STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	U-5168	1	

STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
45241.1.1		PE
45241.3.1	STP-0314(5)	CONST

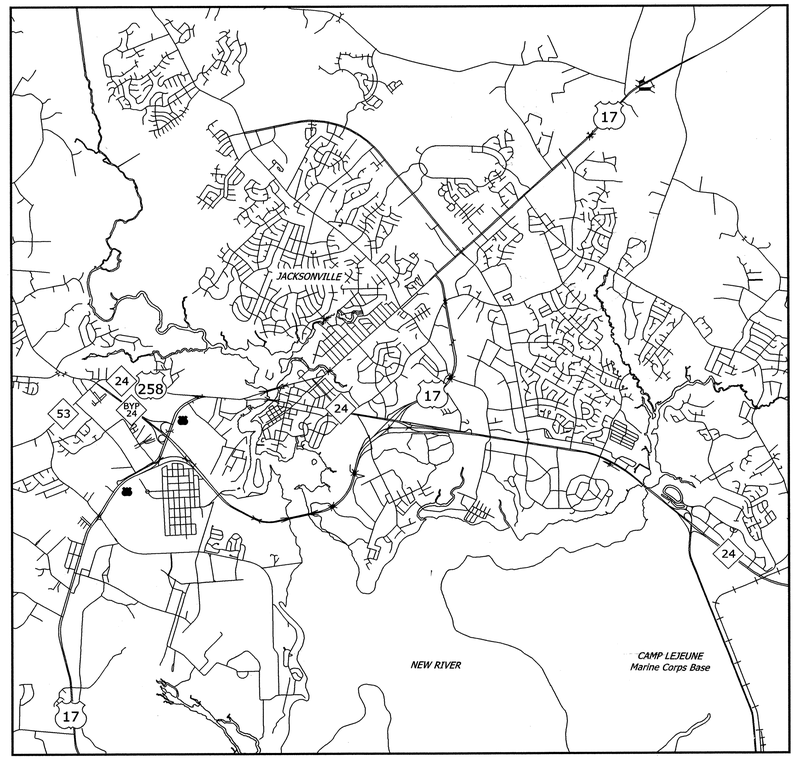
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED

JACKSONVILLE

COMPUTERIZED TRAFFIC SIGNAL SYSTEM

(ONSLOW COUNTY)



Volume I of III
Project Overview and Fiber-Optic Cable Routing

FINAL PLANS

TIP PROJECT: U-5168

CONTRACT: C202576

7/19/2011 $TIME$ susan.pennington ...#600 PSUE#CADWCR-001_PRJ.dgn

2006 STANDARD SPECIFICATIONS

LETTING DATE:

NOVEMBER 15, 2011

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED

DIVISION ADMINISTRATOR *DATE*

PROJECT LENGTH

PROJECT LENGTH = 41 MILES

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

STATE DESIGN ENGINEER *P.E.*

NCDOT CONTACTS:
TRANSPORTATION SAFETY AND MOBILITY
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: T.F. BURCHETT, P.E. - PROJECT MANAGER
KEVIN W. SMITH, P.E. - PROJECT ENGINEER

750 Greenfield Pkwy., Garner, NC 27529

SEAL

SIGNATURE *DATE*

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

7-20-11

SIGNATURE *DATE*

INDEX OF SHEETS

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1F-1G.....SYSTEM DETECTION SCHEMATIC
1H.....SYSTEM DETECTION KEY
1J-1K.....SEQUENCE OF CONSTRUCTION
2.....CABINET FOUNDATION DETAILS
2A.....CABINET DETAILS
2B.....SPLICE ENCLOSURE DETAILS
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3.....SUMMARY OF QUANTITIES
3A-3K.....SUMMARY OF WORK BY CABLE ROUTING
3L.....SUMMARY OF WORK BY CCTV
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2-2E..... SUMMARY OF WORK BY INTERSECTION
3-3B.....INDUCTIVE DETECTION LOOP DETAILS
SIG.1-134.....NCDOT TRAFFIC SIGNAL PLANS
SIG.135-SIG.138..... CITY TRAFFIC SIGNAL PLANS

ROADWAY STANDARD DRAWINGS

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

STD. NO.	TITLE
848.01	CONCRETE SIDEWALK
862.01	GUARDRAIL PLACEMENT
862.02	GUARDRAIL INSTALLATION
862.03	STRUCTURE ANCHOR UNITS
1705.01	SIGNAL HEADS - VEHICULAR SIGNALS HEADS
1705.02	SIGNAL HEADS - PEDESTRIAN ASSEMBLIES
1715.01	UNDERGROUND CONDUIT - TRENCHING
1716.01	JUNCTION BOXES
1720.01	WOOD POLES
1721.01	GUY ASSEMBLIES
1730.01	FIBER OPTIC CABLE
1751.01	CONTROLLERS AND CABINETS

PLANS PREPARED IN THE OFFICE OF:
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STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0

CITY OF JACKSONVILLE
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
INDEX OF SHEETS AND
ROADWAY STANDARD DRAWINGS

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J.C. CROSS	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH
SIGNATURE 8/9/11 DATE
CADD Filename:

8/9/2011 $TIME$ susan.pennington ...\600 PSE\MCJDRCR-001A.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	1B

1. INSTALL SMFO CABLE
2. INSTALL FIBER OPTIC DROP CABLE
3. INSTALL TRACER WIRE
4. REUSE EXISTING SMFO CABLE
5. INSTALL PLENUM RATED SMFO CABLE
6. INSTALL LOOP LEAD-IN CABLE
7. INSTALL ETHERNET CABLE

(1) INSTALL PVC CONDUIT
(2) INSTALL POLYETHYLENE CONDUIT
(3) INSTALL RIGID, GALVANIZED STEEL CONDUIT
(4) INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
(5) INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
(6) TRENCH CONDUIT
(7) DIRECTIONAL DRILL CONDUIT
(8) BORE AND JACK CONDUIT
(9) INSTALL CABLE(S) IN EXISTING CONDUIT
(10) INSTALL CABLE(S) IN NEW CONDUIT
(11) INSTALL CABLE(S) IN EXISTING RISER
(12) INSTALL CABLE(S) IN NEW RISER
(13) INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS
(14) INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)
(15) INSTALL NEW RISER INTO POLE MOUNTED CABINET
(16) REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
(17) INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET

◇1 INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
◇2 INSTALL UNDERGROUND SPLICE ENCLOSURE
◇3 INSTALL AERIAL SPLICE ENCLOSURE
◇4 MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
◇5 INSTALL TERMINAL SPLICE BOX

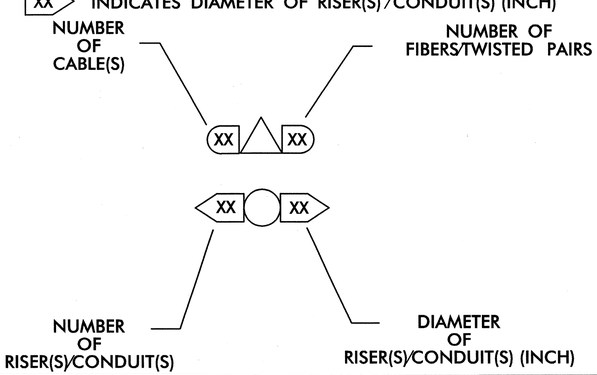
[1] INSTALL CABINET FOUNDATION
[2] REMOVE EXISTING CABINET FOUNDATION
[3] MODIFY EXISTING CABINET FOUNDATION
[4] REMOVE EXISTING CONTROLLER AND CABINET
[5] INSTALL NEW CONTROLLER
[6] INSTALL NEW 332 BASE MOUNTED CABINET
[7] INSTALL NEW 336S BASE MOUNTED CABINET
[8] INSTALL NEW 336S POLE MOUNTED CABINET
[9] INSTALL BASE ADAPTER
[10] INSTALL PRE-FORMED CABINET FOUNDATION PAD
[11] INSTALL STANDARD JUNCTION BOX
[12] INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
[13] INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
[14] INSTALL WOOD POLE
[15] REMOVE EXISTING WOOD POLE
[16] INSTALL AERIAL GUY ASSEMBLY
[17] INSTALL STANDARD GUY ASSEMBLY
[18] INSTALL SIDEWALK GUY ASSEMBLY
[19] INSTALL MESSENGER CABLE
[20] REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
[21] REMOVE EXISTING COMMUNICATIONS CABLE
[22] LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
[23] LASH CABLE(S) TO EXISTING MESSENGER CABLE
[24] LASH CABLE(S) TO NEW MESSENGER CABLE
[25] INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE
[26] STORE 30 FEET OF EACH COMMUNICATIONS CABLE
[27] STORE 100 FEET OF EACH COMMUNICATIONS CABLE
[28] INSTALL FIBER OPTIC DELINEATOR MARKER
[29] BOND MESSENGER CABLE TO POLE GROUND
[30] MODIFY EXISTING ELECTRICAL SERVICE
[31] INSTALL NEW ELECTRICAL SERVICE
[32] INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
[33] INSTALL GENERATOR ANCHOR IN FOUNDATION
[34] RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
[35] RECONNECT GENERATOR POWER INLET BOX
[36] INSTALL CCTV CAMERA ASSEMBLY
[37] INSTALL SMALL DMS ASSEMBLY
[38] INSTALL LARGE DMS ASSEMBLY
[39] INSTALL PEDESTAL STRUCTURE FOR SMALL DMS
[40] INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
[41] INSTALL ETHERNET SWITCH
[42] INSTALL VIDEO CODEC UNIT
[43] REMOVE EXISTING FIBER OPTIC TRANSCEIVER
[44] INSTALL CELLULAR MODEM
[45] INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)
[46] INSTALL 2.4/5.8 GHz RADIO TRANSCEIVER ▽
[47] INSTALL PANEL ANTENNA ▽
[48] INSTALL OMNI-DIRECTIONAL ANTENNA
[49] REMOVE EXISTING WIRELESS HARDWARE
[50] INSTALL NEW EMERGENCY VEHICLE PREEMPTION EQUIPMENT
[51] INSTALL NEW GENERATOR POWER INLET BOX
[52] INSTALL CCTV UNIFIED CABLE
[53] INSTALL ANTENNA CABLE
[54] INSTALL DMS CONTROLLER
[55] INSTALL SOLAR POWER ASSEMBLY

LEGEND

- FO — FO — NEW FIBER OPTIC COMMUNICATIONS CABLE
- EXI — EXISTING COMMUNICATIONS CABLE
- NEW AERIAL GUY ASSEMBLY
- NEW CONDUIT
- EXISTING CONDUIT
- DD — DD — NEW DIRECTIONAL DRILLED CONDUIT
- B&J — B&J — NEW BORED AND JACKED CONDUIT
- EXISTING GUARDRAIL
- NEW GUARDRAIL
- NEW JUNCTION BOX
- EXISTING JUNCTION BOX
- NEW WOOD POLE
- EXISTING WOOD POLE
- (S) NEW AERIAL SPLICE ENCLOSURE
- (S) EXISTING AERIAL SPLICE ENCLOSURE
- NEW METAL POLE
- EXISTING METAL POLE
- EXISTING MAST ARM METAL POLE
- NEW CCTV CAMERA ASSEMBLY
- EXISTING CCTV CAMERA ASSEMBLY
- NEW DYNAMIC MESSAGE SIGN (DMS)
- NEW STANDARD GUY ASSEMBLY
- NEW SIDEWALK GUY ASSEMBLY
- NEW CABLE STORAGE RACKS (SNOW SHOES)
- NEW WIRELESS ANTENNA AND TRANSCEIVER
- NEW BASE MOUNTED EQUIPMENT CABINET
- EXISTING BASE MOUNTED EQUIPMENT CABINET
- NEW POLE MOUNTED EQUIPMENT CABINET
- EXISTING POLE MOUNTED EQUIPMENT CABINET
- NEW SYSTEM DETECTOR
- EXISTING SYSTEM DETECTOR
- XX-XXXX SIGNAL INVENTORY NUMBER
- CITY CITY IT PAY ITEM

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)



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

Transportation Mobility and Safety Division
Intelligent Transportation Systems Section
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE LEGEND

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J.C. CROSS	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE
▽ NEW WIRELESS RADIO DESIGN	KWS	10/28/11

SEAL

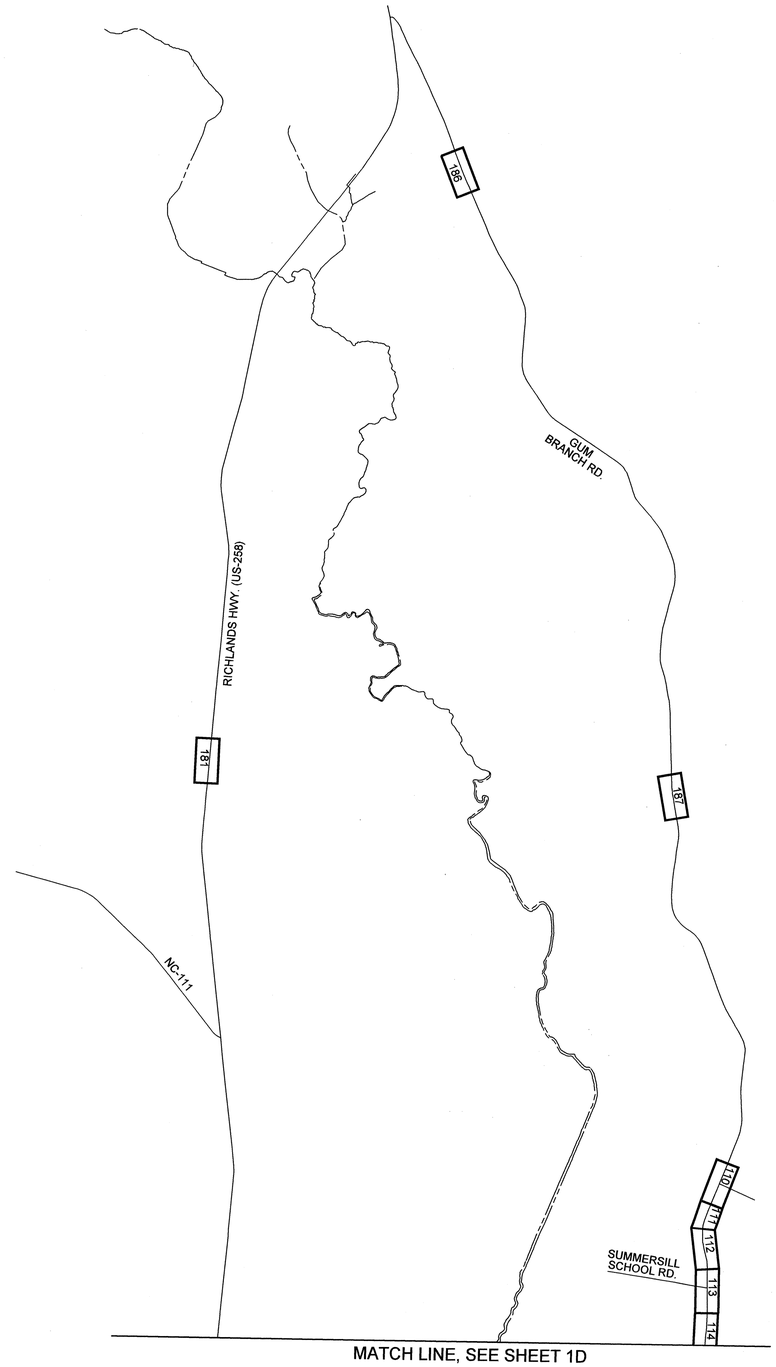
This document originally issued and sealed by Kevin W. Smith, 030472, on 07/20/11. This media shall not be considered a certified document.

SIGNATURE DATE

CADD Filename:

10/28/2011 $TIME$ jerry.cross ...#600 FSSE#CADMGR-001B.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	1C



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STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Mobility and Safety Division
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

PLAN KEY

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J.C. CROSS	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

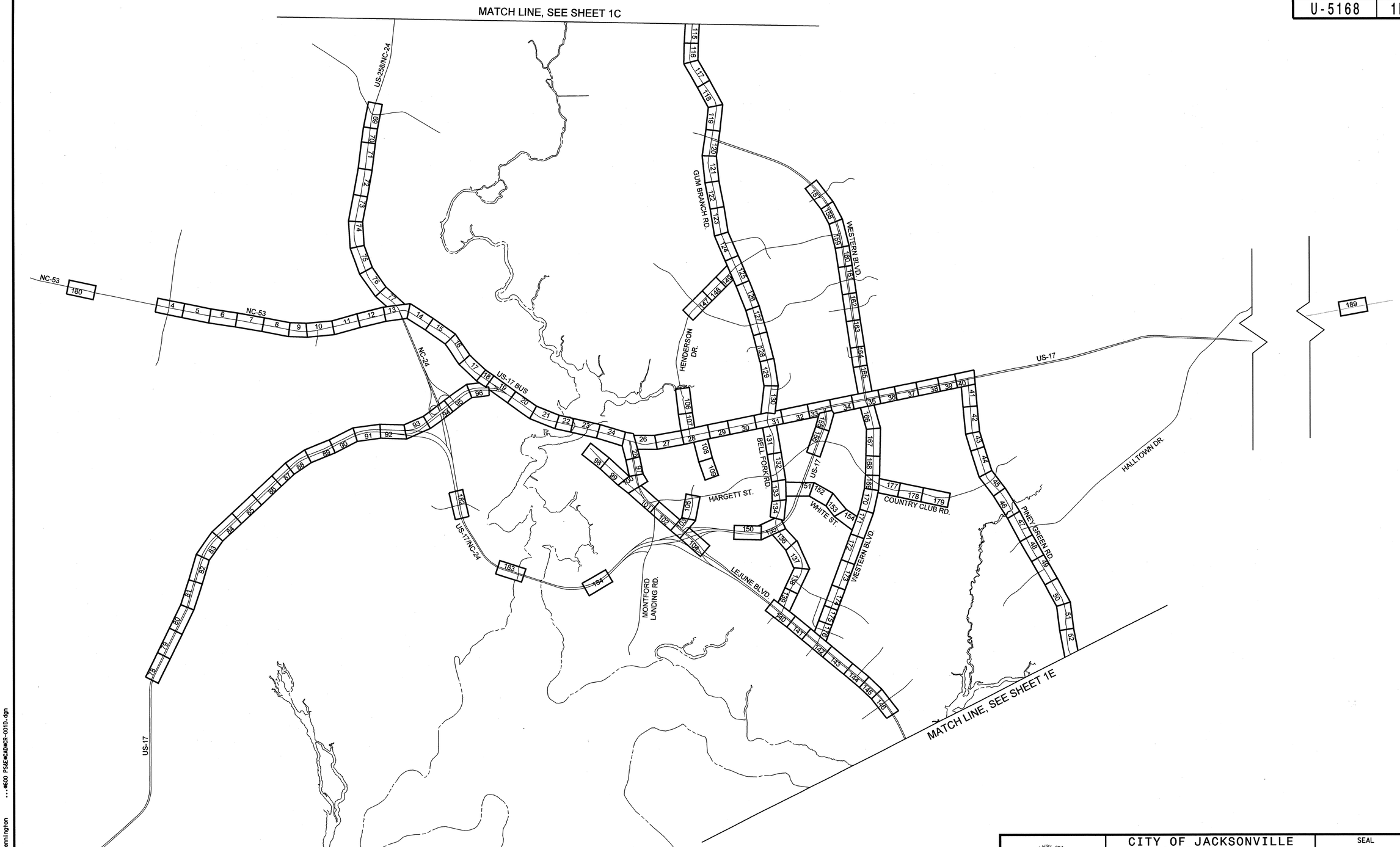
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSAE#CADWCR-001C.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	1D



PLANS PREPARED IN THE OFFICE OF:

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STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Mobility and Safety Division
Statewide Transportation Improvement Program
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

PLAN KEY

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J.C. CROSS	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

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PROJECT REFERENCE NO.	SHEET NO.
U-5168	1E

PLANS PREPARED IN THE OFFICE OF:

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STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Mobility and Safety Division
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE
0

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE
PLAN KEY

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J.C. CROSS	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

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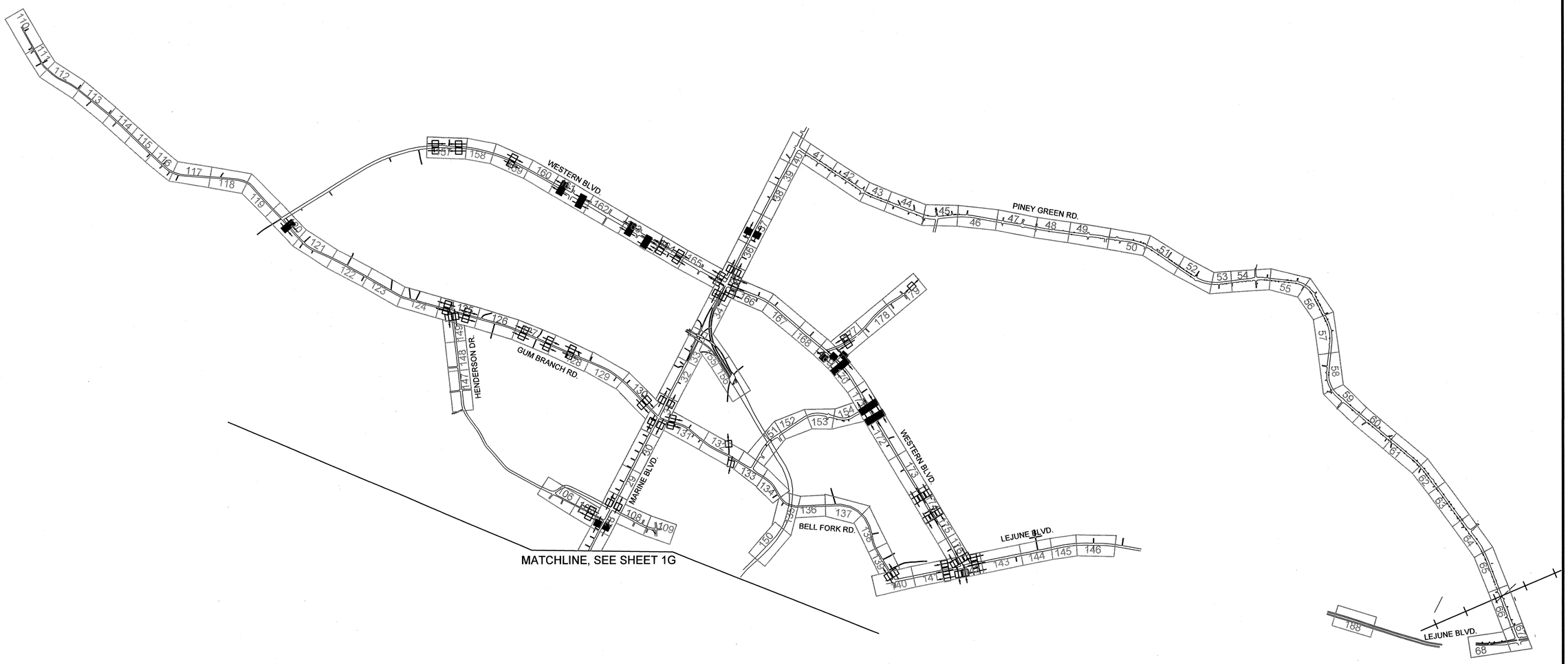
PROJECT REFERENCE NO.	SHEET NO.
U-5168	1F



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STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Mobility and Safety Division
Intermodal Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

SYSTEM DETECTION SCHEMATIC

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J.C. CROSS	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KELVIN W. SMITH

SIGNATURE 7-20-11 DATE

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PROJECT REFERENCE NO.	SHEET NO.
U-5168	1G

PLANS PREPARED IN THE OFFICE OF:

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750 N. Greenfield Pkwy., Garner, NC 27529

SCALE

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

SYSTEM DETECTION SCHEMATIC

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J.C. CROSS	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

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7/19/2011 $TIME$ susan.pennington ...#600 PSE#CADWCR-0016.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	1H

Global System Detector ID	Signal Plan ID
S1	03-0172 S01
S2-1	03-0187 S03
S2-2	03-0187 S04
S3	03-0187 S02
S4	03-0187 S01
S5 *	03-0116 S04
S6 *	03-0116 S05
S7 *	03-0116 S06
S8 *	03-0116 S03
S9 *	03-0116 S02
S10 *	03-0116 S01
S11	03-0174 S01
S12	03-0174 S02
S13	03-0174 S03
S14 *	03-0108 S01
S15 *	03-0108 S02
S16 *	03-0108 S03
S17	03-0114 S03
S18	03-0114 S02
S19	03-0114 S01
S20	03-0094 S03
S21	03-0094 S02
S22	03-0094 S01
S23	03-0095 S01
S24	03-0095 S02
S25	03-0095 S03
S26	03-0115 S02
S27	03-0115 S01
S28	NOT USED
S29	03-0091 S02
S30	03-0091 S01
S31 *	03-0092 S01
S32 *	03-0092 S02
S33	03-0092 S03
S34	03-0092 S04
S35	03-0090 S03
S36	03-0090 S04
S37	03-0090 S08
S38	03-0090 S07
S39	03-0090 S02
S40	03-0090 S01
S41	03-0090 S05
S42	03-0090 S06
S43	03-0124 S03
S44-1	03-0124 S04
S44-2	03-0124 S05

Global System Detector ID	Signal Plan ID
S45	03-0124 S08
S46	03-0124 S07
S47	03-0124 S06
S48	03-0124 S02
S49	03-0124 S01
S50	03-0124 S10
S51	03-0124 S09
S52	03-0825
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S54 **	03-0264
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S56 **	03-0264
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S58 **	03-0851
S59 **	03-0340
S60 **	03-0340
S61 **	03-0568
S62 **	03-0218
S63 **	03-0218
S64 **	03-0218
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S66 **	03-0218
S67	03-0109 S05
S68	03-0109 S04
S69	03-0109 S09
S70	03-0109 S08
S71	03-0109 S07
S72	03-0109 S06
S73-1	03-0109 S01
S73-2	03-0109 S02
S73-3	03-0109 S03
S74	03-0931 S06
S75	03-0931 S05
S76	03-0931 S04
S77	03-0931 S03
S78	03-0931 S02
S79	03-0931 S01
S80	NOT USED
S81	NOT USED
S82	NOT USED
S83	03-0100 S04
S84	03-0100 S05
S85	03-0100 S06
S86	03-0100 S03
S87	03-0100 S02
S88	03-0100 S01

Global System Detector ID	Signal Plan ID
S89	03-0665 S01
S90	03-0103 S07
S91	03-0103 S08
S92	03-0103 S03
S93	03-0103 S02
S94	03-0103 S01
S95	03-0103 S04
S96	03-0103 S05
S97	03-0103 S06
S98	03-0111 S01
S99	03-0112 S05
S100	03-0112 S06
S101	03-0112 S07
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S105-1	03-0112 S02
S105-2	03-0112 S01
S106	03-0384
S107	03-0384
S108	03-0384
S109	03-0173 S03
S110	03-0173 S04
S111	03-0173 S06
S112	03-0173 S05
S113	03-0173 S02
S114	03-0173 S01
S115	03-0588 S03
S116	03-0588 S04
S117	03-0588 S02
S118	03-0588 S01
S119	03-0411 S02
S120	03-0411 S01
S121	03-0106 S02
S122	NOT USED
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S124	03-0117
S125	03-0117
S126	03-0121 S04
S127	03-0121 S05
S128	03-0121 S06
S129	03-0121 S11
S130	03-0121 S10
S131	03-0121 S03
S132	03-0121 S02
S133	03-0121 S01

Global System Detector ID	Signal Plan ID
S134	03-0121 S09
S135	03-0121 S08
S136	03-0121 S07
S137	03-1015 S02
S138	03-1015 S01
S139	03-1015 S04
S140	03-1015 S03
S141	03-0776 S02
S142	03-0776 S01
S143 *	03-0822 S01
S144 *	03-0822 S02
S145 *	03-0822 S04
S146 *	03-0822 S03
S147-1 *	03-0828 S03
S147-2 *	03-0828 S04
S148 *	03-0828 S05
S149 *	03-0828 S02
S150 *	03-0828 S01
S151-1	03-0750 S03
S151-2	03-0750 S04
S152	03-0750 S05
S153	03-0750 S02
S154	03-0750 S01
S155 *	03-0169 S06
S156 *	03-0169 S05
S157 *	03-0169 S04
S158 *	03-0169 S01
S159 *	03-0169 S02
S160 *	03-0169 S03
S161 *	03-0558 S01
S162 *	03-0558 S02
S163 *	03-0558 S03
S164 *	03-0558 S06
S165 *	03-0558 S05
S166 *	03-0558 S04
S167	03-0144 S01
S168	03-0144 S02
S169	03-0144 S03
S170	03-0144 S06
S171	03-0144 S05
S172	03-0144 S04
S173	03-0527 S01
S174	03-0527 S02
S175	03-0664 S01

* Existing System Detector

** Future System Detector To Be Designed and Installed Under U-3810

PLANS PREPARED IN THE OFFICE OF:

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

750 N. Greenfield Pkwy., Garner, NC 27529

SCALE

CITY OF JACKSONVILLE
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
SYSTEM DETECTION KEY

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J.C. CROSS	REVIEWED BY:	T.F. BURCHETT

REVISIONS INIT. DATE

SEAL

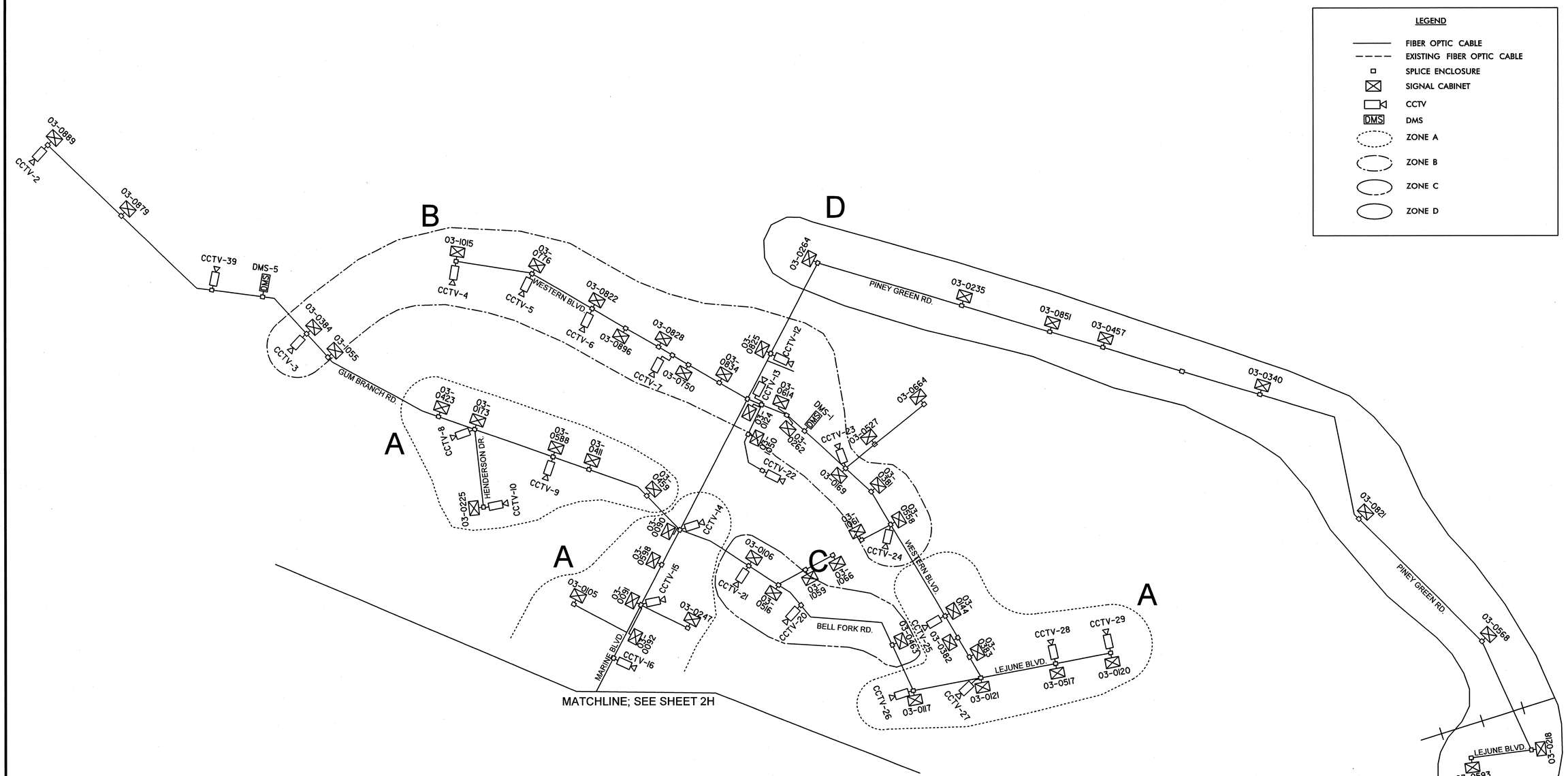
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSSE-MCADM03-0011L.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	1J



NOTES:

1. SIGNALS WITHIN EACH ZONE HAVE BEEN PLACED INTO GROUPINGS FOR REPLACEMENT/UPGRADE. SEE PROJECT SPECIAL PROVISIONS.
2. ZONE A AND B SIGNALS MAY BE UPGRADED AT ANY TIME SUCH THAT THE ENTIRE EXISTING CLOSED LOOP SYSTEM IS DOWN AT THE SAME TIME. CONTRACTOR SHALL HAVE CUMMUNICATIONS UP AND RUNNING EXISTING TIME-OF-DAY COORDINATED TIMING PLANS WITHIN TURN AROUND TIME NO GREATER THAN 1 DAY PER SIGNAL IN EXISTING CLOSED LOOP SYSTEM.
3. ZONE B SIGNALS SHALL BE UPGRADED AFTER ZONE A SIGNALS AND FOLLOWING THE COMPLETION OF PLANNED ROADWAY RESURFACING PROJECTS.
4. ZONE C SIGNALS SHALL BE UPGRADED FOLLOWING THE COMPLETION OF PLANNED ROADWAY RESURFACING PROJECTS.
5. ZONE D SIGNALS WILL BE UPGRADED AND INTEGRATED UNDER U-3810 ROADWAY WIDENING PROJECT. FIBER OPTIC CABLE SHALL BE INSTALLED IN ZONE D FIRST AND FOLLOWING THE RELOCATION OF EXISTING UTILITY POLES UNDER U-3810.
6. ALL SIGNALS NOT IN ZONE A, B, C, OR D MAY BE UPGRADED AT ANY TIME.

