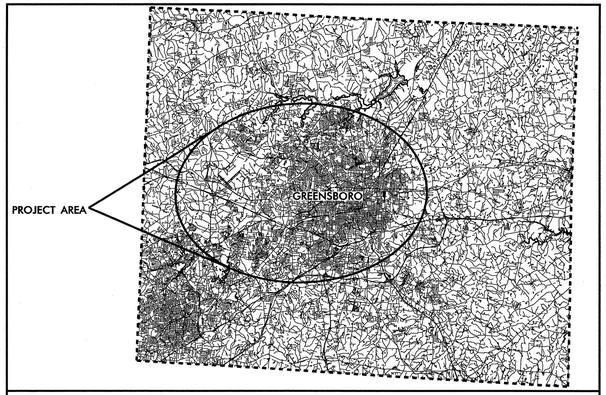
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-4711	1	
39075.1.1		P.E.	
39075.3.1	CMS-0708(13)	CONST.	

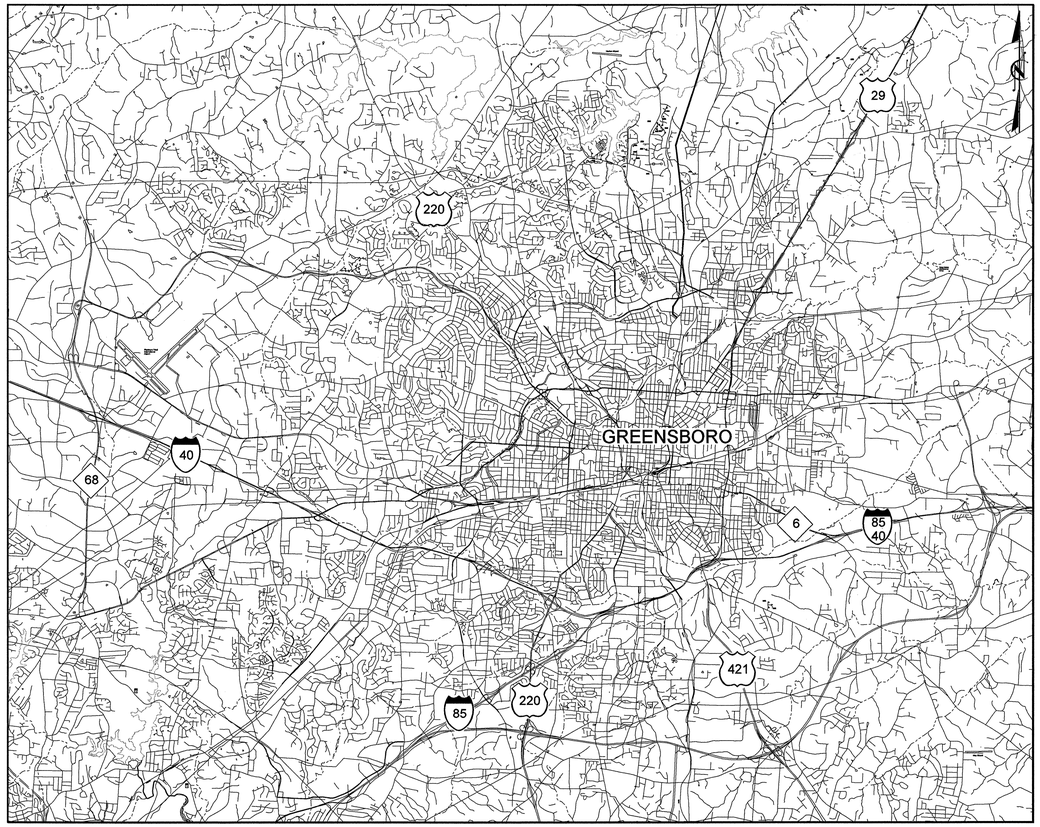
NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED IMPROVEMENTS
GREENSBORO
COMPUTERIZED TRAFFIC SIGNAL SYSTEM

THIS PROJECT CONSISTS OF UPGRADING THE COMPUTERIZED TRAFFIC SIGNAL SYSTEM AND INTERSECTION EQUIPMENT IN THE CITY OF GREENSBORO. THE PROJECT CONSISTS OF FURNISHING AND INSTALLING INTERSECTION CONTROL EQUIPMENT INCLUDING CONTROLLERS, CABINETS, DETECTORS; TRAFFIC SIGNAL EQUIPMENT; TRAFFIC CONTROL APPLICATIONS SOFTWARE; A CCTV SURVEILLANCE SYSTEM; A FIBER OPTIC COMMUNICATIONS NEWTORK; AND RELATED EQUIPMENT.



VICINITY MAP
NOT TO SCALE



FINAL PLANS

TIP PROJECT: U-4711

CONTRACT: C201859

3/4/2008
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2006 STANDARD SPECIFICATIONS

LETTING DATE:
JUNE 17, 2008

PROJECT LENGTH

PROJECT LENGTH = 148 MILES

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED
DIVISION ADMINISTRATOR *DATE*

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

STATE DESIGN ENGINEER *P.E.*

NCDOT CONTACTS:
TRAFFIC ENGINEERING AND SAFETY SYSTEMS BRANCH
INTELLIGENT TRANSPORTATION SYSTEMS SECTION
W. MICHAEL BRASWELL - METRO SYSTEMS PROJECT ENGINEER

PLANS PREPARED BY:

Kimley-Horn
and Associates, Inc.
P.O. Box 33068
Raleigh, NC 27636
(919) 677-2000

KIMLEY-HORN CONTACTS:
MARK W. DUNZO, P.E. - SYSTEMS ENGINEER
KEVIN W. SMITH, P.E. - SYSTEMS ENGINEER
INGER Z. VANOSDELL, P.E. - SYSTEMS ENGINEER

750 Greenfield Pkwy., Garner, NC 27529

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE 3/4/08 *DATE*

SEAL
SIGNATURE *DATE*

PROJECT REFERENCE NO.	SHEET NO.
U-4711	1-A

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED IMPROVEMENTS

GREENSBORO

COMPUTERIZED TRAFFIC SIGNAL SYSTEM

TIP PROJECT: U-4711

CONTRACT: C201859

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VOL. 3	371-595	COMMUNICATIONS CABLE AND CONDUIT ROUTING PLANS
VOL. 4	SPL. 001-SPL. 239	FIBER OPTIC SPLICE PLANS
VOL. 5	SPL. 240-SPL. 447	FIBER OPTIC SPLICE PLANS
	TCP01-TCP04	TRAFFIC CONTROL PLANS

PLANS PREPARED BY:

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P.O. Box 33068
Raleigh, NC 27636
(919) 677-2000

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/28/08 DATE

2/27/2008
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5/28/99

CT REFERENCE NO. 4-4711 | SHEET NO. 2

SHEET 1 OF 2

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C201859

ItemNumber	Sec #	Quantity	Unit	Description
0000100000-N	800	Lump Sum		MOBILIZATION
2591000000-E	848	50	SY	4" CONCRETE SIDEWALK
4405000000-E	1110	538	SF	WORK ZONE SIGNS (PORTABLE)
4415000000-N	1115	2	EA	FLASHING ARROW PANELS, TYPE C
4420000000-N	1120	1	EA	CHANGEABLE MESSAGE SIGN
4430000000-N	1130	33	EA	DRUMS
4435000000-N	1135	33	EA	CONES
4455000000-N	1150	30	MD	FLAGGER
4480000000-N	1165	2	EA	TMIA
7060000000-E	1705	40,000	LF	SIGNAL CABLE
7252000000-E	1710	223,800	LF	MESSENGER CABLE (1/4")
7264000000-E	1710	2,000	LF	MESSENGER CABLE (3/8")
7276000000-E	1715	2,700	LF	BORE & JACK (**********) (1, 5")
7279000000-E	1715	53,500	LF	TRACER WIRE
7301000000-E	1715	9,300	LF	DIRECTIONAL DRILL (**********) (1, 2")
7301000000-E	1715	26,700	LF	DIRECTIONAL DRILL (**********) (2, 2")
7312000000-N	1716	9	EA	JUNCTION BOX (**********) (SPECIAL OVER-SIZED)
7324000000-N	1716	275	EA	JUNCTION BOX (STANDARD SIZE)
7348000000-N	1716	387	EA	JUNCTION BOX (OVER-SIZED, HEAVY DUTY)
7360000000-N	1720	38	EA	WOOD POLE
7372000000-N	1721	1,149	EA	GUY ASSEMBLY
7420000000-E	1722	213	EA	2" RISER WITH WEATHERHEAD
7430000000-N	1722	48	EA	HEAT SHRINK TUBING RETROFIT KIT
7432000000-E	1722	409	EA	2" RISER WITH HEAT SHRINK TUBING
7444000000-E	1725	31,550	LF	INDUCTIVE LOOP SAWCUT
7456000000-E	1726	394,200	LF	LEAD-IN CABLE (**********) (14-2)
7484000000-N	SP	3	EA	MICROWAVE VEHICLE DETECTOR
7516000000-E	1730	17,400	LF	COMMUNICATIONS CABLE (**FIBER) (12)
7516000000-E	1730	475,300	LF	COMMUNICATIONS CABLE (**FIBER) (24)
7516000000-E	1730	1,700	LF	COMMUNICATIONS CABLE (**FIBER) (36)
7516000000-E	1730	209,800	LF	COMMUNICATIONS CABLE (**FIBER) (48)
7516000000-E	1730	23,000	LF	COMMUNICATIONS CABLE (**FIBER) (72)
7540000000-N	1731	355	EA	SPLICE ENCLOSURE
7552000000-N	1731	457	EA	INTERCONNECT CENTER
7566000000-N	1733	174	EA	DELINEATOR MARKER
7568000000-N	SP	2	EA	FURNISH FIBER-OPTIC RESTORATION KIT
7570000000-N	SP	2	EA	FURNISH FIBER-OPTIC POWER METER
7572000000-N	SP	2	EA	FURNISH OPTICAL LIGHT GENERATOR
7575142100-N	SP	7	EA	900MHZ WIRELESS REPEATER STANDALONE RADIO SYSTEM
7575142200-N	SP	53	EA	NEW ELECTRICAL SERVICE
7575180000-N	1735	100	EA	CABLE TRANSFER
7684000000-N	1750	86	EA	SIGNAL CABINET FOUNDATION
7686000000-N	SP	392	EA	CONDUIT ENTRANCE INTO EXISTING FOUNDATION
7687000000-N	SP	329	EA	MODIFY FOUNDATION FOR CONTROLLER CABINET
7688000000-N	1753	14	EA	CABINET BASE ADAPTER
7708000000-N	1751	1,595	EA	DETECTOR CARD (**********) (TYPE 2070L)
7901000000-N	1753	379	EA	CABINET BASE EXTENDER
7980000000-N	SP	4	EA	GENERIC SIGNAL ITEM 900 MHZ WIRELESS RADIO SYSTEM, TYPE A
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM 900 MHZ WIRELESS RADIO SYSTEM, TYPE B
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM 900 MHZ WIRELESS RADIO SYSTEM, TYPE C
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM 900 MHZ WIRELESS RADIO SYSTEM, TYPE D
7980000000-N	SP	41	EA	GENERIC SIGNAL ITEM CCTV ASSEMBLY
7980000000-N	SP	49	EA	GENERIC SIGNAL ITEM CENTRAL VIDEO CODEC
7980000000-N	SP	379	EA	GENERIC SIGNAL ITEM CONTROLLER WITH CABINET (2070L, 332 BASE MOUNT)
7980000000-N	SP	59	EA	GENERIC SIGNAL ITEM CONTROLLER WITH CABINET (2070L, 336S, POLE OR BASE MOUNT)
7980000000-N	SP	42	EA	GENERIC SIGNAL ITEM DSL ETHERNET SWITCH
7980000000-N	SP	3	EA	GENERIC SIGNAL ITEM EQUIPMENT CABINET (333 BASE MOUNT)
7980000000-N	SP	423	EA	GENERIC SIGNAL ITEM FIELD ETHERNET SWITCH
7980000000-N	SP	28	EA	GENERIC SIGNAL ITEM FIELD VIDEO CODEC UNIT
7980000000-N	SP	20	EA	GENERIC SIGNAL ITEM FURNISH 2070L CONTROLLER
7980000000-N	SP	4	EA	GENERIC SIGNAL ITEM FURNISH 332 CABINET
7980000000-N	SP	4	EA	GENERIC SIGNAL ITEM FURNISH 336 CABINET
7980000000-N	SP	5	EA	GENERIC SIGNAL ITEM FURNISH AC ISOLATOR CARD
7980000000-N	SP	4	EA	GENERIC SIGNAL ITEM FURNISH CCTV ASSEMBLY
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM FURNISH CCTV TEST CABINET
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM FURNISH CCTV TEST MONITOR
7980000000-N	SP	20	EA	GENERIC SIGNAL ITEM FURNISH CONFLICT MONITOR
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM FURNISH CONTROLLER TESTER
7980000000-N	SP	5	EA	GENERIC SIGNAL ITEM FURNISH DC ISOLATOR CARD
7980000000-N	SP	80	EA	GENERIC SIGNAL ITEM FURNISH DETECTOR CARD
7980000000-N	SP	2	EA	GENERIC SIGNAL ITEM FURNISH DSL ETHERNET SWITCH
7980000000-N	SP	10	EA	GENERIC SIGNAL ITEM FURNISH FIBER OPTIC INTERCONNECT CENTER
7980000000-N	SP	10	EA	GENERIC SIGNAL ITEM FURNISH FIELD ETHERNET SWITCH
7980000000-N	SP	10	EA	GENERIC SIGNAL ITEM FURNISH HEAT SHRINK TUBING
7980000000-N	SP	10	EA	GENERIC SIGNAL ITEM FURNISH HEAT SHRINK TUBING RETROFIT KIT
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM FURNISH OTDR
7980000000-N	SP	200	EA	GENERIC SIGNAL ITEM FURNISH SC JUMPERS
7980000000-N	SP	200	EA	GENERIC SIGNAL ITEM FURNISH SC PIGTAILS
7980000000-N	SP	50	EA	GENERIC SIGNAL ITEM FURNISH SC SPLICE CONNECTOR
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM FURNISH SIGNAL MONITOR TESTER
7980000000-N	SP	10	EA	GENERIC SIGNAL ITEM FURNISH SPLICE ENCLOSURE
7980000000-N	SP	200	EA	GENERIC SIGNAL ITEM FURNISH ST JUMPERS
7980000000-N	SP	200	EA	GENERIC SIGNAL ITEM FURNISH ST PIGTAILS
7980000000-N	SP	50	EA	GENERIC SIGNAL ITEM FURNISH ST SPLICE CONNECTOR
7980000000-N	SP	2	EA	GENERIC SIGNAL ITEM FURNISH TEST 332 CABINET/CONTROLLER
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM FURNISH TEST 336 CABINET/CONTROLLER
7980000000-N	SP	4	EA	GENERIC SIGNAL ITEM FURNISH VIDEO CODEC UNIT
7980000000-N	SP	2	EA	GENERIC SIGNAL ITEM FURNISH WI-FI ACCESS POINT
7980000000-N	SP	2	EA	GENERIC SIGNAL ITEM FURNISH WIRELESS RADIO SYSTEM, TYPE A
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM GPS ANTENNA
7980000000-N	SP	59	EA	GENERIC SIGNAL ITEM INTEGRATED CABINET BASE ADAPTER
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM IP KVM SWITCH
7980000000-N	SP	8	EA	GENERIC SIGNAL ITEM KVM SWITCH
7980000000-N	SP	14	EA	GENERIC SIGNAL ITEM LCD VIDEO MONITOR
7980000000-N	SP	23	EA	GENERIC SIGNAL ITEM METAL POLE
7980000000-N	SP	42	EA	GENERIC SIGNAL ITEM MIS 2" RISER WITH HEAT SHRINK TUBING
7980000000-N	SP	20	EA	GENERIC SIGNAL ITEM MIS CABLE TRANSFER
7980000000-N	SP	109	EA	GENERIC SIGNAL ITEM MIS DELINEATOR MARKER
7980000000-N	SP	204	EA	GENERIC SIGNAL ITEM MIS GUY ASSEMBLY
7980000000-N	SP	27	EA	GENERIC SIGNAL ITEM MIS JUNCTION BOX (SPECIAL OVER-SIZED)
7980000000-N	SP	128	EA	GENERIC SIGNAL ITEM MIS JUNCTION BOX (OVER-SIZED HEAVY DUTY)
7980000000-N	SP	44	EA	GENERIC SIGNAL ITEM MIS SPLICE ENCLOSURE
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM MIS WOOD POLE
7980000000-N	SP	23	EA	GENERIC SIGNAL ITEM MODIFY EXISTING ELECTRICAL SERVICE
7980000000-N	SP	23	EA	GENERIC SIGNAL ITEM MODIFY EXISTING SPLICE ENCLOSURE
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM NETWORK VIDEO RECORDER
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM PLOTTER
7980000000-N	SP	16	EA	GENERIC SIGNAL ITEM POLE MOUNTED CCTV EQUIPMENT CABINET
7980000000-N	SP	2	EA	GENERIC SIGNAL ITEM TERMINAL SERVER
7980000000-N	SP	5	EA	GENERIC SIGNAL ITEM TERMINAL SPLICE BOX
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM UHF MODULATOR
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM VIDEO PROJECTION UNIT
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM VIDEO WALL
7980000000-N	SP	41	EA	GENERIC SIGNAL ITEM WI-FI ACCESS POINT
7980000000-N	SP	3	EA	GENERIC SIGNAL ITEM WIRELESS CONTROLLER UNIT
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM BENJAMIN LIBRARY BUILDING MODIFICATIONS
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM BURMILL PARK BUILDING MODIFICATIONS
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM CCTV CENTRAL SOFTWARE
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM CENTRAL LIBRARY BUILDING MODIFICATIONS
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM COLISEUM BUILDING MODIFICATIONS
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM COMPUTER HARDWARE INTEGRATION
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM CONE BUILDING BUILDING MODIFICATIONS
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM CURB MARKET BUILDING MODIFICATIONS
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM FIRE STATION 1 BUILDING MODIFICATIONS
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM FIRE STATION 10 BUILDING MODIFICATIONS

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PROJECT REFERENCE No.	SHEET No.
	2 OF 2

ItemNumber	Sec #	Quantity	Unit	Description
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM FIRE STATION 12 BUILDING MODIFICATIONS
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM FIRE STATION 14 BUILDING MODIFICATIONS
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM FIRE STATION 15 BUILDING MODIFICATIONS
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM FIRE STATION 16 BUILDING MODICATIONS
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM FIRE STATION 18 BUILDING MODIFICATIONS
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM FIRE STATION 19 BUILDING MODIFICATIONS
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM FIRE STATION 20 BUILDING MODIFICATIONS
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM FIRE STATION 21 BUILDING MODIFICATIONS
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM FIRE STATION 4 BUILDING MODIFICATIONS
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM FIRE STATION 5 BUILDING MODIFICATIONS
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM FIRE STATION 56 BUILDING MODIFICATIONS
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM FIRE STATION 6 BUILDING MODIFICATIONS
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM FIRE STATION 7 BUILDING MODIFICATIONS
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM FIRE STATION 8 BUILDING MODIFICATIONS
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM FIRE STATION 9 BUILDING MODIFICATIONS
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM GLENWOOD LIBRARY BUILDING MODIFICATIONS
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM GREENSBORO EMERGENCY MANAGEMENT CENTER BUILDING MODIFICATIONS
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM GREENSBORO SIGNAL SHOP BUILDING MODIFICATIONS
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM HISTORICAL MUSEUM BUILDING MODIFICATIONS
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM KCEF LIBRARY BUILDING MODIFICATIONS
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM LAN INTEGRATION
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM LANDFILL OFFICES BUILDING MODIFICATIONS
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM LOCAL CONTROLLER SOFTWARE
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM MCGIRT-HORTON LIBRARY BUILDING MODIFICATIONS
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM NCDOT PTRTMC BUILDING MODIFICATIONS
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM P&R MAINTENANCE BUILDING MODIFICATIONS
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM SANFORD SMITH BUILDING MODIFICATIONS
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM SIGNAL SYSTEM SOFTWARE
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM SPORTSPLEX BUILDING MODIFICATIONS
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM SWING ROAD STATION BUILDING MODIFICATIONS
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM SYSTEM SUPPORT SOFTWARE
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM TANNENBAUM BUILDING MODIFICATIONS
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM TRAFFIC OPERATIONS CENTER BUILDING MODIFICATIONS
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM TRAFFIC OPERATIONS CENTER COMPUTER ROOM BUILDING MODIFICATIONS
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM TRAINING
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM TROTTER RECHESTER BUILDING MODIFICATIONS
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM VANCE CHANVIS LIBRARY BUILDING MODIFICATIONS
7990000000-E	SP	4,422	LF	GENERIC SIGNAL ITEM CCTV UNIFIED CABLE
7990000000-E	SP	3,800	LF	GENERIC SIGNAL ITEM DROP CABLE (12 FIBER)
7990000000-E	SP	182,900	LF	GENERIC SIGNAL ITEM DROP CABLE (6 FIBER)
7990000000-E	SP	5,700	LF	GENERIC SIGNAL ITEM ETHERNET CABLE (OUTDOOR RATED)
7990000000-E	SP	600	LF	GENERIC SIGNAL ITEM FURNISH COMMUNICATIONS CABLE (12 FIBER)
7990000000-E	SP	18,100	LF	GENERIC SIGNAL ITEM FURNISH COMMUNICATIONS CABLE (24 FIBER)
7990000000-E	SP	100	LF	GENERIC SIGNAL ITEM FURNISH COMMUNICATIONS CABLE (36 FIBER)
7990000000-E	SP	6,400	LF	GENERIC SIGNAL ITEM FURNISH COMMUNICATIONS CABLE (48 FIBER)
7990000000-E	SP	700	LF	GENERIC SIGNAL ITEM FURNISH COMMUNICATIONS CABLE (72 FIBER)
7990000000-E	SP	200	LF	GENERIC SIGNAL ITEM FURNISH DROP CABLE (12 FIBER)
7990000000-E	SP	5,500	LF	GENERIC SIGNAL ITEM FURNISH DROP CABLE (6 FIBER)
7990000000-E	SP	100	LF	GENERIC SIGNAL ITEM FURNISH ETHERNET CABLE (OUTDOOR RATED)
7990000000-E	SP	100	LF	GENERIC SIGNAL ITEM FURNISH PLENUM RATED COMMUNICATIONS CABLE (144 FIBER)
7990000000-E	SP	800	LF	GENERIC SIGNAL ITEM FURNISH PLENUM RATED COMMUNICATIONS CABLE (24 FIBER)
7990000000-E	SP	100	LF	GENERIC SIGNAL ITEM FURNISH PLENUM RATED COMMUNICATIONS CABLE (96 FIBER)
7990000000-E	SP	100	LF	GENERIC SIGNAL ITEM FURNISH UNIFIED CABLE
7990000000-E	SP	500	LF	GENERIC SIGNAL ITEM INDUCTIVE LOOP DOUBLE SAWCUT
7990000000-E	SP	300	LF	GENERIC SIGNAL ITEM MIS BORE AND JACK (1, 5")
7990000000-E	SP	125,900	LF	GENERIC SIGNAL ITEM MIS COMMUNICATIONS CABLE (24 FIBER)
7990000000-E	SP	1,300	LF	GENERIC SIGNAL ITEM MIS COMMUNICATIONS CABLE (48 FIBER)
7990000000-E	SP	7,000	LF	GENERIC SIGNAL ITEM MIS DIRECTIONAL DRILL (2, 2")
7990000000-E	SP	88,500	LF	GENERIC SIGNAL ITEM MIS MESSENGER CABLE (1/4")
7990000000-E	SP	300	LF	GENERIC SIGNAL ITEM MIS MULTI-DUCT (2, 2") IN OUTER-DUCT (1, 5")
7990000000-E	SP	100	LF	GENERIC SIGNAL ITEM MIS PAVED TRENCHING (1, 2") HDPE CONDUIT
7990000000-E	SP	100	LF	GENERIC SIGNAL ITEM MIS PAVED TRENCHING (2, 2") HDPE CONDUIT
7990000000-E	SP	700	LF	GENERIC SIGNAL ITEM MIS PLENUM RATED COMMUNICATIONS CABLE (144 FIBER)
7990000000-E	SP	23,900	LF	GENERIC SIGNAL ITEM MIS PLENUM RATED COMMUNICATIONS CABLE (24 FIBER)
7990000000-E	SP	700	LF	GENERIC SIGNAL ITEM MIS PLENUM RATED COMMUNICATIONS CABLE (96 FIBER)
7990000000-E	SP	23,900	LF	GENERIC SIGNAL ITEM MIS TRACER WIRE
7990000000-E	SP	17,000	LF	GENERIC SIGNAL ITEM MIS UNPAVED TRECHING (2, 2") HDPE CONDUIT
7990000000-E	SP	2,700	LF	GENERIC SIGNAL ITEM MULTI-DUCT (2, 2") IN OUTER-DUCT (1, 5")
7990000000-E	SP	1,000	LF	GENERIC SIGNAL ITEM PAVED TRENCHING (1, 2") HDPE CONDUIT
7990000000-E	SP	1,000	LF	GENERIC SIGNAL ITEM PAVED TRENCHING (2, 2") HDPE CONDUIT
7990000000-E	SP	200	LF	GENERIC SIGNAL ITEM TWISTED PAIR CABLE (6 PAIR)
7990000000-E	SP	15,400	LF	GENERIC SIGNAL ITEM UNPAVED TRENCHING (1, 2") HDPE CONDUIT
7990000000-E	SP	31,100	LF	GENERIC SIGNAL ITEM UNPAVED TRENCHING (2, 2") HDPE CONDUIT
7990000000-E	SP	700	LF	GENERIC SIGNAL ITEM UNPAVED TRENCHING (2, 2") PVC CONDUIT
7990000000-E	SP	3,615	LF	GENERIC SIGNAL ITEM WI-FI ACCESS POINT POWER CABLE
7991000000-E	SP	500	SF	GENERIC SIGNAL ITEM BRICK PAVERS

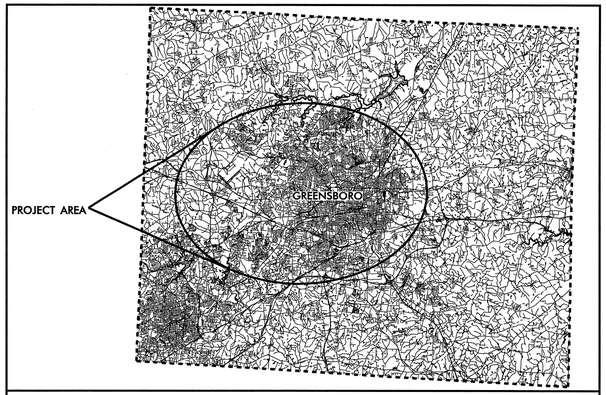
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-4711	1	
39075.1.1		P.E.	
39075.3.1	CMS-0708(13)	CONST.	

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

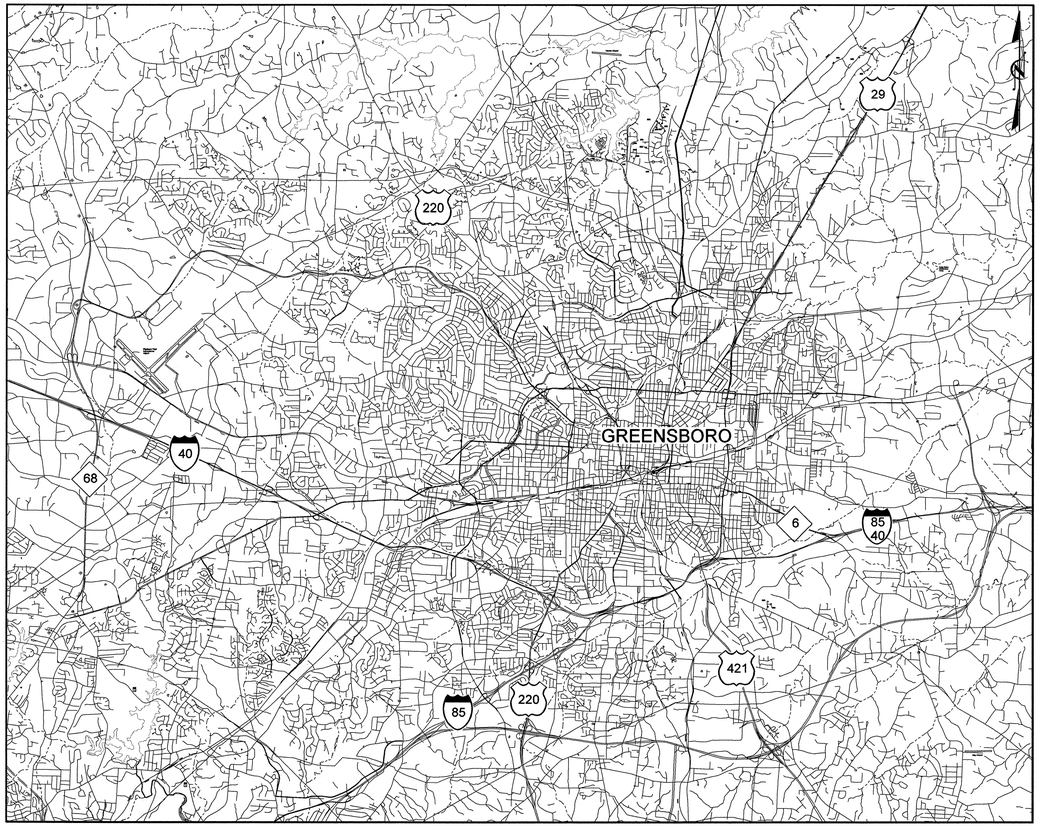
PLANS FOR PROPOSED IMPROVEMENTS

GREENSBORO

COMPUTERIZED TRAFFIC SIGNAL SYSTEM
DETAILS, QUANTITIES, AND COMMUNICATIONS CABLE
AND CONDUIT ROUTING PLANS



VICINITY MAP
NOT TO SCALE



FINAL PLANS

TIP PROJECT: U-4711

CONTRACT: C201859

VOLUME 1 OF 5

2/27/2008
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PROJECT REFERENCE NO.	SHEET NO.
U-4711	1A

NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED IMPROVEMENTS

GREENSBORO

COMPUTERIZED TRAFFIC SIGNAL SYSTEM

COMMUNICATIONS CABLE AND CONDUIT ROUTING PLANS

TIP PROJECT: U-4711

CONTRACT: C201859

LEGEND

—FO—	NEW FIBER OPTIC COMMUNICATIONS CABLE
—EXI—	EXISTING COMMUNICATIONS CABLE
—FO LLI—	NEW FIBER OPTIC COMMUNICATIONS CABLE AND LOOP LEAD-IN CABLE
—LLI—	NEW LOOP LEAD-IN CABLE
	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
(MH)	EXISTING MANHOLE
○	NEW WOOD POLE
●	EXISTING WOOD POLE
Ⓢ	NEW SPLICE ENCLOSURE
Ⓢ	EXISTING SPLICE ENCLOSURE
	NEW METAL POLE
	EXISTING METAL POLE
	EXISTING MAST ARM METAL POLE
	NEW CCTV CAMERA ASSEMBLY
	EXISTING CCTV CAMERA ASSEMBLY
	NEW STANDARD GUY ASSEMBLY
	NEW SIDEWALK GUY ASSEMBLY
	NEW CABLE STORAGE RACKS (SNOW SHOES)
	NEW WIRELESS TRANSCEIVER AND ANTENNA
	NEW BASE MOUNTED EQUIPMENT CABINET (CONTROLLER, CCTV OR COMMUNICATIONS HUB)
	EXISTING BASE MOUNTED EQUIPMENT CABINET (CONTROLLER OR CCTV)
	NEW POLE MOUNTED EQUIPMENT CABINET (CONTROLLER OR CCTV)
	EXISTING POLE MOUNTED EQUIPMENT CABINET (CONTROLLER OR CCTV)
S	EXISTING SPLICE CABINET
S	NEW SPLICE CABINET
	NEW MICROWAVE VEHICLE DETECTOR
	NEW SYSTEM DETECTOR
	EXISTING SYSTEM DETECTOR
	NEW WIRELESS ACCESS POINT
XX-XXXX	SIGNAL INVENTORY NUMBER
SP	SIGNAL POLE
M	NEW CITY MIS DEPARTMENT REQUESTED MATERIAL

INDEX OF SHEETS

SHEET NUMBER	DESCRIPTION
1	TITLE SHEET
1A	LEGEND, INDEX OF SHEETS, ROADWAY STANDARD DRAWINGS
1B	CONSTRUCTION NOTES
1C-1P	PLAN KEY
2-2L	CABLE SCHEMATIC
2M-2U	SYSTEM DETECTOR SCHEMATIC
2V-2AG	SEQUENCE OF CONSTRUCTION
2AH	SPECIAL DETAILS - JUNCTION BOXES AND SPLICE ENCLOSURES
2AJ-2AQ	CABINET AND CABINET FOUNDATION DETAILS
2AR-2AS	EMERGENCY GENERATOR DETAILS
2AT-2AU	RADIO ANTENNA DETAILS
2AV-2AY	CCTV/WI-FI DETAILS
2AZ	NETWORK BACKBONE TOPOLOGY
2BA-2BF	BLOCK DIAGRAMS
2BG-2BM	BUILDING MODIFICATIONS
2BN-2BW	CITY FACILITY BUILDING MODIFICATIONS
3	QUANTITIES
3A-3W	SUMMARY OF WORK BY INTERSECTION
3X	SUMMARY OF WORK BY ITS DEVICES
3Y	SUMMARY OF WORK BY COMMUNICATIONS HUB
3Z	SUMMARY OF WORK BY CITY FACILITY
4-138	CABLE ROUTING SHEETS

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. NUMBER	DESCRIPTION
1700.01	ELECTRICAL SERVICE OPTIONS
1700.02	ELECTRICAL SERVICE GROUNDING
1715.01	UNDERGROUND CONDUIT - TRENCHING
1716.01	JUNCTION BOXES
1720.01	WOOD POLES
1721.01	GUY ASSEMBLIES
1725.01	INDUCTIVE DETECTION LOOPS
1730.01	FIBER OPTIC CABLE
1751.01	CONTROLLERS AND CABINETS
848.01	CONCRETE SIDEWALK

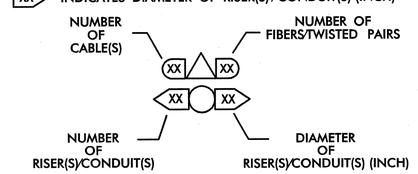
CONSTRUCTION NOTE SYMBOLOGY KEY

(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)



VOLUME 1 OF 5

PLANS PREPARED BY:

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NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNTO

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PROJECT REFERENCE NO.	SHEET NO.
U-4711	1B

△1 INSTALL SMFO CABLE

△2 INSTALL PLENUM RATED FIBER OPTIC CABLE

△3 INSTALL FIBER OPTIC DROP CABLE

△4 INSTALL TRACER WIRE

△5 REUSE NCDOT SMFO CABLE

△6 REUSE GDOT SMFO CABLE

(1) TRENCH

(2) INSTALL PVC CONDUIT

(3) INSTALL RIGID, GALVANIZED STEEL CONDUIT

(4) INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD

(5) INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC CABLE SEAL

(6) INSTALL OUTER–DUCT POLYETHYLENE CONDUIT

(7) INSTALL POLYETHYLENE CONDUIT

(8) DIRECTIONAL DRILL CONDUIT

(9) BORE AND JACK CONDUIT

(10) INSTALL CABLE(S) IN EXISTING CONDUIT

(11) INSTALL CABLE(S) IN NEW CONDUIT

(12) INSTALL CABLE(S) IN EXISTING RISER

(13) INSTALL CABLE(S) IN NEW RISER

(14) INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE

(15) INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB–OUTS WHEN AVAILABLE)

(16) INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB–OUTS WHEN AVAILABLE)

(17) INSTALL NEW CONDUIT INTO EXISTING POLE MOUNTED CABINET

(18) INSTALL NEW RISER INTO EXISTING POLE MOUNTED CABINET

(19) REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING

◇1 INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET

◇2 INSTALL UNDERGROUND SPLICE ENCLOSURE

◇3 INSTALL AERIAL SPLICE ENCLOSURE

◇4 INSTALL POLE MOUNTED SPLICE CABINET

◇5 INSTALL BASE MOUNTED SPLICE CABINET

◇6 REMOVE EXISTING SPLICE CABINET

◇7 INSTALL TERMINAL SPLICE BOX

◇8 MODIFY EXISTING SPLICE ENCLOSURE

[1] INSTALL CABINET FOUNDATION

[2] REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER

[3] MODIFY EXISTING CABINET FOUNDATION

[4] INSTALL NEW 333 COMMUNICATION CABINET

[5] INSTALL NEW 332 BASE MOUNTED CABINET

[6] INSTALL NEW 336S CABINET

[7] INSTALL CCTV CAMERA ASSEMBLY

[8] INSTALL CCTV CAMERA WOOD POLE

[9] INSTALL CCTV METAL POLE AND FOUNDATION

[10] INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX

[11] INSTALL SPECIAL OVERSIZED JUNCTION BOX

[12] INSTALL OVERSIZED JUNCTION BOX

[13] INSTALL STANDARD JUNCTION BOX

[14] REMOVE EXISTING JUNCTION BOX

[15] INSTALL WOOD POLE

[16] REMOVE EXISTING WOOD POLE

[17] INSTALL AERIAL GUY ASSEMBLY

[18] INSTALL STANDARD GUY ASSEMBLY

[19] INSTALL SIDEWALK GUY ASSEMBLY

[20] INSTALL MESSENGER CABLE

[21] REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE

[22] REMOVE EXISTING COMMUNICATIONS CABLE

[23] INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE

[24] INSTALL DELINEATOR MARKER

[25] STORE 30 FEET OF EACH COMMUNICATIONS CABLE

[26] STORE 100 FEET OF EACH COMMUNICATIONS CABLE

[27] LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE

[28] LASH CABLE(S) TO EXISTING MESSENGER CABLE

[29] LASH CABLE(S) TO NEW MESSENGER CABLE

[30] INSTALL NEW ELECTRICAL SERVICE

[31] MODIFY EXISTING ELECTRICAL SERVICE

[32] INSTALL NEW CONTROLLER

[33] INSTALL EXISTING CABLE IN NEW CABINET

[34] INSTALL GENERATOR POWER INLET BOX

[35] INSTALL LOCAL GIGABIT ETHERNET SWITCH

[36] INSTALL UNIFIED CABLE

[37] INSTALL POLE MOUNTED EQUIPMENT CABINET

[38] INSTALL UNI–DIRECTIONAL YAGI ANTENNA

[39] INSTALL OMNI–DIRECTIONAL ANTENNA

[40] INSTALL RADIO TRANSCEIVER

[41] INSTALL SYSTEM LOOP

[42] INSTALL SYSTEM LOOP AMPLIFIER

[43] INSTALL SYSTEM LOOP LEAD–IN CABLE

[44] INSTALL LOCAL LOOP AMPLIFIER

[45] INSTALL WIRELESS ACCESS POINT

[46] INSTALL HUB 10 – GIGABIT ETHERNET SWITCH

[47] INSTALL CODEC

[48] BOND MESSENGER CABLE TO POLE GROUND

[49] INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION

[50] INSTALL ANTENNA CABLE

[51] RECONNECT RAILROAD PREEMPTION EQUIPMENT

[52] RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT

[53] INSTALL DSL ETHERNET SWITCH

[54] INSTALL ETHERNET CABLE

[55] INSTALL TERMINAL SERVER

[56] INSTALL MICROWAVE VEHICLE DETECTOR

[57] INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT

[58] INSTALL WIRELESS ACCESS POINT POWER CABLE

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0
NONE

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CONSTRUCTION NOTES

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: K.D. VANPATTEN	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
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PROJECT REFERENCE NO.	SHEET NO.
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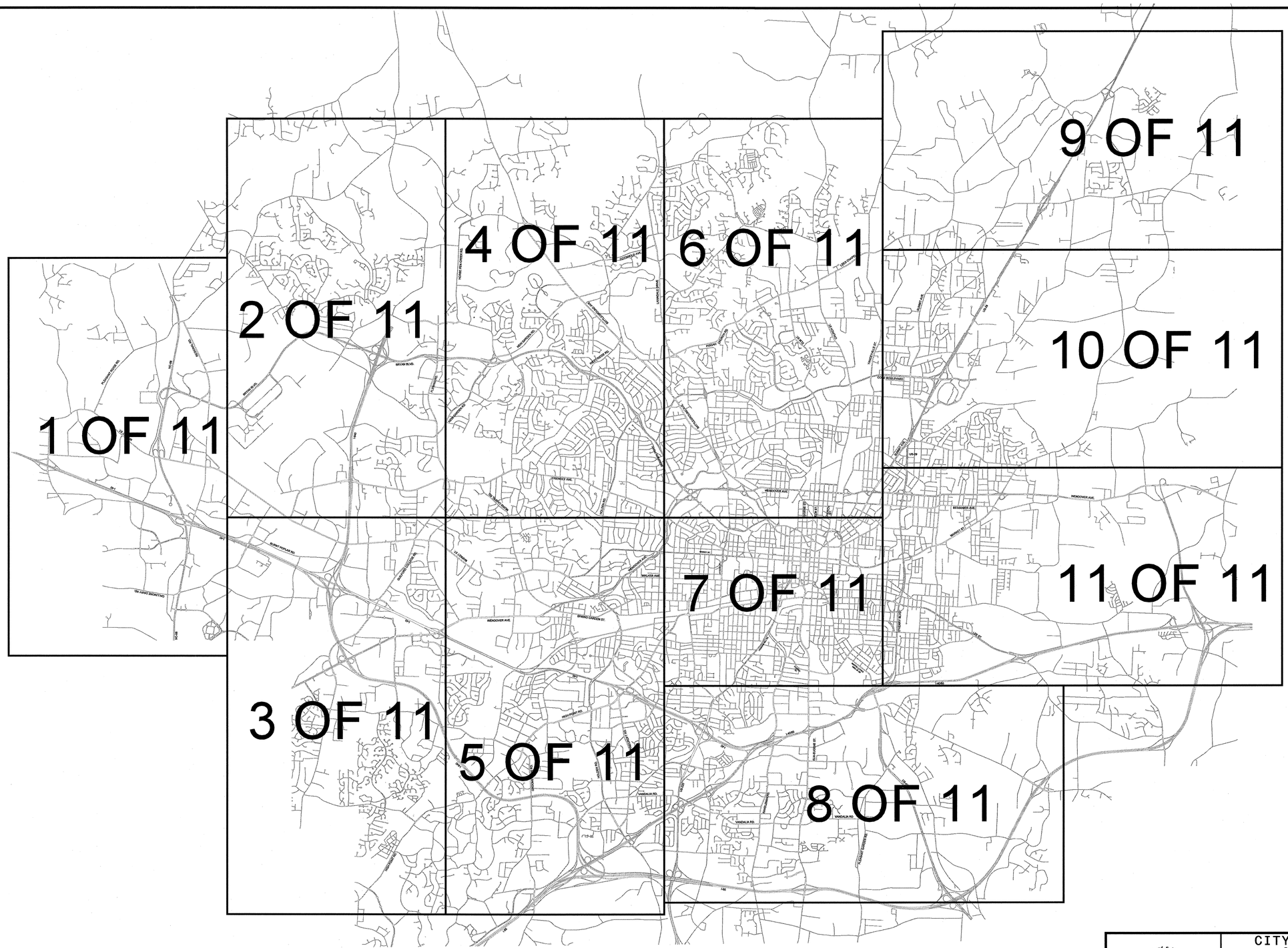

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DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems

750 Greenfield Pkwy., Garner, NC 27529

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CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
PLAN KEY

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: J. CROSS	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

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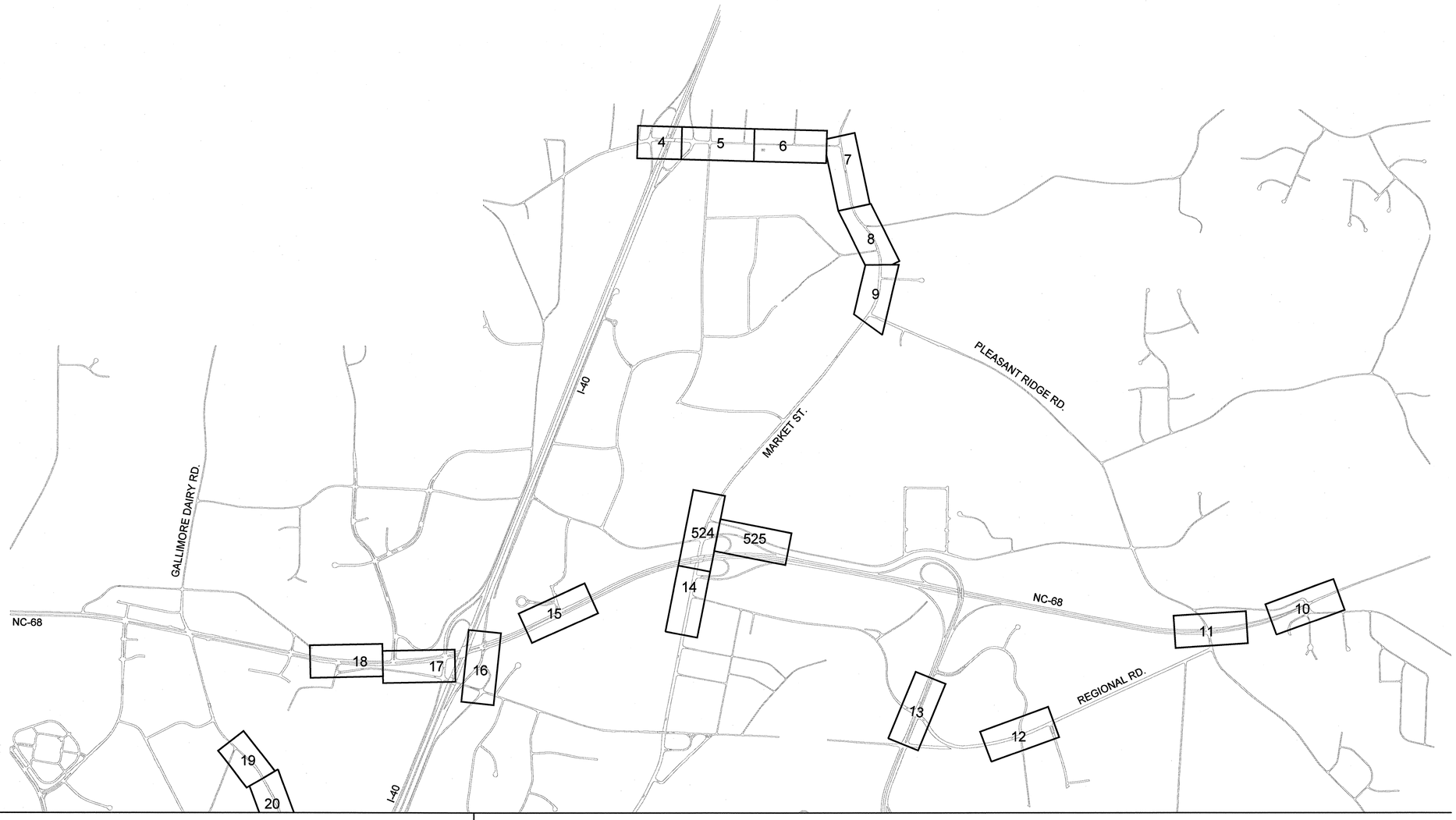

1 OF 11

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CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
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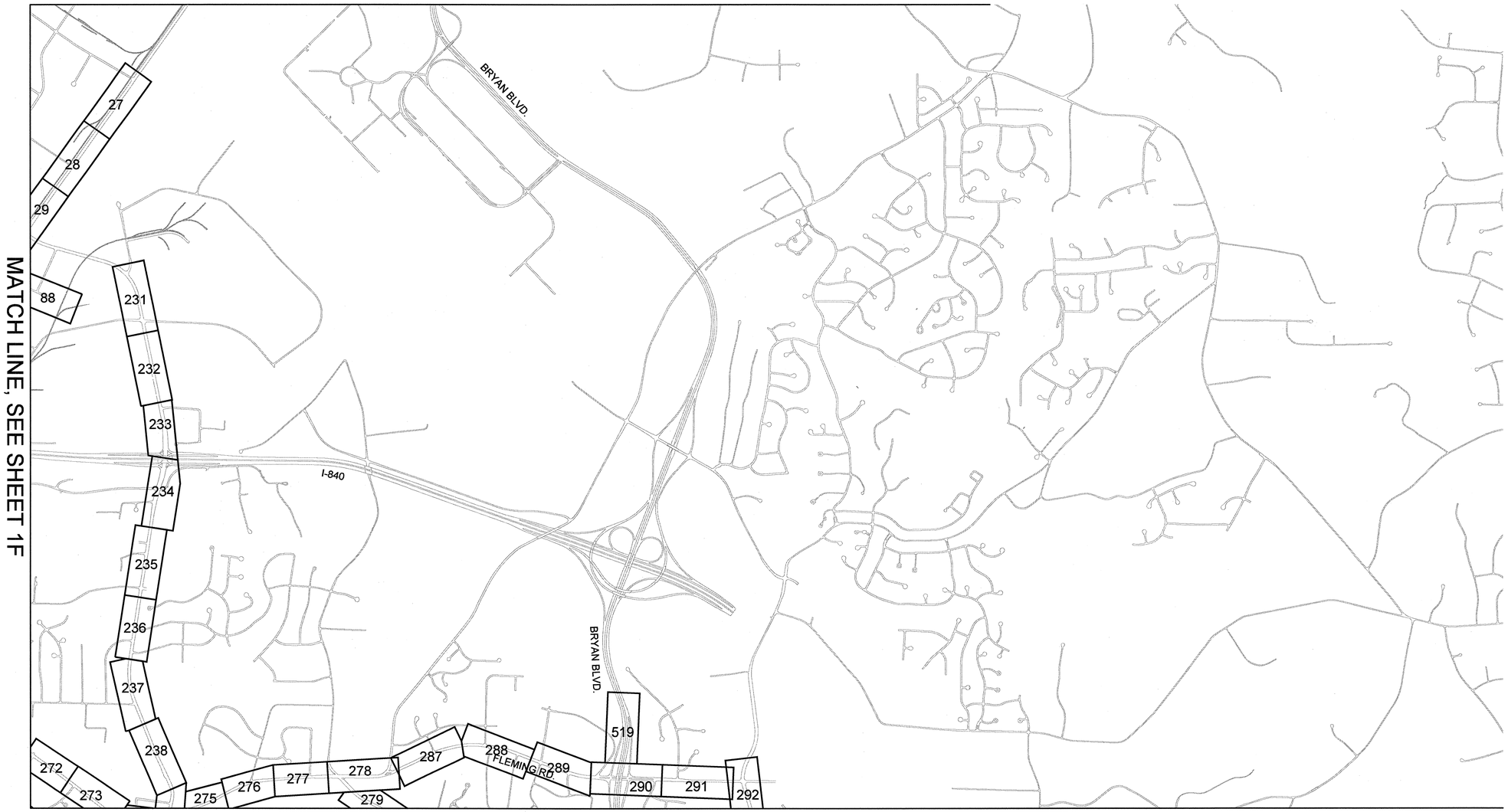

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CITY OF GREENSBORO
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PROJECT REFERENCE NO.	SHEET NO.
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3 OF 11

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CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

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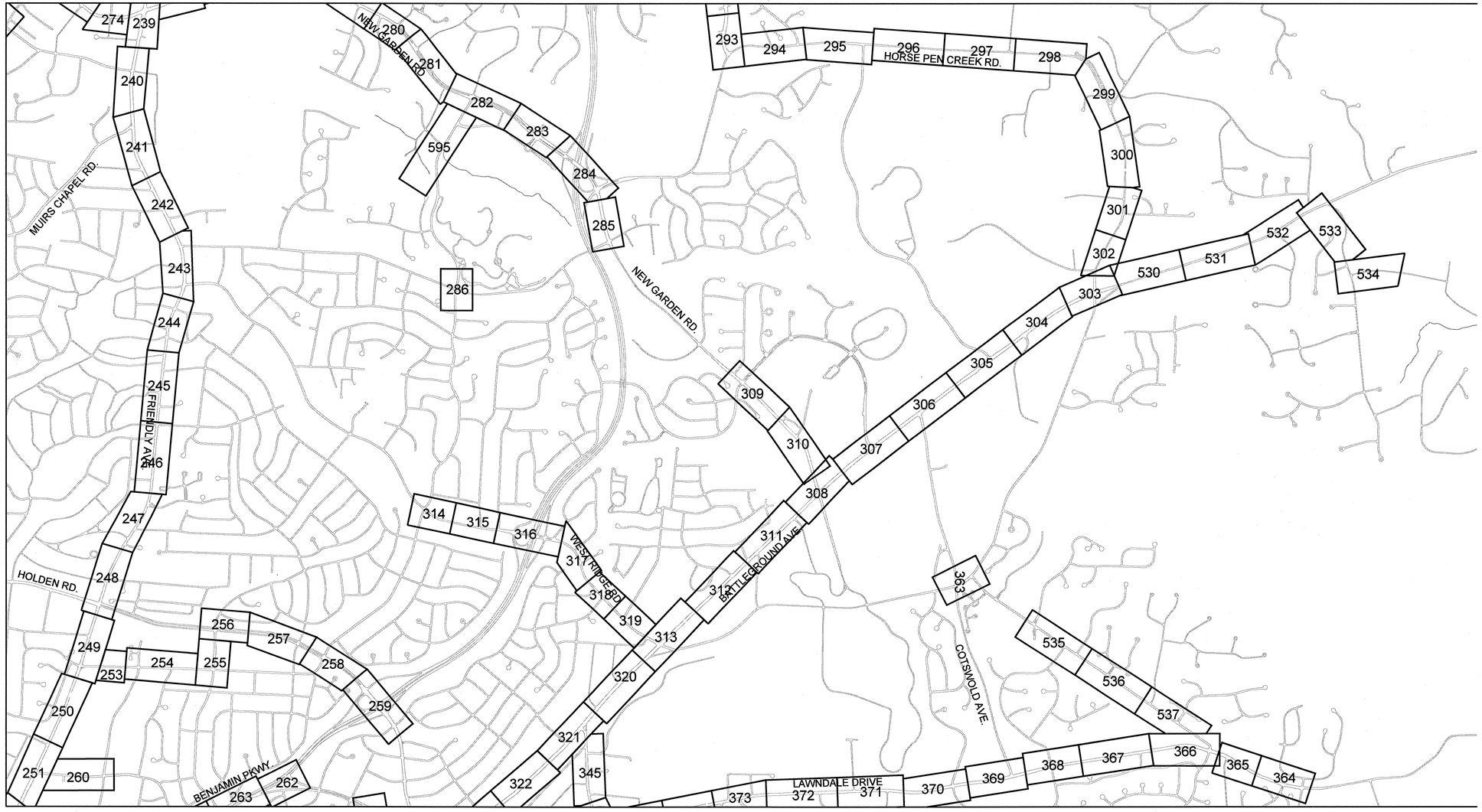

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4 OF 11

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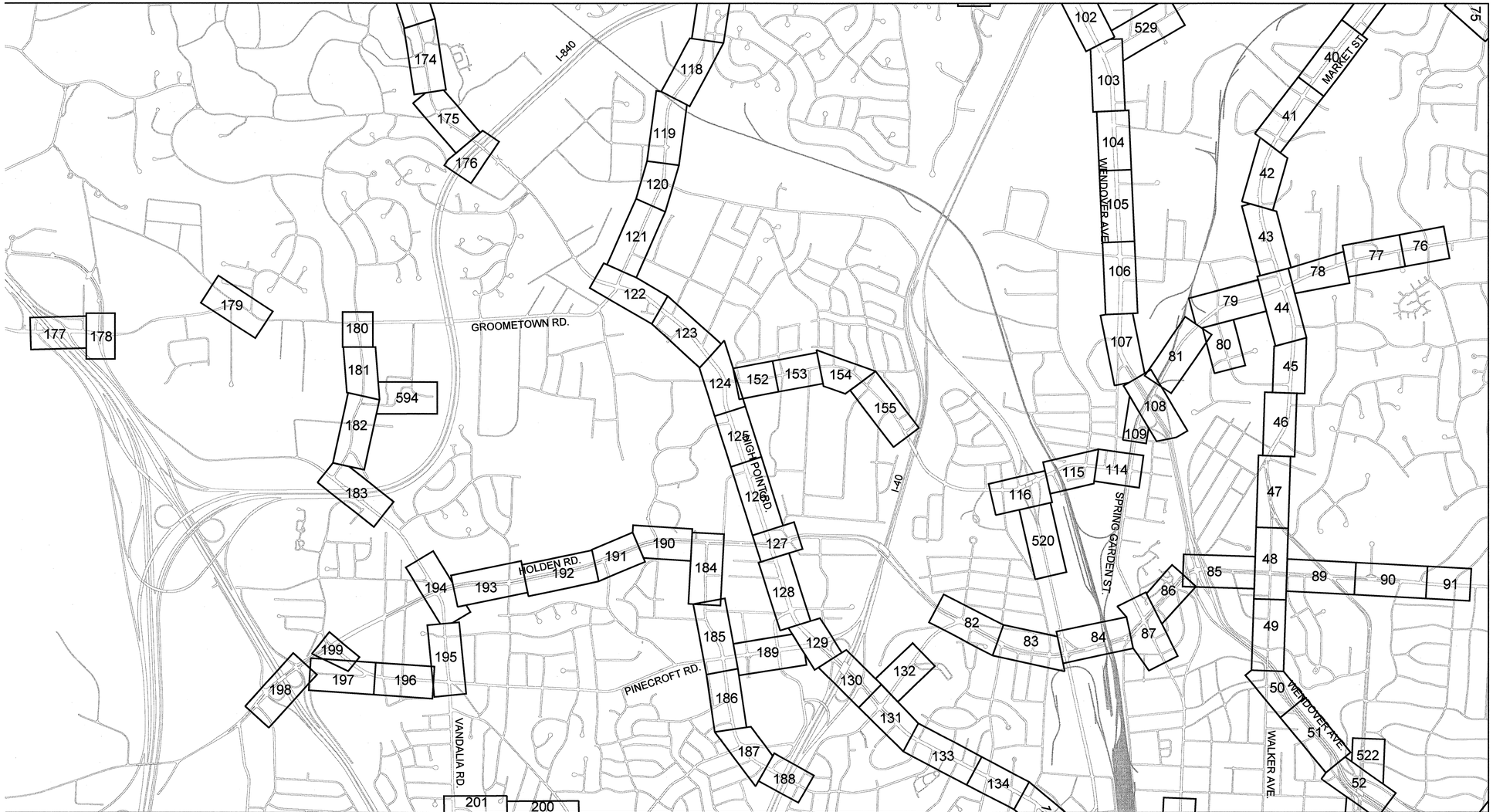

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5 OF 11

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CITY OF GREENSBORO
COMPUTERIZED
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PLAN KEY

DIVISION 7 GUILFORD COUNTY

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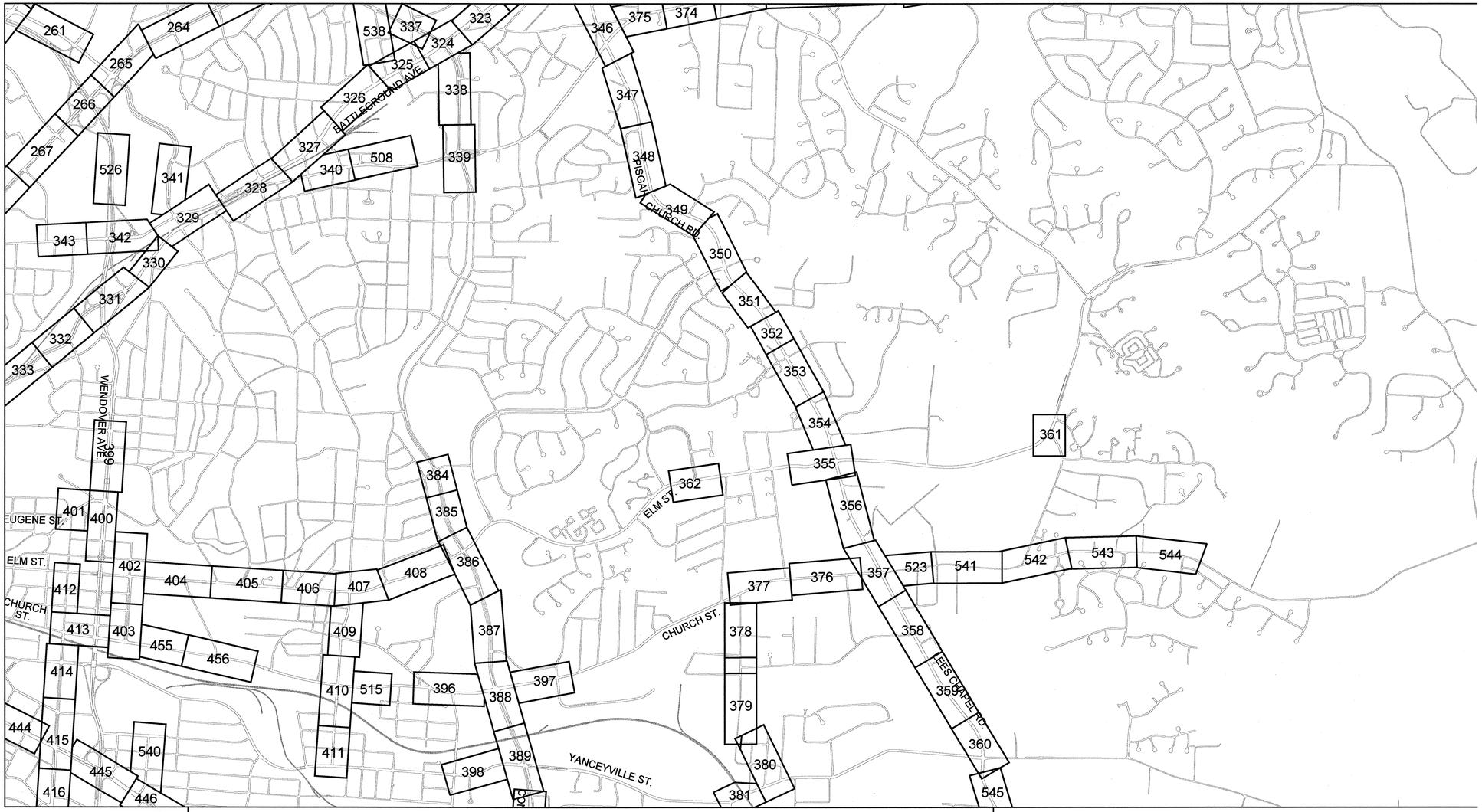

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6 OF 11

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CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

PLAN KEY

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: J. CROSS — REVIEWED BY: M.W. DUNZO

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PROJECT REFERENCE NO.	SHEET NO.
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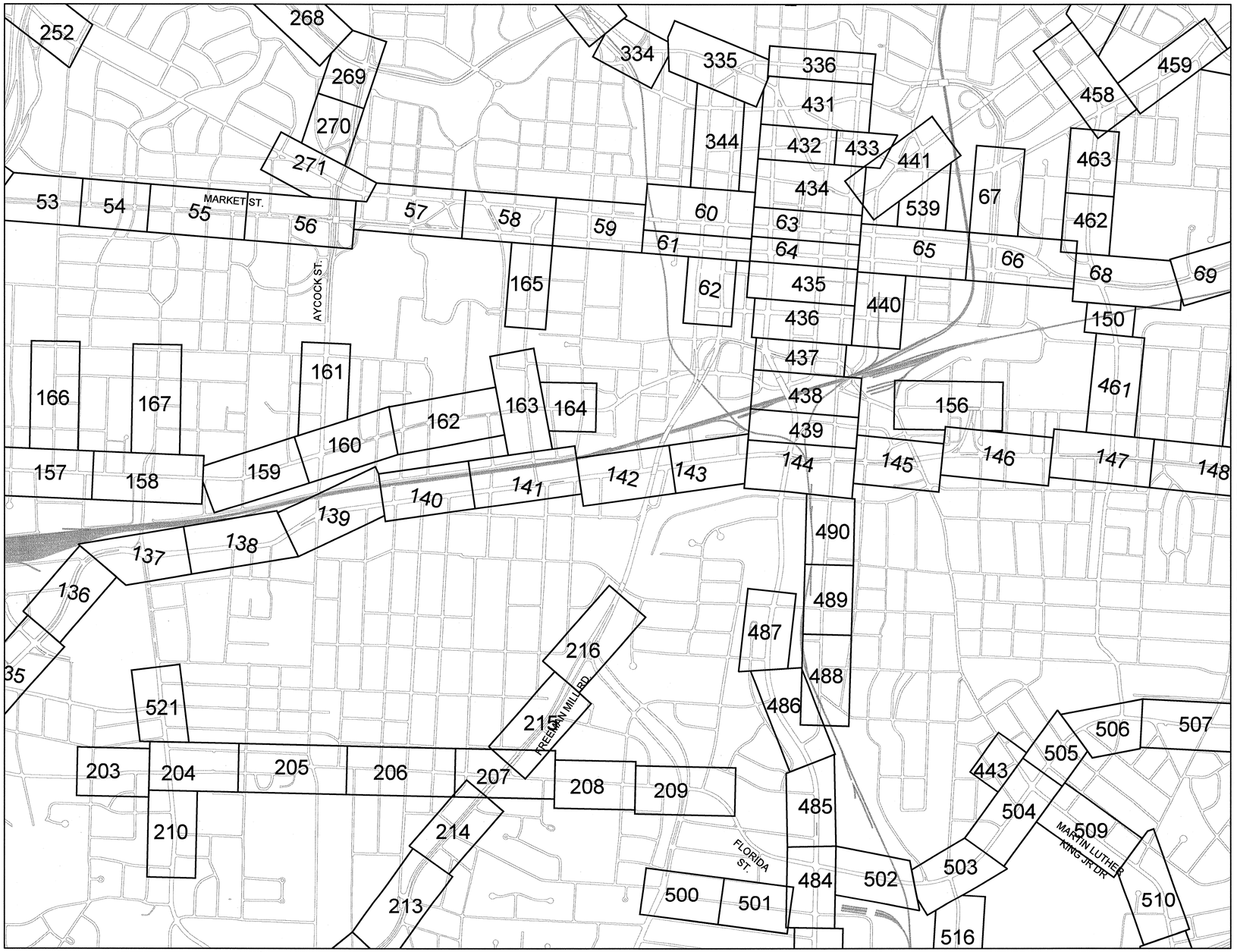

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7 OF 11

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SCALE
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CITY OF GREENSBORO
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PLAN KEY

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SCALE
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CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

PLAN KEY

DIVISION 7 GUILFORD COUNTY

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PROJECT REFERENCE NO.	SHEET NO.
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CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

PLAN KEY

DIVISION 7 GUILFORD COUNTY

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SEAL
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PROJECT REFERENCE NO.	SHEET NO.
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10 OF 11

PLANS PREPARED IN THE OFFICE OF:

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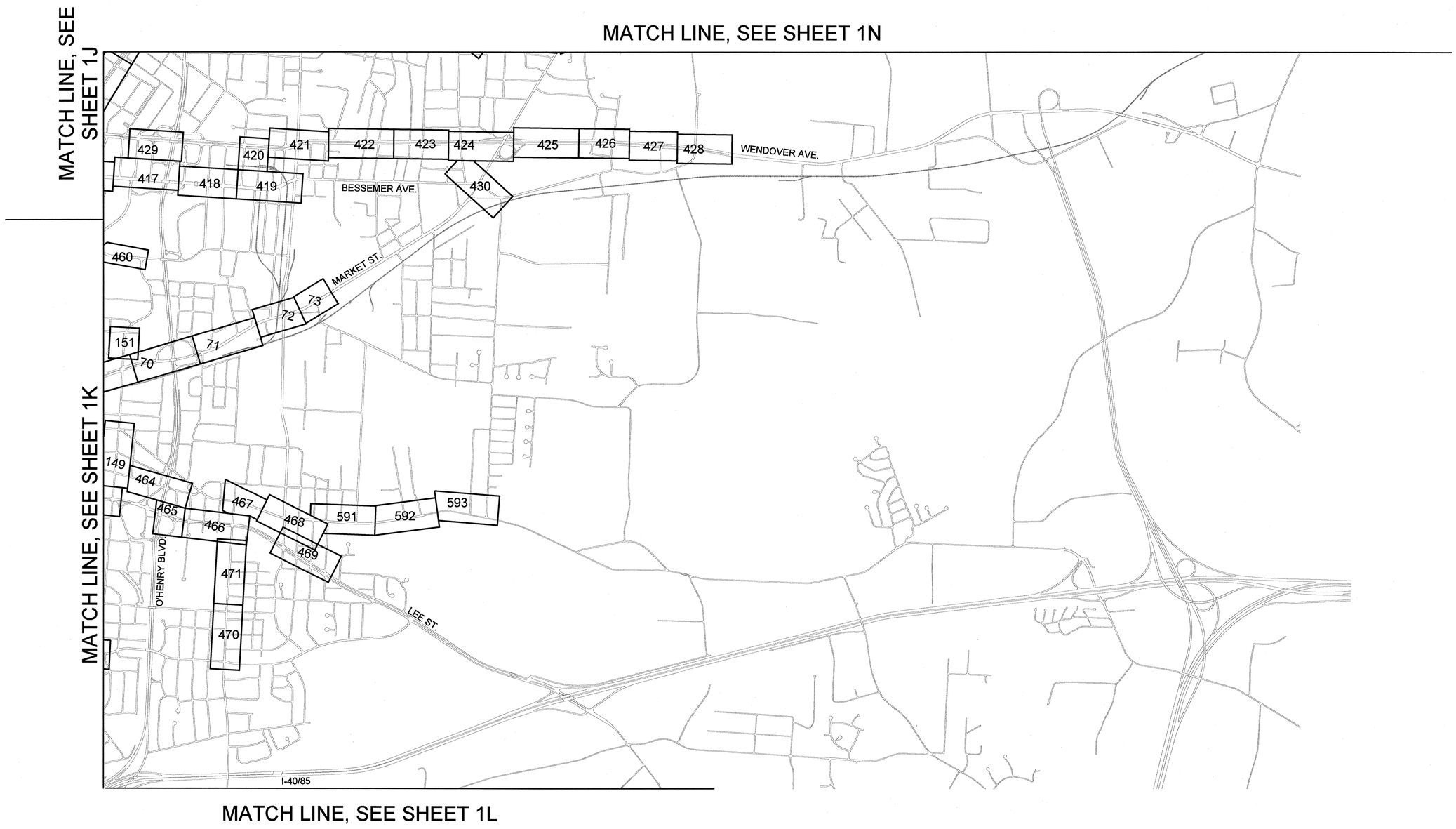
PROJECT REFERENCE NO.	SHEET NO.
U-4711	1P



PLANS PREPARED IN THE OFFICE OF:

Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE
0
NONE

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
PLAN KEY

DIVISION 7 GUILFORD COUNTY

PLAN DATE:	FEBRUARY, 2008	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J. CROSS	REVIEWED BY:	M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filename:

2/20/2008
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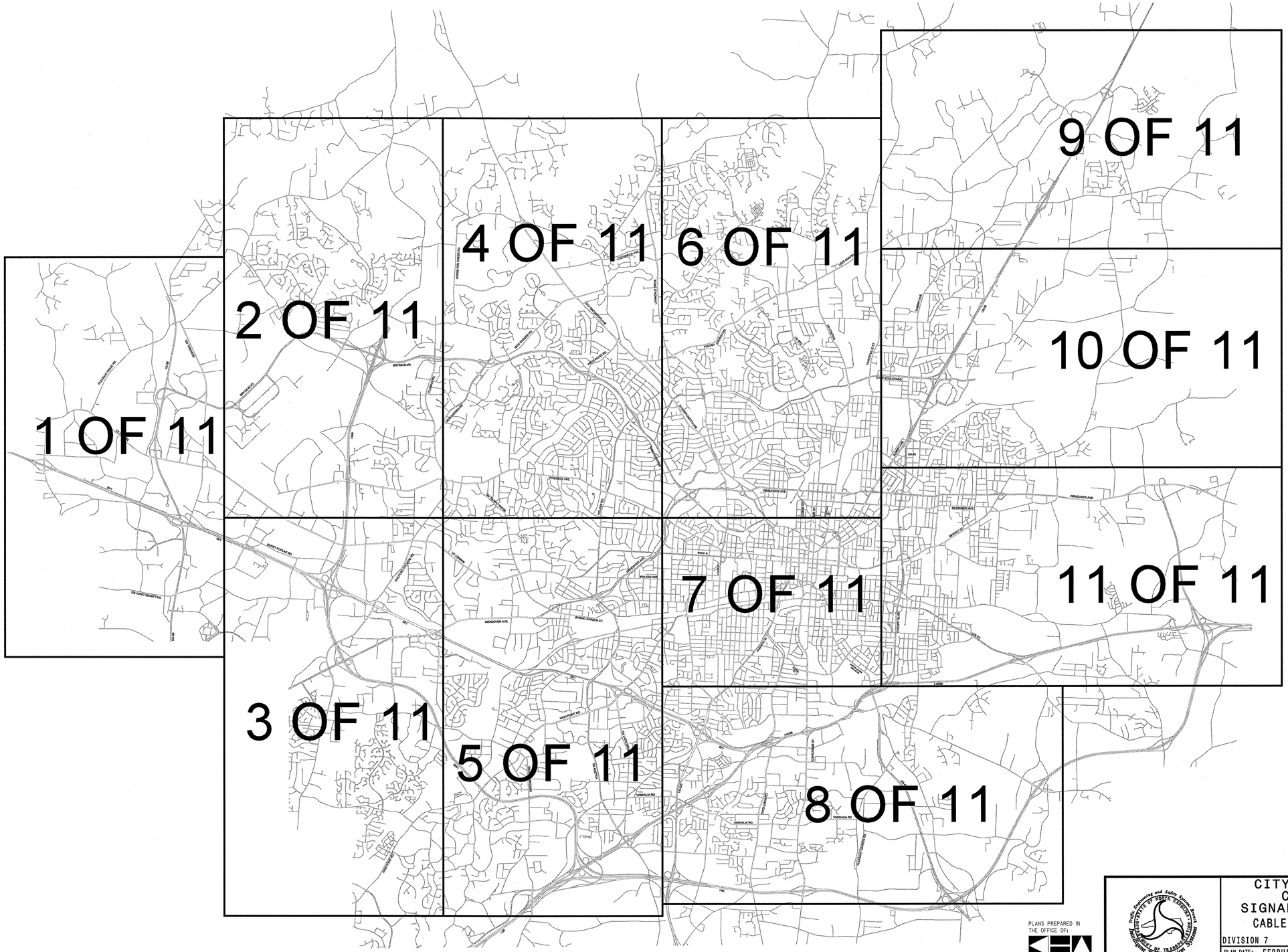
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2



PLANS PREPARED IN THE OFFICE OF:

Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE
0

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE SCHEMATIC PLAN KEY

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: J. CROSS	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filename:

2/20/2008
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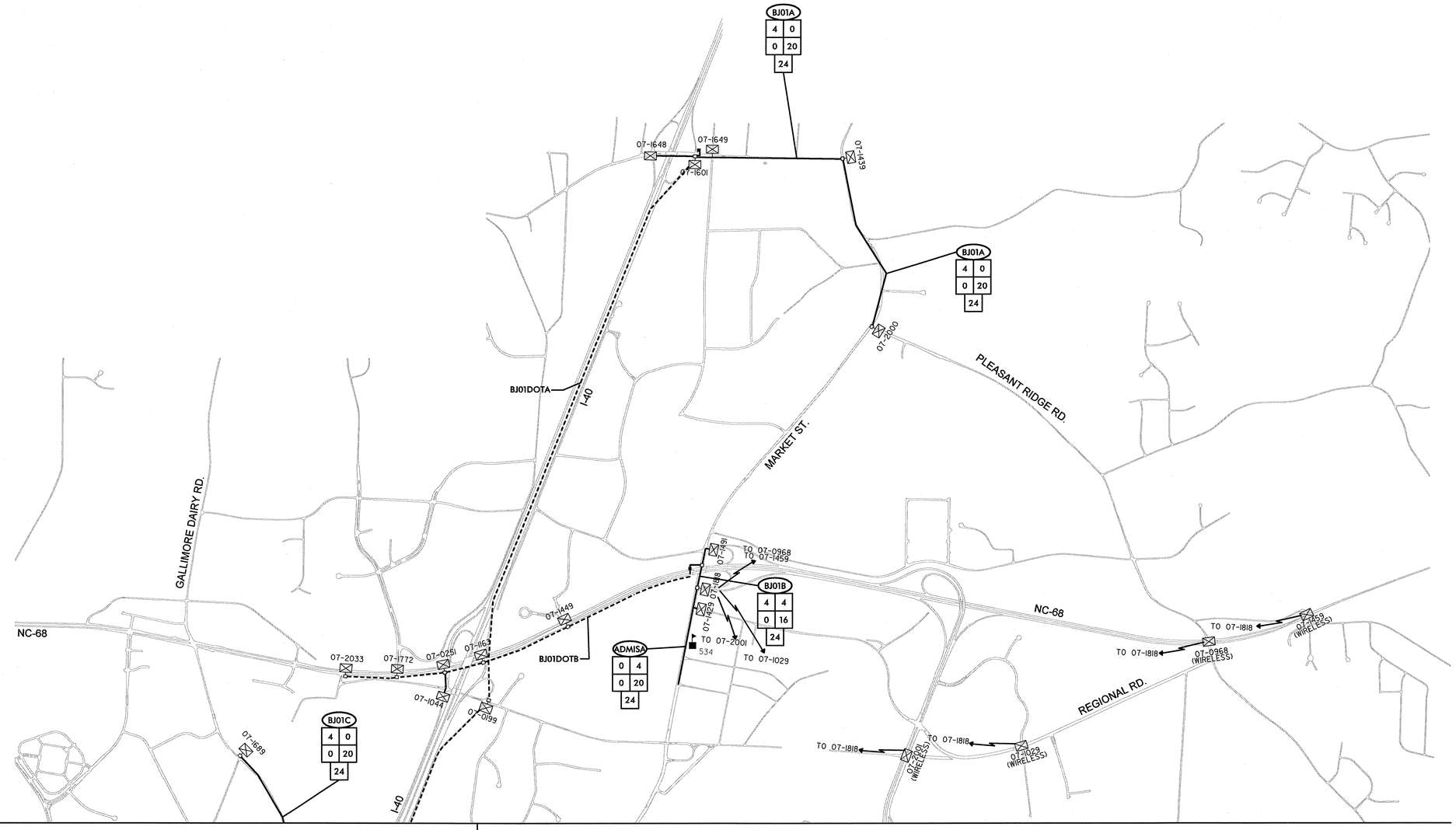
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2A



MATCH LINE, SEE SHEET 2C

MATCH LINE, SEE SHEET 2B

LEGEND

- EXISTING SIGNAL CABINET
- FUTURE SIGNAL CABINET
- NEW SPLICE ENCLOSURE
- EXISTING SPLICE ENCLOSURE
- NEW FIBER ROUTE
- EXISTING FIBER ROUTE
- WIRELESS ROUTE
- NEW CCTV CAMERA
- EXISTING CCTV CAMERA
- 07-XXXX SIGNAL ID NUMBER
- CCTV-X CCTV #
- GIGABIT ETHERNET HUB
- XXX MIS FACILITY

CABLE NAME

LOCAL CIRCUIT	MIS FIBERS
10-GIG-E RING	SPARE FIBERS
TOTAL FIBERS	

NOTE:
SPLICE ENCLOSURES AT MIS FACILITIES NOT SHOWN

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Integrated Mobility Division
750 Greenfield Pkwy., Garner, NC 27529

SCALE
0
NONE

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE SCHEMATIC

DIVISION 7 — GUILFORD COUNTY

PLAN DATE:	FEBRUARY, 2008	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J. CROSS	REVIEWED BY:	M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL
SEAL 023562
ENGINEER
MARK DUNZO

SIGNATURE — DATE 2/20/08

CADD Filename:

2/20/2008
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PROJECT REFERENCE NO.	SHEET NO.
U-4711	2B

MATCH LINE, SEE SHEET 2A

MATCH LINE, SEE SHEET 2C

MATCH LINE, SEE SHEET 2D

LEGEND

EXISTING SIGNAL CABINET	NEW CCTV CAMERA	CABLE NAME	
FUTURE SIGNAL CABINET	EXISTING CCTV CAMERA	LOCAL CIRCUIT	MIS FIBERS
NEW SPLICE ENCLOSURE	07-XXXX SIGNAL ID NUMBER	10-GIG-E RING	SPARE FIBERS
EXISTING SPLICE ENCLOSURE	CCTV-X CCTV #	TOTAL FIBERS	
NEW FIBER ROUTE	GIGABIT ETHERNET HUB		
EXISTING FIBER ROUTE	XXX MIS FACILITY		
WIRELESS ROUTE			

NOTE:
SPLICE ENCLOSURES AT MIS FACILITIES NOT SHOWN

PLANS PREPARED IN THE OFFICE OF:
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P.O. Box 33068
Raleigh N.C. 27636-3068
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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE
0
NONE

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE SCHEMATIC

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: J. CROSS	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filename:

2/20/2008
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PROJECT REFERENCE NO.	SHEET NO.
U-4711	2C

MATCH LINE, SEE SHEET 2A

MATCH LINE, SEE SHEET 2B

MATCH LINE, SEE SHEET 2E

LEGEND

- EXISTING SIGNAL CABINET
- FUTURE SIGNAL CABINET
- NEW SPLICE ENCLOSURE
- EXISTING SPLICE ENCLOSURE
- NEW FIBER ROUTE
- EXISTING FIBER ROUTE
- WIRELESS ROUTE
- NEW CCTV CAMERA
- EXISTING CCTV CAMERA
- 07-XXXX SIGNAL ID NUMBER
- CCTV-X CCTV #
- GIGABIT ETHERNET HUB
- XXX MIS FACILITY

CABLE NAME

LOCAL CIRCUIT	MIS FIBERS
10-GIG-E RING	SPARE FIBERS
TOTAL FIBERS	

NOTE:
SPLICE ENCLOSURES AT MIS FACILITIES NOT SHOWN

PLANS PREPARED IN THE OFFICE OF:
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NCDEPARTMENT OF TRANSPORTATION
Integrated Mobility Division
750 Greenfield Pkwy., Garner, NC 27529

SCALE
0
NONE

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE SCHEMATIC

DIVISION 7 — GUILFORD COUNTY

PLAN DATE:	FEBRUARY, 2008	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J. CROSS	REVIEWED BY:	M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE — DATE 2/20/08

CADD Filename:

2/20/2008
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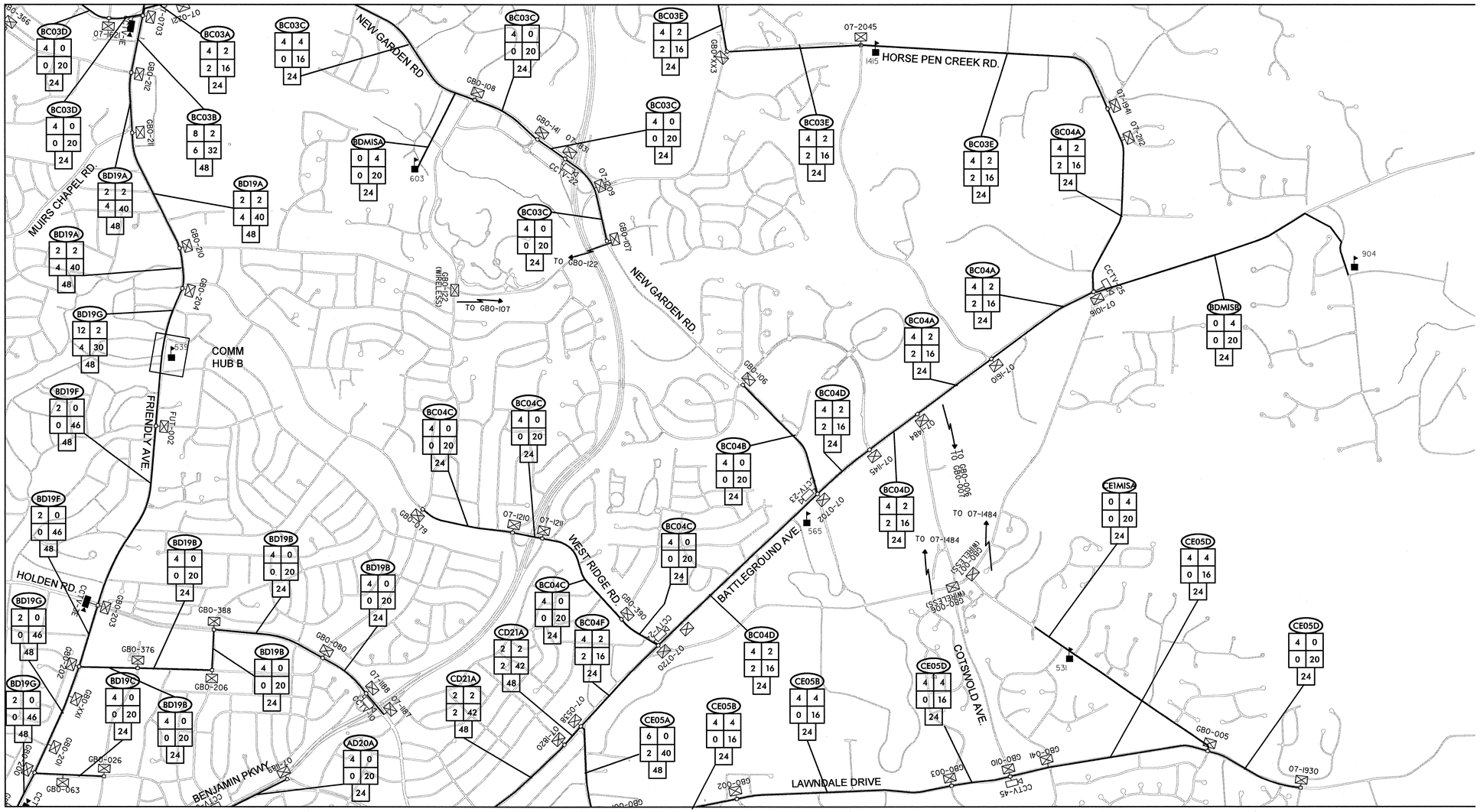
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2D

MATCH LINE, SEE SHEET 2B

MATCH LINE, SEE SHEET 2E



MATCH LINE, SEE SHEET 2F

LEGEND

EXISTING SIGNAL CABINET	NEW CCTV CAMERA	CABLE NAME	
FUTURE SIGNAL CABINET	EXISTING CCTV CAMERA	LOCAL CIRCUIT	MIS FIBERS
NEW SPLICE ENCLOSURE	07-XXXX SIGNAL ID NUMBER	10-GIG-E RING	SPARE FIBERS
EXISTING SPLICE ENCLOSURE	CCTV-X CCTV #	TOTAL FIBERS	
NEW FIBER ROUTE	GIGABIT ETHERNET HUB		
EXISTING FIBER ROUTE	XXX MIS FACILITY		
WIRELESS ROUTE			

NOTE:
SPLICE ENCLOSURES AT MIS FACILITIES NOT SHOWN

PLANS PREPARED IN THE OFFICE OF:
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750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 — NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
CABLE SCHEMATIC

DIVISION 7 GUILFORD COUNTY

PLAN DATE:	FEBRUARY, 2008	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J. CROSS	REVIEWED BY:	M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE DATE 2/20/08

CADD Filename:

2/20/2008
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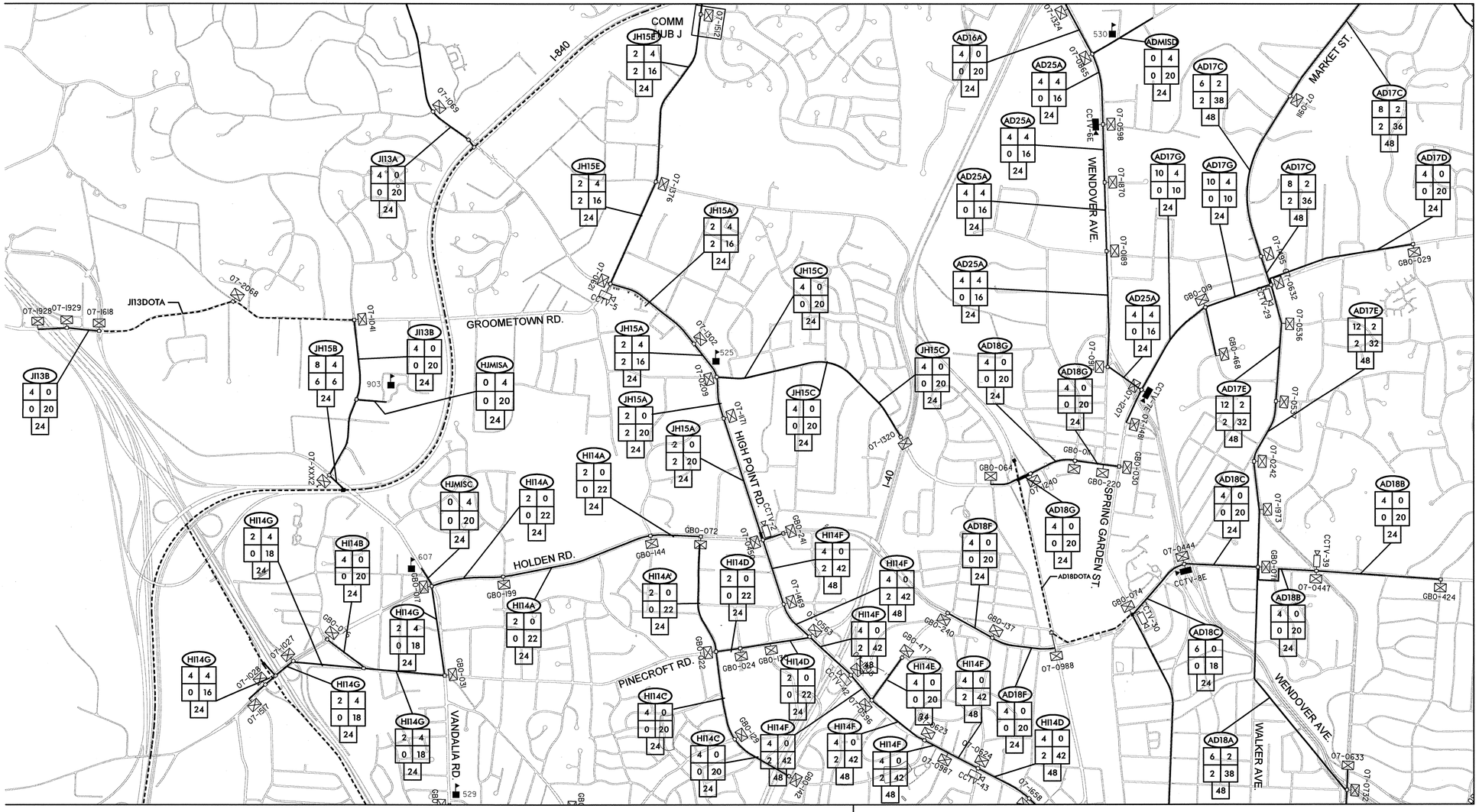
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2E

MATCH LINE, SEE SHEET 2C



MATCH LINE, SEE SHEET 2D

MATCH LINE, SEE SHEET 2H

MATCH LINE, SEE SHEET 2G

LEGEND

EXISTING SIGNAL CABINET	NEW CCTV CAMERA	CABLE NAME	
FUTURE SIGNAL CABINET	EXISTING CCTV CAMERA	LOCAL CIRCUIT	MIS FIBERS
NEW SPLICE ENCLOSURE	07-XXXX SIGNAL ID NUMBER	10-GIG-E RING	SPARE FIBERS
EXISTING SPLICE ENCLOSURE	CCTV-X CCTV #	TOTAL FIBERS	
NEW FIBER ROUTE	GIGABIT ETHERNET HUB		
EXISTING FIBER ROUTE	XXX MIS FACILITY		
WIRELESS ROUTE			

NOTE:
SPLICE ENCLOSURES AT MIS FACILITIES NOT SHOWN

5 OF 11

PLANS PREPARED IN THE OFFICE OF:
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(919) 677-2000

Traffic Engineering and Safety Systems Branch
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE
0
NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
CABLE SCHEMATIC

DIVISION 7 GUILFORD COUNTY

PLAN DATE:	FEBRUARY, 2008	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J. CROSS	REVIEWED BY:	M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filename:

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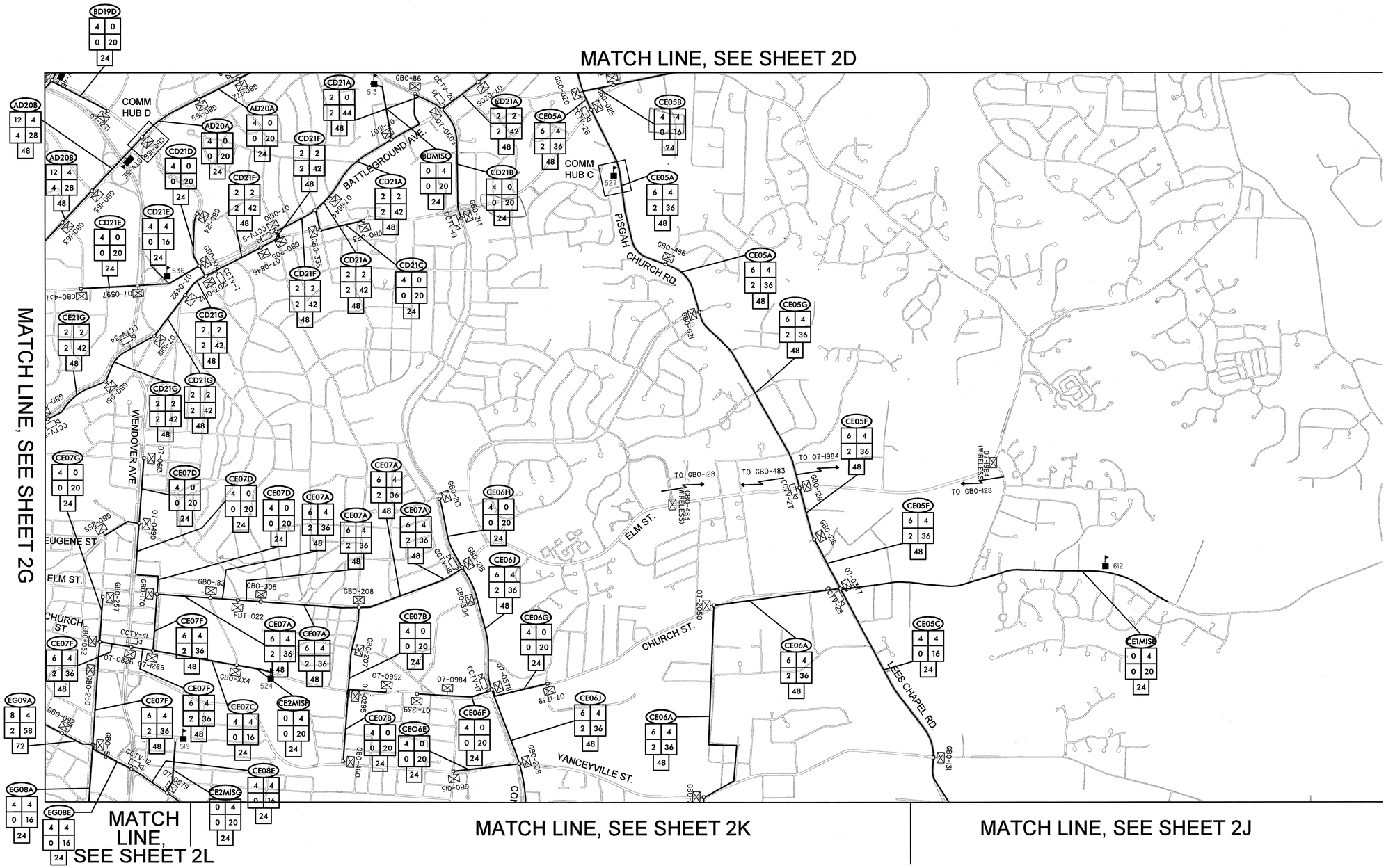
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2F



LEGEND

EXISTING SIGNAL CABINET	NEW CCTV CAMERA	CABLE NAME	
FUTURE SIGNAL CABINET	EXISTING CCTV CAMERA	LOCAL CIRCUIT	MIS FIBERS
NEW SPLICE ENCLOSURE	07-XXXX SIGNAL ID NUMBER	10-GIG-E RING	SPARE FIBERS
EXISTING SPLICE ENCLOSURE	CCTV-X CCTV #	TOTAL FIBERS	
NEW FIBER ROUTE	GIGABIT ETHERNET HUB		
EXISTING FIBER ROUTE	XXX MIS FACILITY		
WIRELESS ROUTE			

NOTE:
SPLICE ENCLOSURES AT MIS FACILITIES NOT SHOWN

PLANS PREPARED IN THE OFFICE OF:
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Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 NONE

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE SCHEMATIC

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: J. CROSS	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filename:

2/20/2008
I:\systems\projects\011462020 (g-boro mis)\details-mis\DTL-Sht002f.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-4711	2G

MATCH LINE, SEE SHEET 2F

MATCH LINE, SEE SHEET 2E

MATCH LINE, SEE SHEET 2L

MATCH LINE, SEE SHEET 2H

MARKET ST.

AYCOCK ST.

COMM HUB F

COMM HUB E

COMM HUB H

JUSTICE DRUG COMPLEX

FREEMAN MILL RD.

FLORIDA ST.

MARTIN LUTHER KING JR DR

MMOB

CCTV-6

CCTV-31

LEGEND

- EXISTING SIGNAL CABINET
- FUTURE SIGNAL CABINET
- NEW SPLICE ENCLOSURE
- EXISTING SPLICE ENCLOSURE
- NEW FIBER ROUTE
- EXISTING FIBER ROUTE
- WIRELESS ROUTE
- NEW CCTV CAMERA
- EXISTING CCTV CAMERA
- 07-XXXX SIGNAL ID NUMBER
- CCTV-X CCTV #
- GIGABIT ETHERNET HUB
- XXX MIS FACILITY

CABLE NAME | LOCAL CIRCUIT | MIS FIBERS | 10-GIG-E RING | SPARE FIBERS | TOTAL FIBERS

NOTE:
SPLICE ENCLOSURES AT MIS FACILITIES NOT SHOWN

PLANS PREPARED IN THE OFFICE OF:
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P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Integrated Mobility Division
750 Greenfield Pkwy., Garner, NC 27529

SCALE: 0 NONE

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE SCHEMATIC

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: J. CROSS — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL
SEAL 023562
ENGINEER MARK DUNZO

SIGNATURE 2/29/08 DATE

CADD Filenames:

2/29/2008
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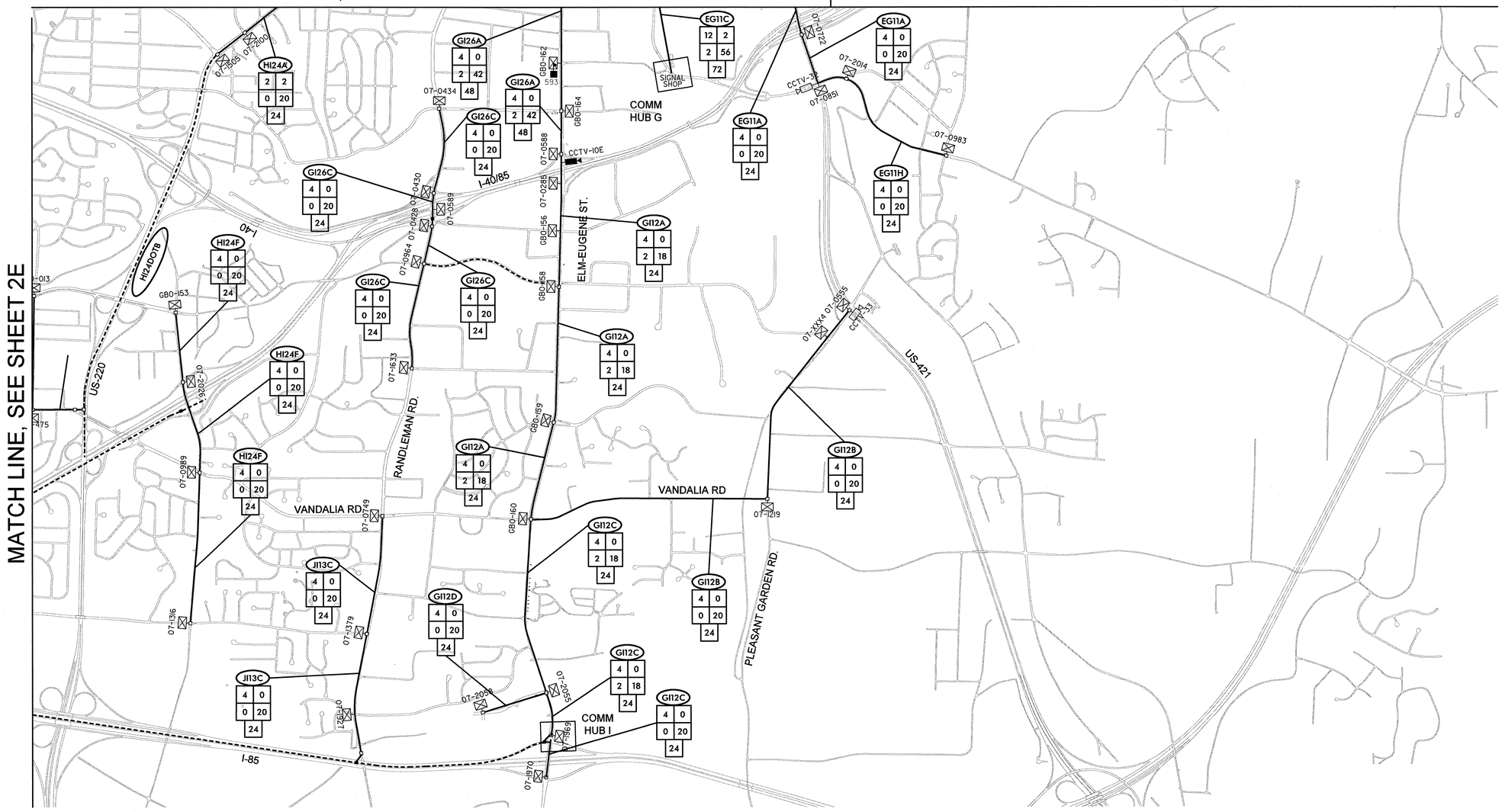
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2H

MATCH LINE, SEE SHEET 2G

MATCH LINE, SEE SHEET 2L

MATCH LINE, SEE SHEET 2E



LEGEND

- EXISTING SIGNAL CABINET
- FUTURE SIGNAL CABINET
- NEW SPLICE ENCLOSURE
- EXISTING SPLICE ENCLOSURE
- NEW FIBER ROUTE
- EXISTING FIBER ROUTE
- WIRELESS ROUTE
- NEW CCTV CAMERA
- EXISTING CCTV CAMERA
- 07-XXXX SIGNAL ID NUMBER
- CCTV-X CCTV #
- GIGABIT ETHERNET HUB
- XXX MIS FACILITY

CABLE NAME

LOCAL CIRCUIT	MIS FIBERS
10-GIG-E RING	SPARE FIBERS
TOTAL FIBERS	

NOTE:
SPLICE ENCLOSURES AT MIS FACILITIES NOT SHOWN

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Prepared for the City of Greensboro by the Department of Transportation Traffic Engineering and Safety Systems Branch
Piedmont Triad Regional Transportation Authority
750 Greenfield Pkwy., Garner, NC 27529

SCALE: 0 — NONE

N

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE SCHEMATIC

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: J. CROSS — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/22/08 DATE

CADD Filename:

2/20/2008
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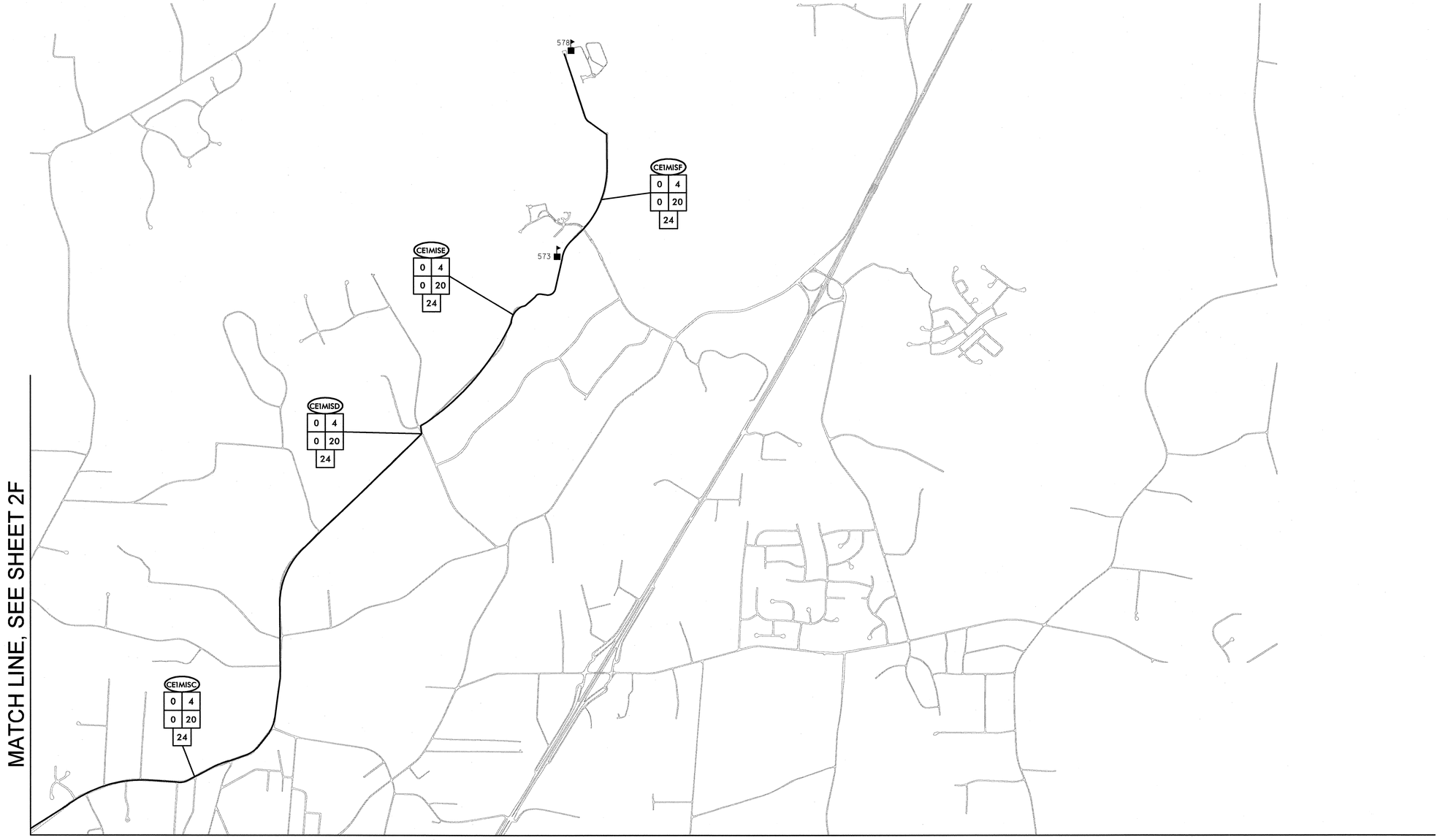
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2J



LEGEND

EXISTING SIGNAL CABINET	NEW CCTV CAMERA	CABLE NAME	
FUTURE SIGNAL CABINET	EXISTING CCTV CAMERA	LOCAL CIRCUIT	MIS FIBERS
NEW SPLICE ENCLOSURE	07-XXXX SIGNAL ID NUMBER	10-GIG-E RING	SPARE FIBERS
EXISTING SPLICE ENCLOSURE	CCTV-X CCTV #	TOTAL FIBERS	
NEW FIBER ROUTE	GIGABIT ETHERNET HUB		
EXISTING FIBER ROUTE	XXX MIS FACILITY		
WIRELESS ROUTE			

NOTE:
SPLICE ENCLOSURES AT MIS FACILITIES NOT SHOWN

PLANS PREPARED IN THE OFFICE OF:
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P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE
0
NONE

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE SCHEMATIC

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: J. CROSS	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/29/08 DATE

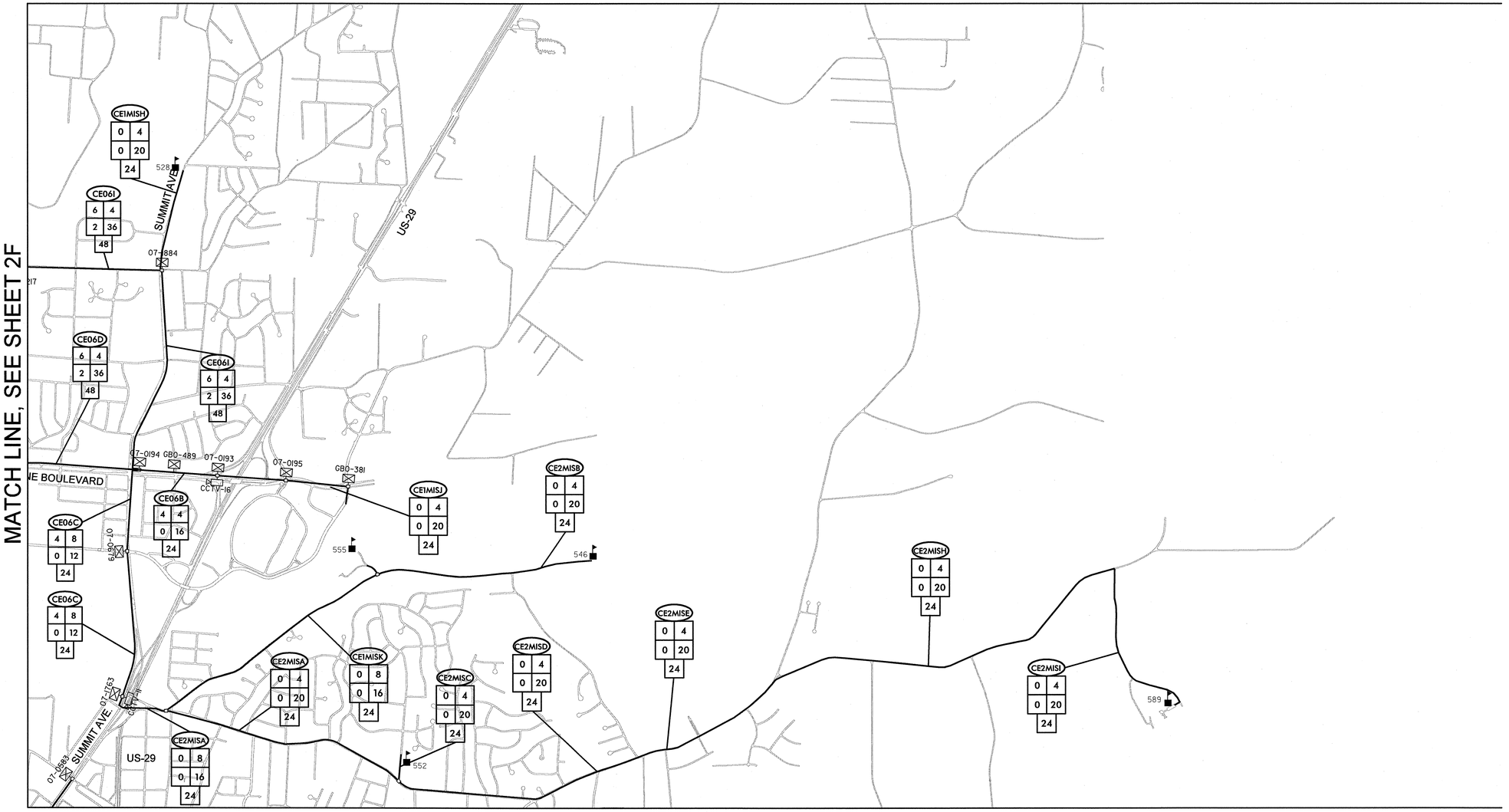
CADD Filename:

2/29/2008
I:\Systems\projects\011462020 (g-boro mis)\Details-MIS\DTL-Sht002.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-4711	2K

MATCH LINE, SEE SHEET 2J

MATCH LINE, SEE SHEET 2F



MATCH LINE, SEE SHEET 2L

LEGEND

EXISTING SIGNAL CABINET	NEW CCTV CAMERA
FUTURE SIGNAL CABINET	EXISTING CCTV CAMERA
NEW SPLICE ENCLOSURE	07-XXXX SIGNAL ID NUMBER
EXISTING SPLICE ENCLOSURE	CCTV-X CCTV #
NEW FIBER ROUTE	GIGABIT ETHERNET HUB
EXISTING FIBER ROUTE	XXX MIS FACILITY
WIRELESS ROUTE	

CABLE NAME: LOCAL CIRCUIT | MIS FIBERS | 10-GIG-E RING | SPARE FIBERS | TOTAL FIBERS

NOTE:
SPLICE ENCLOSURES AT MIS FACILITIES NOT SHOWN

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Raleigh N.C. 27636-3068
(919) 677-2000

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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE
0
NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
CABLE SCHEMATIC

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: J. CROSS	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/29/08 DATE

CADD Filename:

2/29/2008
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PROJECT REFERENCE NO.	SHEET NO.
U-4711	2L

MATCH LINE, SEE SHEET 2K

MATCH LINE, SEE SHEET 2F

MATCH LINE, SEE SHEET 2G

MATCH LINE, SEE SHEET 2H

LEGEND

EXISTING SIGNAL CABINET	NEW CCTV CAMERA	CABLE NAME	
FUTURE SIGNAL CABINET	EXISTING CCTV CAMERA	LOCAL CIRCUIT	MIS FIBERS
NEW SPLICE ENCLOSURE	07-XXXX SIGNAL ID NUMBER	10-GIG-E RING	SPARE FIBERS
EXISTING SPLICE ENCLOSURE	CCTV-X CCTV #	TOTAL FIBERS	
NEW FIBER ROUTE	GIGABIT ETHERNET HUB		
EXISTING FIBER ROUTE	XXX MIS FACILITY		
WIRELESS ROUTE			

NOTE:
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Raleigh N.C. 27636-3068
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STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE
0
NONE

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE SCHEMATIC

DIVISION 7 GUILFORD COUNTY

PLAN DATE:	FEBRUARY, 2008	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J. CROSS	REVIEWED BY:	M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/29/08 DATE

CADD Filename:

2/29/2008
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PROJECT REFERENCE NO.	SHEET NO.
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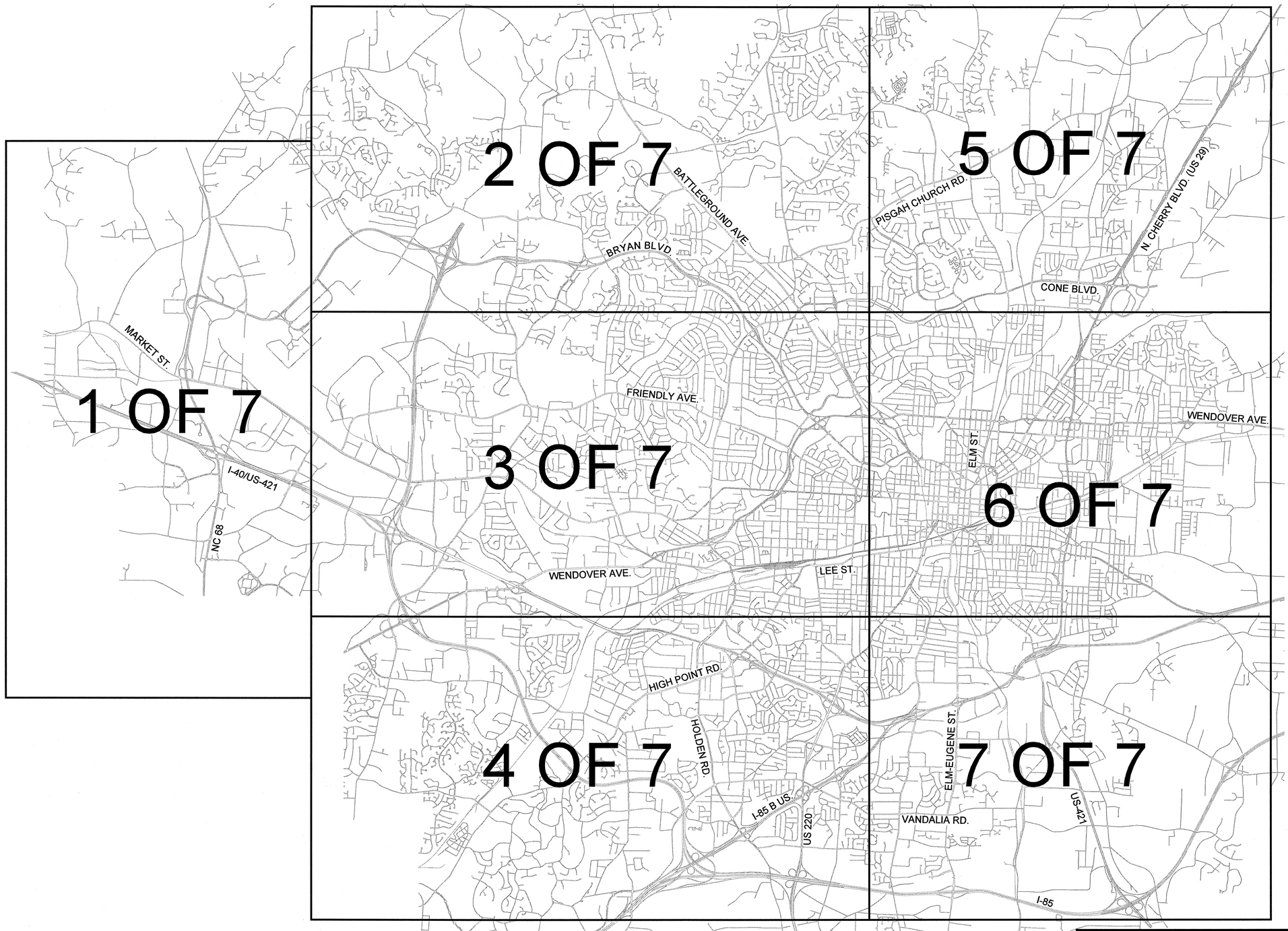

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Raleigh N.C. 27636-3068
(919) 677-2000

750 Greenfield Pkwy., Garner, NC 27529

SCALE 0

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

SYSTEM DETECTOR SCHEMATIC PLAN KEY

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: J. CROSS — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filenames:

2/20/2008
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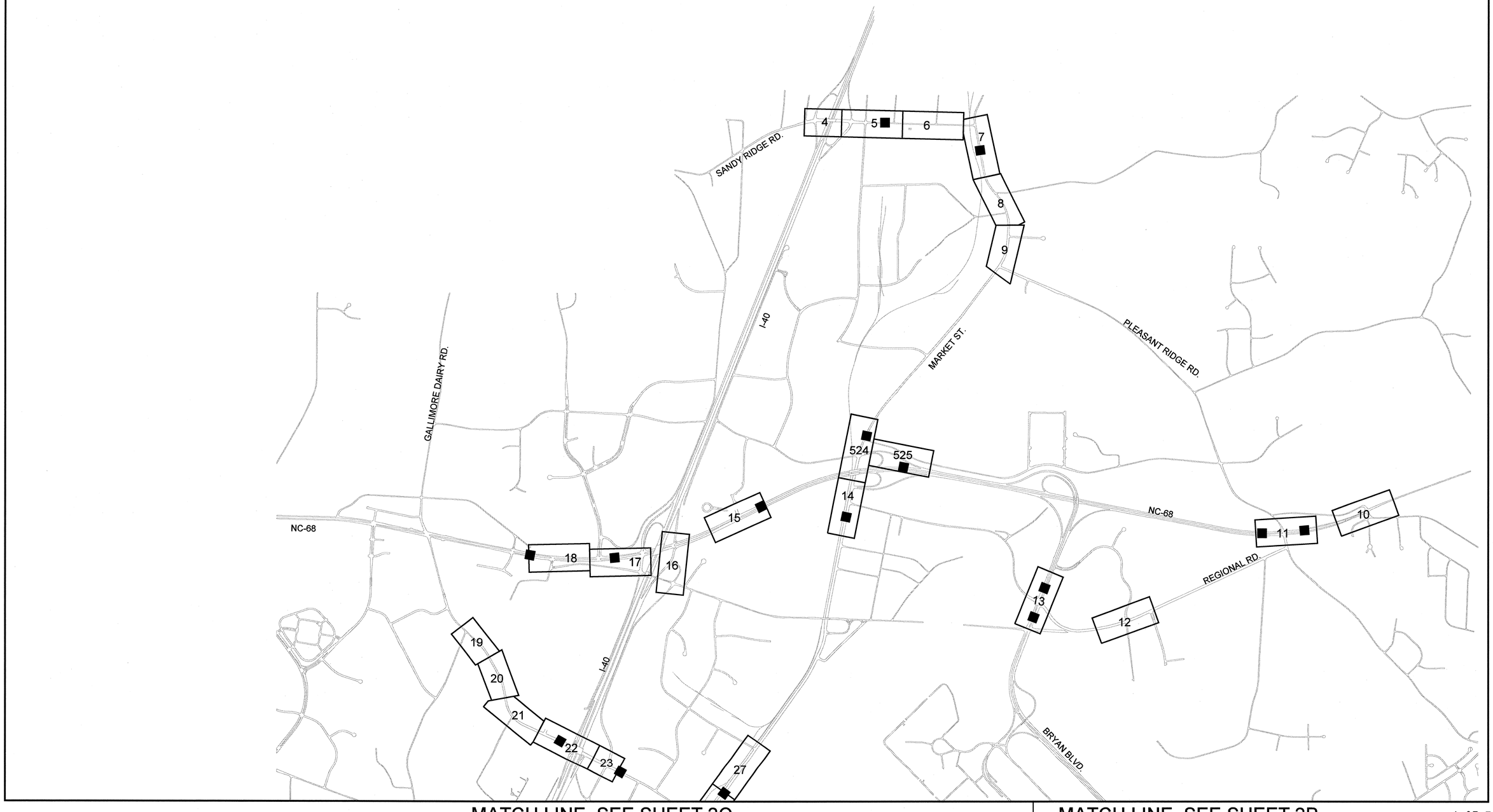
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2N



MATCH LINE, SEE SHEET 2Q

MATCH LINE, SEE SHEET 2P

LEGEND

■ SYSTEM DETECTOR LOCATION

PLANS PREPARED IN THE OFFICE OF:

Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

SYSTEM DETECTOR SCHEMATIC

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: J. CROSS	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filename:

2/20/2008
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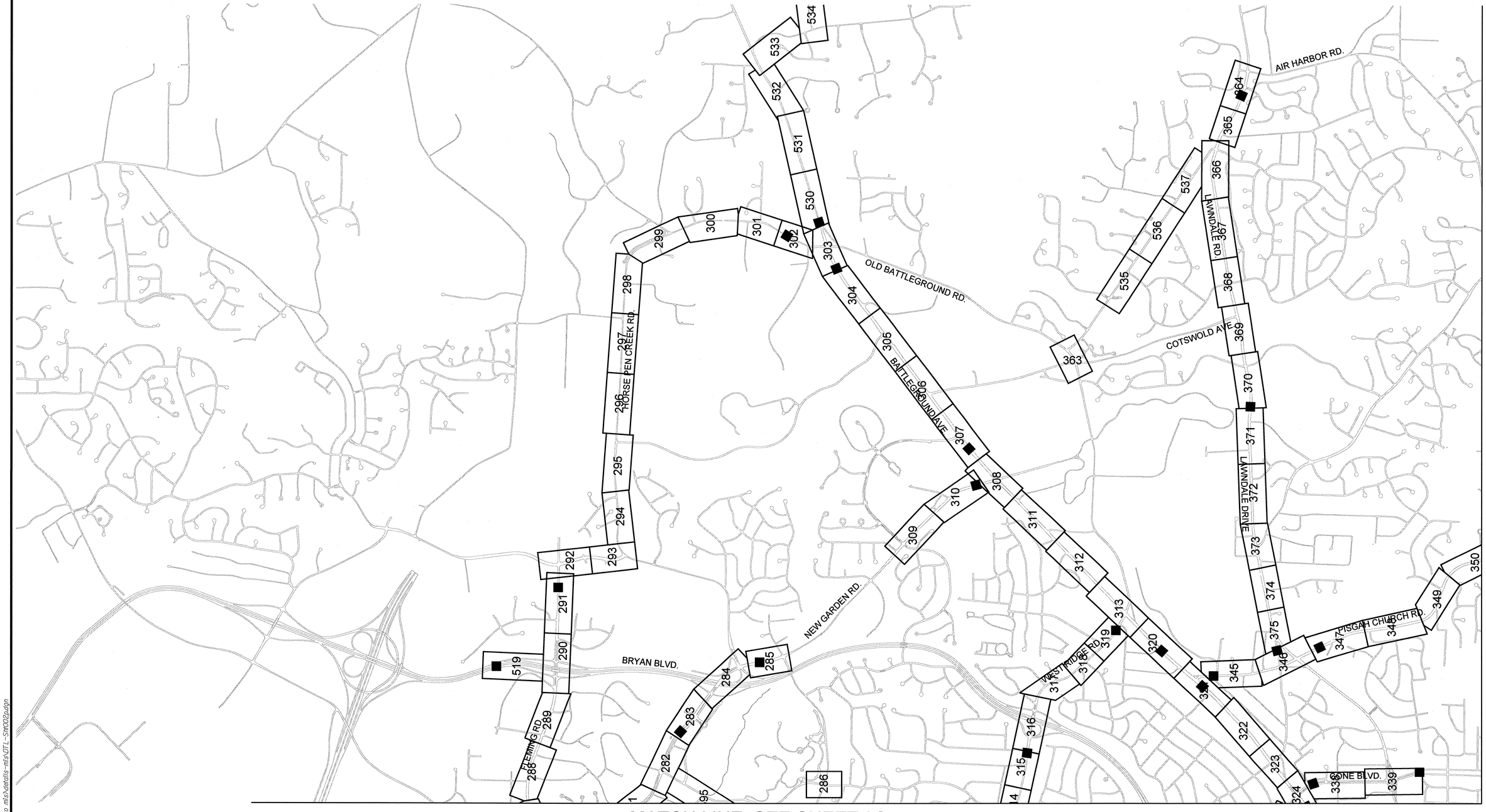
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2P



MATCH LINE, SEE SHEET 2S

MATCH LINE, SEE SHEET 2Q

2 OF 7

LEGEND

■ SYSTEM DETECTOR LOCATION

PLANS PREPARED IN THE OFFICE OF:

Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

750 Greenfield Pkwy., Garner, NC 27529

SCALE 0

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

SYSTEM DETECTOR SCHEMATIC

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: J. CROSS	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filenames

2/20/2008
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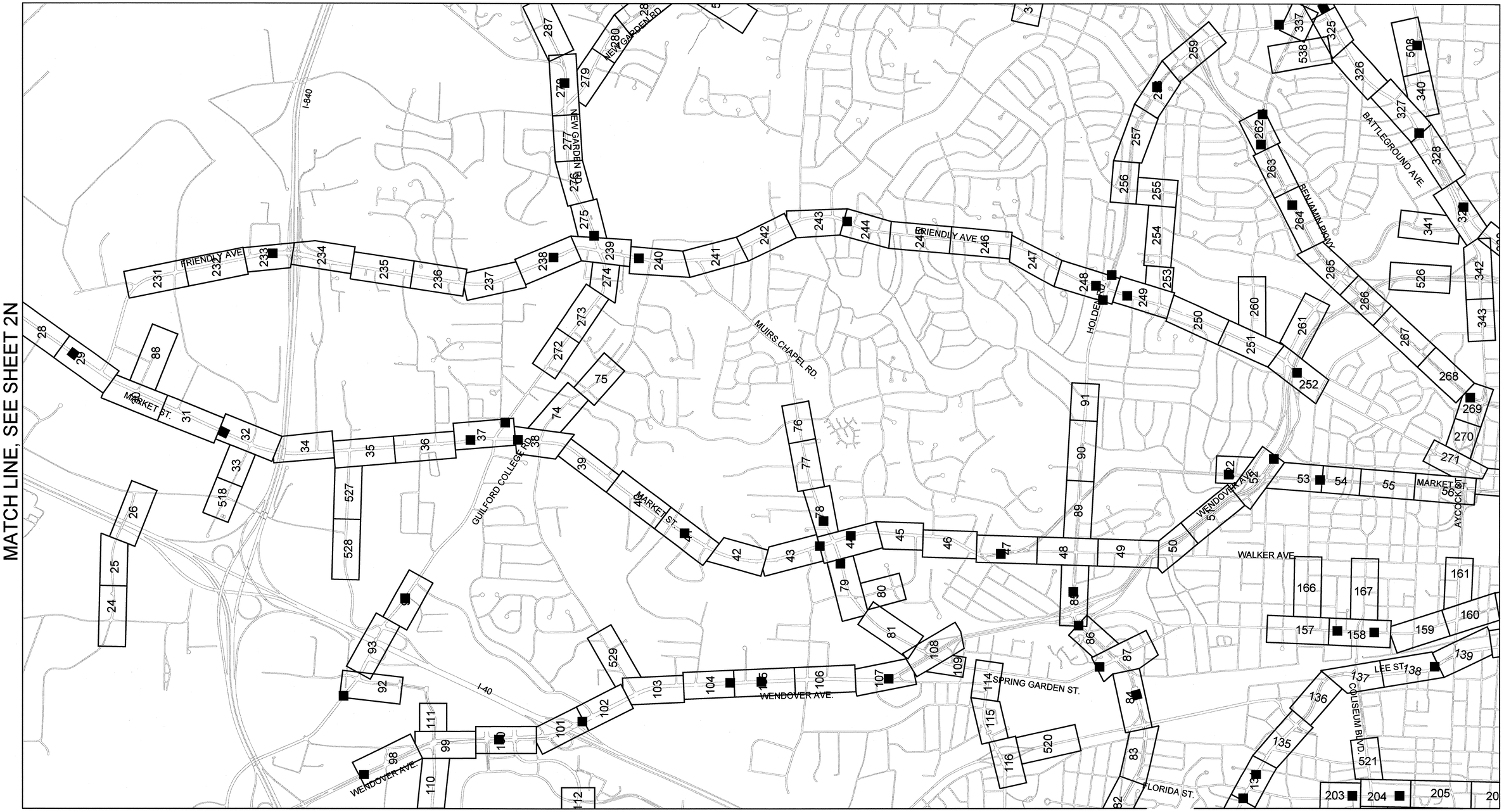
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2Q

MATCH LINE, SEE SHEET 2P

MATCH LINE, SEE SHEET 2N



MATCH LINE, SEE SHEET 2T

MATCH LINE, SEE SHEET 2R

3 OF 7

LEGEND

■ SYSTEM DETECTOR LOCATION

PLANS PREPARED IN THE OFFICE OF:

Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0

N

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

SYSTEM DETECTOR SCHEMATIC

DIVISION 7 GUILFORD COUNTY

PLAN DATE:	FEBRUARY, 2008	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J. CROSS	REVIEWED BY:	M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filename:

2/20/2008
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PROJECT REFERENCE NO.	SHEET NO.
U-4711	2R

MATCH LINE, SEE SHEET 2Q

MATCH LINE, SEE SHEET 2U

HILLTOP RD.
BRIDFORD PKWY.
HIGH POINT RD.
I-40
I-840
GROOMETOWN RD
PINECROFT RD.
HOLDEN RD
VANDALIA RD
US-220
I-85

95 96 113 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 154 155 152 153 210 211 212 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 221 220 219 218 217 176 175 174 173 172 171 170 169 168 594 180 181 182 183 179 178 177

LEGEND

■ SYSTEM DETECTOR LOCATION

4 OF 7

PLANS PREPARED IN THE OFFICE OF:

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P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

750 Greenfield Pkwy., Garner, NC 27529

SCALE 0

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

SYSTEM DETECTOR SCHEMATIC

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: J. CROSS	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filenames

2/20/2008
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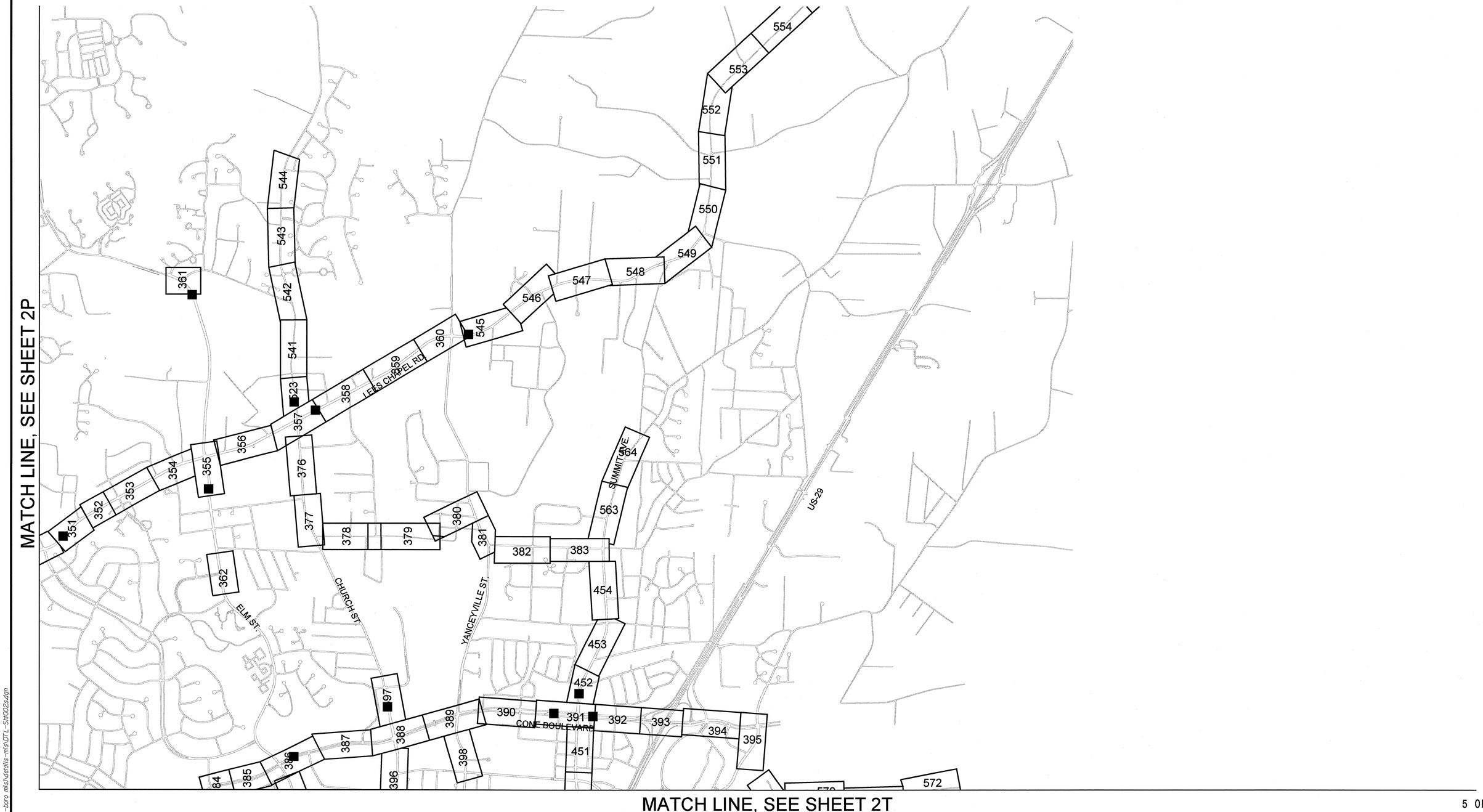
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2S



5 OF 7

LEGEND

■ SYSTEM DETECTOR LOCATION

PLANS PREPARED IN THE OFFICE OF:

Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE
0
NONE

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

SYSTEM DETECTOR SCHEMATIC

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: J. CROSS	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filename:

2/20/2008
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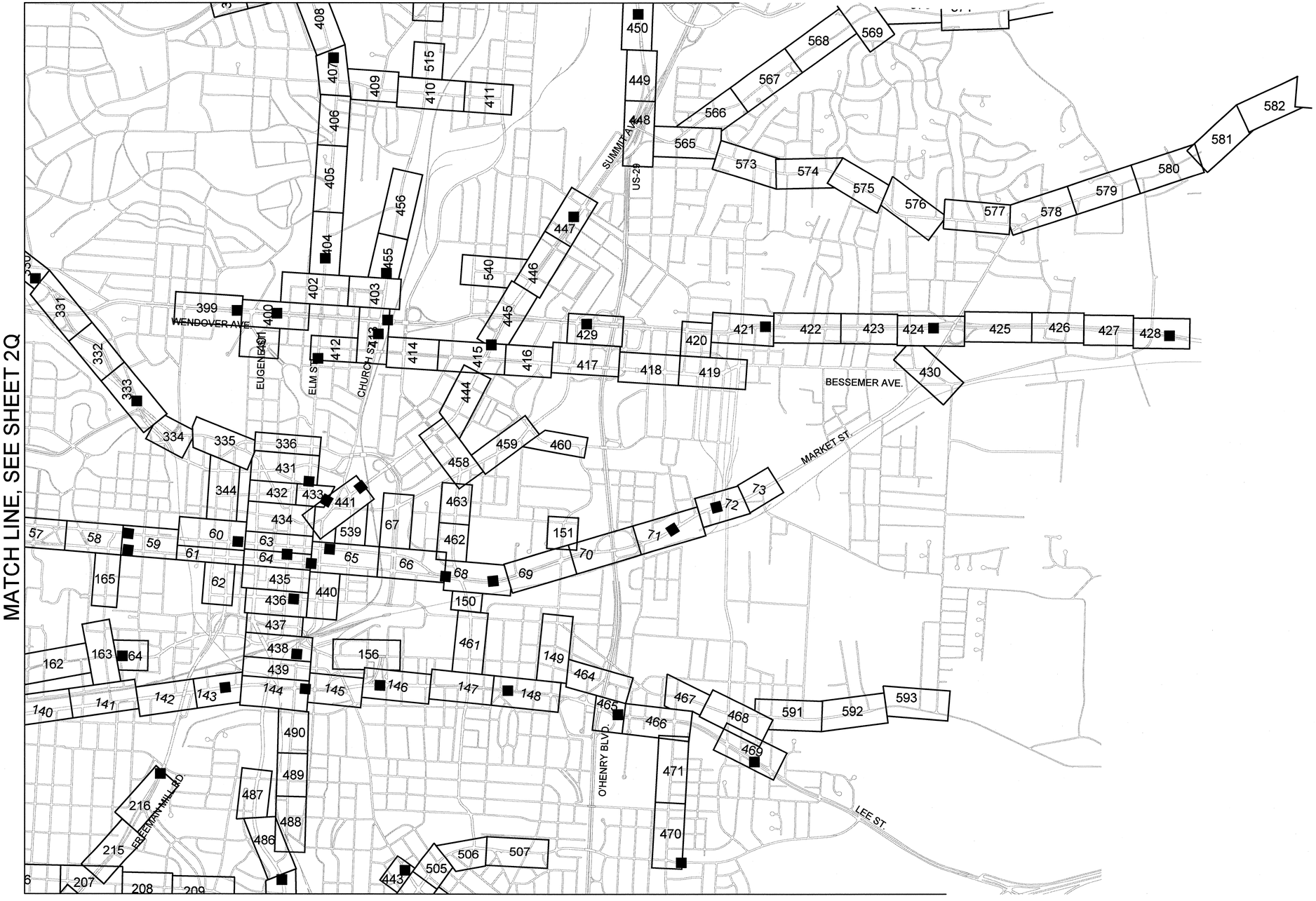
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2T

MATCH LINE, SEE SHEET 2S



MATCH LINE, SEE SHEET 2U

6 OF 7

LEGEND

■ SYSTEM DETECTOR LOCATION

PLANS PREPARED IN THE OFFICE OF:

Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

750 Greenfield Pkwy., Garner, NC 27529

SCALE 0

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

SYSTEM DETECTOR SCHEMATIC

DIVISION 7 — GUILFORD COUNTY

PLAN DATE:	FEBRUARY, 2008	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J. CROSS	REVIEWED BY:	M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE — DATE 2/20/08

CADD Filename:

2/20/2008
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PROJECT REFERENCE NO.	SHEET NO.
U-4711	2U

MATCH LINE, SEE SHEET 2T

MATCH LINE, SEE SHEET 2R

7 OF 7

LEGEND

■ SYSTEM DETECTOR LOCATION

PLANS PREPARED IN THE OFFICE OF:

Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0

N

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

SYSTEM DETECTOR SCHEMATIC

DIVISION 7 GUILFORD COUNTY

PLAN DATE:	FEBRUARY, 2008	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J. CROSS	REVIEWED BY:	M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filename:

2/20/2008
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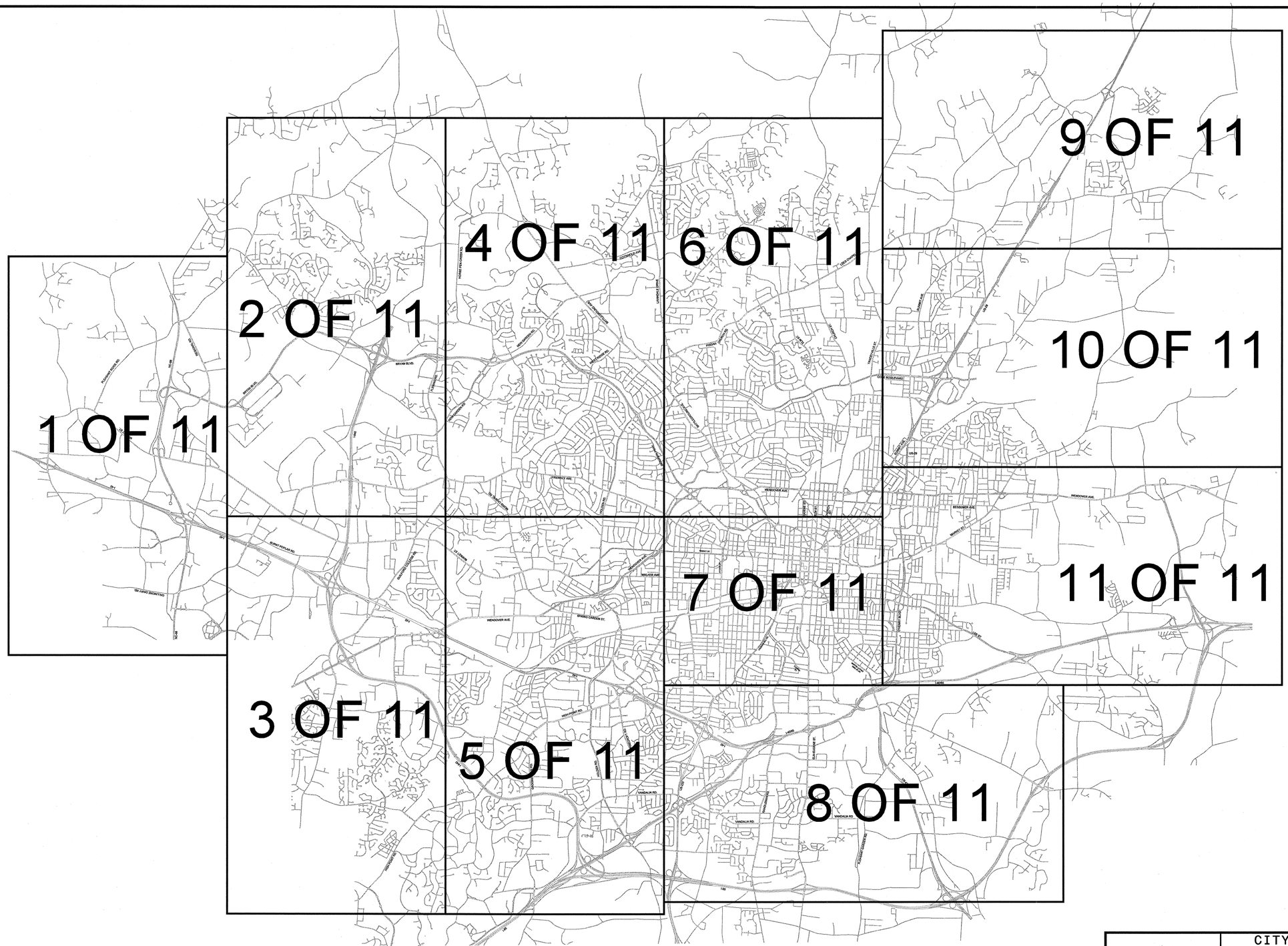
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2V



PLANS PREPARED IN THE OFFICE OF:

Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE
0

N

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
SEQUENCE OF CONSTRUCTION KEY

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: J. CROSS	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE — DATE 2/20/08

CADD Filename:

2/20/2008
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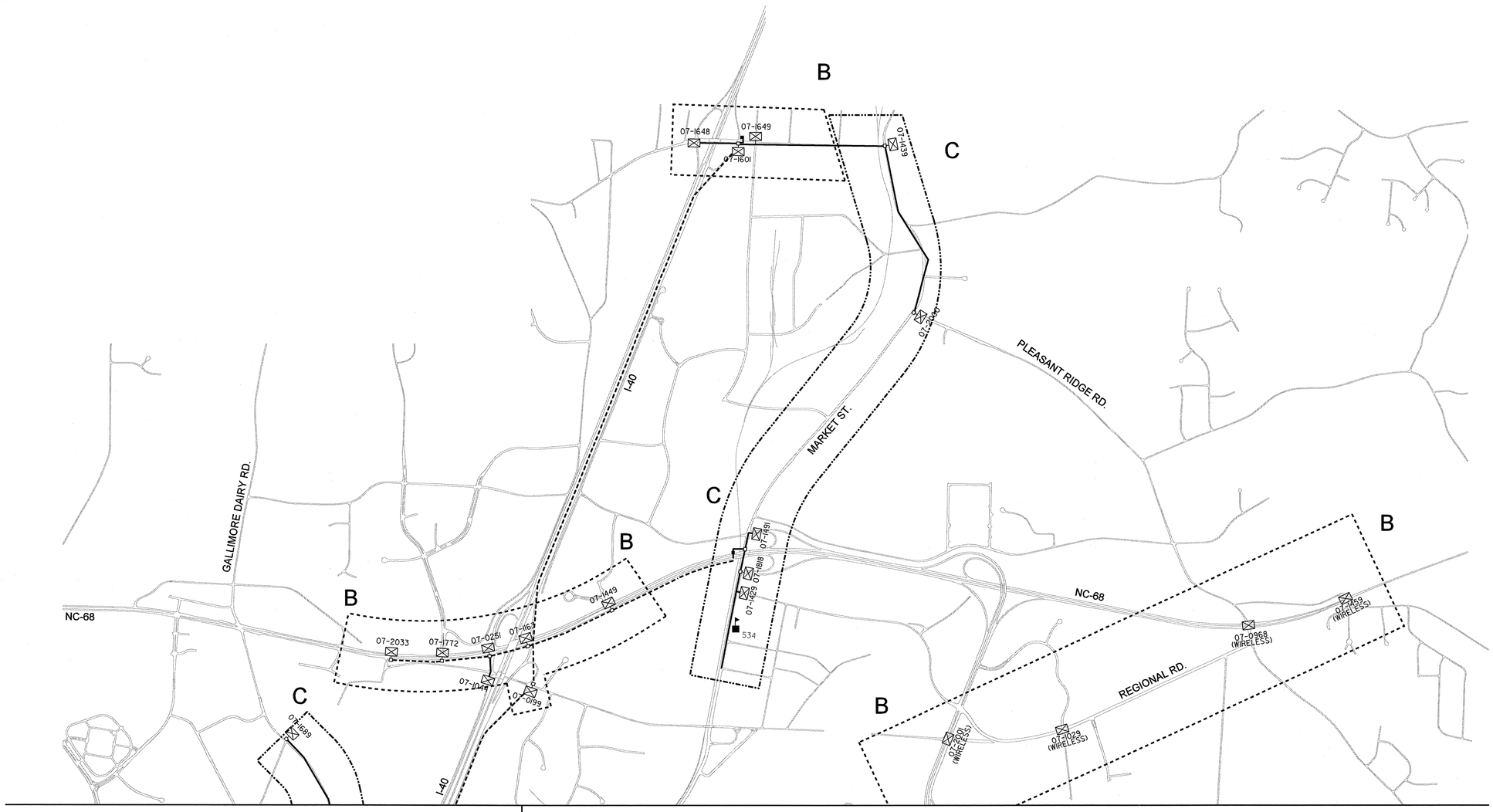
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2W



MATCH LINE, SEE SHEET 2Y

MATCH LINE, SEE SHEET 2X

1 OF 11

NOTES:

1. SIGNALS WITHIN EACH ZONE HAVE BEEN PLACED INTO GROUPINGS FOR REPLACEMENT. SEE PROJECT SPECIAL PROVISIONS FOR GROUP ORDER.
2. ZONE A SIGNALS MUST BE UPGRADED FIRST. BUILD COMMUNICATIONS HUBS AS PART OF THIS ZONE.
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4. ZONE C SIGNALS MUST BE UPGRADED LAST. DO NOT CUT EXISTING CABLE UNTIL BEGINNING CABINET/CONTROLLER UPGRADES ON THESE CHANNELS.
5. ZONE D SIGNALS MAY BE UPGRADED AT ANY TIME SUCH THAT THE ENTIRE CHANNEL IS DOWN AT THE SAME TIME. CONTRACTOR MUST HAVE COMMUNICATION CHANNELS UP AND RUNNING EXISTING TIME-OF-DAY COORDINATED TIMING PLANS WITHIN TURN AROUND TIME NO GREATER THAN 2 DAYS PER SIGNAL IN THE CHANNEL.

LEGEND:

ZONE A BOUNDARY

ZONE B BOUNDARY

ZONE C BOUNDARY

ZONE D BOUNDARY

MIS FACILITY

PLANS PREPARED IN THE OFFICE OF:

Kimley-Horn and Associates, Inc.

