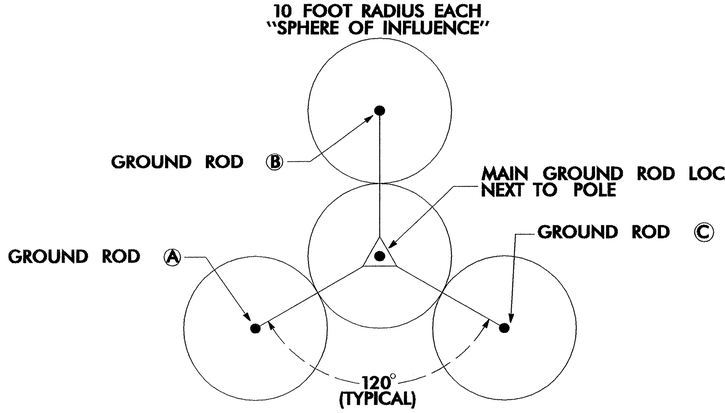
PLAN DATE:	DECEMBER 2007	REVIEWED BY:	M.A. ASLAMI
PREPARED BY:	S.C. WARDLE	REVIEWED BY:	T.G. PARKER

SCALE: 0 — N/A

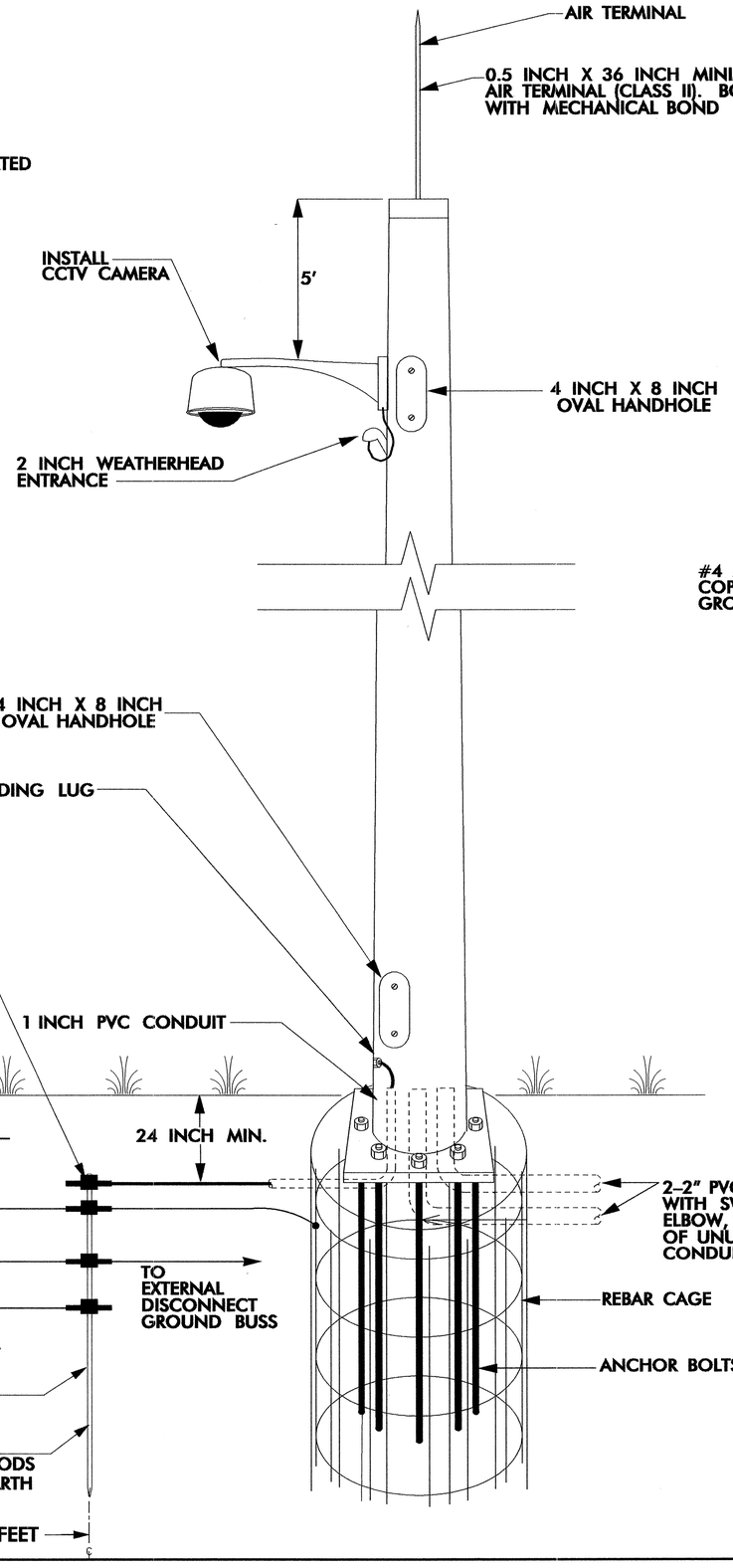
REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 14543 ENGINEER GENE G. MURR, JR.
SIGNATURE 12-5-07 DATE
CADD FILE NAME