PLANS PREPARED IN THE OFFICE OF:

Kimley-Horn and Associates, Inc.
P.O. Box 33068
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Transportation Mobility and Safety Division
Intelligent Transportation Systems
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

SEQUENCE OF CONSTRUCTION

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J.C. CROSS	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

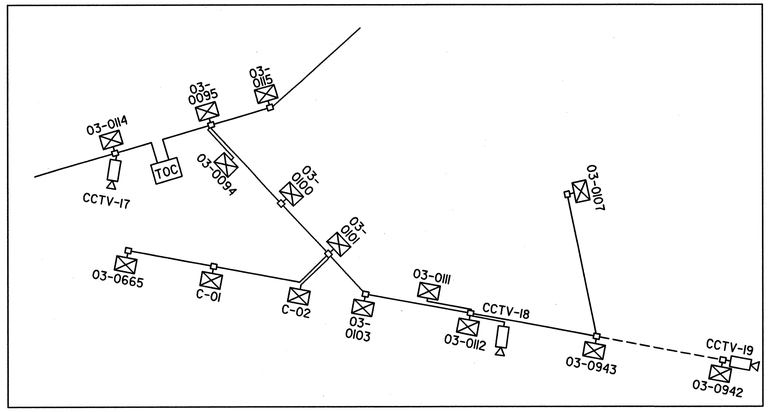
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE K.W. Smith DATE 7-20-11

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSE#CADWCR-001J.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	1K



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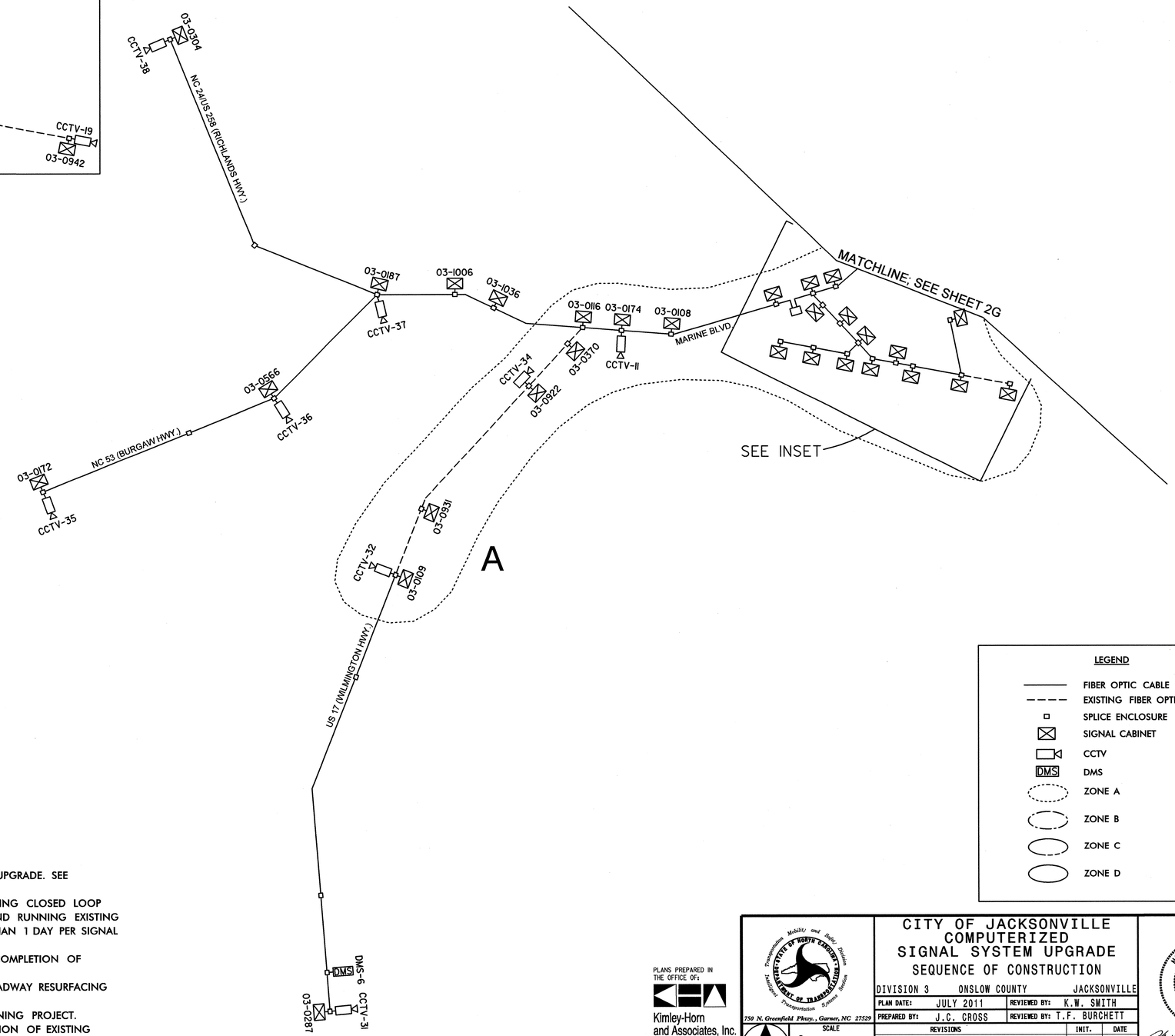

LEGEND

- FIBER OPTIC CABLE
- EXISTING FIBER OPTIC CABLE
- SPLICE ENCLOSURE
- SIGNAL CABINET
- CCTV
- DMS
- ZONE A
- ZONE B
- ZONE C
- ZONE D

NOTES:

1. SIGNALS WITHIN EACH ZONE HAVE BEEN PLACED INTO GROUPINGS FOR REPLACEMENT/UPGRADE. SEE PROJECT SPECIAL PROVISIONS.
2. ZONE A AND B SIGNALS MAY BE UPGRADED AT ANY TIME SUCH THAT THE ENTIRE EXISTING CLOSED LOOP SYSTEM IS DOWN AT THE SAME TIME. CONTRACTOR SHALL HAVE COMMUNICATIONS UP AND RUNNING EXISTING TIME-OF-DAY COORDINATED TIMING PLANS WITHIN TURN AROUND TIME NO GREATER THAN 1 DAY PER SIGNAL IN EXISTING CLOSED LOOP SYSTEM.
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4. ZONE C SIGNALS SHALL BE UPGRADED FOLLOWING THE COMPLETION OF PLANNED ROADWAY RESURFACING PROJECTS.
5. ZONE D SIGNALS WILL BE UPGRADED AND INTEGRATED UNDER U-3810 ROADWAY WIDENING PROJECT. FIBER OPTIC CABLE SHALL BE INSTALLED IN ZONE D FIRST AND FOLLOWING THE RELOCATION OF EXISTING UTILITY POLES UNDER U-3810.
6. ALL SIGNALS NOT IN ZONE A, B, C, OR D MAY BE UPGRADED AT ANY TIME.

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

750 N. Greenfield Pkwy., Garner, NC 27529

SCALE

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

SEQUENCE OF CONSTRUCTION

DIVISION 3	ONSLOW COUNTY	JACKSONVILLE	
PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J.C. CROSS	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

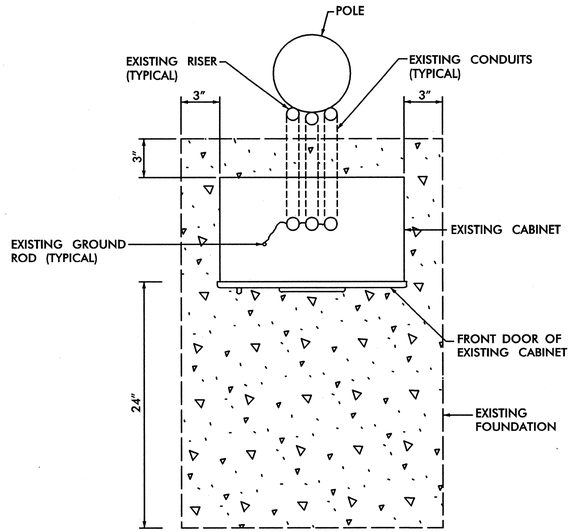
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-25-11 DATE

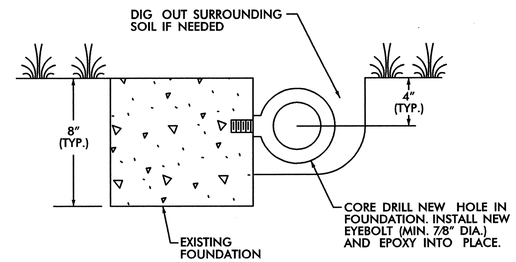
CADD Filename:

7/25/2011 $TIME$ susan.pennington ...#600 PS&E#C/UDACR-001K.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	2

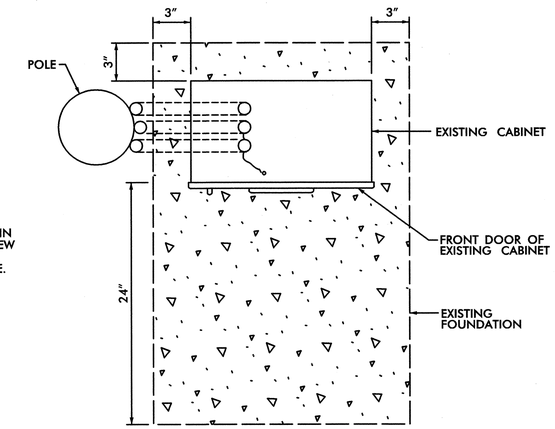


EXISTING FOUNDATION (TYPICAL)

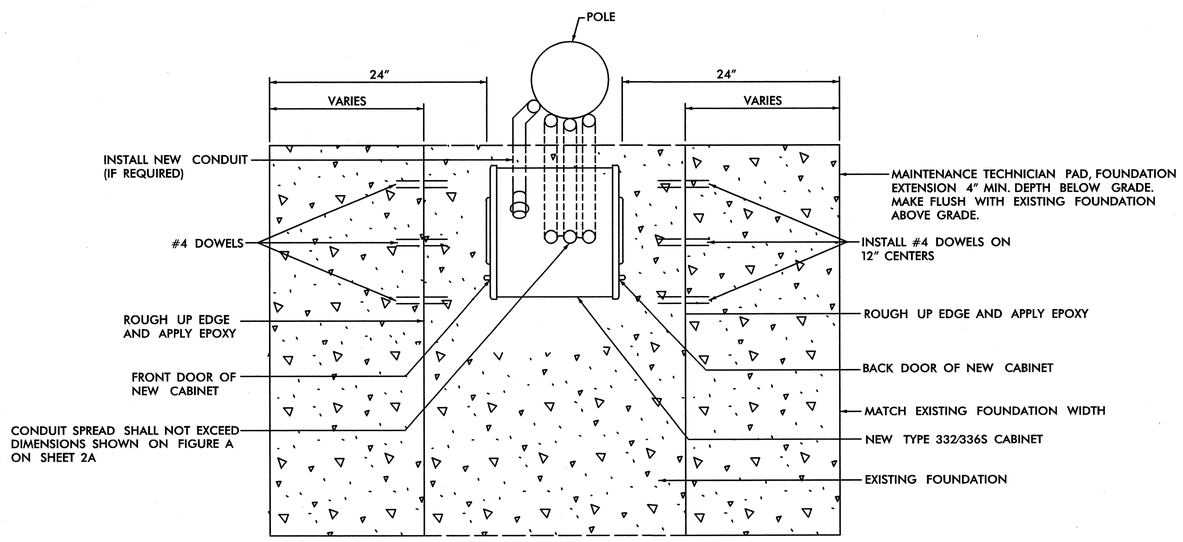


TYPICAL GENERATOR ANCHOR

ELEVATION

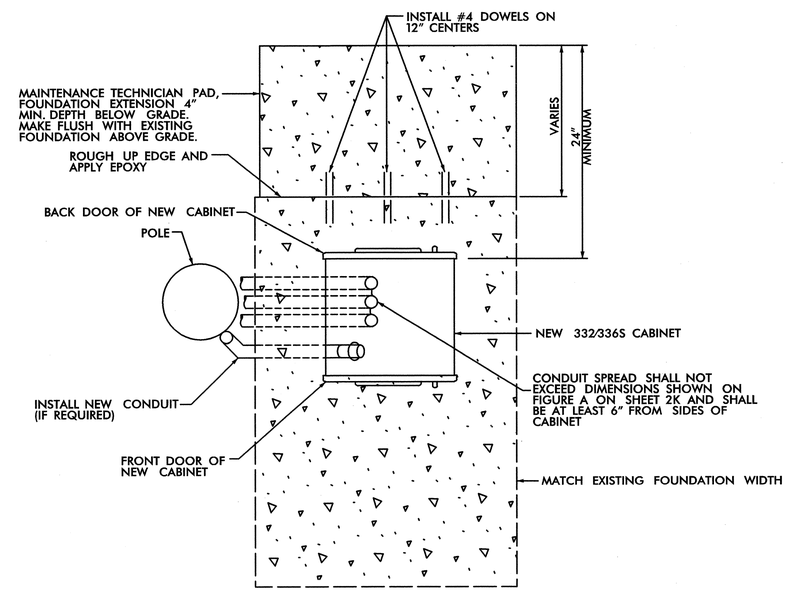


EXISTING FOUNDATION (TYPICAL)



MODIFIED FOUNDATION PLAN

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



MODIFIED FOUNDATION PLAN

NEW MODEL 332/336S CABINETS ON MODIFIED FOUNDATION WITH SAME ORIENTATION AS EXISTING NEMA CABINET

PLANS PREPARED IN THE OFFICE OF:

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

Transportation Mobility and Safety Division
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABINET FOUNDATION DETAILS

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J.C. CROSS	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

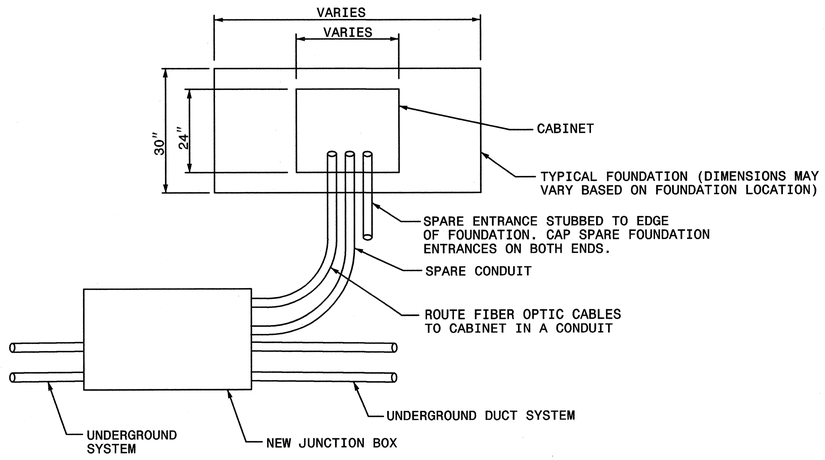
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 FSE#CADWCR-002.dgn

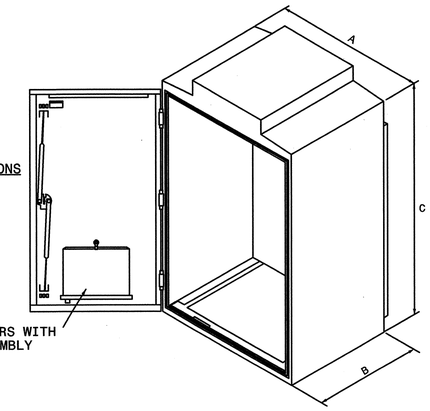
PROJECT REFERENCE NO.	SHEET NO.
U-5168	2A



ROUTING OF CABLE TO BASE MOUNT CABINET (PLAN)

CABINET HOUSING DIMENSIONS

332		336S	
A	24"	A	24"
B	30"	B	20"
C	64"	C	46"

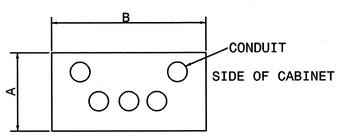


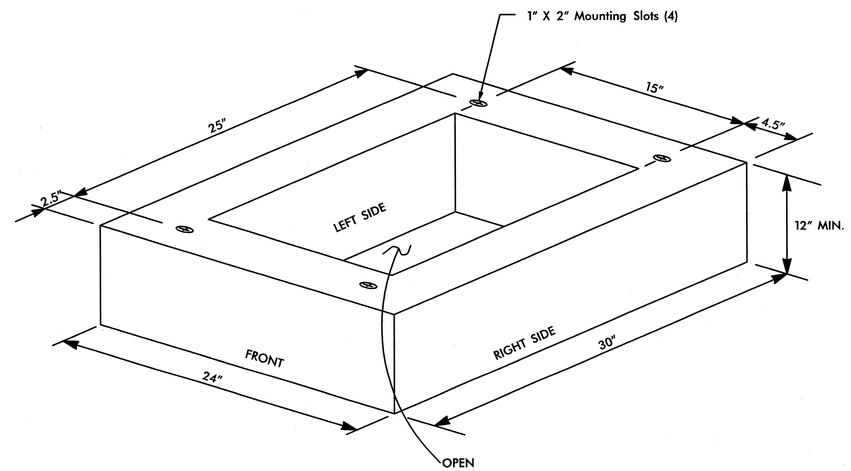
EQUIPMENT CABINET SIZES

FIGURE A

ACCEPTABLE CONDUIT SPREAD

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

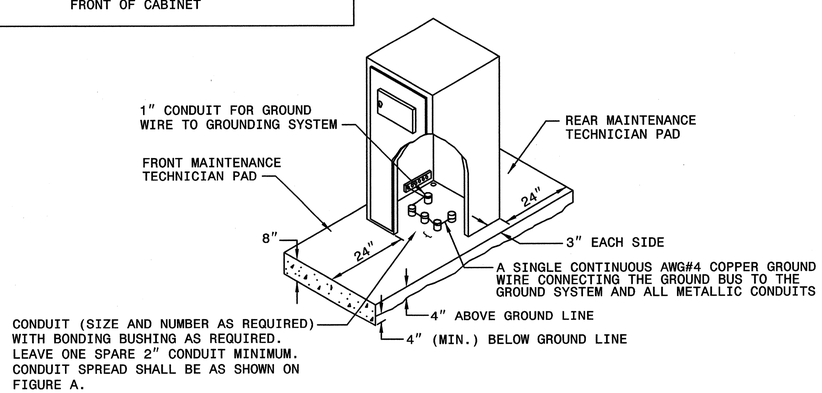




BASE EXTENSION FOR 332 CABINET

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.



TYPICAL BASE MOUNTED CABINET (NEW STANDARD FOUNDATION)

PLANS PREPARED IN THE OFFICE OF:

Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
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STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Mobility and Safety Division
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE: 0

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABINET DETAILS

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J.C. CROSS	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

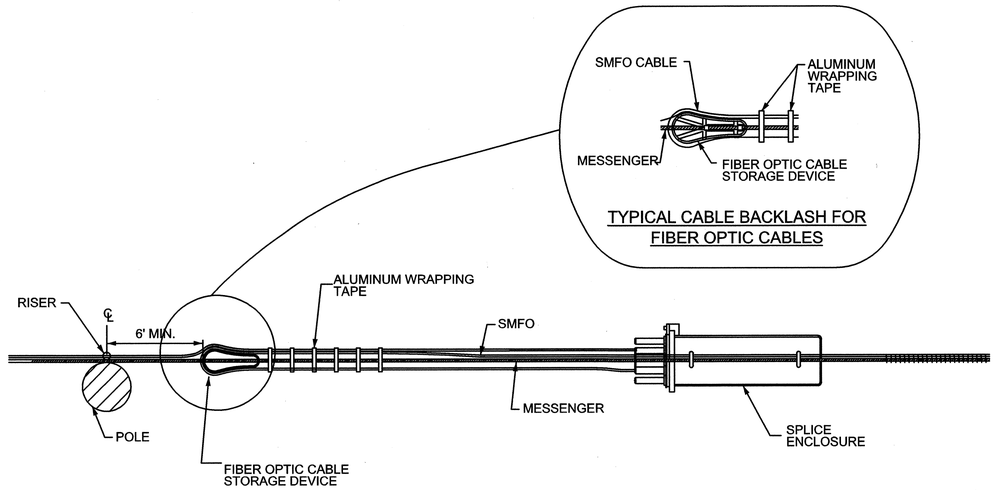
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE: 7-20-11 DATE

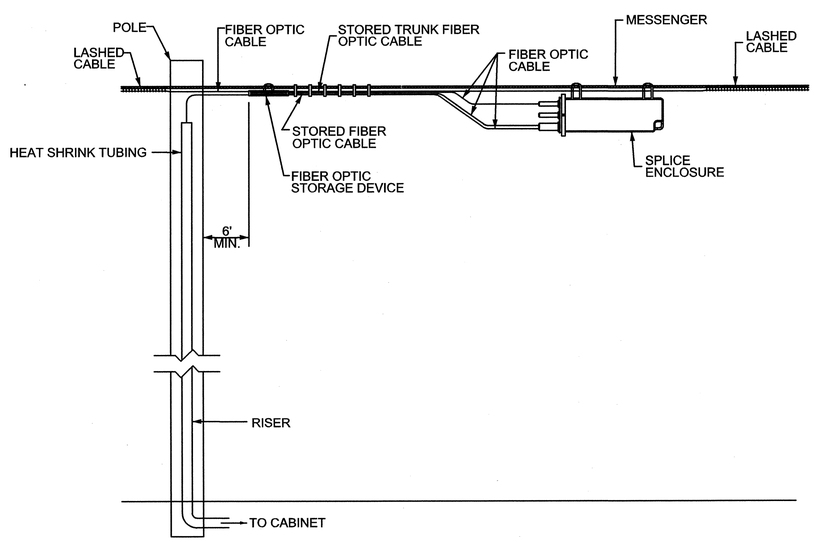
CADD Filename:

7/19/2011 $TIME$ susan.pennington ...\R600 PSLE\CADRCR-002A.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	2B



PLAN VIEW



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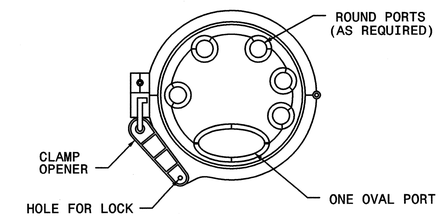
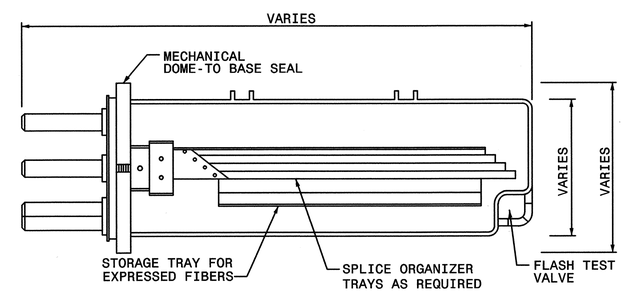


FRONT



SIDE

FIBER OPTIC SPLICE ENCLOSURE

PLANS PREPARED IN THE OFFICE OF:

Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
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Transportation Mobility and Safety Division
Intermodal Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0

CITY OF JACKSONVILLE
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
SPLICE ENCLOSURE DETAILS

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
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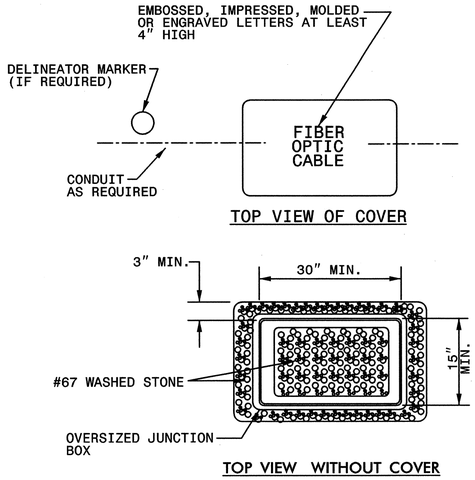
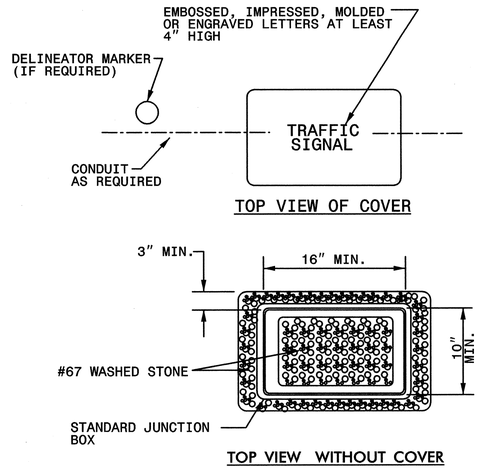
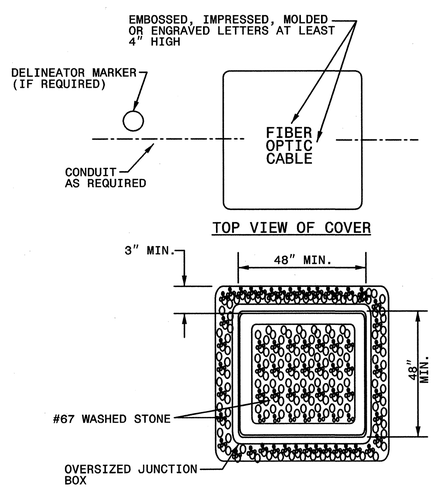
7/19/2011 $TIME$ susan.pennington ...#600 PSLE#CADNOR-0028.dgn



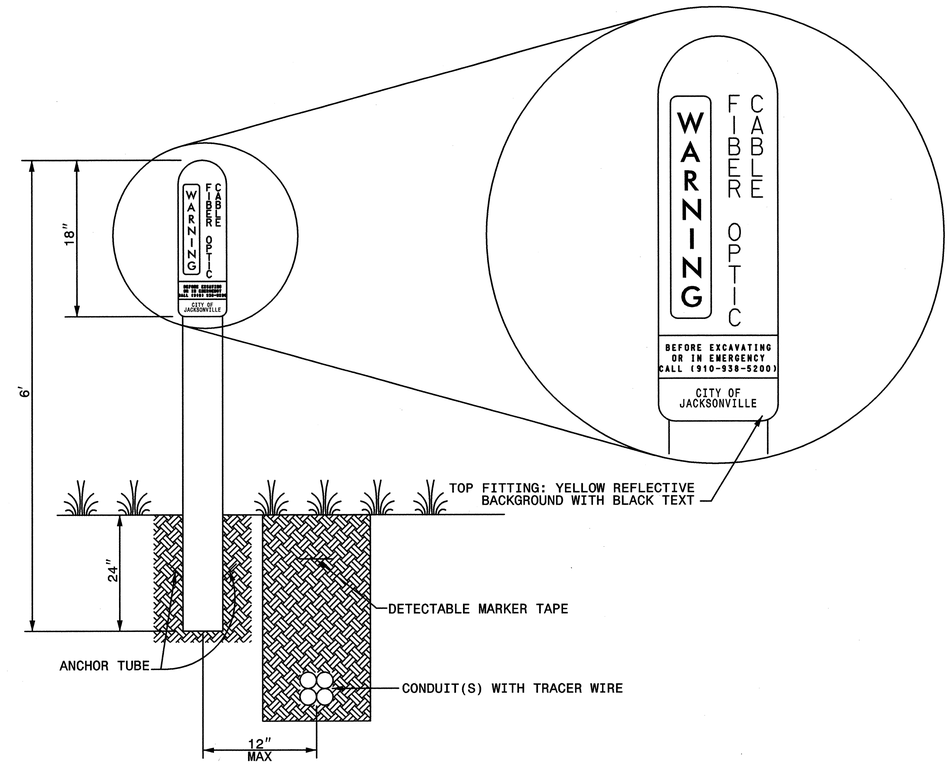
OVERSIZED HEAVY DUTY JUNCTION BOX
TYPICAL DETAIL



STANDARD JUNCTION BOX
TYPICAL DETAIL



SPECIAL OVERSIZED 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.