P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
NCDEPARTMENT OF TRANSPORTATION
Management Transportation Services

750 Greenfield Pkwy., Garner, NC 27529

SCALE

0

NONE

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

SEQUENCE OF CONSTRUCTION

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: J. CROSS — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE — DATE

CADD Filename:

2/20/2008
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PROJECT REFERENCE NO.	SHEET NO.
U-4711	2X

MATCH LINE, SEE SHEET 2W

MATCH LINE, SEE SHEET 2Y

MATCH LINE, SEE SHEET 2Z

NOTES:

1. SIGNALS WITHIN EACH ZONE HAVE BEEN PLACED INTO GROUPINGS FOR REPLACEMENT. SEE PROJECT SPECIAL PROVISIONS FOR GROUP ORDER.
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LEGEND:

ZONE A BOUNDARY

ZONE B BOUNDARY

ZONE C BOUNDARY

ZONE D BOUNDARY

MIS FACILITY

PLANS PREPARED IN THE OFFICE OF:

Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE
0
NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
SEQUENCE OF CONSTRUCTION

DIVISION 7 GUILFORD COUNTY

PLAN DATE:	FEBRUARY, 2008	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J. CROSS	REVIEWED BY:	M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filename:

2 OF 11

2/20/2008
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MATCH LINE, SEE SHEET 2W

MATCH LINE, SEE SHEET 2X

MATCH LINE, SEE SHEET 2AA

NOTES:

1. SIGNALS WITHIN EACH ZONE HAVE BEEN PLACED INTO GROUPINGS FOR REPLACEMENT. SEE PROJECT SPECIAL PROVISIONS FOR GROUP ORDER.
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LEGEND:

ZONE A BOUNDARY

ZONE B BOUNDARY

ZONE C BOUNDARY

ZONE D BOUNDARY

MIS FACILITY

PLANS PREPARED IN THE OFFICE OF:

Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 NONE

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

SEQUENCE OF CONSTRUCTION

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: J. CROSS	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filename:

2/20/2008
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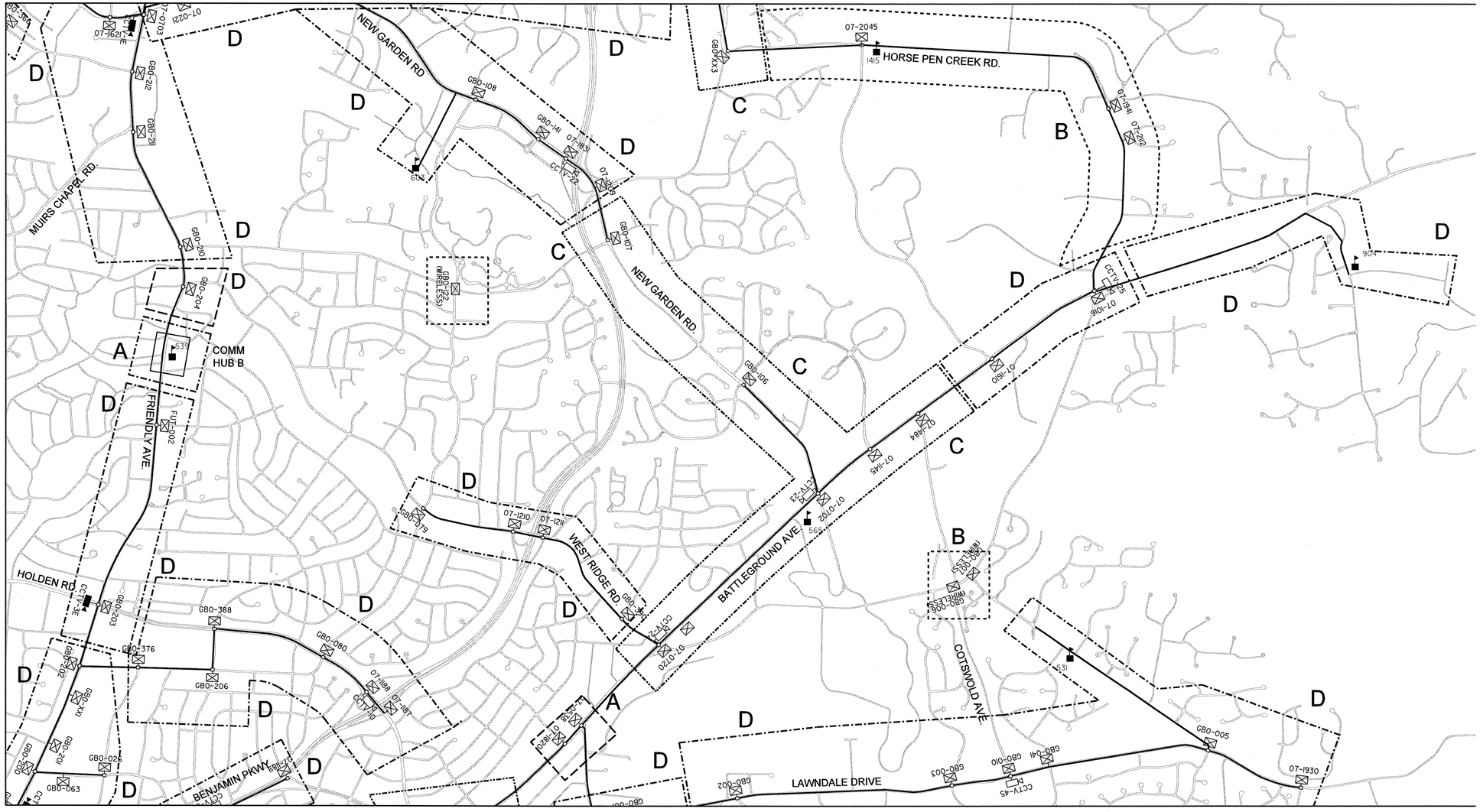
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2Z

MATCH LINE, SEE SHEET 2X

MATCH LINE, SEE SHEET 2AA



MATCH LINE, SEE SHEET 2AB

NOTES:

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LEGEND:

ZONE A BOUNDARY

ZONE B BOUNDARY

ZONE C BOUNDARY

ZONE D BOUNDARY

MIS FACILITY

PLANS PREPARED IN THE OFFICE OF:

Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
SEQUENCE OF CONSTRUCTION

DIVISION 7 GUILFORD COUNTY

PLAN DATE:	FEBRUARY, 2008	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J. CROSS	REVIEWED BY:	M.W. DUNZO

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SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filename:

2/20/2008
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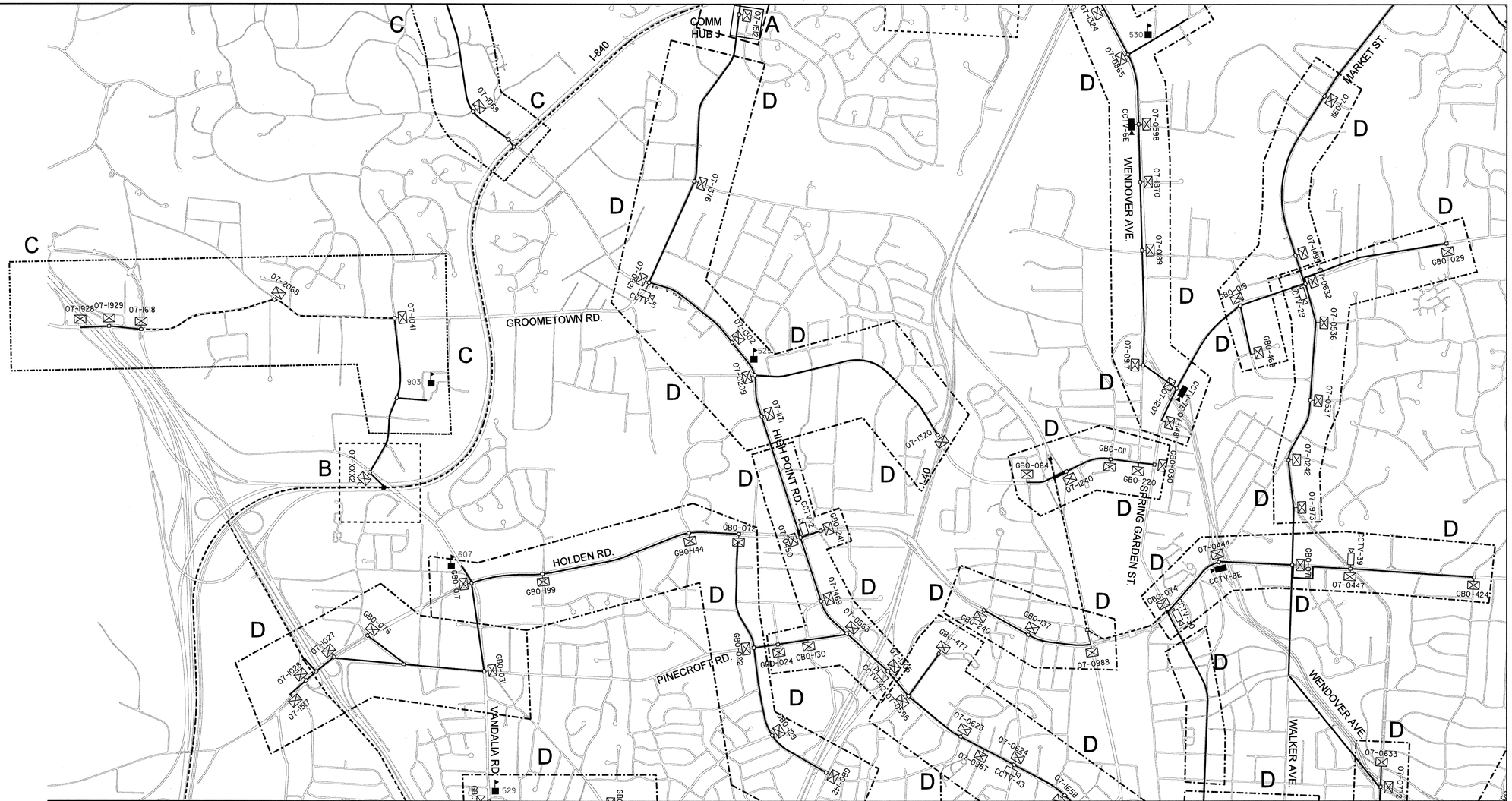
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2AA

MATCH LINE, SEE SHEET 2Y



MATCH LINE, SEE SHEET 2Z

MATCH LINE, SEE SHEET 2AD

MATCH LINE, SEE SHEET 2AC

5 OF 11

NOTES:

1. SIGNALS WITHIN EACH ZONE HAVE BEEN PLACED INTO GROUPINGS FOR REPLACEMENT. SEE PROJECT SPECIAL PROVISIONS FOR GROUP ORDER.
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LEGEND:

ZONE A BOUNDARY

ZONE B BOUNDARY

ZONE C BOUNDARY

ZONE D BOUNDARY

MIS FACILITY

PLANS PREPARED IN THE OFFICE OF:

Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE
0
NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
SEQUENCE OF CONSTRUCTION

DIVISION 7 GUILFORD COUNTY

PLAN DATE:	FEBRUARY, 2008	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J. CROSS	REVIEWED BY:	M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

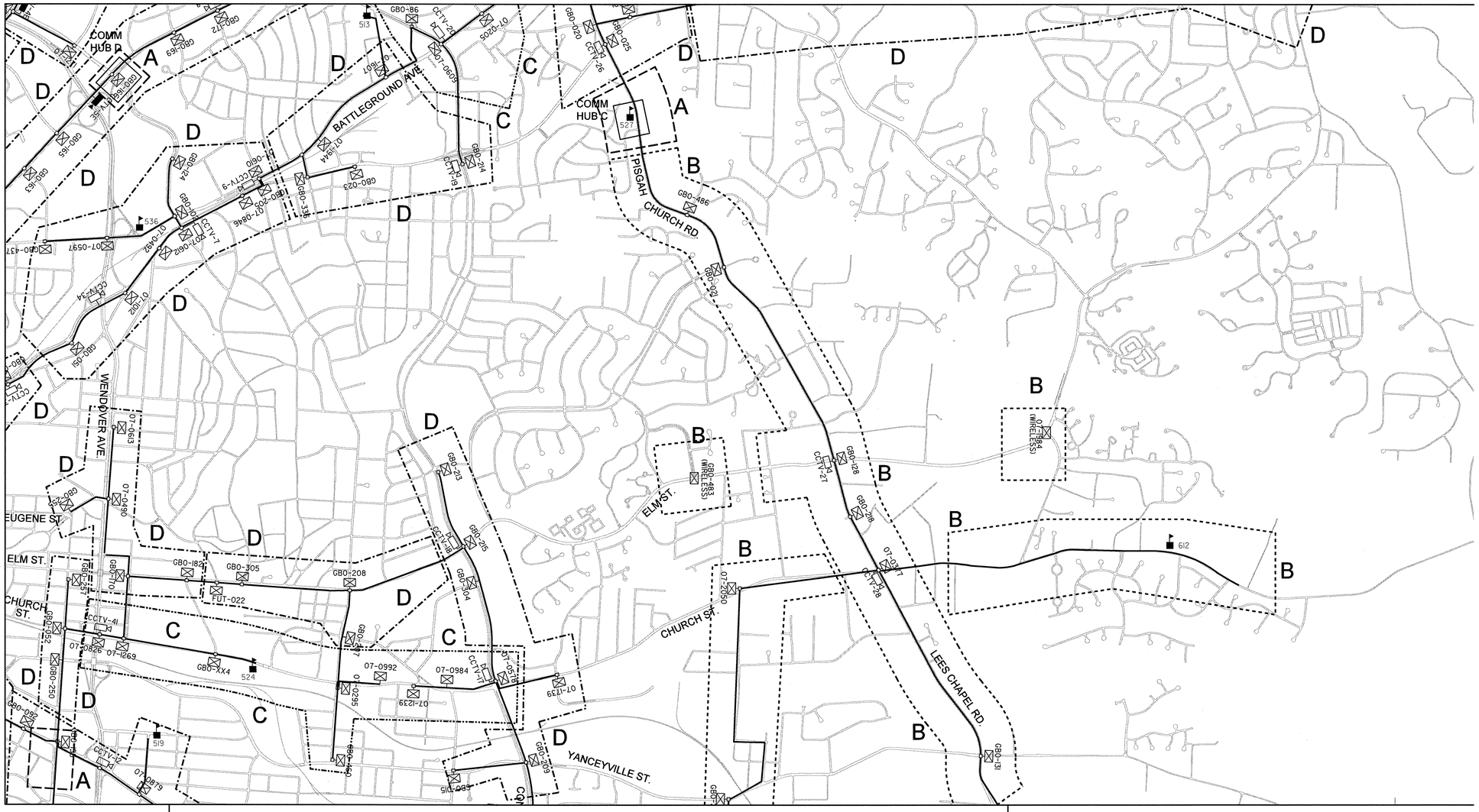
CADD Filename:

2/20/2008
I:\systems\projects\011462020 (g-boro mis)\details-mis\DTL-SH002zaa.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-4711	2AB

MATCH LINE, SEE SHEET 2Z

MATCH LINE, SEE SHEET 2AC



MATCH LINE, SEE SHEET 2AG

MATCH LINE, SEE SHEET 2AF

MATCH LINE, SEE SHEET 2AE

NOTES:

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LEGEND:

ZONE A BOUNDARY

ZONE B BOUNDARY

ZONE C BOUNDARY

ZONE D BOUNDARY

MIS FACILITY

PLANS PREPARED IN THE OFFICE OF:

Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 — NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
SEQUENCE OF CONSTRUCTION

DIVISION 7 — GUILFORD COUNTY

PLAN DATE:	FEBRUARY, 2008	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J. CROSS	REVIEWED BY:	M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE — DATE 2/20/08

CADD Filename:

2/20/2008
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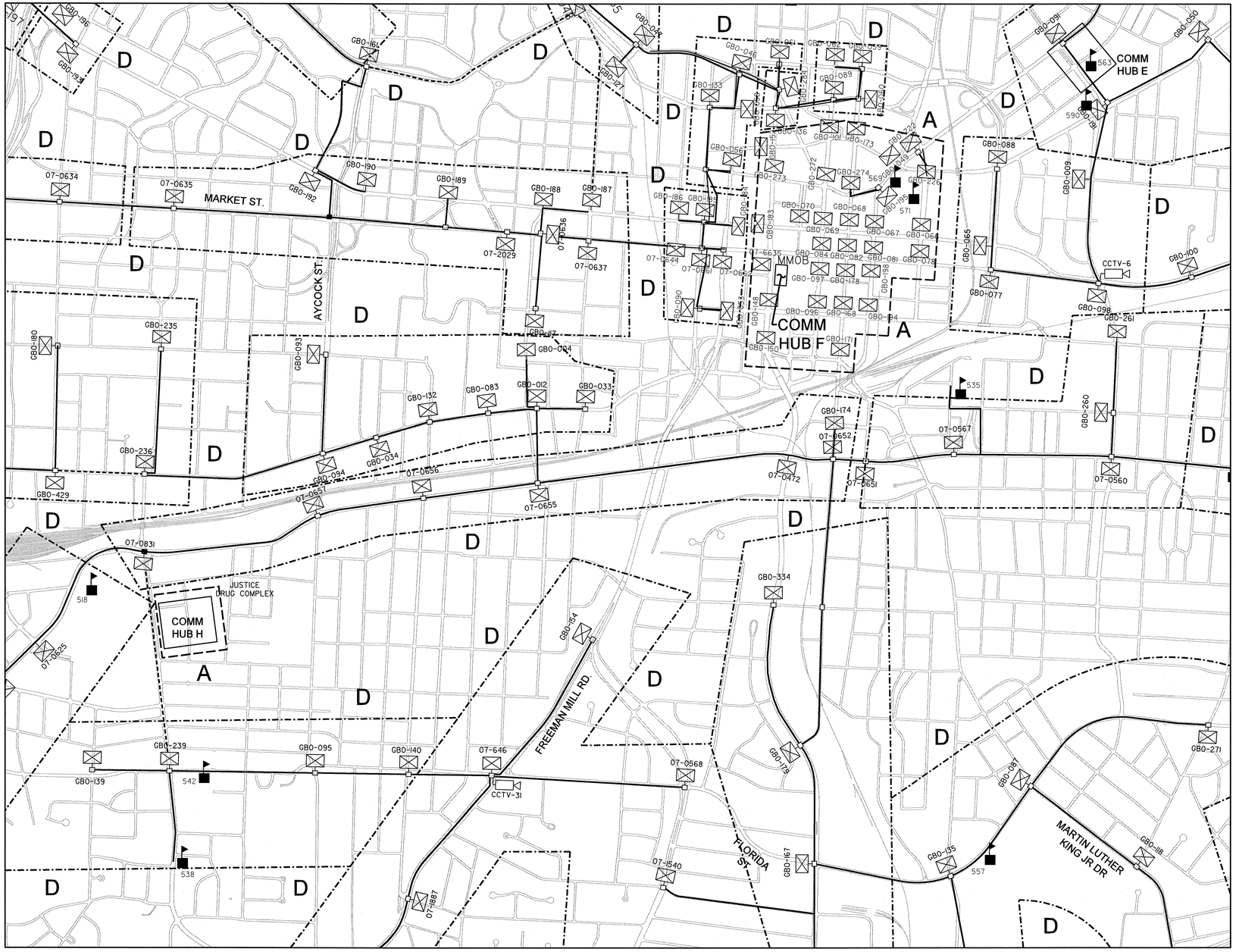
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2AC

MATCH LINE, SEE SHEET 2AB

MATCH LINE, SEE SHEET 2AA



MATCH LINE, SEE SHEET 2AG

MATCH LINE, SEE SHEET 2AD

7 OF 11

NOTES:

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LEGEND:

ZONE A BOUNDARY

ZONE B BOUNDARY

ZONE C BOUNDARY

ZONE D BOUNDARY

MIS FACILITY

PLANS PREPARED IN THE OFFICE OF:

Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE
0
NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
SEQUENCE OF CONSTRUCTION

DIVISION 7 GUILFORD COUNTY

PLAN DATE:	FEBRUARY, 2008	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J. CROSS	REVIEWED BY:	M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filename:

2/20/2008
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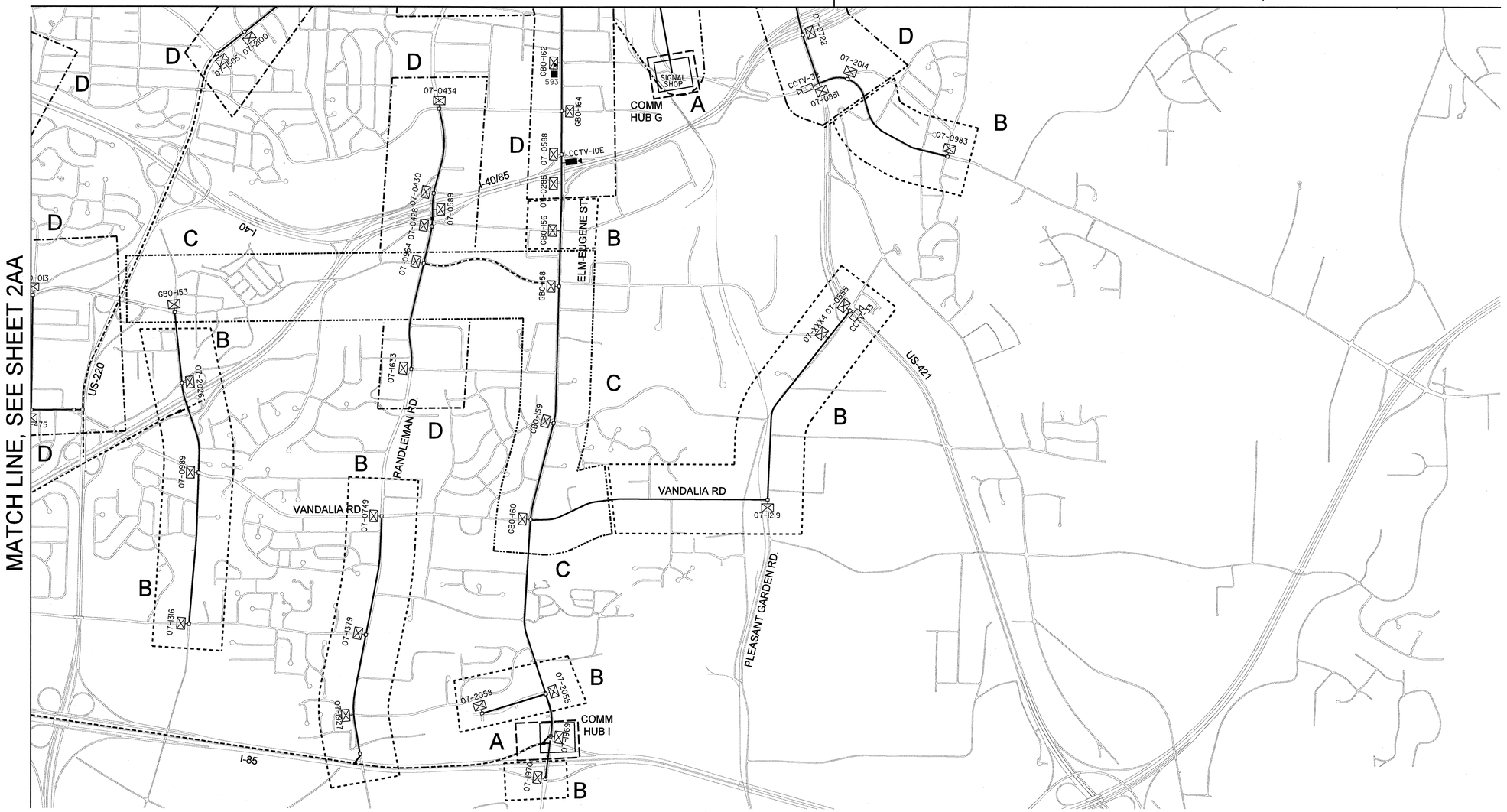
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2AD



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ZONE B BOUNDARY
ZONE C BOUNDARY
ZONE D BOUNDARY
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DIVISION 7 GUILFORD COUNTY

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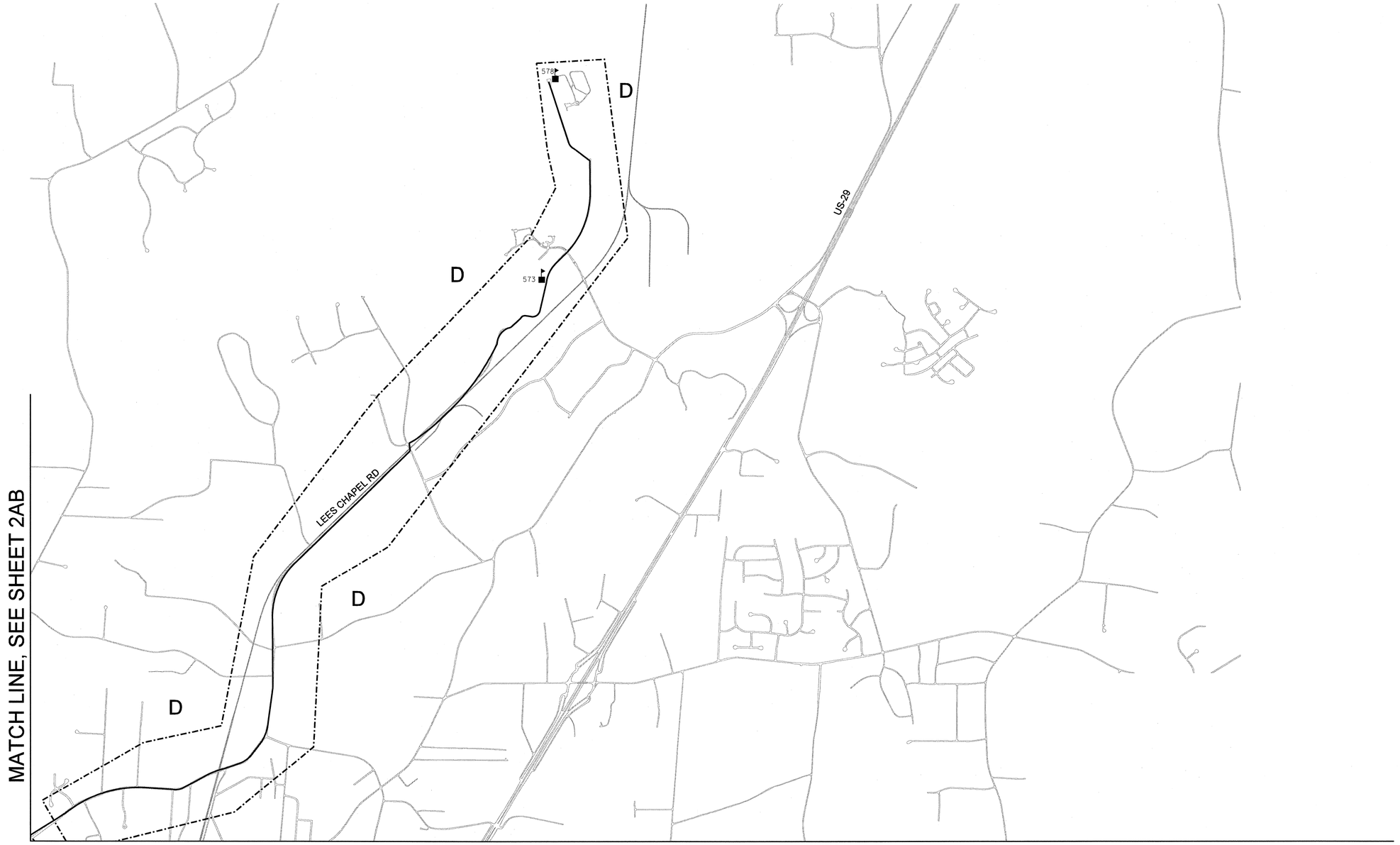
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2AE



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ZONE B BOUNDARY

ZONE C BOUNDARY

ZONE D BOUNDARY

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CITY OF GREENSBORO
COMPUTERIZED
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SEQUENCE OF CONSTRUCTION

DIVISION 7 GUILFORD COUNTY

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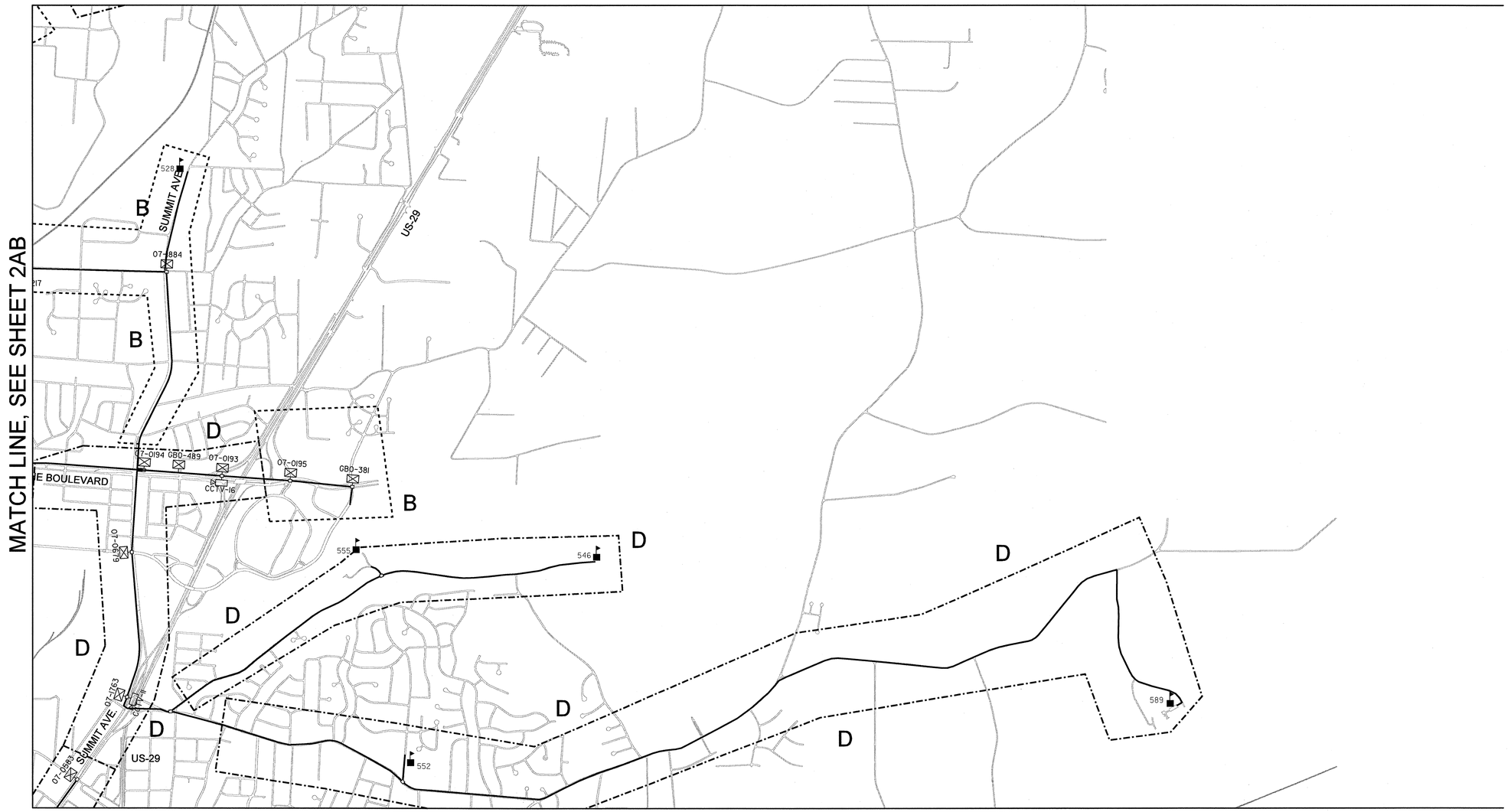
CADD Filename:

2/29/2008
t:\systems\projects\011462020 (g-boro mis)\Details-MIS\DTL-SHT002zae.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-4711	2AF

MATCH LINE, SEE SHEET 2AE

MATCH LINE, SEE SHEET 2AB



MATCH LINE, SEE SHEET 2AG

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750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
SEQUENCE OF CONSTRUCTION

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 REVIEWED BY: K.W. SMITH

PREPARED BY: J. CROSS REVIEWED BY: M.W. DUNZO

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SEAL

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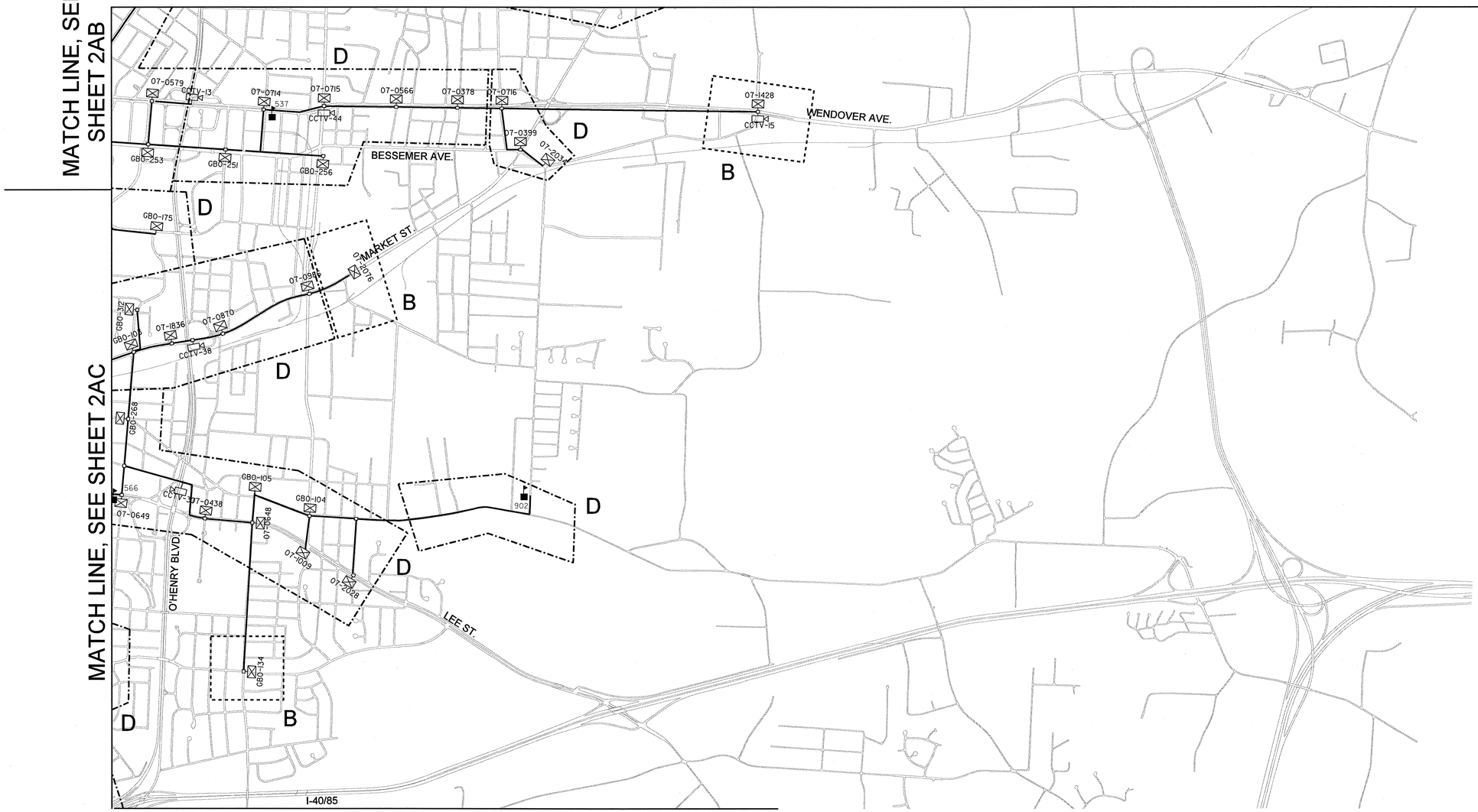
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2AG

MATCH LINE, SEE SHEET 2AF

MATCH LINE, SEE SHEET 2AB



MATCH LINE, SEE SHEET 2AC

MATCH LINE, SEE SHEET 2AD

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Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 — NONE

CITY OF GREENSBORO
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DIVISION 7 — GUILFORD COUNTY

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SIGNATURE — DATE 2/20/08

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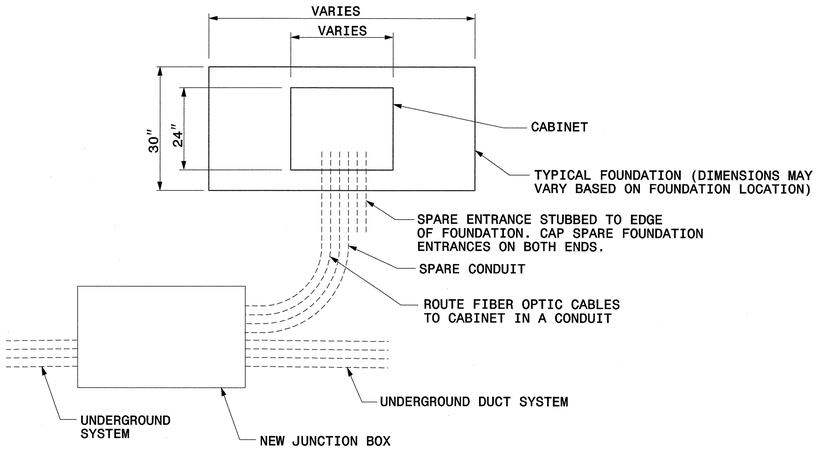
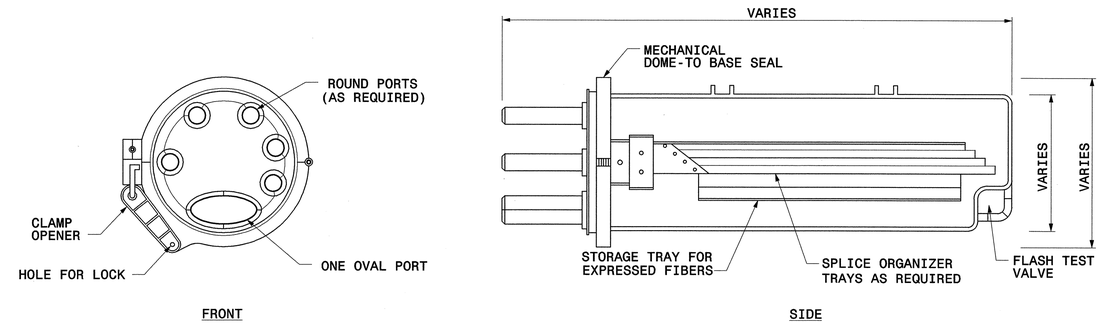
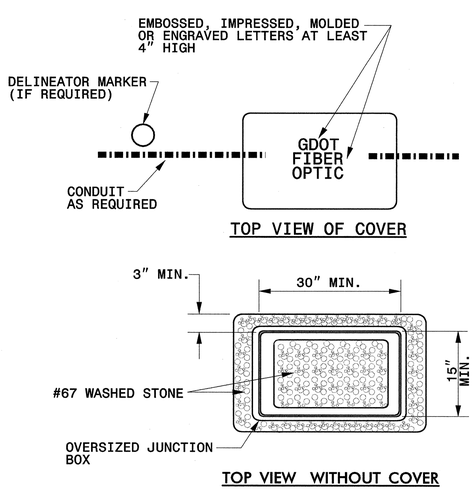
U-4711	2AH



ROUTING OF CABLE TO BASE MOUNT CABINET (PLAN)



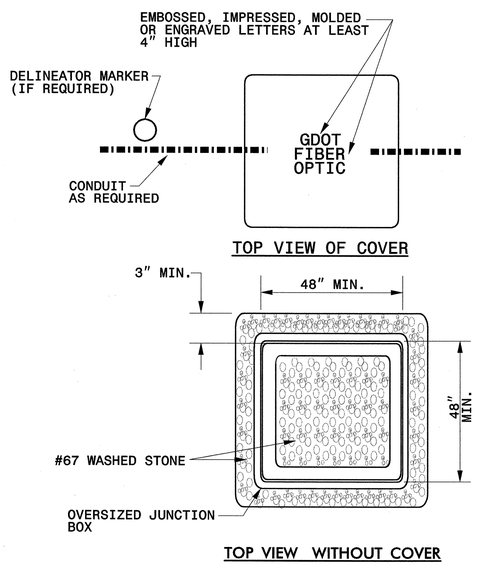
FIBER OPTIC SPLICE ENCLOSURE



TOP VIEW OF COVER

TOP VIEW WITHOUT COVER

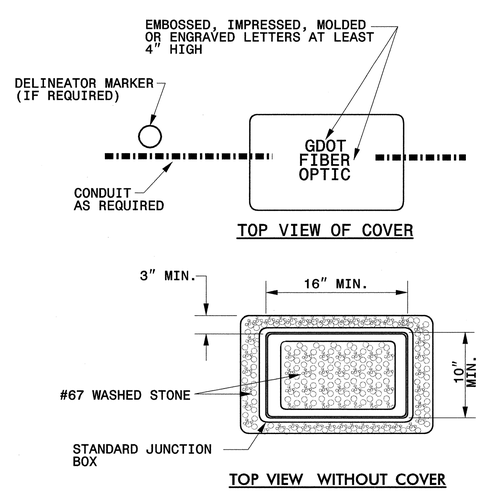
OVERSIZED HEAVY DUTY JUNCTION BOX TYPICAL DETAIL



TOP VIEW OF COVER

TOP VIEW WITHOUT COVER

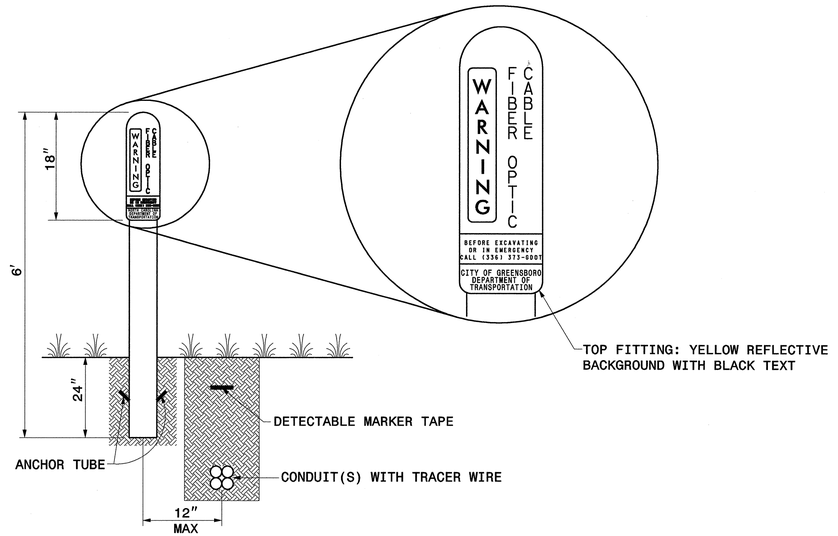
SPECIAL OVERSIZED JUNCTION BOX TYPICAL DETAIL



TOP VIEW OF COVER

TOP VIEW WITHOUT COVER

STANDARD JUNCTION BOX TYPICAL DETAIL



PVC POST-MOUNTED DELINEATOR MARKER

NOTE:
BACKFILL WITH EXCAVATED MATERIAL AND COMPACT THE SOIL TO 95% OF ITS ORIGINAL DENSITY. REMOVE ROCK AND DEBRIS FROM BACKFILL MATERIAL.

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SCALE
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NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
SPECIAL DETAILS
JUNCTION BOXES AND SPLICE ENCLOSURES
DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: J. CROSS	REVIEWED BY: M.W. DUNZO

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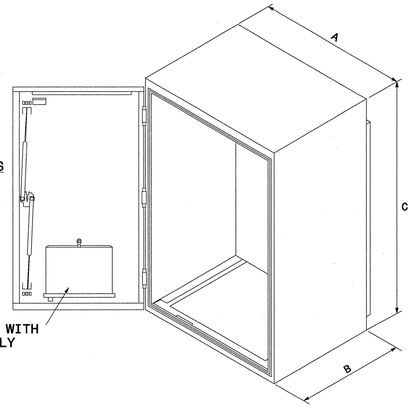
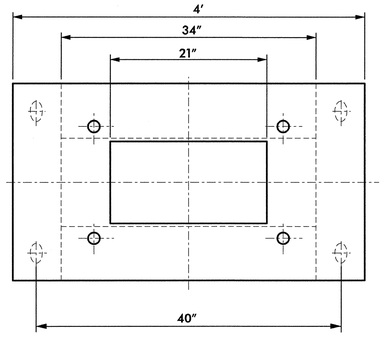
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2AJ

CABINET HOUSING DIMENSIONS

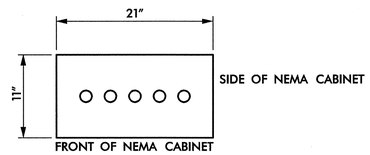
332		333		336S	
A	24"	A	45"	A	24"
B	30"	B	26"	B	20"
C	64"	C	66"	C	46"



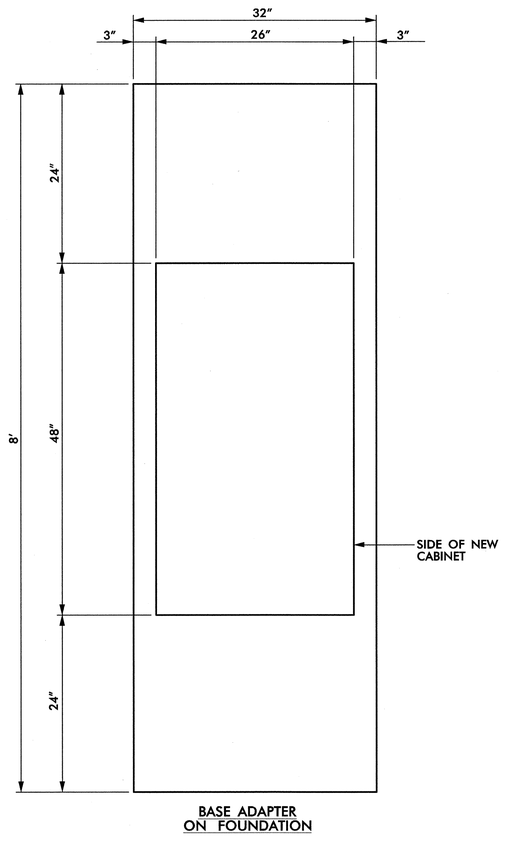
EQUIPMENT CABINET SIZES



PLAN (TOP)

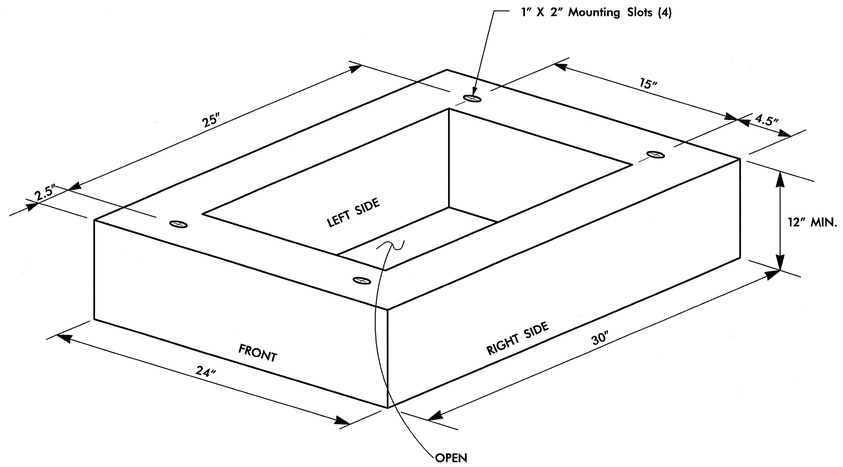


ALLOWABLE CONDUIT SPREAD WHEN USING BASE ADAPTER



BASE ADAPTER ON FOUNDATION

332 P BASE ADAPTER



BASE EXTENSION FOR 332 CABINET

NOTES

1. BASE EXTENDER BOLT HOLE PATTERN AND SPACING SHALL MATCH THAT OF EQUIPMENT CABINET.
2. DIMENSIONS SHOWN FOR BASE EXTENDER ARE APPROXIMATE OUTER DIMENSIONS, DIMENSIONS FOR CENTER OPENING AND FLANGE DIMENSIONS SHALL MATCH THOSE OF EQUIPMENT CABINET.
3. FABRICATE BASE EXTENDER FROM SAME MATERIAL AND SAME GAUGE AS EQUIPMENT CABINET. BASE EXTENDER SHALL HAVE FINISH THAT IS IDENTICAL TO EQUIPMENT CABINET.

ACCEPTABLE CONDUIT SPREAD

332		333		336S	
A	15"	A	15"	A	12"
B	21"	B	42"	B	12"

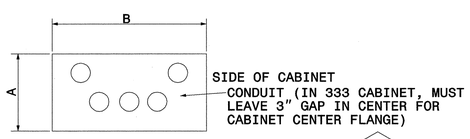
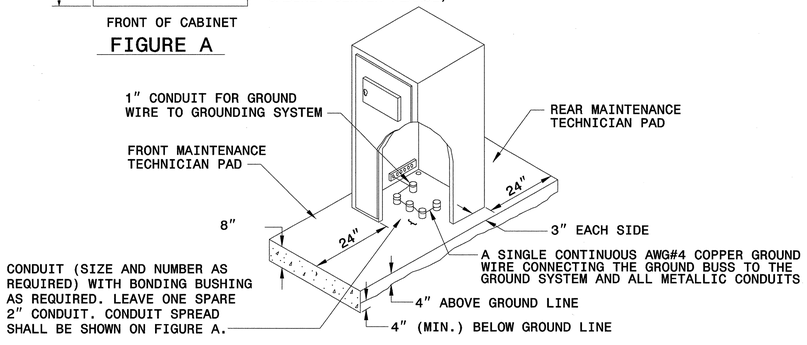


FIGURE A



TYPICAL BASE MOUNTED CABINET (NEW STANDARD FOUNDATION)

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SCALE 0 NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
CABINET DETAILS

DIVISION 7 GUILFORD COUNTY

PLAN DATE:	FEBRUARY, 2008	REVIEWED BY:	K.W. SMITH
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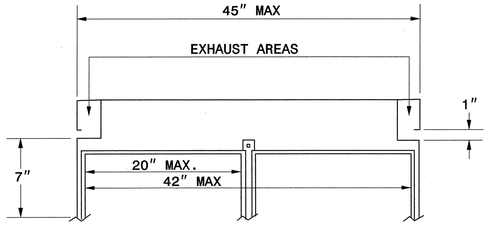
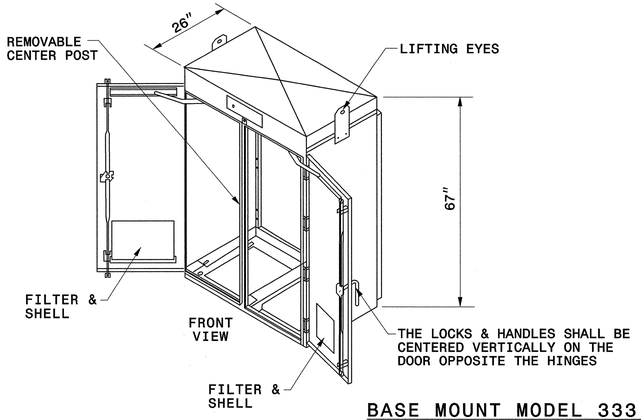
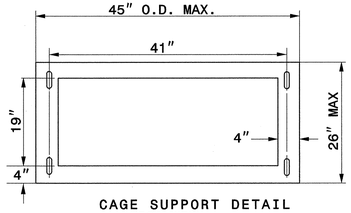
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2AK



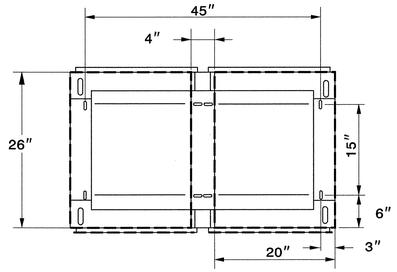
TOP FRONT DETAIL



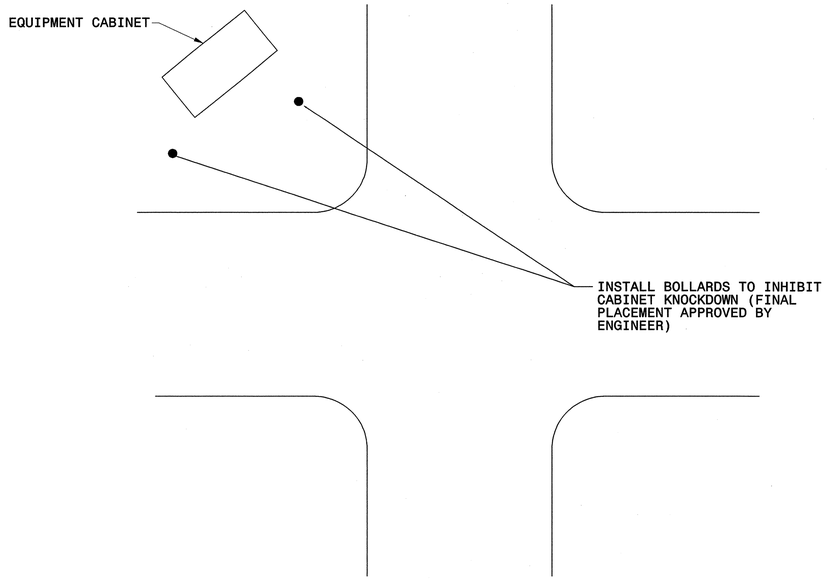
CABINET HOUSING BOTTOM DETAIL



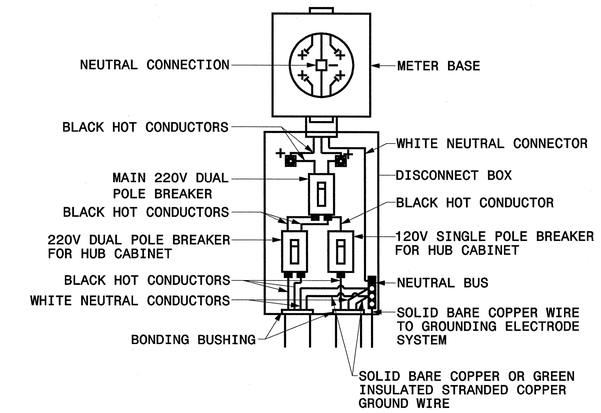
CAGE SUPPORT DETAIL
(TOP VIEW)



BASE MOUNT MODEL 333 FIELD EQUIPMENT CABINET

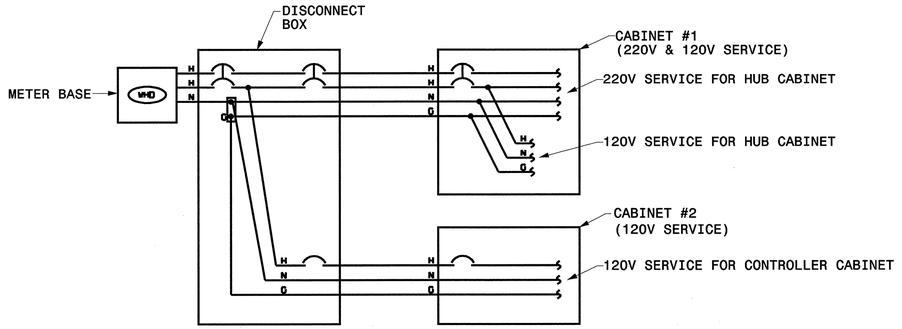


CABINET PROTECTION



ELECTRICAL CONNECTION DETAIL FOR 120/220 DISCONNECT BRANCH CIRCUIT FOR 333 EQUIPMENT CABINET AND 332 CONTROLLER CABINET AT SAME METER

(SHOWN WITH METER BASE AND DISCONNECT BOX)
*CONTRACTOR TO SIZE ALL CIRCUIT BREAKERS AND CONDUCTOR SIZES PER THE NATIONAL ELECTRIC CODE



ELECTRICAL ONE-LINE DETAIL

*CONTRACTOR TO SIZE ALL CIRCUIT BREAKERS AND CONDUCTOR SIZES PER THE NATIONAL ELECTRIC CODE

NOTES:
1. PROVIDE ELECTRICAL DISCONNECT BRANCH CIRCUITS TO PROVIDE BOTH 120V AC AND 220V AC SERVICE TO HUB CABINET AND 120V AC SERVICE TO TRAFFIC SIGNAL CONTROLLER CABINET.
2. FURNISH 333 CABINET HOUSING WITH BOTH FRONT DOORS AND BOTH REAR DOORS VENTED TO PROVIDE AIR INTAKE AND OUTFLOW FOR RACK MOUNT AIR COOLING UNIT.
3. PROVIDE GROUNDING, INSULATION AND SURGE PROTECTION AS CALLED FOR IN THE PROJECT SPECIAL PROVISIONS.
4. DO NOT SUPPLY CABINET HOUSING WITH STANDARD MODEL 333 CEILING EXHAUST.
5. DO NOT SUPPLY CABINET HOUSING WITH POLICE PANEL.
6. PROVIDE SHOP DRAWINGS OF CABINET PRIOR TO INSTALLATION AS CALLED FOR IN THE PROJECT SPECIAL PROVISIONS.

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SCALE
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NONE

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABINET DETAILS

DIVISION 7 GUILFORD COUNTY

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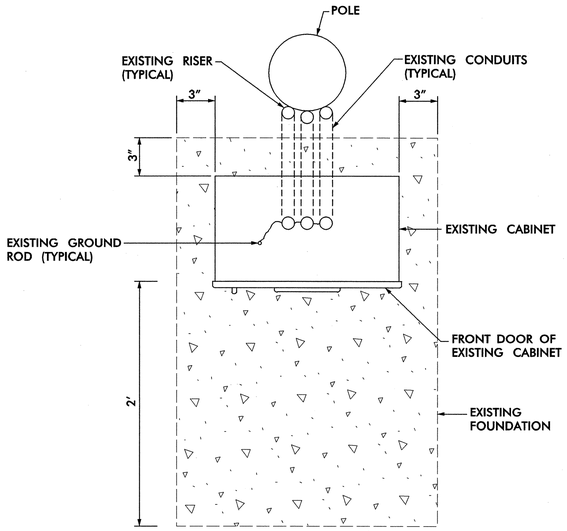
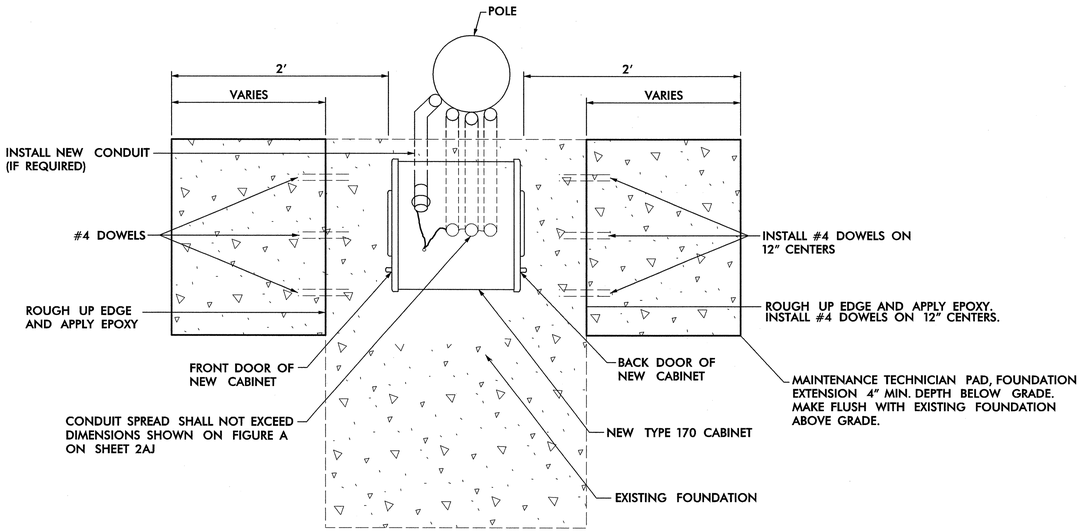
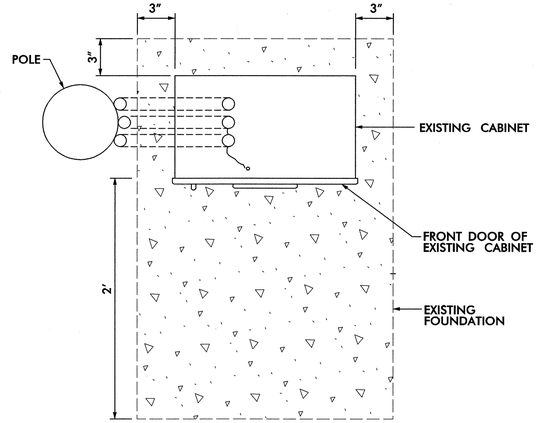


EXISTING FOUNDATION (TYPICAL)

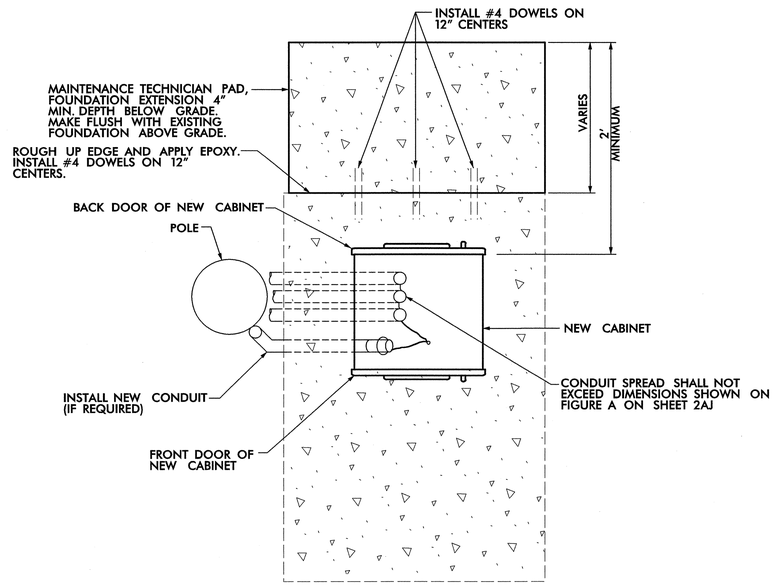


MODIFIED FOUNDATION PLAN

MODEL 332/336S CABINETS ON MODIFIED FOUNDATION ROTATED 90 DEGREES FROM ORIENTATION OF EXISTING CABINET



EXISTING FOUNDATION (TYPICAL)



MODIFIED FOUNDATION PLAN

NEW CABINETS ON MODIFIED FOUNDATION WITH SAME ORIENTATION AS EXISTING CABINET

PLANS PREPARED IN THE OFFICE OF:

Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE
0
NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
CABINET FOUNDATION DETAILS

DIVISION 7 GUILFORD COUNTY

PLAN DATE:	FEBRUARY, 2008	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J. CROSS	REVIEWED BY:	M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 3/4/08 DATE

CADD Filename:

3/4/2008
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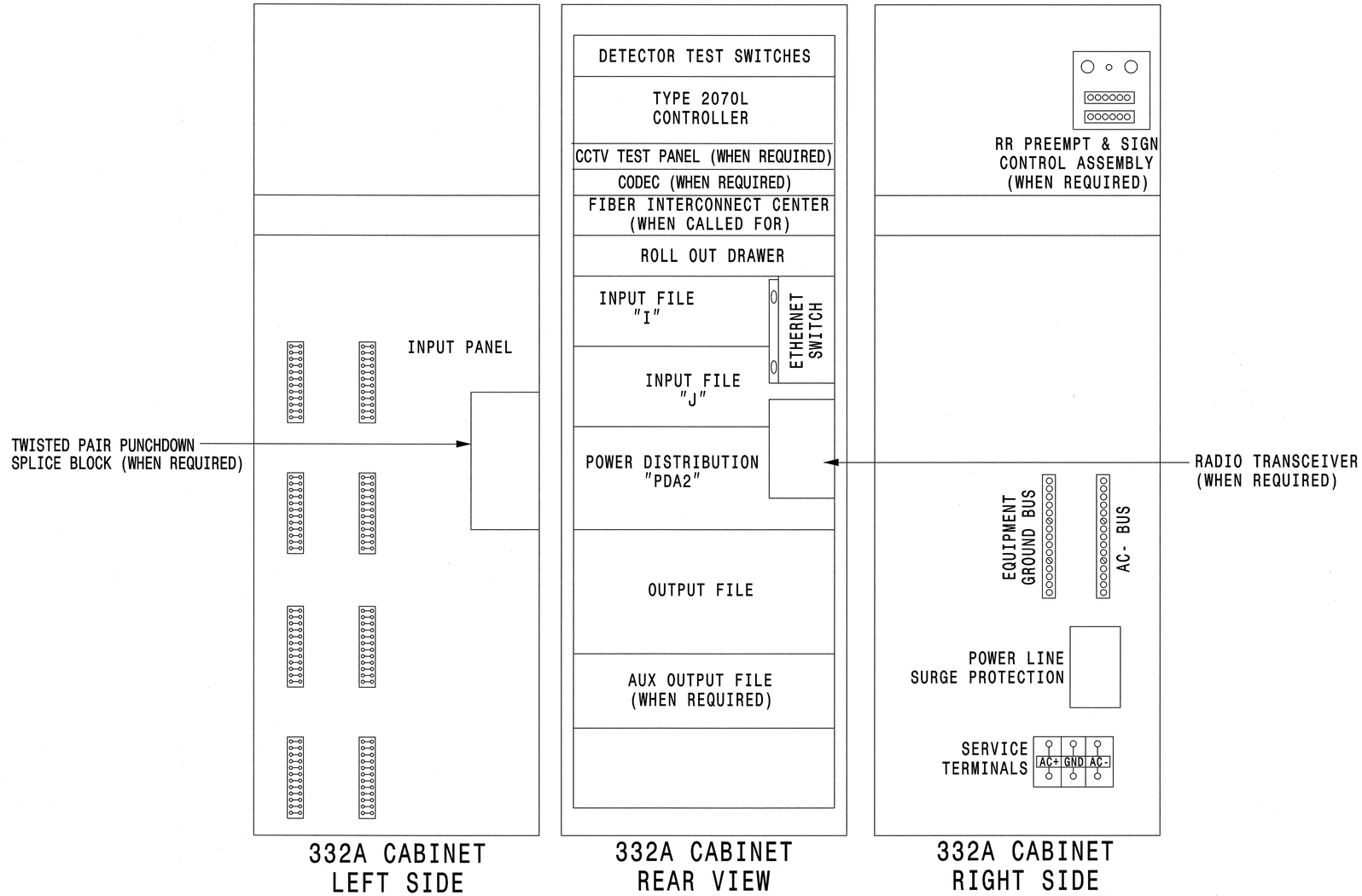
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2AM



BASE MOUNTED CABINET MODEL 332A WITH 2070L CONTROLLER

NOTES

1. EXHIBIT FOR DIAGRAMATIC PURPOSES ONLY. CONTRACTOR SHALL DEVELOP FULLY POPULATED TEST CABINET PROTOTYPE FOR REVIEW AND APPROVAL BY THE ENGINEER.
2. INSTALL POWER LINE SURGE PROTECTION INSIDE POWER DISTRIBUTION ASSEMBLY. PROVIDE INLINE SURGE PROTECTION FOR ALL DEVICES IN ACCORDANCE WITH THE PROJECT SPECIAL PROVISIONS AND AS APPROVED BY THE ENGINEER.
3. GROUND ALL EQUIPMENT IN ACCORDANCE WITH THE PROJECT SPECIAL PROVISIONS AND THE MANUFACTURER RECOMMENDATIONS.

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE
0
NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
CABINET COMPONENT LAYOUT

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: J. CROSS	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

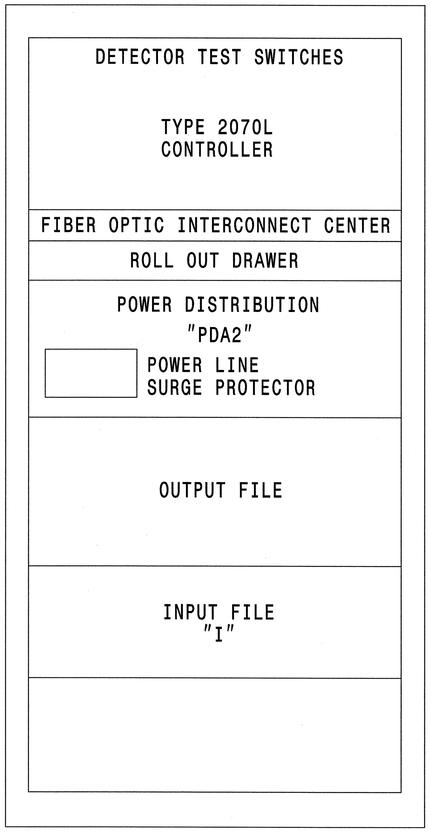
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

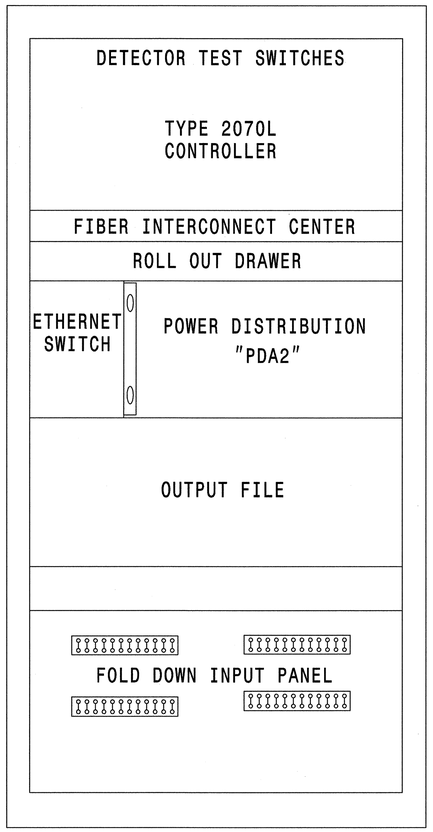
CADD Filename:

2/20/2008
I:\systems\projects\01\462020 (g-boro mls)\details-mls\DTL-Sht2zAM.dgn

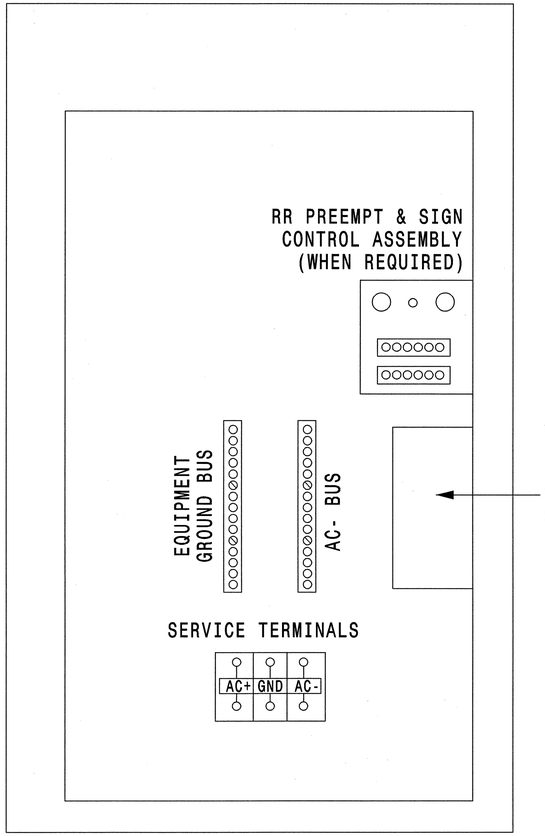
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2AN



336S CABINET
FRONT VIEW



336S CABINET
REAR VIEW



336S CABINET
REAR VIEW
RIGHT SIDE

CABINET MODEL 336S WITH 2070L CONTROLLER

NOTES

1. EXHIBIT FOR DIAGRAMATIC PURPOSES ONLY. CONTRACTOR SHALL DEVELOP FULLY POPULATED TEST CABINET PROTOTYPE FOR REVIEW AND APPROVAL BY THE ENGINEER.
2. INSTALL POWER LINE SURGE PROTECTION INSIDE POWER DISTRIBUTION ASSEMBLY. PROVIDE INLINE SURGE PROTECTION FOR ALL DEVICES IN ACCORDANCE WITH THE PROJECT SPECIAL PROVISIONS AND AS APPROVED BY THE ENGINEER.
3. GROUND ALL EQUIPMENT IN ACCORDANCE WITH THE PROJECT SPECIAL PROVISIONS AND THE MANUFACTURER RECOMMENDATIONS.

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Public Partnership and Safety Systems Unit
NC DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE
0
NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
CABINET COMPONENT LAYOUT

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: J. CROSS	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE — DATE 2/20/08

CADD Filenames

2/20/2008
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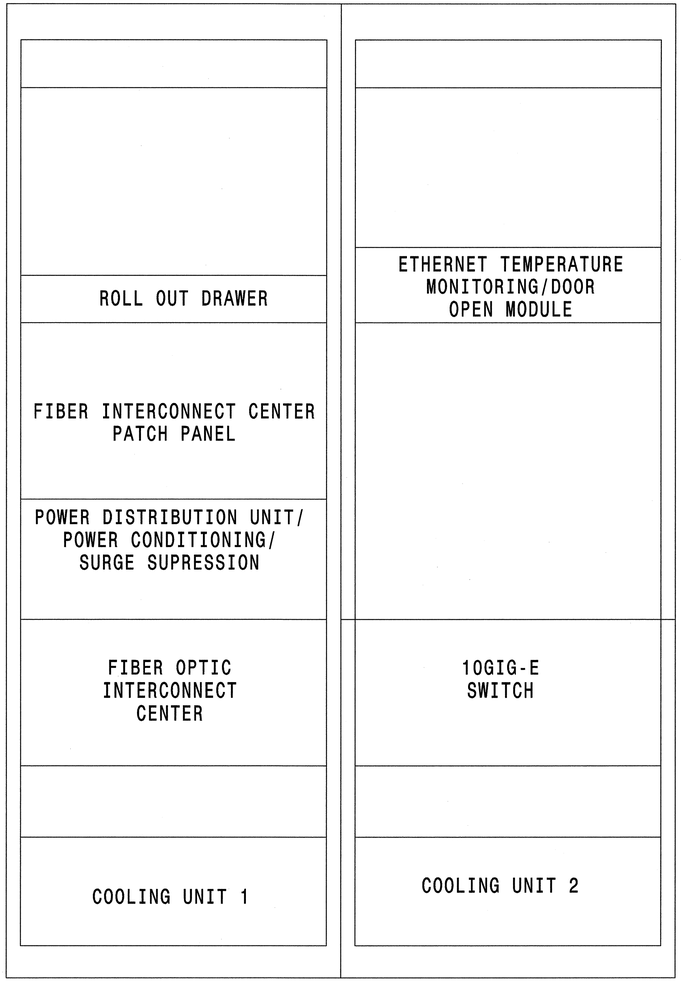
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2AP



333 CABINET

FRONT VIEW

BASE MOUNTED CABINET MODEL 333 WITH COMMUNICATIONS EQUIPMENT

PLANS PREPARED IN THE OFFICE OF:

Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE
0
NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
CABINET COMPONENT LAYOUT

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: J. CROSS	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filename:

2/20/2008
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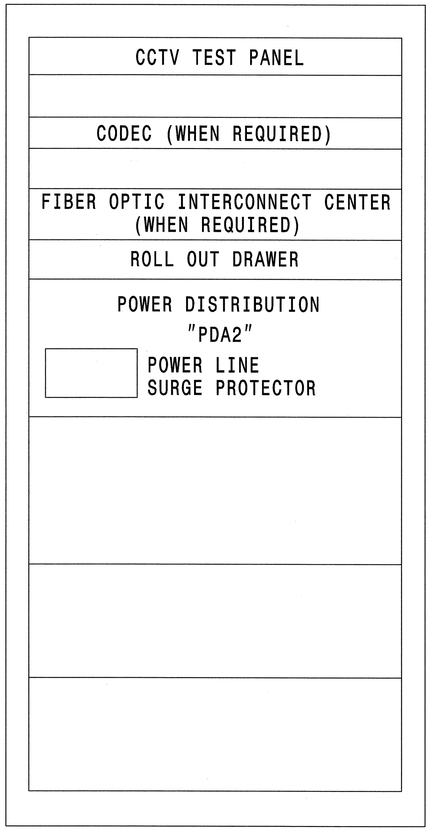
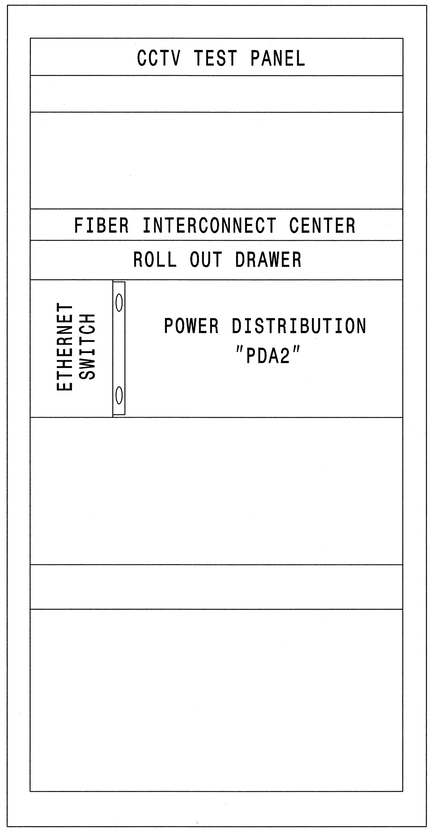
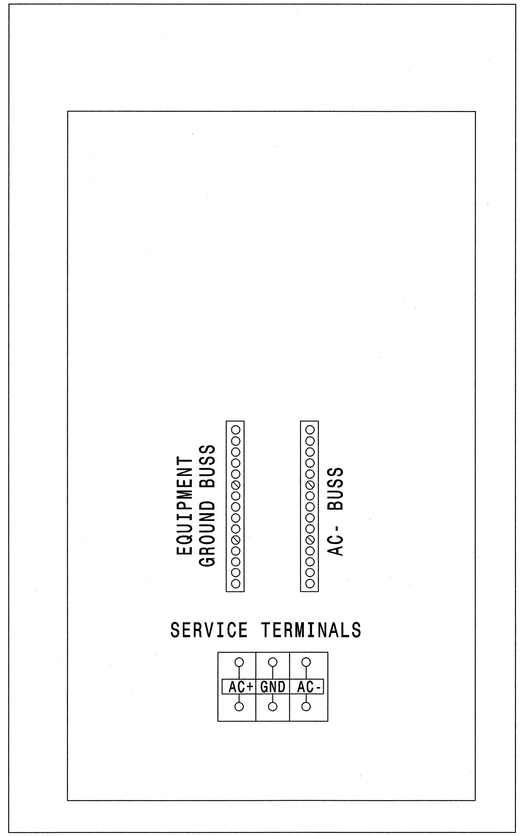
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2AQ



336S CABINET
FRONT VIEW



336S CABINET
REAR VIEW



336S CABINET
REAR VIEW
RIGHT SIDE

CABINET MODEL 336S
EQUIPMENT CABINET

NOTES

1. EXHIBIT FOR DIAGRAMATIC PURPOSES ONLY. CONTRACTOR SHALL DEVELOP FULLY POPULATED TEST CABINET PROTOTYPE FOR REVIEW AND APPROVAL BY THE ENGINEER.
2. INSTALL POWER LINE SURGE PROTECTION INSIDE POWER DISTRIBUTION ASSEMBLY. PROVIDE INLINE SURGE PROTECTION FOR ALL DEVICES IN ACCORDANCE WITH THE PROJECT SPECIAL PROVISIONS AND AS APPROVED BY THE ENGINEER.
3. GROUND ALL EQUIPMENT IN ACCORDANCE WITH THE PROJECT SPECIAL PROVISIONS AND THE MANUFACTURER RECOMMENDATIONS.

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE
0
NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
CABINET COMPONENT LAYOUT

DIVISION 7 GUILFORD COUNTY

PLAN DATE:	FEBRUARY, 2008	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J. CROSS	REVIEWED BY:	M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE 2/20/08 DATE
CADD Filename:

2/20/2008
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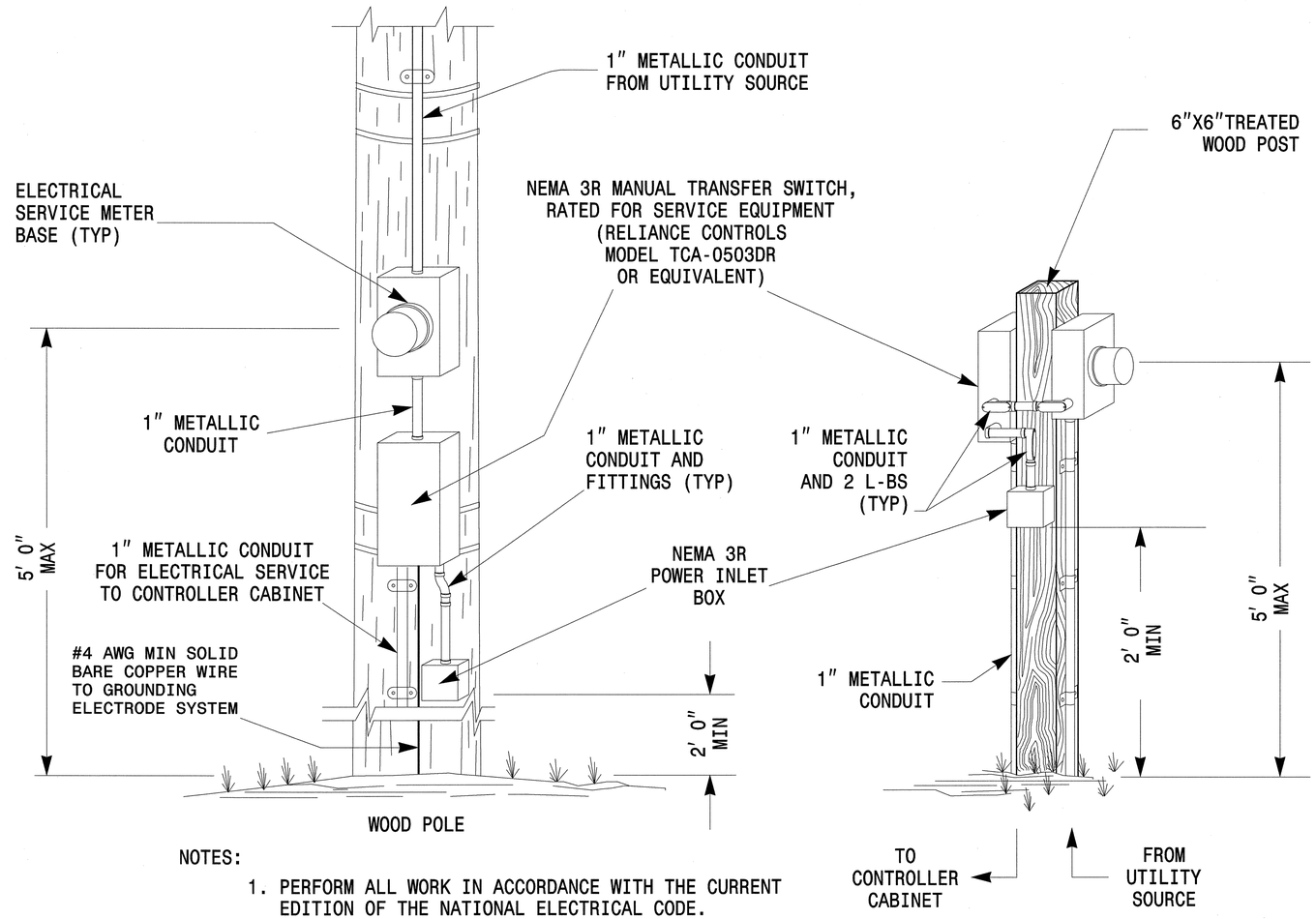
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2AR



NOTES:

1. PERFORM ALL WORK IN ACCORDANCE WITH THE CURRENT EDITION OF THE NATIONAL ELECTRICAL CODE.
2. PROVIDE LOCKABLE POWER INLET BOX WITH L14-30P THAT RETAINS NEMA 3R RAINPROOF RATING WITH GENERATOR CORD SET CONNECTED.
3. A COMBINATION METER BASE, TRANSFER SWITCH, AND POWER INLET MAY BE USED WITH APPROVAL OF THE ENGINEER.
4. REFER TO NCDOT ROADWAY STANDARD DRAWINGS 1700.01 AND 1700.02 FOR GROUNDING ELECTRODE SYSTEM REQUIREMENTS.
5. REFER TO SHEET 2AS FOR BONDING REQUIREMENTS.

TYPICAL ELECTRICAL SERVICE FOR TRAFFIC SIGNALS WITH EMERGENCY GENERATOR PROVISIONS

SHEET 1 OF 2

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE
0
NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
EMERGENCY GENERATOR DETAIL

DIVISION 7 GUILFORD COUNTY

PLAN DATE:	FEBRUARY, 2008	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J. CROSS	REVIEWED BY:	M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE 3/4/08 DATE
CADD Filename:

3/4/2008
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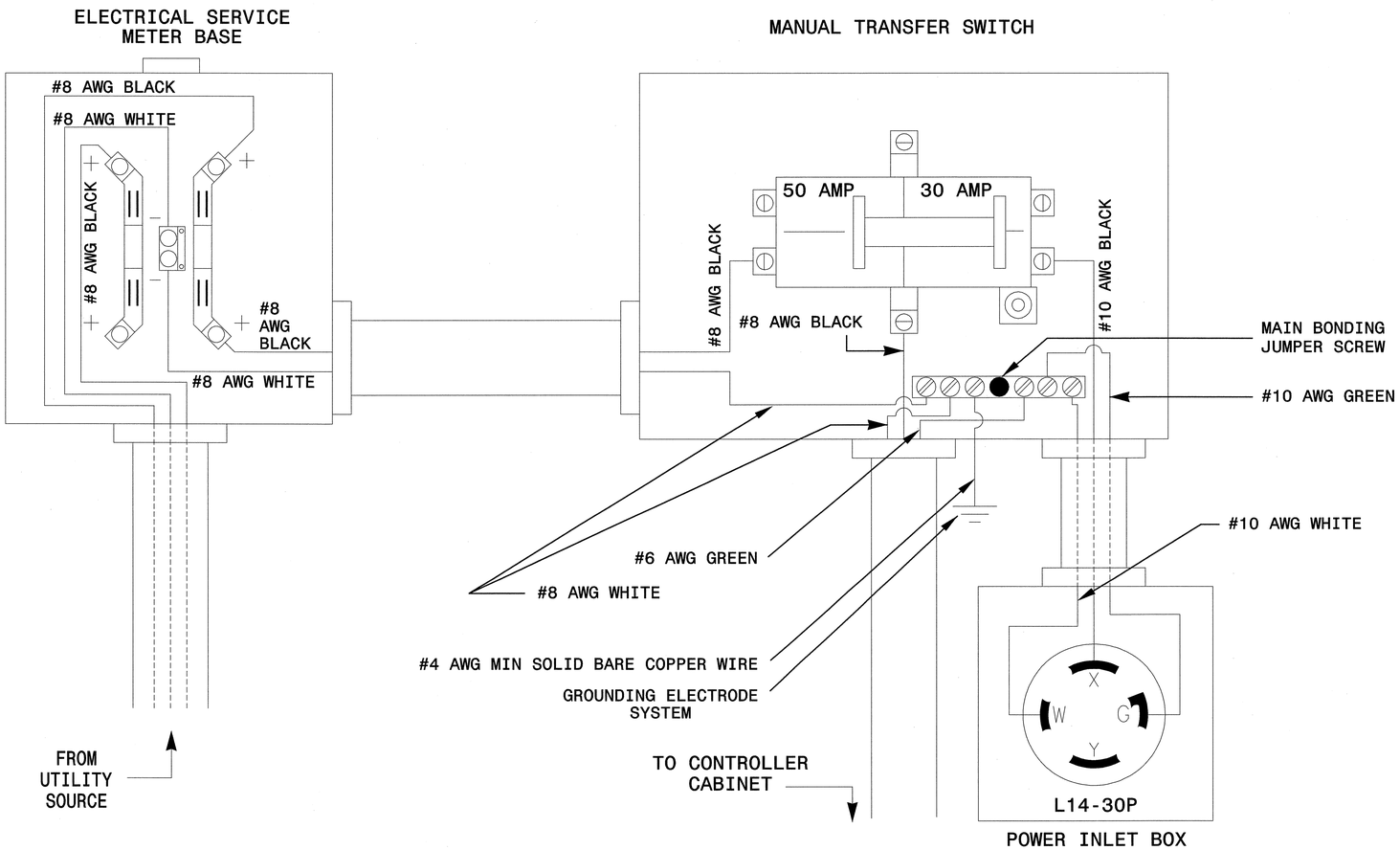
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2AS

ELECTRICAL SCHEMATIC



NOTES:
1. BOND ALL RACEWAYS AND EQUIPMENT IN ACCORDANCE WITH THE CURRENT EDITION OF THE NATIONAL ELECTRICAL CODE.
2. ALL WIRES SHOWN SHALL BE STRANDED COPPER WITH THHN INSULATION, UNLESS OTHERWISE NOTED.

TYPICAL ELECTRICAL SERVICE FOR TRAFFIC SIGNALS WITH EMERGENCY GENERATOR PROVISIONS

SHEET 2 OF 2

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 — NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
EMERGENCY GENERATOR DETAIL

DIVISION 7 — GUILFORD COUNTY

PLAN DATE:	FEBRUARY, 2008	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J. CROSS	REVIEWED BY:	M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE — DATE 2/20/08

CADD Filename:

2/20/2008
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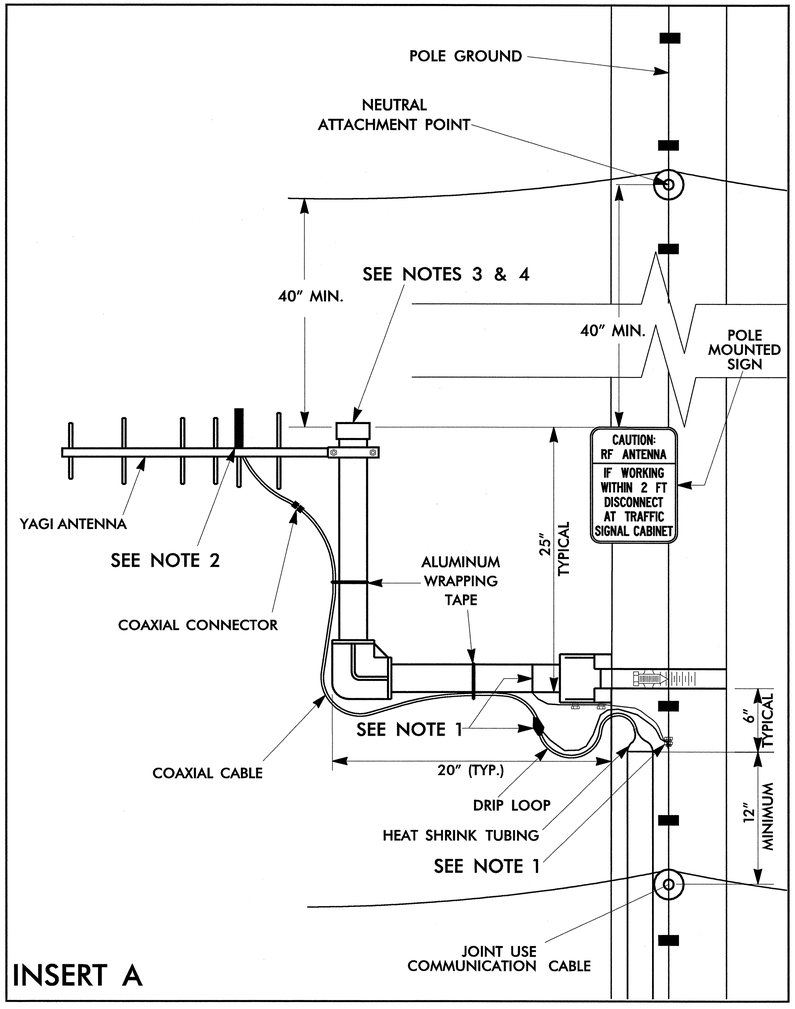
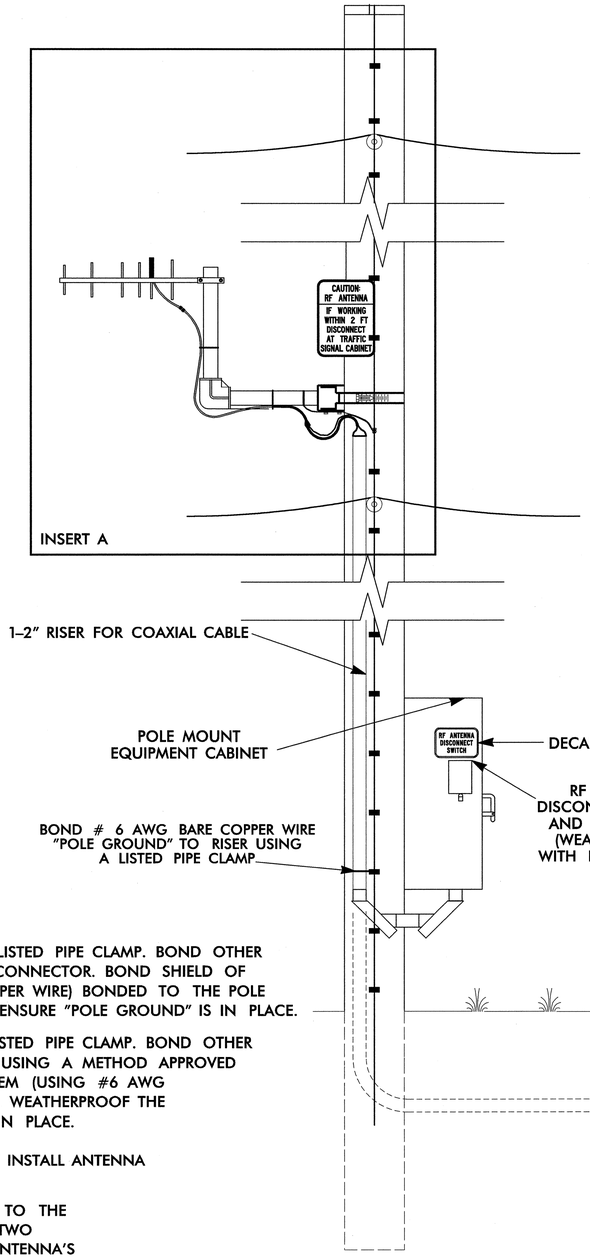
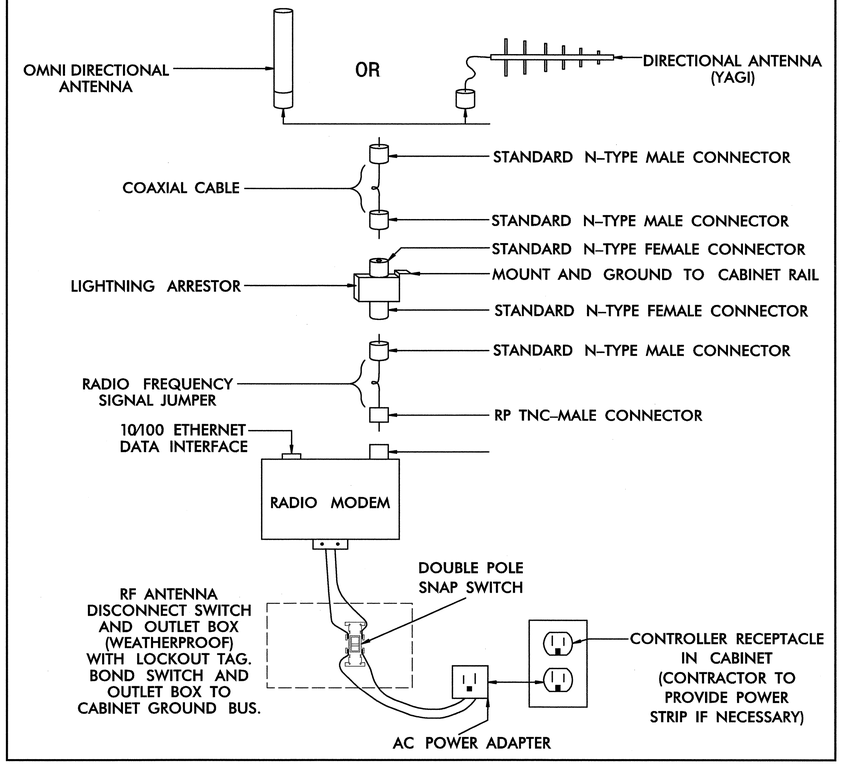
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2AT





ANTENNA AND COAXIAL CABLE CONNECTION SCHEMATIC



NOTES

1. WOOD POLE — BOND # 6 AWG SOLID BARE COPPER WIRE TO ANTENNA SUPPORT USING LISTED PIPE CLAMP. BOND OTHER END OF # 6 AWG SOLID BARE COPPER WIRE TO THE POLE GROUND USING A SPLIT BOLT CONNECTOR. BOND SHIELD OF COAXIAL CABLE WITH AN APPROVED GROUNDING SYSTEM (USING #6 AWG STRANDED COPPER WIRE) BONDED TO THE POLE GROUND. WEATHERPROOF THE CONNECTION ONCE THE GROUNDING SYSTEM IS INSTALLED. ENSURE "POLE GROUND" IS IN PLACE.

   METAL POLE — BOND # 6 AWG SOLID BARE COPPER WIRE TO ANTENNA SUPPORT USING LISTED PIPE CLAMP. BOND OTHER END OF # 6 AWG SOLID BARE COPPER WIRE TO THE POLE OR EXISTING SYSTEM GROUND USING A METHOD APPROVED BY THE ENGINEER. BOND SHIELD OF COAXIAL CABLE WITH AN APPROVED GROUNDING SYSTEM (USING #6 AWG STRANDED COPPER WIRE) BONDED TO THE POLE BY A METHOD APPROVED BY THE ENGINEER. WEATHERPROOF THE CONNECTION ONCE THE GROUNDING SYSTEM IS INSTALLED. ENSURE "SYSTEM GROUND" IS IN PLACE.

2. YAGI ANTENNA SHOWN IN VERTICAL POLARIZATION POSITION FOR CLARIFICATION. TYPICALLY INSTALL ANTENNA IN HORIZONTAL POLARIZATION POSITION.

3. TO CONSERVE VERTICAL SPACING ON THE POLE (JOINT-USE OR SIGNAL POLE) WITH REGARDS TO THE SURROUNDING UTILITIES, INSTALL THE ANTENNA MOUNTING HARDWARE USING ONE OF THE TWO METHODS LISTED BELOW: (ENSURE THAT THE MOUNTING METHOD DOES NOT DEGRADE THE ANTENNA'S SIGNAL INTEGRITY)

   A) ROTATE THE VERTICAL SUPPORT ARM 90 DEGREES SUCH THAT THE ANTENNA IS AT THE SAME HEIGHT AS THE HORIZONTAL SUPPORT ARM.

   B) ELIMINATE THE VERTICAL SUPPORT ARM AND MOUNT THE ANTENNA TO THE HORIZONTAL SUPPORT ARM.

   C) ANTENNA, ANTENNA SUPPORT ARM, AND SIGN TO MAINTAIN A 40" SEPARATION FROM NEUTRAL /POWER AND 12" FROM OTHER UTILITIES.

4. INSTALL AN END CAP TO SEAL THE EXPOSED END OF THE MOUNTING PIPE.

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Department of Transportation
750 Greenfield Pkwy., Garner, NC 27529

SCALE: 0 NONE

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

RADIO ANTENNA TYPICAL DETAILS

DIVISION 7		GUILFORD COUNTY	
PLAN DATE: FEBRUARY, 2008		REVIEWED BY: K.W. SMITH	
PREPARED BY: J. CROSS		REVIEWED BY: M.W. DUNZO	

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE 2/20/08 DATE

CADD Filename:

2/20/2008
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PROJECT REFERENCE NO.	SHEET NO.
U-4711	2AU

DECAL

SIGN NUMBER: SP05224
TYPE: DECAL
QUANTITY:

BACKG COLOR: Yellow
COPY COLOR: Black

SYMBOL	X	Y	WID	HT

SIGN WIDTH: 0′-9″
HEIGHT: 0′-6″
TOTAL AREA: 0.4 Sq.Ft.

BORDER TYPE: FLUSH
RECESS: 0″
WIDTH: 0.25″
RADII: 1″

NO. Z BARS:
LENGTH:

MAT'L: 0.063″ (1.6 mm) ALUMINUM

DESIGN BY: S PIOTROWSKI DATE: Jul 18,2005 CHECKED BY: SUSAN B. KUNZ
PROJECT ID: ID DIV:INTELLIGENT TRANSPORTATION SYSTEM

NOTE: THIS SIGN SHALL BE PRODUCED AS A DECAL

USE NOTES: 2, 4
1. Legend and border shall be direct applied Type III reflective sheeting.
2. Legend and border shall be direct applied non-reflective sheeting.
3. Shields shall be Type III reflective sheeting on 0.032″ (0.8mm) aluminum and demountable.
4. Background shall be Type III reflective sheeting.
5. Background shall be Type I reflective sheeting.
6. Center arrow(s) vertically on sign.
7. Bottom panel shall be yellow Type III sheeting. Legend shall be direct applied black non-reflective sheeting. Yellow panel is:

LETTER POSITIONS

Letter spacings are to start of next letter

													Series/Size Text Length
		R	F		A	N	T	E	N	N	A		C1
	0.9	0.8	0.5	1	0.8	0.7	0.7	0.7	0.8	0.7	0.6	0.9	7.2
		D	I	S	C	O	N	N	E	C	T		C1
	1.2	0.8	0.3	0.7	0.7	0.8	0.8	0.8	0.7	0.7	0.5	1.2	6.7
		S	W	I	T	C	H						C1
	2.6	0.7	0.9	0.3	0.7		0.5	2.6					3.9

Spacing Factor is 1 unless specified otherwise

POLE MOUNTED SIGN

SIGN NUMBER: SP05223
TYPE: D
QUANTITY:

BACKG COLOR: Yellow
COPY COLOR: Black

SYMBOL	X	Y	WID	HT
BAR	0.2	8.2	8.6	1.0

SIGN WIDTH: 0′-9″
HEIGHT: 1′-0″
TOTAL AREA: 0.8 Sq.Ft.

BORDER TYPE: FLUSH
RECESS: 0″
WIDTH: 0.2″
RADII: 1″

NO. Z BARS:
LENGTH:

MAT'L: 0.063″ (1.6 mm) ALUMINUM

DESIGN BY: M. TRACEY DATE: OCT 25, 2007 CHECKED BY: SUSAN KUNZ
PROJECT ID: DIV: INTELLIGENT TRANSPORTATION SYSTEMS

0.60 SPACING FACTOR

USE NOTES: 2, 4
1. Legend and border shall be direct applied Type III reflective sheeting.
2. Legend and border shall be direct applied non-reflective sheeting.
3. Shields shall be Type III reflective sheeting on 0.032″ (0.8mm) aluminum and demountable.
4. Background shall be Type III reflective sheeting.
5. Background shall be Type I reflective sheeting.
6. Center arrow(s) vertically on sign.
7. Bottom panel shall be yellow Type III sheeting. Legend shall be direct applied black non-reflective sheeting. Yellow panel is:

LETTER POSITIONS

Letter spacings are to start of next letter

																	Series/Size Text Length
		C	A	U	T	I	O	N	:								C
	2.3	0.6	0.7	0.6	0.6	0.3	0.7	0.7	0.1	2.3							4.4
		R	F		A	N	T	E	N	N	A						C
	1.1	0.7	0.5	1	0.7	0.6	0.6	0.6	0.7	0.6	0.6		1.2				6.7
		I	F		W	O	R	K	I	N	G						C
	1.4	0.3	0.5	1	0.8	0.7	0.7	0.6	0.3	0.7	0.5	1.4					6.1
		W	I	T	H	I	N		2		F	T					C
	1.1	0.8	0.2	0.6	0.7	0.3	0.5	1	0.5	1	0.6	0.5	1.1				6.8
		D	I	S	C	O	N	N	E	C	T						C
	1.5	0.7	0.3	0.6	0.6	0.7	0.7	0.7	0.6	0.6	0.5	1.5					6
		A	T		T	R	A	F	F	I	C						C
	1.4	0.7	0.5	1	0.6	0.6	0.7	0.6	0.6	0.3	0.5	1.4					6.2
		S	I	G	N	A	L		C	A	B	I	N	E	T		C
	0.5	0.7	0.3	0.7	0.6	0.7	0.5	0.4	0.6	0.7	0.7	0.3	0.7	0.6	0.5	0.5	7.9

Spacing Factor is 1 unless specified otherwise

2/20/2008
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PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
State of North Carolina Department of Transportation
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE
0
NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
RADIO ANTENNA TYPICAL DETAILS

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: J. CROSS	REVIEWED BY: M.W. DUNZO

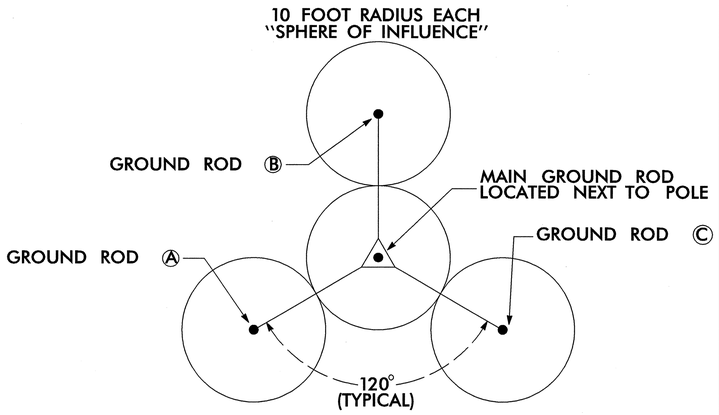
REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

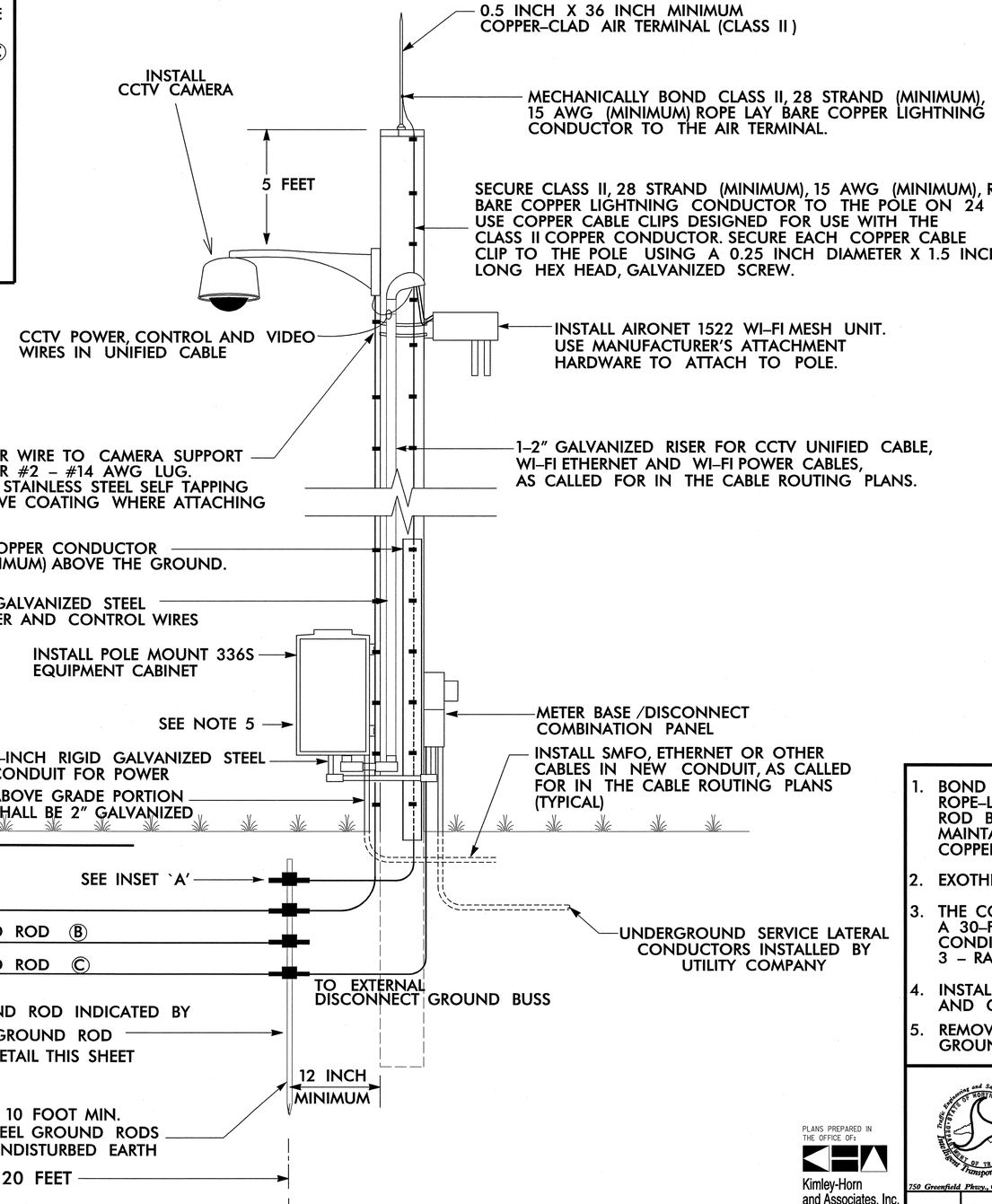
CADD Filename:

PROJECT REFERENCE NO.	SHEET NO.
U-4711	2AV



GROUND ROD PLACEMENT DETAIL

(TYPICAL EACH POLE)



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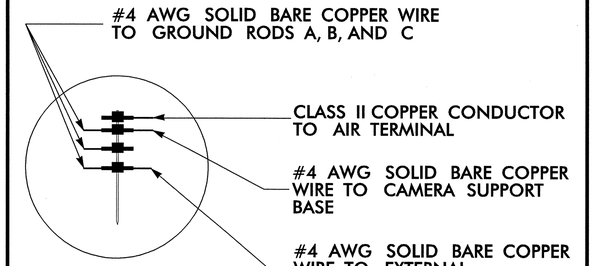

ALTERNATE GROUNDING METHOD

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

NOTES

1. BOND CLASS II, 28 STRAND (MINIMUM), 15 AWG (MINIMUM) ROPE–LAY BARE COPPER CONDUCTOR TO THE MAIN GROUND ROD BY AN EXOTHERMIC WELD METHOD. MAINTAIN MAXIMUM HORIZONTAL SEPARATION BETWEEN COPPER CONDUCTOR AND RISER.
2. EXOTHERMICALLY WELD ALL CONNECTIONS TO GROUND RODS.
3. THE CONTRACTOR MAY, UPON APPROVAL OF THE ENGINEER, INSTALL A 30–FOOT SECTIONAL GROUND ROD FOR INSTANCES WHEN CONDITIONS WILL NOT ALLOW FOR THE INSTALLATION OF THE 3 – RADIAL GROUND RODS.
4. INSTALL MARKER TAPE DIRECTLY ABOVE ALL GROUNDING ELECTRODES AND CONDUCTORS AT A DEPTH OF 12 INCHES.
5. REMOVE BONDING JUMPER BETWEEN EQUIPMENT CABINET GROUND BUSS AND NEUTRAL BUSS.

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

750 Greenfield Pkwy., Garner, NC 27529

SCALE: NONE

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE CCTV CAMERA WITH CABINET ON WOOD POLE DETAIL

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: J. CROSS — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE — DATE: 2/20/08

CADD Filename:

2/20/2008
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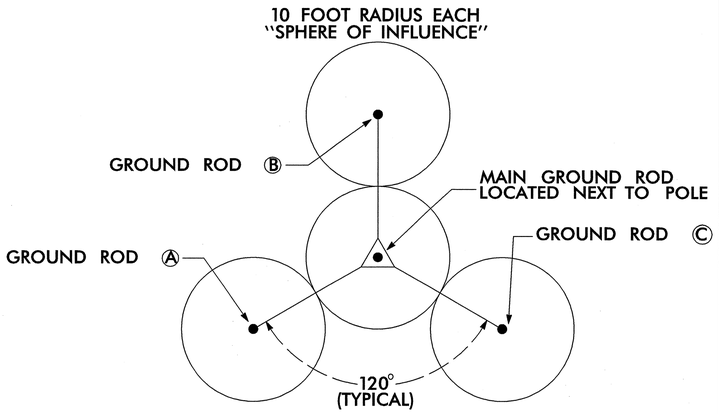
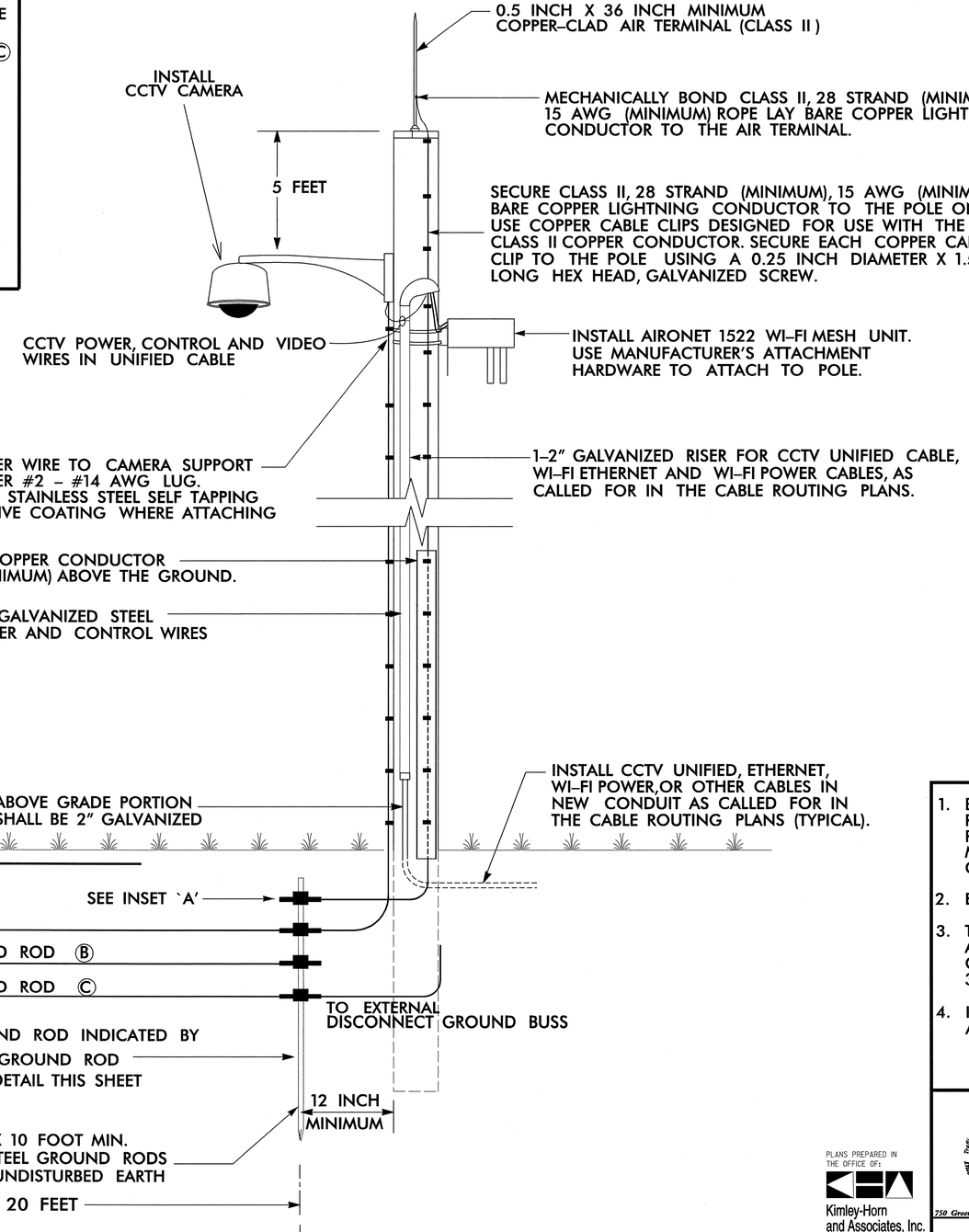
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2AW



GROUND ROD PLACEMENT DETAIL

(TYPICAL EACH POLE)



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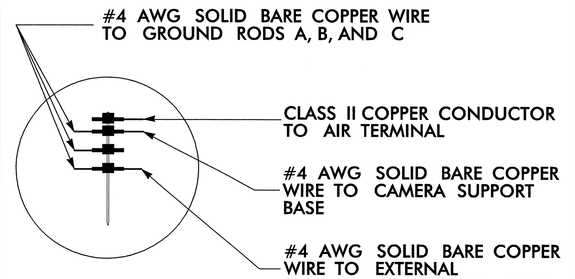
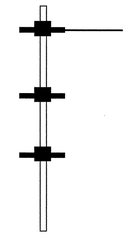


ALTERNATE GROUNDING METHOD

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

NOTES

1. BOND CLASS II, 28 STRAND (MINIMUM), 15 AWG (MINIMUM) ROPE–LAY BARE COPPER CONDUCTOR TO THE MAIN GROUND ROD BY AN EXOTHERMIC WELD METHOD. MAINTAIN MAXIMUM HORIZONTAL SEPARATION BETWEEN COPPER CONDUCTOR AND RISER.
2. EXOTHERMICALLY WELD ALL CONNECTIONS TO GROUND RODS.
3. THE CONTRACTOR MAY, UPON APPROVAL OF THE ENGINEER, INSTALL A 30–FOOT SECTIONAL GROUND ROD FOR INSTANCES WHEN CONDITIONS WILL NOT ALLOW FOR THE INSTALLATION OF THE 3 – RADIAL GROUND RODS.
4. INSTALL MARKER TAPE DIRECTLY ABOVE ALL GROUNDING ELECTRODES AND CONDUCTORS AT A DEPTH OF 12 INCHES.

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000
750 Greenfield Pkwy., Garner, NC 27529

Dept. Engineering and State Street Maintenance — Division of Traffic Engineering and Safety Systems — Traffic Management Unit — Department of Transportation

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

CCTV CAMERA WITHOUT CABINET ON WOOD POLE DETAIL

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: J. CROSS	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SCALE: 0 — NONE

SEAL — NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE — DATE: 2/20/08

CADD Filenames

2/20/2008
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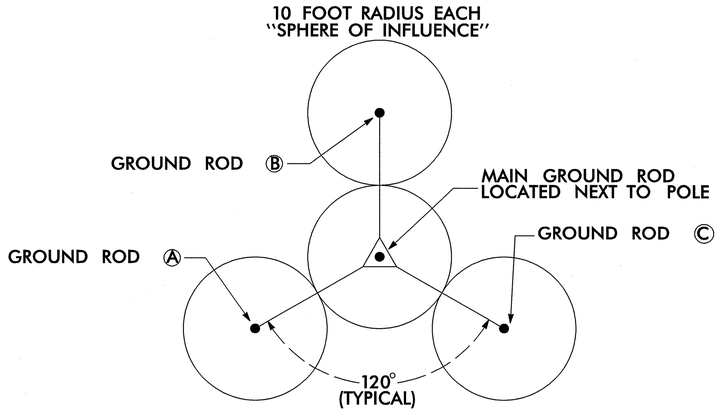
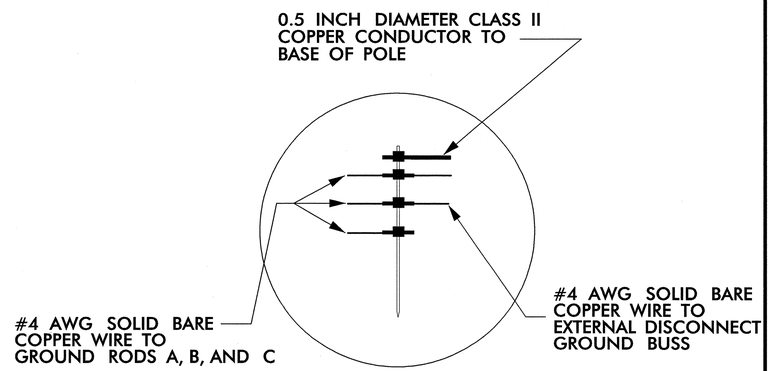
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2AX



GROUND ROD PLACEMENT DETAIL
(TYPICAL EACH POLE)



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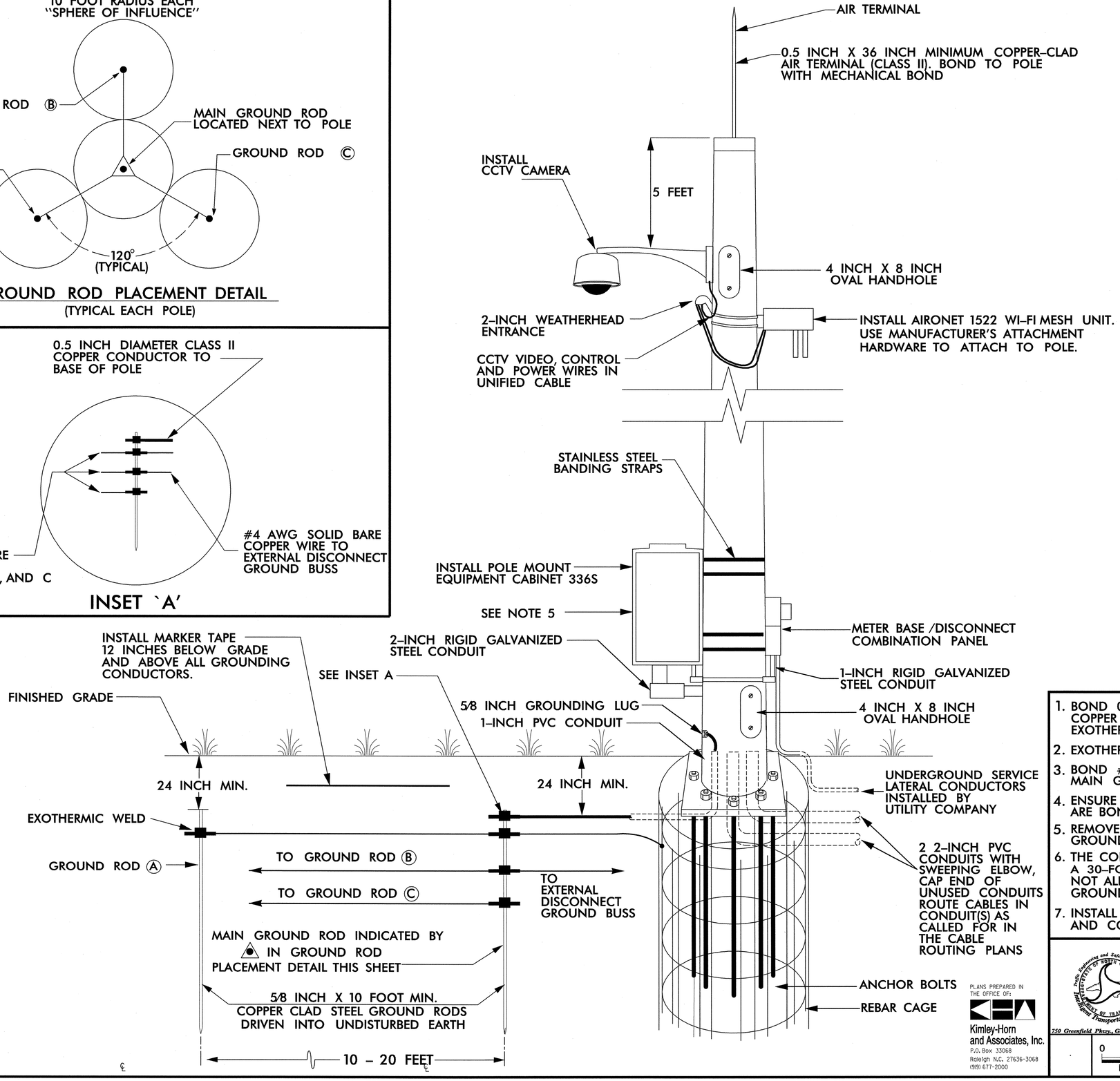
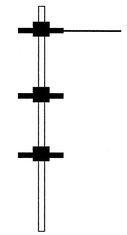


ALTERNATE GROUNDING METHOD

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

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. ENSURE CAMERA HOUSING, CAMERA, AND PAN -TILT UNIT ARE BONDED TO POLE.
5. REMOVE BONDING JUMPER BETWEEN EQUIPMENT CABINET GROUND BUSS AND NEUTRAL BUSS.
6. 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.
7. INSTALL MARKER TAPE DIRECTLY ABOVE ALL GROUNDING ELECTRODES AND CONDUCTORS AT A DEPTH OF 12 INCHES.

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

750 Greenfield Pkwy., Garner, NC 27529

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
CCTV CAMERA WITH CABINET
ON METAL POLE

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: J. CROSS	REVIEWED BY: M.W. DUNZO

SCALE: 0 — NONE

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL
SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE — DATE
CADD Filename:

2/20/2008
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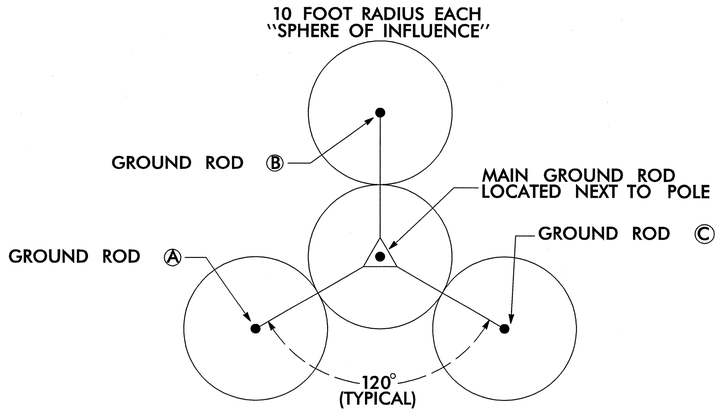
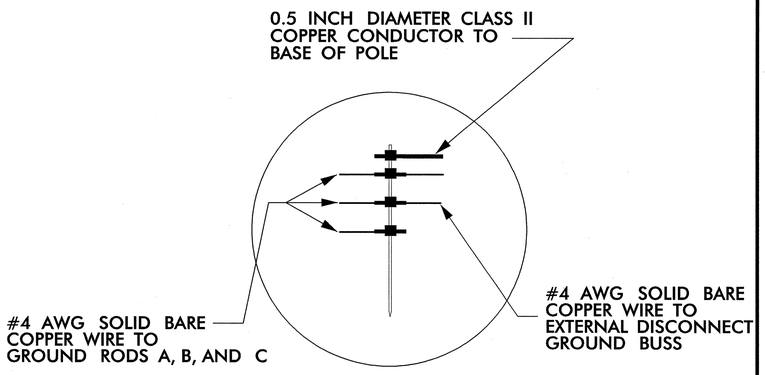
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2AY



GROUND ROD PLACEMENT DETAIL
(TYPICAL EACH POLE)



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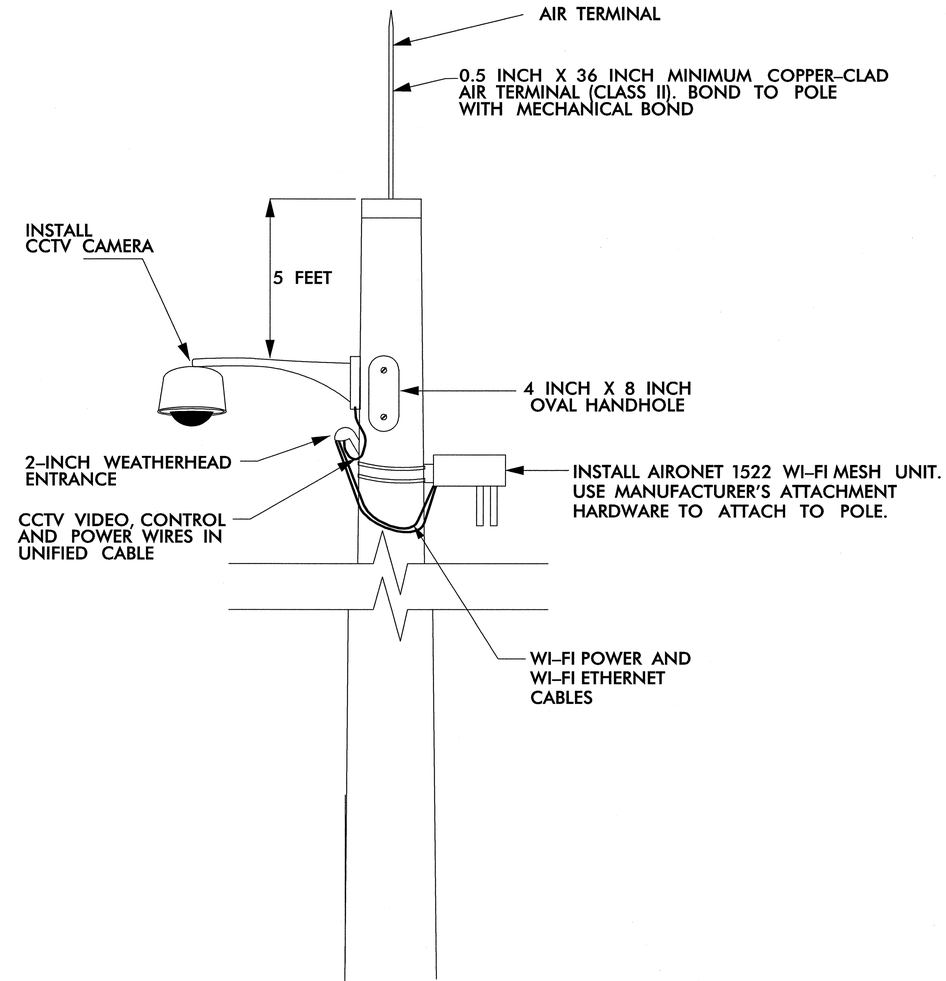

ALTERNATE GROUNDING METHOD

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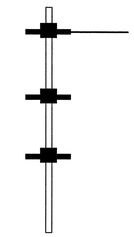
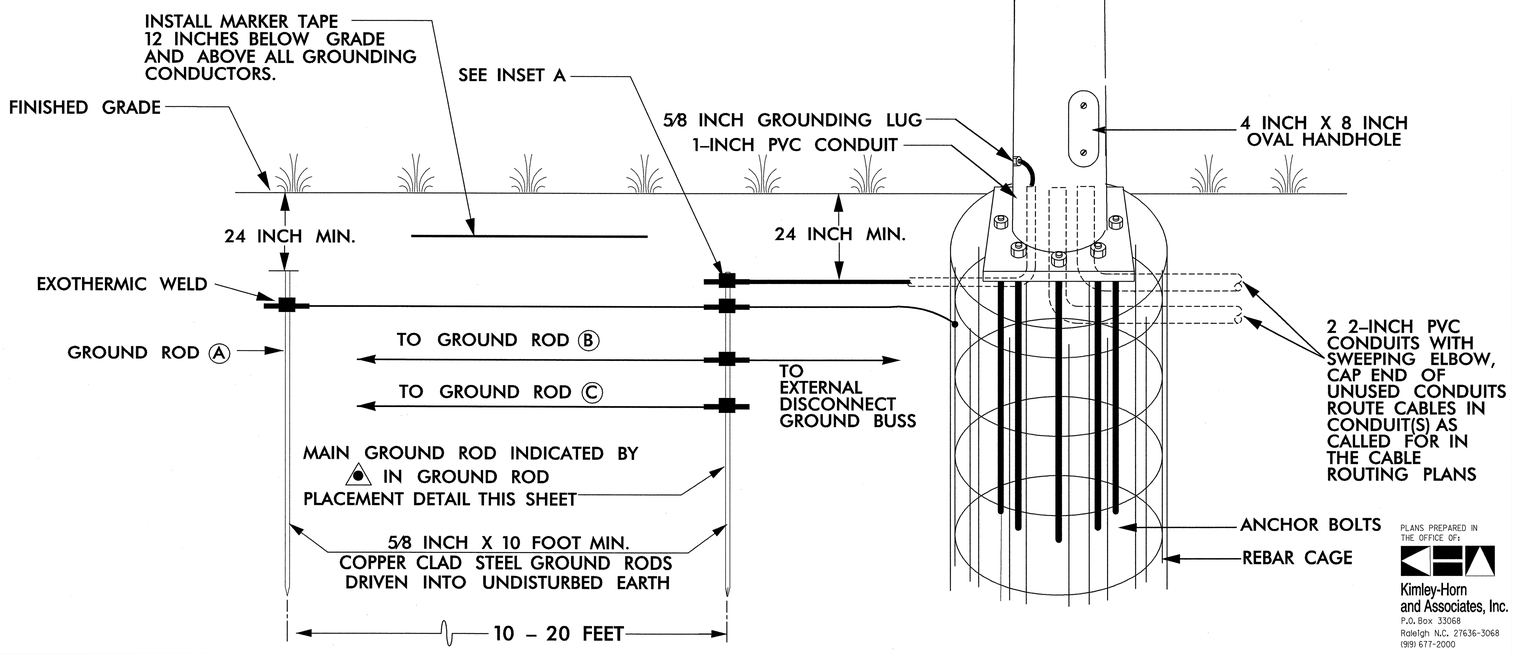


JOIN SECTIONAL GROUND RODS BY EXOTHERMIC WELDING CONNECTION



NOTES

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6. INSTALL MARKER TAPE DIRECTLY ABOVE ALL GROUNDING ELECTRODES AND CONDUCTORS AT A DEPTH OF 12 INCHES.

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE
0
NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
CCTV CAMERA WITHOUT CABINET
ON METAL POLE

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: J. CROSS	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filename:

2/20/2008
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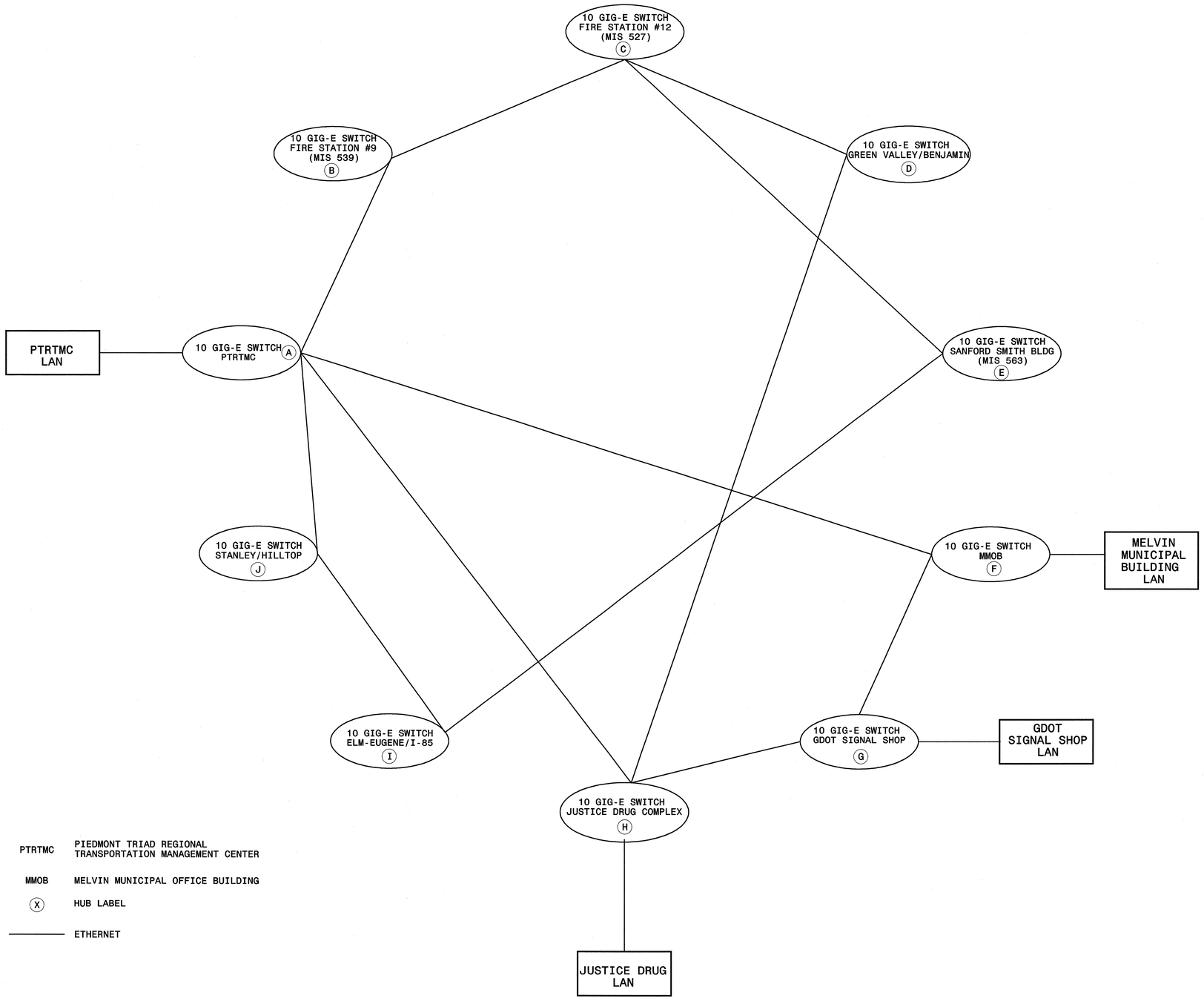
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2AZ



PTRTMC PIEDMONT TRIAD REGIONAL TRANSPORTATION MANAGEMENT CENTER

MMOB MELVIN MUNICIPAL OFFICE BUILDING

(X) HUB LABEL

ETHERNET

10 GIG-E SWITCH BACKBONE TOPOLOGY

NOTE

ADDITIONAL DESCRIPTION AND SCHEMATIC DIAGRAMS SHOWN IN SHEET 1B-1N OF VOLUMES 4 AND 5 OF PLAN SET.

2/20/2008 I:\Systems\projects\0l\462020 (g-boro mis\details-mis\DTL-Sht22AZ.dgn

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Prefer Engineering and Safety Sense and Service
DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE: 0 — NONE

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

NETWORK BACKBONE TOPOLOGY

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 REVIEWED BY: K.W. SMITH

PREPARED BY: J. CROSS REVIEWED BY: M.W. DUNZO

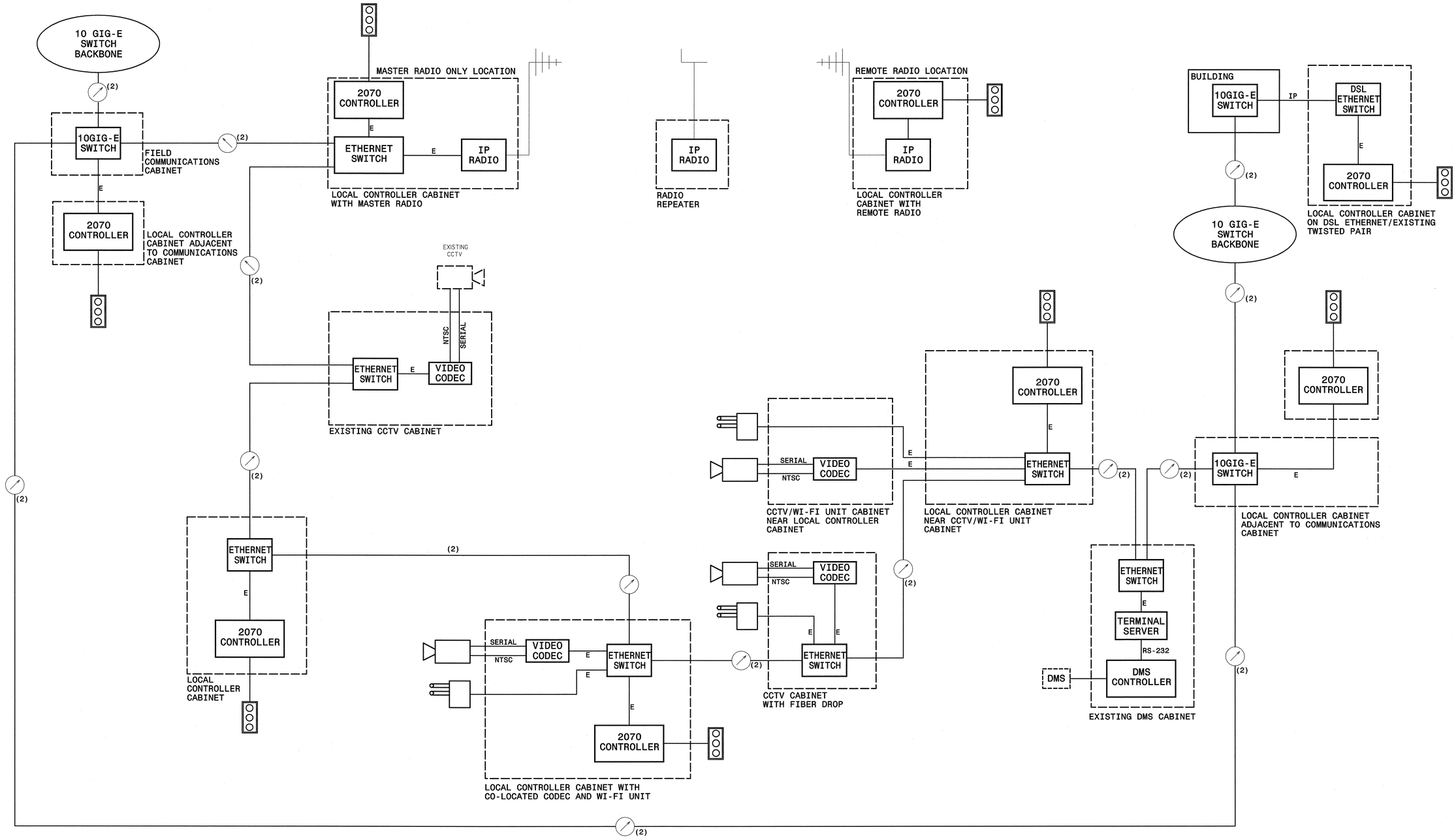
REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filenames:

PROJECT REFERENCE NO.	SHEET NO.
U-4711	2BA



LEGEND

	EXISTING CCTV		YAGI ANTENNA FOR RADIO
	NEW CCTV		OMNI DIRECTIONAL ANTENNA FOR RADIO
	WI-FI HOTSPOT UNIT	DMS	EXISTING DMS
E	ETHERNET	IP	INTERNET PROTOCOL
CODEC	ENCODER/DECODER		

NOTE: NOT ALL POSSIBLE CABINET/COMPONENT CONFIGURATIONS SHOWN.

PLANS PREPARED IN THE OFFICE OF:

Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE
0
NONE

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
LOCAL CHANNEL LAYOUT (TYPICAL)

DIVISION 7 GUILFORD COUNTY

PLAN DATE:	FEBRUARY, 2008	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J. CROSS	REVIEWED BY:	M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filename:

2/20/2008
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PROJECT REFERENCE NO.	SHEET NO.
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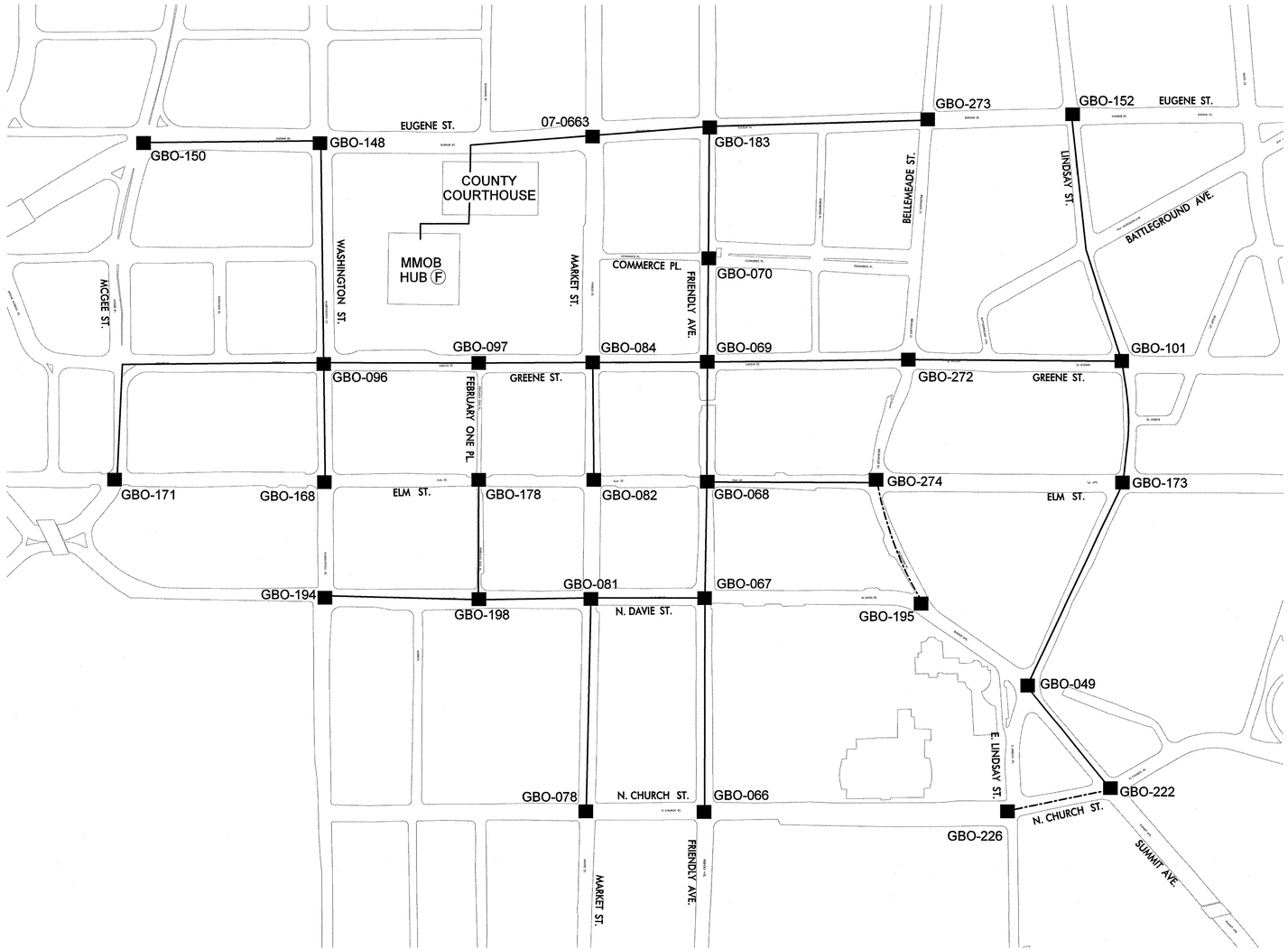

LEGEND

- - - - - NEW SMFO CABLE

——— EXISTING CABLE

NOTE:
USE EXISTNG TWISTED PAIR CABLE AND NEW FIBER OPTIC CABLE TO INTERCONNECT SHOWN CBD CABINETS. SPLICE IN ACCORDANCE WITH SPLICE DETAILS

PLANS PREPARED IN THE OFFICE OF:

Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE
0
NONE

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CBD TWISTED PAIR INTERCONNECT DIAGRAM

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: J. CROSS	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filename:

2/20/2008
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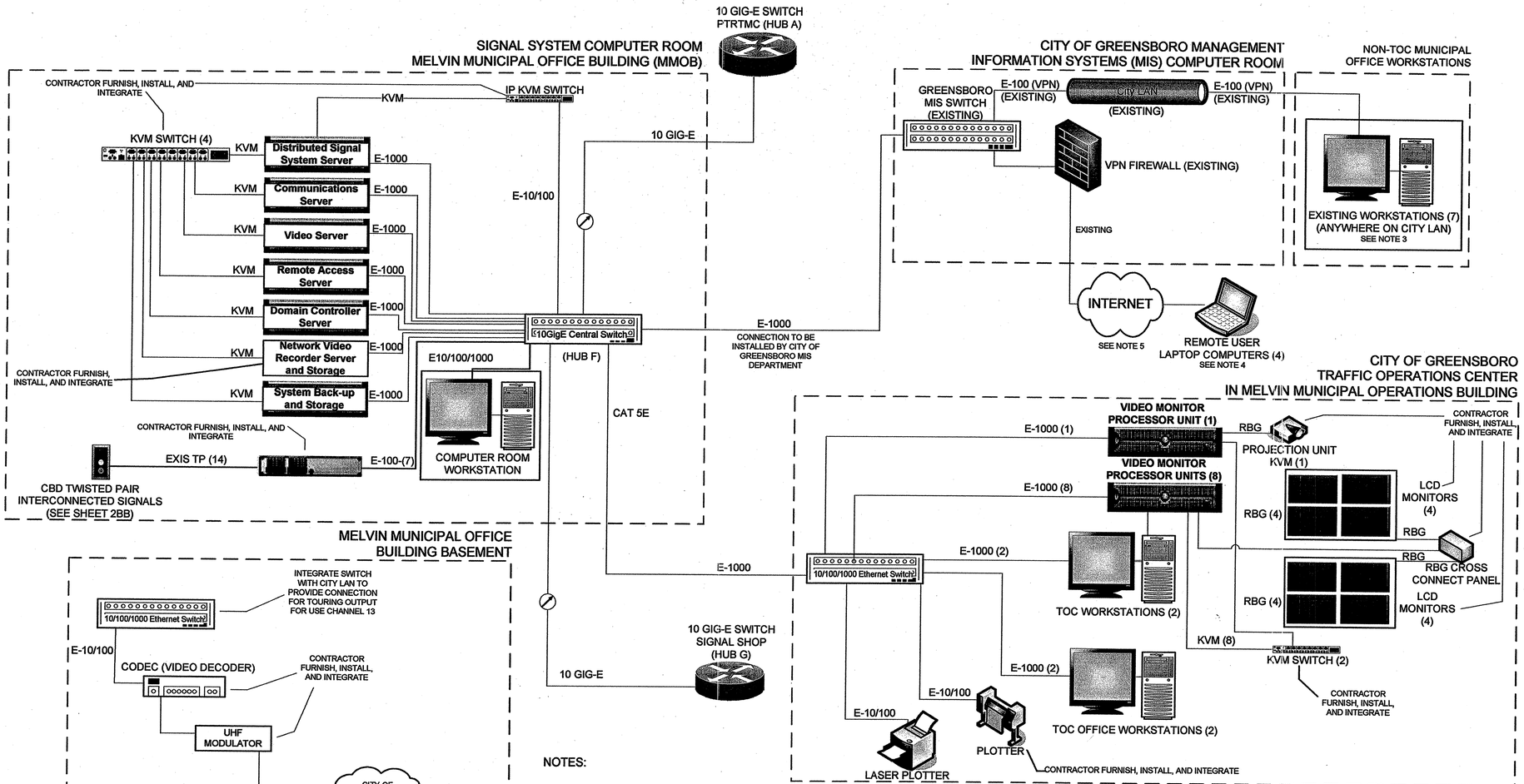
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2BC

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE: MELVIN MUNICIPAL BUILDING



NOTES:

1. UNLESS OTHERWISE NOTED IN THE PLANS OR PROJECT SPECIAL PROVISIONS, EQUIPMENT SHOWN SHALL BE FURNISHED TO THE CONTRACTOR BY THE CITY OF GREENSBORO VIA THE PROCESS AND PROCEDURES DESCRIBED IN THE PROJECT SPECIAL PROVISIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND INTEGRATING EQUIPMENT AS SHOWN IN THE PLANS AND AS DESCRIBED IN THE PROJECT SPECIAL PROVISIONS.
2. UNLESS ITEM IS IDENTIFIED AS EXISTING, IT IS TO BE FURNISHED BY THE CONTRACTOR AS NOTED OR TO BE FURNISHED BY THE CITY.
3. INTEGRATE EXISTING CITY OF GREENSBORO WORKSTATIONS DESIGNATED BY THE ENGINEER WITH TRAFFIC SIGNAL SYSTEM HARDWARE AND INSTALL CLIENT SOFTWARE AS CALLED FOR IN THE PROJECT SPECIAL PROVISIONS. PROVISION EXISTING WORKSTATIONS FOR BOTH DIRECT LAN ACCESS AND VPN ACCESS TO THE SOFTWARE APPLICATIONS FURNISHED UNDER THIS PROJECT.
4. INTEGRATE LAPTOP COMPUTERS FURNISHED BY THE CITY FOR BOTH DIRECT LAN ACCESS AND VPN ACCESS TO THE APPLICATION SERVERS. PROVISION LAPTOP COMPUTERS FOR BOTH DIRECT LAN ACCESS AND VPN ACCESS TO THE SOFTWARE APPLICATIONS FURNISHED UNDER THIS PROJECT.
5. UTILIZE EXISTING CITY OF GREENSBORO INTERNET CONNECTIONS, FIREWALL, AND CITRIX ™ BASED REMOTE ACCESS SOLUTIONS TO PROVIDE BOTH CITRIX ™ BASED AND VPN BASED REMOTE ACCESS CONNECTIVITY.

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

750 Greenfield Pkwy., Garner, NC 27529

SCALE: 0 INONE:

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE BLOCK DIAGRAM MELVIN MUNICIPAL BUILDING

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: S. BRANNUM	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE 2/20/08 DATE
CADD Filename:

2/20/2008
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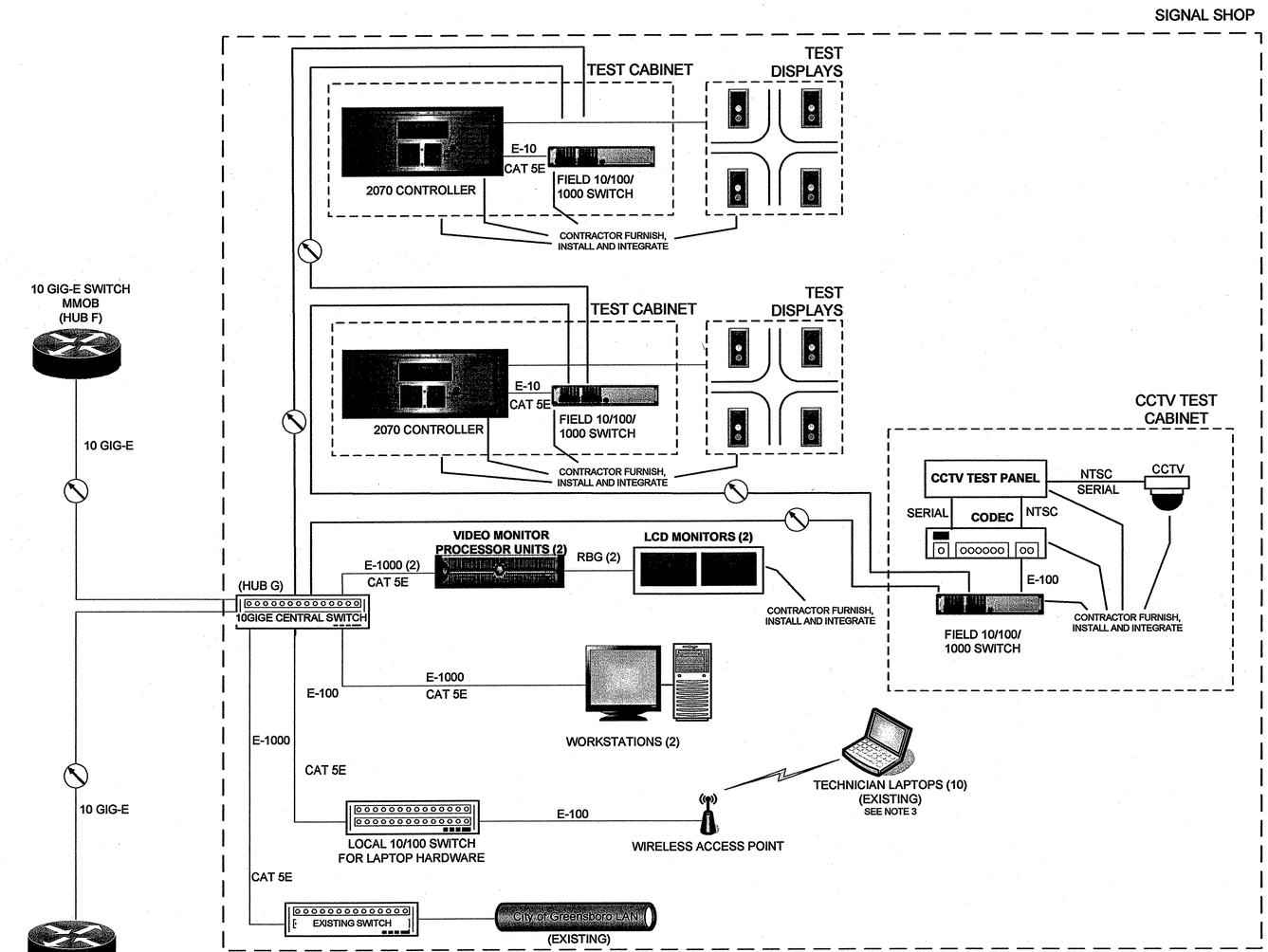
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2BD

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE: GDOT SIGNAL SHOP



NOTES:

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2. UNLESS ITEM IS IDENTIFIED AS EXISTING, IT IS TO BE FURNISHED BY THE CONTRACTOR AS NOTED OR TO BE FURNISHED BY THE CITY.
3. INTEGRATE EXISTING CITY OF GREENSBORO TECHNICIAN LAPTOP COMPUTERS FOR BOTH DIRECT LAN ACCESS AND VPN ACCESS TO THE APPLICATION SERVERS. PROVISION EXISTING TECHNICIAN LAPTOP COMPUTERS FOR BOTH DIRECT LAN ACCESS AND VPN ACCESS TO THE SOFTWARE APPLICATIONS FURNISHED UNDER THIS PROJECT.

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE: 0 — NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
BLOCK DIAGRAM
GDOT SIGNAL SHOP

DIVISION 7 — GUILFORD COUNTY

PLAN DATE:	FEBRUARY, 2008	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S. BRANNUM	REVIEWED BY:	M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE — DATE 2/20/08

CADD Filename:

2/20/2008
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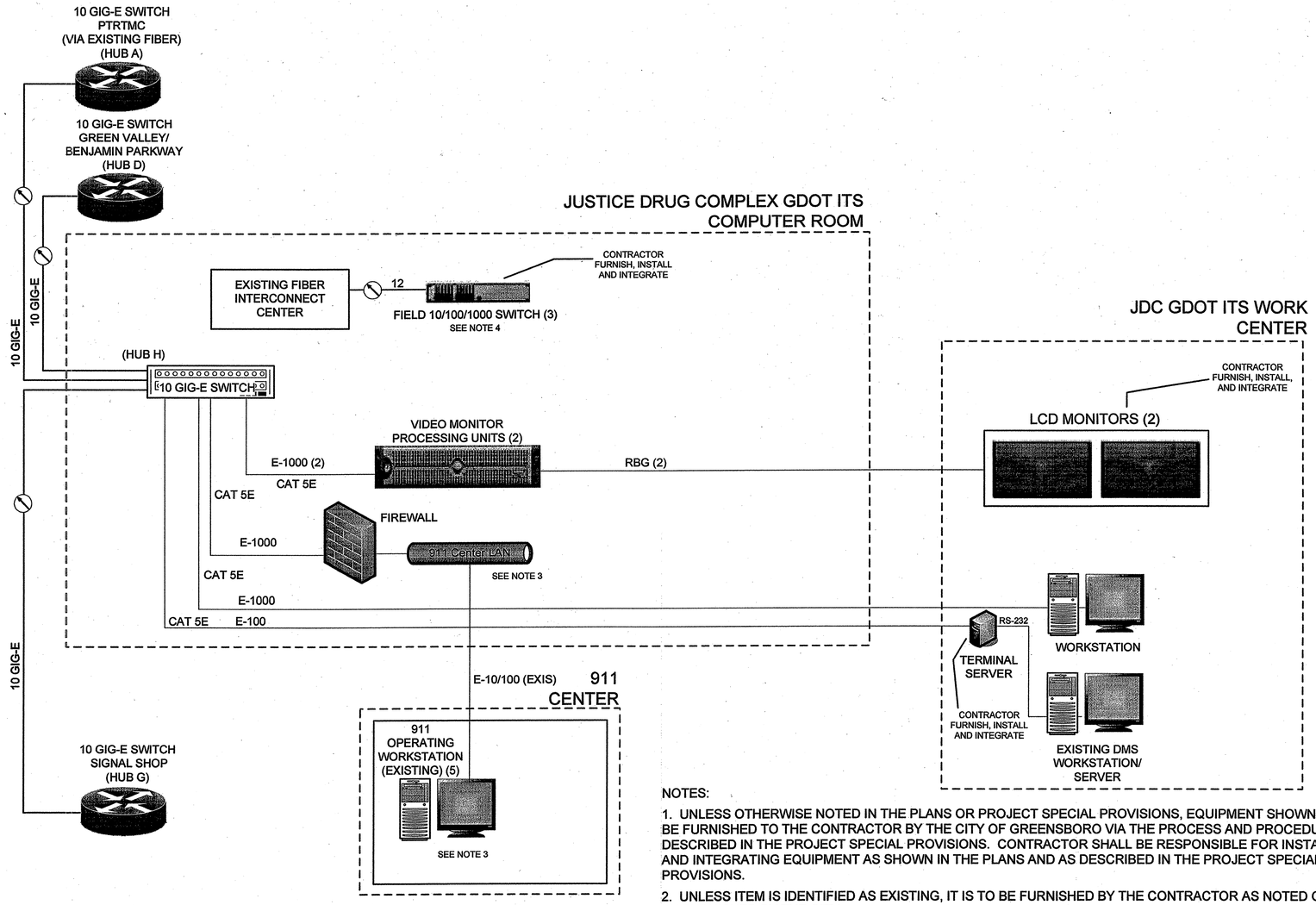
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2BE

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE: JUSTICE DRUG COMPLEX



NOTES:

1. UNLESS OTHERWISE NOTED IN THE PLANS OR PROJECT SPECIAL PROVISIONS, EQUIPMENT SHOWN SHALL BE FURNISHED TO THE CONTRACTOR BY THE CITY OF GREENSBORO VIA THE PROCESS AND PROCEDURES DESCRIBED IN THE PROJECT SPECIAL PROVISIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND INTEGRATING EQUIPMENT AS SHOWN IN THE PLANS AND AS DESCRIBED IN THE PROJECT SPECIAL PROVISIONS.

2. UNLESS ITEM IS IDENTIFIED AS EXISTING, IT IS TO BE FURNISHED BY THE CONTRACTOR AS NOTED OR TO BE FURNISHED BY THE CITY.

3. CONFIGURE ROUTERS AND FIREWALLS TO SEGMENT 911 OPERATOR WORKSTATIONS FROM TRAFFIC SIGNAL SYSTEM LAN AS CALLED FOR IN THE PROJECT SPECIAL PROVISIONS TO ALLOW 911 OPERATOR ACCESS TO CCTV VIEW AND CONTROL VIA THEIR EXISTING WORKSTATIONS.

4. GIGABIT FIELD ETHERNET SWITCHES FOR MID-GROUP REPEAT OF GROUP GI26 CONNECTIONS TO HUB I, MID-GROUP REPEAT OF FIELD ETHERNET SWITCH TO FIELD ETHERNET SWITCH CONNECTION WITHIN GROUP GI26 AND REPEAT OF GROUP BD19 CONNECTION TO HUB D. SEE SPLICE DETAILS FOR ADDITIONAL INFORMATION.

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE
0
NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
BLOCK DIAGRAM
JUSTICE DRUG COMPLEX
DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: S. BRANNUM	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/21/08 DATE

CADD Filename:

2/21/2008
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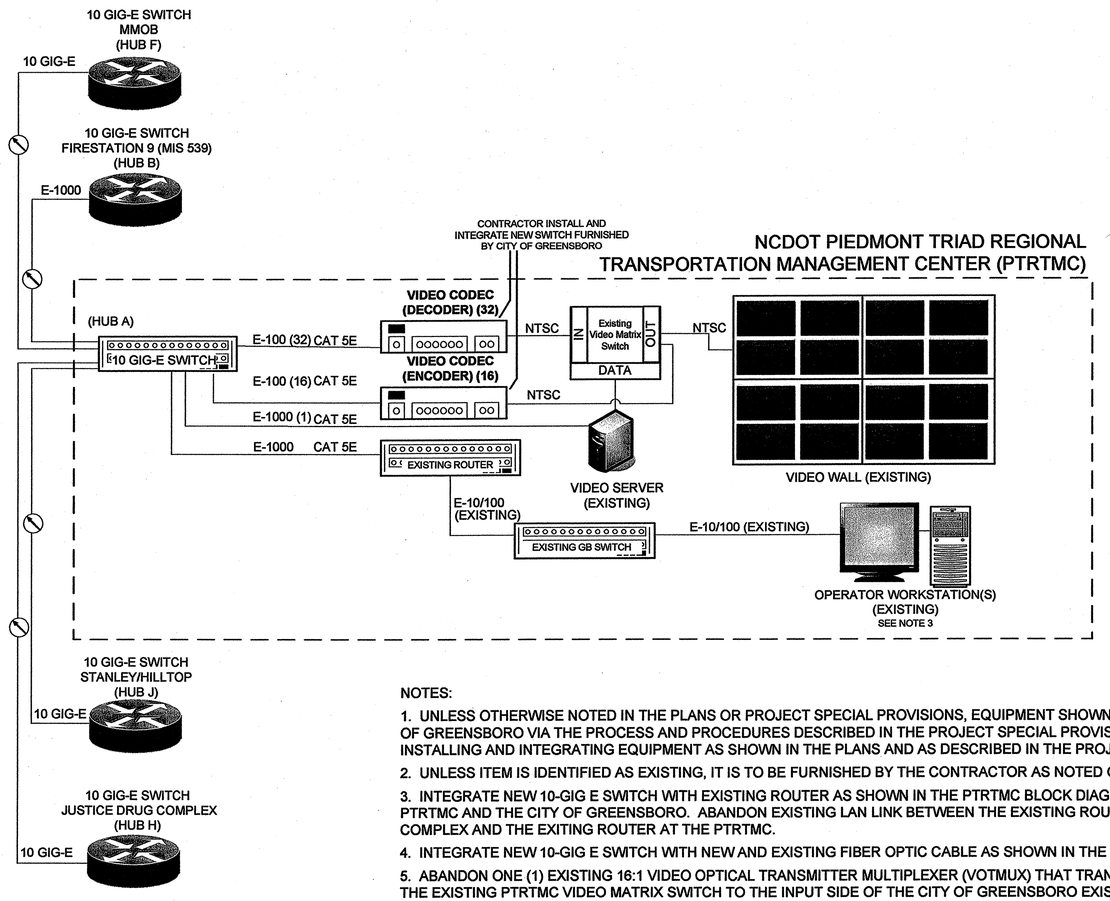
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2BF

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE: PIEDMONT TRIAD REGIONAL TRANSPORTATION MANAGEMENT CENTER (PTRTMC)



NOTES:

1. UNLESS OTHERWISE NOTED IN THE PLANS OR PROJECT SPECIAL PROVISIONS, EQUIPMENT SHOWN SHALL BE FURNISHED TO THE CONTRACTOR BY THE CITY OF GREENSBORO VIA THE PROCESS AND PROCEDURES DESCRIBED IN THE PROJECT SPECIAL PROVISIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING AND INTEGRATING EQUIPMENT AS SHOWN IN THE PLANS AND AS DESCRIBED IN THE PROJECT SPECIAL PROVISIONS.

2. UNLESS ITEM IS IDENTIFIED AS EXISTING, IT IS TO BE FURNISHED BY THE CONTRACTOR AS NOTED OR TO BE FURNISHED BY THE CITY.

3. INTEGRATE NEW 10-GIG E SWITCH WITH EXISTING ROUTER AS SHOWN IN THE PTRTMC BLOCK DIAGRAM TO SERVE AS NEW LAN CONNECTION BETWEEN THE PTRTMC AND THE CITY OF GREENSBORO. ABANDON EXISTING LAN LINK BETWEEN THE EXISTING ROUTER AT THE CITY OF GREENSBORO JUSTICE DRUG COMPLEX AND THE EXITING ROUTER AT THE PTRTMC.

4. INTEGRATE NEW 10-GIG E SWITCH WITH NEW AND EXISTING FIBER OPTIC CABLE AS SHOWN IN THE SPLICE DETAILS.

5. ABANDON ONE (1) EXISTING 16:1 VIDEO OPTICAL TRANSMITTER MULTIPLEXER (VOTMUX) THAT TRANSMITS NTSC VIDEO SIGNALS FROM THE OUTPUT SIDE OF THE EXISTING PTRTMC VIDEO MATRIX SWITCH TO THE INPUT SIDE OF THE CITY OF GREENSBORO EXISTING VIDEO MATRIX SWITCH (THAT WILL BE ABANDONED UNDER THIS PROJECT) AT THE JUSTICE DRUG COMPLEX. THIS VIDEO WILL BE TRANSMITTED DIGITALLY VIA THE VIDEO CODECS (ENCODERS) AND THE DIGITAL COMMUNICATIONS NETWORK INSTALLED AND INTEGRATED UNDER THIS PROJECT.

6. ABANDON TWO (2) EXISTING 1:16 VIDEO OPTICAL TRANSMITTER DE-MULTIPLEXERS (VOTDEMUX) THAT RECEIVES NTSC VIDEO SIGNALS FROM THE OUTPUT SIDE OF THE EXISTING OF THE CITY OF GREENSBORO EXISTING VIDEO MATRIX SWITCH (THAT WILL BE ABANDONED UNDER THIS PROJECT) AT THE JUSTICE DRUG COMPLEX AND TRANSMITS THEM ON THE INPUT SIDE OF THE PTRTMC VIDEO MATRIX SWITCH. THIS VIDEO WILL BE RECEIVED DIGITALLY VIA THE VIDEO CODECS (DECODERS) AND THE DIGITAL COMMUNICATIONS NETWORK INSTALLED AND INTEGRATED UNDER THIS PROJECT.

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
Traffic Management Unit
NCDEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE: 0 NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
BLOCK DIAGRAM
NCDOT PTRTMC

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: S. BRANNUM	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE 2/20/08 DATE
CADD Filenames

2/20/2008
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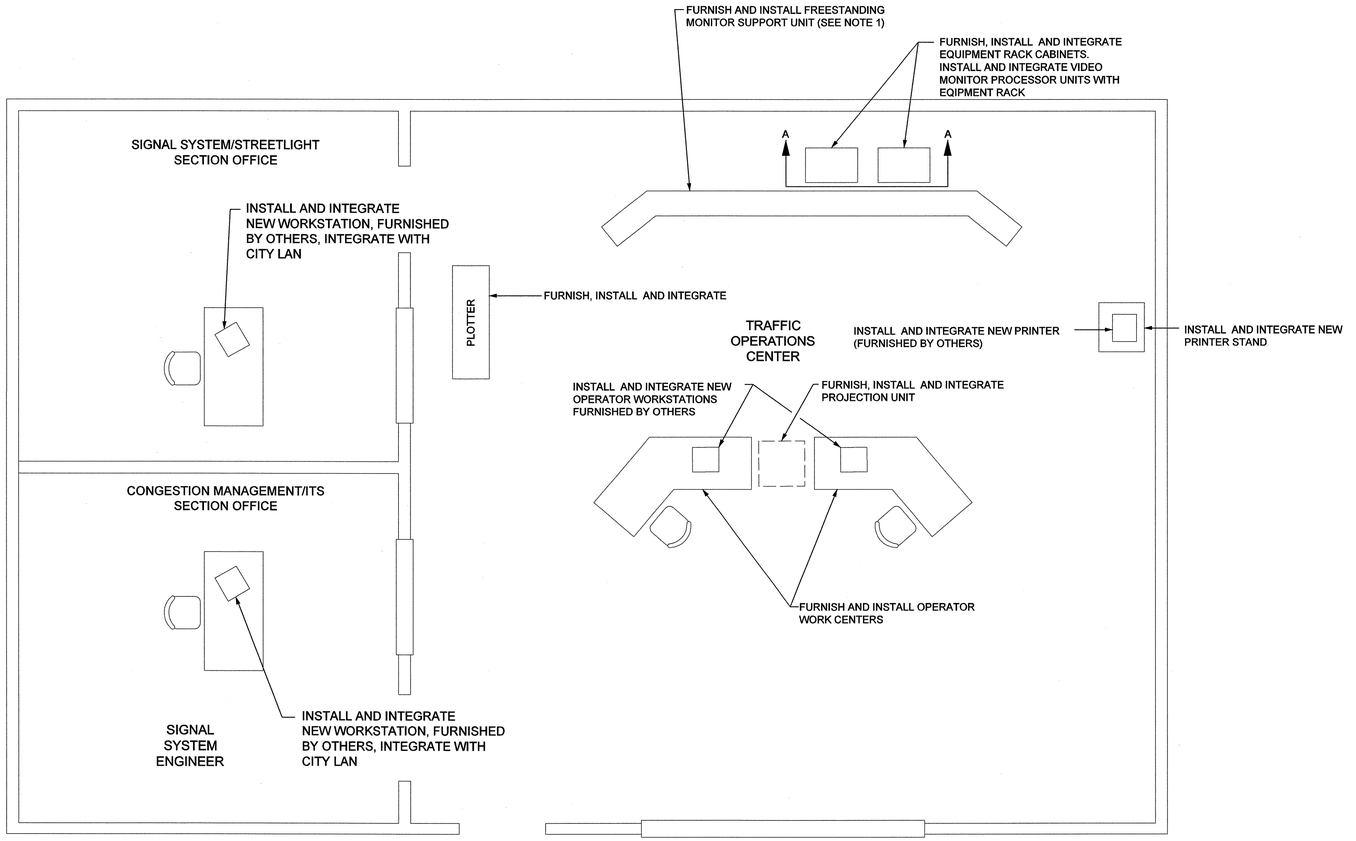
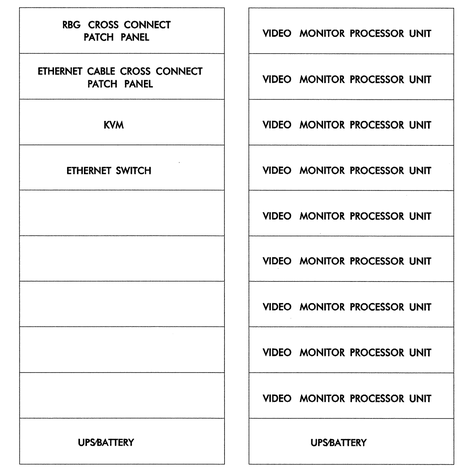
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2BG



TRAFFIC OPERATIONS CENTER
IN MELVIN MUNICIPAL OFFICE BUILDING



SECTION A-A

NOTES

1. PROVIDE SHOP DRAWINGS FOR FREESTANDING MONITOR UNIT TO ENGINEER PRIOR TO FABRICATION. FABRICATE AND INSTALL UNIT IN ACCORD WITH PROJECT SPECIAL PROVISIONS.
2. FURNISH, INSTALL, AND/ OR INTEGRATE ITEMS AS CALLED FOR ON SHEET 2BC UNLESS OTHERWISE NOTED.
3. FURNISH, INSTALL, AND INTEGRATE UPS/BATTERY UNITS WITH RACKS AND EQUIPMENT.
4. FURNISH, INSALL, AND INTEGRATE KVM SWITCH WITH VIDEO MONITOR PROCESSOR UNITS (FURNISHED BY OTHERS).
5. INTEGRATE OPERATOR WORKSTATIONS (FURNISHED BY OTHERS) WITH LCD VIDEO MONITOR, PATCH PANELS, AND UPS UNITS.
6. INTEGRATE OPERATOR WORKSTATIONS (FURNISHED BY OTHERS), PRINTERS AND PLOTTER WITH ETHERNET SWITCH.

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE
0
NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
TRAFFIC OPERATIONS CENTER

DIVISION 7 GUILFORD COUNTY

PLAN DATE:	FEBRUARY, 2008	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J. CROSS	REVIEWED BY:	M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filename:

2/20/2008
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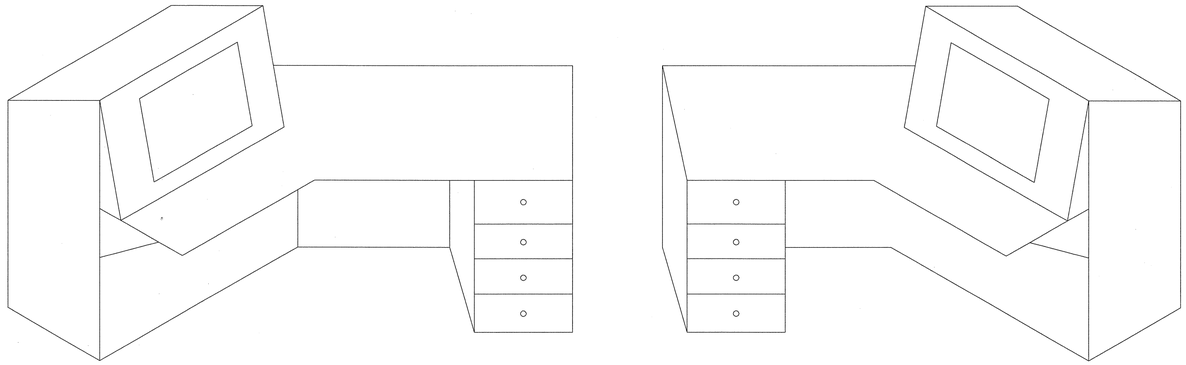
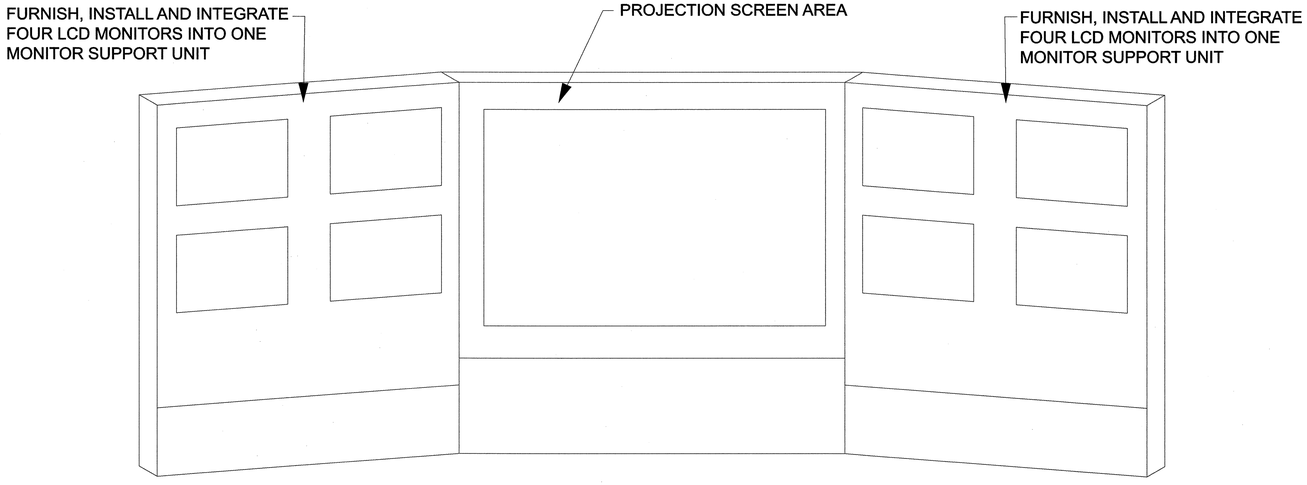
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2BH



SYSTEM OPERATOR WORKCENTER
ELEVATION



VIDEO WALL

MELVIN MUNICIPAL OFFICE BUILDING
TRAFFIC OPERATIONS BUILDING

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE
0
NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
TRAFFIC OPERATIONS CENTER

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: J. CROSS	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filename:

2/20/2008
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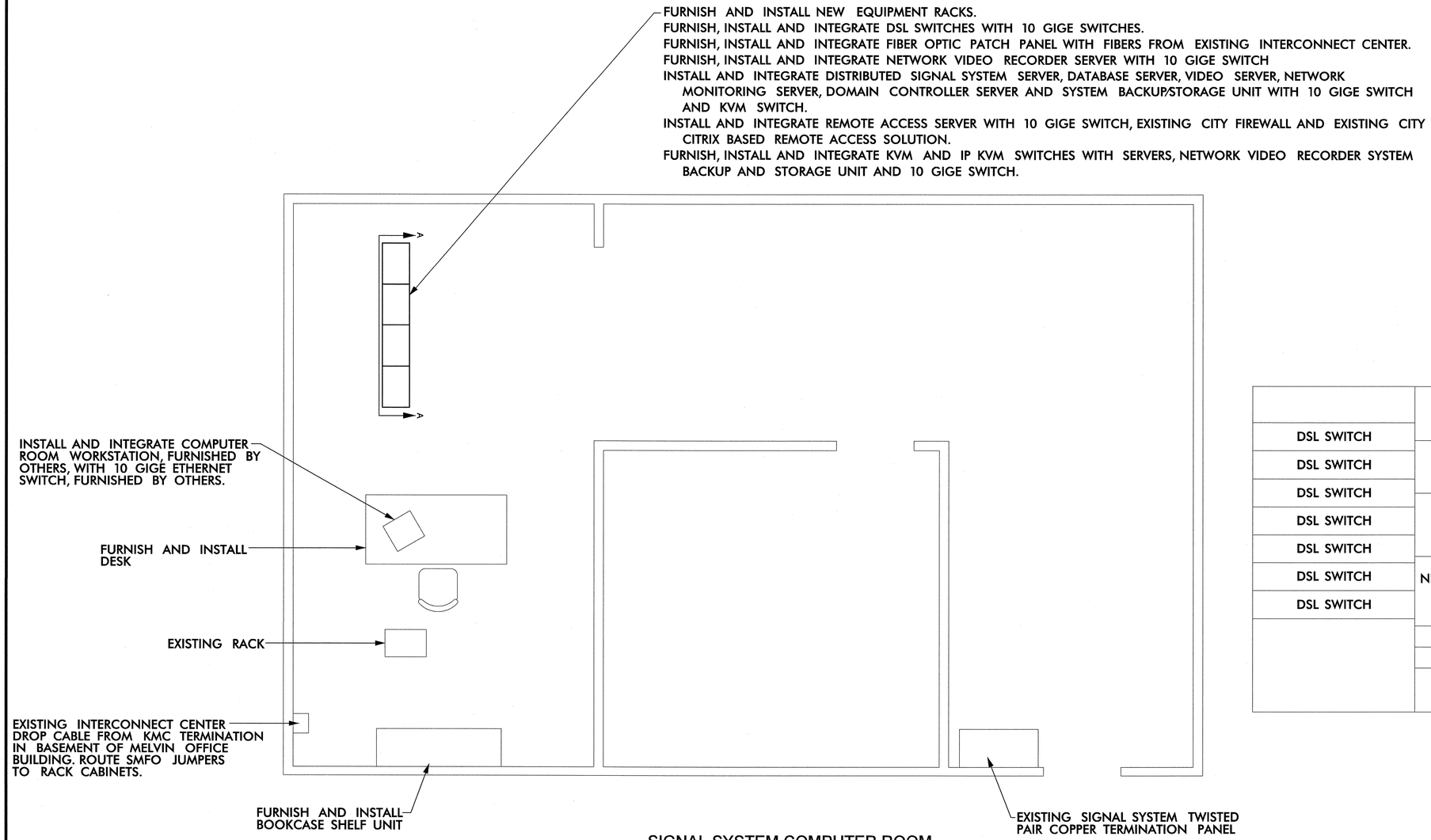
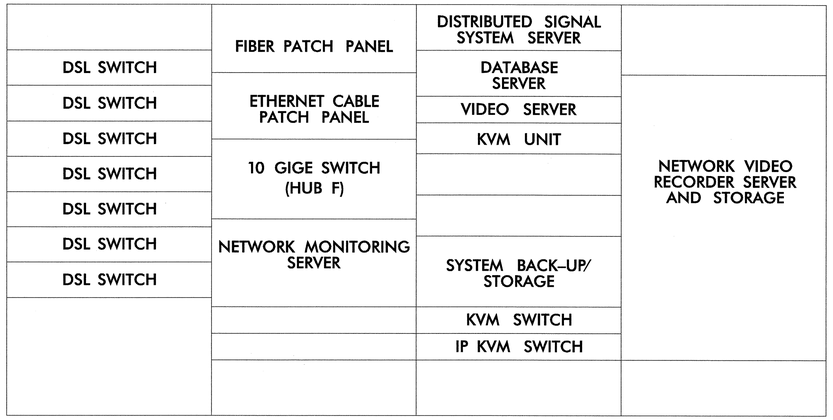
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2BJ



SIGNAL SYSTEM COMPUTER ROOM
IN MELVIN MUNICIPAL OFFICE BUILDING



SECTION A-A

NOTES

1. INSTALL OVERHEAD AND WALL RACEWAY SYSTEMS TO ACCOMODATE FIBER OPTIC CABLES, SERIAL CABLES AND ETHERNET CABLES.
2. REMOVE EXISTING SERVERS AND EQUIPMENT IN ACCORDANCE WITH PROJECT SPECIAL PROVISIONS.
3. INTEGRATE RACKS AND RACK EQUIPMENT INTO EXISTING UPS.
4. TERMINATE EXISTING TWISTED PAIR CABLE CBD-1 INTO DSL SWITCHES IN RACK CABINET. USE SPLICE DIAGRAM IN SPLICE DETAILS FOR SPECIFIC TWISTED PAIRS TO BE TERMINATED.
5. INTEGRATE BATTERY UPS WITH RACKS AND SERVERS.
6. ROUTE ETHERNET CABLES TO MELVIN MUNICIPAL OFFICE BUILDING TRAFFIC OPERATIONS CENTER FROM 10 GIGE SWITCH.

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE
0
NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
MMOB SIGNAL SYSTEM COMPUTER ROOM
DIVISION 7 GUILFORD COUNTY

PLAN DATE:	FEBRUARY, 2008	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J. CROSS	REVIEWED BY:	M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE DATE 2/20/08
CADD Filename:

2/20/2008
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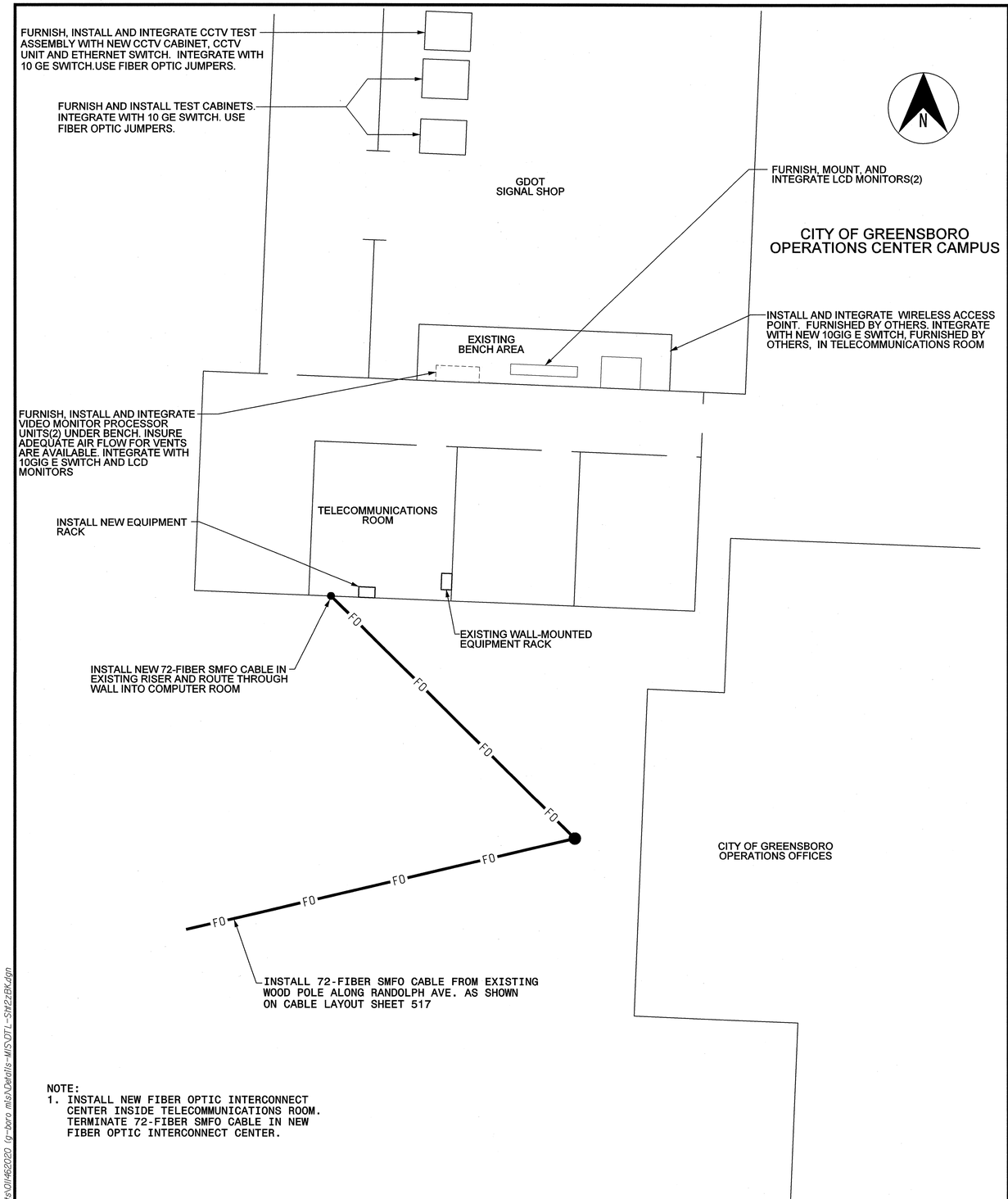
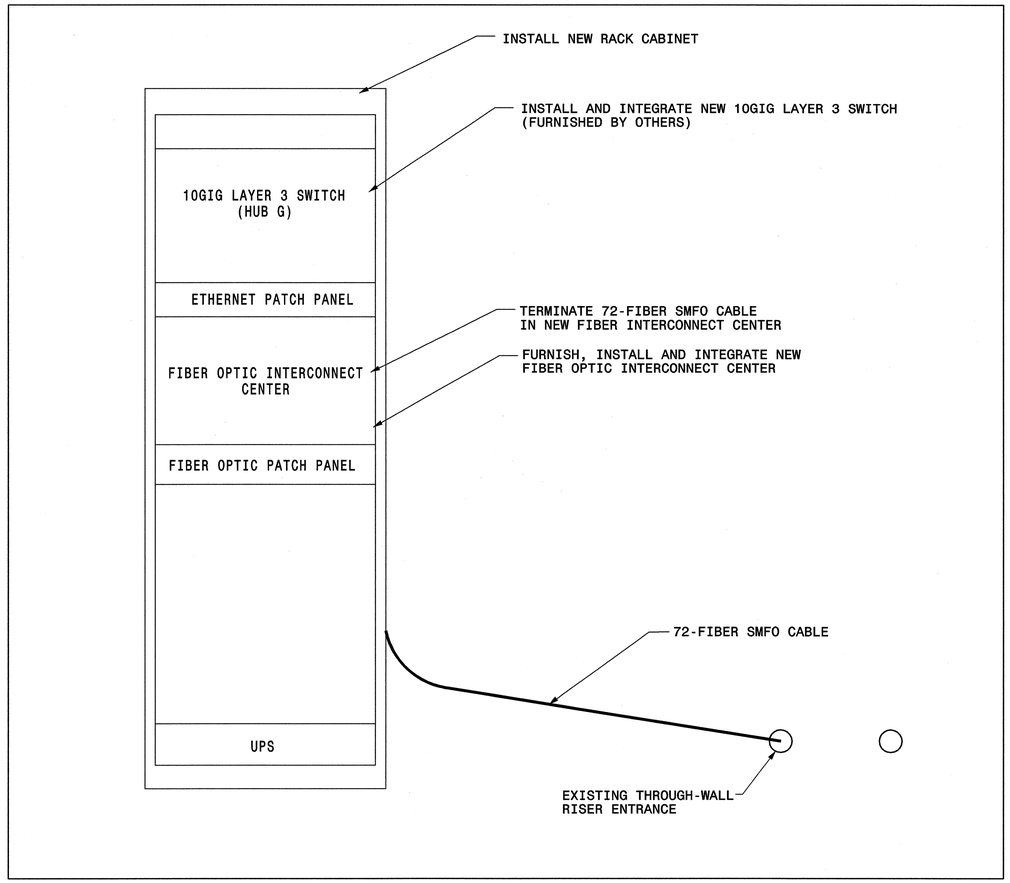
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2BK



NOTE:
1. INSTALL NEW FIBER OPTIC INTERCONNECT CENTER INSIDE TELECOMMUNICATIONS ROOM. TERMINATE 72-FIBER SMFO CABLE IN NEW FIBER OPTIC INTERCONNECT CENTER.