PROJECT REFERENCE NO.	SHEET NO.
U-4754	ITS-2

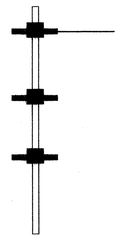


GROUND ROD PLACEMENT DETAIL
(TYPICAL EACH POLE)

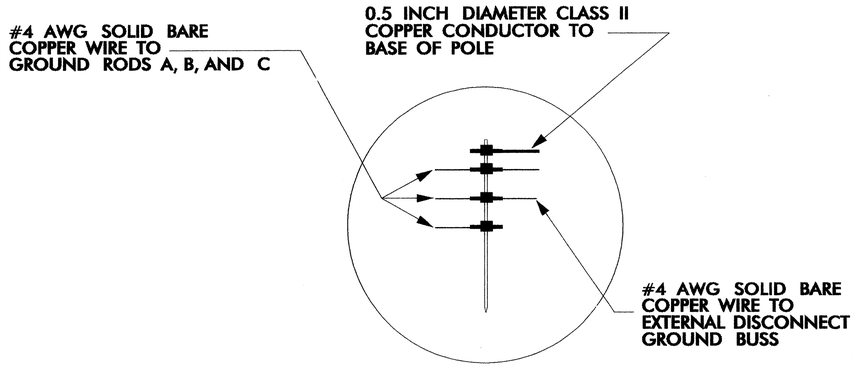


ALTERNATE GROUNDING METHOD

IF SPACE IS NOT AVAILABLE TO DRIVE MULTIPLE RODS, DRIVE SECTIONAL GROUND RODS A MINIMUM OF 30 FEET.



JOIN SECTIONAL GROUND RODS BY EXOTHERMIC WELDING CONNECTION



INSET `A'

NOTES

1. BOND 0.5 INCH DIAMETER, 28 STRAND (MINIMUM) CLASS II COPPER CONDUCTOR TO THE MAIN GROUND ROD BY AN EXOTHERMIC WELD METHOD.
2. EXOTHERMICALLY WELD ALL CONNECTIONS TO GROUND RODS.
3. BOND #4 AWG SOLID BARE COPPER WIRE TO REBAR CAGE AND THE MAIN GROUND ROD BY AN EXOTHERMIC WELD METHOD
4. BOND CAMERA HOUSING, CAMERA, AND PAN-TILT UNIT TO POLE
5. THE CONTRACTOR MAY, UPON APPROVAL OF THE ENGINEER, INSTALL A 30-FOOT SECTIONAL GROUND ROD WHEN CONDITIONS WILL NOT ALLOW FOR THE INSTALLATION OF THE 3 - RADIAL GROUND RODS.
6. INSTALL MARKER TAPE DIRECTLY ABOVE ALL GROUNDING ELECTRODES AND CONDUCTORS AT A DEPTH OF 12 INCHES.

Prepared in the Offices of:
Traffic Engineering and Safety Systems Branch
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Integrated Transportation Services
122 N. McDowell St., Raleigh, NC 27603