PLANS PREPARED IN THE OFFICE OF:

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

Transportation Mobility and Safety Division
Management Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE: 0

CITY OF JACKSONVILLE
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
JUNCTION BOX AND
DELINEATOR DETAILS

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J.C. CROSS	REVIEWED BY:	T.F. BURCHETT

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SEAL
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SIGNATURE 7-20-11 DATE

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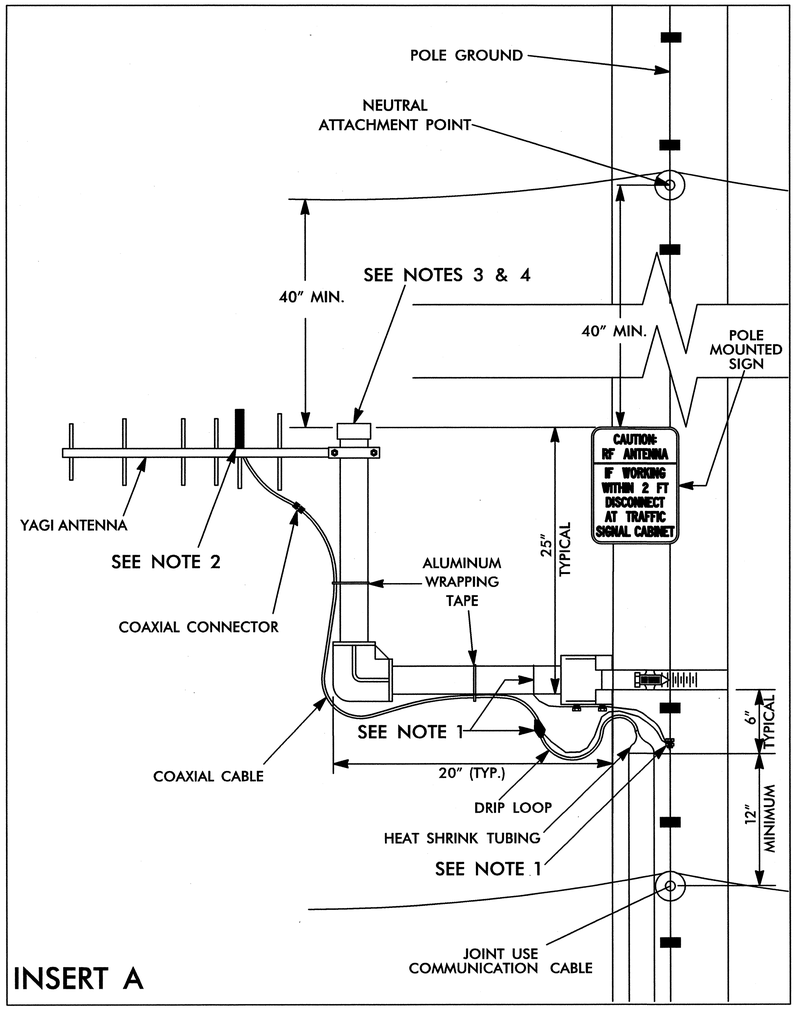
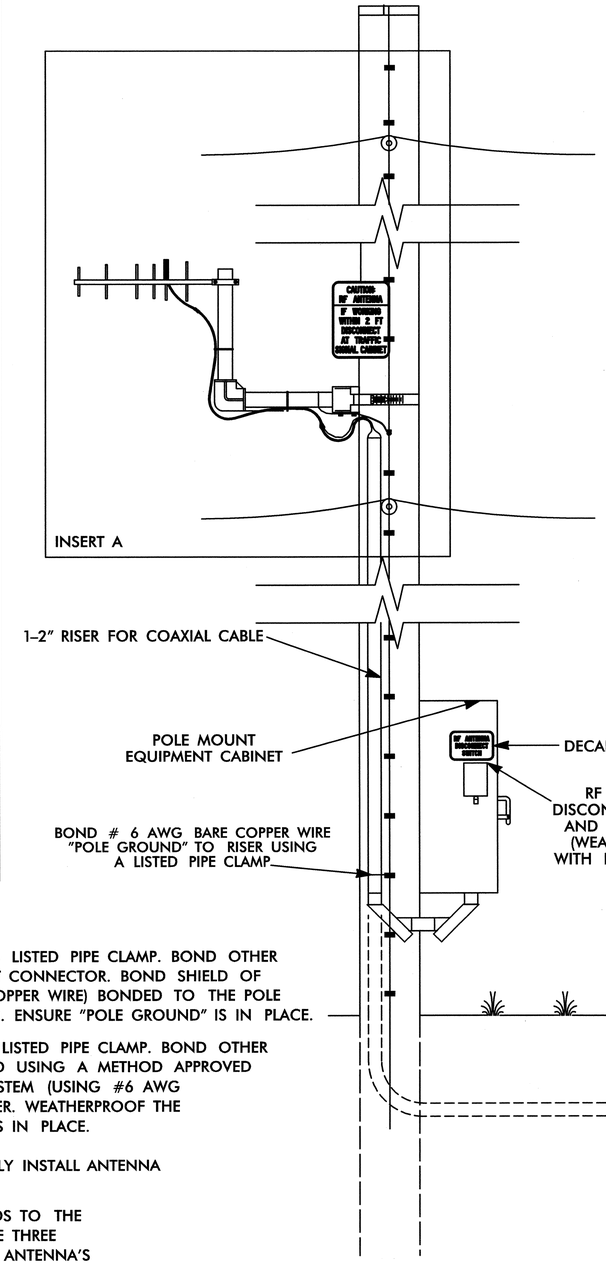
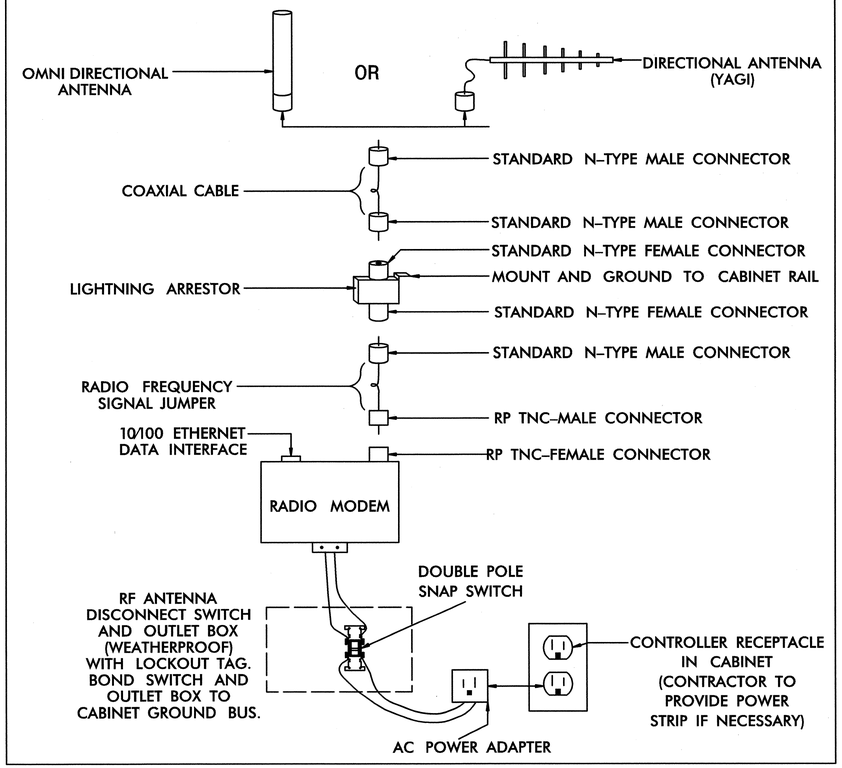
7/19/2011 $TIME$ susan.pennington ...#600 PSE#4DWGR-002C.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	2D





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 THREE 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) INSTALL 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:
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Transportation Mobility and Safety Division
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intermodal Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE: 0

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

WIRELESS RADIO DETAILS

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
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SEAL
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SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...\600 PSE\RCJDMCR-0020.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	2E

DECAL

SIGN NUMBER: SP05224
TYPE: DECAL
QUANTITY:

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:

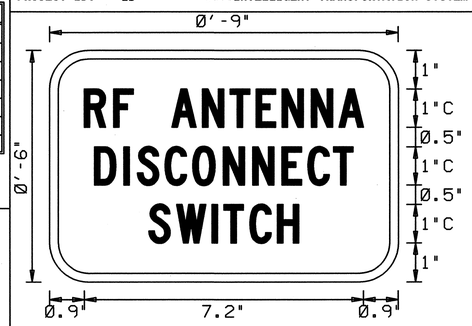
BACKG COLOR: Yellow
COPY COLOR: Black

SYMBOL	X	Y	WID	HT

MAT'L: 0.063" (1.6 mm) ALUMINUM

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:

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



BORDER
R=1"
TH=Ø.25"

NOTE: THIS SIGN SHALL BE PRODUCED AS A DECAL

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:

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:

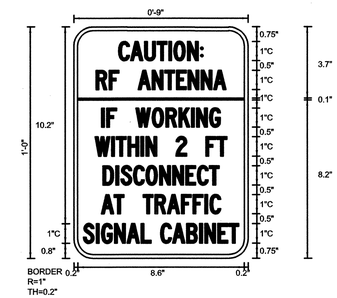
BACKG COLOR: Yellow
COPY COLOR: Black

SYMBOL	X	Y	WID	HT
BAR	0.2	8.2	8.6	1.0

MAT'L: 0.063" (1.6 mm) ALUMINUM

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:

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



0.60 SPACING FACTOR

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

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

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Mobility and Safety Division
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE
0

CITY OF JACKSONVILLE
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
WIRELESS RADIO DETAILS

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

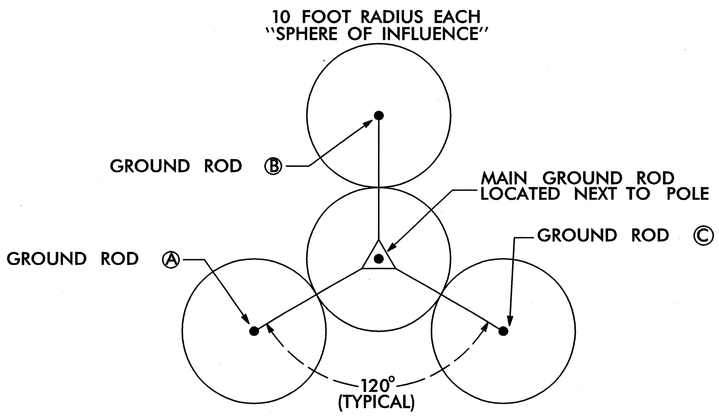
PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J.C. CROSS	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH
SIGNATURE 7-20-11 DATE
CADD Filename:

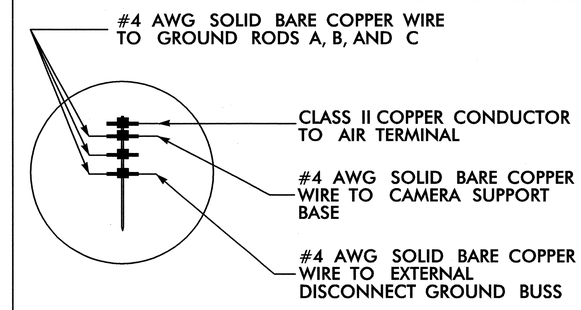
7/19/2011 $TIME$ susan.pennington ...#600 PSAE#CADWCR-002E.dgn

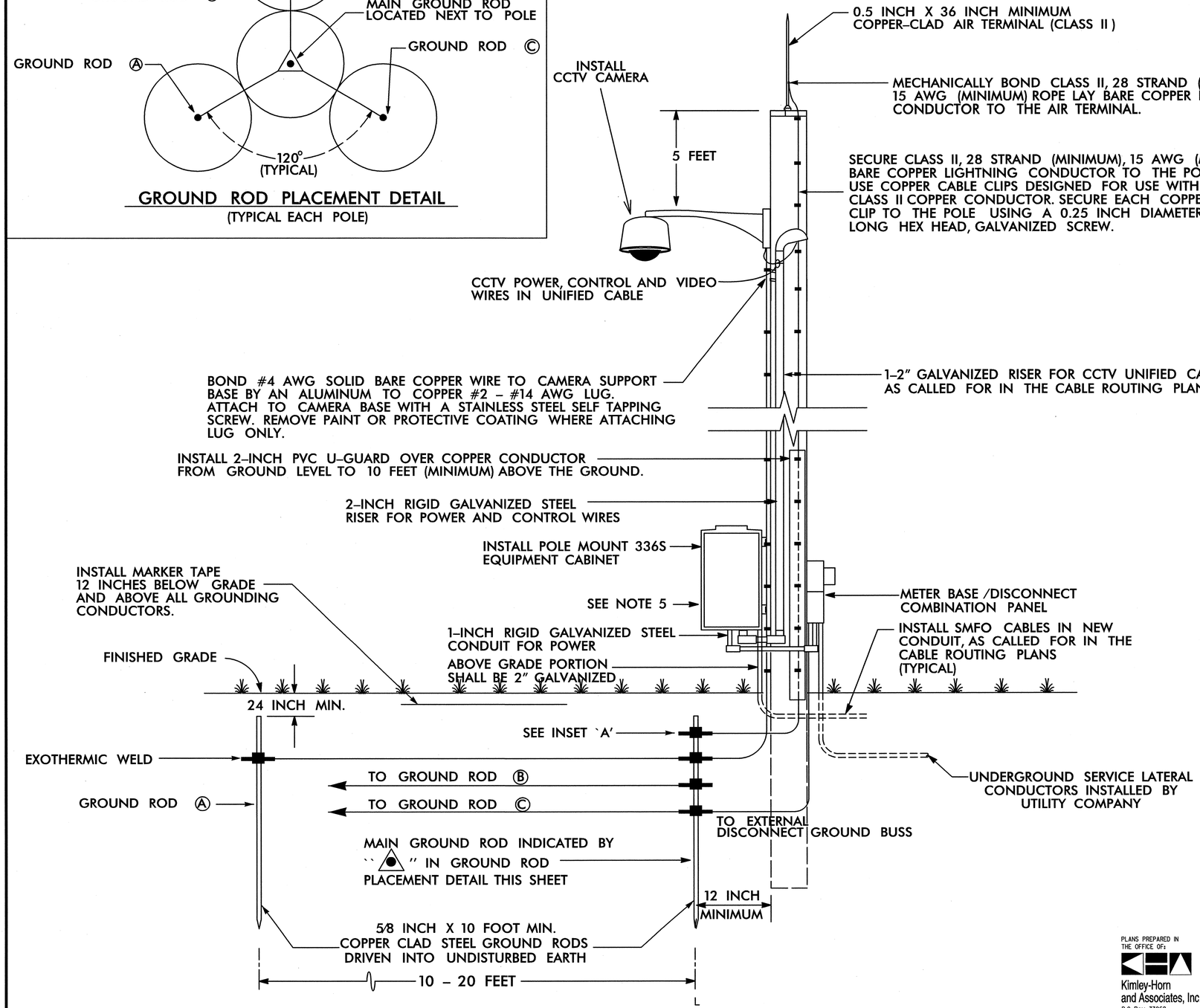
PROJECT REFERENCE NO.	SHEET NO.
U-5168	2F



GROUND ROD PLACEMENT DETAIL

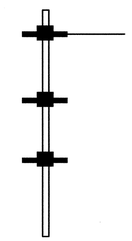
(TYPICAL EACH POLE)





ALTERNATE GROUNDING METHOD

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



JOIN SECTIONAL GROUND RODS BY EXOTHERMIC WELDING CONNECTION

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 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0

CITY OF JACKSONVILLE
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
WOOD POLE CCTV WITH
UNDERGROUND SERVICE

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J.C. CROSS	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

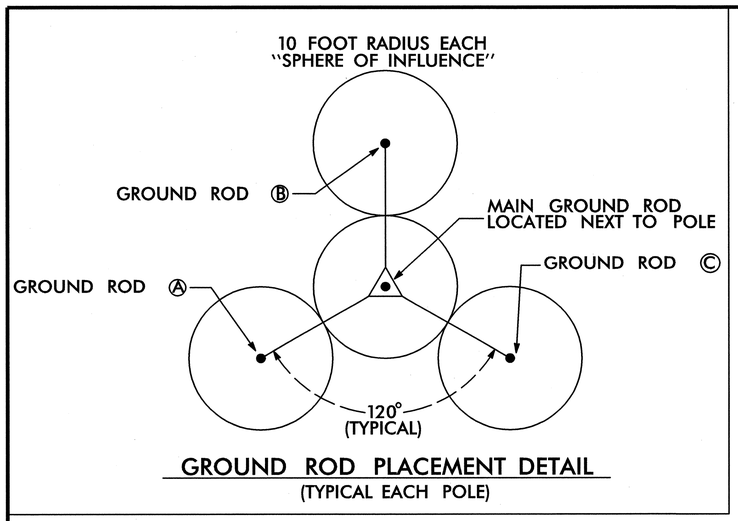
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE K.W. Smith DATE 7-20-11

CADD Filename:

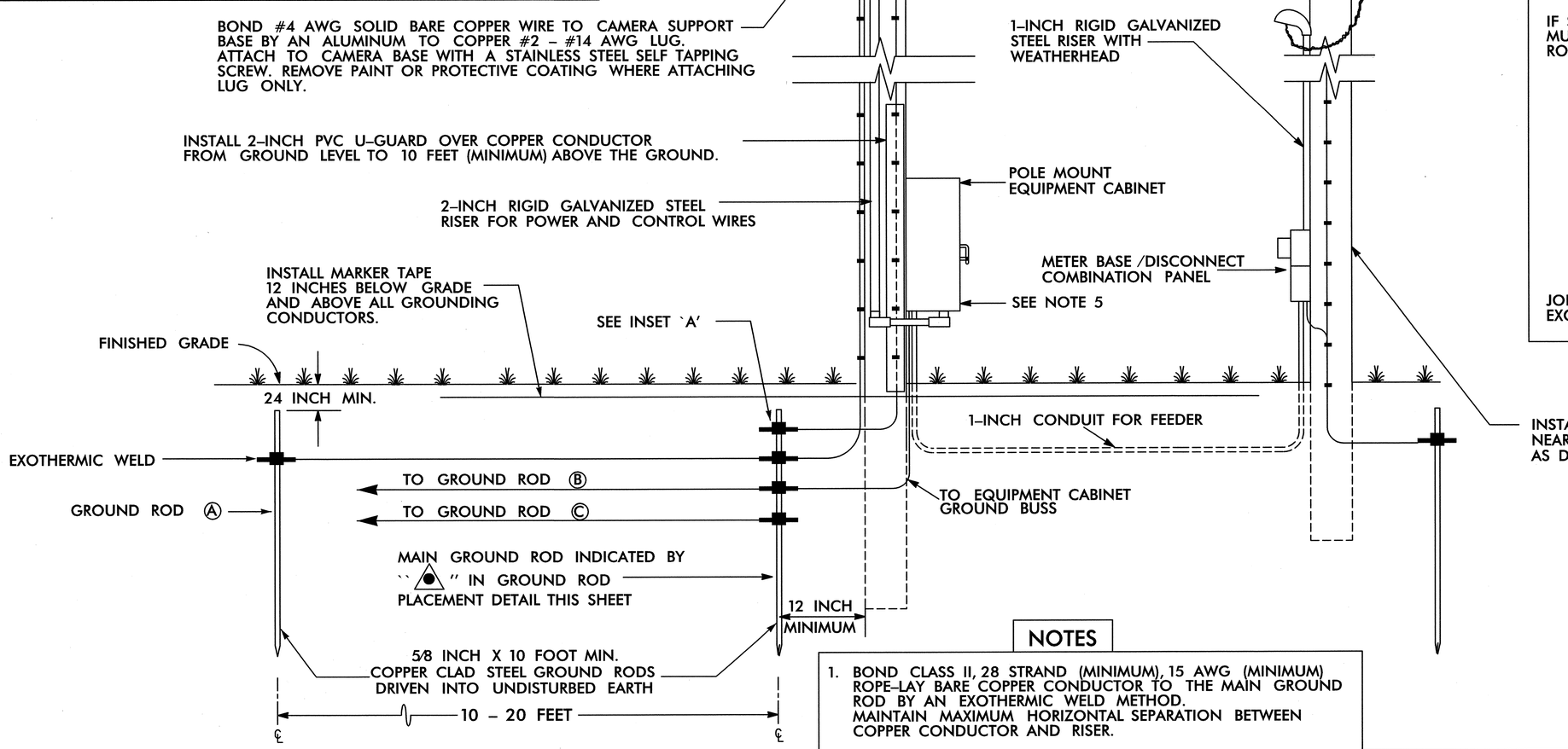
7/19/2011 $TIME$ susan.pennington ...#600 PSE#KJHNCR-002F.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	2G

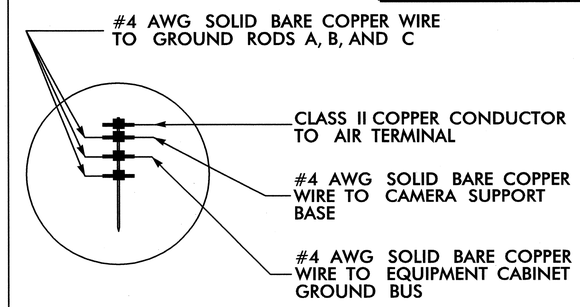


GROUND ROD PLACEMENT DETAIL

(TYPICAL EACH POLE)

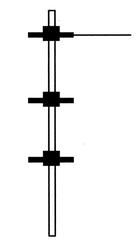


INSET `A'



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 BUS AND NEUTRAL BUS.

Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intermodal Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0

CITY OF JACKSONVILLE
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
WOOD POLE CCTV WITH OVERHEAD SERVICE

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J.C. CROSS	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

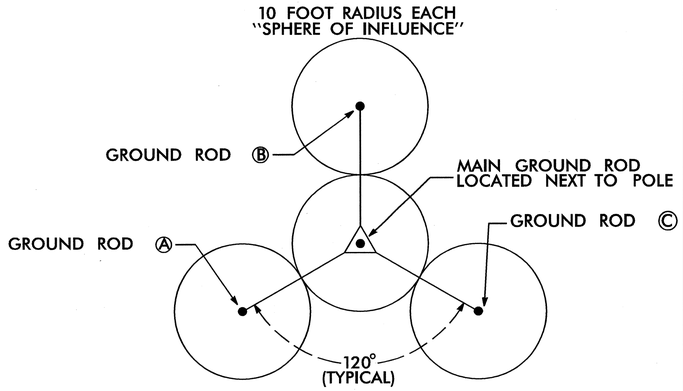
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

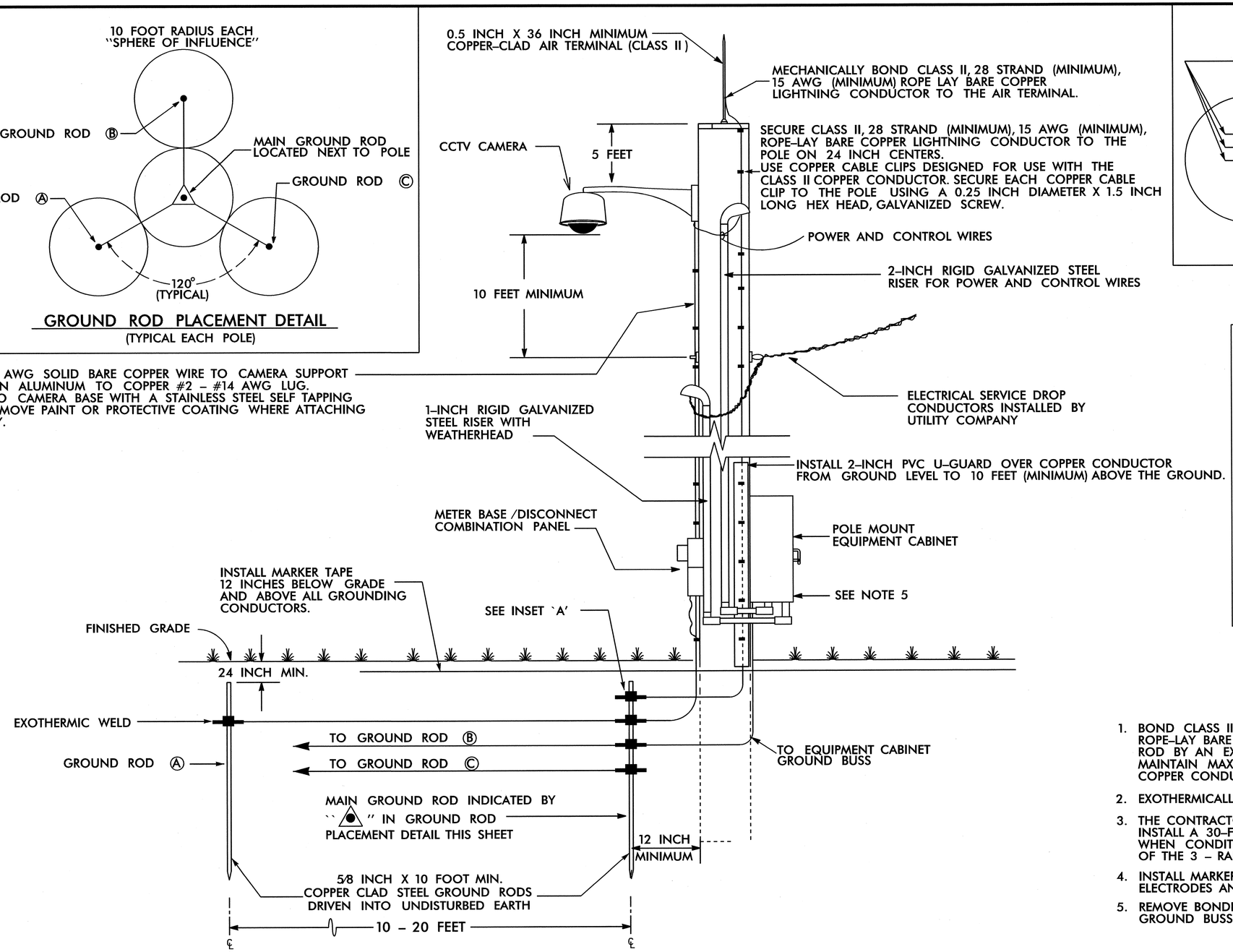
7/19/2011 $TIME$ susan.pennington ...\R600 PS&E\ADMCR-002G.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	2H

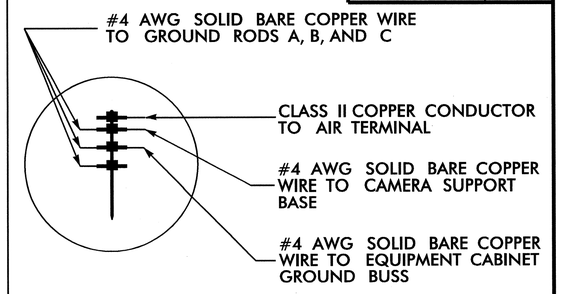


GROUND ROD PLACEMENT DETAIL

(TYPICAL EACH POLE)

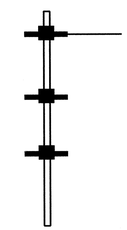


INSET `A'



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

Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 N. Greenfield Pkwy., Garner, NC 27529

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE WOOD POLE CCTV WITH OVERHEAD SERVICE

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J.C. CROSS	REVIEWED BY:	T.F. BURCHETT

SCALE 0

REVISIONS	INIT.	DATE

SEAL

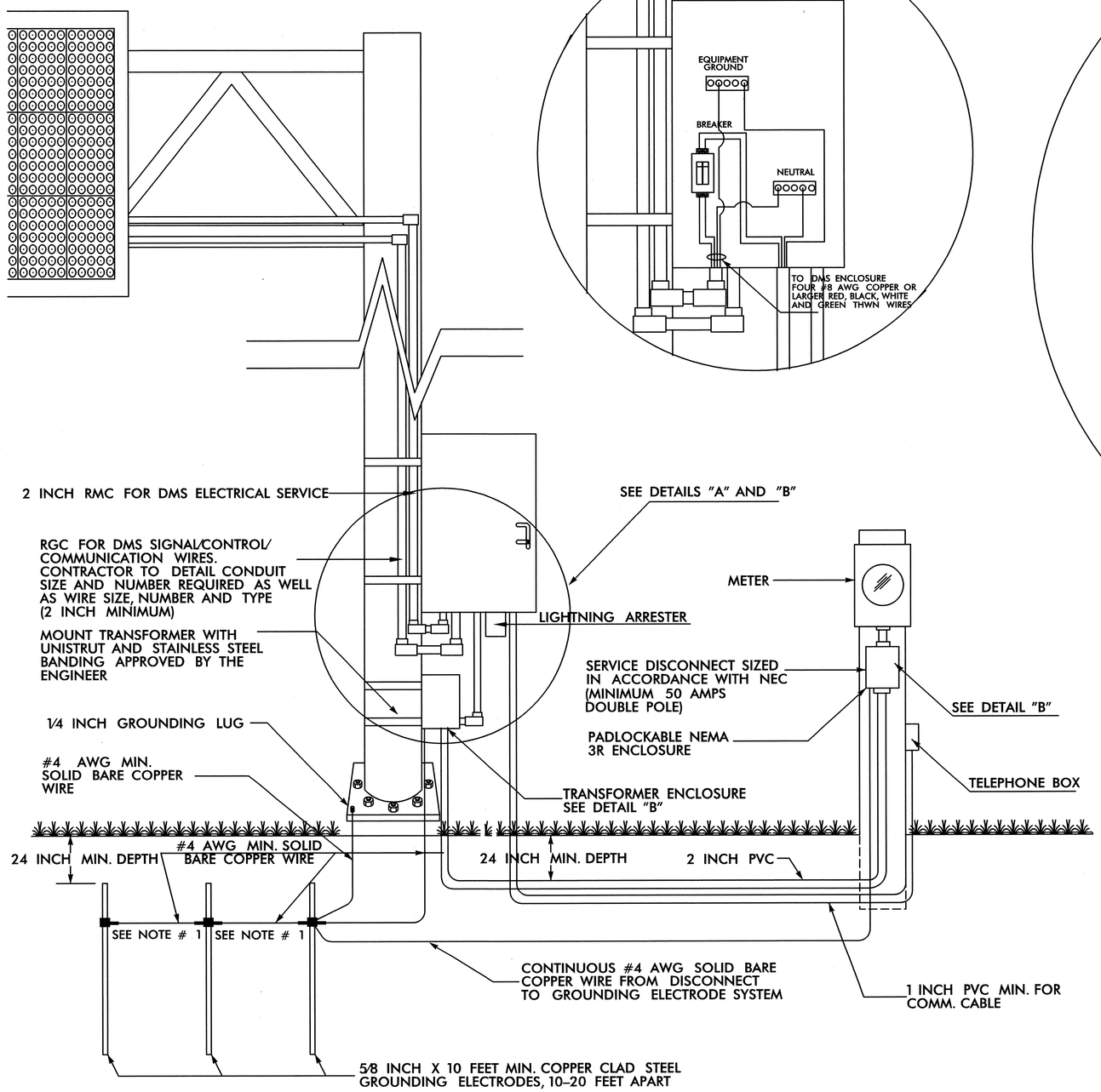
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

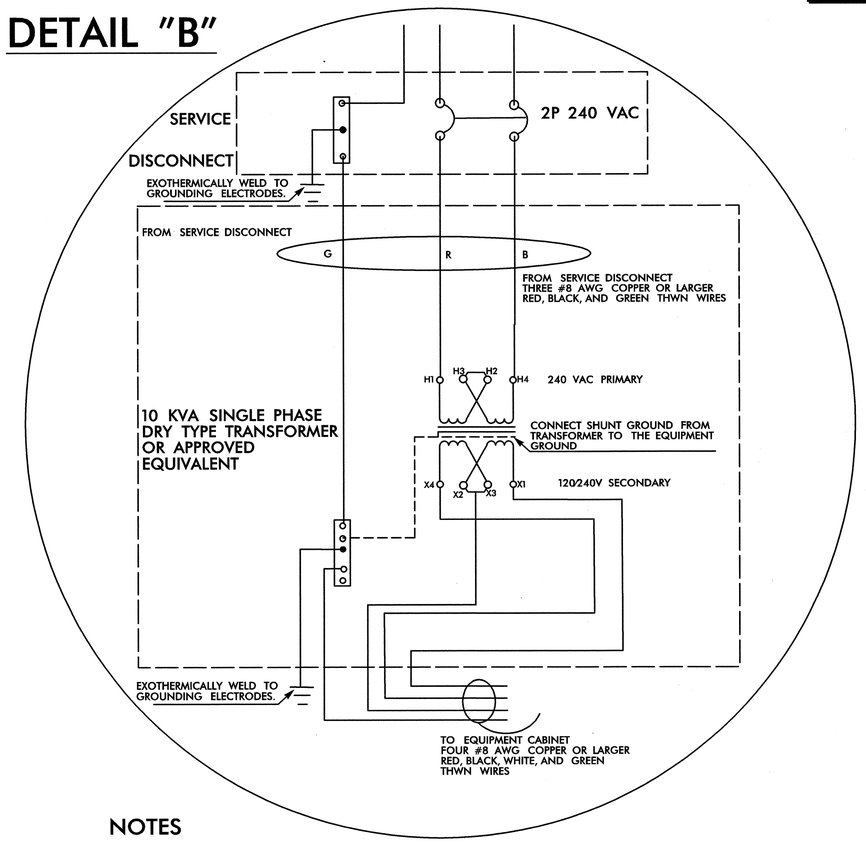
SIGNATURE 7-25-11 DATE

CADD Filenames

7/25/2011 $TIME$ susan.pennington ...#600 PSSE#CAD#CR-002H.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	2J





NOTES

1. INSTALL A MINIMUM OF THREE GROUND RODS SPACED A MINIMUM OF 10 FEET APART. ENSURE THAT EXISTING UNDERGROUND FACILITIES ARE NOT DAMAGED DURING INSTALLATION.
2. TEST GROUNDING SYSTEM USING AN APPROVED METHOD. SYSTEM SHALL MEASURE TWENTY (20) OHMS OR LESS. ADDITIONAL GROUND RODS SHALL BE INSTALLED AS DIRECTED BY THE ENGINEER TO MEET THIS REQUIREMENT.
3. EXOTHERMICALLY WELD ALL CONNECTIONS TO GROUND RODS.
4. INSTALL MARKER TAPE DIRECTLY ABOVE ALL GROUNDING ELECTRODES AND CONDUCTORS AT A DEPTH OF 12 INCHES.
5. EXOTHERMICALLY WELD THE SERVICE POLE GROUND WIRE TO THE GROUND ROD SYSTEM.
6. REMOVE BONDING JUMPER BETWEEN EQUIPMENT GROUND AND AC NEUTRAL IN THE EQUIPMENT CABINET.
7. BOND ALL RIGID GALVANIZED STEEL CONDUITS ENTERING THE CABINET TO EQUIPMENT GROUND.
8. ALL ABOVE GROUND CONDUITS SHALL BE RGC OR LIQUIDTIGHT FLEXIBLE METAL CONDUIT (LFMC). PVC CONDUITS ARE ALLOWED FOR UNDERGROUND INSTALLATIONS.
9. SERVICE DISCONNECT NEUTRAL BUS BAR SHALL PROVIDE FOR 2 #4 AWG CONNECTIONS.
10. ENSURE EQUIPMENT GROUND IS ELECTRICALLY BONDED TO EQUIPMENT CABINET.
11. ENSURE TELEPHONE SERVICE IN THE EQUIPMENT CABINET IS BONDED TO EQUIPMENT GROUND.