PLAN VIEW
SIGNAL SHOP



ELEVATION
SOUTH FACING INTERIOR WALL

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE
0
NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
GDOT SIGNAL SHOP

DIVISION 7 GUILFORD COUNTY
PLAN DATE: FEBRUARY, 2008 REVIEWED BY: K.W. SMITH
PREPARED BY: J. CROSS REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE 2/29/08 DATE
CADD Filename:

2/29/2008
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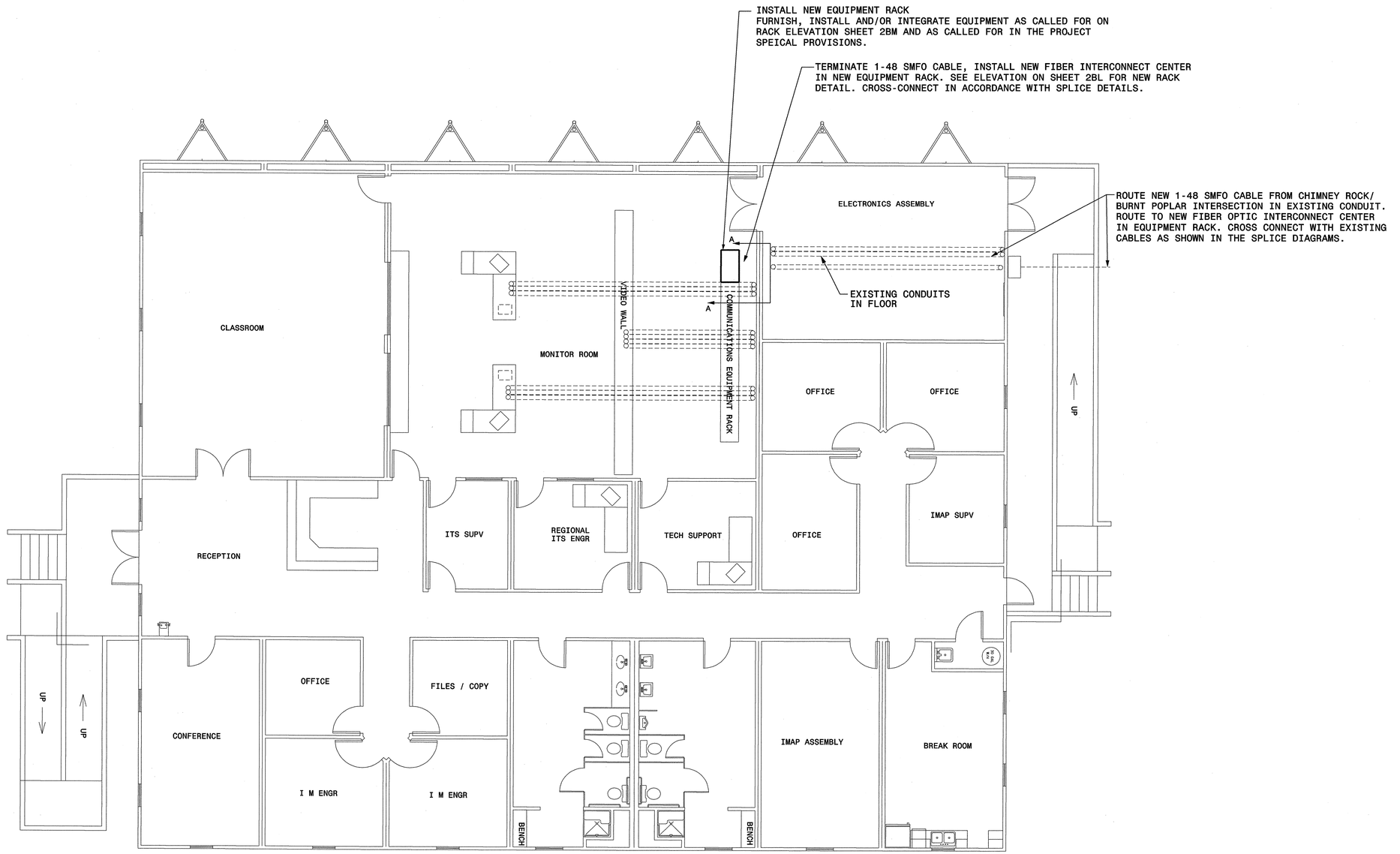
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2BL



NOTES:
1. ROUTE ALL CABLING IN CONDUIT, WALLS, CEILINGS, AND FLOORS AS APPROVED BY THE ENGINEER.
2. FINAL PLACEMENT OF EQUIPMENT TO BE APPROVED BY THE ENGINEER.

PIEDMONT TRIAD REGIONAL TRANSPORTATION MANAGEMENT CENTER

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation
750 Greenfield Pkwy., Garner, NC 27529

SCALE: 0 NONE

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

PTRTMC BUILDING

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: J. CROSS	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filenames:

2/20/2008
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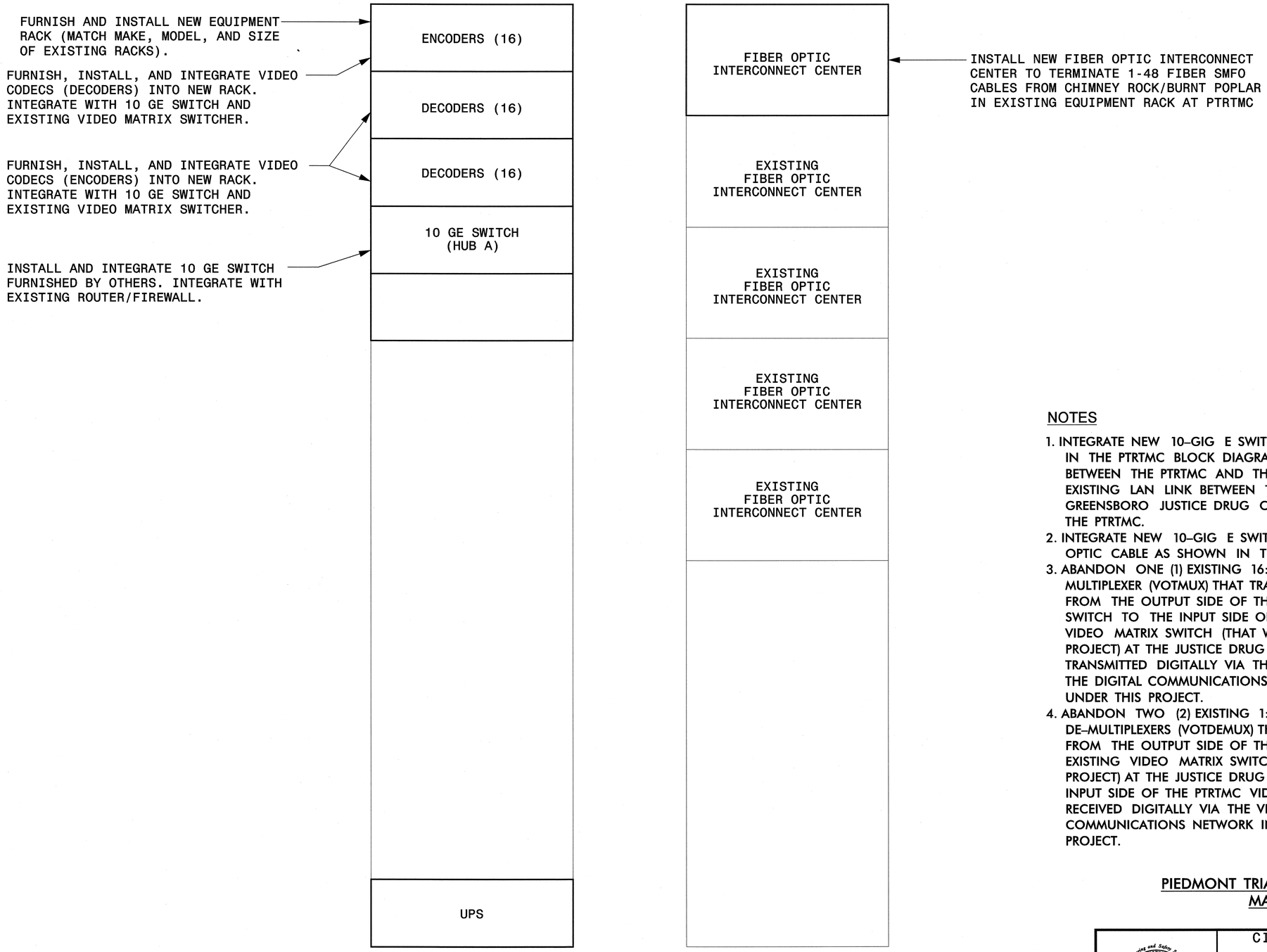
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2BM



NOTES

1. INTEGRATE NEW 10–GIG E SWITCH WITH EXISTING ROUTER AS SHOWN IN THE PTRTMC BLOCK DIAGRAM TO SERVE AS NEW LAN CONNECTION BETWEEN THE PTRTMC AND THE CITY OF GREENSBORO. ABANDON EXISTING LAN LINK BETWEEN THE EXISTING ROUTER AT THE CITY OF GREENSBORO JUSTICE DRUG COMPLEX AND THE EXISTING ROUTER AT THE PTRTMC.
2. INTEGRATE NEW 10–GIG E SWITCH WITH NEW AND EXISTING FIBER OPTIC CABLE AS SHOWN IN THE SPLICE DETAILS.
3. ABANDON ONE (1) EXISTING 16:1 VIDEO OPTICAL TRANSMITTER MULTIPLEXER (VOTMUX) THAT TRANSMITS NTSC VIDEO SIGNALS FROM THE OUTPUT SIDE OF THE EXISTING PTRTMC VIDEO MATRIX SWITCH TO THE INPUT SIDE OF THE CITY OF GREENSBORO EXISTING VIDEO MATRIX SWITCH (THAT WILL BE ABANDONED UNDER THIS PROJECT) AT THE JUSTICE DRUG COMPLEX. THIS VIDEO WILL BE TRANSMITTED DIGITALLY VIA THE VIDEO CODECS (ENCODERS) AND THE DIGITAL COMMUNICATIONS NETWORK INSTALLED AND INTEGRATED UNDER THIS PROJECT.
4. ABANDON TWO (2) EXISTING 1:16 VIDEO OPTICAL TRANSMITTER DE–MULTIPLEXERS (VOTDEMUX) THAT RECEIVES NTSC VIDEO SIGNALS FROM THE OUTPUT SIDE OF THE EXISTING OF THE CITY OF GREENSBORO EXISTING VIDEO MATRIX SWITCH (THAT WILL BE ABANDONED UNDER THIS PROJECT) AT THE JUSTICE DRUG COMPLEX AND TRANSMITS THEM ON THE INPUT SIDE OF THE PTRTMC VIDEO MATRIX SWITCH. THIS VIDEO WILL BE RECEIVED DIGITALLY VIA THE VIDEO CODECS (DECODERS) AND THE DIGITAL COMMUNICATIONS NETWORK INSTALLED AND INTEGRATED UNDER THIS PROJECT.

PIEDMONT TRIAD REGIONAL TRANSPORTATION MANAGEMENT CENTER

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE: 0 NONE

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

PTRTMC EQUIPMENT RACKS

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: J. CROSS — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

2/29/08
SIGNATURE — DATE

CADD Filename:

2/29/2008
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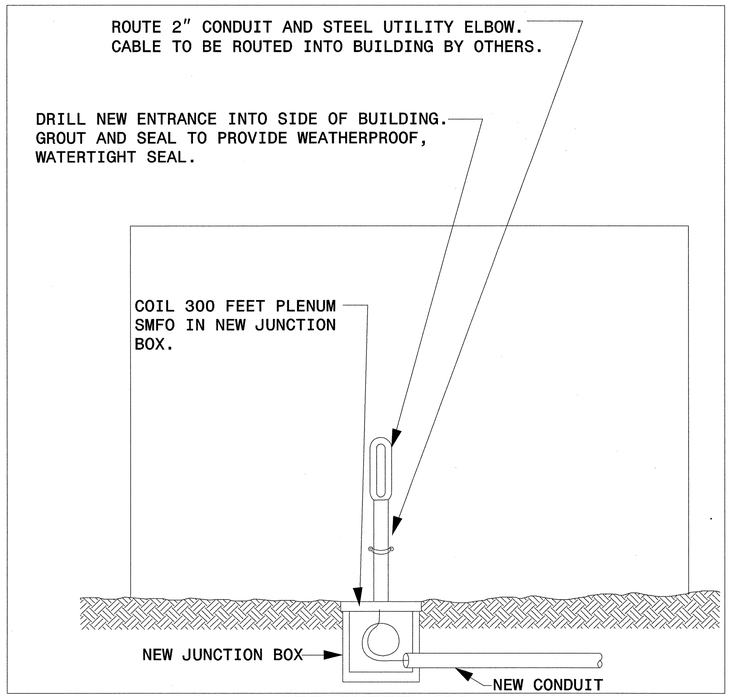
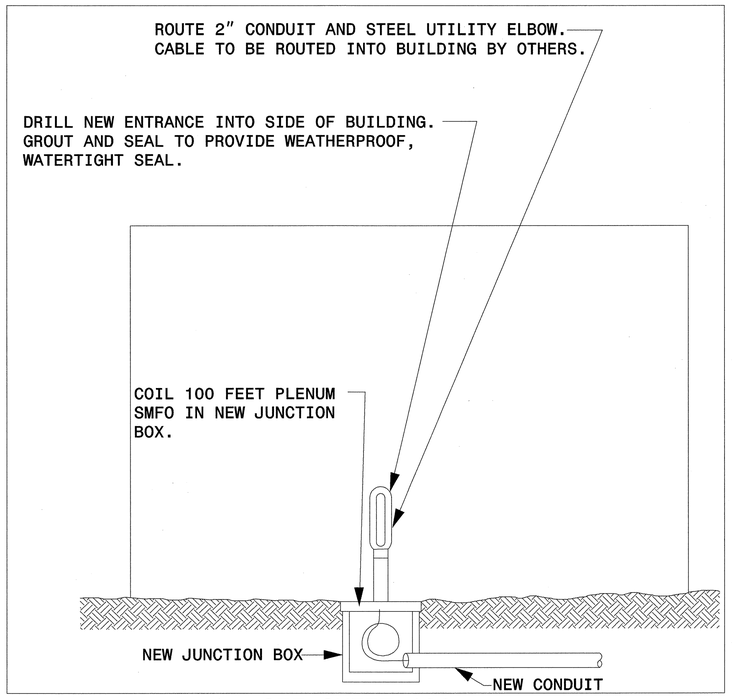
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2BN



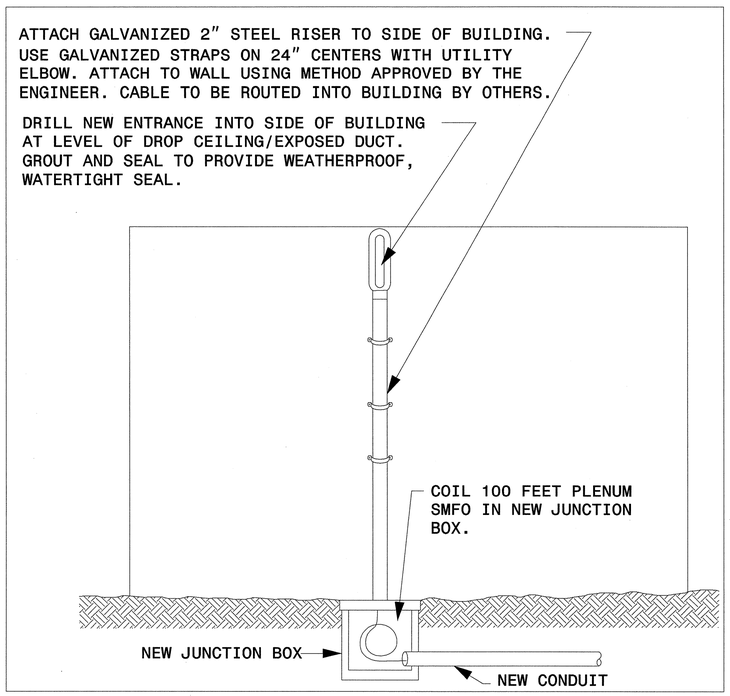
SEE SHEET 538

PARTIAL ELEVATION OF SOUTH EXTERIOR WALL
OF BENJAMIN LIBRARY (MIS 513)



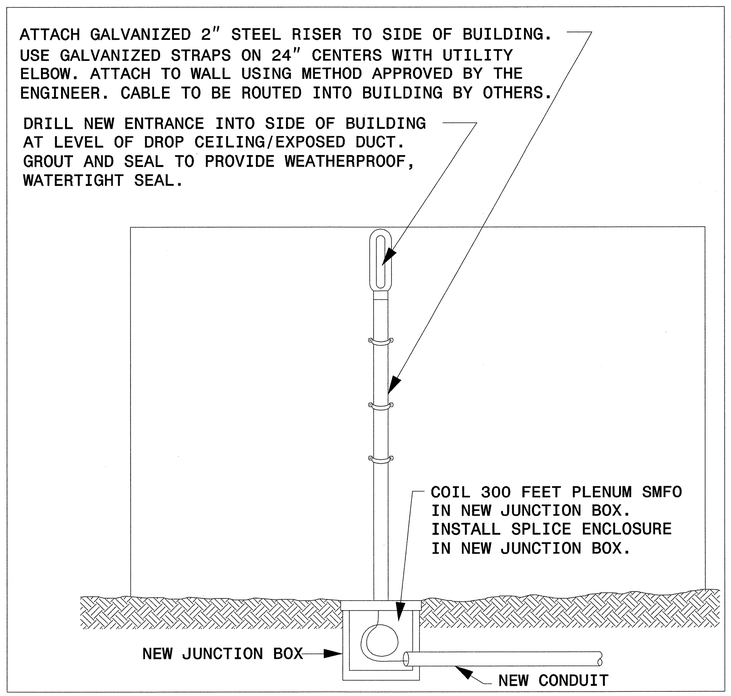
SEE SHEET 136

PARTIAL ELEVATION OF WEST EXTERIOR WALL
OF GREENSBORO COLISEUM (MIS 518)



SEE SHEET 540

PARTIAL ELEVATION OF EAST EXTERIOR WALL
OF CONE BUILDING (MIS 519)



SEE SHEET 456

PARTIAL ELEVATION OF NORTH EXTERIOR WALL
OF FIRE STATION #1 (MIS 524)

1. COORDINATE ALL WORK AT BUILDINGS WITH CONTACT PERSON IDENTIFIED BY ENGINEER.
2. NO WORK SHALL BE PERFORMED AT MIS BUILDINGS WITHOUT PRIOR WRITTEN AUTHORIZATION FROM ENGINEER.
3. ALL METHODS TO ENTER BUILDINGS AND ATTACH ITEMS TO BUILDINGS SHALL BE APPROVED BY THE ENGINEER PRIOR TO COMMENCING WORK AT BUILDINGS.
4. ALL ROUTING OF CABLE WITHIN BUILDINGS SHALL BE REVIEWED AND APPROVED BY THE ENGINEER PRIOR TO BEGINNING WORK.
5. ALL MATERIALS DISPLACED FOR CONDUIT INSTALLATION, JUNCTION BOX INSTALLATIONS, AND ALL OTHER WORK TO ROUTE CONDUIT AND/OR CABLE TO AND WITHIN BUILDING SHALL BE REPLACED WITH SAME MATERIAL INCLUDING BUT NOT LIMITED TO PAVEMENT, SIDEWALKS, LANDSCAPING MATERIALS (ROCKS, MULCH, ETC.) TREES AND GRASS. SIDEWALK REPLACEMENT SHALL BE WHOLE PANELS.

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
NCDEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE
0
NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
MIS FACILITIES BUILDING
ENTRANCE DETAILS

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: J. CROSS	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL
SEAL 023562
ENGINEER
MARK DUNZO

SIGNATURE 3/4/08 DATE

CADD Filenames

3/4/2008
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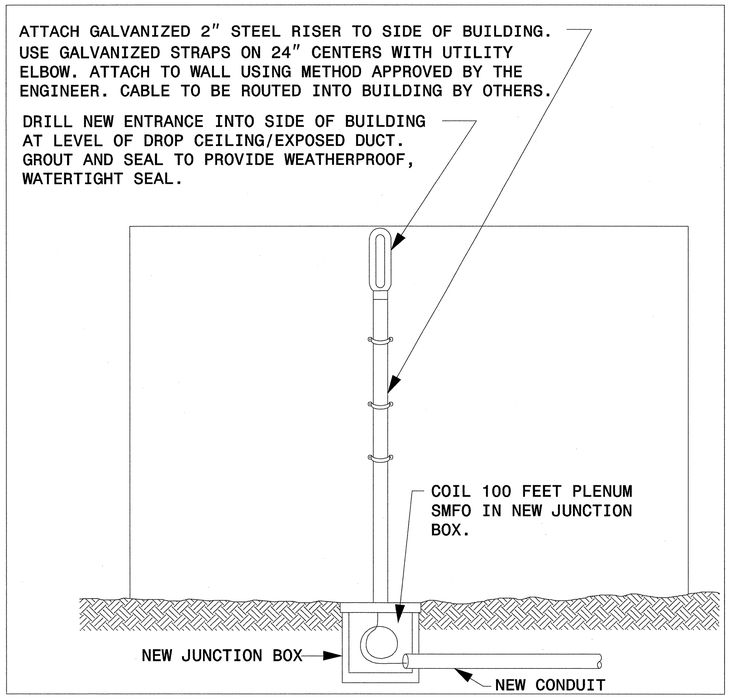
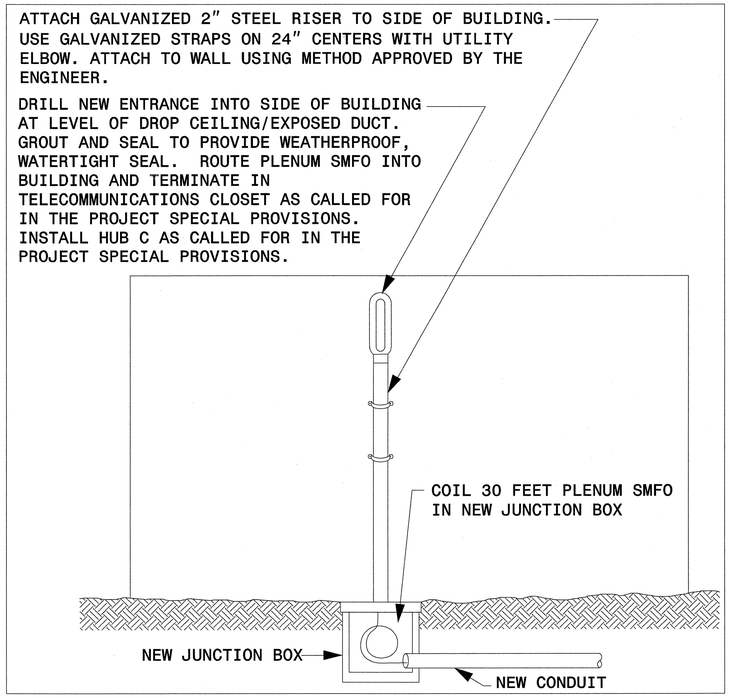
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2BP



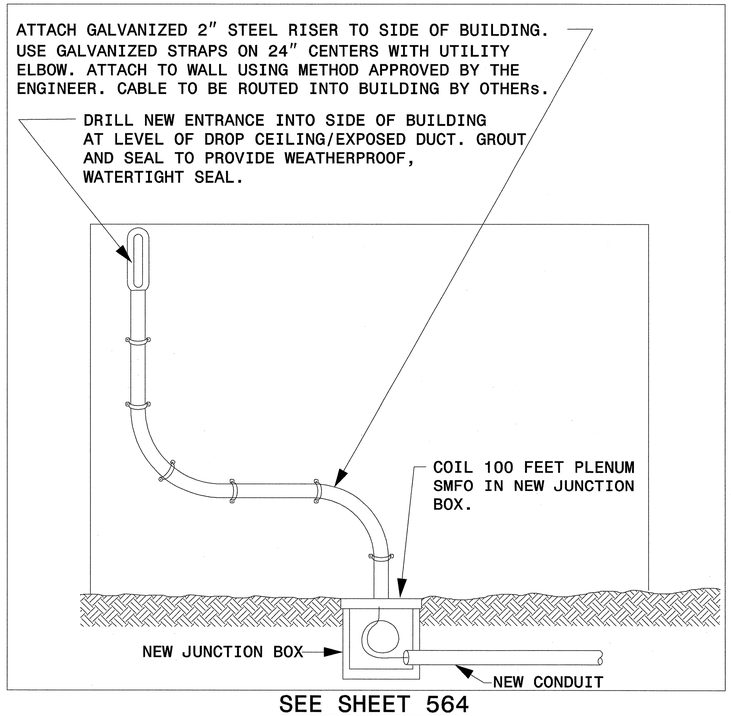
SEE SHEET 124

PARTIAL ELEVATION OF WEST EXTERIOR WALL
OF FIRE STATION #10 (MIS 525)



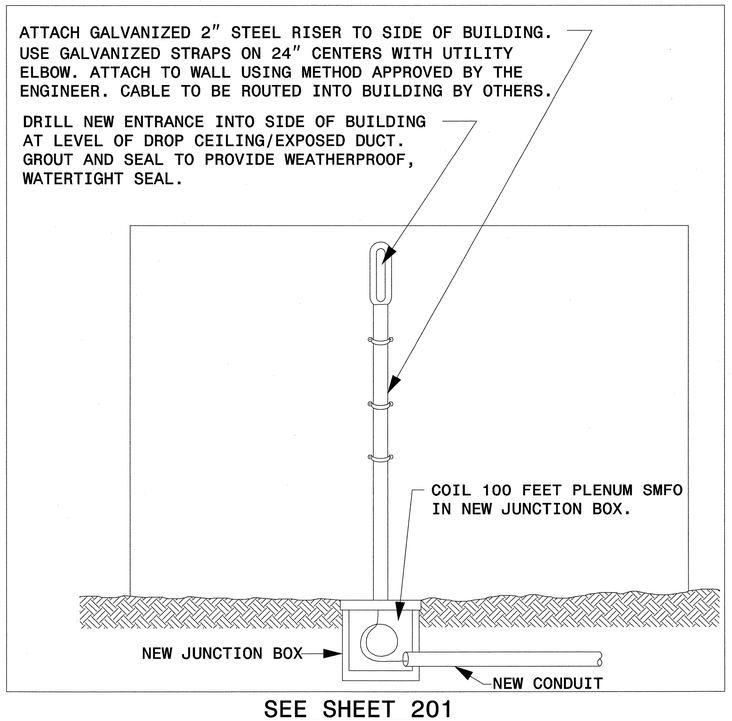
SEE SHEET 347

PARTIAL ELEVATION OF EAST EXTERIOR WALL
OF FIRE STATION #12 (MIS 527) (HUB C)



SEE SHEET 564

PARTIAL ELEVATION OF SOUTH EXTERIOR WALL
OF FIRE STATION #14 (MIS 528)



SEE SHEET 201

PARTIAL ELEVATION OF EAST EXTERIOR WALL
OF FIRE STATION #15 (MIS 529)

1. COORDINATE ALL WORK AT BUILDINGS WITH CONTACT PERSON IDENTIFIED BY ENGINEER.
2. NO WORK SHALL BE PERFORMED AT MIS BUILDINGS WITHOUT PRIOR WRITTEN AUTHORIZATION FROM ENGINEER.
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PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
NCDEPARTMENT OF TRANSPORTATION
Integrated Mobility Division
750 Greenfield Pkwy., Garner, NC 27529

SCALE
0
NONE

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
MIS FACILITIES BUILDING ENTRANCE DETAILS

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: J. CROSS	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE — DATE 2/20/08

CADD Filenames:

2/20/2008
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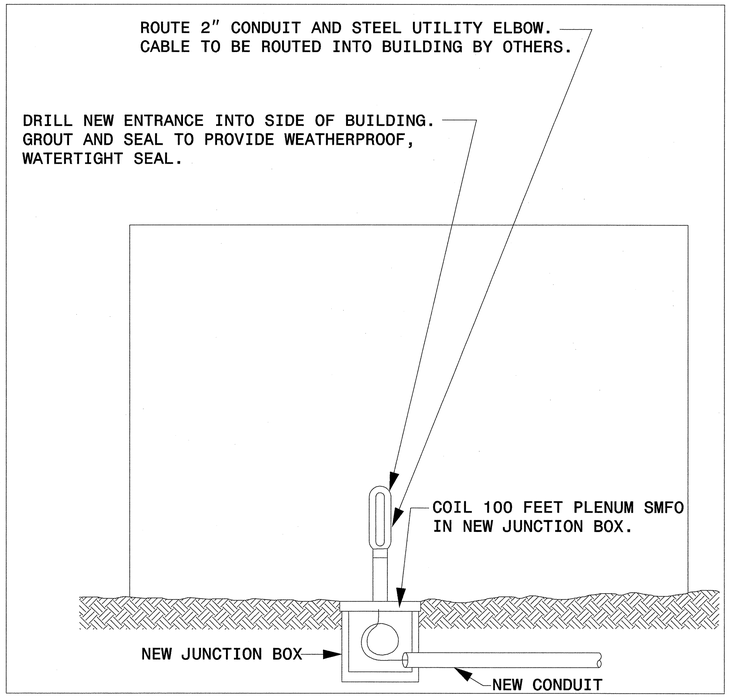
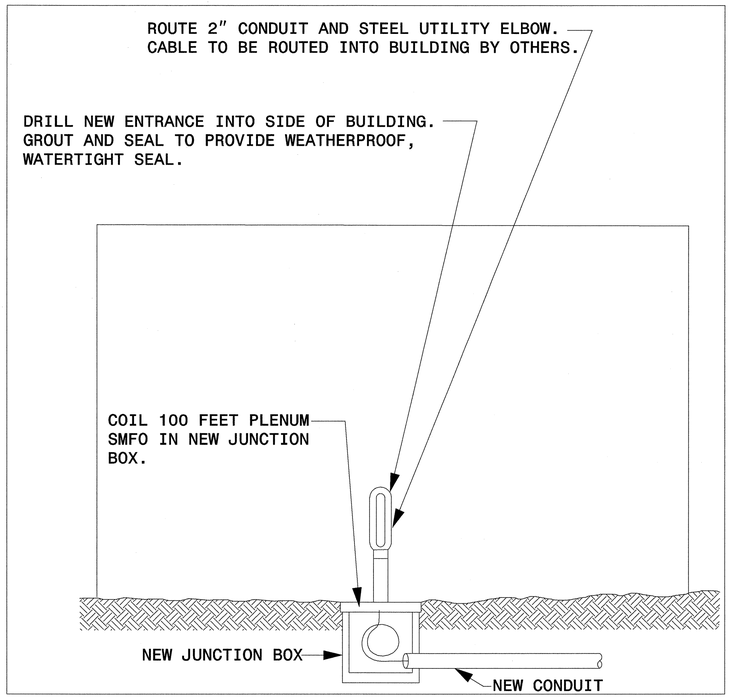
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2BQ



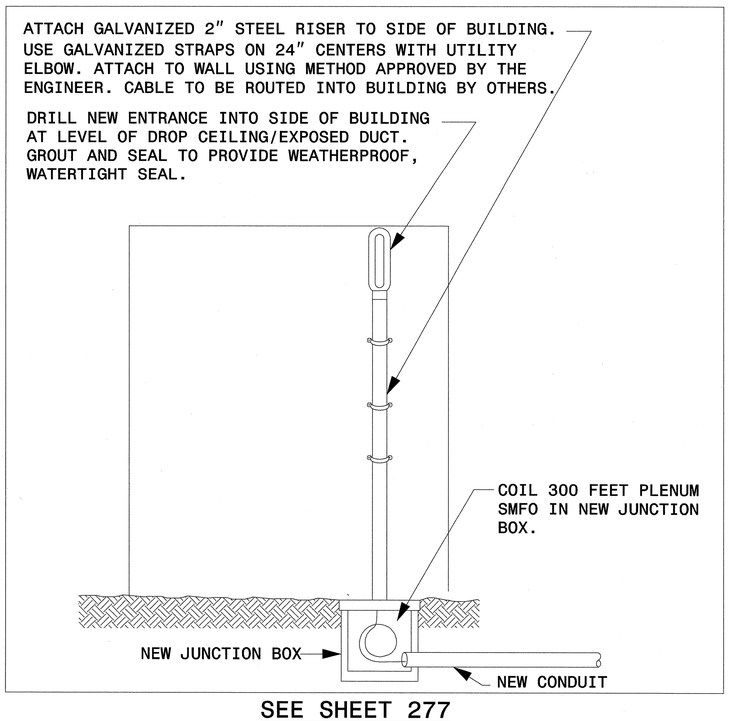
SEE SHEET 529

PARTIAL ELEVATION OF NORTH EXTERIOR WALL
OF FIRE STATION #16 (MIS 530)



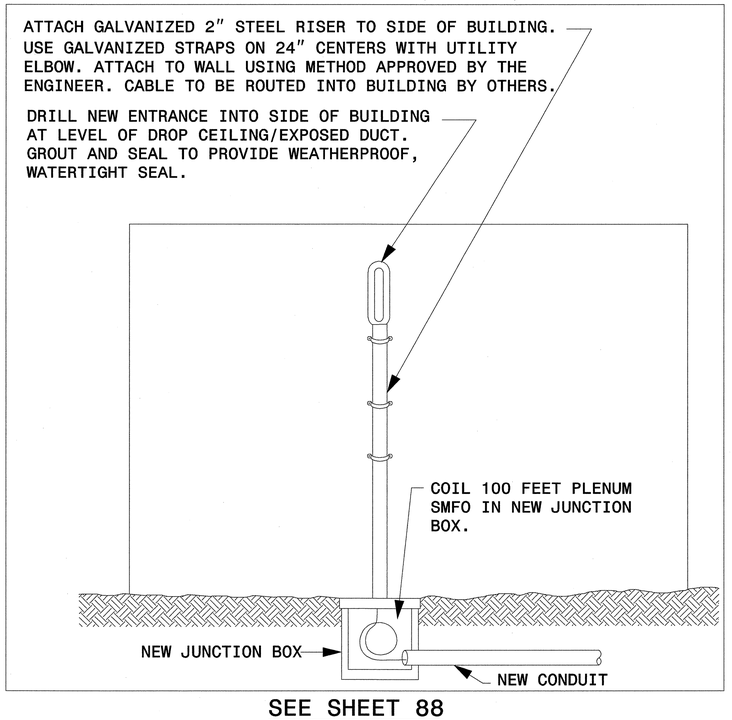
SEE SHEET 535

PARTIAL ELEVATION OF NORTH EXTERIOR WALL
OF FIRE STATION #6 (MIS 531)



SEE SHEET 277

PARTIAL ELEVATION OF EAST EXTERIOR WALL
OF FIRE STATION #18 (MIS 532)



SEE SHEET 88

PARTIAL ELEVATION OF EAST EXTERIOR WALL
OF FIRE STATION #19 (MIS 533)

1. COORDINATE ALL WORK AT BUILDINGS WITH CONTACT PERSON IDENTIFIED BY ENGINEER.
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Traffic Engineering and Safety Systems Branch
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Mailing Address
750 Greenfield Pkwy., Garner, NC 27529

CITY OF GREENSBORO
COMPUTERIZED SIGNAL SYSTEM UPGRADE
MIS FACILITIES BUILDING ENTRANCE DETAILS

DIVISION 7 — GUILFORD COUNTY

PLAN DATE:	FEBRUARY, 2008	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J. CROSS	REVIEWED BY:	M.W. DUNZO

REVISIONS	INIT.	DATE

SCALE: 0 — NONE

SEAL
NORTH CAROLINA PROFESSIONAL
SEAL 023562
ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filename

2/20/2008
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PROJECT REFERENCE NO.	SHEET NO.
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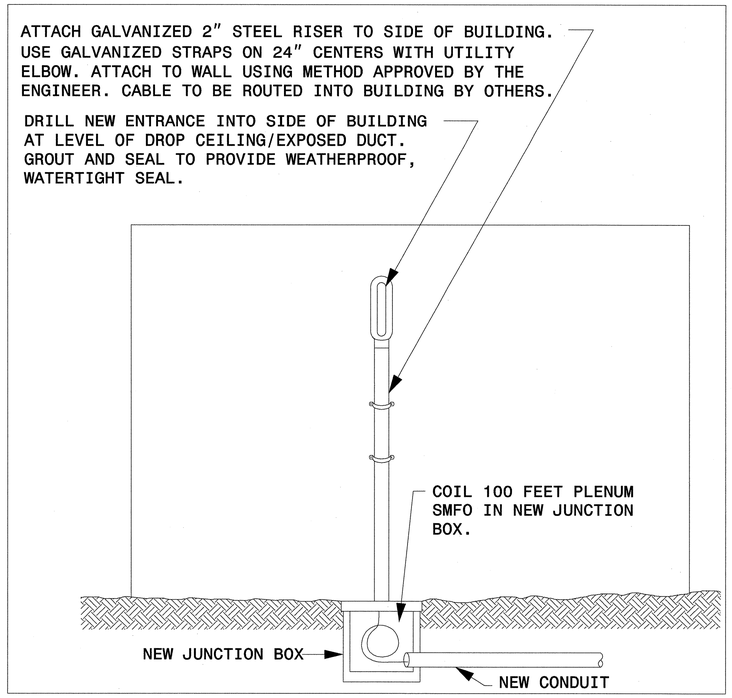
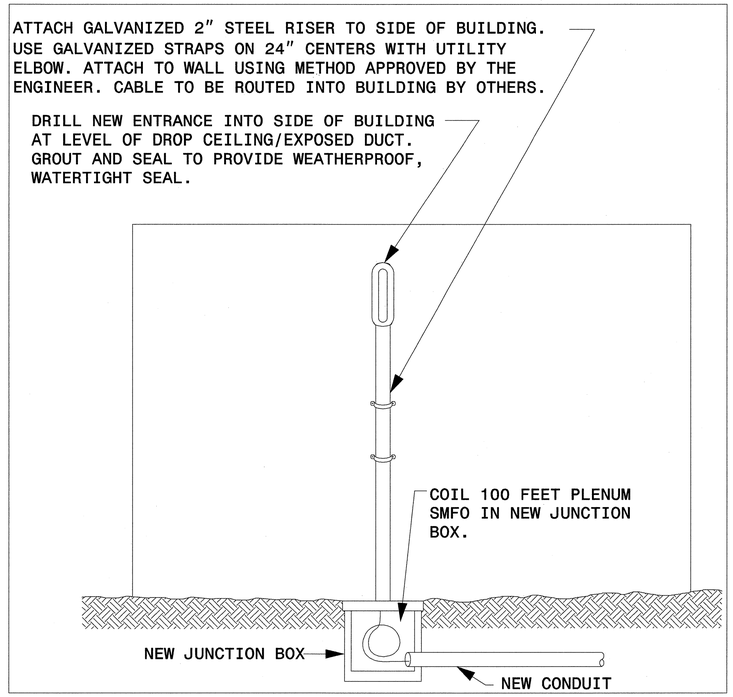


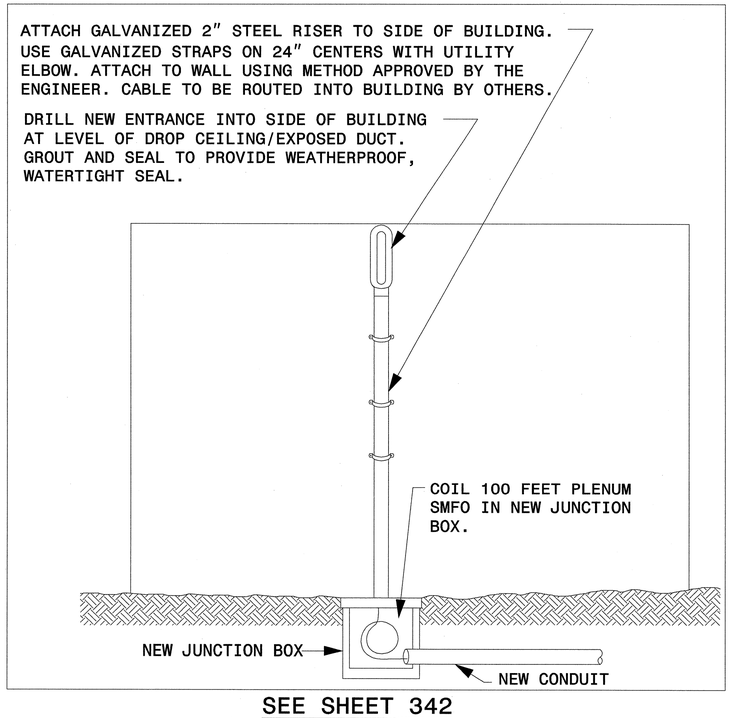
SEE SHEET 14

PARTIAL ELEVATION OF EAST EXTERIOR WALL
OF FIRE STATION #20 (MIS 534)



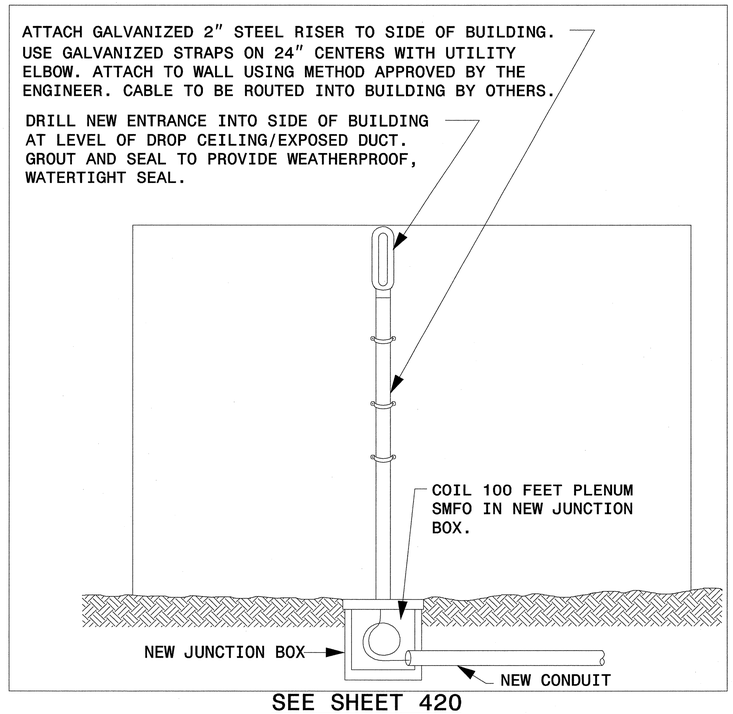
SEE SHEET 156

PARTIAL ELEVATION OF WEST EXTERIOR WALL
OF FIRE STATION #4 (MIS 535)



SEE SHEET 342

PARTIAL ELEVATION OF SOUTH EXTERIOR WALL
OF FIRE STATION #5 (MIS 536)



SEE SHEET 420

PARTIAL ELEVATION OF EAST EXTERIOR WALL
OF FIRE STATION #7 (MIS 537)

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Traffic Engineering and Safety Systems Branch
Traffic Engineering Division
NCDEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE
0
NONE

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
MIS FACILITIES BUILDING ENTRANCE DETAILS

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: J. CROSS	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE 2/22/08 DATE
CADD Filename:

2/20/2008
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PROJECT REFERENCE NO.	SHEET NO.
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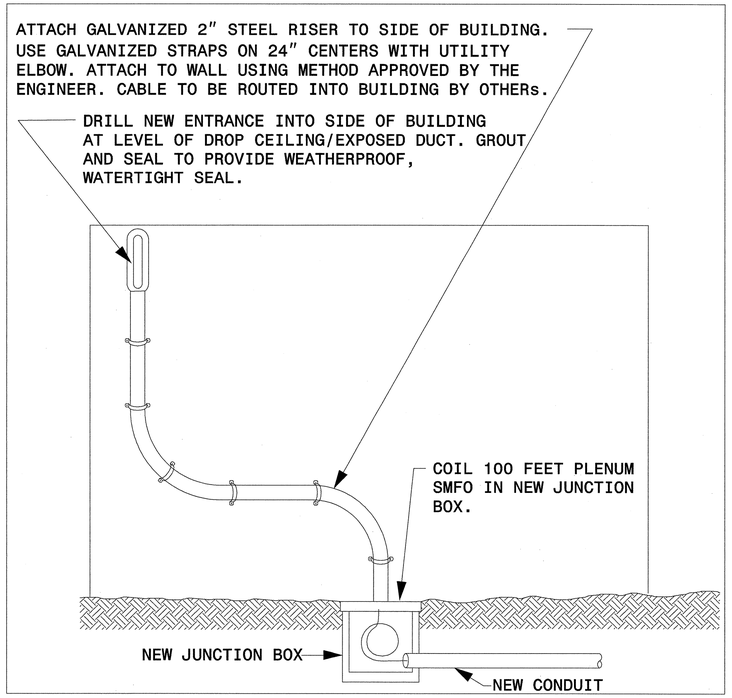
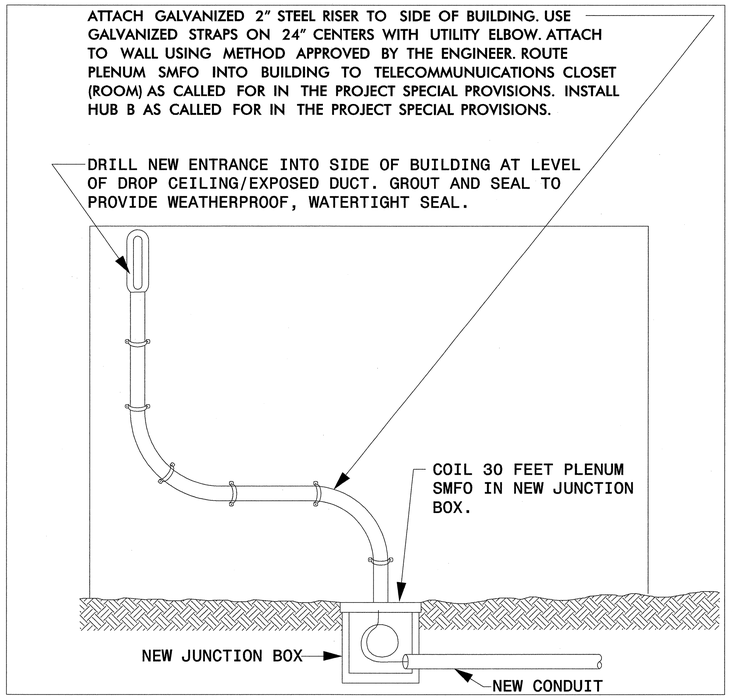


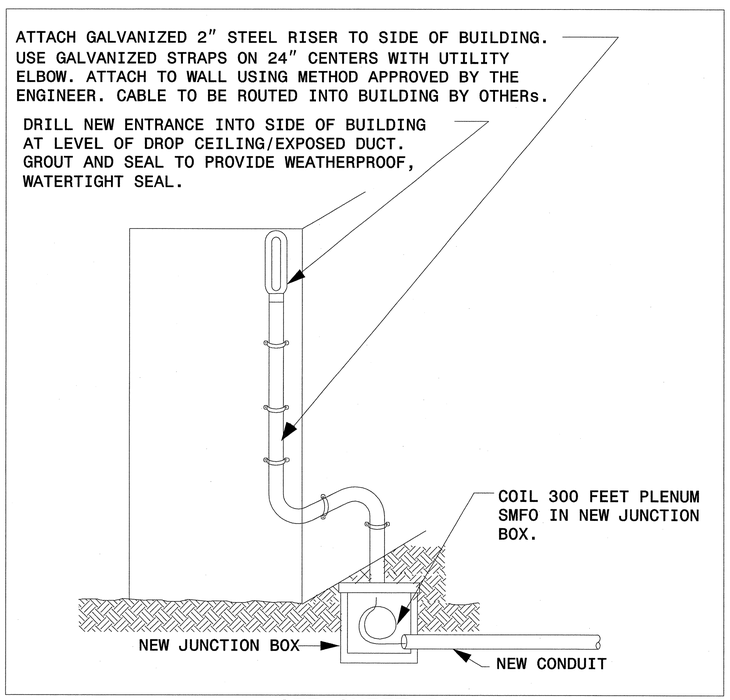
SEE SHEET 210

PARTIAL ELEVATION OF NORTH EXTERIOR WALL
OF FIRE STATION #8 (MIS 538)



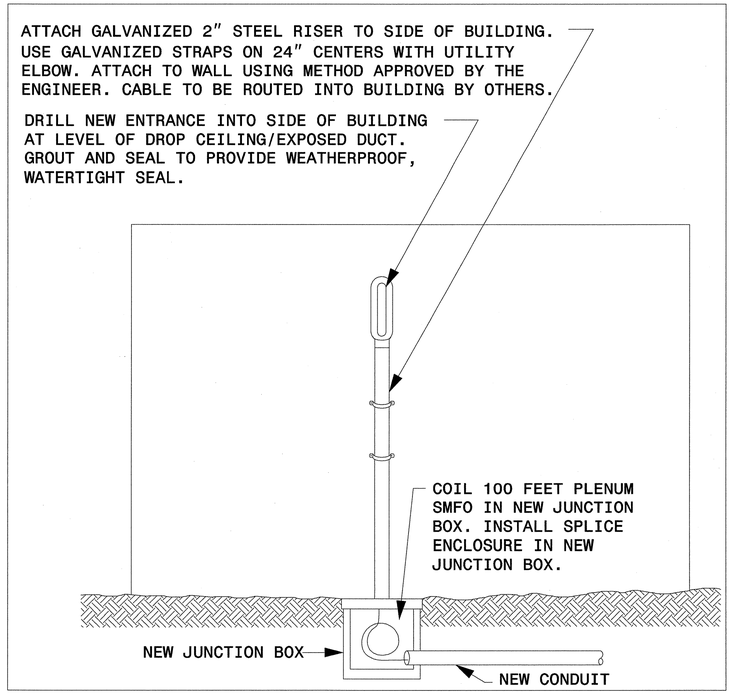
SEE SHEET 245

PARTIAL ELEVATION OF WEST EXTERIOR WALL
OF FIRE STATION #9 (MIS 539) (HUB B)



SEE SHEET 204

PARTIAL ELEVATION OF EAST EXTERIOR WALL
OF GLENWOOD LIBRARY (MIS 542)



SEE SHEET 572

PARTIAL ELEVATION OF WEST EXTERIOR WALL
OF LANDFILL OFFICE (MIS 546)

1. COORDINATE ALL WORK AT BUILDINGS WITH CONTACT PERSON IDENTIFIED BY ENGINEER.
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Raleigh N.C. 27636-3068
(919) 677-2000

750 Greenfield Pkwy., Garner, NC 27529

SCALE
0
NONE

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
MIS FACILITIES BUILDING ENTRANCE DETAILS

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: J. CROSS	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE
2/20/08
DATE
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PROJECT REFERENCE NO.	SHEET NO.
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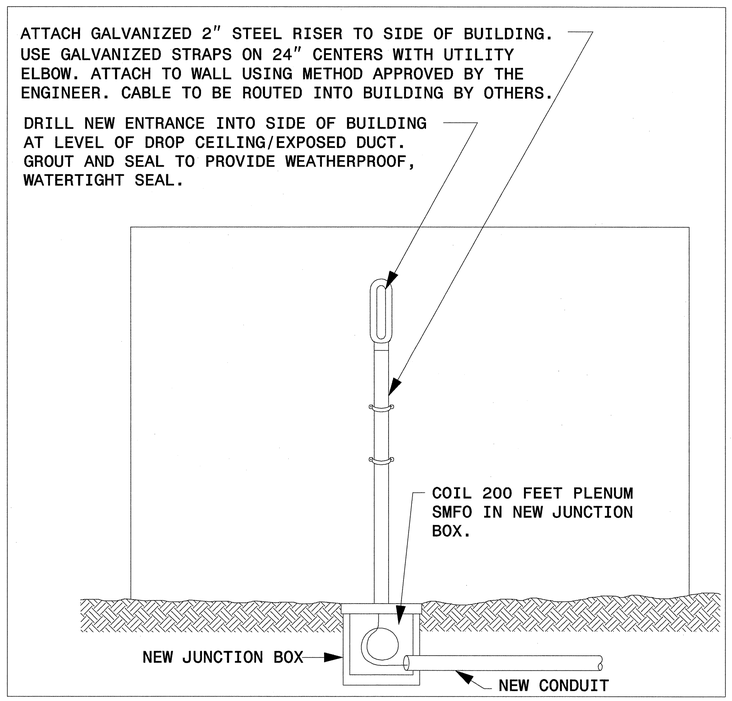
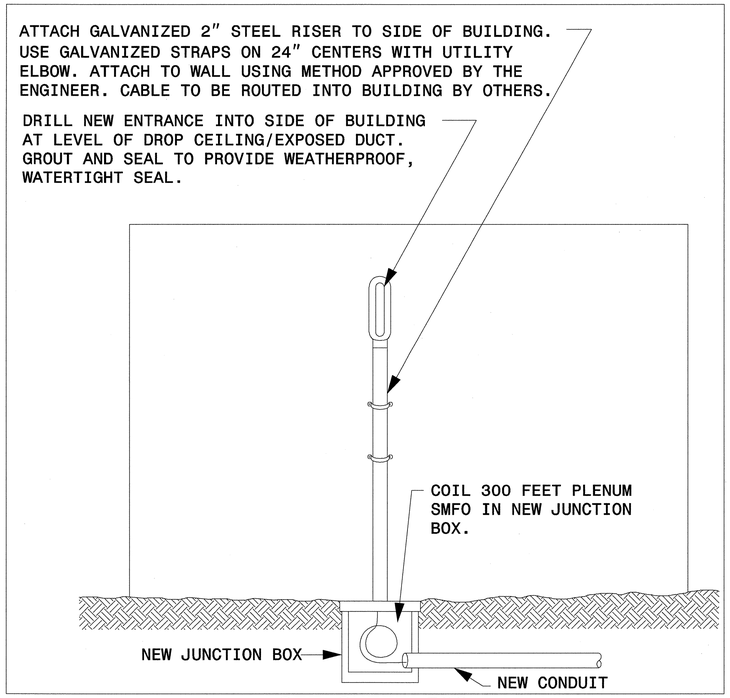


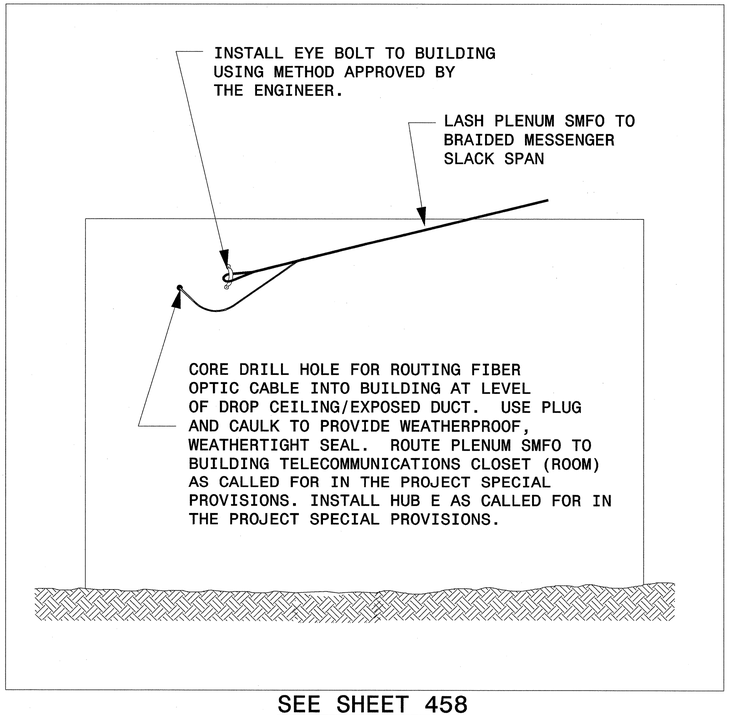
SEE SHEET 576

PARTIAL ELEVATION OF WEST EXTERIOR WALL
OF McGIRT HORTON LIBRARY (MIS 552)



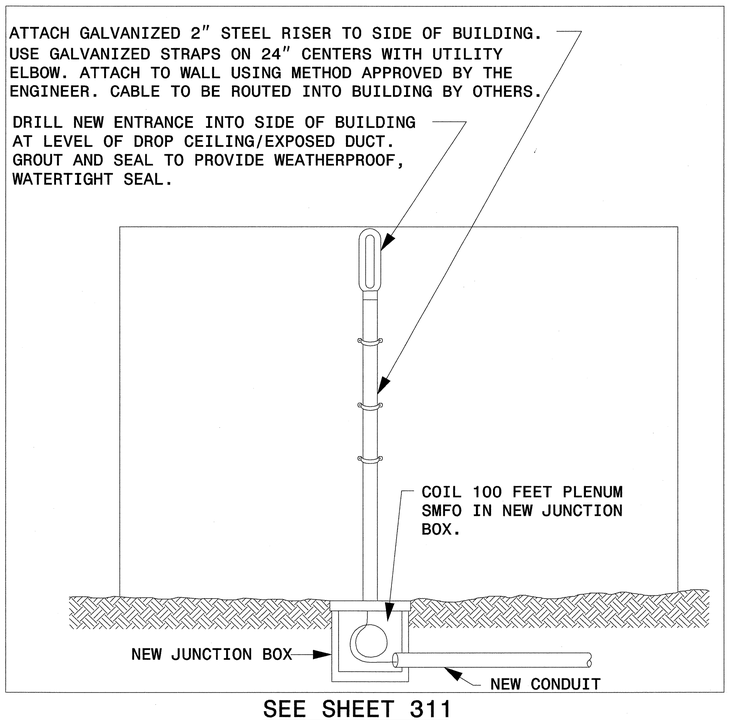
SEE SHEET 503

PARTIAL ELEVATION OF NORTH EXTERIOR WALL
OF P & R MAINTENANCE (MIS 557)



SEE SHEET 458

PARTIAL ELEVATION OF WEST EXTERIOR WALL
OF SANFORD SMITH BUILDING (MIS 563) (HUB E)



SEE SHEET 311

PARTIAL ELEVATION OF SOUTH EXTERIOR WALL
OF TANNENBAUM (565)

1. COORDINATE ALL WORK AT BUILDINGS WITH CONTACT PERSON IDENTIFIED BY ENGINEER.
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Raleigh N.C. 27636-3068
(919) 677-2000

750 Greenfield Pkwy., Garner, NC 27529

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
MIS FACILITIES BUILDING
ENTRANCE DETAILS

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: J. CROSS	REVIEWED BY: M.W. DUNZO

SCALE: 0 NONE

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE 2/20/08 DATE
CADD Filename:

2/20/2008
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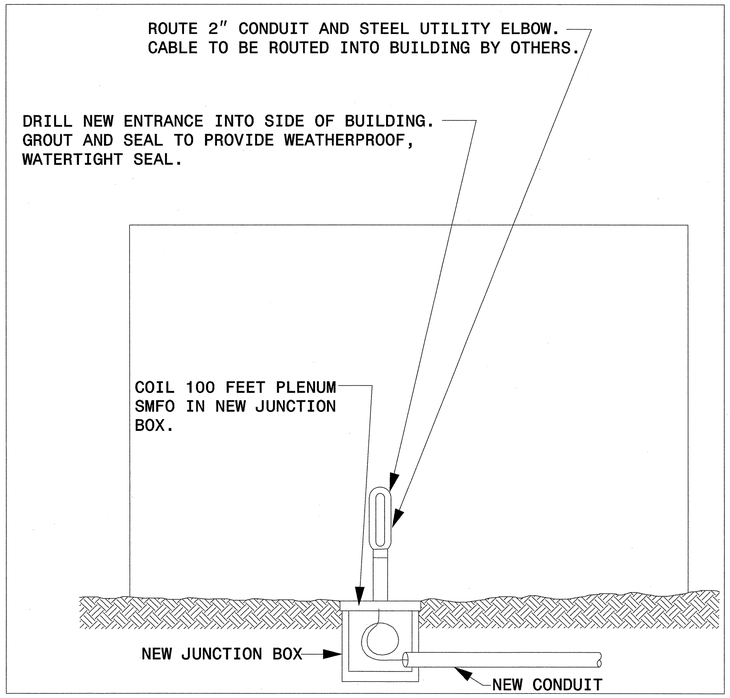
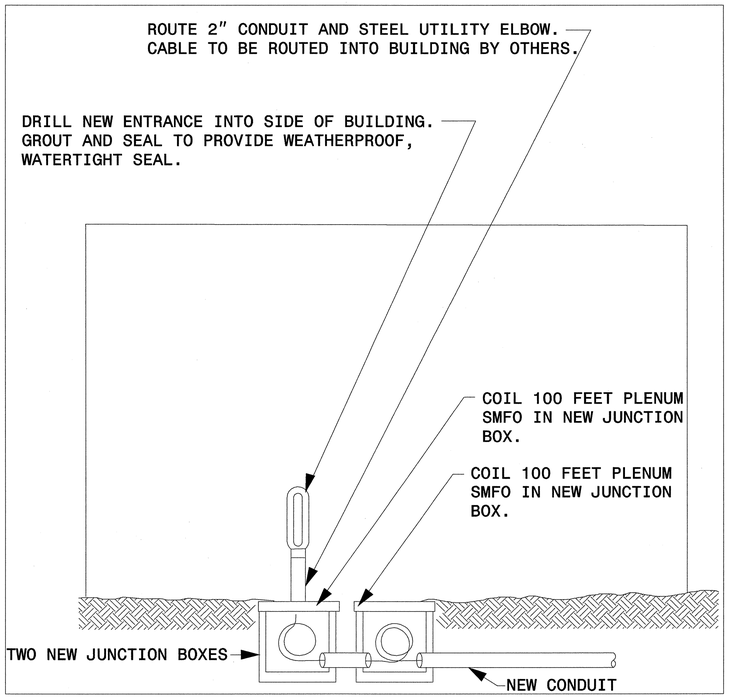
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2BU



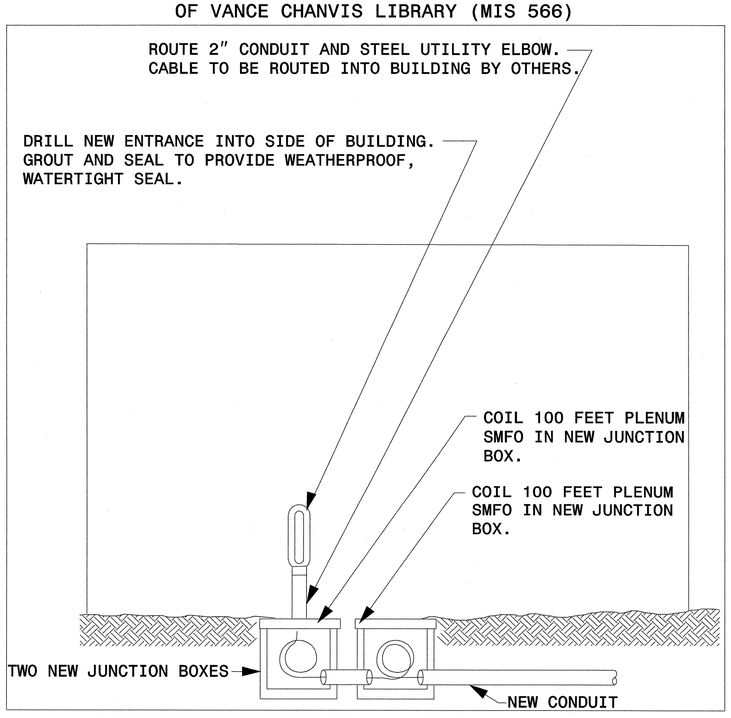
SEE SHEET 148

PARTIAL ELEVATION OF SOUTH EXTERIOR WALL
OF VANCE CHANVIS LIBRARY (MIS 566)



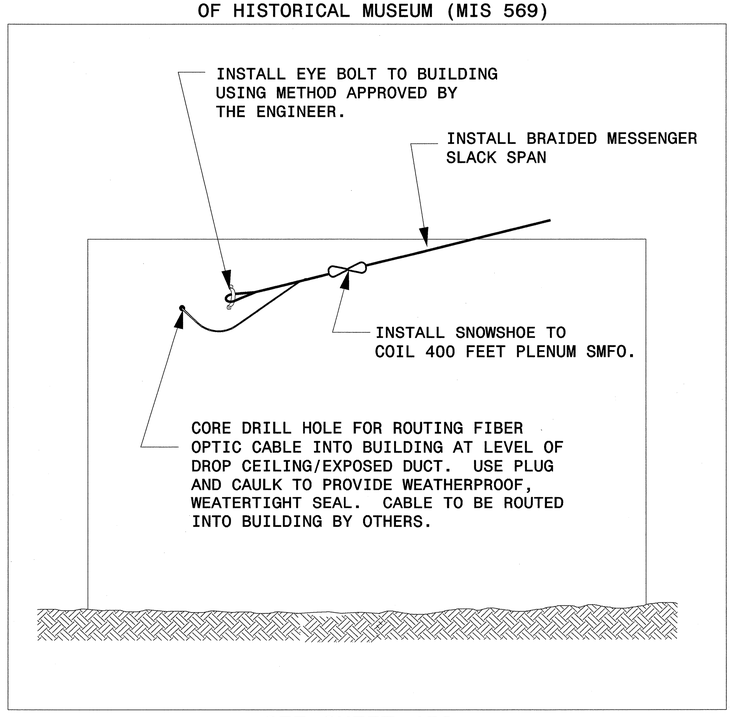
SEE SHEET 441

PARTIAL ELEVATION OF SOUTH EXTERIOR WALL
OF HISTORICAL MUSEUM (MIS 569)



SEE SHEET 539

PARTIAL ELEVATION OF WEST EXTERIOR WALL
OF CENTRAL LIBRARY (MIS 571)



SEE SHEET 458

PARTIAL ELEVATION OF EAST EXTERIOR WALL
OF CURB MARKET MIS (590)

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Traffic Engineering and Safety Systems Branch
Department of Transportation
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE
0
NONE

CITY OF GREENSBORO
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SIGNAL SYSTEM UPGRADE
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DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
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SEAL
NORTH CAROLINA
PROFESSIONAL
SEAL
023562
ENGINEER
MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filenames

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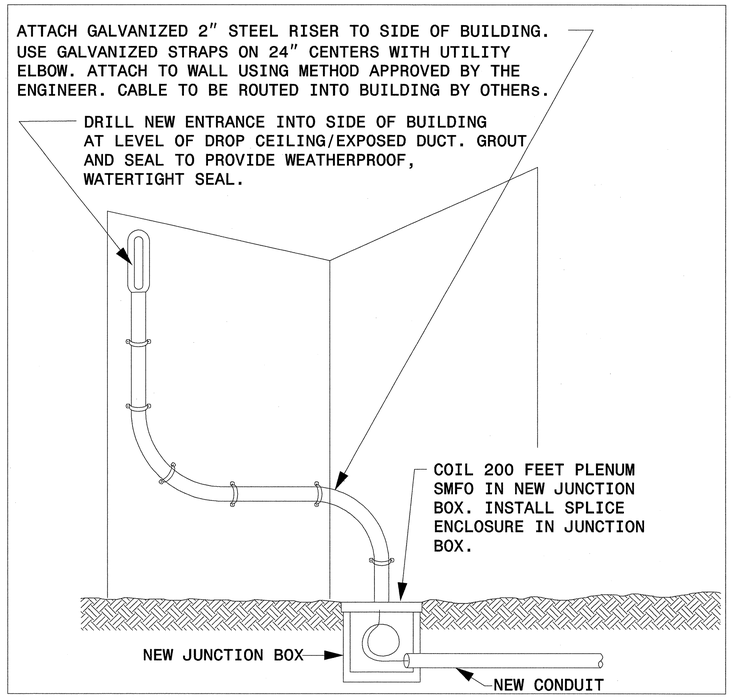
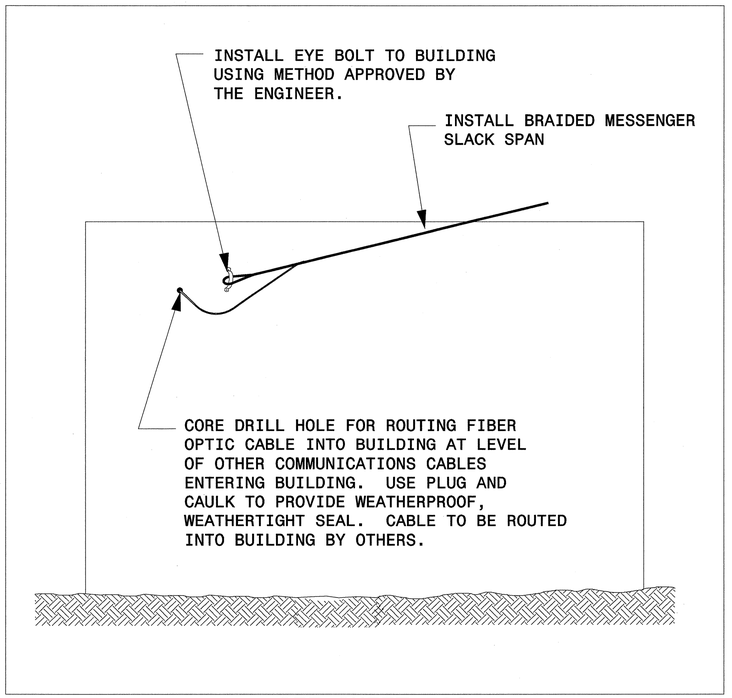
PROJECT REFERENCE NO.	SHEET NO.
U-4711	2BV



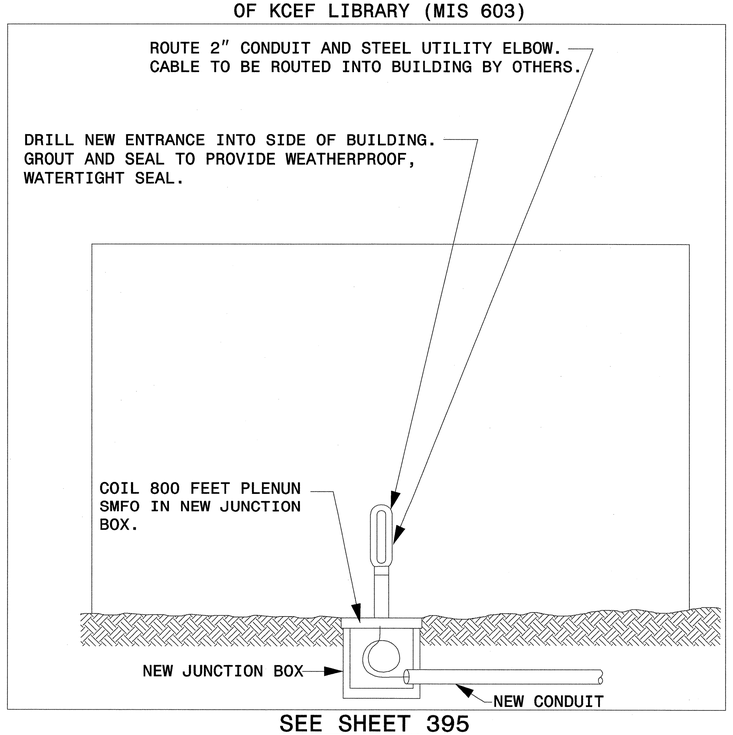
SEE SHEET 595

PARTIAL ELEVATION OF NORTH EXTERIOR WALL
OF KCEF LIBRARY (MIS 603)



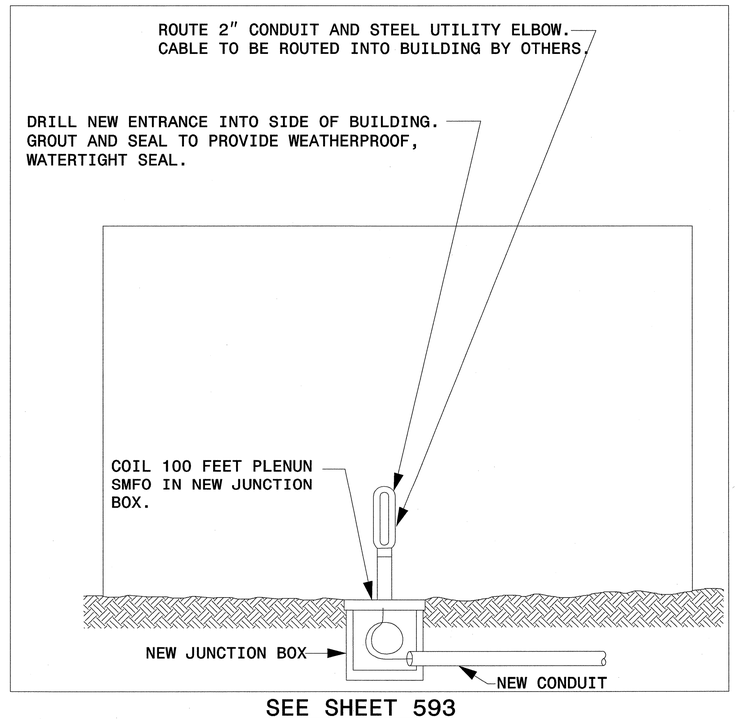
SEE SHEET 528

PARTIAL ELEVATION OF SOUTH EXTERIOR WALL
OF SWING ROAD STATION (MIS 606)



SEE SHEET 395

PARTIAL ELEVATION OF WEST EXTERIOR WALL
OF SPORTS PLEX (MIS 901)



SEE SHEET 593

PARTIAL ELEVATION OF SOUTH EXTERIOR WALL
OF FIRE STATION #56 (MIS 902)

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NCDEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
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DIVISION 7 — GUILFORD COUNTY

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PREPARED BY: J. CROSS	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SCALE: 0 — NONE

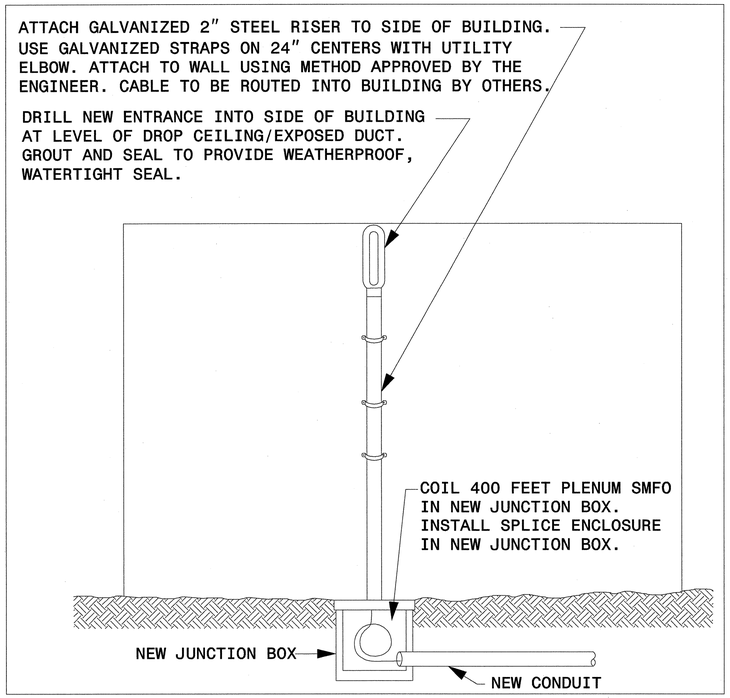
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE — DATE 2/29/08

CADD Filenames

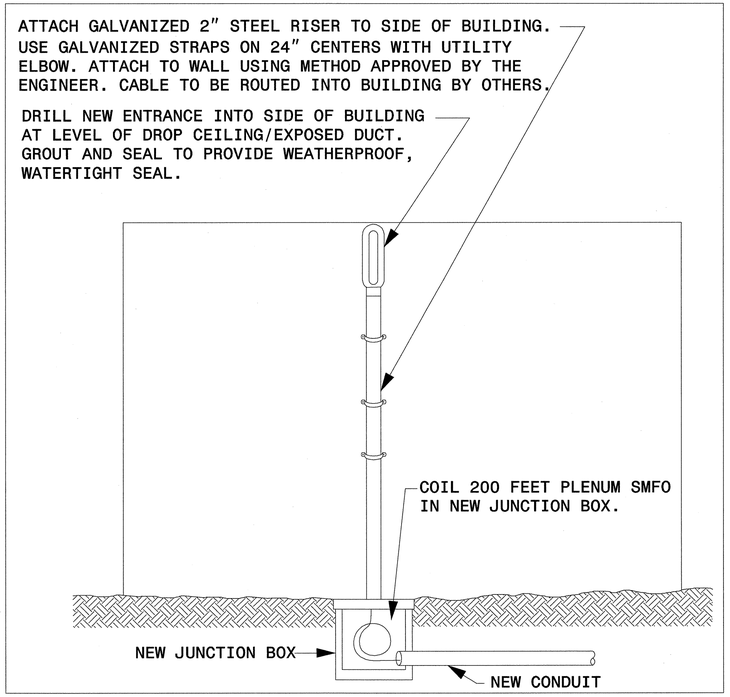
2/29/2008
I:\Systems\Svro1ects\DIH\HB2020 (g-boro mis\Details-MIS\DOT_-SH2zBV.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-4711	2BW



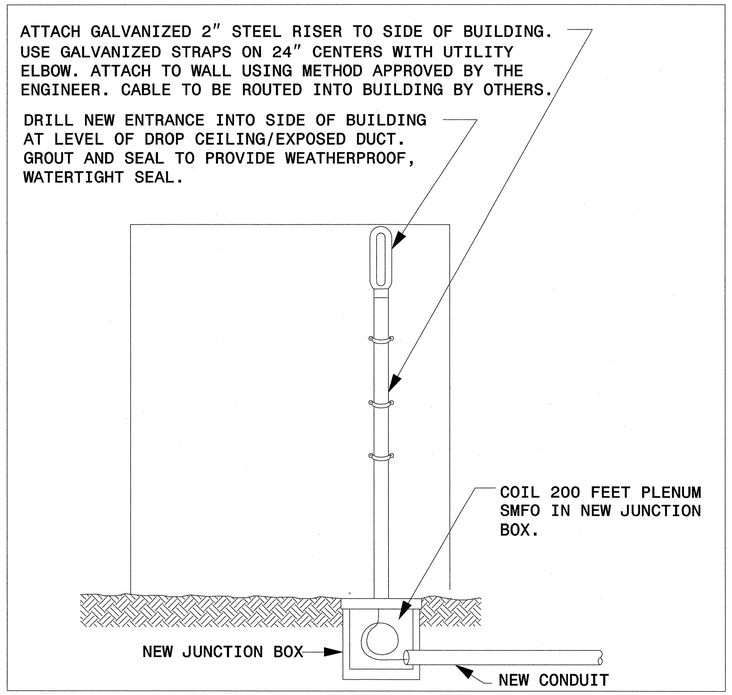
SEE SHEET 594

PARTIAL ELEVATION OF WEST EXTERIOR WALL OF TROTTER REC./HESTER (MIS 903)



SEE SHEET 534

PARTIAL ELEVATION OF EAST EXTERIOR WALL OF BURMILL PARK (MIS 904)



SEE SHEET 296

PARTIAL ELEVATION OF NORTH EXTERIOR WALL OF FIRE STATION #21 (MIS 1415)

1. COORDINATE ALL WORK AT BUILDINGS WITH CONTACT PERSON IDENTIFIED BY ENGINEER.
2. NO WORK SHALL BE PERFORMED AT MIS BUILDINGS WITHOUT PRIOR WRITTEN AUTHORIZATION FROM ENGINEER.
3. ALL METHODS TO ENTER BUILDINGS AND ATTACH ITEMS TO BUILDINGS SHALL BE APPROVED BY THE ENGINEER PRIOR TO COMMENCING WORK AT BUILDINGS.
4. ALL ROUTING OF CABLE WITHIN BUILDINGS SHALL BE REVIEWED AND APPROVED BY THE ENGINEER PRIOR TO BEGINNING WORK.
5. ALL MATERIALS DISPLACED FOR CONDUIT INSTALLATION, JUNCTION BOX INSTALLATIONS, AND ALL OTHER WORK TO ROUTE CONDUIT AND/OR CABLE TO AND WITHIN BUILDING SHALL BE REPLACED WITH SAME MATERIAL INCLUDING BUT NOT LIMITED TO PAVEMENT, SIDEWALKS, LANDSCAPING MATERIALS (ROCKS, MULCH, ETC.) TREES AND GRASS. SIDEWALK REPLACEMENT SHALL BE WHOLE PANELS.

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
MIS FACILITIES BUILDING
ENTRANCE DETAILS

DIVISION 7 GUILFORD COUNTY

PLAN DATE:	FEBRUARY, 2008	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J. CROSS	REVIEWED BY:	M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filename:

2/20/2008
I:\systems\projects\011462020 (g-boro mis)\details-mis\DTL-Sht2zBW.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-4711	3A

SUMMARY OF WORK BY INTERSECTION

	INTERSECTION					LOCATION		EXISTING CABINET TYPE		ELECTRICAL SERVICE			FOUNDATION					CABINETS					
	SIGNAL NUMBER	SHEET NUMBER (CR | SPL)		STREET 1	STREET 2	PROPOSED CORNER	NEW LOCATION	BASE-MOUNT	POLE-MOUNT	INSTALL NEW SERVICE (Note 30)	INSTALL GENERATOR POWER INLET BOX (Note 34)	MODIFY EXISTING ELECTRICAL SERVICE (Note 31)	EXTEND FOUNDATION (Note 3)	INSTALL BASE ADAPTER AND MODIFY FOUNDATION (Note 49)	INSTALL NEW FOUNDATION (Note 1)	INSTALL TERMINAL SPLICE BOX (Note 7)	REMOVE EXISTING FOUNDATION (Note 2)	INSTALL NEW EQUIPMENT BASE-MOUNTED CABINET (Note 4)	INSTALL NEW 332 BASE-MOUNTED CABINET (Note 5)	INSTALL NEW 336S BASE-MOUNTED CABINET (Note 6)	INSTALL NEW 336S POLE-MOUNTED CABINET (Note 6)	INSTALL NEW CONTROLLER (Note 32)	INSTALL NEW SOFTWARE
1	07-0189	106	439	NORWALK	WENDOVER	NW		1			1				1		1		1			1	
2	07-0193	393	97	US-29 RAMPS	CONE	NW		1				1	1						1			1	
3	07-0194	391	100	SUMMIT	CONE	NE		1			1		1						1			1	
4	07-0195	394	97	SANDS	CONE	SE		1				1	1						1			1	
5	07-0199	16	14	REGIONAL	BURNT POPLAR	NW		1					1						1			1	
6	07-0205	323	331	BATTLEGROUND	DAVID CALDWELL/MARTINSVILLE	NE		1					1						1			1	
7	07-0209	124	244	HIGH POINT	MERRITT	NE		1			1			1					1			1	
8	07-0221	275	46	NEW GARDEN	FRIEND'S HOME	NE			1												1	1	
9	07-0242	47	277	UNITED	MARKET	NW		1					1						1			1	
10	07-0251	17	12	NC-68	ALBERT PICK/I-40 EB RAMP	SE		1			1		1						1			1	
11	07-0285	481	446	ELM-EUGENE	SENECA/I-85	NW		1							1		1		1			1	
12	07-0295	410	120	CHURCH	CORNWALLIS	SE	1	1		1					1		1		1			1	
13	07-0362	101	257	I-40 WB RAMP	WENDOVER	SE		1							1		1		1			1	
14	07-0375	34	264	STAGE COACH	MARKET	NW		1					1						1			1	
15	07-0377	357	86	CHURCH	LEES CHAPEL/PISGAH CHURCH	SW		1					1						1			1	
16	07-0378	423	139	SYKES	WENDOVER	SW		1					1						1			1	
17	07-0399	430	138	HUFFINE MILL	BESSEMER	SE	1	1		1					1		1		1			1	
18	07-0408	278	52	FLEMING	OLD OAK RIDGE	SE		1					1						1			1	
19	07-0428	229	444	RANDLEMAN	I-85 NB RAMP	SE		1					1						1			1	
20	07-0430	229	442	I-40 WB RAMP/I-85 SB	RANDLEMAN	SE		1						1					1			1	
21	07-0434	230	441	RANDLEMAN	MEADOWVIEW	SW		1					1						1			1	
22	07-0438	465	168	LEE	LINCOLN	SW		1					1						1			1	
23	07-0444	85	287	HOLDEN RD	W WENDOVER AVE	NE		1			1			1					1			1	
24	07-0447	89	289	HOLDEN	MARKET	NE		1			1			1					1			1	
25	07-0450	127	241	HOLDEN	HIGH POINT	SE		1			1		1						1			1	
26	07-0472	144	176	EUGENE	LEE	SE		1					1						1			1	
27	07-0490	400	125	CRIDLAND/PARKWAY	WENDOVER	SE		1					1						1			1	
28	07-0492	330	349	BATTLEGROUND	NORTHWOOD	NE		1							1		1		1			1	
29	07-0536	44	275	MARKET	MONTROSE	NW		1					1						1			1	
30	07-0537	46	276	WESTGATE	MARKET	NE		1							1		1		1			1	
31	07-0538	321	71	BATTLEGROUND	PISGAH CHURCH	NW		1			1		1						1			1	
32	07-0555	499	192	US-421 (JOSEPH M HUNT JR.)	PLEASANT GARDEN	SW		1			1		1						1			1	
33	07-0560	147	172	BENNETT	LEE	SE	1	1		1					1		1		1			1	
34	07-0563	129	232	PINECROFT	HIGH POINT	SW		1			1		1						1			1	
35	07-0566	422	140	WAUGH	WENDOVER	NW		1							1		1		1			1	
36	07-0567	146	173	MURROW	LEE	NW		1					1							1		1	
37	07-0568	209	427	FLORIDA	RANDLEMAN	NE		1					1						1			1	
38	07-0569	101	256	I-40 EB RAMP	WENDOVER	SE		1					1						1			1	
39	07-0578	388	115	CHURCH	CONE	NE		1			1		1						1			1	
40	07-0579	429	145	LINDSAY	WENDOVER	NW		1						1					1			1	
41	07-0583	447	133	SUMMIT	TEXTILE	SW		1							1		1		1			1	
42	07-0588	481	446	ELM-EUGENE	I-85 SB RAMP	SE		1					1						1			1	
43	07-0589	229	442	RANDLEMAN	I-40 EB RAMP/I-85 SB	NW		1					1						1			1	
44	07-0594	93	261	GUILFORD COLLEGE	I-40 WB/SWING	NE		1			1		1						1			1	
45	07-0596	131	235	HIGH POINT	MEADOWVIEW	SW		1			1		1						1			1	
46	07-0597	342	344	WESTOVER TER.	WENDOVER	SW		1					1						1			1	
47	07-0598	104	437	EDWARDIA	WENDOVER	NW		1					1						1			1	
48	07-0609	324	333	BATTLEGROUND	BENJAMIN/CONE	NE		1			1				1		1		1			1	
49	07-0610	328	341	BATTLEGROUND	CORNWALLIS	SE		1			1		1						1			1	
50	07-0612	329	348	BATTLEGROUND	GREEN VALLEY/PEMBROKE	NW		1			1		1						1			1	
51	07-0613	399	124	HILL	WENDOVER	NW		1			1		1						1			1	
52	07-0621	122	247	GROOMETOWN/HILLTOP	HIGH POINT	NW		1			1				1		1		1			1	
53	07-0623	133	236	HIGH POINT	VANSTORY	NE		1					1						1			1	
54	07-0624	134	237	HIGH POINT	FLORIDA	NE		1					1						1			1	
55	07-0625	135	238	HIGH POINT	PATTERSON	SW		1						1					1			1	
56	07-0632	44	275	MUIRS CHAPEL/SPRING GARDEN	MARKET	SE		1			1		1						1			1	
57	07-0633	52	291	GREEN VALLEY	MARKET	SE		1					1						1			1	
58	07-0634	53	292	ELAM	MARKET	SE		1							1		1		1			1	
59	07-0635	55	293	CHAPMAN	MARKET	SE		1					1						1			1	
60	07-0636	58	323	TATE	MARKET	SE		1							1		1		1			1	
61	07-0637	59	325	MENDENHALL	MARKET	SE		1					1						1			1	
62	07-0644	61	326	CEDAR	MARKET	SE			1												1	1	
63	07-0646	207	428	FREEMAN MILL	FLORIDA	SE		1					1						1			1	
64	07-0648	466	167	WILLOW	LEE	NW		1					1						1			1	
65	07-0649	148	170	BENBOW	LEE	NE		1					1						1			1	
					SUBTOTAL	-	3	63	2	3	19	2	43	6	14	0	14	0	62	1	2	65	0

THIS SUMMARY OF WORK TABLE IS FOR INFORMATION ONLY
AND DOES NOT REFLECT ACTUAL PROJECT PAY ITEM QUANTITIES

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

750 Greenfield Pkwy., Garner, NC 27529

SCALE: 0 NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
SUMMARY OF WORK

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 REVIEWED BY: K.W. SMITH

PREPARED BY: J. CROSS REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE 2/20/08 DATE

CADD Filename:

2/20/2008
I:\systems\projects\01\462020 lg-boro mlb\details-mls\SUM-SH03.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-4711	3B

SUMMARY OF WORK BY INTERSECTION

INTERSECTION						LOCATION		EXISTING CABINET TYPE		ELECTRICAL SERVICE			FOUNDATION					CABINETS						
	SIGNAL NUMBER	SHEET NUMBER (CR | SPL)		STREET 1	STREET 2	PROPOSED CORNER	NEW LOCATION	BASE-MOUNT	POLE-MOUNT	INSTALL NEW SERVICE (Note 30)	INSTALL GENERATOR POWER INLET BOX (Note 34)	MODIFY EXISTING ELECTRICAL SERVICE (Note 31)	EXTEND FOUNDATION (Note 3)	INSTALL BASE ADAPTER AND MODIFY FOUNDATION (Note 49)	INSTALL NEW FOUNDATION (Note 1)	INSTALL TERMINAL SPLICE BOX (Note 7)	REMOVE EXISTING FOUNDATION (Note 2)	INSTALL NEW EQUIPMENT BASE-MOUNTED CABINET (Note 4)	INSTALL NEW 332 BASE-MOUNTED CABINET (Note 5)	INSTALL NEW 336S BASE-MOUNTED CABINET (Note 6)	INSTALL NEW 336S POLE-MOUNTED CABINET (Note 6)	INSTALL NEW CONTROLLER (Note 32)	INSTALL NEW SOFTWARE
66	07-0651	145	175	ARLINGTON	LEE	NW		1							1		1			1		1	
67	07-0652	144	176	ELM	LEE	SE		1							1		1		1			1	
68	07-0655	141	377	LEE	SILVER	SE		1							1		1		1			1	
69	07-0656	140	378	GLENWOOD	LEE	SE		1							1		1		1			1	
70	07-0657	139	379	AYCOCK	LEE	SE		1					1						1			1	
71	07-0661	61	328	SPRING	MARKET	SE			1												1	1	
72	07-0662	61	328	EDGEWORTH	MARKET	SE			1												1	1	
73	07-0663	64	383	EUGENE	MARKET	NE		1		1			1							1		1	
74	07-0679	450	111	SIXTEENTH	SUMMIT	NE		1					1						1			1	
75	07-0702	308	64	BATTLEGROUND	NEW GARDEN	SW		1			1		1						1			1	
76	07-0703	239	44	COLLEGE/NEW GARDEN	FRIENDLY	NW		1			1			1					1			1	
77	07-0714	420	142	GATEWOOD	WENDOVER	SE		1					1						1			1	
78	07-0715	421	141	ENGLISH	WENDOVER	NW		1			1		1						1			1	
79	07-0716	424	137	ELWELL	WENDOVER	NW		1						1					1			1	
80	07-0720	313	70	BATTLEGROUND	WESTRIDGE	SE		1			1		1						1			1	
81	07-0722	511	182	MARTIN LUTHER KING	I-85/US-29 RAMPS	NW		1			1		1						1			1	
82	07-0725	37	268	COLLEGE/GUILFORD COLLEGE	MARKET	NW		1			1		1						1			1	
83	07-0732	52	291	LINDELL	MARKET	NE		1							1		1		1			1	
84	07-0749	226	200	RANDLEMAN	VANDALIA	NW		1					1						1			1	
85	07-0826	413	130	CHURCH	WENDOVER	NW		1			1		1						1			1	
86	07-0831	137	380	CHAPMAN/COLISEUM	LEE	NW		1					1						1			1	
87	07-0846	328	342	BATTLEGROUND	LAWNDALE	NE		1			1				1		1		1			1	
88	07-0851	512	181	ALAMANCE	US 421	SE		1					1						1			1	
89	07-0865	103	435	MEADOWOOD	WENDOVER	NW		1					1						1			1	
90	07-0867	38	268	DOLLEY MADISON/MEADOWOOD	MARKET	SW		1			1		1						1			1	
91	07-0870	71	159	GILLESPIE	MARKET	NE		1							1		1		1			1	
92	07-0879	446	134	SUMMIT	4TH	NW		1					1						1			1	
93	07-0890	35	265	SWING	MARKET	NE		1					1						1			1	
94	07-0911	41	270	EDWARDIA	MARKET	SE		1					1						1			1	
95	07-0917	107	440	CLIFTON	WENDOVER	SW		1					1						1			1	
96	07-0962	32	31	CHIMNEY ROCK	MARKET	NE		1					1						1			1	
97	07-0964	228	444	CREEK RIDGE	RANDLEMAN	SE		1					1						1			1	
98	07-0968 Wireless	11	5	NC-68	PLEASANT RIDGE RD.	NE		1			1		1						1			1	
99	07-0978	28	26	GALLIMORE DAIRY	MARKET	NE		1			1	1	1						1			1	
100	07-0983	514	180	WILLOW RD	ALAMANCE CHURCH	NE		1					1						1			1	
101	07-0984	396	116	CHURCH	SIXTEENTH	SW		1							1		1		1			1	
102	07-0986	72	158	ENGLISH	MARKET	NW		1					1						1			1	
103	07-0987	133	236	HIGH POINT	GRIMSLEY	NE		1					1						1			1	
104	07-0988	84	284	HOLDEN	PATTERSON	SW		1			1		1						1			1	
105	07-0989	219	414	REHOBETH CHURCH	VANDALIA	SW		1					1						1			1	
106	07-0992	515	120	CHURCH	PEDESTRIAN CROSSING (HALL TOWERS)	SW			1												1	1	
107	07-1009	469	164	ENGLISH	LEE	NW		1					1						1			1	
108	07-1012	331	350	BATTLEGROUND	MILL	SE		1					1						1			1	
109	07-1016	303	58	BATTLEGROUND	HORSEPEN CREEK RD.	NW		1					1						1			1	
110	07-1017	93	261	GUILFORD COLLEGE	I-40 EB RAMP	NE		1			1		1						1			1	
111	07-1018	278	52	FLEMING/NEW GARDEN	BALLINGER/NEW GARDEN	SE		1					1						1			1	
112	07-1027	198	219	HOLDEN	I-85 SB RAMP	SE		1					1						1			1	
113	07-1028	198	217	HOLDEN	I-85 NB RAMP/CAMPGROUND	SW		1					1						1			1	
114	07-1029 Wireless	12	5	BENTLEY	REGIONAL RD.	SE			1												1	1	
115	07-1035	100	255	STANLEY	WENDOVER	SW		1			1				1		1		1			1	
116	07-1036	100	255	LANDMARK CENTER	WENDOVER	SW		1					1						1			1	
117	07-1041	180	207	GROOMETOWN	VANDALIA/WAYNE	NE		1															1
118	07-1044	17	12	REGIONAL	ALBERT PICK	SW		1					1						1			1	
119	07-1069	175	213	HIGH POINT RD.	ALAMANCE	SW		1					1						1			1	
120	07-1073	36	267	FRIENDWAY	MARKET	NW		1				1		1					1			1	
121	07-1145	307	62	BATTLEGROUND	BRASSFIELD	SW		1					1						1			1	
122	07-1163	16	13	I-40 WB RAMP	NC-68	SE		1					1						1			1	
123	07-1171	125	242	FARMINGTON	HIGH POINT	SW		1					1						1			1	
124	07-1185	171	212	HIGH POINT	MACKAY	NE		1					1						1			1	
125	07-1186	29	27	FRIENDLY	MARKET	NW		1					1						1			1	
126	07-1187	259	301	BRYAN WB RAMP	HOLDEN	SE		1					1						1			1	
127	07-1188	259	301	BRYAN EB RAMP	HOLDEN	NE		1					1						1			1	
128	07-1189	262	312	BENJAMIN	BRYAN BLVD	SE		1			1		1						1			1	
129	07-1197	23	17	GALLIMORE	BURNT POPLAR	NW		1					1						1			1	
130	07-1207	108	273	SPRING GARDEN	WENDOVER WB RAMP	NE		1			1	1	1						1			1	
					SUBTOTAL	-	0	61	4	1	16	3	48	3	9	0	9	0	58	2	4	64	1

THIS SUMMARY OF WORK TABLE IS FOR INFORMATION ONLY
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PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

750 Greenfield Pkwy., Garner, NC 27529

SCALE
0
NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
SUMMARY OF WORK

DIVISION 7 GUILFORD COUNTY
PLAN DATE: FEBRUARY, 2008 REVIEWED BY: K.W. SMITH
PREPARED BY: J. CROSS REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 023562 MARK DUNZO
SIGNATURE 2/24/08 DATE
CADD Filenames:

2/20/2008
I:\systems\pro\jects\DII\462020 (g-boro mls\ndetails-mls\SUM-SH03B.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-4711	3C

SUMMARY OF WORK BY INTERSECTION

	INTERSECTION					LOCATION		EXISTING CABINET TYPE		ELECTRICAL SERVICE			FOUNDATION					CABINETS					
	SIGNAL NUMBER	SHEET NUMBER (CR | SPL)		STREET 1	STREET 2	PROPOSED CORNER	NEW LOCATION	BASE-MOUNT	POLE-MOUNT	INSTALL NEW SERVICE (Note 30)	INSTALL GENERATOR POWER INLET BOX (Note 34)	MODIFY EXISTING ELECTRICAL SERVICE (Note 31)	EXTEND FOUNDATION (Note 3)	INSTALL BASE ADAPTER AND MODIFY FOUNDATION (Note 49)	INSTALL NEW FOUNDATION (Note 1)	INSTALL TERMINAL SPLICE BOX (Note 7)	REMOVE EXISTING FOUNDATION (Note 2)	INSTALL NEW EQUIPMENT BASE-MOUNTED CABINET (Note 4)	INSTALL NEW 332 BASE-MOUNTED CABINET (Note 5)	INSTALL NEW 336S BASE-MOUNTED CABINET (Note 6)	INSTALL NEW 336S POLE-MOUNTED CABINET (Note 6)	INSTALL NEW CONTROLLER (Note 32)	INSTALL NEW SOFTWARE
131	07-1209	284	48	BRYAN WB RAMP/HORSEPEN CREEK	NEW GARDEN	SW		1					1						1			1	
132	07-1210	316	67	BRYAN EB RAMP/FRIENDLY ACRES	WESTRIDGE	NE		1					1						1			1	
133	07-1211	316	68	BRYAN WB RAMP	WESTRIDGE	SE		1					1						1			1	
134	07-1219	495	193	PLEASANT GARDEN	VANDALIA	SW		1					1						1			1	
135	07-1235	234	39	FRIENDLY	STAGE COACH	SE		1					1						1			1	
136	07-1239	396	116	CHURCH	GOLDEN GATE	NW		1					1						1			1	
137	07-1240	116	280	MERRITT	PATTERSON WB RAMP	NE		1					1						1			1	
138	07-1241	276	46	ARCADIA	NEW GARDEN	SW		1					1						1			1	
139	07-1269	403	129	CHURCH	NORTHWOOD	NW		1					1						1			1	
140	07-1271	261	310	GREEN VALLEY	NORTHLINE/WENDOVER RAMP	SW		1			1		1						1			1	
141	07-1284 Wireless	168	212	MILLIS/ BONNER	HIGH POINT	NE		1							1		1		1			1	
142	07-1302	123	246	ROMAINE ST.	HIGH POINT	SW		1					1						1			1	
143	07-1305	130	233	HIGH POINT	I-40 WB RAMP	NE			1												1	1	
144	07-1316	217	346	GLENDALE	REHOBETH CHURCH	SW		1					1						1			1	
145	07-1320	155	243	MERRITT	FAIRFAX	SW		1			1		1						1			1	
146	07-1324	102	257	BIG TREE	WENDOVER	NE		1			1		1						1			1	
147	07-1376	120	248	FAIRFAX	HILLTOP	NE		1					1						1			1	
148	07-1379	225	201	RANDLEMAN	GLENDALE	SW		1					1						1			1	
149	07-1428	428	136	PENRY/BURLINGTON	WENDOVER/BURLINGTON	SE		1					1						1			1	
150	07-1429	14	5	BURGESS	MARKET	NW		1					1						1			1	
151	07-1436 Wireless	27	26	BOEING	MARKET	NE		1							1		1		1			1	
152	07-1439	7	2	SANDY RIDGE RD.	US-421 (W.MARKET)	SE		1					1						1			1	
153	07-1449	15	9	NC-68	TRIAD CENTER DR.	NE		1					1						1			1	
154	07-1458	236	41	KING GEORGE	FRIENDLY	SW		1					1						1			1	
155	07-1459 Wireless	10	5	EDGEFIELD	NC-68	SE		1							1		1		1			1	
156	07-1469	128	240	VEASLEY	HIGH POINT	SE		1					1						1			1	
157	07-1481	109	273	SPRING GARDEN	WENDOVER EB RAMP	NW		1					1						1			1	
158	07-1484	306	61	BATTLEGROUND	COTSWALD AVE.	SE		1					1						1			1	
159	07-1495	43	271	NORWALK	MARKET	NE		1					1						1			1	
160	07-1505	211	424	COLISEUM	FREEMAN MILL	SE		1					1						1			1	
161	07-1512	117	249	STANLEY	HILLTOP	NE		1					1		1			1	1			1	
162	07-1513	231	36	FRIENDLY	OLD FRIENDLY	SW		1					1						1			1	
163	07-1517	198	217	HOLDEN	PHOENIX	NE		1					1						1			1	
164	07-1518	99	254	BRIDFORD	WENDOVER AVE	NE		1			1		1						1			1	
165	07-1540	500	189	RANDLEMAN	TERRELL	SW		1							1		1		1			1	
166	07-1543	518	32	BURNT POPLAR	CHIMNEY ROCK	SE		1							1		1		1			1	
167	07-1600 Wireless	170	212	ADAMS FARM	MACKAY	NE		1							1		1		1			1	
168	07-1601	5	3	SANDY RIDGE	I-40 WB RAMP	SE		1				1	1						1			1	
169	07-1607	325	336	BATTLEGROUND	OAKCREST	SW		1					1						1			1	
170	07-1610	305	60	BATTLEGROUND	DRAWBRIDGE PKWY	NW		1					1						1			1	
171	07-1611	237	41	FRIENDS HOME	FRIENDLY	NW		1					1						1			1	
172	07-1618	178	205	GROOMETOWN	GRANDOVER/WILEY DAVIS	NE		1															1
173	07-1621	274	43	COLLEGE	HUNT CLUB DR.	NE		1					1						1			1	
174	07-1633	227	443	RANDLEMAN	CORLISS	NE		1					1						1			1	
175	07-1648	4	3	SANDY RIDGE	I-40 EB RAMP	SE		1					1						1			1	
176	07-1649	5	3	SANDY RIDGE RD.	TRIAD DR.	SE		1					1						1			1	
177	07-1658	135	238	HIGH POINT	ELLINGTON	SE		1							1		1		1			1	
178	07-1689	19	15	CHIMNEY ROCK	GALLIMORE DAIRY	NW		1					1						1			1	
179	07-1739	397	114	CHURCH	ELECTRA	NE		1					1						1			1	
180	07-1763	448	101	SUMMIT	PHILLIPS	SW		1					1						1			1	
181	07-1772	17	11	NC-68	THORNDIKE	NE		1					1						1			1	
182	07-1773	95	22	ADAMS FARM	HILLTOP	SE		1					1						1			1	
183	07-1774	96	23	BRIDFORD	HILLTOP	NW		1					1						1			1	
184	07-1775	272	42	COLLEGE	GUIDA	SW		1					1						1			1	
185	07-1776	231	36	CHIMNEY ROCK	FRIENDLY	SE		1					1						1			1	
186	07-1818	14	5	MARKET	NC-68 NB RAMP	NE		1					1						1			1	
187	07-1820	321	330	BATTLEGROUND	EDNEY RIDGE	SW		1					1						1			1	
188	07-1831	284	48	BRYAN EB RAMP	NEW GARDEN	NW		1					1						1			1	
189	07-1836	70	160	OHENRY BLVD RAMP	MARKET	NW		1					1						1			1	
190	07-1862	92	260	GUILFORD COLLEGE	HORNADAY	SE		1					1						1			1	
191	07-1863	98	251	SAPP	WENDOVER	NE		1					1						1			1	
192	07-1870	105	438	TRI-CITY	WENDOVER	NW		1					1						1			1	
193	07-1871	101	256	I-40 EB RAMP	WENDOVER	NW		1					1						1			1	
194	07-1884	383	95	SUMMIT	RANKIN	SE		1							1		1		1			1	
					SUBTOTAL	-	0	63	1	0	4	1	54	0	9	0	8	1	62	0	1	63	1

THIS SUMMARY OF WORK TABLE IS FOR INFORMATION ONLY
AND DOES NOT REFLECT ACTUAL PROJECT PAY ITEM QUANTITIES

PLANS PREPARED IN THE OFFICE OF:

Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
NCDEPARTMENT OF TRANSPORTATION
Integrated Mobility Division
750 Greenfield Pkwy., Garner, NC 27529

SCALE
0
NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
SUMMARY OF WORK

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: J. CROSS	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filename:

2/20/2008
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PROJECT REFERENCE NO.	SHEET NO.
U-4711	3D

SUMMARY OF WORK BY INTERSECTION

INTERSECTION						LOCATION		EXISTING CABINET TYPE		ELECTRICAL SERVICE			FOUNDATION					CABINETS					
	SIGNAL NUMBER	SHEET NUMBER (CR | SPL)		STREET 1	STREET 2	PROPOSED CORNER	NEW LOCATION	BASE-MOUNT	POLE-MOUNT	INSTALL NEW SERVICE (Note 30)	INSTALL GENERATOR POWER INLET BOX (Note 34)	MODIFY EXISTING ELECTRICAL SERVICE (Note 31)	EXTEND FOUNDATION (Note 3)	INSTALL BASE ADAPTER AND MODIFY FOUNDATION (Note 49)	INSTALL NEW FOUNDATION (Note 1)	INSTALL TERMINAL SPLICE BOX (Note 7)	REMOVE EXISTING FOUNDATION (Note 2)	INSTALL NEW EQUIPMENT BASE-MOUNTED CABINET (Note 4)	INSTALL NEW 332 BASE-MOUNTED CABINET (Note 5)	INSTALL NEW 336S BASE-MOUNTED CABINET (Note 6)	INSTALL NEW 336S POLE-MOUNTED CABINET (Note 6)	INSTALL NEW CONTROLLER (Note 32)	INSTALL NEW SOFTWARE
196	07-1887	213	382	FREEMAN MILL	GARRETT/GLENWOOD	NW		1					1						1			1	
197	07-1893	22	15	GALLIMORE DAIRY	I 40 RAMPS	NE		1					1						1			1	
198	07-1894	24	17	BOULDER	CHIMNEY ROCK	NE		1					1						1			1	
199	07-1921	26	18	BOULDER	BURNT POPLAR	SE		1					1						1			1	
200	07-1927	223	172	RANDLEMAN	ELMSLEY/NESTLEWAY	SE		1					1						1			1	
201	07-1928	177	173	GROOMETOWN	I-85 NB RAMP	NW		1					1						1			1	
202	07-1929	177	173	GROOMETOWN	I-85 SB RAMP	SW		1					1						1			1	
203	07-1930	364	66	LAKE BRANDT	AIR HARBOR	SW		1					1						1			1	
204	07-1941	299	52	HORSEPEN	CARLSON DAIRY	NW			1												1	1	
205	07-1944	327	299	BATTLEGROUND	MARKLAND	SE		1					1						1			1	
206	07-1964	94	22	BIG TREE	GUILFORD COLLEGE	SE		1					1						1			1	
207	07-1969	472	168	ELM-EUGENE	I-85 SB RAMPS	NW		1				1	1						1			1	
208	07-1970	472	167	ELM-EUGENE	I-85 NB RAMPS	NW		1				1	1		1			1	1			1	
209	07-1973	47	240	MARKET	WALKER	NW		1					1						1			1	
210	07-1978	31	27	MARKET	PPG	NW		1					1						1			1	
211	07-1984 Wireless	361	75	ELM	OLD LAKE JEANETTE	NE		1					1						1			1	
212	07-2000	9	1	MARKET	PLEASANT RIDGE	SE		1					1						1			1	
213	07-2001 Wireless	13	5	REGIONAL ROAD	BRYAN	SE		1			1		1						1			1	
214	07-2008	234	36	FRIENDLY	OUTER LOOP	SE		1					1						1				1
215	07-2014	512	151	ROTHERWOOD	ALAMANCE CHURCH	NW		1					1						1			1	
216	07-2026	220	373	REHOBETH	I-85/TOLAR	SE		1				1	1						1			1	
217	07-2028	469	135	MOODY	LEE	NW		1					1						1			1	
218	07-2029	58	285	E LAKE/MCGIVER	MARKET	SE		1				1	1						1			1	
219	07-2030 Wireless	169	178	HIGHPOINT	GUILFORD COLLEGE	SW		1							1		1		1			1	
220	07-2033	18	9	HIGHWAY 68	REGIONAL/HICKORY RIDGE	NE		1					1						1			1	
221	07-2034	430	112	BURLINGTON	BESSEMER/FRANKLIN	NW		1					1						1			1	
222	07-2040	183	176	WILEY DAVIS	VANDALIA	NE		1														1	
223	07-2044	235	37	FRIENDWAY/COBLE FARMS	FRIENDLY	SE		1					1						1			1	
224	07-2045	295	51	HORSE PEN CREEK	DRAWBRIDGE	NE		1					1						1			1	
225	07-2050	377	79	CHURCH	DENNY	NW		1					1						1			1	
226	07-2055	473	166	ELM-EUGENE	ELMSLEY	SW		1					1						1			1	
227	07-2058	491	165	WALMART ACCESS	ELMSLEY	NW		1					1						1			1	
228	07-2068	179	174A	GROOMETOWN	ROSELAKE/SEDGEWOOD	NE		1															1
229	07-2076	73	129	MARKET	HOLTS CHAPEL	SE		1															1
230	07-2077	22	14	GALLIMORE DAIRY	AIRPARK	SW		1					1						1			1	
231	07-2112	300	52	HORSE PEN CREEK	HANBERRY/YMCA	SE		1															1
232	GBO-001	375	71	LAWNDALE	MARTINSVILLE	NW		1					1						1			1	
233	GBO-002	373	70	LAWNDALE	LAKE JEANETTE	NE		1					1						1			1	
234	GBO-003	370	69	LAWNDALE	COTTAGE	NW		1					1						1			1	
235	GBO-004	163	333	TATE	WALKER	SE			1	1											1	1	
236	GBO-005	366	67	LAKE BRANDT	LAWNDALE	SW		1					1						1			1	
237	GBO-006 Wireless	363	55	COTSWOLD	OLD BATTLEGROUND	SW		1					1						1			1	
238	GBO-007 Wireless	363	55	LAKE BRANDT	OLD BATTLEGROUND	NE		1					1						1			1	
239	GBO-009	463	125	DUDLEY	BLUFORD	SW		1					1						1			1	
240	GBO-010	369	68	LAWNDALE	COTSWOLD	SW		1					1						1			1	
241	GBO-011	115	242	MERRIT	HEWITT	SE		1					1						1			1	
242	GBO-012	163	333	S TATE	SPRING GARDEN ST	NE		1							1		1		1			1	
243	GBO-013	200	376	CREEK RIDGE	FOUR SEASONS	NW		1					1						1			1	
244	GBO-015	398	86	YANCEYVILLE	16th STREET	SE		1					1						1			1	
245	GBO-017	194	188	HOLDEN	VANDALIA	SW		1					1						1			1	
246	GBO-019	79	237	POMONA	SPRING GARDEN	SW		1					1						1			1	
247	GBO-020	346	72	MARTINSVILLE	PISGAH CHURCH	NE		1					1						1			1	
248	GBO-021	350	74	PISGAH CHURCH	WILLOUGHBY	NW		1					1						1			1	
249	GBO-022	185	194	PINECROFT	VANSTORY	SW		1					1						1			1	
250	GBO-023	508	300	LAWNDALE	LAWNDALE CROSSING	SW		1					1						1			1	
251	GBO-024	189	195	PINECROFT	SEAWELL	NW		1					1						1			1	
252	GBO-025	346	72	PISGAH CHURCH	LAWNDALE	SW		1			1		1						1			1	
253	GBO-026	260	270	PEMBROKE	NORTHLINE	SW		1							1		1		1			1	
254	GBO-029	76	235	MUIRS CHAPEL	TOWER	NE		1					1						1			1	
255	GBO-030	114	241	MERRITT	SPRING GARDEN	NW		1			1				1		1		1			1	
256	GBO-031	195	187	PINECROFT	VANDALIA	NW		1					1						1			1	
257	GBO-033	164	322	MENDENHALL	SPRING GARDEN	NW		1							1		1		1			1	
258	GBO-034	160	329	KENILWORTH	SPRING GARDEN	SE		1		1			1						1			1	
259	GBO-041	368	68	LAWNDALE	REGENTS PARK LN.	SW		1					1						1			1	
260	GBO-046	335	320	FISHER/EDGEWORTH	BATTLEGROUND	NE		1							1		1				1	1	
					SUBTOTAL		0	63	2	2	3	4	53	0	7	0	6	1	58	1	2	61	4

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PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy, Garner, NC 27529

SCALE: 0 NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
SUMMARY OF WORK

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH
PREPARED BY: J. CROSS — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE — DATE: 2/20/08

CADD Filename:

2/20/2008
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PROJECT REFERENCE NO.	SHEET NO.
U-4711	3E

SUMMARY OF WORK BY INTERSECTION

	INTERSECTION					LOCATION		EXISTING CABINET TYPE		ELECTRICAL SERVICE			FOUNDATION					CABINETS					
	SIGNAL NUMBER	SHEET NUMBER (CR | SPL)		STREET 1	STREET 2	PROPOSED CORNER	NEW LOCATION	BASE-MOUNT	POLE-MOUNT	INSTALL NEW SERVICE (Note 30)	INSTALL GENERATOR POWER INLET BOX (Note 34)	MODIFY EXISTING ELECTRICAL SERVICE (Note 31)	EXTEND FOUNDATION (Note 3)	INSTALL BASE ADAPTER AND MODIFY FOUNDATION (Note 49)	INSTALL NEW FOUNDATION (Note 1)	INSTALL TERMINAL SPLICE BOX (Note 7)	REMOVE EXISTING FOUNDATION (Note 2)	INSTALL NEW EQUIPMENT BASE-MOUNTED CABINET (Note 4)	INSTALL NEW 332 BASE-MOUNTED CABINET (Note 5)	INSTALL NEW 336S BASE-MOUNTED CABINET (Note 6)	INSTALL NEW 336S POLE-MOUNTED CABINET (Note 6)	INSTALL NEW CONTROLLER (Note 32)	INSTALL NEW SOFTWARE
260	GBO-047	334	353	BATTLEGROUND	HILL	NW		1			1		1						1			1	
261	GBO-048	333	352	BATTLEGROUND	BENJAMIN/SMITH	SW		1			1	1			1		1		1			1	
262	GBO-049	441	407	SUMMIT	LINDSAY	NW		1		1			1							1		1	
263	GBO-050	459	152	SULLIVAN	LINDSAY	NW		1					1						1			1	
264	GBO-051	332	351	BATTLEGROUND	BESSEMER	SE		1							1		1		1			1	
265	GBO-052	413	132	CHURCH	BESSEMER	SE		1					1						1			1	
266	GBO-053	62	327	EDGEWORTH	WASHINGTON	SW		1					1							1		1	
267	GBO-056	344	362	EDGEWORTH	BELLEMEADE	SW		1							1		1			1		1	
268	GBO-058	344	361	EDGEWORTH	SMITH	SE		1					1							1		1	
269	GBO-059	336	354	ELM	FISHER	NE		1							1		1			1		1	
270	GBO-060	431	355	ELM	SMITH	NW		1							1		1			1		1	
271	GBO-061	336	359	EUGENE	FISHER	SW		1					1							1		1	
272	GBO-062	336	354	GREENE	FISHER	NE		1					1							1		1	
273	GBO-063	260	308	PEMBROKE	KATHLEEN	NE		1							1		1		1			1	
274	GBO-064	116	280	MERRITT	IMMANEUL	SW		1					1						1			1	
275	GBO-065	66	156	MURROW	FRIENDLY	SW		1					1							1		1	
276	GBO-066	65	405	CHURCH	FRIENDLY	NE		1		1					1		1			1		1	
277	GBO-067	65	392	DAVIE	FRIENDLY	NE		1		1			1						1			1	
278	GBO-068	63	391	ELM	FRIENDLY	NE		1		1			1							1		1	
279	GBO-069	63	390	GREENE	FRIENDLY	NE		1		1					1		1			1		1	
280	GBO-070	63	385	COMMERCE	FRIENDLY	NW		1		1			1							1		1	
281	GBO-071	48	290	HOLDEN	WALKER	SW		1							1		1		1			1	
282	GBO-072	184	227	HOLDEN	VANSTORY	NW		1					1						1			1	
283	GBO-074	87	286	HOLDEN	SPRING GARDEN	NW	1	1		1	1				1	1			1			1	
284	GBO-076	199	220	HOLDEN	MCCUISTON/PINECROFT	SW		1					1						1			1	
285	GBO-077	66	156	MURROW	MARKET	NE		1					1							1		1	
286	GBO-078	65	404	CHURCH	MARKET	NW		1		1			1							1		1	
287	GBO-079	314	66	HOBBS	WESTRIDGE	SW		1							1		1		1			1	
288	GBO-080	258	302	HOLDEN	HOBBS	SE		1					1						1			1	
289	GBO-081	65	403	DAVIE	MARKET	SW		1		1			1							1		1	
290	GBO-082	64	388	ELM	MARKET	NW		1		1					1		1			1		1	
291	GBO-083	162	374	HIGHLAND	SPRING GARDEN	SE		1					1						1			1	
292	GBO-084	64	387	GREENE	MARKET	NE		1		1			1							1		1	
293	GBO-086	337	334	BENJAMIN	HOLDEN/PINEDALE	SW		1					1						1			1	
294	GBO-087	504	184	MARTIN LUTHER KING	FLORIDA	SW		1					1						1			1	
295	GBO-088	67	155	MURROW	LINDSAY	SW		1							1		1		1			1	
296	GBO-089	431	355	GREENE	SMITH	NW		1							1		1			1		1	
297	GBO-090	62	327	SPRING	WASHINGTON	SE		1					1							1		1	
298	GBO-091	458	149	SUMMIT	YANCEYVILLE	SE		1					1						1			1	
299	GBO-092	444	148	SUMMIT	SULLIVAN	SE		1							1		1		1			1	
300	GBO-093	161	370	AYCOCK	WALKER	SW		1					1						1			1	
301	GBO-094	160	371	AYCOCK	SPRING GARDEN	SE		1							1		1		1			1	
302	GBO-095	205	430	AYCOCK/LOVETT	FLORIDA	SE		1							1		1		1			1	
303	GBO-096	436	398	GREENE	WASHINGTON	NW		1		1					1		1			1		1	
304	GBO-097	435	389	GREENE	FEBRUARY ONE	NW		1		1			1							1		1	
305	GBO-098	68	157	DUDLEY	MARKET	SW		1					1						1			1	
306	GBO-100	69	162	LAUREL	MARKET	SW		1					1						1			1	
307	GBO-101	432	396	GREENE	LINDSAY	NW		1		1					1		1			1		1	
308	GBO-102	329	347	WESTOVER	GREEN VALLEY	SE		1			1		1						1			1	
309	GBO-103	69	162	BENBOW	MARKET	SW		1							1		1		1			1	
310	GBO-104	468	164	ENGLISH	MCCONNELL	SW		1					1						1			1	
311	GBO-105	467	167	WILLOW	MCCONNELL	SW		1					1						1			1	
312	GBO-106	309	63	BRASSFIELD	NEW GARDEN	NE		1					1						1			1	
313	GBO-107	285	47	WILL DOSKEY/JEFFERSON	NEW GARDEN	SW		1					1						1			1	
314	GBO-108	282	50	NEW GARDEN	GARDEN LAKE/ HOBBS	SE		1							1		1		1			1	
315	GBO-112 Wireless	113	256	STANLEY	EAGLE	SE		1					1						1			1	
316	GBO-113 Wireless	112	256	STANLEY	KOGER	NW		1					1						1			1	
317	GBO-117	165	243	TATE	CARR	SW		1					1						1			1	
318	GBO-118	510	183	MARTIN LUTHER KING JR	BENBOW	NE		1					1						1			1	
319	GBO-122 Wireless	286	47	JEFFERSON	HOBBS	NW		1					1						1			1	
320	GBO-124	341	346	LENDEW	GREEN VALLEY	NE		1					1						1			1	
321	GBO-127	334	353	HILL	SMITH	NW		1						1					1			1	
322	GBO-128	355	84	ELM	PISGAH CHURCH	NE		1					1						1			1	
323	GBO-129	187	229	FOUR SEASONS	VANSTORY	SE		1					1						1			1	
324	GBO-130	189	231	PINECROFT	KOURY BLVD.	SW		1					1						1			1	
					SUBTOTAL	-	1	65	0	14	4	1	43	1	21	1	20	0	42	23	0	65	0

THIS SUMMARY OF WORK TABLE IS FOR INFORMATION ONLY
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PLANS PREPARED IN THE OFFICE OF:

Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

750 Greenfield Pkwy., Garner, NC 27529

SCALE
0
NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
SUMMARY OF WORK

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: J. CROSS	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filenames

2/20/2008
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PROJECT REFERENCE NO.	SHEET NO.
U-4711	3F

SUMMARY OF WORK BY INTERSECTION

INTERSECTION						LOCATION		EXISTING CABINET TYPE		ELECTRICAL SERVICE			FOUNDATION					CABINETS					
	SIGNAL NUMBER	SHEET NUMBER (CR | SPL)		STREET 1	STREET 2	PROPOSED CORNER	NEW LOCATION	BASE-MOUNT	POLE-MOUNT	INSTALL NEW SERVICE (Note 30)	INSTALL GENERATOR POWER INLET BOX (Note 34)	MODIFY EXISTING ELECTRICAL SERVICE (Note 31)	EXTEND FOUNDATION (Note 3)	INSTALL BASE ADAPTER AND MODIFY FOUNDATION (Note 49)	INSTALL NEW FOUNDATION (Note 1)	INSTALL TERMINAL SPLICE BOX (Note 7)	REMOVE EXISTING FOUNDATION (Note 2)	INSTALL NEW EQUIPMENT BASE-MOUNTED CABINET (Note 4)	INSTALL NEW 332 BASE-MOUNTED CABINET (Note 5)	INSTALL NEW 336S BASE-MOUNTED CABINET (Note 6)	INSTALL NEW 336S POLE-MOUNTED CABINET (Note 6)	INSTALL NEW CONTROLLER (Note 32)	INSTALL NEW SOFTWARE
325	GBO-131	360	88	YANCEYVILLE	LEES CHAPEL	SW		1					1						1			1	
326	GBO-132	162	373	FOREST	SPRING GARDEN	SE		1				1	1						1			1	
327	GBO-133	344	361	SPRING	SMITH	SE		1						1					1			1	
328	GBO-134	470	166	WILLOW	FLORIDA	SW	1	1		1					1	1	1		1			1	
329	GBO-135	503	185	RANDOLPH	FLORIDA	NE	1	1		1					1	1	1		1			1	
330	GBO-136	431	358	EUGENE	SMITH	NE		1					1						1			1	
331	GBO-137	83	283	HOLDEN	FLORIDA	NE		1						1					1			1	
332	GBO-138	111	253	BRIDFORD	WENDOVER PLACE	SW		1					1						1			1	
333	GBO-139	203	431	FLORIDA	HARDIE	NW		1					1						1			1	
334	GBO-140	206	429	FLORIDA	GLENWOOD	SW		1					1						1			1	
335	GBO-141	283	49	HIGH WOODS CIRCLE	NEW GARDEN	NW		1				1	1						1			1	
336	GBO-142	188	228	VANSTORY	MEADOWVIEW	SW		1					1						1			1	
337	GBO-144	190	226	HOLDEN	FARMINGTON	SE		1					1						1			1	
338	GBO-148	436	399	EUGENE	WASHINGTON	SE		1		1			1								1	1	
339	GBO-150	437	400	EUGENE	MCGEE	NE		1							1		1				1	1	
340	GBO-152	432	397	EUGENE	LINDSAY	SW		1		1			1								1	1	
341	GBO-153	221	415	REHOBETH CHURCH	CREEK RIDGE	SW		1					1						1			1	
342	GBO-154	216	426	RANDLEMAN	FREEMAN MILL	SW		1					1						1			1	
343	GBO-155	415	147	BESSEMER	SUMMIT	NW		1					1		1				1			1	
344	GBO-156	480	190	ELM-EUGENE	JJ	SE		1					1						1			1	
345	GBO-158	479	190	ELM-EUGENE	CREEK RIDGE/INDUSTRIAL	SW		1					1						1			1	
346	GBO-159	477	191	ELM-EUGENE	MONTCASTLE	SW		1						1					1			1	
347	GBO-160	476	194	ELM-EUGENE	VANDALIA	SE		1					1						1			1	
348	GBO-161	269	318	AYCOCK/WESTOVER	BENJAMIN	SE		1					1						1			1	
349	GBO-162	482	447	ELM-EUGENE	PATTON	NE		1					1						1			1	
350	GBO-163	267	317	CAMPUS	BENJAMIN	NW		1					1						1			1	
351	GBO-164	482	447	ELM-EUGENE	MEADOWVIEW	SW		1					1						1			1	
352	GBO-165	267	316	BENJAMIN	ELAM/KISER	SW		1					1						1			1	
353	GBO-166	265	315	BENJAMIN	GREEN VALLEY	SW		1							2		1	1	1			1	
354	GBO-167	484	188	ELM-EUGENE	FLORIDA	SE		1					1						1			1	
355	GBO-168	436	402	ELM	WASHINGTON	SW		1		1			1								1	1	
356	GBO-169	264	314	BENJAMIN	PEMBROKE	NE		1					1						1			1	
357	GBO-170	402	126	ELM	NORTHWOOD	SE		1					1						1			1	
358	GBO-171	437	401	ELM	MCGEE	NW		1		1					1		1				1	1	
359	GBO-172	263	313	BENJAMIN	CORNWALLIS	NE		1				1	1						1			1	
360	GBO-173	433	406	ELM	LINDSAY	NW		1		1					1		1				1	1	
361	GBO-174	439	176	ELM	LEWIS	SE		1		1			1								1	1	
362	GBO-175	460	152	BENBOW	SULLIVAN	SE			1													1	1
363	GBO-178	435	411	ELM	FEBRUARY ONE	NE		1		1			1								1	1	
364	GBO-179	486	178	ELM-EUGENE	ELM	NE		1					1						1			1	
365	GBO-180	166	363	ELAM	WALKER	SE		1							1		1		1			1	
366	GBO-182	404	123	ELM	TANKERSLEY	NE		1				1	1						1			1	
367	GBO-183	63	384	EUGENE	FRIENDLY	NW		1		1					1		1				1	1	
368	GBO-184	60	329	EDGEWORTH	FRIENDLY	SE			1													1	1
369	GBO-185	60	329	FRIENDLY	SPRING	NE			1													1	1
370	GBO-186	60	329	CEDAR	FRIENDLY	SE			1													1	1
371	GBO-187	59	323	MENDENHALL	FRIENDLY	NW		1			1		1						1			1	
372	GBO-188	58	325	TATE	FRIENDLY	SW		1							1		1		1			1	
373	GBO-189	57	321	MARKET CROSSOVER	FRIENDLY	NE		1				1	1						1			1	
374	GBO-190	271	319	WESTOVER	FRIENDLY	SW		1							1		1		1			1	
375	GBO-191	458	153	DUDLEY/YANCEYVILLE	LINDSAY	NW		1							1		1		1			1	
376	GBO-192	271	319	RADIANCE	FRIENDLY	NW		1							1		1		1			1	
377	GBO-193	252	310	ELAM	FRIENDLY	NE		1					1						1			1	
378	GBO-194	440	307	DAVIE	WASHINGTON	NE		1		1			1								1	1	
379	GBO-195	441	394	DAVIE	SUMMIT	SW		1		1					1		1				1	1	
380	GBO-196	252	310	LINDELL	FRIENDLY	SE		1					1						1			1	
381	GBO-197	252	311	GREEN VALLEY	FRIENDLY	NW		1					1						1			1	
382	GBO-198	440	410	DAVIE	FEBRUARY ONE	SE		1		1			1								1	1	
383	GBO-199	193	225	HOLDEN	DARDEN	SW		1					1						1			1	
384	GBO-200	251	307	FRIENDLY	PEMBROKE	NW		1					1						1			1	
385	GBO-201	251	307	AVONDALE	FRIENDLY	NW		1					1						1			1	
386	GBO-202	249	306	HOBBS	FRIENDLY	NE		1				1	1						1			1	
387	GBO-203	248	300	HOLDEN	FRIENDLY	NE		1			1		1						1			1	
388	GBO-204	243	296	LAKEWOOD/WESTRIDGE	FRIENDLY	NE		1					1						1			1	
389	GBO-205	328	341	LAWNDALE	CORNWALLIS	SW		1			1		1						1			1	
					SUBTOTAL	-	2	61	4	13	3	6	45	3	15	2	13	1	49	12	4	65	0

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PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

750 Greenfield Pkwy., Garner, NC 27529

SCALE: 0 NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
SUMMARY OF WORK

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 REVIEWED BY: K.W. SMITH
PREPARED BY: J. CROSS REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNTO
SIGNATURE 2/20/08 DATE
CADD Filename:

2/20/2008
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PROJECT REFERENCE NO.	SHEET NO.
U-4711	3G

SUMMARY OF WORK BY INTERSECTION

	INTERSECTION					LOCATION		EXISTING CABINET TYPE		ELECTRICAL SERVICE			FOUNDATION					CABINETS					
	SIGNAL NUMBER	SHEET NUMBER (CR | SPL)		STREET 1	STREET 2	PROPOSED CORNER	NEW LOCATION	BASE-MOUNT	POLE-MOUNT	INSTALL NEW SERVICE (Note 30)	INSTALL GENERATOR POWER INLET BOX (Note 34)	MODIFY EXISTING ELECTRICAL SERVICE (Note 31)	EXTEND FOUNDATION (Note 3)	INSTALL BASE ADAPTER AND MODIFY FOUNDATION (Note 49)	INSTALL NEW FOUNDATION (Note 1)	INSTALL TERMINAL SPLICE BOX (Note 7)	REMOVE EXISTING FOUNDATION (Note 2)	INSTALL NEW EQUIPMENT BASE-MOUNTED CABINET (Note 4)	INSTALL NEW 332 BASE-MOUNTED CABINET (Note 5)	INSTALL NEW 336S BASE-MOUNTED CABINET (Note 6)	INSTALL NEW 336S POLE-MOUNTED CABINET (Note 6)	INSTALL NEW CONTROLLER (Note 32)	INSTALL NEW SOFTWARE
390	GBO-206	255	243	CORNWALLIS	HOBBS	NW		1				1	1						1			1	
391	GBO-207	409	119	GOLDEN GATE	CORNWALLIS	NW		1					1						1			1	
392	GBO-208	407	119	ELM	CORNWALLIS	NW		1					1						1			1	
393	GBO-209	389	113	CONE	YANCEYVILLE	SW	1	1		1					1	1	1		1			1	
394	GBO-210	243	295	FRIENDLY	JEFFERSON	NE		1					1						1			1	
395	GBO-211	241	294	MUIRS CHAPEL	FRIENDLY	NE		1					1						1			1	
396	GBO-212	240	45	DOLLEY MADISON	FRIENDLY	NE		1							1		1		1			1	
397	GBO-213	384	117	MARSTON	CONE	NW		1					1						1			1	
398	GBO-214	339	332	CONE	LAWNDALE	NE		1							1		1		1			1	
399	GBO-215	386	118	ELM	CONE	SW		1					1						1			1	
400	GBO-217	381	94	YANCEYVILLE	RANKIN	SE		1				1			1		1		1			1	
401	GBO-218	356	85	ELM VILLAGE DRIVE	PISGAH CHURCH	NW		1				1	1						1			1	
402	GBO-220	114	278	MERRITT	CLIFTON	SW		1							1		1		1			1	
403	GBO-222	441	408	CHURCH	SUMMIT	SW		1					1							1		1	
404	GBO-226	441	409	CHURCH	LINDSAY	SW		1					1							1		1	
405	GBO-235	167	368	CHAPMAN	WALKER	NW		1					1						1			1	
406	GBO-236	158	369	CHAPMAN	SPRING GARDEN	NE		1					1						1			1	
407	GBO-239	204	432	COLISEUM	FLORIDA	NW		1					1						1			1	
408	GBO-240	82	282	HOLDEN	CENTER/MEADOWVIEW	SE		1			1		1						1			1	
409	GBO-241	127	331	CEDAR FORK	HOLDEN	SE		1					1						1			1	
410	GBO-250	414	132	YANCEYVILLE	BESSEMER	NW		1					1						1			1	
411	GBO-251	418	144	BESSEMER	HUFFMAN/WINSTON	NE		1					1						1			1	
412	GBO-253	417	146	BESSEMER	LINDSAY	NE		1					1						1			1	
413	GBO-255	401	125	BESSEMER/EUGENE	PARKWAY	NW		1					1						1			1	
414	GBO-256	419	143	ENGLISH	BESSEMER	SW		1					1						1			1	
415	GBO-257	412	131	ELM	BESSEMER	SE	1	1		1					1	1	1		1			1	
416	GBO-260	461	171	BENNETT	GORRELL	NW		1					1						1			1	
417	GBO-261	461	171	BENNETT/DUDLEY	WASHINGTON	NW		1					1						1			1	
418	GBO-268	149	169	BENBOW	MCCONNELL/WASHINGTON	NE		1					1						1			1	
419	GBO-271	507	179	BENBOW	FLORIDA	SW		1					1						1			1	
420	GBO-272	434	395	GREENE	BELLEMEADE	SW		1		1					1		1			1		1	
421	GBO-273	434	386	EUGENE	BELLEMEADE	NW		1		1			1							1		1	
422	GBO-274	434	393	ELM	BELLEMEADE/SUMMIT	NE		1		1					1		1			1		1	
423	GBO-381	395	97	CONE	16th STREET	SE		1															1
424	GBO-284	431	359	BATTLEGROUND	EUGENE	NE		1							1		1			1		1	
425	GBO-304	386	118	ALMA PINNIX	CONE	SW		1					1						1			1	
426	GBO-305	405	122	ELM	SUNSET	NW		1					1						1			1	
427	GBO-312	151	161	BENBOW	BLUFORD	SW			1												1	1	
428	GBO-334	487	177	EUGENE	WHITTINGTON	NE		1					1						1			1	
429	GBO-335	340	339	LAWNDALE	FERNWOOD	SE		1					1						1			1	
430	GBO-366	75	269	DOLLEY MADISON	TOWER	SW		1					1						1			1	
431	GBO-376	254	305	HOBBS	NORTHLINE	NE		1					1						1			1	
432	GBO-388	256	303	HOLDEN	CASCADE/CORNWALLIS	SW		1				1		1					1			1	
433	GBO-390	319	69	WESTRIDGE	WHITEHURST	SW		1							1		1		1			1	
434	GBO-424	91	288	HOLDEN	MADISON	NW		1					1						1			1	
435	GBO-429	157	365	ELAM	SPRING GARDEN	SE		1					1						1			1	
436	GBO-437	343	343	CAMPUS	WESTOVER	SW		1					1						1			1	
437	GBO-460	411	121	YANCEYVILLE	CORNWALLIS	NW		1					1						1			1	
438	GBO-468	80	274	DUNDAS	POMONA	SW		1					1						1			1	
439	GBO-475	201	420	FOUR SEASONS	VANDALIA	NW		1					1						1			1	
440	GBO-477	132	234	CENTERVIEW	MEADOWVIEW	SW		1					1						1			1	
441	GBO-480	92	260	WENDOVER PLACE	HORNADAY	SW		1					1						1			1	
442	GBO-483 Wireless	362	84	ELM	CORPORATE CENTER	NE		1					1						1			1	
443	GBO-486	349	82	PISGAH CHURCH	PISGAH PLACE	NE		1					1						1			1	
444	GBO-487	110	252	BRIDFORD	KMART	SW		1					1						1			1	
445	GBO-489	392	100	ORANGE	CONE	NW		1					1						1			1	
446	07-2100	212	424	FREEMAN MILL	LOVETT	SW		1															1
447	07-XXX3	290	53	FLEMING	BRYAN BOULEVARD RAMP	SW		1															1
448	07-XXX4	499	192	PLEASANT GARDEN	INDUSTRIAL	SE		1															1
449	GBO-XX1	250	306	FRIENDLY	SHOPS AT FRIENDLY	SW		1															1
450	GBO-XX2	292	54	FLEMING	ISAACSON	SE		1															1
451	GBO-XX3	293	55	HORSE PEN CREEK	ISAACSON	NW		1															1
452	GBO-XX4	456	127	CHURCH	TANKERSLEY	SW		1															1
					SUBTOTAL	-	2	62	1	5	1	4	43	1	10	2	10	0	48	6	1	55	8
					TOTAL	-	8	438	14	38	50	21	329	14	86	5	80	4	379	45	14	437	14

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P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
NCDEPARTMENT OF TRANSPORTATION
750 Greenfield Pkwy., Garner, NC 27529

SCALE
0
NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
SUMMARY OF WORK

DIVISION 7 — GUILFORD COUNTY

PLAN DATE:	FEBRUARY, 2008	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J. CROSS	REVIEWED BY:	M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL
SEAL 023562
ENGINEER
MARK DUNZO

SIGNATURE — DATE 2/20/08

CADD Filename:

2/20/2008
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PROJECT REFERENCE NO.	SHEET NO.
U-4711	3H

SUMMARY OF WORK BY INTERSECTION

INTERSECTION						RISERS										IN CABINET				
	SIGNAL NUMBER	SHEET NUMBER (CR | SPL)		STREET 1	STREET 2	REUSE EXISTING RISER AND REPLACE WEATHERHEAD WITH TUBING (Note 19)	INSTALL NEW RISER WITH WEATHERHEAD (Note 4)	INSTALL NEW RISER WITH TUBING (Note 5)	INSTALL CABLE (Note 12)	INSTALL CABLE IN RISER (Note 13)	INSTALL CABLE IN EXISTING CONDUIT STUBOUTS/ ENTRANCES (Note 14)	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (Note 15)	INSTALL NEW RISER IN EXISTING CABINET BASE (Note 16)	INSTALL NEW CONDUIT INTO EXISTING POLE-MOUNTED CABINET (Note 17)	INSTALL NEW RISER IN EXISTING POLE-MOUNTED CABINET (Note 18)	INSTALL NEW FIBER OPTIC INTER-CONNECT CENTER (Note 1)	INSTALL ETHERNET SWITCH (Note 35)	INSTALL GIGABIT ETHERNET SWITCH (Note 46)	REINSTALL RAILROAD PREEMPTION EQUIPMENT (Note 51)	REINSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT (Note 52)
1	07-0189	106	439	NORWALK	WENDOVER			1		1						1	1			1
2	07-0193	393	97	US-29 RAMPS	CONE						1					1	1			
3	07-0194	391	100	SUMMIT	CONE		1	1		1	1					1	1			1
4	07-0195	394	97	SANDS	CONE							1				1	1			
5	07-0199	16	14	REGIONAL	BURNT POPLAR							1				1	1			
6	07-0205	323	331	BATTLEGROUND	DAVID CALDWELL/MARTINSVILLE			1		1			1			1	1			
7	07-0209	124	244	HIGH POINT	MERRITT			1		1	1					1	1			1
8	07-0221	275	46	NEW GARDEN	FRIEND'S HOME			1		1					1	1	1			
9	07-0242	47	277	UNITED	MARKET		1	1		1			1			1	1			
10	07-0251	17	12	NC-68	ALBERT PICK/I-40 EB RAMP			1		1	1					1	1			
11	07-0285	481	446	ELM-EUGENE	SENECA/I-85			1		1						1	1			1
12	07-0295	410	120	CHURCH	CORNWALLIS			1		1						1	1			1
13	07-0362	101	257	I-40 WB RAMP	WENDOVER	1			1							1	1			1
14	07-0375	34	264	STAGE COACH	MARKET			1		1	1					1	1			
15	07-0377	357	86	CHURCH	LEES CHAPEL/PISGAH CHURCH		1	1		1		2				1	1			
16	07-0378	423	139	SYKES	WENDOVER	1			1							1	1			
17	07-0399	430	138	HUFFINE MILL	BESSEMER			1		1						1	1			
18	07-0408	278	52	FLEMING	OLD OAK RIDGE			1	1	1	1					1	1			
19	07-0428	229	444	RANDLEMAN	I-85 NB RAMP			1		1		1				1	1			
20	07-0430	229	442	I-40 WB RAMP/I-85 SB	RANDLEMAN			1	1	1	1					1	1			
21	07-0434	230	441	RANDLEMAN	MEADOWVIEW			1		1			1			1	1			
22	07-0438	465	168	LEE	LINCOLN			1	1	1			1			1	1			
23	07-0444	85	287	HOLDEN RD	W WENDOVER AVE						1					1	1			
24	07-0447	89	289	HOLDEN	MARKET						1	1				1	1			
25	07-0450	127	241	HOLDEN	HIGH POINT		1	1		1			1			1	1			1
26	07-0472	144	176	EUGENE	LEE		1	1		1		1				1	1			
27	07-0490	400	125	CRIDLAND/PARKWAY	WENDOVER		1	1		1			2			1	1			
28	07-0492	330	349	BATTLEGROUND	NORTHWOOD		1	1		1						1	1			
29	07-0536	44	275	MARKET	MONTROSE		1	1		1			1			1	1			
30	07-0537	46	276	WESTGATE	MARKET			1		1			1			1	1			
31	07-0538	321	71	BATTLEGROUND	PISGAH CHURCH			1		1		1				1				1
32	07-0555	499	192	US-421 (JOSEPH M HUNT JR.)	PLEASANT GARDEN			1		1	1	1				1	1			1
33	07-0560	147	172	BENNETT	LEE											1	1			1
34	07-0563	129	232	PINECROFT	HIGH POINT						1					1	1			1
35	07-0566	422	140	WAUGH	WENDOVER			1		1						1	1			
36	07-0567	146	173	MURROW	LEE		1	1		1	1	1				1	1			
37	07-0568	209	427	FLORIDA	RANDLEMAN			1		1	1	1				1	1			1
38	07-0569	101	256	I-40 EB RAMP	WENDOVER			1		1			1			1	1			1
39	07-0578	388	115	CHURCH	CONE			1		1	1					1	1			1
40	07-0579	429	145	LINDSAY	WENDOVER			1		1		1				1	1			1
41	07-0583	447	133	SUMMIT	TEXTILE		1	1		1						1	1			
42	07-0588	481	446	ELM-EUGENE	I-85 SB RAMP		1	1		1	1		1			1	1			1
43	07-0589	229	442	RANDLEMAN	I-40 EB RAMP/I-85 SB			1		1	1					1	1			
44	07-0594	93	261	GUILFORD COLLEGE	I-40 WB/SWING			1		1	1					1	1			
45	07-0596	131	235	HIGH POINT	MEADOWVIEW			1	1	1	1		1			1	1			1
46	07-0597	342	344	WESTOVER TER.	WENDOVER			1		1			1			1	1			1
47	07-0598	104	437	EDWARDIA	WENDOVER	1			1		1	1				1	1			1
48	07-0609	324	333	BATTLEGROUND	BENJAMIN/CONE		1	1		1						1	1			1
49	07-0610	328	341	BATTLEGROUND	CORNWALLIS		1	1		1	1					1	1			1
50	07-0612	329	348	BATTLEGROUND	GREEN VALLEY/PEMBROKE			1		1		2				1	1		1	1
51	07-0613	399	124	HILL	WENDOVER			1		1	1					1	1			1
52	07-0621	122	247	GROOMETOWN/HILLTOP	HIGH POINT		1	1		1						1	1			1
53	07-0623	133	236	HIGH POINT	VANSTORY	1			1							1	1			1
54	07-0624	134	237	HIGH POINT	FLORIDA						1					1	1			1
55	07-0625	135	238	HIGH POINT	PATTERSON	1			1							1	1			1
56	07-0632	44	275	MUIRS CHAPEL/SPRING GARDEN	MARKET			2		1	1	1				1	1			
57	07-0633	52	291	GREEN VALLEY	MARKET						1					1	1			
58	07-0634	53	292	ELAM	MARKET											1	1			
59	07-0635	55	293	CHAPMAN	MARKET						1					1	1			
60	07-0636	58	323	TATE	MARKET			1		1		1				1	1			
61	07-0637	59	325	MENDENHALL	MARKET											1	1			
62	07-0644	61	326	CEDAR	MARKET			1		1					1	1	1			
63	07-0646	207	428	FREEMAN MILL	FLORIDA						1	2				1	1			1
64	07-0648	466	167	WILLOW	LEE			1		1			1			1	1			
65	07-0649	148	170	BENBOW	LEE			1		1	1					1	1			1
					SUBTOTAL	5	14	48	9	47	27	19	14	0	2	65	64	0	1	28

THIS SUMMARY OF WORK TABLE IS FOR INFORMATION ONLY
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PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
Engineering Transportation Systems
DEPARTMENT OF TRANSPORTATION
STATE OF NORTH CAROLINA
750 Greenfield Pkwy., Garner, NC 27529

SCALE
0
NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
SUMMARY OF WORK

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: J. CROSS	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filename:

2/20/2008
h:\systems\pro\techs\01\462020 (g-boro mls\details-mls\SUM-SH03H.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-4711	3J

SUMMARY OF WORK BY INTERSECTION

	INTERSECTION					RISERS										IN CABINET				
	SIGNAL NUMBER	SHEET NUMBER (CR | SPL)		STREET 1	STREET 2	REUSE EXISTING RISER AND REPLACE WEATHERHEAD WITH TUBING (Note 19)	INSTALL NEW RISER WITH WEATHERHEAD (Note 4)	INSTALL NEW RISER WITH TUBING (Note 5)	INSTALL CABLE (Note 12)	INSTALL CABLE IN RISER (Note 13)	INSTALL CABLE IN EXISTING CONDUIT STUBOUTS/ ENTRANCES (Note 14)	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (Note 15)	INSTALL NEW RISER IN EXISTING CABINET BASE (Note 16)	INSTALL NEW CONDUIT INTO EXISTING POLE-MOUNTED CABINET (Note 17)	INSTALL NEW RISER IN EXISTING POLE-MOUNTED CABINET (Note 18)	INSTALL NEW FIBER OPTIC INTER-CONNECT CENTER (Note 1)	INSTALL ETHERNET SWITCH (Note 35)	INSTALL GIGABIT ETHERNET SWITCH (Note 46)	REINSTALL RAILROAD PREEMPTION EQUIPMENT (Note 51)	REINSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT (Note 52)
66	07-0651	145	175	ARLINGTON	LEE			1		1						1	1			
67	07-0652	144	176	ELM	LEE		1	1	1	1						1	1		1	
68	07-0655	141	377	LEE	SILVER	1			1							1	1			
69	07-0656	140	378	GLENWOOD	LEE	1			1							1	1			
70	07-0657	139	379	AYCOCK	LEE		1	1		1	1		1			1	1			1
71	07-0661	61	328	SPRING	MARKET			1		1				2	1	1	1			
72	07-0662	61	328	EDGEWORTH	MARKET									1		1	1			
73	07-0663	64	383	EUGENE	MARKET															
74	07-0679	450	111	SIXTEENTH	SUMMIT		1	1		1			2			1	1			1
75	07-0702	308	64	BATTLEGROUND	NEW GARDEN		1	1		1		1	2			1	1			1
76	07-0703	239	44	COLLEGE/NEW GARDEN	FRIENDLY		1	1		1			1			1	1			1
77	07-0714	420	142	GATEWOOD	WENDOVER			1		1			1			1	1		1	
78	07-0715	421	141	ENGLISH	WENDOVER		1	1		1	1		1			1	1			
79	07-0716	424	137	ELWELL	WENDOVER			1	1	1			1			1	1			
80	07-0720	313	70	BATTLEGROUND	WESTRIDGE		1	1		1	1	1	1			1	1			1
81	07-0722	511	182	MARTIN LUTHER KING	I-85/US-29 RAMPS		1	1		1	1					1	1			
82	07-0725	37	268	COLLEGE/GUILFORD COLLEGE	MARKET			1	1	1	1					1	1		1	
83	07-0732	52	291	LINDELL	MARKET		1	1		1						1	1			
84	07-0749	226	200	RANDLEMAN	VANDALIA			1		1		1				1	1			
85	07-0826	413	130	CHURCH	WENDOVER		1	1		1	1		1			1	1			1
86	07-0831	137	380	CHAPMAN/COLISEUM	LEE	1			1							1	1			1
87	07-0846	328	342	BATTLEGROUND	LAWNDALE			1		1						1	1			1
88	07-0851	512	181	ALAMANCE	US 421			1		1		1	1			1	1			1
89	07-0865	103	435	MEADOWOOD	WENDOVER			1		1	1					1	1			
90	07-0867	38	268	DOLLEY MADISON/MEADOWOOD	MARKET						1					1	1		1	
91	07-0870	71	159	GILLESPIE	MARKET		1	1		1						1	1			
92	07-0879	446	134	SUMMIT	4TH			1		1	1					1	1			
93	07-0890	35	265	SWING	MARKET			1		1	1					1	1		1	1
94	07-0911	41	270	EDWARDIA	MARKET			1		1		1				1	1			
95	07-0917	107	440	CLIFTON	WENDOVER	1			1		1					1	1			1
96	07-0962	32	31	CHIMNEY ROCK	MARKET			1	1	1	1					1	1		1	1
97	07-0964	228	444	CREEK RIDGE	RANDLEMAN		1	1		1		1				1	1			
98	07-0968 Wireless	11	5	NC-68	PLEASANT RIDGE RD.		1			1		1								
99	07-0978	28	26	GALLIMORE DAIRY	MARKET		1	1		1	1	1				1	1		1	
100	07-0983	514	180	WILLOW RD	ALAMANCE CHURCH		1	1		1	1					1	1			
101	07-0984	396	116	CHURCH	SIXTEENTH			1		1						1	1			
102	07-0986	72	158	ENGLISH	MARKET			1		1		1				1	1			1
103	07-0987	133	236	HIGH POINT	GRIMSLEY			1		1	1					1	1			
104	07-0988	84	284	HOLDEN	PATTERSON			1		1		1				1	1			
105	07-0989	219	414	REHOBETH CHURCH	VANDALIA			1		1	1					1	1			
106	07-0992	515	120	CHURCH	PEDESTRIAN CROSSING (HALL TOWERS)			1		1					1	1	1			
107	07-1009	469	164	ENGLISH	LEE			1		1			1			1	1			
108	07-1012	331	350	BATTLEGROUND	MILL			1		1			1			1	1			
109	07-1016	303	58	BATTLEGROUND	HORSEPEN CREEK RD.		1	1		1	1	1				1	1			
110	07-1017	93	261	GUILFORD COLLEGE	I-40 EB RAMP	1			1		1					1	1			
111	07-1018	278	52	FLEMING/NEW GARDEN	BALLINGER/NEW GARDEN			1		1	1					1	1			
112	07-1027	198	219	HOLDEN	I-85 SB RAMP						1					1	1			
113	07-1028	198	217	HOLDEN	I-85 NB RAMP/CAMPGROUND						1					1	1			
114	07-1029 Wireless	12	5	BENTLEY	REGIONAL RD.		1			1										
115	07-1035	100	255	STANLEY	WENDOVER			1	1	1		1				1	1			1
116	07-1036	100	255	LANDMARK CENTER	WENDOVER	1			1		1					1	1			1
117	07-1041	180	207	GROOMETOWN	VANDALIA/WAYNE		1	1		1			1			1	1			
118	07-1044	17	12	REGIONAL	ALBERT PICK			1		1	1					1	1			
119	07-1069	175	213	HIGH POINT RD.	ALAMANCE			1	1	1	1					1	1			
120	07-1073	36	267	FRIENDWAY	MARKET	1			1		1					1	1			1
121	07-1145	307	62	BATTLEGROUND	BRASSFIELD		1	1		1			2			1	1			
122	07-1163	16	13	I-40 WB RAMP	NC-68						1					1	1			
123	07-1171	125	242	FARMINGTON	HIGH POINT			1		1		1				1	1			1
124	07-1185	171	212	HIGH POINT	MACKAY			1	1	1	1					1	1			
125	07-1186	29	27	FRIENDLY	MARKET		1	1		1	1		1			1	1			1
126	07-1187	259	301	BRYAN WB RAMP	HOLDEN						1					1	1			
127	07-1188	259	301	BRYAN EB RAMP	HOLDEN			1		1	1					1	1			
128	07-1189	262	312	BENJAMIN	BRYAN BLVD		1	1		1	1					1	1			
129	07-1197	23	17	GALLIMORE	BURNT POPLAR	1			1		1					1	1			
130	07-1207	108	273	SPRING GARDEN	WENDOVER WB RAMP						1	1				1				
					SUBTOTAL	8	21	47	15	49	33	14	18	3	2	62	61	0	7	18

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PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh NC, 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
Traffic Engineering Unit
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Division of Highways
Statewide Traffic Engineering and Safety Systems
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE
0
NONE

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

SUMMARY OF WORK

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: J. CROSS — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE — DATE 2/29/08

CADD Filename:

2/29/2008
I:\systems\projects\01\462020 (g-boro mts)\Details-MTS\SUM-SHO3.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-4711	3K

SUMMARY OF WORK BY INTERSECTION

	INTERSECTION					RISERS										IN CABINET				
	SIGNAL NUMBER	SHEET NUMBER (CR | SPL)		STREET 1	STREET 2	REUSE EXISTING RISER AND REPLACE WEATHERHEAD WITH TUBING (Note 19)	INSTALL NEW RISER WITH WEATHERHEAD (Note 4)	INSTALL NEW RISER WITH TUBING (Note 5)	INSTALL CABLE (Note 12)	INSTALL CABLE IN RISER (Note 13)	INSTALL CABLE IN EXISTING CONDUIT STUBOUTS/ ENTRANCES (Note 14)	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (Note 15)	INSTALL NEW RISER IN EXISTING CABINET BASE (Note 16)	INSTALL NEW CONDUIT INTO EXISTING POLE-MOUNTED CABINET (Note 17)	INSTALL NEW RISER IN EXISTING POLE-MOUNTED CABINET (Note 18)	INSTALL NEW FIBER OPTIC INTER-CONNECT CENTER (Note 1)	INSTALL ETHERNET SWITCH (Note 35)	INSTALL GIGABIT ETHERNET SWITCH (Note 46)	REINSTALL RAILROAD PREEMPTION EQUIPMENT (Note 51)	REINSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT (Note 52)
131	07-1209	284	48	BRYAN WB RAMP/HORSEPEN CREEK	NEW GARDEN			1		1	1					1	1			
132	07-1210	316	67	BRYAN EB RAMP/FRIENDLY ACRES	WESTRIDGE		1	1		1			2			1	1			
133	07-1211	316	68	BRYAN WB RAMP	WESTRIDGE	1			1							1	1			
134	07-1219	495	193	PLEASANT GARDEN	VANDALIA			1		1	1					1	1		1	
135	07-1235	234	39	FRIENDLY	STAGE COACH						1					1	1			
136	07-1239	396	116	CHURCH	GOLDEN GATE			1		1			1			1	1			1
137	07-1240	116	280	MERRITT	PATTERSON WB RAMP			1		1			1			1	1			
138	07-1241	276	46	ARCADIA	NEW GARDEN			1		1			1			1	1			
139	07-1269	403	129	CHURCH	NORTHWOOD		1	1		1			1			1	1			1
140	07-1271	261	310	GREEN VALLEY	NORTHLINE/WENDOVER RAMP			1		1	1					1	1			
141	07-1284 Wireless	168	212	MILLIS/ BONNER	HIGH POINT		1			1	1									
142	07-1302	123	246	ROMAINE ST.	HIGH POINT			1		1			1			1	1			
143	07-1305	130	233	HIGH POINT	I-40 WB RAMP			1		1					1	1	1			
144	07-1316	217	346	GLENDALE	REHOBETH CHURCH	1			1							1	1			
145	07-1320	155	243	MERRITT	FAIRFAX	1			1							1	1			
146	07-1324	102	257	BIG TREE	WENDOVER			1		1			1			1	1			1
147	07-1376	120	248	FAIRFAX	HILLTOP						1					1	1			
148	07-1379	225	201	RANDLEMAN	GLENDALE		1	1		1	1					1	1			
149	07-1428	428	136	PENRY/BURLINGTON	WENDOVER/BURLINGTON						1	1				1	1			
150	07-1429	14	5	BURGESS	MARKET	1			1		1					1	1			
151	07-1436 Wireless	27	26	BOEING	MARKET		1			1									1	
152	07-1439	7	2	SANDY RIDGE RD.	US-421 (W.MARKET)			1	1	1	1	1				1	1			
153	07-1449	15	9	NC-68	TRIAD CENTER DR.							1				1	1			
154	07-1458	236	41	KING GEORGE	FRIENDLY			1		1	1					1	1			
155	07-1459 Wireless	10	5	EDGEFIELD	NC-68		1			1										
156	07-1469	128	240	VEASLEY	HIGH POINT			1		1		1				1	1			1
157	07-1481	109	273	SPRING GARDEN	WENDOVER EB RAMP						1					1	1			
158	07-1484	306	61	BATTLEGROUND	COTSWALD AVE.	1			1		1					1	1			
160	07-1495	43	271	NORWALK	MARKET		1	1		1	1					1	1			
161	07-1505	211	424	COLISEUM	FREEMAN MILL		1	1		1		1				1	1			1
162	07-1512	117	249	STANLEY	HILLTOP			1		1	1	2				1		1		
163	07-1513	231	36	FRIENDLY	OLD FRIENDLY			1		1			1			1	1			
164	07-1517	198	217	HOLDEN	PHOENIX	1			1							1	1			
165	07-1518	99	254	BRIDFORD	WENDOVER AVE	1			1		1	1				1	1			1
166	07-1540	500	189	RANDLEMAN	TERRELL			1		1						1	1			
167	07-1543	518	32	BURNT POPLAR	CHIMNEY ROCK	1			1							1	1			
168	07-1600 Wireless	170	212	ADAMS FARM	MACKAY		1			1			1							
169	07-1601	5	3	SANDY RIDGE	I-40 WB RAMP			1		1	1					1	1			
170	07-1607	325	336	BATTLEGROUND	OAKCREST						1					1	1			
171	07-1610	305	60	BATTLEGROUND	DRAWBRIDGE PKWY	1			1							1	1			
172	07-1611	237	41	FRIENDS HOME	FRIENDLY	1			1							1				
173	07-1618	178	205	GROOMETOWN	GRANDOVER/WILEY DAVIS											1	1			
174	07-1621	274	43	COLLEGE	HUNT CLUB DR.	1			1							1	1			1
175	07-1633	227	443	RANDLEMAN	CORLISS			1		1		1				1	1			
176	07-1648	4	3	SANDY RIDGE	I-40 EB RAMP			1		1	1					1	1			
177	07-1649	5	3	SANDY RIDGE RD.	TRIAD DR.		1	1		1	1					1	1			
178	07-1658	135	238	HIGH POINT	ELLINGTON			1		1						1	1			
179	07-1689	19	15	CHIMNEY ROCK	GALLIMORE DAIRY			1		1	1					1	1			
180	07-1739	397	114	CHURCH	ELECTRA		1	1		1	1					1	1			
181	07-1763	448	101	SUMMIT	PHILLIPS			1		1	1					1	1			
182	07-1772	17	11	NC-68	THORNDIKE						1					1	1			
183	07-1773	95	22	ADAMS FARM	HILLTOP			1		1	1					1	1			
184	07-1774	96	23	BRIDFORD	HILLTOP		1	1		1	1	1				1	1			
185	07-1775	272	42	COLLEGE	GUIDA			1		1			1			1	1			
186	07-1776	231	36	CHIMNEY ROCK	FRIENDLY			1		1			1			1	1			
187	07-1818	14	5	MARKET	NC-68 NB RAMP			1		1	1					1	1			
188	07-1820	321	330	BATTLEGROUND	EDNEY RIDGE			1		1			1			1	1			
189	07-1831	284	48	BRYAN EB RAMP	NEW GARDEN			1		1			1			1	1			
190	07-1836	70	160	OHENRY BLVD RAMP	MARKET						1					1	1			
191	07-1862	92	260	GUILFORD COLLEGE	HORNADAY			1		1		1				1	1			
192	07-1863	98	251	SAPP	WENDOVER						1					1	1			
193	07-1870	105	438	TRI-CITY	WENDOVER		1	1		1			2			1	1			1
194	07-1871	101	256	I-40 EB RAMP	WENDOVER	1			1							1	1			
195	07-1884	383	95	SUMMIT	RANKIN			1		1						1	1			
					SUBTOTAL	12	13	38	13	42	29	11	16	0	1	60	58	1	2	8

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(919) 677-2000

750 Greenfield Pkwy., Garner, NC 27529

SCALE
0
NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
SUMMARY OF WORK

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: J. CROSS	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE 2/20/08 DATE
CADD Filename:

2/20/2008
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PROJECT REFERENCE NO.	SHEET NO.
U-4711	3L

SUMMARY OF WORK BY INTERSECTION

INTERSECTION						RISERS										IN CABINET				
	SIGNAL NUMBER	SHEET NUMBER (CR | SPL)		STREET 1	STREET 2	REUSE EXISTING RISER AND REPLACE WEATHERHEAD WITH TUBING (Note 19)	INSTALL NEW RISER WITH WEATHERHEAD (Note 4)	INSTALL NEW RISER WITH TUBING (Note 5)	INSTALL CABLE (Note 12)	INSTALL CABLE IN RISER (Note 13)	INSTALL CABLE IN EXISTING CONDUIT STUBOUTS/ ENTRANCES (Note 14)	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (Note 15)	INSTALL NEW RISER IN EXISTING CABINET BASE (Note 16)	INSTALL NEW CONDUIT INTO EXISTING POLE-MOUNTED CABINET (Note 17)	INSTALL NEW RISER IN EXISTING POLE-MOUNTED CABINET (Note 18)	INSTALL NEW FIBER OPTIC INTER-CONNECT CENTER (Note 1)	INSTALL ETHERNET SWITCH (Note 35)	INSTALL GIGABIT ETHERNET SWITCH (Note 46)	REINSTALL RAILROAD PREEMPTION EQUIPMENT (Note 51)	REINSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT (Note 52)
196	07-1887	213	425	FREEMAN MILL	GARRETT/GLENWOOD			1		1	1					1	1			
197	07-1893	22	17	GALLIMORE DAIRY	I 40 RAMPS			1			1					1	1			
198	07-1894	24	19	BOULDER	CHIMNEY ROCK	1			1							1	1			
199	07-1921	26	20	BOULDER	BURNT POPLAR			1		1	1					1	1			
200	07-1927	223	202	RANDLEMAN	ELMSLEY/NESTLEWAY			1		1	1					1	1			
201	07-1928	177	204	GROOMETOWN	I-85 NB RAMP			1		1	1					1	1			
202	07-1929	177	204	GROOMETOWN	I-85 SB RAMP	1			1		1					1	1			
203	07-1930	364	72	LAKE BRANDT	AIR HARBOR		1	1		1	1		1			1	1			
204	07-1941	299	57	HORSEPEN	CARLSON DAIRY			1		1					1	1	1			
205	07-1944	327	337	BATTLEGROUND	MARKLAND			1		1	1					1	1			1
206	07-1964	94	24	BIG TREE	GUILFORD COLLEGE						1					1	1			
207	07-1969	472	198	ELM-EUGENE	I-85 SB RAMPS		1	1		1			2			1		1		
208	07-1970	472	197	ELM-EUGENE	I-85 NB RAMPS			1		1	1					1	1			
209	07-1973	47	277	MARKET	WALKER			1		1	1					1	1			
210	07-1978	31	30	MARKET	PPG			1		1	1					1	1		1	
211	07-1984 Wireless	361	84	ELM	OLD LAKE JEANETTE			1		1	1									
212	07-2000	9	1	MARKET	PLEASANT RIDGE			1		1	1					1	1			
213	07-2001 Wireless	13	5	REGIONAL ROAD	BRYAN		1			1		1								
214	07-2008	234	39	FRIENDLY	OUTER LOOP						1					1	1			
215	07-2014	512	181	ROTHERWOOD	ALAMANCE CHURCH			1		1	1					1	1			
216	07-2026	220	416	REHOBETH	I-85/TOLAR			1		1	1					1	1			
217	07-2028	469	163	MOODY	LEE		1	1		1	1					1	1			
218	07-2029	58	323	E LAKE/MCIVER	MARKET											1	1			
219	07-2030 Wireless	169	212	HIGHPOINT	GUILFORD COLLEGE		1			1			1							
220	07-2033	18	10	NC-68	REGIONAL/HICKORY RIDGE							1				1	1			
221	07-2034	430	138	BURLINGTON	BESSEMER/FRANKLIN			1		1	1					1	1		1	
222	07-2040	183	208	WILEY DAVIS	VANDALIA											1	1			
223	07-2044	235	40	FRIENDWAY/COBLE FARM	FRIENDLY						1					1	1			
224	07-2045	295	56	HORSE PEN CREEK	DRAWBRIDGE			1		1	1					1	1			
225	07-2050	377	93	CHURCH	DENNY			1		1	1					1	1			
226	07-2055	473	196	ELM-EUGENE	ELMSLEY							1				1	1			
227	07-2058	491	195	WALMART ACCESS	ELMSLEY							1				1	1			
228	07-2068	179	206	GROOMETOWN	ROSELAKE/SEDGEWOOD												1			
229	07-2076	73	158	MARKET	HOLTS CHAPEL						1					1	1			
230	07-2077	22	16	GALLIMORE DAIRY	AIRPARK						1					1	1			
231	07-2112	300	57	HORSE PEN CREEK	HANSBERRY/YMCA							1				1	1			
232	GBO-001	375	78	LAWNDALE	MARTINSVILLE	1			1							1	1			
233	GBO-002	373	77	LAWNDALE	LAKE JEANETTE			1		1	1					1	1			
234	GBO-003	370	76	LAWNDALE	COTTAGE		1	1		1			1			1	1			
235	GBO-004	163	376	TATE	WALKER									1		1	1			
236	GBO-005	366	73	LAKE BRANDT	LAWNDALE			1		1			1			1	1			
237	GBO-006 Wireless	363	61	COTSWOLD	OLD BATTLEGROUND		1			1	1									
238	GBO-007 Wireless	363	61	LAKE BRANDT	OLD BATTLEGROUND			1		1			1							1
239	GBO-009	463	153	DUDLEY	BLUFORD			1		1	1					1	1			
240	GBO-010	369	75	LAWNDALE	COTSWOLD			1		1	1	1				1	1			
241	GBO-011	115	279	MERRIT	HEWITT			1		1		1	1			1	1			
242	GBO-012	163	376	TATE	SPRING GARDEN ST	1			1							1	1			
243	GBO-013	200	419	CREEK RIDGE	FOUR SEASONS			1		1	1					1	1			
244	GBO-015	398	112	YANCEYVILLE	16th STREET			1		1			1			1	1			
245	GBO-017	194	223	HOLDEN	VANDALIA			1	1	1	1					1	1			1
246	GBO-019	79	274	POMONA	SPRING GARDEN	1			1		1					1	1			
247	GBO-020	346	79	MARTINSVILLE	PISGAH CHURCH		1	1		1			1			1	1			
248	GBO-021	350	83	PISGAH CHURCH	WILLOUGHBY		1	1		1	1		1			1	1			
249	GBO-022	185	230	PINECROFT	VANSTORY			1		1	1					1	1			
250	GBO-023	508	338	LAWNDALE	LAWNDALE CROSSING			1		1		1				1	1			
251	GBO-024	189	231	PINECROFT	SEAWELL						1					1	1			
252	GBO-025	346	79	PISGAH CHURCH	LAWNDALE		2	1		1			3			1	1			1
253	GBO-026	260	308	PEMBROKE	NORTHLINE											1	1			
254	GBO-029	76	272	MUIRS CHAPEL	TOWER	1			1		1					1	1			
255	GBO-030	114	278	MERRITT	SPRING GARDEN			1		1						1	1		1	
256	GBO-031	195	222	PINECROFT	VANDALIA			1		1		1				1	1			
257	GBO-033	164	362	MENDENHALL	SPRING GARDEN		1	1		1						1	1			
258	GBO-034	160	372	KENILWORTH	SPRING GARDEN						1					1	1			
259	GBO-041	368	75	LAWNDALE	REGENTS PARK LN.			1		1	1					1	1			
260	GBO-046	335	360	FISHER/EDGEWORTH	BATTLEGROUND			1		1						1	1			
					SUBTOTAL	6	12	40	7	42	37	9	14	1	1	59	59	1	3	4

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AND DOES NOT REFLECT ACTUAL PROJECT PAY ITEM QUANTITIES

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Integrated Mobility Division
750 Greenfield Pkwy., Garner, NC 27529

SCALE: 0 — NONE

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

SUMMARY OF WORK

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: J. CROSS — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL
SEAL 023562
ENGINEER
MARK DUNZO

SIGNATURE — DATE: 2/22/08

CADD Filename:

2/20/2008
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PROJECT REFERENCE NO.	SHEET NO.
U-4711	3M