SCALE
0

CCTV CAMERA INSTALLATION FOR METAL POLE WITH FOUNDATION TYPICAL DETAIL

PLAN DATE:	MARCH 2004	REVIEWED BY:	T. G. PARKER
PREPARED BY:	J. HOOKER	REVIEWED BY:	G. A. FULLER

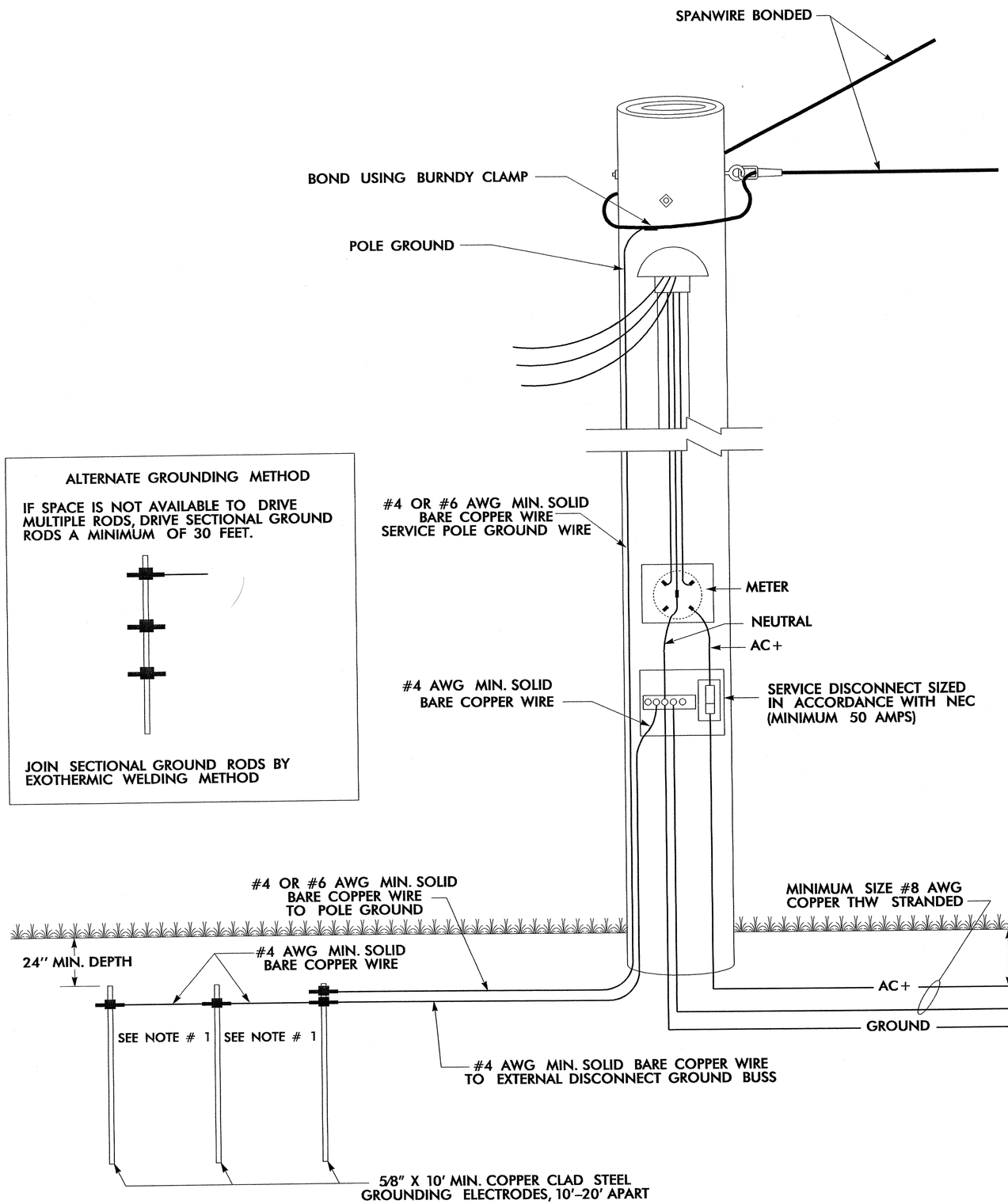
REVISIONS	INIT.	DATE
MODIFICATION TO AIR TERMINAL	TGP	04/13/06

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023919 ENGINEER GREGORY A. FULLER

Gregory A. Fuller 4/13/06
SIGNATURE DATE

CADD Filename:

PROJECT REFERENCE NO.	SHEET NO.
U-4754	ITS-2A



NOTES

1. INSTALL A MINIMUM OF THREE (3) GROUND RODS – SPACED A MINIMUM OF 10 FEET APART. ENSURE THAT EXISTING UNDERGROUND FACILITIES ARE NOT DAMAGED DURING INSTALLATION.
2. TEST GROUNDING SYSTEM USING AN APPROVED METHOD. SYSTEM SHOULD MEASURE TWENTY (20) OHMS OR LESS. ADDITIONAL GROUND RODS 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".
5. EXOTHERMICALLY WELD THE SERVICE POLE GROUND WIRE TO THE GROUND ROD SYSTEM.
6. REMOVE BONDING JUMPER IN EQUIPMENT CABINET IF INSTALLED BETWEEN AC NEUTRAL AND EQUIPMENT GROUND.
7. BOND ALL RIGID GALVANIZED STEEL CONDUITS ENTERING THE CABINET TO "EQUIPMENT GROUND".
8. INSTALL RIGID GALVANIZED STEEL CONDUIT (MINIMUM 1") BETWEEN METER AND CABINET.
9. SERVICE DISCONNECT GROUND BUS BAR SHALL PROVIDE FOR 2 #4 AWG CONNECTIONS.