750 N. Greenfield Pkwy., Garner, NC 27529

CITY OF JACKSONVILLE
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
DMS ELECTRICAL SERVICE WITH
ISOLATION TRANSFORMER

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J.C. CROSS	REVIEWED BY:	T.F. BURCHETT

SCALE 0

REVISIONS	INIT.	DATE

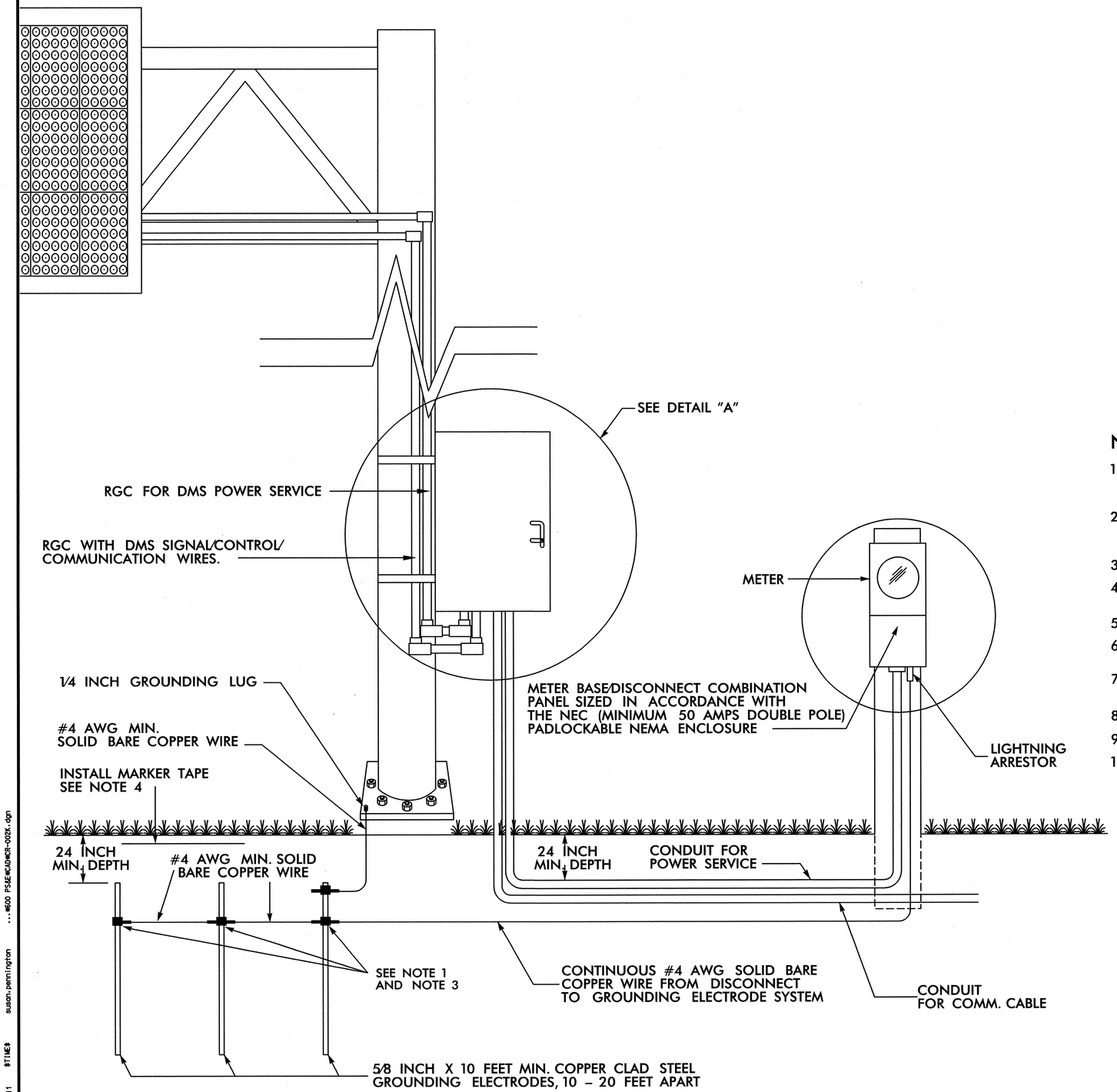
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

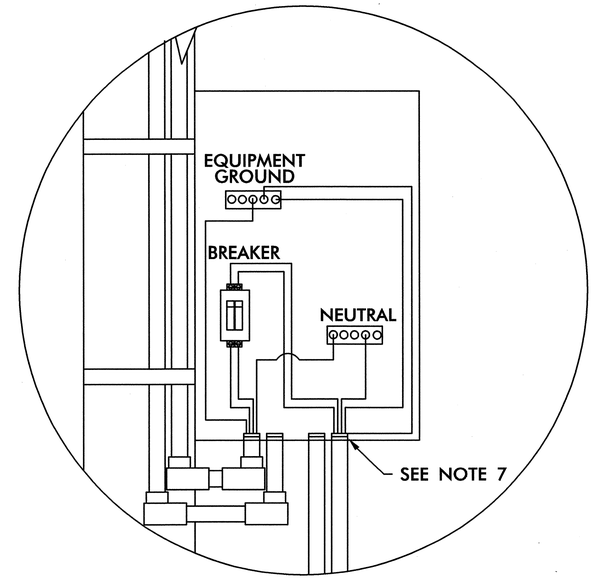
SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSSE#CADWCR-002J.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	2K





DETAIL "A"

NOTES

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

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Mobility and Safety Division
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

CITY OF JACKSONVILLE
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
DMS ELECTRICAL SERVICE AND GROUNDING TYPICAL DETAIL

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J.C. CROSS	REVIEWED BY:	T.F. BURCHETT

SCALE 0

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

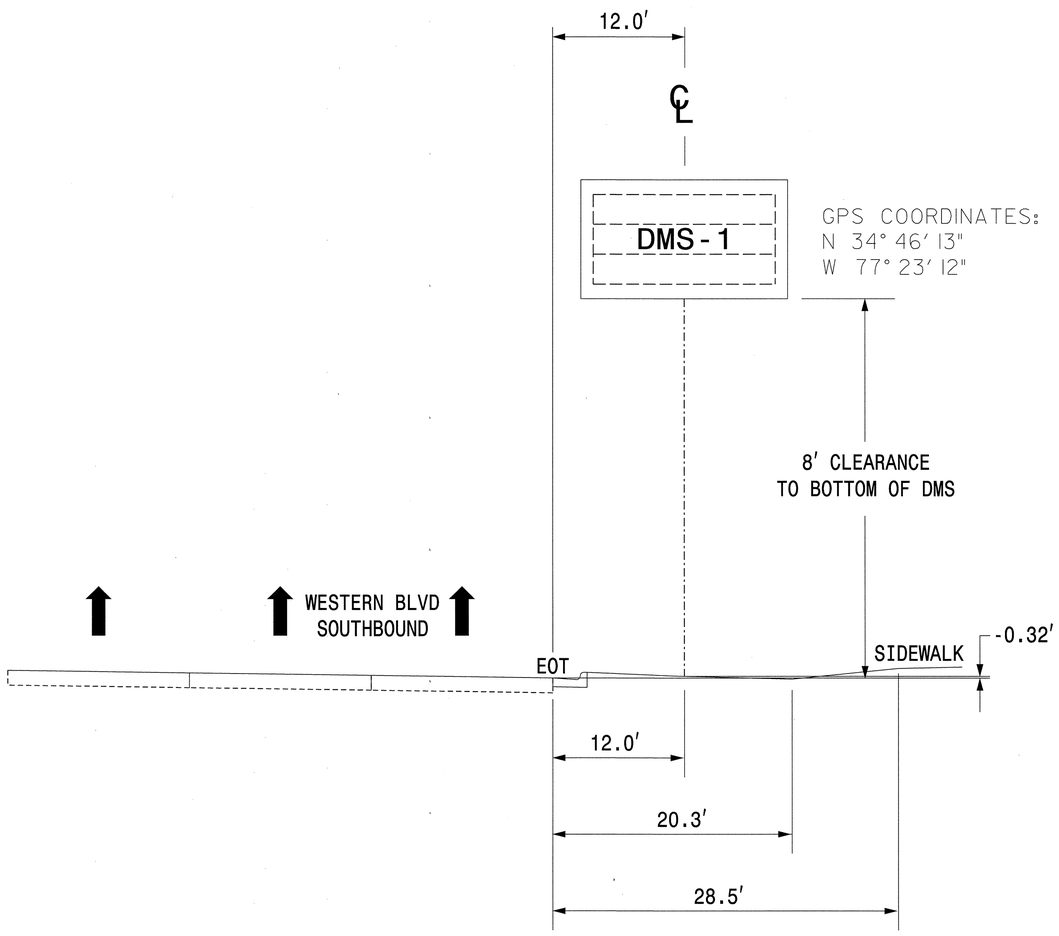
CADD Filename:

7/19/2011 $TIME$ susan.pennington ...N600 PSSE#CADWCR-002K.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	2L

ESTIMATED DIMENSION : 15' X 8'

MAXIMUM DEADLOAD OF 1,500 LBS.



NOTES:

1. USE THE ACTUAL DIMENSIONS AND WEIGHT OF THE DMS PROVIDED BY DMS THE FABRICATOR TO COMPLETE THE DESIGN OF THE DMS STRUCTURE.
2. FIELD VERIFY ALL FOOTING ELEVATIONS AND GROUNDING SLOPES AT THE FOOTINGS USING THE LATEST NCDOT STANDARD SPECIFICATION FOR ROADS AND STRUCTURES.
3. ENSURE THAT THE TOP OF THE FOOTING EXTENDS AT LEAST 6 INCHES AND NOT MORE THAN 24 INCHES ABOVE THE HIGHEST POINT OF THE GROUND SURFACE AT THE FOOTING.
4. DESIGN AND CONSTRUCT THE PEDESTAL STRUCTURE AND DMS ENCLOSURE TO WITHSTAND WIND VELOCITIES OF 130 MPH.
5. VERIFY ALL UNDERGROUND UTILITY LOCATIONS BEFORE BEGINNING ANY UNDERGROUND WORK. DO NOT DAMAGE ANY EXISTING UTILITIES OR NCDOT COMMUNICATIONS CABLE DURING CONSTRUCTION.

Prepared in the Offices of:
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE
0

ITS PLANS
DMS INSTALLATION

DIVISION 03 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: APRIL 2011 REVIEWED BY: J HOCHANADEL

PREPARED BY: R DRAYTON REVIEWED BY:

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 28430 ENGINEER JEFFREY P. HOCHANADEL

SIGNATURE 7/19/11 DATE

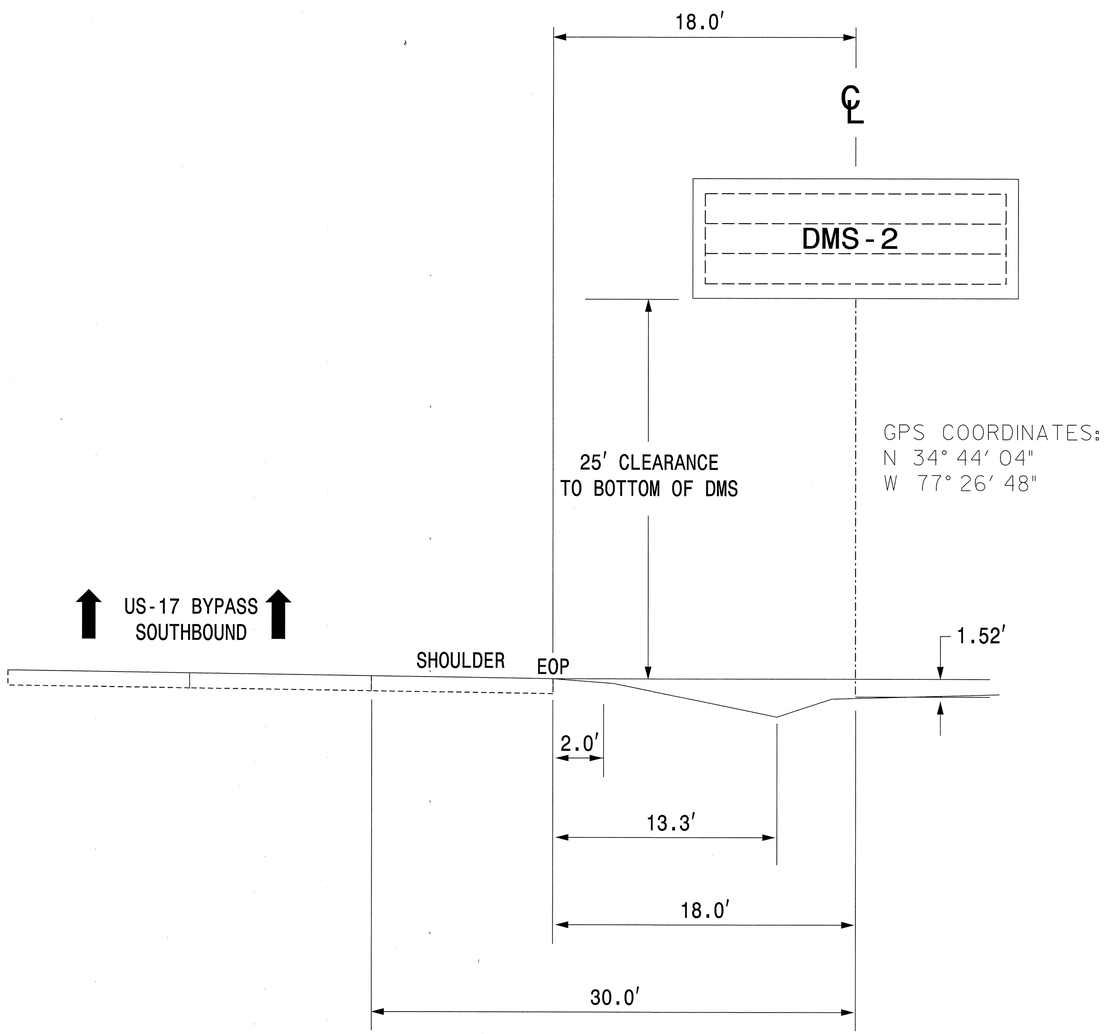
CADD Filename:

...\Jacksonville DMS.dgn 7/19/2011 8:04:49 AM

PROJECT REFERENCE NO.	SHEET NO.
U-5168	2M

ESTIMATED DIMENSION : 22' X 8'

MAXIMUM DEADLOAD OF 5,200 LBS.



NOTES:

1. USE THE ACTUAL DIMENSIONS AND WEIGHT OF THE DMS PROVIDED BY THE DMS FABRICATOR TO COMPLETE THE DESIGN OF THE DMS STRUCTURE.
2. FIELD VERIFY ALL FOOTING ELEVATIONS AND GROUNDING SLOPES AT THE FOOTINGS USING THE LATEST NCDOT STANDARD SPECIFICATION FOR ROADS AND STRUCTURES.
3. ENSURE THAT THE TOP OF THE FOOTING EXTENDS AT LEAST 6 INCHES AND NOT MORE THAN 24 INCHES ABOVE THE HIGHEST POINT OF THE GROUND SURFACE AT THE FOOTING.
4. DESIGN AND CONSTRUCT THE PEDESTAL STRUCTURE AND DMS ENCLOSURE TO WITHSTAND WIND VELOCITIES OF 130 MPH.
5. VERIFY ALL UNDERGROUND UTILITY LOCATIONS BEFORE BEGINNING ANY UNDERGROUND WORK. DO NOT DAMAGE ANY EXISTING UTILITIES OR NCDOT COMMUNICATIONS CABLE DURING CONSTRUCTION.
6. FURNISH AND INSTALL LADDER AND ACCESS PLATFORM ON THE WALK-IN DMS STRUCTURE AS INDICATED IN THE PROJECT SPECIAL PROVISIONS.

Prepared in the Offices of:
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Mobility and Safety Division
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0

N

ITS PLANS
DMS INSTALLATION

DIVISION 03 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	APRIL 2011	REVIEWED BY:	J HOCHANADEL
PREPARED BY:	R DRAYTON	REVIEWED BY:	

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 28430 ENGINEER JEFFREY P. HOCHANADEL

SIGNATURE 7/19/11 DATE

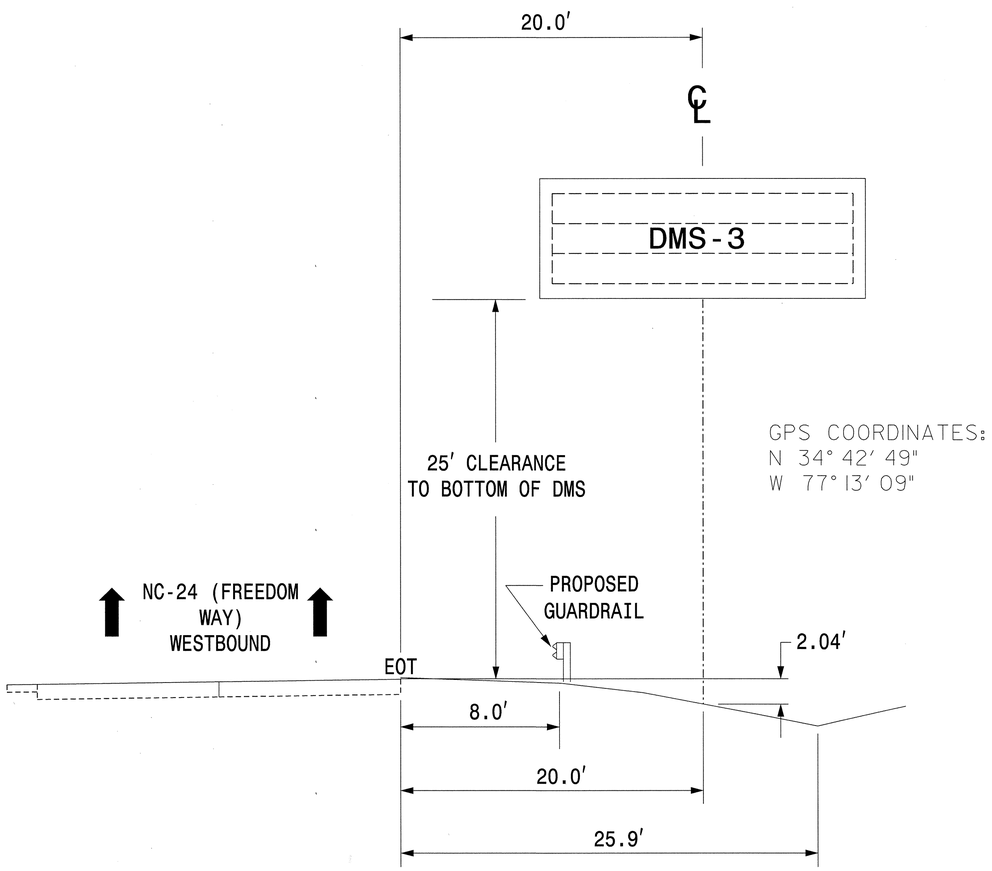
CADD Filename:

...\Jacksonville DMS.dgn 7/19/2011 8:04:55 AM

PROJECT REFERENCE NO.	SHEET NO.
U-5168	2N

ESTIMATED DIMENSION : 22' X 8'

MAXIMUM DEADLOAD OF 5,200 LBS.



NOTES:

1. USE THE ACTUAL DIMENSIONS AND WEIGHT OF THE DMS PROVIDED BY THE DMS FABRICATOR TO COMPLETE THE DESIGN OF THE DMS STRUCTURE.
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Prepared in the Offices of:
Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intermodal Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

ITS PLANS
DMS INSTALLATION

DIVISION 03 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	APRIL 2011	REVIEWED BY:	J HOCHANADEL
PREPARED BY:	R DRAYTON	REVIEWED BY:	

SCALE 0

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 28430 ENGINEER JEFFREY P. HOCHANADEL

SIGNATURE 7/19/11 DATE

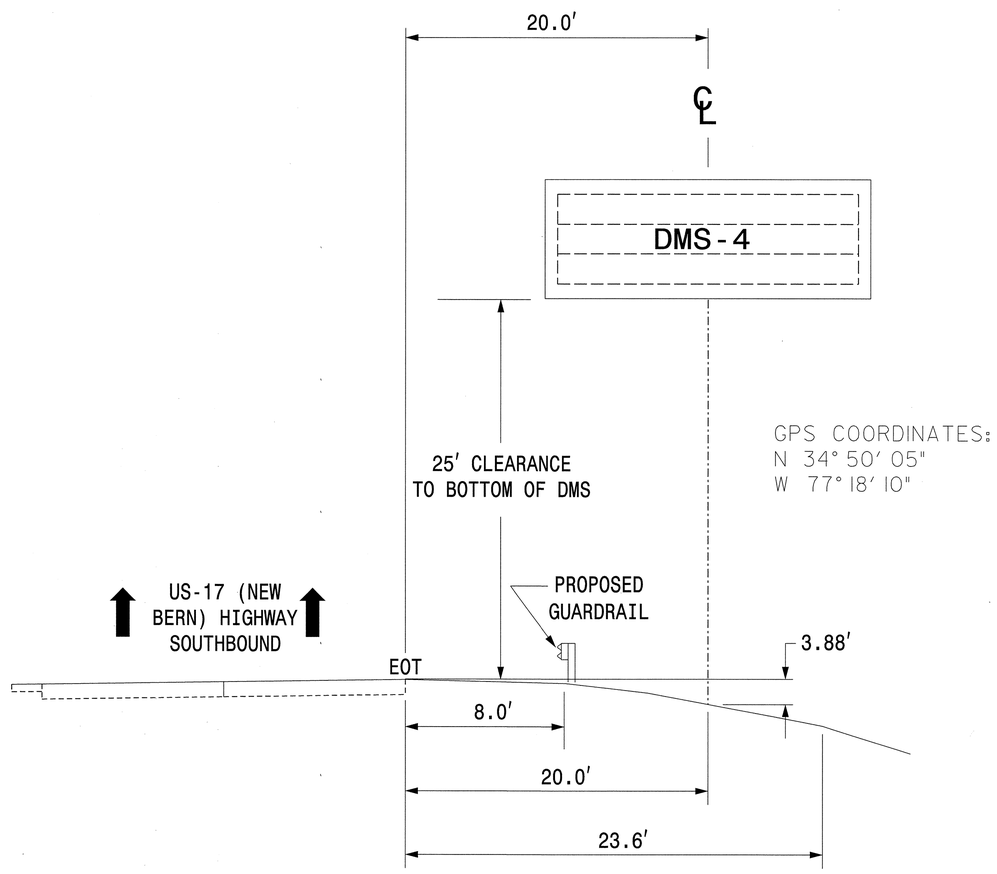
CADD Filename:

...\Jacksonville DMS.dgn 7/19/2011 8:05:01 AM

PROJECT REFERENCE NO.	SHEET NO.
U-5168	2P

ESTIMATED DIMENSION : 22' X 8'

MAXIMUM DEADLOAD OF 5,200 LBS.



NOTES:

1. USE THE ACTUAL DIMENSIONS AND WEIGHT OF THE DMS PROVIDED BY THE DMS FABRICATOR TO COMPLETE THE DESIGN OF THE DMS STRUCTURE.
2. FIELD VERIFY ALL FOOTING ELEVATIONS AND GROUNDING SLOPES AT THE FOOTINGS USING THE LATEST NCDOT STANDARD SPECIFICATION FOR ROADS AND STRUCTURES.
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Prepared in the Offices of:
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Mobility and Safety Division
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE
0

ITS PLANS
DMS INSTALLATION

DIVISION 03 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: APRIL 2011 REVIEWED BY: J HOCHANADEL

PREPARED BY: R DRAYTON REVIEWED BY:

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 28430 ENGINEER JEFFREY P. HOCHANADEL

SIGNATURE 7/19/11 DATE

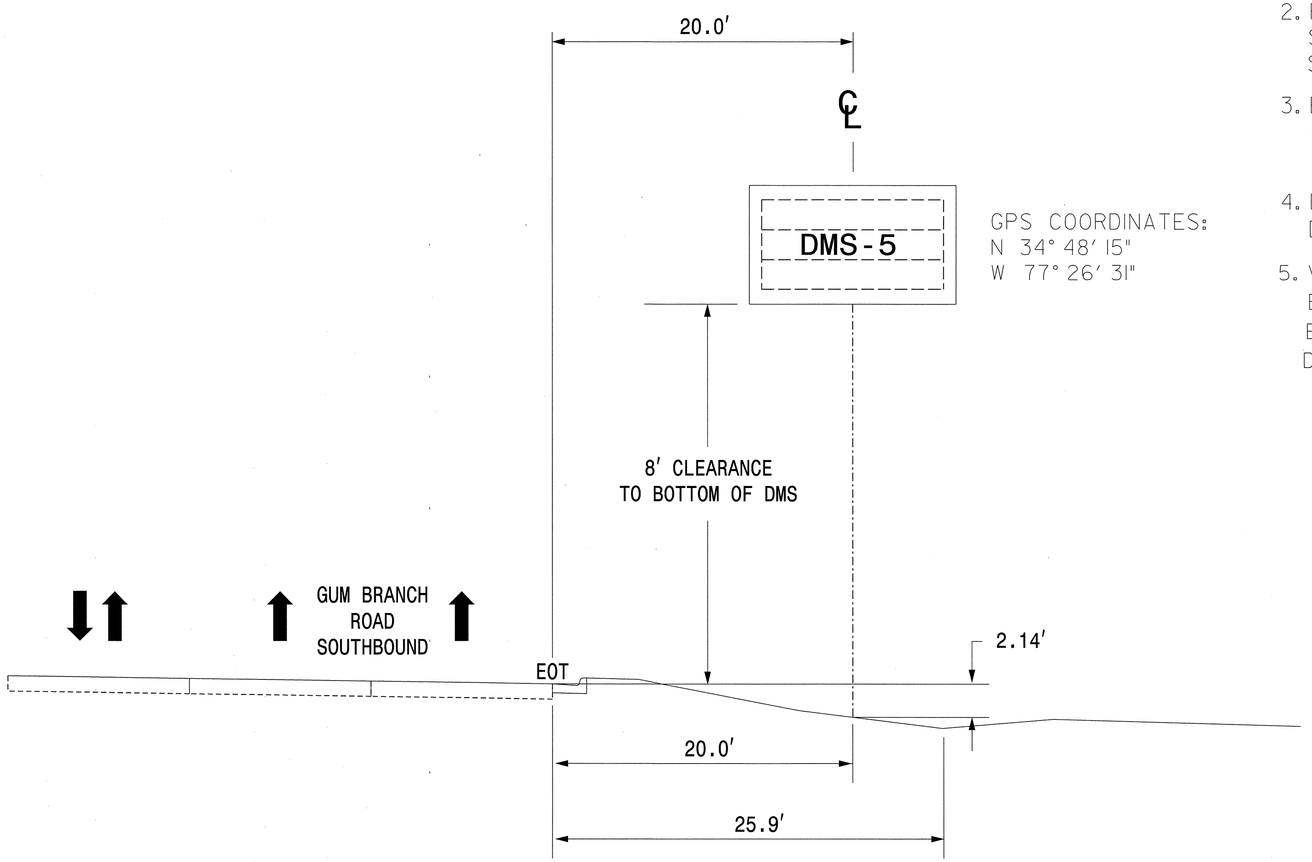
CADD Filename:

...\Jacksonville DMS.dgn 7/19/2011 8:05:08 AM

PROJECT REFERENCE NO.	SHEET NO.
U-5168	2Q

ESTIMATED DIMENSION : 15' X 8'

MAXIMUM DEADLOAD OF 1,500 LBS.



NOTES:

1. USE THE ACTUAL DIMENSIONS AND WEIGHT OF THE DMS PROVIDED BY THE DMS FABRICATOR TO COMPLETE THE DESIGN OF THE DMS STRUCTURE.
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Prepared in the Offices of:

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Mobility and Safety Division
Intelligent Transportation Systems Section

750 N. Greenfield Pkwy., Garner, NC 27529

SCALE

0

ITS PLANS
DMS INSTALLATION

DIVISION 03 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	APRIL 2011	REVIEWED BY:	J HOCHANADEL
PREPARED BY:	R DRAYTON	REVIEWED BY:	

REVISIONS	INIT.	DATE

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 28430 ENGINEER JEFFREY P. HOCHANADEL

SIGNATURE 7/19/11 DATE

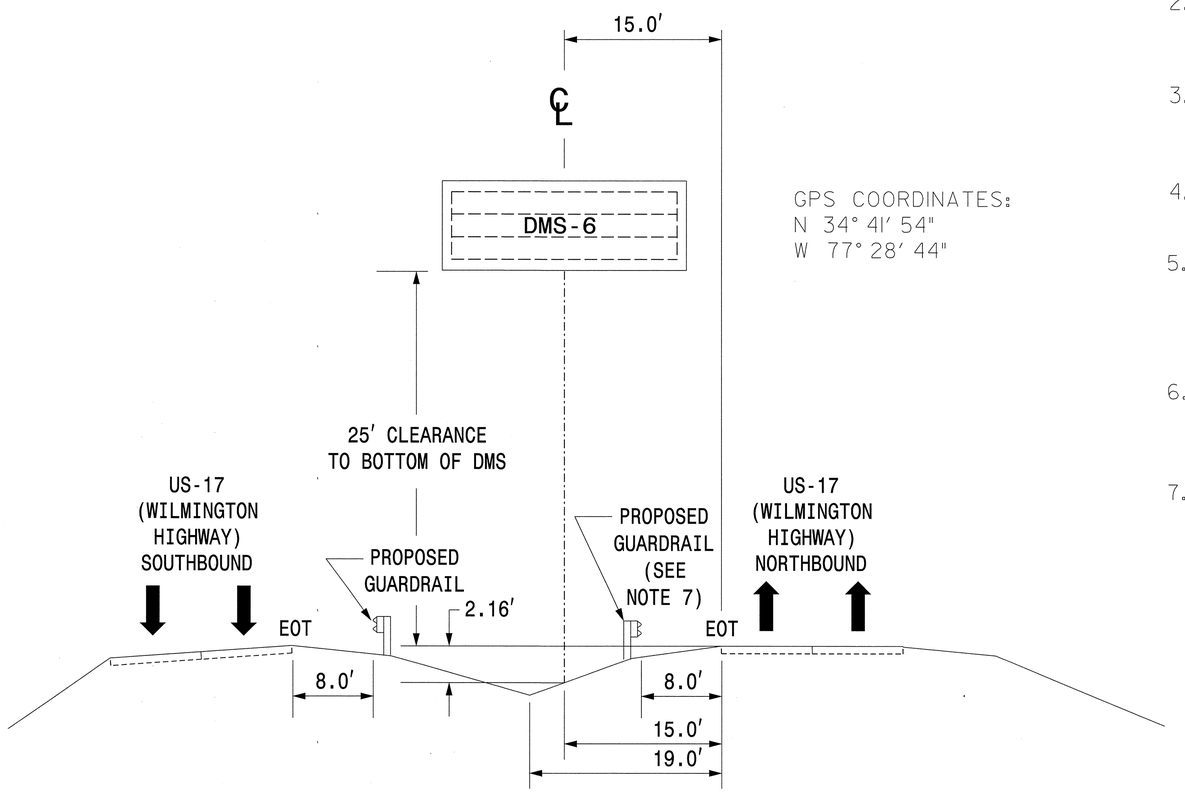
CADD Filename:

...\Jacksonville DMS.dgn 7/19/2011 8:05:14 AM

PROJECT REFERENCE NO.	SHEET NO.
U-5168	2R

ESTIMATED DIMENSION : 22′ X 8′

MAXIMUM DEADLOAD OF 5,200 LBS.



GPS COORDINATES:
N 34° 41′ 54"
W 77° 28′ 44"

NOTES:

1. USE THE ACTUAL DIMENSIONS AND WEIGHT OF THE DMS PROVIDED BY THE DMS FABRICATOR TO COMPLETE THE DESIGN OF THE DMS STRUCTURE.
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7. STRENGTHEN GUARDRAIL AT THIS LOCATION (IN THE CASE OF AUTOMOBILE COLLISION) TO AVOID DEFLECTION OF GUARDRAIL CLOSER THAN THE REQUIRED 20-FOOT OFFSET.

Prepared in the Offices of:
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE
0

ITS PLANS
DMS INSTALLATION

DIVISION 03 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	APRIL 2011	REVIEWED BY:	J HOCHANADEL
PREPARED BY:	R DRAYTON	REVIEWED BY:	

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 28430 ENGINEER JEFFREY P. HOCHANADEL

SIGNATURE 7/19/11 DATE

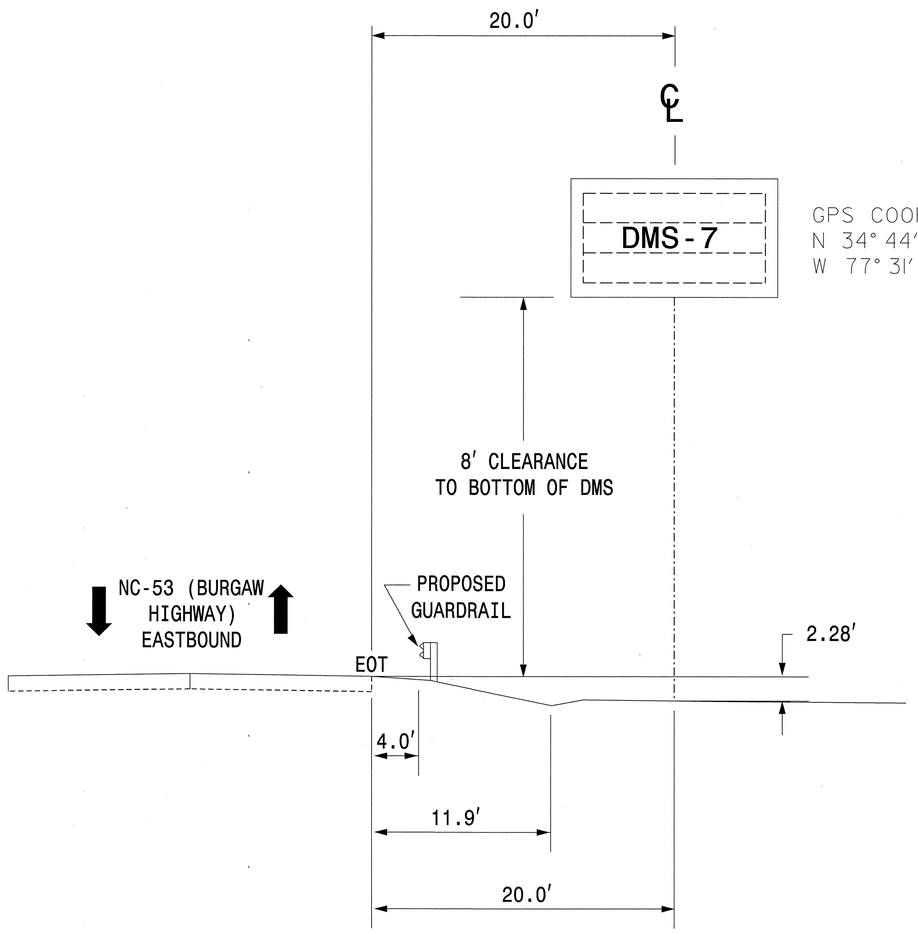
CADD Filename:

...\Jacksonville DMS.dgn 7/19/2011 8:05:20 AM

PROJECT REFERENCE NO.	SHEET NO.
U-5168	2S

ESTIMATED DIMENSION : 15' X 8'

MAXIMUM DEADLOAD OF 1,500 LBS.