SUMMARY OF WORK BY INTERSECTION

	INTERSECTION					RISERS										IN CABINET				
	SIGNAL NUMBER	SHEET NUMBER (CR | SPL)		STREET 1	STREET 2	REUSE EXISTING RISER AND REPLACE WEATHERHEAD WITH TUBING (Note 19)	INSTALL NEW RISER WITH WEATHERHEAD (Note 4)	INSTALL NEW RISER WITH TUBING (Note 5)	INSTALL CABLE (Note 12)	INSTALL CABLE IN RISER (Note 13)	INSTALL CABLE IN EXISTING CONDUIT STUBOUTS/ ENTRANCES (Note 14)	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (Note 15)	INSTALL NEW RISER IN EXISTING CABINET BASE (Note 16)	INSTALL NEW CONDUIT INTO EXISTING POLE-MOUNTED CABINET (Note 17)	INSTALL NEW RISER IN EXISTING POLE-MOUNTED CABINET (Note 18)	INSTALL NEW FIBER OPTIC INTER-CONNECT CENTER (Note 1)	INSTALL ETHERNET SWITCH (Note 35)	INSTALL GIGABIT ETHERNET SWITCH (Note 46)	REINSTALL RAILROAD PREEMPTION EQUIPMENT (Note 51)	REINSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT (Note 52)
261	GBO-047	334	353	BATTLEGROUND	HILL	1			1							1	1		1	
262	GBO-048	333	352	BATTLEGROUND	BENJAMIN/SMITH											1	1			1
263	GBO-049	441	407	SUMMIT	LINDSAY							1								
264	GBO-050	459	152	SULLIVAN	LINDSAY			1		1			1			1	1			
265	GBO-051	332	351	BATTLEGROUND	BESSEMER	1			1							1	1			1
266	GBO-052	413	132	CHURCH	BESSEMER		1	1		1	1					1	1			1
267	GBO-053	62	327	EDGEWORTH	WASHINGTON			1		1	1					1	1			
268	GBO-056	344	362	EDGEWORTH	BELLEMEADE			1		1						1	1			
269	GBO-058	344	361	EDGEWORTH	SMITH			1		1	1					1	1			
270	GBO-059	336	354	ELM	FISHER	1			1							1	1			
271	GBO-060	431	355	ELM	SMITH	1		1	1	1						1	1			
272	GBO-061	336	359	EUGENE	FISHER			1		1	1					1	1			
273	GBO-062	336	354	GREENE	FISHER			1		1	1					1	1			1
274	GBO-063	260	308	PEMBROKE	KATHLEEN			1		1						1	1			
275	GBO-064	116	280	MERRITT	IMMANEUL			1		1	1					1	1			
276	GBO-065	66	156	MURROW	FRIENDLY	1			1							1	1			
277	GBO-066	65	405	CHURCH	FRIENDLY															
278	GBO-067	65	392	DAVIE	FRIENDLY							1								
279	GBO-068	63	391	ELM	FRIENDLY															
280	GBO-069	63	390	GREENE	FRIENDLY															
281	GBO-070	63	385	COMMERCE	FRIENDLY															
282	GBO-071	48	290	HOLDEN	WALKER			1		1						1	1			
283	GBO-072	184	227	HOLDEN	VANSTORY		1	1		1	1					1	1			
284	GBO-074	87	286	HOLDEN	SPRING GARDEN			1		1						1	1			
285	GBO-076	199	220	HOLDEN	MCCUISTON/PINECROFT							1				1	1			
286	GBO-077	66	156	MURROW	MARKET						1					1	1			
287	GBO-078	65	404	CHURCH	MARKET															
288	GBO-079	314	66	HOBBS	WESTRIDGE							1				1	1			
289	GBO-080	258	302	HOLDEN	HOBBS							1				1	1			
290	GBO-081	65	403	DAVIE	MARKET							1								
291	GBO-082	64	388	ELM	MARKET															
292	GBO-083	162	374	HIGHLAND	SPRING GARDEN											1	1			
293	GBO-084	64	387	GREENE	MARKET							1								
294	GBO-086	337	334	BENJAMIN	HOLDEN/PINEDALE			1		1		1				1	1			
295	GBO-087	504	184	MARTIN LUTHER KING	FLORIDA		1	1		1		1				1	1			
296	GBO-088	67	155	MURROW	LINDSAY			1		1						1	1			
297	GBO-089	431	355	GREENE	SMITH			1		1						1	1			1
298	GBO-090	62	327	SPRING	WASHINGTON	1			1							1	1			
299	GBO-091	458	149	SUMMIT	YANCEYVILLE			1		1	1					1	1			
300	GBO-092	444	148	SUMMIT	SULLIVAN			1		1						1	1			
301	GBO-093	161	370	AYCOCK	WALKER			1		1	1					1	1			1
302	GBO-094	160	371	AYCOCK	SPRING GARDEN											1	1			1
303	GBO-095	205	430	AYCOCK/LOVETT	FLORIDA			1		1			1			1	1			1
304	GBO-096	436	398	GREENE	WASHINGTON															
305	GBO-097	435	389	GREENE	FEBRUARY ONE															1
306	GBO-098	68	157	DUDLEY	MARKET		2	1		1	1		2			1	1			
307	GBO-100	69	162	LAUREL	MARKET			1	1	1	1					1	1			
308	GBO-101	432	396	GREENE	LINDSAY															1
309	GBO-102	329	347	WESTOVER	GREEN VALLEY			1		1			1			1	1			1
310	GBO-103	69	162	BENBOW	MARKET	1			1							1	1			
311	GBO-104	468	164	ENGLISH	MCCONNELL			1		1	1					1	1			
312	GBO-105	467	167	WILLOW	MCCONNELL			1		1			1			1	1			
313	GBO-106	309	63	BRASSFIELD	NEW GARDEN			1		1	1					1	1			
314	GBO-107	285	47	WILL DOSKEY/JEFFERSON	NEW GARDEN			1	1	1	1					1	1			
315	GBO-108	282	50	NEW GARDEN	GARDEN LAKE/ HOBBS			1		1						1	1			
316	GBO-112 Wireless	113	256	STANLEY	EAGLE		1			1	1									
317	GBO-113 Wireless	112	256	STANLEY	KOGER		1			1	1									
318	GBO-117	165	243	TATE	CARR						1					1	1			
319	GBO-118	510	183	MARTIN LUTHER KING JR	BENBOW			1		1	1					1	1			
320	GBO-122 Wireless	286	47	JEFFERSON	HOBBS			1		1			1							
321	GBO-124	341	346	LENDEW	GREEN VALLEY						1					1	1			
322	GBO-127	334	353	HILL	SMITH			1		1			1			1	1		1	
323	GBO-128	355	84	ELM	PISGAH CHURCH		1	1		1	1					1	1			
324	GBO-129	187	229	FOUR SEASONS	VANSTORY			1		1		1				1	1			
325	GBO-130	189	231	PINECROFT	KOURY BLVD.						1					1	1			
					SUBTOTAL	7	8	34	9	36	22	10	8	0	0	49	49	0	2	11

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750 Greenfield Pkwy, Garner, NC 27529

Traffic Engineering and Safety Systems Branch
DEPARTMENT OF TRANSPORTATION
Integrated Mobility Division

SCALE
0
NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
SUMMARY OF WORK

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: J. CROSS	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL
SEAL 023562
ENGINEER
MARK DUNZO

SIGNATURE — DATE 2/23/08

CADD Filename:

2/20/2008
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PROJECT REFERENCE NO.	SHEET NO.
U-4711	3N

SUMMARY OF WORK BY INTERSECTION

INTERSECTION						RISERS										IN CABINET				
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326	GBO-131	360	88	YANCEYVILLE	LEES CHAPEL			1		1	1					1	1			
327	GBO-132	162	373	FOREST	SPRING GARDEN											1	1			
328	GBO-133	344	361	SPRING	SMITH			1		1			1			1	1			
329	GBO-134	470	166	WILLOW	FLORIDA											1	1			
330	GBO-135	503	185	RANDOLPH	FLORIDA											1	1			
331	GBO-136	431	358	EUGENE	SMITH	1			1							1	1			1
332	GBO-137	83	283	HOLDEN	FLORIDA			1		1			1			1	1			
333	GBO-138	111	253	BRIDFORD	WENDOVER PLACE			1		1	1					1	1			
334	GBO-139	203	431	FLORIDA	HARDIE			1		1	1					1	1			
335	GBO-140	206	429	FLORIDA	GLENWOOD			1		1	1					1	1			
336	GBO-141	283	49	HIGH WOODS CIRCLE	NEW GARDEN		1	1		1	1					1	1			
337	GBO-142	188	228	VANSTORY	MEADOWVIEW			1		1		1				1	1			
338	GBO-144	190	226	HOLDEN	FARMINGTON			1		1	1					1	1			
339	GBO-148	436	399	EUGENE	WASHINGTON							1								
340	GBO-150	437	400	EUGENE	MCGEE															
341	GBO-152	432	397	EUGENE	LINDSAY															
342	GBO-153	221	415	REHOBETH CHURCH	CREEK RIDGE	1			1							1	1			
343	GBO-154	216	426	RANDLEMAN	FREEMAN MILL						1					1	1			1
344	GBO-155	415	147	BESSEMER	SUMMIT			1		1			1			1				
345	GBO-156	480	190	ELM-EUGENE	JJ		1	1		1	1		1			1	1			1
346	GBO-158	479	190	ELM-EUGENE	CREEK RIDGE/INDUSTRIAL			1		1			1			1	1			1
347	GBO-159	477	191	ELM-EUGENE	MONTCASTLE			1		1	1					1	1			
348	GBO-160	476	194	ELM-EUGENE	VANDALIA		1	1		1	1		1			1	1			
349	GBO-161	269	318	AYCOCK/WESTOVER	BENJAMIN						1					1	1			1
350	GBO-162	482	447	ELM-EUGENE	PATTON		1	1		1			2			1	1			1
351	GBO-163	267	317	CAMPUS	BENJAMIN			1		1	1					1	1			
352	GBO-164	482	447	ELM-EUGENE	MEADOWVIEW		1	1		1	1		1			1	1			1
353	GBO-165	267	316	BENJAMIN	ELAM			1		1			1			1	1			
354	GBO-166	265	315	BENJAMIN	GREEN VALLEY			1		1						1		1		
355	GBO-167	484	188	ELM-EUGENE	FLORIDA			1		1			1			1	1			1
356	GBO-168	436	402	ELM	WASHINGTON							1								
357	GBO-169	264	314	BENJAMIN	PEMBROKE			1		1			1			1	1			
358	GBO-170	402	126	ELM	NORTHWOOD	1			1							1	1			1
359	GBO-171	437	401	ELM	MCGEE															
360	GBO-172	263	313	BENJAMIN	CORNWALLIS		1	1		1			1			1	1			
361	GBO-173	433	406	ELM	LINDSAY							1								
362	GBO-174	439	176	ELM	LEWIS							1				1	1			
363	GBO-175	460	152	BENBOW	SULLIVAN			1		1					1	1	1			
364	GBO-178	435	411	ELM	FEBRUARY ONE															
365	GBO-179	486	178	ELM-EUGENE	ELM		1	1		1			2			1	1			
366	GBO-180	166	363	ELAM	WALKER			1		1						1	1			
367	GBO-182	404	123	ELM	TANKERSLEY		1	1		1	1					1	1			
368	GBO-183	63	384	EUGENE	FRIENDLY															
369	GBO-184	60	329	EDGEWORTH	FRIENDLY	1			1					1		1	1			
370	GBO-185	60	329	FRIENDLY	SPRING			1		1					1	1	1			
371	GBO-186	60	329	CEDAR	FRIENDLY			1		1					1	1	1			
372	GBO-187	59	323	MENDENHALL	FRIENDLY	1			1							1	1			
373	GBO-188	58	325	TATE	FRIENDLY		1	1		1						1	1			
374	GBO-189	57	321	MARKET CROSSOVER	FRIENDLY											1	1			
375	GBO-190	271	319	WESTOVER	FRIENDLY			1		1						1	1			
376	GBO-191	458	153	DUDLEY/YANCEYVILLE	LINDSAY			1		1						1	1			
377	GBO-192	271	319	RADIANCE	FRIENDLY			1		1						1	1			
378	GBO-193	252	310	ELAM	FRIENDLY	1			1							1	1			
379	GBO-194	440	307	DAVIE	WASHINGTON															
380	GBO-195	441	394	DAVIE	SUMMIT											1	1			1
381	GBO-196	252	310	LINDELL	FRIENDLY	1			1							1	1			
382	GBO-197	252	311	GREEN VALLEY	FRIENDLY		1	1		1	1	1				1	1			1
383	GBO-198	440	410	DAVIE	FEBRUARY ONE							1								
384	GBO-199	193	225	HOLDEN	DARDEN			1		1	1					1	1			
385	GBO-200	251	307	FRIENDLY	PEMBROKE	1			1							1	1			
386	GBO-201	251	307	AVONDALE	FRIENDLY			1		1	1					1	1			
387	GBO-202	249	306	HOBBS	FRIENDLY			1	1	1	1					1	1			1
388	GBO-203	248	300	HOLDEN	FRIENDLY		1	1		1		2				1	1			1
389	GBO-204	243	296	LAKEWOOD/WESTRIDGE	FRIENDLY			1		1	1					1	1			1
390	GBO-205	328	341	LAWNDALE	CORNWALLIS			1		1		1				1	1		1	1
					SUBTOTAL	8	11	39	9	39	19	10	15	1	3	55	53	1	1	15

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PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
NC DEPARTMENT OF TRANSPORTATION
Statewide Transportation Improvement Program
750 Greenfield Pkwy., Garner, NC 27529

SCALE: 0 — NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
SUMMARY OF WORK

DIVISION 7 — GUILFORD COUNTY
PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH
PREPARED BY: J. CROSS — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE — DATE: 2/20/08
CADD Filenames:

2/20/2008
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PROJECT REFERENCE NO.	SHEET NO.
U-4711	3P

SUMMARY OF WORK BY INTERSECTION

INTERSECTION						RISERS									IN CABINET				
	SIGNAL NUMBER	SHEET NUMBER (CR | SPL)		STREET 1	STREET 2	REUSE EXISTING RISER AND REPLACE WEATHERHEAD WITH TUBING (Note 19)	INSTALL NEW RISER WITH WEATHERHEAD (Note 4)	INSTALL NEW RISER WITH TUBING (Note 5)	INSTALL CABLE (Note 12)	INSTALL CABLE IN RISER (Note 13)	INSTALL CABLE IN EXISTING CONDUIT STUBOUTS/ ENTRANCES (Note 14)	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (Note 15)	INSTALL NEW RISER IN EXISTING CABINET BASE (Note 16)	INSTALL NEW CONDUIT INTO EXISTING POLE-MOUNTED CABINET (Note 17)	INSTALL NEW RISER IN EXISTING POLE-MOUNTED CABINET (Note 18)	INSTALL NEW FIBER OPTIC INTER-CONNECT CENTER (Note 1)	INSTALL ETHERNET SWITCH (Note 35)	INSTALL GIGABIT ETHERNET SWITCH (Note 46)	REINSTALL RAILROAD PREEMPTION EQUIPMENT (Note 51)	REINSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT (Note 52)
391	GBO-206	255	243	CORNWALLIS	HOBBS						1					1	1			
392	GBO-207	409	119	GOLDEN GATE	CORNWALLIS	1			1							1	1			
393	GBO-208	407	119	ELM	CORNWALLIS		1	1		1			2			1	1			
394	GBO-209	389	113	CONE	YANCEYVILLE			1		1		1				1	1			1
395	GBO-210	243	295	FRIENDLY	JEFFERSON			1		1	1					1	1			
396	GBO-211	241	294	MUIRS CHAPEL	FRIENDLY			1		1			1			1	1			
397	GBO-212	240	45	DOLLEY MADISON	FRIENDLY			1		1						1				
398	GBO-213	384	117	MARSTON	CONE			1		1	1					1	1			
399	GBO-214	339	332	CONE	LAWNDALE			1		1						1	1			
400	GBO-215	386	118	ELM	CONE		1	1		1			2			1	1			
401	GBO-217	381	94	YANCEYVILLE	RANKIN			1		1						1	1			
402	GBO-218	356	85	ELM VILLAGE DRIVE	PISGAH CHURCH			1		1	1					1	1			
403	GBO-220	114	278	MERRITT	CLIFTON			1		1						1	1			
404	GBO-222	441	408	CHURCH	SUMMIT		1			1	1	1				1	1			
405	GBO-226	441	409	CHURCH	LINDSAY							1				1				
406	GBO-235	167	368	CHAPMAN	WALKER			1		1			1			1	1			
407	GBO-236	158	369	CHAPMAN	SPRING GARDEN		1	1		1			1			1	1			
408	GBO-239	204	432	COLISEUM	FLORIDA		1	1		1	1					1	1			1
409	GBO-240	82	282	HOLDEN	CENTER/MEADOWVIEW			1		1	1	1				1	1			
410	GBO-241	127	331	CEDAR FORK	HOLDEN			1		1			1			1	1			1
411	GBO-250	414	132	YANCEYVILLE	BESSEMER			1		1			1			1	1			
412	GBO-251	418	144	BESSEMER	HUFFMAN/WINSTON			1		1			1			1	1			
413	GBO-253	417	146	BESSEMER	LINDSAY	1			1							1	1			1
414	GBO-255	401	125	BESSEMER/EUGENE	PARKWAY			1		1	1					1	1			
415	GBO-256	419	143	ENGLISH	BESSEMER			1		1	1					1	1			1
416	GBO-257	412	131	ELM	BESSEMER			1		1						1	1			1
417	GBO-260	461	171	BENNETT	GORRELL			1		1	1					1	1			1
418	GBO-261	461	171	BENNETT/DUDLEY	WASHINGTON			1		1			1			1	1			
419	GBO-268	149	169	BENBOW	MCCONNELL/WASHINGTON			1		1			1			1	1			
420	GBO-271	507	179	BENBOW	FLORIDA	1			1							1	1			
421	GBO-272	434	395	GREENE	BELLEMEADE															1
422	GBO-273	434	386	EUGENE	BELLEMEADE							1								
423	GBO-274	434	393	ELM	BELLEMEADE/SUMMIT							1				1				
424	GBO-381	395	97	CONE	16th STREET			1		1			1			1	1			
425	GBO-284	431	359	BATTLEGROUND	EUGENE	1			1							1	1			
426	GBO-304	386	118	ALMA PINNIX	CONE			1		1			1			1	1			
427	GBO-305	405	122	ELM	SUNSET			1		1	1					1	1			
428	GBO-312	151	161	BENBOW	BLUFORD			1		1					1	1	1			
429	GBO-334	487	177	EUGENE	WHITTINGTON	1			1							1	1			
430	GBO-335	340	339	LAWNDALE	FERNWOOD			1		1		1				1	1			1
431	GBO-366	75	269	DOLLEY MADISON	TOWER			1		1	1					1	1			
432	GBO-376	254	305	HOBBS	NORTHLINE			1		1			1			1	1			
433	GBO-388	256	303	HOLDEN	CASCADE/CORNWALLIS						1					1	1			
434	GBO-390	319	69	WESTRIDGE	WHITEHURST			1		1						1	1			
435	GBO-424	91	288	HOLDEN	MADISON						1					1	1			
436	GBO-429	157	365	ELAM	SPRING GARDEN			1		1		1				1	1			
437	GBO-437	343	343	CAMPUS	WESTOVER			1		1	1					1	1			
438	GBO-460	411	121	YANCEYVILLE	CORNWALLIS			1		1	1					1	1			
439	GBO-468	80	274	DUNDAS	POMONA						1					1	1			
440	GBO-475	201	420	FOUR SEASONS	VANDALIA			1		1	1					1	1			
441	GBO-477	132	234	CENTERVIEW	MEADOWVIEW			1		1	1					1	1			
442	GBO-480	92	260	WENDOVER PLACE	HORNADAY						1					1	1			
443	GBO-483 Wireless	362	84	ELM	CORPORATE CENTER															
444	GBO-486	349	82	PISGAH CHURCH	PISGAH PLACE			1		1	1					1	1			
445	GBO-487	110	252	BRIDFORD	KMART			1		1			1			1	1			
446	GBO-489	392	100	ORANGE	CONE			1		1	1					1	1			1
447	07-2100	212	424	FREEMAN MILL	LOVETT			1		1	1					1	1			
448	07-XXX3	290	53	FLEMING	BRYAN BOULEVARD RAMP							1				1	1			
449	07-XXX4	499	192	PLEASANT GARDEN	INDUSTRIAL			1		1			1			1	1			
450	GBO-XX1	250	306	FRIENDLY	SHOPS AT FRIENDLY			1		1		1				1	1			
451	GBO-XX2	292	54	FLEMING	ISAACSON							1				1	1			
452	GBO-XX3	293	55	HORSE PEN CREEK	ISAACSON							1				1	1			
453	GBO-XX4	456	127	CHURCH	TANKERSLEY			1		1			1			1	1			
					SUBTOTAL	5	5	44	5	45	23	12	18	0	1	60	57	0	0	10
					TOTAL	51	84	290	67	300	190	85	103	5	10	410	401	3	16	94

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PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
Department of Transportation
Division of North Carolina
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE
0
NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
SUMMARY OF WORK

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: J. CROSS	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL
SEAL 023562
ENGINEER
MARK DUNZO

SIGNATURE 2/29/08 DATE

CADD Filenames:

2/29/2008
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PROJECT REFERENCE NO.	SHEET NO.
U-4711	3Q

SUMMARY OF WORK BY INTERSECTION

INTERSECTION						WIRELESS DIAL-UP					DETECTORS			
	SIGNAL NUMBER	SHEET NUMBER (CR | SPL)		STREET 1	STREET 2	INSTALL DSL MODEM (Note 53)	INSTALL UNI-DIRECTIONAL YAGI ANTENNA (Note 38)	INSTALL OMNI-DIRECTIONAL ANTENNA (Note 39)	INSTALL RADIO TRANSCEIVER (Note 40)	INSTALL ANTENNA CABLE (Note 50)	NUMBER OF DETECTOR LOOPS (Note 41)	INSTALL SYSTEM LOOP AMPLIER (Note 42)	EXISTING LOCAL LOOP AMPLIFERS (Note 44)	INSTALL MICROWAVE VEHICLE DETECTOR UNIT (Note 57)
1	07-0189	106	439	NORWALK	WENDOVER								4	
2	07-0193	393	97	US-29 RAMPS	CONE								2	
3	07-0194	391	100	SUMMIT	CONE						7	4	7	
4	07-0195	394	97	SANDS	CONE								3	
5	07-0199	16	14	REGIONAL	BURNT POPLAR								2	
6	07-0205	323	331	BATTLEGROUND	DAVID CALDWELL/MARTINSVILLE								4	
7	07-0209	124	244	HIGH POINT	MERRITT								4	
8	07-0221	275	46	NEW GARDEN	FRIEND'S HOME								1	
9	07-0242	47	277	UNITED	MARKET						2	2	2	
10	07-0251	17	12	NC-68	ALBERT PICK/I-40 EB RAMP								6	
11	07-0285	481	446	ELM-EUGENE	SENECA/I-85								3	
12	07-0295	410	120	CHURCH	CORNWALLIS							1	5	
13	07-0362	101	257	I-40 WB RAMP	WENDOVER						4	3	3	
14	07-0375	34	264	STAGE COACH	MARKET								3	
15	07-0377	357	86	CHURCH	LEES CHAPEL/PISGAH CHURCH						6	3	3	
16	07-0378	423	139	SYKES	WENDOVER								2	
17	07-0399	430	138	HUFFINE MILL	BESSEMER								1	
18	07-0408	278	52	FLEMING	OLD OAK RIDGE						4	2	2	
19	07-0428	229	444	RANDLEMAN	I-85 NB RAMP								2	
20	07-0430	229	442	I-40 WB RAMP/I-85 SB	RANDLEMAN						3	3	2	
21	07-0434	230	441	RANDLEMAN	MEADOWVIEW								4	
22	07-0438	465	168	LEE	LINCOLN						2	2	4	
23	07-0444	85	287	HOLDEN RD	W WENDOVER AVE						8	5	4	
24	07-0447	89	289	HOLDEN	MARKET								Video	
25	07-0450	127	241	HOLDEN	HIGH POINT						10	6	5	
26	07-0472	144	176	EUGENE	LEE						4	2	5	
27	07-0490	400	125	CRIDLAND/PARKWAY	WENDOVER						10	6	4	
28	07-0492	330	349	BATTLEGROUND	NORTHWOOD						4	2	2	
29	07-0536	44	275	MARKET	MONTROSE						6	3	2	
30	07-0537	46	276	WESTGATE	MARKET								1	
31	07-0538	321	71	BATTLEGROUND	PISGAH CHURCH						9	5	4	
32	07-0555	499	192	US-421 (JOSEPH M HUNT JR.)	PLEASANT GARDEN						4	2	4	
33	07-0560	147	172	BENNETT	LEE						4	2	4	
34	07-0563	129	232	PINECROFT	HIGH POINT								4	
35	07-0566	422	140	WAUGH	WENDOVER								2	
36	07-0567	146	173	MURROW	LEE						2	2	3	
37	07-0568	209	427	FLORIDA	RANDLEMAN						4	2	3	
38	07-0569	101	256	I-40 EB RAMP	WENDOVER			1	1	1			2	
39	07-0578	388	115	CHURCH	CONE								4	
40	07-0579	429	145	LINDSAY	WENDOVER						6	3	3	
41	07-0583	447	133	SUMMIT	TEXTILE						2	2	2	
42	07-0588	481	446	ELM-EUGENE	I-85 SB RAMP								2	
43	07-0589	229	442	RANDLEMAN	I-40 EB RAMP/I-85 SB								1	
44	07-0594	93	261	GUILFORD COLLEGE	I-40 WB/SWING								7	
45	07-0596	131	235	HIGH POINT	MEADOWVIEW						3	3	6	
46	07-0597	342	344	WESTOVER TER.	WENDOVER								2	1
47	07-0598	104	437	EDWARDIA	WENDOVER								4	
48	07-0609	324	333	BATTLEGROUND	BENJAMIN/CONE						6	4	5	
49	07-0610	328	341	BATTLEGROUND	CORNWALLIS						5	3	1	
50	07-0612	329	348	BATTLEGROUND	GREEN VALLEY/PEMBROKE						3	3	2	
51	07-0613	399	124	HILL	WENDOVER								2	
52	07-0621	122	247	GROOMETOWN/HILLTOP	HIGH POINT						8	5	5	
53	07-0623	133	236	HIGH POINT	VANSTORY								2	
54	07-0624	134	237	HIGH POINT	FLORIDA						12	6	4	
55	07-0625	135	238	HIGH POINT	PATTERSON								5	
56	07-0632	44	275	MUIRS CHAPEL/SPRING GARDEN	MARKET						8	4	4	
57	07-0633	52	291	GREEN VALLEY	MARKET						4	2	2	
58	07-0634	53	292	ELAM	MARKET						2	2	2	
59	07-0635	55	293	CHAPMAN	MARKET								2	
60	07-0636	58	323	TATE	MARKET									
61	07-0637	59	325	MENDENHALL	MARKET						2	2	1	
62	07-0644	61	326	CEDAR	MARKET									
63	07-0646	207	428	FREEMAN MILL	FLORIDA						4	3	7	
64	07-0648	466	167	WILLOW	LEE								3	
65	07-0649	148	170	BENBOW	LEE								3	
					SUBTOTAL	0	0	1	1	1	158	99	199	1

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PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
Traffic Engineering Unit
NCDEPARTMENT OF TRANSPORTATION
Integrated Mobility Division
750 Greenfield Pkwy., Garner, NC 27529

SCALE
0
NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
SUMMARY OF WORK

DIVISION 7 — GUILFORD COUNTY

PLAN DATE:	FEBRUARY, 2008	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J. CROSS	REVIEWED BY:	M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE — DATE 2/20/08
CADD Filename:

2/20/2008
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PROJECT REFERENCE NO.	SHEET NO.
U-4711	3R

SUMMARY OF WORK BY INTERSECTION

INTERSECTION						WIRELESS DIAL-UP					DETECTORS			
	SIGNAL NUMBER	SHEET NUMBER (CR | SPL)		STREET 1	STREET 2	INSTALL DSL MODEM (Note 53)	INSTALL UNI-DIRECTIONAL YAGI ANTENNA (Note 38)	INSTALL OMNI-DIRECTIONAL ANTENNA (Note 39)	INSTALL RADIO TRANSCEIVER (Note 40)	INSTALL ANTENNA CABLE (Note 50)	NUMBER OF DETECTOR LOOPS (Note 41)	INSTALL SYSTEM LOOP AMPLIER (Note 42)	EXISTING LOCAL LOOP AMPLIFERS (Note 44)	INSTALL MICROWAVE VEHICLE DETECTOR UNIT (Note 57)
66	07-0651	145	175	ARLINGTON	LEE								2	
67	07-0652	144	176	ELM	LEE						4	2	2	
68	07-0655	141	377	LEE	SILVER								3	
69	07-0656	140	378	GLENWOOD	LEE								1	
70	07-0657	139	379	AYCOCK	LEE						5	3	6	
71	07-0661	61	328	SPRING	MARKET									
72	07-0662	61	328	EDGEWORTH	MARKET									
73	07-0663	64	383	EUGENE	MARKET	1								
74	07-0679	450	111	SIXTEENTH	SUMMIT						4	2	2	
75	07-0702	308	64	BATTLEGROUND	NEW GARDEN						4	2	5	
76	07-0703	239	44	COLLEGE/NEW GARDEN	FRIENDLY						8	4	5	
77	07-0714	420	142	GATEWOOD	WENDOVER								3	
78	07-0715	421	141	ENGLISH	WENDOVER						4	3	5	
79	07-0716	424	137	ELWELL	WENDOVER						6	3	3	
80	07-0720	313	70	BATTLEGROUND	WESTRIDGE						6	3	3	
81	07-0722	511	182	MARTIN LUTHER KING	I-85/US-29 RAMPS						4	2	3	
82	07-0725	37	268	COLLEGE/GUILFORD COLLEGE	MARKET						8	4	3	
83	07-0732	52	291	LINDELL	MARKET						5	3	2	
84	07-0749	226	200	RANDLEMAN	VANDALIA						4	2	4	
85	07-0826	413	130	CHURCH	WENDOVER						6	3	3	
86	07-0831	137	380	CHAPMAN/COLISEUM	LEE								6	
87	07-0846	328	342	BATTLEGROUND	LAWNDALE									
88	07-0851	512	181	ALAMANCE	US 421					1	4	2	3	
89	07-0865	103	435	MEADOWOOD	WENDOVER								7	
90	07-0867	38	268	DOLLEY MADISON/MEADOWOOD	MARKET						4	2	4	
91	07-0870	71	159	GILLESPIE	MARKET						4	2	2	
92	07-0879	446	134	SUMMIT	4TH								3	
93	07-0890	35	265	SWING	MARKET								4	
94	07-0911	41	270	EDWARDIA	MARKET						2	2	4	
95	07-0917	107	440	CLIFTON	WENDOVER						4	3	4	
96	07-0962	32	31	CHIMNEY ROCK	MARKET						4	2	2	
97	07-0964	228	444	CREEK RIDGE	RANDLEMAN						4	2	3	
98	07-0968 Wireless	11	5	NC-68	PLEASANT RIDGE RD.				1	1	8	4	2	
99	07-0978	28	26	GALLIMORE DAIRY	MARKET			1	1	1	4	2	3	
100	07-0983	514	180	WILLOW RD	ALAMANCE CHURCH						2	1	2	
101	07-0984	396	116	CHURCH	SIXTEENTH								2	
102	07-0986	72	158	ENGLISH	MARKET						2	2	4	
103	07-0987	133	236	HIGH POINT	GRIMSLEY									
104	07-0988	84	284	HOLDEN	PATTERSON						6	3	4	
105	07-0989	219	414	REHOBETH CHURCH	VANDALIA								2	
106	07-0992	515	120	CHURCH	PEDESTRIAN CROSSING (HALL TOWERS)									
107	07-1009	469	164	ENGLISH	LEE								3	
108	07-1012	331	350	BATTLEGROUND	MILL								3	
109	07-1016	303	58	BATTLEGROUND	HORSEPEN CREEK RD.						8	4	5	
110	07-1017	93	261	GUILFORD COLLEGE	I-40 EB RAMP								5	
111	07-1018	278	52	FLEMING/NEW GARDEN	BALLINGER/NEW GARDEN								5	
112	07-1027	198	219	HOLDEN	I-85 SB RAMP								2	
113	07-1028	198	217	HOLDEN	I-85 NB RAMP/CAMPGROUND								2	
114	07-1029 Wireless	12	5	BENTLEY	REGIONAL RD.		1		1	1			1	
115	07-1035	100	255	STANLEY	WENDOVER						4	3	6	
116	07-1036	100	255	LANDMARK CENTER	WENDOVER								5	
117	07-1041	180	207	GROOMETOWN	VANDALIA/WAYNE						2	1		
118	07-1044	17	12	REGIONAL	ALBERT PICK								4	
119	07-1069	175	213	HIGH POINT RD.	ALAMANCE						2	1	3	
120	07-1073	36	267	FRIENDWAY	MARKET								2	
121	07-1145	307	62	BATTLEGROUND	BRASSFIELD						2	2	4	
122	07-1163	16	13	I-40 WB RAMP	NC-68								2	
123	07-1171	125	242	FARMINGTON	HIGH POINT								3	
124	07-1185	171	212	HIGH POINT	MACKAY			1	1	1			3	
125	07-1186	29	27	FRIENDLY	MARKET						4	2	2	
126	07-1187	259	301	BRYAN WB RAMP	HOLDEN								2	
127	07-1188	259	301	BRYAN EB RAMP	HOLDEN								3	
128	07-1189	262	312	BENJAMIN	BRYAN BLVD						7	4	2	
129	07-1197	23	17	GALLIMORE	BURNT POPLAR						5	3	3	
130	07-1207	108	273	SPRING GARDEN	WENDOVER WB RAMP								2	
					SUBTOTAL	1	1	2	4	5	150	83	188	0

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PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
NCDEPARTMENT OF TRANSPORTATION
Integrated Mobility Transportation Solutions
750 Greenfield Pkwy., Garner, NC 27529

SCALE: 0 — NONE

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

SUMMARY OF WORK

DIVISION 7 — GUILFORD COUNTY

PLAN DATE:	FEBRUARY, 2008	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J. CROSS	REVIEWED BY:	M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE — DATE: 2/20/08

CADD Filenames

2/20/2008
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PROJECT REFERENCE NO.	SHEET NO.
U-4711	3S

SUMMARY OF WORK BY INTERSECTION

INTERSECTION						WIRELESS DIAL-UP					DETECTORS			
	SIGNAL NUMBER	SHEET NUMBER (CR | SPL)		STREET 1	STREET 2	INSTALL DSL MODEM (Note 53)	INSTALL UNI-DIRECTIONAL YAGI ANTENNA (Note 38)	INSTALL OMNI-DIRECTIONAL ANTENNA (Note 39)	INSTALL RADIO TRANSCEIVER (Note 40)	INSTALL ANTENNA CABLE (Note 50)	NUMBER OF DETECTOR LOOPS (Note 41)	INSTALL SYSTEM LOOP AMPLIER (Note 42)	EXISTING LOCAL LOOP AMPLIFERS (Note 44)	INSTALL MICROWAVE VEHICLE DETECTOR UNIT (Note 57)
131	07-1209	284	48	BRYAN WB RAMP/HORSEPEN CREEK	NEW GARDEN								5	
132	07-1210	316	67	BRYAN EB RAMP/FRIENDLY ACRES	WESTRIDGE						2	1	3	
133	07-1211	316	68	BRYAN WB RAMP	WESTRIDGE								2	
134	07-1219	495	193	PLEASANT GARDEN	VANDALIA								3	
135	07-1235	234	39	FRIENDLY	STAGE COACH								2	
136	07-1239	396	116	CHURCH	GOLDEN GATE								1	
137	07-1240	116	280	MERRITT	PATTERSON WB RAMP								3	
138	07-1241	276	46	ARCADIA	NEW GARDEN								3	
139	07-1269	403	129	CHURCH	NORTHWOOD						4	2	2	
140	07-1271	261	310	GREEN VALLEY	NORTHLINE/WENDOVER RAMP								4	
141	07-1284 Wireless	168	212	MILLIS/ BONNER	HIGH POINT		1		1	1			2	
142	07-1302	123	246	ROMAINE ST.	HIGH POINT								2	
143	07-1305	130	233	HIGH POINT	I-40 WB RAMP								3	
144	07-1316	217	346	GLENDALE	REHOBETH CHURCH								2	
145	07-1320	155	243	MERRITT	FAIRFAX								4	
146	07-1324	102	257	BIG TREE	WENDOVER								5	
147	07-1376	120	248	FAIRFAX	HILLTOP								4	
148	07-1379	225	201	RANDLEMAN	GLENDALE						2	1	2	
149	07-1428	428	136	PENRY/BURLINGTON	WENDOVER/BURLINGTON						5	3	3	
150	07-1429	14	5	BURGESS	MARKET						4	2	2	
151	07-1436 Wireless	27	26	BOEING	MARKET		1		1	1			2	
152	07-1439	7	2	SANDY RIDGE RD.	US-421 (W.MARKET)						2	1	1	
153	07-1449	15	9	NC-68	TRIAD CENTER DR.						4	2	4	
154	07-1458	236	41	KING GEORGE	FRIENDLY								2	
155	07-1459 Wireless	10	5	EDGEFIELD	NC-68		1		1	1			2	
156	07-1469	128	240	VEASLEY	HIGH POINT								4	
157	07-1481	109	273	SPRING GARDEN	WENDOVER EB RAMP								2	
158	07-1484	306	61	BATTLEGROUND	COTSWALD AVE.			1	1	1			5	
160	07-1495	43	271	NORWALK	MARKET						4	2	3	
161	07-1505	211	424	COLISEUM	FREEMAN MILL						10	5	6	
162	07-1512	117	249	STANLEY	HILLTOP						5	3	2	
163	07-1513	231	36	FRIENDLY	OLD FRIENDLY								3	
164	07-1517	198	217	HOLDEN	PHOENIX								3	
165	07-1518	99	254	BRIDFORD	WENDOVER AVE								8	
166	07-1540	500	189	RANDLEMAN	TERRELL								2	
167	07-1543	518	32	BURNT POPLAR	CHIMNEY ROCK								3	
168	07-1600 Wireless	170	212	ADAMS FARM	MACKAY		1		1	1			3	
169	07-1601	5	3	SANDY RIDGE	I-40 WB RAMP								2	
170	07-1607	325	336	BATTLEGROUND	OAKCREST								3	
171	07-1610	305	60	BATTLEGROUND	DRAWBRIDGE PKWY								6	
172	07-1611	237	41	FRIENDS HOME	FRIENDLY								2	
173	07-1618	178	205	GROOMETOWN	GRANDOVER/WILEY DAVIS									
174	07-1621	274	43	COLLEGE	HUNT CLUB DR.								2	
175	07-1633	227	443	RANDLEMAN	CORLISS								3	
176	07-1648	4	3	SANDY RIDGE	I-40 EB RAMP								2	
177	07-1649	5	3	SANDY RIDGE RD.	TRIAD DR.						2	1	2	
178	07-1658	135	238	HIGH POINT	ELLINGTON								3	
179	07-1689	19	15	CHIMNEY ROCK	GALLIMORE DAIRY								2	
180	07-1739	397	114	CHURCH	ELECTRA						2	1	3	
181	07-1763	448	101	SUMMIT	PHILLIPS								2	
182	07-1772	17	11	NC-68	THORNDIKE						6	3	3	
183	07-1773	95	22	ADAMS FARM	HILLTOP								2	
184	07-1774	96	23	BRIDFORD	HILLTOP						4	2	4	
185	07-1775	272	42	COLLEGE	GUIDA								2	
186	07-1776	231	36	CHIMNEY ROCK	FRIENDLY								3	
187	07-1818	14	5	MARKET	NC-68 NB RAMP			1	1	1			1	1
188	07-1820	321	330	BATTLEGROUND	EDNEY RIDGE								3	
189	07-1831	284	48	BRYAN EB RAMP	NEW GARDEN								3	
190	07-1836	70	160	OHENRY BLVD RAMP	MARKET								3	
191	07-1862	92	260	GUILFORD COLLEGE	HORNADAY						3	2	5	
192	07-1863	98	251	SAPP	WENDOVER						6	3	6	
193	07-1870	105	438	TRI-CITY	WENDOVER						8	6	5	
194	07-1871	101	256	I-40 EB RAMP	WENDOVER								2	
195	07-1884	383	95	SUMMIT	RANKIN								2	
SUBTOTAL						0	4	2	6	6	73	40	188	1

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Raleigh N.C. 27636-3068
(919) 677-2000

750 Greenfield Pkwy., Garner, NC 27529

SCALE
0
NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
SUMMARY OF WORK

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: J. CROSS	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filenames

2/20/2008
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PROJECT REFERENCE NO.	SHEET NO.
U-4711	3T

SUMMARY OF WORK BY INTERSECTION

INTERSECTION						WIRELESS DIAL-UP					DETECTORS			
	SIGNAL NUMBER	SHEET NUMBER (CR | SPL)		STREET 1	STREET 2	INSTALL DSL MODEM (Note 53)	INSTALL UNI-DIRECTIONAL YAGI ANTENNA (Note 38)	INSTALL OMNI-DIRECTIONAL ANTENNA (Note 39)	INSTALL RADIO TRANSCEIVER (Note 40)	INSTALL ANTENNA CABLE (Note 50)	NUMBER OF DETECTOR LOOPS (Note 41)	INSTALL SYSTEM LOOP AMPLIER (Note 42)	EXISTING LOCAL LOOP AMPLIFERS (Note 44)	INSTALL MICROWAVE VEHICLE DETECTOR UNIT (Note 57)
196	07-1887	213	425	FREEMAN MILL	GARRETT/GLENWOOD								4	
197	07-1893	22	17	GALLIMORE DAIRY	I 40 RAMPS								Video	
198	07-1894	24	19	BOULDER	CHIMNEY ROCK								4	
199	07-1921	26	20	BOULDER	BURNT POPLAR								4	
200	07-1927	223	202	RANDLEMAN	ELMSLEY/NESTLEWAY								5	
201	07-1928	177	204	GROOMETOWN	I-85 NB RAMP									
202	07-1929	177	204	GROOMETOWN	I-85 SB RAMP								Video	
203	07-1930	364	72	LAKE BRANDT	AIR HARBOR						4	2	2	
204	07-1941	299	57	HORSEPEN	CARLSON DAIRY								3	
205	07-1944	327	337	BATTLEGROUND	MARKLAND								4	
206	07-1964	94	24	BIG TREE	GUILFORD COLLEGE						4	2	3	
207	07-1969	472	198	ELM-EUGENE	I-85 SB RAMPS						4	2	3	
208	07-1970	472	197	ELM-EUGENE	I-85 NB RAMPS								3	
209	07-1973	47	277	MARKET	WALKER								3	
210	07-1978	31	30	MARKET	PPG								3	
211	07-1984 Wireless	361	84	ELM	OLD LAKE JEANETTE		1		1	1	4	2	4	
212	07-2000	9	1	MARKET	PLEASANT RIDGE								2	
213	07-2001 Wireless	13	5	REGIONAL ROAD	BRYAN		1		1	1	8	4	3	
214	07-2008	234	39	FRIENDLY	OUTER LOOP						6	3	16	
215	07-2014	512	181	ROTHERWOOD	ALAMANCE CHURCH								2	
216	07-2026	220	416	REHOBETH	I-85/TOLAR								4	
217	07-2028	469	163	WOODY	LEE						4	2	5	
218	07-2029	58	323	E LAKE/MCIVER	MARKET									
219	07-2030 Wireless	169	212	HIGHPOINT	GUILFORD COLLEGE		1		1	1			8	
220	07-2033	18	10	NC-68	REGIONAL/HICKORY RIDGE						4	2	3	
221	07-2034	430	138	BURLINGTON	BESSEMER/FRANKLIN								3	
222	07-2040	183	208	WILEY DAVIS	VANDALIA									
223	07-2044	235	40	FRIENDWAY/COBLE FARM	FRIENDLY								5	
224	07-2045	295	56	HORSE PEN CREEK	DRAWBRIDGE								4	
225	07-2050	377	93	CHURCH	DENNY								2	
226	07-2055	473	196	ELM-EUGENE	ELMSLEY								6	
227	07-2058	491	195	WALMART ACCESS	ELMSLEY								4	
228	07-2068	179	206	GROOMETOWN	ROSELAKE/SEDGEWOOD									
229	07-2076	73	158	MARKET	HOLTS CHAPEL									
230	07-2077	22	16	GALLIMORE DAIRY	AIRPARK						4	2	2	
231	07-2112	300	57	HORSE PEN CREEK	HANSBERRY/YMCA								8	
232	GBO-001	375	78	LAWNDALE	MARTINSVILLE								2	
233	GBO-002	373	77	LAWNDALE	LAKE JEANETTE								1	
234	GBO-003	370	76	LAWNDALE	COTTAGE						4	2	2	
235	GBO-004	163	376	TATE	WALKER									
236	GBO-005	366	73	LAKE BRANDT	LAWNDALE								2	
237	GBO-006 Wireless	363	61	COTSWOLD	OLD BATTLEGROUND		1		1	1			4	
238	GBO-007 Wireless	363	61	LAKE BRANDT	OLD BATTLEGROUND		1		1	1			2	
239	GBO-009	463	153	DUDLEY	BLUFORD								2	
240	GBO-010	369	75	LAWNDALE	COTSWOLD								3	
241	GBO-011	115	279	MERRIT	HEWITT								3	
242	GBO-012	163	376	TATE	SPRING GARDEN ST								4	
243	GBO-013	200	419	CREEK RIDGE	FOUR SEASONS								3	
244	GBO-015	398	112	YANCEYVILLE	16th STREET								2	
245	GBO-017	194	223	HOLDEN	VANDALIA						8	4	4	
246	GBO-019	79	274	POMONA	SPRING GARDEN								4	
247	GBO-020	346	79	MARTINSVILLE	PISGAH CHURCH						2	1	2	
248	GBO-021	350	83	PISGAH CHURCH	WILLOUGHBY						4	2	2	
249	GBO-022	185	230	PINECROFT	VANSTORY								5	
250	GBO-023	508	338	LAWNDALE	LAWNDALE CROSSING						4	2	5	
251	GBO-024	189	231	PINECROFT	SEAWELL								1	
252	GBO-025	346	79	PISGAH CHURCH	LAWNDALE						4	2	5	
253	GBO-026	260	308	PEMBROKE	NORTHLINE								2	
254	GBO-029	76	272	MUIRS CHAPEL	TOWER								3	
255	GBO-030	114	278	MERRITT	SPRING GARDEN								3	
256	GBO-031	195	222	PINECROFT	VANDALIA								2	
257	GBO-033	164	362	MENDENHALL	SPRING GARDEN						2	1	2	
258	GBO-034	160	372	KENILWORTH	SPRING GARDEN								4	
259	GBO-041	368	75	LAWNDALE	REGENTS PARK LN.								2	
260	GBO-046	335	360	FISHER/EDGEWORTH	BATTLEGROUND									
					SUBTOTAL	0	5	0	5	5	70	35	198	0

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(919) 677-2000

Traffic Engineering and Safety Systems Branch
NCDEPARTMENT OF TRANSPORTATION
Integrated Mobility Division
750 Greenfield Pkwy., Garner, NC 27529

SCALE: 0 NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
SUMMARY OF WORK

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 REVIEWED BY: K.W. SMITH
PREPARED BY: J. CROSS REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL
SEAL 023562
ENGINEER
MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filenames:

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PROJECT REFERENCE NO.	SHEET NO.
U-4711	3U

SUMMARY OF WORK BY INTERSECTION

	INTERSECTION					WIRELESS DIAL-UP					DETECTORS			
	SIGNAL NUMBER	SHEET NUMBER (CR | SPL)		STREET 1	STREET 2	INSTALL DSL MODEM (Note 53)	INSTALL UNI-DIRECTIONAL YAGI ANTENNA (Note 38)	INSTALL OMNI-DIRECTIONAL ANTENNA (Note 39)	INSTALL RADIO TRANSCEIVER (Note 40)	INSTALL ANTENNA CABLE (Note 50)	NUMBER OF DETECTOR LOOPS (Note 41)	INSTALL SYSTEM LOOP AMPLIER (Note 42)	EXISTING LOCAL LOOP AMPLIFERS (Note 44)	INSTALL MICROWAVE VEHICLE DETECTOR UNIT (Note 57)
261	GBO-047	334	353	BATTLEGROUND	HILL									
262	GBO-048	333	352	BATTLEGROUND	BENJAMIN/SMITH						3	3	1	
263	GBO-049	441	407	SUMMIT	LINDSAY	1					1	2	1	
264	GBO-050	459	152	SULLIVAN	LINDSAY								1	
265	GBO-051	332	351	BATTLEGROUND	BESSEMER								2	
266	GBO-052	413	132	CHURCH	BESSEMER						2	1	2	
267	GBO-053	62	327	EDGEWORTH	WASHINGTON									
268	GBO-056	344	362	EDGEWORTH	BELLEMEADE									
269	GBO-058	344	361	EDGEWORTH	SMITH									
270	GBO-059	336	354	ELM	FISHER									
271	GBO-060	431	355	ELM	SMITH									
272	GBO-061	336	359	EUGENE	FISHER									
273	GBO-062	336	354	GREENE	FISHER									
274	GBO-063	260	308	PEMBROKE	KATHLEEN								1	
275	GBO-064	116	280	MERRITT	IMMANEUL								1	
276	GBO-065	66	156	MURROW	FRIENDLY									
277	GBO-066	65	405	CHURCH	FRIENDLY	1								
278	GBO-067	65	392	DAVIE	FRIENDLY	1					3	2		
279	GBO-068	63	391	ELM	FRIENDLY	1								
280	GBO-069	63	390	GREENE	FRIENDLY	1								
281	GBO-070	63	385	COMMERCE	FRIENDLY	1								
282	GBO-071	48	290	HOLDEN	WALKER								1	
283	GBO-072	184	227	HOLDEN	VANSTORY						5	3	3	
284	GBO-074	87	286	HOLDEN	SPRING GARDEN						4	2	4	
285	GBO-076	199	220	HOLDEN	MCCUISTON/PINECROFT						2	2	4	
286	GBO-077	66	156	MURROW	MARKET									
287	GBO-078	65	404	CHURCH	MARKET	1								
288	GBO-079	314	66	HOBBS	WESTRIDGE								2	
289	GBO-080	258	302	HOLDEN	HOBBS						2	2	4	
290	GBO-081	65	403	DAVIE	MARKET	1					3	2		
291	GBO-082	64	388	ELM	MARKET	1								
292	GBO-083	162	374	HIGHLAND	SPRING GARDEN								1	
293	GBO-084	64	387	GREENE	MARKET	1					2	2	1	
294	GBO-086	337	334	BENJAMIN	HOLDEN/PINEDALE						4	2	3	
295	GBO-087	504	184	MARTIN LUTHER KING	FLORIDA						4	2	2	
296	GBO-088	67	155	MURROW	LINDSAY								1	
297	GBO-089	431	355	GREENE	SMITH									
298	GBO-090	62	327	SPRING	WASHINGTON									
299	GBO-091	458	149	SUMMIT	YANCEYVILLE								2	
300	GBO-092	444	148	SUMMIT	SULLIVAN								2	
301	GBO-093	161	370	AYCOCK	WALKER								3	
302	GBO-094	160	371	AYCOCK	SPRING GARDEN								5	
303	GBO-095	205	430	AYCOCK/LOVETT	FLORIDA								2	
304	GBO-096	436	398	GREENE	WASHINGTON	1								
305	GBO-097	435	389	GREENE	FEBRUARY ONE	1								
306	GBO-098	68	157	DUDLEY	MARKET						4	3	7	
307	GBO-100	69	162	LAUREL	MARKET						4	2	2	
308	GBO-101	432	396	GREENE	LINDSAY	1								
309	GBO-102	329	347	WESTOVER	GREEN VALLEY								1	
310	GBO-103	69	162	BENBOW	MARKET								5	
311	GBO-104	468	164	ENGLISH	MCCONNELL								2	
312	GBO-105	467	167	WILLOW	MCCONNELL								1	
313	GBO-106	309	63	BRASSFIELD	NEW GARDEN								5	
314	GBO-107	285	47	WILL DOSKEY/JEFFERSON	NEW GARDEN		1		1	1	4	2	2	
315	GBO-108	282	50	NEW GARDEN	GARDEN LAKE/ HOBBS								5	
316	GBO-112 Wireless	113	256	STANLEY	EAGLE		1		1	1			4	
317	GBO-113 Wireless	112	256	STANLEY	KOGER		1		1	1			5	
318	GBO-117	165	243	TATE	CARR								1	
319	GBO-118	510	183	MARTIN LUTHER KING JR	BENBOW								1	
320	GBO-122 Wireless	286	47	JEFFERSON	HOBBS		1		1	1			4	
321	GBO-124	341	346	LENDEW	GREEN VALLEY								4	
322	GBO-127	334	353	HILL	SMITH									
323	GBO-128	355	84	ELM	PISGAH CHURCH			1	1	1	4	2	4	
324	GBO-129	187	229	FOUR SEASONS	VANSTORY								3	
325	GBO-130	189	231	PINECROFT	KOURY BLVD.						7	4	5	
					SUBTOTAL	13	4	1	5	5	58	38	110	0

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750 Greenfield Pkwy., Garner, NC 27529

SCALE
0
NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
SUMMARY OF WORK

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 REVIEWED BY: K.W. SMITH

PREPARED BY: J. CROSS REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE DATE 2/20/08

CADD Filenames:

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N:\systems\projects\01\462020 (g-boro mts\details-mts\SUM-Sht03U.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-4711	3V

SUMMARY OF WORK BY INTERSECTION

	INTERSECTION					WIRELESS DIAL-UP					DETECTORS			
	SIGNAL NUMBER	SHEET NUMBER (CR | SPL)		STREET 1	STREET 2	INSTALL DSL MODEM (Note 53)	INSTALL UNI-DIRECTIONAL YAGI ANTENNA (Note 38)	INSTALL OMNI-DIRECTIONAL ANTENNA (Note 39)	INSTALL RADIO TRANSCEIVER (Note 40)	INSTALL ANTENNA CABLE (Note 50)	NUMBER OF DETECTOR LOOPS (Note 41)	INSTALL SYSTEM LOOP AMPLIER (Note 42)	EXISTING LOCAL LOOP AMPLIFERS (Note 44)	INSTALL MICROWAVE VEHICLE DETECTOR UNIT (Note 57)
326	GBO-131	360	88	YANCEYVILLE	LEES CHAPEL						4	2	2	
327	GBO-132	162	373	FOREST	SPRING GARDEN								3	
328	GBO-133	344	361	SPRING	SMITH									
329	GBO-134	470	166	WILLOW	FLORIDA						2	1	1	
330	GBO-135	503	185	RANDOLPH	FLORIDA						2	2	2	
331	GBO-136	431	358	EUGENE	SMITH									
332	GBO-137	83	283	HOLDEN	FLORIDA								2	
333	GBO-138	111	253	BRIDFORD	WENDOVER PLACE								3	
334	GBO-139	203	431	FLORIDA	HARDIE							1	2	
335	GBO-140	206	429	FLORIDA	GLENWOOD								2	
336	GBO-141	283	49	HIGH WOODS CIRCLE	NEW GARDEN						4	2	4	
337	GBO-142	188	228	VANSTORY	MEADOWVIEW								3	
338	GBO-144	190	226	HOLDEN	FARMINGTON								3	
339	GBO-148	436	399	EUGENE	WASHINGTON	1					4	3	1	
340	GBO-150	437	400	EUGENE	MCGEE	1							1	
341	GBO-152	432	397	EUGENE	LINDSAY	1								
342	GBO-153	221	415	REHOBETH CHURCH	CREEK RIDGE								3	
343	GBO-154	216	426	RANDLEMAN	FREEMAN MILL						4	2	1	
344	GBO-155	415	147	BESSEMER	SUMMIT						4	2	6	
345	GBO-156	480	190	ELM-EUGENE	JJ						2	2	4	
346	GBO-158	479	190	ELM-EUGENE	CREEK RIDGE/INDUSTRIAL								5	
347	GBO-159	477	191	ELM-EUGENE	MONTCASTLE								3	
348	GBO-160	476	194	ELM-EUGENE	VANDALIA						5	4	4	
349	GBO-161	269	318	AYCOCK/WESTOVER	BENJAMIN						3	2	4	
350	GBO-162	482	447	ELM-EUGENE	PATTON						4	2	2	
351	GBO-163	267	317	CAMPUS	BENJAMIN								2	
352	GBO-164	482	447	ELM-EUGENE	MEADOWVIEW						2	2	3	
353	GBO-165	267	316	BENJAMIN	ELAM								2	
354	GBO-166	265	315	BENJAMIN	GREEN VALLEY								4	
355	GBO-167	484	188	ELM-EUGENE	FLORIDA								4	
356	GBO-168	436	402	ELM	WASHINGTON	1					2	1	1	
357	GBO-169	264	314	BENJAMIN	PEMBROKE								3	
358	GBO-170	402	126	ELM	NORTHWOOD								2	
359	GBO-171	437	401	ELM	MCGEE	1								
360	GBO-172	263	313	BENJAMIN	CORNWALLIS						5	3	4	
361	GBO-173	433	406	ELM	LINDSAY	1					2	2	1	
362	GBO-174	439	176	ELM	LEWIS						2	1		
363	GBO-175	460	152	BENBOW	SULLIVAN								2	
364	GBO-178	435	411	ELM	FEBRUARY ONE	1								
365	GBO-179	486	178	ELM-EUGENE	ELM						3	3	2	
366	GBO-180	166	363	ELAM	WALKER								2	
367	GBO-182	404	123	ELM	TANKERSLEY						2	1	3	
368	GBO-183	63	384	EUGENE	FRIENDLY	1								
369	GBO-184	60	329	EDGEWORTH	FRIENDLY						2	2		
370	GBO-185	60	329	FRIENDLY	SPRING									
371	GBO-186	60	329	CEDAR	FRIENDLY									
372	GBO-187	59	323	MENDENHALL	FRIENDLY									
373	GBO-188	58	325	TATE	FRIENDLY						2	2	1	
374	GBO-189	57	321	MARKET CROSSOVER	FRIENDLY									
375	GBO-190	271	319	WESTOVER	FRIENDLY								1	
376	GBO-191	458	153	DUDLEY/YANCEYVILLE	LINDSAY								2	
377	GBO-192	271	319	RADIANCE	FRIENDLY								1	
378	GBO-193	252	310	ELAM	FRIENDLY								2	
379	GBO-194	440	307	DAVIE	WASHINGTON	1								
380	GBO-195	441	394	DAVIE	SUMMIT									
381	GBO-196	252	310	LINDELL	FRIENDLY								3	
382	GBO-197	252	311	GREEN VALLEY	FRIENDLY						2	2	3	
383	GBO-198	440	410	DAVIE	FEBRUARY ONE	1					3	2	1	
384	GBO-199	193	225	HOLDEN	DARDEN								3	
385	GBO-200	251	307	FRIENDLY	PEMBROKE								2	
386	GBO-201	251	307	AVONDALE	FRIENDLY								2	
387	GBO-202	249	306	HOBBS	FRIENDLY						4	2	2	
388	GBO-203	248	300	HOLDEN	FRIENDLY						10	6	5	
389	GBO-204	243	296	LAKEWOOD/WESTRIDGE	FRIENDLY							2	3	
390	GBO-205	328	341	LAWNDALE	CORNWALLIS								1	
					SUBTOTAL	10	0	0	0	0	79	56	128	0

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PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
Traffic Engineering Unit
Department of Transportation
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
SUMMARY OF WORK

DIVISION 7 — GUILFORD COUNTY

PLAN DATE:	FEBRUARY, 2008	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J. CROSS	REVIEWED BY:	M.W. DUNZO

REVISIONS	INIT.	DATE

SCALE: 0 — NONE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filename:

2/20/2008
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PROJECT REFERENCE NO.	SHEET NO.
U-4711	3W

SUMMARY OF WORK BY INTERSECTION

	INTERSECTION					WIRELESS DIAL-UP					DETECTORS			
	SIGNAL NUMBER	SHEET NUMBER (CR | SPL)		STREET 1	STREET 2	INSTALL DSL MODEM (Note 53)	INSTALL UNI-DIRECTIONAL YAGI ANTENNA (Note 38)	INSTALL OMNI-DIRECTIONAL ANTENNA (Note 39)	INSTALL RADIO TRANSCEIVER (Note 40)	INSTALL ANTENNA CABLE (Note 50)	NUMBER OF DETECTOR LOOPS (Note 41)	INSTALL SYSTEM LOOP AMPLIER (Note 42)	EXISTING LOCAL LOOP AMPLIFERS (Note 44)	INSTALL MICROWAVE VEHICLE DETECTOR UNIT (Note 57)
391	GBO-206	255	243	CORNWALLIS	HOBBS								2	
392	GBO-207	409	119	GOLDEN GATE	CORNWALLIS								2	
393	GBO-208	407	119	ELM	CORNWALLIS						2	1	4	
394	GBO-209	389	113	CONE	YANCEYVILLE								4	
395	GBO-210	243	295	FRIENDLY	JEFFERSON								2	
396	GBO-211	241	294	MUIRS CHAPEL	FRIENDLY								2	
397	GBO-212	240	45	DOLLEY MADISON	FRIENDLY						2	2	3	
398	GBO-213	384	117	MARSTON	CONE								2	
399	GBO-214	339	332	CONE	LAWNDALE						4	2	2	
400	GBO-215	386	118	ELM	CONE						2	2	5	
401	GBO-217	381	94	YANCEYVILLE	RANKIN								2	
402	GBO-218	356	85	ELM VILLAGE DRIVE	PISGAH CHURCH								3	
403	GBO-220	114	278	MERRITT	CLIFTON								1	
404	GBO-222	441	408	CHURCH	SUMMIT						1	2	1	
405	GBO-226	441	409	CHURCH	LINDSAY	1								
406	GBO-235	167	368	CHAPMAN	WALKER								1	
407	GBO-236	158	369	CHAPMAN	SPRING GARDEN						3	3	4	
408	GBO-239	204	432	COLISEUM	FLORIDA						2	1	2	
409	GBO-240	82	282	HOLDEN	CENTER/MEADOWVIEW						5	3	5	
410	GBO-241	127	331	CEDAR FORK	HOLDEN								3	
411	GBO-250	414	132	YANCEYVILLE	BESSEMER								1	
412	GBO-251	418	144	BESSEMER	HUFFMAN/WINSTON								2	
413	GBO-253	417	146	BESSEMER	LINDSAY								2	
414	GBO-255	401	125	BESSEMER/EUGENE	PARKWAY								2	
415	GBO-256	419	143	ENGLISH	BESSEMER								3	
416	GBO-257	412	131	ELM	BESSEMER						4	2	2	
417	GBO-260	461	171	BENNETT	GORRELL								1	
418	GBO-261	461	171	BENNETT/DUDLEY	WASHINGTON								2	
419	GBO-268	149	169	BENBOW	MCCONNELL/WASHINGTON								2	
420	GBO-271	507	179	BENBOW	FLORIDA							1	3	
421	GBO-272	434	395	GREENE	BELLEMEADE	1								
422	GBO-273	434	386	EUGENE	BELLEMEADE	1					2	2	1	
423	GBO-274	434	393	ELM	BELLEMEADE/SUMMIT	1								
424	GBO-381	395	97	CONE	16th STREET									
425	GBO-284	431	359	BATTLEGROUND	EUGENE									
426	GBO-304	386	118	ALMA PINNIX	CONE								1	
427	GBO-305	405	122	ELM	SUNSET								2	
428	GBO-312	151	161	BENBOW	BLUFORD								1	
429	GBO-334	487	177	EUGENE	WHITTINGTON								2	
430	GBO-335	340	339	LAWNDALE	FERNWOOD								1	
431	GBO-366	75	269	DOLLEY MADISON	TOWER								1	
432	GBO-376	254	305	HOBBS	NORTHLINE								2	
433	GBO-388	256	303	HOLDEN	CASCADE/CORNWALLIS								1	
434	GBO-390	319	69	WESTRIDGE	WHITEHURST								2	
435	GBO-424	91	288	HOLDEN	MADISON								2	
436	GBO-429	157	365	ELAM	SPRING GARDEN								2	
437	GBO-437	343	343	CAMPUS	WESTOVER								2	
438	GBO-460	411	121	YANCEYVILLE	CORNWALLIS								2	
439	GBO-468	80	274	DUNDAS	POMONA								2	
440	GBO-475	201	420	FOUR SEASONS	VANDALIA								2	
441	GBO-477	132	234	CENTERVIEW	MEADOWVIEW								2	
442	GBO-480	92	260	WENDOVER PLACE	HORNADAY								4	
443	GBO-483 Wireless	362	84	ELM	CORPORATE CENTER		1		1	1			4	
444	GBO-486	349	82	PISGAH CHURCH	PISGAH PLACE								3	
445	GBO-487	110	252	BRIDFORD	KMART								5	
446	GBO-489	392	100	ORANGE	CONE								3	
447	07-2100	212	424	FREEMAN MILL	LOVETT									
448	07-XXX3	290	53	FLEMING	BRYAN BOULEVARD RAMP								7	1
449	07-XXX4	499	192	PLEASANT GARDEN	INDUSTRIAL									
450	GBO-XX1	250	306	FRIENDLY	SHOPS AT FRIENDLY									
451	GBO-XX2	292	54	FLEMING	ISAACSON							1	1	
452	GBO-XX3	293	55	HORSE PEN CREEK	ISAACSON								1	
453	GBO-XX4	456	127	CHURCH	TANKERSLEY									
					SUBTOTAL	4	1	0	1	1	27	22	126	1
					TOTAL	28	15	6	22	23	615	373	1137	3

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PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
NCDEPARTMENT OF TRANSPORTATION
Integrated Mobility Division
750 Greenfield Pkwy., Garner, NC 27529

SCALE
0
NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
SUMMARY OF WORK

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: J. CROSS	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL
SEAL 023562
ENGINEER
MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filename:

2/20/2008
N:\systems\projects\DII\462020 (g-bero mts\details-mts\SUM-SH03W.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-4711	3X

SUMMARY OF WORK FOR ITS DEVICES

REFERENCE INFORMATION						CCTV											DMS
REFERENCE NUMBER	SHEET REFERENCE	OWNER	STATUS	LOCAL DESCRIPTION	LOCATION OF CCTV EQUIPMENT	INSTALL INTERCONNECT CENTER (Note 1)	INSTALL NEW ELECTRICAL SERVICE (Note 30)	INSTALL CCTV CAMERA ASSEMBLY (Note 7)	INSTALL WOOD CAMERA POLE (Note 8)	INSTALL METAL CAMERA POLE AND FOUNDATION (Note 9)	INSTALL CCTV EQUIPMENT POLE-MOUNTED CABINET (Note 37)	INSTALL CITY WI-FI ANTENNA (Note 45)	INSTALL ETHERNET SWITCH (Note 35)	INSTALL UNIFIED CABLE (Note 36)	INSTALL CODEC (Note 47)	INSTALL ETHERNET CABLE (Note 54)	INSTALL WI-FI POWER CABLE (Note 58)	INSTALL TERMINAL SERVER (Note 55)
CCTV 1E	239	GDOT	EXISTING	FRIENDLY & NEW GARDEN & COLLEGE RD	CCTV ID #1E	1							1		1			
CCTV 2E	37	GDOT	EXISTING	W. MARKET & GUILFORD COLLEGE	CCTV ID #2E										1	1		
CCTV 3E	248	GDOT	EXISTING	FRIENDLY AVE & HOLDEN RD	CCTV ID #3E										1	1		
CCTV 4E	252	GDOT	EXISTING	FRIENDLY AVE & GREEN VALLEY RD	CCTV ID #4E										1	1		
CCTV 5E	266	GDOT	EXISTING	BENJAMIN PKWY & WENDOVER AVE	CCTV ID #5E								1		1	1		
CCTV 6E	104	GDOT	EXISTING	WENDOVER AVE & EDWARDIA DR	CCTV ID #6E										1	1		
CCTV 7E	108	GDOT	EXISTING	WENDOVER AVE & SPRING GARDEN ST	CCTV ID #7E										1	1		
CCTV 8E	85	GDOT	EXISTING	WENDOVER AVE & HOLDEN RD	CCTV ID #8E										1	1		
CCTV 9E	99	GDOT	EXISTING	WENDOVER AVE & BRIDFORD PKWY	CCTV ID #9E										1	1		
CCTV 10E	481	GDOT	EXISTING	ELM EUGENE & I-85/40	CCTV ID #10E										1	1		
CCTV 1	28	GDOT	PROPOSED	W. MARKET ST & GALLIMORE DAIRY RD	07-0978			1				1		1		1	1	
CCTV 2	127	GDOT	PROPOSED	HIGH POINT RD & S. HOLDEN RD	CCTV ID #2	1	1	1		1	1	1	1	1	1	1	1	
CCTV 3	278	GDOT	PROPOSED	BALLINGER RD & FLEMING RD & NEW GARDEN RD	CCTV ID #3	1	1	1		1	1	1	1	1	1	1	1	
CCTV 4	290	GDOT	PROPOSED	BRYAN BLVD & FLEMING RD	CCTV ID #4	1	1	1	1		1	1	1	1	1	1	1	
CCTV 5	122	GDOT	PROPOSED	HIGH POINT RD & HILLTOP RD & GROOMETOWN RD	07-0621			1		1		1		1		1	1	
CCTV 6	68	GDOT	PROPOSED	BENNETT ST & DUDLEY ST & E. MARKET ST	GBO-098			1		1		1		1		1	1	
CCTV 7	329	GDOT	PROPOSED	BATTLEGROUND& PEMBROKE/GREEN VALLEY RD	07-0612			1	1			1		1		1	1	
CCTV 8	263	GDOT	PROPOSED	BENJAMIN PKWY & BRYAN BLVD	07-1189			1	1			1		1	1	1	1	
CCTV 9	328	GDOT	PROPOSED	BATTLEGROUND AVE & W. CORNWALLIS DR	CCTV ID #9	1	1	1	1		1	1	1	1	1	1	1	
CCTV 10	259	GDOT	PROPOSED	BRYAN BLVD & N. HOLDEN RD	CCTV ID #10	1	1	1	1		1	1	1	1	1	1	1	
CCTV 11	448	GDOT	PROPOSED	US 29 & PHILLIPS AVE	07-1763			1	1			1		1		1	1	
CCTV 12	445	GDOT	PROPOSED	SUMMIT AVE & E. WENDOVER AVE	CCTV ID #12	1	1	1	1		1	1	1	1	1	1	1	
CCTV 13	429	GDOT	PROPOSED	US 29 & E. WENDOVER AVE	CCTV ID #13	1	1	1	1		1	1	1	1	1	1	1	
CCTV 15	428	GDOT	PROPOSED	E. WENDOVER AVE & PENRY RD	07-1428			1	1			1		1		1	1	
CCTV 16	393	GDOT	PROPOSED	US 29 & E. CONE BLVD	CCTV ID #16	1	1	1	1		1	1	1	1	1	1	1	
CCTV 17	388	GDOT	PROPOSED	N. CHURCH ST & E. CONE BLVD	07-0578			1		1		1		1		1	1	
CCTV 18	386	GDOT	PROPOSED	E. CONE BLVD & N. ELM ST	GBO-215			1		1		1		1		1	1	
CCTV 19	339	GDOT	PROPOSED	W. CONE BLVD & LAWNDALE DR	GBO-214			1		1		1		1		1	1	
CCTV 20	324	GDOT	PROPOSED	BATTLEGROUND AVE & BENJAMIN PKWY & W. CONE BLVD	07-0609			1		1		1		1		1	1	
CCTV 22	284	GDOT	PROPOSED	BRYAN BLVD & NEW GARDEN RD	07-1831			1	1			1		1		1	1	
CCTV 23	308	GDOT	PROPOSED	BATTLEGROUND AVE & NEW GARDEN RD	07-0702			1		1		1		1		1	1	
CCTV 24	313	GDOT	PROPOSED	BATTLEGROUND AVE & OLD BATTLEGROUND & WESTRIDGE RD	07-0720			1		1		1		1		1	1	
CCTV 25	303	GDOT	PROPOSED	BATTLEGROUND AVE & HORSEPEN CREEK & OLD BATTLEGRND	07-1016			1		1		1		1		1	1	
CCTV 26	346	GDOT	PROPOSED	LAWNDALE DR & PISGAH CHURCH RD	GBO-025			1		1		1		1	1	1	1	
CCTV 27	355	GDOT	PROPOSED	N. ELM ST & PISGAH CHURCH RD	CCTV ID #27	1	1	1		1	1	1	1	1	1	1	1	
CCTV 28	357	GDOT	PROPOSED	N. CHURCH ST & LEES CHAPEL RD & PISGAH CHURCH RD	07-0377			1		1		1		1		1	1	
CCTV 29	44	GDOT	PROPOSED	W. MARKET ST & MUIRS CHAPEL RD & SPRING GARDEN ST	CCTV ID #29	1	1	1		1	1	1	1	1	1	1	1	
CCTV 30	87	GDOT	PROPOSED	N. HOLDEN RD & SPRING GARDEN ST	GBO-074			1		1		1		1		1	1	
CCTV 31	207	GDOT	PROPOSED	W. FLORIDA ST & FREEMAN MILL RD	07-0646			1		1		1		1		1	1	
CCTV 32	512	GDOT	PROPOSED	US 421 & ALAMANCE CHURCH RD & PATTON AVE	07-0851			1		1		1		1		1	1	
CCTV 33	499	GDOT	PROPOSED	US 421 & PLEASANT GARDEN RD	07-0555			1	1			1		1		1	1	
CCTV 34	331	GDOT	PROPOSED	BATTLEGROUND AVE & W. WENDOVER AVE	CCTV ID #34	1	1	1	1		1	1	1	1	1	1	1	
CCTV 35	333	GDOT	PROPOSED	BATTLEGROUND AVE & BENJAMIN PKWY	GBO-048			1		1		1		1		1	1	
CCTV 37	465	GDOT	PROPOSED	US 29 & LEE ST.	CCTV ID #37	1	1	1	1		1	1	1	1	1	1	1	
CCTV 38	70	GDOT	PROPOSED	US 29 & E. MARKET ST	CCTV ID #38	1	1	1		1	1	1	1	1	1	1	1	
CCTV 39	89	GDOT	PROPOSED	HOLDEN RD & W. MARKET ST	07-0447			1		1		1		1		1	1	
CCTV 41	413	GDOT	PROPOSED	W. WENDOVER AVE & N. CHURCH ST	CCTV ID #41	1	1	1		1	1	1	1	1	1	1	1	
CCTV 42	130	GDOT	PROPOSED	I-40 & HIGH POINT RD	CCTV ID #42	1	1	1	1		1	1	1		1	1	1	
CCTV 43	134	GDOT	PROPOSED	HIGH POINT RD & W. FLORIDA ST	CCTV ID #43	1	1	1		1	1	1	1	1	1	1	1	
CCTV 44	421	GDOT	PROPOSED	E. WENDOVER AVE & N. ENGLISH ST	07-0715			1		1		1		1		1	1	
CCTV 45	369	GDOT	PROPOSED	LAWNDALE DR & COTSWOLD AVE.	GBO-010			1		1		1		1		1	1	
DMS 1E	135	GDOT	EXISTING	HIGH POINT & IMMANUEL RD.	DMS #1	1							1					1
DMS 2E	521	GDOT	EXISTING	COLISEUM BLVD. & MARION ST.	DMS #2	1												1
				TOTALS		19	16	41	15	25	16	41	19	40	28	50	41	2

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Professional Engineering and Sales Support Services
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Integrated Mobility Division
750 Greenfield Pkwy., Garner, NC 27529

SCALE: 0 — NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
SUMMARY OF WORK

DIVISION 7 — GUILFORD COUNTY

PLAN DATE:	FEBRUARY, 2008	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J. CROSS	REVIEWED BY:	M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE — DATE: 2/27/08

CADD Filenames:

2/20/2008
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SUMMARY OF WORK FOR COMMUNICATION HUBS

REFERENCE INFORMATION						IN BUILDING	IN FIELD CABINET			
REFERENCE	CABLE ROUTING SHEET	SPLICING DETAIL SHEET	GROUP	LOCAL DESCRIPTION	SIGNAL NUMBER	INSTALL 10-GIGABIT ETHERNET SWITCH	INSTALL NEW FOUNDATION	INSTALL NEW BASE-MOUNTED CABINET	INSTALL NEW FIBER OPTIC INTER-CONNECT CENTER	INSTALL 10-GIGABIT ETHERNET SWITCH
HUB A	-	33	BJ02	NCDOT PIEDMONT TRIAD REGIONAL TMC	-	1				
HUB B	245	298	BD19 (BDMIS)	FIRESTATION #9 (MIS 539)	-	1				
HUB C	347	81	CE05 (CE1MIS)	FIRESTATION #12 (MIS 527)	-	1				
HUB D	265	315	AD20	BENJAMIN AT GREEN VALLEY	GBO-166		1	1	1	1
HUB E	458	151	EG09 (CE2MIS)	SANFORD SMITH BUILDING (MIS 563)	-	1				
HUB F	-	382	FF23	MELVIN MUNICIPAL OFFICE BUILDING	-	1				
HUB G	-	187	EG11	CITY SIGNAL SHOP	-	1				
HUB H	-	381	HI14	JUSTICE BUILDING COMPLEX	-	1				
HUB I	472	198	GI12	ELM-EUGENE AT I-85 NB RAMP	07-1969		1	1	1	1
HUB J	117	249	JH15	STANLEY AT HILLTOP	07-1512		1	1	1	1
					TOTAL	7	3	3	3	3

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PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
Institute of Transportation
DEPARTMENT OF TRANSPORTATION
750 Greenfield Pkwy., Garner, NC 27529

SCALE
0
NONE

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
SUMMARY OF WORK

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: J. CROSS	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL
SEAL 023562
ENGINEER
MARK DUNZO

2/29/08
SIGNATURE DATE

CADD Filename:

2/29/2008
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PROJECT REFERENCE NO.	SHEET NO.
U-4711	3Z

SUMMARY OF WORK FOR MIS FACILITIES

REFERENCE INFORMATION							AT BUILDING						
MIS REFERENCE NUMBER	CABLE ROUTING SHEET	SPLICING SHEET	DETAIL SHEET	GROUP	LOCAL DESCRIPTION	ADDRESS	INSTALL NEW MESSENGER CABLE	INSTALL NEW RISER	INSTALL NEW JUNCTION BOX	INSTALL NEW SPLICE ENCLOSURE	DRILL NEW BUILDING ENTRANCE	INSTALL 10-GIGABIT ETHERNET SWITCH	COIL PLENUM SMFO (FT)
513	538	335	2BN	BDMIS	Benjamin Library	1530 Benjamin Pkwy			1		1		300
518	136	239	2BN	HJMIS	Coliseum	1921 W Lee St			1		1		100
519	540	135	2BN	CE2MIS	Cone Building	1101 4th St		1	1		1		100
524	456	128	2BN	CE2MIS	Fire Station 1	1514 N Church St		1	1	1	1		300
525	124	245	2BP	HJMIS	Fire Station 10	4208 High Point Rd		1	1		1		100
527	347	81	2BP	CE1MIS	Fire Station 12	1805 Pisgah Church Rd		1	1		1	1 (HUB C)	30
528	564	96	2BP	CE1MIS	Fire Station 14	3622 Summit Ave		1	1		1		100
529	201	420	2BP	HJMIS	Fire Station 15	1400 W. Vandalia Rd		1	1		1		100
530	529	436	2BQ	ADMIS	Fire Station 16	1000 Meadwood St			1		1		100
531	535	74	2BQ	CE1MIS	Fire Station 6	4504 Lake Brandt Rd			1		1		100
532	277	52	2BQ	BDMIS	Fire Station 18	5903 Ballinger Rd		1	1		1		300
533	88	29	2BQ	ADMIS	Fire Station 19	6900 Downwind Rd		1	1		1		100
534	14	6	2BR	ADMIS	Fire Station 20	8404 W. Market St		1	1		1		100
535	156	174	2BR	EGMIS	Fire Station 4	401 Gorrell St		1	1		1		100
536	342	345	2BR	BDMIS	Fire Station 5	1401 Westover Ter		1	1		1		100
537	420	141	2BR	CE2MIS	Fire Station 7	1064 Gatewood Ave		1	1		1		100
538	210	432	2BS	HJMIS	Fire Station 8	2201 Coliseum Blvd		1	1		1		100
539	245	298	2BS	BDMIS	Fire Station 9	4302 W. Friendly Ave		1	1		1	1 (HUB B)	30
542	204	433	2BS	HJMIS	Glenwood Library	1901 W. Florida St		1	1		1		300
546	572	104	2BS	CE2MIS	Landfill offices	2503 White St		1	1	1	1		100
552	576	106	2BT	CE2MIS	Mcgirt-Horton Library	2509 Phillips St		1	1		1		200
555	569	103	-	CE1MIS	N Buffalo Treatment	2199 White St							-
557	503	186	2BT	EGMIS	P&R Maintence	316 E. Florida St		1	1		1		300
563	458	151	2BT	CE2MIS	Sanford Smith	514 Yanceyville St	1				1	1 (HUB E)	-
565	311	65	2BT	BDMIS	Tannenbaum	2200 New Garden Road		1	1		1		100
566	148	170	2BU	EGMIS	Vance Chanvis Library	900 S Benbow Rd			1		1		100
569	441	356	2BU	EGMIS	Historical Museum	130 Summit Ave			2		1		200
571	539	357	2BU	EGMIS	Central Library	219 N Church St			2		1		200
573	559	91	-	CE1MIS	Bryan Park Enrichment Ctr	6275 Bryan park Rd							-
578	562	92	-	CE1MIS	Lake Townsend Treatment Plant	6332 Townsend Road							-
589	590	110	-	CE2MIS	TZ Osborne Wastewater Treatment	2350 Huffine Mill Rd							-
590	458	153	2BU	CE2MIS	Curb Market	501 Yanceyville Rd	1				1		400
593	482	447	-	EGMIS	J Edward Kitchen Operations Center	2602 S Elm-Eugene ST							-
603	595	51	2BV	BDMIS	Kathleen Clay Edwards Family Branch libra	1420 Price Park Rd		1	1	1	1		200
606	528	266	2BV	ADMIS	Swing Road Station	300 Swing Rd	1				1		-
607	194	224	-	HJMIS	Hemphill Branch Library	2301 W Vandalia Rd							-
612	544	87	-	CE1MIS	Fire Station 2	5109 N Church St							-
901	395	99	2BV	CE1MIS	SportsPlex	2400 16th Street			1		1		800
902	593	165	2BV	EGMIS	Fire Station 56	820 Franklin Blvd			1	1	1		100
903	594	210	2BW	HJMIS	Trotter Rec/Hester	3906 Betula Street		1	1	1	1		400
904	534	59	2BW	BDMIS	Burmill Park	5834 Bur-Mil Club Road		1	1		1		200
1415	296	56	2BW	BDMIS	Fire Station 21	2870 Horsepen Creek Rd		1	1		1		200
1416	518	32	-	ADMIS	Transfer Station	6310 Burnt Poplar Rd							-
						TOTAL	3	23	34	5	35	3	6,060

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Raleigh N.C. 27636-3068
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Traffic Engineering and Safety Systems Branch
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Statewide Transportation Solutions
750 Greenfield Pkwy., Garner, NC 27529

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
SUMMARY OF WORK

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: J. CROSS	REVIEWED BY: M.W. DUNZO

SCALE: 0 — NONE

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE — DATE: 2/29/08

CADD Filename:

2/29/2008
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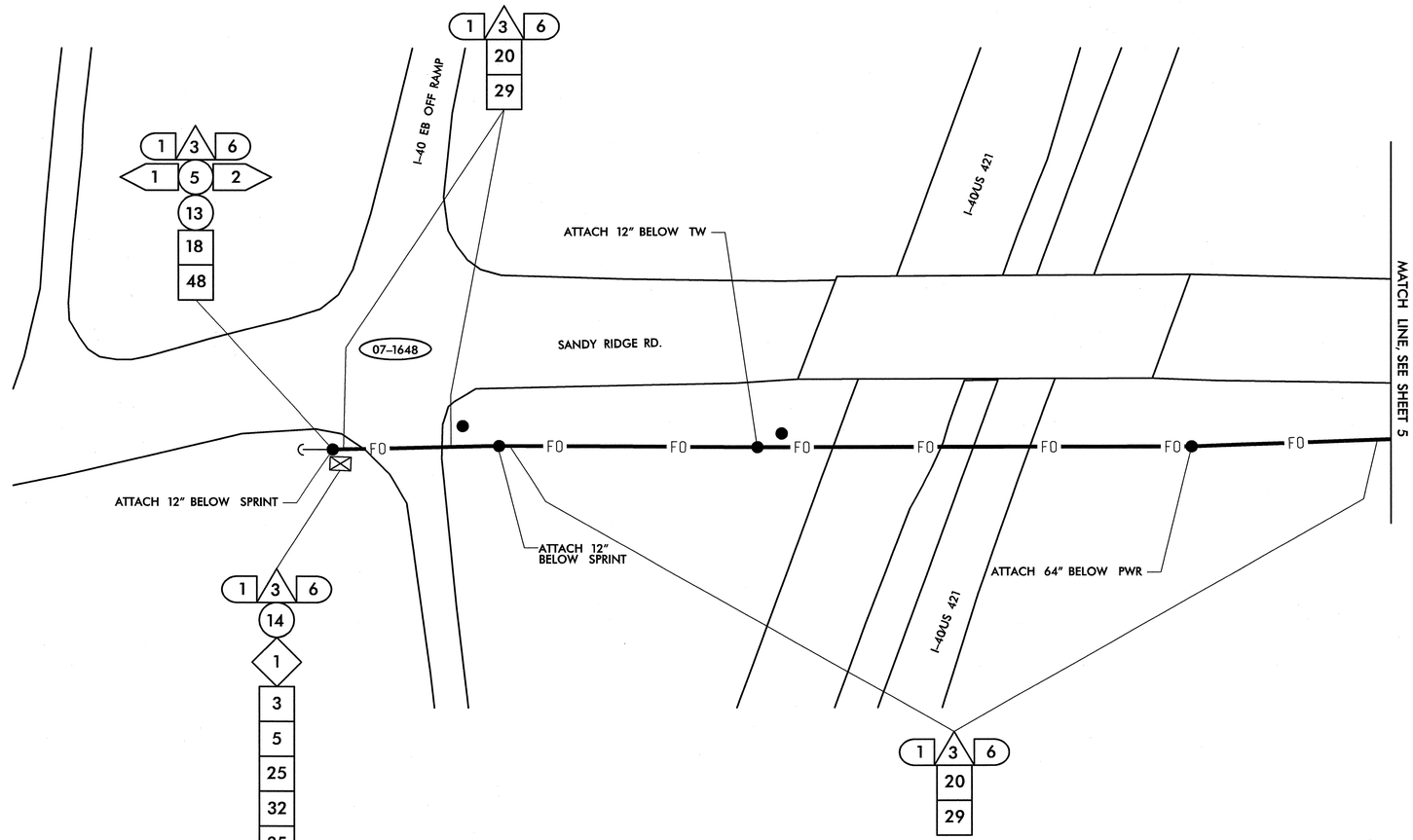
PROJECT REFERENCE NO.	SHEET NO.
U-4711	4



1. INSTALL SMFO CABLE
2. INSTALL PLENUM RATED FIBER OPTIC CABLE
3. INSTALL FIBER OPTIC DROP CABLE
4. INSTALL TRACER WIRE
5. REUSE NCDOT SMFO CABLE
6. REUSE GDOT SMFO CABLE
1. TRENCH
2. INSTALL PVC CONDUIT
3. INSTALL RIGID, GALVANIZED STEEL CONDUIT
4. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5. INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
6. INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
7. INSTALL POLYETHYLENE CONDUIT
8. DIRECTIONAL DRILL CONDUIT
9. BORE AND JACK CONDUIT
10. INSTALL CABLE(S) IN EXISTING CONDUIT
11. INSTALL CABLE(S) IN NEW CONDUIT
12. INSTALL CABLE(S) IN EXISTING RISER
13. INSTALL CABLE(S) IN NEW RISER
14. INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
15. INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
16. INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
17. INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
18. INSTALL NEW RISER INTO POLE MOUNTED CABINET
19. REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
1. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2. INSTALL UNDERGROUND SPLICE ENCLOSURE
3. INSTALL AERIAL SPLICE ENCLOSURE
4. INSTALL POLE MOUNTED SPLICE CABINET
5. INSTALL BASE MOUNTED SPLICE CABINET
6. REMOVE EXISTING SPLICE CABINET
7. INSTALL TERMINAL SPLICE BOX
8. MODIFY EXISTING SPLICE ENCLOSURE
1. INSTALL CABINET FOUNDATION
2. REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
3. MODIFY EXISTING CABINET FOUNDATION
4. INSTALL NEW 333 COMMUNICATION CABINET
5. INSTALL NEW 332 BASE MOUNTED CABINET
6. INSTALL NEW 336S CABINET
7. INSTALL CCTV CAMERA ASSEMBLY
8. INSTALL CCTV CAMERA WOOD POLE
9. INSTALL CCTV METAL POLE AND FOUNDATION
10. INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
11. INSTALL SPECIAL OVERSIZED JUNCTION BOX
12. INSTALL OVERSIZED JUNCTION BOX
13. INSTALL STANDARD JUNCTION BOX
14. REMOVE EXISTING JUNCTION BOX
15. INSTALL WOOD POLE
16. REMOVE EXISTING WOOD POLE
17. INSTALL AERIAL GUY ASSEMBLY
18. INSTALL STANDARD GUY ASSEMBLY
19. INSTALL SIDEWALK GUY ASSEMBLY
20. INSTALL MESSENGER CABLE
21. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
22. REMOVE EXISTING COMMUNICATIONS CABLE
23. INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
24. INSTALL DELINEATOR MARKER
25. STORE 30 FEET OF EACH COMMUNICATIONS CABLE
26. STORE 100 FEET OF EACH COMMUNICATIONS CABLE
27. LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
28. LASH CABLE(S) TO EXISTING MESSENGER CABLE
29. LASH CABLE(S) TO NEW MESSENGER CABLE
30. INSTALL NEW ELECTRICAL SERVICE
31. MODIFY EXISTING ELECTRICAL SERVICE
32. INSTALL NEW CONTROLLER
33. INSTALL EXISTING CABLE IN NEW CABINET
34. INSTALL GENERATOR POWER INLET BOX
35. INSTALL LOCAL GIGABIT ETHERNET SWITCH
36. INSTALL UNIFIED CABLE
37. INSTALL POLE MOUNTED EQUIPMENT CABINET
38. INSTALL UNI-DIRECTIONAL YAGI ANTENNA
39. INSTALL OMNI-DIRECTIONAL ANTENNA
40. INSTALL RADIO TRANSCEIVER
41. INSTALL SYSTEM LOOP
42. INSTALL SYSTEM LOOP AMPLIFIER
43. INSTALL SYSTEM LOOP LEAD-IN CABLE
44. INSTALL LOCAL LOOP AMPLIFIER
45. INSTALL CITY WI-FI ANTENNA
46. INSTALL HUB 10-GIGABIT ETHERNET SWITCH
47. INSTALL CODEC
48. BOND MESSENGER CABLE TO POLE GROUND
49. INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION
50. INSTALL ANTENNA CABLE
51. RECONNECT RAILROAD PREEMPTION EQUIPMENT
52. RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
53. INSTALL DSL ETHERNET SWITCH
54. INSTALL ETHERNET CABLE
55. INSTALL TERMINAL SERVER
56. INSTALL MICROWAVE VEHICLE DETECTOR
57. INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
58. INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
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Traffic Engineering and Safety Systems Branch
Traffic Engineering Division
NC DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: K.D. VANPATTEN	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE 2/20/08 DATE

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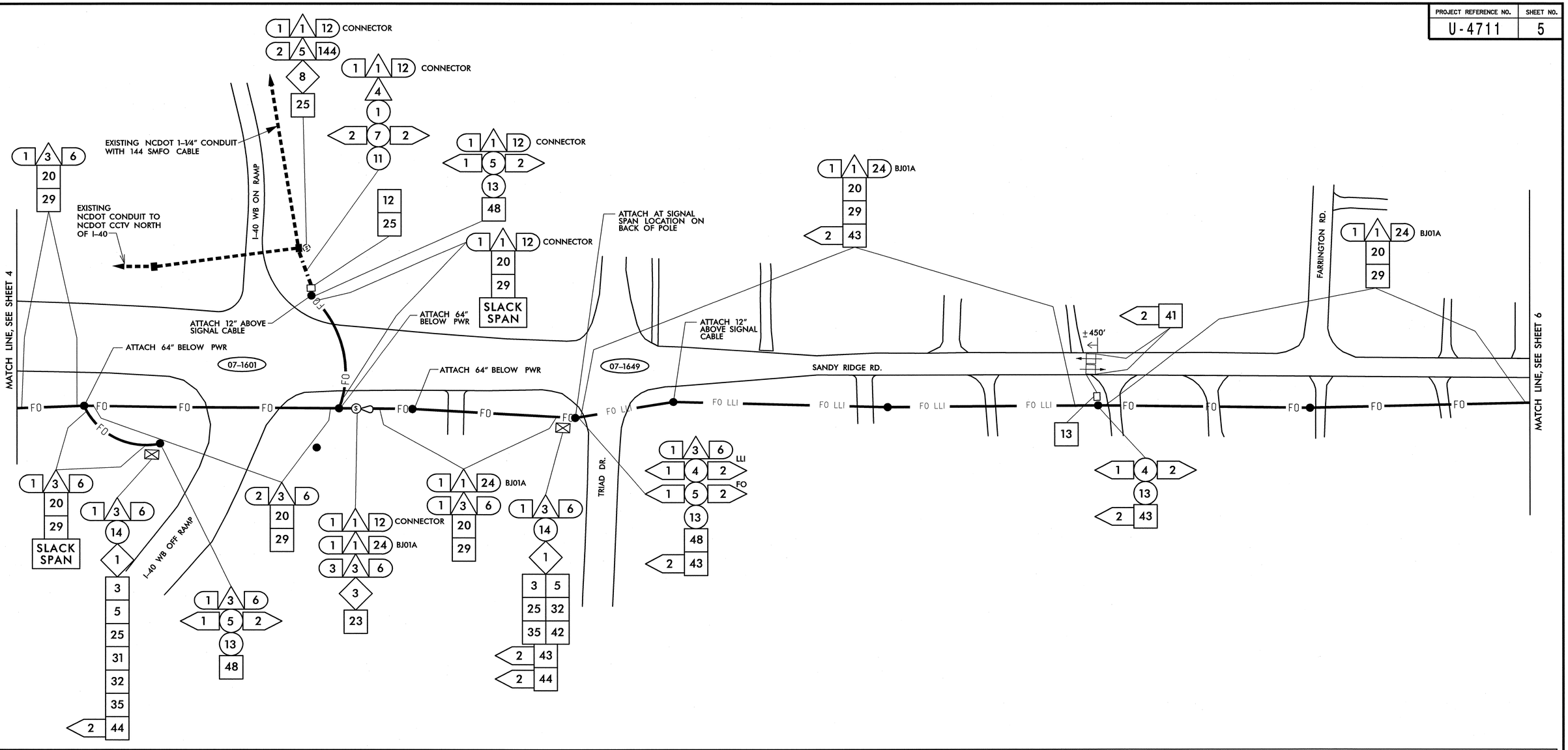
PROJECT REFERENCE NO.	SHEET NO.
U-4711	5



1	INSTALL SMFO CABLE
2	INSTALL PLENUM RATED FIBER OPTIC CABLE
3	INSTALL FIBER OPTIC DROP CABLE
4	INSTALL TRACER WIRE
5	REUSE NCDOT SMFO CABLE
6	REUSE GDOT SMFO CABLE
1	TRENCH
2	INSTALL PVC CONDUIT
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
6	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
7	INSTALL POLYETHYLENE CONDUIT
8	DIRECTIONAL DRILL CONDUIT
9	BORE AND JACK CONDUIT
10	INSTALL CABLE(S) IN EXISTING CONDUIT
11	INSTALL CABLE(S) IN NEW CONDUIT
12	INSTALL CABLE(S) IN EXISTING RISER
13	INSTALL CABLE(S) IN NEW RISER
14	INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
15	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
16	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
17	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
18	INSTALL NEW RISER INTO POLE MOUNTED CABINET
19	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2	INSTALL UNDERGROUND SPLICE ENCLOSURE
3	INSTALL AERIAL SPLICE ENCLOSURE
4	INSTALL POLE MOUNTED SPLICE CABINET
5	INSTALL BASE MOUNTED SPLICE CABINET
6	REMOVE EXISTING SPLICE CABINET
7	INSTALL TERMINAL SPLICE BOX
8	MODIFY EXISTING SPLICE ENCLOSURE
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
3	MODIFY EXISTING CABINET FOUNDATION
4	INSTALL NEW 333 COMMUNICATION CABINET
5	INSTALL NEW 332 BASE MOUNTED CABINET
6	INSTALL NEW 336S CABINET
7	INSTALL CCTV CAMERA ASSEMBLY
8	INSTALL CCTV CAMERA WOOD POLE
9	INSTALL CCTV METAL POLE AND FOUNDATION
10	INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
11	INSTALL SPECIAL OVERSIZED JUNCTION BOX
12	INSTALL OVERSIZED JUNCTION BOX
13	INSTALL STANDARD JUNCTION BOX
14	REMOVE EXISTING JUNCTION BOX
15	INSTALL WOOD POLE
16	REMOVE EXISTING WOOD POLE
17	INSTALL AERIAL GUY ASSEMBLY
18	INSTALL STANDARD GUY ASSEMBLY
19	INSTALL SIDEWALK GUY ASSEMBLY
20	INSTALL MESSENGER CABLE
21	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
22	REMOVE EXISTING COMMUNICATIONS CABLE
23	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
24	INSTALL DELINEATOR MARKER
25	STORE 30 FEET OF EACH COMMUNICATIONS CABLE
26	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
27	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
28	LASH CABLE(S) TO EXISTING MESSENGER CABLE
29	LASH CABLE(S) TO NEW MESSENGER CABLE
30	INSTALL NEW ELECTRICAL SERVICE
31	MODIFY EXISTING ELECTRICAL SERVICE
32	INSTALL NEW CONTROLLER
33	INSTALL EXISTING CABLE IN NEW CABINET
34	INSTALL GENERATOR POWER INLET BOX
35	INSTALL LOCAL GIGABIT ETHERNET SWITCH
36	INSTALL UNIFIED CABLE
37	INSTALL POLE MOUNTED EQUIPMENT CABINET
38	INSTALL UNI-DIRECTIONAL YAGI ANTENNA
39	INSTALL OMNI-DIRECTIONAL ANTENNA
40	INSTALL RADIO TRANSCEIVER
41	INSTALL SYSTEM LOOP
42	INSTALL SYSTEM LOOP AMPLIFIER
43	INSTALL SYSTEM LOOP LEAD-IN CABLE
44	INSTALL LOCAL LOOP AMPLIFIER
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46	INSTALL HUB 10-GIGABIT ETHERNET SWITCH
47	INSTALL CODEC
48	BOND MESSENGER CABLE TO POLE GROUND
49	INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION
50	INSTALL ANTENNA CABLE
51	RECONNECT RAILROAD PREEMPTION EQUIPMENT
52	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
53	INSTALL DSL ETHERNET SWITCH
54	INSTALL ETHERNET CABLE
55	INSTALL TERMINAL SERVER
56	INSTALL MICROWAVE VEHICLE DETECTOR
57	INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
58	INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

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SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE 2/20/08 DATE

CADD Filename: ...\Sht0005.dgn

2/20/2008
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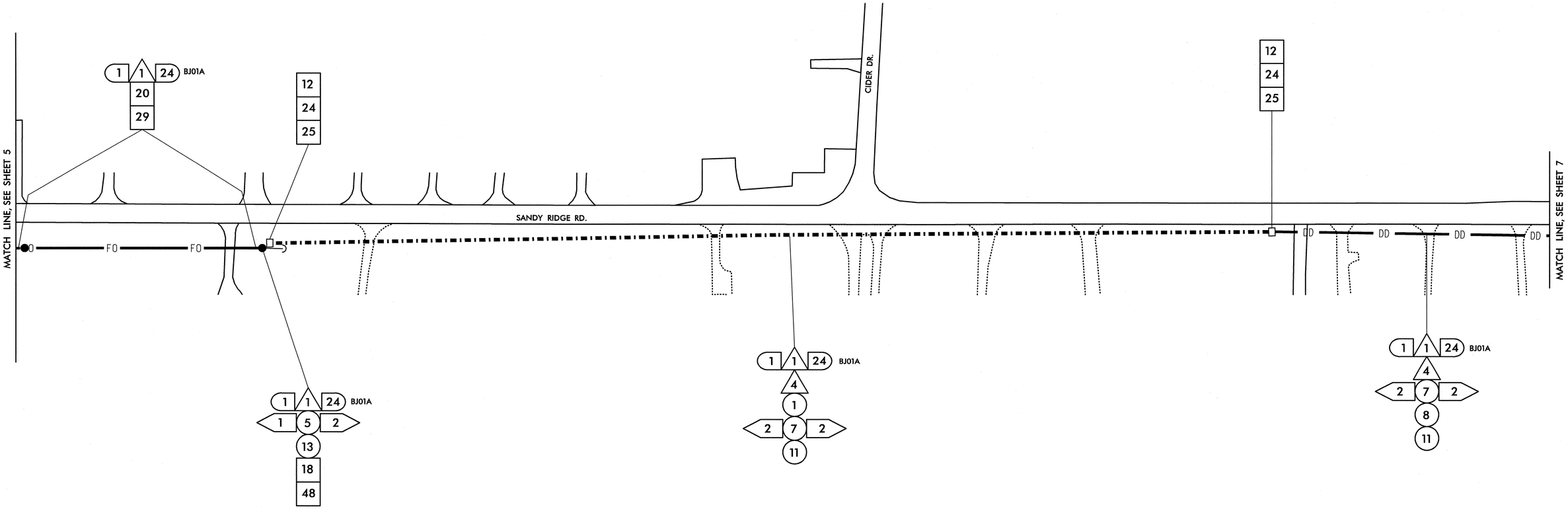
PROJECT REFERENCE NO.	SHEET NO.
U-4711	6



1	INSTALL SMFO CABLE
2	INSTALL PLENUM RATED FIBER OPTIC CABLE
3	INSTALL FIBER OPTIC DROP CABLE
4	INSTALL TRACER WIRE
5	REUSE NCDOT SMFO CABLE
6	REUSE GDOT SMFO CABLE
1	TRENCH
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3	INSTALL RIGID, GALVANIZED STEEL CONDUIT
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13	INSTALL CABLE(S) IN NEW RISER
14	INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
15	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
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24	INSTALL DELINEATOR MARKER
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30	INSTALL NEW ELECTRICAL SERVICE
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47	INSTALL CODEC
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50	INSTALL ANTENNA CABLE
51	RECONNECT RAILROAD PREEMPTION EQUIPMENT
52	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
53	INSTALL DSL ETHERNET SWITCH
54	INSTALL ETHERNET CABLE
55	INSTALL TERMINAL SERVER
56	INSTALL MICROWAVE VEHICLE DETECTOR
57	INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
58	INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
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Raleigh N.C. 27636-3068
(919) 677-2000
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING SHEET

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: K.D. VANPATTEN	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

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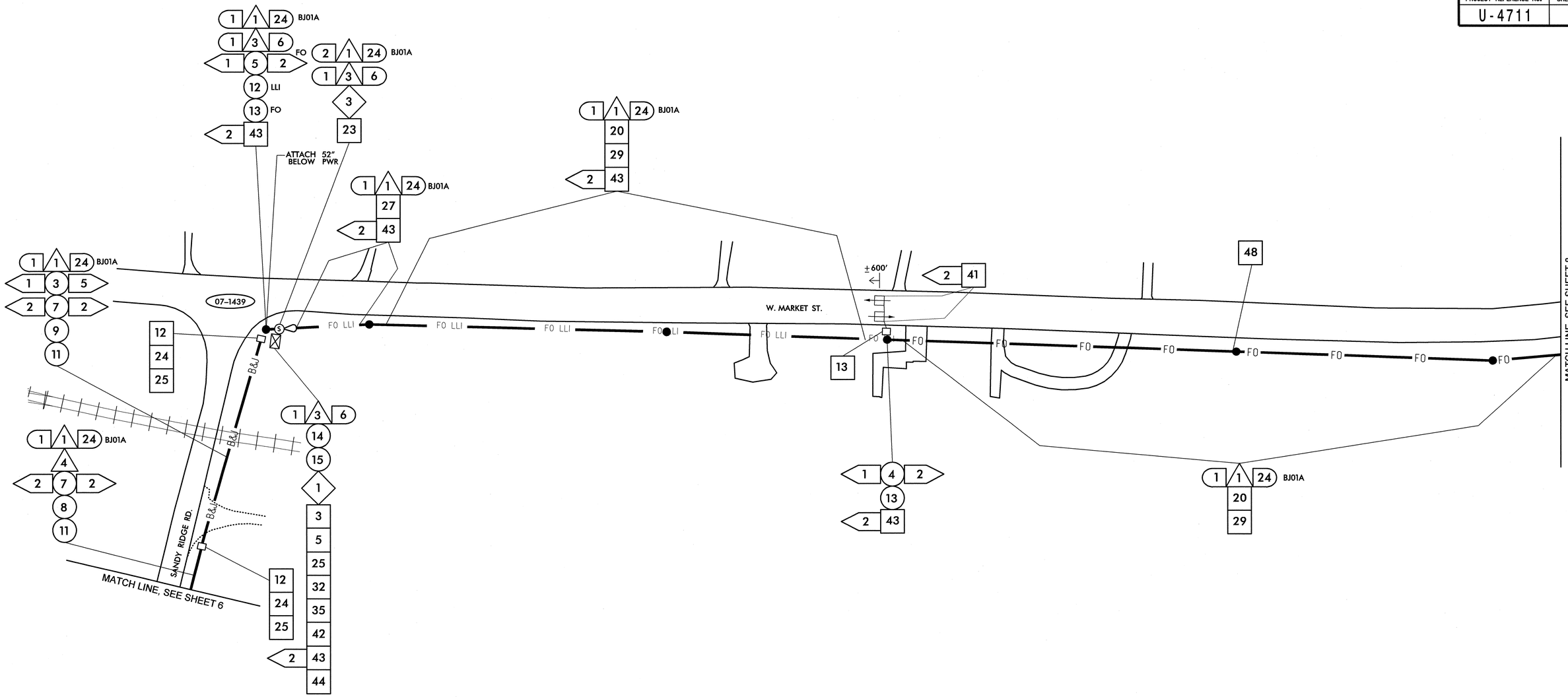
PROJECT REFERENCE NO.	SHEET NO.
U-4711	7



1. INSTALL SMFO CABLE
2. INSTALL PLENUM RATED FIBER OPTIC CABLE
3. INSTALL FIBER OPTIC DROP CABLE
4. INSTALL TRACER WIRE
5. REUSE NCDOT SMFO CABLE
6. REUSE GDOT SMFO CABLE

1. TRENCH
2. INSTALL PVC CONDUIT
3. INSTALL RIGID, GALVANIZED STEEL CONDUIT
4. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5. INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
6. INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
7. INSTALL POLYETHYLENE CONDUIT
8. DIRECTIONAL DRILL CONDUIT
9. BORE AND JACK CONDUIT
10. INSTALL CABLE(S) IN EXISTING CONDUIT
11. INSTALL CABLE(S) IN NEW CONDUIT
12. INSTALL CABLE(S) IN EXISTING RISER
13. INSTALL CABLE(S) IN NEW RISER
14. INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
15. INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
16. INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
17. INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
18. INSTALL NEW RISER INTO POLE MOUNTED CABINET
19. REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING

1. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2. INSTALL UNDERGROUND SPLICE ENCLOSURE
3. INSTALL AERIAL SPLICE ENCLOSURE
4. INSTALL POLE MOUNTED SPLICE CABINET
5. INSTALL BASE MOUNTED SPLICE CABINET
6. REMOVE EXISTING SPLICE CABINET
7. INSTALL TERMINAL SPLICE BOX
8. MODIFY EXISTING SPLICE ENCLOSURE

1. INSTALL CABINET FOUNDATION
2. REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
3. MODIFY EXISTING CABINET FOUNDATION
4. INSTALL NEW 333 COMMUNICATION CABINET
5. INSTALL NEW 332 BASE MOUNTED CABINET
6. INSTALL NEW 336S CABINET
7. INSTALL CCTV CAMERA ASSEMBLY
8. INSTALL CCTV CAMERA WOOD POLE
9. INSTALL CCTV METAL POLE AND FOUNDATION
10. INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
11. INSTALL SPECIAL OVERSIZED JUNCTION BOX
12. INSTALL OVERSIZED JUNCTION BOX
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20. INSTALL MESSENGER CABLE
21. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
22. REMOVE EXISTING COMMUNICATIONS CABLE
23. INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
24. INSTALL DELINEATOR MARKER
25. STORE 30 FEET OF EACH COMMUNICATIONS CABLE

26. STORE 100 FEET OF EACH COMMUNICATIONS CABLE
27. LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
28. LASH CABLE(S) TO EXISTING MESSENGER CABLE
29. LASH CABLE(S) TO NEW MESSENGER CABLE
30. INSTALL NEW ELECTRICAL SERVICE
31. MODIFY EXISTING ELECTRICAL SERVICE
32. INSTALL NEW CONTROLLER
33. INSTALL EXISTING CABLE IN NEW CABINET
34. INSTALL GENERATOR POWER INLET BOX
35. INSTALL LOCAL GIGABIT ETHERNET SWITCH
36. INSTALL UNIFIED CABLE
37. INSTALL POLE MOUNTED EQUIPMENT CABINET
38. INSTALL UNI-DIRECTIONAL YAGI ANTENNA
39. INSTALL OMNI-DIRECTIONAL ANTENNA
40. INSTALL RADIO TRANSCEIVER
41. INSTALL SYSTEM LOOP
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43. INSTALL SYSTEM LOOP LEAD-IN CABLE

44. INSTALL LOCAL LOOP AMPLIFIER
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47. INSTALL CODEC
48. BOND MESSENGER CABLE TO POLE GROUND
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51. RECONNECT RAILROAD PREEMPTION EQUIPMENT
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53. INSTALL DSL ETHERNET SWITCH
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56. INSTALL MICROWAVE VEHICLE DETECTOR
57. INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
58. INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
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Traffic Engineering and Safety Systems Branch
Intelligent Transportation Systems
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 023562 MARK DUNZO

SIGNATURE 2/20/08 DATE

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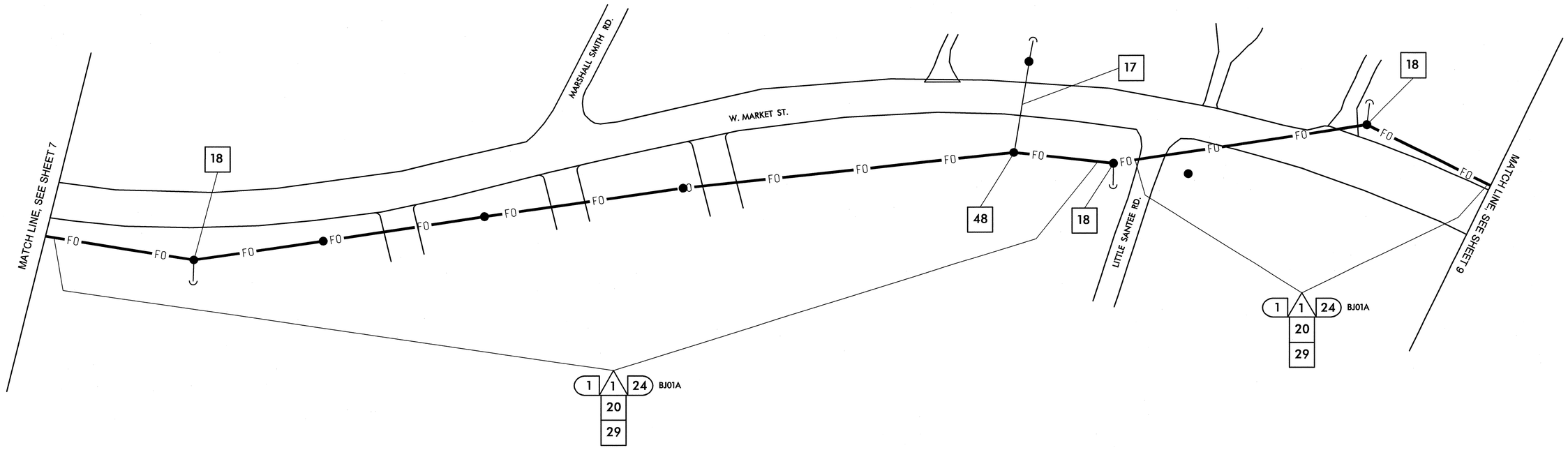

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DIVISION 7 GUILFORD COUNTY

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SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE 2/20/08 DATE

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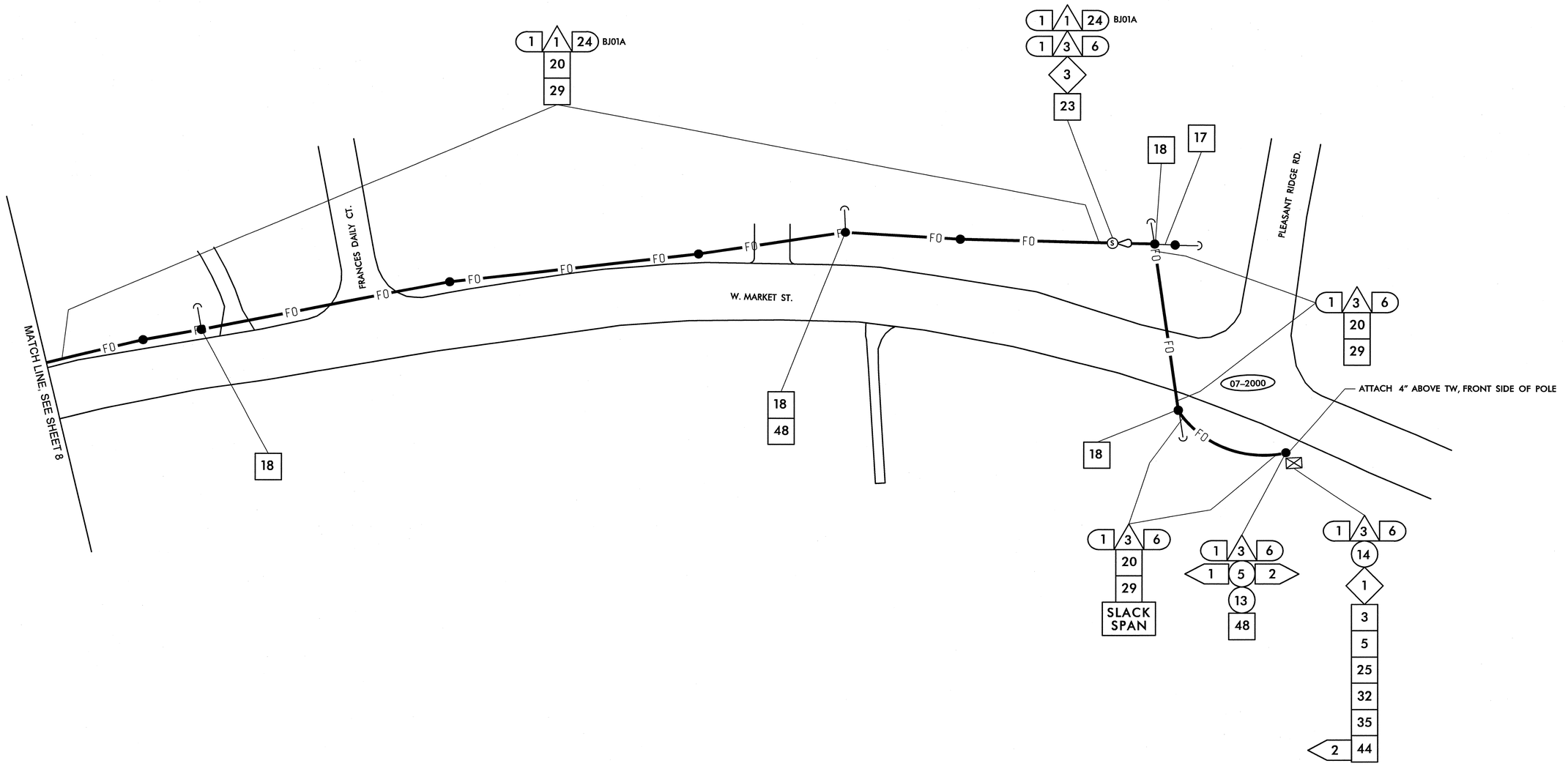

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SEAL 023562
ENGINEER MARK DUNZO

SIGNATURE 2/24/08 DATE

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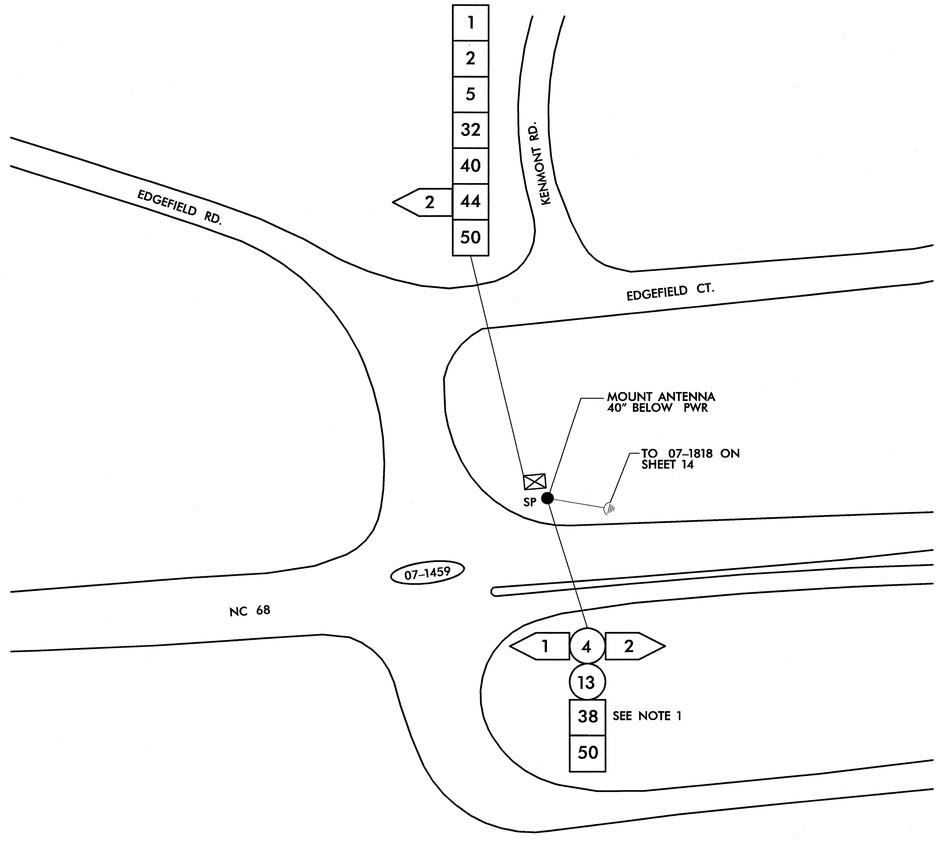
U-4711	10



WIRELESS

NOTE (THIS SHEET ONLY):
1. ANTENNA ORIENTATION FOR DISPLAY PURPOSES ONLY. FINAL ORIENTATION TO BE DETERMINED IN THE FIELD.

1	INSTALL SMFO CABLE
2	INSTALL PLENUM RATED FIBER OPTIC CABLE
3	INSTALL FIBER OPTIC DROP CABLE
4	INSTALL TRACER WIRE
5	REUSE NCDOT SMFO CABLE
6	REUSE GDOT SMFO CABLE
(1)	TRENCH
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(9)	BORE AND JACK CONDUIT
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◇5	INSTALL BASE MOUNTED SPLICE CABINET
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PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: K.D. VANPATTEN	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE 2/20/08 DATE

CADD Filename: ...\Sht0010.dgn

2/20/2008
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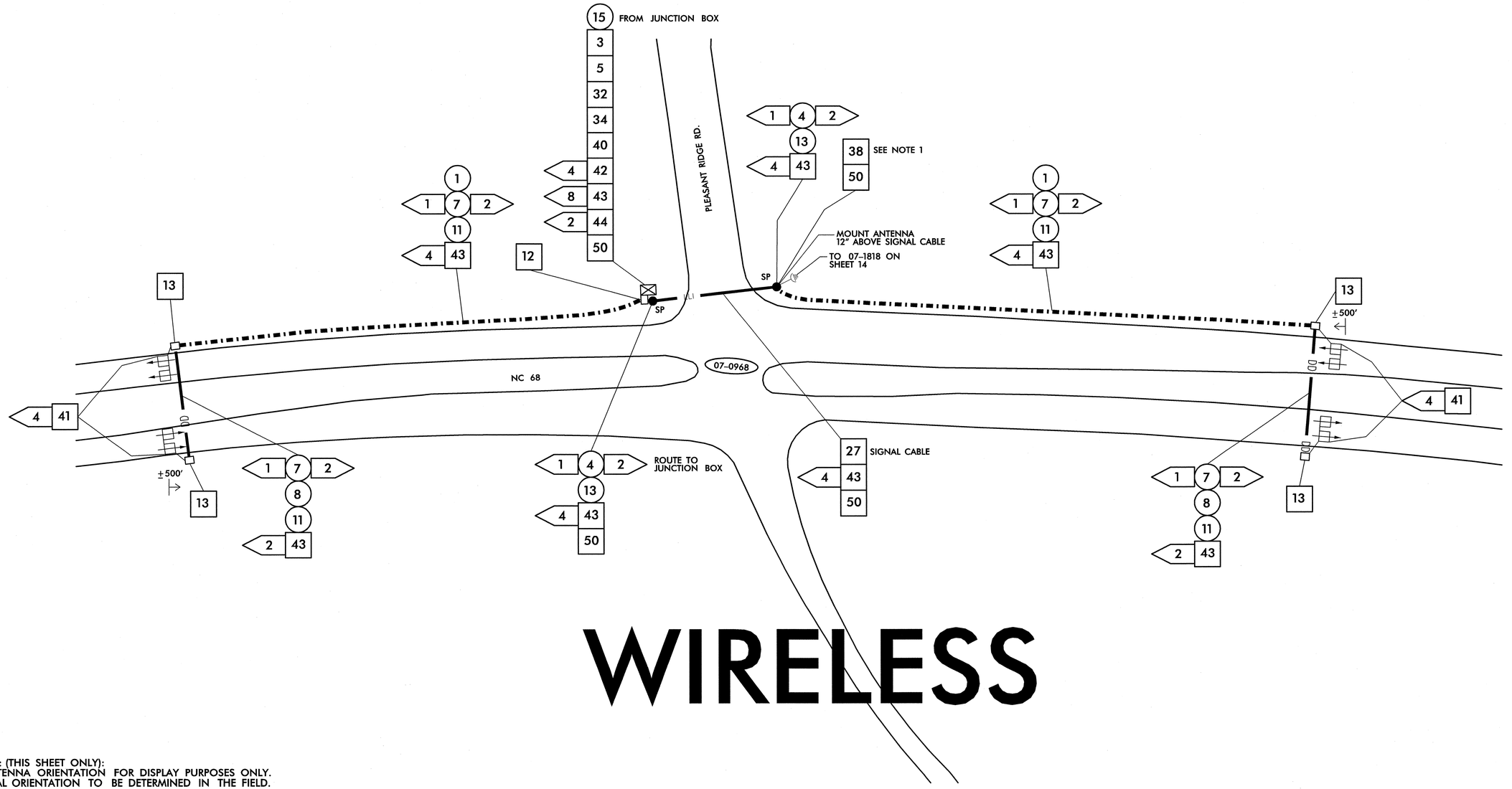
PROJECT REFERENCE NO.	SHEET NO.
U-4711	11



WIRELESS

NOTE: (THIS SHEET ONLY):
1. ANTENNA ORIENTATION FOR DISPLAY PURPOSES ONLY. FINAL ORIENTATION TO BE DETERMINED IN THE FIELD.

1. INSTALL SMFO CABLE
2. INSTALL PLENUM RATED FIBER OPTIC CABLE
3. INSTALL FIBER OPTIC DROP CABLE
4. INSTALL TRACER WIRE
5. REUSE NCDOT SMFO CABLE
6. REUSE GDOT SMFO CABLE
1. TRENCH
2. INSTALL PVC CONDUIT
3. INSTALL RIGID, GALVANIZED STEEL CONDUIT
4. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5. INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
6. INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
7. INSTALL POLYETHYLENE CONDUIT
8. DIRECTIONAL DRILL CONDUIT
9. BORE AND JACK CONDUIT
10. INSTALL CABLE(S) IN EXISTING CONDUIT
11. INSTALL CABLE(S) IN NEW CONDUIT
12. INSTALL CABLE(S) IN EXISTING RISER
13. INSTALL CABLE(S) IN NEW RISER
14. INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
15. INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
16. INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
17. INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
18. INSTALL NEW RISER INTO POLE MOUNTED CABINET
19. REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
1. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2. INSTALL UNDERGROUND SPLICE ENCLOSURE
3. INSTALL AERIAL SPLICE ENCLOSURE
4. INSTALL POLE MOUNTED SPLICE CABINET
5. INSTALL BASE MOUNTED SPLICE CABINET
6. REMOVE EXISTING SPLICE CABINET
7. INSTALL TERMINAL SPLICE BOX
8. MODIFY EXISTING SPLICE ENCLOSURE
1. INSTALL CABINET FOUNDATION
2. REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
3. MODIFY EXISTING CABINET FOUNDATION
4. INSTALL NEW 333 COMMUNICATION CABINET
5. INSTALL NEW 332 BASE MOUNTED CABINET
6. INSTALL NEW 336S CABINET
7. INSTALL CCTV CAMERA ASSEMBLY
8. INSTALL CCTV CAMERA WOOD POLE
9. INSTALL CCTV METAL POLE AND FOUNDATION
10. INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
11. INSTALL SPECIAL OVERSIZED JUNCTION BOX
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13. INSTALL STANDARD JUNCTION BOX
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15. INSTALL WOOD POLE
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17. INSTALL AERIAL GUY ASSEMBLY
18. INSTALL STANDARD GUY ASSEMBLY
19. INSTALL SIDEWALK GUY ASSEMBLY
20. INSTALL MESSENGER CABLE
21. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
22. REMOVE EXISTING COMMUNICATIONS CABLE
23. INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
24. INSTALL DELINEATOR MARKER
25. STORE 30 FEET OF EACH COMMUNICATIONS CABLE
26. STORE 100 FEET OF EACH COMMUNICATIONS CABLE
27. LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
28. LASH CABLE(S) TO EXISTING MESSENGER CABLE
29. LASH CABLE(S) TO NEW MESSENGER CABLE
30. INSTALL NEW ELECTRICAL SERVICE
31. MODIFY EXISTING ELECTRICAL SERVICE
32. INSTALL NEW CONTROLLER
33. INSTALL EXISTING CABLE IN NEW CABINET
34. INSTALL GENERATOR POWER INLET BOX
35. INSTALL LOCAL GIGABIT ETHERNET SWITCH
36. INSTALL UNIFIED CABLE
37. INSTALL POLE MOUNTED EQUIPMENT CABINET
38. INSTALL UNI-DIRECTIONAL YAGI ANTENNA
39. INSTALL OMNI-DIRECTIONAL ANTENNA
40. INSTALL RADIO TRANSCEIVER
41. INSTALL SYSTEM LOOP
42. INSTALL SYSTEM LOOP AMPLIFIER
43. INSTALL SYSTEM LOOP LEAD-IN CABLE
44. INSTALL LOCAL LOOP AMPLIFIER
45. INSTALL CITY WI-FI ANTENNA
46. INSTALL HUB 10-GIGABIT ETHERNET SWITCH
47. INSTALL CODEC
48. BOND MESSENGER CABLE TO POLE GROUND
49. INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION
50. INSTALL ANTENNA CABLE
51. RECONNECT RAILROAD PREEMPTION EQUIPMENT
52. RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
53. INSTALL DSL ETHERNET SWITCH
54. INSTALL ETHERNET CABLE
55. INSTALL TERMINAL SERVER
56. INSTALL MICROWAVE VEHICLE DETECTOR
57. INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
58. INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
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Traffic Engineering and Safety Systems Branch
Traffic Engineering Unit
North Carolina Department of Transportation
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 GUILFORD COUNTY
PLAN DATE: FEBRUARY, 2008 REVIEWED BY: K.W. SMITH
PREPARED BY: K.D. VANPATTEN REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

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NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
2/22/08
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CADD Filename: ...\Sht001l.dgn

2/20/2008
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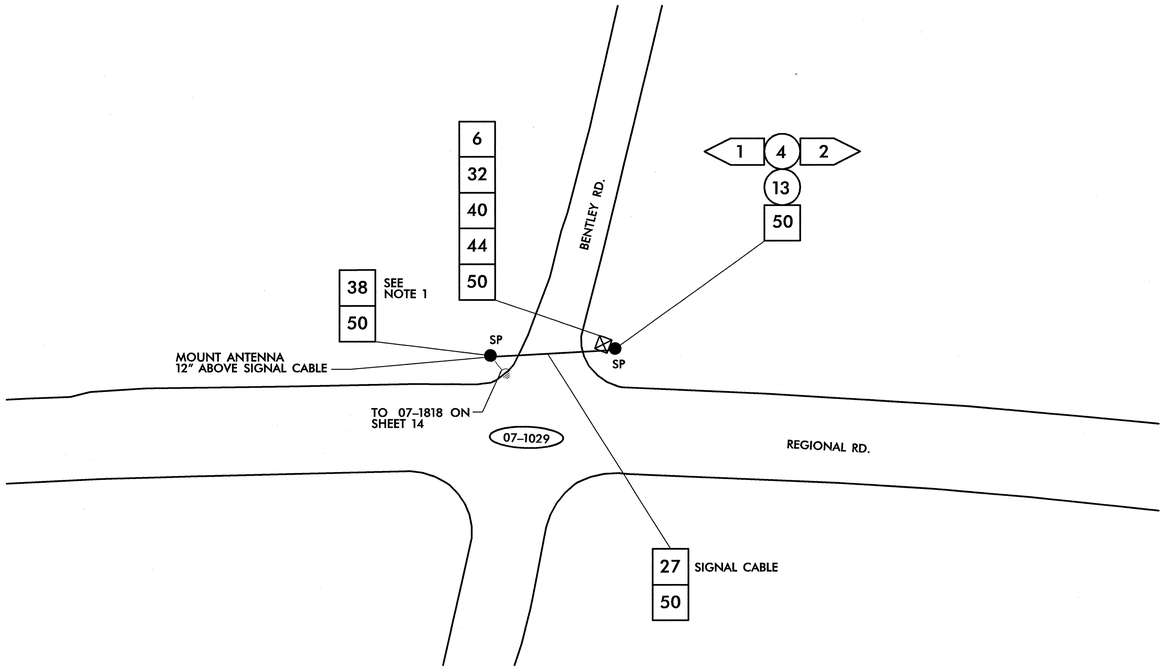
PROJECT REFERENCE NO.	SHEET NO.
U-4711	12



WIRELESS

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- (1) INSTALL SMFO CABLE
- (2) INSTALL PLENUM RATED FIBER OPTIC CABLE
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- (4) INSTALL TRACER WIRE
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- (1) TRENCH
- (2) INSTALL PVC CONDUIT
- (3) INSTALL RIGID, GALVANIZED STEEL CONDUIT
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- (8) MODIFY EXISTING SPLICE ENCLOSURE
- [1] INSTALL CABINET FOUNDATION
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- [3] MODIFY EXISTING CABINET FOUNDATION
- [4] INSTALL NEW 333 COMMUNICATION CABINET
- [5] INSTALL NEW 332 BASE MOUNTED CABINET
- [6] INSTALL NEW 336S CABINET
- [7] INSTALL CCTV CAMERA ASSEMBLY
- [8] INSTALL CCTV CAMERA WOOD POLE
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CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE — DATE 2/20/08

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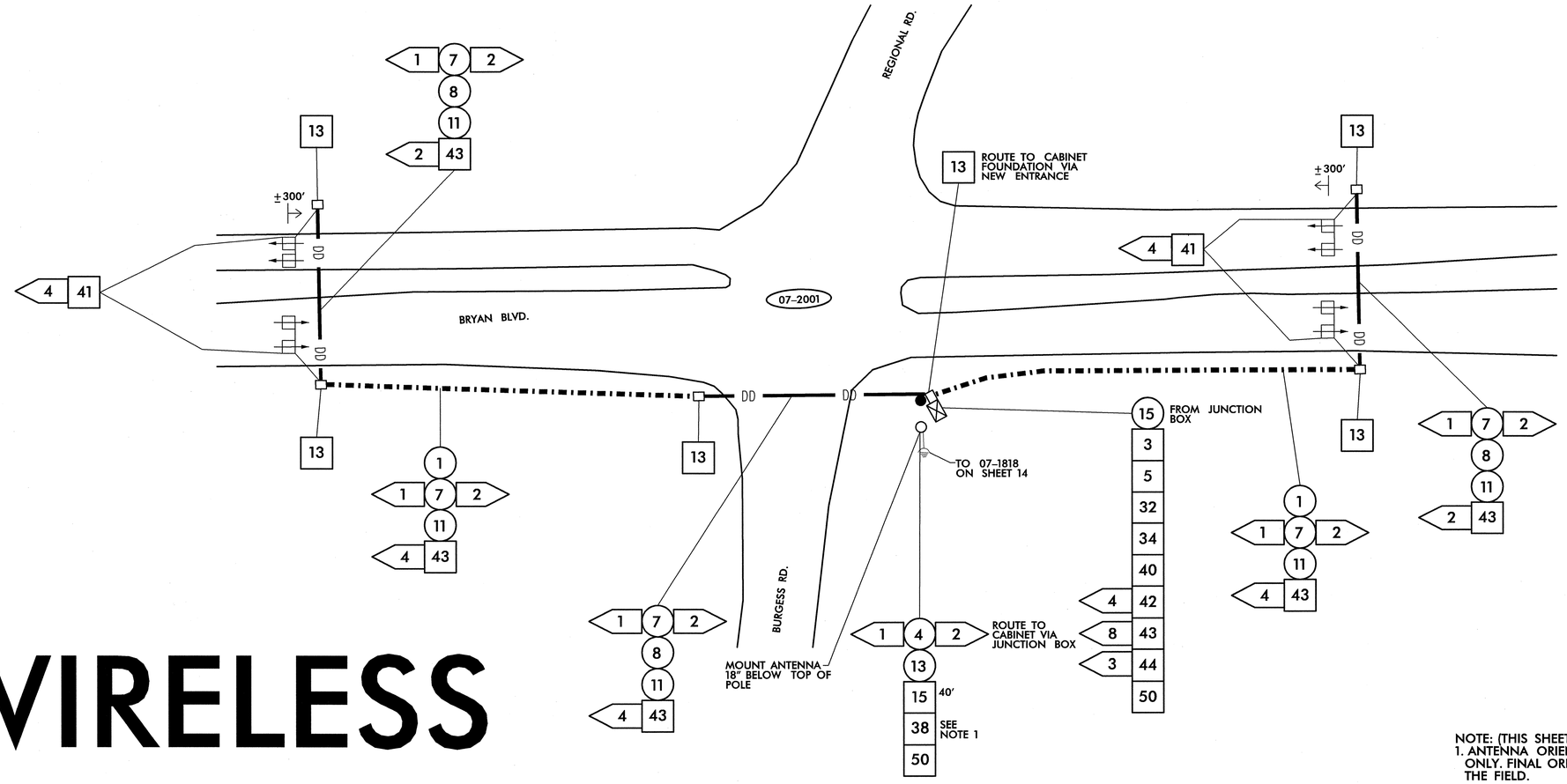
PROJECT REFERENCE NO.	SHEET NO.
U-4711	13



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◇5 INSTALL BASE MOUNTED SPLICE CABINET
◇6 REMOVE EXISTING SPLICE CABINET
◇7 INSTALL TERMINAL SPLICE BOX
◇8 MODIFY EXISTING SPLICE ENCLOSURE

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Traffic Engineering and Safety Systems Branch
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
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REVISIONS	INIT.	DATE

SEAL
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CADD Filename: ...\Sht0013.dgn

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PROJECT REFERENCE NO.	SHEET NO.
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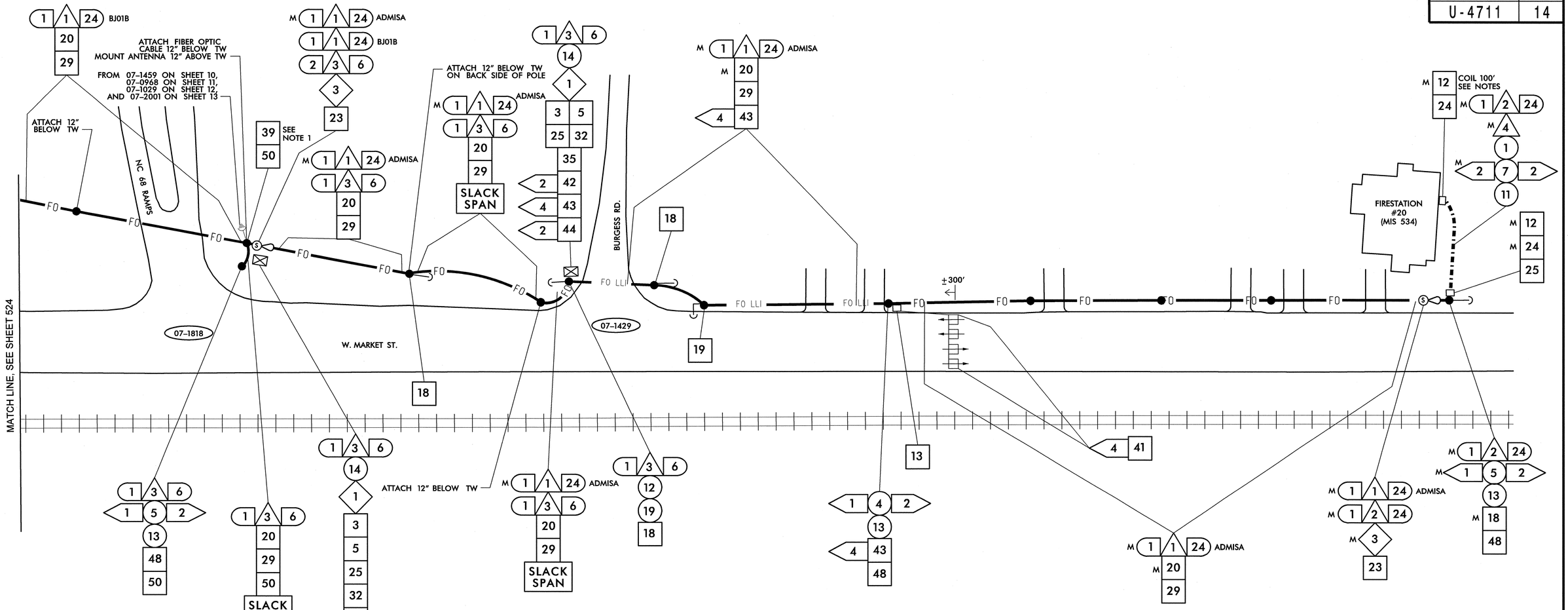

NOTES: (THIS SHEET ONLY):
1. ANTENNA ORIENTATION FOR DISPLAY PURPOSES ONLY. FINAL ORIENTATION TO BE DETERMINED IN THE FIELD.
2. SEE BUILDING ENTRANCE DETAIL FOR ROUTING TO BUILDING.

1	INSTALL SMFO CABLE
2	INSTALL PLENUM RATED FIBER OPTIC CABLE
3	INSTALL FIBER OPTIC DROP CABLE
4	INSTALL TRACER WIRE
5	REUSE NCDOT SMFO CABLE
6	REUSE GDOT SMFO CABLE
1	TRENCH
2	INSTALL PVC CONDUIT
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
6	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
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8	DIRECTIONAL DRILL CONDUIT
9	BORE AND JACK CONDUIT
10	INSTALL CABLE(S) IN EXISTING CONDUIT
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14	INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
15	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
16	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
17	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
18	INSTALL NEW RISER INTO POLE MOUNTED CABINET
19	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2	INSTALL UNDERGROUND SPLICE ENCLOSURE
3	INSTALL AERIAL SPLICE ENCLOSURE
4	INSTALL POLE MOUNTED SPLICE CABINET
5	INSTALL BASE MOUNTED SPLICE CABINET
6	REMOVE EXISTING SPLICE CABINET
7	INSTALL TERMINAL SPLICE BOX
8	MODIFY EXISTING SPLICE ENCLOSURE
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
3	MODIFY EXISTING CABINET FOUNDATION
4	INSTALL NEW 333 COMMUNICATION CABINET
5	INSTALL NEW 332 BASE MOUNTED CABINET
6	INSTALL NEW 336S CABINET
7	INSTALL CCTV CAMERA ASSEMBLY
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20	INSTALL MESSENGER CABLE
21	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
22	REMOVE EXISTING COMMUNICATIONS CABLE
23	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
24	INSTALL DELINEATOR MARKER
25	STORE 30 FEET OF EACH COMMUNICATIONS CABLE
26	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
27	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
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31	MODIFY EXISTING ELECTRICAL SERVICE
32	INSTALL NEW CONTROLLER
33	INSTALL EXISTING CABLE IN NEW CABINET
34	INSTALL GENERATOR POWER INLET BOX
35	INSTALL LOCAL GIGABIT ETHERNET SWITCH
36	INSTALL UNIFIED CABLE
37	INSTALL POLE MOUNTED EQUIPMENT CABINET
38	INSTALL UNI-DIRECTIONAL YAGI ANTENNA
39	INSTALL OMNI-DIRECTIONAL ANTENNA
40	INSTALL RADIO TRANSCEIVER
41	INSTALL SYSTEM LOOP
42	INSTALL SYSTEM LOOP AMPLIFIER
43	INSTALL SYSTEM LOOP LEAD-IN CABLE
44	INSTALL LOCAL LOOP AMPLIFIER
45	INSTALL CITY WI-FI ANTENNA
46	INSTALL HUB 10-GIGABIT ETHERNET SWITCH
47	INSTALL CODEC
48	BOND MESSENGER CABLE TO POLE GROUND
49	INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION
50	INSTALL ANTENNA CABLE
51	RECONNECT RAILROAD PREEMPTION EQUIPMENT
52	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
53	INSTALL DSL ETHERNET SWITCH
54	INSTALL ETHERNET CABLE
55	INSTALL TERMINAL SERVER
56	INSTALL MICROWAVE VEHICLE DETECTOR
57	INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
58	INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
THE STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE — DATE 2/29/08

CADD Filename: ...\Sht0014m.dgn

2/29/2008
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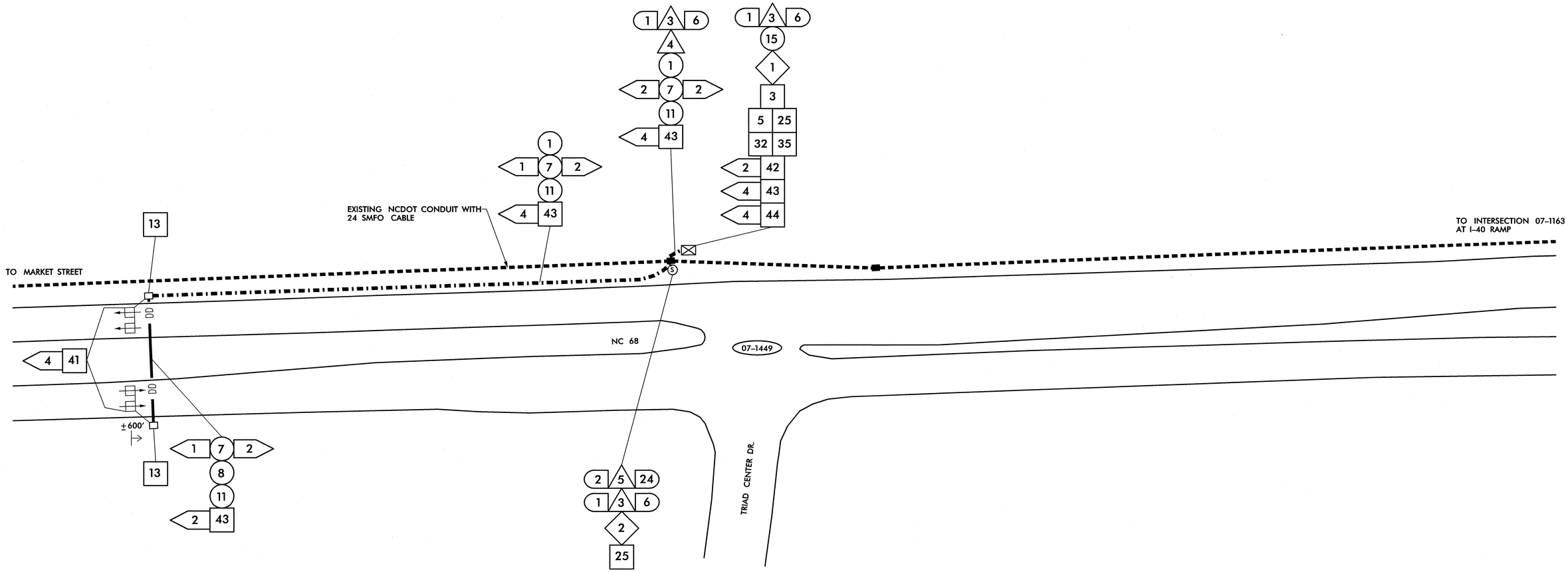
PROJECT REFERENCE NO.	SHEET NO.
U-4711	15



1. INSTALL SMFO CABLE
2. INSTALL PLENUM RATED FIBER OPTIC CABLE
3. INSTALL FIBER OPTIC DROP CABLE
4. INSTALL TRACER WIRE
5. REUSE NCDOT SMFO CABLE
6. REUSE GDOT SMFO CABLE

1. TRENCH
2. INSTALL PVC CONDUIT
3. INSTALL RIGID, GALVANIZED STEEL CONDUIT
4. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5. INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
6. INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
7. INSTALL POLYETHYLENE CONDUIT
8. DIRECTIONAL DRILL CONDUIT
9. BORE AND JACK CONDUIT
10. INSTALL CABLE(S) IN EXISTING CONDUIT
11. INSTALL CABLE(S) IN NEW CONDUIT
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13. INSTALL CABLE(S) IN NEW RISER
14. INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
15. INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
16. INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
17. INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
18. INSTALL NEW RISER INTO POLE MOUNTED CABINET
19. REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING

1. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2. INSTALL UNDERGROUND SPLICE ENCLOSURE
3. INSTALL AERIAL SPLICE ENCLOSURE
4. INSTALL POLE MOUNTED SPLICE CABINET
5. INSTALL BASE MOUNTED SPLICE CABINET
6. REMOVE EXISTING SPLICE CABINET
7. INSTALL TERMINAL SPLICE BOX
8. MODIFY EXISTING SPLICE ENCLOSURE

1. INSTALL CABINET FOUNDATION
2. REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
3. MODIFY EXISTING CABINET FOUNDATION
4. INSTALL NEW 333 COMMUNICATION CABINET
5. INSTALL NEW 332 BASE MOUNTED CABINET
6. INSTALL NEW 336S CABINET
7. INSTALL CCTV CAMERA ASSEMBLY
8. INSTALL CCTV CAMERA WOOD POLE
9. INSTALL CCTV METAL POLE AND FOUNDATION
10. INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
11. INSTALL SPECIAL OVERSIZED JUNCTION BOX
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20. INSTALL MESSENGER CABLE
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22. REMOVE EXISTING COMMUNICATIONS CABLE
23. INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
24. INSTALL DELINEATOR MARKER
25. STORE 30 FEET OF EACH COMMUNICATIONS CABLE
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27. LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
28. LASH CABLE(S) TO EXISTING MESSENGER CABLE
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SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING SHEET

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

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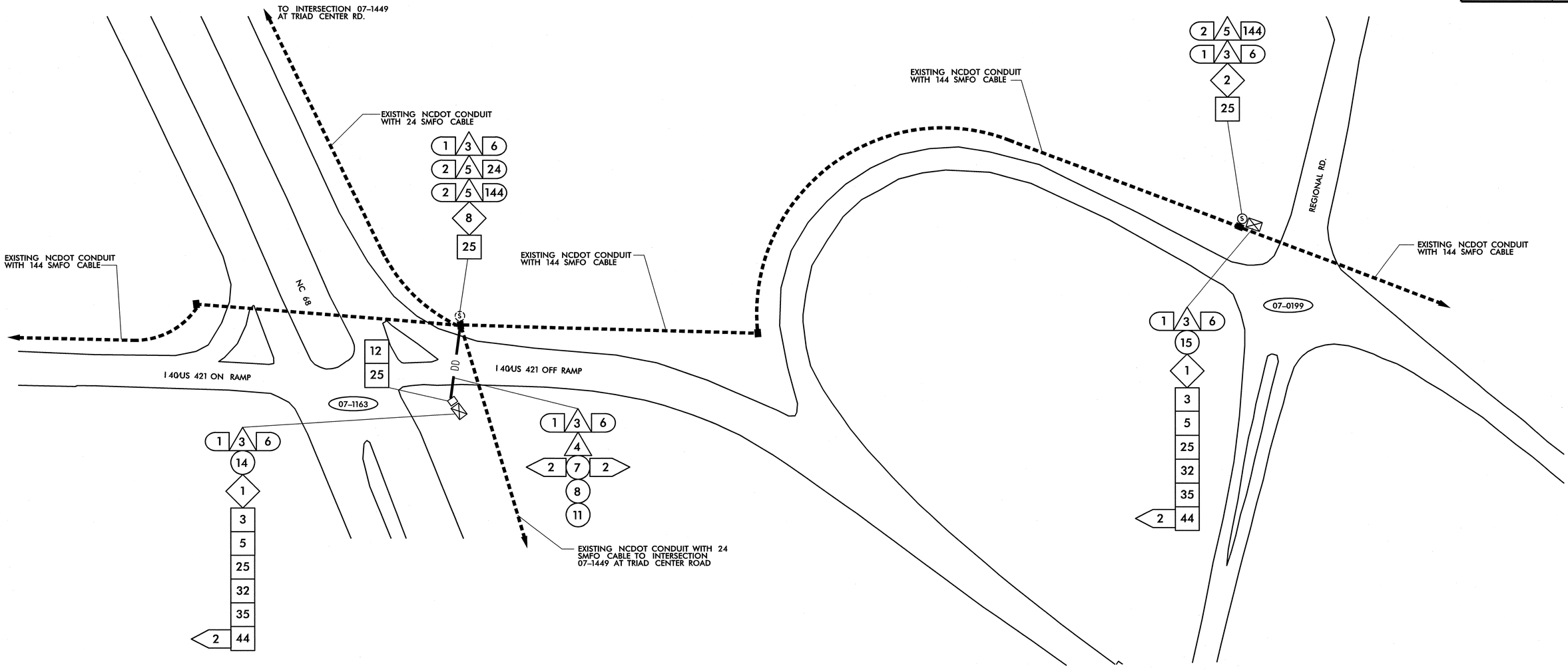
PROJECT REFERENCE NO.	SHEET NO.
U-4711	16



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NOTE:
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PLANS PREPARED IN THE OFFICE OF:
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(919) 677-2000

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE — DATE 2/20/08

CADD Filename: ...\Sht0016.dgn

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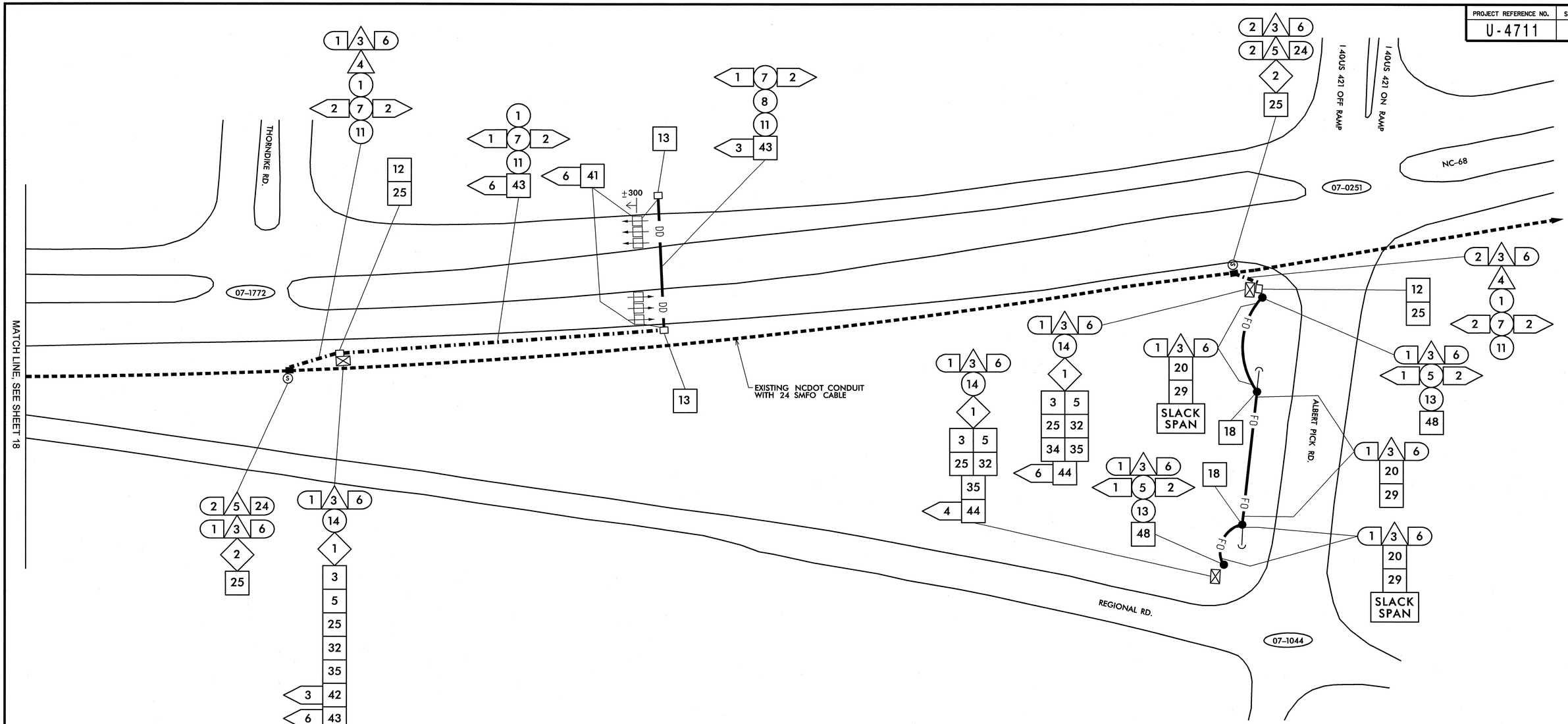
PROJECT REFERENCE NO.	SHEET NO.
U-4711	17



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CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE:	FEBRUARY, 2008	REVIEWED BY:	K.W. SMITH
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SCALE 0 50

REVISIONS	INIT.	DATE

SEAL
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SIGNATURE — DATE 2/29/08

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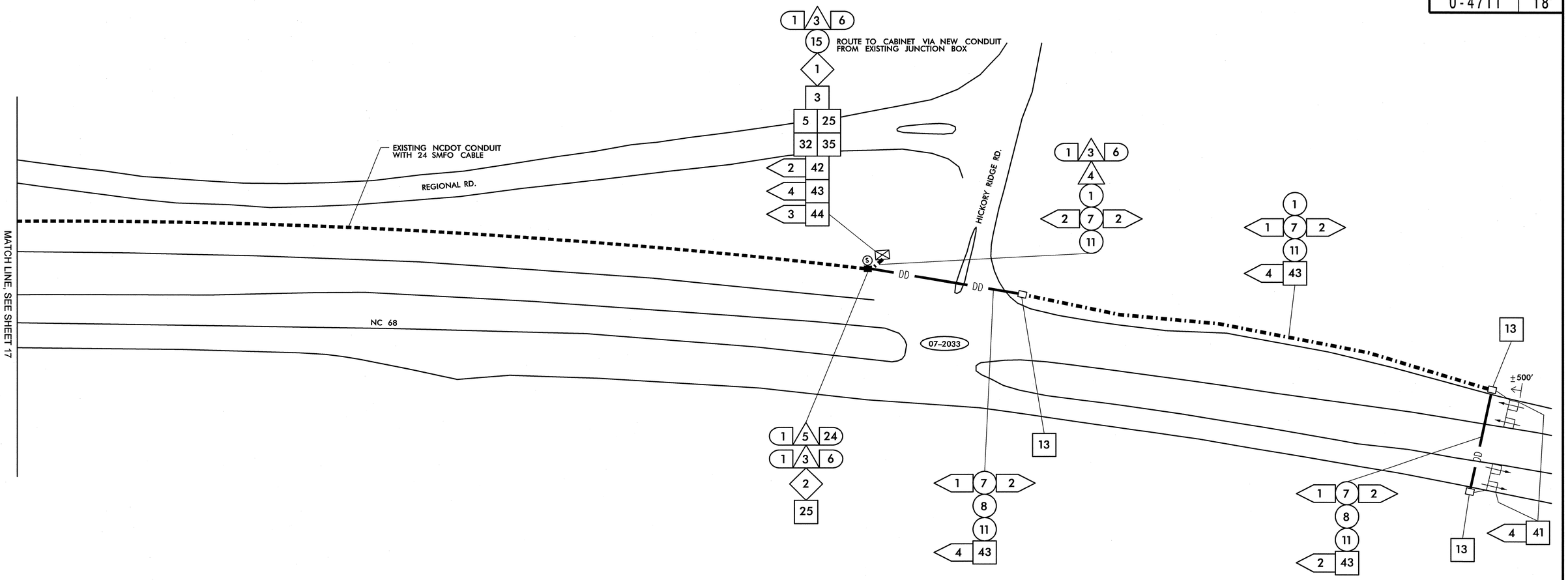
PROJECT REFERENCE NO.	SHEET NO.
U-4711	18



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46	INSTALL HUB 10-GIGABIT ETHERNET SWITCH
47	INSTALL CODEC
48	BOND MESSENGER CABLE TO POLE GROUND
49	INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION
50	INSTALL ANTENNA CABLE
51	RECONNECT RAILROAD PREEMPTION EQUIPMENT
52	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
53	INSTALL DSL ETHERNET SWITCH
54	INSTALL ETHERNET CABLE
55	INSTALL TERMINAL SERVER
56	INSTALL MICROWAVE VEHICLE DETECTOR
57	INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
58	INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE 2/20/08 DATE

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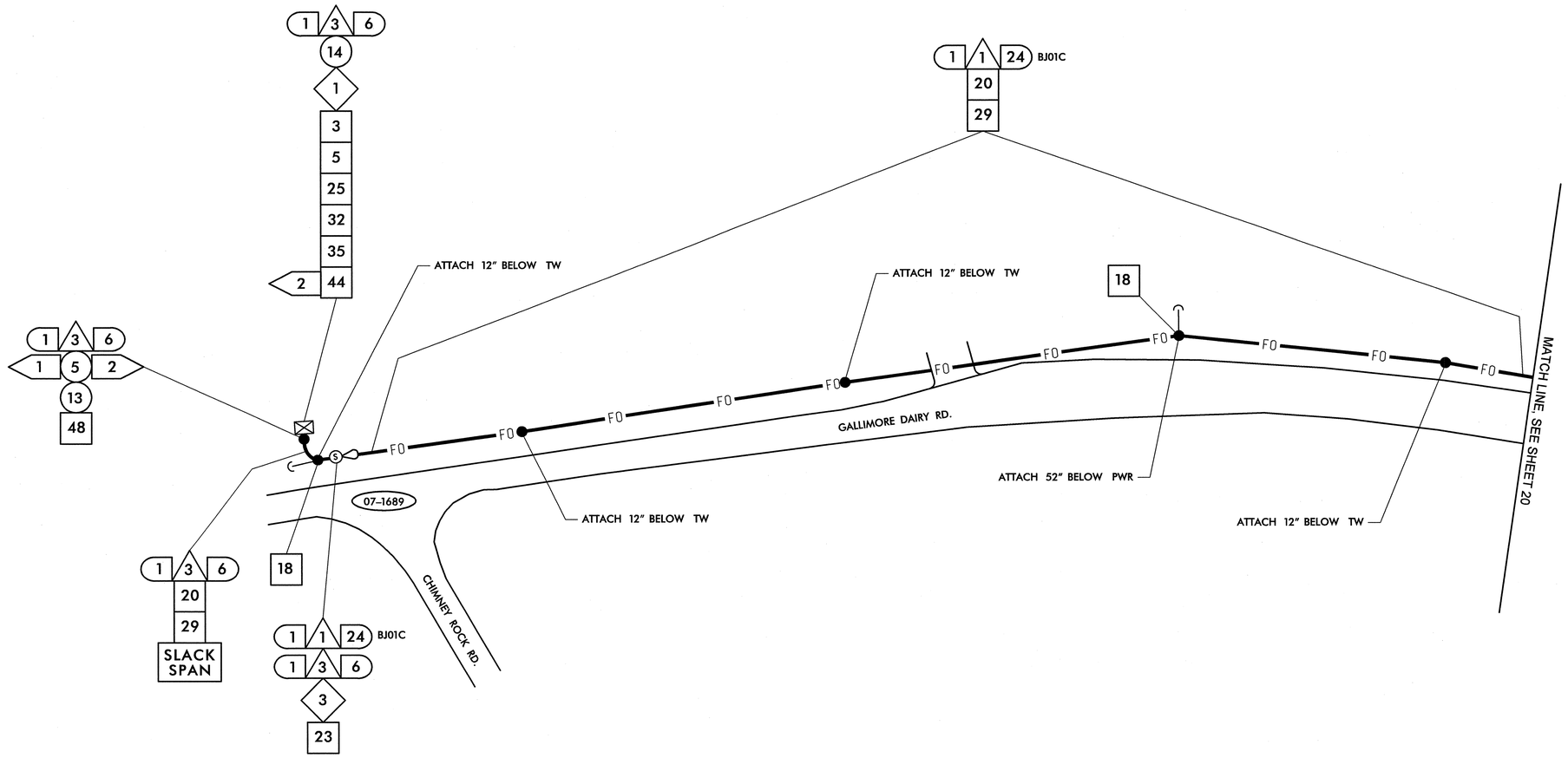
PROJECT REFERENCE NO.	SHEET NO.
U-4711	19



1	INSTALL SMFO CABLE
2	INSTALL PLENUM RATED FIBER OPTIC CABLE
3	INSTALL FIBER OPTIC DROP CABLE
4	INSTALL TRACER WIRE
5	REUSE NCDOT SMFO CABLE
6	REUSE GDOT SMFO CABLE
1	TRENCH
2	INSTALL PVC CONDUIT
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
6	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
7	INSTALL POLYETHYLENE CONDUIT
8	DIRECTIONAL DRILL CONDUIT
9	BORE AND JACK CONDUIT
10	INSTALL CABLE(S) IN EXISTING CONDUIT
11	INSTALL CABLE(S) IN NEW CONDUIT
12	INSTALL CABLE(S) IN EXISTING RISER
13	INSTALL CABLE(S) IN NEW RISER
14	INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
15	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
16	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
17	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
18	INSTALL NEW RISER INTO POLE MOUNTED CABINET
19	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2	INSTALL UNDERGROUND SPLICE ENCLOSURE
3	INSTALL AERIAL SPLICE ENCLOSURE
4	INSTALL POLE MOUNTED SPLICE CABINET
5	INSTALL BASE MOUNTED SPLICE CABINET
6	REMOVE EXISTING SPLICE CABINET
7	INSTALL TERMINAL SPLICE BOX
8	MODIFY EXISTING SPLICE ENCLOSURE
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
3	MODIFY EXISTING CABINET FOUNDATION
4	INSTALL NEW 333 COMMUNICATION CABINET
5	INSTALL NEW 332 BASE MOUNTED CABINET
6	INSTALL NEW 336S CABINET
7	INSTALL CCTV CAMERA ASSEMBLY
8	INSTALL CCTV CAMERA WOOD POLE
9	INSTALL CCTV METAL POLE AND FOUNDATION
10	INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
11	INSTALL SPECIAL OVERSIZED JUNCTION BOX
12	INSTALL OVERSIZED JUNCTION BOX
13	INSTALL STANDARD JUNCTION BOX
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19	INSTALL SIDEWALK GUY ASSEMBLY
20	INSTALL MESSENGER CABLE
21	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
22	REMOVE EXISTING COMMUNICATIONS CABLE
23	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
24	INSTALL DELINEATOR MARKER
25	STORE 30 FEET OF EACH COMMUNICATIONS CABLE
26	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
27	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
28	LASH CABLE(S) TO EXISTING MESSENGER CABLE
29	LASH CABLE(S) TO NEW MESSENGER CABLE
30	INSTALL NEW ELECTRICAL SERVICE
31	MODIFY EXISTING ELECTRICAL SERVICE
32	INSTALL NEW CONTROLLER
33	INSTALL EXISTING CABLE IN NEW CABINET
34	INSTALL GENERATOR POWER INLET BOX
35	INSTALL LOCAL GIGABIT ETHERNET SWITCH
36	INSTALL UNIFIED CABLE
37	INSTALL POLE MOUNTED EQUIPMENT CABINET
38	INSTALL UNI-DIRECTIONAL YAGI ANTENNA
39	INSTALL OMNI-DIRECTIONAL ANTENNA
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SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL
SEAL 023562
ENGINEER MARK DUNZO
SIGNATURE 2/20/08 DATE

CADD Filename: ...\Sht0019.dgn

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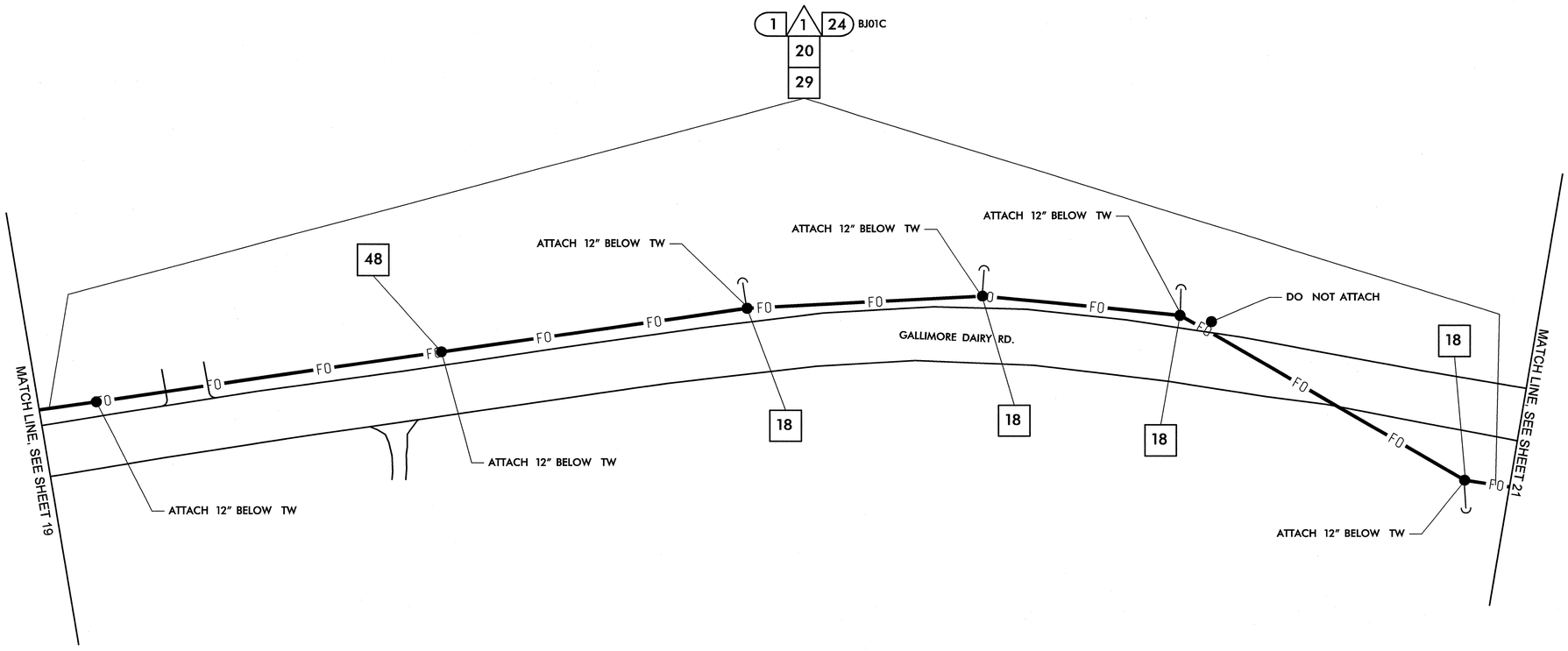
PROJECT REFERENCE NO.	SHEET NO.
U-4711	20



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NOTE:
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750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: K.D. VANPATTEN	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE 2/27/08 DATE

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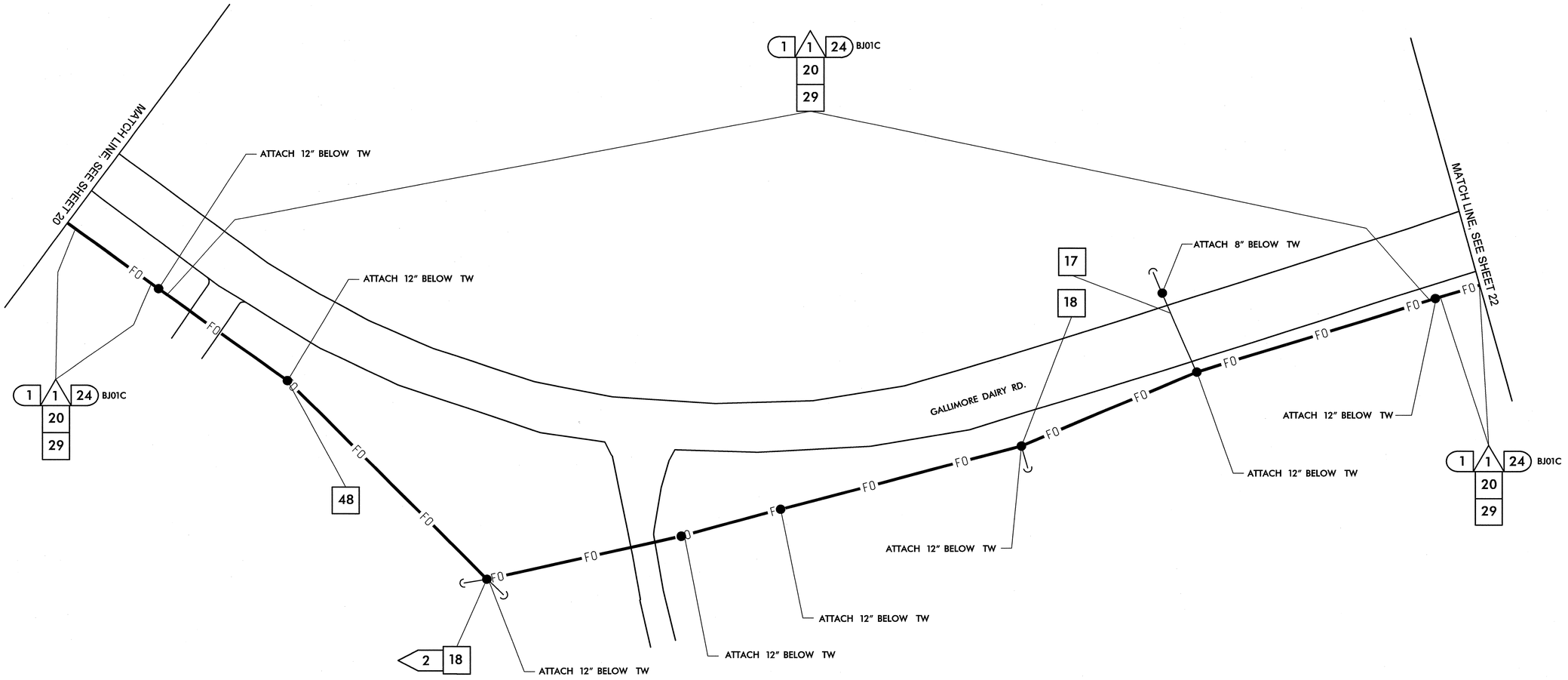
PROJECT REFERENCE NO.	SHEET NO.
U-4711	21