ALTERNATE GROUNDING METHOD

IF SPACE IS NOT AVAILABLE TO DRIVE MULTIPLE RODS, DRIVE SECTIONAL GROUND RODS A MINIMUM OF 30 FEET.

JOIN SECTIONAL GROUND RODS BY EXOTHERMIC WELDING METHOD

Prepared in the Offices of:
Traffic Engineering and Safety Systems Branch
DIVISION OF HIGHWAYS
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Traffic Management Systems
122 N. McDowell St., Raleigh, NC 27603

ELECTRICAL SERVICE GROUNDING TYPICAL DETAIL

PLAN DATE:	MARCH 2004	REVIEWED BY:	T. G. PARKER
PREPARED BY:	J. HOOKER	REVIEWED BY:	G. A. FULLER

REVISIONS	INIT.	DATE

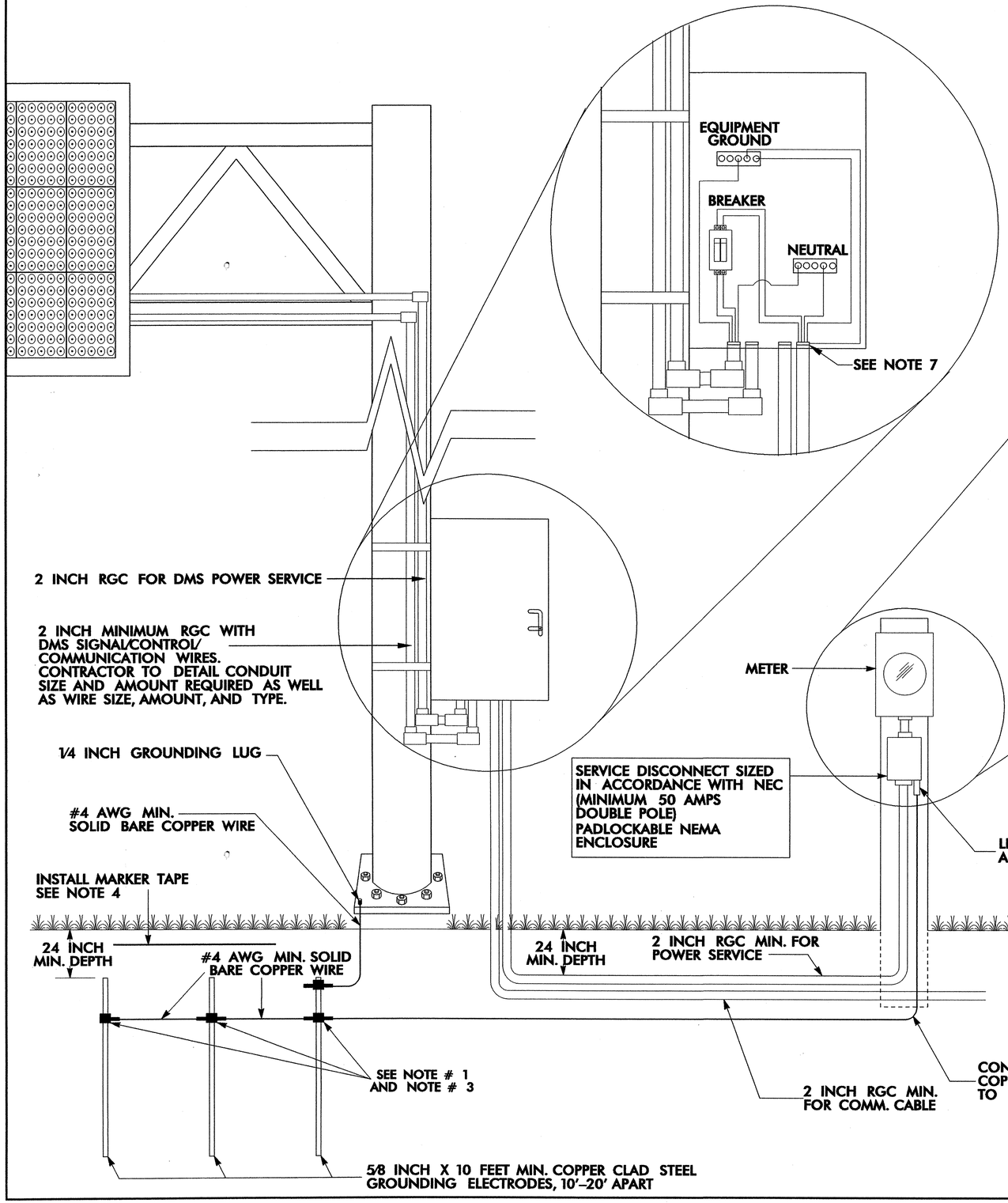
SCALE: 0 N/A

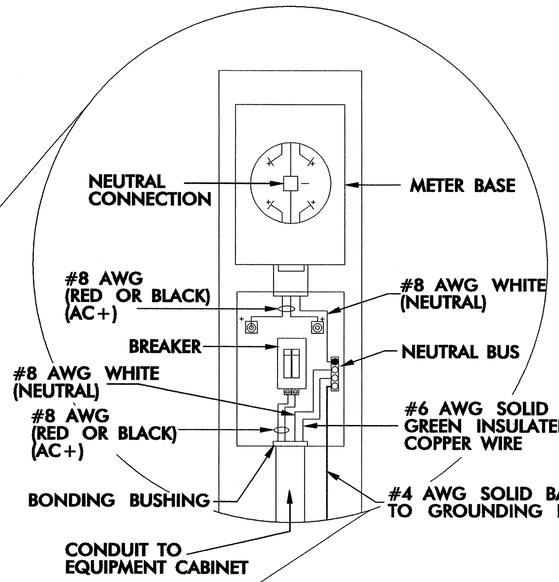
CADD FILE NAME

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023919 ENGINEER GREGORY A. FULLER

Gregory A. Fuller 3/17/04
SIGNATURE DATE

PROJECT REFERENCE NO.	SHEET NO.
U-4754	ITS-2B





NOTES

1. INSTALL A MINIMUM OF THREE (3) GROUND RODS SPACED A MINIMUM OF 10 FEET APART. ENSURE THAT EXISTING UNDERGROUND FACILITIES ARE NOT DAMAGED DURING INSTALLATION.