NOTES:

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Prepared in the Offices of:
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
750 N. Greenfield Pkwy., Garner, NC 27529

ITS PLANS
DMS INSTALLATION

DIVISION 03 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	APRIL 2011	REVIEWED BY:	J HOCHANADEL
PREPARED BY:	R DRAYTON	REVIEWED BY:	

SCALE 0

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 28430 ENGINEER JEFFREY P. HOCHANADEL

SIGNATURE 7/19/11 DATE

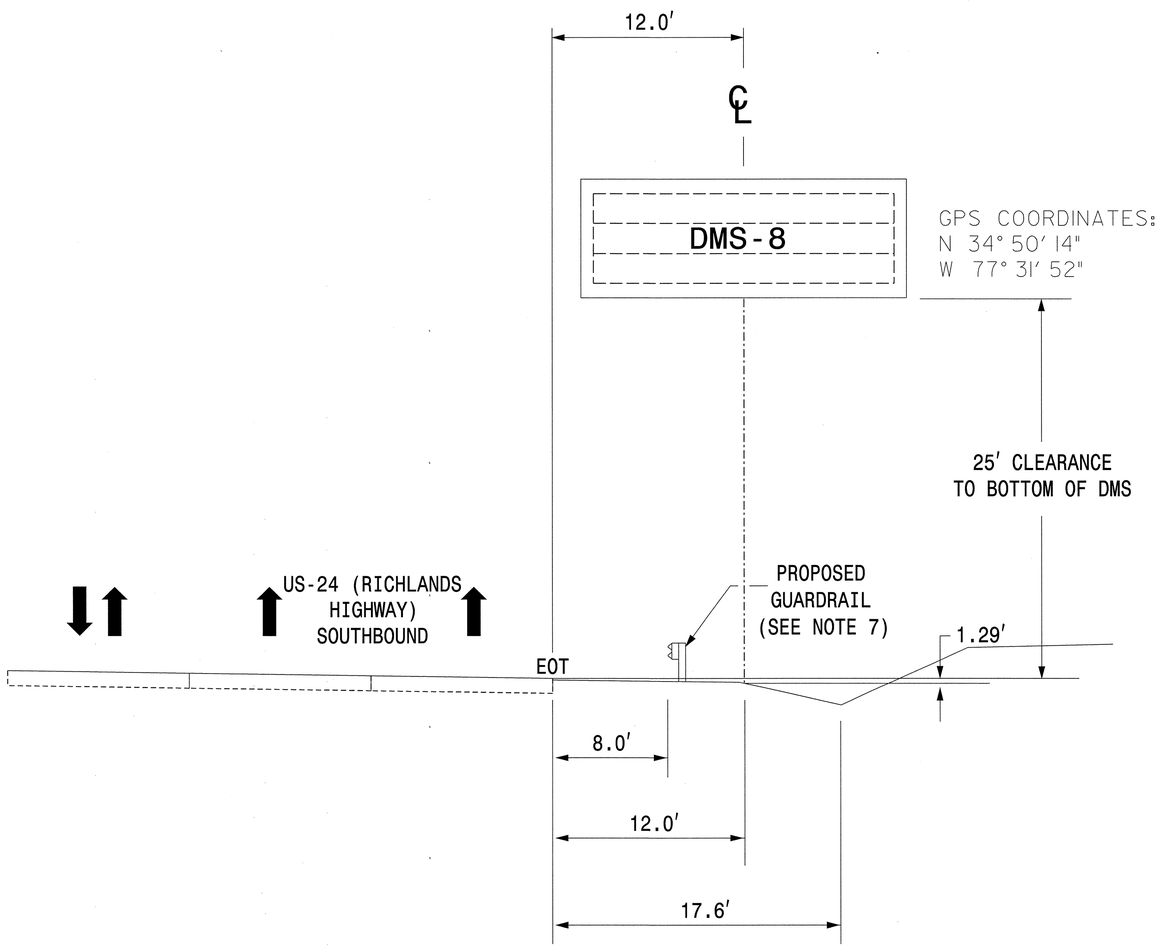
CADD Filename:

...\Jacksonville DMS.dgn 7/19/2011 8:05:26 AM

PROJECT REFERENCE NO.	SHEET NO.
U-5168	2T

ESTIMATED DIMENSION : 22' X 8'

MAXIMUM DEADLOAD OF 5,200 LBS.



NOTES:

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Prepared in the Offices of:
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Mobility and Safety Division
Intermodal Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE
0

ITS PLANS
DMS INSTALLATION

DIVISION 03 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	APRIL 2011	REVIEWED BY:	J HOCHANADEL
PREPARED BY:	R DRAYTON	REVIEWED BY:	

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 28430 ENGINEER JEFFREY P. HOCHANADEL

SIGNATURE 7/19/11 DATE

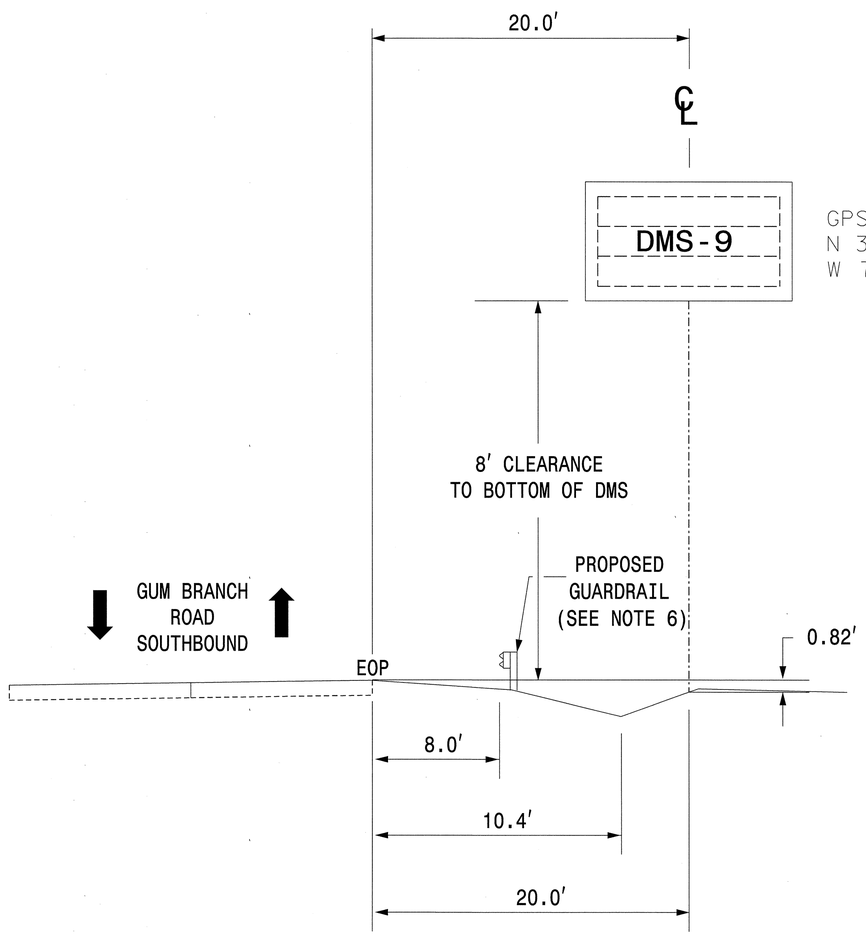
CADD Filename:

...\Jacksonville DMS.dgn 7/19/2011 8:05:32 AM

PROJECT REFERENCE NO.	SHEET NO.
U-5168	2U

ESTIMATED DIMENSION : 15′ X 8′

MAXIMUM DEADLOAD OF 1,500 LBS.



GPS COORDINATES:
N 34° 53′ 36"
W 77° 32′ 18"

NOTES:

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Prepared in the Offices of:
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Mobility and Safety Division
Transportation Systems Management Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE
0

ITS PLANS
DMS INSTALLATION

DIVISION 03 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	APRIL 2011	REVIEWED BY:	J HOCHANADEL
PREPARED BY:	R DRAYTON	REVIEWED BY:	

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 28430 ENGINEER JEFFREY P. HOCHANADEL

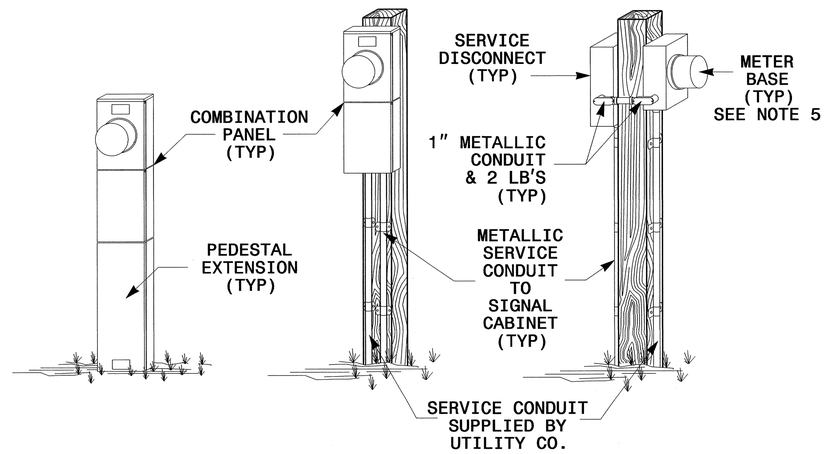
SIGNATURE 7/19/11 DATE

CADD Filename:

...\Jacksonville DMS.dgn 7/19/2011 8:05:39 AM

PROJECT REFERENCE NO.	SHEET NO.
U-5168	2V

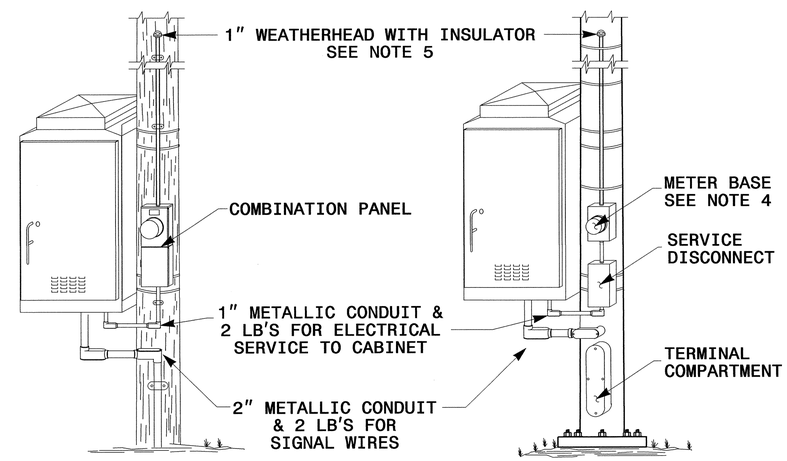
GROUND MOUNTED SERVICE EQUIPMENT OPTIONS FOR UNDERGROUND ELECTRICAL SERVICE



COMBINATION PANEL WITH PEDESTAL EXTENSION

COMBINATION PANEL OR METER BASE AND DISCONNECT SURFACE MOUNTED ON 6"X6" TREATED WOOD POST

POLE MOUNTED SERVICE EQUIPMENT OPTIONS FOR OVERHEAD ELECTRICAL SERVICE



WOOD POLE

METAL POLE

NOTES

1. LOCATE THE SERVICE EQUIPMENT NEAR THE SIGNAL CABINET IN A MANNER THAT WILL ALLOW EASY ACCESS TO THE SERVICE DISCONNECT. LOCATE SERVICE EQUIPMENT SO AS NOT TO OBSTRUCT SIGHT DISTANCE OF VEHICLES TURNING RIGHT ON RED.
2. FOR GROUND MOUNTED ELECTRICAL SERVICE INSTALLATIONS WHEN POST MOUNTING IS CHOSEN, INSTALL TREATED WOOD POSTS A MINIMUM OF 3 FEET INTO THE GROUND.
3. INSTALL ALL METER BASES MOUNTED IN PEDESTALS AT A HEIGHT NOT TO EXCEED 5 FEET AS MEASURED FROM THE CENTER OF THE METER. INSTALL ALL OTHER METER BASES AT A HEIGHT BETWEEN 4 FEET AND 5 FEET AS MEASURED FROM THE CENTER OF THE METER. SEAL ANY UNUSED MOUNTING HOLES ON COMBINATION PANELS, METER BASES AND SERVICE DISCONNECTS.
4. INSTALL OVERHEAD ELECTRICAL SERVICE ON POLES AS SHOWN WHEN UNDERGROUND SOURCE IS NOT AN OPTION. COMBINATION PANELS, OR METER BASES AND SERVICE DISCONNECTS, MAY BE INSTALLED ON POLES WHEN POLE MOUNTED SIGNAL CABINETS ARE REQUIRED FOR THE INSTALLATION. DO NOT ROUTE UNFUSED OVERHEAD ELECTRICAL SERVICE CONDUCTOR INSIDE OF METAL POLES.
5. TYPICAL POINT OF DELIVERY FOR UNDERGROUND SERVICE IS INSIDE OF METER BASE. TYPICAL POINT OF DELIVERY FOR OVERHEAD SERVICE IS AT THE WEATHERHEAD ENTRANCE AT THE TOP OF THE SERVICE RISER.

Service Options Sheet 1 of 2

Prepared in the Offices of:
Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Signal Management Section
750 N.Greenfield Pkwy,Garner,NC 27529

Jacksonville Signal System
Electrical Service Options

Division 03	Onslow County	Jacksonville
PLAN DATE: June 2011	REVIEWED BY:	
PREPARED BY: J.T.Rowe	REVIEWED BY:	

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 016286 ENGINEER MILTON I. DEAN
SIGNATURE 6/22/11 DATE

22-JUN-2011 09:44
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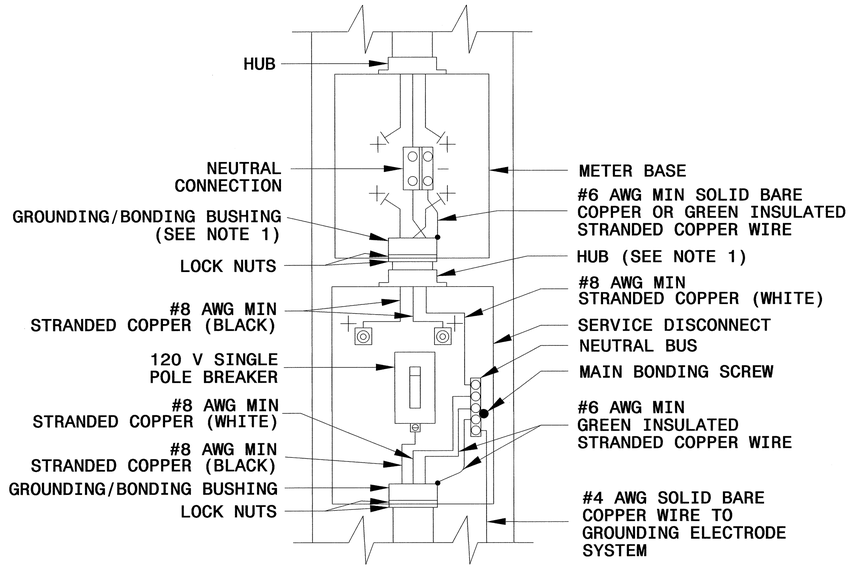
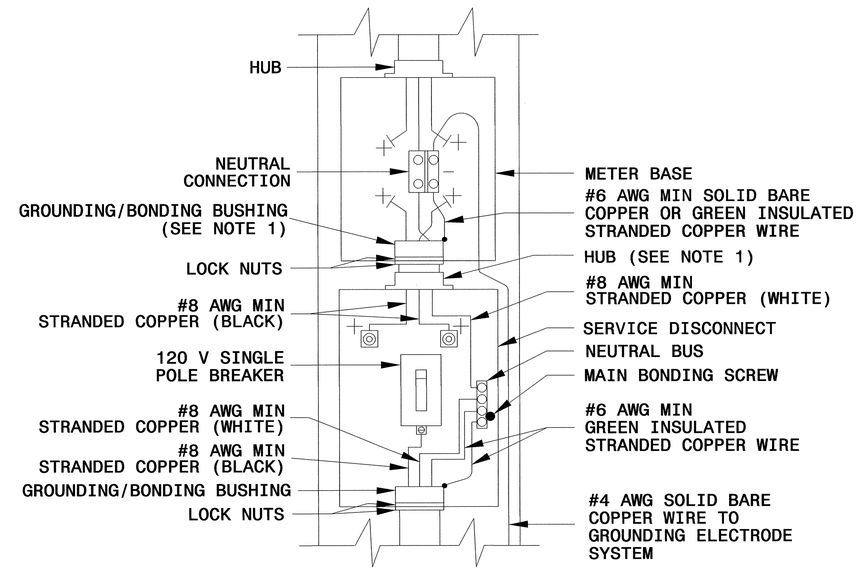
jtrowe

PROJECT REFERENCE NO.	SHEET NO.
U-5168	2W

TYPICAL ELECTRICAL CONNECTION DETAIL FOR OVERHEAD SERVICE INSTALLATION (SHOWN WITH METER BASE/SERVICE DISCONNECT OPTION AND WITH GROUNDING ELECTRODE CONDUCTOR TERMINATED IN DISCONNECT)



ALTERNATE ELECTRICAL CONNECTION DETAIL FOR OVERHEAD SERVICE INSTALLATION (SHOWN WITH METER BASE/SERVICE DISCONNECT OPTION AND WITH GROUNDING ELECTRODE CONDUCTOR TERMINATED IN METER)



NOTES

1. WHEN USING A HUB LISTED AS A GROUNDING HUB (UL TYPES DWTT AND KDER), THE BONDING BUSHING IN THE METER BASE IS NOT NECESSARY.

Service Options Sheet 2 of 2

Prepared in the Offices of:
Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Signal Management Section
750 N.Greenfield Pkwy,Garner,NC 27529

Jacksonville Signal System
Electrical Service Options

Division 03 Onslow County Jacksonville

PLAN DATE:	June 2011	REVIEWED BY:	
PREPARED BY:	J.T.Rowe	REVIEWED BY:	

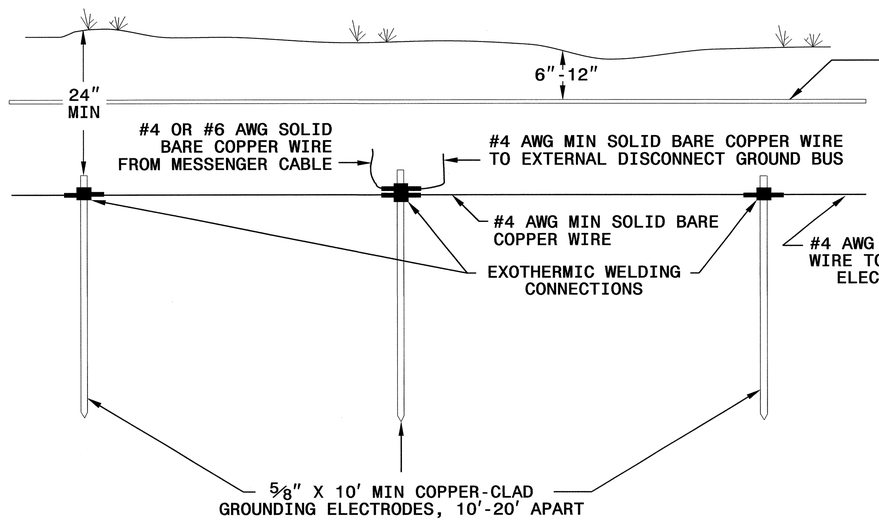
REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 016286 ENGINEER MILTON L. DEAN
SIGNATURE Milton L. Dean 6/22/11 DATE

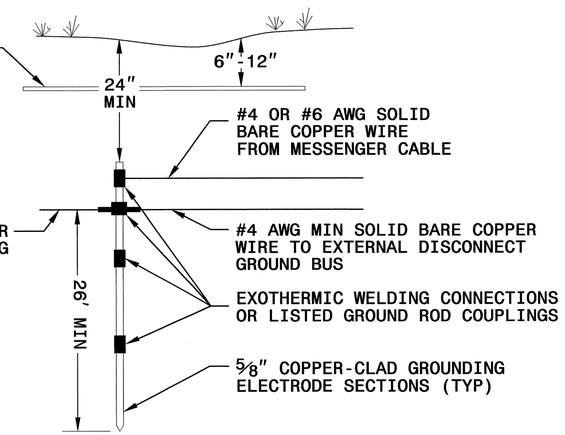
22-JUN-2011 09:47
C:#Documents and Settings#jrowe#My Documents#Rowe#M-Z#NCDOT Specs#2012 Standard Spec#New Standard Drawings#Jacksonville U-5168 - 17000102.dgn
jrowe

PROJECT REFERENCE NO.	SHEET NO.
U-5168	2X

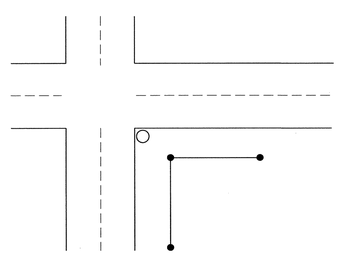
MULTIPLE ELECTRODES



SECTIONAL ELECTRODES

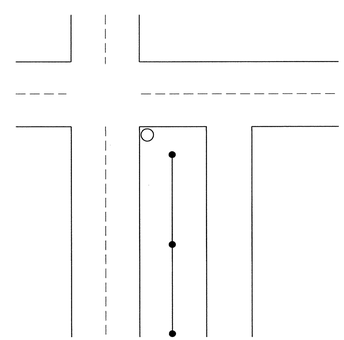


UNRESTRICTED SHOULDER



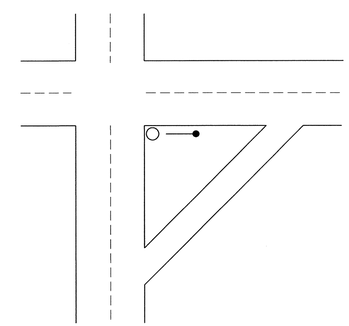
PLACE GROUNDING ELECTRODES AT 90°

LIMITED SHOULDER



PLACE GROUNDING ELECTRODES IN A STRAIGHT LINE

RESTRICTED SPACE



NOTES

1. DO NOT USE THREADED GROUND RODS OR THREADED COUPLERS.

Service Grounding Sheet 1 of 2

Prepared in the Offices of:
Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPT. OF TRANSPORTATION
Signal Management Section
750 N.Greenfield Pkwy,Garner,NC 27529

Jacksonville Signal System Electrical Service Grounding

Division 03 | Onslow County | Jacksonville

PLAN DATE:	June 2011	REVIEWED BY:	
PREPARED BY:	J.T.Rowe	REVIEWED BY:	

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 016286 ENGINEER MILTON I. DEAN
Milton I. Dean 6/22/11
SIGNATURE DATE

22-JUN-2011 09:50
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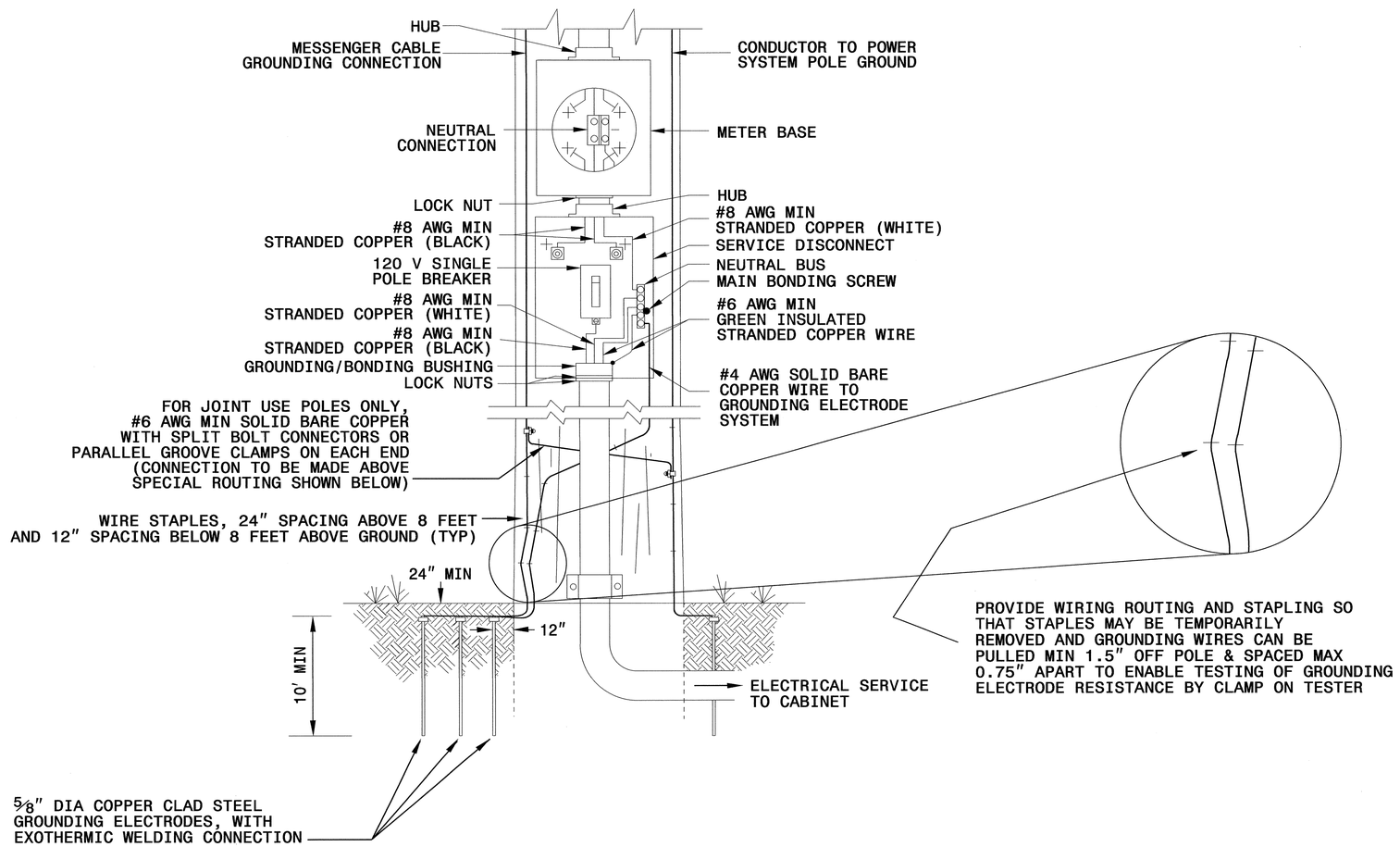
jrowe

PROJECT REFERENCE NO.	SHEET NO.
U-5168	2Y



Service Grounding Sheet 2 of 2

Prepared in the Offices of:
Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Signals Management Section
750 N.Greenfield Pkwy,Garner,NC 27529

Jacksonville Signal System Electrical Service Grounding

Division 03	Onslow County	Jacksonville
PLAN DATE: June 2011	REVIEWED BY:	
PREPARED BY: J.T.Rowe	REVIEWED BY:	

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 016286 ENGINEER MILTON I. DEAN
SIGNATURE Milton I. Dean DATE 6/22/11

22-JUN-2011 09:53
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PROJECT REFERENCE NO.	SHEET NO.
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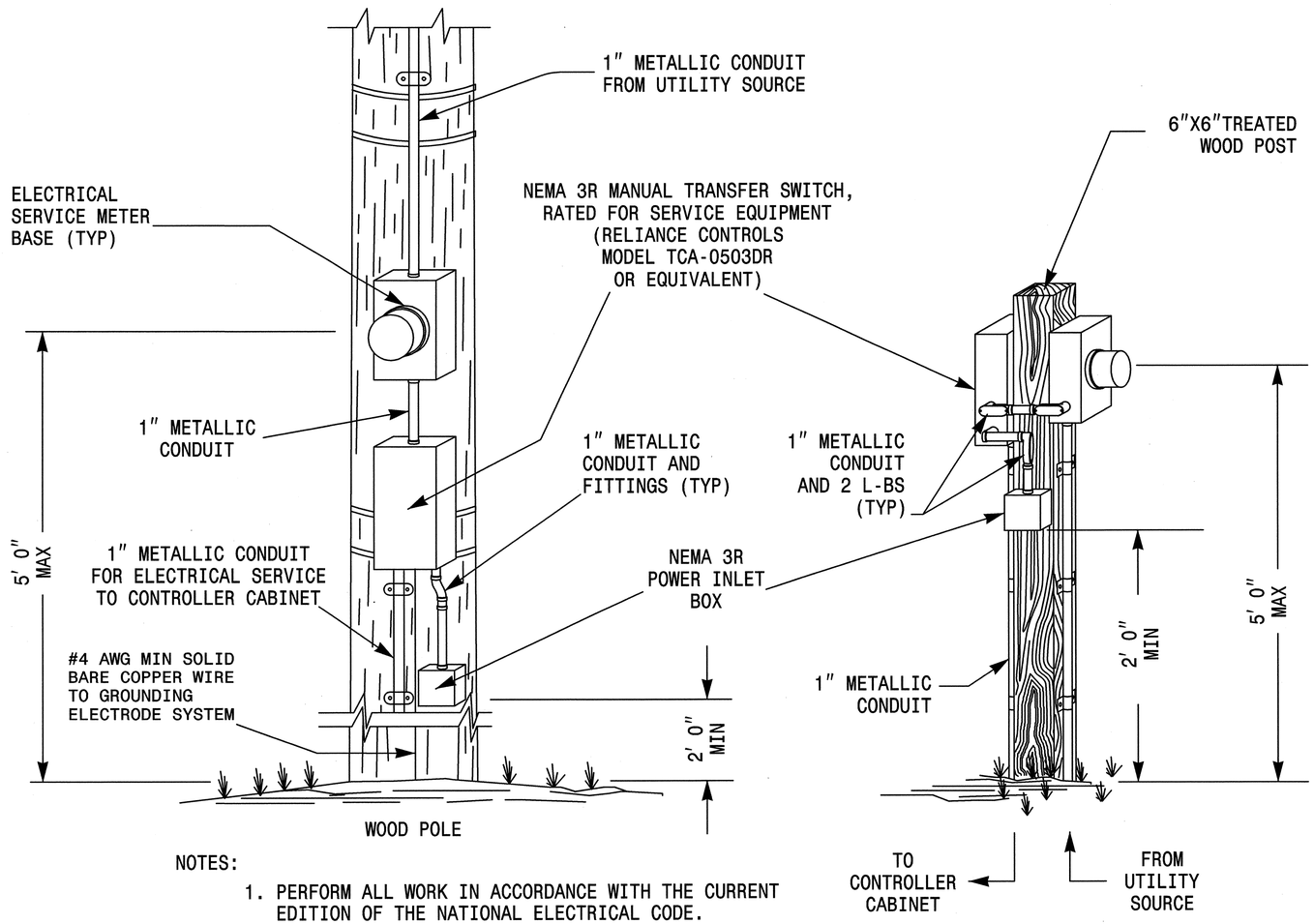


NOTES:

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.