1. INSTALL SMFO CABLE
2. INSTALL PLENUM RATED FIBER OPTIC CABLE
3. INSTALL FIBER OPTIC DROP CABLE
4. INSTALL TRACER WIRE
5. REUSE NCDOT SMFO CABLE
6. REUSE GDOT SMFO CABLE

1. TRENCH
2. INSTALL PVC CONDUIT
3. INSTALL RIGID, GALVANIZED STEEL CONDUIT
4. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5. INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
6. INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
7. INSTALL POLYETHYLENE CONDUIT
8. DIRECTIONAL DRILL CONDUIT
9. BORE AND JACK CONDUIT
10. INSTALL CABLE(S) IN EXISTING CONDUIT
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15. INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
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17. INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
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19. REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
1. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2. INSTALL UNDERGROUND SPLICE ENCLOSURE
3. INSTALL AERIAL SPLICE ENCLOSURE
4. INSTALL POLE MOUNTED SPLICE CABINET
5. INSTALL BASE MOUNTED SPLICE CABINET
6. REMOVE EXISTING SPLICE CABINET
7. INSTALL TERMINAL SPLICE BOX
8. MODIFY EXISTING SPLICE ENCLOSURE

1. INSTALL CABINET FOUNDATION
2. REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
3. MODIFY EXISTING CABINET FOUNDATION
4. INSTALL NEW 333 COMMUNICATION CABINET
5. INSTALL NEW 332 BASE MOUNTED CABINET
6. INSTALL NEW 336S CABINET
7. INSTALL CCTV CAMERA ASSEMBLY
8. INSTALL CCTV CAMERA WOOD POLE
9. INSTALL CCTV METAL POLE AND FOUNDATION
10. INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
11. INSTALL SPECIAL OVERSIZED JUNCTION BOX
12. INSTALL OVERSIZED JUNCTION BOX
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20. INSTALL MESSENGER CABLE
21. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
22. REMOVE EXISTING COMMUNICATIONS CABLE
23. INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
24. INSTALL DELINEATOR MARKER
25. STORE 30 FEET OF EACH COMMUNICATIONS CABLE

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27. LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
28. LASH CABLE(S) TO EXISTING MESSENGER CABLE
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30. INSTALL NEW ELECTRICAL SERVICE
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32. INSTALL NEW CONTROLLER
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34. INSTALL GENERATOR POWER INLET BOX
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45. INSTALL CITY WI-FI ANTENNA
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47. INSTALL CODEC
48. BOND MESSENGER CABLE TO POLE GROUND
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50. INSTALL ANTENNA CABLE
51. RECONNECT RAILROAD PREEMPTION EQUIPMENT
52. RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT

53. INSTALL DSL ETHERNET SWITCH
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CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: K.D. VANPATTEN	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
2/20/08
SIGNATURE DATE

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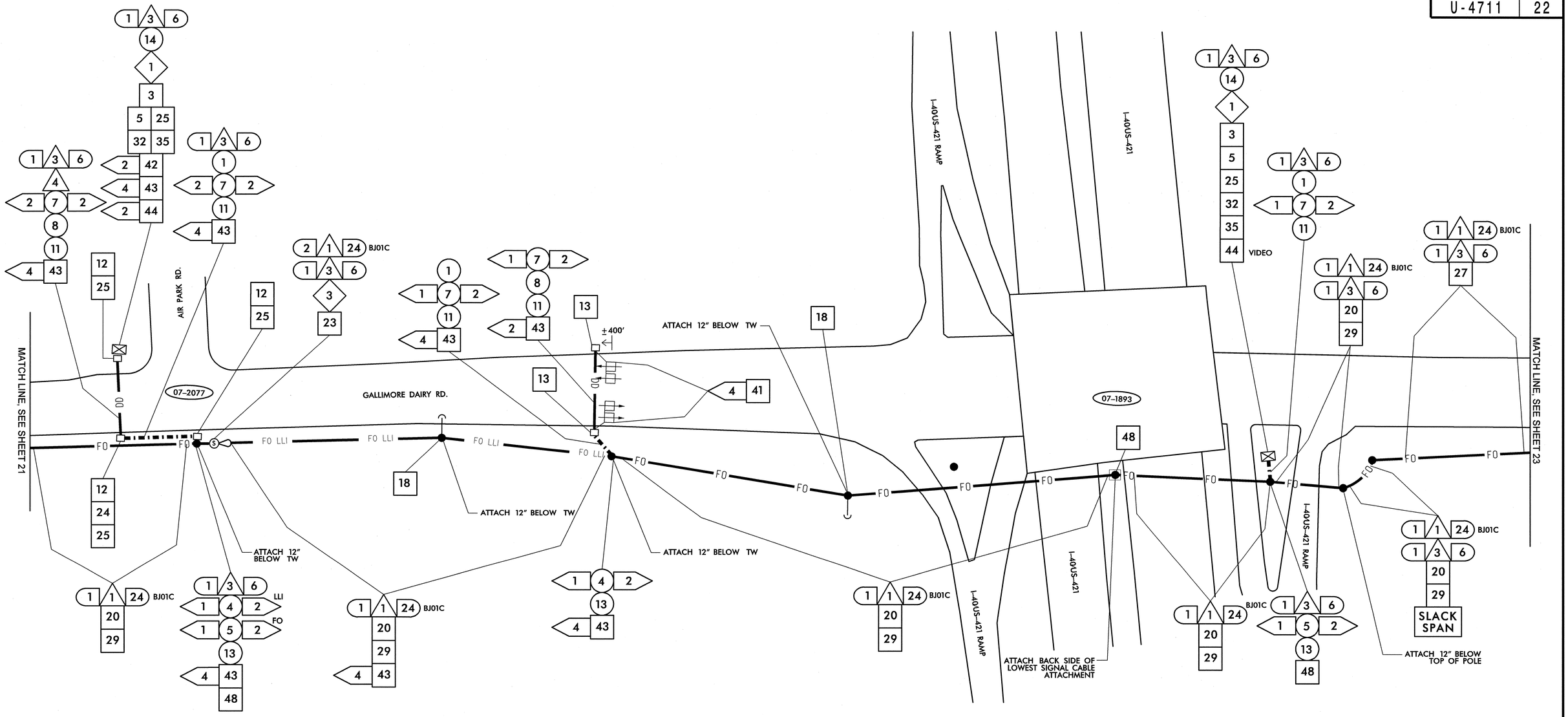
PROJECT REFERENCE NO.	SHEET NO.
U-4711	22



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Traffic Engineering and Safety Systems Branch
Traffic Engineering Division
NCDEPARTMENT OF TRANSPORTATION
Transportation Mobility & Safety
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH
PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE — DATE 2/20/08

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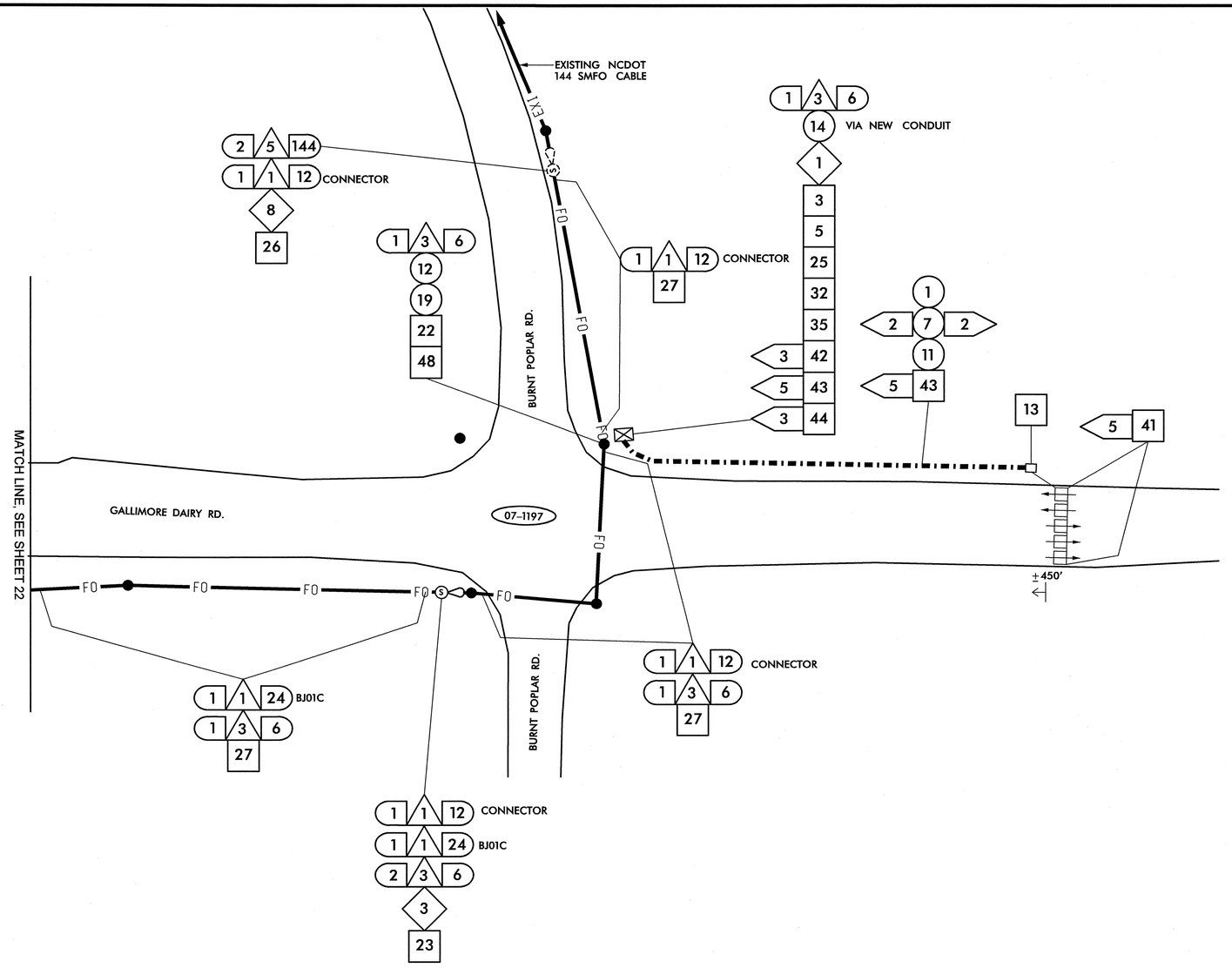
PROJECT REFERENCE NO.	SHEET NO.
U-4711	23



1. INSTALL SMFO CABLE
2. INSTALL PLENUM RATED FIBER OPTIC CABLE
3. INSTALL FIBER OPTIC DROP CABLE
4. INSTALL TRACER WIRE
5. REUSE NCDOT SMFO CABLE
6. REUSE GDOT SMFO CABLE
1. TRENCH
2. INSTALL PVC CONDUIT
3. INSTALL RIGID, GALVANIZED STEEL CONDUIT
4. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5. INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
6. INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
7. INSTALL POLYETHYLENE CONDUIT
8. DIRECTIONAL DRILL CONDUIT
9. BORE AND JACK CONDUIT
10. INSTALL CABLE(S) IN EXISTING CONDUIT
11. INSTALL CABLE(S) IN NEW CONDUIT
12. INSTALL CABLE(S) IN EXISTING RISER
13. INSTALL CABLE(S) IN NEW RISER
14. INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
15. INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
16. INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
17. INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
18. INSTALL NEW RISER INTO POLE MOUNTED CABINET
19. REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
1. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2. INSTALL UNDERGROUND SPLICE ENCLOSURE
3. INSTALL AERIAL SPLICE ENCLOSURE
4. INSTALL POLE MOUNTED SPLICE CABINET
5. INSTALL BASE MOUNTED SPLICE CABINET
6. REMOVE EXISTING SPLICE CABINET
7. INSTALL TERMINAL SPLICE BOX
8. MODIFY EXISTING SPLICE ENCLOSURE
1. INSTALL CABINET FOUNDATION
2. REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
3. MODIFY EXISTING CABINET FOUNDATION
4. INSTALL NEW 333 COMMUNICATION CABINET
5. INSTALL NEW 332 BASE MOUNTED CABINET
6. INSTALL NEW 336S CABINET
7. INSTALL CCTV CAMERA ASSEMBLY
8. INSTALL CCTV CAMERA WOOD POLE
9. INSTALL CCTV METAL POLE AND FOUNDATION
10. INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
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20. INSTALL MESSENGER CABLE
21. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
22. REMOVE EXISTING COMMUNICATIONS CABLE
23. INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
24. INSTALL DELINEATOR MARKER
25. STORE 30 FEET OF EACH COMMUNICATIONS CABLE
26. STORE 100 FEET OF EACH COMMUNICATIONS CABLE
27. LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
28. LASH CABLE(S) TO EXISTING MESSENGER CABLE
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31. MODIFY EXISTING ELECTRICAL SERVICE
32. INSTALL NEW CONTROLLER
33. INSTALL EXISTING CABLE IN NEW CABINET
34. INSTALL GENERATOR POWER INLET BOX
35. INSTALL LOCAL GIGABIT ETHERNET SWITCH
36. INSTALL UNIFIED CABLE
37. INSTALL POLE MOUNTED EQUIPMENT CABINET
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39. INSTALL OMNI-DIRECTIONAL ANTENNA
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45. INSTALL CITY WI-FI ANTENNA
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48. BOND MESSENGER CABLE TO POLE GROUND
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52. RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
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57. INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
58. INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Public Transportation and Safety Strategic Prioritization Office of Transportation Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529
SCALE 0 50

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CADD Filename: ...\Sht0023.dgn

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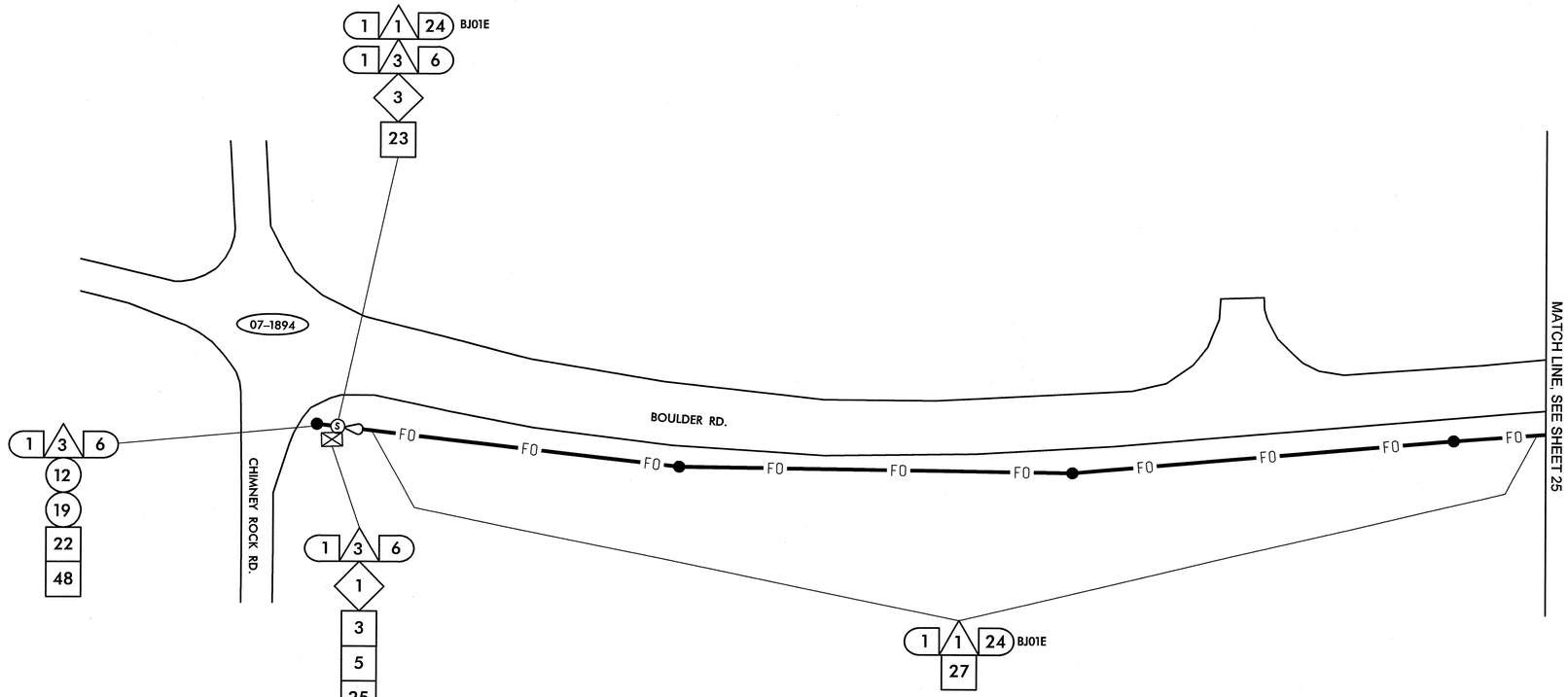
U-4711	24



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PLANS PREPARED IN THE OFFICE OF:
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SCALE 0 50

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DIVISION 7 GUILFORD COUNTY

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SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

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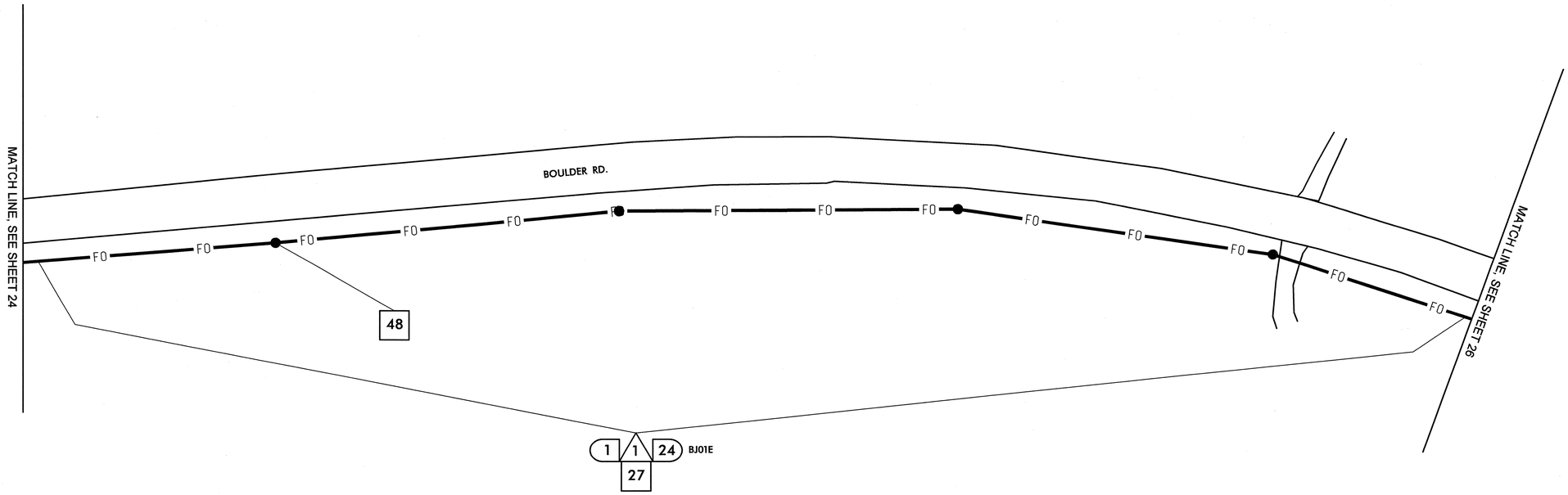
PROJECT REFERENCE NO.	SHEET NO.
U-4711	25



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NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

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Traffic Engineering and Safety Systems Branch
Traffic Engineering Unit
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

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CADD Filename: ...\Sht0025.dgn

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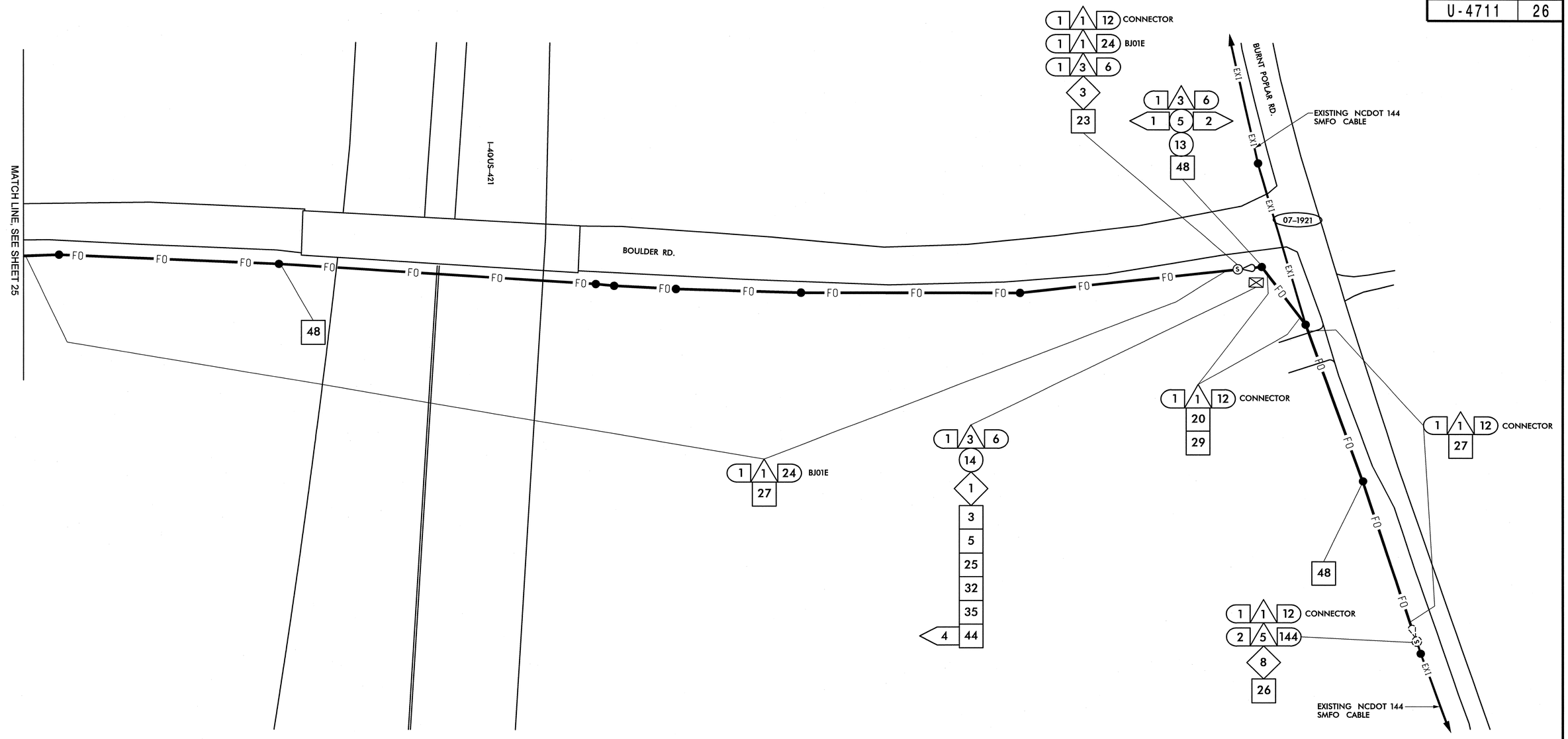
PROJECT REFERENCE NO.	SHEET NO.
U-4711	26



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PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/24/08 DATE

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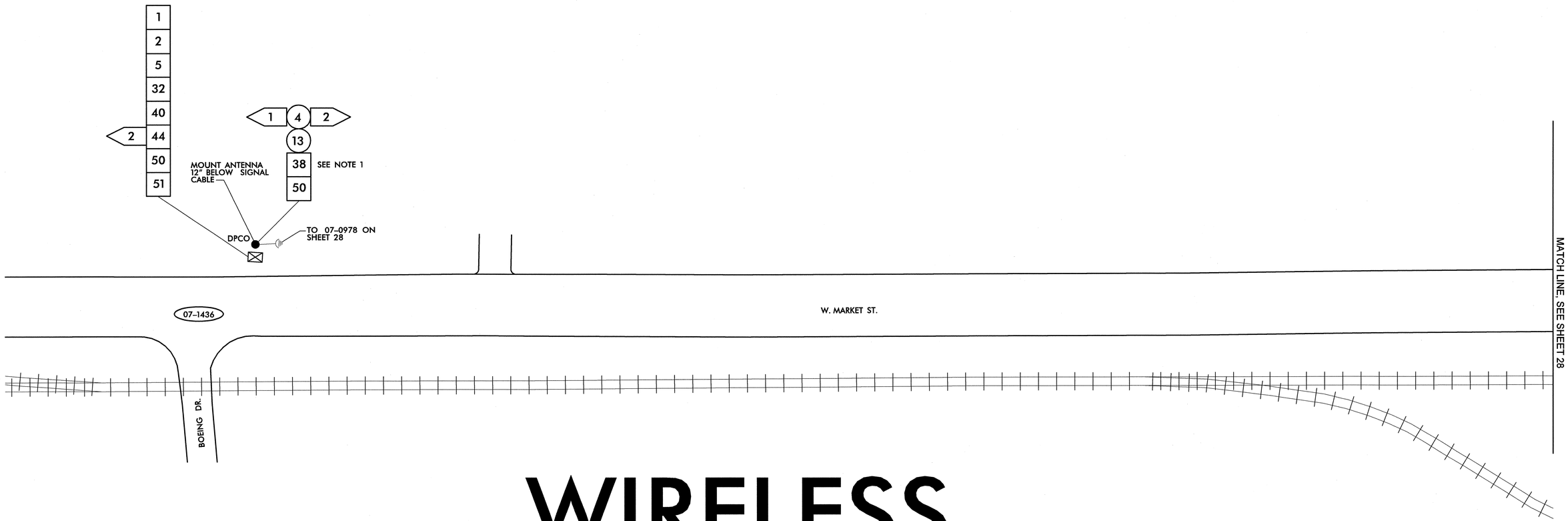
PROJECT REFERENCE NO.	SHEET NO.
U-4711	27



WIRELESS

NOTES (THIS SHEET ONLY):
1. ANTENNA ORIENTATION FOR DISPLAY PURPOSES ONLY. FINAL ORIENTATION TO BE DETERMINED IN THE FIELD.

- 1 INSTALL SMFO CABLE
- 2 INSTALL PLENUM RATED FIBER OPTIC CABLE
- 3 INSTALL FIBER OPTIC DROP CABLE
- 4 INSTALL TRACER WIRE
- 5 REUSE NCDOT SMFO CABLE
- 6 REUSE GDOT SMFO CABLE
- (1) TRENCH
- (2) INSTALL PVC CONDUIT
- (3) INSTALL RIGID, GALVANIZED STEEL CONDUIT
- (4) INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
- (5) INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
- (6) INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
- (7) INSTALL POLYETHYLENE CONDUIT
- (8) DIRECTIONAL DRILL CONDUIT
- (9) BORE AND JACK CONDUIT
- (10) INSTALL CABLE(S) IN EXISTING CONDUIT
- (11) INSTALL CABLE(S) IN NEW CONDUIT
- (12) INSTALL CABLE(S) IN EXISTING RISER
- (13) INSTALL CABLE(S) IN NEW RISER
- (14) INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
- (15) INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
- (16) INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
- (17) INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
- (18) INSTALL NEW RISER INTO POLE MOUNTED CABINET
- (19) REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
- ◇1 INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
- ◇2 INSTALL UNDERGROUND SPLICE ENCLOSURE
- ◇3 INSTALL AERIAL SPLICE ENCLOSURE
- ◇4 INSTALL POLE MOUNTED SPLICE CABINET
- ◇5 INSTALL BASE MOUNTED SPLICE CABINET
- ◇6 REMOVE EXISTING SPLICE CABINET
- ◇7 INSTALL TERMINAL SPLICE BOX
- ◇8 MODIFY EXISTING SPLICE ENCLOSURE
- [1] INSTALL CABINET FOUNDATION
- [2] REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
- [3] MODIFY EXISTING CABINET FOUNDATION
- [4] INSTALL NEW 333 COMMUNICATION CABINET
- [5] INSTALL NEW 332 BASE MOUNTED CABINET
- [6] INSTALL NEW 336S CABINET
- [7] INSTALL CCTV CAMERA ASSEMBLY
- [8] INSTALL CCTV CAMERA WOOD POLE
- [9] INSTALL CCTV METAL POLE AND FOUNDATION
- [10] INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
- [11] INSTALL SPECIAL OVERSIZED JUNCTION BOX
- [12] INSTALL OVERSIZED JUNCTION BOX
- [13] INSTALL STANDARD JUNCTION BOX
- [14] REMOVE EXISTING JUNCTION BOX
- [15] INSTALL WOOD POLE
- [16] REMOVE EXISTING WOOD POLE
- [17] INSTALL AERIAL GUY ASSEMBLY
- [18] INSTALL STANDARD GUY ASSEMBLY
- [19] INSTALL SIDEWALK GUY ASSEMBLY
- [20] INSTALL MESSENGER CABLE
- [21] REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
- [22] REMOVE EXISTING COMMUNICATIONS CABLE
- [23] INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
- [24] INSTALL DELINEATOR MARKER
- [25] STORE 30 FEET OF EACH COMMUNICATIONS CABLE
- [26] STORE 100 FEET OF EACH COMMUNICATIONS CABLE
- [27] LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
- [28] LASH CABLE(S) TO EXISTING MESSENGER CABLE
- [29] LASH CABLE(S) TO NEW MESSENGER CABLE
- [30] INSTALL NEW ELECTRICAL SERVICE
- [31] MODIFY EXISTING ELECTRICAL SERVICE
- [32] INSTALL NEW CONTROLLER
- [33] INSTALL EXISTING CABLE IN NEW CABINET
- [34] INSTALL GENERATOR POWER INLET BOX
- [35] INSTALL LOCAL GIGABIT ETHERNET SWITCH
- [36] INSTALL UNIFIED CABLE
- [37] INSTALL POLE MOUNTED EQUIPMENT CABINET
- [38] INSTALL UNI-DIRECTIONAL YAGI ANTENNA
- [39] INSTALL OMNI-DIRECTIONAL ANTENNA
- [40] INSTALL RADIO TRANSCEIVER
- [41] INSTALL SYSTEM LOOP
- [42] INSTALL SYSTEM LOOP AMPLIFIER
- [43] INSTALL SYSTEM LOOP LEAD-IN CABLE
- [44] INSTALL LOCAL LOOP AMPLIFIER
- [45] INSTALL CITY WI-FI ANTENNA
- [46] INSTALL HUB 10-GIGABIT ETHERNET SWITCH
- [47] INSTALL CODEC
- [48] BOND MESSENGER CABLE TO POLE GROUND
- [49] INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION
- [50] INSTALL ANTENNA CABLE
- [51] RECONNECT RAILROAD PREEMPTION EQUIPMENT
- [52] RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
- [53] INSTALL DSL ETHERNET SWITCH
- [54] INSTALL ETHERNET CABLE
- [55] INSTALL TERMINAL SERVER
- [56] INSTALL MICROWAVE VEHICLE DETECTOR
- [57] INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
- [58] INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
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Traffic Engineering and Safety Systems Branch
Traffic Engineering Unit
NC DEPARTMENT OF TRANSPORTATION
Integrated Mobility Division
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 REVIEWED BY: K.W. SMITH
PREPARED BY: K.D. VANPATTEN REVIEWED BY: M.W. DUNZO

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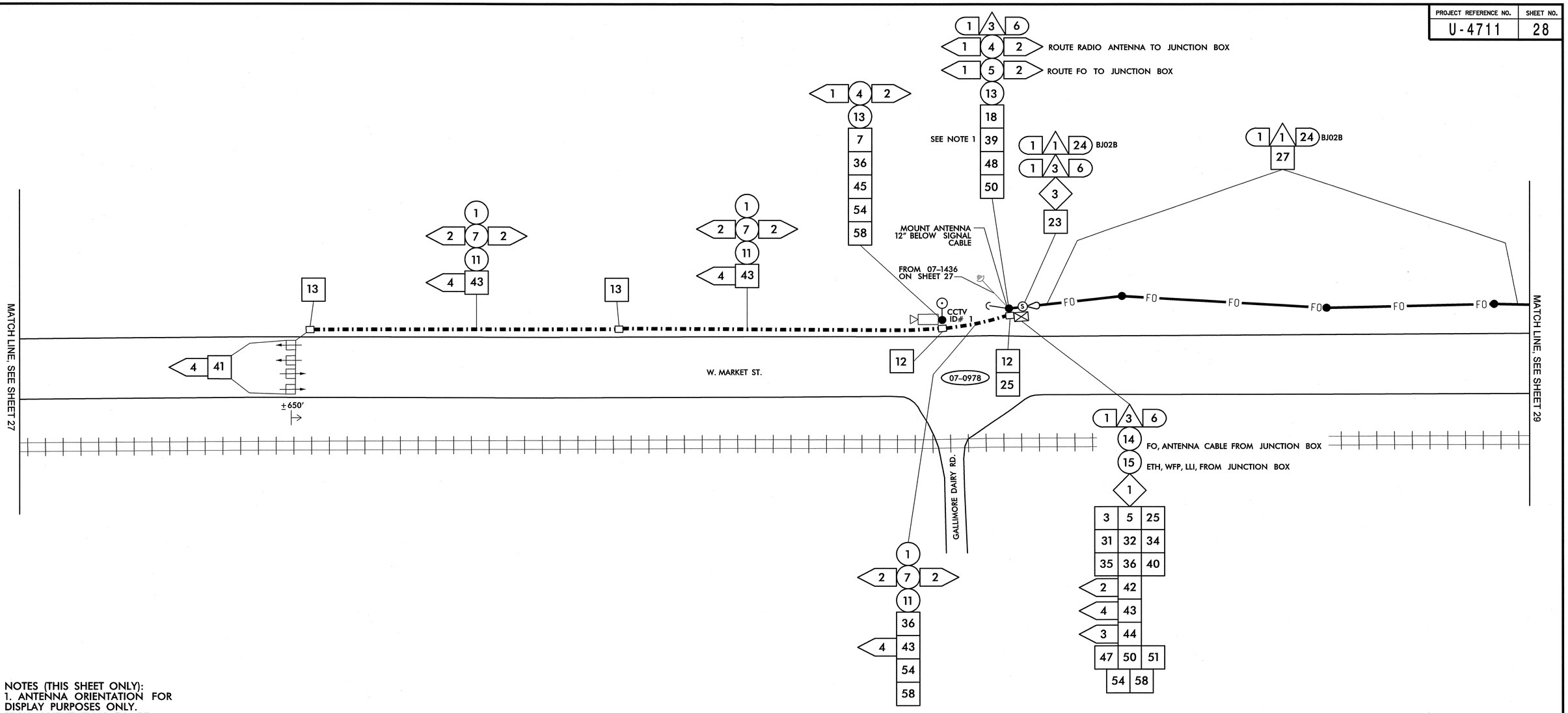
PROJECT REFERENCE NO.	SHEET NO.
U-4711	28



NOTES (THIS SHEET ONLY):
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1	INSTALL SMFO CABLE	14	INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE	6	INSTALL NEW 336S CABINET	26	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
2	INSTALL PLENUM RATED FIBER OPTIC CABLE	15	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	7	INSTALL CCTV CAMERA ASSEMBLY	27	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
3	INSTALL FIBER OPTIC DROP CABLE	16	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	8	INSTALL CCTV CAMERA WOOD POLE	28	LASH CABLE(S) TO EXISTING MESSENGER CABLE
4	INSTALL TRACER WIRE	17	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET	9	INSTALL CCTV METAL POLE AND FOUNDATION	29	LASH CABLE(S) TO NEW MESSENGER CABLE
5	REUSE NCDOT SMFO CABLE	18	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX	30	INSTALL NEW ELECTRICAL SERVICE
6	REUSE GDOT SMFO CABLE	19	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL SPECIAL OVERSIZED JUNCTION BOX	31	MODIFY EXISTING ELECTRICAL SERVICE
1	TRENCH	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	12	INSTALL OVERSIZED JUNCTION BOX	32	INSTALL NEW CONTROLLER
2	INSTALL PVC CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	13	INSTALL STANDARD JUNCTION BOX	33	INSTALL EXISTING CABLE IN NEW CABINET
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	14	REMOVE EXISTING JUNCTION BOX	34	INSTALL GENERATOR POWER INLET BOX
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	INSTALL POLE MOUNTED SPLICE CABINET	15	INSTALL WOOD POLE	35	INSTALL LOCAL GIGABIT ETHERNET SWITCH
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING	5	INSTALL BASE MOUNTED SPLICE CABINET	16	REMOVE EXISTING WOOD POLE	36	INSTALL UNIFIED CABLE
6	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT	6	REMOVE EXISTING SPLICE CABINET	17	INSTALL AERIAL GUY ASSEMBLY	37	INSTALL POLE MOUNTED EQUIPMENT CABINET
7	INSTALL POLYETHYLENE CONDUIT	7	INSTALL TERMINAL SPLICE BOX	18	INSTALL STANDARD GUY ASSEMBLY	38	INSTALL UNI-DIRECTIONAL YAGI ANTENNA
8	DIRECTIONAL DRILL CONDUIT	8	MODIFY EXISTING SPLICE ENCLOSURE	19	INSTALL SIDEWALK GUY ASSEMBLY	39	INSTALL OMNI-DIRECTIONAL ANTENNA
9	BORE AND JACK CONDUIT	1	INSTALL CABINET FOUNDATION	20	INSTALL MESSENGER CABLE	40	INSTALL RADIO TRANSCEIVER
10	INSTALL CABLE(S) IN EXISTING CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER	21	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	41	INSTALL SYSTEM LOOP
11	INSTALL CABLE(S) IN NEW CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	22	REMOVE EXISTING COMMUNICATIONS CABLE	42	INSTALL SYSTEM LOOP AMPLIFIER
12	INSTALL CABLE(S) IN EXISTING RISER	4	INSTALL NEW 333 COMMUNICATION CABINET	23	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE	43	INSTALL SYSTEM LOOP LEAD-IN CABLE
13	INSTALL CABLE(S) IN NEW RISER	5	INSTALL NEW 332 BASE MOUNTED CABINET	24	INSTALL DELINEATOR MARKER		
				25	STORE 30 FEET OF EACH COMMUNICATIONS CABLE		

44	INSTALL LOCAL LOOP AMPLIFIER	53	INSTALL DSL ETHERNET SWITCH
45	INSTALL CITY WI-FI ANTENNA	54	INSTALL ETHERNET CABLE
46	INSTALL HUB 10-GIGABIT ETHERNET SWITCH	55	INSTALL TERMINAL SERVER
47	INSTALL CODEC	56	INSTALL MICROWAVE VEHICLE DETECTOR
48	BOND MESSENGER CABLE TO POLE GROUND	57	INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
49	INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION	58	INSTALL WIRELESS ACCESS POINT POWER CABLE
50	INSTALL ANTENNA CABLE		
51	RECONNECT RAILROAD PREEMPTION EQUIPMENT		
52	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT		

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

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Traffic Engineering and Safety Systems Branch
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: K.D. VANPATTEN	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
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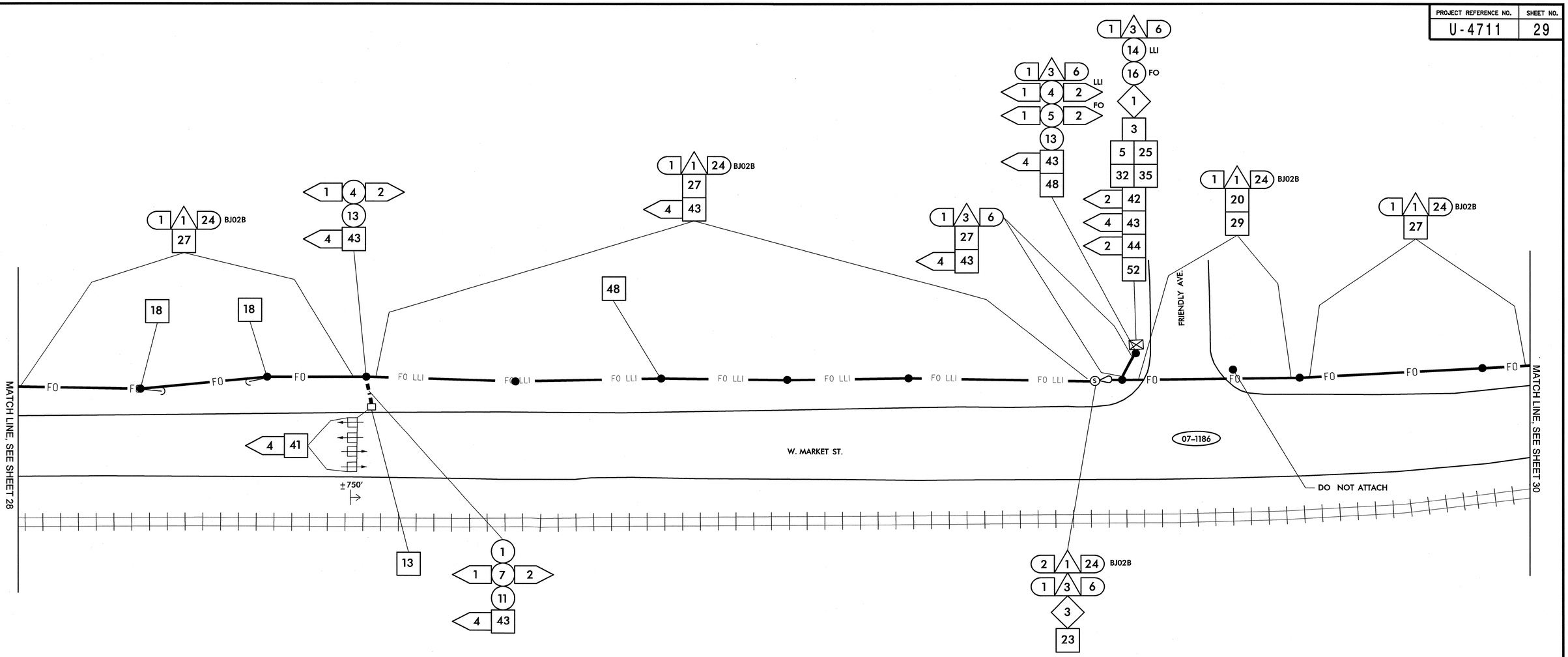
PROJECT REFERENCE NO.	SHEET NO.
U-4711	29



1	INSTALL SMFO CABLE
2	INSTALL PLENUM RATED FIBER OPTIC CABLE
3	INSTALL FIBER OPTIC DROP CABLE
4	INSTALL TRACER WIRE
5	REUSE NCDOT SMFO CABLE
6	REUSE GDOT SMFO CABLE
1	TRENCH
2	INSTALL PVC CONDUIT
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
6	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
7	INSTALL POLYETHYLENE CONDUIT
8	DIRECTIONAL DRILL CONDUIT
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12	INSTALL CABLE(S) IN EXISTING RISER
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15	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
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1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2	INSTALL UNDERGROUND SPLICE ENCLOSURE
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4	INSTALL POLE MOUNTED SPLICE CABINET
5	INSTALL BASE MOUNTED SPLICE CABINET
6	REMOVE EXISTING SPLICE CABINET
7	INSTALL TERMINAL SPLICE BOX
8	MODIFY EXISTING SPLICE ENCLOSURE
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
3	MODIFY EXISTING CABINET FOUNDATION
4	INSTALL NEW 333 COMMUNICATION CABINET
5	INSTALL NEW 332 BASE MOUNTED CABINET
6	INSTALL NEW 336S CABINET
7	INSTALL CCTV CAMERA ASSEMBLY
8	INSTALL CCTV CAMERA WOOD POLE
9	INSTALL CCTV METAL POLE AND FOUNDATION
10	INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
11	INSTALL SPECIAL OVERSIZED JUNCTION BOX
12	INSTALL OVERSIZED JUNCTION BOX
13	INSTALL STANDARD JUNCTION BOX
14	REMOVE EXISTING JUNCTION BOX
15	INSTALL WOOD POLE
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17	INSTALL AERIAL GUY ASSEMBLY
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19	INSTALL SIDEWALK GUY ASSEMBLY
20	INSTALL MESSENGER CABLE
21	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
22	REMOVE EXISTING COMMUNICATIONS CABLE
23	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
24	INSTALL DELINEATOR MARKER
25	STORE 30 FEET OF EACH COMMUNICATIONS CABLE
26	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
27	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
28	LASH CABLE(S) TO EXISTING MESSENGER CABLE
29	LASH CABLE(S) TO NEW MESSENGER CABLE
30	INSTALL NEW ELECTRICAL SERVICE
31	MODIFY EXISTING ELECTRICAL SERVICE
32	INSTALL NEW CONTROLLER
33	INSTALL EXISTING CABLE IN NEW CABINET
34	INSTALL GENERATOR POWER INLET BOX
35	INSTALL LOCAL GIGABIT ETHERNET SWITCH
36	INSTALL UNIFIED CABLE
37	INSTALL POLE MOUNTED EQUIPMENT CABINET
38	INSTALL UNI-DIRECTIONAL YAGI ANTENNA
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51	RECONNECT RAILROAD PREEMPTION EQUIPMENT
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53	INSTALL DSL ETHERNET SWITCH
54	INSTALL ETHERNET CABLE
55	INSTALL TERMINAL SERVER
56	INSTALL MICROWAVE VEHICLE DETECTOR
57	INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
58	INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

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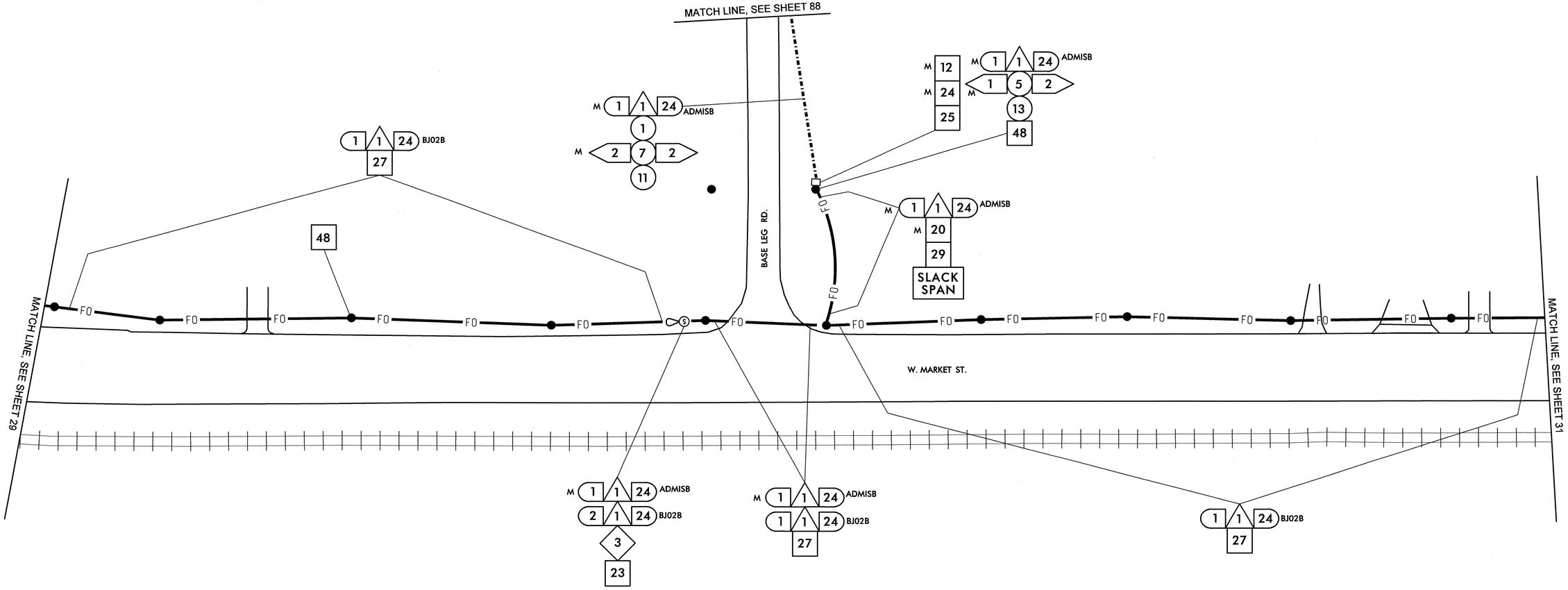
PROJECT REFERENCE NO.	SHEET NO.
U-4711	30



1. INSTALL SMFO CABLE
2. INSTALL PLENUM RATED FIBER OPTIC CABLE
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2. INSTALL UNDERGROUND SPLICE ENCLOSURE
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6. REMOVE EXISTING SPLICE CABINET
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NOTE:
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PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: K.D. VANPATTEN	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
2/20/08
SIGNATURE DATE

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2/20/2008
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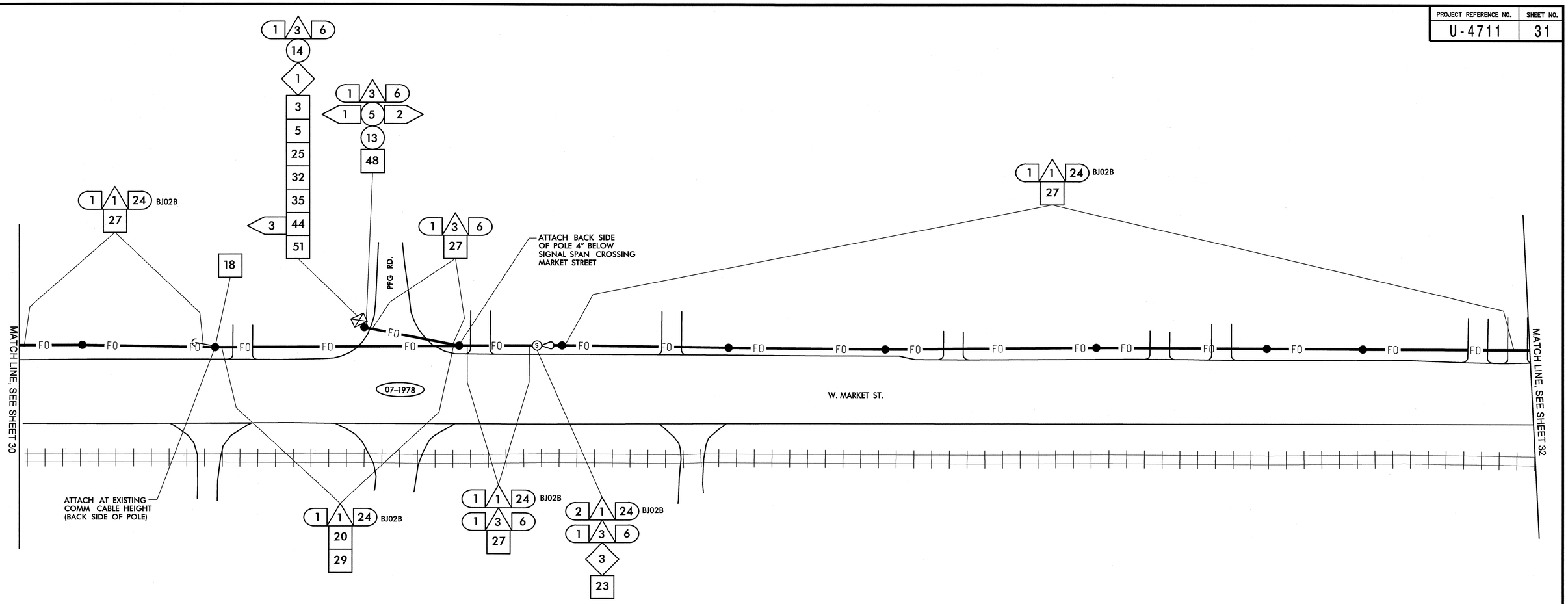
PROJECT REFERENCE NO.	SHEET NO.
U-4711	31



1	INSTALL SMFO CABLE
2	INSTALL PLENUM RATED FIBER OPTIC CABLE
3	INSTALL FIBER OPTIC DROP CABLE
4	INSTALL TRACER WIRE
5	REUSE NCDOT SMFO CABLE
6	REUSE GDOT SMFO CABLE
1	TRENCH
2	INSTALL PVC CONDUIT
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
6	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
7	INSTALL POLYETHYLENE CONDUIT
8	DIRECTIONAL DRILL CONDUIT
9	BORE AND JACK CONDUIT
10	INSTALL CABLE(S) IN EXISTING CONDUIT
11	INSTALL CABLE(S) IN NEW CONDUIT
12	INSTALL CABLE(S) IN EXISTING RISER
13	INSTALL CABLE(S) IN NEW RISER
14	INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
15	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
16	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
17	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
18	INSTALL NEW RISER INTO POLE MOUNTED CABINET
19	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2	INSTALL UNDERGROUND SPLICE ENCLOSURE
3	INSTALL AERIAL SPLICE ENCLOSURE
4	INSTALL POLE MOUNTED SPLICE CABINET
5	INSTALL BASE MOUNTED SPLICE CABINET
6	REMOVE EXISTING SPLICE CABINET
7	INSTALL TERMINAL SPLICE BOX
8	MODIFY EXISTING SPLICE ENCLOSURE
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
3	MODIFY EXISTING CABINET FOUNDATION
4	INSTALL NEW 333 COMMUNICATION CABINET
5	INSTALL NEW 332 BASE MOUNTED CABINET
6	INSTALL NEW 336S CABINET
7	INSTALL CCTV CAMERA ASSEMBLY
8	INSTALL CCTV CAMERA WOOD POLE
9	INSTALL CCTV METAL POLE AND FOUNDATION
10	INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
11	INSTALL SPECIAL OVERSIZED JUNCTION BOX
12	INSTALL OVERSIZED JUNCTION BOX
13	INSTALL STANDARD JUNCTION BOX
14	REMOVE EXISTING JUNCTION BOX
15	INSTALL WOOD POLE
16	REMOVE EXISTING WOOD POLE
17	INSTALL AERIAL GUY ASSEMBLY
18	INSTALL STANDARD GUY ASSEMBLY
19	INSTALL SIDEWALK GUY ASSEMBLY
20	INSTALL MESSENGER CABLE
21	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
22	REMOVE EXISTING COMMUNICATIONS CABLE
23	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
24	INSTALL DELINEATOR MARKER
25	STORE 30 FEET OF EACH COMMUNICATIONS CABLE
26	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
27	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
28	LASH CABLE(S) TO EXISTING MESSENGER CABLE
29	LASH CABLE(S) TO NEW MESSENGER CABLE
30	INSTALL NEW ELECTRICAL SERVICE
31	MODIFY EXISTING ELECTRICAL SERVICE
32	INSTALL NEW CONTROLLER
33	INSTALL EXISTING CABLE IN NEW CABINET
34	INSTALL GENERATOR POWER INLET BOX
35	INSTALL LOCAL GIGABIT ETHERNET SWITCH
36	INSTALL UNIFIED CABLE
37	INSTALL POLE MOUNTED EQUIPMENT CABINET
38	INSTALL UNI-DIRECTIONAL YAGI ANTENNA
39	INSTALL OMNI-DIRECTIONAL ANTENNA
40	INSTALL RADIO TRANSCEIVER
41	INSTALL SYSTEM LOOP
42	INSTALL SYSTEM LOOP AMPLIFIER
43	INSTALL SYSTEM LOOP LEAD-IN CABLE
44	INSTALL LOCAL LOOP AMPLIFIER
45	INSTALL CITY WI-FI ANTENNA
46	INSTALL HUB 10-GIGABIT ETHERNET SWITCH
47	INSTALL CODEC
48	BOND MESSENGER CABLE TO POLE GROUND
49	INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION
50	INSTALL ANTENNA CABLE
51	RECONNECT RAILROAD PREEMPTION EQUIPMENT
52	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
53	INSTALL DSL ETHERNET SWITCH
54	INSTALL ETHERNET CABLE
55	INSTALL TERMINAL SERVER
56	INSTALL MICROWAVE VEHICLE DETECTOR
57	INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
58	INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

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Traffic Engineering and Safety Systems Branch
Traffic Engineering Unit
DEPARTMENT OF TRANSPORTATION
Integrated Mobility Division
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

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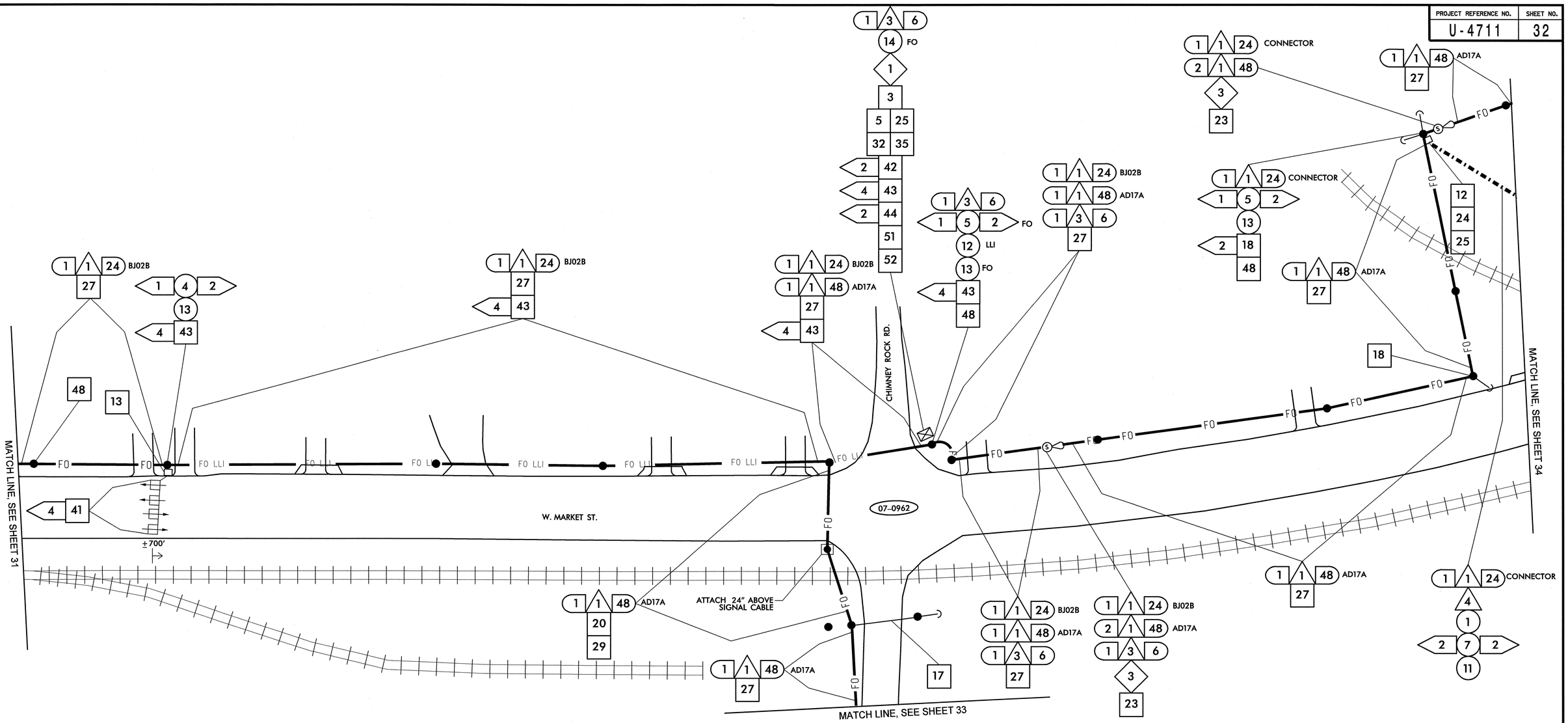
PROJECT REFERENCE NO.	SHEET NO.
U-4711	32



1	INSTALL SMFO CABLE	14	INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
2	INSTALL PLENUM RATED FIBER OPTIC CABLE	15	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
3	INSTALL FIBER OPTIC DROP CABLE	16	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
4	INSTALL TRACER WIRE	17	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
5	REUSE NCDOT SMFO CABLE	18	INSTALL NEW RISER INTO POLE MOUNTED CABINET
6	REUSE GDOT SMFO CABLE	19	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
1	TRENCH	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2	INSTALL PVC CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	INSTALL POLE MOUNTED SPLICE CABINET
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING	5	INSTALL BASE MOUNTED SPLICE CABINET
6	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT	6	REMOVE EXISTING SPLICE CABINET
7	INSTALL POLYETHYLENE CONDUIT	7	INSTALL TERMINAL SPLICE BOX
8	DIRECTIONAL DRILL CONDUIT	8	MODIFY EXISTING SPLICE ENCLOSURE
9	BORE AND JACK CONDUIT	1	INSTALL CABINET FOUNDATION
10	INSTALL CABLE(S) IN EXISTING CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
11	INSTALL CABLE(S) IN NEW CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION
12	INSTALL CABLE(S) IN EXISTING RISER	4	INSTALL NEW 333 COMMUNICATION CABINET
13	INSTALL CABLE(S) IN NEW RISER	5	INSTALL NEW 332 BASE MOUNTED CABINET

6	INSTALL NEW 336S CABINET	26	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
7	INSTALL CCTV CAMERA ASSEMBLY	27	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
8	INSTALL CCTV CAMERA WOOD POLE	28	LASH CABLE(S) TO EXISTING MESSENGER CABLE
9	INSTALL CCTV METAL POLE AND FOUNDATION	29	LASH CABLE(S) TO NEW MESSENGER CABLE
10	INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX	30	INSTALL NEW ELECTRICAL SERVICE
11	INSTALL SPECIAL OVERSIZED JUNCTION BOX	31	MODIFY EXISTING ELECTRICAL SERVICE
12	INSTALL OVERSIZED JUNCTION BOX	32	INSTALL NEW CONTROLLER
13	INSTALL STANDARD JUNCTION BOX	33	INSTALL EXISTING CABLE IN NEW CABINET
14	REMOVE EXISTING JUNCTION BOX	34	INSTALL GENERATOR POWER INLET BOX
15	INSTALL WOOD POLE	35	INSTALL LOCAL GIGABIT ETHERNET SWITCH
16	REMOVE EXISTING WOOD POLE	36	INSTALL UNIFIED CABLE
17	INSTALL AERIAL GUY ASSEMBLY	37	INSTALL POLE MOUNTED EQUIPMENT CABINET
18	INSTALL STANDARD GUY ASSEMBLY	38	INSTALL UNI-DIRECTIONAL YAGI ANTENNA
19	INSTALL SIDEWALK GUY ASSEMBLY	39	INSTALL OMNI-DIRECTIONAL ANTENNA
20	INSTALL MESSENGER CABLE	40	INSTALL RADIO TRANSCEIVER
21	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	41	INSTALL SYSTEM LOOP
22	REMOVE EXISTING COMMUNICATIONS CABLE	42	INSTALL SYSTEM LOOP AMPLIFIER
23	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE	43	INSTALL SYSTEM LOOP LEAD-IN CABLE
24	INSTALL DELINEATOR MARKER		
25	STORE 30 FEET OF EACH COMMUNICATIONS CABLE		

44	INSTALL LOCAL LOOP AMPLIFIER	53	INSTALL DSL ETHERNET SWITCH
45	INSTALL CITY WI-FI ANTENNA	54	INSTALL ETHERNET CABLE
46	INSTALL HUB 10-GIGABIT ETHERNET SWITCH	55	INSTALL TERMINAL SERVER
47	INSTALL CODEC	56	INSTALL MICROWAVE VEHICLE DETECTOR
48	BOND MESSENGER CABLE TO POLE GROUND	57	INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
49	INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION	58	INSTALL WIRELESS ACCESS POINT POWER CABLE
50	INSTALL ANTENNA CABLE		
51	RECONNECT RAILROAD PREEMPTION EQUIPMENT		
52	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT		

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

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Traffic Engineering and Safety Systems Branch
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Integrated Mobility Division
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE:	FEBRUARY, 2008	REVIEWED BY:	K.W. SMITH
PREPARED BY:	K.D. VANPATTEN	REVIEWED BY:	M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE 2/29/08 DATE
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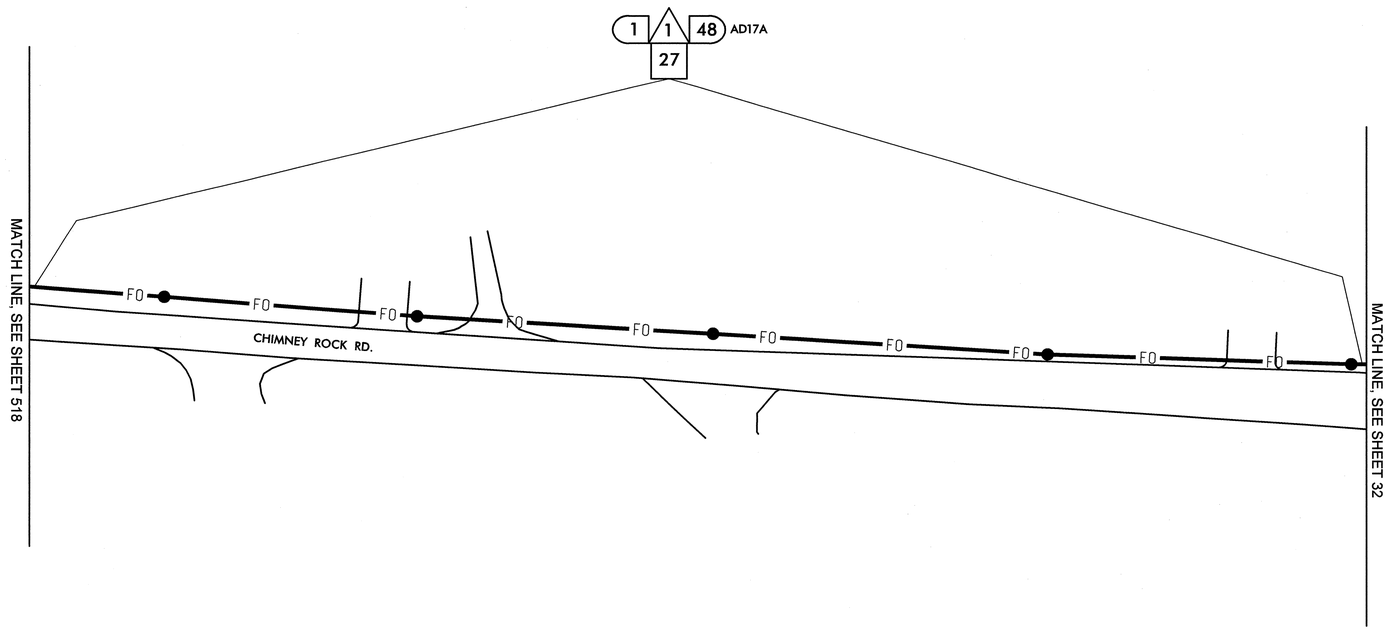
PROJECT REFERENCE NO.	SHEET NO.
U-4711	33



1. INSTALL SMFO CABLE
2. INSTALL PLENUM RATED FIBER OPTIC CABLE
3. INSTALL FIBER OPTIC DROP CABLE
4. INSTALL TRACER WIRE
5. REUSE NCDOT SMFO CABLE
6. REUSE GDOT SMFO CABLE

(1) TRENCH
(2) INSTALL PVC CONDUIT
(3) INSTALL RIGID, GALVANIZED STEEL CONDUIT
(4) INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
(5) INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
(6) INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
(7) INSTALL POLYETHYLENE CONDUIT
(8) DIRECTIONAL DRILL CONDUIT
(9) BORE AND JACK CONDUIT
(10) INSTALL CABLE(S) IN EXISTING CONDUIT
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(13) INSTALL CABLE(S) IN NEW RISER
(14) INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
(15) INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
(16) INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
(17) INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
(18) INSTALL NEW RISER INTO POLE MOUNTED CABINET
(19) REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING

<1> INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
<2> INSTALL UNDERGROUND SPLICE ENCLOSURE
<3> INSTALL AERIAL SPLICE ENCLOSURE
<4> INSTALL POLE MOUNTED SPLICE CABINET
<5> INSTALL BASE MOUNTED SPLICE CABINET
<6> REMOVE EXISTING SPLICE CABINET
<7> INSTALL TERMINAL SPLICE BOX
<8> MODIFY EXISTING SPLICE ENCLOSURE

[1] INSTALL CABINET FOUNDATION
[2] REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
[3] MODIFY EXISTING CABINET FOUNDATION
[4] INSTALL NEW 333 COMMUNICATION CABINET
[5] INSTALL NEW 332 BASE MOUNTED CABINET
[6] INSTALL NEW 336S CABINET
[7] INSTALL CCTV CAMERA ASSEMBLY
[8] INSTALL CCTV CAMERA WOOD POLE
[9] INSTALL CCTV METAL POLE AND FOUNDATION
[10] INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
[11] INSTALL SPECIAL OVERSIZED JUNCTION BOX
[12] INSTALL OVERSIZED JUNCTION BOX
[13] INSTALL STANDARD JUNCTION BOX
[14] REMOVE EXISTING JUNCTION BOX
[15] INSTALL WOOD POLE
[16] REMOVE EXISTING WOOD POLE
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[18] INSTALL STANDARD GUY ASSEMBLY
[19] INSTALL SIDEWALK GUY ASSEMBLY
[20] INSTALL MESSENGER CABLE
[21] REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
[22] REMOVE EXISTING COMMUNICATIONS CABLE
[23] INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
[24] INSTALL DELINEATOR MARKER
[25] STORE 30 FEET OF EACH COMMUNICATIONS CABLE
[26] STORE 100 FEET OF EACH COMMUNICATIONS CABLE
[27] LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
[28] LASH CABLE(S) TO EXISTING MESSENGER CABLE
[29] LASH CABLE(S) TO NEW MESSENGER CABLE
[30] INSTALL NEW ELECTRICAL SERVICE
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[36] INSTALL UNIFIED CABLE
[37] INSTALL POLE MOUNTED EQUIPMENT CABINET
[38] INSTALL UNI-DIRECTIONAL YAGI ANTENNA
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[41] INSTALL SYSTEM LOOP
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[44] INSTALL LOCAL LOOP AMPLIFIER
[45] INSTALL CITY WI-FI ANTENNA
[46] INSTALL HUB 10-GIGABIT ETHERNET SWITCH
[47] INSTALL CODEC
[48] BOND MESSENGER CABLE TO POLE GROUND
[49] INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION
[50] INSTALL ANTENNA CABLE
[51] RECONNECT RAILROAD PREEMPTION EQUIPMENT
[52] RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
[53] INSTALL DSL ETHERNET SWITCH
[54] INSTALL ETHERNET CABLE
[55] INSTALL TERMINAL SERVER
[56] INSTALL MICROWAVE VEHICLE DETECTOR
[57] INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
[58] INSTALL WIRELESS ACCESS POINT POWER CABLE

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GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

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CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: K.D. VANPATTEN	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE 2/20/08 DATE

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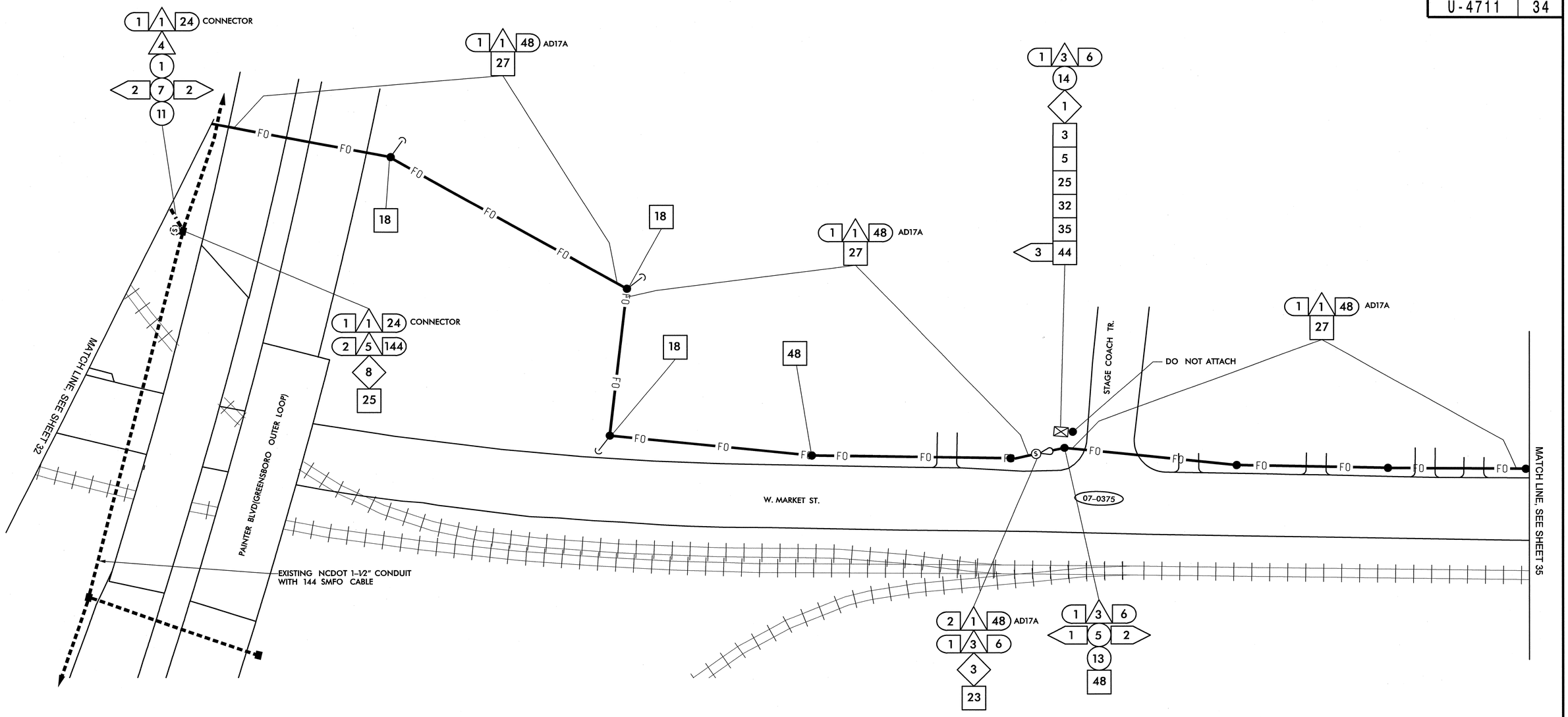
PROJECT REFERENCE NO.	SHEET NO.
U-4711	34



1	INSTALL SMFO CABLE	14	INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE	6	INSTALL NEW 336S CABINET	26	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	44	INSTALL LOCAL LOOP AMPLIFIER	53	INSTALL DSL ETHERNET SWITCH
2	INSTALL PLENUM RATED FIBER OPTIC CABLE	15	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	7	INSTALL CCTV CAMERA ASSEMBLY	27	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	45	INSTALL CITY WI-FI ANTENNA	54	INSTALL ETHERNET CABLE
3	INSTALL FIBER OPTIC DROP CABLE	16	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	8	INSTALL CCTV CAMERA WOOD POLE	28	LASH CABLE(S) TO EXISTING MESSENGER CABLE	46	INSTALL HUB 10-GIGABIT ETHERNET SWITCH	55	INSTALL TERMINAL SERVER
4	INSTALL TRACER WIRE	17	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET	9	INSTALL CCTV METAL POLE AND FOUNDATION	29	LASH CABLE(S) TO NEW MESSENGER CABLE	47	INSTALL CODEC	56	INSTALL MICROWAVE VEHICLE DETECTOR
5	REUSE NCDOT SMFO CABLE	18	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX	30	INSTALL NEW ELECTRICAL SERVICE	48	BOND MESSENGER CABLE TO POLE GROUND	57	INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
6	REUSE GDOT SMFO CABLE	19	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL SPECIAL OVERSIZED JUNCTION BOX	31	MODIFY EXISTING ELECTRICAL SERVICE	49	INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION	58	INSTALL WIRELESS ACCESS POINT POWER CABLE
1	TRENCH	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	12	INSTALL OVERSIZED JUNCTION BOX	32	INSTALL NEW CONTROLLER	50	INSTALL ANTENNA CABLE		
2	INSTALL PVC CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	13	INSTALL STANDARD JUNCTION BOX	33	INSTALL EXISTING CABLE IN NEW CABINET	51	RECONNECT RAILROAD PREEMPTION EQUIPMENT		
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	14	REMOVE EXISTING JUNCTION BOX	34	INSTALL GENERATOR POWER INLET BOX	52	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT		
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	INSTALL POLE MOUNTED SPLICE CABINET	15	INSTALL WOOD POLE	35	INSTALL LOCAL GIGABIT ETHERNET SWITCH				
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING	5	INSTALL BASE MOUNTED SPLICE CABINET	16	REMOVE EXISTING WOOD POLE	36	INSTALL UNIFIED CABLE				
6	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT	6	REMOVE EXISTING SPLICE CABINET	17	INSTALL AERIAL GUY ASSEMBLY	37	INSTALL POLE MOUNTED EQUIPMENT CABINET				
7	INSTALL POLYETHYLENE CONDUIT	7	INSTALL TERMINAL SPLICE BOX	18	INSTALL STANDARD GUY ASSEMBLY	38	INSTALL UNI-DIRECTIONAL YAGI ANTENNA				
8	DIRECTIONAL DRILL CONDUIT	8	MODIFY EXISTING SPLICE ENCLOSURE	19	INSTALL SIDEWALK GUY ASSEMBLY	39	INSTALL OMNI-DIRECTIONAL ANTENNA				
9	BORE AND JACK CONDUIT	1	INSTALL CABINET FOUNDATION	20	INSTALL MESSENGER CABLE	40	INSTALL RADIO TRANSCEIVER				
10	INSTALL CABLE(S) IN EXISTING CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER	21	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	41	INSTALL SYSTEM LOOP				
11	INSTALL CABLE(S) IN NEW CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	22	REMOVE EXISTING COMMUNICATIONS CABLE	42	INSTALL SYSTEM LOOP AMPLIFIER				
12	INSTALL CABLE(S) IN EXISTING RISER	4	INSTALL NEW 333 COMMUNICATION CABINET	23	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE	43	INSTALL SYSTEM LOOP LEAD-IN CABLE				
13	INSTALL CABLE(S) IN NEW RISER	5	INSTALL NEW 332 BASE MOUNTED CABINET	24	INSTALL DELINEATOR MARKER						
				25	STORE 30 FEET OF EACH COMMUNICATIONS CABLE						

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

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CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

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CADD Filename: ...\Sht0034.dgn

2/29/2008
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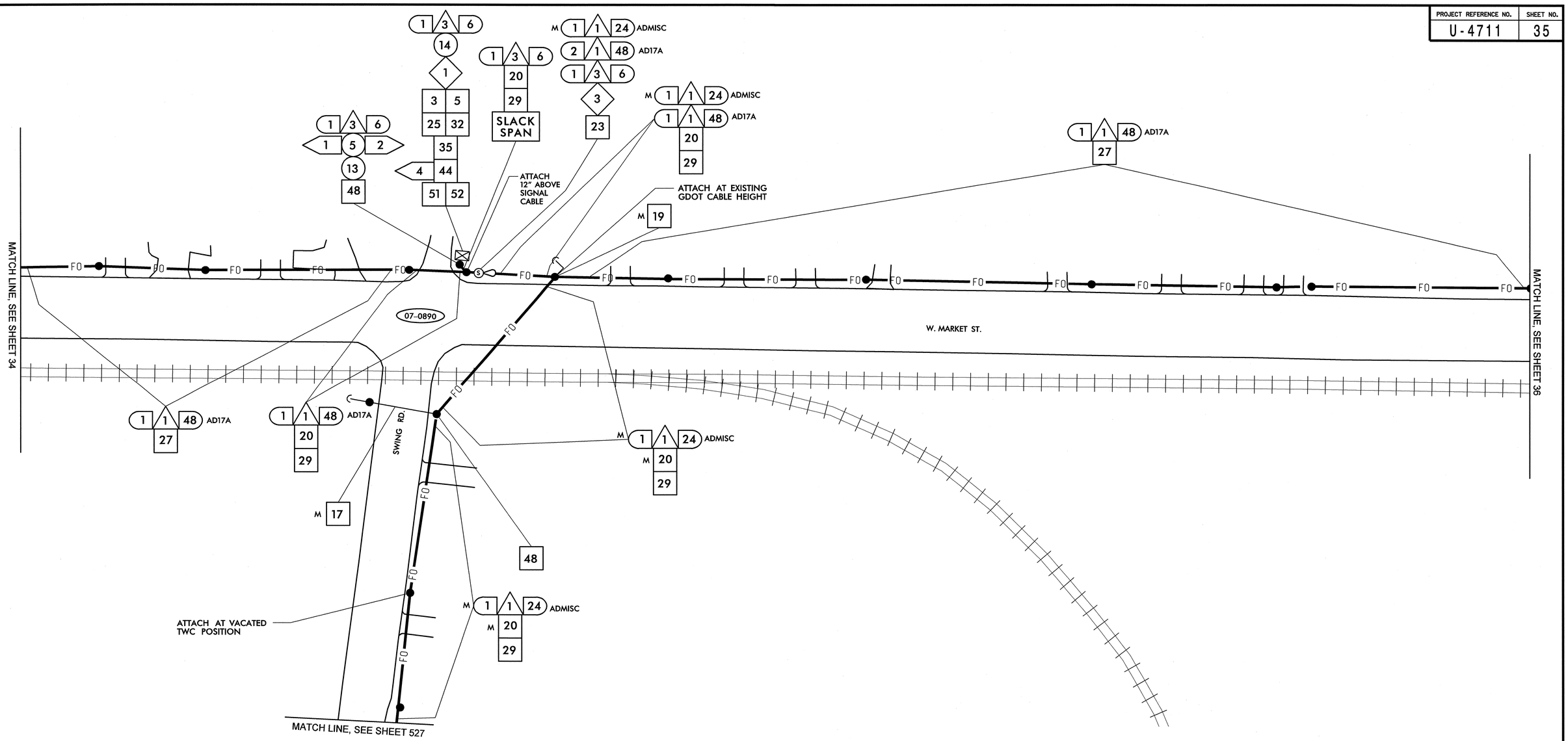
PROJECT REFERENCE NO.	SHEET NO.
U-4711	35



1	INSTALL SMFO CABLE
2	INSTALL PLENUM RATED FIBER OPTIC CABLE
3	INSTALL FIBER OPTIC DROP CABLE
4	INSTALL TRACER WIRE
5	REUSE NCDOT SMFO CABLE
6	REUSE GDOT SMFO CABLE
(1)	TRENCH
(2)	INSTALL PVC CONDUIT
(3)	INSTALL RIGID, GALVANIZED STEEL CONDUIT
(4)	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
(5)	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
(6)	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
(7)	INSTALL POLYETHYLENE CONDUIT
(8)	DIRECTIONAL DRILL CONDUIT
(9)	BORE AND JACK CONDUIT
(10)	INSTALL CABLE(S) IN EXISTING CONDUIT
(11)	INSTALL CABLE(S) IN NEW CONDUIT
(12)	INSTALL CABLE(S) IN EXISTING RISER
(13)	INSTALL CABLE(S) IN NEW RISER
(14)	INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
(15)	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
(16)	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
(17)	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
(18)	INSTALL NEW RISER INTO POLE MOUNTED CABINET
(19)	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
◇1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
◇2	INSTALL UNDERGROUND SPLICE ENCLOSURE
◇3	INSTALL AERIAL SPLICE ENCLOSURE
◇4	INSTALL POLE MOUNTED SPLICE CABINET
◇5	INSTALL BASE MOUNTED SPLICE CABINET
◇6	REMOVE EXISTING SPLICE CABINET
◇7	INSTALL TERMINAL SPLICE BOX
◇8	MODIFY EXISTING SPLICE ENCLOSURE
[1]	INSTALL CABINET FOUNDATION
[2]	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
[3]	MODIFY EXISTING CABINET FOUNDATION
[4]	INSTALL NEW 333 COMMUNICATION CABINET
[5]	INSTALL NEW 332 BASE MOUNTED CABINET
[6]	INSTALL NEW 336S CABINET
[7]	INSTALL CCTV CAMERA ASSEMBLY
[8]	INSTALL CCTV CAMERA WOOD POLE
[9]	INSTALL CCTV METAL POLE AND FOUNDATION
[10]	INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
[11]	INSTALL SPECIAL OVERSIZED JUNCTION BOX
[12]	INSTALL OVERSIZED JUNCTION BOX
[13]	INSTALL STANDARD JUNCTION BOX
[14]	REMOVE EXISTING JUNCTION BOX
[15]	INSTALL WOOD POLE
[16]	REMOVE EXISTING WOOD POLE
[17]	INSTALL AERIAL GUY ASSEMBLY
[18]	INSTALL STANDARD GUY ASSEMBLY
[19]	INSTALL SIDEWALK GUY ASSEMBLY
[20]	INSTALL MESSENGER CABLE
[21]	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
[22]	REMOVE EXISTING COMMUNICATIONS CABLE
[23]	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
[24]	INSTALL DELINEATOR MARKER
[25]	STORE 30 FEET OF EACH COMMUNICATIONS CABLE
[26]	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
[27]	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
[28]	LASH CABLE(S) TO EXISTING MESSENGER CABLE
[29]	LASH CABLE(S) TO NEW MESSENGER CABLE
[30]	INSTALL NEW ELECTRICAL SERVICE
[31]	MODIFY EXISTING ELECTRICAL SERVICE
[32]	INSTALL NEW CONTROLLER
[33]	INSTALL EXISTING CABLE IN NEW CABINET
[34]	INSTALL GENERATOR POWER INLET BOX
[35]	INSTALL LOCAL GIGABIT ETHERNET SWITCH
[36]	INSTALL UNIFIED CABLE
[37]	INSTALL POLE MOUNTED EQUIPMENT CABINET
[38]	INSTALL UNI-DIRECTIONAL YAGI ANTENNA
[39]	INSTALL OMNI-DIRECTIONAL ANTENNA
[40]	INSTALL RADIO TRANSCEIVER
[41]	INSTALL SYSTEM LOOP
[42]	INSTALL SYSTEM LOOP AMPLIFIER
[43]	INSTALL SYSTEM LOOP LEAD-IN CABLE
[44]	INSTALL LOCAL LOOP AMPLIFIER
[45]	INSTALL CITY WI-FI ANTENNA
[46]	INSTALL HUB 10-GIGABIT ETHERNET SWITCH
[47]	INSTALL CODEC
[48]	BOND MESSENGER CABLE TO POLE GROUND
[49]	INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION
[50]	INSTALL ANTENNA CABLE
[51]	RECONNECT RAILROAD PREEMPTION EQUIPMENT
[52]	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
[53]	INSTALL DSL ETHERNET SWITCH
[54]	INSTALL ETHERNET CABLE
[55]	INSTALL TERMINAL SERVER
[56]	INSTALL MICROWAVE VEHICLE DETECTOR
[57]	INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
[58]	INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch — Department of Transportation — State of North Carolina — Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY
PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH
PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE 2/20/08 DATE
CADD Filename: ..\Sht0035m.dgn

2/20/2008
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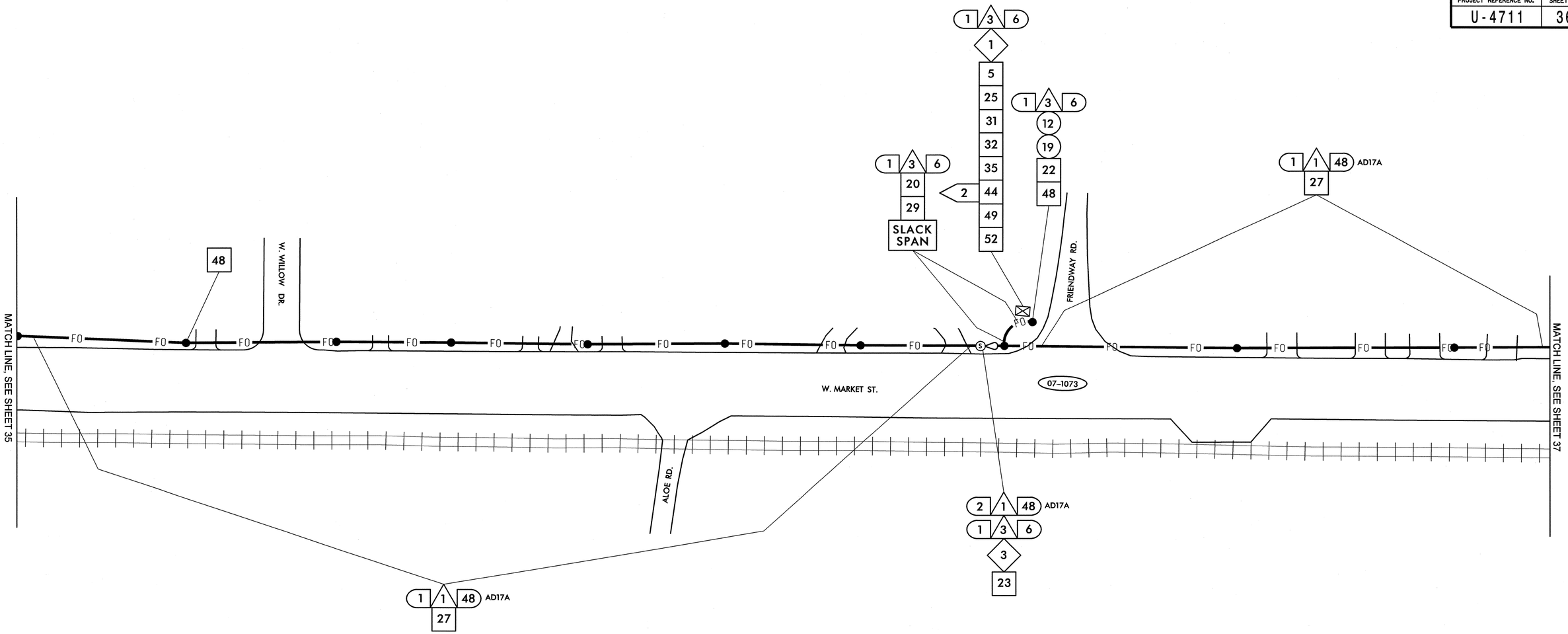
PROJECT REFERENCE NO.	SHEET NO.
U-4711	36



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3	INSTALL FIBER OPTIC DROP CABLE
4	INSTALL TRACER WIRE
5	REUSE NCDOT SMFO CABLE
6	REUSE GDOT SMFO CABLE
1	TRENCH
2	INSTALL PVC CONDUIT
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
6	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
7	INSTALL POLYETHYLENE CONDUIT
8	DIRECTIONAL DRILL CONDUIT
9	BORE AND JACK CONDUIT
10	INSTALL CABLE(S) IN EXISTING CONDUIT
11	INSTALL CABLE(S) IN NEW CONDUIT
12	INSTALL CABLE(S) IN EXISTING RISER
13	INSTALL CABLE(S) IN NEW RISER
14	INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
15	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
16	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
17	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
18	INSTALL NEW RISER INTO POLE MOUNTED CABINET
19	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2	INSTALL UNDERGROUND SPLICE ENCLOSURE
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4	INSTALL POLE MOUNTED SPLICE CABINET
5	INSTALL BASE MOUNTED SPLICE CABINET
6	REMOVE EXISTING SPLICE CABINET
7	INSTALL TERMINAL SPLICE BOX
8	MODIFY EXISTING SPLICE ENCLOSURE
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
3	MODIFY EXISTING CABINET FOUNDATION
4	INSTALL NEW 333 COMMUNICATION CABINET
5	INSTALL NEW 332 BASE MOUNTED CABINET
6	INSTALL NEW 336S CABINET
7	INSTALL CCTV CAMERA ASSEMBLY
8	INSTALL CCTV CAMERA WOOD POLE
9	INSTALL CCTV METAL POLE AND FOUNDATION
10	INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
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13	INSTALL STANDARD JUNCTION BOX
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15	INSTALL WOOD POLE
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19	INSTALL SIDEWALK GUY ASSEMBLY
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23	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
24	INSTALL DELINEATOR MARKER
25	STORE 30 FEET OF EACH COMMUNICATIONS CABLE
26	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
27	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
28	LASH CABLE(S) TO EXISTING MESSENGER CABLE
29	LASH CABLE(S) TO NEW MESSENGER CABLE
30	INSTALL NEW ELECTRICAL SERVICE
31	MODIFY EXISTING ELECTRICAL SERVICE
32	INSTALL NEW CONTROLLER
33	INSTALL EXISTING CABLE IN NEW CABINET
34	INSTALL GENERATOR POWER INLET BOX
35	INSTALL LOCAL GIGABIT ETHERNET SWITCH
36	INSTALL UNIFIED CABLE
37	INSTALL POLE MOUNTED EQUIPMENT CABINET
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39	INSTALL OMNI-DIRECTIONAL ANTENNA
40	INSTALL RADIO TRANSCEIVER
41	INSTALL SYSTEM LOOP
42	INSTALL SYSTEM LOOP AMPLIFIER
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44	INSTALL LOCAL LOOP AMPLIFIER
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47	INSTALL CODEC
48	BOND MESSENGER CABLE TO POLE GROUND
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53	INSTALL DSL ETHERNET SWITCH
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55	INSTALL TERMINAL SERVER
56	INSTALL MICROWAVE VEHICLE DETECTOR
57	INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
58	INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
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Traffic Engineering and Safety Systems Branch
NC DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

2/20/08
SIGNATURE DATE

CADD Filename: ...\Sht0036.dgn

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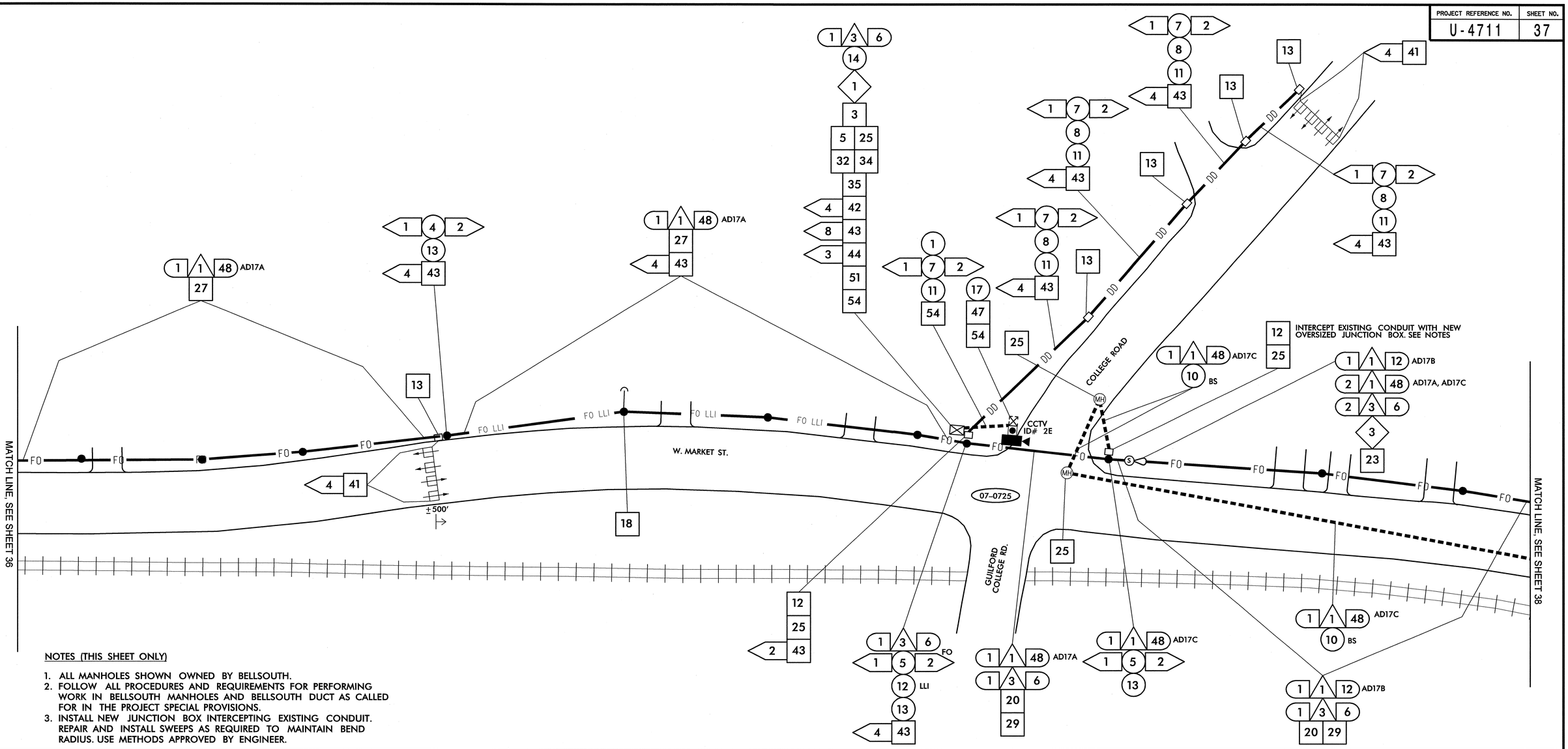
PROJECT REFERENCE NO.	SHEET NO.
U-4711	37



NOTES (THIS SHEET ONLY)

1. ALL MANHOLES SHOWN OWNED BY BELLSOUTH.
2. FOLLOW ALL PROCEDURES AND REQUIREMENTS FOR PERFORMING WORK IN BELLSOUTH MANHOLES AND BELLSOUTH DUCT AS CALLED FOR IN THE PROJECT SPECIAL PROVISIONS.
3. INSTALL NEW JUNCTION BOX INTERCEPTING EXISTING CONDUIT. REPAIR AND INSTALL SWEEPS AS REQUIRED TO MAINTAIN BEND RADIUS. USE METHODS APPROVED BY ENGINEER.

1	INSTALL SMFO CABLE
2	INSTALL PLENUM RATED FIBER OPTIC CABLE
3	INSTALL FIBER OPTIC DROP CABLE
4	INSTALL TRACER WIRE
5	REUSE NCDOT SMFO CABLE
6	REUSE GDOT SMFO CABLE
(1)	TRENCH
(2)	INSTALL PVC CONDUIT
(3)	INSTALL RIGID, GALVANIZED STEEL CONDUIT
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4	INSTALL POLE MOUNTED SPLICE CABINET
5	INSTALL BASE MOUNTED SPLICE CABINET
6	REMOVE EXISTING SPLICE CABINET
7	INSTALL TERMINAL SPLICE BOX
8	MODIFY EXISTING SPLICE ENCLOSURE
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
3	MODIFY EXISTING CABINET FOUNDATION
4	INSTALL NEW 333 COMMUNICATION CABINET
5	INSTALL NEW 332 BASE MOUNTED CABINET
6	INSTALL NEW 336S CABINET
7	INSTALL CCTV CAMERA ASSEMBLY
8	INSTALL CCTV CAMERA WOOD POLE
9	INSTALL CCTV METAL POLE AND FOUNDATION
10	INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
11	INSTALL SPECIAL OVERSIZED JUNCTION BOX
12	INSTALL OVERSIZED JUNCTION BOX
13	INSTALL STANDARD JUNCTION BOX
14	REMOVE EXISTING JUNCTION BOX
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21	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
22	REMOVE EXISTING COMMUNICATIONS CABLE
23	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
24	INSTALL DELINEATOR MARKER
25	STORE 30 FEET OF EACH COMMUNICATIONS CABLE
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27	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
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29	LASH CABLE(S) TO NEW MESSENGER CABLE
30	INSTALL NEW ELECTRICAL SERVICE
31	MODIFY EXISTING ELECTRICAL SERVICE
32	INSTALL NEW CONTROLLER
33	INSTALL EXISTING CABLE IN NEW CABINET
34	INSTALL GENERATOR POWER INLET BOX
35	INSTALL LOCAL GIGABIT ETHERNET SWITCH
36	INSTALL UNIFIED CABLE
37	INSTALL POLE MOUNTED EQUIPMENT CABINET
38	INSTALL UNI-DIRECTIONAL YAGI ANTENNA
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40	INSTALL RADIO TRANSCEIVER
41	INSTALL SYSTEM LOOP
42	INSTALL SYSTEM LOOP AMPLIFIER
43	INSTALL SYSTEM LOOP LEAD-IN CABLE
44	INSTALL LOCAL LOOP AMPLIFIER
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46	INSTALL HUB 10-GIGABIT ETHERNET SWITCH
47	INSTALL CODEC
48	BOND MESSENGER CABLE TO POLE GROUND
49	INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION
50	INSTALL ANTENNA CABLE
51	RECONNECT RAILROAD PREEMPTION EQUIPMENT
52	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
53	INSTALL DSL ETHERNET SWITCH
54	INSTALL ETHERNET CABLE
55	INSTALL TERMINAL SERVER
56	INSTALL MICROWAVE VEHICLE DETECTOR
57	INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
58	INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
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CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: K.D. VANPATTEN	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SCALE 0 50

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filenames: ...\Sht0037.dgn

2/20/2008
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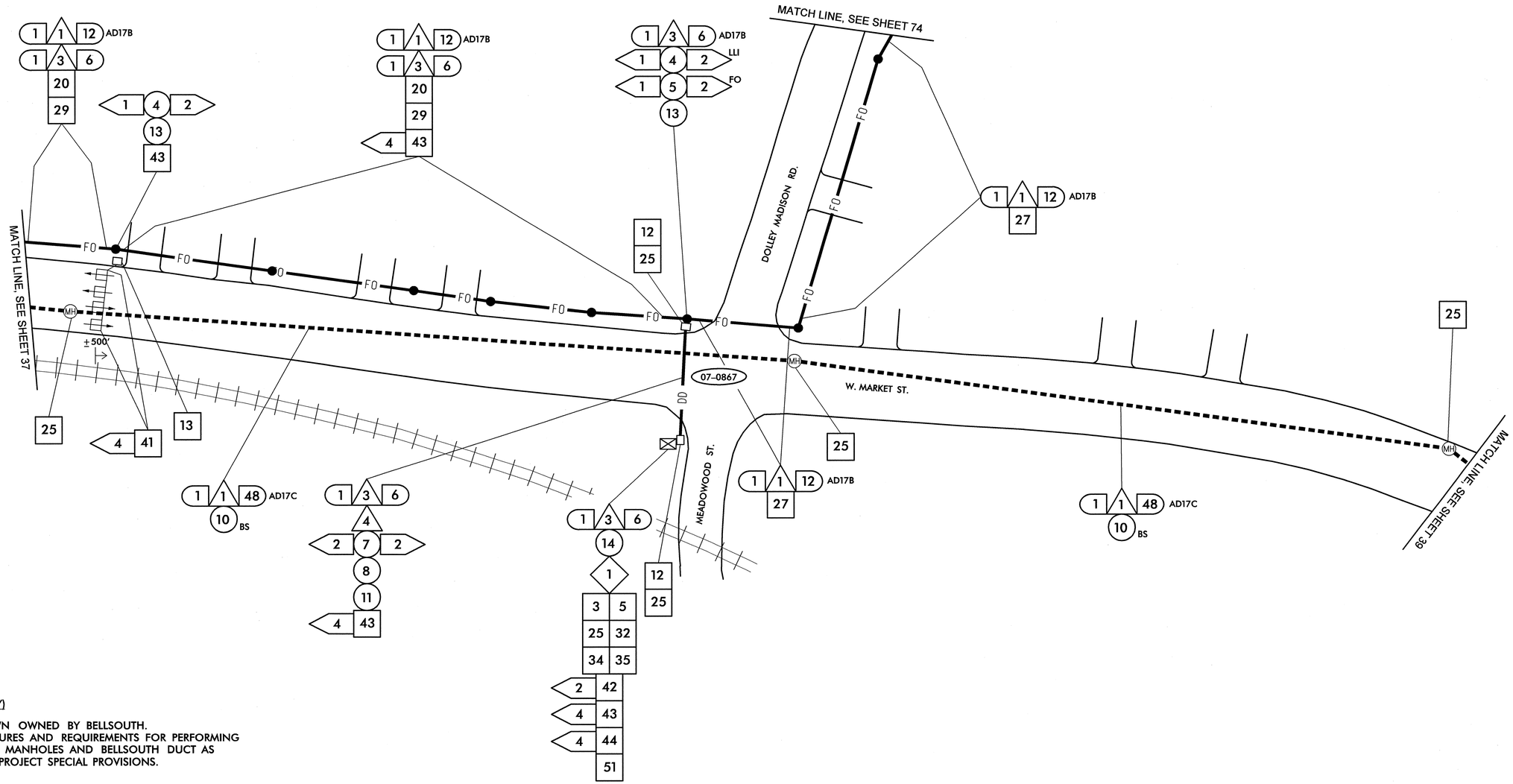
PROJECT REFERENCE NO.	SHEET NO.
U-4711	38



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3	INSTALL FIBER OPTIC DROP CABLE
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⟨4⟩	INSTALL POLE MOUNTED SPLICE CABINET
⟨5⟩	INSTALL BASE MOUNTED SPLICE CABINET
⟨6⟩	REMOVE EXISTING SPLICE CABINET
⟨7⟩	INSTALL TERMINAL SPLICE BOX
⟨8⟩	MODIFY EXISTING SPLICE ENCLOSURE
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SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: K.D. VANPATTEN	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 023562 MARK DUNZO

SIGNATURE 2/20/08 DATE

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2/20/2008
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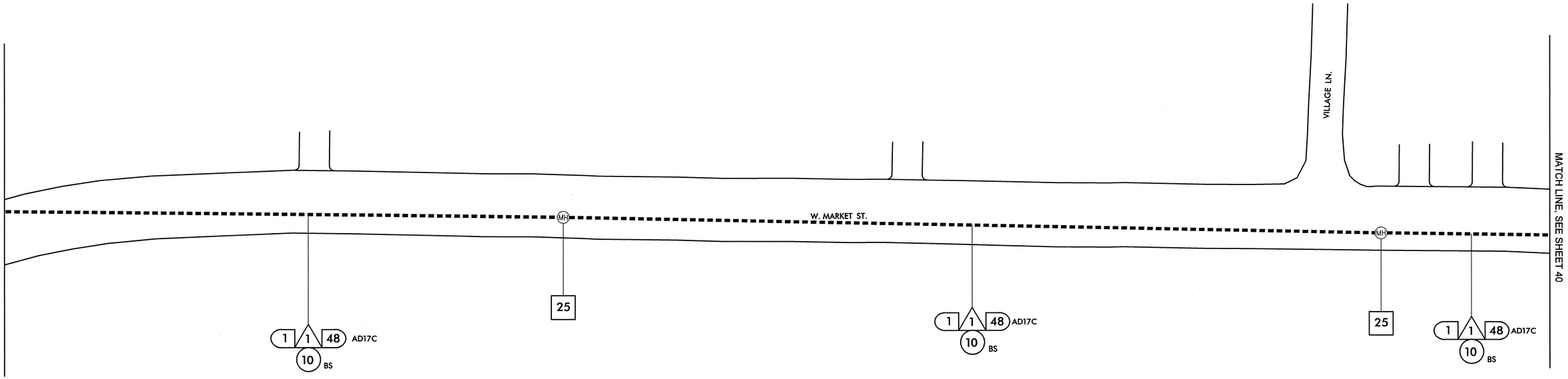
PROJECT REFERENCE NO.	SHEET NO.
U-4711	39



NOTES (THIS SHEET ONLY)

1. ALL MANHOLES SHOWN OWNED BY BELLSOUTH.
2. FOLLOW ALL PROCEDURES AND REQUIREMENTS FOR PERFORMING WORK IN BELLSOUTH MANHOLES AND BELLSOUTH DUCT AS CALLED FOR IN THE PROJECT SPECIAL PROVISIONS.

△1 INSTALL SMFO CABLE
△2 INSTALL PLENUM RATED FIBER OPTIC CABLE
△3 INSTALL FIBER OPTIC DROP CABLE
△4 INSTALL TRACER WIRE
△5 REUSE NCDOT SMFO CABLE
△6 REUSE GDOT SMFO CABLE

(1) TRENCH
(2) INSTALL PVC CONDUIT
(3) INSTALL RIGID, GALVANIZED STEEL CONDUIT
(4) INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
(5) INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
(6) INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
(7) INSTALL POLYETHYLENE CONDUIT
(8) DIRECTIONAL DRILL CONDUIT
(9) BORE AND JACK CONDUIT
(10) INSTALL CABLE(S) IN EXISTING CONDUIT
(11) INSTALL CABLE(S) IN NEW CONDUIT
(12) INSTALL CABLE(S) IN EXISTING RISER
(13) INSTALL CABLE(S) IN NEW RISER
(14) INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
(15) INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
(16) INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
(17) INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
(18) INSTALL NEW RISER INTO POLE MOUNTED CABINET
(19) REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING

◇1 INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
◇2 INSTALL UNDERGROUND SPLICE ENCLOSURE
◇3 INSTALL AERIAL SPLICE ENCLOSURE
◇4 INSTALL POLE MOUNTED SPLICE CABINET
◇5 INSTALL BASE MOUNTED SPLICE CABINET
◇6 REMOVE EXISTING SPLICE CABINET
◇7 INSTALL TERMINAL SPLICE BOX
◇8 MODIFY EXISTING SPLICE ENCLOSURE

[1] INSTALL CABINET FOUNDATION
[2] REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
[3] MODIFY EXISTING CABINET FOUNDATION
[4] INSTALL NEW 333 COMMUNICATION CABINET
[5] INSTALL NEW 332 BASE MOUNTED CABINET
[6] INSTALL NEW 336S CABINET
[7] INSTALL CCTV CAMERA ASSEMBLY
[8] INSTALL CCTV CAMERA WOOD POLE
[9] INSTALL CCTV METAL POLE AND FOUNDATION
[10] INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
[11] INSTALL SPECIAL OVERSIZED JUNCTION BOX
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[13] INSTALL STANDARD JUNCTION BOX
[14] REMOVE EXISTING JUNCTION BOX
[15] INSTALL WOOD POLE
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[17] INSTALL AERIAL GUY ASSEMBLY
[18] INSTALL STANDARD GUY ASSEMBLY
[19] INSTALL SIDEWALK GUY ASSEMBLY
[20] INSTALL MESSENGER CABLE
[21] REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
[22] REMOVE EXISTING COMMUNICATIONS CABLE
[23] INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
[24] INSTALL DELINEATOR MARKER
[25] STORE 30 FEET OF EACH COMMUNICATIONS CABLE
[26] STORE 100 FEET OF EACH COMMUNICATIONS CABLE
[27] LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
[28] LASH CABLE(S) TO EXISTING MESSENGER CABLE
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[30] INSTALL NEW ELECTRICAL SERVICE
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[32] INSTALL NEW CONTROLLER
[33] INSTALL EXISTING CABLE IN NEW CABINET
[34] INSTALL GENERATOR POWER INLET BOX
[35] INSTALL LOCAL GIGABIT ETHERNET SWITCH
[36] INSTALL UNIFIED CABLE
[37] INSTALL POLE MOUNTED EQUIPMENT CABINET
[38] INSTALL UNI-DIRECTIONAL YAGI ANTENNA
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[40] INSTALL RADIO TRANSCEIVER
[41] INSTALL SYSTEM LOOP
[42] INSTALL SYSTEM LOOP AMPLIFIER
[43] INSTALL SYSTEM LOOP LEAD-IN CABLE
[44] INSTALL LOCAL LOOP AMPLIFIER
[45] INSTALL CITY WI-FI ANTENNA
[46] INSTALL HUB 10-GIGABIT ETHERNET SWITCH
[47] INSTALL CODEC
[48] BOND MESSENGER CABLE TO POLE GROUND
[49] INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION
[50] INSTALL ANTENNA CABLE
[51] RECONNECT RAILROAD PREEMPTION EQUIPMENT
[52] RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
[53] INSTALL DSL ETHERNET SWITCH
[54] INSTALL ETHERNET CABLE
[55] INSTALL TERMINAL SERVER
[56] INSTALL MICROWAVE VEHICLE DETECTOR
[57] INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
[58] INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: K.D. VANPATTEN	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE 2/20/08 DATE
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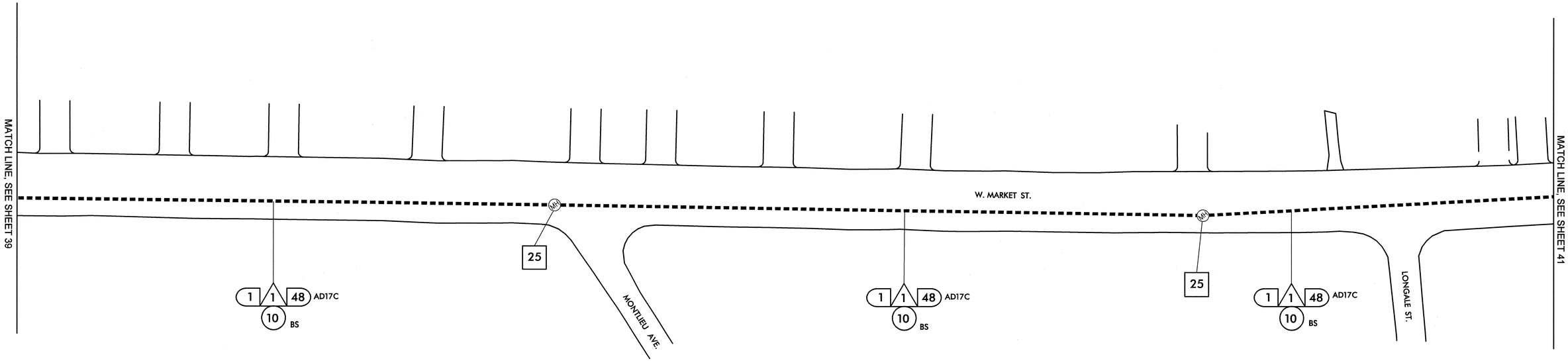
PROJECT REFERENCE NO.	SHEET NO.
U-4711	40



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(1)	INSTALL SMFO CABLE
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(3)	INSTALL FIBER OPTIC DROP CABLE
(4)	INSTALL TRACER WIRE
(5)	REUSE NCDOT SMFO CABLE
(6)	REUSE GDOT SMFO CABLE
(1)	TRENCH
(2)	INSTALL PVC CONDUIT
(3)	INSTALL RIGID, GALVANIZED STEEL CONDUIT
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[8]	INSTALL CCTV CAMERA WOOD POLE
[9]	INSTALL CCTV METAL POLE AND FOUNDATION
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[54]	INSTALL ETHERNET CABLE
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[57]	INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
[58]	INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
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Traffic Engineering and Safety Systems Branch
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Integrated Mobility Division
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

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CABLE ROUTING SHEET

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
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SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

2/22/08
SIGNATURE DATE

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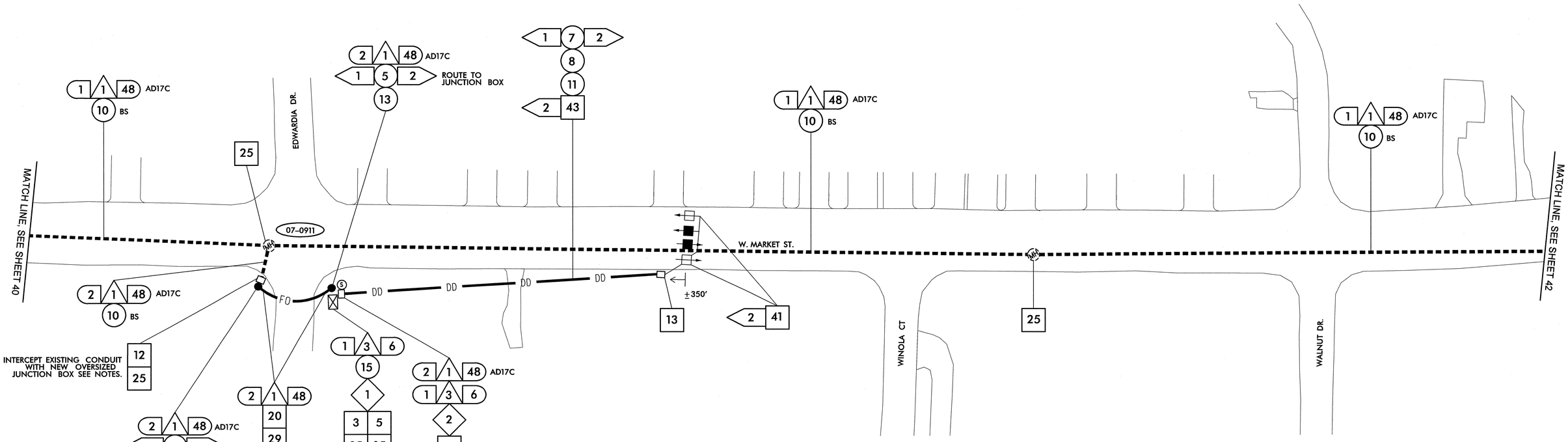
PROJECT REFERENCE NO.	SHEET NO.
U-4711	41



NOTES (THIS SHEET ONLY)

1. ALL MANHOLES SHOWN OWNED BY BELLSOUTH.
2. FOLLOW ALL PROCEDURES AND REQUIREMENTS FOR PERFORMING WORK IN BELLSOUTH MANHOLES.
3. INSTALL NEW JUNCTION BOX INTERCEPTING EXISTING CONDUIT. REPAIR AND INSTALL SWEEPS AS REQUIRED TO MAINTAIN BEND RADIUS. USE METHODS APPROVED BY ENGINEER.

1	INSTALL SMFO CABLE
2	INSTALL PLENUM RATED FIBER OPTIC CABLE
3	INSTALL FIBER OPTIC DROP CABLE
4	INSTALL TRACER WIRE
5	REUSE NCDOT SMFO CABLE
6	REUSE GDOT SMFO CABLE
1	TRENCH
2	INSTALL PVC CONDUIT
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
6	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
7	INSTALL POLYETHYLENE CONDUIT
8	DIRECTIONAL DRILL CONDUIT
9	BORE AND JACK CONDUIT
10	INSTALL CABLE(S) IN EXISTING CONDUIT
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14	INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
15	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
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17	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
18	INSTALL NEW RISER INTO POLE MOUNTED CABINET
19	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2	INSTALL UNDERGROUND SPLICE ENCLOSURE
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4	INSTALL POLE MOUNTED SPLICE CABINET
5	INSTALL BASE MOUNTED SPLICE CABINET
6	REMOVE EXISTING SPLICE CABINET
7	INSTALL TERMINAL SPLICE BOX
8	MODIFY EXISTING SPLICE ENCLOSURE
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
3	MODIFY EXISTING CABINET FOUNDATION
4	INSTALL NEW 333 COMMUNICATION CABINET
5	INSTALL NEW 332 BASE MOUNTED CABINET
6	INSTALL NEW 336S CABINET
7	INSTALL CCTV CAMERA ASSEMBLY
8	INSTALL CCTV CAMERA WOOD POLE
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10	INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
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18	INSTALL STANDARD GUY ASSEMBLY
19	INSTALL SIDEWALK GUY ASSEMBLY
20	INSTALL MESSENGER CABLE
21	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
22	REMOVE EXISTING COMMUNICATIONS CABLE
23	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
24	INSTALL DELINEATOR MARKER
25	STORE 30 FEET OF EACH COMMUNICATIONS CABLE
26	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
27	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
28	LASH CABLE(S) TO EXISTING MESSENGER CABLE
29	LASH CABLE(S) TO NEW MESSENGER CABLE
30	INSTALL NEW ELECTRICAL SERVICE
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32	INSTALL NEW CONTROLLER
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34	INSTALL GENERATOR POWER INLET BOX
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41	INSTALL SYSTEM LOOP
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47	INSTALL CODEC
48	BOND MESSENGER CABLE TO POLE GROUND
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Traffic Engineering and Safety Systems Branch
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
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REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filename: ...\Sht004l.dgn

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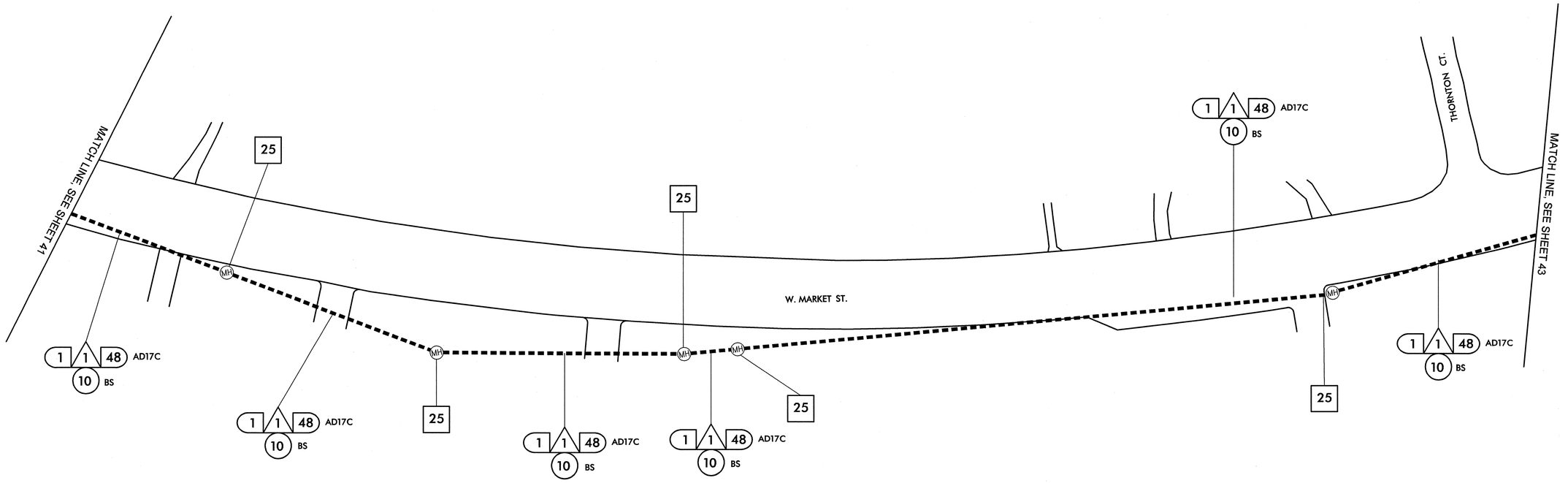
PROJECT REFERENCE NO.	SHEET NO.
U-4711	42



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1	INSTALL SMFO CABLE
2	INSTALL PLENUM RATED FIBER OPTIC CABLE
3	INSTALL FIBER OPTIC DROP CABLE
4	INSTALL TRACER WIRE
5	REUSE NCDOT SMFO CABLE
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(1)	TRENCH
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[37]	INSTALL POLE MOUNTED EQUIPMENT CABINET
[38]	INSTALL UNI-DIRECTIONAL YAGI ANTENNA
[39]	INSTALL OMNI-DIRECTIONAL ANTENNA
[40]	INSTALL RADIO TRANSCEIVER
[41]	INSTALL SYSTEM LOOP
[42]	INSTALL SYSTEM LOOP AMPLIFIER
[43]	INSTALL SYSTEM LOOP LEAD-IN CABLE
[44]	INSTALL LOCAL LOOP AMPLIFIER
[45]	INSTALL CITY WI-FI ANTENNA
[46]	INSTALL HUB 10-GIGABIT ETHERNET SWITCH
[47]	INSTALL CODEC
[48]	BOND MESSENGER CABLE TO POLE GROUND
[49]	INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION
[50]	INSTALL ANTENNA CABLE
[51]	RECONNECT RAILROAD PREEMPTION EQUIPMENT
[52]	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
[53]	INSTALL DSL ETHERNET SWITCH
[54]	INSTALL ETHERNET CABLE
[55]	INSTALL TERMINAL SERVER
[56]	INSTALL MICROWAVE VEHICLE DETECTOR
[57]	INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
[58]	INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE 2/20/08 DATE

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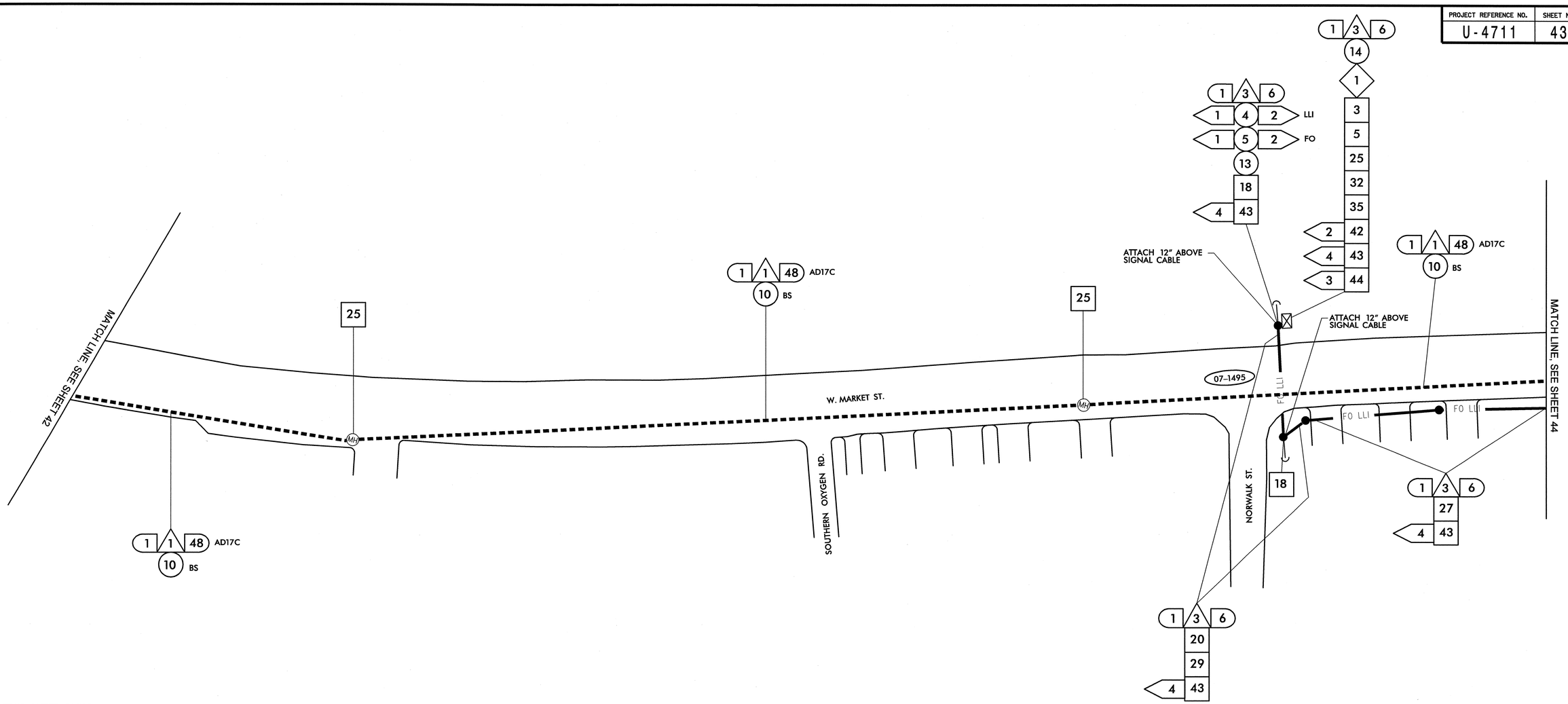
PROJECT REFERENCE NO.	SHEET NO.
U-4711	43



NOTES (THIS SHEET ONLY)

1. ALL MANHOLES SHOWN OWNED BY BELLSOUTH.
2. FOLLOW ALL PROCEDURES AND REQUIREMENTS FOR PERFORMING WORK IN BELLSOUTH MANHOLES AND BELLSOUTH DUCT AS CALLED FOR IN THE PROJECT SPECIAL PROVISIONS.

△1 INSTALL SMFO CABLE
△2 INSTALL PLENUM RATED FIBER OPTIC CABLE
△3 INSTALL FIBER OPTIC DROP CABLE
△4 INSTALL TRACER WIRE
△5 REUSE NCDOT SMFO CABLE
△6 REUSE GDOT SMFO CABLE

(1) TRENCH
(2) INSTALL PVC CONDUIT
(3) INSTALL RIGID, GALVANIZED STEEL CONDUIT
(4) INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
(5) INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
(6) INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
(7) INSTALL POLYETHYLENE CONDUIT
(8) DIRECTIONAL DRILL CONDUIT
(9) BORE AND JACK CONDUIT
(10) INSTALL CABLE(S) IN EXISTING CONDUIT
(11) INSTALL CABLE(S) IN NEW CONDUIT
(12) INSTALL CABLE(S) IN EXISTING RISER
(13) INSTALL CABLE(S) IN NEW RISER
(14) INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
(15) INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
(16) INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
(17) INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
(18) INSTALL NEW RISER INTO POLE MOUNTED CABINET
(19) REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING

◇1 INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
◇2 INSTALL UNDERGROUND SPLICE ENCLOSURE
◇3 INSTALL AERIAL SPLICE ENCLOSURE
◇4 INSTALL POLE MOUNTED SPLICE CABINET
◇5 INSTALL BASE MOUNTED SPLICE CABINET
◇6 REMOVE EXISTING SPLICE CABINET
◇7 INSTALL TERMINAL SPLICE BOX
◇8 MODIFY EXISTING SPLICE ENCLOSURE

[1] INSTALL CABINET FOUNDATION
[2] REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
[3] MODIFY EXISTING CABINET FOUNDATION
[4] INSTALL NEW 333 COMMUNICATION CABINET
[5] INSTALL NEW 332 BASE MOUNTED CABINET
[6] INSTALL NEW 336S CABINET
[7] INSTALL CCTV CAMERA ASSEMBLY
[8] INSTALL CCTV CAMERA WOOD POLE
[9] INSTALL CCTV METAL POLE AND FOUNDATION
[10] INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
[11] INSTALL SPECIAL OVERSIZED JUNCTION BOX
[12] INSTALL OVERSIZED JUNCTION BOX
[13] INSTALL STANDARD JUNCTION BOX
[14] REMOVE EXISTING JUNCTION BOX
[15] INSTALL WOOD POLE
[16] REMOVE EXISTING WOOD POLE
[17] INSTALL AERIAL GUY ASSEMBLY
[18] INSTALL STANDARD GUY ASSEMBLY
[19] INSTALL SIDEWALK GUY ASSEMBLY
[20] INSTALL MESSENGER CABLE
[21] REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
[22] REMOVE EXISTING COMMUNICATIONS CABLE
[23] INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
[24] INSTALL DELINEATOR MARKER
[25] STORE 30 FEET OF EACH COMMUNICATIONS CABLE
[26] STORE 100 FEET OF EACH COMMUNICATIONS CABLE
[27] LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
[28] LASH CABLE(S) TO EXISTING MESSENGER CABLE
[29] LASH CABLE(S) TO NEW MESSENGER CABLE
[30] INSTALL NEW ELECTRICAL SERVICE
[31] MODIFY EXISTING ELECTRICAL SERVICE
[32] INSTALL NEW CONTROLLER
[33] INSTALL EXISTING CABLE IN NEW CABINET
[34] INSTALL GENERATOR POWER INLET BOX
[35] INSTALL LOCAL GIGABIT ETHERNET SWITCH
[36] INSTALL UNIFIED CABLE
[37] INSTALL POLE MOUNTED EQUIPMENT CABINET
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[47] INSTALL CODEC
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[51] RECONNECT RAILROAD PREEMPTION EQUIPMENT
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[54] INSTALL ETHERNET CABLE
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[56] INSTALL MICROWAVE VEHICLE DETECTOR
[57] INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
[58] INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
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2/20/2008
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PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: K.D. VANPATTEN	REVIEWED BY: M.W. DUNZO

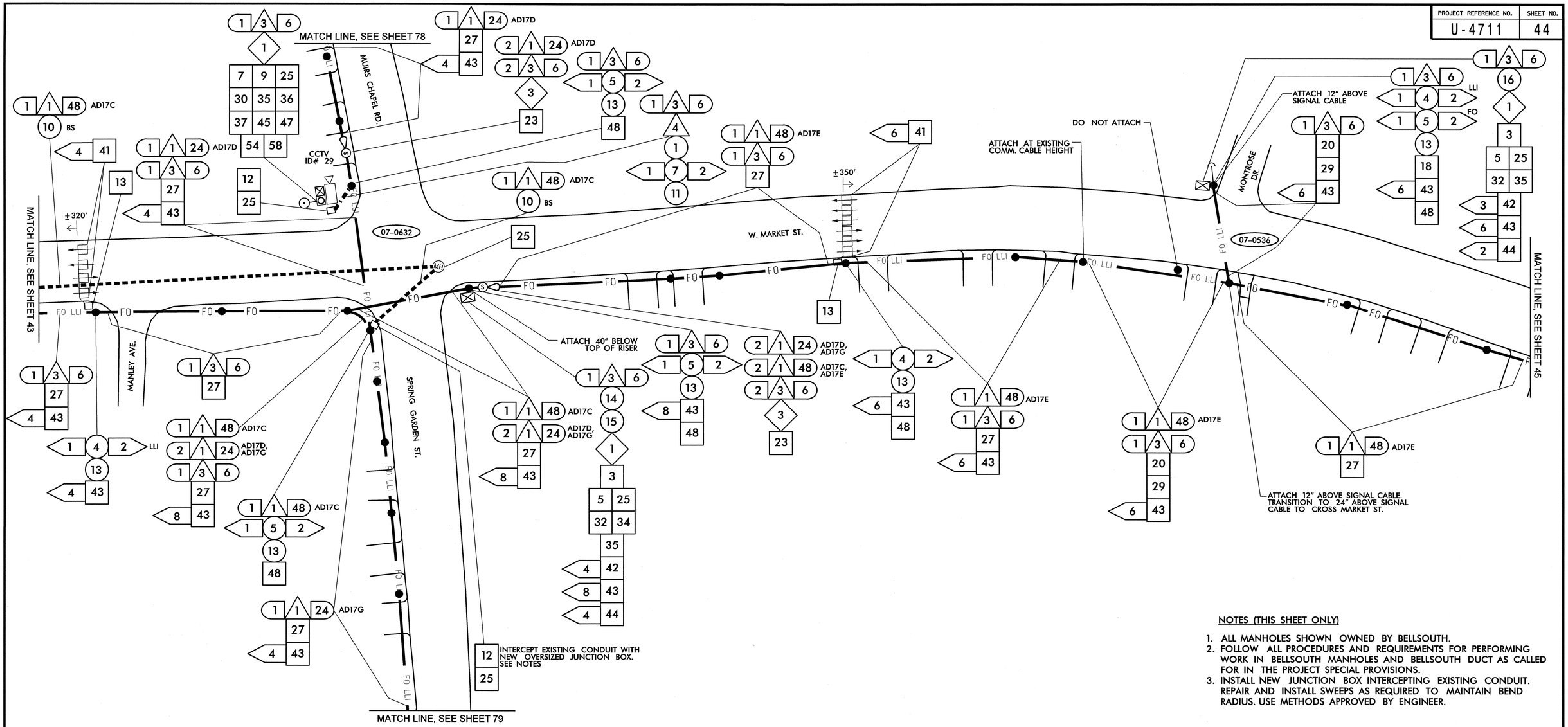
REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL
SEAL 023562
ENGINEER
MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filename: ...\Sh10043.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-4711	44



NOTES (THIS SHEET ONLY)

1. ALL MANHOLES SHOWN OWNED BY BELLSOUTH.
2. FOLLOW ALL PROCEDURES AND REQUIREMENTS FOR PERFORMING WORK IN BELLSOUTH MANHOLES AND BELLSOUTH DUCT AS CALLED FOR IN THE PROJECT SPECIAL PROVISIONS.
3. INSTALL NEW JUNCTION BOX INTERCEPTING EXISTING CONDUIT. REPAIR AND INSTALL SWEEPS AS REQUIRED TO MAINTAIN BEND RADIUS. USE METHODS APPROVED BY ENGINEER.

1	INSTALL SMFO CABLE
2	INSTALL PLENUM RATED FIBER OPTIC CABLE
3	INSTALL FIBER OPTIC DROP CABLE
4	INSTALL TRACER WIRE
5	REUSE NCDOT SMFO CABLE
6	REUSE GDOT SMFO CABLE
(1)	TRENCH
(2)	INSTALL PVC CONDUIT
(3)	INSTALL RIGID, GALVANIZED STEEL CONDUIT
(4)	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
(5)	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
(6)	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
(7)	INSTALL POLYETHYLENE CONDUIT
(8)	DIRECTIONAL DRILL CONDUIT
(9)	BORE AND JACK CONDUIT
(10)	INSTALL CABLE(S) IN EXISTING CONDUIT
(11)	INSTALL CABLE(S) IN NEW CONDUIT
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(13)	INSTALL CABLE(S) IN NEW RISER
(14)	INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
(15)	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
(16)	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
(17)	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
(18)	INSTALL NEW RISER INTO POLE MOUNTED CABINET
(19)	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
◇1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
◇2	INSTALL UNDERGROUND SPLICE ENCLOSURE
◇3	INSTALL AERIAL SPLICE ENCLOSURE
◇4	INSTALL POLE MOUNTED SPLICE CABINET
◇5	INSTALL BASE MOUNTED SPLICE CABINET
◇6	REMOVE EXISTING SPLICE CABINET
◇7	INSTALL TERMINAL SPLICE BOX
◇8	MODIFY EXISTING SPLICE ENCLOSURE
[1]	INSTALL CABINET FOUNDATION
[2]	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
[3]	MODIFY EXISTING CABINET FOUNDATION
[4]	INSTALL NEW 333 COMMUNICATION CABINET
[5]	INSTALL NEW 332 BASE MOUNTED CABINET
[6]	INSTALL NEW 336S CABINET
[7]	INSTALL CCTV CAMERA ASSEMBLY
[8]	INSTALL CCTV CAMERA WOOD POLE
[9]	INSTALL CCTV METAL POLE AND FOUNDATION
[10]	INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
[11]	INSTALL SPECIAL OVERSIZED JUNCTION BOX
[12]	INSTALL OVERSIZED JUNCTION BOX
[13]	INSTALL STANDARD JUNCTION BOX
[14]	REMOVE EXISTING JUNCTION BOX
[15]	INSTALL WOOD POLE
[16]	REMOVE EXISTING WOOD POLE
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[19]	INSTALL SIDEWALK GUY ASSEMBLY
[20]	INSTALL MESSENGER CABLE
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[22]	REMOVE EXISTING COMMUNICATIONS CABLE
[23]	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
[24]	INSTALL DELINEATOR MARKER
[25]	STORE 30 FEET OF EACH COMMUNICATIONS CABLE
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[27]	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
[28]	LASH CABLE(S) TO EXISTING MESSENGER CABLE
[29]	LASH CABLE(S) TO NEW MESSENGER CABLE
[30]	INSTALL NEW ELECTRICAL SERVICE
[31]	MODIFY EXISTING ELECTRICAL SERVICE
[32]	INSTALL NEW CONTROLLER
[33]	INSTALL EXISTING CABLE IN NEW CABINET
[34]	INSTALL GENERATOR POWER INLET BOX
[35]	INSTALL LOCAL GIGABIT ETHERNET SWITCH
[36]	INSTALL UNIFIED CABLE
[37]	INSTALL POLE MOUNTED EQUIPMENT CABINET
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[39]	INSTALL OMNI-DIRECTIONAL ANTENNA
[40]	INSTALL RADIO TRANSCEIVER
[41]	INSTALL SYSTEM LOOP
[42]	INSTALL SYSTEM LOOP AMPLIFIER
[43]	INSTALL SYSTEM LOOP LEAD-IN CABLE
[44]	INSTALL LOCAL LOOP AMPLIFIER
[45]	INSTALL CITY WI-FI ANTENNA
[46]	INSTALL HUB 10-GIGABIT ETHERNET SWITCH
[47]	INSTALL CODEC
[48]	BOND MESSENGER CABLE TO POLE GROUND
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[50]	INSTALL ANTENNA CABLE
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[52]	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
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[54]	INSTALL ETHERNET CABLE
[55]	INSTALL TERMINAL SERVER
[56]	INSTALL MICROWAVE VEHICLE DETECTOR
[57]	INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
[58]	INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
NC DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: K.D. VANPATTEN	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE — DATE 3/4/08

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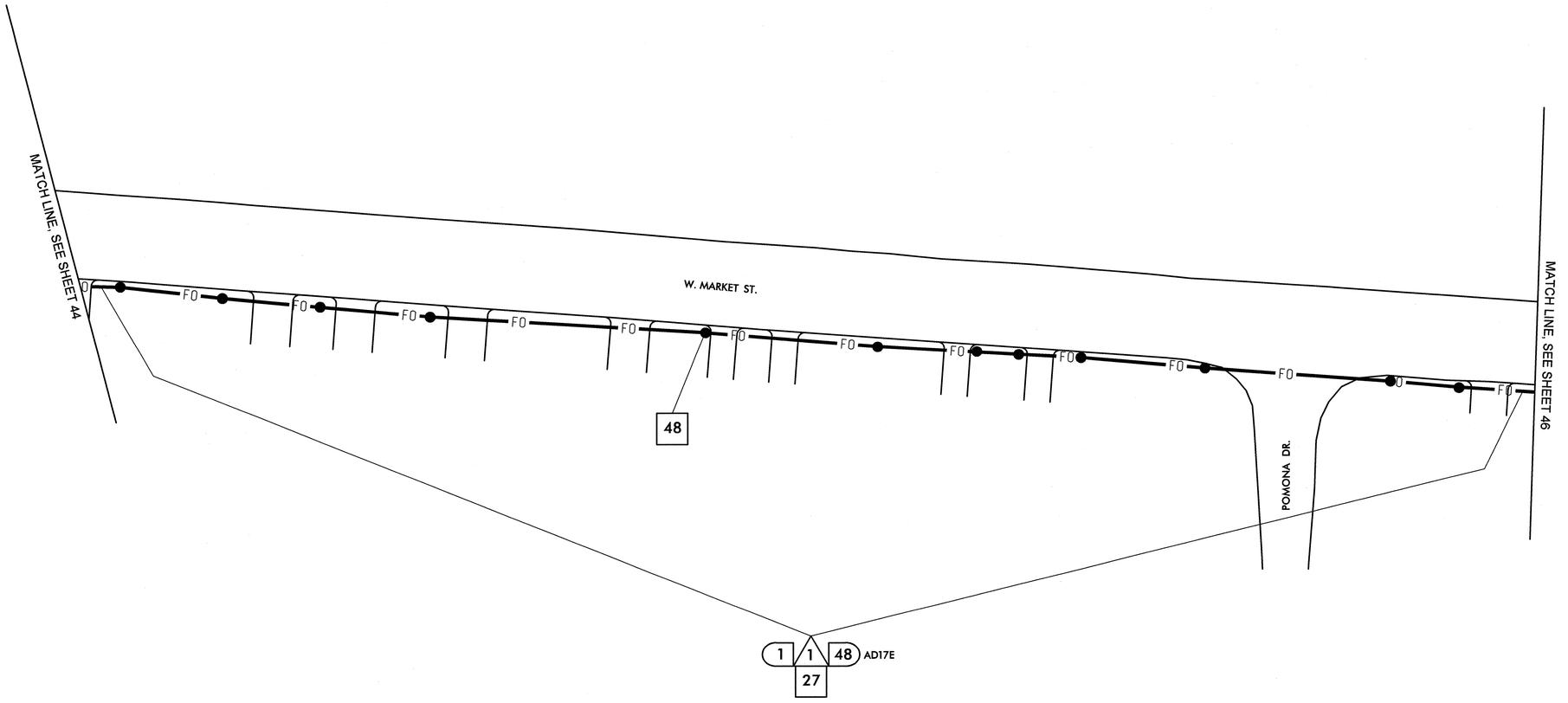
PROJECT REFERENCE NO.	SHEET NO.
U-4711	45



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5. REUSE NCDOT SMFO CABLE
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1. TRENCH
2. INSTALL PVC CONDUIT
3. INSTALL RIGID, GALVANIZED STEEL CONDUIT
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9. BORE AND JACK CONDUIT
10. INSTALL CABLE(S) IN EXISTING CONDUIT
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17. INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
18. INSTALL NEW RISER INTO POLE MOUNTED CABINET
19. REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
1. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2. INSTALL UNDERGROUND SPLICE ENCLOSURE
3. INSTALL AERIAL SPLICE ENCLOSURE
4. INSTALL POLE MOUNTED SPLICE CABINET
5. INSTALL BASE MOUNTED SPLICE CABINET
6. REMOVE EXISTING SPLICE CABINET
7. INSTALL TERMINAL SPLICE BOX
8. MODIFY EXISTING SPLICE ENCLOSURE
1. INSTALL CABINET FOUNDATION
2. REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
3. MODIFY EXISTING CABINET FOUNDATION
4. INSTALL NEW 333 COMMUNICATION CABINET
5. INSTALL NEW 332 BASE MOUNTED CABINET
6. INSTALL NEW 336S CABINET
7. INSTALL CCTV CAMERA ASSEMBLY
8. INSTALL CCTV CAMERA WOOD POLE
9. INSTALL CCTV METAL POLE AND FOUNDATION
10. INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
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24. INSTALL DELINEATOR MARKER
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27. LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
28. LASH CABLE(S) TO EXISTING MESSENGER CABLE
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30. INSTALL NEW ELECTRICAL SERVICE
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SCALE 0 50 N

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: K.D. VANPATTEN	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE 2/20/08 DATE

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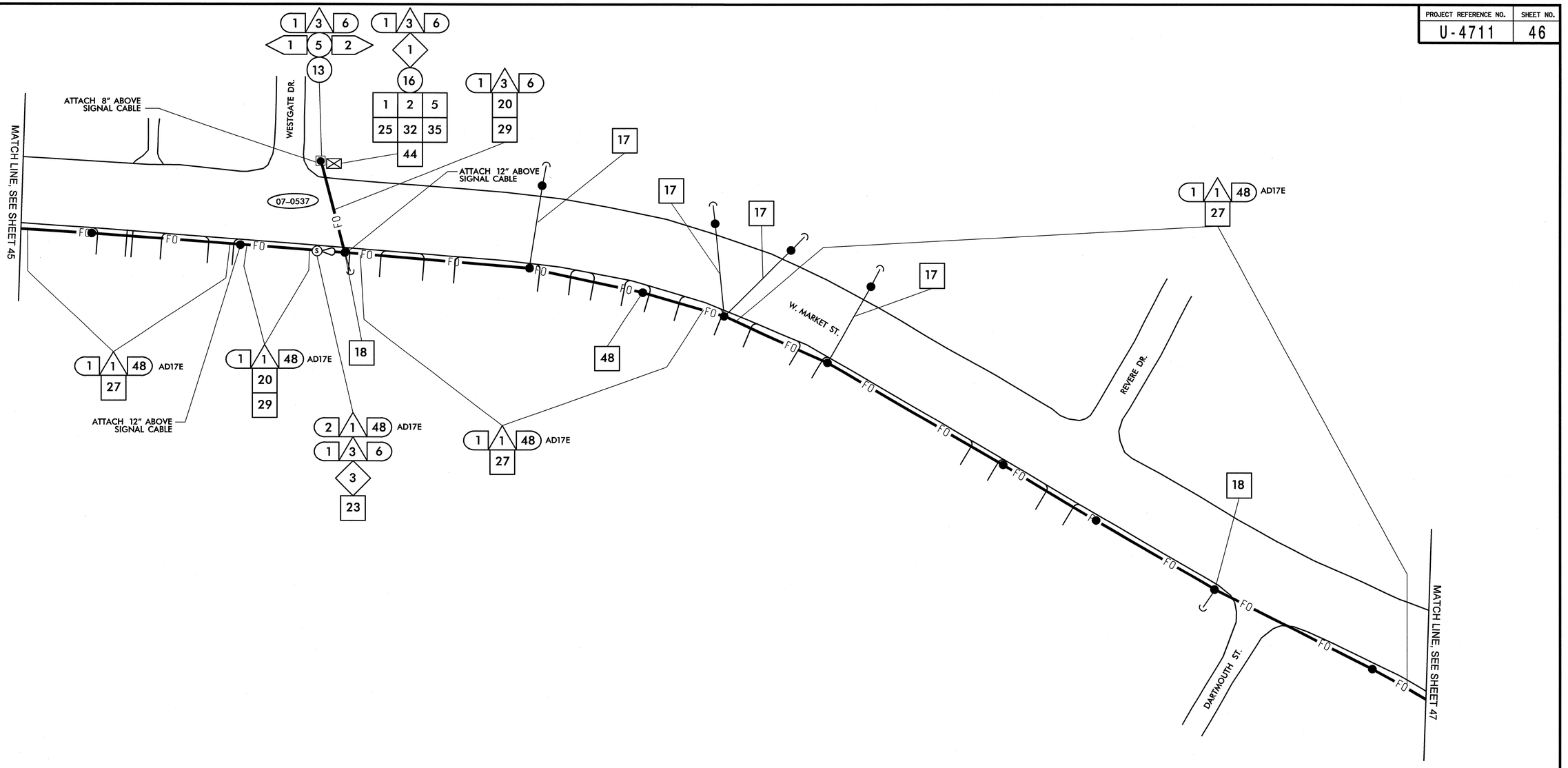
PROJECT REFERENCE NO.	SHEET NO.
U-4711	46



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8. MODIFY EXISTING SPLICE ENCLOSURE
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6. INSTALL NEW 336S CABINET
7. INSTALL CCTV CAMERA ASSEMBLY
8. INSTALL CCTV CAMERA WOOD POLE
9. INSTALL CCTV METAL POLE AND FOUNDATION
10. INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
11. INSTALL SPECIAL OVERSIZED JUNCTION BOX
12. INSTALL OVERSIZED JUNCTION BOX
13. INSTALL STANDARD JUNCTION BOX
14. REMOVE EXISTING JUNCTION BOX
15. INSTALL WOOD POLE
16. REMOVE EXISTING WOOD POLE
17. INSTALL AERIAL GUY ASSEMBLY
18. INSTALL STANDARD GUY ASSEMBLY
19. INSTALL SIDEWALK GUY ASSEMBLY
20. INSTALL MESSENGER CABLE
21. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
22. REMOVE EXISTING COMMUNICATIONS CABLE
23. INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
24. INSTALL DELINEATOR MARKER
25. STORE 30 FEET OF EACH COMMUNICATIONS CABLE
26. STORE 100 FEET OF EACH COMMUNICATIONS CABLE
27. LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
28. LASH CABLE(S) TO EXISTING MESSENGER CABLE
29. LASH CABLE(S) TO NEW MESSENGER CABLE
30. INSTALL NEW ELECTRICAL SERVICE
31. MODIFY EXISTING ELECTRICAL SERVICE
32. INSTALL NEW CONTROLLER
33. INSTALL EXISTING CABLE IN NEW CABINET
34. INSTALL GENERATOR POWER INLET BOX
35. INSTALL LOCAL GIGABIT ETHERNET SWITCH
36. INSTALL UNIFIED CABLE
37. INSTALL POLE MOUNTED EQUIPMENT CABINET
38. INSTALL UNI-DIRECTIONAL YAGI ANTENNA
39. INSTALL OMNI-DIRECTIONAL ANTENNA
40. INSTALL RADIO TRANSCEIVER
41. INSTALL SYSTEM LOOP
42. INSTALL SYSTEM LOOP AMPLIFIER
43. INSTALL SYSTEM LOOP LEAD-IN CABLE
44. INSTALL LOCAL LOOP AMPLIFIER
45. INSTALL CITY WI-FI ANTENNA
46. INSTALL HUB 10-GIGABIT ETHERNET SWITCH
47. INSTALL CODEC
48. BOND MESSENGER CABLE TO POLE GROUND
49. INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION
50. INSTALL ANTENNA CABLE
51. RECONNECT RAILROAD PREEMPTION EQUIPMENT
52. RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
53. INSTALL DSL ETHERNET SWITCH
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55. INSTALL TERMINAL SERVER
56. INSTALL MICROWAVE VEHICLE DETECTOR
57. INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
58. INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:

Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
TRAFFIC ENGINEERING BRANCH
DEPARTMENT OF TRANSPORTATION
Integrated Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: K.D. VANPATTEN	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

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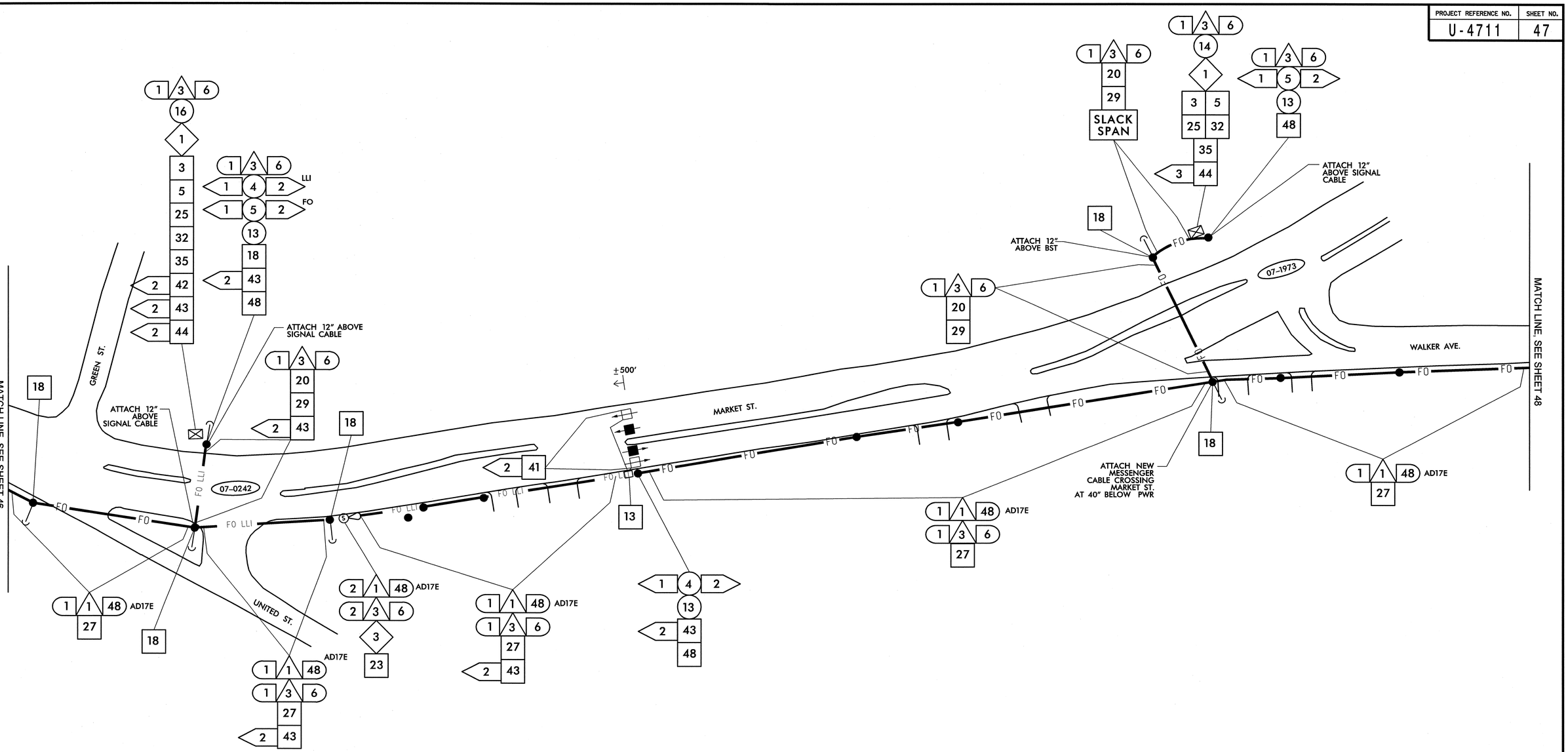
PROJECT REFERENCE NO.	SHEET NO.
U-4711	47



1	INSTALL SMFO CABLE
2	INSTALL PLENUM RATED FIBER OPTIC CABLE
3	INSTALL FIBER OPTIC DROP CABLE
4	INSTALL TRACER WIRE
5	REUSE NCDOT SMFO CABLE
6	REUSE GDOT SMFO CABLE
(1)	TRENCH
(2)	INSTALL PVC CONDUIT
(3)	INSTALL RIGID, GALVANIZED STEEL CONDUIT
(4)	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
(5)	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
(6)	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
(7)	INSTALL POLYETHYLENE CONDUIT
(8)	DIRECTIONAL DRILL CONDUIT
(9)	BORE AND JACK CONDUIT
(10)	INSTALL CABLE(S) IN EXISTING CONDUIT
(11)	INSTALL CABLE(S) IN NEW CONDUIT
(12)	INSTALL CABLE(S) IN EXISTING RISER
(13)	INSTALL CABLE(S) IN NEW RISER
(14)	INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
(15)	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
(16)	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
(17)	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
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(19)	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
◇1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
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◇5	INSTALL BASE MOUNTED SPLICE CABINET
◇6	REMOVE EXISTING SPLICE CABINET
◇7	INSTALL TERMINAL SPLICE BOX
◇8	MODIFY EXISTING SPLICE ENCLOSURE
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[2]	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
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[5]	INSTALL NEW 332 BASE MOUNTED CABINET
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SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE — DATE 2/21/08

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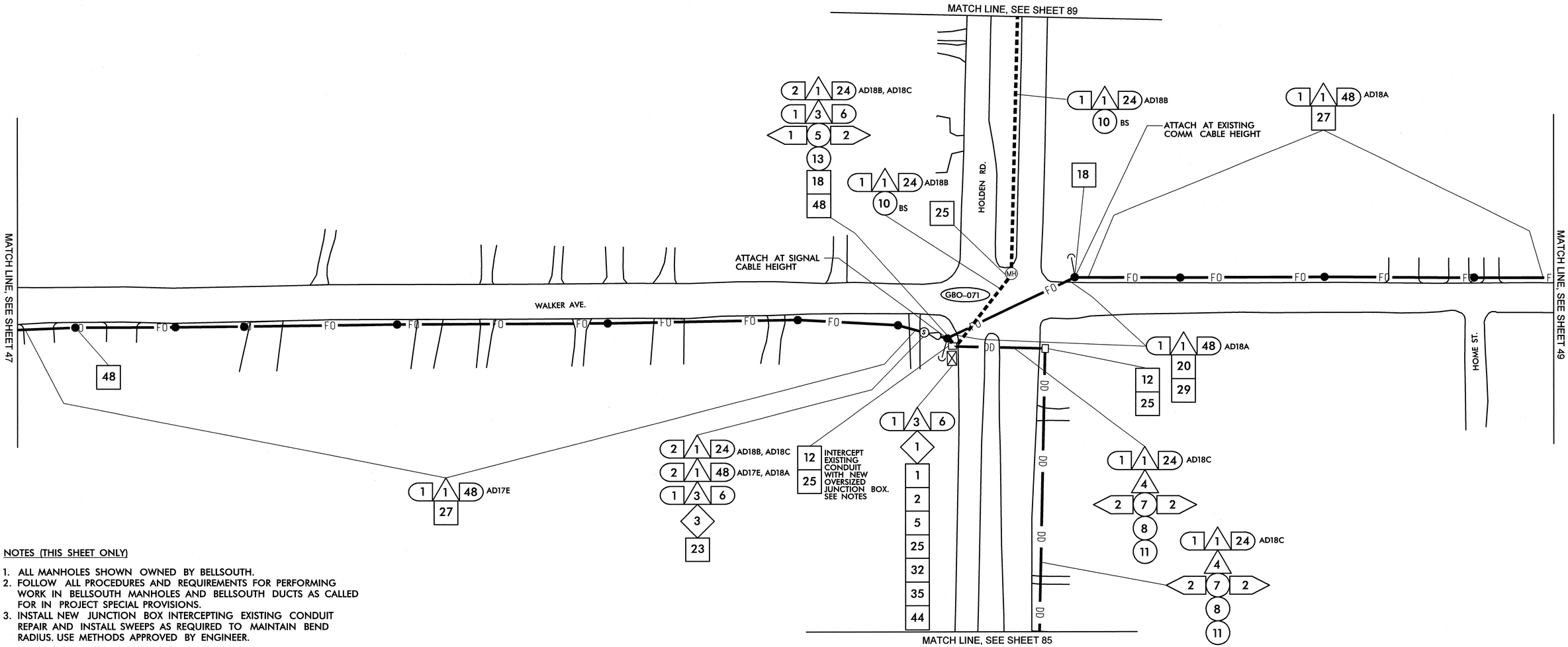
PROJECT REFERENCE NO.	SHEET NO.
U-4711	48



NOTES (THIS SHEET ONLY)

1. ALL MANHOLES SHOWN OWNED BY BELLSOUTH.
2. FOLLOW ALL PROCEDURES AND REQUIREMENTS FOR PERFORMING WORK IN BELLSOUTH MANHOLES AND BELLSOUTH DUCTS AS CALLED FOR IN PROJECT SPECIAL PROVISIONS.
3. INSTALL NEW JUNCTION BOX INTERCEPTING EXISTING CONDUIT REPAIR AND INSTALL SWEEPS AS REQUIRED TO MAINTAIN BEND RADIUS. USE METHODS APPROVED BY ENGINEER.