2. TEST GROUNDING SYSTEM USING AN APPROVED METHOD. SYSTEM SHOULD MEASURE TWENTY (20) OHMS OR LESS. ADDITIONAL GROUND RODS 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 6–12 INCHES.
5. EXOTHERMICALLY WELD THE SERVICE POLE GROUND WIRE TO THE GROUND ROD SYSTEM.
6. REMOVE BONDING JUMPER IN EQUIPMENT CABINET IF INSTALLED BETWEEN AC NEUTRAL AND EQUIPMENT GROUND.
7. BOND ALL RIGID GALVANIZED STEEL CONDUITS ENTERING THE CABINET TO "EQUIPMENT GROUND".
8. INSTALL RIGID GALVANIZED STEEL CONDUIT (MINIMUM 2 INCH) BETWEEN DISCONNECT AND CABINET.
9. SERVICE DISCONNECT NEUTRAL BUS BAR SHALL PROVIDE FOR 2 #4 AWG CONNECTIONS.
10. ENSURE EQUIPMENT GROUND IS ELECTRICALLY BONDED TO CABINET

Prepared in the Offices of:
North Carolina Department of Transportation
Traffic Engineering and Safety Systems Branch
1020 Birch Ridge Drive
Raleigh, NC 27610

DYNAMIC MESSAGE SIGN
ELECTRICAL SERVICE AND GROUNDING
TYPICAL DETAIL

PLAN DATE: APRIL 2006	REVIEWED BY: T. G. PARKER
PREPARED BY: J. HOOKER	REVIEWED BY: G.A. FULLER

122 N. McDowell St., Raleigh, NC 27603

SCALE: 0 N/A

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023919 ENGINEER GREGORY A. FULLER