TYPICAL ELECTRICAL SERVICE FOR TRAFFIC SIGNALS WITH EMERGENCY GENERATOR PROVISIONS

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

Transportation Mobility and Safety Division
Intelligent Transportation Systems
DEPARTMENT OF TRANSPORTATION
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE
0

CITY OF JACKSONVILLE
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
EMERGENCY GENERATOR
PROVISIONS DETAIL

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J.C. CROSS	REVIEWED BY:	T.F. BURCHETT

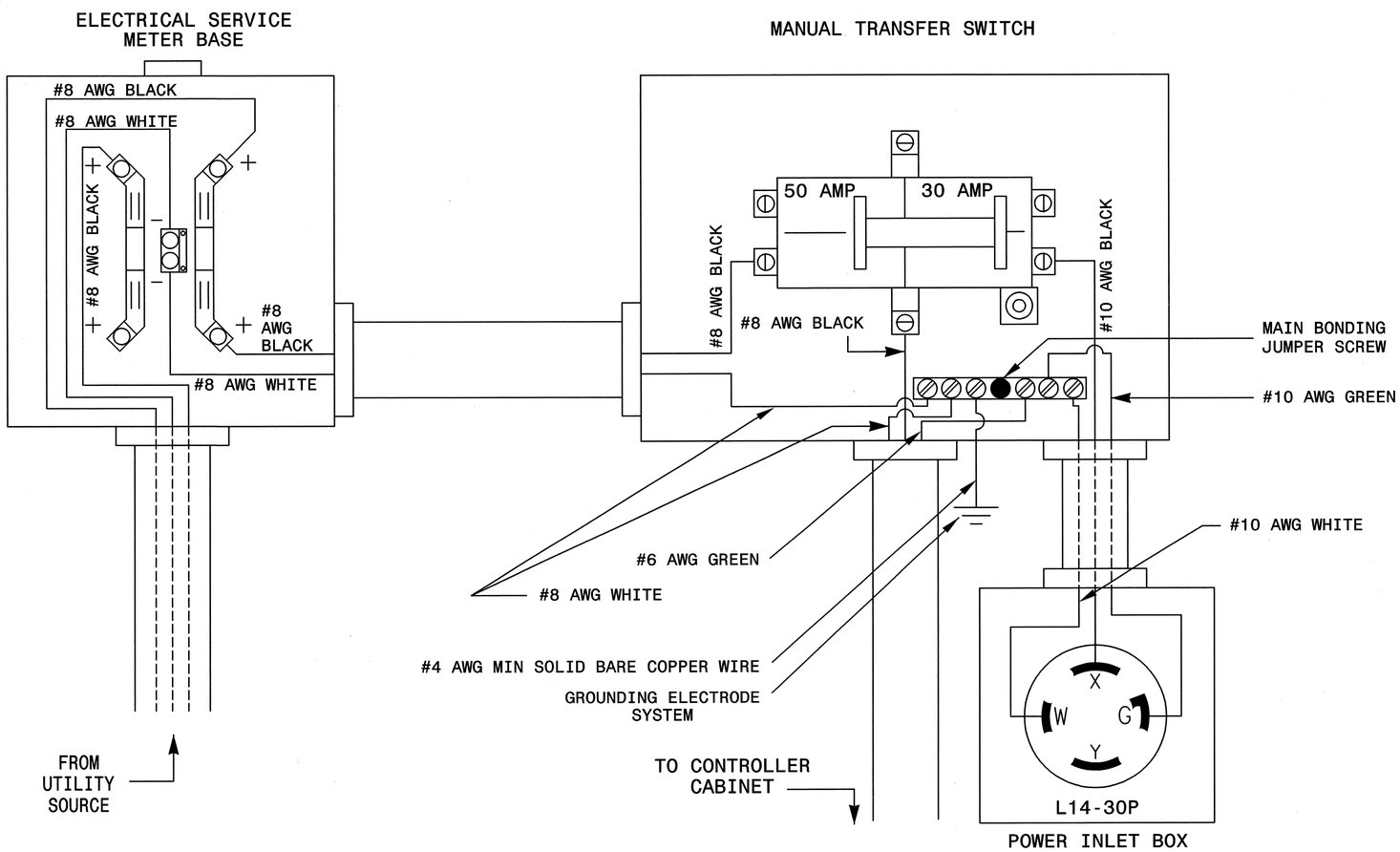
REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH
SIGNATURE 7-20-11 DATE
CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 FSSE\CADMCR-0022.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	2AA

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

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

Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE: 0

CITY OF JACKSONVILLE
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
EMERGENCY GENERATOR
PROVISIONS DETAILS

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J.C. CROSS	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE: K.W.S. DATE: 7-20-11

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...\500 PSUE\CADNER-0022AA.dgn

COMPUTED BY: _____ DATE: _____
CHECKED BY: E. BROOKS DATE: 07 /11 /2011

PROJECT REFERENCE NO.	SHEET NO.
U-5168	2AB

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL.
TOTAL SHOULDER WIDTH = DISTANCE FROM EDGE OF TRAVEL LANE TO SHOULDER BREAK POINT.
FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL.
W = TOTAL WIDTH OF FLARE FROM BEGINNING OF TAPER TO END OF GUARDRAIL.
G = GATING IMPACT ATTENUATOR TYPE 350
NG = NON-GATING IMPACT ATTENUATOR TYPE 350

GUARDRAIL SUMMARY

DEVICE	SHEET NO.	LOCATION	LOCATION	LENGTH			WARRANT POINT		"N" DIST. FROM E.O.L.	TOTAL SHOULDER WIDTH	FLARE LENGTH		W		ANCHORS									IMPACT ATTENUATOR TYPE 350			REMOVE DETOUR GUARDRAIL	REMOVE GUARDRAIL	REMOVE AND STOCKPILE EXISTING GUARDRAIL	REMARKS
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH END	TRAILING END			APPROACH END	TRAILING END	APPROACH END	TRAILING END	TYPE 350	AT-1	CAT-1	B-77	B-83	TERMINAL END SECTION	·	·	·	NO.	PERMITTED G	PERMITTED NG				
CCTV 20	150	HWY 17	S OF BELL FORK RD	162.50			162.50′		12		50		1		1		1													
CCTV 30	185	HWY 17	HIGH HILL RD INT	100.00	50.00		150′		12		50		1		1		1													
CCTV 40	188	HWY 24	W OF PINEY GREEN RD	237.50			237.50′		8		50		1		1		1													
DMS 3	190	HWY 24	CRAIG DRIVE	237.50			237.50′		8		50		1		1		1													
DMS 4	189	HWY 17	FORESTRY CENTER CR	237.50			237.50′		8		50		1		1		1													
DMS 6	80	HWY 17	S OF STONEY CREEK DR	187.50			187.50′		8		50		1		1		1													NORTHBOUND MEDIAN SHOULDER
DMS 6	80	HWY 17	S OF STONEY CREEK DR	275.00			275′		8		50		1		1		1													SOUTHBOUND MEDIAN SHOULDER
DMS 7	180	HWY 53	S OF FOY LOCKAMY RD	525.00			320′	205′	4		50	50	1	1	2															
DMS 8	181	HWY 258	S OF THOMAS LOOP RD	125.00					8		50		1				1													EXTEND EXISTING GUARDRAIL
DMS 9	186	GUM BRANCH RD	E OF EAST POINT ST	400.00			240′	160′	8		50	50	1	1	2															
			SUBTOTAL	2487.50	50.00										11		8													
	LESS ANCHOR DEDUCTIONS																													
	GRAU 350	11 @ 50.00′	=	–550.00																										
	AT-1	@ 6.25′	=																											
	CAT-1	8 @ 6.25′	=	–50.00																										
	B-77	@ 18.75′	=																											
	B-83	@ 25.00′	=																											
	TERM. END SEC.	* NO DEDUCTIONS																												
			TOTAL	1887.50	50.00																									
			SAY	1900	50										11		8													
ADDITIONAL GUARDRAIL POSTS = 10 EA																														

PLANS PREPARED IN THE OFFICE OF:

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(919) 677-2000

Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE
0

CITY OF JACKSONVILLE
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
GUARDRAIL SUMMARY

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J.C. CROSS	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

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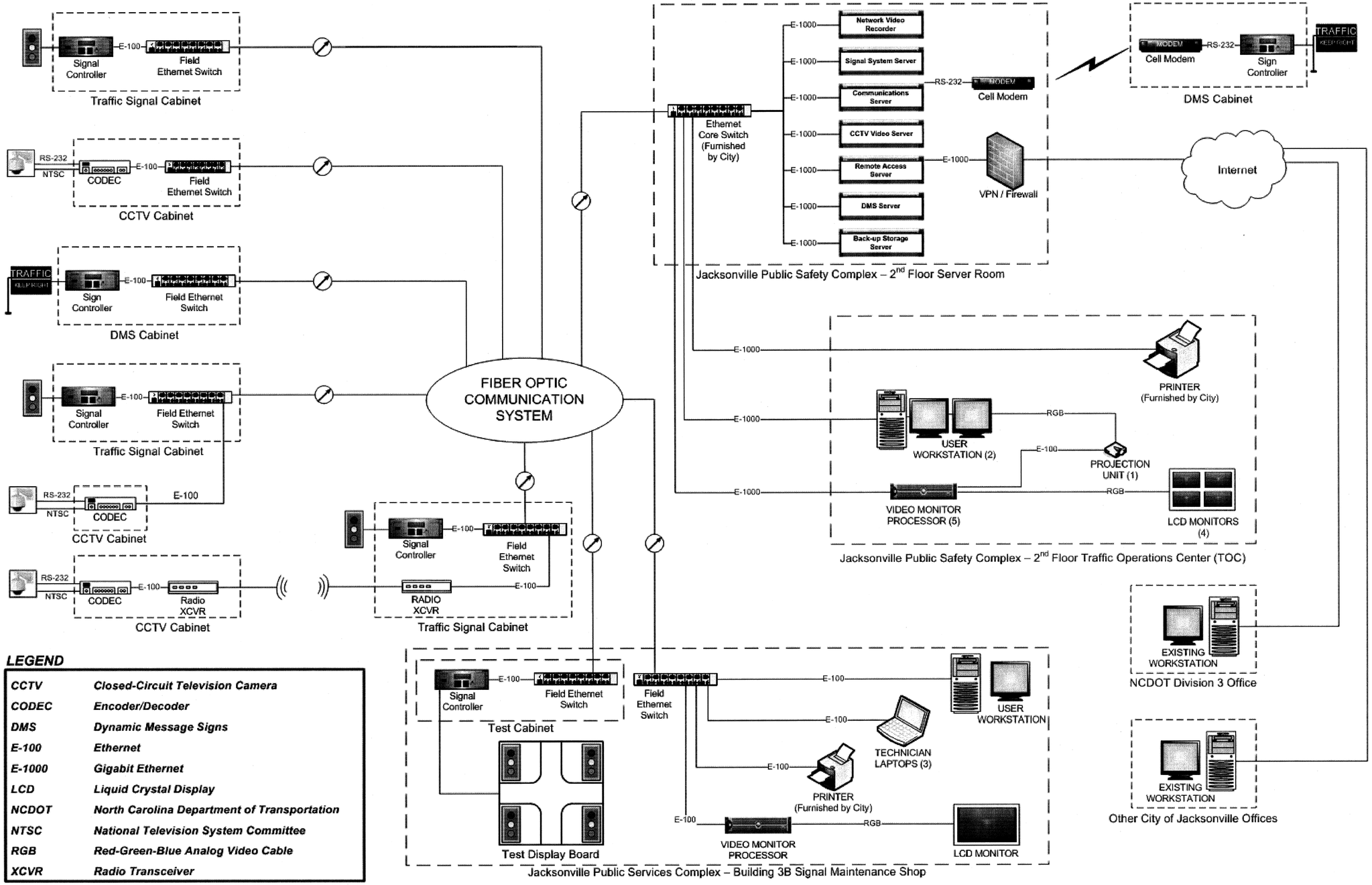
U-5168	2AC



LEGEND

CCTV	***Closed-Circuit Television Camera***
CODEC	***Encoder/Decoder***
DMS	***Dynamic Message Signs***
E-100	***Ethernet***
E-1000	***Gigabit Ethernet***
LCD	***Liquid Crystal Display***
NCDOT	***North Carolina Department of Transportation***
NTSC	***National Television System Committee***
RGB	***Red-Green-Blue Analog Video Cable***
XCVR	***Radio Transceiver***

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SCALE: 0

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

SYSTEM BLOCK DIAGRAM

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J.C. CROSS	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

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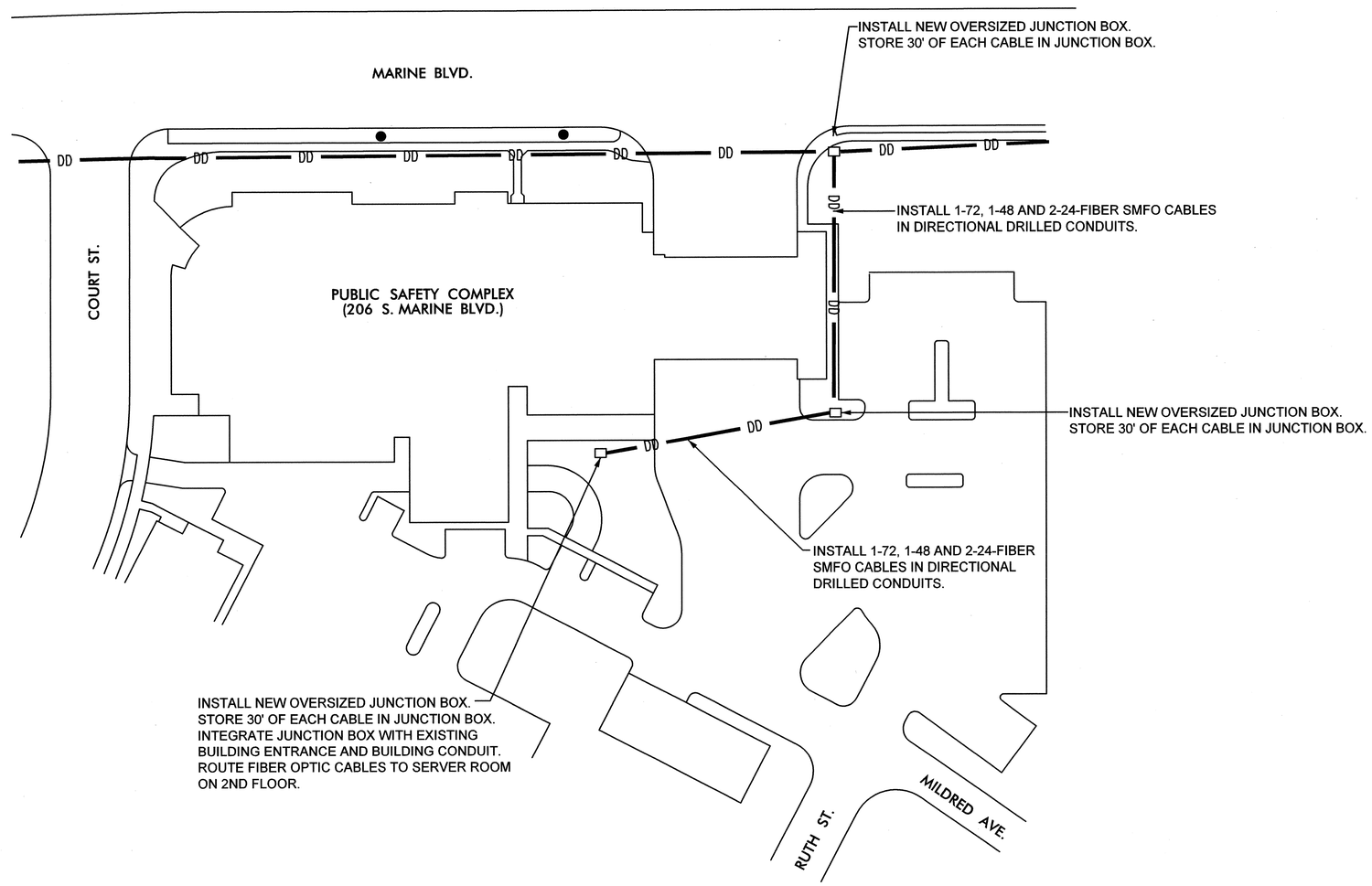

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Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE: 0

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CITY TRAFFIC OPERATIONS CENTER

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J.C. CROSS	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

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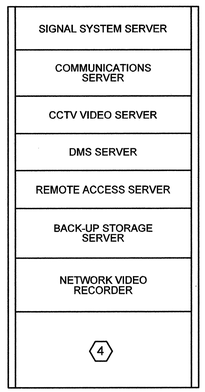
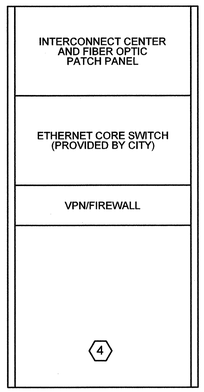


SECTION B-B



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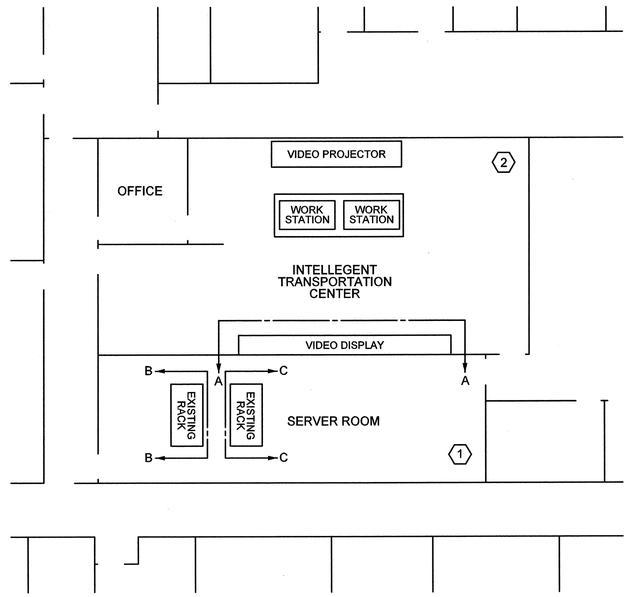
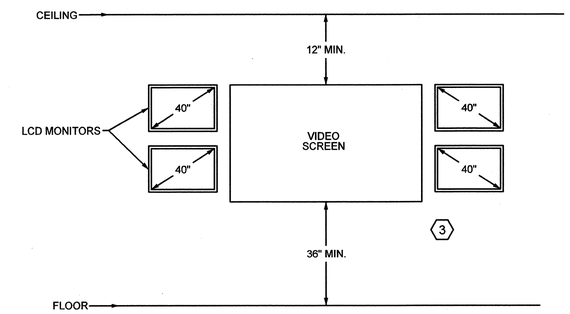


PUBLIC SAFETY COMPLEX - 2ND FLOOR
206 S. MARINE BOULEVARD



SECTION A-A

NOTES

1. ROUTE CABLES IN EXISTING CONDUIT TO SERVER ROOM. INSTALL NEW FIBER INTERCONNECT CENTER IN EXISTING RACKS AND TERMINATE CABLES. INTEGRATE WITH CITY-FURNISHED ETHERNET SWITCH. INSTALL NEW APPLICATION SERVERS IN EXISTING RACK AND INTEGRATE WITH ETHERNET SWITCH.

2. INSTALL TWO NEW WORKSTATIONS AND INTEGRATE WITH ETHERNET SWITCH IN THE SERVER ROOM USING EXISTING BUILDING WIRING. INSTALL LCD MONITORS, VIDEO PROJECTOR AND VIDEO PROCESSORS AND INTEGRATE WITH ETHERNET SWITCH. FURNITURE FOR TOC WILL BE PROVIDED BY THE CITY.

3. INSTALL LCD MONITORS AND VIDEO SCREEN ON TOC WALL ACCORDING TO PROJECT SPECIAL PROVISIONS.

4. INSTALL EQUIPMENT IN EXISTING RACK CABINETS. RACKS WILL HAVE EXISTING KVM SWITCHES AND WILL BE INTEGRATED WITH UPS SERVICING ALL SERVER ROOM EQUIPMENT. RACK ELEMENTS SHOWN ARE FOR SCHEMATIC PURPOSES. OBTAIN APPROVAL FROM ENGINEER FOR ACTUAL RACK POPULATION.

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

750 N. Greenfield Pkwy., Garner, NC 27529

SCALE

CITY OF JACKSONVILLE
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
CITY TRAFFIC OPERATIONS CENTER

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J.C. CROSS	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

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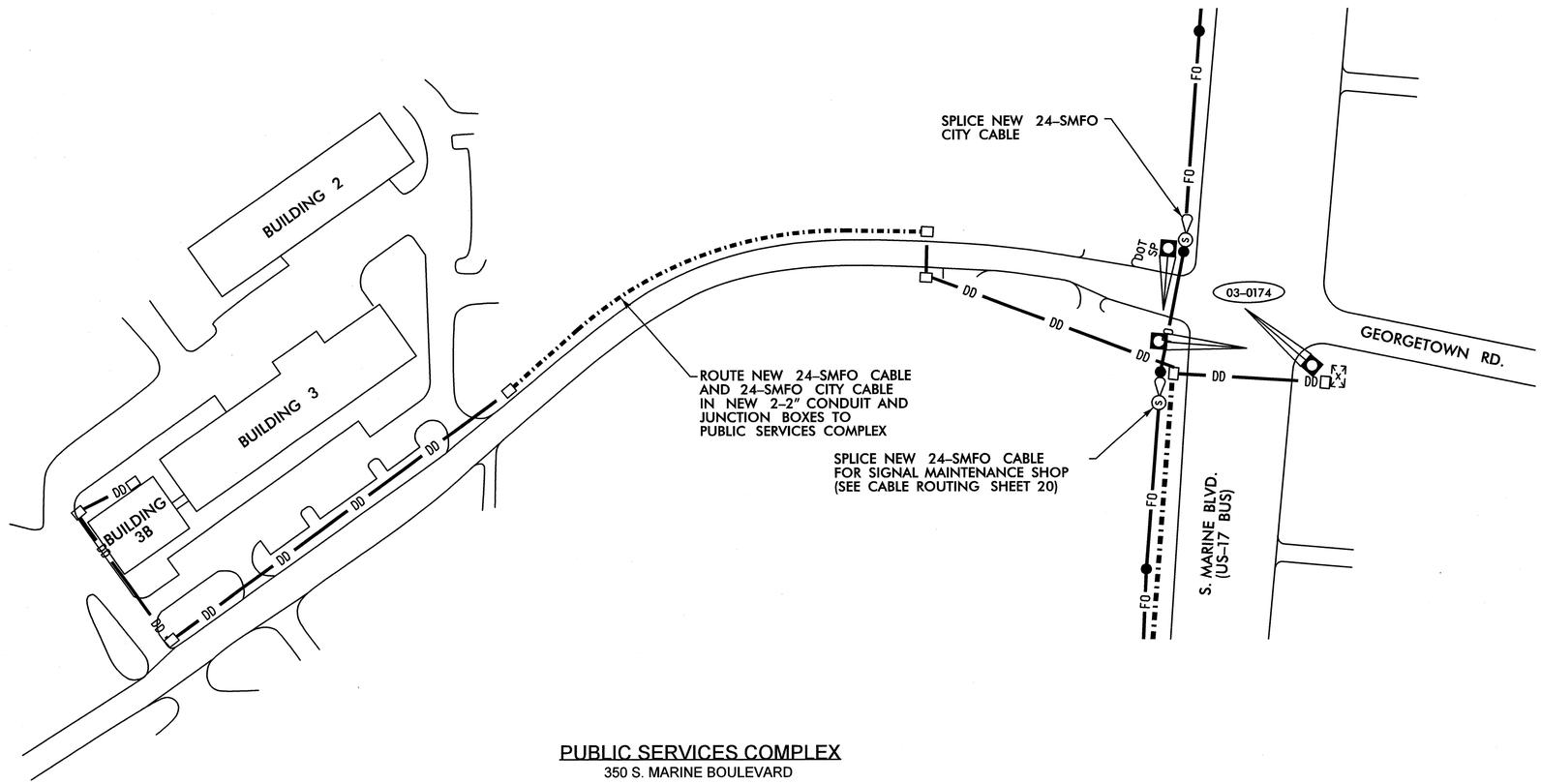
PROJECT REFERENCE NO.	SHEET NO.
U-5168	2AF



PUBLIC SERVICES COMPLEX
350 S. MARINE BOULEVARD

PLANS PREPARED IN THE OFFICE OF:

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

Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intermodal Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50'

CITY OF JACKSONVILLE
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
CITY SIGNAL MAINTENANCE SHOP

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J.C. CROSS	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

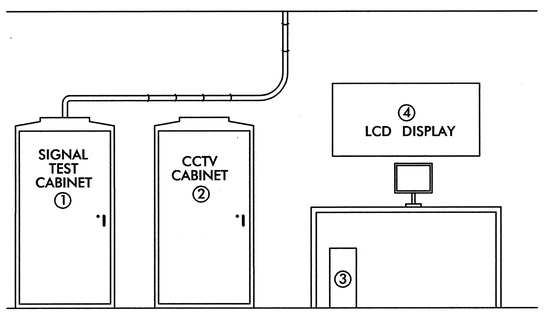
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...:\600 PSGE\KJ\MCR-0022AF.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	2AG



① INSTALL NEW SIGNAL TEST CABINET. INTEGRATE SMFO PATCH CABLE WITH FIELD ETHERNET SWITCH.

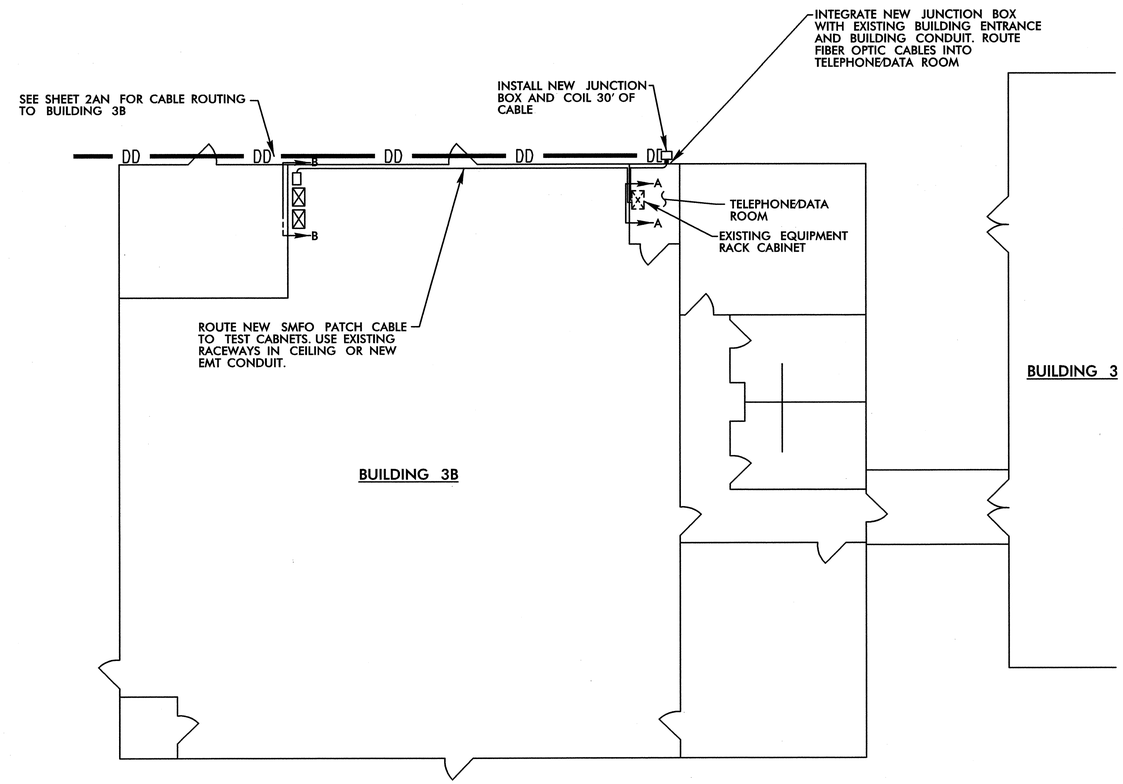
② INSTALL NEW CCTV TEST CABINET. INTEGRATE THE VIDEO ENCODER WITH THE FIELD ETHERNET SWITCH IN THE SIGNAL TEST CABINET USING ETHERNET CABLE.

③ INSTALL NEW WORKSTATION. INTEGRATE WITH NEW ETHERNET SWITCH IN THE TELEPHONE/DATA ROOM USING EXISTING ETHERNET WIRING AND OUTLETS IN BUILDING. INSTALL SIGNAL SYSTEM CENTRAL SOFTWARE AND INTEGRATE WORKSTATION AS A REMOTE USER OF THE TOC.

④ INSTALL NEW LCD MONITOR. INTEGRATE WITH VIDEO MONITOR PROCESSOR.

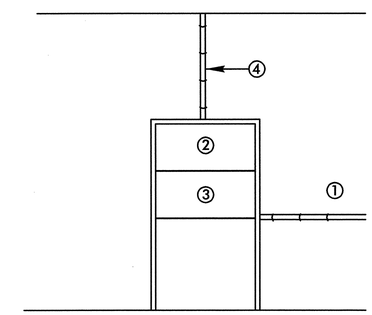
SECTION B–B

PARTIAL ELEVATION OF NORTH INTERIOR WALL



PUBLIC SERVICES COMPLEX, BUILDING 3B

PLAN VIEW



① ROUTE 24–SMFO CABLE AND 24–SMFO CITY CABLE IN NEW EMT CONDUIT TO EXISTING EQUIPMENT RACK CABINET. ATTACH CONDUIT TO THE WALL IN A METHOD APPROVED BY THE ENGINEER. COIL 24–SMFO CITY CABLE IN PLACE.

② INSTALL NEW FIBER OPTIC INTERCONNECT CENTER AND TERMINATE ALL FIBERS OF 24–SMFO CABLE FOR SIGNAL.

③ INSTALL NEW ETHERNET SWITCH AND INTEGRATE WITH NEW INTERCONNECT CENTER.

④ INSTALL NEW SMFO PATCH CABLE AND ROUTE IN NEW EMT CONDUIT TO SIGNAL MAINTENANCE SHOP AREA.