1	INSTALL SMFO CABLE
2	INSTALL PLENUM RATED FIBER OPTIC CABLE
3	INSTALL FIBER OPTIC DROP CABLE
4	INSTALL TRACER WIRE
5	REUSE NCDOT SMFO CABLE
6	REUSE GDOT SMFO CABLE
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NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
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SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 GUILFORD COUNTY

PLAN DATE:	FEBRUARY, 2008	REVIEWED BY:	K.W. SMITH
PREPARED BY:	K.D. VANPATTEN	REVIEWED BY:	M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE DATE 2/20/08

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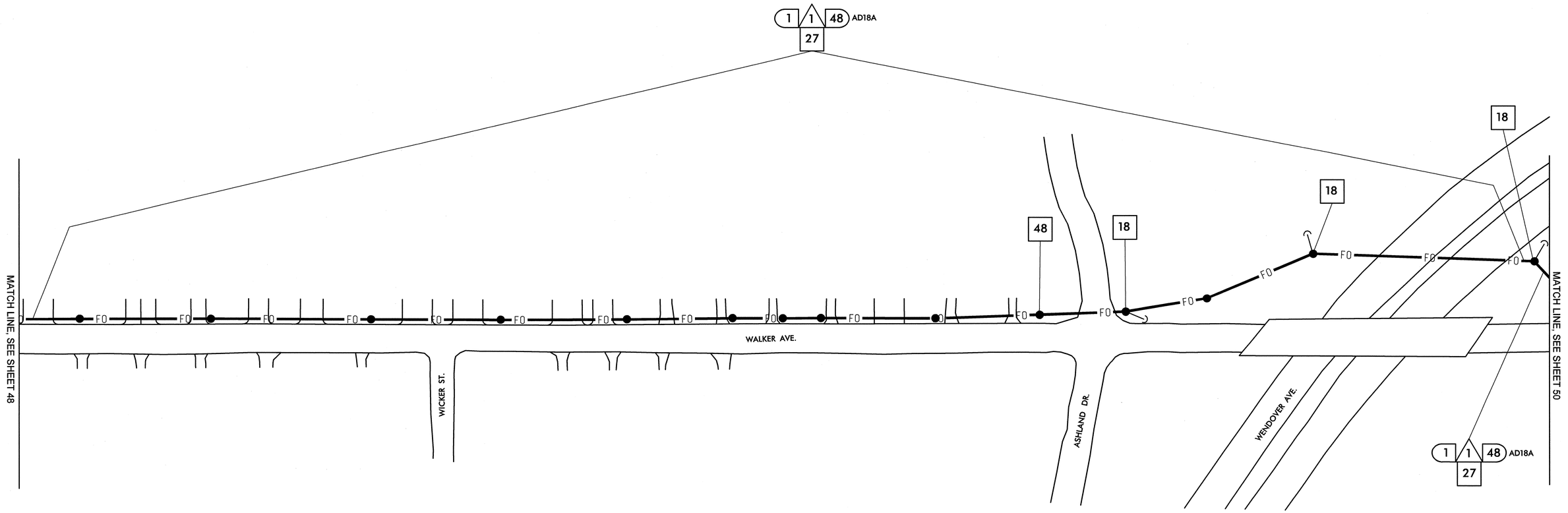
PROJECT REFERENCE NO.	SHEET NO.
U-4711	49



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CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: K.D. VANPATTEN	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

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PROJECT REFERENCE NO.	SHEET NO.
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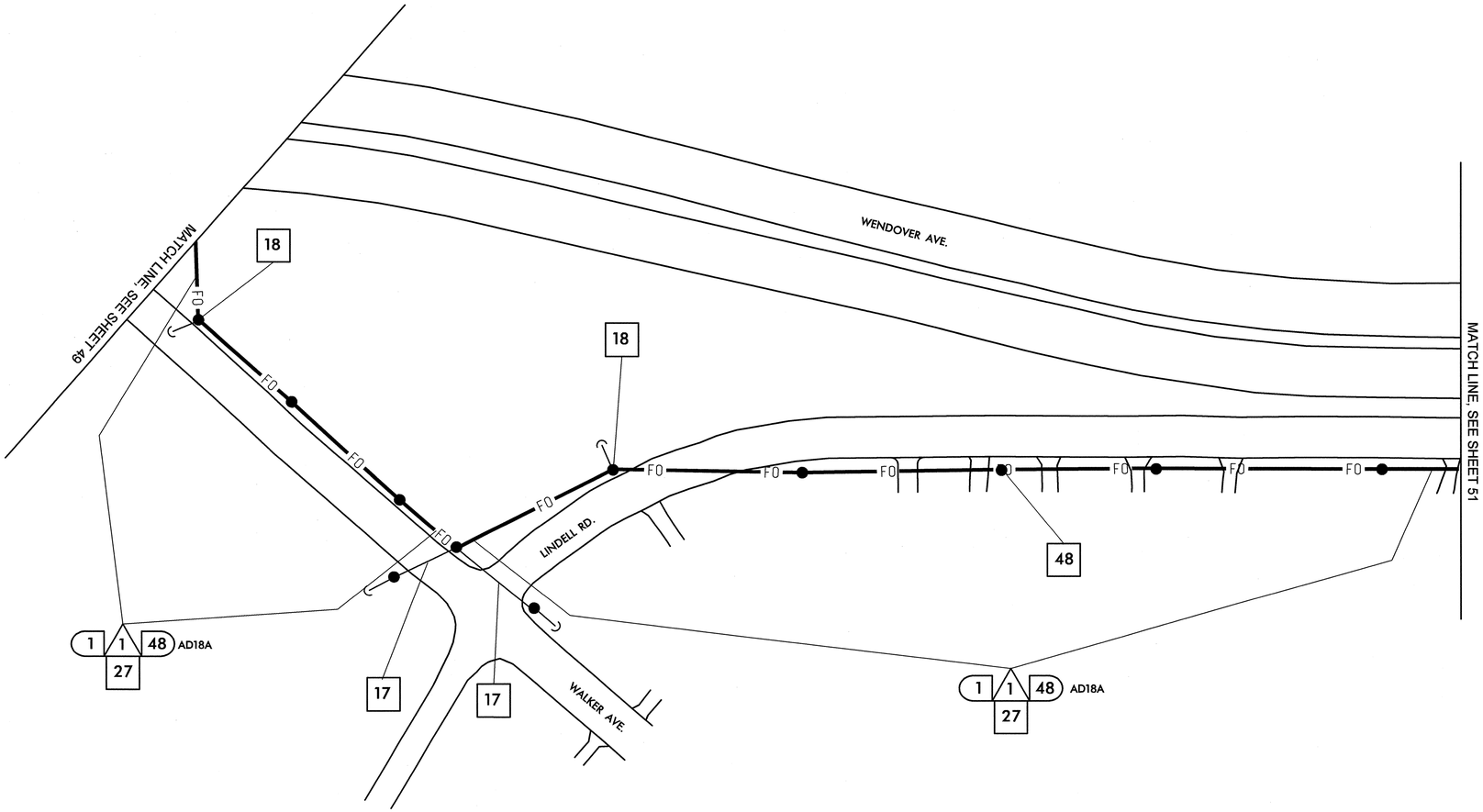

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19. REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING

1. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2. INSTALL UNDERGROUND SPLICE ENCLOSURE
3. INSTALL AERIAL SPLICE ENCLOSURE
4. INSTALL POLE MOUNTED SPLICE CABINET
5. INSTALL BASE MOUNTED SPLICE CABINET
6. REMOVE EXISTING SPLICE CABINET
7. INSTALL TERMINAL SPLICE BOX
8. MODIFY EXISTING SPLICE ENCLOSURE

1. INSTALL CABINET FOUNDATION
2. REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
3. MODIFY EXISTING CABINET FOUNDATION
4. INSTALL NEW 333 COMMUNICATION CABINET
5. INSTALL NEW 332 BASE MOUNTED CABINET
6. INSTALL NEW 336S CABINET
7. INSTALL CCTV CAMERA ASSEMBLY
8. INSTALL CCTV CAMERA WOOD POLE
9. INSTALL CCTV METAL POLE AND FOUNDATION
10. INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
11. INSTALL SPECIAL OVERSIZED JUNCTION BOX
12. INSTALL OVERSIZED JUNCTION BOX
13. INSTALL STANDARD JUNCTION BOX
14. REMOVE EXISTING JUNCTION BOX
15. INSTALL WOOD POLE
16. REMOVE EXISTING WOOD POLE
17. INSTALL AERIAL GUY ASSEMBLY
18. INSTALL STANDARD GUY ASSEMBLY
19. INSTALL SIDEWALK GUY ASSEMBLY
20. INSTALL MESSENGER CABLE
21. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
22. REMOVE EXISTING COMMUNICATIONS CABLE
23. INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
24. INSTALL DELINEATOR MARKER
25. STORE 30 FEET OF EACH COMMUNICATIONS CABLE
26. STORE 100 FEET OF EACH COMMUNICATIONS CABLE
27. LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
28. LASH CABLE(S) TO EXISTING MESSENGER CABLE
29. LASH CABLE(S) TO NEW MESSENGER CABLE
30. INSTALL NEW ELECTRICAL SERVICE
31. MODIFY EXISTING ELECTRICAL SERVICE
32. INSTALL NEW CONTROLLER
33. INSTALL EXISTING CABLE IN NEW CABINET
34. INSTALL GENERATOR POWER INLET BOX
35. INSTALL LOCAL GIGABIT ETHERNET SWITCH
36. INSTALL UNIFIED CABLE
37. INSTALL POLE MOUNTED EQUIPMENT CABINET
38. INSTALL UNI-DIRECTIONAL YAGI ANTENNA
39. INSTALL OMNI-DIRECTIONAL ANTENNA
40. INSTALL RADIO TRANSCEIVER
41. INSTALL SYSTEM LOOP
42. INSTALL SYSTEM LOOP AMPLIFIER
43. INSTALL SYSTEM LOOP LEAD-IN CABLE
44. INSTALL LOCAL LOOP AMPLIFIER
45. INSTALL CITY WI-FI ANTENNA
46. INSTALL HUB 10-GIGABIT ETHERNET SWITCH
47. INSTALL CODEC
48. BOND MESSENGER CABLE TO POLE GROUND
49. INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION
50. INSTALL ANTENNA CABLE
51. RECONNECT RAILROAD PREEMPTION EQUIPMENT
52. RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
53. INSTALL DSL ETHERNET SWITCH
54. INSTALL ETHERNET CABLE
55. INSTALL TERMINAL SERVER
56. INSTALL MICROWAVE VEHICLE DETECTOR
57. INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
58. INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
Intelligent Transportation Systems
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY
PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH
PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE 2/29/08 DATE
CADD Filename: ...\Sht0050.dgn

2/20/2008
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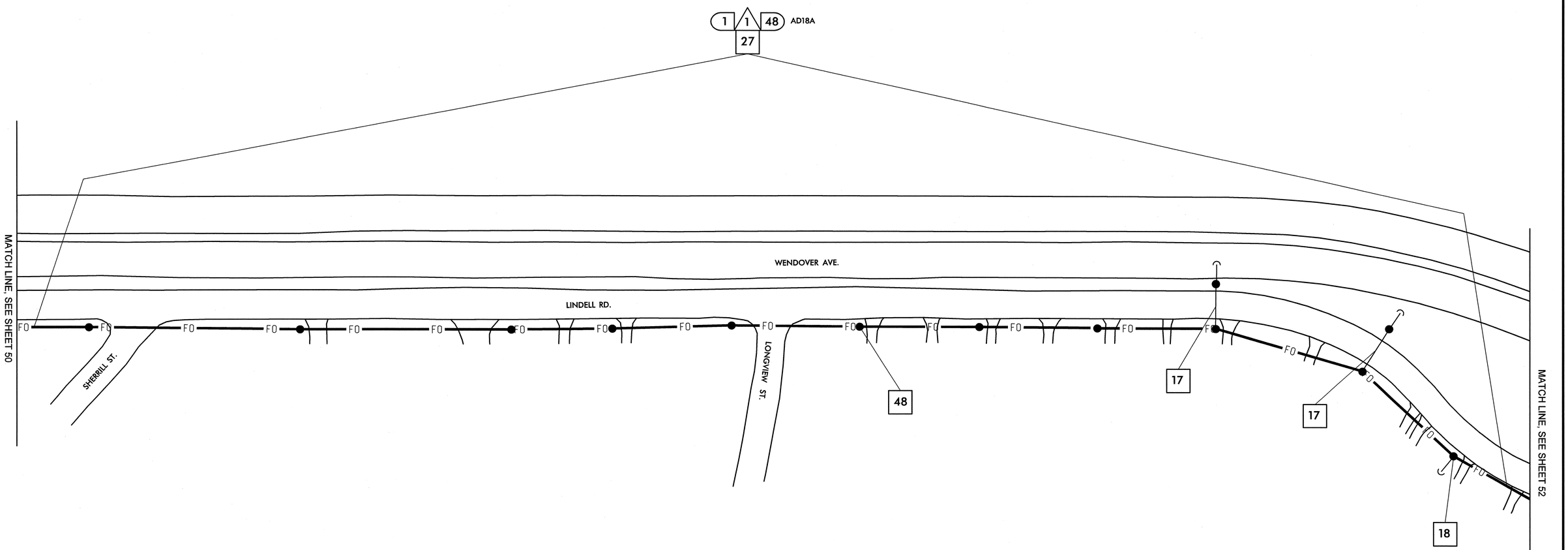
PROJECT REFERENCE NO.	SHEET NO.
U-4711	51



1. INSTALL SMFO CABLE
2. INSTALL PLENUM RATED FIBER OPTIC CABLE
3. INSTALL FIBER OPTIC DROP CABLE
4. INSTALL TRACER WIRE
5. REUSE NCDOT SMFO CABLE
6. REUSE GDOT SMFO CABLE

1. TRENCH
2. INSTALL PVC CONDUIT
3. INSTALL RIGID, GALVANIZED STEEL CONDUIT
4. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5. INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
6. INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
7. INSTALL POLYETHYLENE CONDUIT
8. DIRECTIONAL DRILL CONDUIT
9. BORE AND JACK CONDUIT
10. INSTALL CABLE(S) IN EXISTING CONDUIT
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14. INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
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27. LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
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58. INSTALL WIRELESS ACCESS POINT POWER CABLE

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Traffic Engineering and Safety Systems Branch
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: K.D. VANPATTEN	REVIEWED BY: M.W. DUNZO

SCALE 0 50

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE 2/20/08 DATE

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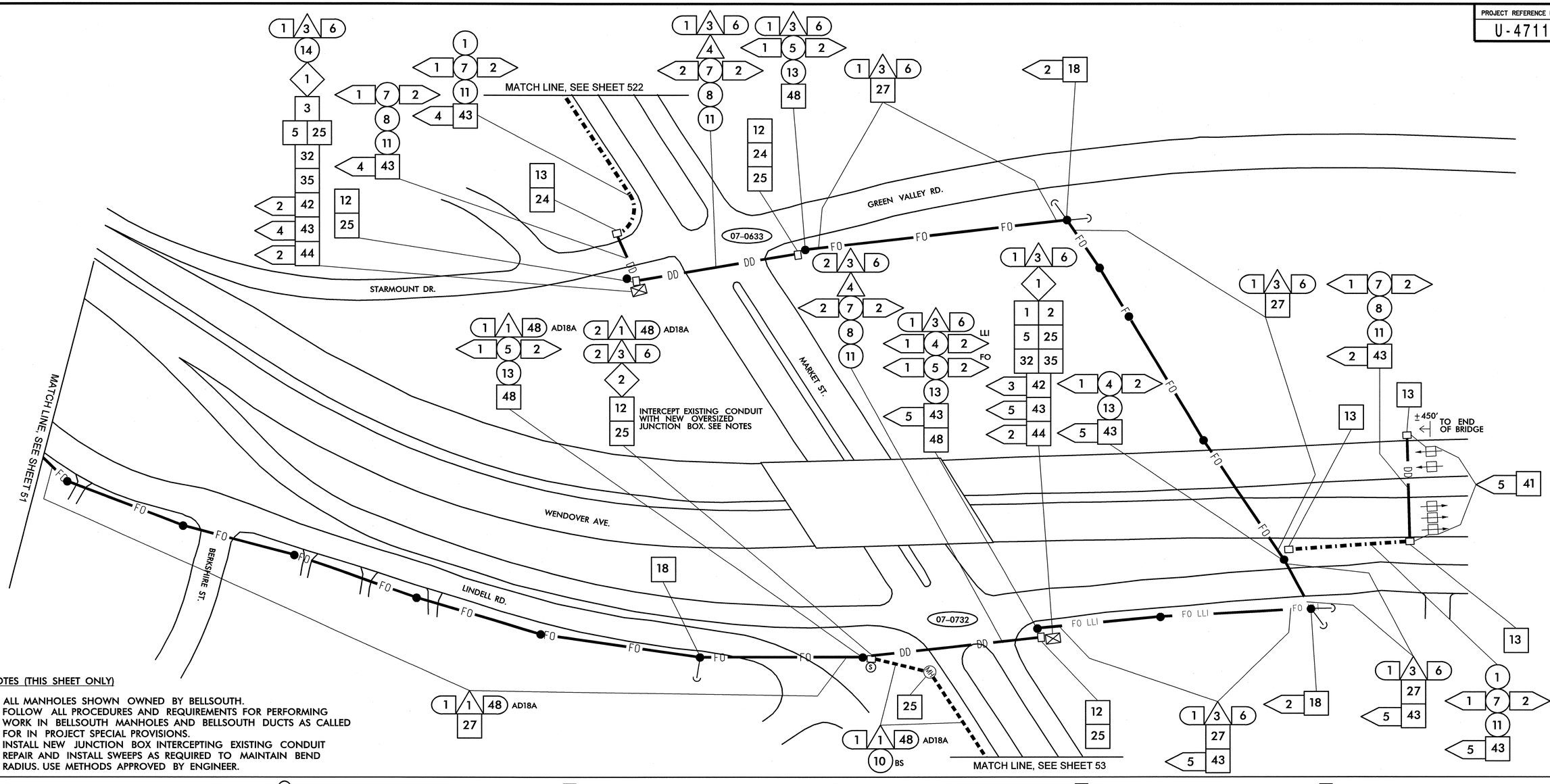
PROJECT REFERENCE NO.	SHEET NO.
U-4711	52



NOTES (THIS SHEET ONLY)

1. ALL MANHOLES SHOWN OWNED BY BELLSOUTH.
2. FOLLOW ALL PROCEDURES AND REQUIREMENTS FOR PERFORMING WORK IN BELLSOUTH MANHOLES AND BELLSOUTH DUCTS AS CALLED FOR IN PROJECT SPECIAL PROVISIONS.
3. INSTALL NEW JUNCTION BOX INTERCEPTING EXISTING CONDUIT REPAIR AND INSTALL SWEEPS AS REQUIRED TO MAINTAIN BEND RADIUS. USE METHODS APPROVED BY ENGINEER.

1	INSTALL SMFO CABLE
2	INSTALL PLENUM RATED FIBER OPTIC CABLE
3	INSTALL FIBER OPTIC DROP CABLE
4	INSTALL TRACER WIRE
5	REUSE NCDOT SMFO CABLE
6	REUSE GDOT SMFO CABLE
1	TRENCH
2	INSTALL PVC CONDUIT
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
6	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
7	INSTALL POLYETHYLENE CONDUIT
8	DIRECTIONAL DRILL CONDUIT
9	BORE AND JACK CONDUIT
10	INSTALL CABLE(S) IN EXISTING CONDUIT
11	INSTALL CABLE(S) IN NEW CONDUIT
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15	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
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17	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
18	INSTALL NEW RISER INTO POLE MOUNTED CABINET
19	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2	INSTALL UNDERGROUND SPLICE ENCLOSURE
3	INSTALL AERIAL SPLICE ENCLOSURE
4	INSTALL POLE MOUNTED SPLICE CABINET
5	INSTALL BASE MOUNTED SPLICE CABINET
6	REMOVE EXISTING SPLICE CABINET
7	INSTALL TERMINAL SPLICE BOX
8	MODIFY EXISTING SPLICE ENCLOSURE
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
3	MODIFY EXISTING CABINET FOUNDATION
4	INSTALL NEW 333 COMMUNICATION CABINET
5	INSTALL NEW 332 BASE MOUNTED CABINET
6	INSTALL NEW 336S CABINET
7	INSTALL CCTV CAMERA ASSEMBLY
8	INSTALL CCTV CAMERA WOOD POLE
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10	INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
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15	INSTALL WOOD POLE
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17	INSTALL AERIAL GUY ASSEMBLY
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19	INSTALL SIDEWALK GUY ASSEMBLY
20	INSTALL MESSENGER CABLE
21	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
22	REMOVE EXISTING COMMUNICATIONS CABLE
23	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
24	INSTALL DELINEATOR MARKER
25	STORE 30 FEET OF EACH COMMUNICATIONS CABLE
26	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
27	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
28	LASH CABLE(S) TO EXISTING MESSENGER CABLE
29	LASH CABLE(S) TO NEW MESSENGER CABLE
30	INSTALL NEW ELECTRICAL SERVICE
31	MODIFY EXISTING ELECTRICAL SERVICE
32	INSTALL NEW CONTROLLER
33	INSTALL EXISTING CABLE IN NEW CABINET
34	INSTALL GENERATOR POWER INLET BOX
35	INSTALL LOCAL GIGABIT ETHERNET SWITCH
36	INSTALL UNIFIED CABLE
37	INSTALL POLE MOUNTED EQUIPMENT CABINET
38	INSTALL UNI-DIRECTIONAL YAGI ANTENNA
39	INSTALL OMNI-DIRECTIONAL ANTENNA
40	INSTALL RADIO TRANSCEIVER
41	INSTALL SYSTEM LOOP
42	INSTALL SYSTEM LOOP AMPLIFIER
43	INSTALL SYSTEM LOOP LEAD-IN CABLE
44	INSTALL LOCAL LOOP AMPLIFIER
45	INSTALL CITY WI-FI ANTENNA
46	INSTALL HUB 10-GIGABIT ETHERNET SWITCH
47	INSTALL CODEC
48	BOND MESSENGER CABLE TO POLE GROUND
49	INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION
50	INSTALL ANTENNA CABLE
51	RECONNECT RAILROAD PREEMPTION EQUIPMENT
52	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
53	INSTALL DSL ETHERNET SWITCH
54	INSTALL ETHERNET CABLE
55	INSTALL TERMINAL SERVER
56	INSTALL MICROWAVE VEHICLE DETECTOR
57	INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
58	INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
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750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE 2/20/08 DATE

CADD Filename: ...\Sht0052.dgn

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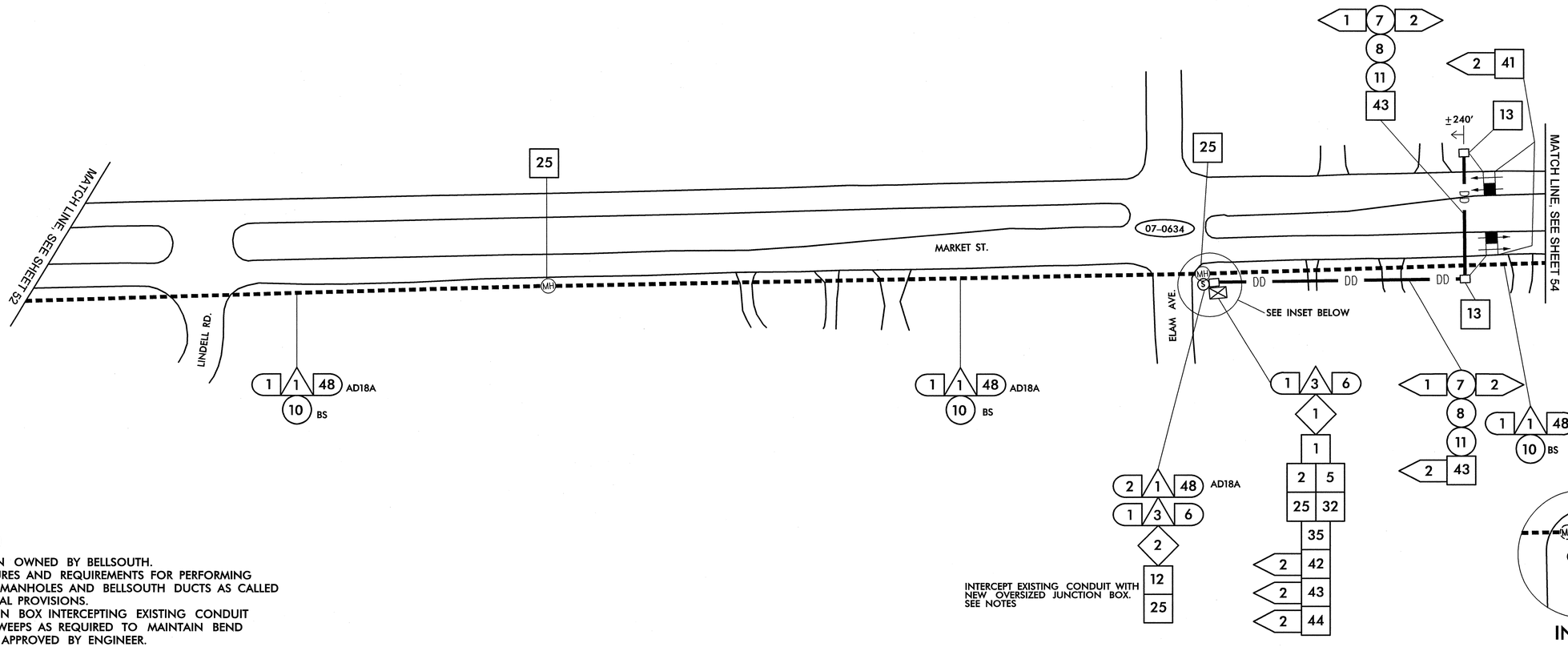
PROJECT REFERENCE NO.	SHEET NO.
U-4711	53



NOTES (THIS SHEET ONLY)

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2. FOLLOW ALL PROCEDURES AND REQUIREMENTS FOR PERFORMING WORK IN BELLSOUTH MANHOLES AND BELLSOUTH DUCTS AS CALLED FOR IN PROJECT SPECIAL PROVISIONS.
3. INSTALL NEW JUNCTION BOX INTERCEPTING EXISTING CONDUIT REPAIR AND INSTALL SWEEPS AS REQUIRED TO MAINTAIN BEND RADIUS. USE METHODS APPROVED BY ENGINEER.

△1 INSTALL SMFO CABLE
△2 INSTALL PLENUM RATED FIBER OPTIC CABLE
△3 INSTALL FIBER OPTIC DROP CABLE
△4 INSTALL TRACER WIRE
△5 REUSE NCDOT SMFO CABLE
△6 REUSE GDOT SMFO CABLE

(1) TRENCH
(2) INSTALL PVC CONDUIT
(3) INSTALL RIGID, GALVANIZED STEEL CONDUIT
(4) INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
(5) INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
(6) INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
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(8) DIRECTIONAL DRILL CONDUIT
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◇4 INSTALL POLE MOUNTED SPLICE CABINET
◇5 INSTALL BASE MOUNTED SPLICE CABINET
◇6 REMOVE EXISTING SPLICE CABINET
◇7 INSTALL TERMINAL SPLICE BOX
◇8 MODIFY EXISTING SPLICE ENCLOSURE

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CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 GUILFORD COUNTY
PLAN DATE: FEBRUARY, 2008 REVIEWED BY: K.W. SMITH
PREPARED BY: K.D. VANPATTEN REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

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NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE 2/20/08 DATE

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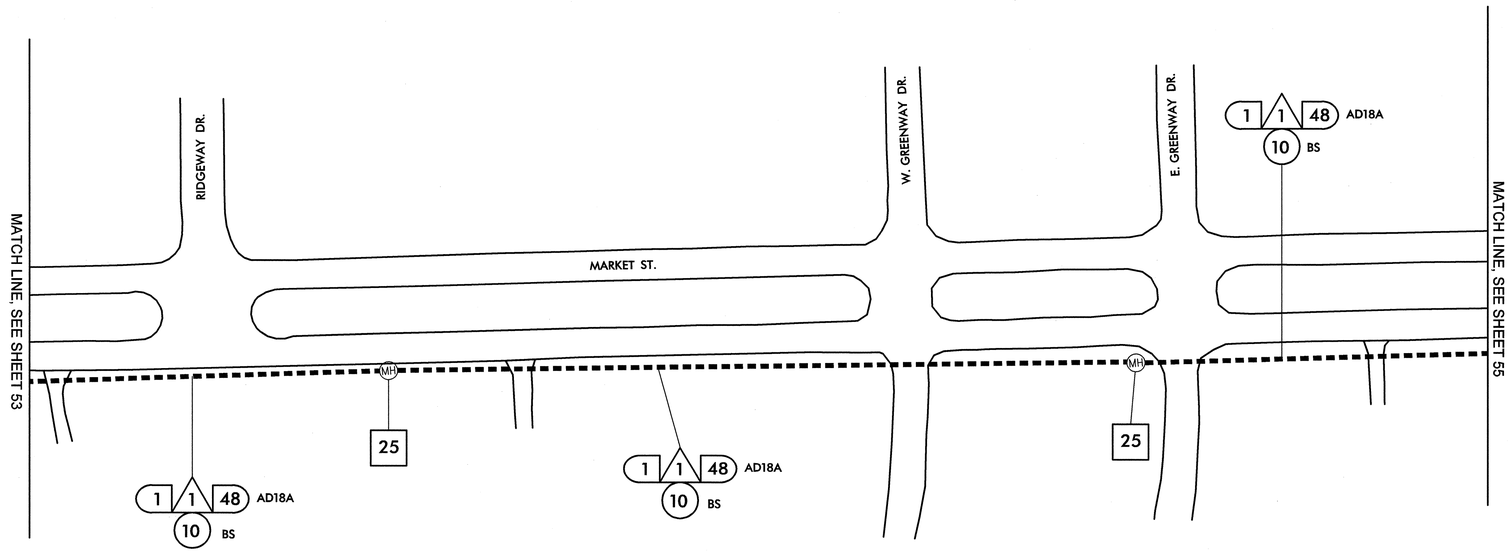

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4	INSTALL TRACER WIRE
5	REUSE NCDOT SMFO CABLE
6	REUSE GDOT SMFO CABLE
1	TRENCH
2	INSTALL PVC CONDUIT
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
6	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
7	INSTALL POLYETHYLENE CONDUIT
8	DIRECTIONAL DRILL CONDUIT
9	BORE AND JACK CONDUIT
10	INSTALL CABLE(S) IN EXISTING CONDUIT
11	INSTALL CABLE(S) IN NEW CONDUIT
12	INSTALL CABLE(S) IN EXISTING RISER
13	INSTALL CABLE(S) IN NEW RISER
14	INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
15	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
16	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
17	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
18	INSTALL NEW RISER INTO POLE MOUNTED CABINET
19	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2	INSTALL UNDERGROUND SPLICE ENCLOSURE
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5	INSTALL BASE MOUNTED SPLICE CABINET
6	REMOVE EXISTING SPLICE CABINET
7	INSTALL TERMINAL SPLICE BOX
8	MODIFY EXISTING SPLICE ENCLOSURE
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
3	MODIFY EXISTING CABINET FOUNDATION
4	INSTALL NEW 333 COMMUNICATION CABINET
5	INSTALL NEW 332 BASE MOUNTED CABINET
6	INSTALL NEW 336S CABINET
7	INSTALL CCTV CAMERA ASSEMBLY
8	INSTALL CCTV CAMERA WOOD POLE
9	INSTALL CCTV METAL POLE AND FOUNDATION
10	INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
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22	REMOVE EXISTING COMMUNICATIONS CABLE
23	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
24	INSTALL DELINEATOR MARKER
25	STORE 30 FEET OF EACH COMMUNICATIONS CABLE
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27	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
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32	INSTALL NEW CONTROLLER
33	INSTALL EXISTING CABLE IN NEW CABINET
34	INSTALL GENERATOR POWER INLET BOX
35	INSTALL LOCAL GIGABIT ETHERNET SWITCH
36	INSTALL UNIFIED CABLE
37	INSTALL POLE MOUNTED EQUIPMENT CABINET
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57	INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
58	INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
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PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: K.D. VANPATTEN	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE 2/20/08 DATE

CADD Filename: ...\Sht0054.dgn

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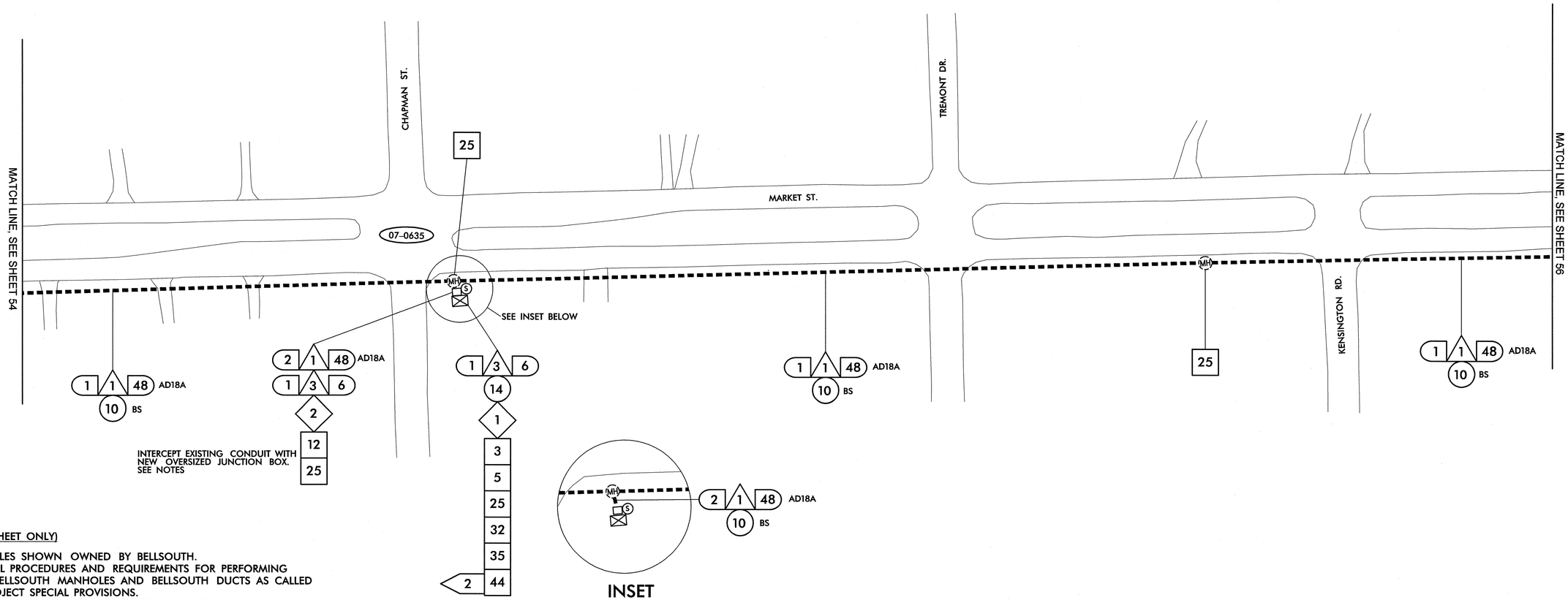
PROJECT REFERENCE NO.	SHEET NO.
U-4711	55



INSET

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Traffic Engineering and Safety Systems Branch
Traffic Management Unit
Department of Transportation
State of North Carolina

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 GUILFORD COUNTY
PLAN DATE: FEBRUARY, 2008 REVIEWED BY: K.W. SMITH
PREPARED BY: K.D. VANPATTEN REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE DATE 2/20/08

CADD Filename: ...\Sht0055.dgn

2/20/2008
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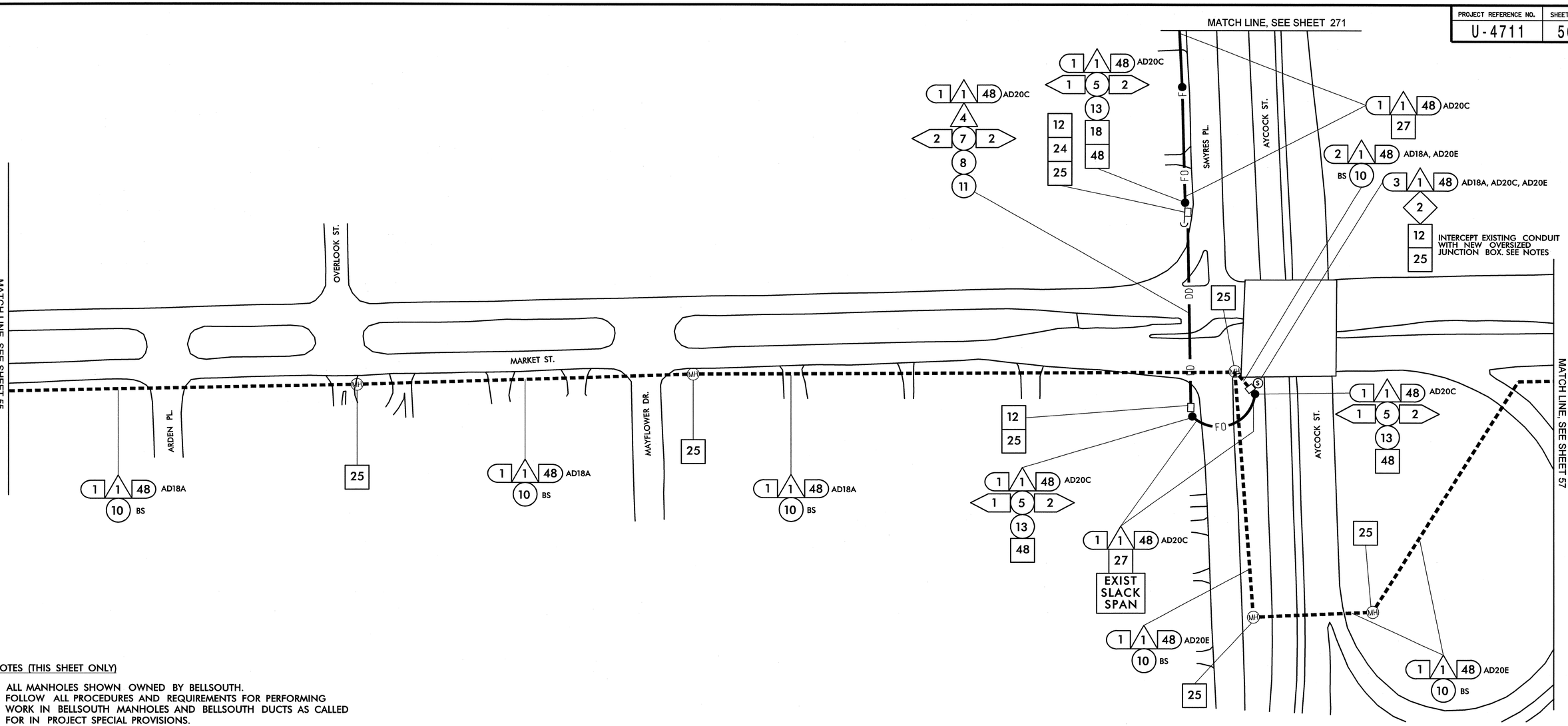
PROJECT REFERENCE NO.	SHEET NO.
U-4711	56



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◇8 MODIFY EXISTING SPLICE ENCLOSURE

[1] INSTALL CABINET FOUNDATION
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[4] INSTALL NEW 333 COMMUNICATION CABINET
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PLANS PREPARED IN THE OFFICE OF:
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Traffic Engineering and Safety Systems Branch
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY
PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH
PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 023562 MARK DUNZO
SIGNATURE 2/20/08 DATE
CADD Filename: ...\Sht0056.dgn

2/20/2008
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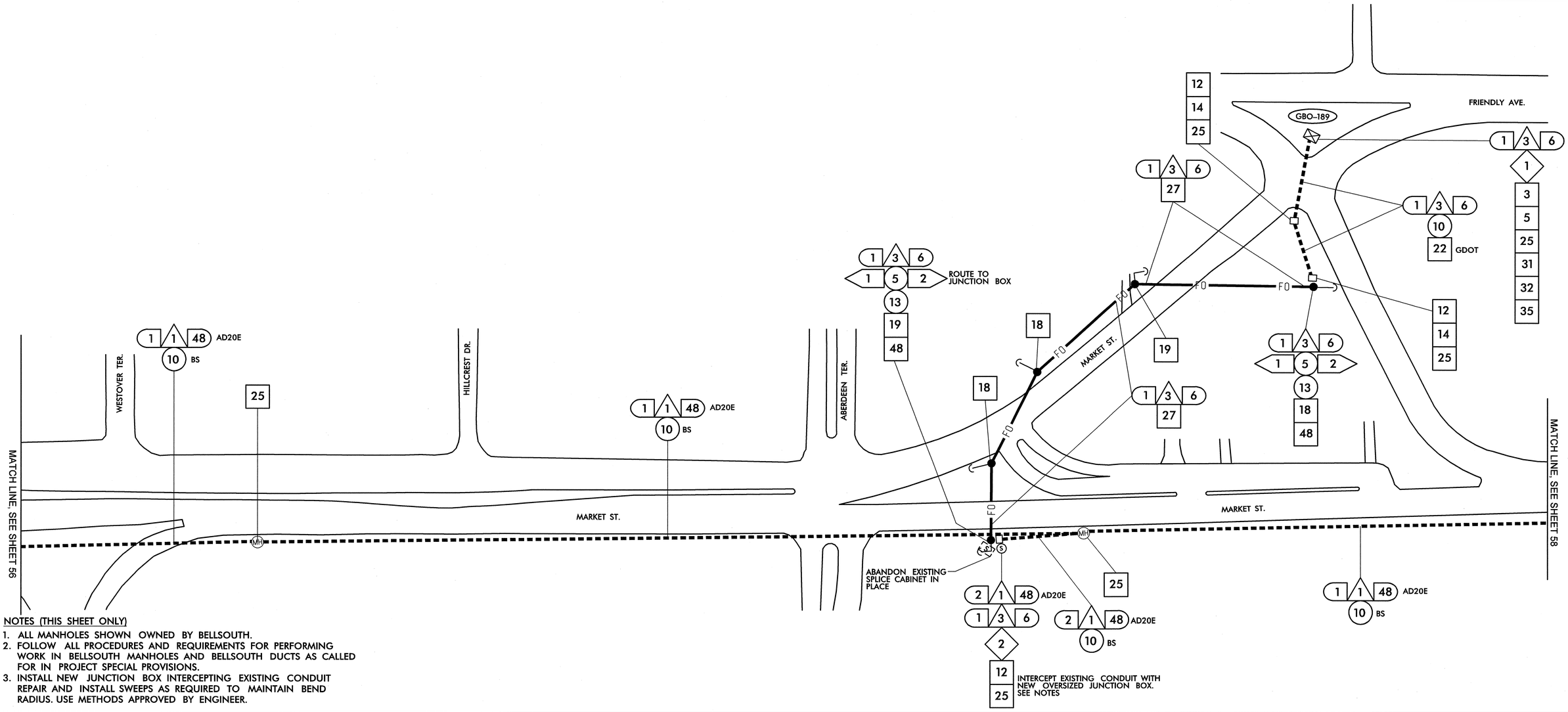
PROJECT REFERENCE NO.	SHEET NO.
U-4711	57



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GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Public Safety and Safety Transportation Systems
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy, Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY
PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH
PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE 2/20/08 DATE
CADD Filename: ...\Sht0057.dgn

2/20/2008
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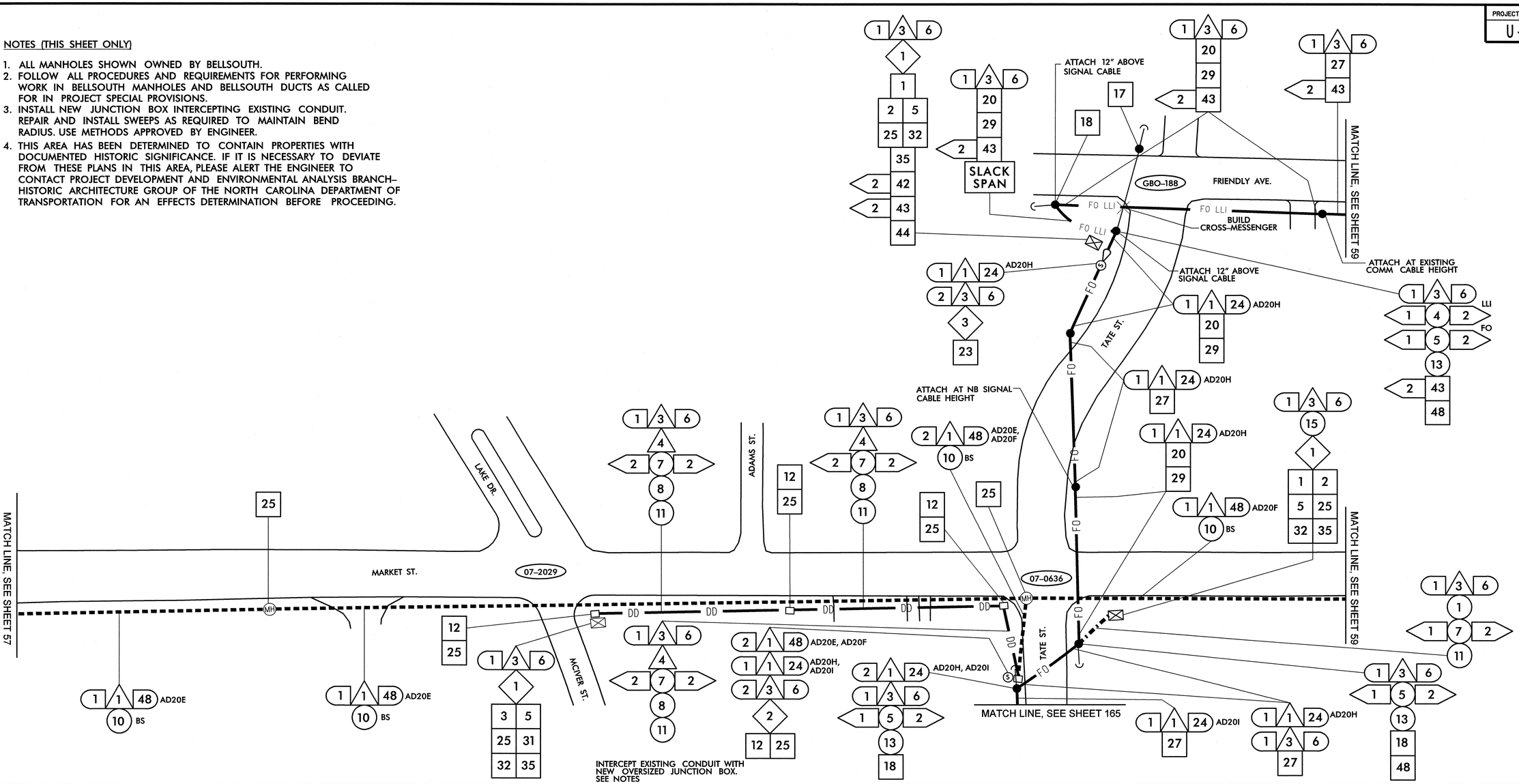
PROJECT REFERENCE NO.	SHEET NO.
U-4711	58

NOTES (THIS SHEET ONLY)

1. ALL MANHOLES SHOWN OWNED BY BELLSOUTH.
2. FOLLOW ALL PROCEDURES AND REQUIREMENTS FOR PERFORMING WORK IN BELLSOUTH MANHOLES AND BELLSOUTH DUCTS AS CALLED FOR IN PROJECT SPECIAL PROVISIONS.
3. INSTALL NEW JUNCTION BOX INTERCEPTING EXISTING CONDUIT. REPAIR AND INSTALL SWEEPS AS REQUIRED TO MAINTAIN BEND RADIUS. USE METHODS APPROVED BY ENGINEER.
4. THIS AREA HAS BEEN DETERMINED TO CONTAIN PROPERTIES WITH DOCUMENTED HISTORIC SIGNIFICANCE. IF IT IS NECESSARY TO DEVIATE FROM THESE PLANS IN THIS AREA, PLEASE ALERT THE ENGINEER TO CONTACT PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS BRANCH–HISTORIC ARCHITECTURE GROUP OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION FOR AN EFFECTS DETERMINATION BEFORE PROCEEDING.



1. INSTALL SMFO CABLE
2. INSTALL PLENUM RATED FIBER OPTIC CABLE
3. INSTALL FIBER OPTIC DROP CABLE
4. INSTALL TRACER WIRE
5. REUSE NCDOT SMFO CABLE
6. REUSE GDOT SMFO CABLE
1. TRENCH
2. INSTALL PVC CONDUIT
3. INSTALL RIGID, GALVANIZED STEEL CONDUIT
4. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5. INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
6. INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
7. INSTALL POLYETHYLENE CONDUIT
8. DIRECTIONAL DRILL CONDUIT
9. BORE AND JACK CONDUIT
10. INSTALL CABLE(S) IN EXISTING CONDUIT
11. INSTALL CABLE(S) IN NEW CONDUIT
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13. INSTALL CABLE(S) IN NEW RISER
14. INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
15. INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
16. INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
17. INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
18. INSTALL NEW RISER INTO POLE MOUNTED CABINET
19. REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
1. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2. INSTALL UNDERGROUND SPLICE ENCLOSURE
3. INSTALL AERIAL SPLICE ENCLOSURE
4. INSTALL POLE MOUNTED SPLICE CABINET
5. INSTALL BASE MOUNTED SPLICE CABINET
6. REMOVE EXISTING SPLICE CABINET
7. INSTALL TERMINAL SPLICE BOX
8. MODIFY EXISTING SPLICE ENCLOSURE
1. INSTALL CABINET FOUNDATION
2. REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
3. MODIFY EXISTING CABINET FOUNDATION
4. INSTALL NEW 333 COMMUNICATION CABINET
5. INSTALL NEW 332 BASE MOUNTED CABINET
6. INSTALL NEW 336S CABINET
7. INSTALL CCTV CAMERA ASSEMBLY
8. INSTALL CCTV CAMERA WOOD POLE
9. INSTALL CCTV METAL POLE AND FOUNDATION
10. INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
11. INSTALL SPECIAL OVERSIZED JUNCTION BOX
12. INSTALL OVERSIZED JUNCTION BOX
13. INSTALL STANDARD JUNCTION BOX
14. REMOVE EXISTING JUNCTION BOX
15. INSTALL WOOD POLE
16. REMOVE EXISTING WOOD POLE
17. INSTALL AERIAL GUY ASSEMBLY
18. INSTALL STANDARD GUY ASSEMBLY
19. INSTALL SIDEWALK GUY ASSEMBLY
20. INSTALL MESSENGER CABLE
21. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
22. REMOVE EXISTING COMMUNICATIONS CABLE
23. INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
24. INSTALL DELINEATOR MARKER
25. STORE 30 FEET OF EACH COMMUNICATIONS CABLE
26. STORE 100 FEET OF EACH COMMUNICATIONS CABLE
27. LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
28. LASH CABLE(S) TO EXISTING MESSENGER CABLE
29. LASH CABLE(S) TO NEW MESSENGER CABLE
30. INSTALL NEW ELECTRICAL SERVICE
31. MODIFY EXISTING ELECTRICAL SERVICE
32. INSTALL NEW CONTROLLER
33. INSTALL EXISTING CABLE IN NEW CABINET
34. INSTALL GENERATOR POWER INLET BOX
35. INSTALL LOCAL GIGABIT ETHERNET SWITCH
36. INSTALL UNIFIED CABLE
37. INSTALL POLE MOUNTED EQUIPMENT CABINET
38. INSTALL UNI-DIRECTIONAL YAGI ANTENNA
39. INSTALL OMNI-DIRECTIONAL ANTENNA
40. INSTALL RADIO TRANSCEIVER
41. INSTALL SYSTEM LOOP
42. INSTALL SYSTEM LOOP AMPLIFIER
43. INSTALL SYSTEM LOOP LEAD-IN CABLE
44. INSTALL LOCAL LOOP AMPLIFIER
45. INSTALL CITY WI-FI ANTENNA
46. INSTALL HUB 10-GIGABIT ETHERNET SWITCH
47. INSTALL CODEC
48. BOND MESSENGER CABLE TO POLE GROUND
49. INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION
50. INSTALL ANTENNA CABLE
51. RECONNECT RAILROAD PREEMPTION EQUIPMENT
52. RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
53. INSTALL DSL ETHERNET SWITCH
54. INSTALL ETHERNET CABLE
55. INSTALL TERMINAL SERVER
56. INSTALL MICROWAVE VEHICLE DETECTOR
57. INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
58. INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

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SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE — DATE 3/4/08

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PROJECT REFERENCE NO.	SHEET NO.
U-4711	59

NOTES (THIS SHEET ONLY)

1. ALL MANHOLES SHOWN OWNED BY BELLSOUTH.
2. FOLLOW ALL PROCEDURES AND REQUIREMENTS FOR PERFORMING WORK IN BELLSOUTH MANHOLES AND BELLSOUTH DUCT AS CALLED FOR IN THE PROJECT SPECIAL PROVISIONS.
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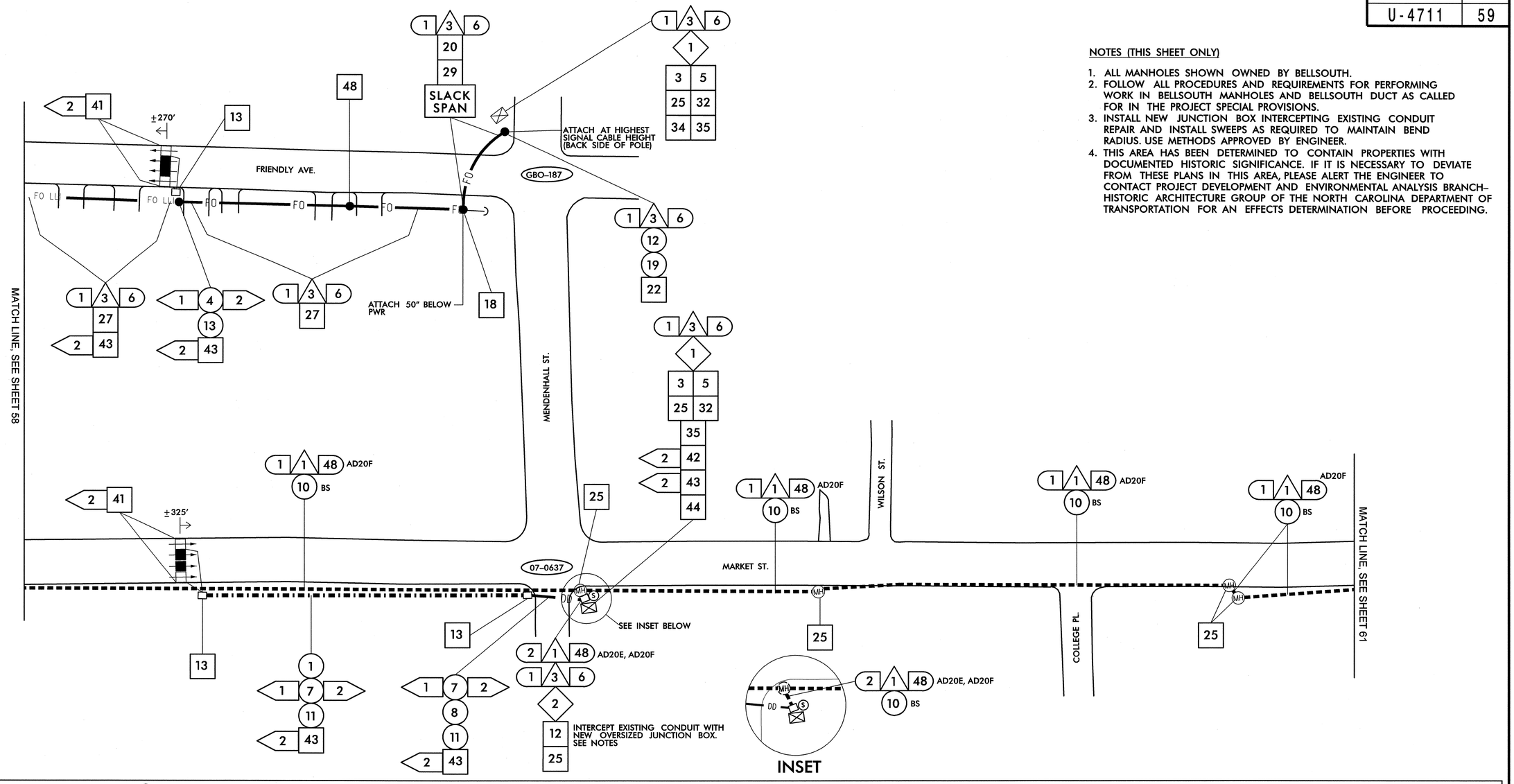

1	INSTALL SMFO CABLE
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4	INSTALL NEW 333 COMMUNICATION CABINET
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NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

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Traffic Engineering and Safety Systems Branch
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Integrated Mobility Division
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: K.D. VANPATTEN	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE 2/20/08 DATE

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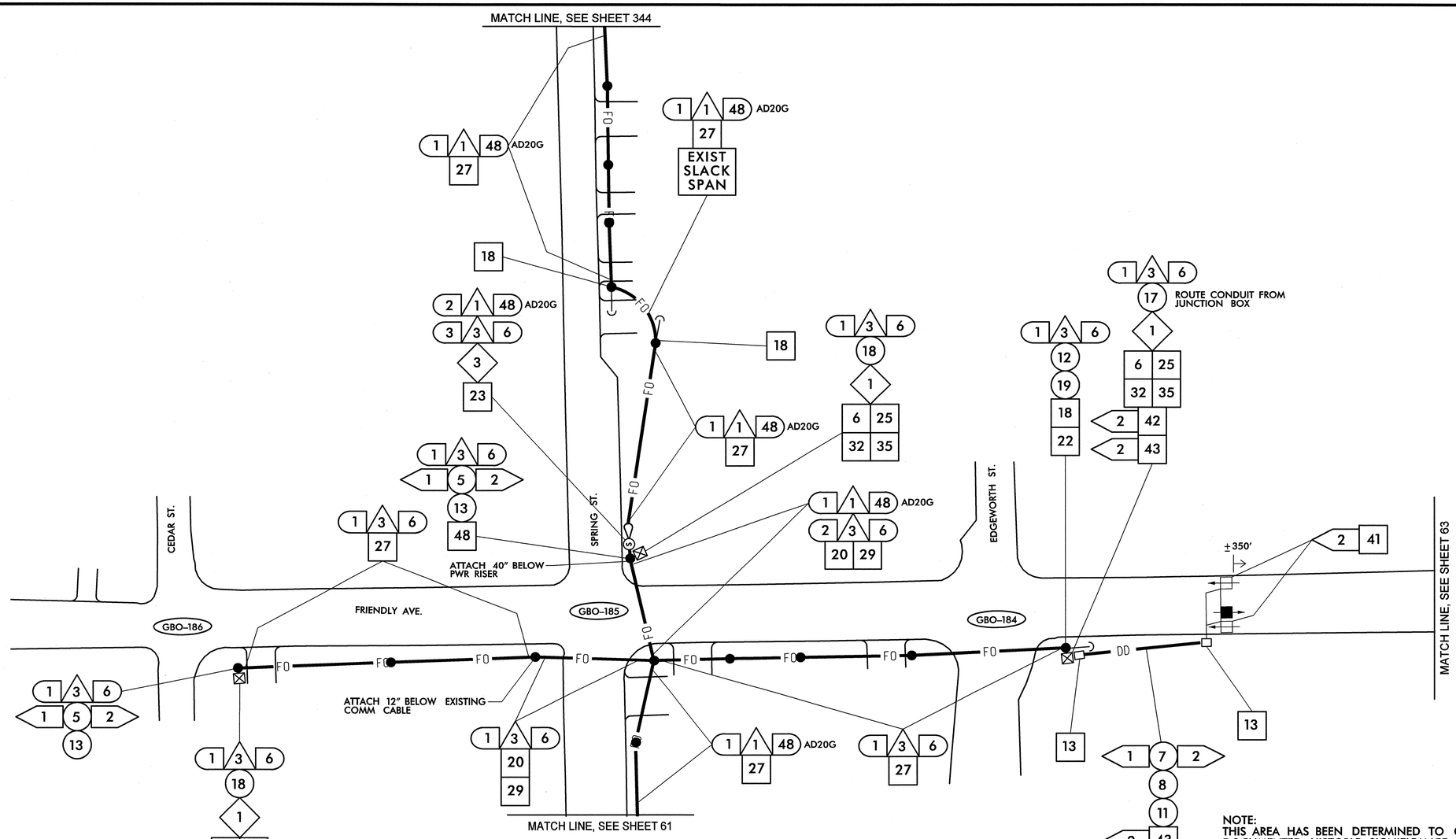
PROJECT REFERENCE NO.	SHEET NO.
U-4711	60



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7. INSTALL TERMINAL SPLICE BOX
8. MODIFY EXISTING SPLICE ENCLOSURE
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3. MODIFY EXISTING CABINET FOUNDATION
4. INSTALL NEW 333 COMMUNICATION CABINET
5. INSTALL NEW 332 BASE MOUNTED CABINET
6. INSTALL NEW 336S CABINET
7. INSTALL CCTV CAMERA ASSEMBLY
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10. INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
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27. LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
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SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
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SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filename ...\Sht0060.dgn

2/20/2008
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PROJECT REFERENCE NO.	SHEET NO.
U-4711	61

NOTES (THIS SHEET ONLY)

1. ALL MANHOLES SHOWN OWNED BY BELLSOUTH.
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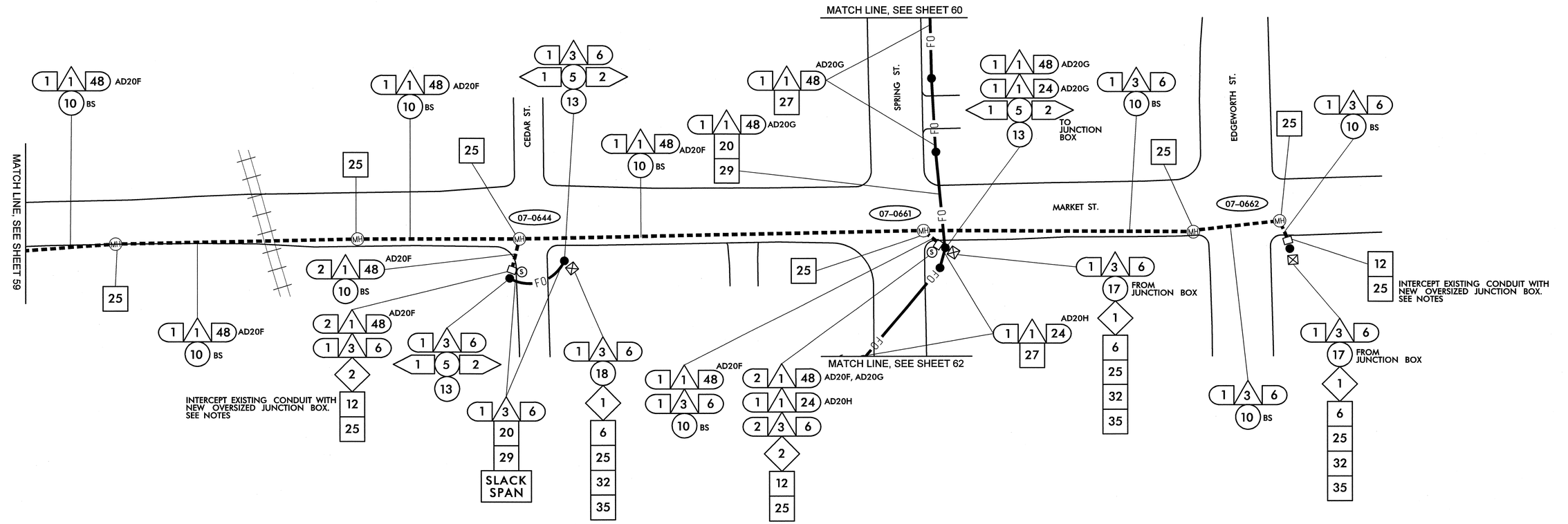

1	INSTALL SMFO CABLE	14	INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE	6	INSTALL NEW 336S CABINET	26	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
2	INSTALL PLENUM RATED FIBER OPTIC CABLE	15	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	7	INSTALL CCTV CAMERA ASSEMBLY	27	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
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5	REUSE NCDOT SMFO CABLE	18	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX	30	INSTALL NEW ELECTRICAL SERVICE
6	REUSE GDOT SMFO CABLE	19	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL SPECIAL OVERSIZED JUNCTION BOX	31	MODIFY EXISTING ELECTRICAL SERVICE
1	TRENCH	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	12	INSTALL OVERSIZED JUNCTION BOX	32	INSTALL NEW CONTROLLER
2	INSTALL PVC CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	13	INSTALL STANDARD JUNCTION BOX	33	INSTALL EXISTING CABLE IN NEW CABINET
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	14	REMOVE EXISTING JUNCTION BOX	34	INSTALL GENERATOR POWER INLET BOX
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	INSTALL POLE MOUNTED SPLICE CABINET	15	INSTALL WOOD POLE	35	INSTALL LOCAL GIGABIT ETHERNET SWITCH
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING	5	INSTALL BASE MOUNTED SPLICE CABINET	16	REMOVE EXISTING WOOD POLE	36	INSTALL UNIFIED CABLE
6	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT	6	REMOVE EXISTING SPLICE CABINET	17	INSTALL AERIAL GUY ASSEMBLY	37	INSTALL POLE MOUNTED EQUIPMENT CABINET
7	INSTALL POLYETHYLENE CONDUIT	7	INSTALL TERMINAL SPLICE BOX	18	INSTALL STANDARD GUY ASSEMBLY	38	INSTALL UNI-DIRECTIONAL YAGI ANTENNA
8	DIRECTIONAL DRILL CONDUIT	8	MODIFY EXISTING SPLICE ENCLOSURE	19	INSTALL SIDEWALK GUY ASSEMBLY	39	INSTALL OMNI-DIRECTIONAL ANTENNA
9	BORE AND JACK CONDUIT	1	INSTALL CABINET FOUNDATION	20	INSTALL MESSENGER CABLE	40	INSTALL RADIO TRANSCEIVER
10	INSTALL CABLE(S) IN EXISTING CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER	21	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	41	INSTALL SYSTEM LOOP
11	INSTALL CABLE(S) IN NEW CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	22	REMOVE EXISTING COMMUNICATIONS CABLE	42	INSTALL SYSTEM LOOP AMPLIFIER
12	INSTALL CABLE(S) IN EXISTING RISER	4	INSTALL NEW 333 COMMUNICATION CABINET	23	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE	43	INSTALL SYSTEM LOOP LEAD-IN CABLE
13	INSTALL CABLE(S) IN NEW RISER	5	INSTALL NEW 332 BASE MOUNTED CABINET	24	INSTALL DELINEATOR MARKER		
				25	STORE 30 FEET OF EACH COMMUNICATIONS CABLE		

44	INSTALL LOCAL LOOP AMPLIFIER	53	INSTALL DSL ETHERNET SWITCH				
45	INSTALL CITY WI-FI ANTENNA	54	INSTALL ETHERNET CABLE				
46	INSTALL HUB 10-GIGABIT ETHERNET SWITCH	55	INSTALL TERMINAL SERVER				
47	INSTALL CODEC	56	INSTALL MICROWAVE VEHICLE DETECTOR				
48	BOND MESSENGER CABLE TO POLE GROUND	57	INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT				
49	INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION	58	INSTALL WIRELESS ACCESS POINT POWER CABLE				
50	INSTALL ANTENNA CABLE						
51	RECONNECT RAILROAD PREEMPTION EQUIPMENT						
52	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT						

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
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SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING SHEET

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE 2/20/08 DATE

CADD Filename: ...\Sht0061.dgn

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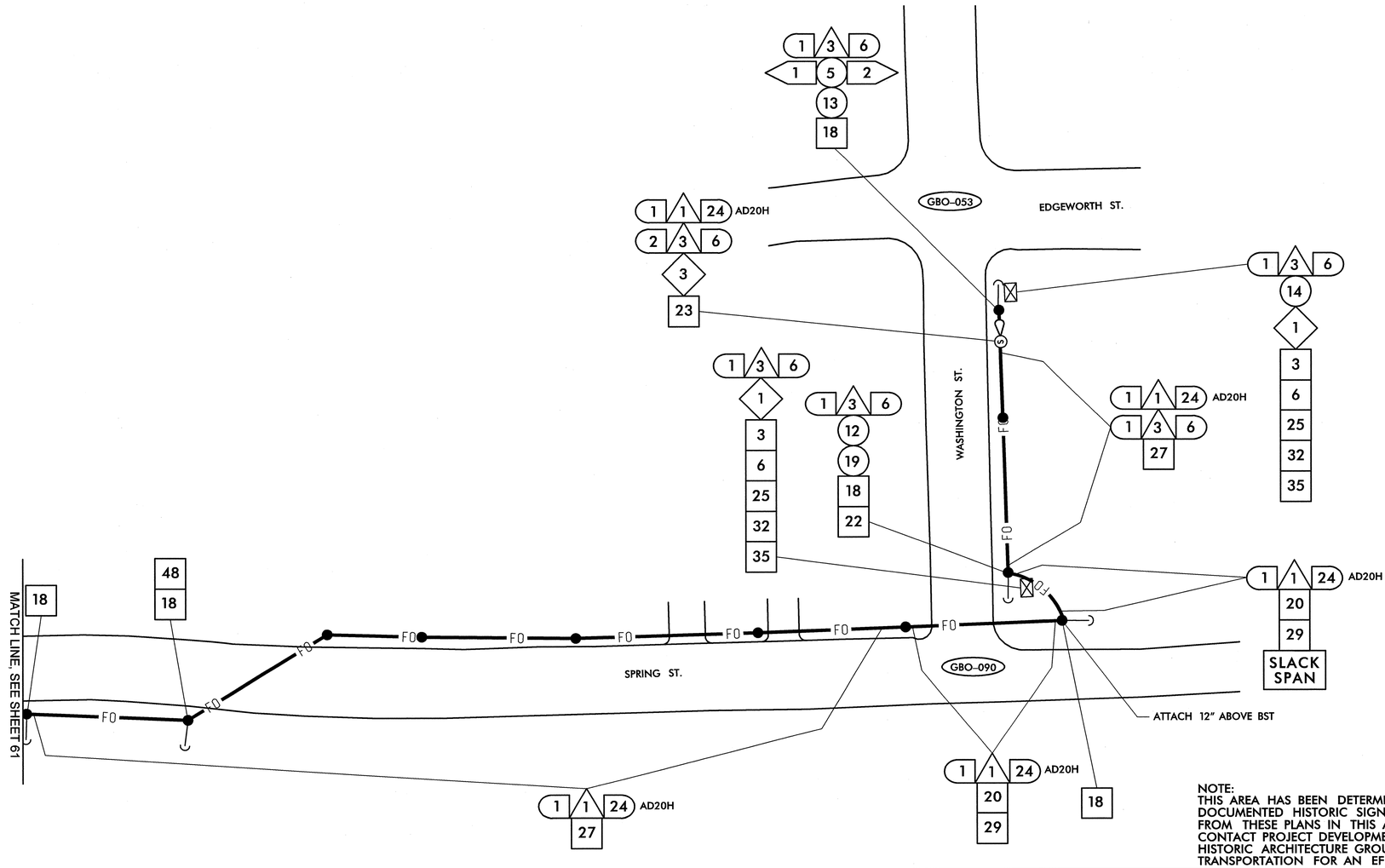
PROJECT REFERENCE NO.	SHEET NO.
U-4711	62



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1. INSTALL SMFO CABLE
2. INSTALL PLENUM RATED FIBER OPTIC CABLE
3. INSTALL FIBER OPTIC DROP CABLE
4. INSTALL TRACER WIRE
5. REUSE NCDOT SMFO CABLE
6. REUSE GDOT SMFO CABLE

1. TRENCH
2. INSTALL PVC CONDUIT
3. INSTALL RIGID, GALVANIZED STEEL CONDUIT
4. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5. INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
6. INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
7. INSTALL POLYETHYLENE CONDUIT
8. DIRECTIONAL DRILL CONDUIT
9. BORE AND JACK CONDUIT
10. INSTALL CABLE(S) IN EXISTING CONDUIT
11. INSTALL CABLE(S) IN NEW CONDUIT
12. INSTALL CABLE(S) IN EXISTING RISER
13. INSTALL CABLE(S) IN NEW RISER
14. INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
15. INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
16. INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
17. INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
18. INSTALL NEW RISER INTO POLE MOUNTED CABINET
19. REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING

1. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2. INSTALL UNDERGROUND SPLICE ENCLOSURE
3. INSTALL AERIAL SPLICE ENCLOSURE
4. INSTALL POLE MOUNTED SPLICE CABINET
5. INSTALL BASE MOUNTED SPLICE CABINET
6. REMOVE EXISTING SPLICE CABINET
7. INSTALL TERMINAL SPLICE BOX
8. MODIFY EXISTING SPLICE ENCLOSURE

1. INSTALL CABINET FOUNDATION
2. REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
3. MODIFY EXISTING CABINET FOUNDATION
4. INSTALL NEW 333 COMMUNICATION CABINET
5. INSTALL NEW 332 BASE MOUNTED CABINET
6. INSTALL NEW 336S CABINET
7. INSTALL CCTV CAMERA ASSEMBLY
8. INSTALL CCTV CAMERA WOOD POLE
9. INSTALL CCTV METAL POLE AND FOUNDATION
10. INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
11. INSTALL SPECIAL OVERSIZED JUNCTION BOX
12. INSTALL OVERSIZED JUNCTION BOX
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20. INSTALL MESSENGER CABLE
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22. REMOVE EXISTING COMMUNICATIONS CABLE
23. INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
24. INSTALL DELINEATOR MARKER
25. STORE 30 FEET OF EACH COMMUNICATIONS CABLE

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30. INSTALL NEW ELECTRICAL SERVICE
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SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL
SEAL 023562
ENGINEER MARK DUNLO

SIGNATURE 2/20/08 DATE

CADD Filename: ...\Sht0062.dgn

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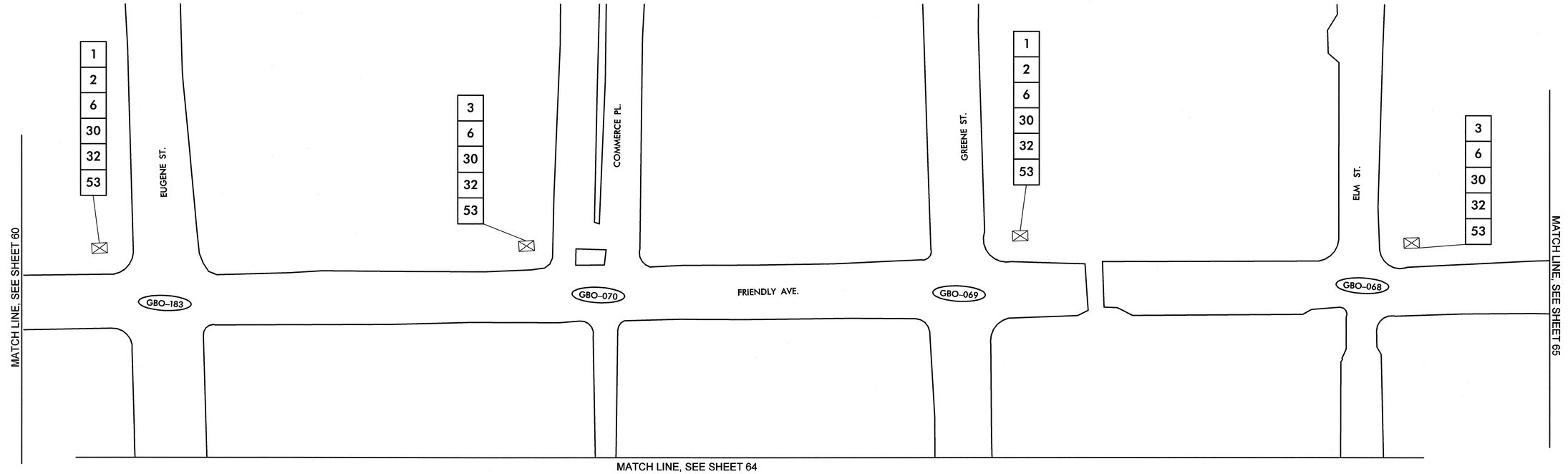
PROJECT REFERENCE NO.	SHEET NO.
U-4711	63



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PLANS PREPARED IN THE OFFICE OF:
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Traffic Engineering and Safety Systems Branch
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Integrated Mobility Division
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filename: ...\Sht0063.dgn

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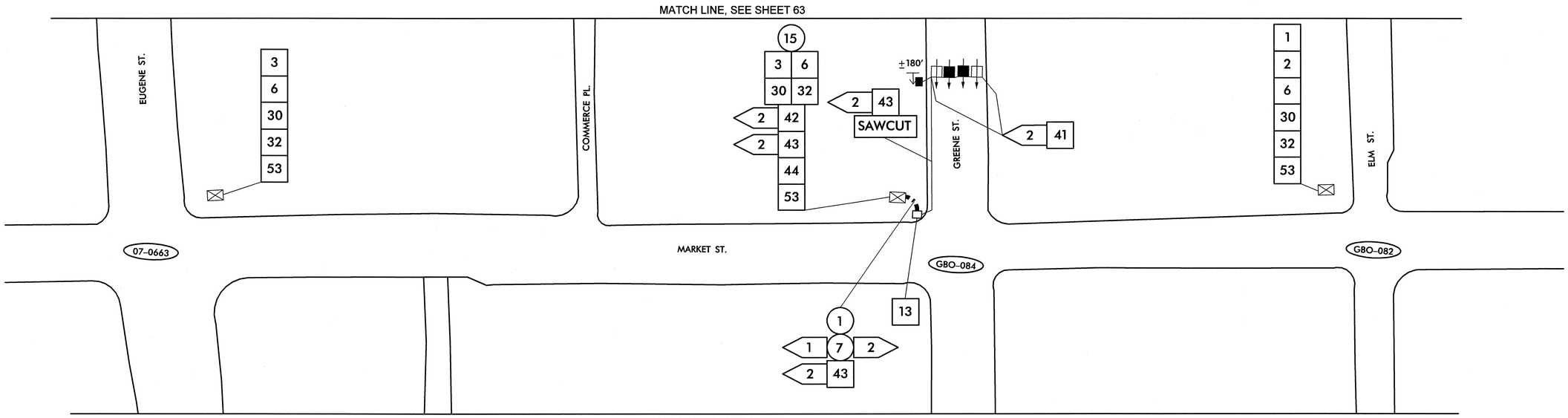
PROJECT REFERENCE NO.	SHEET NO.
U-4711	64



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DIVISION 7 — GUILFORD COUNTY

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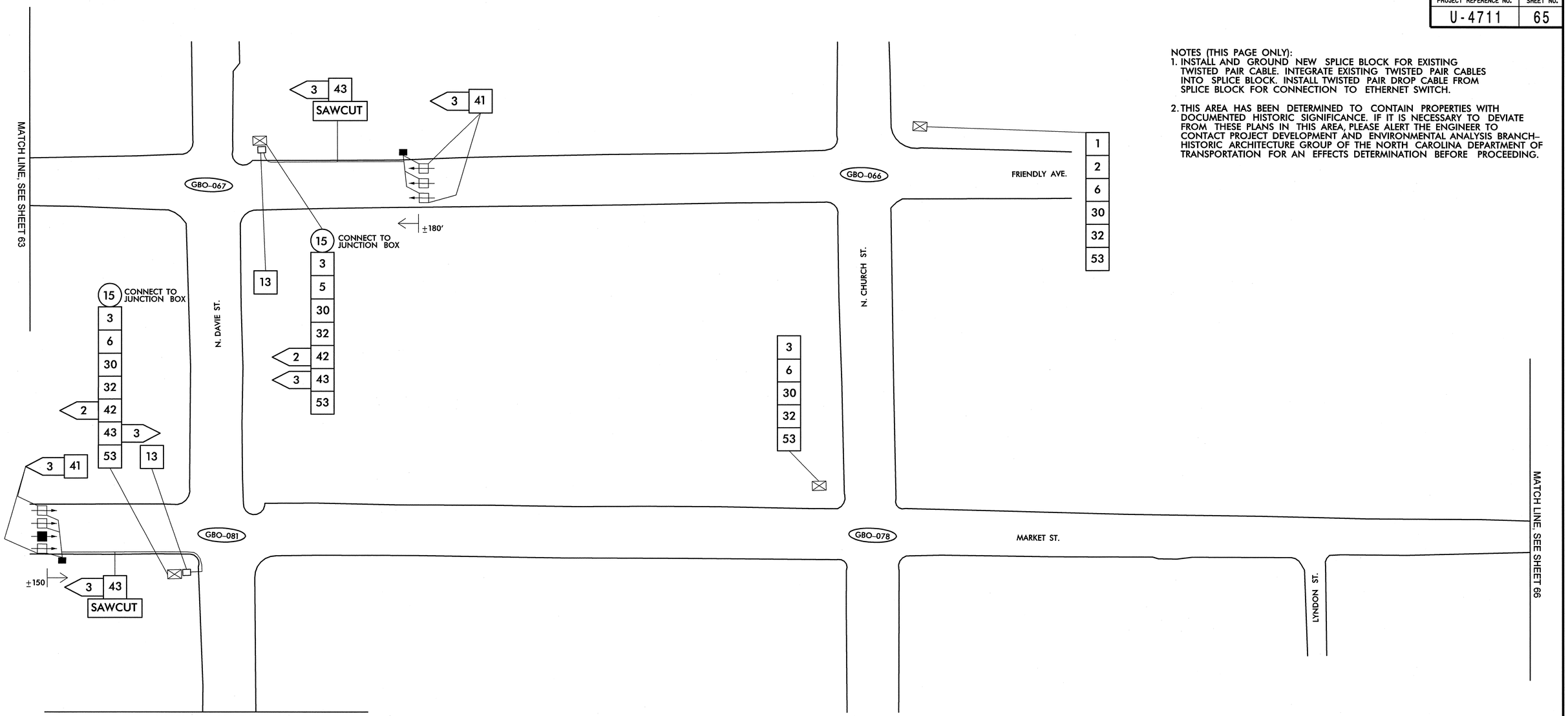
U-4711	65

NOTES (THIS PAGE ONLY):
1. INSTALL AND GROUND NEW SPLICE BLOCK FOR EXISTING TWISTED PAIR CABLE. INTEGRATE EXISTING TWISTED PAIR CABLES INTO SPLICE BLOCK. INSTALL TWISTED PAIR DROP CABLE FROM SPLICE BLOCK FOR CONNECTION TO ETHERNET SWITCH.
2. THIS AREA HAS BEEN DETERMINED TO CONTAIN PROPERTIES WITH DOCUMENTED HISTORIC SIGNIFICANCE. IF IT IS NECESSARY TO DEVIATE FROM THESE PLANS IN THIS AREA, PLEASE ALERT THE ENGINEER TO CONTACT PROJECT DEVELOPMENT AND ENVIRONMENTAL ANALYSIS BRANCH–HISTORIC ARCHITECTURE GROUP OF THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION FOR AN EFFECTS DETERMINATION BEFORE PROCEEDING.



1. INSTALL SMFO CABLE
2. INSTALL PLENUM RATED FIBER OPTIC CABLE
3. INSTALL FIBER OPTIC DROP CABLE
4. INSTALL TRACER WIRE
5. REUSE NCDOT SMFO CABLE
6. REUSE GDOT SMFO CABLE

1. TRENCH
2. INSTALL PVC CONDUIT
3. INSTALL RIGID, GALVANIZED STEEL CONDUIT
4. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5. INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
6. INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
7. INSTALL POLYETHYLENE CONDUIT
8. DIRECTIONAL DRILL CONDUIT
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6. REMOVE EXISTING SPLICE CABINET
7. INSTALL TERMINAL SPLICE BOX
8. MODIFY EXISTING SPLICE ENCLOSURE
1. INSTALL CABINET FOUNDATION
2. REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
3. MODIFY EXISTING CABINET FOUNDATION
4. INSTALL NEW 333 COMMUNICATION CABINET
5. INSTALL NEW 332 BASE MOUNTED CABINET
6. INSTALL NEW 336S CABINET
7. INSTALL CCTV CAMERA ASSEMBLY
8. INSTALL CCTV CAMERA WOOD POLE
9. INSTALL CCTV METAL POLE AND FOUNDATION
10. INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
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23. INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
24. INSTALL DELINEATOR MARKER
25. STORE 30 FEET OF EACH COMMUNICATIONS CABLE
26. STORE 100 FEET OF EACH COMMUNICATIONS CABLE
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32. INSTALL NEW CONTROLLER
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57. INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
58. INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Public Transportation and Safety Services Branch
Intelligent Transportation Systems
Traffic Engineering Branch
Traffic Engineering Unit
NC DEPARTMENT OF TRANSPORTATION
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 GUILFORD COUNTY
PLAN DATE: FEBRUARY, 2008 REVIEWED BY: K.W. SMITH
PREPARED BY: K.D. VANPATTEN REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE 2/20/08 DATE
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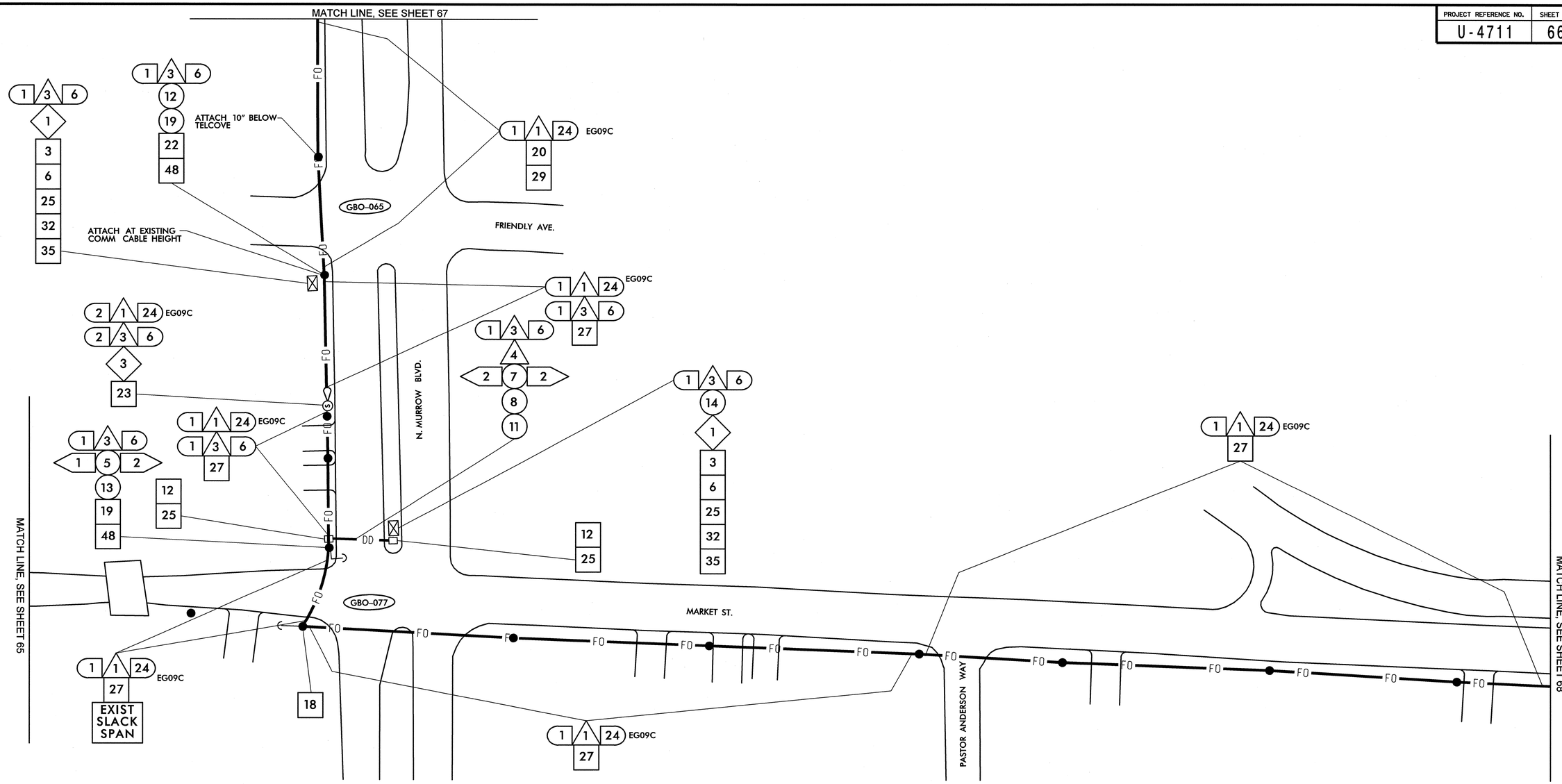
PROJECT REFERENCE NO.	SHEET NO.
U-4711	66



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SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

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SEAL
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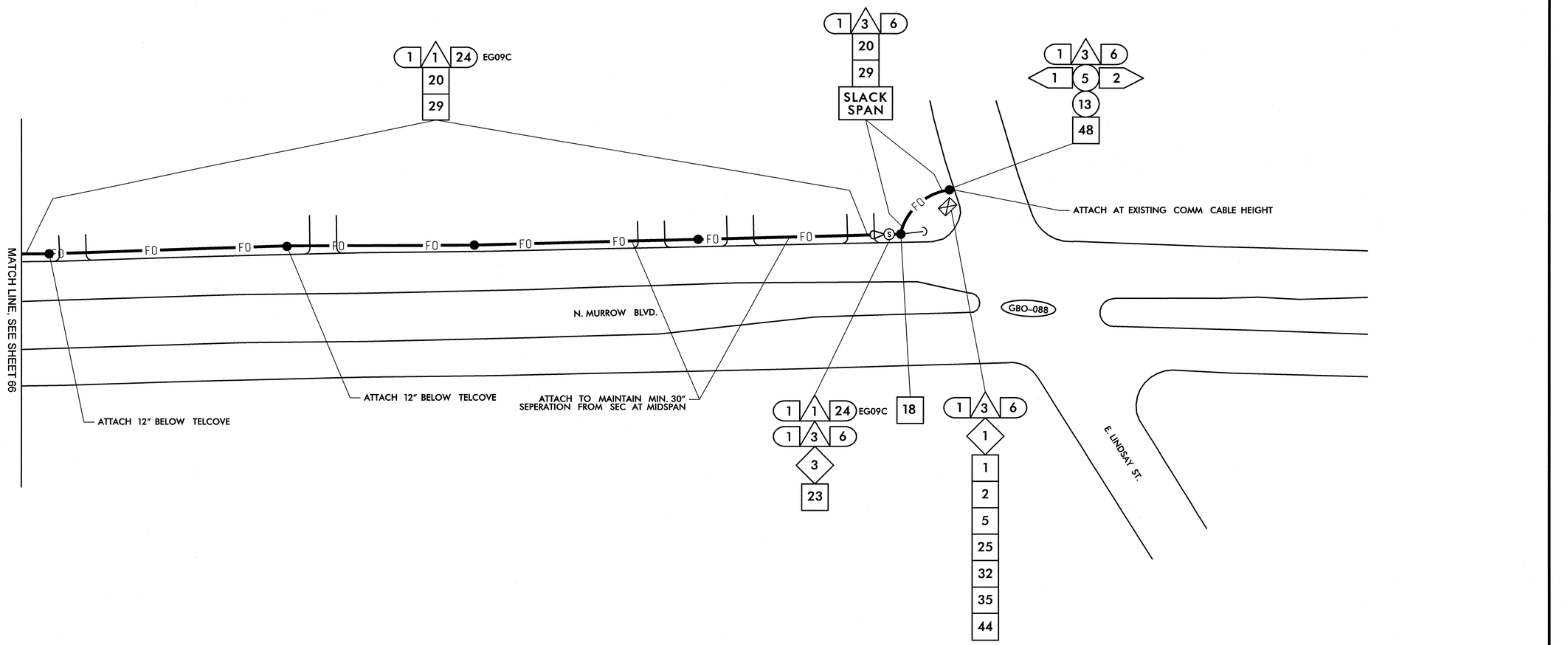
PROJECT REFERENCE NO.	SHEET NO.
U-4711	67



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CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY
PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH
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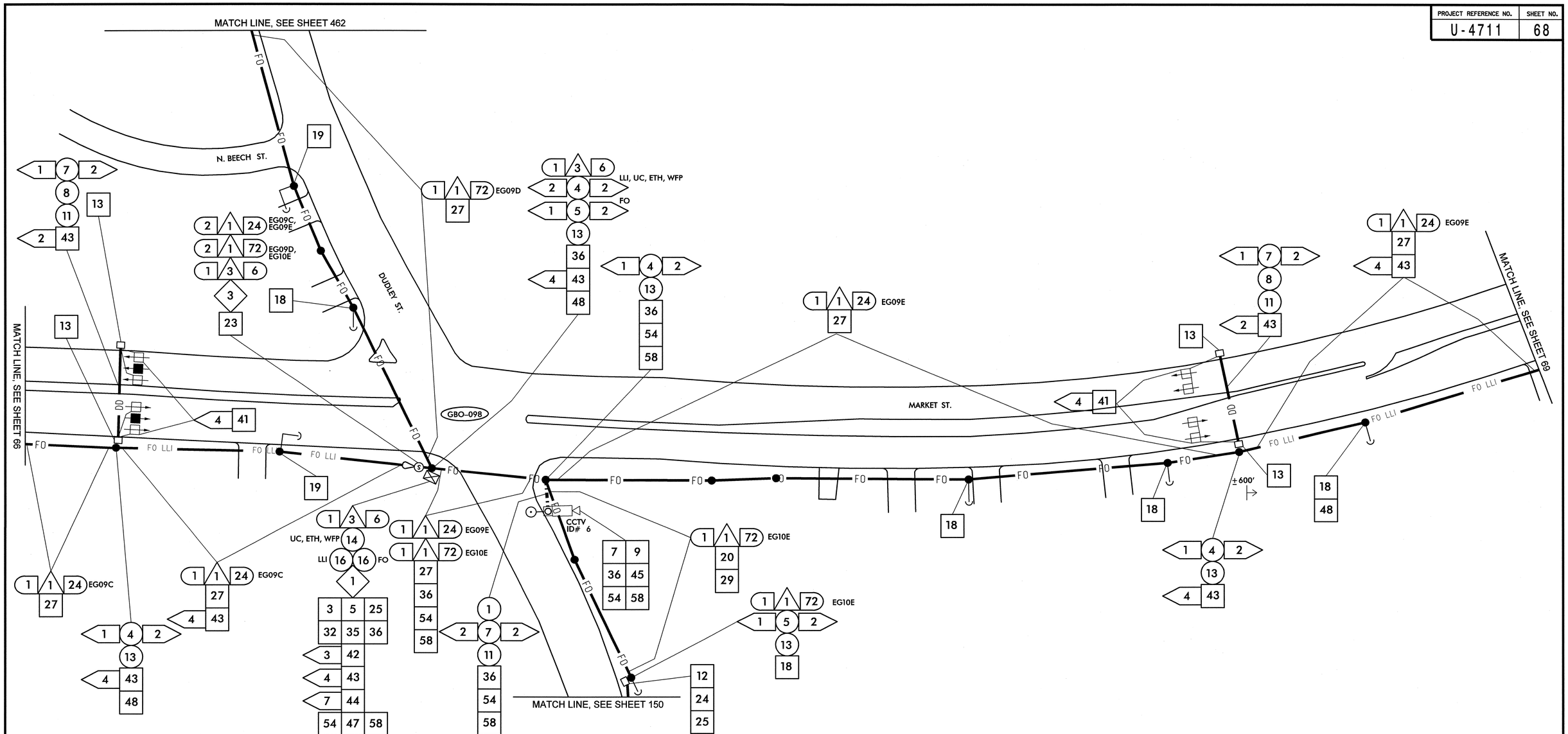
U-4711	68



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CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

2/12/08
SIGNATURE DATE

CADD Filename: ...\Sht0068m.dgn

2/20/2008
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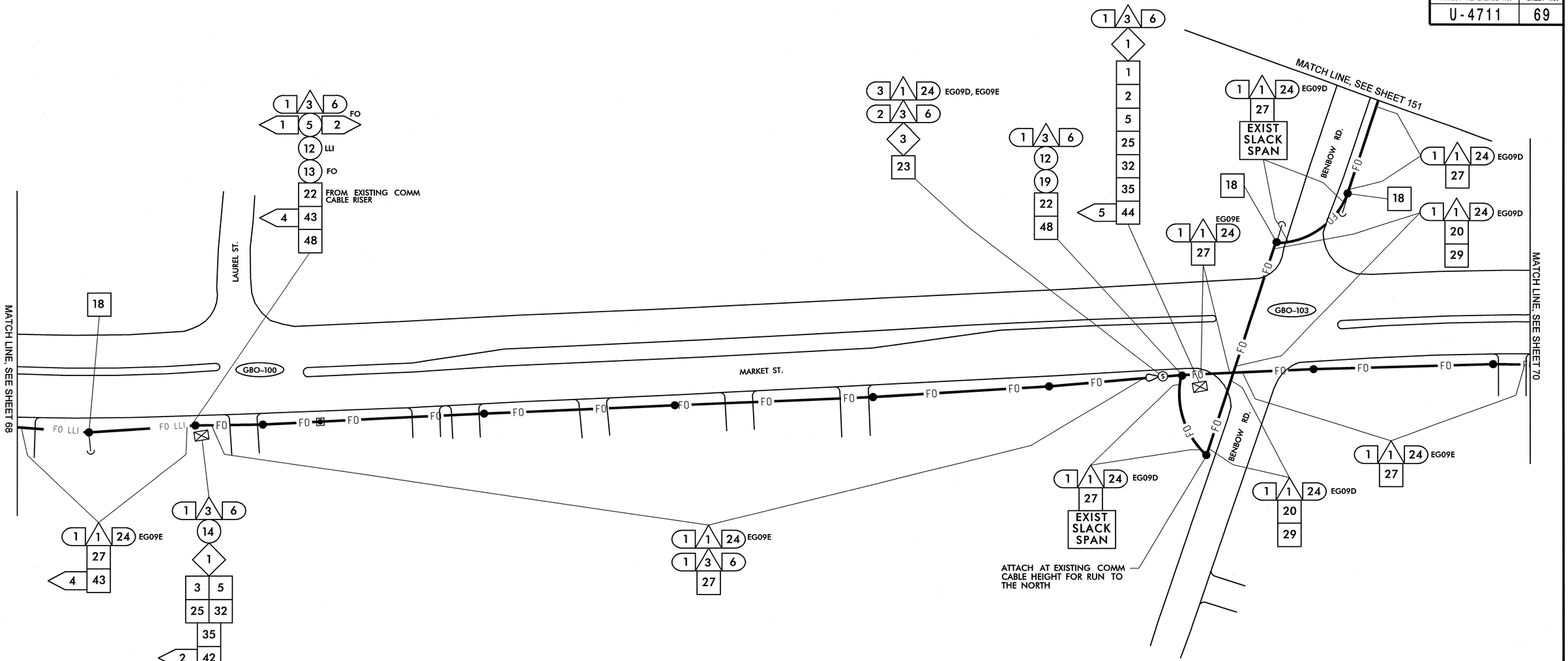
PROJECT REFERENCE NO.	SHEET NO.
U-4711	69



1	INSTALL SMFO CABLE	14	INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
2	INSTALL PLENUM RATED FIBER OPTIC CABLE	15	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
3	INSTALL FIBER OPTIC DROP CABLE	16	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
4	INSTALL TRACER WIRE	17	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
5	REUSE NCDOT SMFO CABLE	18	INSTALL NEW RISER INTO POLE MOUNTED CABINET
6	REUSE GDOT SMFO CABLE	19	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
1	TRENCH	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2	INSTALL PVC CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	INSTALL POLE MOUNTED SPLICE CABINET
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING	5	INSTALL BASE MOUNTED SPLICE CABINET
6	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT	6	REMOVE EXISTING SPLICE CABINET
7	INSTALL POLYETHYLENE CONDUIT	7	INSTALL TERMINAL SPLICE BOX
8	DIRECTIONAL DRILL CONDUIT	8	MODIFY EXISTING SPLICE ENCLOSURE
9	BORE AND JACK CONDUIT	1	INSTALL CABINET FOUNDATION
10	INSTALL CABLE(S) IN EXISTING CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
11	INSTALL CABLE(S) IN NEW CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION
12	INSTALL CABLE(S) IN EXISTING RISER	4	INSTALL NEW 333 COMMUNICATION CABINET
13	INSTALL CABLE(S) IN NEW RISER	5	INSTALL NEW 332 BASE MOUNTED CABINET

6	INSTALL NEW 336S CABINET	26	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
7	INSTALL CCTV CAMERA ASSEMBLY	27	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
8	INSTALL CCTV CAMERA WOOD POLE	28	LASH CABLE(S) TO EXISTING MESSENGER CABLE
9	INSTALL CCTV METAL POLE AND FOUNDATION	29	LASH CABLE(S) TO NEW MESSENGER CABLE
10	INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX	30	INSTALL NEW ELECTRICAL SERVICE
11	INSTALL SPECIAL OVERSIZED JUNCTION BOX	31	MODIFY EXISTING ELECTRICAL SERVICE
12	INSTALL OVERSIZED JUNCTION BOX	32	INSTALL NEW CONTROLLER
13	INSTALL STANDARD JUNCTION BOX	33	INSTALL EXISTING CABLE IN NEW CABINET
14	REMOVE EXISTING JUNCTION BOX	34	INSTALL GENERATOR POWER INLET BOX
15	INSTALL WOOD POLE	35	INSTALL LOCAL GIGABIT ETHERNET SWITCH
16	REMOVE EXISTING WOOD POLE	36	INSTALL UNIFIED CABLE
17	INSTALL AERIAL GUY ASSEMBLY	37	INSTALL POLE MOUNTED EQUIPMENT CABINET
18	INSTALL STANDARD GUY ASSEMBLY	38	INSTALL UNI-DIRECTIONAL YAGI ANTENNA
19	INSTALL SIDEWALK GUY ASSEMBLY	39	INSTALL OMNI-DIRECTIONAL ANTENNA
20	INSTALL MESSENGER CABLE	40	INSTALL RADIO TRANSCEIVER
21	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	41	INSTALL SYSTEM LOOP
22	REMOVE EXISTING COMMUNICATIONS CABLE	42	INSTALL SYSTEM LOOP AMPLIFIER
23	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE	43	INSTALL SYSTEM LOOP LEAD-IN CABLE
24	INSTALL DELINEATOR MARKER		
25	STORE 30 FEET OF EACH COMMUNICATIONS CABLE		

44	INSTALL LOCAL LOOP AMPLIFIER	53	INSTALL DSL ETHERNET SWITCH
45	INSTALL CITY WI-FI ANTENNA	54	INSTALL ETHERNET CABLE
46	INSTALL HUB 10-GIGABIT ETHERNET SWITCH	55	INSTALL TERMINAL SERVER
47	INSTALL CODEC	56	INSTALL MICROWAVE VEHICLE DETECTOR
48	BOND MESSENGER CABLE TO POLE GROUND	57	INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
49	INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION	58	INSTALL WIRELESS ACCESS POINT POWER CABLE
50	INSTALL ANTENNA CABLE		
51	RECONNECT RAILROAD PREEMPTION EQUIPMENT		
52	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT		

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
TRAFFIC ENGINEERING BRANCH
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filename: ...\Sht0069.dgn

2/20/2008
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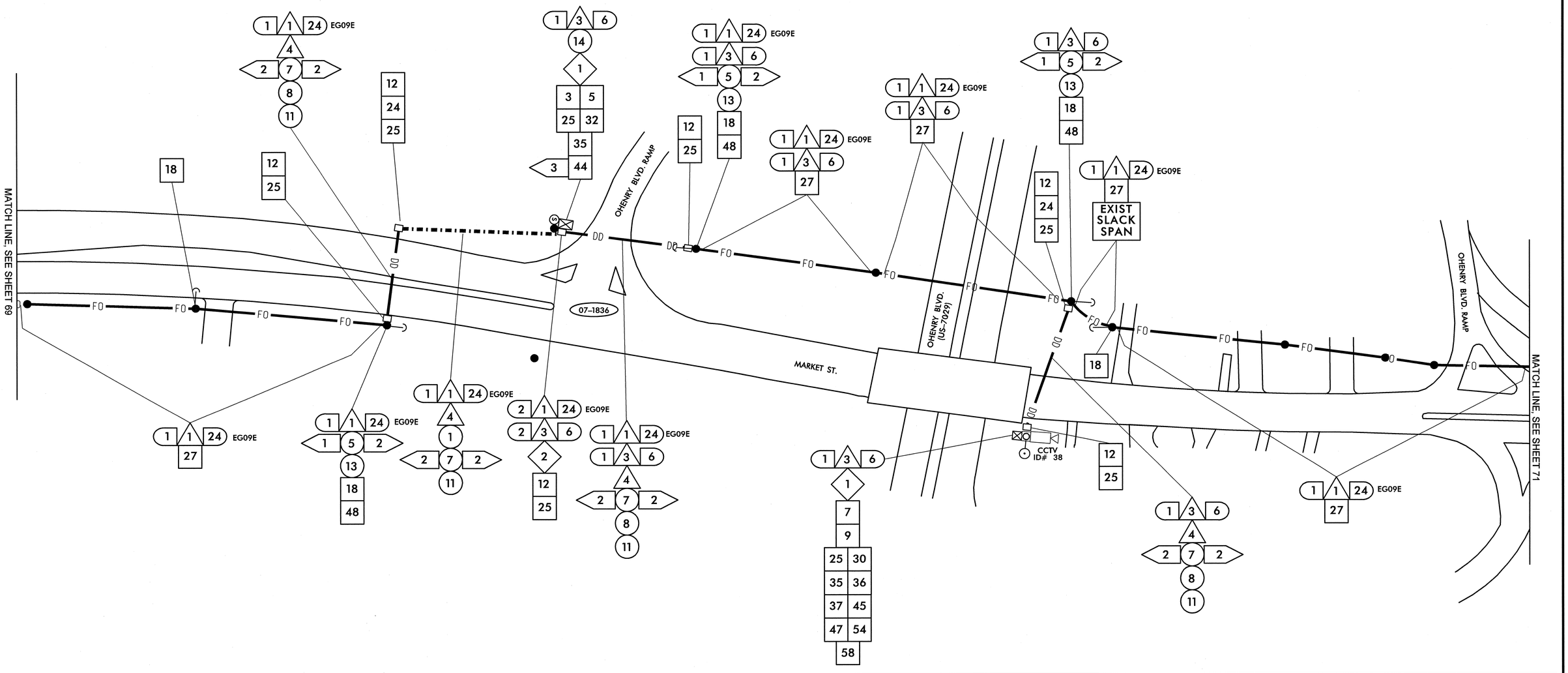
PROJECT REFERENCE NO.	SHEET NO.
U-4711	70



1	INSTALL SMFO CABLE
2	INSTALL PLENUM RATED FIBER OPTIC CABLE
3	INSTALL FIBER OPTIC DROP CABLE
4	INSTALL TRACER WIRE
5	REUSE NCDOT SMFO CABLE
6	REUSE GDOT SMFO CABLE
1	TRENCH
2	INSTALL PVC CONDUIT
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
6	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
7	INSTALL POLYETHYLENE CONDUIT
8	DIRECTIONAL DRILL CONDUIT
9	BORE AND JACK CONDUIT
10	INSTALL CABLE(S) IN EXISTING CONDUIT
11	INSTALL CABLE(S) IN NEW CONDUIT
12	INSTALL CABLE(S) IN EXISTING RISER
13	INSTALL CABLE(S) IN NEW RISER
14	INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
15	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
16	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
17	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
18	INSTALL NEW RISER INTO POLE MOUNTED CABINET
19	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2	INSTALL UNDERGROUND SPLICE ENCLOSURE
3	INSTALL AERIAL SPLICE ENCLOSURE
4	INSTALL POLE MOUNTED SPLICE CABINET
5	INSTALL BASE MOUNTED SPLICE CABINET
6	REMOVE EXISTING SPLICE CABINET
7	INSTALL TERMINAL SPLICE BOX
8	MODIFY EXISTING SPLICE ENCLOSURE
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
3	MODIFY EXISTING CABINET FOUNDATION
4	INSTALL NEW 333 COMMUNICATION CABINET
5	INSTALL NEW 332 BASE MOUNTED CABINET
6	INSTALL NEW 336S CABINET
7	INSTALL CCTV CAMERA ASSEMBLY
8	INSTALL CCTV CAMERA WOOD POLE
9	INSTALL CCTV METAL POLE AND FOUNDATION
10	INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
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24	INSTALL DELINEATOR MARKER
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58	INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
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P.O. Box 33068
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(919) 677-2000

Traffic Engineering and Safety Systems Branch
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Integrated Mobility Division
750 Greenfield Pkwy, Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE 2/24/08 DATE

CADD Filename: ...\Sht0070.dgn

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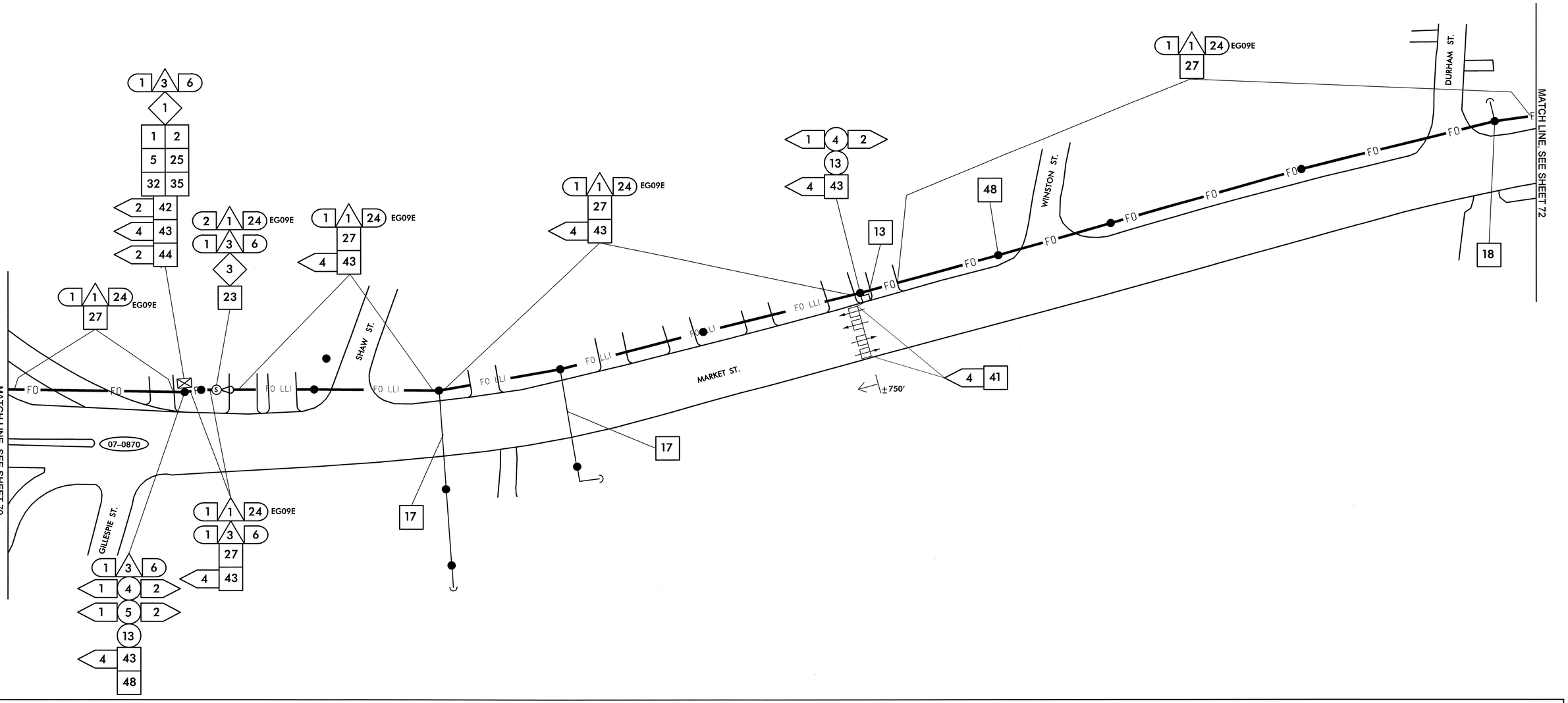
PROJECT REFERENCE NO.	SHEET NO.
U-4711	71



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NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
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P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
Department of Transportation
Division of Highways
Statewide Transportation Improvement Program

750 Greenfield Pkwy, Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/22/08 DATE

CADD Filename: ...\Sht0071.dgn

2/20/2008
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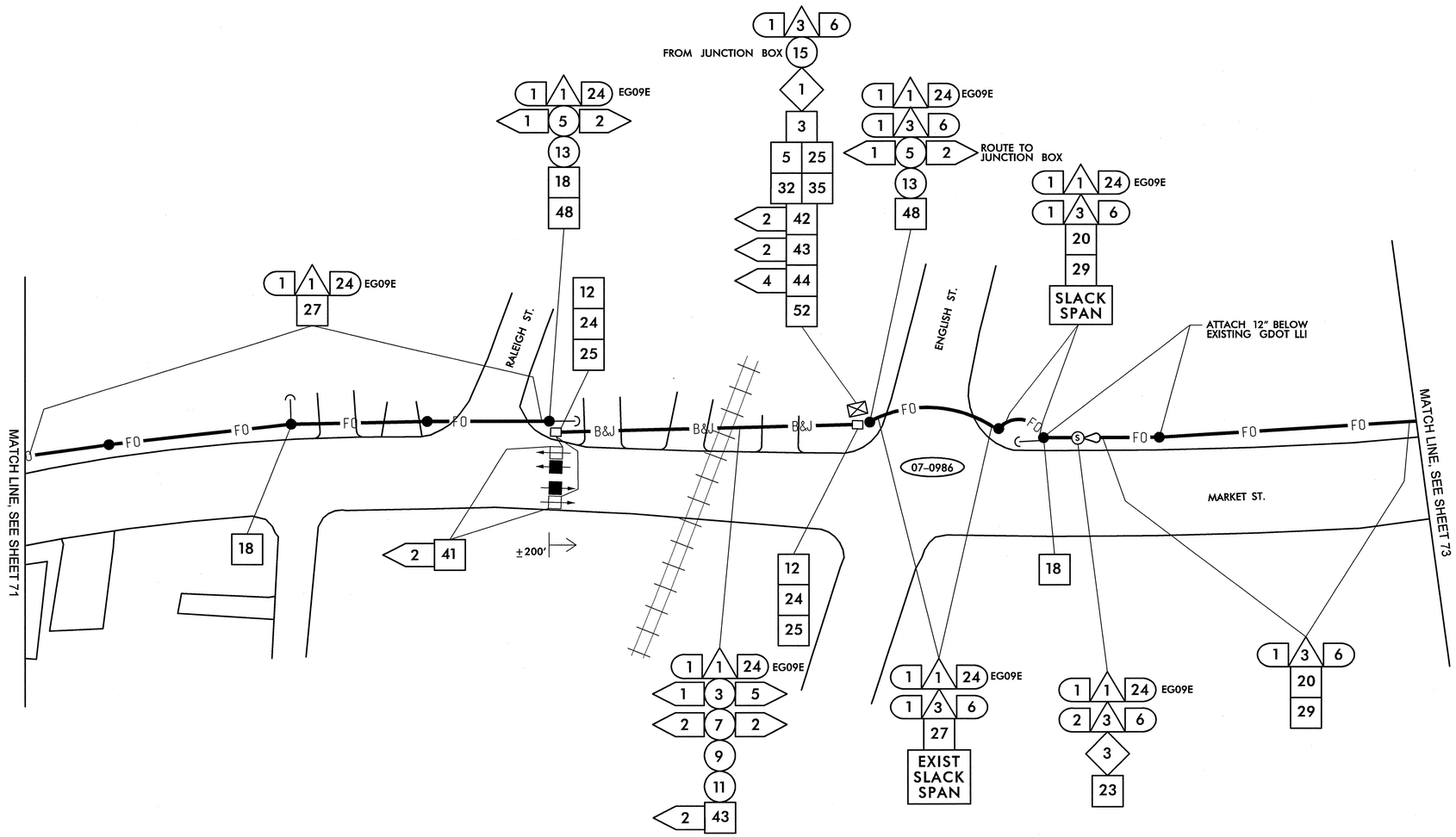
PROJECT REFERENCE NO.	SHEET NO.
U-4711	72



1. INSTALL SMFO CABLE
2. INSTALL PLENUM RATED FIBER OPTIC CABLE
3. INSTALL FIBER OPTIC DROP CABLE
4. INSTALL TRACER WIRE
5. REUSE NCDOT SMFO CABLE
6. REUSE GDOT SMFO CABLE

1. TRENCH
2. INSTALL PVC CONDUIT
3. INSTALL RIGID, GALVANIZED STEEL CONDUIT
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1. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2. INSTALL UNDERGROUND SPLICE ENCLOSURE
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4. INSTALL POLE MOUNTED SPLICE CABINET
5. INSTALL BASE MOUNTED SPLICE CABINET
6. REMOVE EXISTING SPLICE CABINET
7. INSTALL TERMINAL SPLICE BOX
8. MODIFY EXISTING SPLICE ENCLOSURE

1. INSTALL CABINET FOUNDATION
2. REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
3. MODIFY EXISTING CABINET FOUNDATION
4. INSTALL NEW 333 COMMUNICATION CABINET
5. INSTALL NEW 332 BASE MOUNTED CABINET
6. INSTALL NEW 336S CABINET
7. INSTALL CCTV CAMERA ASSEMBLY
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9. INSTALL CCTV METAL POLE AND FOUNDATION
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51. RECONNECT RAILROAD PREEMPTION EQUIPMENT
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58. INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

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SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: K.D. VANPATTEN	REVIEWED BY: M.W. DUNZO

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CADD Filename: ...\Sht0072.dgn

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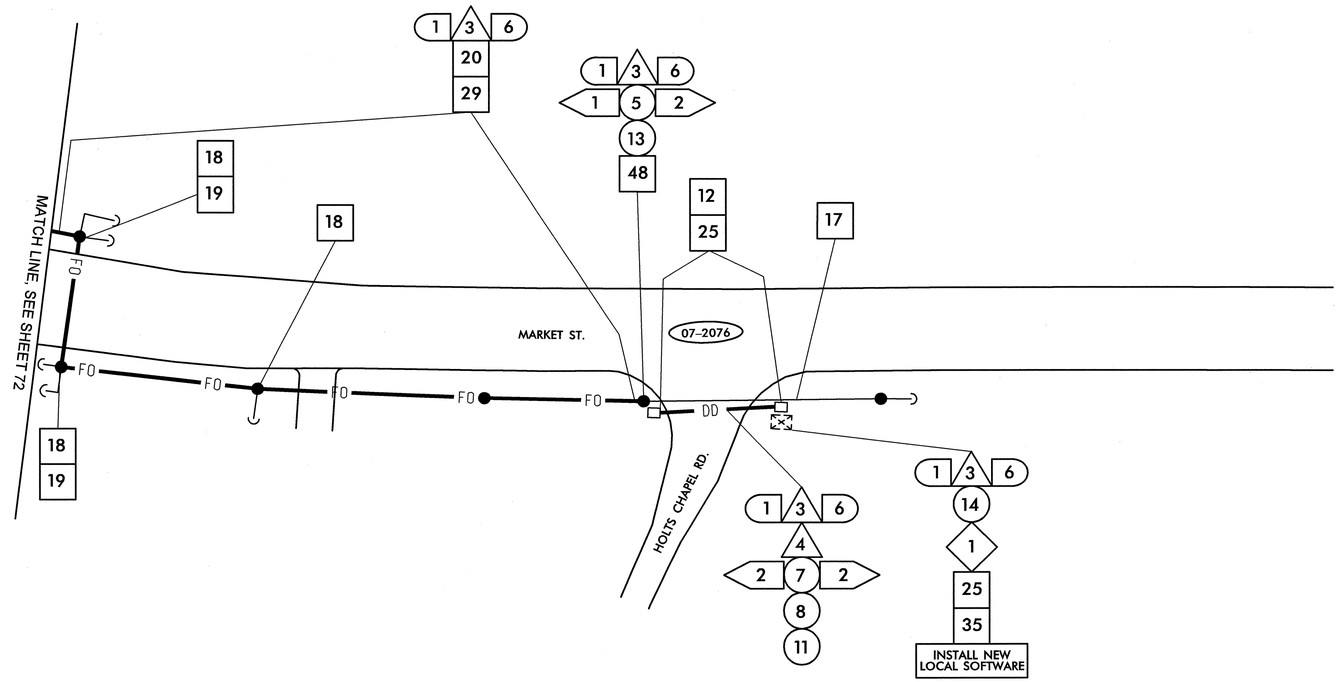
PROJECT REFERENCE NO.	SHEET NO.
U-4711	73



1. INSTALL SMFO CABLE
2. INSTALL PLENUM RATED FIBER OPTIC CABLE
3. INSTALL FIBER OPTIC DROP CABLE
4. INSTALL TRACER WIRE
5. REUSE NCDOT SMFO CABLE
6. REUSE GDOT SMFO CABLE
1. TRENCH
2. INSTALL PVC CONDUIT
3. INSTALL RIGID, GALVANIZED STEEL CONDUIT
4. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5. INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
6. INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
7. INSTALL POLYETHYLENE CONDUIT
8. DIRECTIONAL DRILL CONDUIT
9. BORE AND JACK CONDUIT
10. INSTALL CABLE(S) IN EXISTING CONDUIT
11. INSTALL CABLE(S) IN NEW CONDUIT
12. INSTALL CABLE(S) IN EXISTING RISER
13. INSTALL CABLE(S) IN NEW RISER
14. INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
15. INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
16. INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
17. INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
18. INSTALL NEW RISER INTO POLE MOUNTED CABINET
19. REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
1. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2. INSTALL UNDERGROUND SPLICE ENCLOSURE
3. INSTALL AERIAL SPLICE ENCLOSURE
4. INSTALL POLE MOUNTED SPLICE CABINET
5. INSTALL BASE MOUNTED SPLICE CABINET
6. REMOVE EXISTING SPLICE CABINET
7. INSTALL TERMINAL SPLICE BOX
8. MODIFY EXISTING SPLICE ENCLOSURE
1. INSTALL CABINET FOUNDATION
2. REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
3. MODIFY EXISTING CABINET FOUNDATION
4. INSTALL NEW 333 COMMUNICATION CABINET
5. INSTALL NEW 332 BASE MOUNTED CABINET
6. INSTALL NEW 336S CABINET
7. INSTALL CCTV CAMERA ASSEMBLY
8. INSTALL CCTV CAMERA WOOD POLE
9. INSTALL CCTV METAL POLE AND FOUNDATION
10. INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
11. INSTALL SPECIAL OVERSIZED JUNCTION BOX
12. INSTALL OVERSIZED JUNCTION BOX
13. INSTALL STANDARD JUNCTION BOX
14. REMOVE EXISTING JUNCTION BOX
15. INSTALL WOOD POLE
16. REMOVE EXISTING WOOD POLE
17. INSTALL AERIAL GUY ASSEMBLY
18. INSTALL STANDARD GUY ASSEMBLY
19. INSTALL SIDEWALK GUY ASSEMBLY
20. INSTALL MESSENGER CABLE
21. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
22. REMOVE EXISTING COMMUNICATIONS CABLE
23. INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
24. INSTALL DELINEATOR MARKER
25. STORE 30 FEET OF EACH COMMUNICATIONS CABLE
26. STORE 100 FEET OF EACH COMMUNICATIONS CABLE
27. LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
28. LASH CABLE(S) TO EXISTING MESSENGER CABLE
29. LASH CABLE(S) TO NEW MESSENGER CABLE
30. INSTALL NEW ELECTRICAL SERVICE
31. MODIFY EXISTING ELECTRICAL SERVICE
32. INSTALL NEW CONTROLLER
33. INSTALL EXISTING CABLE IN NEW CABINET
34. INSTALL GENERATOR POWER INLET BOX
35. INSTALL LOCAL GIGABIT ETHERNET SWITCH
36. INSTALL UNIFIED CABLE
37. INSTALL POLE MOUNTED EQUIPMENT CABINET
38. INSTALL UNI-DIRECTIONAL YAGI ANTENNA
39. INSTALL OMNI-DIRECTIONAL ANTENNA
40. INSTALL RADIO TRANSCEIVER
41. INSTALL SYSTEM LOOP
42. INSTALL SYSTEM LOOP AMPLIFIER
43. INSTALL SYSTEM LOOP LEAD-IN CABLE
44. INSTALL LOCAL LOOP AMPLIFIER
45. INSTALL CITY WI-FI ANTENNA
46. INSTALL HUB 10-GIGABIT ETHERNET SWITCH
47. INSTALL CODEC
48. BOND MESSENGER CABLE TO POLE GROUND
49. INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION
50. INSTALL ANTENNA CABLE
51. RECONNECT RAILROAD PREEMPTION EQUIPMENT
52. RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
53. INSTALL DSL ETHERNET SWITCH
54. INSTALL ETHERNET CABLE
55. INSTALL TERMINAL SERVER
56. INSTALL MICROWAVE VEHICLE DETECTOR
57. INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
58. INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE 2/29/08 DATE

CADD Filename: ...\Sht0073.dgn

2/20/2008
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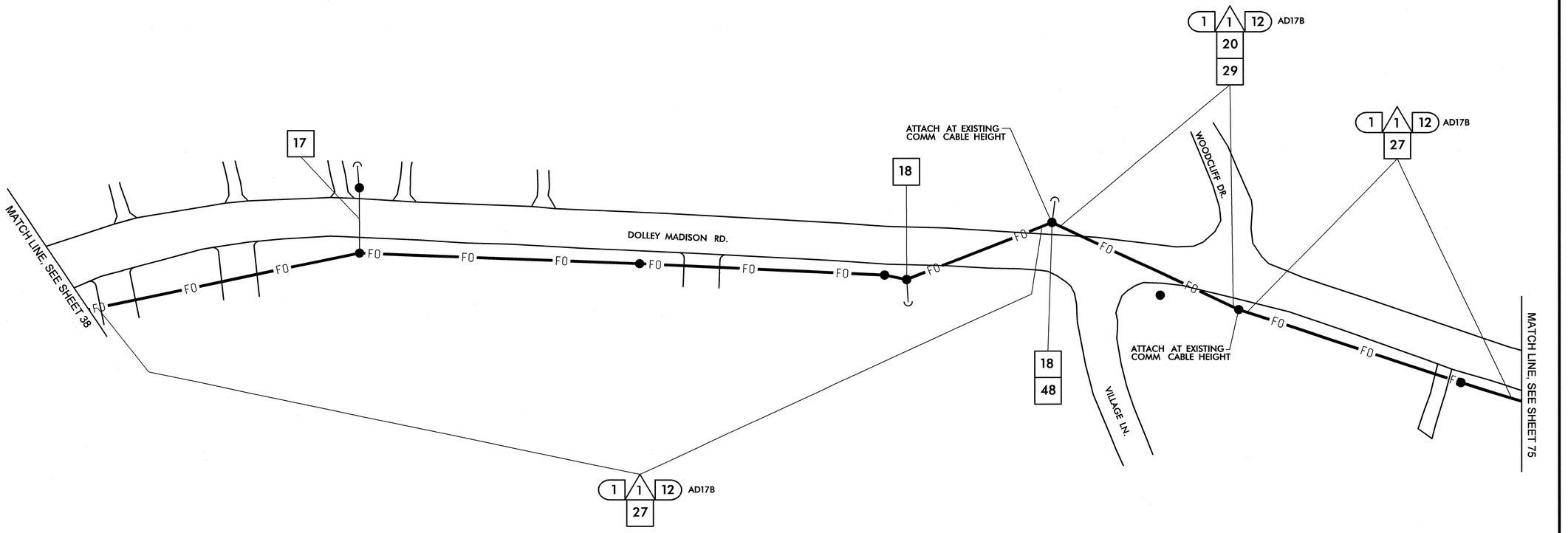
PROJECT REFERENCE NO.	SHEET NO.
U-4711	74



1. INSTALL SMFO CABLE
2. INSTALL PLENUM RATED FIBER OPTIC CABLE
3. INSTALL FIBER OPTIC DROP CABLE
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5. REUSE NCDOT SMFO CABLE
6. REUSE GDOT SMFO CABLE

1. TRENCH
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3. INSTALL RIGID, GALVANIZED STEEL CONDUIT
4. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5. INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
6. INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
7. INSTALL POLYETHYLENE CONDUIT
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10. INSTALL CABLE(S) IN EXISTING CONDUIT
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14. INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
15. INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
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17. INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
18. INSTALL NEW RISER INTO POLE MOUNTED CABINET
19. REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING

1. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2. INSTALL UNDERGROUND SPLICE ENCLOSURE
3. INSTALL AERIAL SPLICE ENCLOSURE
4. INSTALL POLE MOUNTED SPLICE CABINET
5. INSTALL BASE MOUNTED SPLICE CABINET
6. REMOVE EXISTING SPLICE CABINET
7. INSTALL TERMINAL SPLICE BOX
8. MODIFY EXISTING SPLICE ENCLOSURE

1. INSTALL CABINET FOUNDATION
2. REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
3. MODIFY EXISTING CABINET FOUNDATION
4. INSTALL NEW 333 COMMUNICATION CABINET
5. INSTALL NEW 332 BASE MOUNTED CABINET
6. INSTALL NEW 336S CABINET
7. INSTALL CCTV CAMERA ASSEMBLY
8. INSTALL CCTV CAMERA WOOD POLE
9. INSTALL CCTV METAL POLE AND FOUNDATION
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24. INSTALL DELINEATOR MARKER
25. STORE 30 FEET OF EACH COMMUNICATIONS CABLE
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27. LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
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29. LASH CABLE(S) TO NEW MESSENGER CABLE
30. INSTALL NEW ELECTRICAL SERVICE
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57. INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
58. INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
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(919) 677-2000
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING SHEET

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/29/08 DATE

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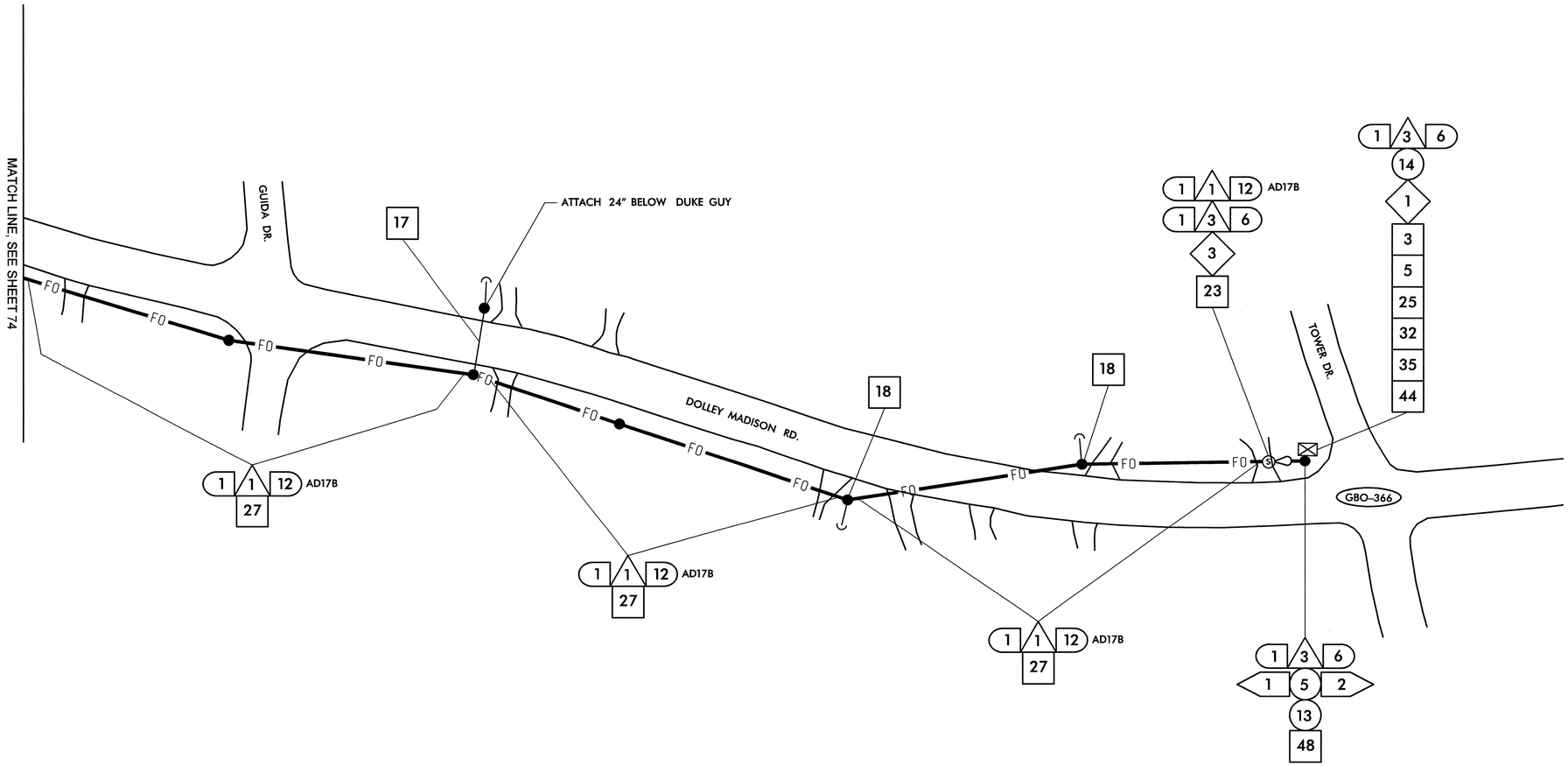
PROJECT REFERENCE NO.	SHEET NO.
U-4711	75



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3. INSTALL AERIAL SPLICE ENCLOSURE
4. INSTALL POLE MOUNTED SPLICE CABINET
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6. REMOVE EXISTING SPLICE CABINET
7. INSTALL TERMINAL SPLICE BOX
8. MODIFY EXISTING SPLICE ENCLOSURE
1. INSTALL CABINET FOUNDATION
2. REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
3. MODIFY EXISTING CABINET FOUNDATION
4. INSTALL NEW 333 COMMUNICATION CABINET
5. INSTALL NEW 332 BASE MOUNTED CABINET
6. INSTALL NEW 336S CABINET
7. INSTALL CCTV CAMERA ASSEMBLY
8. INSTALL CCTV CAMERA WOOD POLE
9. INSTALL CCTV METAL POLE AND FOUNDATION
10. INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
11. INSTALL SPECIAL OVERSIZED JUNCTION BOX
12. INSTALL OVERSIZED JUNCTION BOX
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14. REMOVE EXISTING JUNCTION BOX
15. INSTALL WOOD POLE
16. REMOVE EXISTING WOOD POLE
17. INSTALL AERIAL GUY ASSEMBLY
18. INSTALL STANDARD GUY ASSEMBLY
19. INSTALL SIDEWALK GUY ASSEMBLY
20. INSTALL MESSENGER CABLE
21. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
22. REMOVE EXISTING COMMUNICATIONS CABLE
23. INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
24. INSTALL DELINEATOR MARKER
25. STORE 30 FEET OF EACH COMMUNICATIONS CABLE
26. STORE 100 FEET OF EACH COMMUNICATIONS CABLE
27. LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
28. LASH CABLE(S) TO EXISTING MESSENGER CABLE
29. LASH CABLE(S) TO NEW MESSENGER CABLE
30. INSTALL NEW ELECTRICAL SERVICE
31. MODIFY EXISTING ELECTRICAL SERVICE
32. INSTALL NEW CONTROLLER
33. INSTALL EXISTING CABLE IN NEW CABINET
34. INSTALL GENERATOR POWER INLET BOX
35. INSTALL LOCAL GIGABIT ETHERNET SWITCH
36. INSTALL UNIFIED CABLE
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38. INSTALL UNI-DIRECTIONAL YAGI ANTENNA
39. INSTALL OMNI-DIRECTIONAL ANTENNA
40. INSTALL RADIO TRANSCEIVER
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42. INSTALL SYSTEM LOOP AMPLIFIER
43. INSTALL SYSTEM LOOP LEAD-IN CABLE
44. INSTALL LOCAL LOOP AMPLIFIER
45. INSTALL CITY WI-FI ANTENNA
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47. INSTALL CODEC
48. BOND MESSENGER CABLE TO POLE GROUND
49. INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION
50. INSTALL ANTENNA CABLE
51. RECONNECT RAILROAD PREEMPTION EQUIPMENT
52. RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
53. INSTALL DSL ETHERNET SWITCH
54. INSTALL ETHERNET CABLE
55. INSTALL TERMINAL SERVER
56. INSTALL MICROWAVE VEHICLE DETECTOR
57. INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
58. INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
Transportation Management Unit
NCDEPARTMENT OF TRANSPORTATION
750 Greenfield Pkwy, Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 GUILFORD COUNTY

PLAN DATE:	FEBRUARY, 2008	REVIEWED BY:	K.W. SMITH
PREPARED BY:	K.D. VANPATTEN	REVIEWED BY:	M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/26/08 DATE

CADD Filename: ...\Sht0075.dgn

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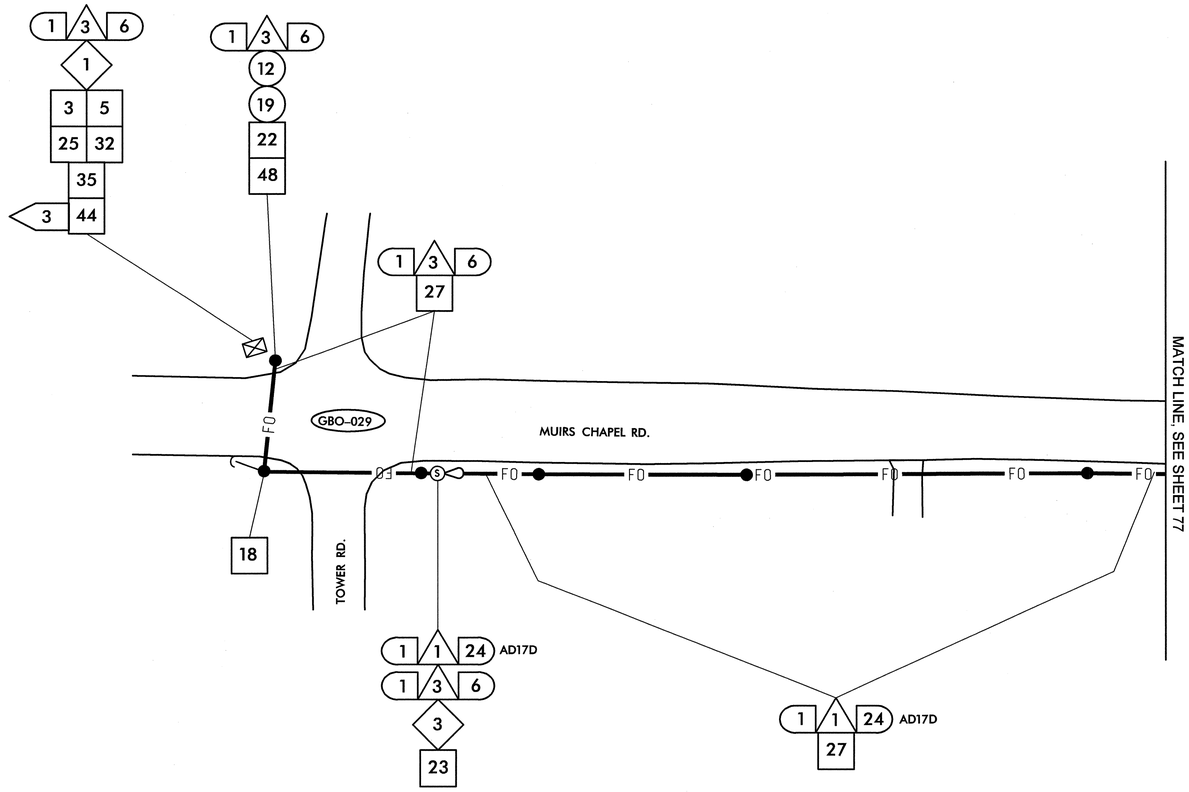
PROJECT REFERENCE NO.	SHEET NO.
U-4711	76



1	INSTALL SMFO CABLE	14	INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE	6	INSTALL NEW 336S CABINET	26	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	44	INSTALL LOCAL LOOP AMPLIFIER	53	INSTALL DSL ETHERNET SWITCH
2	INSTALL PLENUM RATED FIBER OPTIC CABLE	15	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	7	INSTALL CCTV CAMERA ASSEMBLY	27	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	45	INSTALL CITY WI-FI ANTENNA	54	INSTALL ETHERNET CABLE
3	INSTALL FIBER OPTIC DROP CABLE	16	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	8	INSTALL CCTV CAMERA WOOD POLE	28	LASH CABLE(S) TO EXISTING MESSENGER CABLE	46	INSTALL HUB 10-GIGABIT ETHERNET SWITCH	55	INSTALL TERMINAL SERVER
4	INSTALL TRACER WIRE	17	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET	9	INSTALL CCTV METAL POLE AND FOUNDATION	29	LASH CABLE(S) TO NEW MESSENGER CABLE	47	INSTALL CODEC	56	INSTALL MICROWAVE VEHICLE DETECTOR
5	REUSE NCDOT SMFO CABLE	18	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX	30	INSTALL NEW ELECTRICAL SERVICE	48	BOND MESSENGER CABLE TO POLE GROUND	57	INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
6	REUSE GDOT SMFO CABLE	19	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL SPECIAL OVERSIZED JUNCTION BOX	31	MODIFY EXISTING ELECTRICAL SERVICE	49	INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION	58	INSTALL WIRELESS ACCESS POINT POWER CABLE
1	TRENCH	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	12	INSTALL OVERSIZED JUNCTION BOX	32	INSTALL NEW CONTROLLER	50	INSTALL ANTENNA CABLE		
2	INSTALL PVC CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	13	INSTALL STANDARD JUNCTION BOX	33	INSTALL EXISTING CABLE IN NEW CABINET	51	RECONNECT RAILROAD PREEMPTION EQUIPMENT		
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	14	REMOVE EXISTING JUNCTION BOX	34	INSTALL GENERATOR POWER INLET BOX	52	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT		
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	INSTALL POLE MOUNTED SPLICE CABINET	15	INSTALL WOOD POLE	35	INSTALL LOCAL GIGABIT ETHERNET SWITCH				
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING	5	INSTALL BASE MOUNTED SPLICE CABINET	16	REMOVE EXISTING WOOD POLE	36	INSTALL UNIFIED CABLE				
6	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT	6	REMOVE EXISTING SPLICE CABINET	17	INSTALL AERIAL GUY ASSEMBLY	37	INSTALL POLE MOUNTED EQUIPMENT CABINET				
7	INSTALL POLYETHYLENE CONDUIT	7	INSTALL TERMINAL SPLICE BOX	18	INSTALL STANDARD GUY ASSEMBLY	38	INSTALL UNI-DIRECTIONAL YAGI ANTENNA				
8	DIRECTIONAL DRILL CONDUIT	8	MODIFY EXISTING SPLICE ENCLOSURE	19	INSTALL SIDEWALK GUY ASSEMBLY	39	INSTALL OMNI-DIRECTIONAL ANTENNA				
9	BORE AND JACK CONDUIT	1	INSTALL CABINET FOUNDATION	20	INSTALL MESSENGER CABLE	40	INSTALL RADIO TRANSCEIVER				
10	INSTALL CABLE(S) IN EXISTING CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER	21	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	41	INSTALL SYSTEM LOOP				
11	INSTALL CABLE(S) IN NEW CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	22	REMOVE EXISTING COMMUNICATIONS CABLE	42	INSTALL SYSTEM LOOP AMPLIFIER				
12	INSTALL CABLE(S) IN EXISTING RISER	4	INSTALL NEW 333 COMMUNICATION CABINET	23	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE	43	INSTALL SYSTEM LOOP LEAD-IN CABLE				
13	INSTALL CABLE(S) IN NEW RISER	5	INSTALL NEW 332 BASE MOUNTED CABINET	24	INSTALL DELINEATOR MARKER						
				25	STORE 30 FEET OF EACH COMMUNICATIONS CABLE						

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
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CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING SHEET

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL
SEAL 023562
ENGINEER
MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filename: ...\Sht0076.dgn

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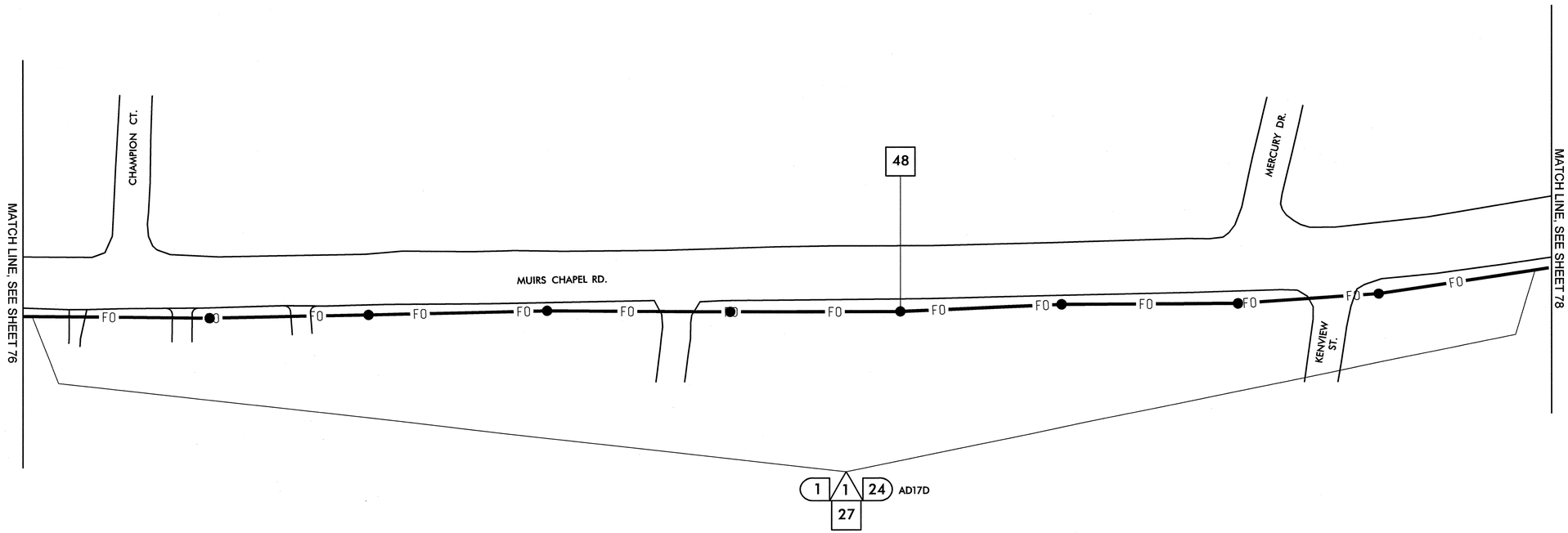
PROJECT REFERENCE NO.	SHEET NO.
U-4711	77



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(2) INSTALL PVC CONDUIT
(3) INSTALL RIGID, GALVANIZED STEEL CONDUIT
(4) INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
(5) INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
(6) INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
(7) INSTALL POLYETHYLENE CONDUIT
(8) DIRECTIONAL DRILL CONDUIT
(9) BORE AND JACK CONDUIT
(10) INSTALL CABLE(S) IN EXISTING CONDUIT
(11) INSTALL CABLE(S) IN NEW CONDUIT
(12) INSTALL CABLE(S) IN EXISTING RISER
(13) INSTALL CABLE(S) IN NEW RISER
(14) INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
(15) INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
(16) INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
(17) INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
(18) INSTALL NEW RISER INTO POLE MOUNTED CABINET
(19) REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING

◇1 INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
◇2 INSTALL UNDERGROUND SPLICE ENCLOSURE
◇3 INSTALL AERIAL SPLICE ENCLOSURE
◇4 INSTALL POLE MOUNTED SPLICE CABINET
◇5 INSTALL BASE MOUNTED SPLICE CABINET
◇6 REMOVE EXISTING SPLICE CABINET
◇7 INSTALL TERMINAL SPLICE BOX
◇8 MODIFY EXISTING SPLICE ENCLOSURE

[1] INSTALL CABINET FOUNDATION
[2] REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
[3] MODIFY EXISTING CABINET FOUNDATION
[4] INSTALL NEW 333 COMMUNICATION CABINET
[5] INSTALL NEW 332 BASE MOUNTED CABINET
[6] INSTALL NEW 336S CABINET
[7] INSTALL CCTV CAMERA ASSEMBLY
[8] INSTALL CCTV CAMERA WOOD POLE
[9] INSTALL CCTV METAL POLE AND FOUNDATION
[10] INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
[11] INSTALL SPECIAL OVERSIZED JUNCTION BOX
[12] INSTALL OVERSIZED JUNCTION BOX
[13] INSTALL STANDARD JUNCTION BOX
[14] REMOVE EXISTING JUNCTION BOX
[15] INSTALL WOOD POLE
[16] REMOVE EXISTING WOOD POLE
[17] INSTALL AERIAL GUY ASSEMBLY
[18] INSTALL STANDARD GUY ASSEMBLY
[19] INSTALL SIDEWALK GUY ASSEMBLY
[20] INSTALL MESSENGER CABLE
[21] REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
[22] REMOVE EXISTING COMMUNICATIONS CABLE
[23] INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
[24] INSTALL DELINEATOR MARKER
[25] STORE 30 FEET OF EACH COMMUNICATIONS CABLE
[26] STORE 100 FEET OF EACH COMMUNICATIONS CABLE
[27] LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
[28] LASH CABLE(S) TO EXISTING MESSENGER CABLE
[29] LASH CABLE(S) TO NEW MESSENGER CABLE
[30] INSTALL NEW ELECTRICAL SERVICE
[31] MODIFY EXISTING ELECTRICAL SERVICE
[32] INSTALL NEW CONTROLLER
[33] INSTALL EXISTING CABLE IN NEW CABINET
[34] INSTALL GENERATOR POWER INLET BOX
[35] INSTALL LOCAL GIGABIT ETHERNET SWITCH
[36] INSTALL UNIFIED CABLE
[37] INSTALL POLE MOUNTED EQUIPMENT CABINET
[38] INSTALL UNI-DIRECTIONAL YAGI ANTENNA
[39] INSTALL OMNI-DIRECTIONAL ANTENNA
[40] INSTALL RADIO TRANSCEIVER
[41] INSTALL SYSTEM LOOP
[42] INSTALL SYSTEM LOOP AMPLIFIER
[43] INSTALL SYSTEM LOOP LEAD-IN CABLE
[44] INSTALL LOCAL LOOP AMPLIFIER
[45] INSTALL CITY WI-FI ANTENNA
[46] INSTALL HUB 10-GIGABIT ETHERNET SWITCH
[47] INSTALL CODEC
[48] BOND MESSENGER CABLE TO POLE GROUND
[49] INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION
[50] INSTALL ANTENNA CABLE
[51] RECONNECT RAILROAD PREEMPTION EQUIPMENT
[52] RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
[53] INSTALL DSL ETHERNET SWITCH
[54] INSTALL ETHERNET CABLE
[55] INSTALL TERMINAL SERVER
[56] INSTALL MICROWAVE VEHICLE DETECTOR
[57] INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
[58] INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
Traffic Engineering Unit
Statewide Traffic Engineering Systems
NC DEPARTMENT OF TRANSPORTATION
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: K.D. VANPATTEN	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL
SEAL 023562
ENGINEER
MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filename: ...\Sht0077.dgn

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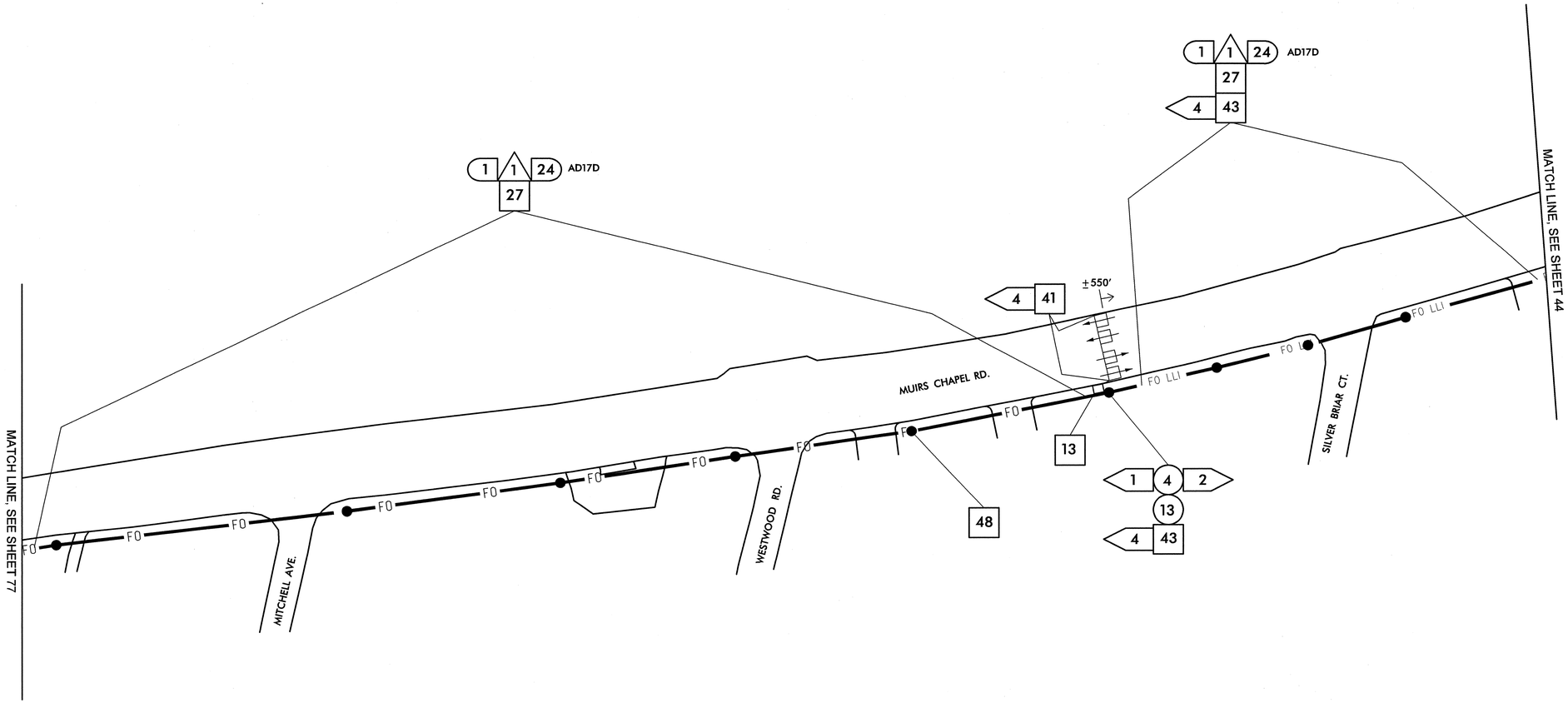
PROJECT REFERENCE NO.	SHEET NO.
U-4711	78



1	INSTALL SMFO CABLE	14	INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE	6	INSTALL NEW 336S CABINET	26	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
2	INSTALL PLENUM RATED FIBER OPTIC CABLE	15	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	7	INSTALL CCTV CAMERA ASSEMBLY	27	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
3	INSTALL FIBER OPTIC DROP CABLE	16	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	8	INSTALL CCTV CAMERA WOOD POLE	28	LASH CABLE(S) TO EXISTING MESSENGER CABLE
4	INSTALL TRACER WIRE	17	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET	9	INSTALL CCTV METAL POLE AND FOUNDATION	29	LASH CABLE(S) TO NEW MESSENGER CABLE
5	REUSE NCDOT SMFO CABLE	18	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX	30	INSTALL NEW ELECTRICAL SERVICE
6	REUSE GDOT SMFO CABLE	19	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL SPECIAL OVERSIZED JUNCTION BOX	31	MODIFY EXISTING ELECTRICAL SERVICE
1	TRENCH	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	12	INSTALL OVERSIZED JUNCTION BOX	32	INSTALL NEW CONTROLLER
2	INSTALL PVC CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	13	INSTALL STANDARD JUNCTION BOX	33	INSTALL EXISTING CABLE IN NEW CABINET
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	14	REMOVE EXISTING JUNCTION BOX	34	INSTALL GENERATOR POWER INLET BOX
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	INSTALL POLE MOUNTED SPLICE CABINET	15	INSTALL WOOD POLE	35	INSTALL LOCAL GIGABIT ETHERNET SWITCH
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING	5	INSTALL BASE MOUNTED SPLICE CABINET	16	REMOVE EXISTING WOOD POLE	36	INSTALL UNIFIED CABLE
6	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT	6	REMOVE EXISTING SPLICE CABINET	17	INSTALL AERIAL GUY ASSEMBLY	37	INSTALL POLE MOUNTED EQUIPMENT CABINET
7	INSTALL POLYETHYLENE CONDUIT	7	INSTALL TERMINAL SPLICE BOX	18	INSTALL STANDARD GUY ASSEMBLY	38	INSTALL UNI-DIRECTIONAL YAGI ANTENNA
8	DIRECTIONAL DRILL CONDUIT	8	MODIFY EXISTING SPLICE ENCLOSURE	19	INSTALL SIDEWALK GUY ASSEMBLY	39	INSTALL OMNI-DIRECTIONAL ANTENNA
9	BORE AND JACK CONDUIT	1	INSTALL CABINET FOUNDATION	20	INSTALL MESSENGER CABLE	40	INSTALL RADIO TRANSCEIVER
10	INSTALL CABLE(S) IN EXISTING CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER	21	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	41	INSTALL SYSTEM LOOP
11	INSTALL CABLE(S) IN NEW CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	22	REMOVE EXISTING COMMUNICATIONS CABLE	42	INSTALL SYSTEM LOOP AMPLIFIER
12	INSTALL CABLE(S) IN EXISTING RISER	4	INSTALL NEW 333 COMMUNICATION CABINET	23	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE	43	INSTALL SYSTEM LOOP LEAD-IN CABLE
13	INSTALL CABLE(S) IN NEW RISER	5	INSTALL NEW 332 BASE MOUNTED CABINET	24	INSTALL DELINEATOR MARKER		
				25	STORE 30 FEET OF EACH COMMUNICATIONS CABLE		

44	INSTALL LOCAL LOOP AMPLIFIER	53	INSTALL DSL ETHERNET SWITCH
45	INSTALL CITY WI-FI ANTENNA	54	INSTALL ETHERNET CABLE
46	INSTALL HUB 10-GIGABIT ETHERNET SWITCH	55	INSTALL TERMINAL SERVER
47	INSTALL CODEC	56	INSTALL MICROWAVE VEHICLE DETECTOR
48	BOND MESSENGER CABLE TO POLE GROUND	57	INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
49	INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION	58	INSTALL WIRELESS ACCESS POINT POWER CABLE
50	INSTALL ANTENNA CABLE		
51	RECONNECT RAILROAD PREEMPTION EQUIPMENT		
52	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT		

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
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Public Transportation and Safety Services Branch
Traffic Engineering Unit
NCDEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE DATE 2/26/08

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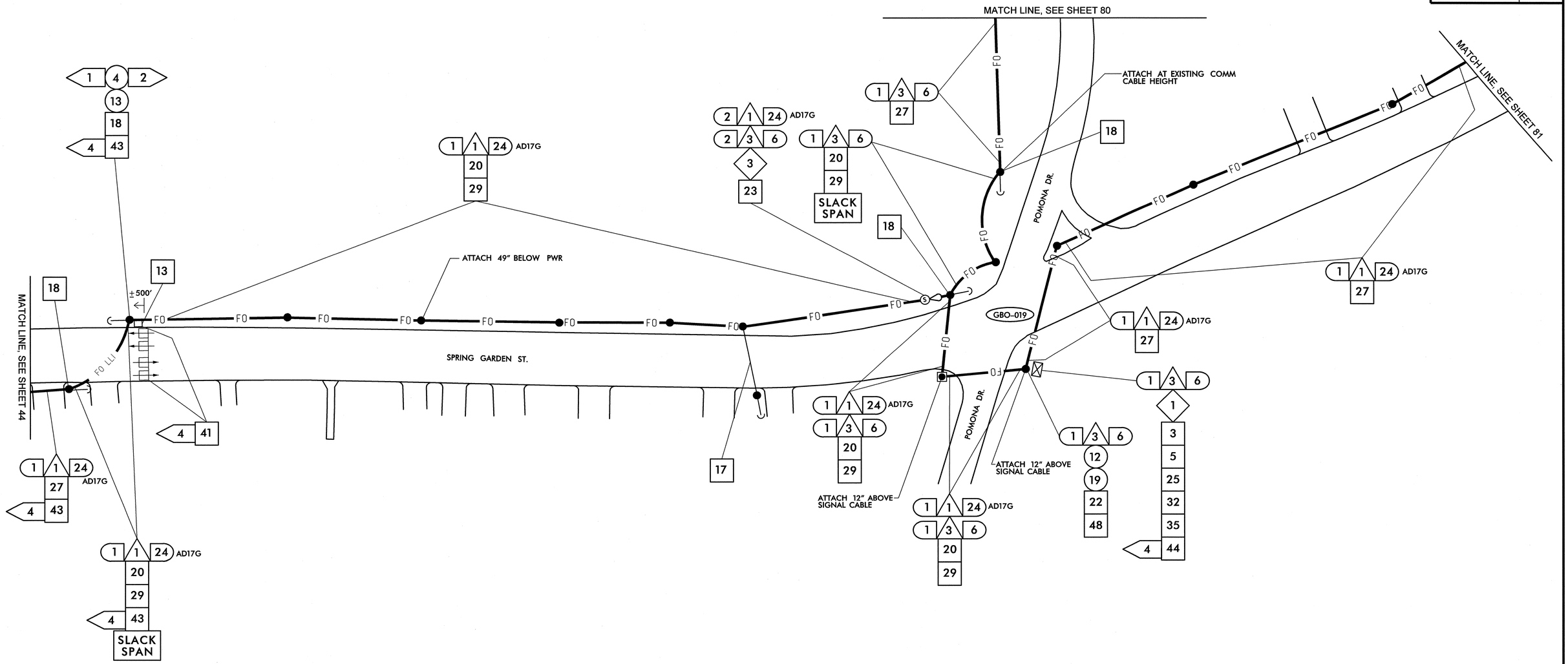
PROJECT REFERENCE NO.	SHEET NO.
U-4711	79



1. INSTALL SMFO CABLE
2. INSTALL PLENUM RATED FIBER OPTIC CABLE
3. INSTALL FIBER OPTIC DROP CABLE
4. INSTALL TRACER WIRE
5. REUSE NCDOT SMFO CABLE
6. REUSE GDOT SMFO CABLE

1. TRENCH
2. INSTALL PVC CONDUIT
3. INSTALL RIGID, GALVANIZED STEEL CONDUIT
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6. INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
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15. INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
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19. REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
1. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2. INSTALL UNDERGROUND SPLICE ENCLOSURE
3. INSTALL AERIAL SPLICE ENCLOSURE
4. INSTALL POLE MOUNTED SPLICE CABINET
5. INSTALL BASE MOUNTED SPLICE CABINET
6. REMOVE EXISTING SPLICE CABINET
7. INSTALL TERMINAL SPLICE BOX
8. MODIFY EXISTING SPLICE ENCLOSURE
1. INSTALL CABINET FOUNDATION
2. REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
3. MODIFY EXISTING CABINET FOUNDATION
4. INSTALL NEW 333 COMMUNICATION CABINET
5. INSTALL NEW 332 BASE MOUNTED CABINET
6. INSTALL NEW 336S CABINET
7. INSTALL CCTV CAMERA ASSEMBLY
8. INSTALL CCTV CAMERA WOOD POLE
9. INSTALL CCTV METAL POLE AND FOUNDATION
10. INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
11. INSTALL SPECIAL OVERSIZED JUNCTION BOX
12. INSTALL OVERSIZED JUNCTION BOX
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15. INSTALL WOOD POLE
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19. INSTALL SIDEWALK GUY ASSEMBLY
20. INSTALL MESSENGER CABLE
21. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
22. REMOVE EXISTING COMMUNICATIONS CABLE
23. INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
24. INSTALL DELINEATOR MARKER
25. STORE 30 FEET OF EACH COMMUNICATIONS CABLE
26. STORE 100 FEET OF EACH COMMUNICATIONS CABLE
27. LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
28. LASH CABLE(S) TO EXISTING MESSENGER CABLE
29. LASH CABLE(S) TO NEW MESSENGER CABLE
30. INSTALL NEW ELECTRICAL SERVICE
31. MODIFY EXISTING ELECTRICAL SERVICE
32. INSTALL NEW CONTROLLER
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41. INSTALL SYSTEM LOOP
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57. INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
58. INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
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Raleigh N.C. 27636-3068
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750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNLO

SIGNATURE — DATE 2/24/08

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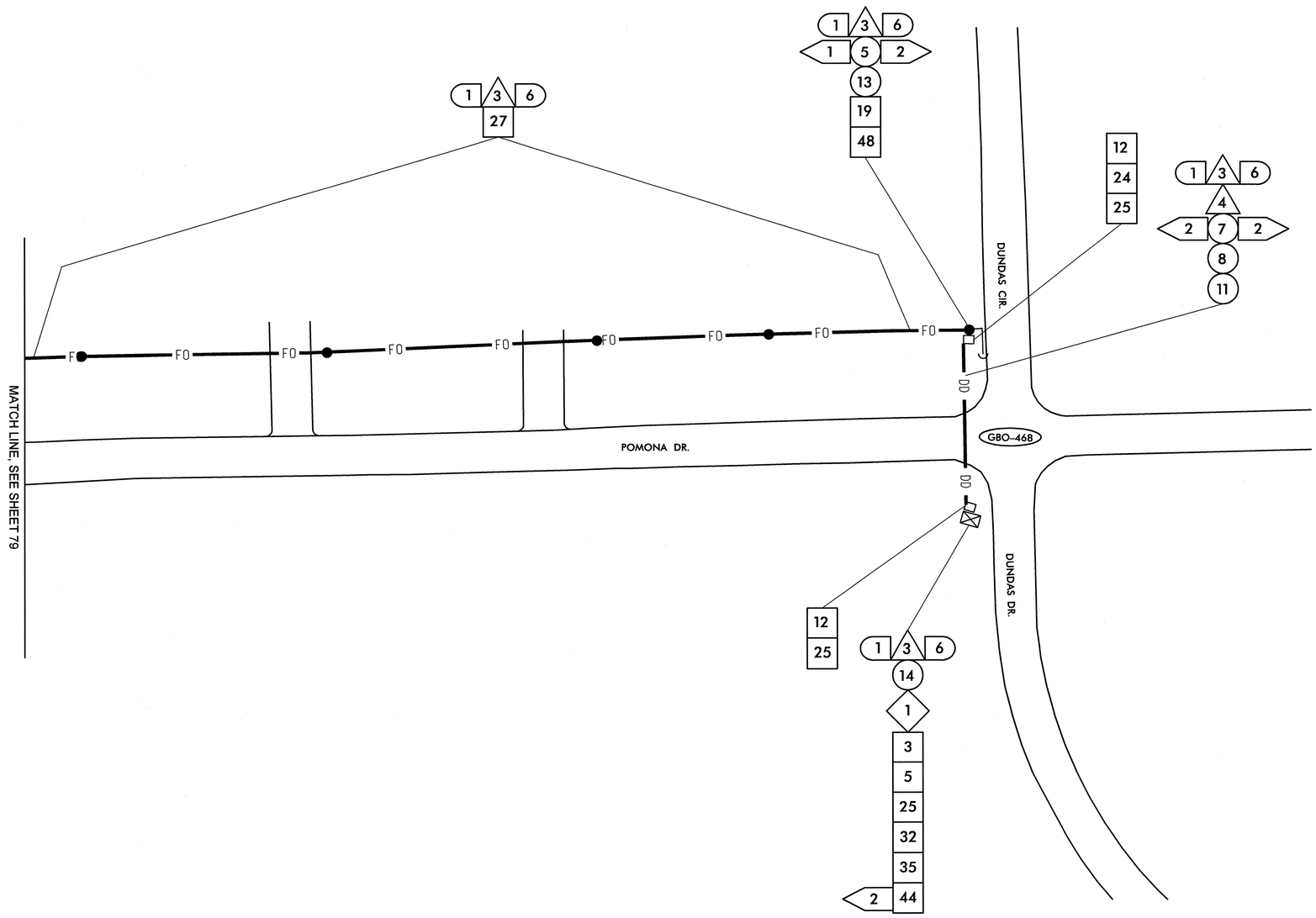
PROJECT REFERENCE NO.	SHEET NO.
U-4711	80



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Traffic Engineering and Safety Systems Branch
Certified Engineering Technician
Intelligent Transportation Systems
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH		
PREPARED BY: K.D. VANPATTEN	REVIEWED BY: M.W. DUNZO		

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

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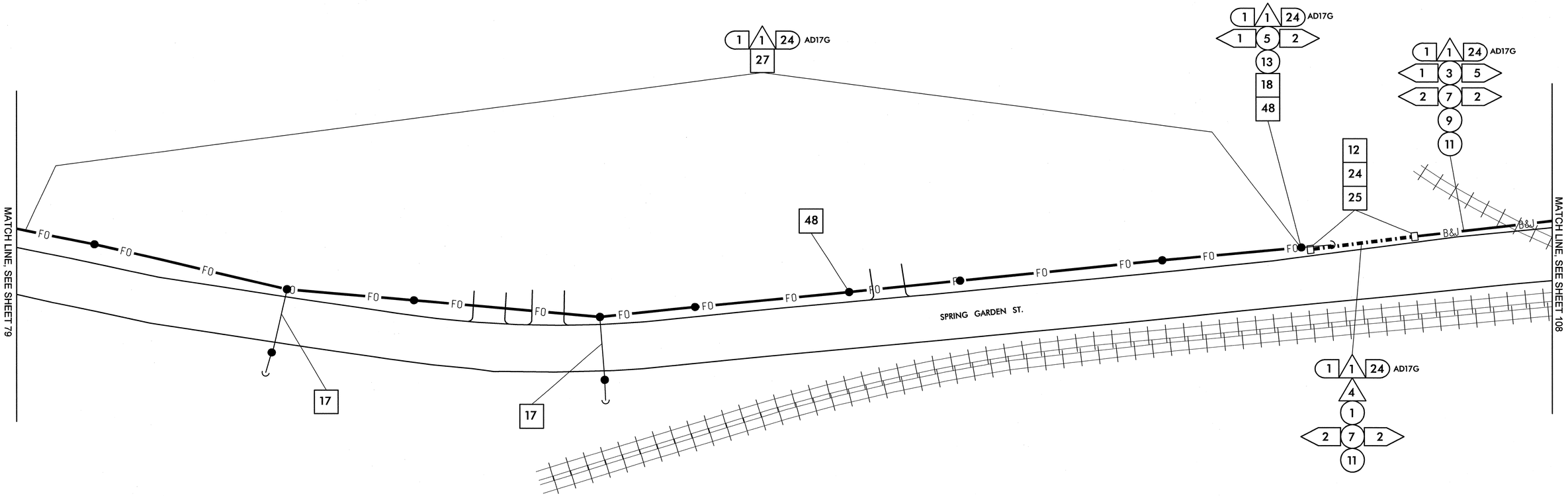
PROJECT REFERENCE NO.	SHEET NO.
U-4711	81



1	INSTALL SMFO CABLE	14	INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE	6	INSTALL NEW 336S CABINET	26	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
2	INSTALL PLENUM RATED FIBER OPTIC CABLE	15	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	7	INSTALL CCTV CAMERA ASSEMBLY	27	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
3	INSTALL FIBER OPTIC DROP CABLE	16	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	8	INSTALL CCTV CAMERA WOOD POLE	28	LASH CABLE(S) TO EXISTING MESSENGER CABLE
4	INSTALL TRACER WIRE	17	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET	9	INSTALL CCTV METAL POLE AND FOUNDATION	29	LASH CABLE(S) TO NEW MESSENGER CABLE
5	REUSE NCDOT SMFO CABLE	18	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX	30	INSTALL NEW ELECTRICAL SERVICE
6	REUSE GDOT SMFO CABLE	19	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL SPECIAL OVERSIZED JUNCTION BOX	31	MODIFY EXISTING ELECTRICAL SERVICE
1	TRENCH	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	12	INSTALL OVERSIZED JUNCTION BOX	32	INSTALL NEW CONTROLLER
2	INSTALL PVC CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	13	INSTALL STANDARD JUNCTION BOX	33	INSTALL EXISTING CABLE IN NEW CABINET
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	14	REMOVE EXISTING JUNCTION BOX	34	INSTALL GENERATOR POWER INLET BOX
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	INSTALL POLE MOUNTED SPLICE CABINET	15	INSTALL WOOD POLE	35	INSTALL LOCAL GIGABIT ETHERNET SWITCH
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING	5	INSTALL BASE MOUNTED SPLICE CABINET	16	REMOVE EXISTING WOOD POLE	36	INSTALL UNIFIED CABLE
6	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT	6	REMOVE EXISTING SPLICE CABINET	17	INSTALL AERIAL GUY ASSEMBLY	37	INSTALL POLE MOUNTED EQUIPMENT CABINET
7	INSTALL POLYETHYLENE CONDUIT	7	INSTALL TERMINAL SPLICE BOX	18	INSTALL STANDARD GUY ASSEMBLY	38	INSTALL UNI-DIRECTIONAL YAGI ANTENNA
8	DIRECTIONAL DRILL CONDUIT	8	MODIFY EXISTING SPLICE ENCLOSURE	19	INSTALL SIDEWALK GUY ASSEMBLY	39	INSTALL OMNI-DIRECTIONAL ANTENNA
9	BORE AND JACK CONDUIT	1	INSTALL CABINET FOUNDATION	20	INSTALL MESSENGER CABLE	40	INSTALL RADIO TRANSCEIVER
10	INSTALL CABLE(S) IN EXISTING CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER	21	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	41	INSTALL SYSTEM LOOP
11	INSTALL CABLE(S) IN NEW CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	22	REMOVE EXISTING COMMUNICATIONS CABLE	42	INSTALL SYSTEM LOOP AMPLIFIER
12	INSTALL CABLE(S) IN EXISTING RISER	4	INSTALL NEW 333 COMMUNICATION CABINET	23	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE	43	INSTALL SYSTEM LOOP LEAD-IN CABLE
13	INSTALL CABLE(S) IN NEW RISER	5	INSTALL NEW 332 BASE MOUNTED CABINET	24	INSTALL DELINEATOR MARKER	44	INSTALL LOCAL LOOP AMPLIFIER
				25	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	45	INSTALL CITY WI-FI ANTENNA
						46	INSTALL HUB 10-GIGABIT ETHERNET SWITCH
						47	INSTALL CODEC
						48	BOND MESSENGER CABLE TO POLE GROUND
						49	INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION
						50	INSTALL ANTENNA CABLE
						51	RECONNECT RAILROAD PREEMPTION EQUIPMENT
						52	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
						53	INSTALL DSL ETHERNET SWITCH
						54	INSTALL ETHERNET CABLE
						55	INSTALL TERMINAL SERVER
						56	INSTALL MICROWAVE VEHICLE DETECTOR
						57	INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
						58	INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

2/20/2008
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PLANS PREPARED IN THE OFFICE OF:

Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING SHEET

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: K.D. VANPATTEN	REVIEWED BY: M.W. DUNZO

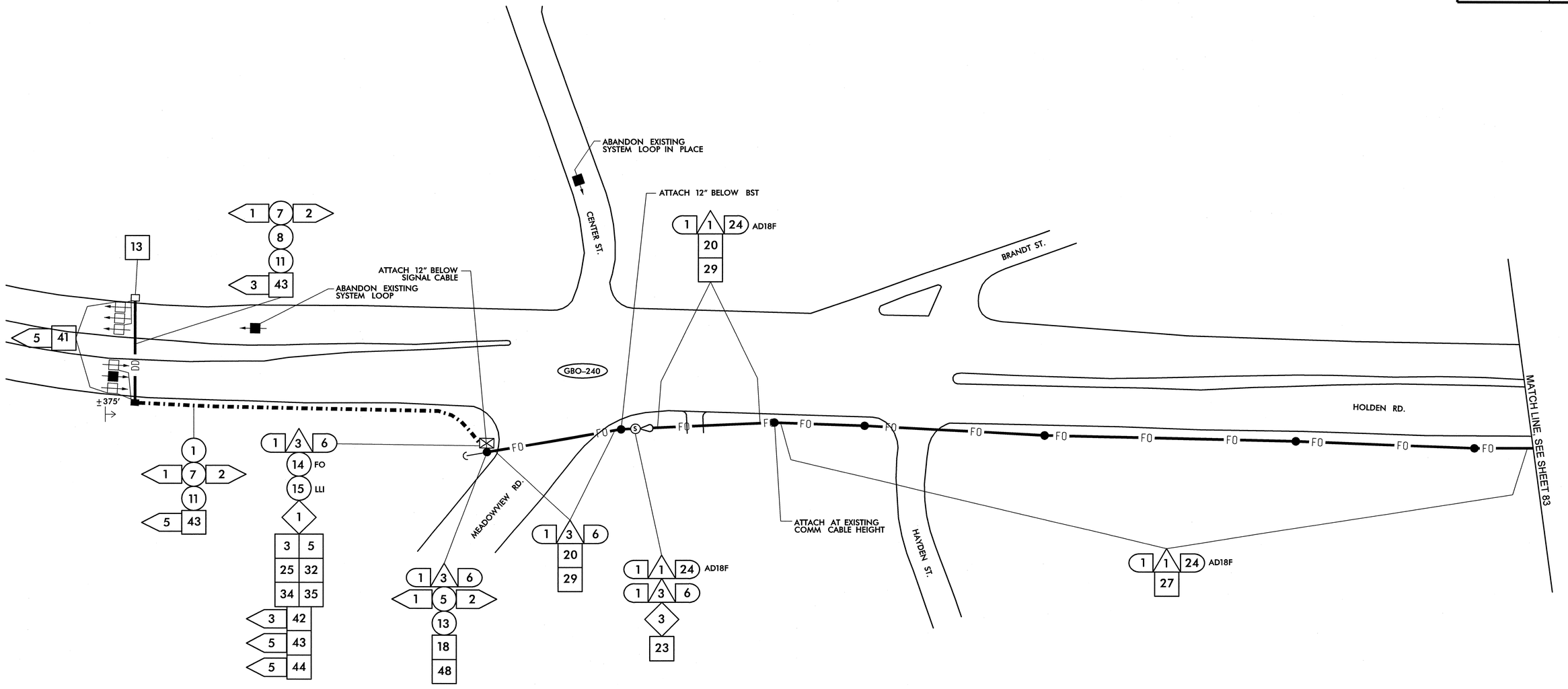
REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filenames ...\Sht0081.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-4711	82



1 INSTALL SMFO CABLE
2 INSTALL PLENUM RATED FIBER OPTIC CABLE
3 INSTALL FIBER OPTIC DROP CABLE
4 INSTALL TRACER WIRE
5 REUSE NCDOT SMFO CABLE
6 REUSE GDOT SMFO CABLE

1 TRENCH
2 INSTALL PVC CONDUIT
3 INSTALL RIGID, GALVANIZED STEEL CONDUIT
4 INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5 INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
6 INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
7 INSTALL POLYETHYLENE CONDUIT
8 DIRECTIONAL DRILL CONDUIT
9 BORE AND JACK CONDUIT
10 INSTALL CABLE(S) IN EXISTING CONDUIT
11 INSTALL CABLE(S) IN NEW CONDUIT
12 INSTALL CABLE(S) IN EXISTING RISER
13 INSTALL CABLE(S) IN NEW RISER
14 INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
15 INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
16 INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
17 INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
18 INSTALL NEW RISER INTO POLE MOUNTED CABINET
19 REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
1 INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2 INSTALL UNDERGROUND SPLICE ENCLOSURE
3 INSTALL AERIAL SPLICE ENCLOSURE
4 INSTALL POLE MOUNTED SPLICE CABINET
5 INSTALL BASE MOUNTED SPLICE CABINET
6 REMOVE EXISTING SPLICE CABINET
7 INSTALL TERMINAL SPLICE BOX
8 MODIFY EXISTING SPLICE ENCLOSURE
1 INSTALL CABINET FOUNDATION
2 REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
3 MODIFY EXISTING CABINET FOUNDATION
4 INSTALL NEW 333 COMMUNICATION CABINET
5 INSTALL NEW 332 BASE MOUNTED CABINET
6 INSTALL NEW 336S CABINET
7 INSTALL CCTV CAMERA ASSEMBLY
8 INSTALL CCTV CAMERA WOOD POLE
9 INSTALL CCTV METAL POLE AND FOUNDATION
10 INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
11 INSTALL SPECIAL OVERSIZED JUNCTION BOX
12 INSTALL OVERSIZED JUNCTION BOX
13 INSTALL STANDARD JUNCTION BOX
14 REMOVE EXISTING JUNCTION BOX
15 INSTALL WOOD POLE
16 REMOVE EXISTING WOOD POLE
17 INSTALL AERIAL GUY ASSEMBLY
18 INSTALL STANDARD GUY ASSEMBLY
19 INSTALL SIDEWALK GUY ASSEMBLY
20 INSTALL MESSENGER CABLE
21 REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
22 REMOVE EXISTING COMMUNICATIONS CABLE
23 INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
24 INSTALL DELINEATOR MARKER
25 STORE 30 FEET OF EACH COMMUNICATIONS CABLE
26 STORE 100 FEET OF EACH COMMUNICATIONS CABLE
27 LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
28 LASH CABLE(S) TO EXISTING MESSENGER CABLE
29 LASH CABLE(S) TO NEW MESSENGER CABLE
30 INSTALL NEW ELECTRICAL SERVICE
31 MODIFY EXISTING ELECTRICAL SERVICE
32 INSTALL NEW CONTROLLER
33 INSTALL EXISTING CABLE IN NEW CABINET
34 INSTALL GENERATOR POWER INLET BOX
35 INSTALL LOCAL GIGABIT ETHERNET SWITCH
36 INSTALL UNIFIED CABLE
37 INSTALL POLE MOUNTED EQUIPMENT CABINET
38 INSTALL UNI-DIRECTIONAL YAGI ANTENNA
39 INSTALL OMNI-DIRECTIONAL ANTENNA
40 INSTALL RADIO TRANSCEIVER
41 INSTALL SYSTEM LOOP
42 INSTALL SYSTEM LOOP AMPLIFIER
43 INSTALL SYSTEM LOOP LEAD-IN CABLE
44 INSTALL LOCAL LOOP AMPLIFIER
45 INSTALL CITY WI-FI ANTENNA
46 INSTALL HUB 10-GIGABIT ETHERNET SWITCH
47 INSTALL CODEC
48 BOND MESSENGER CABLE TO POLE GROUND
49 INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION
50 INSTALL ANTENNA CABLE
51 RECONNECT RAILROAD PREEMPTION EQUIPMENT
52 RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
53 INSTALL DSL ETHERNET SWITCH
54 INSTALL ETHERNET CABLE
55 INSTALL TERMINAL SERVER
56 INSTALL MICROWAVE VEHICLE DETECTOR
57 INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
58 INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
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P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH		
PREPARED BY: K.D. VANPATTEN	REVIEWED BY: M.W. DUNZO		
REVISIONS		INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE 2/2/2008 DATE
CADD Filename: ...\Sht0082.dgn

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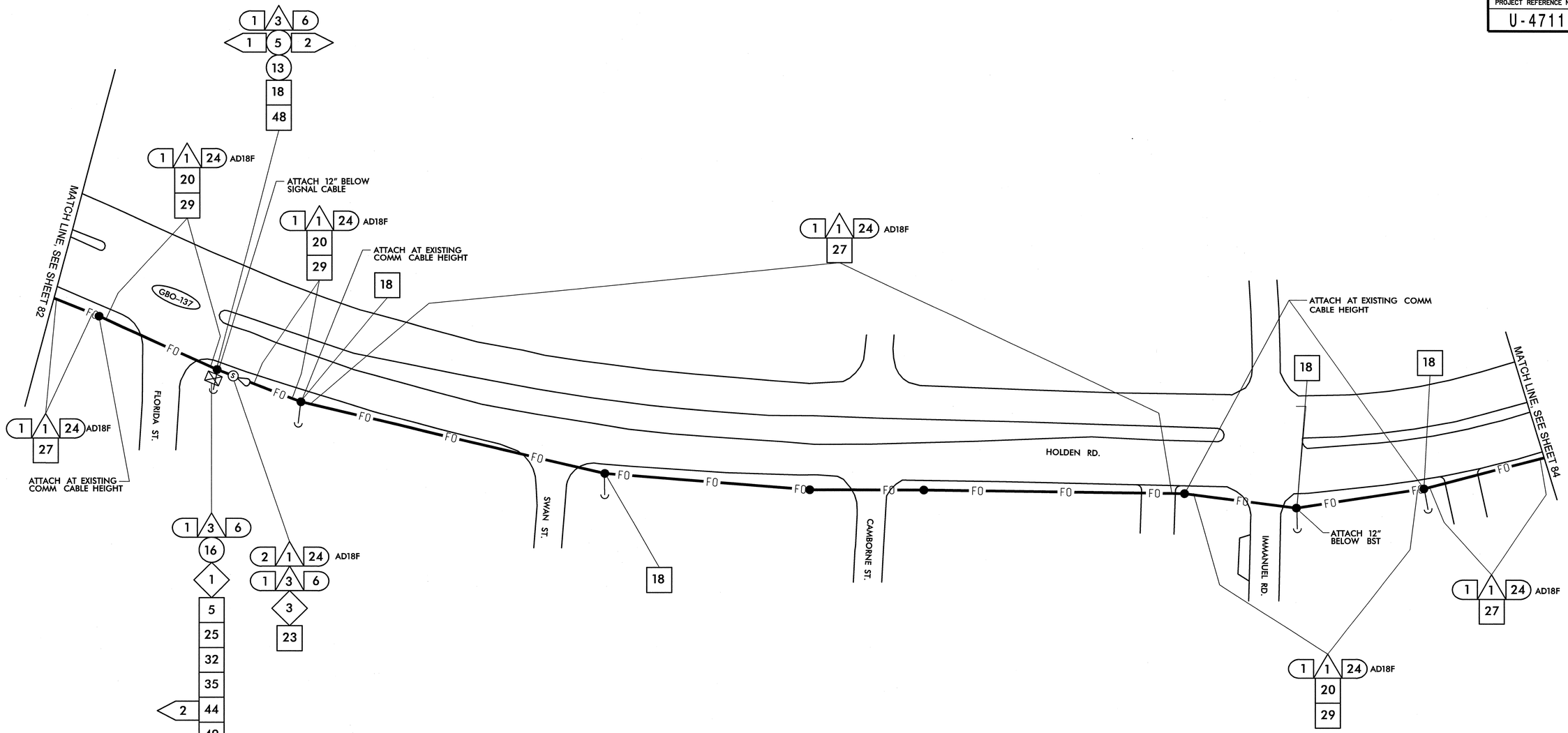
PROJECT REFERENCE NO.	SHEET NO.
U-4711	83



1	INSTALL SMFO CABLE
2	INSTALL PLENUM RATED FIBER OPTIC CABLE
3	INSTALL FIBER OPTIC DROP CABLE
4	INSTALL TRACER WIRE
5	REUSE NCDOT SMFO CABLE
6	REUSE GDOT SMFO CABLE
1	TRENCH
2	INSTALL PVC CONDUIT
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
6	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
7	INSTALL POLYETHYLENE CONDUIT
8	DIRECTIONAL DRILL CONDUIT
9	BORE AND JACK CONDUIT
10	INSTALL CABLE(S) IN EXISTING CONDUIT
11	INSTALL CABLE(S) IN NEW CONDUIT
12	INSTALL CABLE(S) IN EXISTING RISER
13	INSTALL CABLE(S) IN NEW RISER
14	INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
15	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
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1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2	INSTALL UNDERGROUND SPLICE ENCLOSURE
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4	INSTALL POLE MOUNTED SPLICE CABINET
5	INSTALL BASE MOUNTED SPLICE CABINET
6	REMOVE EXISTING SPLICE CABINET
7	INSTALL TERMINAL SPLICE BOX
8	MODIFY EXISTING SPLICE ENCLOSURE
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
3	MODIFY EXISTING CABINET FOUNDATION
4	INSTALL NEW 333 COMMUNICATION CABINET
5	INSTALL NEW 332 BASE MOUNTED CABINET
6	INSTALL NEW 336S CABINET
7	INSTALL CCTV CAMERA ASSEMBLY
8	INSTALL CCTV CAMERA WOOD POLE
9	INSTALL CCTV METAL POLE AND FOUNDATION
10	INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
11	INSTALL SPECIAL OVERSIZED JUNCTION BOX
12	INSTALL OVERSIZED JUNCTION BOX
13	INSTALL STANDARD JUNCTION BOX
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18	INSTALL STANDARD GUY ASSEMBLY
19	INSTALL SIDEWALK GUY ASSEMBLY
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22	REMOVE EXISTING COMMUNICATIONS CABLE
23	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
24	INSTALL DELINEATOR MARKER
25	STORE 30 FEET OF EACH COMMUNICATIONS CABLE
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27	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
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29	LASH CABLE(S) TO NEW MESSENGER CABLE
30	INSTALL NEW ELECTRICAL SERVICE
31	MODIFY EXISTING ELECTRICAL SERVICE
32	INSTALL NEW CONTROLLER
33	INSTALL EXISTING CABLE IN NEW CABINET
34	INSTALL GENERATOR POWER INLET BOX
35	INSTALL LOCAL GIGABIT ETHERNET SWITCH
36	INSTALL UNIFIED CABLE
37	INSTALL POLE MOUNTED EQUIPMENT CABINET
38	INSTALL UNI-DIRECTIONAL YAGI ANTENNA
39	INSTALL OMNI-DIRECTIONAL ANTENNA
40	INSTALL RADIO TRANSCEIVER
41	INSTALL SYSTEM LOOP
42	INSTALL SYSTEM LOOP AMPLIFIER
43	INSTALL SYSTEM LOOP LEAD-IN CABLE
44	INSTALL LOCAL LOOP AMPLIFIER
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46	INSTALL HUB 10-GIGABIT ETHERNET SWITCH
47	INSTALL CODEC
48	BOND MESSENGER CABLE TO POLE GROUND
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52	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
53	INSTALL DSL ETHERNET SWITCH
54	INSTALL ETHERNET CABLE
55	INSTALL TERMINAL SERVER
56	INSTALL MICROWAVE VEHICLE DETECTOR
57	INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
58	INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
Traffic Engineering Unit
NCDEPARTMENT OF TRANSPORTATION
Integrated Mobility Division
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

2/20/08
SIGNATURE DATE

CADD Filename: ...\Sht0083.dgn

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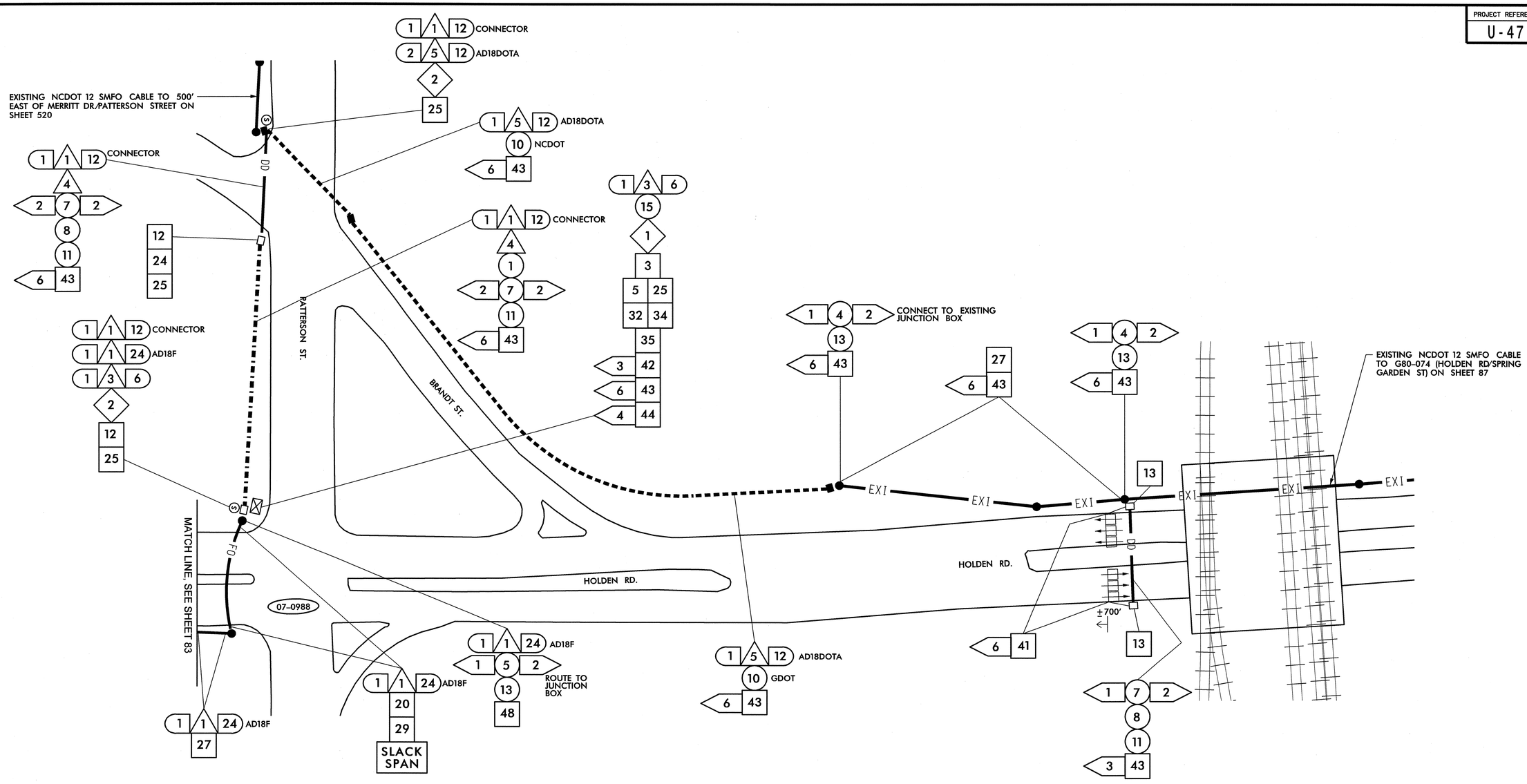
PROJECT REFERENCE NO.	SHEET NO.
U-4711	84



1	INSTALL SMFO CABLE	14	INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE	6	INSTALL NEW 336S CABINET	26	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
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3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	14	REMOVE EXISTING JUNCTION BOX	34	INSTALL GENERATOR POWER INLET BOX
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8	DIRECTIONAL DRILL CONDUIT	8	MODIFY EXISTING SPLICE ENCLOSURE	19	INSTALL SIDEWALK GUY ASSEMBLY	39	INSTALL OMNI-DIRECTIONAL ANTENNA
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44	INSTALL LOCAL LOOP AMPLIFIER	53	INSTALL DSL ETHERNET SWITCH
45	INSTALL CITY WI-FI ANTENNA	54	INSTALL ETHERNET CABLE
46	INSTALL HUB 10-GIGABIT ETHERNET SWITCH	55	INSTALL TERMINAL SERVER
47	INSTALL CODEC	56	INSTALL MICROWAVE VEHICLE DETECTOR
48	BOND MESSENGER CABLE TO POLE GROUND	57	INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
49	INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION	58	INSTALL WIRELESS ACCESS POINT POWER CABLE
50	INSTALL ANTENNA CABLE		
51	RECONNECT RAILROAD PREEMPTION EQUIPMENT		
52	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT		

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
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SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING SHEET

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL
SEAL 023562
ENGINEER MARK DUNZO

SIGNATURE 2/29/08 DATE

CADD Filename: ...\Sht0084.dgn

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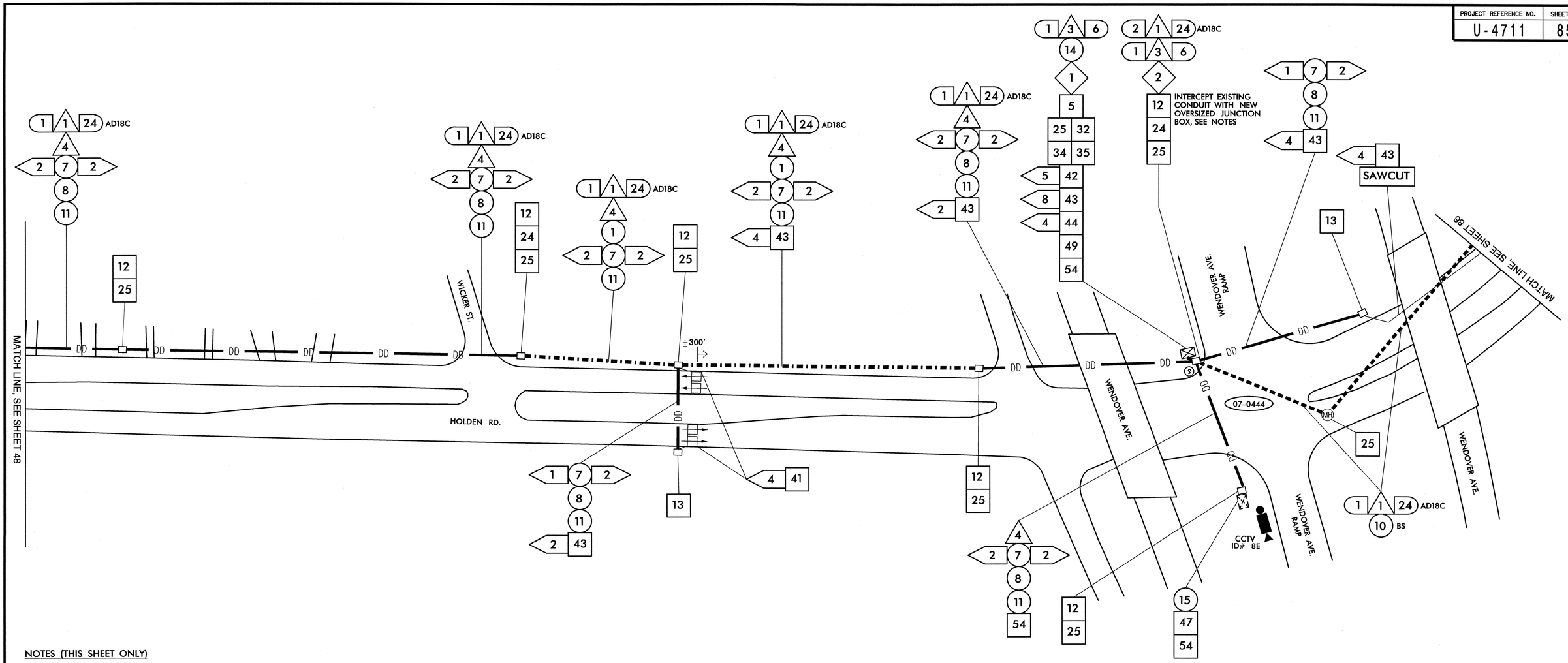
PROJECT REFERENCE NO.	SHEET NO.
U-4711	85



NOTES (THIS SHEET ONLY)

1. ALL MANHOLES SHOWN OWNED BY BELLSOUTH.
2. FOLLOW ALL PROCEDURES AND REQUIREMENTS FOR PERFORMING WORK IN BELLSOUTH MANHOLES AND BELLSOUTH DUCTS AS CALLED FOR IN PROJECT SPECIAL PROVISIONS.
3. INSTALL NEW JUNCTION BOX INTERCEPTING EXISTING CONDUIT. REPAIR AND INSTALL SWEEPS AS REQUIRED TO MAINTAIN BEND RADIUS. USE METHODS APPROVED BY ENGINEER.