Gregory A. Fuller 5-18-06
SIGNATURE DATE

CADD FILE NAME

PROJECT REFERENCE NO.	SHEET NO.
U-4754	ITS 3

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C201460

ItemNumber	Sec #	Quantity	Unit	Description
0000100000-N	800	Lump Sum		MOBILIZATION
4405000000-E	1110	390	SF	WORK ZONE SIGNS (PORTABLE)
4415000000-N	1115	2	EA	FLASHING ARROW PANELS, TYPE C
4422000000-N	1120	40	DAY	CHANGEABLE MESSAGE SIGN (SHORT TERM)
4430000000-N	1130	100	EA	DRUMS
4455000000-N	1150	60	MD	FLAGGER
4480000000-N	1165	1	EA	TMIA
4510000000-N	SP	20	HR	POLICE
7300000000-E	1715	330	LF	UNPAVED TRENCHING (**********) (2, 2")
7430000000-N	1722	18	EA	HEAT SHRINK TUBING RETROFIT KIT
7432000000-E	1722	3	EA	2" RISER WITH HEAT SHRINK TUBING
7980000000-N	SP	10	EA	GENERIC SIGNAL ITEM CCTV ASSEMBLY
7980000000-N	SP	10	EA	GENERIC SIGNAL ITEM CCTV CAMERA LOWERING SYSTEM
7980000000-N	SP	10	EA	GENERIC SIGNAL ITEM CCTV METAL POLE
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM CENTRAL ETHERNET SWITCH
7980000000-N	SP	10	EA	GENERIC SIGNAL ITEM FIBER OPTIC VIDEO RECEIVER W/ DATA (MRTMC
7980000000-N	SP	10	EA	GENERIC SIGNAL ITEM FIBER OPTIC VIDEO TRANSMITTER W/ DATA (FIELD)
7980000000-N	SP	10	EA	GENERIC SIGNAL ITEM FIELD EQUIPMENT CABINET
7980000000-N	SP	10	EA	GENERIC SIGNAL ITEM FIELD ETHERNET SWITCH
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM FURNISH ONLY CCTV CAMERA
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM FURNISH ONLY FIELD ETHERNET SWITCH
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM FURNISH ONLY MVD DETECTOR
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM FURNISH ONLY VOR-D
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM FURNISH ONLY VOT-D
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM INTEGRATE TERMINAL SERVER
7980000000-N	SP	13	EA	GENERIC SIGNAL ITEM INTERCONNECT CENTER
7980000000-N	SP	11	EA	GENERIC SIGNAL ITEM JUNCTION BOX (OVER-SIZED, HEAVY DUTY)
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM MODIFIED ELECTRICAL SERVICE
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM MODIFY INTERCONNECT CENTER
7980000000-N	SP	19	EA	GENERIC SIGNAL ITEM MODIFY SPLICE ENCLOSURE
7980000000-N	SP	16	EA	GENERIC SIGNAL ITEM MVD ASSEMBLY
7980000000-N	SP	10	EA	GENERIC SIGNAL ITEM NEW ELECTRICAL SERVICE
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM NEW PHONE SERVICE
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM PORTABLE CCTV LOWERING DEVICE
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM SPICE ENCLOSURE
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM VIDEO DISTRIBUTION AMPLIFIERS
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM WALL MOUNTED INTERCONNECT CENTER
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM DMS - 1 INSTALLATION
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM DMS - 1 ACCESS LADDER
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM DMS - 2 INSTALLATION
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM DMS - 2 ACCESS LADDER
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM DYNAMIC MESSAGE SIGN ASSEMBLY "DMS - 1"
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM DYNAMIC MESSAGE SIGN ASSEMBLY "DMS - 2"
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM MRTMC SOFTWARE MODIFICATIONS
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM VIDEO SWITCH MODIFICATIONS
7990000000-E	SP	49,436	LF	GENERIC SIGNAL ITEM COMMUNICATIONS CABLE (72-FIBER)
7990000000-E	SP	1,395	LF	GENERIC SIGNAL ITEM DIRECTIONAL DRILL CONDUIT (2, 2")
7990000000-E	SP	300	LF	GENERIC SIGNAL ITEM DIRECTIONAL DRILL CONDUIT (3,2")
7990000000-E	SP	4,167	LF	GENERIC SIGNAL ITEM DROP CABLE
7990000000-E	SP	1,725	LF	GENERIC SIGNAL ITEM TRACER WIRE
7992000000-E	SP	18	CY	GENERIC SIGNAL ITEM DMS FOOTING

Prepared in the Offices of:
Traffic Engineering and Safety Systems Branch
Traffic Engineering Unit
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Integrated Transportation Systems
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE
0
N/A

SUMMARY OF QUANTITIES

PLAN DATE:	REVIEWED BY:
PREPARED BY:	REVIEWED BY:

REVISIONS	INIT.	DATE

CADD FILE NAME