SECTION A–A

PARTIAL ELEVATION OF NORTH INTERIOR WALL

PLANS PREPARED IN THE OFFICE OF:

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

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Mobility and Safety Division
Intermodal Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0

CITY OF JACKSONVILLE
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
CITY SIGNAL MAINTENANCE SHOP

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J.C. CROSS	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PS&EM&DMCR-U02AG.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	3

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C202576

SUMMARY OF QUANTITIES

ItemNumber	Sec #	Quantity	Unit	Description
0000100000-N	800	Lump Sum		MOBILIZATION
2591000000-E	848	50	SY	4" CONCRETE SIDEWALK
3030000000-E	862	1,900	LF	STEEL BM GUARDRAIL
3045000000-E	862	50	LF	STEEL BM GUARDRAIL, SHOP CURVED
3150000000-N	862	10	EA	ADDITIONAL GUARDRAIL POSTS
3210000000-N	862	8	EA	GUARDRAIL ANCHOR UNITS, TYPE CAT-1
3270000000-N	SP	11	EA	GUARDRAIL ANCHOR UNITS, TYPE 350
4405000000-E	1110	468	SF	WORK ZONE SIGNS (PORTABLE)
4410000000-E	1110	40	SF	WORK ZONE SIGNS (BARRICADE MOUNTED)
4415000000-N	1115	1	EA	FLASHING ARROW PANELS, TYPE C
4422000000-N	1120	60	DAY	CHANGEABLE MESSAGE SIGN (SHORT TERM)
4430000000-N	1130	50	EA	DRUMS
4435000000-N	1135	25	EA	CONES
4445000000-E	1145	80	LF	BARRICADES (TYPE III)
4450000000-N	1150	225	HR	FLAGGER
4510000000-N	SP	400	HR	LAW ENFORCEMENT
7000000000-E	1705	30	EA	PEDESTRIAN SIGNAL HEAD (**", ** SECTION) (16", 1 SECTION W/ COUNTDOWN)
7060000000-E	1705	11,800	LF	SIGNAL CABLE
7120000000-E	1705	25	EA	VEHICLE SIGNAL HEAD (12", 3 SECTION)
7132000000-E	1705	20	EA	VEHICLE SIGNAL HEAD (12", 4 SECTION)
7216000000-N	SP	1	EA	MODIFY EXISTING VEHICLE SIGNAL HEAD
7252000000-E	1710	136,100	LF	MESSENGER CABLE (1/4")
7279000000-E	1715	46,600	LF	TRACER WIRE
7288000000-E	1715	900	LF	PAVED TRENCHING (**********) (1, 2")
7288000000-E	1715	1,100	LF	PAVED TRENCHING (**********) (2, 2")
7300000000-E	1715	800	LF	UNPAVED TRENCHING (**********) (1, 1")
7300000000-E	1715	7,300	LF	UNPAVED TRENCHING (**********) (1, 2")
7300000000-E	1715	9,700	LF	UNPAVED TRENCHING (**********) (2, 2")
7301000000-E	1715	3,400	LF	DIRECTIONAL DRILL (**********) (1, 2")
7301000000-E	1715	28,600	LF	DIRECTIONAL DRILL (**********) (2, 2")
7312000000-N	1716	19	EA	JUNCTION BOX (**********) (SPECIAL OVERSIZED HEAVY DUTY)
7324000000-N	1716	76	EA	JUNCTION BOX (STANDARD SIZE)
7348000000-N	1716	173	EA	JUNCTION BOX (OVER-SIZED, HEAVY DUTY)
7360000000-N	1720	4	EA	WOOD POLE
7372000000-N	1721	164	EA	GUY ASSEMBLY
7420000000-E	1722	78	EA	2" RISER WITH WEATHERHEAD
7430000000-N	1722	9	EA	HEAT SHRINK TUBING RETROFIT KIT
7432000000-E	1722	144	EA	2" RISER WITH HEAT SHRINK TUBING
7444000000-E	1725	6,300	LF	INDUCTIVE LOOP SAWCUT
7456000000-E	1726	34,400	LF	LEAD-IN CABLE (**********) (14-2)
7516000000-E	1730	143,600	LF	COMMUNICATIONS CABLE (**FIBER) (12)
7516000000-E	1730	276,800	LF	COMMUNICATIONS CABLE (**FIBER) (24)
7516000000-E	1730	17,800	LF	COMMUNICATIONS CABLE (**FIBER) (48)
7516000000-E	1730	1,600	LF	COMMUNICATIONS CABLE (**FIBER) (72)
7540000000-N	1731	127	EA	SPLICE ENCLOSURE
7552000000-N	1731	76	EA	INTERCONNECT CENTER
7566000000-N	1733	116	EA	DELINEATOR MARKER

ItemNumber	Sec #	Quantity	Unit	Description
7568000000-N	SP	1	EA	FURNISH FIBER-OPTIC RESTORATION KIT
7570000000-N	SP	1	EA	FURNISH FIBER-OPTIC POWER METER
7572000000-N	SP	1	EA	FURNISH OPTICAL LIGHT GENERATOR
7575142200-N	SP	35	EA	NEW ELECTRICAL SERVICE
7575180000-N	1735	10	EA	CABLE TRANSFER
7624000000-N	1743	1	EA	SIGNAL PEDESTAL WITH FOUNDATION
7636000000-N	1745	1	EA	SIGN FOR SIGNALS
7684000000-N	1750	7	EA	SIGNAL CABINET FOUNDATION
7686000000-N	SP	32	EA	CONDUIT ENTRANCE INTO EXISTING FOUNDATION
7687000000-N	SP	5	EA	MODIFY FOUNDATION FOR CONTROLLER CABINET
7708000000-N	1751	140	EA	DETECTOR CARD (**********) (MODEL 222)
7901000000-N	1753	10	EA	CABINET BASE EXTENDER
7901010000-N	1753	2	EA	CABINET BASE ADAPTER
7980000000-N	SP	4	EA	GENERIC SIGNAL ITEM 2.4/5.8 GHZ WIRELESS ETHERNET RADIO SYSTEM
7980000000-N	SP	8	EA	GENERIC SIGNAL ITEM 2.4/5.8 GHZ WIRELESS ETHERNET REPEATER STANDALONE RADIO SYSTEM
7980000000-N	SP	10	EA	GENERIC SIGNAL ITEM AUXILIARY OUTPUT FILE
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM BACKUP STORAGE SERVER
7980000000-N	SP	41	EA	GENERIC SIGNAL ITEM CCTV CAMERA ASSEMBLY
7980000000-N	SP	3	EA	GENERIC SIGNAL ITEM CCTV CONTROL PANEL
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM CCTV VIDEO SERVER
7980000000-N	SP	37	EA	GENERIC SIGNAL ITEM CCTV WOOD POLE (MT HGHT 30' - 35')
7980000000-N	SP	4	EA	GENERIC SIGNAL ITEM CCTV WOOD POLE (MT HGHT 45' - 60')
7980000000-N	SP	6	EA	GENERIC SIGNAL ITEM CELLULAR MODEM
7980000000-N	SP	3	EA	GENERIC SIGNAL ITEM COMPUTER WORKSTATION
7980000000-N	SP	8	EA	GENERIC SIGNAL ITEM CONFLICT MONITOR
7980000000-N	SP	5	EA	GENERIC SIGNAL ITEM CONTROLLER WITH CABINET (TYPE 2070L) (332 BASE MOUNTED WITH AUX FILE)
7980000000-N	SP	7	EA	GENERIC SIGNAL ITEM CONTROLLER WITH CABINET (TYPE 2070L) (332 BASE MOUNTED)
7980000000-N	SP	6	EA	GENERIC SIGNAL ITEM CONTROLLER WITH CABINET (TYPE 2070L) (336S POLE MOUNTED)
7980000000-N	SP	5	EA	GENERIC SIGNAL ITEM DMS ACCESS LADDER
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM DMS SERVER
7980000000-N	SP	16	EA	GENERIC SIGNAL ITEM EMERGENCY GENERATOR PROVISIONS
7980000000-N	SP	2	EA	GENERIC SIGNAL ITEM FIBER-OPTIC TRANSMITTER & RECEIVER UNIT
7980000000-N	SP	96	EA	GENERIC SIGNAL ITEM FIELD ETHERNET SWITCH
7980000000-N	SP	41	EA	GENERIC SIGNAL ITEM FIELD VIDEO CODEC UNIT
7980000000-N	SP	4	EA	GENERIC SIGNAL ITEM FRONT ACCESS ENCLOSURE DMS
7980000000-N	SP	3	EA	GENERIC SIGNAL ITEM FURNISH 2070L CONTROLLER
7980000000-N	SP	2	EA	GENERIC SIGNAL ITEM FURNISH 332 CABINET
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM FURNISH 336 CABINET
7980000000-N	SP	3	EA	GENERIC SIGNAL ITEM FURNISH AC ISOLATOR CARD
7980000000-N	SP	2	EA	GENERIC SIGNAL ITEM FURNISH CCTV ASSEMBLY

ItemNumber	Sec #	Quantity	Unit	Description
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	3	EA	GENERIC SIGNAL ITEM FURNISH CONFLICT MONITOR
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM FURNISH CONTROLLER TESTER
7980000000-N	SP	3	EA	GENERIC SIGNAL ITEM FURNISH DC ISOLATOR CARD
7980000000-N	SP	6	EA	GENERIC SIGNAL ITEM FURNISH DETECTOR CARD
7980000000-N	SP	2	EA	GENERIC SIGNAL ITEM FURNISH DMS CONTROLLER
7980000000-N	SP	5	EA	GENERIC SIGNAL ITEM FURNISH FIBER OPTIC INTERCONNECT CENTER
7980000000-N	SP	8	EA	GENERIC SIGNAL ITEM FURNISH FIELD ETHERNET SWITCH
7980000000-N	SP	4	EA	GENERIC SIGNAL ITEM FURNISH FLASH TRANSFER RELAY
7980000000-N	SP	2	EA	GENERIC SIGNAL ITEM FURNISH FLASHER MODULE
7980000000-N	SP	5	EA	GENERIC SIGNAL ITEM FURNISH HEAT SHRINK TUBING
7980000000-N	SP	5	EA	GENERIC SIGNAL ITEM FURNISH HEAT SHRINK TUBING RETROFIT KIT
7980000000-N	SP	3	EA	GENERIC SIGNAL ITEM FURNISH LOAD SWITCH
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM FURNISH OPTICAL PREEMPTION PHASE SELECTOR
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM FURNISH OPTICAL PREEMPTION DETECTOR
7980000000-N	SP	8	EA	GENERIC SIGNAL ITEM FURNISH SC JUMPERS
7980000000-N	SP	8	EA	GENERIC SIGNAL ITEM FURNISH SC PIGTAILS
7980000000-N	SP	8	EA	GENERIC SIGNAL ITEM FURNISH SC SPLICE CONNECTOR
7980000000-N	SP	8	EA	GENERIC SIGNAL ITEM FURNISH SC-ST JUMPERS
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM FURNISH SIGNAL MONITOR TESTER
7980000000-N	SP	2	EA	GENERIC SIGNAL ITEM FURNISH SPLICE ENCLOSURE
7980000000-N	SP	8	EA	GENERIC SIGNAL ITEM FURNISH ST JUMPERS
7980000000-N	SP	8	EA	GENERIC SIGNAL ITEM FURNISH ST PIGTAILS
7980000000-N	SP	8	EA	GENERIC SIGNAL ITEM FURNISH ST SPLICE CONNECTOR
7980000000-N	SP	20	EA	GENERIC SIGNAL ITEM FURNISH SURGE PROTECTOR
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM FURNISH TEST CABINET/ CONTROLLER
7980000000-N	SP	2	EA	GENERIC SIGNAL ITEM FURNISH VIDEO CODEC UNIT
7980000000-N	SP	2	EA	GENERIC SIGNAL ITEM FURNISH WIRELESS RADIO TRANSCEIVER
7980000000-N	SP	26	EA	GENERIC SIGNAL ITEM GENERATOR ANCHOR INTO EXISTING FOUNDATION
7980000000-N	SP	5	EA	GENERIC SIGNAL ITEM LCD VIDEO MONITOR
7980000000-N	SP	11	EA	GENERIC SIGNAL ITEM MODIFY EXISTING ELECTRICAL SERVICE
7980000000-N	SP	24	EA	GENERIC SIGNAL ITEM MODIFY EXISTING INTERCONNECT CENTER OR SPLICE ENCLOSURE
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM NETWORK VIDEO RECORDER
7980000000-N	SP	3	EA	GENERIC SIGNAL ITEM NOTEBOOK COMPUTER
7980000000-N	SP	36	EA	GENERIC SIGNAL ITEM OPTICAL PREEMPTION DETECTOR
7980000000-N	SP	14	EA	GENERIC SIGNAL ITEM OPTICAL PREEMPTION PHASE SELECTOR
7980000000-N	SP	4	EA	GENERIC SIGNAL ITEM PEDESTAL STRUCTURE FOR FRONT ACCESS DMS

ItemNumber	Sec #	Quantity	Unit	Description
7980000000-N	SP	5	EA	GENERIC SIGNAL ITEM PEDESTAL STRUCTURE FOR WALK-IN DMS
7980000000-N	SP	13	EA	GENERIC SIGNAL ITEM POWER FROM EXISTING ELECTRICAL SERVICE
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM REMOTE ACCESS SERVER
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM SIGNAL SYSTEM COMMUNICATIONS SERVER
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM SIGNAL SYSTEM PROCESSING SERVER
7980000000-N	SP	3	EA	GENERIC SIGNAL ITEM SOLAR POWER ASSEMBLY
7980000000-N	SP	5	EA	GENERIC SIGNAL ITEM TERMINAL SPLICE BOX
7980000000-N	SP	6	EA	GENERIC SIGNAL ITEM VIDEO MONITOR PROCESSOR UNIT
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM VIDEO PROJECTION UNIT
7980000000-N	SP	1	EA	GENERIC SIGNAL ITEM VPN FIREWALL
7980000000-N	SP	5	EA	GENERIC SIGNAL ITEM WALK-IN ENCLOSURE DMS
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM CCTV SYSTEM SOFTWARE
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM COMPUTER HARDWARE INTEGRATION
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM LAN INTEGRATION
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM PUBLIC SAFETY COMPLEX FIBER OPTIC CABLE TERMINATION
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM PUBLIC SERVICES COMPLEX FIBER OPTIC CABLE TERMINATION
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM SIGNAL SYSTEM SOFTWARE
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM SYSTEM SUPPORT SOFTWARE
7985000000-N	SP	Lump Sum		GENERIC SIGNAL ITEM TRAINING
7990000000-E	SP	33,700	LF	GENERIC SIGNAL ITEM DROP CABLE (6 FIBER)
7990000000-E	SP	3,300	LF	GENERIC SIGNAL ITEM ETHERNET CABLE (OUTDOOR RATED)
7990000000-E	SP	4,400	LF	GENERIC SIGNAL ITEM FURNISH COMMUNICATIONS CABLE (12 FIBER)
7990000000-E	SP	8,400	LF	GENERIC SIGNAL ITEM FURNISH COMMUNICATIONS CABLE (24 FIBER)
7990000000-E	SP	600	LF	GENERIC SIGNAL ITEM FURNISH COMMUNICATIONS CABLE (48 FIBER)
7990000000-E	SP	100	LF	GENERIC SIGNAL ITEM FURNISH COMMUNICATIONS CABLE (72 FIBER)
7990000000-E	SP	1,100	LF	GENERIC SIGNAL ITEM FURNISH DROP CABLE (6 FIBER)
7991000000-E	SP	500	SF	GENERIC SIGNAL ITEM BRICK PAVERS
7992000000-E	SP	90	CY	GENERIC SIGNAL ITEM FOOTINGS FOR DMS STRUCTURE

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Mobility and Safety Division
Integrated Transportation Systems Section
759 N. Greenfield Pkwy., Garner, NC 27529

SCALE: 0

CITY OF JACKSONVILLE
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
SUMMARY OF QUANTITIES

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J.C. CROSS	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE: KW Smith DATE: 7-20-11

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PS:E=CADWCR-003.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	3A

SUMMARY OF WORK BY CABLE ROUTING

CABLE ROUTING SHEET NO.	MESSENGER CABLE (1/4")	TRACER WIRE	UNDERGROUND POLYETHYLENE CONDUIT, 2" (1 CONDUIT)	UNDERGROUND POLYETHYLENE CONDUIT, 2" (2 CONDUITS)	DIRECTIONAL DRILL POLYETHYLENE CONDUIT, 2" (1 CONDUIT)	DIRECTIONAL DRILL POLYETHYLENE CONDUIT, 2" (2 CONDUITS)	JUNCTION BOX (STANDARD)	JUNCTION BOX (OVERSIZED HEAVY-DUTY)	JUNCTION BOX (SPECIAL OVERSIZED HEAVY-DUTY)	FIBER OPTIC DELINEATOR MARKER	WOOD POLE	AERIAL GUY ASSEMBLY	STANDARD GUY ASSEMBLY	SIDEWALK GUY ASSEMBLY	2" RISER WITH WEATHERHEAD	2" RISER WITH HEAT SHRINK TUBING	2.4/5.8 GHZ RADIO TRANSCEIVER ▽	PANEL ANTENNA ▽	OMNI-DIRECTIONAL ANTENNA	REMOVE EXISTING WIRELESS HARDWARE
	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA
4	400	350	350					1	1	1	1		1		1	1				
5	1,440																			
6	1,440																			
7	1,155	310				310		1		1			3			1				
8	930	485				485		2		1			1			1				
9	115	810		810				2		1			1			1				
10		715		545		170	1	3		2	1		1		1	3				
11	820	670		180		490		3		2			1			1				
12	1,475												4							
13	1,735	35	35		200		1	2		1	1	1	2		1	1				
14	730	530				530		2		2		1	1	1		2				
15	1,190	290			110	180		3		2				1		2				
16	560	775				775		2		2			2			3				
17		1,235				1,235		2		1										
18	360	210				210		1		1			1			1				
19	490	190				190		2		1		3	1			3				
20		1,290	210	330	100	650		8		1	1				1	1				
21	710	450		230	100	120		3	1	3		1	5			2				
22	330	480				480		1		1			1			1				
23	265	410				410		2		2			2			2				
24		1,505	230		110	1,165		6	1	5	1		1		1	1				1
25																2				1
26																1				
27		110	110					2		1	1				1	1				
28	1,050						1				1		1		1	2				1
29	1,070																			
30	1,450															1				
31	1,035	1,130	25			1,130	2	3		2	1		1		1	2				1
32	770	680				680		3		2			2			2				
33		1,200				1,200			2	2										
34	880	730		440	90	200		3		1			3	1		1				
35	1,975	290			180	110		2			1		2		1	1				1
36	635	260				260		1		1			1			1				
37	360	820				820		1	1	1	1		1		3	3				1
38	1,180																			
39	940																			
40	945												3							
SUBTOTAL	**26,435**	**15,960**	**960**	**2,535**	**890**	**11,800**	**5**	**61**	**6**	**40**	**10**	**6**	**42**	**3**	**12**	**44**	**0**	**0**	**0**	**6**

10/28/2011 $TIME$ jerry.cross ...*600 PSAE*CADMCR-003A.dgn

PLANS PREPARED IN THE OFFICE OF:

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

750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0

CITY OF JACKSONVILLE
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
SUMMARY OF WORK BY CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J.C. CROSS	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE
▽ NEW WIRELESS RADIO DESIGN	KWS	10/28/11

SEAL

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SIGNATURE DATE

CADD Filename:

PROJECT REFERENCE NO.	SHEET NO.
U-5168	3B

SUMMARY OF WORK BY CABLE ROUTING

CABLE ROUTING SHEET NO.	MESSENGER CABLE (1/4")	TRACER WIRE	UNDERGROUND POLYETHYLENE CONDUIT, 2" (1 CONDUIT)	UNDERGROUND POLYETHYLENE CONDUIT, 2" (2 CONDUITS)	DIRECTIONAL DRILL POLYETHYLENE CONDUIT, 2" (1 CONDUIT)	DIRECTIONAL DRILL POLYETHYLENE CONDUIT, 2" (2 CONDUITS)	JUNCTION BOX (STANDARD)	JUNCTION BOX (OVERSIZED HEAVY-DUTY)	JUNCTION BOX (SPECIAL OVERSIZED HEAVY-DUTY)	FIBER OPTIC DELINEATOR MARKER	WOOD POLE	AERIAL GUY ASSEMBLY	STANDARD GUY ASSEMBLY	SIDEWALK GUY ASSEMBLY	2" RISER WITH WEATHERHEAD	2" RISER WITH HEAT SHRINK TUBING	2.4/5.8 GHZ RADIO TRANSCEIVER	PANEL ANTENNA	OMNI-DIRECTIONAL ANTENNA	REMOVE EXISTING WIRELESS HARDWARE
	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA
41	1,145																			
42	1,410																			
43	890																			
44	1,380																			
45	1,220																			
46	1,430																			
47	1,355																			
48	1,290																			
49	1,450																			
50	1,390																			
51	1,390																			
52	1,320																			
53	685																			
54	1,400																			
55	1,320																			
56	1,310																			
57	1,425																			
58	1,360																			
59	1,300																			
60	1,430																			
61	1,415																			
62	1,005																			
63	1,450																			
64	1,425																			
65	1,450												2							
66	1,450																			
67	705												1							
68	710												1			2	1	1		
69	740	110			90	110	1	1	1	1	1		3		1	1				
70	800												1							
71	1,450											1								
72	1,180	350				350		1		1			4			1				
73	940	460				460		1	1	2			1			1				
74	25	1,340				1,340		3		2			1			1				
75	710	630				630		2		1			1			1				
76	800	565				565		2		2		1	3			2				
77	1,060												3							
78	680	200			200			2		2	1		1		1	2	1	1		
79	1,450																			
80	750	790			110	680		4		2			1			2				
SUBTOTAL	**46,095**	**4,445**	**0**	**0**	**400**	**4,135**	**1**	**16**	**2**	**13**	**2**	**2**	**23**	**0**	**2**	**13**	**2**	**2**	**0**	**0**

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Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE: 0

CITY OF JACKSONVILLE
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
SUMMARY OF WORK BY CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: J.C. CROSS	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE
1 NEW WIRELESS RADIO DESIGN	KWS	10/28/11

SEAL

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CADD Filename:

10/28/2011 $TIME$ jerry.cross ...#600 PSJE-#CADWCR-003B.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	3C

SUMMARY OF WORK BY CABLE ROUTING

CABLE ROUTING SHEET NO.	MESSENGER CABLE (1/4")	TRACER WIRE	UNDERGROUND POLYETHYLENE CONDUIT, 2" (1 CONDUIT)	UNDERGROUND POLYETHYLENE CONDUIT, 2" (2 CONDUITS)	DIRECTIONAL DRILL POLYETHYLENE CONDUIT, 2" (1 CONDUIT)	DIRECTIONAL DRILL POLYETHYLENE CONDUIT, 2" (2 CONDUITS)	JUNCTION BOX (STANDARD)	JUNCTION BOX (OVERSIZED HEAVY-DUTY)	JUNCTION BOX (SPECIAL OVERSIZED HEAVY-DUTY)	FIBER OPTIC DELINEATOR MARKER	WOOD POLE	AERIAL GUY ASSEMBLY	STANDARD GUY ASSEMBLY	SIDEWALK GUY ASSEMBLY	2" RISER WITH WEATHERHEAD	2" RISER WITH HEAT SHRINK TUBING	2.4/5.8 GHZ RADIO TRANSCEIVER	PANEL ANTENNA	OMNI-DIRECTIONAL ANTENNA	REMOVE EXISTING WIRELESS HARDWARE
	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA
81	1,380	225				225		2		2			1			1				
82	1,410																			
83	1,400												3							
84	1,420																			
85	1,450																			
86	1,450																			
87	965																			
88	1,220											1	1							
89	760						1				1				1	1				
90																				
91																				
92																				
93																				
94		330	330					1			1				1					
95		510	310		200			2		1										
96																				
97																1				
98	370	125				125		1		1			2			1				
99	400	945		50		895		4		3			2			4				
100		700				700			2							1				
101	100	230	230					2		2						3				1
102	205							1			1		1		1	1				
103	600	465		35		430		2	1	2			2			3	1	1		
104							1				1				1					
105	1,150												2			1				
106	870											1	2			1				
107	850																			
108	1,050												1							
109	350												2			1				
110	790	75			75			2		1	1		1		1	2	1	1		
111	870											1								
112	1,340											1	1							
113	1,530	25	25					2		1			3			1				
114	1,060																			
115	1,005																			
116	1,020												2							
117	1,370	125	125					2		1	1		1		1	1				
118	910	470	55	415				2	1	2			1			1				
119	1,125	190		190				1		1			1			1				
120	1,190	305	90		105	215	1	3		2	1		1		1	2				
SUBTOTAL	**29,610**	**4,720**	**1,165**	**690**	**380**	**2,590**	**3**	**27**	**4**	**19**	**7**	**4**	**30**	**0**	**7**	**27**	**2**	**2**	**0**	**1**

PLANS PREPARED IN THE OFFICE OF:

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

Transportation Mobility and Safety Division
Intelligent Transportation Systems Section
DEPARTMENT OF TRANSPORTATION
STATE OF NORTH CAROLINA
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE
0

CITY OF JACKSONVILLE
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
SUMMARY OF WORK BY CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: J.C. CROSS	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE
1 NEW WIRELESS RADIO DESIGN	KWS	10/28/11

SEAL

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CADD Filename:

10/28/2011 $TIME$ jerry.cross ...#600 PSE#CADWCR-003C.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	3D

SUMMARY OF WORK BY CABLE ROUTING

CABLE ROUTING SHEET NO.	MESSENGER CABLE (1/4")	TRACER WIRE	UNDERGROUND POLYETHYLENE CONDUIT, 2" (1 CONDUIT)	UNDERGROUND POLYETHYLENE CONDUIT, 2" (2 CONDUITS)	DIRECTIONAL DRILL POLYETHYLENE CONDUIT, 2" (1 CONDUIT)	DIRECTIONAL DRILL POLYETHYLENE CONDUIT, 2" (2 CONDUITS)	JUNCTION BOX (STANDARD)	JUNCTION BOX (OVERSIZED HEAVY-DUTY)	JUNCTION BOX (SPECIAL OVERSIZED HEAVY-DUTY)	FIBER OPTIC DELINEATOR MARKER	WOOD POLE	AERIAL GUY ASSEMBLY	STANDARD GUY ASSEMBLY	SIDEWALK GUY ASSEMBLY	2" RISER WITH WEATHERHEAD	2" RISER WITH HEAT SHRINK TUBING	2.4/5.8 GHZ RADIO TRANSCEIVER V	PANEL ANTENNA V	OMNI-DIRECTIONAL ANTENNA	REMOVE EXISTING WIRELESS HARDWARE
	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA
121	845	695		315		380		2	1	1			1			1				
122	1,435											1								
123	1,405												1							
124	620	345		345				1		1			1			2				
125	695	120		35	85			3		2	1		1		1	2				
126	255												1							
127		890				890		3	1	3	1		2		1	3				1
128																				
129																				
130	185	1,130	660			470		4		3			1			1				
131	750	755		655		100		3		1			2			1				
132	765	855		285		570		5	1	5	1		3	1	1	3				
133	1,045	40	40													1				
134	1,020											1	2							
135	480	1,410		890		520		3	1	3			3			2				
136	975												2							
137	345	1,185		535		650		4	1	3			1			1				
138	640	780	435		345			3		1		1	1			1				1
139	975																			
140	260										1				1	1				1
141																				
142								1			1				1	1				1
143																				
144		415			415			2		1	1				1	2				1
145																				
146		105			105			2		1	1				1	2				1
147	80	1,215	565			650		2	1	1	1				1	2				
148	1,040	125				125		1		1			1			1				
149	720																			
150		1,105		1,105				3		1	1				1					
151																				
152																				
153																				
154																				
155		1,030		1,030				2		1										
156		760		525	235			2		1	1				1					
157		385	110	275				3		2	1				1	2				
158		315		315				1					1			1				
159							1				1		1		2	1				1
160													1							
SUBTOTAL	**14,535**	**13,660**	**1,810**	**6,310**	**1,185**	**4,355**	**1**	**50**	**6**	**32**	**12**	**3**	**26**	**1**	**13**	**31**	**0**	**0**	**0**	**7**

PLANS PREPARED IN THE OFFICE OF:

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

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Mobility and Safety Division
Intermodal Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE: 0

CITY OF JACKSONVILLE
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
SUMMARY OF WORK BY CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: J.C. CROSS	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE
V NEW WIRELESS RADIO DESIGN	KWS	10/28/11

SEAL

This document originally issued and sealed by Kevin W. Smith, 030472, on 07/25/11. This media shall not be considered a certified document.

SIGNATURE DATE

CADD Filename:

10/28/2011 $TIME$ jerry.cross ...#500 PSA&#CADWCR-003D.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	3E

SUMMARY OF WORK BY CABLE ROUTING

CABLE ROUTING SHEET NO.	MESSENGER CABLE (1/4")	TRACER WIRE	UNDERGROUND POLYETHYLENE CONDUIT, 2" (1 CONDUIT)	UNDERGROUND POLYETHYLENE CONDUIT, 2" (2 CONDUITS)	DIRECTIONAL DRILL POLYETHYLENE CONDUIT, 2" (1 CONDUIT)	DIRECTIONAL DRILL POLYETHYLENE CONDUIT, 2" (2 CONDUITS)	JUNCTION BOX (STANDARD)	JUNCTION BOX (OVERSIZED HEAVY-DUTY)	JUNCTION BOX (SPECIAL OVERSIZED HEAVY-DUTY)	FIBER OPTIC DELINEATOR MARKER	WOOD POLE	AERIAL GUY ASSEMBLY	STANDARD GUY ASSEMBLY	SIDEWALK GUY ASSEMBLY	2" RISER WITH WEATHERHEAD	2" RISER WITH HEAT SHRINK TUBING	2.4/5.8 GHZ RADIO TRANSCEIVER V	PANEL ANTENNA V	OMNI-DIRECTIONAL ANTENNA	REMOVE EXISTING WIRELESS HARDWARE
	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA	EA
161	75						1				1		2		1	1				1
162	485															1				1
163	80	35	35					2		1	1				1	2				1
164																1				1
165																1				1
166		20	20					2		1			1			1				1
167		570				570		1		1			2			2				1
168	160	220		120		100		2		1			3			1				
169	680	455	110			345		3	1	1	1		2		1	2				1
170	370															1				1
171	235	295		140		155		2		2	1		1		1	2				1
172	870	585				585		3		3			3	1		3				
173	1,450																			
174	780										1				2	1				1
175	170															1				1
176													1			1				1
177	625	520				520		2		1			2			2				1
178	495	795				795		2		1			3			1				
179	490												3							
180																				
181																				
182																				
183											1				1	1	1	1		
184											1				1	1	1	2		
185											1				1	1	1	1		
186																				
187											1				1	1	1	1		
188											1				1	1	1	1		
189																				
190																				
SUBTOTAL	6,965	3,495	165	260	0	3,070	1	19	1	12	10	0	23	1	11	29	5	6	0	14
TOTAL	123,640	42,280	4,100	9,795	2,855	25,950	11	173	19	116	41	15	144	5	45	144	9	10	0	28

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(919) 677-2000

750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0

CITY OF JACKSONVILLE
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
SUMMARY OF WORK BY CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011 REVIEWED BY: K.W. SMITH
PREPARED BY: J.C. CROSS REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE
V NEW WIRELESS RADIO DESIGN	KWS	10/28/11

SEAL

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SIGNATURE DATE

CADD Filename:

10/28/2011 $TIME$ jerry.cross ...#600 PSJEWCADWCR-003E.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	3F

SUMMARY OF WORK BY CABLE ROUTING

CABLE ROUTING SHEET NO.	COMM CABLE 12 FIBER (CITY)	COMM CABLE 24 FIBER (CITY)	COMM CABLE 48 FIBER (CITY)	COMM CABLE 24 FIBER	COMM CABLE 48 FIBER	COMM CABLE 72 FIBER	DROP CABLE 6 FIBER	UNDGERGROUND SPLICE ENCLOSURE (CITY)	AERIAL SPLICE ENCLOSURE (CITY)	UNDERGROUND SPLICE ENCLOSURE	AERIAL SPLICE ENCLOSURE	INTERCONNECT CENTER	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	ETHERNET CABLE	CCTV UNIFIED CABLE	ANTENNA CABLE	ETHERNET SWITCH	REMOVE EXISTING FIBER OPTIC TRANCEIVER
	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	LF	LF	LF	EA	EA
4				910			130			1		1		100	50		1	
5				1,440														
6				1,440														
7				1,725							1							
8				1,505														
9				1,015														
10				1,755			230				1	1		100	50		1	
11				1,610														
12				1,475														
13		1,105		2,095			495				1	1		300	50		1	
14		1,380		1,380														
15		1,630		1,630			330		1		1	1					1	
16		1,455		1,655			160				1	1					1	
17		1,295		1,295														
18		630		630														
19		2,020		2,020			160		1		1		1				1	1
20		2,710		3,190			720		1		1	1	1		100		2	1
21		2,155		1,185	970		130		1	1			1				1	1
22		870			870													
23		1,615			1,615													
24		2,160			1,285	1,105	560			1		2			50		2	
25		890	1,070	1,140	560	330	860		1		1	2					2	
26		1,110			1,310		160				1	1					1	
27		1,425			1,625		330				1	1			50		1	
28	560	1,085		1,490	1,645		775		1		1	2		100	50		2	
29	1,070				1,070													
30	1,450				1,650		185				1	1					1	
31	2,875			2,555	650		170		1		1	1		125	50		1	
32	1,770			1,570					1									
33	1,260			1,260				1		1								
34	1,350			2,585			300			1		1					1	
35	2,790			3,860			980		1		2	2			50		2	
36	955			955														
37	1,240			1,440			330			1		1		340	50		1	
38	1,380			1,180					1									
39	940			940														
40	1,275			1,275			100		1		1							
SUBTOTAL	**18,915**	**23,535**	**1,070**	**48,205**	**13,250**	**1,435**	**7,105**	**1**	**11**	**6**	**16**	**20**	**3**	**1,065**	**550**	**0**	**23**	**3**

PLANS PREPARED IN THE OFFICE OF:

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Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE: 0

CITY OF JACKSONVILLE
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
SUMMARY OF WORK BY CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J.C. CROSS	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-25-11 DATE

CADD Filename:

7/25/2011 $TIME$ susan.pennington ...#600 PSA&#CAD#CR-003F.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	3G

SUMMARY OF WORK BY CABLE ROUTING

CABLE ROUTING SHEET NO.	COMM CABLE 12 FIBER (CITY)	COMM CABLE 24 FIBER (CITY)	COMM CABLE 48 FIBER (CITY)	COMM CABLE 24 FIBER	COMM CABLE 48 FIBER	COMM CABLE 72 FIBER	DROP CABLE 6 FIBER	UNDGERGROUND SPLICE ENCLOSURE (CITY)	AERIAL SPLICE ENCLOSURE (CITY)	UNDERGROUND SPLICE ENCLOSURE	AERIAL SPLICE ENCLOSURE	INTERCONNECT CENTER	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	ETHERNET CABLE	CCTV UNIFIED CABLE	ANTENNA CABLE	ETHERNET SWITCH	REMOVE EXISTING FIBER OPTIC TRANCEIVER
	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	LF	LF	LF	EA	EA
41	1,145			1,145														
42	1,410			1,410														
43	890			890														
44	1,380			1,380														
45	1,420			1,420			100		1		1							
46	1,430			1,430														
47	1,355			1,355														
48	1,490			1,490			100		1		1							
49	1,450			1,650			100				1							
50	1,390			1,390														
51	1,390			1,390														
52	1,520			1,520					1		1							
53	685			685														
54	1,400			1,600			100				1							
55	1,320			1,320														
56	1,510			1,310					1									
57	1,425			1,425														
58	1,360			1,360														
59	1,500			1,500			100		1		1							
60	1,430			1,630			100				1							
61	1,415			1,415														
62	1,005			1,005														
63	1,650			1,450					1									
64	1,425			1,625			100				1							
65	1,650			1,450					1									
66	1,450			1,450														
67	505			905					1		1							
68				760			320				1	1					1	
69		370		910			90		1	1		1		190	50		1	
70		800		800														
71		1,450		1,450														
72		1,590		1,590														
73		1,660		1,660					1	1								
74		1,485		1,485														
75		1,430		1,430														
76		1,685		1,685					1		1							
77		1,060		1,060														
78				780			420				1	1		200	50	100	1	
79				1,450														
80				1,720			330				1	1					1	
SUBTOTAL	**36,000**	**11,530**	**0**	**53,380**	**0**	**0**	**1,860**	**0**	**11**	**2**	**13**	**4**	**0**	**390**	**100**	**100**	**4**	**0**

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Transportation Mobility and Safety Division
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0

CITY OF JACKSONVILLE
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
SUMMARY OF WORK BY CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J.C. CROSS	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-25-11 DATE

CADD Filename:

7/25/2011 $TIME$ susan.pennington ...#600 PSSE#CAD#CR-0036.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	3H