1	INSTALL SMFO CABLE
2	INSTALL PLENUM RATED FIBER OPTIC CABLE
3	INSTALL FIBER OPTIC DROP CABLE
4	INSTALL TRACER WIRE
5	REUSE NCDOT SMFO CABLE
6	REUSE GDOT SMFO CABLE
(1)	TRENCH
(2)	INSTALL PVC CONDUIT
(3)	INSTALL RIGID, GALVANIZED STEEL CONDUIT
(4)	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
(5)	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
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(7)	INSTALL POLYETHYLENE CONDUIT
(8)	DIRECTIONAL DRILL CONDUIT
(9)	BORE AND JACK CONDUIT
(10)	INSTALL CABLE(S) IN EXISTING CONDUIT
(11)	INSTALL CABLE(S) IN NEW CONDUIT
(12)	INSTALL CABLE(S) IN EXISTING RISER
(13)	INSTALL CABLE(S) IN NEW RISER
(14)	INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
(15)	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
(16)	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
(17)	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
(18)	INSTALL NEW RISER INTO POLE MOUNTED CABINET
(19)	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2	INSTALL UNDERGROUND SPLICE ENCLOSURE
3	INSTALL AERIAL SPLICE ENCLOSURE
4	INSTALL POLE MOUNTED SPLICE CABINET
5	INSTALL BASE MOUNTED SPLICE CABINET
6	REMOVE EXISTING SPLICE CABINET
7	INSTALL TERMINAL SPLICE BOX
8	MODIFY EXISTING SPLICE ENCLOSURE
[1]	INSTALL CABINET FOUNDATION
[2]	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
[3]	MODIFY EXISTING CABINET FOUNDATION
[4]	INSTALL NEW 333 COMMUNICATION CABINET
[5]	INSTALL NEW 332 BASE MOUNTED CABINET
[6]	INSTALL NEW 336S CABINET
[7]	INSTALL CCTV CAMERA ASSEMBLY
[8]	INSTALL CCTV CAMERA WOOD POLE
[9]	INSTALL CCTV METAL POLE AND FOUNDATION
[10]	INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
[11]	INSTALL SPECIAL OVERSIZED JUNCTION BOX
[12]	INSTALL OVERSIZED JUNCTION BOX
[13]	INSTALL STANDARD JUNCTION BOX
[14]	REMOVE EXISTING JUNCTION BOX
[15]	INSTALL WOOD POLE
[16]	REMOVE EXISTING WOOD POLE
[17]	INSTALL AERIAL GUY ASSEMBLY
[18]	INSTALL STANDARD GUY ASSEMBLY
[19]	INSTALL SIDEWALK GUY ASSEMBLY
[20]	INSTALL MESSENGER CABLE
[21]	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
[22]	REMOVE EXISTING COMMUNICATIONS CABLE
[23]	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
[24]	INSTALL DELINEATOR MARKER
[25]	STORE 30 FEET OF EACH COMMUNICATIONS CABLE
[26]	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
[27]	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
[28]	LASH CABLE(S) TO EXISTING MESSENGER CABLE
[29]	LASH CABLE(S) TO NEW MESSENGER CABLE
[30]	INSTALL NEW ELECTRICAL SERVICE
[31]	MODIFY EXISTING ELECTRICAL SERVICE
[32]	INSTALL NEW CONTROLLER
[33]	INSTALL EXISTING CABLE IN NEW CABINET
[34]	INSTALL GENERATOR POWER INLET BOX
[35]	INSTALL LOCAL GIGABIT ETHERNET SWITCH
[36]	INSTALL UNIFIED CABLE
[37]	INSTALL POLE MOUNTED EQUIPMENT CABINET
[38]	INSTALL UNI-DIRECTIONAL YAGI ANTENNA
[39]	INSTALL OMNI-DIRECTIONAL ANTENNA
[40]	INSTALL RADIO TRANSCEIVER
[41]	INSTALL SYSTEM LOOP
[42]	INSTALL SYSTEM LOOP AMPLIFIER
[43]	INSTALL SYSTEM LOOP LEAD-IN CABLE
[44]	INSTALL LOCAL LOOP AMPLIFIER
[45]	INSTALL CITY WI-FI ANTENNA
[46]	INSTALL HUB 10-GIGABIT ETHERNET SWITCH
[47]	INSTALL CODEC
[48]	BOND MESSENGER CABLE TO POLE GROUND
[49]	INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION
[50]	INSTALL ANTENNA CABLE
[51]	RECONNECT RAILROAD PREEMPTION EQUIPMENT
[52]	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
[53]	INSTALL DSL ETHERNET SWITCH
[54]	INSTALL ETHERNET CABLE
[55]	INSTALL TERMINAL SERVER
[56]	INSTALL MICROWAVE VEHICLE DETECTOR
[57]	INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
[58]	INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY
PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH
PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE 2/22/08 DATE

CADD Filename: ...\Sht0085.dgn

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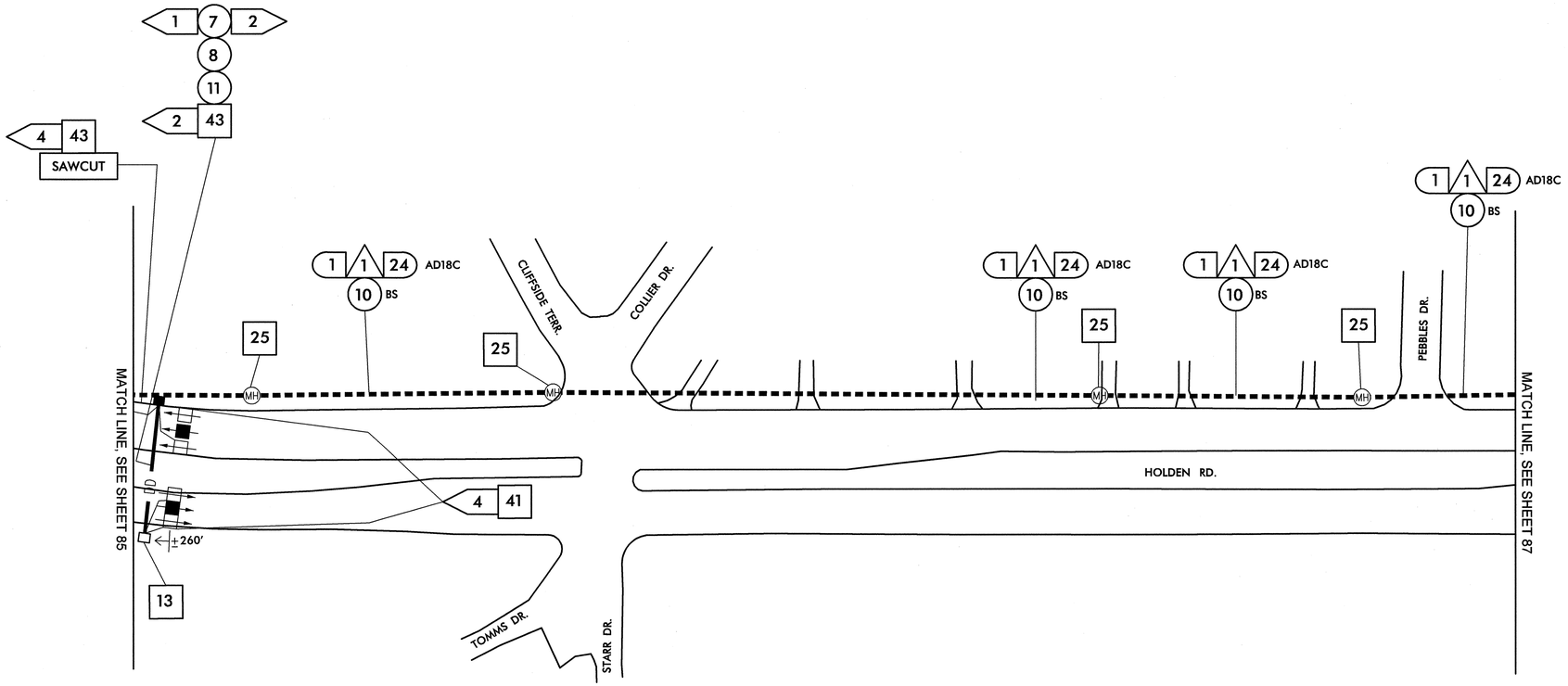
PROJECT REFERENCE NO.	SHEET NO.
U-4711	86



NOTES (THIS SHEET ONLY)

1. ALL MANHOLES SHOWN OWNED BY BELLSOUTH.
2. FOLLOW ALL PROCEDURES AND REQUIREMENTS FOR PERFORMING WORK IN BELLSOUTH MANHOLES AND BELLSOUTH DUCTS AS CALLED FOR IN PROJECT SPECIAL PROVISIONS.

- (1) TRENCH
- (2) INSTALL PVC CONDUIT
- (3) INSTALL RIGID, GALVANIZED STEEL CONDUIT
- (4) INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
- (5) INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
- (6) INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
- (7) INSTALL POLYETHYLENE CONDUIT
- (8) DIRECTIONAL DRILL CONDUIT
- (9) BORE AND JACK CONDUIT
- (10) INSTALL CABLE(S) IN EXISTING CONDUIT
- (11) INSTALL CABLE(S) IN NEW CONDUIT
- (12) INSTALL CABLE(S) IN EXISTING RISER
- (13) INSTALL CABLE(S) IN NEW RISER
- (14) INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
- (15) INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
- (16) INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
- (17) INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
- (18) INSTALL NEW RISER INTO POLE MOUNTED CABINET
- (19) REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
- ◇1 INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
- ◇2 INSTALL UNDERGROUND SPLICE ENCLOSURE
- ◇3 INSTALL AERIAL SPLICE ENCLOSURE
- ◇4 INSTALL POLE MOUNTED SPLICE CABINET
- ◇5 INSTALL BASE MOUNTED SPLICE CABINET
- ◇6 REMOVE EXISTING SPLICE CABINET
- ◇7 INSTALL TERMINAL SPLICE BOX
- ◇8 MODIFY EXISTING SPLICE ENCLOSURE
- [1] INSTALL CABINET FOUNDATION
- [2] REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
- [3] MODIFY EXISTING CABINET FOUNDATION
- [4] INSTALL NEW 333 COMMUNICATION CABINET
- [5] INSTALL NEW 332 BASE MOUNTED CABINET
- [6] INSTALL NEW 336S CABINET
- [7] INSTALL CCTV CAMERA ASSEMBLY
- [8] INSTALL CCTV CAMERA WOOD POLE
- [9] INSTALL CCTV METAL POLE AND FOUNDATION
- [10] INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
- [11] INSTALL SPECIAL OVERSIZED JUNCTION BOX
- [12] INSTALL OVERSIZED JUNCTION BOX
- [13] INSTALL STANDARD JUNCTION BOX
- [14] REMOVE EXISTING JUNCTION BOX
- [15] INSTALL WOOD POLE
- [16] REMOVE EXISTING WOOD POLE
- [17] INSTALL AERIAL GUY ASSEMBLY
- [18] INSTALL STANDARD GUY ASSEMBLY
- [19] INSTALL SIDEWALK GUY ASSEMBLY
- [20] INSTALL MESSENGER CABLE
- [21] REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
- [22] REMOVE EXISTING COMMUNICATIONS CABLE
- [23] INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
- [24] INSTALL DELINEATOR MARKER
- [25] STORE 30 FEET OF EACH COMMUNICATIONS CABLE
- [26] STORE 100 FEET OF EACH COMMUNICATIONS CABLE
- [27] LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
- [28] LASH CABLE(S) TO EXISTING MESSENGER CABLE
- [29] LASH CABLE(S) TO NEW MESSENGER CABLE
- [30] INSTALL NEW ELECTRICAL SERVICE
- [31] MODIFY EXISTING ELECTRICAL SERVICE
- [32] INSTALL NEW CONTROLLER
- [33] INSTALL EXISTING CABLE IN NEW CABINET
- [34] INSTALL GENERATOR POWER INLET BOX
- [35] INSTALL LOCAL GIGABIT ETHERNET SWITCH
- [36] INSTALL UNIFIED CABLE
- [37] INSTALL POLE MOUNTED EQUIPMENT CABINET
- [38] INSTALL UNI-DIRECTIONAL YAGI ANTENNA
- [39] INSTALL OMNI-DIRECTIONAL ANTENNA
- [40] INSTALL RADIO TRANSCEIVER
- [41] INSTALL SYSTEM LOOP
- [42] INSTALL SYSTEM LOOP AMPLIFIER
- [43] INSTALL SYSTEM LOOP LEAD-IN CABLE
- [44] INSTALL LOCAL LOOP AMPLIFIER
- [45] INSTALL CITY WI-FI ANTENNA
- [46] INSTALL HUB 10-GIGABIT ETHERNET SWITCH
- [47] INSTALL CODEC
- [48] BOND MESSENGER CABLE TO POLE GROUND
- [49] INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION
- [50] INSTALL ANTENNA CABLE
- [51] RECONNECT RAILROAD PREEMPTION EQUIPMENT
- [52] RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
- [53] INSTALL DSL ETHERNET SWITCH
- [54] INSTALL ETHERNET CABLE
- [55] INSTALL TERMINAL SERVER
- [56] INSTALL MICROWAVE VEHICLE DETECTOR
- [57] INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
- [58] INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
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(919) 677-2000

Traffic Engineering and Safety Systems Branch
Transportation Management Systems
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: K.D. VANPATTEN	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/29/08 DATE

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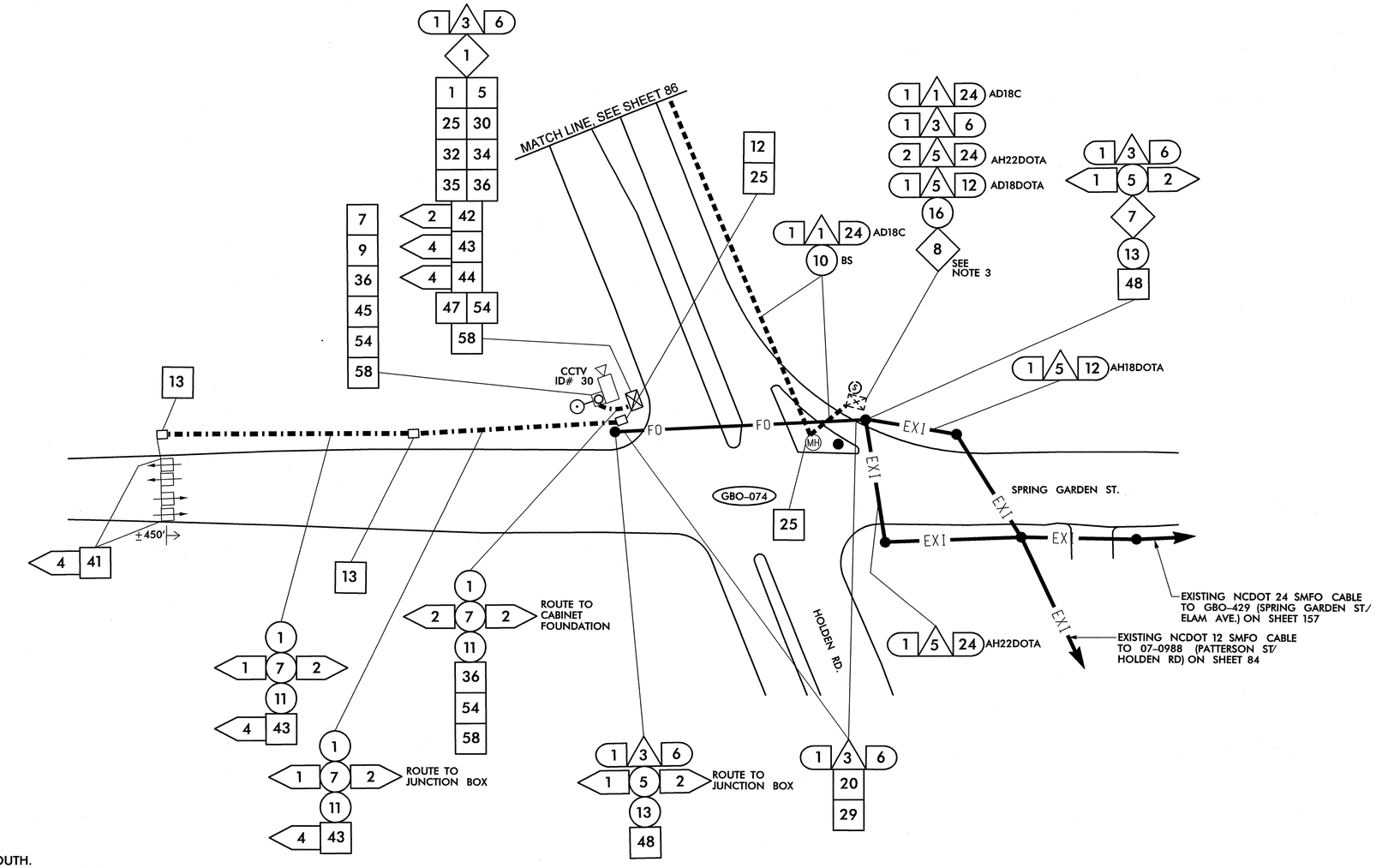
PROJECT REFERENCE NO.	SHEET NO.
U-4711	87



NOTES (THIS SHEET ONLY)

1. ALL MANHOLES SHOWN OWNED BY BELLSOUTH.
2. FOLLOW ALL PROCEDURES AND REQUIREMENTS FOR PERFORMING WORK IN BELLSOUTH MANHOLES AND BELLSOUTH DUCTS AS CALLED FOR IN PROJECT SPECIAL PROVISIONS.
3. MODIFY EXISTING INTERECONNECT CENTER IN CABINET TO ACCOMODATE NEW CABLES AND SPLICING SHOWN ON SPLICE DIAGRAM. REMOVE SIGNAL EQUIPMENT BUT LEAVE SPLICE EQUIPMENT IN CABINET.

1	INSTALL SMFO CABLE
2	INSTALL PLENUM RATED FIBER OPTIC CABLE
3	INSTALL FIBER OPTIC DROP CABLE
4	INSTALL TRACER WIRE
5	REUSE NCDOT SMFO CABLE
6	REUSE GDOT SMFO CABLE
1	TRENCH
2	INSTALL PVC CONDUIT
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
6	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
7	INSTALL POLYETHYLENE CONDUIT
8	DIRECTIONAL DRILL CONDUIT
9	BORE AND JACK CONDUIT
10	INSTALL CABLE(S) IN EXISTING CONDUIT
11	INSTALL CABLE(S) IN NEW CONDUIT
12	INSTALL CABLE(S) IN EXISTING RISER
13	INSTALL CABLE(S) IN NEW RISER
14	INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
15	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
16	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
17	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
18	INSTALL NEW RISER INTO POLE MOUNTED CABINET
19	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2	INSTALL UNDERGROUND SPLICE ENCLOSURE
3	INSTALL AERIAL SPLICE ENCLOSURE
4	INSTALL POLE MOUNTED SPLICE CABINET
5	INSTALL BASE MOUNTED SPLICE CABINET
6	REMOVE EXISTING SPLICE CABINET
7	INSTALL TERMINAL SPLICE BOX
8	MODIFY EXISTING SPLICE ENCLOSURE
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
3	MODIFY EXISTING CABINET FOUNDATION
4	INSTALL NEW 333 COMMUNICATION CABINET
5	INSTALL NEW 332 BASE MOUNTED CABINET
6	INSTALL NEW 336S CABINET
7	INSTALL CCTV CAMERA ASSEMBLY
8	INSTALL CCTV CAMERA WOOD POLE
9	INSTALL CCTV METAL POLE AND FOUNDATION
10	INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
11	INSTALL SPECIAL OVERSIZED JUNCTION BOX
12	INSTALL OVERSIZED JUNCTION BOX
13	INSTALL STANDARD JUNCTION BOX
14	REMOVE EXISTING JUNCTION BOX
15	INSTALL WOOD POLE
16	REMOVE EXISTING WOOD POLE
17	INSTALL AERIAL GUY ASSEMBLY
18	INSTALL STANDARD GUY ASSEMBLY
19	INSTALL SIDEWALK GUY ASSEMBLY
20	INSTALL MESSENGER CABLE
21	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
22	REMOVE EXISTING COMMUNICATIONS CABLE
23	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
24	INSTALL DELINEATOR MARKER
25	STORE 30 FEET OF EACH COMMUNICATIONS CABLE
26	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
27	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
28	LASH CABLE(S) TO EXISTING MESSENGER CABLE
29	LASH CABLE(S) TO NEW MESSENGER CABLE
30	INSTALL NEW ELECTRICAL SERVICE
31	MODIFY EXISTING ELECTRICAL SERVICE
32	INSTALL NEW CONTROLLER
33	INSTALL EXISTING CABLE IN NEW CABINET
34	INSTALL GENERATOR POWER INLET BOX
35	INSTALL LOCAL GIGABIT ETHERNET SWITCH
36	INSTALL UNIFIED CABLE
37	INSTALL POLE MOUNTED EQUIPMENT CABINET
38	INSTALL UNI-DIRECTIONAL YAGI ANTENNA
39	INSTALL OMNI-DIRECTIONAL ANTENNA
40	INSTALL RADIO TRANSCEIVER
41	INSTALL SYSTEM LOOP
42	INSTALL SYSTEM LOOP AMPLIFIER
43	INSTALL SYSTEM LOOP LEAD-IN CABLE
44	INSTALL LOCAL LOOP AMPLIFIER
45	INSTALL CITY WI-FI ANTENNA
46	INSTALL HUB 10-GIGABIT ETHERNET SWITCH
47	INSTALL CODEC
48	BOND MESSENGER CABLE TO POLE GROUND
49	INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION
50	INSTALL ANTENNA CABLE
51	RECONNECT RAILROAD PREEMPTION EQUIPMENT
52	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
53	INSTALL DSL ETHERNET SWITCH
54	INSTALL ETHERNET CABLE
55	INSTALL TERMINAL SERVER
56	INSTALL MICROWAVE VEHICLE DETECTOR
57	INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
58	INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE 3/4/08 DATE

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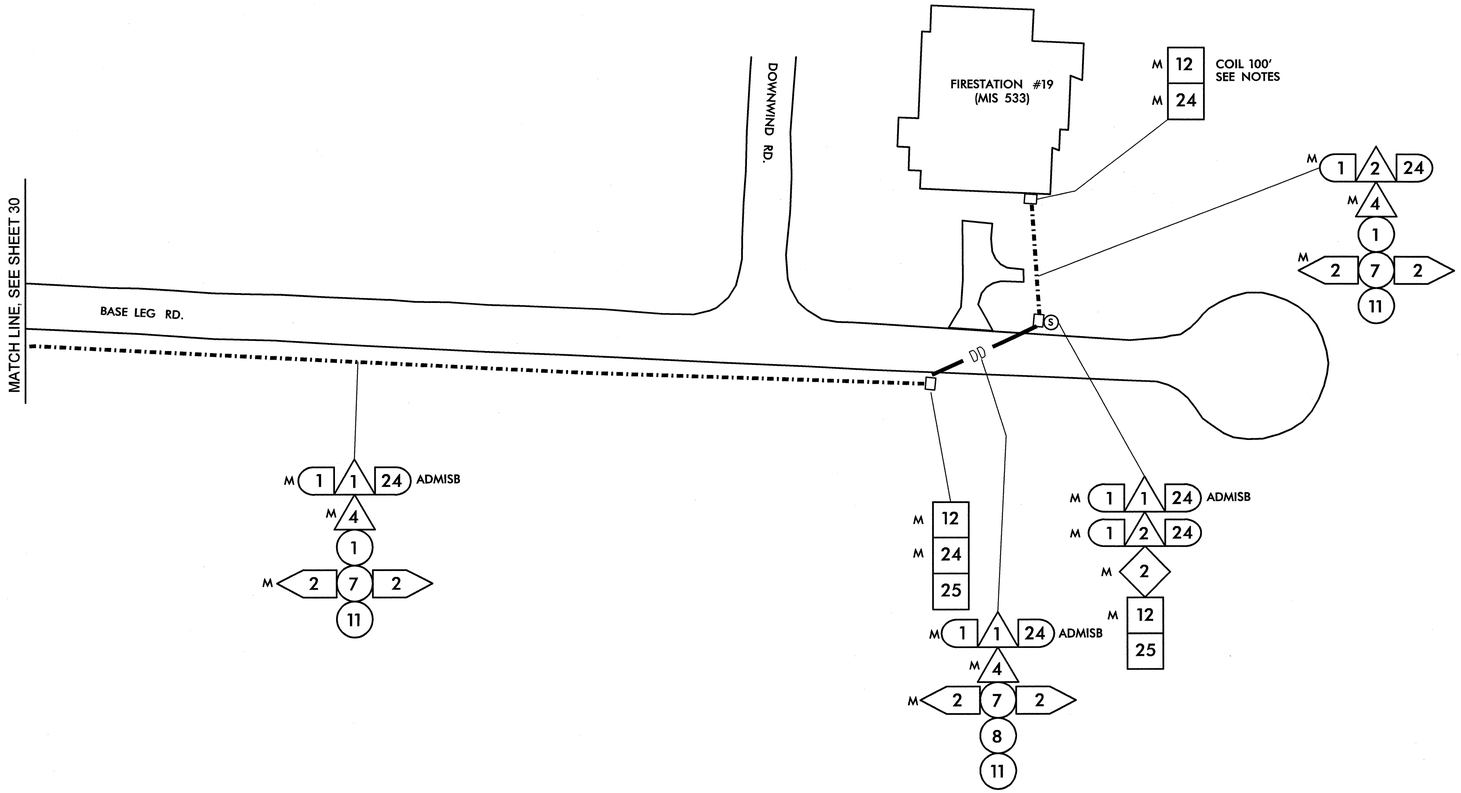
PROJECT REFERENCE NO.	SHEET NO.
U-4711	88



NOTES (THIS SHEET ONLY)

1. SEE BUILDING ENTRANCE DETAIL FOR ROUTING INTO BUILDING

A	INSTALL SMFO CABLE	14	INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE	6	INSTALL NEW 336S CABINET	26	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
B	INSTALL PLENUM RATED FIBER OPTIC CABLE	15	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	7	INSTALL CCTV CAMERA ASSEMBLY	27	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
C	INSTALL FIBER OPTIC DROP CABLE	16	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	8	INSTALL CCTV CAMERA WOOD POLE	28	LASH CABLE(S) TO EXISTING MESSENGER CABLE
4	INSTALL TRACER WIRE	17	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET	9	INSTALL CCTV METAL POLE AND FOUNDATION	29	LASH CABLE(S) TO NEW MESSENGER CABLE
5	REUSE NCDOT SMFO CABLE	18	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX	30	INSTALL NEW ELECTRICAL SERVICE
6	REUSE GDOT SMFO CABLE	19	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL SPECIAL OVERSIZED JUNCTION BOX	31	MODIFY EXISTING ELECTRICAL SERVICE
1	TRENCH	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	12	INSTALL OVERSIZED JUNCTION BOX	32	INSTALL NEW CONTROLLER
2	INSTALL PVC CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	13	INSTALL STANDARD JUNCTION BOX	33	INSTALL EXISTING CABLE IN NEW CABINET
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	14	REMOVE EXISTING JUNCTION BOX	34	INSTALL GENERATOR POWER INLET BOX
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	INSTALL POLE MOUNTED SPLICE CABINET	15	INSTALL WOOD POLE	35	INSTALL LOCAL GIGABIT ETHERNET SWITCH
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING	5	INSTALL BASE MOUNTED SPLICE CABINET	16	REMOVE EXISTING WOOD POLE	36	INSTALL UNIFIED CABLE
6	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT	6	REMOVE EXISTING SPLICE CABINET	17	INSTALL AERIAL GUY ASSEMBLY	37	INSTALL POLE MOUNTED EQUIPMENT CABINET
7	INSTALL POLYETHYLENE CONDUIT	7	INSTALL TERMINAL SPLICE BOX	18	INSTALL STANDARD GUY ASSEMBLY	38	INSTALL UNI-DIRECTIONAL YAGI ANTENNA
8	DIRECTIONAL DRILL CONDUIT	8	MODIFY EXISTING SPLICE ENCLOSURE	19	INSTALL SIDEWALK GUY ASSEMBLY	39	INSTALL OMNI-DIRECTIONAL ANTENNA
9	BORE AND JACK CONDUIT	1	INSTALL CABINET FOUNDATION	20	INSTALL MESSENGER CABLE	40	INSTALL RADIO TRANSCEIVER
10	INSTALL CABLE(S) IN EXISTING CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER	21	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	41	INSTALL SYSTEM LOOP
11	INSTALL CABLE(S) IN NEW CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	22	REMOVE EXISTING COMMUNICATIONS CABLE	42	INSTALL SYSTEM LOOP AMPLIFIER
12	INSTALL CABLE(S) IN EXISTING RISER	4	INSTALL NEW 333 COMMUNICATION CABINET	23	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE	43	INSTALL SYSTEM LOOP LEAD-IN CABLE
13	INSTALL CABLE(S) IN NEW RISER	5	INSTALL NEW 332 BASE MOUNTED CABINET	24	INSTALL DELINEATOR MARKER		
				25	STORE 30 FEET OF EACH COMMUNICATIONS CABLE		

44	INSTALL LOCAL LOOP AMPLIFIER	53	INSTALL DSL ETHERNET SWITCH				
45	INSTALL CITY WI-FI ANTENNA	54	INSTALL ETHERNET CABLE				
46	INSTALL HUB 10-GIGABIT ETHERNET SWITCH	55	INSTALL TERMINAL SERVER				
47	INSTALL CODEC	56	INSTALL MICROWAVE VEHICLE DETECTOR				
48	BOND MESSENGER CABLE TO POLE GROUND	57	INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT				
49	INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION	58	INSTALL WIRELESS ACCESS POINT POWER CABLE				
50	INSTALL ANTENNA CABLE						
51	RECONNECT RAILROAD PREEMPTION EQUIPMENT						
52	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT						

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
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SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING SHEET

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/29/08 DATE

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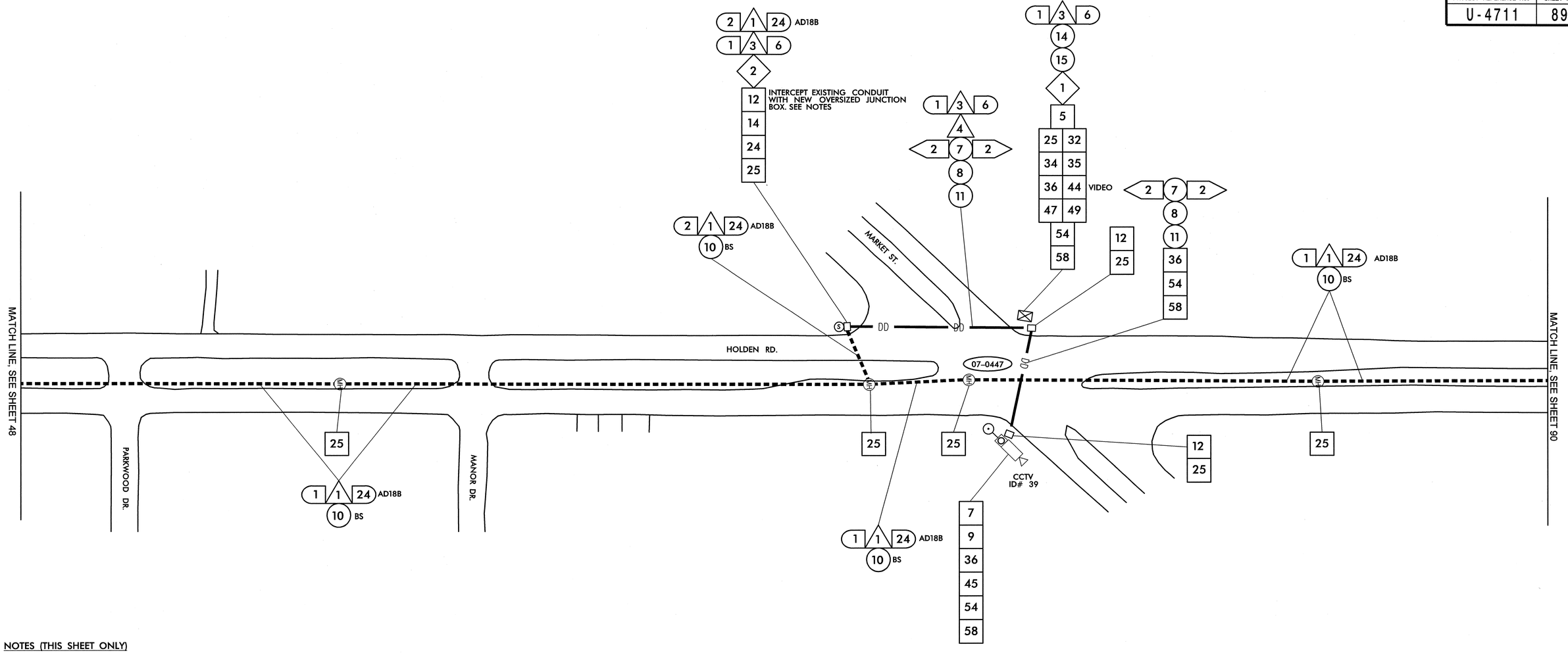
PROJECT REFERENCE NO.	SHEET NO.
U-4711	89



NOTES (THIS SHEET ONLY)

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- △2 INSTALL PLENUM RATED FIBER OPTIC CABLE
- △3 INSTALL FIBER OPTIC DROP CABLE
- △4 INSTALL TRACER WIRE
- △5 REUSE NCDOT SMFO CABLE
- △6 REUSE GDOT SMFO CABLE
- (1) TRENCH
- (2) INSTALL PVC CONDUIT
- (3) INSTALL RIGID, GALVANIZED STEEL CONDUIT
- (4) INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
- (5) INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
- (6) INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
- (7) INSTALL POLYETHYLENE CONDUIT
- (8) DIRECTIONAL DRILL CONDUIT
- (9) BORE AND JACK CONDUIT
- (10) INSTALL CABLE(S) IN EXISTING CONDUIT
- (11) INSTALL CABLE(S) IN NEW CONDUIT
- (12) INSTALL CABLE(S) IN EXISTING RISER
- (13) INSTALL CABLE(S) IN NEW RISER
- (14) INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
- (15) INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
- (16) INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
- (17) INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
- (18) INSTALL NEW RISER INTO POLE MOUNTED CABINET
- (19) REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
- ◇1 INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
- ◇2 INSTALL UNDERGROUND SPLICE ENCLOSURE
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- ◇4 INSTALL POLE MOUNTED SPLICE CABINET
- ◇5 INSTALL BASE MOUNTED SPLICE CABINET
- ◇6 REMOVE EXISTING SPLICE CABINET
- ◇7 INSTALL TERMINAL SPLICE BOX
- ◇8 MODIFY EXISTING SPLICE ENCLOSURE
- [1] INSTALL CABINET FOUNDATION
- [2] REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
- [3] MODIFY EXISTING CABINET FOUNDATION
- [4] INSTALL NEW 333 COMMUNICATION CABINET
- [5] INSTALL NEW 332 BASE MOUNTED CABINET
- [6] INSTALL NEW 336S CABINET
- [7] INSTALL CCTV CAMERA ASSEMBLY
- [8] INSTALL CCTV CAMERA WOOD POLE
- [9] INSTALL CCTV METAL POLE AND FOUNDATION
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- [21] REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
- [22] REMOVE EXISTING COMMUNICATIONS CABLE
- [23] INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
- [24] INSTALL DELINEATOR MARKER
- [25] STORE 30 FEET OF EACH COMMUNICATIONS CABLE
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- [27] LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
- [28] LASH CABLE(S) TO EXISTING MESSENGER CABLE
- [29] LASH CABLE(S) TO NEW MESSENGER CABLE
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- [32] INSTALL NEW CONTROLLER
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PLANS PREPARED IN THE OFFICE OF:
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P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

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2/20/2008
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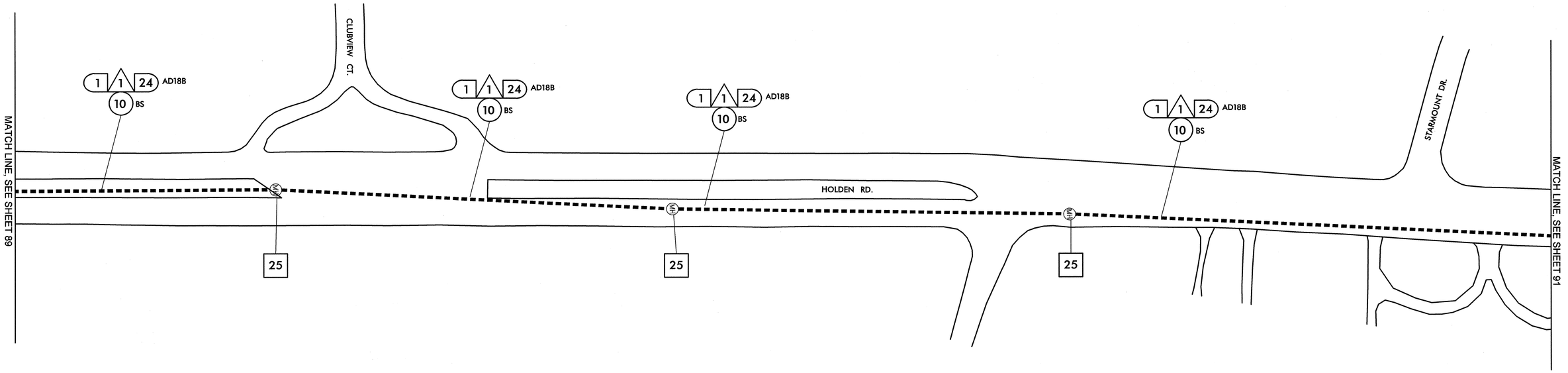
PROJECT REFERENCE NO.	SHEET NO.
U-4711	90



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Traffic Engineering and Safety Systems Branch
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: K.D. VANPATTEN	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE — DATE

CADD Filename: ...\Sht0090.dgn

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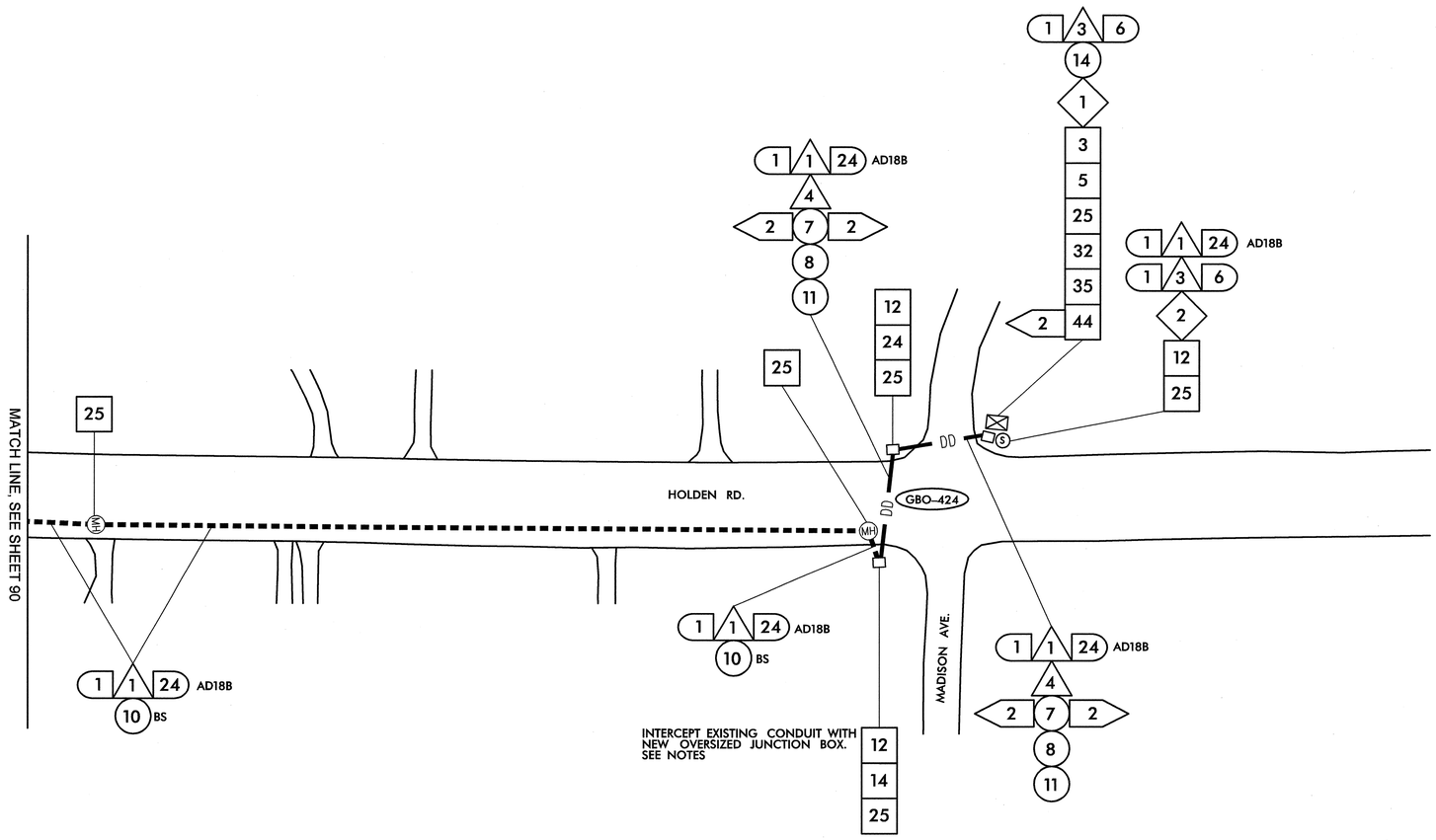
PROJECT REFERENCE NO.	SHEET NO.
U-4711	91



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SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH
PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE DATE

CADD Filename: ...\Sht0091.dgn

2/20/2008
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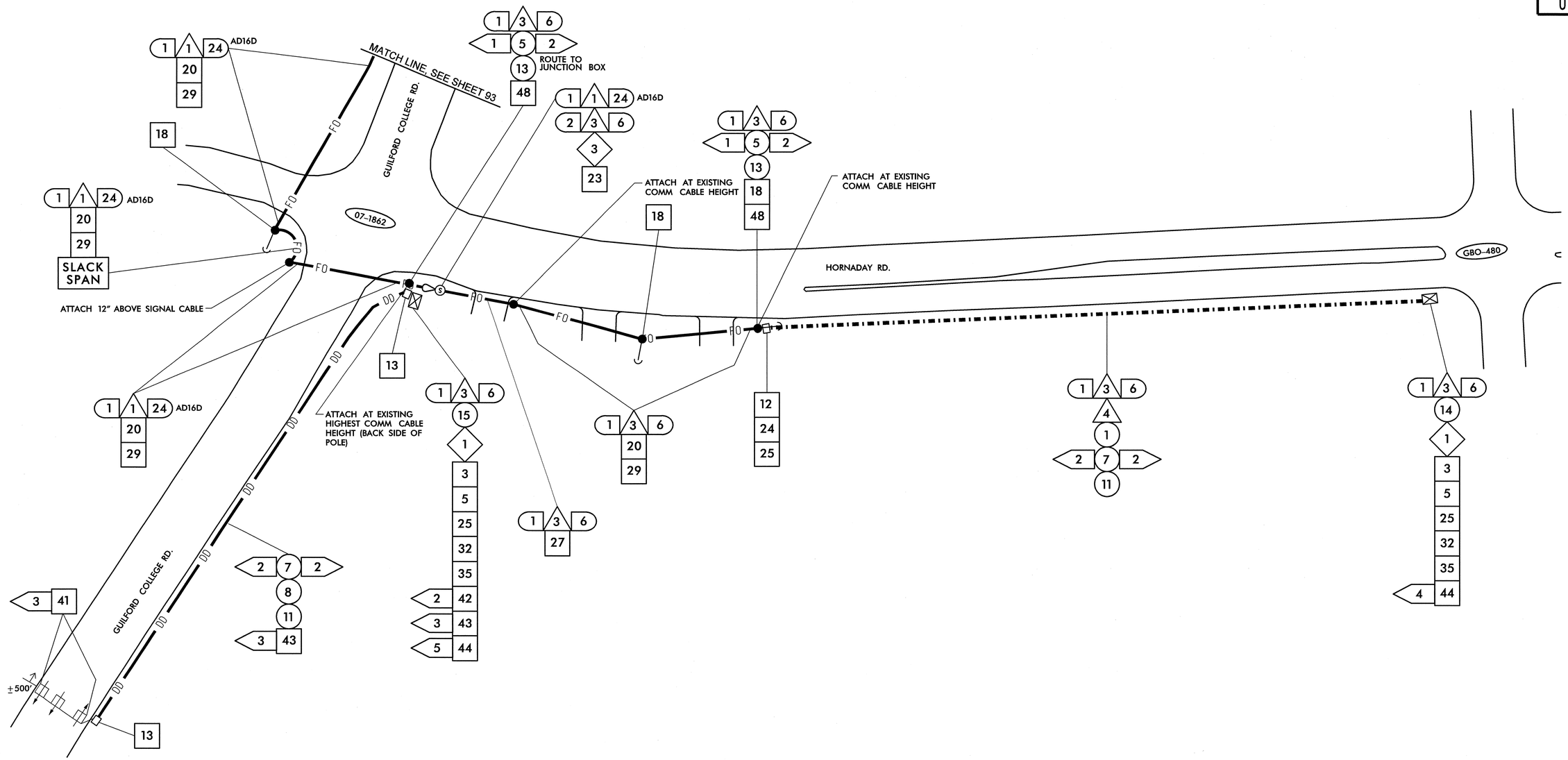
PROJECT REFERENCE NO.	SHEET NO.
U-4711	92



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45	INSTALL CITY WI-FI ANTENNA
46	INSTALL HUB 10-GIGABIT ETHERNET SWITCH
47	INSTALL CODEC
48	BOND MESSENGER CABLE TO POLE GROUND
49	INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION
50	INSTALL ANTENNA CABLE
51	RECONNECT RAILROAD PREEMPTION EQUIPMENT
52	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
53	INSTALL DSL ETHERNET SWITCH
54	INSTALL ETHERNET CABLE
55	INSTALL TERMINAL SERVER
56	INSTALL MICROWAVE VEHICLE DETECTOR
57	INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
58	INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filenames: ...\Sht0092.dgn

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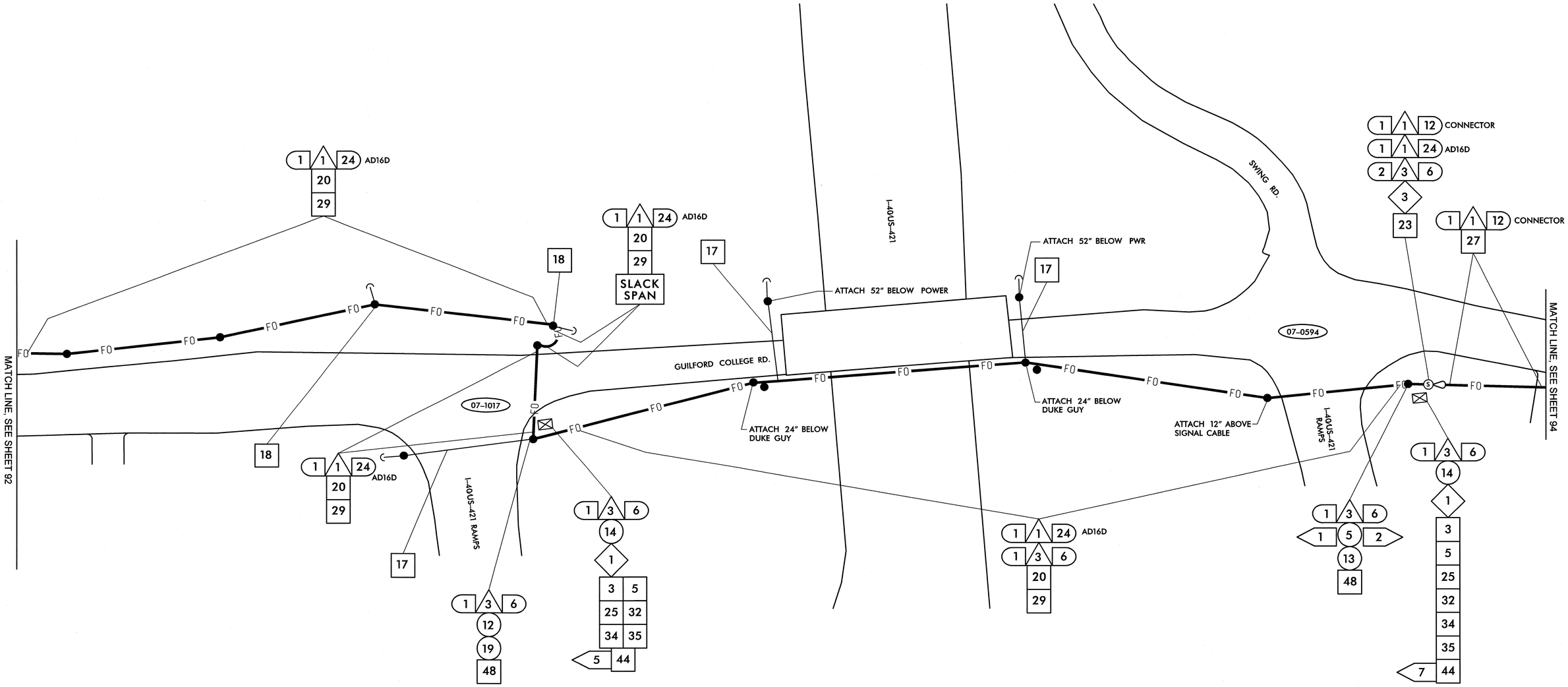
PROJECT REFERENCE NO.	SHEET NO.
U-4711	93



1	INSTALL SMFO CABLE	14	INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE	6	INSTALL NEW 336S CABINET	26	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
2	INSTALL PLENUM RATED FIBER OPTIC CABLE	15	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	7	INSTALL CCTV CAMERA ASSEMBLY	27	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
3	INSTALL FIBER OPTIC DROP CABLE	16	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	8	INSTALL CCTV CAMERA WOOD POLE	28	LASH CABLE(S) TO EXISTING MESSENGER CABLE
4	INSTALL TRACER WIRE	17	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET	9	INSTALL CCTV METAL POLE AND FOUNDATION	29	LASH CABLE(S) TO NEW MESSENGER CABLE
5	REUSE NCDOT SMFO CABLE	18	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX	30	INSTALL NEW ELECTRICAL SERVICE
6	REUSE GDOT SMFO CABLE	19	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL SPECIAL OVERSIZED JUNCTION BOX	31	MODIFY EXISTING ELECTRICAL SERVICE
1	TRENCH	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	12	INSTALL OVERSIZED JUNCTION BOX	32	INSTALL NEW CONTROLLER
2	INSTALL PVC CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	13	INSTALL STANDARD JUNCTION BOX	33	INSTALL EXISTING CABLE IN NEW CABINET
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	14	REMOVE EXISTING JUNCTION BOX	34	INSTALL GENERATOR POWER INLET BOX
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	INSTALL POLE MOUNTED SPLICE CABINET	15	INSTALL WOOD POLE	35	INSTALL LOCAL GIGABIT ETHERNET SWITCH
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING	5	INSTALL BASE MOUNTED SPLICE CABINET	16	REMOVE EXISTING WOOD POLE	36	INSTALL UNIFIED CABLE
6	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT	6	REMOVE EXISTING SPLICE CABINET	17	INSTALL AERIAL GUY ASSEMBLY	37	INSTALL POLE MOUNTED EQUIPMENT CABINET
7	INSTALL POLYETHYLENE CONDUIT	7	INSTALL TERMINAL SPLICE BOX	18	INSTALL STANDARD GUY ASSEMBLY	38	INSTALL UNI-DIRECTIONAL YAGI ANTENNA
8	DIRECTIONAL DRILL CONDUIT	8	MODIFY EXISTING SPLICE ENCLOSURE	19	INSTALL SIDEWALK GUY ASSEMBLY	39	INSTALL OMNI-DIRECTIONAL ANTENNA
9	BORE AND JACK CONDUIT	1	INSTALL CABINET FOUNDATION	20	INSTALL MESSENGER CABLE	40	INSTALL RADIO TRANSCEIVER
10	INSTALL CABLE(S) IN EXISTING CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER	21	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	41	INSTALL SYSTEM LOOP
11	INSTALL CABLE(S) IN NEW CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	22	REMOVE EXISTING COMMUNICATIONS CABLE	42	INSTALL SYSTEM LOOP AMPLIFIER
12	INSTALL CABLE(S) IN EXISTING RISER	4	INSTALL NEW 333 COMMUNICATION CABINET	23	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE	43	INSTALL SYSTEM LOOP LEAD-IN CABLE
13	INSTALL CABLE(S) IN NEW RISER	5	INSTALL NEW 332 BASE MOUNTED CABINET	24	INSTALL DELINEATOR MARKER	44	INSTALL LOCAL LOOP AMPLIFIER
				25	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	45	INSTALL CITY WI-FI ANTENNA
						46	INSTALL HUB 10-GIGABIT ETHERNET SWITCH
						47	INSTALL CODEC
						48	BOND MESSENGER CABLE TO POLE GROUND
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						52	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
						53	INSTALL DSL ETHERNET SWITCH
						54	INSTALL ETHERNET CABLE
						55	INSTALL TERMINAL SERVER
						56	INSTALL MICROWAVE VEHICLE DETECTOR
						57	INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
						58	INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

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Traffic Engineering and Safety Systems Branch
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/22/08 DATE

CADD Filename: ...\Sht0093.dgn

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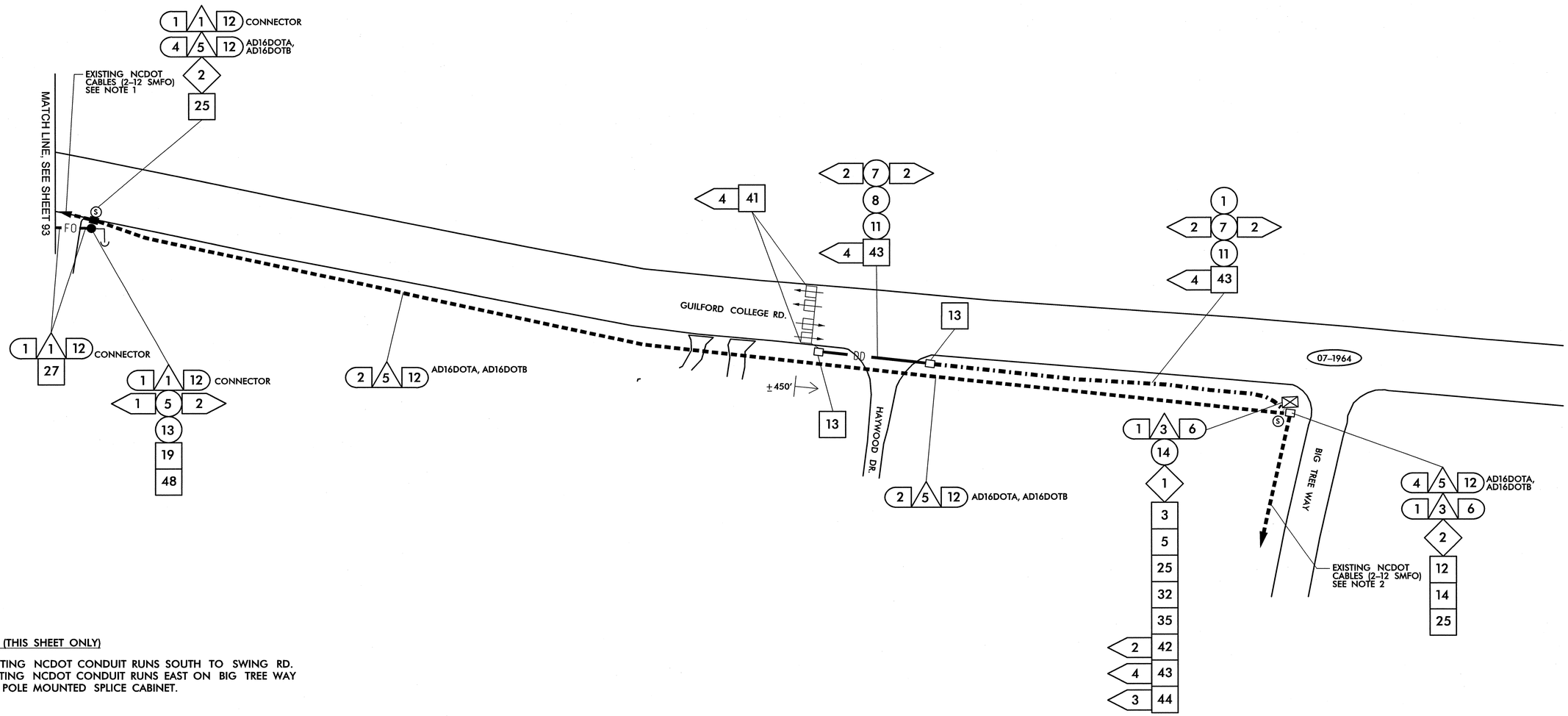
PROJECT REFERENCE NO.	SHEET NO.
U-4711	94



NOTES (THIS SHEET ONLY)

1. EXISTING NCDOT CONDUIT RUNS SOUTH TO SWING RD.
2. EXISTING NCDOT CONDUIT RUNS EAST ON BIG TREE WAY TO POLE MOUNTED SPLICE CABINET.

1	INSTALL SMFO CABLE
2	INSTALL PLENUM RATED FIBER OPTIC CABLE
3	INSTALL FIBER OPTIC DROP CABLE
4	INSTALL TRACER WIRE
5	REUSE NCDOT SMFO CABLE
6	REUSE GDOT SMFO CABLE
(1)	TRENCH
(2)	INSTALL PVC CONDUIT
(3)	INSTALL RIGID, GALVANIZED STEEL CONDUIT
(4)	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
(5)	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
(6)	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
(7)	INSTALL POLYETHYLENE CONDUIT
(8)	DIRECTIONAL DRILL CONDUIT
(9)	BORE AND JACK CONDUIT
(10)	INSTALL CABLE(S) IN EXISTING CONDUIT
(11)	INSTALL CABLE(S) IN NEW CONDUIT
(12)	INSTALL CABLE(S) IN EXISTING RISER
(13)	INSTALL CABLE(S) IN NEW RISER
(14)	INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
(15)	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
(16)	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
(17)	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
(18)	INSTALL NEW RISER INTO POLE MOUNTED CABINET
(19)	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
◇1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
◇2	INSTALL UNDERGROUND SPLICE ENCLOSURE
◇3	INSTALL AERIAL SPLICE ENCLOSURE
◇4	INSTALL POLE MOUNTED SPLICE CABINET
◇5	INSTALL BASE MOUNTED SPLICE CABINET
◇6	REMOVE EXISTING SPLICE CABINET
◇7	INSTALL TERMINAL SPLICE BOX
◇8	MODIFY EXISTING SPLICE ENCLOSURE
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
3	MODIFY EXISTING CABINET FOUNDATION
4	INSTALL NEW 333 COMMUNICATION CABINET
5	INSTALL NEW 332 BASE MOUNTED CABINET
6	INSTALL NEW 336S CABINET
7	INSTALL CCTV CAMERA ASSEMBLY
8	INSTALL CCTV CAMERA WOOD POLE
9	INSTALL CCTV METAL POLE AND FOUNDATION
10	INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
11	INSTALL SPECIAL OVERSIZED JUNCTION BOX
12	INSTALL OVERSIZED JUNCTION BOX
13	INSTALL STANDARD JUNCTION BOX
14	REMOVE EXISTING JUNCTION BOX
15	INSTALL WOOD POLE
16	REMOVE EXISTING WOOD POLE
17	INSTALL AERIAL GUY ASSEMBLY
18	INSTALL STANDARD GUY ASSEMBLY
19	INSTALL SIDEWALK GUY ASSEMBLY
20	INSTALL MESSENGER CABLE
21	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
22	REMOVE EXISTING COMMUNICATIONS CABLE
23	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
24	INSTALL DELINEATOR MARKER
25	STORE 30 FEET OF EACH COMMUNICATIONS CABLE
26	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
27	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
28	LASH CABLE(S) TO EXISTING MESSENGER CABLE
29	LASH CABLE(S) TO NEW MESSENGER CABLE
30	INSTALL NEW ELECTRICAL SERVICE
31	MODIFY EXISTING ELECTRICAL SERVICE
32	INSTALL NEW CONTROLLER
33	INSTALL EXISTING CABLE IN NEW CABINET
34	INSTALL GENERATOR POWER INLET BOX
35	INSTALL LOCAL GIGABIT ETHERNET SWITCH
36	INSTALL UNIFIED CABLE
37	INSTALL POLE MOUNTED EQUIPMENT CABINET
38	INSTALL UNI-DIRECTIONAL YAGI ANTENNA
39	INSTALL OMNI-DIRECTIONAL ANTENNA
40	INSTALL RADIO TRANSCEIVER
41	INSTALL SYSTEM LOOP
42	INSTALL SYSTEM LOOP AMPLIFIER
43	INSTALL SYSTEM LOOP LEAD-IN CABLE
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NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

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SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING SHEET

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL
SEAL 023562
ENGINEER
MARK DUNZO

SIGNATURE 2/29/08 DATE

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2/29/2008
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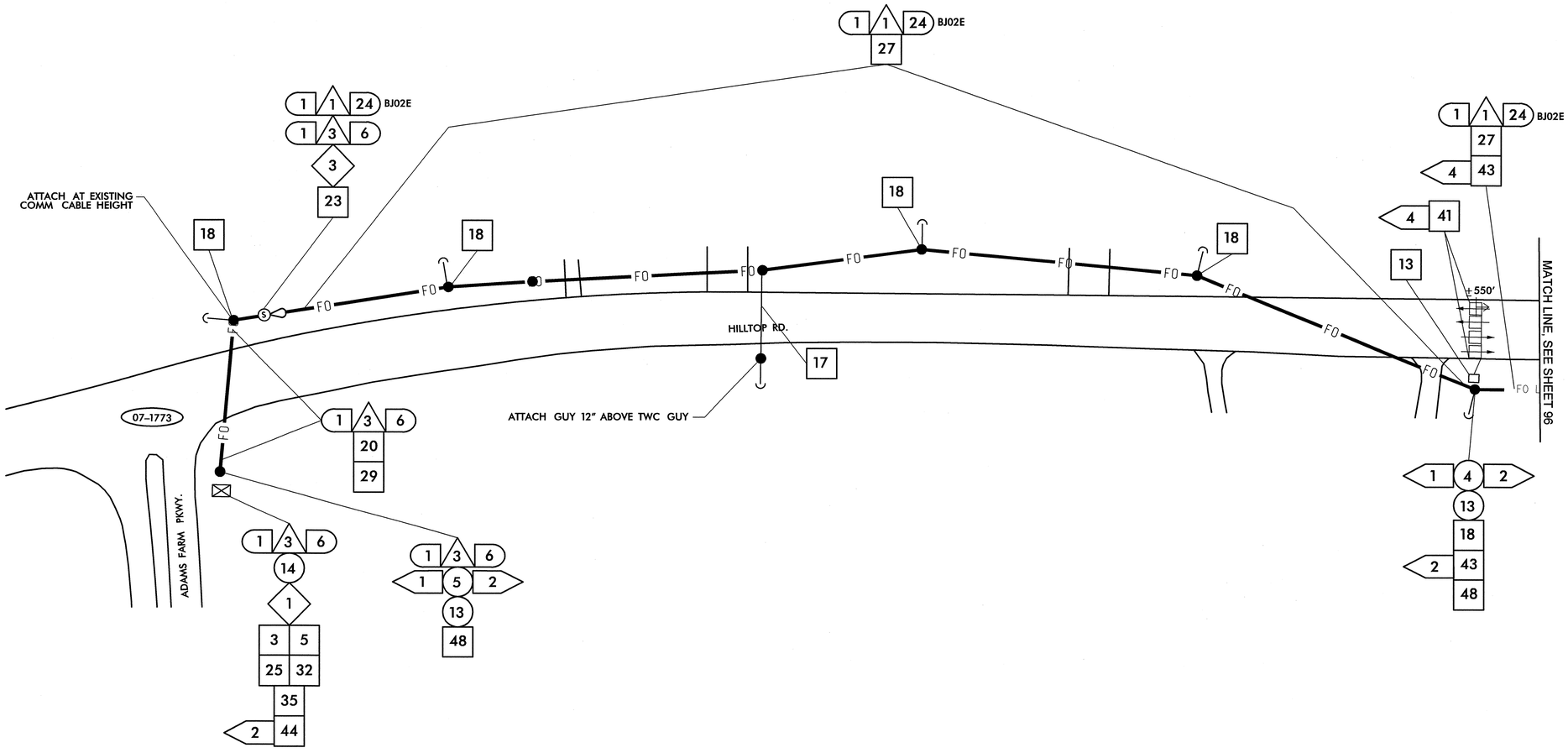
PROJECT REFERENCE NO.	SHEET NO.
U-4711	95



1. INSTALL SMFO CABLE
2. INSTALL PLENUM RATED FIBER OPTIC CABLE
3. INSTALL FIBER OPTIC DROP CABLE
4. INSTALL TRACER WIRE
5. REUSE NCDOT SMFO CABLE
6. REUSE GDOT SMFO CABLE

(1) TRENCH
(2) INSTALL PVC CONDUIT
(3) INSTALL RIGID, GALVANIZED STEEL CONDUIT
(4) INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
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(19) REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING

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3 INSTALL AERIAL SPLICE ENCLOSURE
4 INSTALL POLE MOUNTED SPLICE CABINET
5 INSTALL BASE MOUNTED SPLICE CABINET
6 REMOVE EXISTING SPLICE CABINET
7 INSTALL TERMINAL SPLICE BOX
8 MODIFY EXISTING SPLICE ENCLOSURE

[1] INSTALL CABINET FOUNDATION
[2] REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
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[4] INSTALL NEW 333 COMMUNICATION CABINET
[5] INSTALL NEW 332 BASE MOUNTED CABINET
[6] INSTALL NEW 336S CABINET
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CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 GUILFORD COUNTY
PLAN DATE: FEBRUARY, 2008 REVIEWED BY: K.W. SMITH
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REVISIONS	INIT.	DATE

SEAL
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2/29/08
SIGNATURE DATE
CADD Filename ...\Sht0095.dgn

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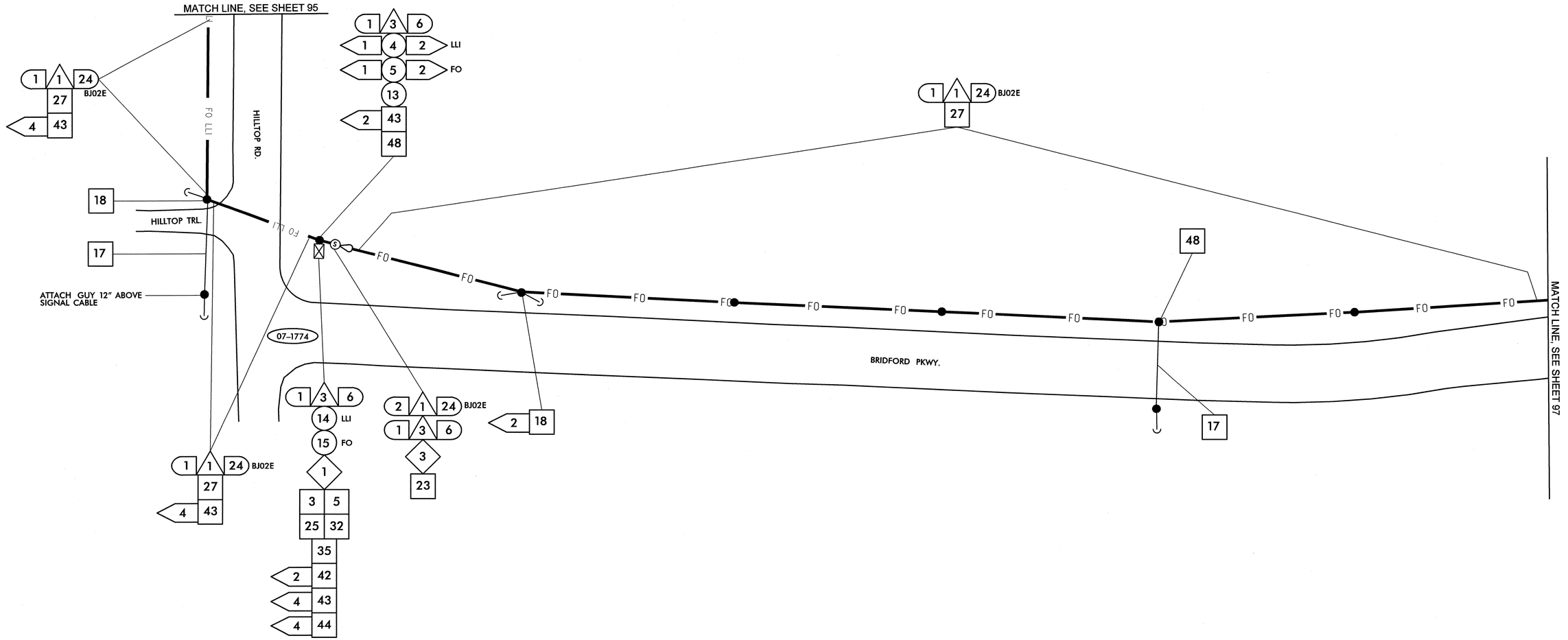
PROJECT REFERENCE NO.	SHEET NO.
U-4711	96



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48. BOND MESSENGER CABLE TO POLE GROUND
49. INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION
50. INSTALL ANTENNA CABLE
51. RECONNECT RAILROAD PREEMPTION EQUIPMENT
52. RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
53. INSTALL DSL ETHERNET SWITCH
54. INSTALL ETHERNET CABLE
55. INSTALL TERMINAL SERVER
56. INSTALL MICROWAVE VEHICLE DETECTOR
57. INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
58. INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
NCDEPARTMENT OF TRANSPORTATION
Integrated Mobility Division
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

2/20/08
SIGNATURE DATE

CADD Filename ...\Sht0096.dgn

2/20/2008
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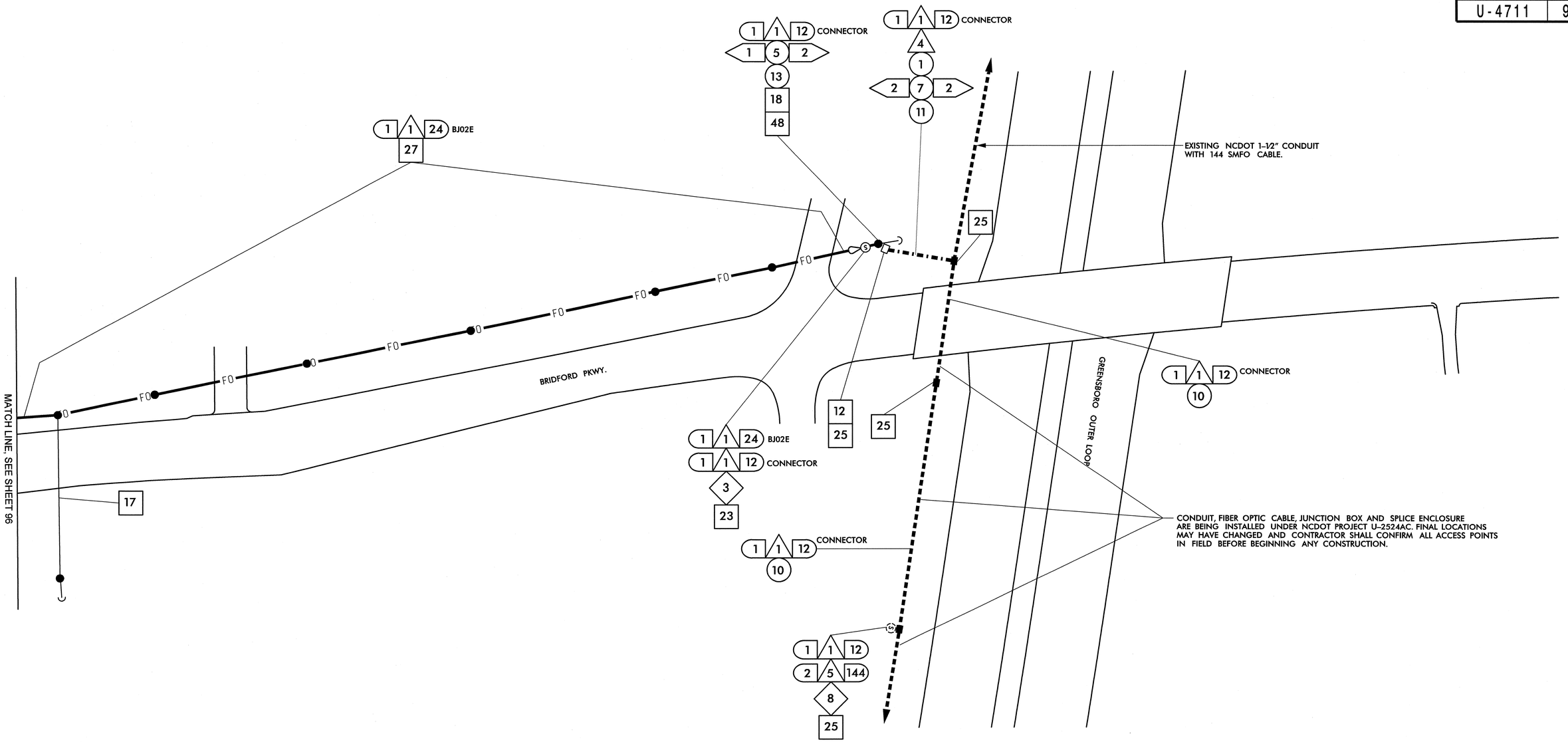
PROJECT REFERENCE NO.	SHEET NO.
U-4711	97



1. INSTALL SMFO CABLE
2. INSTALL PLENUM RATED FIBER OPTIC CABLE
3. INSTALL FIBER OPTIC DROP CABLE
4. INSTALL TRACER WIRE
5. REUSE NCDOT SMFO CABLE
6. REUSE GDOT SMFO CABLE

(1) TRENCH
(2) INSTALL PVC CONDUIT
(3) INSTALL RIGID, GALVANIZED STEEL CONDUIT
(4) INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
(5) INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
(6) INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
(7) INSTALL POLYETHYLENE CONDUIT
(8) DIRECTIONAL DRILL CONDUIT
(9) BORE AND JACK CONDUIT
(10) INSTALL CABLE(S) IN EXISTING CONDUIT
(11) INSTALL CABLE(S) IN NEW CONDUIT
(12) INSTALL CABLE(S) IN EXISTING RISER
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(14) INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
(15) INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
(16) INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
(17) INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
(18) INSTALL NEW RISER INTO POLE MOUNTED CABINET
(19) REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING

◇1 INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
◇2 INSTALL UNDERGROUND SPLICE ENCLOSURE
◇3 INSTALL AERIAL SPLICE ENCLOSURE
◇4 INSTALL POLE MOUNTED SPLICE CABINET
◇5 INSTALL BASE MOUNTED SPLICE CABINET
◇6 REMOVE EXISTING SPLICE CABINET
◇7 INSTALL TERMINAL SPLICE BOX
◇8 MODIFY EXISTING SPLICE ENCLOSURE

[1] INSTALL CABINET FOUNDATION
[2] REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
[3] MODIFY EXISTING CABINET FOUNDATION
[4] INSTALL NEW 333 COMMUNICATION CABINET
[5] INSTALL NEW 332 BASE MOUNTED CABINET
[6] INSTALL NEW 336S CABINET
[7] INSTALL CCTV CAMERA ASSEMBLY
[8] INSTALL CCTV CAMERA WOOD POLE
[9] INSTALL CCTV METAL POLE AND FOUNDATION
[10] INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
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[26] STORE 100 FEET OF EACH COMMUNICATIONS CABLE
[27] LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
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[32] INSTALL NEW CONTROLLER
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SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: K.D. VANPATTEN	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/29/08 DATE

CADD Filename ...\Sht0097.dgn

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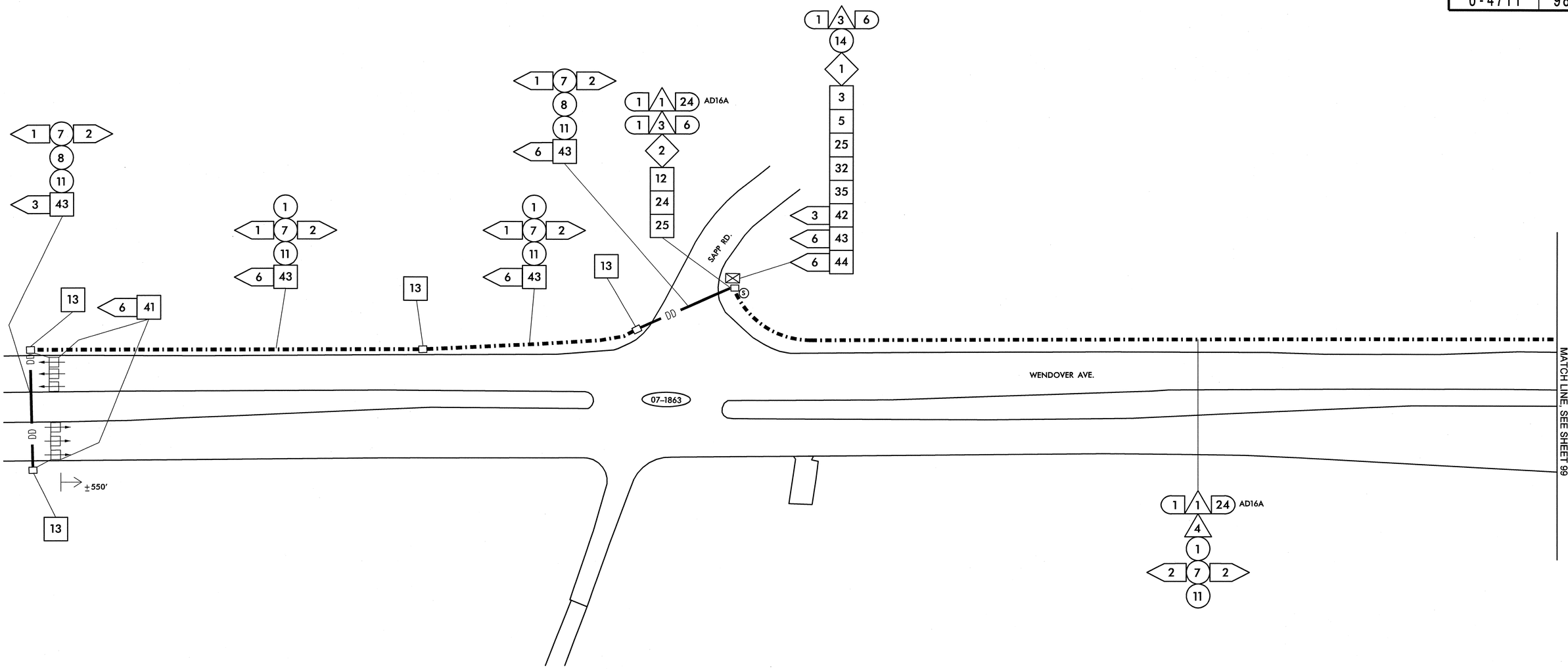
PROJECT REFERENCE NO.	SHEET NO.
U-4711	98



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NOTE:
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Traffic Engineering and Safety Systems Branch
Department of Transportation
Intelligent Transportation Systems

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/29/08 DATE

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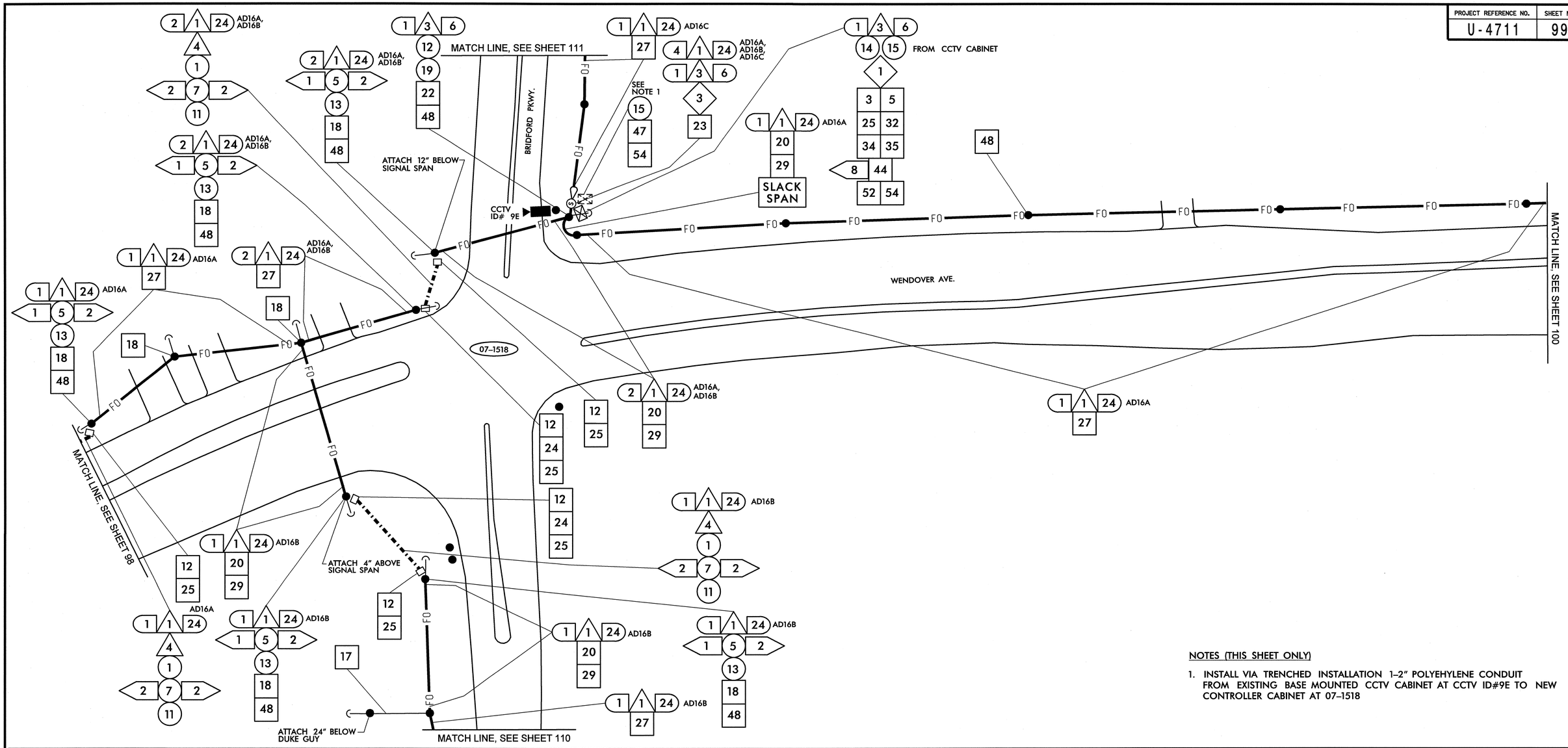
PROJECT REFERENCE NO.	SHEET NO.
U-4711	99



NOTES (THIS SHEET ONLY)

1. INSTALL VIA TRENCHED INSTALLATION 1–2" POLYEHYLENE CONDUIT FROM EXISTING BASE MOUNTED CCTV CABINET AT CCTV ID#9E TO NEW CONTROLLER CABINET AT 07–1518

1	INSTALL SMFO CABLE
2	INSTALL PLENUM RATED FIBER OPTIC CABLE
3	INSTALL FIBER OPTIC DROP CABLE
4	INSTALL TRACER WIRE
5	REUSE NCDOT SMFO CABLE
6	REUSE GDOT SMFO CABLE
1	TRENCH
2	INSTALL PVC CONDUIT
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
6	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
7	INSTALL POLYETHYLENE CONDUIT
8	DIRECTIONAL DRILL CONDUIT
9	BORE AND JACK CONDUIT
10	INSTALL CABLE(S) IN EXISTING CONDUIT
11	INSTALL CABLE(S) IN NEW CONDUIT
12	INSTALL CABLE(S) IN EXISTING RISER
13	INSTALL CABLE(S) IN NEW RISER
14	INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
15	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
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17	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
18	INSTALL NEW RISER INTO POLE MOUNTED CABINET
19	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2	INSTALL UNDERGROUND SPLICE ENCLOSURE
3	INSTALL AERIAL SPLICE ENCLOSURE
4	INSTALL POLE MOUNTED SPLICE CABINET
5	INSTALL BASE MOUNTED SPLICE CABINET
6	REMOVE EXISTING SPLICE CABINET
7	INSTALL TERMINAL SPLICE BOX
8	MODIFY EXISTING SPLICE ENCLOSURE
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
3	MODIFY EXISTING CABINET FOUNDATION
4	INSTALL NEW 333 COMMUNICATION CABINET
5	INSTALL NEW 332 BASE MOUNTED CABINET
6	INSTALL NEW 336S CABINET
7	INSTALL CCTV CAMERA ASSEMBLY
8	INSTALL CCTV CAMERA WOOD POLE
9	INSTALL CCTV METAL POLE AND FOUNDATION
10	INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
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23	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
24	INSTALL DELINEATOR MARKER
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27	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
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CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
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DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
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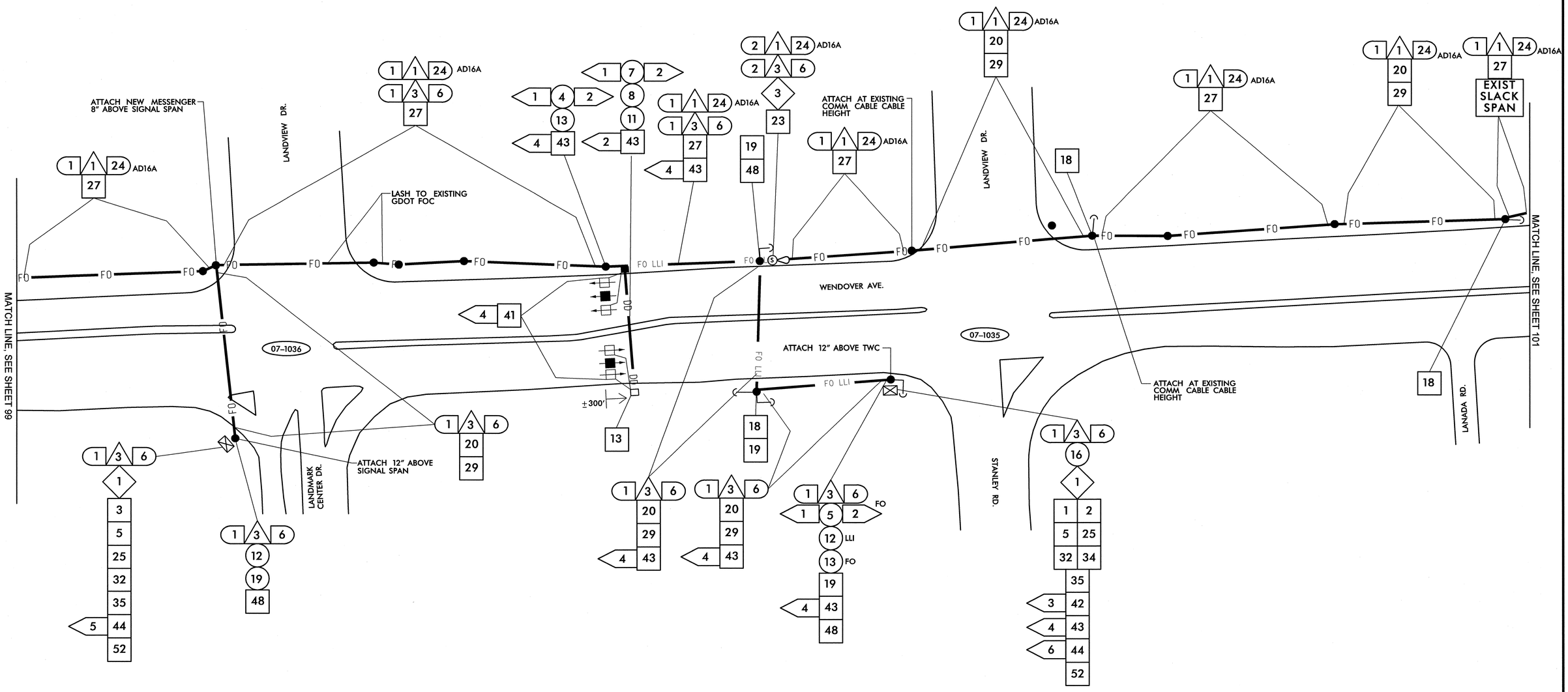
PROJECT REFERENCE NO.	SHEET NO.
U-4711	100



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39. INSTALL OMNI-DIRECTIONAL ANTENNA
40. INSTALL RADIO TRANSCEIVER
41. INSTALL SYSTEM LOOP
42. INSTALL SYSTEM LOOP AMPLIFIER
43. INSTALL SYSTEM LOOP LEAD-IN CABLE
44. INSTALL LOCAL LOOP AMPLIFIER
45. INSTALL CITY WI-FI ANTENNA
46. INSTALL HUB 10-GIGABIT ETHERNET SWITCH
47. INSTALL CODEC
48. BOND MESSENGER CABLE TO POLE GROUND
49. INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION
50. INSTALL ANTENNA CABLE
51. RECONNECT RAILROAD PREEMPTION EQUIPMENT
52. RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
53. INSTALL DSL ETHERNET SWITCH
54. INSTALL ETHERNET CABLE
55. INSTALL TERMINAL SERVER
56. INSTALL MICROWAVE VEHICLE DETECTOR
57. INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
58. INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE — DATE 2/20/08

CADD Filename: ...\Sht0100.dgn

2/20/2008
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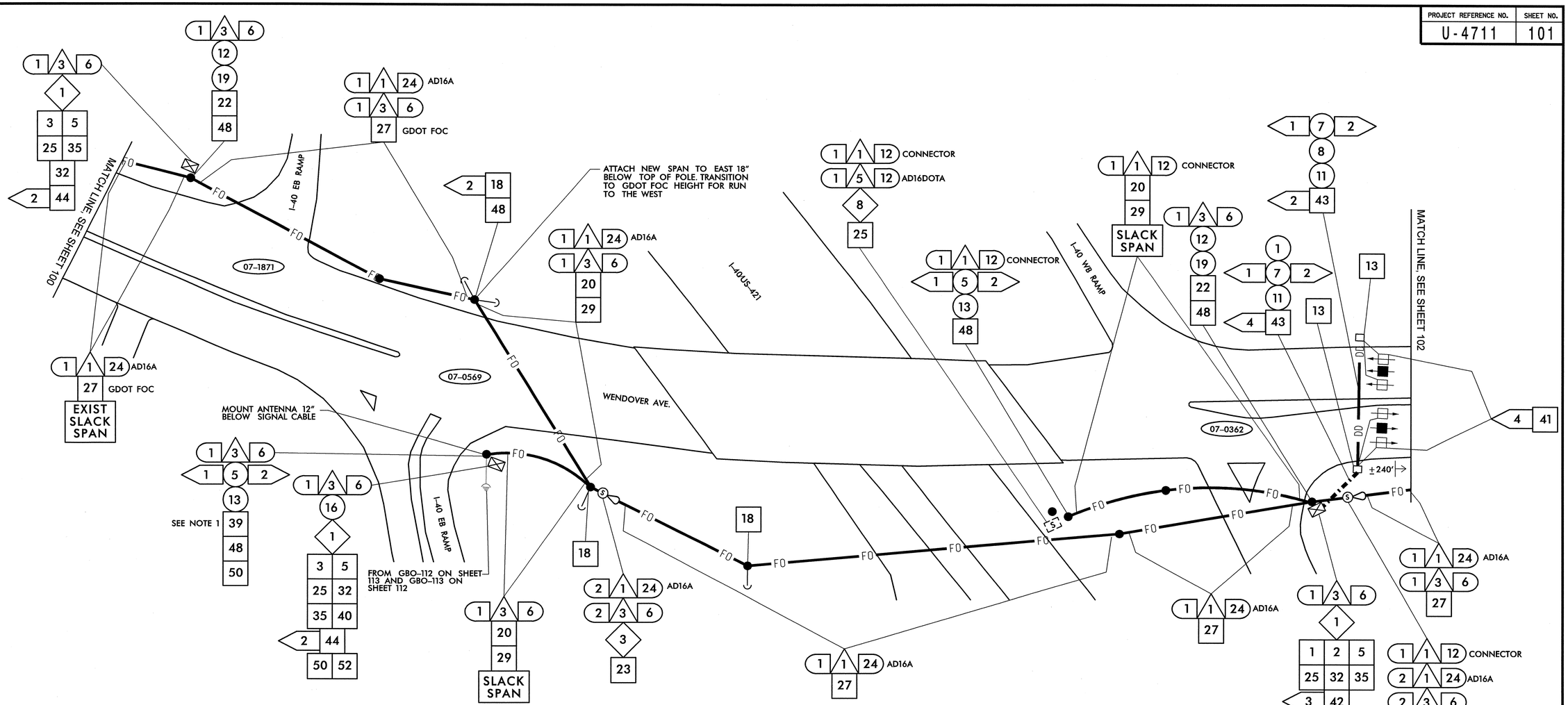
PROJECT REFERENCE NO.	SHEET NO.
U-4711	101



NOTE (THIS SHEET ONLY):
1. ANTENNA ORIENTATION FOR DISPLAY PURPOSES ONLY. FINAL ORIENTATION TO BE DETERMINED IN THE FIELD.

1. INSTALL SMFO CABLE
2. INSTALL PLENUM RATED FIBER OPTIC CABLE
3. INSTALL FIBER OPTIC DROP CABLE
4. INSTALL TRACER WIRE
5. REUSE NCDOT SMFO CABLE
6. REUSE GDOT SMFO CABLE

(1) TRENCH
(2) INSTALL PVC CONDUIT
(3) INSTALL RIGID, GALVANIZED STEEL CONDUIT
(4) INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
(5) INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
(6) INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
(7) INSTALL POLYETHYLENE CONDUIT
(8) DIRECTIONAL DRILL CONDUIT
(9) BORE AND JACK CONDUIT
(10) INSTALL CABLE(S) IN EXISTING CONDUIT
(11) INSTALL CABLE(S) IN NEW CONDUIT
(12) INSTALL CABLE(S) IN EXISTING RISER
(13) INSTALL CABLE(S) IN NEW RISER
(14) INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
(15) INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
(16) INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
(17) INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
(18) INSTALL NEW RISER INTO POLE MOUNTED CABINET
(19) REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING

<1> INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
<2> INSTALL UNDERGROUND SPLICE ENCLOSURE
<3> INSTALL AERIAL SPLICE ENCLOSURE
<4> INSTALL POLE MOUNTED SPLICE CABINET
<5> INSTALL BASE MOUNTED SPLICE CABINET
<6> REMOVE EXISTING SPLICE CABINET
<7> INSTALL TERMINAL SPLICE BOX
<8> MODIFY EXISTING SPLICE ENCLOSURE

[1] INSTALL CABINET FOUNDATION
[2] REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
[3] MODIFY EXISTING CABINET FOUNDATION
[4] INSTALL NEW 333 COMMUNICATION CABINET
[5] INSTALL NEW 332 BASE MOUNTED CABINET
[6] INSTALL NEW 336S CABINET
[7] INSTALL CCTV CAMERA ASSEMBLY
[8] INSTALL CCTV CAMERA WOOD POLE
[9] INSTALL CCTV METAL POLE AND FOUNDATION
[10] INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
[11] INSTALL SPECIAL OVERSIZED JUNCTION BOX
[12] INSTALL OVERSIZED JUNCTION BOX
[13] INSTALL STANDARD JUNCTION BOX
[14] REMOVE EXISTING JUNCTION BOX
[15] INSTALL WOOD POLE
[16] REMOVE EXISTING WOOD POLE
[17] INSTALL AERIAL GUY ASSEMBLY
[18] INSTALL STANDARD GUY ASSEMBLY
[19] INSTALL SIDEWALK GUY ASSEMBLY
[20] INSTALL MESSENGER CABLE
[21] REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
[22] REMOVE EXISTING COMMUNICATIONS CABLE
[23] INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
[24] INSTALL DELINEATOR MARKER
[25] STORE 30 FEET OF EACH COMMUNICATIONS CABLE
[26] STORE 100 FEET OF EACH COMMUNICATIONS CABLE
[27] LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
[28] LASH CABLE(S) TO EXISTING MESSENGER CABLE
[29] LASH CABLE(S) TO NEW MESSENGER CABLE
[30] INSTALL NEW ELECTRICAL SERVICE
[31] MODIFY EXISTING ELECTRICAL SERVICE
[32] INSTALL NEW CONTROLLER
[33] INSTALL EXISTING CABLE IN NEW CABINET
[34] INSTALL GENERATOR POWER INLET BOX
[35] INSTALL LOCAL GIGABIT ETHERNET SWITCH
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[38] INSTALL UNI-DIRECTIONAL YAGI ANTENNA
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[57] INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
[58] INSTALL WIRELESS ACCESS POINT POWER CABLE

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SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

3/4/08
SIGNATURE DATE

CADD Filename: ...\Sht0101.dgn

3/4/2008
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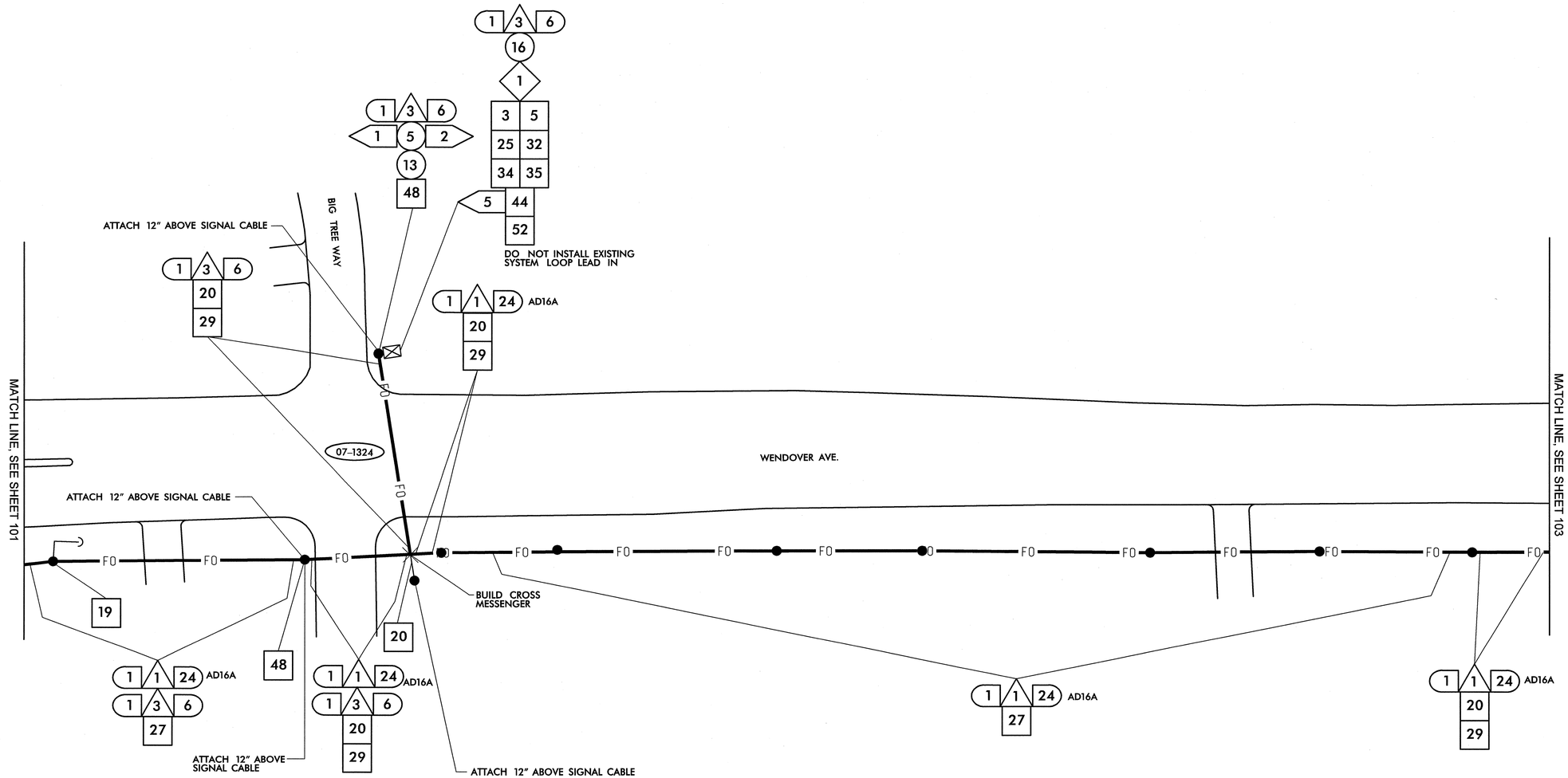
PROJECT REFERENCE NO.	SHEET NO.
U-4711	102



1	INSTALL SMFO CABLE
2	INSTALL PLENUM RATED FIBER OPTIC CABLE
3	INSTALL FIBER OPTIC DROP CABLE
4	INSTALL TRACER WIRE
5	REUSE NCDOT SMFO CABLE
6	REUSE GDOT SMFO CABLE
(1)	TRENCH
(2)	INSTALL PVC CONDUIT
(3)	INSTALL RIGID, GALVANIZED STEEL CONDUIT
(4)	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
(5)	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
(6)	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
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(8)	DIRECTIONAL DRILL CONDUIT
(9)	BORE AND JACK CONDUIT
(10)	INSTALL CABLE(S) IN EXISTING CONDUIT
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(15)	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
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◇2	INSTALL UNDERGROUND SPLICE ENCLOSURE
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◇4	INSTALL POLE MOUNTED SPLICE CABINET
◇5	INSTALL BASE MOUNTED SPLICE CABINET
◇6	REMOVE EXISTING SPLICE CABINET
◇7	INSTALL TERMINAL SPLICE BOX
◇8	MODIFY EXISTING SPLICE ENCLOSURE
[1]	INSTALL CABINET FOUNDATION
[2]	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
[3]	MODIFY EXISTING CABINET FOUNDATION
[4]	INSTALL NEW 333 COMMUNICATION CABINET
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[6]	INSTALL NEW 336S CABINET
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[8]	INSTALL CCTV CAMERA WOOD POLE
[9]	INSTALL CCTV METAL POLE AND FOUNDATION
[10]	INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
[11]	INSTALL SPECIAL OVERSIZED JUNCTION BOX
[12]	INSTALL OVERSIZED JUNCTION BOX
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[43]	INSTALL SYSTEM LOOP LEAD-IN CABLE
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[55]	INSTALL TERMINAL SERVER
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[57]	INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
[58]	INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
Department of Transportation
Information Technology Services

750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

2/20/08
SIGNATURE DATE

CADD Filename: ...\Sht0102.dgn

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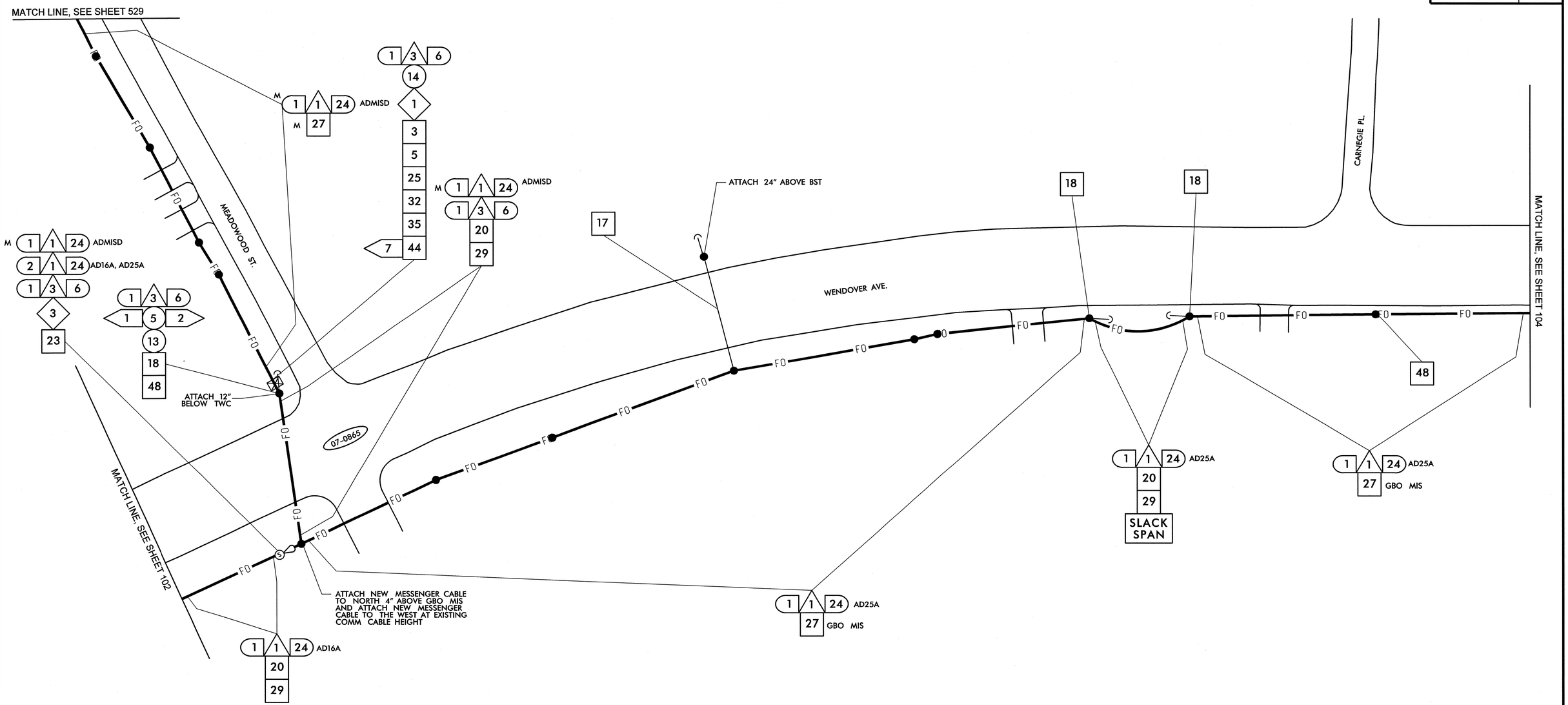
PROJECT REFERENCE NO.	SHEET NO.
U-4711	103



1	INSTALL SMFO CABLE
2	INSTALL PLENUM RATED FIBER OPTIC CABLE
3	INSTALL FIBER OPTIC DROP CABLE
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5	REUSE NCDOT SMFO CABLE
6	REUSE GDOT SMFO CABLE
1	TRENCH
2	INSTALL PVC CONDUIT
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT
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3	MODIFY EXISTING CABINET FOUNDATION
4	INSTALL NEW 333 COMMUNICATION CABINET
5	INSTALL NEW 332 BASE MOUNTED CABINET
6	INSTALL NEW 336S CABINET
7	INSTALL CCTV CAMERA ASSEMBLY
8	INSTALL CCTV CAMERA WOOD POLE
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CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

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REVISIONS	INIT.	DATE

SEAL
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SIGNATURE 2/20/08 DATE

CADD Filename: ...\Sht0103m.dgn

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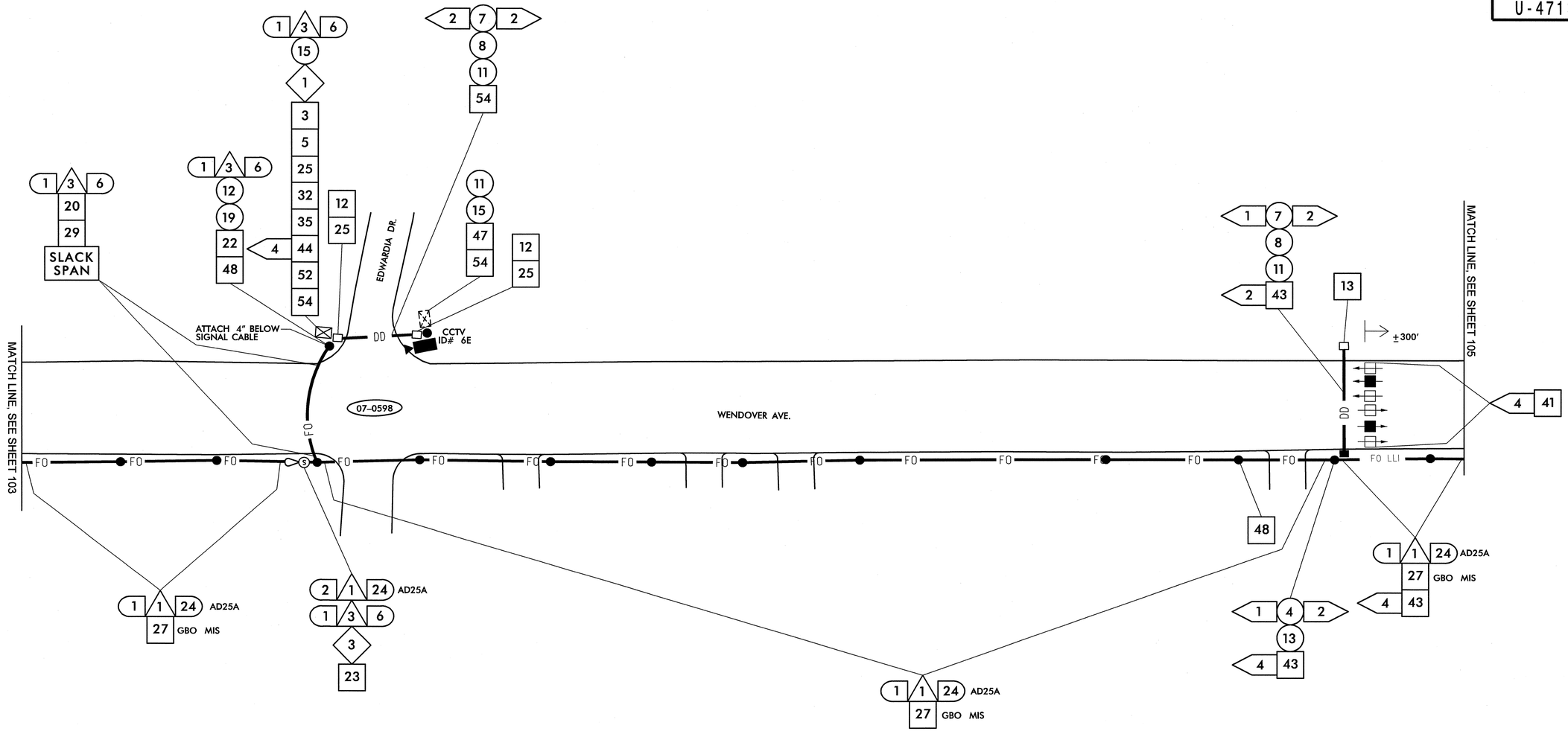
PROJECT REFERENCE NO.	SHEET NO.
U-4711	104



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38	INSTALL UNI-DIRECTIONAL YAGI ANTENNA
39	INSTALL OMNI-DIRECTIONAL ANTENNA
40	INSTALL RADIO TRANSCEIVER
41	INSTALL SYSTEM LOOP
42	INSTALL SYSTEM LOOP AMPLIFIER
43	INSTALL SYSTEM LOOP LEAD-IN CABLE
44	INSTALL LOCAL LOOP AMPLIFIER
45	INSTALL CITY WI-FI ANTENNA
46	INSTALL HUB 10-GIGABIT ETHERNET SWITCH
47	INSTALL CODEC
48	BOND MESSENGER CABLE TO POLE GROUND
49	INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION
50	INSTALL ANTENNA CABLE
51	RECONNECT RAILROAD PREEMPTION EQUIPMENT
52	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
53	INSTALL DSL ETHERNET SWITCH
54	INSTALL ETHERNET CABLE
55	INSTALL TERMINAL SERVER
56	INSTALL MICROWAVE VEHICLE DETECTOR
57	INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
58	INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE 2/20/08 DATE

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2/20/2008
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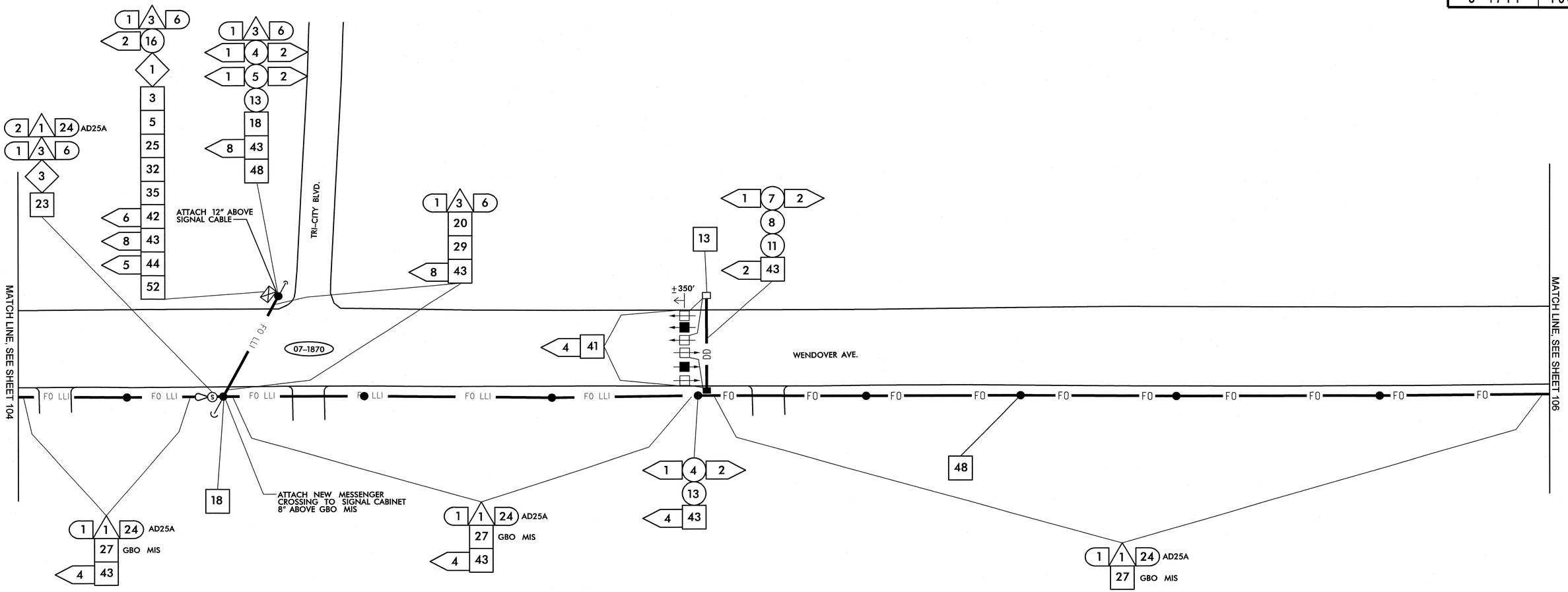
PROJECT REFERENCE NO.	SHEET NO.
U-4711	105



1	INSTALL SMFO CABLE
2	INSTALL PLENUM RATED FIBER OPTIC CABLE
3	INSTALL FIBER OPTIC DROP CABLE
4	INSTALL TRACER WIRE
5	REUSE NCDOT SMFO CABLE
6	REUSE GDOT SMFO CABLE
1	TRENCH
2	INSTALL PVC CONDUIT
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
6	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
7	INSTALL POLYETHYLENE CONDUIT
8	DIRECTIONAL DRILL CONDUIT
9	BORE AND JACK CONDUIT
10	INSTALL CABLE(S) IN EXISTING CONDUIT
11	INSTALL CABLE(S) IN NEW CONDUIT
12	INSTALL CABLE(S) IN EXISTING RISER
13	INSTALL CABLE(S) IN NEW RISER
14	INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
15	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
16	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
17	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
18	INSTALL NEW RISER INTO POLE MOUNTED CABINET
19	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2	INSTALL UNDERGROUND SPLICE ENCLOSURE
3	INSTALL AERIAL SPLICE ENCLOSURE
4	INSTALL POLE MOUNTED SPLICE CABINET
5	INSTALL BASE MOUNTED SPLICE CABINET
6	REMOVE EXISTING SPLICE CABINET
7	INSTALL TERMINAL SPLICE BOX
8	MODIFY EXISTING SPLICE ENCLOSURE
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
3	MODIFY EXISTING CABINET FOUNDATION
4	INSTALL NEW 333 COMMUNICATION CABINET
5	INSTALL NEW 332 BASE MOUNTED CABINET
6	INSTALL NEW 336S CABINET
7	INSTALL CCTV CAMERA ASSEMBLY
8	INSTALL CCTV CAMERA WOOD POLE
9	INSTALL CCTV METAL POLE AND FOUNDATION
10	INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
11	INSTALL SPECIAL OVERSIZED JUNCTION BOX
12	INSTALL OVERSIZED JUNCTION BOX
13	INSTALL STANDARD JUNCTION BOX
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19	INSTALL SIDEWALK GUY ASSEMBLY
20	INSTALL MESSENGER CABLE
21	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
22	REMOVE EXISTING COMMUNICATIONS CABLE
23	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
24	INSTALL DELINEATOR MARKER
25	STORE 30 FEET OF EACH COMMUNICATIONS CABLE
26	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
27	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
28	LASH CABLE(S) TO EXISTING MESSENGER CABLE
29	LASH CABLE(S) TO NEW MESSENGER CABLE
30	INSTALL NEW ELECTRICAL SERVICE
31	MODIFY EXISTING ELECTRICAL SERVICE
32	INSTALL NEW CONTROLLER
33	INSTALL EXISTING CABLE IN NEW CABINET
34	INSTALL GENERATOR POWER INLET BOX
35	INSTALL LOCAL GIGABIT ETHERNET SWITCH
36	INSTALL UNIFIED CABLE
37	INSTALL POLE MOUNTED EQUIPMENT CABINET
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SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING SHEET

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 023562 MARK DUNZO
SIGNATURE 2/20/08 DATE

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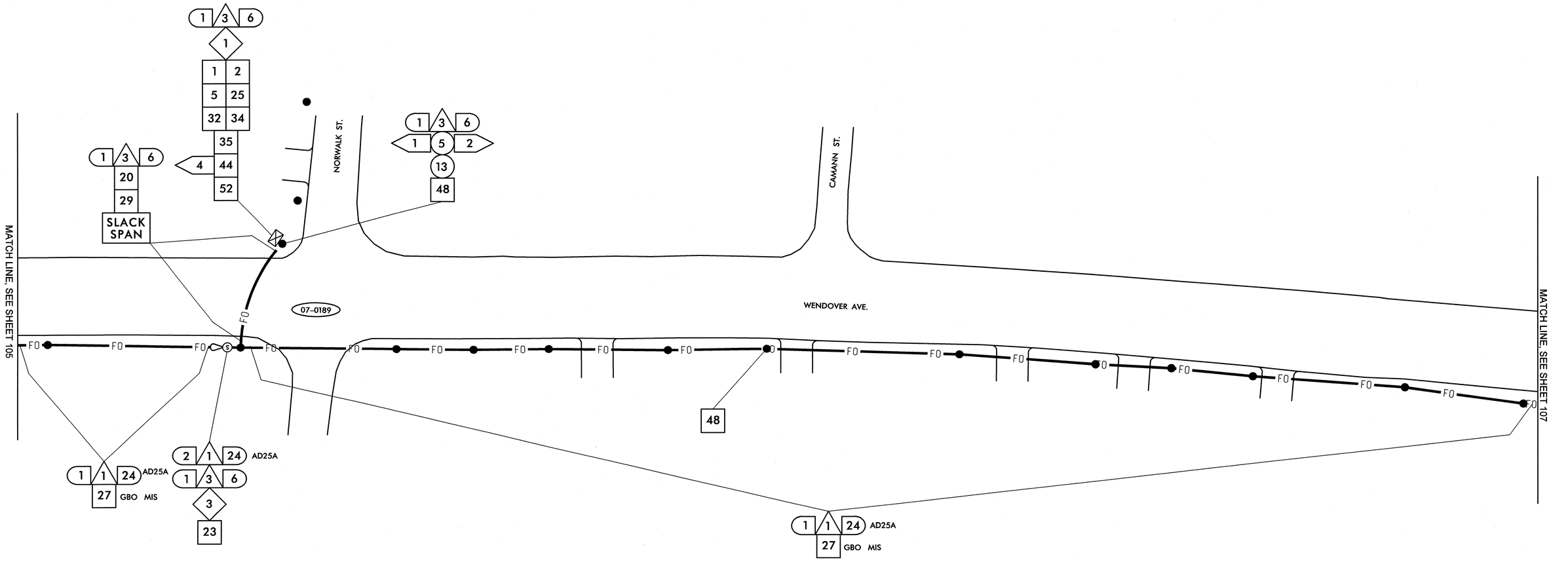
PROJECT REFERENCE NO.	SHEET NO.
U-4711	106



1	INSTALL SMFO CABLE	14	INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE	6	INSTALL NEW 336S CABINET	26	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
2	INSTALL PLENUM RATED FIBER OPTIC CABLE	15	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	7	INSTALL CCTV CAMERA ASSEMBLY	27	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
3	INSTALL FIBER OPTIC DROP CABLE	16	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	8	INSTALL CCTV CAMERA WOOD POLE	28	LASH CABLE(S) TO EXISTING MESSENGER CABLE
4	INSTALL TRACER WIRE	17	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET	9	INSTALL CCTV METAL POLE AND FOUNDATION	29	LASH CABLE(S) TO NEW MESSENGER CABLE
5	REUSE NCDOT SMFO CABLE	18	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX	30	INSTALL NEW ELECTRICAL SERVICE
6	REUSE GDOT SMFO CABLE	19	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL SPECIAL OVERSIZED JUNCTION BOX	31	MODIFY EXISTING ELECTRICAL SERVICE
1	TRENCH	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	12	INSTALL OVERSIZED JUNCTION BOX	32	INSTALL NEW CONTROLLER
2	INSTALL PVC CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	13	INSTALL STANDARD JUNCTION BOX	33	INSTALL EXISTING CABLE IN NEW CABINET
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	14	REMOVE EXISTING JUNCTION BOX	34	INSTALL GENERATOR POWER INLET BOX
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	INSTALL POLE MOUNTED SPLICE CABINET	15	INSTALL WOOD POLE	35	INSTALL LOCAL GIGABIT ETHERNET SWITCH
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING	5	INSTALL BASE MOUNTED SPLICE CABINET	16	REMOVE EXISTING WOOD POLE	36	INSTALL UNIFIED CABLE
6	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT	6	REMOVE EXISTING SPLICE CABINET	17	INSTALL AERIAL GUY ASSEMBLY	37	INSTALL POLE MOUNTED EQUIPMENT CABINET
7	INSTALL POLYETHYLENE CONDUIT	7	INSTALL TERMINAL SPLICE BOX	18	INSTALL STANDARD GUY ASSEMBLY	38	INSTALL UNI-DIRECTIONAL YAGI ANTENNA
8	DIRECTIONAL DRILL CONDUIT	8	MODIFY EXISTING SPLICE ENCLOSURE	19	INSTALL SIDEWALK GUY ASSEMBLY	39	INSTALL OMNI-DIRECTIONAL ANTENNA
9	BORE AND JACK CONDUIT	1	INSTALL CABINET FOUNDATION	20	INSTALL MESSENGER CABLE	40	INSTALL RADIO TRANSCEIVER
10	INSTALL CABLE(S) IN EXISTING CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER	21	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	41	INSTALL SYSTEM LOOP
11	INSTALL CABLE(S) IN NEW CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	22	REMOVE EXISTING COMMUNICATIONS CABLE	42	INSTALL SYSTEM LOOP AMPLIFIER
12	INSTALL CABLE(S) IN EXISTING RISER	4	INSTALL NEW 333 COMMUNICATION CABINET	23	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE	43	INSTALL SYSTEM LOOP LEAD-IN CABLE
13	INSTALL CABLE(S) IN NEW RISER	5	INSTALL NEW 332 BASE MOUNTED CABINET	24	INSTALL DELINEATOR MARKER		
				25	STORE 30 FEET OF EACH COMMUNICATIONS CABLE		

44	INSTALL LOCAL LOOP AMPLIFIER	53	INSTALL DSL ETHERNET SWITCH
45	INSTALL CITY WI-FI ANTENNA	54	INSTALL ETHERNET CABLE
46	INSTALL HUB 10-GIGABIT ETHERNET SWITCH	55	INSTALL TERMINAL SERVER
47	INSTALL CODEC	56	INSTALL MICROWAVE VEHICLE DETECTOR
48	BOND MESSENGER CABLE TO POLE GROUND	57	INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
49	INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION	58	INSTALL WIRELESS ACCESS POINT POWER CABLE
50	INSTALL ANTENNA CABLE		
51	RECONNECT RAILROAD PREEMPTION EQUIPMENT		
52	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT		

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
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(919) 677-2000

Traffic Engineering and Safety Systems Branch
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING SHEET

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

2/20/07
SIGNATURE DATE

CADD Filename: ...\Sht0106.dgn

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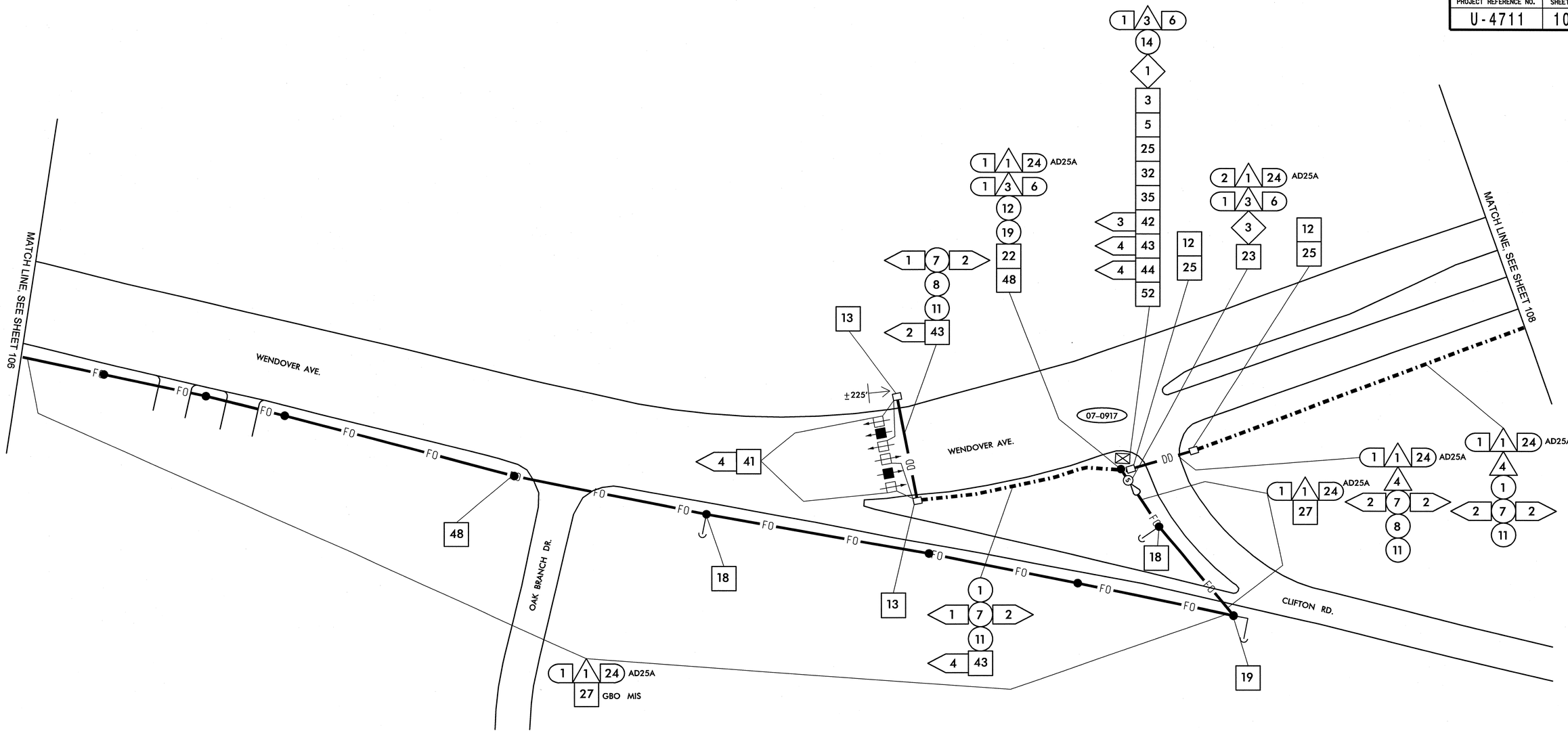
PROJECT REFERENCE NO.	SHEET NO.
U-4711	107



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7	INSTALL TERMINAL SPLICE BOX
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4	INSTALL NEW 333 COMMUNICATION CABINET
5	INSTALL NEW 332 BASE MOUNTED CABINET
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25	STORE 30 FEET OF EACH COMMUNICATIONS CABLE
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27	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
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NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

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Traffic Engineering and Safety Systems Branch
Traffic Engineering Unit
Department of Transportation
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE — DATE 2/20/08

CADD Filenames ...\Sht0107.dgn

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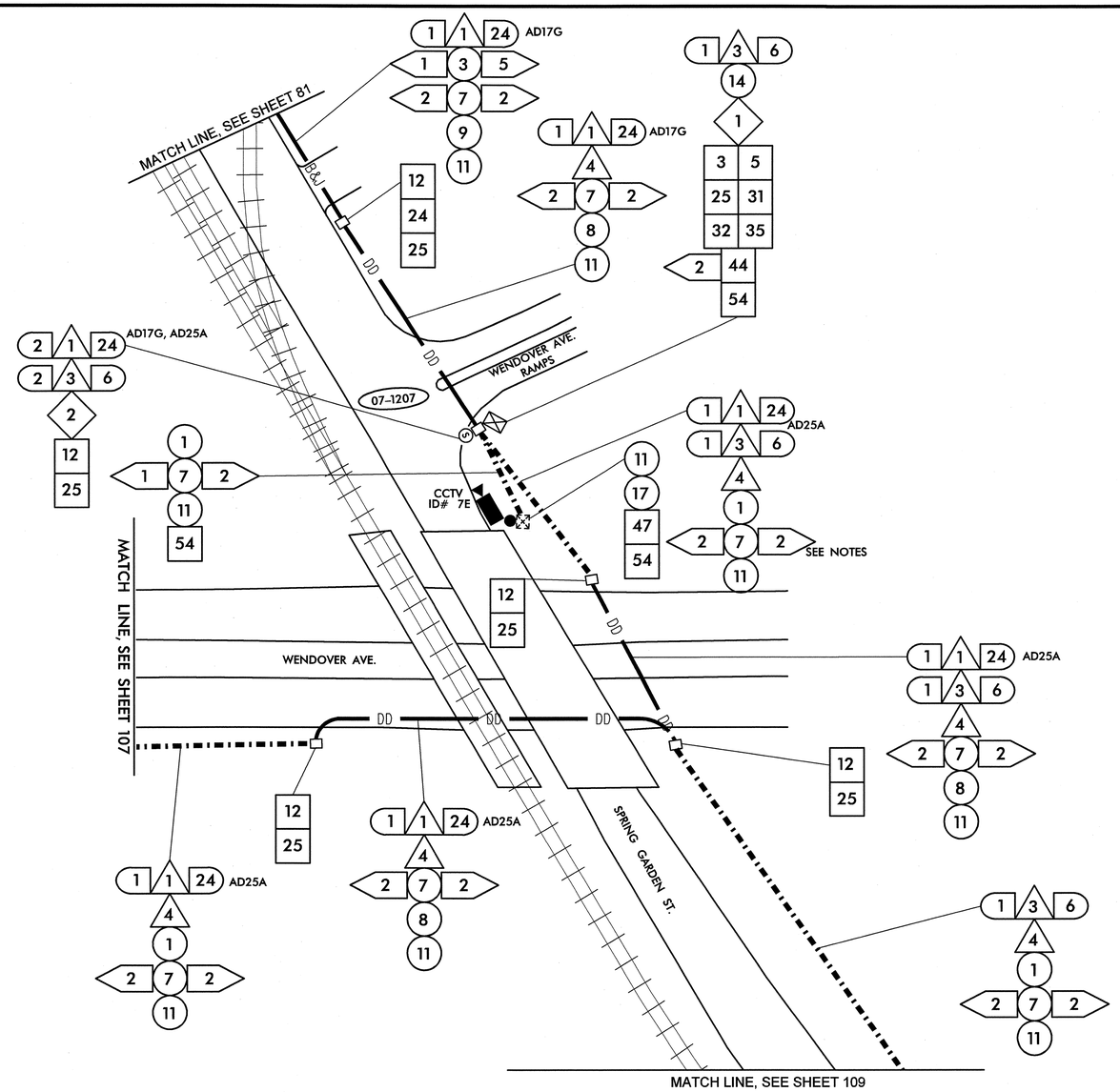
PROJECT REFERENCE NO.	SHEET NO.
U-4711	108



NOTES (THIS SHEET ONLY)

1. ROUTE CONDUIT AROUND TREES.

1	INSTALL SMFO CABLE
2	INSTALL PLENUM RATED FIBER OPTIC CABLE
3	INSTALL FIBER OPTIC DROP CABLE
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SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 GUILFORD COUNTY

PLAN DATE:	FEBRUARY, 2008	REVIEWED BY:	K.W. SMITH
PREPARED BY:	K.D. VANPATTEN	REVIEWED BY:	M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE 2/20/08 DATE
CADD Filename: ...\Sht0108.dgn

2/20/2008
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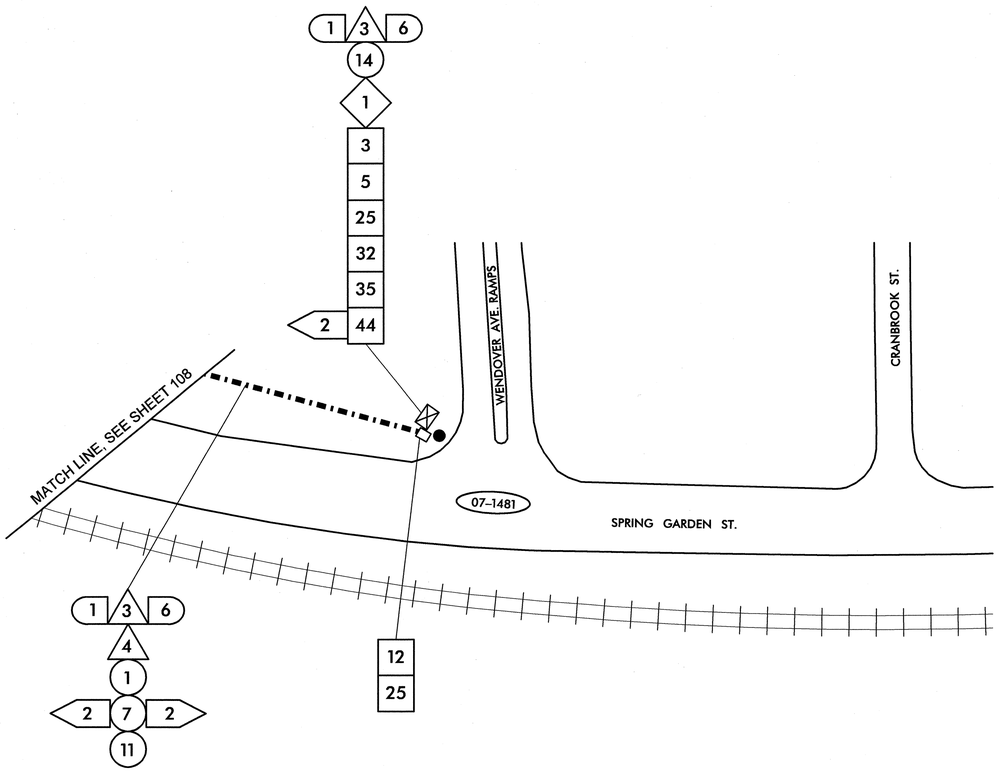
PROJECT REFERENCE NO.	SHEET NO.
U-4711	109



1. INSTALL SMFO CABLE
2. INSTALL PLENUM RATED FIBER OPTIC CABLE
3. INSTALL FIBER OPTIC DROP CABLE
4. INSTALL TRACER WIRE
5. REUSE NCDOT SMFO CABLE
6. REUSE GDOT SMFO CABLE

1. TRENCH
2. INSTALL PVC CONDUIT
3. INSTALL RIGID, GALVANIZED STEEL CONDUIT
4. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5. INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
6. INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
7. INSTALL POLYETHYLENE CONDUIT
8. DIRECTIONAL DRILL CONDUIT
9. BORE AND JACK CONDUIT
10. INSTALL CABLE(S) IN EXISTING CONDUIT
11. INSTALL CABLE(S) IN NEW CONDUIT
12. INSTALL CABLE(S) IN EXISTING RISER
13. INSTALL CABLE(S) IN NEW RISER
14. INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
15. INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
16. INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
17. INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
18. INSTALL NEW RISER INTO POLE MOUNTED CABINET
19. REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING

1. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2. INSTALL UNDERGROUND SPLICE ENCLOSURE
3. INSTALL AERIAL SPLICE ENCLOSURE
4. INSTALL POLE MOUNTED SPLICE CABINET
5. INSTALL BASE MOUNTED SPLICE CABINET
6. REMOVE EXISTING SPLICE CABINET
7. INSTALL TERMINAL SPLICE BOX
8. MODIFY EXISTING SPLICE ENCLOSURE

1. INSTALL CABINET FOUNDATION
2. REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
3. MODIFY EXISTING CABINET FOUNDATION
4. INSTALL NEW 333 COMMUNICATION CABINET
5. INSTALL NEW 332 BASE MOUNTED CABINET
6. INSTALL NEW 336S CABINET
7. INSTALL CCTV CAMERA ASSEMBLY
8. INSTALL CCTV CAMERA WOOD POLE
9. INSTALL CCTV METAL POLE AND FOUNDATION
10. INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
11. INSTALL SPECIAL OVERSIZED JUNCTION BOX
12. INSTALL OVERSIZED JUNCTION BOX
13. INSTALL STANDARD JUNCTION BOX
14. REMOVE EXISTING JUNCTION BOX
15. INSTALL WOOD POLE
16. REMOVE EXISTING WOOD POLE
17. INSTALL AERIAL GUY ASSEMBLY
18. INSTALL STANDARD GUY ASSEMBLY
19. INSTALL SIDEWALK GUY ASSEMBLY
20. INSTALL MESSENGER CABLE
21. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
22. REMOVE EXISTING COMMUNICATIONS CABLE
23. INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
24. INSTALL DELINEATOR MARKER
25. STORE 30 FEET OF EACH COMMUNICATIONS CABLE
26. STORE 100 FEET OF EACH COMMUNICATIONS CABLE
27. LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
28. LASH CABLE(S) TO EXISTING MESSENGER CABLE
29. LASH CABLE(S) TO NEW MESSENGER CABLE
30. INSTALL NEW ELECTRICAL SERVICE
31. MODIFY EXISTING ELECTRICAL SERVICE
32. INSTALL NEW CONTROLLER
33. INSTALL EXISTING CABLE IN NEW CABINET
34. INSTALL GENERATOR POWER INLET BOX
35. INSTALL LOCAL GIGABIT ETHERNET SWITCH
36. INSTALL UNIFIED CABLE
37. INSTALL POLE MOUNTED EQUIPMENT CABINET
38. INSTALL UNI-DIRECTIONAL YAGI ANTENNA
39. INSTALL OMNI-DIRECTIONAL ANTENNA
40. INSTALL RADIO TRANSCEIVER
41. INSTALL SYSTEM LOOP
42. INSTALL SYSTEM LOOP AMPLIFIER
43. INSTALL SYSTEM LOOP LEAD-IN CABLE
44. INSTALL LOCAL LOOP AMPLIFIER
45. INSTALL CITY WI-FI ANTENNA
46. INSTALL HUB 10-GIGABIT ETHERNET SWITCH
47. INSTALL CODEC
48. BOND MESSENGER CABLE TO POLE GROUND
49. INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION
50. INSTALL ANTENNA CABLE
51. RECONNECT RAILROAD PREEMPTION EQUIPMENT
52. RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
53. INSTALL DSL ETHERNET SWITCH
54. INSTALL ETHERNET CABLE
55. INSTALL TERMINAL SERVER
56. INSTALL MICROWAVE VEHICLE DETECTOR
57. INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
58. INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
Traffic Engineering Unit
DIVISION OF TRANSPORTATION SYSTEMS
Intelligent Transportation Systems
750 Greenfield Pkwy, Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE DATE 2/20/08

CADD Filename: ...\Sht0109.dgn

2/20/2008
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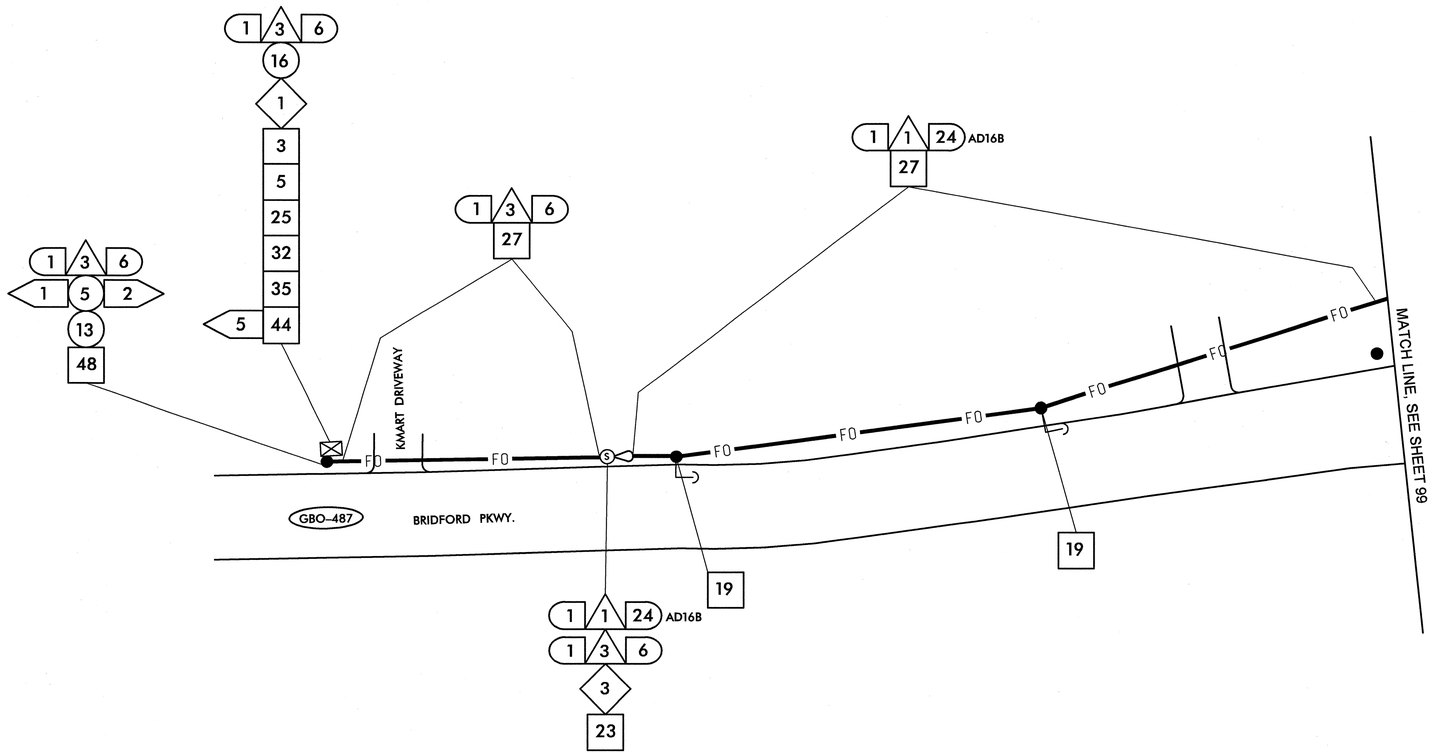
PROJECT REFERENCE NO.	SHEET NO.
U-4711	110



1	INSTALL SMFO CABLE	14	INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE	6	INSTALL NEW 336S CABINET	26	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
2	INSTALL PLENUM RATED FIBER OPTIC CABLE	15	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	7	INSTALL CCTV CAMERA ASSEMBLY	27	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
3	INSTALL FIBER OPTIC DROP CABLE	16	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	8	INSTALL CCTV CAMERA WOOD POLE	28	LASH CABLE(S) TO EXISTING MESSENGER CABLE
4	INSTALL TRACER WIRE	17	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET	9	INSTALL CCTV METAL POLE AND FOUNDATION	29	LASH CABLE(S) TO NEW MESSENGER CABLE
5	REUSE NCDOT SMFO CABLE	18	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX	30	INSTALL NEW ELECTRICAL SERVICE
6	REUSE GDOT SMFO CABLE	19	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL SPECIAL OVERSIZED JUNCTION BOX	31	MODIFY EXISTING ELECTRICAL SERVICE
1	TRENCH	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	12	INSTALL OVERSIZED JUNCTION BOX	32	INSTALL NEW CONTROLLER
2	INSTALL PVC CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	13	INSTALL STANDARD JUNCTION BOX	33	INSTALL EXISTING CABLE IN NEW CABINET
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	14	REMOVE EXISTING JUNCTION BOX	34	INSTALL GENERATOR POWER INLET BOX
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	INSTALL POLE MOUNTED SPLICE CABINET	15	INSTALL WOOD POLE	35	INSTALL LOCAL GIGABIT ETHERNET SWITCH
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING	5	INSTALL BASE MOUNTED SPLICE CABINET	16	REMOVE EXISTING WOOD POLE	36	INSTALL UNIFIED CABLE
6	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT	6	REMOVE EXISTING SPLICE CABINET	17	INSTALL AERIAL GUY ASSEMBLY	37	INSTALL POLE MOUNTED EQUIPMENT CABINET
7	INSTALL POLYETHYLENE CONDUIT	7	INSTALL TERMINAL SPLICE BOX	18	INSTALL STANDARD GUY ASSEMBLY	38	INSTALL UNI-DIRECTIONAL YAGI ANTENNA
8	DIRECTIONAL DRILL CONDUIT	8	MODIFY EXISTING SPLICE ENCLOSURE	19	INSTALL SIDEWALK GUY ASSEMBLY	39	INSTALL OMNI-DIRECTIONAL ANTENNA
9	BORE AND JACK CONDUIT	1	INSTALL CABINET FOUNDATION	20	INSTALL MESSENGER CABLE	40	INSTALL RADIO TRANSCEIVER
10	INSTALL CABLE(S) IN EXISTING CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER	21	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	41	INSTALL SYSTEM LOOP
11	INSTALL CABLE(S) IN NEW CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	22	REMOVE EXISTING COMMUNICATIONS CABLE	42	INSTALL SYSTEM LOOP AMPLIFIER
12	INSTALL CABLE(S) IN EXISTING RISER	4	INSTALL NEW 333 COMMUNICATION CABINET	23	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE	43	INSTALL SYSTEM LOOP LEAD-IN CABLE
13	INSTALL CABLE(S) IN NEW RISER	5	INSTALL NEW 332 BASE MOUNTED CABINET	24	INSTALL DELINEATOR MARKER		
				25	STORE 30 FEET OF EACH COMMUNICATIONS CABLE		

44	INSTALL LOCAL LOOP AMPLIFIER	53	INSTALL DSL ETHERNET SWITCH
45	INSTALL CITY WI-FI ANTENNA	54	INSTALL ETHERNET CABLE
46	INSTALL HUB 10-GIGABIT ETHERNET SWITCH	55	INSTALL TERMINAL SERVER
47	INSTALL CODEC	56	INSTALL MICROWAVE VEHICLE DETECTOR
48	BOND MESSENGER CABLE TO POLE GROUND	57	INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
49	INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION	58	INSTALL WIRELESS ACCESS POINT POWER CABLE
50	INSTALL ANTENNA CABLE		
51	RECONNECT RAILROAD PREEMPTION EQUIPMENT		
52	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT		

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
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(919) 677-2000

Traffic Engineering and Safety Systems Branch
Department of Transportation
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/22/08 DATE

CADD Filename: ...\Sht0110.dgn

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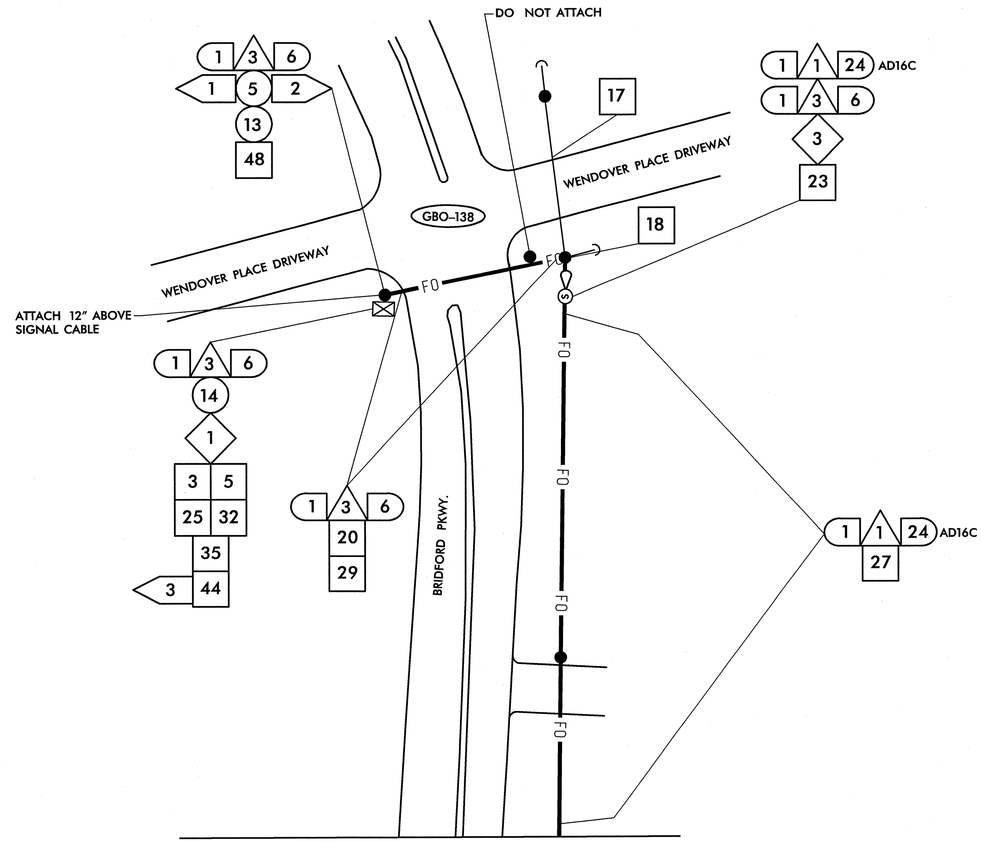
PROJECT REFERENCE NO.	SHEET NO.
U-4711	111



MATCH LINE, SEE SHEET 99

1	INSTALL SMFO CABLE	14	INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE	6	INSTALL NEW 336S CABINET	26	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
2	INSTALL PLENUM RATED FIBER OPTIC CABLE	15	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	7	INSTALL CCTV CAMERA ASSEMBLY	27	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
3	INSTALL FIBER OPTIC DROP CABLE	16	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	8	INSTALL CCTV CAMERA WOOD POLE	28	LASH CABLE(S) TO EXISTING MESSENGER CABLE
4	INSTALL TRACER WIRE	17	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET	9	INSTALL CCTV METAL POLE AND FOUNDATION	29	LASH CABLE(S) TO NEW MESSENGER CABLE
5	REUSE NCDOT SMFO CABLE	18	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX	30	INSTALL NEW ELECTRICAL SERVICE
6	REUSE GDOT SMFO CABLE	19	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL SPECIAL OVERSIZED JUNCTION BOX	31	MODIFY EXISTING ELECTRICAL SERVICE
1	TRENCH	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	12	INSTALL OVERSIZED JUNCTION BOX	32	INSTALL NEW CONTROLLER
2	INSTALL PVC CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	13	INSTALL STANDARD JUNCTION BOX	33	INSTALL EXISTING CABLE IN NEW CABINET
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	14	REMOVE EXISTING JUNCTION BOX	34	INSTALL GENERATOR POWER INLET BOX
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	INSTALL POLE MOUNTED SPLICE CABINET	15	INSTALL WOOD POLE	35	INSTALL LOCAL GIGABIT ETHERNET SWITCH
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING	5	INSTALL BASE MOUNTED SPLICE CABINET	16	REMOVE EXISTING WOOD POLE	36	INSTALL UNIFIED CABLE
6	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT	6	REMOVE EXISTING SPLICE CABINET	17	INSTALL AERIAL GUY ASSEMBLY	37	INSTALL POLE MOUNTED EQUIPMENT CABINET
7	INSTALL POLYETHYLENE CONDUIT	7	INSTALL TERMINAL SPLICE BOX	18	INSTALL STANDARD GUY ASSEMBLY	38	INSTALL UNI-DIRECTIONAL YAGI ANTENNA
8	DIRECTIONAL DRILL CONDUIT	8	MODIFY EXISTING SPLICE ENCLOSURE	19	INSTALL SIDEWALK GUY ASSEMBLY	39	INSTALL OMNI-DIRECTIONAL ANTENNA
9	BORE AND JACK CONDUIT	1	INSTALL CABINET FOUNDATION	20	INSTALL MESSENGER CABLE	40	INSTALL RADIO TRANSCEIVER
10	INSTALL CABLE(S) IN EXISTING CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER	21	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	41	INSTALL SYSTEM LOOP
11	INSTALL CABLE(S) IN NEW CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	22	REMOVE EXISTING COMMUNICATIONS CABLE	42	INSTALL SYSTEM LOOP AMPLIFIER
12	INSTALL CABLE(S) IN EXISTING RISER	4	INSTALL NEW 333 COMMUNICATION CABINET	23	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE	43	INSTALL SYSTEM LOOP LEAD-IN CABLE
13	INSTALL CABLE(S) IN NEW RISER	5	INSTALL NEW 332 BASE MOUNTED CABINET	24	INSTALL DELINEATOR MARKER	44	INSTALL LOCAL LOOP AMPLIFIER
				25	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	45	INSTALL CITY WI-FI ANTENNA
						46	INSTALL HUB 10-GIGABIT ETHERNET SWITCH
						47	INSTALL CODEC
						48	BOND MESSENGER CABLE TO POLE GROUND
						49	INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION
						50	INSTALL ANTENNA CABLE
						51	RECONNECT RAILROAD PREEMPTION EQUIPMENT
						52	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
						53	INSTALL DSL ETHERNET SWITCH
						54	INSTALL ETHERNET CABLE
						55	INSTALL TERMINAL SERVER
						56	INSTALL MICROWAVE VEHICLE DETECTOR
						57	INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
						58	INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE — DATE 2/29/08

CADD Filename: ...\Sht0111.dgn

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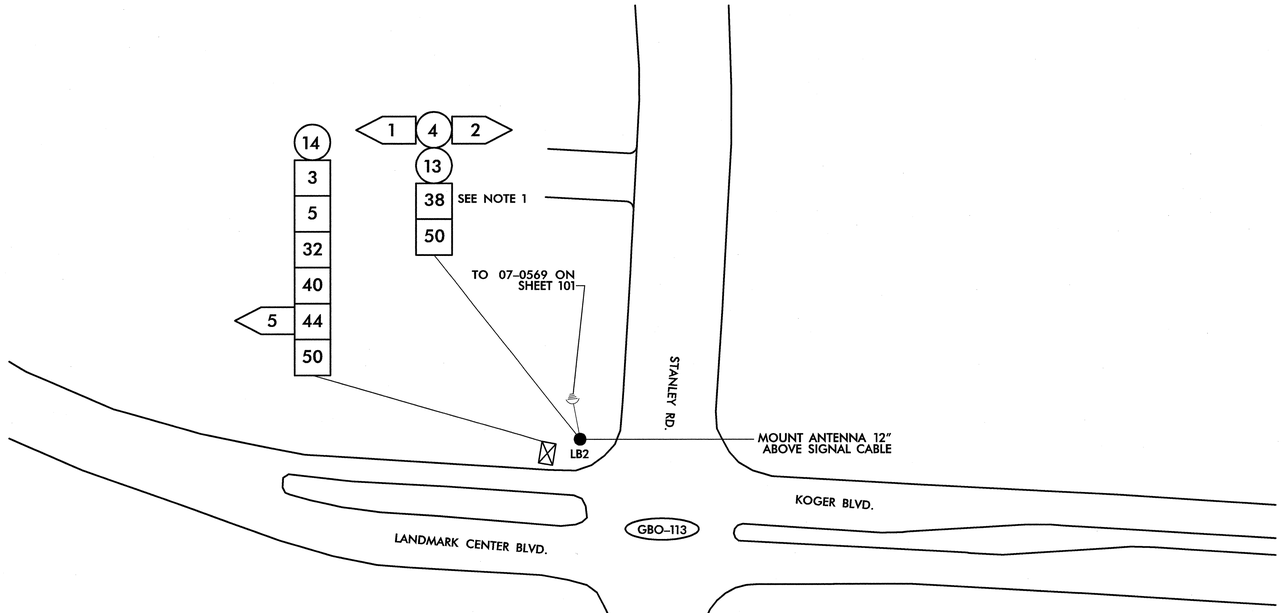
PROJECT REFERENCE NO.	SHEET NO.
U-4711	112



WIRELESS

NOTES (THIS SHEET ONLY)

1. ANTENNA ORIENTATION FOR DISPLAY PURPOSES ONLY. FINAL ORIENTATION TO BE DETERMINED IN THE FIELD.

1	INSTALL SMFO CABLE
2	INSTALL PLENUM RATED FIBER OPTIC CABLE
3	INSTALL FIBER OPTIC DROP CABLE
4	INSTALL TRACER WIRE
5	REUSE NCDOT SMFO CABLE
6	REUSE GDOT SMFO CABLE
(1)	TRENCH
(2)	INSTALL PVC CONDUIT
(3)	INSTALL RIGID, GALVANIZED STEEL CONDUIT
(4)	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
(5)	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
(6)	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
(7)	INSTALL POLYETHYLENE CONDUIT
(8)	DIRECTIONAL DRILL CONDUIT
(9)	BORE AND JACK CONDUIT
(10)	INSTALL CABLE(S) IN EXISTING CONDUIT
(11)	INSTALL CABLE(S) IN NEW CONDUIT
(12)	INSTALL CABLE(S) IN EXISTING RISER
(13)	INSTALL CABLE(S) IN NEW RISER
(14)	INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
(15)	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
(16)	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
(17)	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
(18)	INSTALL NEW RISER INTO POLE MOUNTED CABINET
(19)	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
◇1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
◇2	INSTALL UNDERGROUND SPLICE ENCLOSURE
◇3	INSTALL AERIAL SPLICE ENCLOSURE
◇4	INSTALL POLE MOUNTED SPLICE CABINET
◇5	INSTALL BASE MOUNTED SPLICE CABINET
◇6	REMOVE EXISTING SPLICE CABINET
◇7	INSTALL TERMINAL SPLICE BOX
◇8	MODIFY EXISTING SPLICE ENCLOSURE
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
3	MODIFY EXISTING CABINET FOUNDATION
4	INSTALL NEW 333 COMMUNICATION CABINET
5	INSTALL NEW 332 BASE MOUNTED CABINET
6	INSTALL NEW 336S CABINET
7	INSTALL CCTV CAMERA ASSEMBLY
8	INSTALL CCTV CAMERA WOOD POLE
9	INSTALL CCTV METAL POLE AND FOUNDATION
10	INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
11	INSTALL SPECIAL OVERSIZED JUNCTION BOX
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13	INSTALL STANDARD JUNCTION BOX
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23	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
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27	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
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29	LASH CABLE(S) TO NEW MESSENGER CABLE
30	INSTALL NEW ELECTRICAL SERVICE
31	MODIFY EXISTING ELECTRICAL SERVICE
32	INSTALL NEW CONTROLLER
33	INSTALL EXISTING CABLE IN NEW CABINET
34	INSTALL GENERATOR POWER INLET BOX
35	INSTALL LOCAL GIGABIT ETHERNET SWITCH
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NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

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Traffic Engineering and Safety Systems Branch
Transportation Systems
NC DEPARTMENT OF TRANSPORTATION
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 GUILFORD COUNTY
PLAN DATE: FEBRUARY, 2008 REVIEWED BY: K.W. SMITH
PREPARED BY: K.D. VANPATTEN REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

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2/20/08
SIGNATURE DATE

CADD Filename: ...\Sht0112.dgn

2/20/2008
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PROJECT REFERENCE NO.	SHEET NO.
U-4711	113

WIRELESS

NOTES (THIS SHEET ONLY)

1. ANTENNA ORIENTATION FOR DISPLAY PURPOSES ONLY. FINAL ORIENTATION TO BE DETERMINED IN THE FIELD.

1	INSTALL SMFO CABLE
2	INSTALL PLENUM RATED FIBER OPTIC CABLE
3	INSTALL FIBER OPTIC DROP CABLE
4	INSTALL TRACER WIRE
5	REUSE NCDOT SMFO CABLE
6	REUSE GDOT SMFO CABLE
1	TRENCH
2	INSTALL PVC CONDUIT
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
6	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
7	INSTALL POLYETHYLENE CONDUIT
8	DIRECTIONAL DRILL CONDUIT
9	BORE AND JACK CONDUIT
10	INSTALL CABLE(S) IN EXISTING CONDUIT
11	INSTALL CABLE(S) IN NEW CONDUIT
12	INSTALL CABLE(S) IN EXISTING RISER
13	INSTALL CABLE(S) IN NEW RISER
14	INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
15	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
16	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
17	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
18	INSTALL NEW RISER INTO POLE MOUNTED CABINET
19	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2	INSTALL UNDERGROUND SPLICE ENCLOSURE
3	INSTALL AERIAL SPLICE ENCLOSURE
4	INSTALL POLE MOUNTED SPLICE CABINET
5	INSTALL BASE MOUNTED SPLICE CABINET
6	REMOVE EXISTING SPLICE CABINET
7	INSTALL TERMINAL SPLICE BOX
8	MODIFY EXISTING SPLICE ENCLOSURE
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
3	MODIFY EXISTING CABINET FOUNDATION
4	INSTALL NEW 333 COMMUNICATION CABINET
5	INSTALL NEW 332 BASE MOUNTED CABINET
6	INSTALL NEW 336S CABINET
7	INSTALL CCTV CAMERA ASSEMBLY
8	INSTALL CCTV CAMERA WOOD POLE
9	INSTALL CCTV METAL POLE AND FOUNDATION
10	INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
11	INSTALL SPECIAL OVERSIZED JUNCTION BOX
12	INSTALL OVERSIZED JUNCTION BOX
13	INSTALL STANDARD JUNCTION BOX
14	REMOVE EXISTING JUNCTION BOX
15	INSTALL WOOD POLE
16	REMOVE EXISTING WOOD POLE
17	INSTALL AERIAL GUY ASSEMBLY
18	INSTALL STANDARD GUY ASSEMBLY
19	INSTALL SIDEWALK GUY ASSEMBLY
20	INSTALL MESSENGER CABLE
21	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
22	REMOVE EXISTING COMMUNICATIONS CABLE
23	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
24	INSTALL DELINEATOR MARKER
25	STORE 30 FEET OF EACH COMMUNICATIONS CABLE
26	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
27	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
28	LASH CABLE(S) TO EXISTING MESSENGER CABLE
29	LASH CABLE(S) TO NEW MESSENGER CABLE
30	INSTALL NEW ELECTRICAL SERVICE
31	MODIFY EXISTING ELECTRICAL SERVICE
32	INSTALL NEW CONTROLLER
33	INSTALL EXISTING CABLE IN NEW CABINET
34	INSTALL GENERATOR POWER INLET BOX
35	INSTALL LOCAL GIGABIT ETHERNET SWITCH
36	INSTALL UNIFIED CABLE
37	INSTALL POLE MOUNTED EQUIPMENT CABINET
38	INSTALL UNI-DIRECTIONAL YAGI ANTENNA
39	INSTALL OMNI-DIRECTIONAL ANTENNA
40	INSTALL RADIO TRANSCEIVER
41	INSTALL SYSTEM LOOP
42	INSTALL SYSTEM LOOP AMPLIFIER
43	INSTALL SYSTEM LOOP LEAD-IN CABLE
44	INSTALL LOCAL LOOP AMPLIFIER
45	INSTALL CITY WI-FI ANTENNA
46	INSTALL HUB 10-GIGABIT ETHERNET SWITCH
47	INSTALL CODEC
48	BOND MESSENGER CABLE TO POLE GROUND
49	INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION
50	INSTALL ANTENNA CABLE
51	RECONNECT RAILROAD PREEMPTION EQUIPMENT
52	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
53	INSTALL DSL ETHERNET SWITCH
54	INSTALL ETHERNET CABLE
55	INSTALL TERMINAL SERVER
56	INSTALL MICROWAVE VEHICLE DETECTOR
57	INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
58	INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Integrated Mobility Division
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filename: ...\Sht0113.dgn

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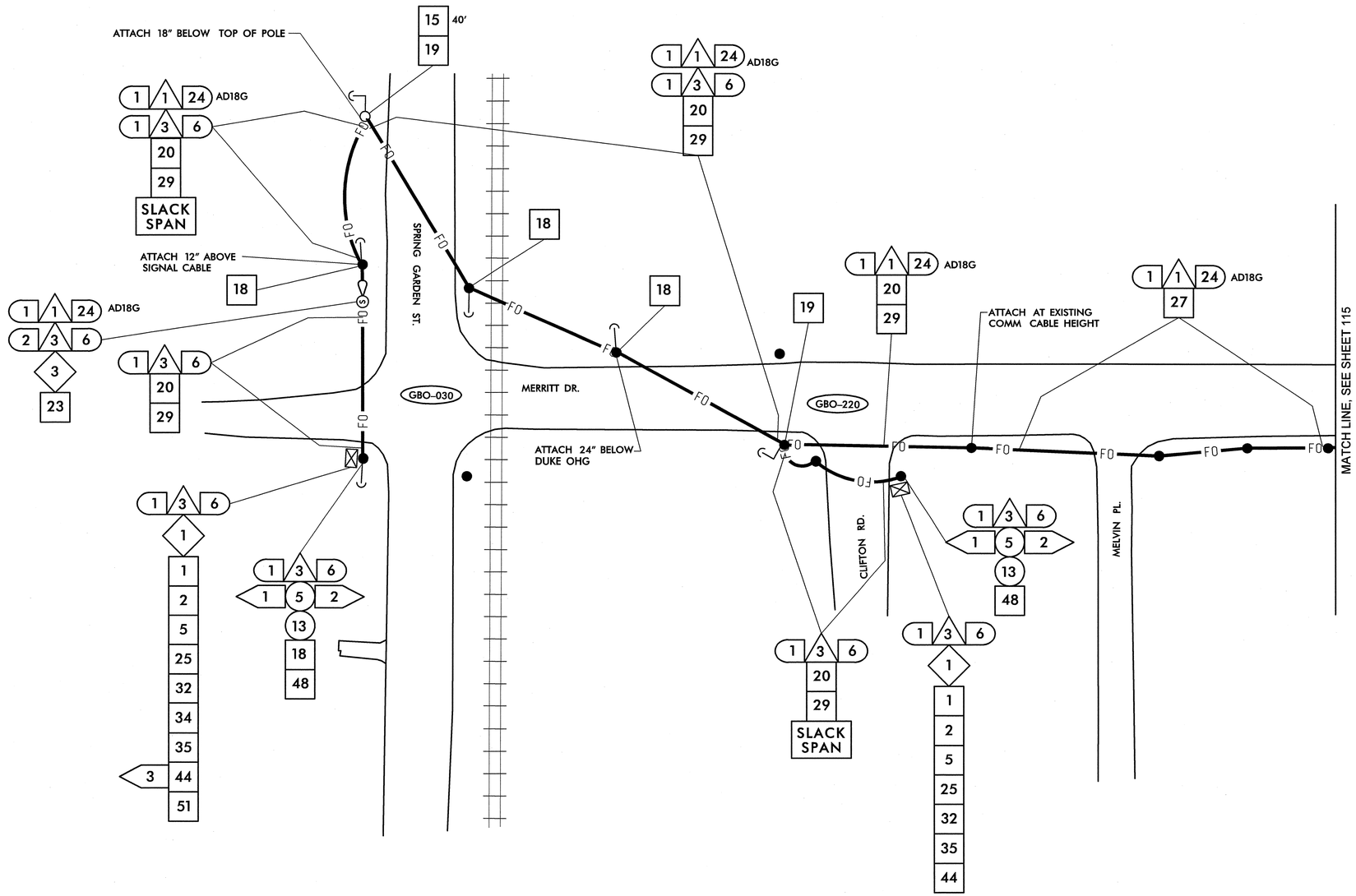
PROJECT REFERENCE NO.	SHEET NO.
U-4711	114



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2. INSTALL PLENUM RATED FIBER OPTIC CABLE
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7. INSTALL TERMINAL SPLICE BOX
8. MODIFY EXISTING SPLICE ENCLOSURE

1. INSTALL CABINET FOUNDATION
2. REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
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5. INSTALL NEW 332 BASE MOUNTED CABINET
6. INSTALL NEW 336S CABINET
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57. INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
58. INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
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PLANS PREPARED IN THE OFFICE OF:
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Traffic Engineering and Safety Systems Branch
NCDEPARTMENT OF TRANSPORTATION
Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 GUILFORD COUNTY
PLAN DATE: FEBRUARY, 2008
PREPARED BY: K.D. VANPATTEN
REVIEWED BY: K.W. SMITH
REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
2/20/08
SIGNATURE DATE
CADD Filename: ...\Sht011 4.dgn

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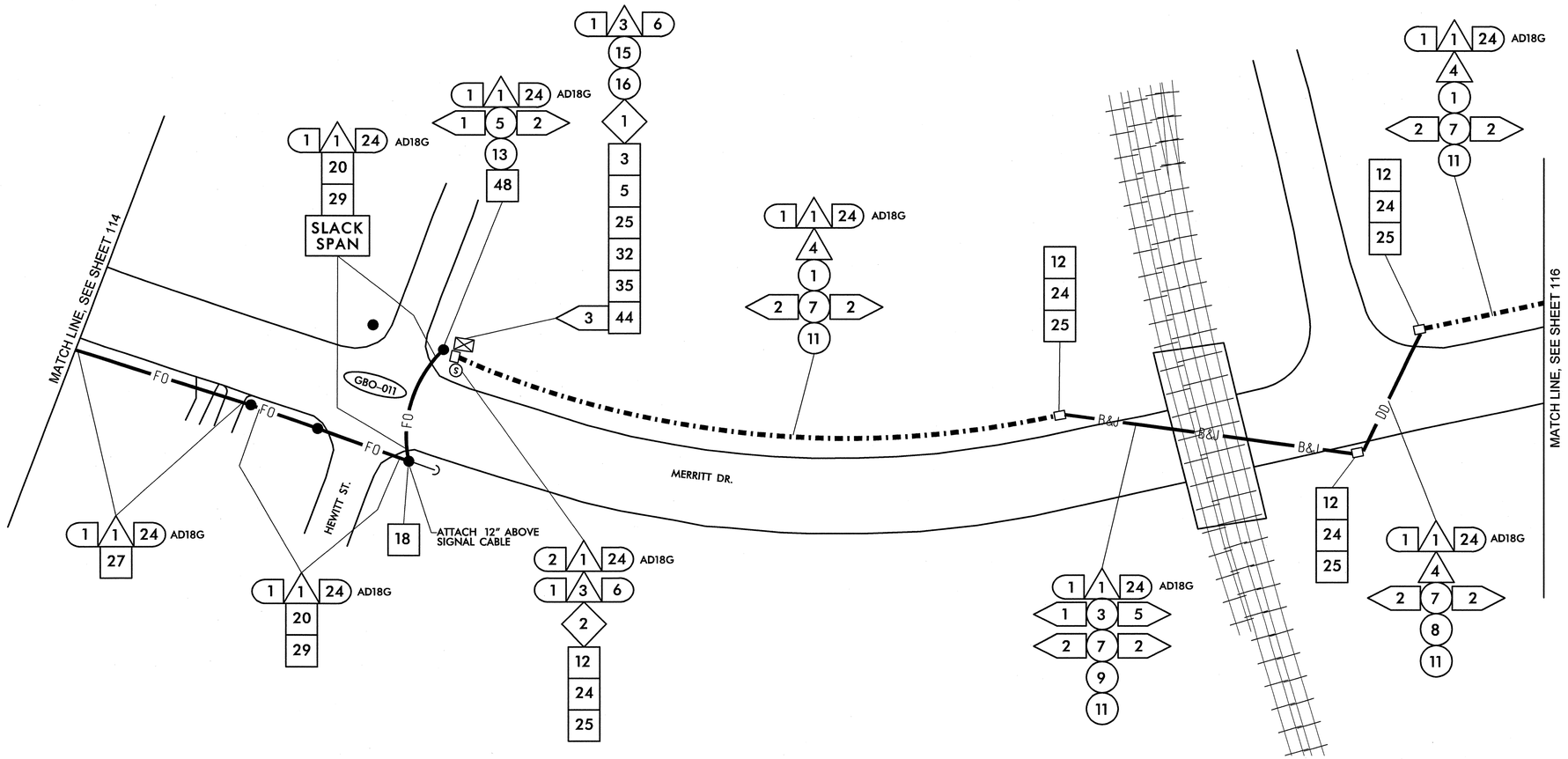
PROJECT REFERENCE NO.	SHEET NO.
U-4711	115



1. INSTALL SMFO CABLE
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1. INSTALL CABINET FOUNDATION
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NOTE:
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PLANS PREPARED IN THE OFFICE OF:
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Raleigh N.C. 27636-3068
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750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE — DATE 2/29/08

CADD Filename: ...\Sht0115.dgn

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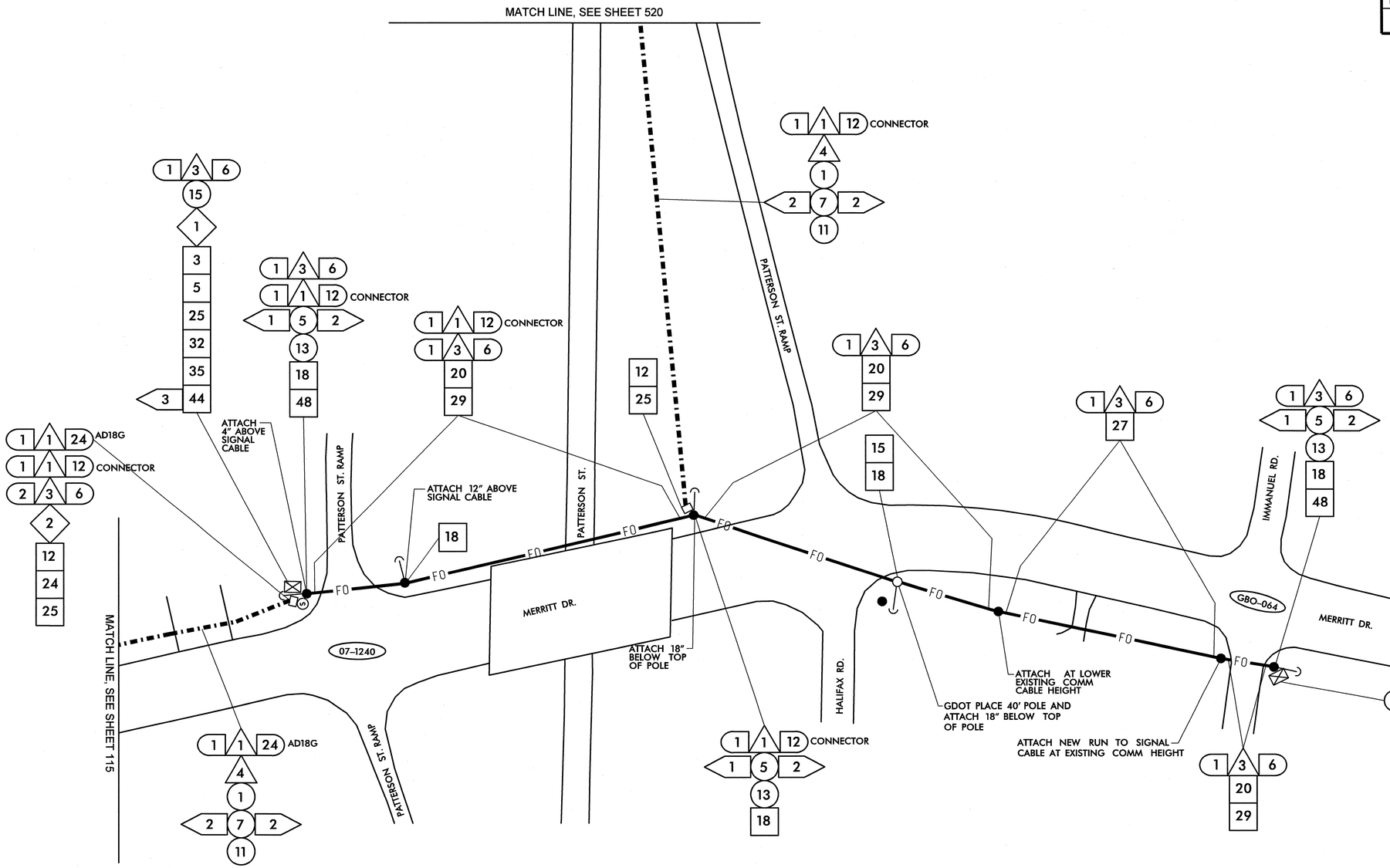
PROJECT REFERENCE NO.	SHEET NO.
U-4711	116



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Traffic Engineering and Safety Systems Branch
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State of North Carolina
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SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

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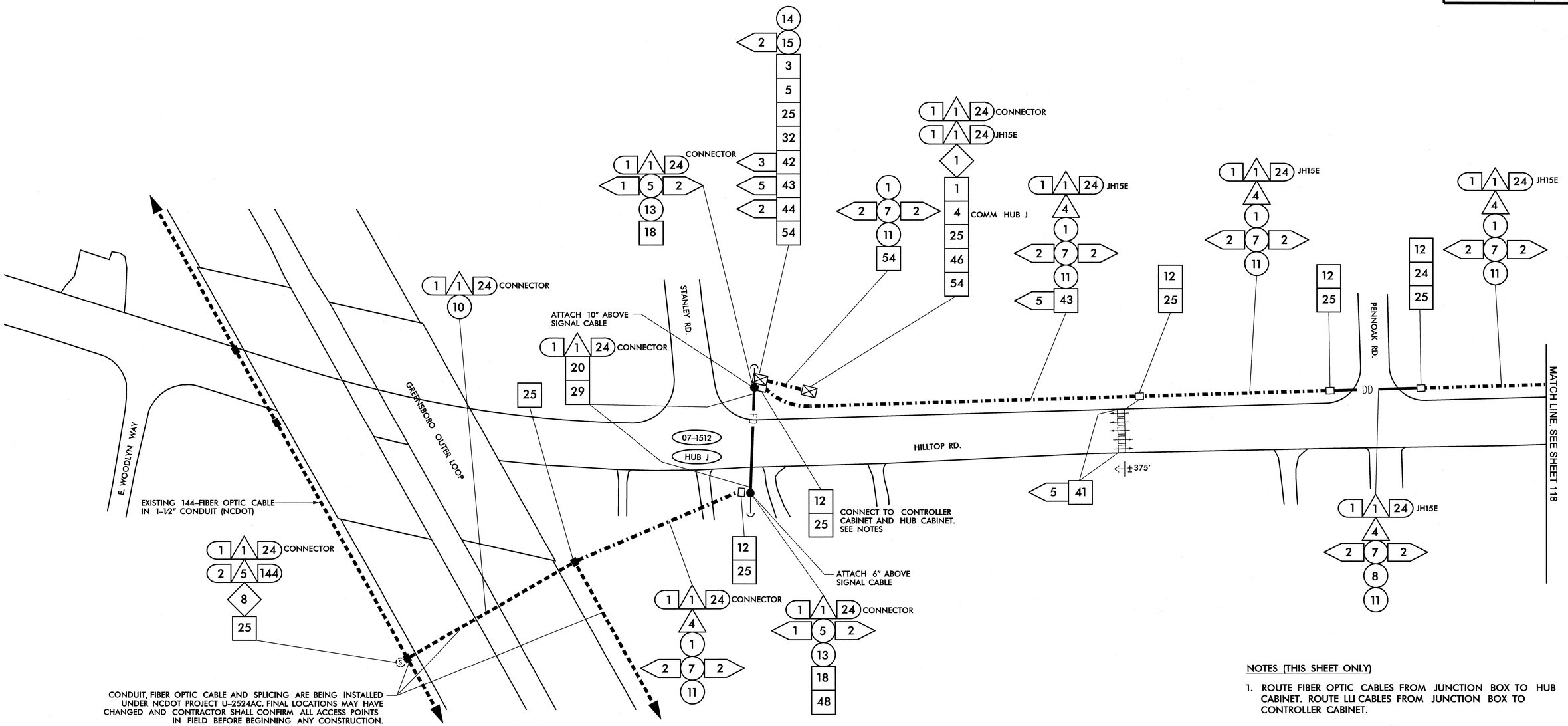
PROJECT REFERENCE NO.	SHEET NO.
U-4711	117



NOTES (THIS SHEET ONLY)

1. ROUTE FIBER OPTIC CABLES FROM JUNCTION BOX TO HUB CABINET. ROUTE LLI CABLES FROM JUNCTION BOX TO CONTROLLER CABINET.

1	INSTALL SMFO CABLE
2	INSTALL PLENUM RATED FIBER OPTIC CABLE
3	INSTALL FIBER OPTIC DROP CABLE
4	INSTALL TRACER WIRE
5	REUSE NCDOT SMFO CABLE
6	REUSE GDOT SMFO CABLE
1	TRENCH
2	INSTALL PVC CONDUIT
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
6	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
7	INSTALL POLYETHYLENE CONDUIT
8	DIRECTIONAL DRILL CONDUIT
9	BORE AND JACK CONDUIT
10	INSTALL CABLE(S) IN EXISTING CONDUIT
11	INSTALL CABLE(S) IN NEW CONDUIT
12	INSTALL CABLE(S) IN EXISTING RISER
13	INSTALL CABLE(S) IN NEW RISER
14	INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
15	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
16	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
17	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
18	INSTALL NEW RISER INTO POLE MOUNTED CABINET
19	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2	INSTALL UNDERGROUND SPLICE ENCLOSURE
3	INSTALL AERIAL SPLICE ENCLOSURE
4	INSTALL POLE MOUNTED SPLICE CABINET
5	INSTALL BASE MOUNTED SPLICE CABINET
6	REMOVE EXISTING SPLICE CABINET
7	INSTALL TERMINAL SPLICE BOX
8	MODIFY EXISTING SPLICE ENCLOSURE
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
3	MODIFY EXISTING CABINET FOUNDATION
4	INSTALL NEW 333 COMMUNICATION CABINET
5	INSTALL NEW 332 BASE MOUNTED CABINET
6	INSTALL NEW 336S CABINET
7	INSTALL CCTV CAMERA ASSEMBLY
8	INSTALL CCTV CAMERA WOOD POLE
9	INSTALL CCTV METAL POLE AND FOUNDATION
10	INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
11	INSTALL SPECIAL OVERSIZED JUNCTION BOX
12	INSTALL OVERSIZED JUNCTION BOX
13	INSTALL STANDARD JUNCTION BOX
14	REMOVE EXISTING JUNCTION BOX
15	INSTALL WOOD POLE
16	REMOVE EXISTING WOOD POLE
17	INSTALL AERIAL GUY ASSEMBLY
18	INSTALL STANDARD GUY ASSEMBLY
19	INSTALL SIDEWALK GUY ASSEMBLY
20	INSTALL MESSENGER CABLE
21	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
22	REMOVE EXISTING COMMUNICATIONS CABLE
23	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
24	INSTALL DELINEATOR MARKER
25	STORE 30 FEET OF EACH COMMUNICATIONS CABLE
26	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
27	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
28	LASH CABLE(S) TO EXISTING MESSENGER CABLE
29	LASH CABLE(S) TO NEW MESSENGER CABLE
30	INSTALL NEW ELECTRICAL SERVICE
31	MODIFY EXISTING ELECTRICAL SERVICE
32	INSTALL NEW CONTROLLER
33	INSTALL EXISTING CABLE IN NEW CABINET
34	INSTALL GENERATOR POWER INLET BOX
35	INSTALL LOCAL GIGABIT ETHERNET SWITCH
36	INSTALL UNIFIED CABLE
37	INSTALL POLE MOUNTED EQUIPMENT CABINET
38	INSTALL UNI-DIRECTIONAL YAGI ANTENNA
39	INSTALL OMNI-DIRECTIONAL ANTENNA
40	INSTALL RADIO TRANSCEIVER
41	INSTALL SYSTEM LOOP
42	INSTALL SYSTEM LOOP AMPLIFIER
43	INSTALL SYSTEM LOOP LEAD-IN CABLE
44	INSTALL LOCAL LOOP AMPLIFIER
45	INSTALL CITY WI-FI ANTENNA
46	INSTALL HUB 10-GIGABIT ETHERNET SWITCH
47	INSTALL CODEC
48	BOND MESSENGER CABLE TO POLE GROUND
49	INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION
50	INSTALL ANTENNA CABLE
51	RECONNECT RAILROAD PREEMPTION EQUIPMENT
52	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
53	INSTALL DSL ETHERNET SWITCH
54	INSTALL ETHERNET CABLE
55	INSTALL TERMINAL SERVER
56	INSTALL MICROWAVE VEHICLE DETECTOR
57	INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
58	INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING SHEET

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/29/08 DATE

CADD Filenames: ...\Sht0117.dgn

2/29/2008
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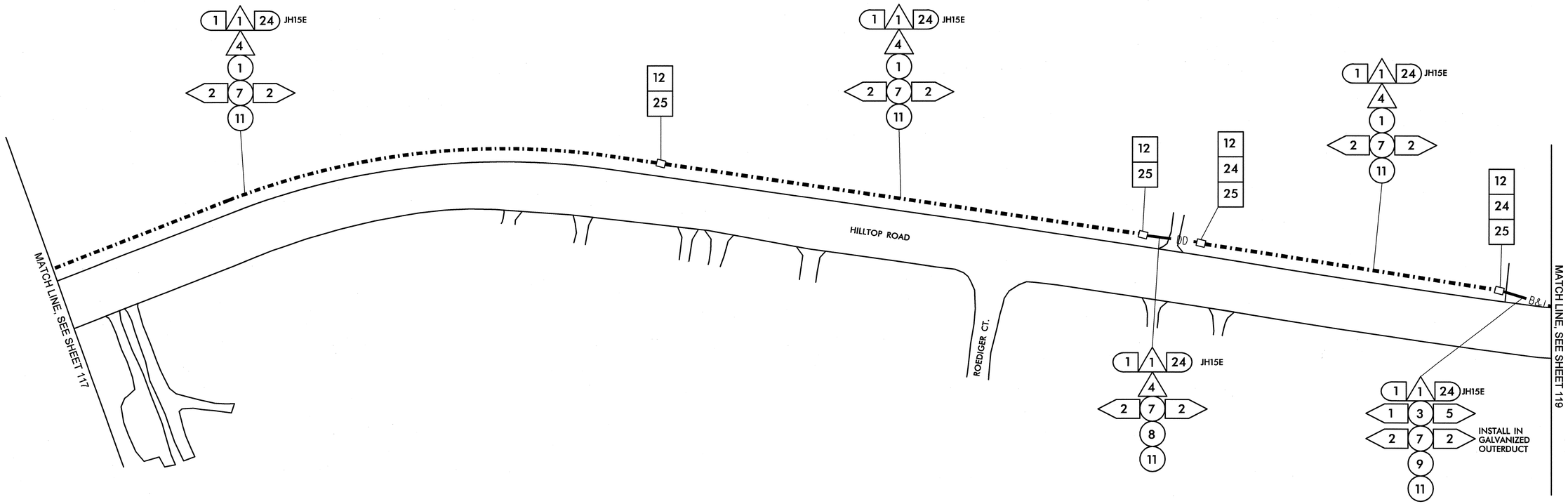
PROJECT REFERENCE NO.	SHEET NO.
U-4711	118



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NOTE:
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Traffic Engineering and Safety Systems Branch
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Integrated Mobility Division
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filename: ...\Sht0118.dgn

2/20/2008
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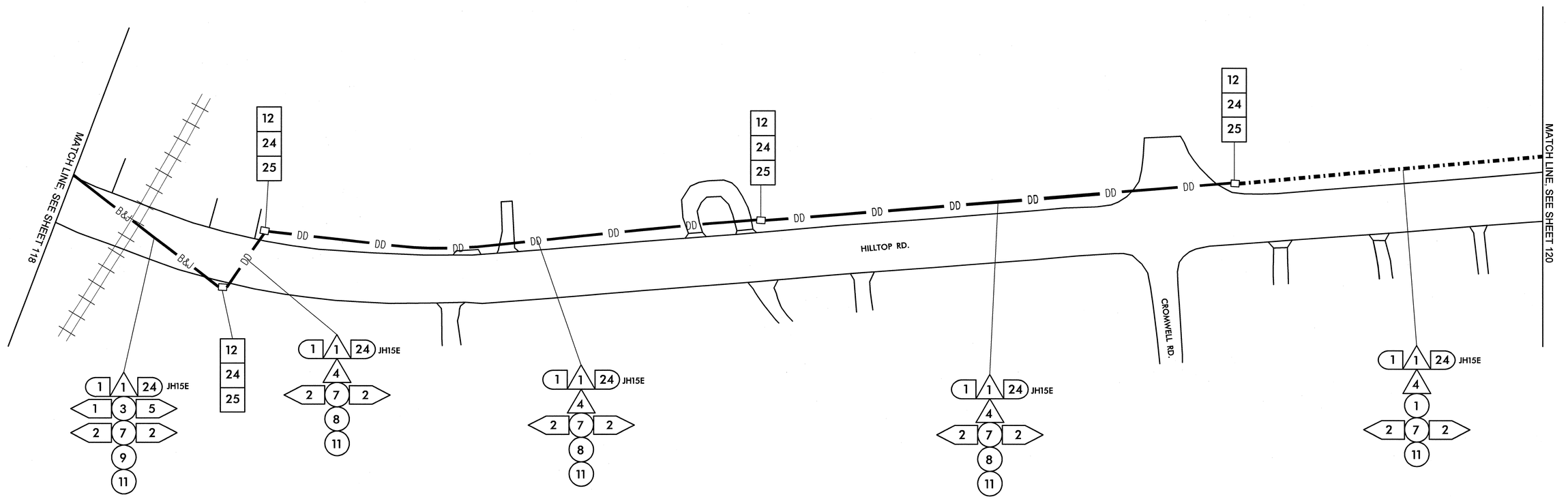
PROJECT REFERENCE NO.	SHEET NO.
U-4711	119



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NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:

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Traffic Engineering and Safety Systems Branch
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Integrated Mobility Division
750 Greenfield Pkwy, Garner, NC 27529

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SCALE 0 50

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filename: ...\Sht0119.dgn

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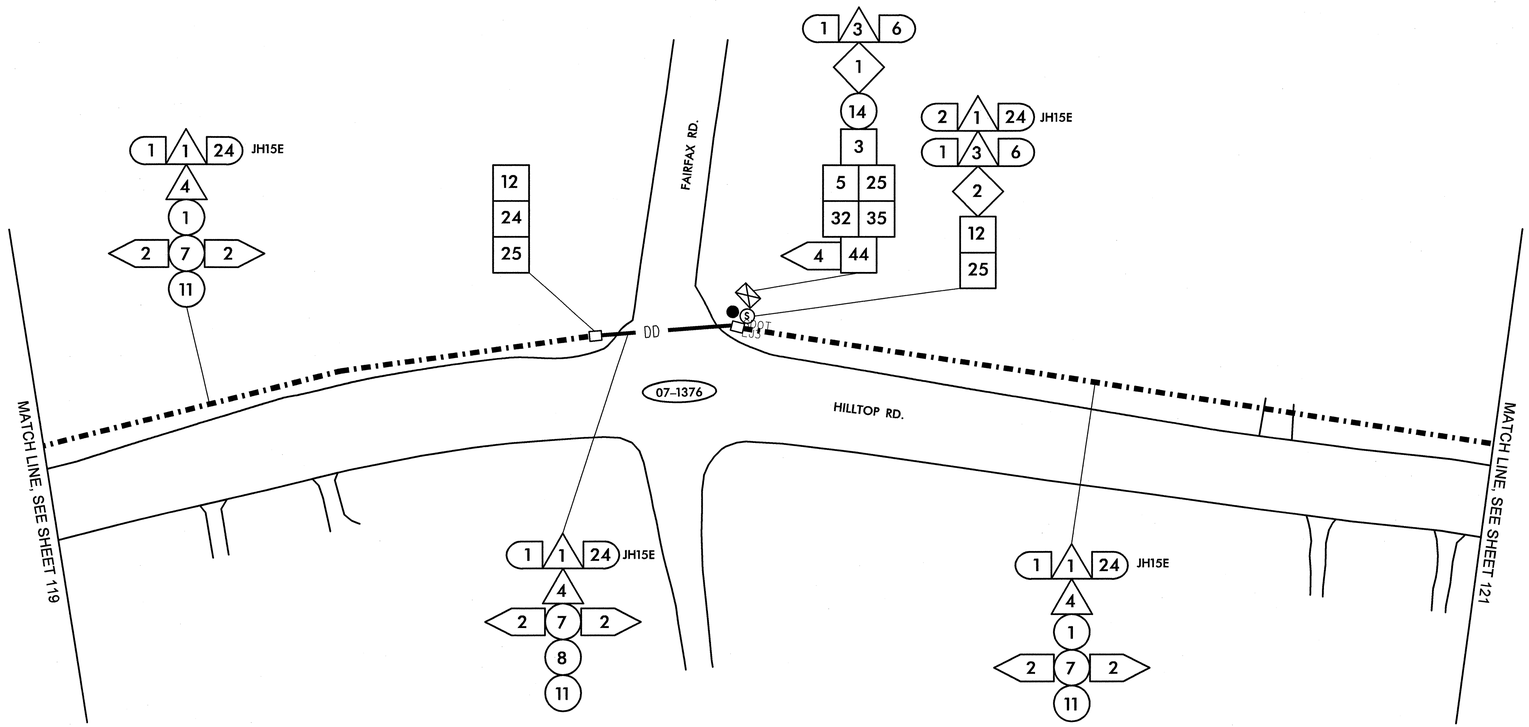
PROJECT REFERENCE NO.	SHEET NO.
U-4711	120



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SEAL
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ENGINEER MARK DUNZO

SIGNATURE — DATE 2/20/08

CADD Filenames: ...\Sht0120.dgn

2/20/2008
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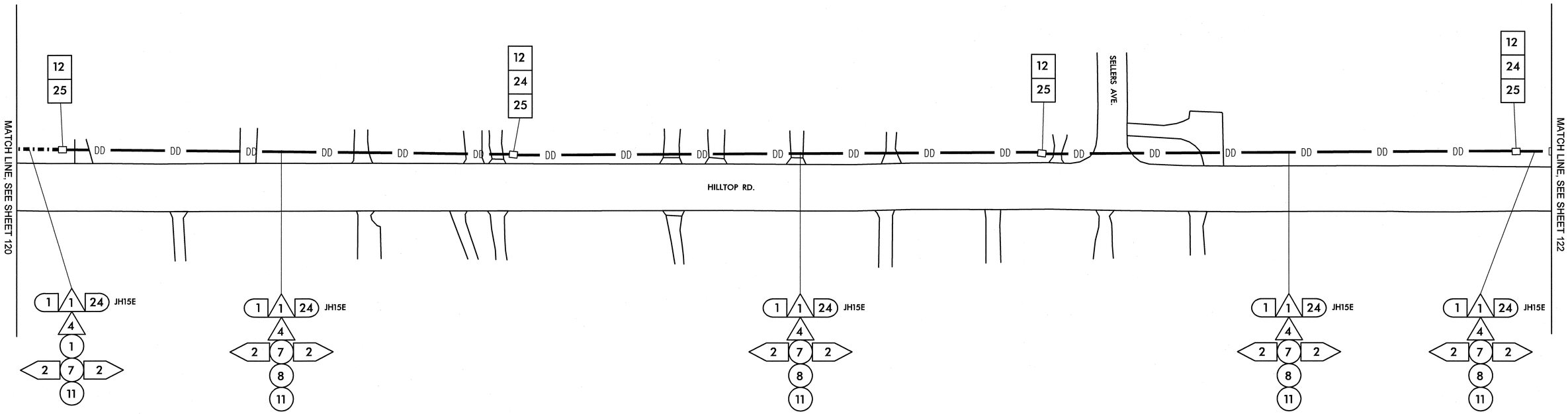
PROJECT REFERENCE NO.	SHEET NO.
U-4711	121



1	INSTALL SMFO CABLE	14	INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE	6	INSTALL NEW 336S CABINET	26	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	44	INSTALL LOCAL LOOP AMPLIFIER	53	INSTALL DSL ETHERNET SWITCH
2	INSTALL PLENUM RATED FIBER OPTIC CABLE	15	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	7	INSTALL CCTV CAMERA ASSEMBLY	27	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	45	INSTALL CITY WI-FI ANTENNA	54	INSTALL ETHERNET CABLE
3	INSTALL FIBER OPTIC DROP CABLE	16	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	8	INSTALL CCTV CAMERA WOOD POLE	28	LASH CABLE(S) TO EXISTING MESSENGER CABLE	46	INSTALL HUB 10-GIGABIT ETHERNET SWITCH	55	INSTALL TERMINAL SERVER
4	INSTALL TRACER WIRE	17	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET	9	INSTALL CCTV METAL POLE AND FOUNDATION	29	LASH CABLE(S) TO NEW MESSENGER CABLE	47	INSTALL CODEC	56	INSTALL MICROWAVE VEHICLE DETECTOR
5	REUSE NCDOT SMFO CABLE	18	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX	30	INSTALL NEW ELECTRICAL SERVICE	48	BOND MESSENGER CABLE TO POLE GROUND	57	INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
6	REUSE GDOT SMFO CABLE	19	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL SPECIAL OVERSIZED JUNCTION BOX	31	MODIFY EXISTING ELECTRICAL SERVICE	49	INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION	58	INSTALL WIRELESS ACCESS POINT POWER CABLE
1	TRENCH	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	12	INSTALL OVERSIZED JUNCTION BOX	32	INSTALL NEW CONTROLLER	50	INSTALL ANTENNA CABLE		
2	INSTALL PVC CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	13	INSTALL STANDARD JUNCTION BOX	33	INSTALL EXISTING CABLE IN NEW CABINET	51	RECONNECT RAILROAD PREEMPTION EQUIPMENT		
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	14	REMOVE EXISTING JUNCTION BOX	34	INSTALL GENERATOR POWER INLET BOX	52	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT		
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	INSTALL POLE MOUNTED SPLICE CABINET	15	INSTALL WOOD POLE	35	INSTALL LOCAL GIGABIT ETHERNET SWITCH				
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING	5	INSTALL BASE MOUNTED SPLICE CABINET	16	REMOVE EXISTING WOOD POLE	36	INSTALL UNIFIED CABLE				
6	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT	6	REMOVE EXISTING SPLICE CABINET	17	INSTALL AERIAL GUY ASSEMBLY	37	INSTALL POLE MOUNTED EQUIPMENT CABINET				
7	INSTALL POLYETHYLENE CONDUIT	7	INSTALL TERMINAL SPLICE BOX	18	INSTALL STANDARD GUY ASSEMBLY	38	INSTALL UNI-DIRECTIONAL YAGI ANTENNA				
8	DIRECTIONAL DRILL CONDUIT	8	MODIFY EXISTING SPLICE ENCLOSURE	19	INSTALL SIDEWALK GUY ASSEMBLY	39	INSTALL OMNI-DIRECTIONAL ANTENNA				
9	BORE AND JACK CONDUIT	1	INSTALL CABINET FOUNDATION	20	INSTALL MESSENGER CABLE	40	INSTALL RADIO TRANSCEIVER				
10	INSTALL CABLE(S) IN EXISTING CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER	21	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	41	INSTALL SYSTEM LOOP				
11	INSTALL CABLE(S) IN NEW CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	22	REMOVE EXISTING COMMUNICATIONS CABLE	42	INSTALL SYSTEM LOOP AMPLIFIER				
12	INSTALL CABLE(S) IN EXISTING RISER	4	INSTALL NEW 333 COMMUNICATION CABINET	23	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE	43	INSTALL SYSTEM LOOP LEAD-IN CABLE				
13	INSTALL CABLE(S) IN NEW RISER	5	INSTALL NEW 332 BASE MOUNTED CABINET	24	INSTALL DELINEATOR MARKER						
				25	STORE 30 FEET OF EACH COMMUNICATIONS CABLE						

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
Traffic Engineering Unit
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Statewide Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

CADD Filename: ...\Sht0121.dgn

2/20/2008
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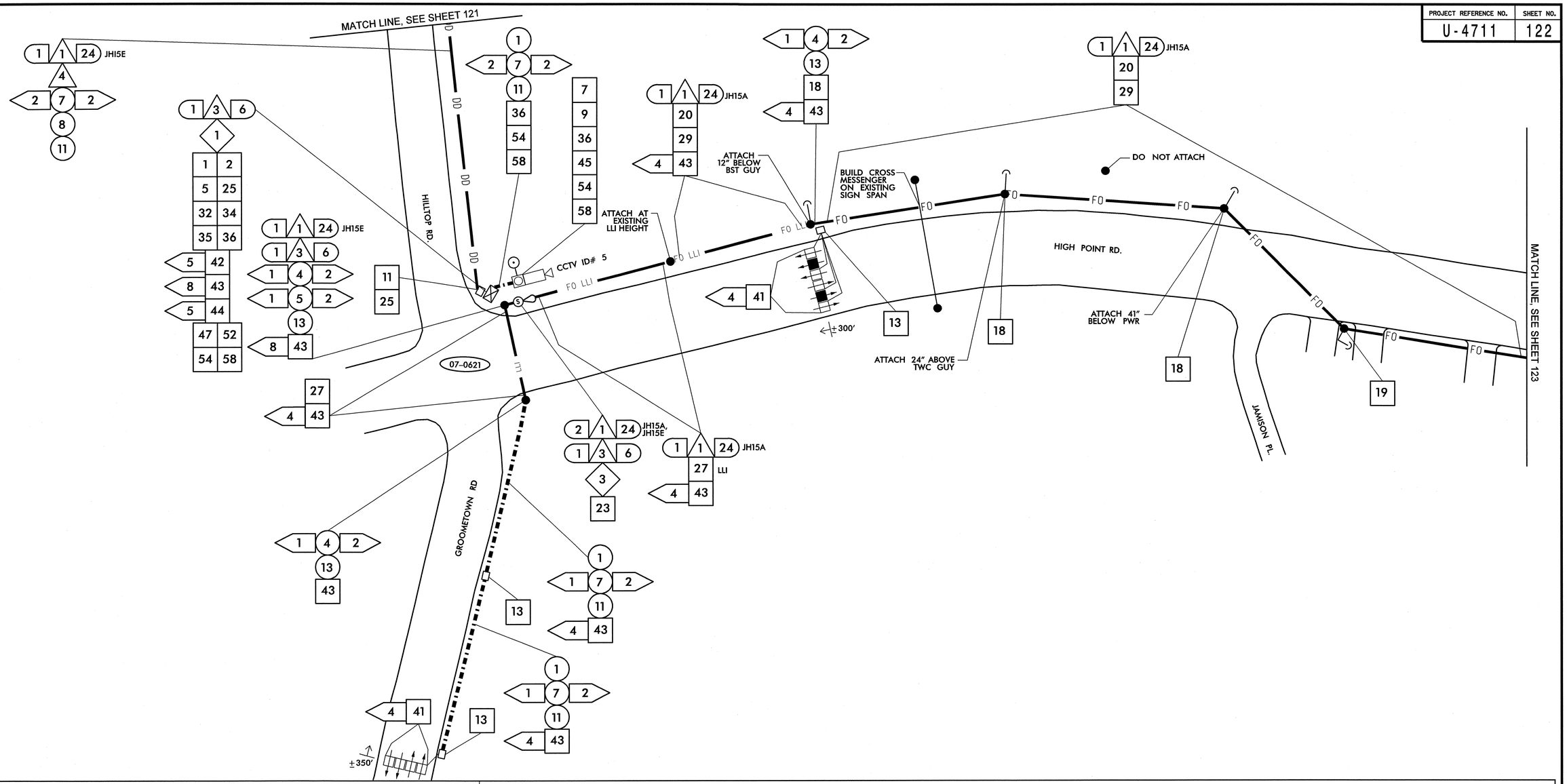
PROJECT REFERENCE NO.	SHEET NO.
U-4711	122



1	INSTALL SMFO CABLE	14	INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE	6	INSTALL NEW 336S CABINET	26	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
2	INSTALL PLENUM RATED FIBER OPTIC CABLE	15	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	7	INSTALL CCTV CAMERA ASSEMBLY	27	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
3	INSTALL FIBER OPTIC DROP CABLE	16	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	8	INSTALL CCTV CAMERA WOOD POLE	28	LASH CABLE(S) TO EXISTING MESSENGER CABLE
4	INSTALL TRACER WIRE	17	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET	9	INSTALL CCTV METAL POLE AND FOUNDATION	29	LASH CABLE(S) TO NEW MESSENGER CABLE
5	REUSE NCDOT SMFO CABLE	18	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX	30	INSTALL NEW ELECTRICAL SERVICE
6	REUSE GDOT SMFO CABLE	19	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL SPECIAL OVERSIZED JUNCTION BOX	31	MODIFY EXISTING ELECTRICAL SERVICE
1	TRENCH	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	12	INSTALL OVERSIZED JUNCTION BOX	32	INSTALL NEW CONTROLLER
2	INSTALL PVC CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	13	INSTALL STANDARD JUNCTION BOX	33	INSTALL EXISTING CABLE IN NEW CABINET
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	14	REMOVE EXISTING JUNCTION BOX	34	INSTALL GENERATOR POWER INLET BOX
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	INSTALL POLE MOUNTED SPLICE CABINET	15	INSTALL WOOD POLE	35	INSTALL LOCAL GIGABIT ETHERNET SWITCH
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING	5	INSTALL BASE MOUNTED SPLICE CABINET	16	REMOVE EXISTING WOOD POLE	36	INSTALL UNIFIED CABLE
6	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT	6	REMOVE EXISTING SPLICE CABINET	17	INSTALL AERIAL GUY ASSEMBLY	37	INSTALL POLE MOUNTED EQUIPMENT CABINET
7	INSTALL POLYETHYLENE CONDUIT	7	INSTALL TERMINAL SPLICE BOX	18	INSTALL STANDARD GUY ASSEMBLY	38	INSTALL UNI-DIRECTIONAL YAGI ANTENNA
8	DIRECTIONAL DRILL CONDUIT	8	MODIFY EXISTING SPLICE ENCLOSURE	19	INSTALL SIDEWALK GUY ASSEMBLY	39	INSTALL OMNI-DIRECTIONAL ANTENNA
9	BORE AND JACK CONDUIT	1	INSTALL CABINET FOUNDATION	20	INSTALL MESSENGER CABLE	40	INSTALL RADIO TRANSCEIVER
10	INSTALL CABLE(S) IN EXISTING CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER	21	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	41	INSTALL SYSTEM LOOP
11	INSTALL CABLE(S) IN NEW CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	22	REMOVE EXISTING COMMUNICATIONS CABLE	42	INSTALL SYSTEM LOOP AMPLIFIER
12	INSTALL CABLE(S) IN EXISTING RISER	4	INSTALL NEW 333 COMMUNICATION CABINET	23	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE	43	INSTALL SYSTEM LOOP LEAD-IN CABLE
13	INSTALL CABLE(S) IN NEW RISER	5	INSTALL NEW 332 BASE MOUNTED CABINET	24	INSTALL DELINEATOR MARKER	44	INSTALL LOCAL LOOP AMPLIFIER
				25	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	45	INSTALL CITY WI-FI ANTENNA
						46	INSTALL HUB 10-GIGABIT ETHERNET SWITCH
						47	INSTALL CODEC
						48	BOND MESSENGER CABLE TO POLE GROUND
						49	INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION
						50	INSTALL ANTENNA CABLE
						51	RECONNECT RAILROAD PREEMPTION EQUIPMENT
						52	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
						53	INSTALL DSL ETHERNET SWITCH
						54	INSTALL ETHERNET CABLE
						55	INSTALL TERMINAL SERVER
						56	INSTALL MICROWAVE VEHICLE DETECTOR
						57	INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
						58	INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
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(919) 677-2000
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE — DATE 2/20/08

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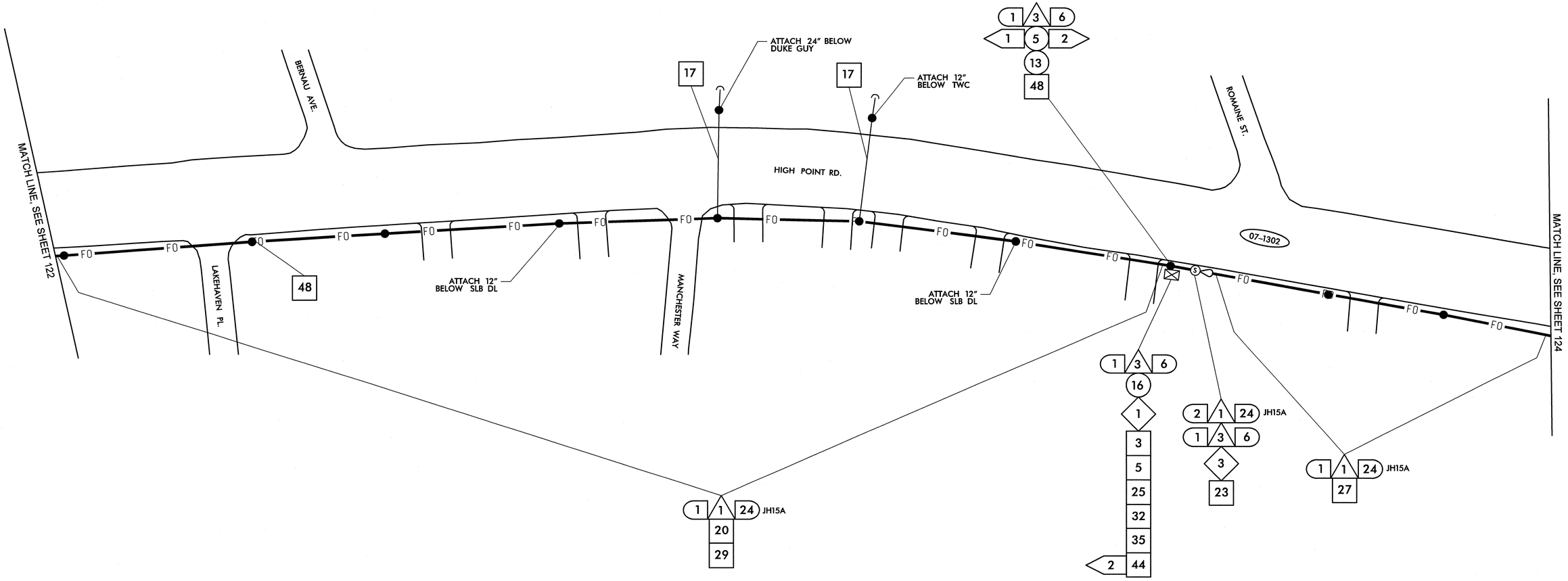
PROJECT REFERENCE NO.	SHEET NO.
U-4711	123



1	INSTALL SMFO CABLE
2	INSTALL PLENUM RATED FIBER OPTIC CABLE
3	INSTALL FIBER OPTIC DROP CABLE
4	INSTALL TRACER WIRE
5	REUSE NCDOT SMFO CABLE
6	REUSE GDOT SMFO CABLE
(1)	TRENCH
(2)	INSTALL PVC CONDUIT
(3)	INSTALL RIGID, GALVANIZED STEEL CONDUIT
(4)	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
(5)	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
(6)	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
(7)	INSTALL POLYETHYLENE CONDUIT
(8)	DIRECTIONAL DRILL CONDUIT
(9)	BORE AND JACK CONDUIT
(10)	INSTALL CABLE(S) IN EXISTING CONDUIT
(11)	INSTALL CABLE(S) IN NEW CONDUIT
(12)	INSTALL CABLE(S) IN EXISTING RISER
(13)	INSTALL CABLE(S) IN NEW RISER
(14)	INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
(15)	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
(16)	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
(17)	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
(18)	INSTALL NEW RISER INTO POLE MOUNTED CABINET
(19)	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2	INSTALL UNDERGROUND SPLICE ENCLOSURE
3	INSTALL AERIAL SPLICE ENCLOSURE
4	INSTALL POLE MOUNTED SPLICE CABINET
5	INSTALL BASE MOUNTED SPLICE CABINET
6	REMOVE EXISTING SPLICE CABINET
7	INSTALL TERMINAL SPLICE BOX
8	MODIFY EXISTING SPLICE ENCLOSURE
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
3	MODIFY EXISTING CABINET FOUNDATION
4	INSTALL NEW 333 COMMUNICATION CABINET
5	INSTALL NEW 332 BASE MOUNTED CABINET
6	INSTALL NEW 336S CABINET
7	INSTALL CCTV CAMERA ASSEMBLY
8	INSTALL CCTV CAMERA WOOD POLE
9	INSTALL CCTV METAL POLE AND FOUNDATION
10	INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
11	INSTALL SPECIAL OVERSIZED JUNCTION BOX
12	INSTALL OVERSIZED JUNCTION BOX
13	INSTALL STANDARD JUNCTION BOX
14	REMOVE EXISTING JUNCTION BOX
15	INSTALL WOOD POLE
16	REMOVE EXISTING WOOD POLE
17	INSTALL AERIAL GUY ASSEMBLY
18	INSTALL STANDARD GUY ASSEMBLY
19	INSTALL SIDEWALK GUY ASSEMBLY
20	INSTALL MESSENGER CABLE
21	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
22	REMOVE EXISTING COMMUNICATIONS CABLE
23	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
24	INSTALL DELINEATOR MARKER
25	STORE 30 FEET OF EACH COMMUNICATIONS CABLE
26	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
27	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
28	LASH CABLE(S) TO EXISTING MESSENGER CABLE
29	LASH CABLE(S) TO NEW MESSENGER CABLE
30	INSTALL NEW ELECTRICAL SERVICE
31	MODIFY EXISTING ELECTRICAL SERVICE
32	INSTALL NEW CONTROLLER
33	INSTALL EXISTING CABLE IN NEW CABINET
34	INSTALL GENERATOR POWER INLET BOX
35	INSTALL LOCAL GIGABIT ETHERNET SWITCH
36	INSTALL UNIFIED CABLE
37	INSTALL POLE MOUNTED EQUIPMENT CABINET
38	INSTALL UNI-DIRECTIONAL YAGI ANTENNA
39	INSTALL OMNI-DIRECTIONAL ANTENNA
40	INSTALL RADIO TRANSCEIVER
41	INSTALL SYSTEM LOOP
42	INSTALL SYSTEM LOOP AMPLIFIER
43	INSTALL SYSTEM LOOP LEAD-IN CABLE
44	INSTALL LOCAL LOOP AMPLIFIER
45	INSTALL CITY WI-FI ANTENNA
46	INSTALL HUB 10-GIGABIT ETHERNET SWITCH
47	INSTALL CODEC
48	BOND MESSENGER CABLE TO POLE GROUND
49	INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION
50	INSTALL ANTENNA CABLE
51	RECONNECT RAILROAD PREEMPTION EQUIPMENT
52	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
53	INSTALL DSL ETHERNET SWITCH
54	INSTALL ETHERNET CABLE
55	INSTALL TERMINAL SERVER
56	INSTALL MICROWAVE VEHICLE DETECTOR
57	INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
58	INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
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SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: K.D. VANPATTEN	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE 2/20/08 DATE

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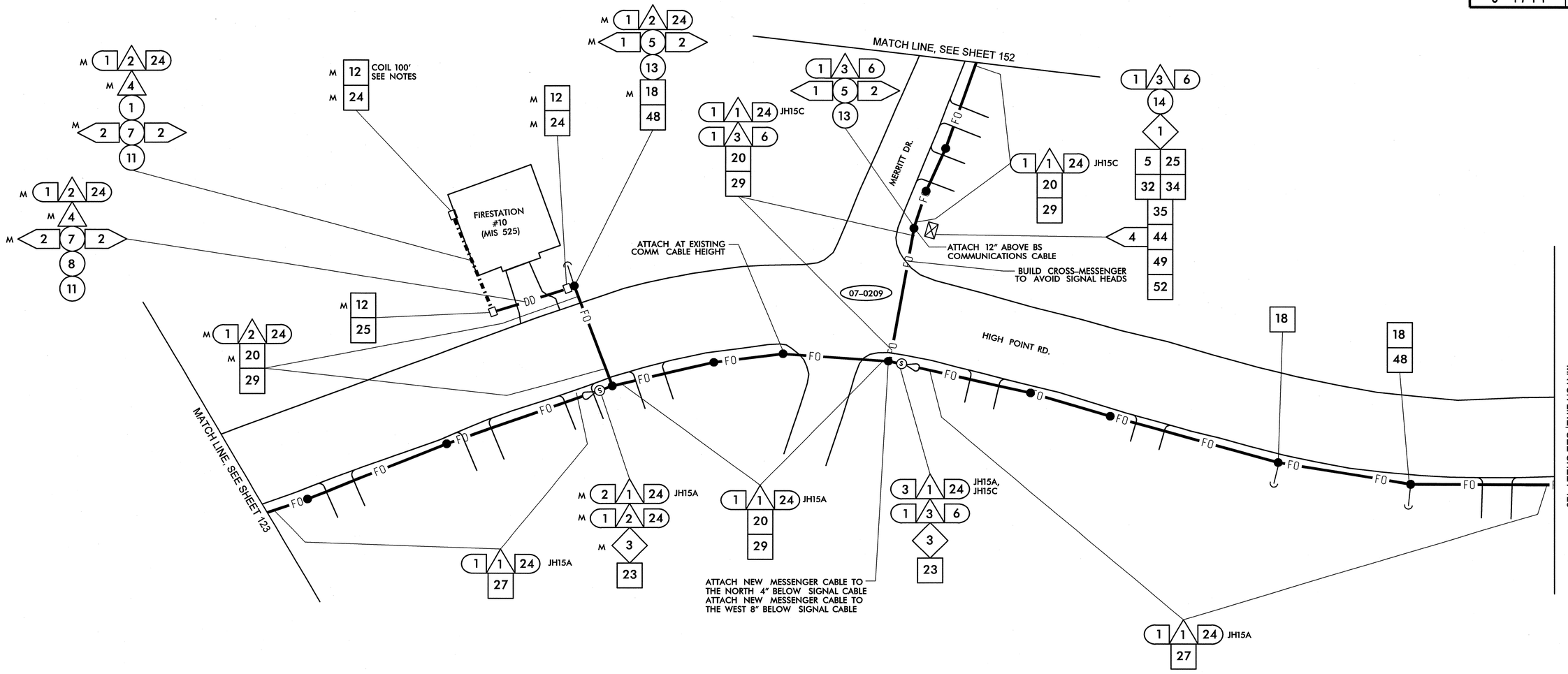
PROJECT REFERENCE NO.	SHEET NO.
U-4711	124



NOTES (THIS SHEET ONLY)

1. SEE BUILDING ENTRANCE DETAIL FOR ROUTING INTO BUILDING

1	INSTALL SMFO CABLE
2	INSTALL PLENUM RATED FIBER OPTIC CABLE
3	INSTALL FIBER OPTIC DROP CABLE
4	INSTALL TRACER WIRE
5	REUSE NCDOT SMFO CABLE
6	REUSE GDOT SMFO CABLE
(1)	TRENCH
(2)	INSTALL PVC CONDUIT
(3)	INSTALL RIGID, GALVANIZED STEEL CONDUIT
(4)	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
(5)	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
(6)	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
(7)	INSTALL POLYETHYLENE CONDUIT
(8)	DIRECTIONAL DRILL CONDUIT
(9)	BORE AND JACK CONDUIT
(10)	INSTALL CABLE(S) IN EXISTING CONDUIT
(11)	INSTALL CABLE(S) IN NEW CONDUIT
(12)	INSTALL CABLE(S) IN EXISTING RISER
(13)	INSTALL CABLE(S) IN NEW RISER
(14)	INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
(15)	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
(16)	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
(17)	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
(18)	INSTALL NEW RISER INTO POLE MOUNTED CABINET
(19)	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
⟨1⟩	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
⟨2⟩	INSTALL UNDERGROUND SPLICE ENCLOSURE
⟨3⟩	INSTALL AERIAL SPLICE ENCLOSURE
⟨4⟩	INSTALL POLE MOUNTED SPLICE CABINET
⟨5⟩	INSTALL BASE MOUNTED SPLICE CABINET
⟨6⟩	REMOVE EXISTING SPLICE CABINET
⟨7⟩	INSTALL TERMINAL SPLICE BOX
⟨8⟩	MODIFY EXISTING SPLICE ENCLOSURE
[1]	INSTALL CABINET FOUNDATION
[2]	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
[3]	MODIFY EXISTING CABINET FOUNDATION
[4]	INSTALL NEW 333 COMMUNICATION CABINET
[5]	INSTALL NEW 332 BASE MOUNTED CABINET
[6]	INSTALL NEW 336S CABINET
[7]	INSTALL CCTV CAMERA ASSEMBLY
[8]	INSTALL CCTV CAMERA WOOD POLE
[9]	INSTALL CCTV METAL POLE AND FOUNDATION
[10]	INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
[11]	INSTALL SPECIAL OVERSIZED JUNCTION BOX
[12]	INSTALL OVERSIZED JUNCTION BOX
[13]	INSTALL STANDARD JUNCTION BOX
[14]	REMOVE EXISTING JUNCTION BOX
[15]	INSTALL WOOD POLE
[16]	REMOVE EXISTING WOOD POLE
[17]	INSTALL AERIAL GUY ASSEMBLY
[18]	INSTALL STANDARD GUY ASSEMBLY
[19]	INSTALL SIDEWALK GUY ASSEMBLY
[20]	INSTALL MESSENGER CABLE
[21]	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
[22]	REMOVE EXISTING COMMUNICATIONS CABLE
[23]	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
[24]	INSTALL DELINEATOR MARKER
[25]	STORE 30 FEET OF EACH COMMUNICATIONS CABLE
[26]	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
[27]	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
[28]	LASH CABLE(S) TO EXISTING MESSENGER CABLE
[29]	LASH CABLE(S) TO NEW MESSENGER CABLE
[30]	INSTALL NEW ELECTRICAL SERVICE
[31]	MODIFY EXISTING ELECTRICAL SERVICE
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[33]	INSTALL EXISTING CABLE IN NEW CABINET
[34]	INSTALL GENERATOR POWER INLET BOX
[35]	INSTALL LOCAL GIGABIT ETHERNET SWITCH
[36]	INSTALL UNIFIED CABLE
[37]	INSTALL POLE MOUNTED EQUIPMENT CABINET
[38]	INSTALL UNI-DIRECTIONAL YAGI ANTENNA
[39]	INSTALL OMNI-DIRECTIONAL ANTENNA
[40]	INSTALL RADIO TRANSCEIVER
[41]	INSTALL SYSTEM LOOP
[42]	INSTALL SYSTEM LOOP AMPLIFIER
[43]	INSTALL SYSTEM LOOP LEAD-IN CABLE
[44]	INSTALL LOCAL LOOP AMPLIFIER
[45]	INSTALL CITY WI-FI ANTENNA
[46]	INSTALL HUB 10-GIGABIT ETHERNET SWITCH
[47]	INSTALL CODEC
[48]	BOND MESSENGER CABLE TO POLE GROUND
[49]	INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION
[50]	INSTALL ANTENNA CABLE
[51]	RECONNECT RAILROAD PREEMPTION EQUIPMENT
[52]	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
[53]	INSTALL DSL ETHERNET SWITCH
[54]	INSTALL ETHERNET CABLE
[55]	INSTALL TERMINAL SERVER
[56]	INSTALL MICROWAVE VEHICLE DETECTOR
[57]	INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
[58]	INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

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SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH		
PREPARED BY: K.D. VANPATTEN	REVIEWED BY: M.W. DUNZO		

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

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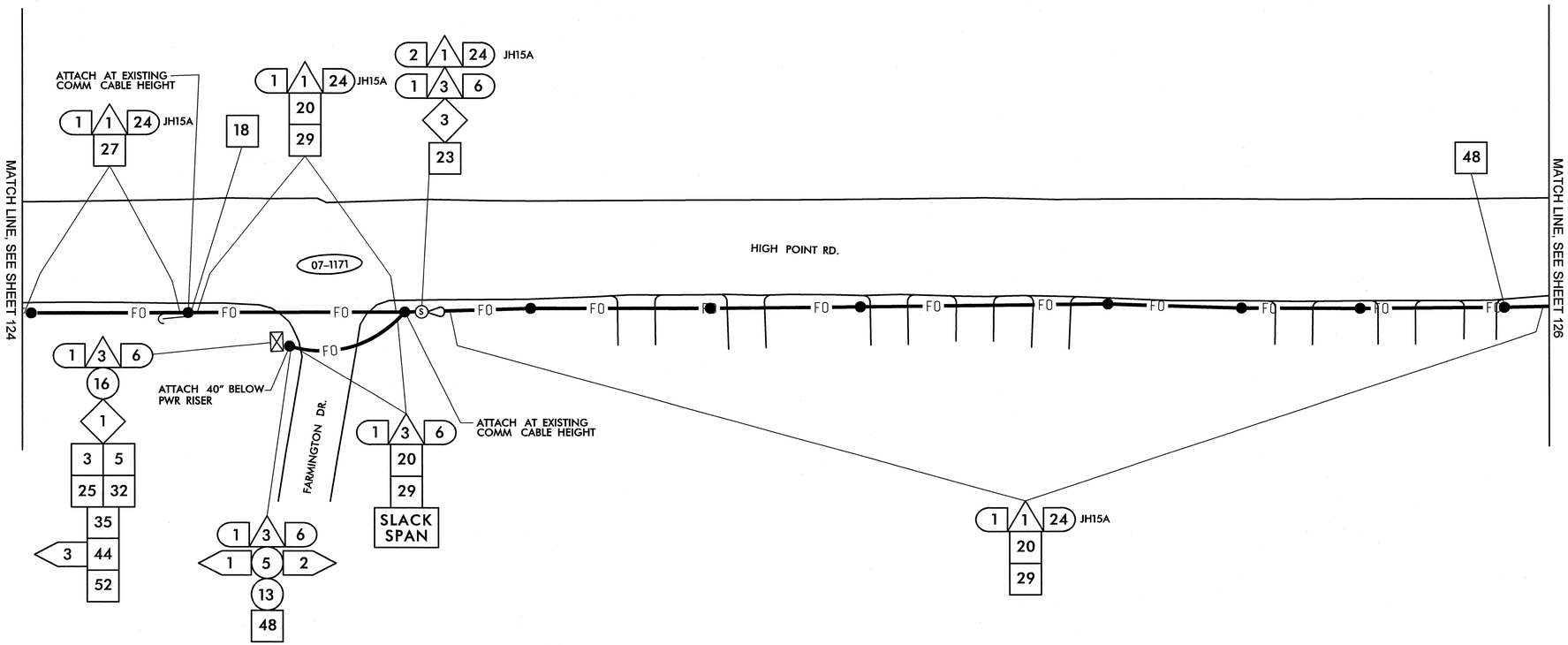
PROJECT REFERENCE NO.	SHEET NO.
U-4711	125



1. INSTALL SMFO CABLE
2. INSTALL PLENUM RATED FIBER OPTIC CABLE
3. INSTALL FIBER OPTIC DROP CABLE
4. INSTALL TRACER WIRE
5. REUSE NCDOT SMFO CABLE
6. REUSE GDOT SMFO CABLE
1. TRENCH
2. INSTALL PVC CONDUIT
3. INSTALL RIGID, GALVANIZED STEEL CONDUIT
4. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5. INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
6. INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
7. INSTALL POLYETHYLENE CONDUIT
8. DIRECTIONAL DRILL CONDUIT
9. BORE AND JACK CONDUIT
10. INSTALL CABLE(S) IN EXISTING CONDUIT
11. INSTALL CABLE(S) IN NEW CONDUIT
12. INSTALL CABLE(S) IN EXISTING RISER
13. INSTALL CABLE(S) IN NEW RISER
14. INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
15. INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
16. INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
17. INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
18. INSTALL NEW RISER INTO POLE MOUNTED CABINET
19. REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
1. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2. INSTALL UNDERGROUND SPLICE ENCLOSURE
3. INSTALL AERIAL SPLICE ENCLOSURE
4. INSTALL POLE MOUNTED SPLICE CABINET
5. INSTALL BASE MOUNTED SPLICE CABINET
6. REMOVE EXISTING SPLICE CABINET
7. INSTALL TERMINAL SPLICE BOX
8. MODIFY EXISTING SPLICE ENCLOSURE
1. INSTALL CABINET FOUNDATION
2. REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
3. MODIFY EXISTING CABINET FOUNDATION
4. INSTALL NEW 333 COMMUNICATION CABINET
5. INSTALL NEW 332 BASE MOUNTED CABINET
6. INSTALL NEW 336S CABINET
7. INSTALL CCTV CAMERA ASSEMBLY
8. INSTALL CCTV CAMERA WOOD POLE
9. INSTALL CCTV METAL POLE AND FOUNDATION
10. INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
11. INSTALL SPECIAL OVERSIZED JUNCTION BOX
12. INSTALL OVERSIZED JUNCTION BOX
13. INSTALL STANDARD JUNCTION BOX
14. REMOVE EXISTING JUNCTION BOX
15. INSTALL WOOD POLE
16. REMOVE EXISTING WOOD POLE
17. INSTALL AERIAL GUY ASSEMBLY
18. INSTALL STANDARD GUY ASSEMBLY
19. INSTALL SIDEWALK GUY ASSEMBLY
20. INSTALL MESSENGER CABLE
21. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
22. REMOVE EXISTING COMMUNICATIONS CABLE
23. INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
24. INSTALL DELINEATOR MARKER
25. STORE 30 FEET OF EACH COMMUNICATIONS CABLE
26. STORE 100 FEET OF EACH COMMUNICATIONS CABLE
27. LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
28. LASH CABLE(S) TO EXISTING MESSENGER CABLE
29. LASH CABLE(S) TO NEW MESSENGER CABLE
30. INSTALL NEW ELECTRICAL SERVICE
31. MODIFY EXISTING ELECTRICAL SERVICE
32. INSTALL NEW CONTROLLER
33. INSTALL EXISTING CABLE IN NEW CABINET
34. INSTALL GENERATOR POWER INLET BOX
35. INSTALL LOCAL GIGABIT ETHERNET SWITCH
36. INSTALL UNIFIED CABLE
37. INSTALL POLE MOUNTED EQUIPMENT CABINET
38. INSTALL UNI-DIRECTIONAL YAGI ANTENNA
39. INSTALL OMNI-DIRECTIONAL ANTENNA
40. INSTALL RADIO TRANSCEIVER
41. INSTALL SYSTEM LOOP
42. INSTALL SYSTEM LOOP AMPLIFIER
43. INSTALL SYSTEM LOOP LEAD-IN CABLE
44. INSTALL LOCAL LOOP AMPLIFIER
45. INSTALL CITY WI-FI ANTENNA
46. INSTALL HUB 10-GIGABIT ETHERNET SWITCH
47. INSTALL CODEC
48. BOND MESSENGER CABLE TO POLE GROUND
49. INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION
50. INSTALL ANTENNA CABLE
51. RECONNECT RAILROAD PREEMPTION EQUIPMENT
52. RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
53. INSTALL DSL ETHERNET SWITCH
54. INSTALL ETHERNET CABLE
55. INSTALL TERMINAL SERVER
56. INSTALL MICROWAVE VEHICLE DETECTOR
57. INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
58. INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
Traffic Engineering Unit
Intelligent Transportation Systems
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
750 Greenfield Pkwy., Garner, NC 27529

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

SCALE 0 50

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE — DATE 2/20/08

CADD Filename: ...\Sht0125.dgn

2/20/2008
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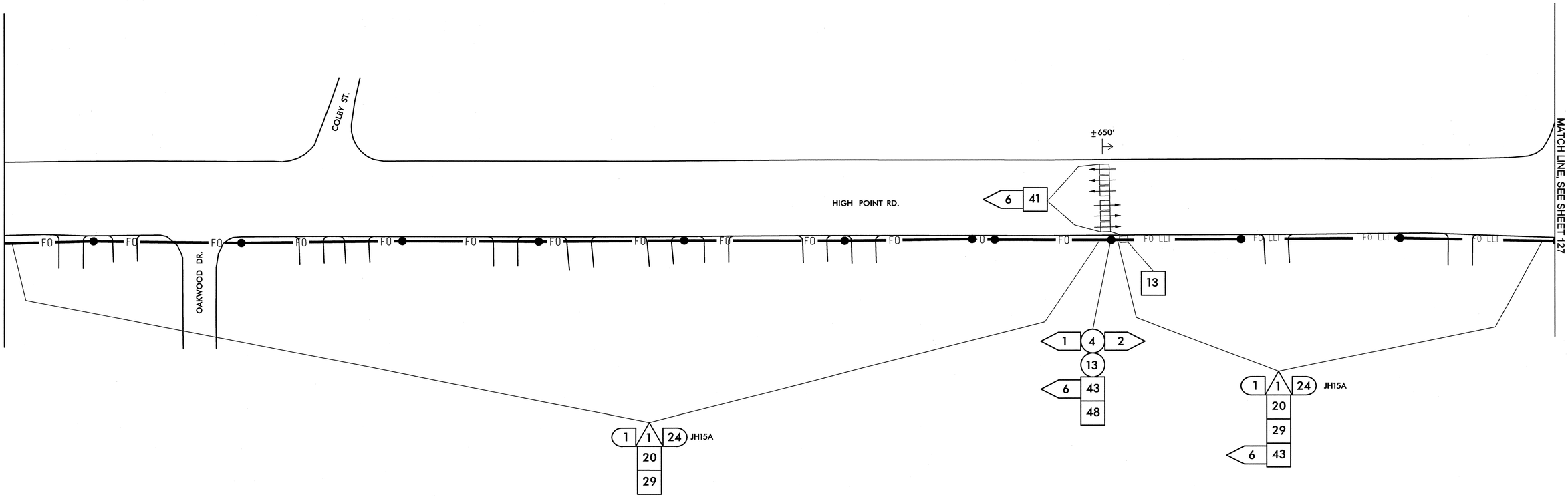
PROJECT REFERENCE NO.	SHEET NO.
U-4711	126



1	INSTALL SMFO CABLE	14	INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE	6	INSTALL NEW 336S CABINET	26	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	44	INSTALL LOCAL LOOP AMPLIFIER	53	INSTALL DSL ETHERNET SWITCH
2	INSTALL PLENUM RATED FIBER OPTIC CABLE	15	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	7	INSTALL CCTV CAMERA ASSEMBLY	27	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	45	INSTALL CITY WI-FI ANTENNA	54	INSTALL ETHERNET CABLE
3	INSTALL FIBER OPTIC DROP CABLE	16	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	8	INSTALL CCTV CAMERA WOOD POLE	28	LASH CABLE(S) TO EXISTING MESSENGER CABLE	46	INSTALL HUB 10-GIGABIT ETHERNET SWITCH	55	INSTALL TERMINAL SERVER
4	INSTALL TRACER WIRE	17	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET	9	INSTALL CCTV METAL POLE AND FOUNDATION	29	LASH CABLE(S) TO NEW MESSENGER CABLE	47	INSTALL CODEC	56	INSTALL MICROWAVE VEHICLE DETECTOR
5	REUSE NCDOT SMFO CABLE	18	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX	30	INSTALL NEW ELECTRICAL SERVICE	48	BOND MESSENGER CABLE TO POLE GROUND	57	INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
6	REUSE GDOT SMFO CABLE	19	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL SPECIAL OVERSIZED JUNCTION BOX	31	MODIFY EXISTING ELECTRICAL SERVICE	49	INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION	58	INSTALL WIRELESS ACCESS POINT POWER CABLE
1	TRENCH	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	12	INSTALL OVERSIZED JUNCTION BOX	32	INSTALL NEW CONTROLLER	50	INSTALL ANTENNA CABLE		
2	INSTALL PVC CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	13	INSTALL STANDARD JUNCTION BOX	33	INSTALL EXISTING CABLE IN NEW CABINET	51	RECONNECT RAILROAD PREEMPTION EQUIPMENT		
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	14	REMOVE EXISTING JUNCTION BOX	34	INSTALL GENERATOR POWER INLET BOX	52	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT		
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	INSTALL POLE MOUNTED SPLICE CABINET	15	INSTALL WOOD POLE	35	INSTALL LOCAL GIGABIT ETHERNET SWITCH				
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING	5	INSTALL BASE MOUNTED SPLICE CABINET	16	REMOVE EXISTING WOOD POLE	36	INSTALL UNIFIED CABLE				
6	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT	6	REMOVE EXISTING SPLICE CABINET	17	INSTALL AERIAL GUY ASSEMBLY	37	INSTALL POLE MOUNTED EQUIPMENT CABINET				
7	INSTALL POLYETHYLENE CONDUIT	7	INSTALL TERMINAL SPLICE BOX	18	INSTALL STANDARD GUY ASSEMBLY	38	INSTALL UNI-DIRECTIONAL YAGI ANTENNA				
8	DIRECTIONAL DRILL CONDUIT	8	MODIFY EXISTING SPLICE ENCLOSURE	19	INSTALL SIDEWALK GUY ASSEMBLY	39	INSTALL OMNI-DIRECTIONAL ANTENNA				
9	BORE AND JACK CONDUIT	1	INSTALL CABINET FOUNDATION	20	INSTALL MESSENGER CABLE	40	INSTALL RADIO TRANSCEIVER				
10	INSTALL CABLE(S) IN EXISTING CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER	21	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	41	INSTALL SYSTEM LOOP				
11	INSTALL CABLE(S) IN NEW CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	22	REMOVE EXISTING COMMUNICATIONS CABLE	42	INSTALL SYSTEM LOOP AMPLIFIER				
12	INSTALL CABLE(S) IN EXISTING RISER	4	INSTALL NEW 333 COMMUNICATION CABINET	23	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE	43	INSTALL SYSTEM LOOP LEAD-IN CABLE				
13	INSTALL CABLE(S) IN NEW RISER	5	INSTALL NEW 332 BASE MOUNTED CABINET	24	INSTALL DELINEATOR MARKER						
				25	STORE 30 FEET OF EACH COMMUNICATIONS CABLE						

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
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(919) 677-2000

Traffic Engineering and Safety Systems Branch
NCDEPARTMENT OF TRANSPORTATION
Integrated Mobility Division
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

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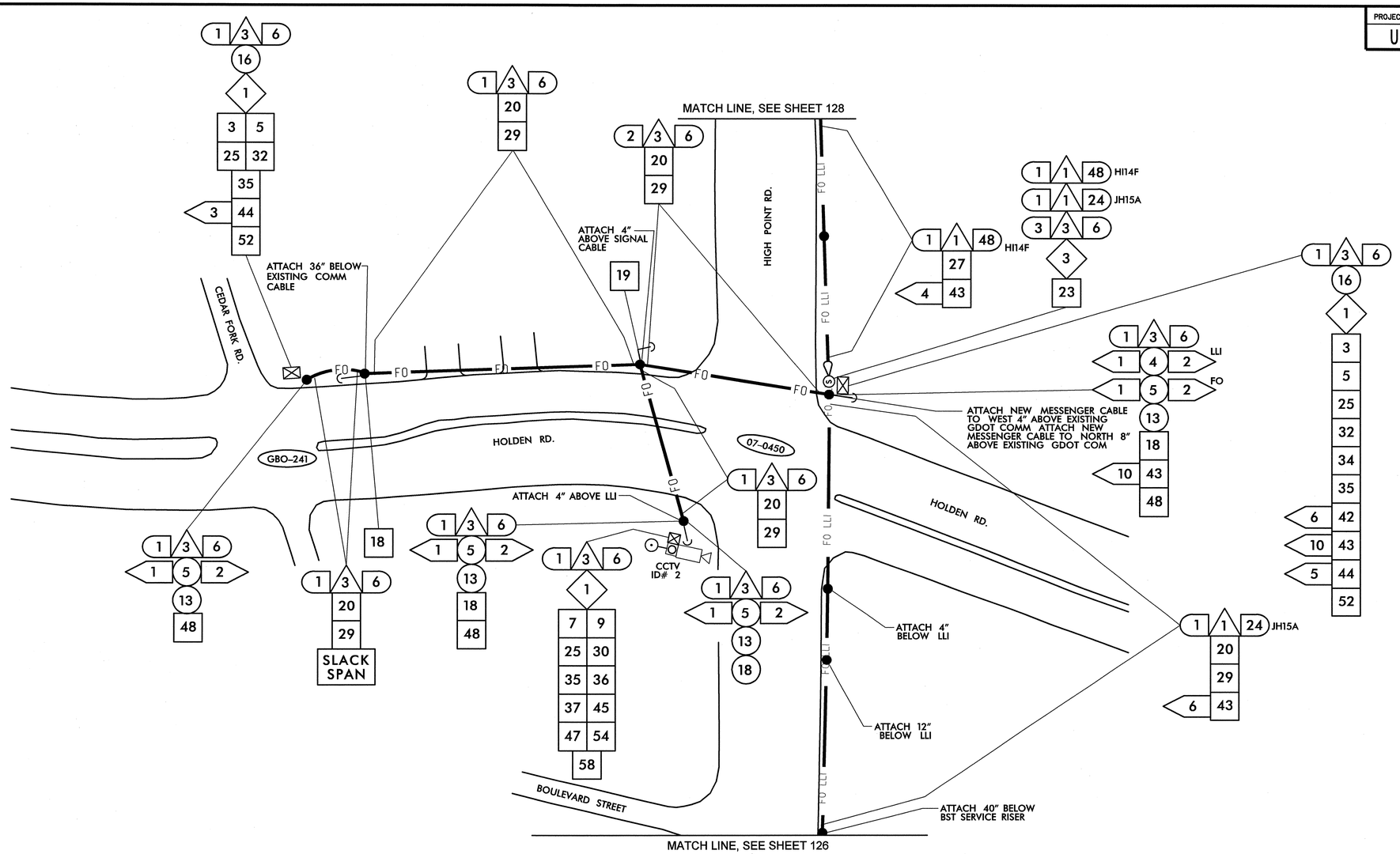
PROJECT REFERENCE NO.	SHEET NO.
U-4711	127



1. INSTALL SMFO CABLE
2. INSTALL PLENUM RATED FIBER OPTIC CABLE
3. INSTALL FIBER OPTIC DROP CABLE
4. INSTALL TRACER WIRE
5. REUSE NCDOT SMFO CABLE
6. REUSE GDOT SMFO CABLE
1. TRENCH
2. INSTALL PVC CONDUIT
3. INSTALL RIGID, GALVANIZED STEEL CONDUIT
4. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5. INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
6. INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
7. INSTALL POLYETHYLENE CONDUIT
8. DIRECTIONAL DRILL CONDUIT
9. BORE AND JACK CONDUIT
10. INSTALL CABLE(S) IN EXISTING CONDUIT
11. INSTALL CABLE(S) IN NEW CONDUIT
12. INSTALL CABLE(S) IN EXISTING RISER
13. INSTALL CABLE(S) IN NEW RISER
14. INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
15. INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
16. INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
17. INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
18. INSTALL NEW RISER INTO POLE MOUNTED CABINET
19. REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
1. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2. INSTALL UNDERGROUND SPLICE ENCLOSURE
3. INSTALL AERIAL SPLICE ENCLOSURE
4. INSTALL POLE MOUNTED SPLICE CABINET
5. INSTALL BASE MOUNTED SPLICE CABINET
6. REMOVE EXISTING SPLICE CABINET
7. INSTALL TERMINAL SPLICE BOX
8. MODIFY EXISTING SPLICE ENCLOSURE
1. INSTALL CABINET FOUNDATION
2. REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
3. MODIFY EXISTING CABINET FOUNDATION
4. INSTALL NEW 333 COMMUNICATION CABINET
5. INSTALL NEW 332 BASE MOUNTED CABINET
6. INSTALL NEW 336S CABINET
7. INSTALL CCTV CAMERA ASSEMBLY
8. INSTALL CCTV CAMERA WOOD POLE
9. INSTALL CCTV METAL POLE AND FOUNDATION
10. INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
11. INSTALL SPECIAL OVERSIZED JUNCTION BOX
12. INSTALL OVERSIZED JUNCTION BOX
13. INSTALL STANDARD JUNCTION BOX
14. REMOVE EXISTING JUNCTION BOX
15. INSTALL WOOD POLE
16. REMOVE EXISTING WOOD POLE
17. INSTALL AERIAL GUY ASSEMBLY
18. INSTALL STANDARD GUY ASSEMBLY
19. INSTALL SIDEWALK GUY ASSEMBLY
20. INSTALL MESSENGER CABLE
21. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
22. REMOVE EXISTING COMMUNICATIONS CABLE
23. INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
24. INSTALL DELINEATOR MARKER
25. STORE 30 FEET OF EACH COMMUNICATIONS CABLE
26. STORE 100 FEET OF EACH COMMUNICATIONS CABLE
27. LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
28. LASH CABLE(S) TO EXISTING MESSENGER CABLE
29. LASH CABLE(S) TO NEW MESSENGER CABLE
30. INSTALL NEW ELECTRICAL SERVICE
31. MODIFY EXISTING ELECTRICAL SERVICE
32. INSTALL NEW CONTROLLER
33. INSTALL EXISTING CABLE IN NEW CABINET
34. INSTALL GENERATOR POWER INLET BOX
35. INSTALL LOCAL GIGABIT ETHERNET SWITCH
36. INSTALL UNIFIED CABLE
37. INSTALL POLE MOUNTED EQUIPMENT CABINET
38. INSTALL UNI-DIRECTIONAL YAGI ANTENNA
39. INSTALL OMNI-DIRECTIONAL ANTENNA
40. INSTALL RADIO TRANSCEIVER
41. INSTALL SYSTEM LOOP
42. INSTALL SYSTEM LOOP AMPLIFIER
43. INSTALL SYSTEM LOOP LEAD-IN CABLE
44. INSTALL LOCAL LOOP AMPLIFIER
45. INSTALL CITY WI-FI ANTENNA
46. INSTALL HUB 10-GIGABIT ETHERNET SWITCH
47. INSTALL CODEC
48. BOND MESSENGER CABLE TO POLE GROUND
49. INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION
50. INSTALL ANTENNA CABLE
51. RECONNECT RAILROAD PREEMPTION EQUIPMENT
52. RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
53. INSTALL DSL ETHERNET SWITCH
54. INSTALL ETHERNET CABLE
55. INSTALL TERMINAL SERVER
56. INSTALL MICROWAVE VEHICLE DETECTOR
57. INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
58. INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Traffic Engineering and Safety Systems Branch
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Integrated Mobility Division
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 GUILFORD COUNTY
PLAN DATE: FEBRUARY, 2008 REVIEWED BY: K.W. SMITH
PREPARED BY: K.D. VANPATTEN REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/29/08 DATE

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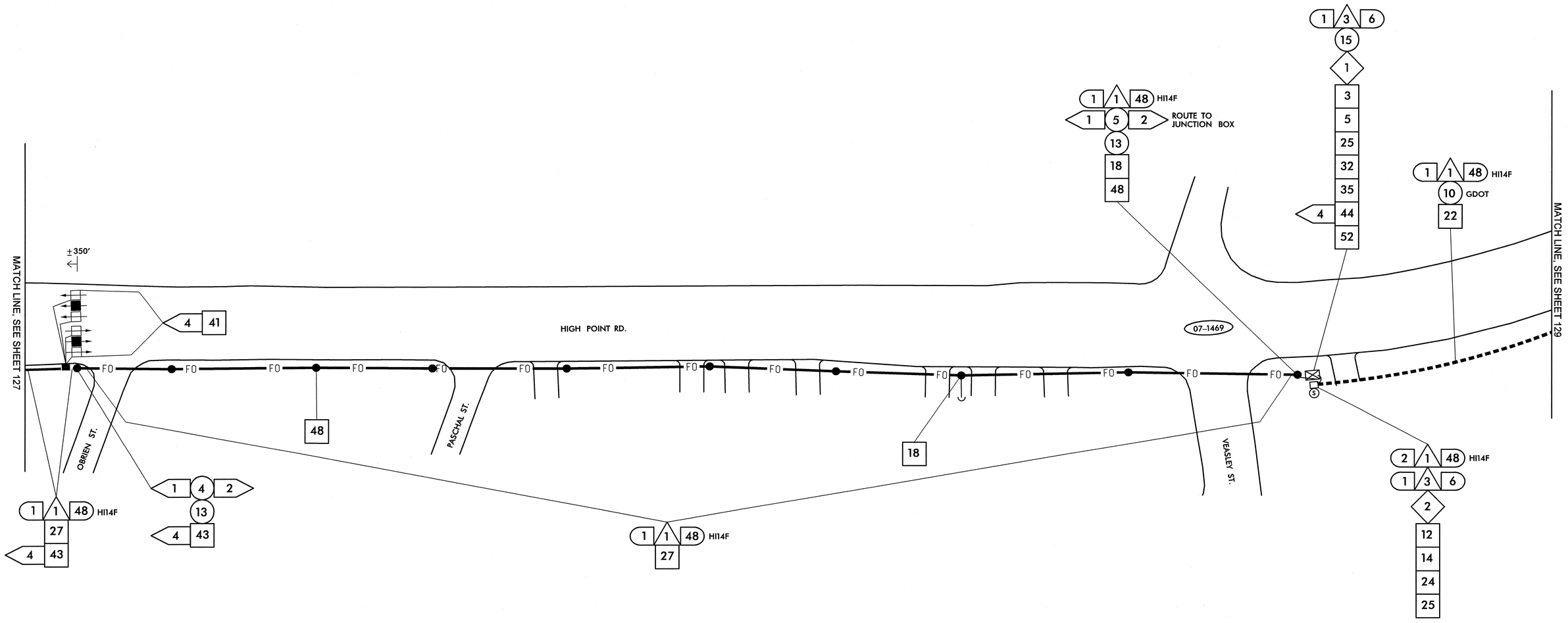
PROJECT REFERENCE NO.	SHEET NO.
U-4711	128



1	INSTALL SMFO CABLE	14	INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE	6	INSTALL NEW 336S CABINET	26	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
2	INSTALL PLENUM RATED FIBER OPTIC CABLE	15	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	7	INSTALL CCTV CAMERA ASSEMBLY	27	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
3	INSTALL FIBER OPTIC DROP CABLE	16	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	8	INSTALL CCTV CAMERA WOOD POLE	28	LASH CABLE(S) TO EXISTING MESSENGER CABLE
4	INSTALL TRACER WIRE	17	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET	9	INSTALL CCTV METAL POLE AND FOUNDATION	29	LASH CABLE(S) TO NEW MESSENGER CABLE
5	REUSE NCDOT SMFO CABLE	18	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX	30	INSTALL NEW ELECTRICAL SERVICE
6	REUSE GDOT SMFO CABLE	19	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL SPECIAL OVERSIZED JUNCTION BOX	31	MODIFY EXISTING ELECTRICAL SERVICE
1	TRENCH	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	12	INSTALL OVERSIZED JUNCTION BOX	32	INSTALL NEW CONTROLLER
2	INSTALL PVC CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	13	INSTALL STANDARD JUNCTION BOX	33	INSTALL EXISTING CABLE IN NEW CABINET
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	14	REMOVE EXISTING JUNCTION BOX	34	INSTALL GENERATOR POWER INLET BOX
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	INSTALL POLE MOUNTED SPLICE CABINET	15	INSTALL WOOD POLE	35	INSTALL LOCAL GIGABIT ETHERNET SWITCH
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING	5	INSTALL BASE MOUNTED SPLICE CABINET	16	REMOVE EXISTING WOOD POLE	36	INSTALL UNIFIED CABLE
6	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT	6	REMOVE EXISTING SPLICE CABINET	17	INSTALL AERIAL GUY ASSEMBLY	37	INSTALL POLE MOUNTED EQUIPMENT CABINET
7	INSTALL POLYETHYLENE CONDUIT	7	INSTALL TERMINAL SPLICE BOX	18	INSTALL STANDARD GUY ASSEMBLY	38	INSTALL UNI-DIRECTIONAL YAGI ANTENNA
8	DIRECTIONAL DRILL CONDUIT	8	MODIFY EXISTING SPLICE ENCLOSURE	19	INSTALL SIDEWALK GUY ASSEMBLY	39	INSTALL OMNI-DIRECTIONAL ANTENNA
9	BORE AND JACK CONDUIT	1	INSTALL CABINET FOUNDATION	20	INSTALL MESSENGER CABLE	40	INSTALL RADIO TRANSCEIVER
10	INSTALL CABLE(S) IN EXISTING CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER	21	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	41	INSTALL SYSTEM LOOP
11	INSTALL CABLE(S) IN NEW CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	22	REMOVE EXISTING COMMUNICATIONS CABLE	42	INSTALL SYSTEM LOOP AMPLIFIER
12	INSTALL CABLE(S) IN EXISTING RISER	4	INSTALL NEW 333 COMMUNICATION CABINET	23	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE	43	INSTALL SYSTEM LOOP LEAD-IN CABLE
13	INSTALL CABLE(S) IN NEW RISER	5	INSTALL NEW 332 BASE MOUNTED CABINET	24	INSTALL DELINEATOR MARKER		
				25	STORE 30 FEET OF EACH COMMUNICATIONS CABLE		

44	INSTALL LOCAL LOOP AMPLIFIER	53	INSTALL DSL ETHERNET SWITCH
45	INSTALL CITY WI-FI ANTENNA	54	INSTALL ETHERNET CABLE
46	INSTALL HUB 10-GIGABIT ETHERNET SWITCH	55	INSTALL TERMINAL SERVER
47	INSTALL CODEC	56	INSTALL MICROWAVE VEHICLE DETECTOR
48	BOND MESSENGER CABLE TO POLE GROUND	57	INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
49	INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION	58	INSTALL WIRELESS ACCESS POINT POWER CABLE
50	INSTALL ANTENNA CABLE		
51	RECONNECT RAILROAD PREEMPTION EQUIPMENT		
52	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT		

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

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SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: K.D. VANPATTEN	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

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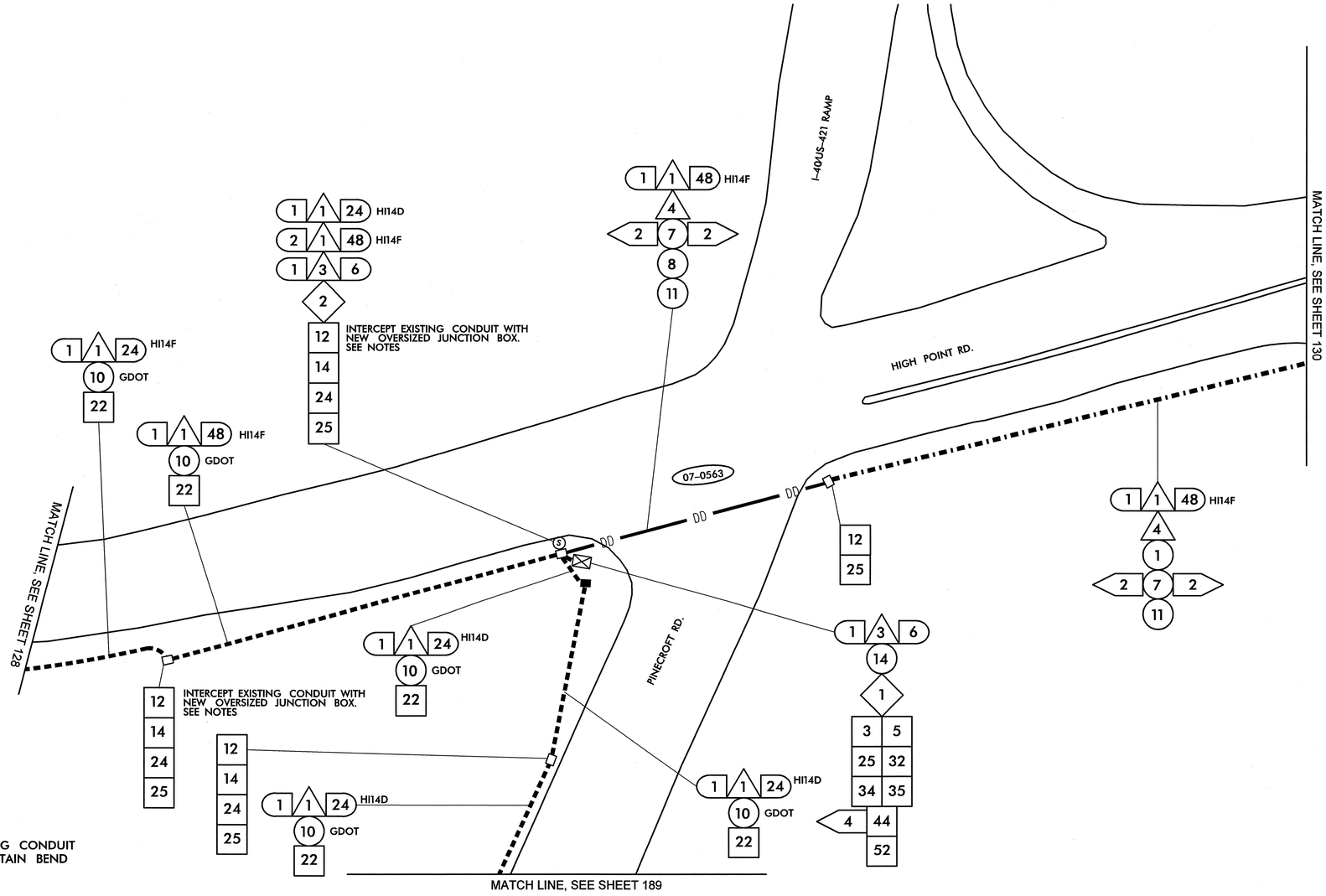
PROJECT REFERENCE NO.	SHEET NO.
U-4711	129



NOTES

1. INSTALL NEW JUNCTION BOX INTERCEPTING EXISTING CONDUIT REPAIR AND INSTALL SWEEPS AS REQUIRED TO MAINTAIN BEND RADIUS. USE METHODS APPROVED BY ENGINEER.

1	INSTALL SMFO CABLE
2	INSTALL PLENUM RATED FIBER OPTIC CABLE
3	INSTALL FIBER OPTIC DROP CABLE
4	INSTALL TRACER WIRE
5	REUSE NCDOT SMFO CABLE
6	REUSE GDOT SMFO CABLE
(1)	TRENCH
(2)	INSTALL PVC CONDUIT
(3)	INSTALL RIGID, GALVANIZED STEEL CONDUIT
(4)	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
(5)	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
(6)	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
(7)	INSTALL POLYETHYLENE CONDUIT
(8)	DIRECTIONAL DRILL CONDUIT
(9)	BORE AND JACK CONDUIT
(10)	INSTALL CABLE(S) IN EXISTING CONDUIT
(11)	INSTALL CABLE(S) IN NEW CONDUIT
(12)	INSTALL CABLE(S) IN EXISTING RISER
(13)	INSTALL CABLE(S) IN NEW RISER
(14)	INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
(15)	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
(16)	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
(17)	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
(18)	INSTALL NEW RISER INTO POLE MOUNTED CABINET
(19)	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
<1>	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
<2>	INSTALL UNDERGROUND SPLICE ENCLOSURE
<3>	INSTALL AERIAL SPLICE ENCLOSURE
<4>	INSTALL POLE MOUNTED SPLICE CABINET
<5>	INSTALL BASE MOUNTED SPLICE CABINET
<6>	REMOVE EXISTING SPLICE CABINET
<7>	INSTALL TERMINAL SPLICE BOX
<8>	MODIFY EXISTING SPLICE ENCLOSURE
[1]	INSTALL CABINET FOUNDATION
[2]	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
[3]	MODIFY EXISTING CABINET FOUNDATION
[4]	INSTALL NEW 333 COMMUNICATION CABINET
[5]	INSTALL NEW 332 BASE MOUNTED CABINET
[6]	INSTALL NEW 336S CABINET
[7]	INSTALL CCTV CAMERA ASSEMBLY
[8]	INSTALL CCTV CAMERA WOOD POLE
[9]	INSTALL CCTV METAL POLE AND FOUNDATION
[10]	INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
[11]	INSTALL SPECIAL OVERSIZED JUNCTION BOX
[12]	INSTALL OVERSIZED JUNCTION BOX
[13]	INSTALL STANDARD JUNCTION BOX
[14]	REMOVE EXISTING JUNCTION BOX
[15]	INSTALL WOOD POLE
[16]	REMOVE EXISTING WOOD POLE
[17]	INSTALL AERIAL GUY ASSEMBLY
[18]	INSTALL STANDARD GUY ASSEMBLY
[19]	INSTALL SIDEWALK GUY ASSEMBLY
[20]	INSTALL MESSENGER CABLE
[21]	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
[22]	REMOVE EXISTING COMMUNICATIONS CABLE
[23]	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
[24]	INSTALL DELINEATOR MARKER
[25]	STORE 30 FEET OF EACH COMMUNICATIONS CABLE
[26]	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
[27]	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
[28]	LASH CABLE(S) TO EXISTING MESSENGER CABLE
[29]	LASH CABLE(S) TO NEW MESSENGER CABLE
[30]	INSTALL NEW ELECTRICAL SERVICE
[31]	MODIFY EXISTING ELECTRICAL SERVICE
[32]	INSTALL NEW CONTROLLER
[33]	INSTALL EXISTING CABLE IN NEW CABINET
[34]	INSTALL GENERATOR POWER INLET BOX
[35]	INSTALL LOCAL GIGABIT ETHERNET SWITCH
[36]	INSTALL UNIFIED CABLE
[37]	INSTALL POLE MOUNTED EQUIPMENT CABINET
[38]	INSTALL UNI-DIRECTIONAL YAGI ANTENNA
[39]	INSTALL OMNI-DIRECTIONAL ANTENNA
[40]	INSTALL RADIO TRANSCEIVER
[41]	INSTALL SYSTEM LOOP
[42]	INSTALL SYSTEM LOOP AMPLIFIER
[43]	INSTALL SYSTEM LOOP LEAD-IN CABLE
[44]	INSTALL LOCAL LOOP AMPLIFIER
[45]	INSTALL CITY WI-FI ANTENNA
[46]	INSTALL HUB 10-GIGABIT ETHERNET SWITCH
[47]	INSTALL CODEC
[48]	BOND MESSENGER CABLE TO POLE GROUND
[49]	INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION
[50]	INSTALL ANTENNA CABLE
[51]	RECONNECT RAILROAD PREEMPTION EQUIPMENT
[52]	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
[53]	INSTALL DSL ETHERNET SWITCH
[54]	INSTALL ETHERNET CABLE
[55]	INSTALL TERMINAL SERVER
[56]	INSTALL MICROWAVE VEHICLE DETECTOR
[57]	INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
[58]	INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:

Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

Public Engineering and Safety Services Division
STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE — DATE 2/20/08

CADD Filename: ...\Sht0129.dgn

2/20/2008
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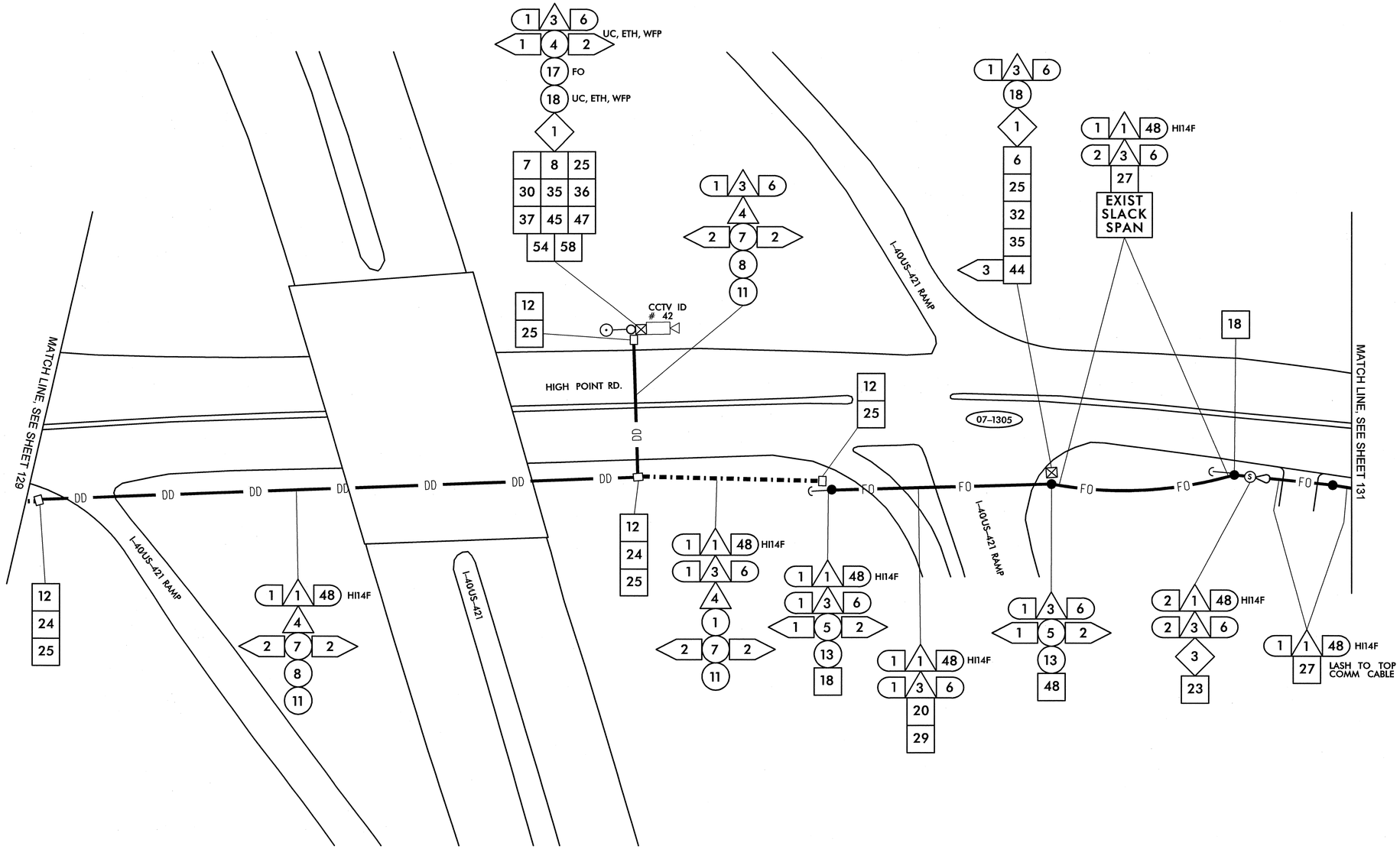
PROJECT REFERENCE NO.	SHEET NO.
U-4711	130



1	INSTALL SMFO CABLE	14	INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE	6	INSTALL NEW 336S CABINET	26	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
2	INSTALL PLENUM RATED FIBER OPTIC CABLE	15	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	7	INSTALL CCTV CAMERA ASSEMBLY	27	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
3	INSTALL FIBER OPTIC DROP CABLE	16	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	8	INSTALL CCTV CAMERA WOOD POLE	28	LASH CABLE(S) TO EXISTING MESSENGER CABLE
4	INSTALL TRACER WIRE	17	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET	9	INSTALL CCTV METAL POLE AND FOUNDATION	29	LASH CABLE(S) TO NEW MESSENGER CABLE
5	REUSE NCDOT SMFO CABLE	18	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX	30	INSTALL NEW ELECTRICAL SERVICE
6	REUSE GDOT SMFO CABLE	19	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL SPECIAL OVERSIZED JUNCTION BOX	31	MODIFY EXISTING ELECTRICAL SERVICE
1	TRENCH	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	12	INSTALL OVERSIZED JUNCTION BOX	32	INSTALL NEW CONTROLLER
2	INSTALL PVC CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	13	INSTALL STANDARD JUNCTION BOX	33	INSTALL EXISTING CABLE IN NEW CABINET
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	14	REMOVE EXISTING JUNCTION BOX	34	INSTALL GENERATOR POWER INLET BOX
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	INSTALL POLE MOUNTED SPLICE CABINET	15	INSTALL WOOD POLE	35	INSTALL LOCAL GIGABIT ETHERNET SWITCH
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING	5	INSTALL BASE MOUNTED SPLICE CABINET	16	REMOVE EXISTING WOOD POLE	36	INSTALL UNIFIED CABLE
6	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT	6	REMOVE EXISTING SPLICE CABINET	17	INSTALL AERIAL GUY ASSEMBLY	37	INSTALL POLE MOUNTED EQUIPMENT CABINET
7	INSTALL POLYETHYLENE CONDUIT	7	INSTALL TERMINAL SPLICE BOX	18	INSTALL STANDARD GUY ASSEMBLY	38	INSTALL UNI-DIRECTIONAL YAGI ANTENNA
8	DIRECTIONAL DRILL CONDUIT	8	MODIFY EXISTING SPLICE ENCLOSURE	19	INSTALL SIDEWALK GUY ASSEMBLY	39	INSTALL OMNI-DIRECTIONAL ANTENNA
9	BORE AND JACK CONDUIT	1	INSTALL CABINET FOUNDATION	20	INSTALL MESSENGER CABLE	40	INSTALL RADIO TRANSCEIVER
10	INSTALL CABLE(S) IN EXISTING CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER	21	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	41	INSTALL SYSTEM LOOP
11	INSTALL CABLE(S) IN NEW CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	22	REMOVE EXISTING COMMUNICATIONS CABLE	42	INSTALL SYSTEM LOOP AMPLIFIER
12	INSTALL CABLE(S) IN EXISTING RISER	4	INSTALL NEW 333 COMMUNICATION CABINET	23	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE	43	INSTALL SYSTEM LOOP LEAD-IN CABLE
13	INSTALL CABLE(S) IN NEW RISER	5	INSTALL NEW 332 BASE MOUNTED CABINET	24	INSTALL DELINEATOR MARKER		
				25	STORE 30 FEET OF EACH COMMUNICATIONS CABLE		

44	INSTALL LOCAL LOOP AMPLIFIER	53	INSTALL DSL ETHERNET SWITCH		
45	INSTALL CITY WI-FI ANTENNA	54	INSTALL ETHERNET CABLE		
46	INSTALL HUB 10-GIGABIT ETHERNET SWITCH	55	INSTALL TERMINAL SERVER		
47	INSTALL CODEC	56	INSTALL MICROWAVE VEHICLE DETECTOR		
48	BOND MESSENGER CABLE TO POLE GROUND	57	INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT		
49	INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION	58	INSTALL WIRELESS ACCESS POINT POWER CABLE		
50	INSTALL ANTENNA CABLE				
51	RECONNECT RAILROAD PREEMPTION EQUIPMENT				
52	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT				

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
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750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL
SEAL 023562
ENGINEER MARK DUNZO

SIGNATURE 2/20/08 DATE

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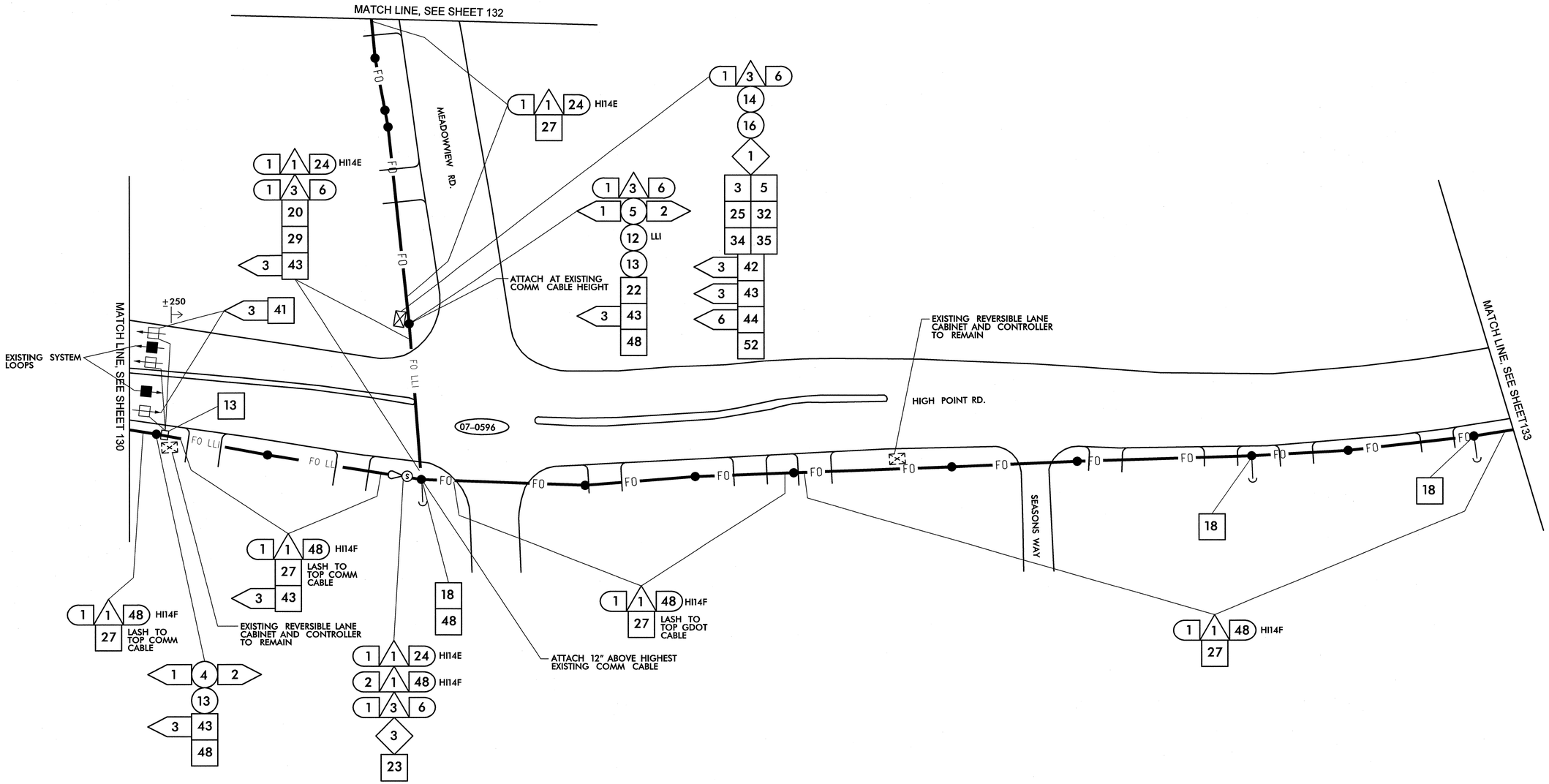
PROJECT REFERENCE NO.	SHEET NO.
U-4711	131



1. INSTALL SMFO CABLE
2. INSTALL PLENUM RATED FIBER OPTIC CABLE
3. INSTALL FIBER OPTIC DROP CABLE
4. INSTALL TRACER WIRE
5. REUSE NCDOT SMFO CABLE
6. REUSE GDOT SMFO CABLE
1. TRENCH
2. INSTALL PVC CONDUIT
3. INSTALL RIGID, GALVANIZED STEEL CONDUIT
4. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5. INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
6. INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
7. INSTALL POLYETHYLENE CONDUIT
8. DIRECTIONAL DRILL CONDUIT
9. BORE AND JACK CONDUIT
10. INSTALL CABLE(S) IN EXISTING CONDUIT
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13. INSTALL CABLE(S) IN NEW RISER
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15. INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
16. INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
17. INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
18. INSTALL NEW RISER INTO POLE MOUNTED CABINET
19. REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
1. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2. INSTALL UNDERGROUND SPLICE ENCLOSURE
3. INSTALL AERIAL SPLICE ENCLOSURE
4. INSTALL POLE MOUNTED SPLICE CABINET
5. INSTALL BASE MOUNTED SPLICE CABINET
6. REMOVE EXISTING SPLICE CABINET
7. INSTALL TERMINAL SPLICE BOX
8. MODIFY EXISTING SPLICE ENCLOSURE
1. INSTALL CABINET FOUNDATION
2. REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
3. MODIFY EXISTING CABINET FOUNDATION
4. INSTALL NEW 333 COMMUNICATION CABINET
5. INSTALL NEW 332 BASE MOUNTED CABINET
6. INSTALL NEW 336S CABINET
7. INSTALL CCTV CAMERA ASSEMBLY
8. INSTALL CCTV CAMERA WOOD POLE
9. INSTALL CCTV METAL POLE AND FOUNDATION
10. INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
11. INSTALL SPECIAL OVERSIZED JUNCTION BOX
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14. REMOVE EXISTING JUNCTION BOX
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16. REMOVE EXISTING WOOD POLE
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19. INSTALL SIDEWALK GUY ASSEMBLY
20. INSTALL MESSENGER CABLE
21. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
22. REMOVE EXISTING COMMUNICATIONS CABLE
23. INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
24. INSTALL DELINEATOR MARKER
25. STORE 30 FEET OF EACH COMMUNICATIONS CABLE
26. STORE 100 FEET OF EACH COMMUNICATIONS CABLE
27. LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
28. LASH CABLE(S) TO EXISTING MESSENGER CABLE
29. LASH CABLE(S) TO NEW MESSENGER CABLE
30. INSTALL NEW ELECTRICAL SERVICE
31. MODIFY EXISTING ELECTRICAL SERVICE
32. INSTALL NEW CONTROLLER
33. INSTALL EXISTING CABLE IN NEW CABINET
34. INSTALL GENERATOR POWER INLET BOX
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36. INSTALL UNIFIED CABLE
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42. INSTALL SYSTEM LOOP AMPLIFIER
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56. INSTALL MICROWAVE VEHICLE DETECTOR
57. INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
58. INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
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SCALE 0 50

CITY OF GREENSBORO
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

2/20/08
SIGNATURE DATE

CADD Filename: ...\Sht0131.dgn

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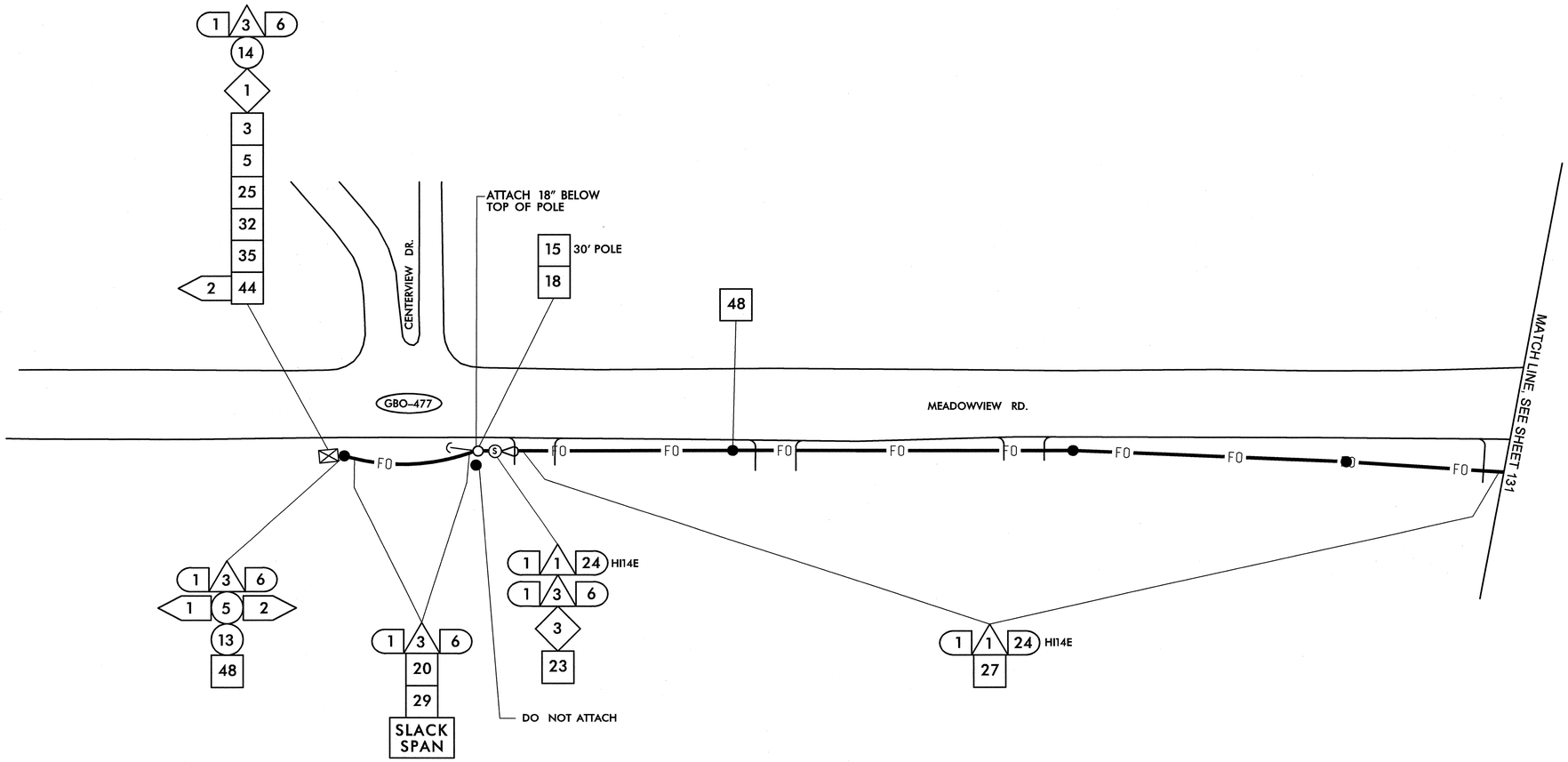
PROJECT REFERENCE NO.	SHEET NO.
U-4711	132



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3. INSTALL FIBER OPTIC DROP CABLE
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Traffic Engineering and Safety Systems Branch
Traffic Engineering Branch
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

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REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE 2/20/08 DATE

CADD Filename: ...\Sht0132.dgn

2/20/2008
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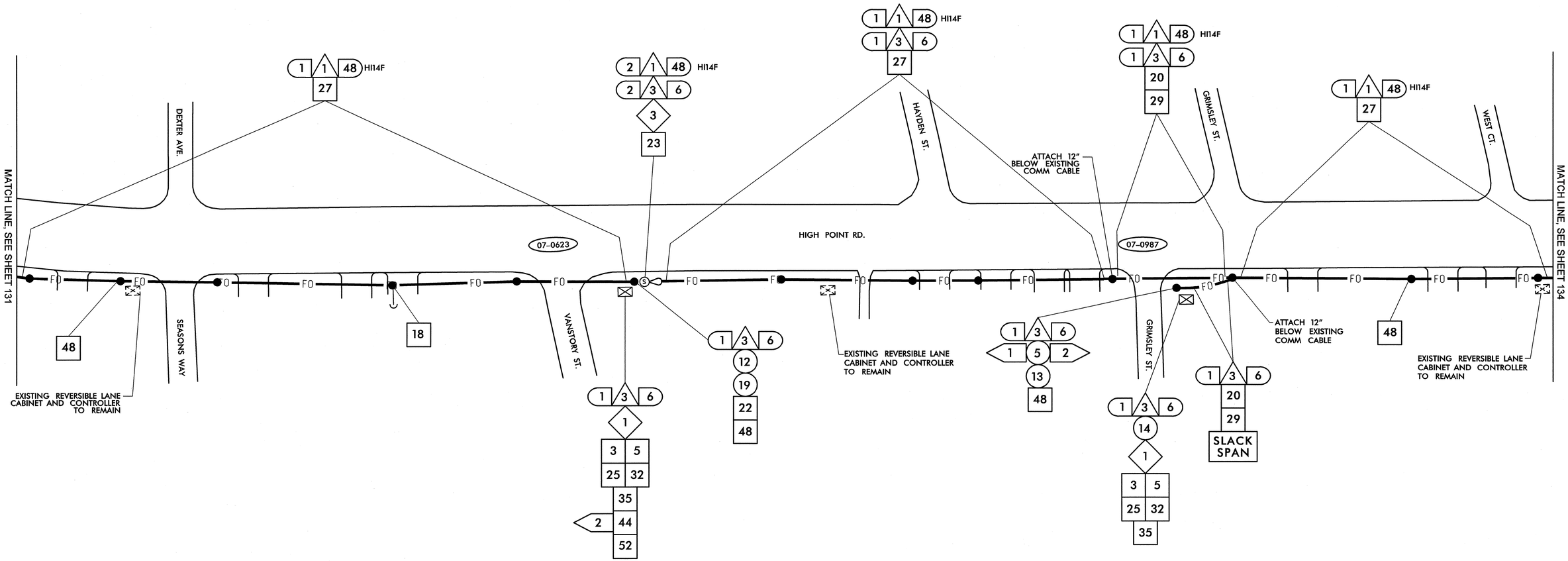
PROJECT REFERENCE NO.	SHEET NO.
U-4711	133



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3	INSTALL FIBER OPTIC DROP CABLE	16	INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)	8	INSTALL CCTV CAMERA WOOD POLE	28	LASH CABLE(S) TO EXISTING MESSENGER CABLE
4	INSTALL TRACER WIRE	17	INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET	9	INSTALL CCTV METAL POLE AND FOUNDATION	29	LASH CABLE(S) TO NEW MESSENGER CABLE
5	REUSE NCDOT SMFO CABLE	18	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX	30	INSTALL NEW ELECTRICAL SERVICE
6	REUSE GDOT SMFO CABLE	19	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL SPECIAL OVERSIZED JUNCTION BOX	31	MODIFY EXISTING ELECTRICAL SERVICE
1	TRENCH	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	12	INSTALL OVERSIZED JUNCTION BOX	32	INSTALL NEW CONTROLLER
2	INSTALL PVC CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	13	INSTALL STANDARD JUNCTION BOX	33	INSTALL EXISTING CABLE IN NEW CABINET
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	14	REMOVE EXISTING JUNCTION BOX	34	INSTALL GENERATOR POWER INLET BOX
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	INSTALL POLE MOUNTED SPLICE CABINET	15	INSTALL WOOD POLE	35	INSTALL LOCAL GIGABIT ETHERNET SWITCH
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING	5	INSTALL BASE MOUNTED SPLICE CABINET	16	REMOVE EXISTING WOOD POLE	36	INSTALL UNIFIED CABLE
6	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT	6	REMOVE EXISTING SPLICE CABINET	17	INSTALL AERIAL GUY ASSEMBLY	37	INSTALL POLE MOUNTED EQUIPMENT CABINET
7	INSTALL POLYETHYLENE CONDUIT	7	INSTALL TERMINAL SPLICE BOX	18	INSTALL STANDARD GUY ASSEMBLY	38	INSTALL UNI-DIRECTIONAL YAGI ANTENNA
8	DIRECTIONAL DRILL CONDUIT	8	MODIFY EXISTING SPLICE ENCLOSURE	19	INSTALL SIDEWALK GUY ASSEMBLY	39	INSTALL OMNI-DIRECTIONAL ANTENNA
9	BORE AND JACK CONDUIT	1	INSTALL CABINET FOUNDATION	20	INSTALL MESSENGER CABLE	40	INSTALL RADIO TRANSCEIVER
10	INSTALL CABLE(S) IN EXISTING CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER	21	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	41	INSTALL SYSTEM LOOP
11	INSTALL CABLE(S) IN NEW CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	22	REMOVE EXISTING COMMUNICATIONS CABLE	42	INSTALL SYSTEM LOOP AMPLIFIER
12	INSTALL CABLE(S) IN EXISTING RISER	4	INSTALL NEW 333 COMMUNICATION CABINET	23	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE	43	INSTALL SYSTEM LOOP LEAD-IN CABLE
13	INSTALL CABLE(S) IN NEW RISER	5	INSTALL NEW 332 BASE MOUNTED CABINET	24	INSTALL DELINEATOR MARKER	44	INSTALL LOCAL LOOP AMPLIFIER
				25	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	45	INSTALL CITY WI-FI ANTENNA
						46	INSTALL HUB 10-GIGABIT ETHERNET SWITCH
						47	INSTALL CODEC
						48	BOND MESSENGER CABLE TO POLE GROUND
						49	INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION
						50	INSTALL ANTENNA CABLE
						51	RECONNECT RAILROAD PREEMPTION EQUIPMENT
						52	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
						53	INSTALL DSL ETHERNET SWITCH
						54	INSTALL ETHERNET CABLE
						55	INSTALL TERMINAL SERVER
						56	INSTALL MICROWAVE VEHICLE DETECTOR
						57	INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
						58	INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
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(919) 677-2000
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING SHEET

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: K.D. VANPATTEN	REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE DATE 2/20/08

CADD Filename: ...\Sht0133.dgn

2/20/2008
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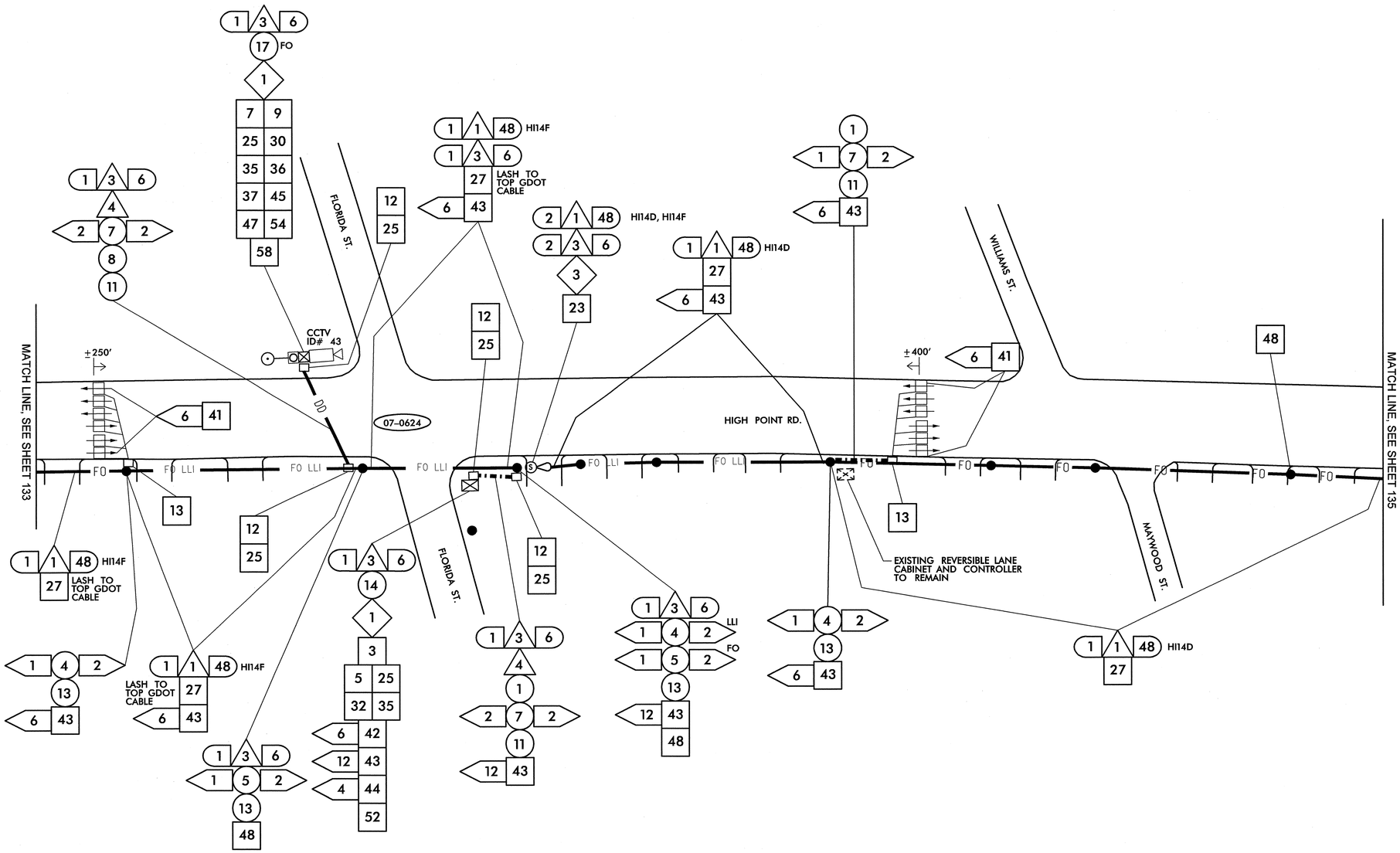
PROJECT REFERENCE NO.	SHEET NO.
U-4711	134



1. INSTALL SMFO CABLE
2. INSTALL PLENUM RATED FIBER OPTIC CABLE
3. INSTALL FIBER OPTIC DROP CABLE
4. INSTALL TRACER WIRE
5. REUSE NCDOT SMFO CABLE
6. REUSE GDOT SMFO CABLE
1. TRENCH
2. INSTALL PVC CONDUIT
3. INSTALL RIGID, GALVANIZED STEEL CONDUIT
4. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5. INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
6. INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
7. INSTALL POLYETHYLENE CONDUIT
8. DIRECTIONAL DRILL CONDUIT
9. BORE AND JACK CONDUIT
10. INSTALL CABLE(S) IN EXISTING CONDUIT
11. INSTALL CABLE(S) IN NEW CONDUIT
12. INSTALL CABLE(S) IN EXISTING RISER
13. INSTALL CABLE(S) IN NEW RISER
14. INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
15. INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
16. INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
17. INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
18. INSTALL NEW RISER INTO POLE MOUNTED CABINET
19. REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
1. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2. INSTALL UNDERGROUND SPLICE ENCLOSURE
3. INSTALL AERIAL SPLICE ENCLOSURE
4. INSTALL POLE MOUNTED SPLICE CABINET
5. INSTALL BASE MOUNTED SPLICE CABINET
6. REMOVE EXISTING SPLICE CABINET
7. INSTALL TERMINAL SPLICE BOX
8. MODIFY EXISTING SPLICE ENCLOSURE
1. INSTALL CABINET FOUNDATION
2. REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
3. MODIFY EXISTING CABINET FOUNDATION
4. INSTALL NEW 333 COMMUNICATION CABINET
5. INSTALL NEW 332 BASE MOUNTED CABINET
6. INSTALL NEW 336S CABINET
7. INSTALL CCTV CAMERA ASSEMBLY
8. INSTALL CCTV CAMERA WOOD POLE
9. INSTALL CCTV METAL POLE AND FOUNDATION
10. INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
11. INSTALL SPECIAL OVERSIZED JUNCTION BOX
12. INSTALL OVERSIZED JUNCTION BOX
13. INSTALL STANDARD JUNCTION BOX
14. REMOVE EXISTING JUNCTION BOX
15. INSTALL WOOD POLE
16. REMOVE EXISTING WOOD POLE
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18. INSTALL STANDARD GUY ASSEMBLY
19. INSTALL SIDEWALK GUY ASSEMBLY
20. INSTALL MESSENGER CABLE
21. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
22. REMOVE EXISTING COMMUNICATIONS CABLE
23. INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
24. INSTALL DELINEATOR MARKER
25. STORE 30 FEET OF EACH COMMUNICATIONS CABLE
26. STORE 100 FEET OF EACH COMMUNICATIONS CABLE
27. LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
28. LASH CABLE(S) TO EXISTING MESSENGER CABLE
29. LASH CABLE(S) TO NEW MESSENGER CABLE
30. INSTALL NEW ELECTRICAL SERVICE
31. MODIFY EXISTING ELECTRICAL SERVICE
32. INSTALL NEW CONTROLLER
33. INSTALL EXISTING CABLE IN NEW CABINET
34. INSTALL GENERATOR POWER INLET BOX
35. INSTALL LOCAL GIGABIT ETHERNET SWITCH
36. INSTALL UNIFIED CABLE
37. INSTALL POLE MOUNTED EQUIPMENT CABINET
38. INSTALL UNI-DIRECTIONAL YAGI ANTENNA
39. INSTALL OMNI-DIRECTIONAL ANTENNA
40. INSTALL RADIO TRANSCEIVER
41. INSTALL SYSTEM LOOP
42. INSTALL SYSTEM LOOP AMPLIFIER
43. INSTALL SYSTEM LOOP LEAD-IN CABLE
44. INSTALL LOCAL LOOP AMPLIFIER
45. INSTALL CITY WI-FI ANTENNA
46. INSTALL HUB 10-GIGABIT ETHERNET SWITCH
47. INSTALL CODEC
48. BOND MESSENGER CABLE TO POLE GROUND
49. INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION
50. INSTALL ANTENNA CABLE
51. RECONNECT RAILROAD PREEMPTION EQUIPMENT
52. RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
53. INSTALL DSL ETHERNET SWITCH
54. INSTALL ETHERNET CABLE
55. INSTALL TERMINAL SERVER
56. INSTALL MICROWAVE VEHICLE DETECTOR
57. INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
58. INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
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750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE — DATE 2/20/08

CADD Filename: ...\Sht0134.dgn

2/20/2008
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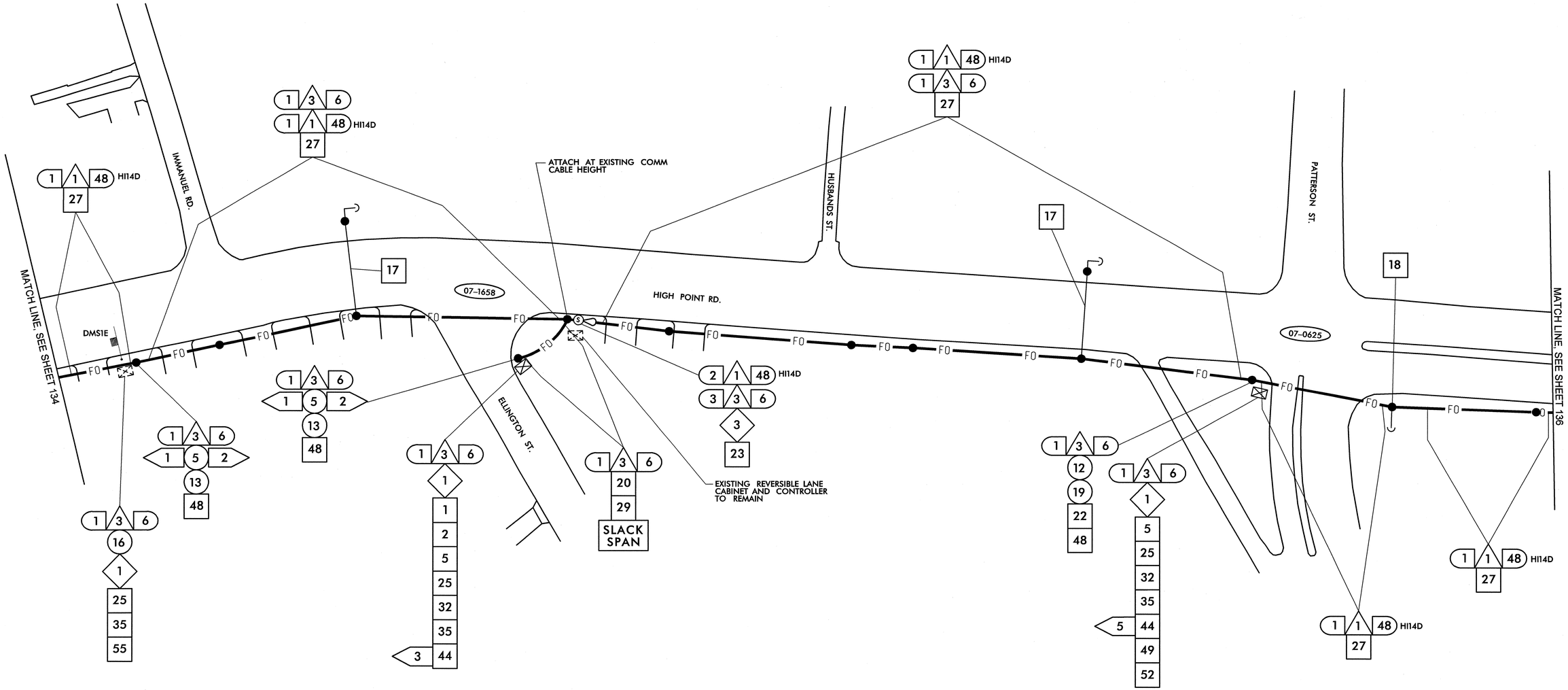
PROJECT REFERENCE NO.	SHEET NO.
U-4711	135



1. INSTALL SMFO CABLE
2. INSTALL PLENUM RATED FIBER OPTIC CABLE
3. INSTALL FIBER OPTIC DROP CABLE
4. INSTALL TRACER WIRE
5. REUSE NCDOT SMFO CABLE
6. REUSE GDOT SMFO CABLE

1. TRENCH
2. INSTALL PVC CONDUIT
3. INSTALL RIGID, GALVANIZED STEEL CONDUIT
4. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5. INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
6. INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
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8. DIRECTIONAL DRILL CONDUIT
9. BORE AND JACK CONDUIT
10. INSTALL CABLE(S) IN EXISTING CONDUIT
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1. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2. INSTALL UNDERGROUND SPLICE ENCLOSURE
3. INSTALL AERIAL SPLICE ENCLOSURE
4. INSTALL POLE MOUNTED SPLICE CABINET
5. INSTALL BASE MOUNTED SPLICE CABINET
6. REMOVE EXISTING SPLICE CABINET
7. INSTALL TERMINAL SPLICE BOX
8. MODIFY EXISTING SPLICE ENCLOSURE

1. INSTALL CABINET FOUNDATION
2. REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
3. MODIFY EXISTING CABINET FOUNDATION
4. INSTALL NEW 333 COMMUNICATION CABINET
5. INSTALL NEW 332 BASE MOUNTED CABINET
6. INSTALL NEW 336S CABINET
7. INSTALL CCTV CAMERA ASSEMBLY
8. INSTALL CCTV CAMERA WOOD POLE
9. INSTALL CCTV METAL POLE AND FOUNDATION
10. INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
11. INSTALL SPECIAL OVERSIZED JUNCTION BOX
12. INSTALL OVERSIZED JUNCTION BOX
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14. REMOVE EXISTING JUNCTION BOX
15. INSTALL WOOD POLE
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20. INSTALL MESSENGER CABLE
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23. INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
24. INSTALL DELINEATOR MARKER
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27. LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
28. LASH CABLE(S) TO EXISTING MESSENGER CABLE
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30. INSTALL NEW ELECTRICAL SERVICE
31. MODIFY EXISTING ELECTRICAL SERVICE
32. INSTALL NEW CONTROLLER
33. INSTALL EXISTING CABLE IN NEW CABINET
34. INSTALL GENERATOR POWER INLET BOX
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40. INSTALL RADIO TRANSCEIVER
41. INSTALL SYSTEM LOOP
42. INSTALL SYSTEM LOOP AMPLIFIER
43. INSTALL SYSTEM LOOP LEAD-IN CABLE
44. INSTALL LOCAL LOOP AMPLIFIER
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51. RECONNECT RAILROAD PREEMPTION EQUIPMENT
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53. INSTALL DSL ETHERNET SWITCH
54. INSTALL ETHERNET CABLE
55. INSTALL TERMINAL SERVER
56. INSTALL MICROWAVE VEHICLE DETECTOR
57. INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
58. INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
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750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 023562 MARK DUNZO
SIGNATURE 2/20/08 DATE

CADD Filename: ...\Sht0135.dgn

2/20/2008
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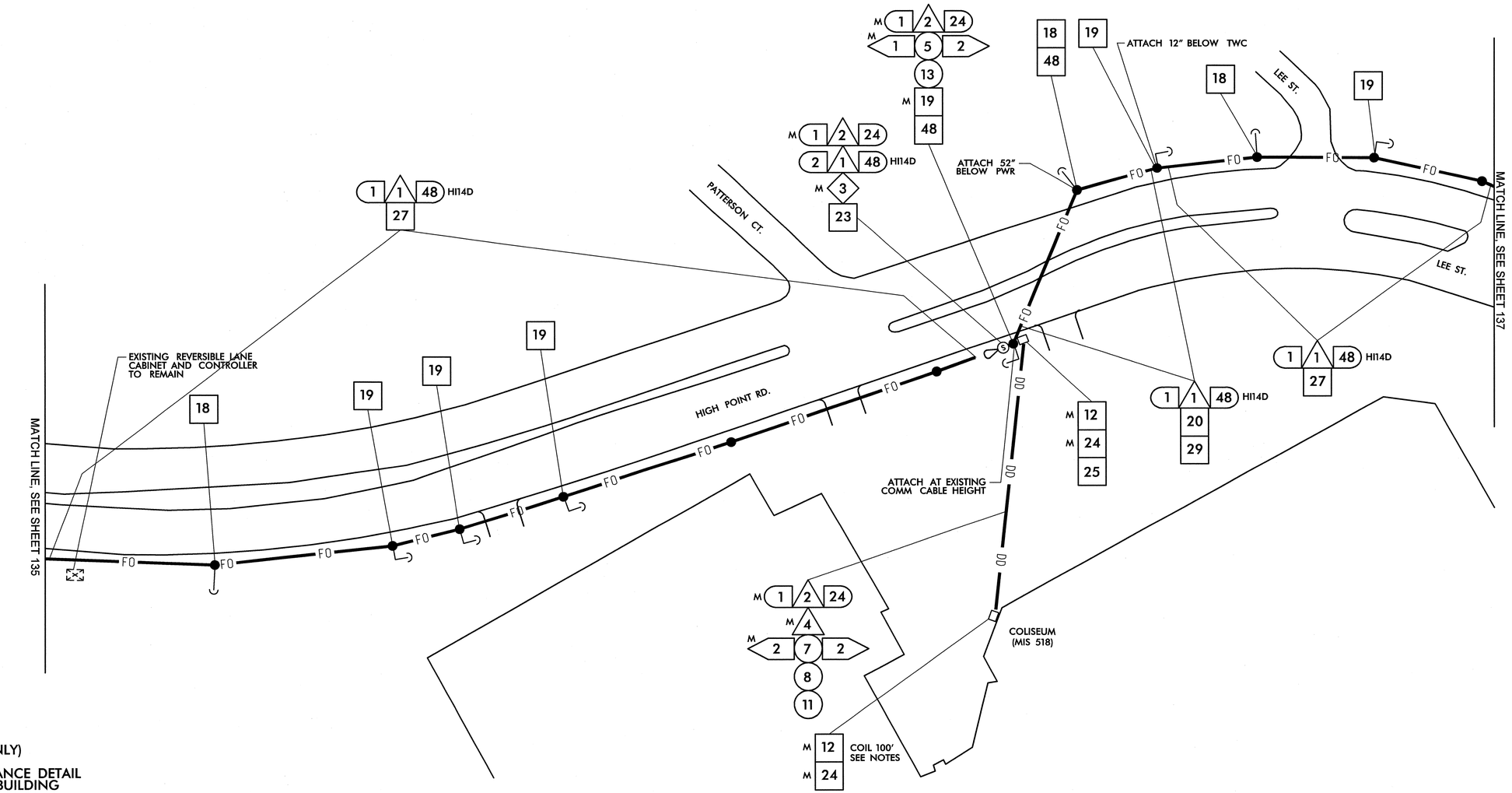
PROJECT REFERENCE NO.	SHEET NO.
U-4711	136



NOTES (THIS SHEET ONLY)

1. SEE BUILDING ENTRANCE DETAIL FOR ROUTING INTO BUILDING

1	INSTALL SMFO CABLE
2	INSTALL PLENUM RATED FIBER OPTIC CABLE
3	INSTALL FIBER OPTIC DROP CABLE
4	INSTALL TRACER WIRE
5	REUSE NCDOT SMFO CABLE
6	REUSE GDOT SMFO CABLE
1	TRENCH
2	INSTALL PVC CONDUIT
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
6	INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
7	INSTALL POLYETHYLENE CONDUIT
8	DIRECTIONAL DRILL CONDUIT
9	BORE AND JACK CONDUIT
10	INSTALL CABLE(S) IN EXISTING CONDUIT
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18	INSTALL NEW RISER INTO POLE MOUNTED CABINET
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7	INSTALL TERMINAL SPLICE BOX
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3	MODIFY EXISTING CABINET FOUNDATION
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5	INSTALL NEW 332 BASE MOUNTED CABINET
6	INSTALL NEW 336S CABINET
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SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING SHEET

DIVISION 7 GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008 REVIEWED BY: K.W. SMITH

PREPARED BY: K.D. VANPATTEN REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO

SIGNATURE 2/29/08 DATE

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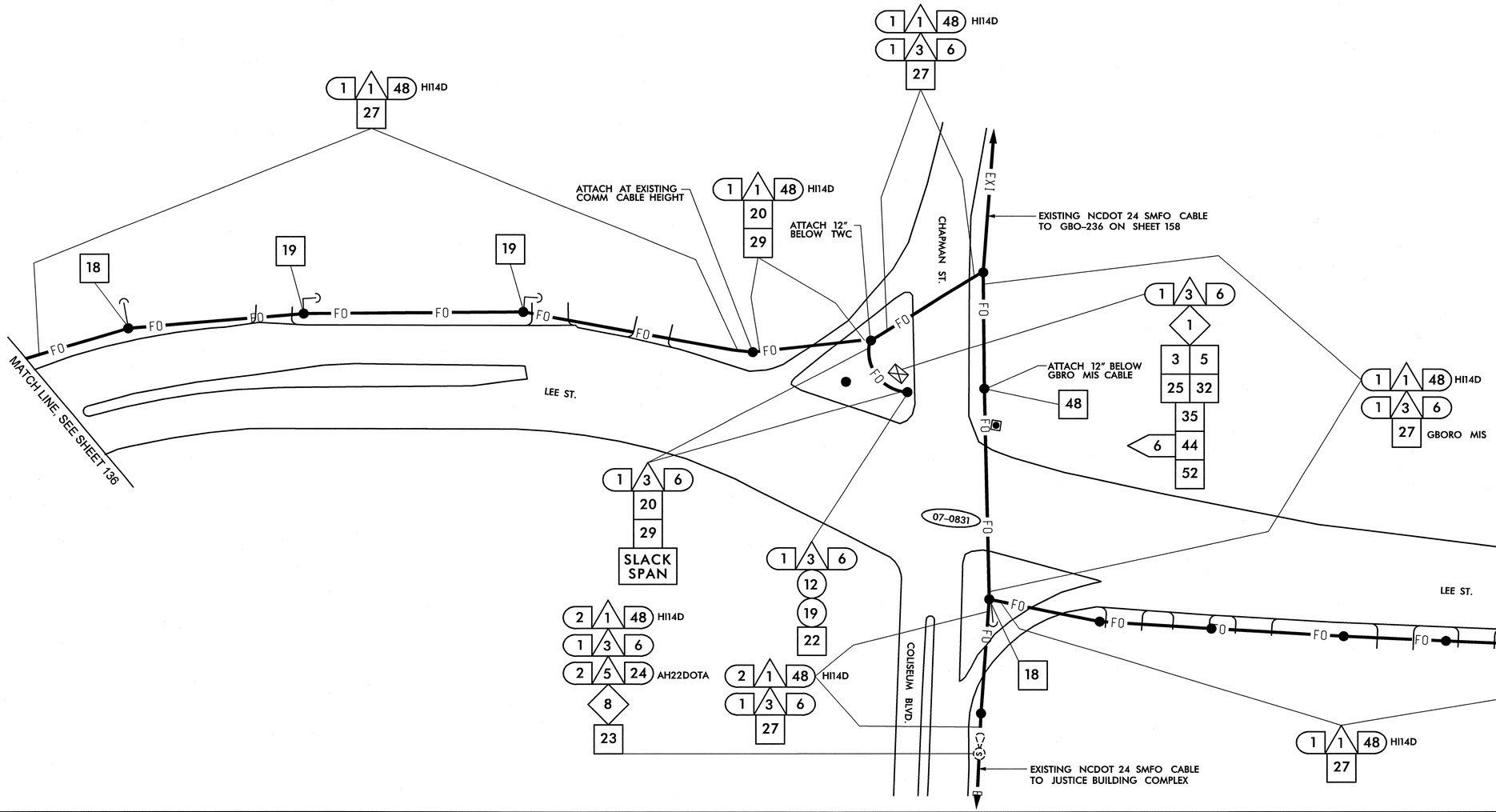
PROJECT REFERENCE NO.	SHEET NO.
U-4711	137



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14. INSTALL NEW CONDUIT OR RISER INTO EXISTING CONDUIT ENTRANCE
15. INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
16. INSTALL NEW RISER INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUB-OUTS WHEN AVAILABLE)
17. INSTALL NEW CONDUIT INTO POLE MOUNTED CABINET
18. INSTALL NEW RISER INTO POLE MOUNTED CABINET
19. REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING

1. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2. INSTALL UNDERGROUND SPLICE ENCLOSURE
3. INSTALL AERIAL SPLICE ENCLOSURE
4. INSTALL POLE MOUNTED SPLICE CABINET
5. INSTALL BASE MOUNTED SPLICE CABINET
6. REMOVE EXISTING SPLICE CABINET
7. INSTALL TERMINAL SPLICE BOX
8. MODIFY EXISTING SPLICE ENCLOSURE

1. INSTALL CABINET FOUNDATION
2. REMOVE EXISTING CABINET FOUNDATION, CABINET AND CONTROLLER
3. MODIFY EXISTING CABINET FOUNDATION
4. INSTALL NEW 333 COMMUNICATION CABINET
5. INSTALL NEW 332 BASE MOUNTED CABINET
6. INSTALL NEW 336S CABINET
7. INSTALL CCTV CAMERA ASSEMBLY
8. INSTALL CCTV CAMERA WOOD POLE
9. INSTALL CCTV METAL POLE AND FOUNDATION
10. INSTALL OVERSIZED HEAVY DUTY JUNCTION BOX
11. INSTALL SPECIAL OVERSIZED JUNCTION BOX
12. INSTALL OVERSIZED JUNCTION BOX
13. INSTALL STANDARD JUNCTION BOX
14. REMOVE EXISTING JUNCTION BOX
15. INSTALL WOOD POLE
16. REMOVE EXISTING WOOD POLE
17. INSTALL AERIAL GUY ASSEMBLY
18. INSTALL STANDARD GUY ASSEMBLY
19. INSTALL SIDEWALK GUY ASSEMBLY
20. INSTALL MESSENGER CABLE
21. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
22. REMOVE EXISTING COMMUNICATIONS CABLE
23. INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF CABLE
24. INSTALL DELINEATOR MARKER
25. STORE 30 FEET OF EACH COMMUNICATIONS CABLE
26. STORE 100 FEET OF EACH COMMUNICATIONS CABLE
27. LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
28. LASH CABLE(S) TO EXISTING MESSENGER CABLE
29. LASH CABLE(S) TO NEW MESSENGER CABLE
30. INSTALL NEW ELECTRICAL SERVICE
31. MODIFY EXISTING ELECTRICAL SERVICE
32. INSTALL NEW CONTROLLER
33. INSTALL EXISTING CABLE IN NEW CABINET
34. INSTALL GENERATOR POWER INLET BOX
35. INSTALL LOCAL GIGABIT ETHERNET SWITCH
36. INSTALL UNIFIED CABLE
37. INSTALL POLE MOUNTED EQUIPMENT CABINET
38. INSTALL UNI-DIRECTIONAL YAGI ANTENNA
39. INSTALL OMNI-DIRECTIONAL ANTENNA
40. INSTALL RADIO TRANSCEIVER
41. INSTALL SYSTEM LOOP
42. INSTALL SYSTEM LOOP AMPLIFIER
43. INSTALL SYSTEM LOOP LEAD-IN CABLE
44. INSTALL LOCAL LOOP AMPLIFIER
45. INSTALL CITY WI-FI ANTENNA
46. INSTALL HUB 10-GIGABIT ETHERNET SWITCH
47. INSTALL CODEC
48. BOND MESSENGER CABLE TO POLE GROUND
49. INSTALL BASE ADAPTER AND MODIFY EXISTING CABINET FOUNDATION
50. INSTALL ANTENNA CABLE
51. RECONNECT RAILROAD PREEMPTION EQUIPMENT
52. RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
53. INSTALL DSL ETHERNET SWITCH
54. INSTALL ETHERNET CABLE
55. INSTALL TERMINAL SERVER
56. INSTALL MICROWAVE VEHICLE DETECTOR
57. INSTALL MICROWAVE VEHICLE DETECTOR CONTROLLER UNIT
58. INSTALL WIRELESS ACCESS POINT POWER CABLE

NOTE:
GDOT ATTACH 40" BELOW PWR ON FRONT SIDE OF POLE, UNLESS OTHERWISE NOTED

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
(919) 677-2000

750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY
PLAN DATE: FEBRUARY, 2008 — REVIEWED BY: K.W. SMITH
PREPARED BY: K.D. VANPATTEN — REVIEWED BY: M.W. DUNZO

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 023562 ENGINEER MARK DUNZO
SIGNATURE 2/20/08 DATE

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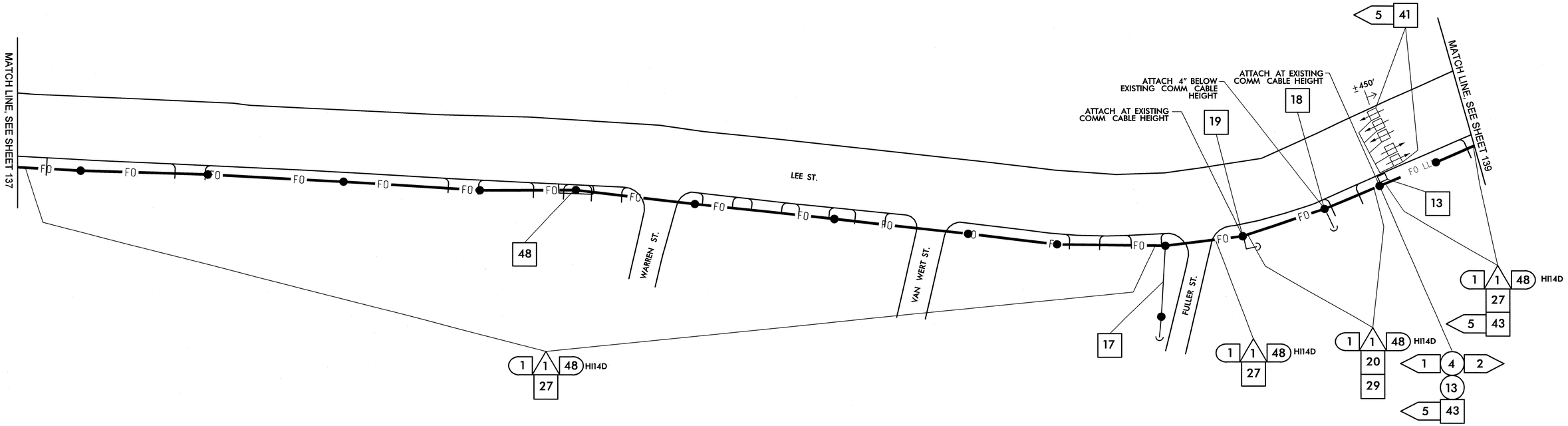
PROJECT REFERENCE NO.	SHEET NO.
U-4711	138



1. INSTALL SMFO CABLE
2. INSTALL PLENUM RATED FIBER OPTIC CABLE
3. INSTALL FIBER OPTIC DROP CABLE
4. INSTALL TRACER WIRE
5. REUSE NCDOT SMFO CABLE
6. REUSE GDOT SMFO CABLE

1. TRENCH
2. INSTALL PVC CONDUIT
3. INSTALL RIGID, GALVANIZED STEEL CONDUIT
4. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5. INSTALL RIGID, GALVANIZED STEEL RISER WITH FIBER OPTIC HEAT SHRINK TUBING
6. INSTALL OUTER-DUCT POLYETHYLENE CONDUIT
7. INSTALL POLYETHYLENE CONDUIT
8. DIRECTIONAL DRILL CONDUIT
9. BORE AND JACK CONDUIT
10. INSTALL CABLE(S) IN EXISTING CONDUIT
11. INSTALL CABLE(S) IN NEW CONDUIT
12. INSTALL CABLE(S) IN EXISTING RISER
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Traffic Engineering and Safety Systems Branch
NC DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF GREENSBORO COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING SHEET

DIVISION 7 — GUILFORD COUNTY

PLAN DATE: FEBRUARY, 2008	REVIEWED BY: K.W. SMITH
PREPARED BY: K.D. VANPATTEN	REVIEWED BY: M.W. DUNZO

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SEAL
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SIGNATURE 2/24/08 DATE

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2/20/2008
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