SUMMARY OF WORK BY CABLE ROUTING

CABLE ROUTING SHEET NO.	COMM CABLE 12 FIBER (CITY)	COMM CABLE 24 FIBER (CITY)	COMM CABLE 48 FIBER (CITY)	COMM CABLE 24 FIBER	COMM CABLE 48 FIBER	COMM CABLE 72 FIBER	DROP CABLE 6 FIBER	UNDGERGROUND SPLICE ENCLOSURE (CITY)	AERIAL SPLICE ENCLOSURE (CITY)	UNDERGROUND SPLICE ENCLOSURE	AERIAL SPLICE ENCLOSURE	INTERCONNECT CENTER	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	ETHERNET CABLE	CCTV UNIFIED CABLE	ANTENNA CABLE	ETHERNET SWITCH	REMOVE EXISTING FIBER OPTIC TRANCEIVER
	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	LF	LF	LF	EA	EA
81				1,695														
82				1,610							1							
83				1,400														
84				1,420														
85				1,450														
86				1,650							1							
87				965														
88				1,220														
89				1,060			360				1		1	100	50		1	1
90																		
91													1				1	1
92																		
93																		
94							390					1			50		1	
95							600						1				1	1
96													1				1	1
97			900	1,100			160				1	1					1	
98				575			240				1	1					1	
99				1,715			430				1	1					1	
100			860	1,740			640	1		1		2					2	
101				1,970			1,420				2	3					3	
102				1,495			130					1			50		1	
103				1,180			125			1			1			300	1	1
104							60						1	60	50		1	1
105				1,220			190				1	1					1	
106				880			250				1	1					1	
107				850														
108				1,050														
109				400			300				1	1					1	
110	720			720			465		1		1	1		200	50	100	1	
111	870			870														
112	1,340			1,340														
113	1,430			1,630			365				1	1					1	
114	1,260			1,060					1									
115	1,005			1,005														
116	1,020			1,020														
117	1,370			1,570			345				1	1			50		1	
118	1,685			1,555			115		1	1		1					1	
119	1,375			1,375														
120	1,465			1,665			400				1	1		185	50		1	
SUBTOTAL	**13,540**	**0**	**1,760**	**40,455**	**0**	**0**	**6,985**	**1**	**3**	**3**	**15**	**18**	**6**	**545**	**350**	**400**	**24**	**6**

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

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

SCALE: 0

CITY OF JACKSONVILLE
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
SUMMARY OF WORK BY CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J.C. CROSS	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-25-11 DATE

CADD Filename:

7/25/2011 $TIME$ susan.pennington ...WBDD PSSE\WCAD\WCR-003H.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	3J

SUMMARY OF WORK BY CABLE ROUTING

CABLE ROUTING SHEET NO.	COMM CABLE 12 FIBER (CITY)	COMM CABLE 24 FIBER (CITY)	COMM CABLE 48 FIBER (CITY)	COMM CABLE 24 FIBER	COMM CABLE 48 FIBER	COMM CABLE 72 FIBER	DROP CABLE 6 FIBER	UNDGERGROUND SPLICE ENCLOSURE (CITY)	AERIAL SPLICE ENCLOSURE (CITY)	UNDERGROUND SPLICE ENCLOSURE	AERIAL SPLICE ENCLOSURE	INTERCONNECT CENTER	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	ETHERNET CABLE	CCTV UNIFIED CABLE	ANTENNA CABLE	ETHERNET SWITCH	REMOVE EXISTING FIBER OPTIC TRANCEIVER
	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	LF	LF	LF	EA	EA
121	1,440			1,640			290			1							1	
122	1,635			1,435					1									
123	1,405			1,405														
124	1,640			1,675			245		1		1		1				1	1
125	1,560			2,195			635				1	1	1		50		2	1
126	1,440			1,440														
127	1,575			1,775			355			1			1	130	50		1	1
128	1,475			1,675			240				1		1				1	1
129	1,405			1,405														
130	1,795			1,795			245		1		1		1				1	1
131	1,565			1,565														
132	1,860			2,060			130			1		1		130	50		1	
133	1,045			1,385									2				1	
134	1,220			1,020					1									
135	955			1,015			1,115			1								
136	975			975														
137	1,980			1,980														
138	1,690			1,690			355		1		1	1					1	
139	975			975														
140	930			1,130			575				1	2			50		2	
141	1,055			1,055														
142	2,035			2,165			215		1		1	1		60	50		1	
143	1,450			1,450														
144	1,115			1,315			895				1	2			50		2	
145	925			925														
146	620			620			630		1		1	2			50		2	
147				670			1,170			1		2			50		2	
148				1,225														
149				720														
150							1,225					1			50		1	
151													4				2	
152																		
153													2				1	
154																		
155				1,090														
156				585			295			1		1			50		1	
157	730			1,045			300		1		1	1		60	50		1	
158	1,070			1,070														
159	1,465			1,665			535				1	1		265	50		1	
160	1,065			1,065														
SUBTOTAL	**40,095**	**0**	**0**	**46,900**	**0**	**0**	**9,450**	**0**	**8**	**6**	**11**	**16**	**13**	**645**	**600**	**0**	**26**	**5**

PLANS PREPARED IN THE OFFICE OF:

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

SCALE: 0

CITY OF JACKSONVILLE
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
SUMMARY OF WORK BY CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J.C. CROSS	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE: K.W. Smith DATE: 7-25-11

CADD Filename:

7/25/2011 $TIME$ susan.pennington ...\#600 PSUE\CADMCR-003J.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	3K

SUMMARY OF WORK BY CABLE ROUTING

CABLE ROUTING SHEET NO.	COMM CABLE 12 FIBER (CITY)	COMM CABLE 24 FIBER (CITY)	COMM CABLE 48 FIBER (CITY)	COMM CABLE 24 FIBER	COMM CABLE 48 FIBER	COMM CABLE 72 FIBER	DROP CABLE 6 FIBER	UNDGERGROUND SPLICE ENCLOSURE (CITY)	AERIAL SPLICE ENCLOSURE (CITY)	UNDERGROUND SPLICE ENCLOSURE	AERIAL SPLICE ENCLOSURE	INTERCONNECT CENTER	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	ETHERNET CABLE	CCTV UNIFIED CABLE	ANTENNA CABLE	ETHERNET SWITCH	REMOVE EXISTING FIBER OPTIC TRANCEIVER
	LF	LF	LF	LF	LF	LF	LF	EA	EA	EA	EA	EA	EA	LF	LF	LF	EA	EA
161	1,665			1,665			265		1		1	1		60	50		1	
162	1,455			1,655			310				1	1					1	
163	1,505			1,905			495				2	2			50		2	
164	1,230			1,230			220		1		1	1					1	
165	1,510			1,710			220				1	1					1	
166	1,240			1,440			700				1	1					1	
167	1,555			1,555			335					1					1	
168	1,470			1,470			340		1		1	1					1	
169	1,100			1,445			310			1		2			50		2	
170	1,145			1,345			245				1	1					1	
171	1,485			1,945			190					1	2		50		2	
172	1,855			1,655					1									
173	1,450			1,450														
174	1,170			1,370			295				1	1		255	50		1	
175	1,125			1,065			200		1		1	1					1	
176	970			1,170			185				1	1					1	
177				1,495			405				1	1					1	
178				1,380														
179				590			470				1	1					1	
180																		
181																		
182																		
183															50	100		
184															50	100		
185															50	100		
186																		
187															50	100		
188															50	100		
189																		
190																		
SUBTOTAL	**21,930**	**0**	**0**	**27,540**	**0**	**0**	**5,185**	**0**	**5**	**1**	**14**	**18**	**2**	**315**	**500**	**500**	**19**	**0**
TOTAL	**130,480**	**35,065**	**2,830**	**216,480**	**13,250**	**1,435**	**30,585**	**2**	**38**	**18**	**69**	**76**	**24**	**2,960**	**2,100**	**1,000**	**96**	**14**

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

Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0

CITY OF JACKSONVILLE
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
SUMMARY OF WORK BY CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J.C. CROSS	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-25-11 DATE

CADD Filename:

7/25/2011 $TIME$ susan.pennington ...#600 PSAE#CAD#WCR-003K.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	3L

SUMMARY OF WORK BY CCTV

No.	Cable Routing Sheet Number	Splicing Details Sheet Number	Location	Proposed Location	Proposed Mounting Height (ft)	GPS Coordinates	36 Install New CCTV Assembly	14 Install New CCTV Camera Wood Pole	31 Install New Electrical Service	Install Power from Existing Electrical Service	Unpaved Trenching (1, 1")	55 Install New Solar Power Assembly	1 Install New Interconnect Center	41 Install New Ethernet Switch	42 Install New Video CODEC Unit	47 Install New Panel Antenna	46 Install New 2.4/5.8 GHz Radio Transceiver
1	187	-	Gum Branch Rd/Rhodestown Rd	SW	35	+34.85371, -77.48461	1	1	1						1	1	1
2	110	65	Gum Branch Rd/Ramsey Rd	NW	35	+34.82621, -77.45983	1	1		1	50				1	1	1
3	120	69	Gum Branch Rd/Western Blvd	SE	35	+34.79926, -77.43892	1	1	1						1		
4	157	32	Western Blvd/Carolina Forest Blvd/North Plain Rd	NW	35	-34.80041, -77.41746	1	1		1	50				1		
5	159	33	Western Blvd/Henderson Dr	N	35	+34.79677, -77.41111	1	1	1						1		
6	161	34	Western Blvd/Branchwood Dr/Gateway Dr	N	35	+34.79157, -77.40601	1	1		1	50				1		
7	163	37	Western Blvd Ext. north of Circuit Ln	E	35	+34.78450, -77.39930	1	1	1				1	1	1		
8	125	71	Gum Branch Rd/Henderson Dr	E	35	+34.78496, -77.42413	1	1	1				1	1	1		
9	127	73	Gum Branch Rd/Branchwood Dr/Doris Ave	N	35	+34.77946, -77.41612	1	1		1	50				1		
10	147	72	Henderson Dr/Saint Anne Ln	NW	35	+34.77562, -77.42756	1	1	1				1	1	1		
11	20	9	Marine Blvd west of Georgetown Rd	E	60	+34.75212, -77.44693	1	1	1				1	1	1		
12	37	21	Marine Blvd/McDaniel Dr/Workshop Ln	W	35	+34.78064, -77.38835	1	1	1						1		
13	35	41	Western Blvd/Marine Blvd	E	35	+34.77723, -77.39233	1	1	1				1	1	1		
14	31	76	Gum Branch Rd/Marine Blvd	S	35	+34.76748, -77.40593	1	1		1	50				1		
15	28	78	Marine Blvd/Onslow Dr	S	35	+34.76065, -77.41547	1	1		1	50				1		
16	27	81	Marine Blvd/Sherwood Rd	E	35	+34.75813, -77.41904	1	1	1				1	1	1		
17	24	11	Marine Blvd west of Murrill Cir	N	35	+34.75428, -77.43013	1	1	1				1	1	1		
18	102	89	Lejeune Blvd/Montford Landing Rd	N	45	+34.74859, -77.41599	1	1	1				1	1	1		
19	104	92	Highway 17 Bypass/Lejeune Boulevard	NE	60	+34.74746, -77.40735	1	1		1	50				1		
20	150	60	Hwy 17 Bypass south of Bell Fork Road	S	35	+34.75180, -77.39890	1	1	1				1	1	1		
21	132	64	Bell Fork Rd/Country Club Rd/Hargett St	N	35	+34.76181, -77.40003	1	1		1	50				1		
22	156	43	Hwy 17 Bypass/Country Club Rd	NW	35	+34.76875, -77.39654	1	1	1				1	1	1		
23	169	50	Western Blvd/Country Club Rd	SW	35	+34.76757, -77.38458	1	1	1				1	1	1		
24	171	47	Western Blvd/Huff Dr	NW	45	+34.76063, -77.38248	1	1	1				1	1	1		
25	174	46	Western Blvd/Brynn Marr Rd	NW	35	+34.74938, -77.38030	1	1	1						1		
26	140	58	Lejeune Blvd/Bell Fork Rd/Camp Knox Rd	NE	35	+34.74422, -77.38688	1	1	1				1	1	1		
27	142	57	Western Blvd/Lejeune Blvd/Tarawa Blvd	NW	35	+34.74313, -77.37920	1	1		1	50				1		
28	144	56	Liberty Dr/Pine Valley Rd	SW	35	+34.74276, -77.36964	1	1	1				1	1	1		
29	146	55	Lejeune Blvd/Corbin St/Tarawa Blvd	NE	35	+34.74014, -77.36296	1	1	1				1	1	1		
30	185	-	Wilmington Hwy/High Hill Rd	SW	35	+34.65419, -77.47559	1	1	1						1	1	1
31	78	12	Wilmington Hwy south of Dawson Cabin Rd	SW	35	+34.69204, -77.47868	1	1		1	50				1	1	1
32	89	16	Wilmington Hwy/Old Maplehurst Rd/Curtis Rd	N	35	+34.73159, -77.47237	1	1		1	50				1		
33	183	-	Hwy 17 Bypass west of Wilson Bay	S	30	+34.72982, -77.43178	1	1				1			1	1	1
34	94	18	Hwy 17 Bypass/Hwy 24 Bypass/Wilmington Highway	N	35	+34.74579, -77.45771	1	1				1	1	1	1		
35	4	1	Burgaw Hwy/Pony Farm Rd/Murrill Hill Rd	SE	35	+34.73863, -77.50805	1	1		1	50				1		
36	10	3	Burgaw Hwy/Old Maplehurst Rd	S	35	+34.74639, -77.48357	1	1		1	50				1		
37	13	6	Richlands Hwy/Hwy 24 Bypass/Burgaw Hwy	N	35	+34.75526, -77.47245	1	1	1						1		
38	69	4	Richlands Hwy/Pony Farm Rd/Northwest Corridor Blvd	NE	30	+34.77834, -77.49380	1	1	1						1		
39	117	67	Gum Branch Rd/Aragona Blvd	S	35	+34.80742, -77.44903	1	1	1				1	1	1		
40	188	-	Lejeune Blvd/Midway Park	SW	35	+34.72322, -77.33738	1	1	1						1	1	1
41	184	-	Hwy 17 Bypass east of Wilson Bay	NE	30	+34.73482, -77.41797	1	1				1			1	2	1
42	-	-	Marine Blvd/Piney Green Rd (To Be Installed Under U-3810)	TBD	TBD	TBD											
43	-	-	Piney Green Rd/Country Club Rd (To Be Installed Under U-3810)	TBD	TBD	TBD											
44	-	-	Piney Green Rd/Creedmoor Rd (To Be Installed Under U-3810)	TBD	TBD	TBD											
45	-	-	Piney Green Rd/Marshall Farm Rd (To Be Installed Under U-3810)	TBD	TBD	TBD											
46	-	-	Lejeune Blvd/Piney Green Rd (To Be Installed Under U-3810)	TBD	TBD	TBD											
			TOTAL	-	-	-	41	41	25	13	650	3	17	17	41	8	7

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SCALE

CITY OF JACKSONVILLE
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
SUMMARY OF WORK BY CCTV

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J.C. CROSS	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE
1 NEW WIRELESS RADIO DESIGN	KWS	10/28/11

SEAL

This document originally issued and sealed by Kevin W. Smith, 030472, on 07/20/11. This media shall not be considered a certified document.

SIGNATURE DATE

CADD Filename:

10/28/2011 $TIME$ jerry.cross ...#600 PSE=CADWCR-003L.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	3M

SUMMARY OF WORK BY DMS

No.	Cable Routing Sheet Number	Splicing Details Sheet Number	Location	GPS Coordinates	37 Install New Small DMS Assembly	39 Install New Pedestal Structure for Small DMS	38 Install New Large DMS Assembly	40 Install New Pedestal Structure for Large DMS	31 Install New Electrical Service	54 Install New DMS Controller	1 Install New Interconnect Center	41 Install New Ethernet Switch	44 Install New Cellular Modem
1	168	53	Western Blvd, South of University Dr (southbound traffic)	34° 46′ 13″ N, 77° 23′ 12″ W	1	1			1	1	1	1	
2	182	-	US-17 Bypass, West of White St (southbound traffic)	34° 44′ 04″ N, 77° 26′ 48″ W			1	1	1	1			1
3	190	-	NC-24, East of NC-172 (westbound traffic)	34° 42′ 49″ N, 77° 13′ 09″ W			1	1	1	1			1
4	189	-	NC-17, East of Forestry Center Cir (southbound traffic)	34° 50′ 05″ N, 77° 18′ 10″ W			1	1	1	1			1
5	118	68	Gum Branch Rd, South of Maynard Blvd (southbound traffic)	34° 48′ 15″ N, 77° 26′ 31″ W	1	1			1	1	1	1	
6	80	13	US-17, South of Stoney Creek Dr (northbound traffic)	34° 41′ 54″ N, 77° 28′ 44″ W			1	1	1	1	1	1	
7	180	-	NC-53, West of Foy Lockamy Rd (eastbound traffic)	34° 44′ 05″ N, 77° 31′ 23″ W	1	1			1	1			1
8	181	-	US-258/NC-24, South of Thomas Loop Road (southbound traffic)	34° 50′ 14″ N, 77° 31′ 52″ W			1	1	1	1			1
9	186	-	Gum Branch Rd, South of E Point St (southbound traffic)	34° 53′ 36″ N, 77° 32′ 18″ W	1	1			1	1			1
10	-	-	US-17, South of Folkstone Rd (northbound traffic) (existing DMS)	TBD									
11	-	-	US-17, North of High Hill Rd (southbound traffic) (existing DMS)	TBD									
12	-	-	Piney Green Rd, West of Country Club Dr (To Be Installed Under U-3810)	TBD									
			TOTAL	-	**4**	**4**	**5**	**5**	**9**	**9**	**3**	**3**	**6**

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SCALE: 0

CITY OF JACKSONVILLE
COMPUTERIZED
SIGNAL SYSTEM UPGRADE
SUMMARY OF WORK BY DMS

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

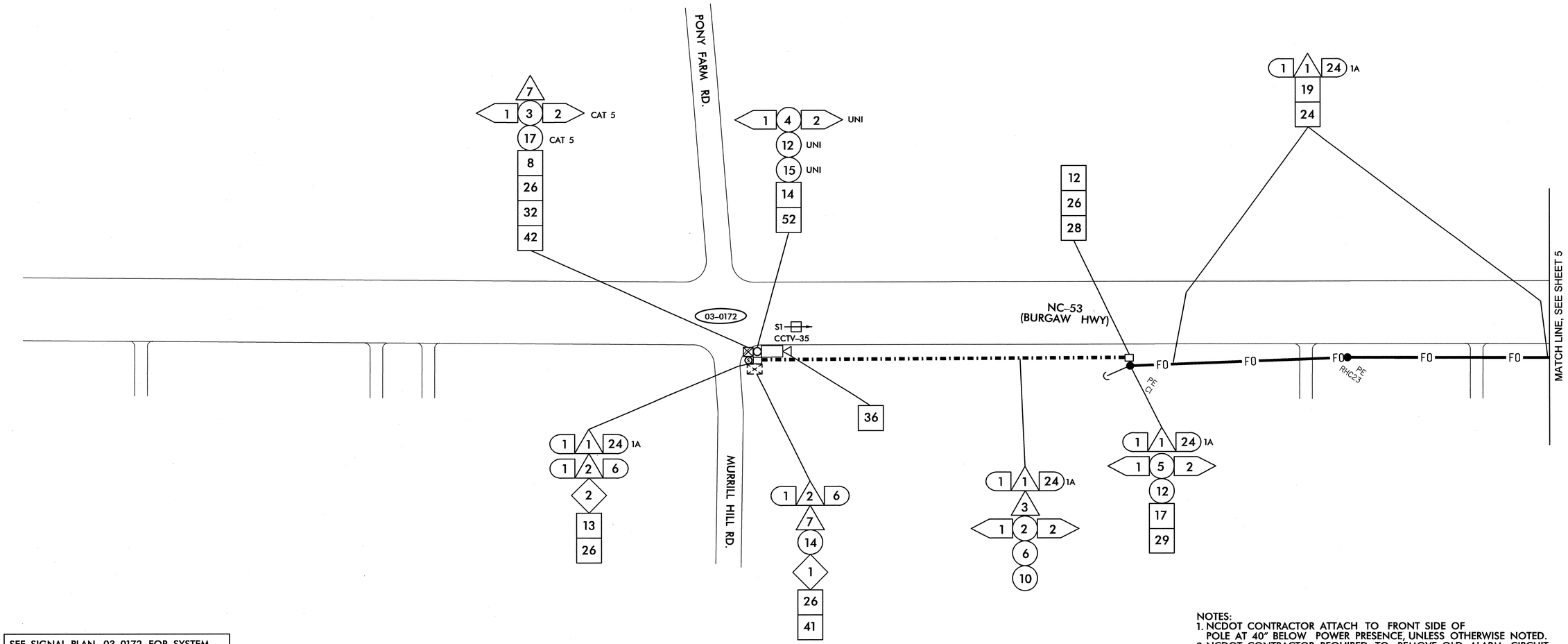
PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	J.C. CROSS	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH
SIGNATURE 7-20-11 DATE
CADD Filenames

7/19/2011 $TIME$ susan.pennington ...#600 PSJE#CAD#CR-003M.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	4



SEE SIGNAL PLAN 03-0172 FOR SYSTEM DETECTOR S1 INSTALLATION DETAILS. REFER TO DETAIL SHEET 1H FOR SYSTEM DETECTOR ID KEY.

NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.

1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE
2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE
3	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA	54	INSTALL DMS CONTROLLER
4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY
5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE		
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT		
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX		
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND						
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE						
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE						
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE						
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION						
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT						
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX						
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY						
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY						
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER										

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SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011		REVIEWED BY: K.W. SMITH	
PREPARED BY: S.P. PENNINGTON		REVIEWED BY: T.F. BURCHETT	
REVISIONS		INIT.	DATE

SEAL

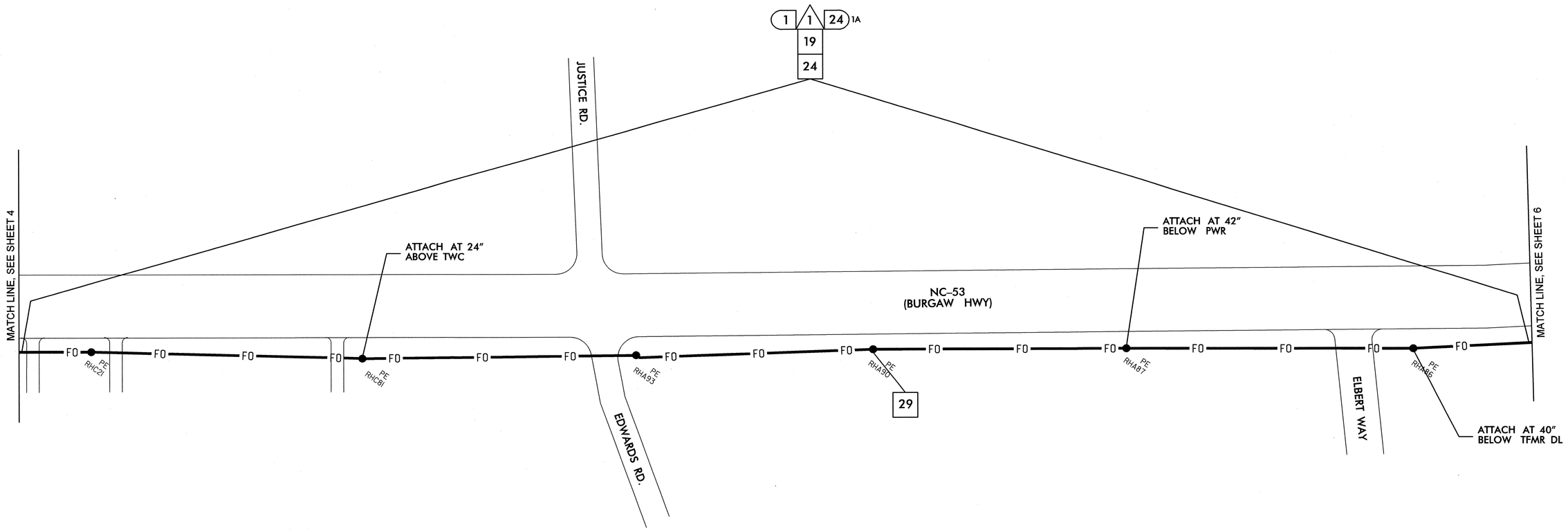
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE DATE 7-20-11

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSAE#CAD#CR-004.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	5



NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.

1	INSTALL SMFO CABLE
2	INSTALL FIBER OPTIC DROP CABLE
3	INSTALL TRACER WIRE
4	REUSE EXISTING SMFO CABLE
5	INSTALL PLENUM RATED SMFO CABLE
6	INSTALL LOOP LEAD-IN CABLE
7	INSTALL ETHERNET CABLE
1	INSTALL PVC CONDUIT
2	INSTALL POLYETHYLENE CONDUIT
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
6	TRENCH CONDUIT
7	DIRECTIONAL DRILL CONDUIT
8	BORE AND JACK CONDUIT
9	INSTALL CABLE(S) IN EXISTING CONDUIT
10	INSTALL CABLE(S) IN NEW CONDUIT
11	INSTALL CABLE(S) IN EXISTING RISER
12	INSTALL CABLE(S) IN NEW RISER
13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS
14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)
15	INSTALL NEW RISER INTO POLE MOUNTED CABINET
16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET
1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2	INSTALL UNDERGROUND SPLICE ENCLOSURE
3	INSTALL AERIAL SPLICE ENCLOSURE
4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5	INSTALL TERMINAL SPLICE BOX
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION
3	MODIFY EXISTING CABINET FOUNDATION
4	REMOVE EXISTING CONTROLLER AND CABINET
5	INSTALL NEW CONTROLLER
6	INSTALL NEW 332 BASE MOUNTED CABINET
7	INSTALL NEW 336S BASE MOUNTED CABINET
8	INSTALL NEW 336S POLE MOUNTED CABINET
9	INSTALL BASE ADAPTER
10	INSTALL PRE-FORMED CABINET FOUNDATION PAD
11	INSTALL STANDARD JUNCTION BOX
12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
14	INSTALL WOOD POLE
15	REMOVE EXISTING WOOD POLE
16	INSTALL AERIAL GUY ASSEMBLY
17	INSTALL STANDARD GUY ASSEMBLY
18	INSTALL SIDEWALK GUY ASSEMBLY
19	INSTALL MESSENGER CABLE
20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
21	REMOVE EXISTING COMMUNICATIONS CABLE
22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
23	LASH CABLE(S) TO EXISTING MESSENGER CABLE
24	LASH CABLE(S) TO NEW MESSENGER CABLE
25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE
26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE
27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
28	INSTALL FIBER OPTIC DELINEATOR MARKER
29	BOND MESSENGER CABLE TO POLE GROUND
30	MODIFY EXISTING ELECTRICAL SERVICE
31	INSTALL NEW ELECTRICAL SERVICE
32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
33	INSTALL GENERATOR ANCHOR IN FOUNDATION
34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
35	RECONNECT GENERATOR POWER INLET BOX
36	INSTALL CCTV CAMERA ASSEMBLY
37	INSTALL SMALL DMS ASSEMBLY
38	INSTALL LARGE DMS ASSEMBLY
39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS
40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
41	INSTALL ETHERNET SWITCH
42	INSTALL VIDEO CODEC UNIT
43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER
44	INSTALL CELLULAR MODEM
45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)
46	INSTALL 2.4 GHz RADIO TRANSCEIVER
47	INSTALL YAGI ANTENNA
48	INSTALL OMNI-DIRECTIONAL ANTENNA
49	REMOVE EXISTING WIRELESS HARDWARE
50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
51	INSTALL NEW GENERATOR POWER INLET BOX
52	INSTALL CCTV UNIFIED CABLE
53	INSTALL ANTENNA CABLE
54	INSTALL DMS CONTROLLER
55	INSTALL SOLAR POWER ASSEMBLY

PLANS PREPARED IN THE OFFICE OF:

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

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Mobility and Safety Division
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

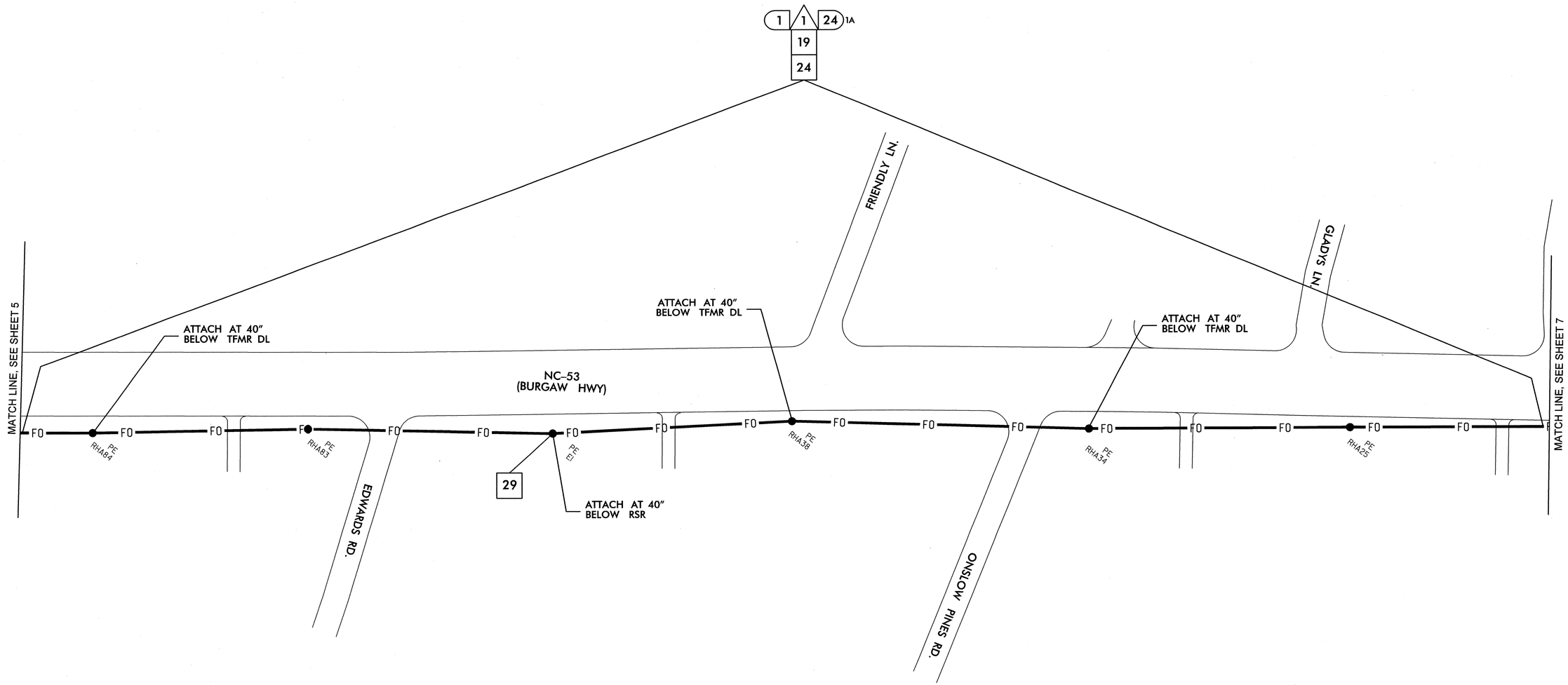
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...*600 PSE*CADMCR-005.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	6



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- 1 INSTALL SMFO CABLE
- 2 INSTALL FIBER OPTIC DROP CABLE
- 3 INSTALL TRACER WIRE
- 4 REUSE EXISTING SMFO CABLE
- 5 INSTALL PLENUM RATED SMFO CABLE
- 6 INSTALL LOOP LEAD-IN CABLE
- 7 INSTALL ETHERNET CABLE
- 1 INSTALL PVC CONDUIT
- 2 INSTALL POLYETHYLENE CONDUIT
- 3 INSTALL RIGID, GALVANIZED STEEL CONDUIT
- 4 INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
- 5 INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
- 6 TRENCH CONDUIT
- 7 DIRECTIONAL DRILL CONDUIT
- 8 BORE AND JACK CONDUIT
- 9 INSTALL CABLE(S) IN EXISTING CONDUIT
- 10 INSTALL CABLE(S) IN NEW CONDUIT
- 11 INSTALL CABLE(S) IN EXISTING RISER
- 12 INSTALL CABLE(S) IN NEW RISER
- 13 INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS
- 14 INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)
- 15 INSTALL NEW RISER INTO POLE MOUNTED CABINET
- 16 REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
- 17 INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET
- 1 INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
- 2 INSTALL UNDERGROUND SPLICE ENCLOSURE
- 3 INSTALL AERIAL SPLICE ENCLOSURE
- 4 MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
- 5 INSTALL TERMINAL SPLICE BOX
- 1 INSTALL CABINET FOUNDATION
- 2 REMOVE EXISTING CABINET FOUNDATION
- 3 MODIFY EXISTING CABINET FOUNDATION
- 4 REMOVE EXISTING CONTROLLER AND CABINET
- 5 INSTALL NEW CONTROLLER
- 6 INSTALL NEW 332 BASE MOUNTED CABINET
- 7 INSTALL NEW 336S BASE MOUNTED CABINET
- 8 INSTALL NEW 336S POLE MOUNTED CABINET
- 9 INSTALL BASE ADAPTER
- 10 INSTALL PRE-FORMED CABINET FOUNDATION PAD
- 11 INSTALL STANDARD JUNCTION BOX
- 12 INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
- 13 INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
- 14 INSTALL WOOD POLE
- 15 REMOVE EXISTING WOOD POLE
- 16 INSTALL AERIAL GUY ASSEMBLY
- 17 INSTALL STANDARD GUY ASSEMBLY
- 18 INSTALL SIDEWALK GUY ASSEMBLY
- 19 INSTALL MESSENGER CABLE
- 20 REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
- 21 REMOVE EXISTING COMMUNICATIONS CABLE
- 22 LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
- 23 LASH CABLE(S) TO EXISTING MESSENGER CABLE
- 24 LASH CABLE(S) TO NEW MESSENGER CABLE
- 25 INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE
- 26 STORE 30 FEET OF EACH COMMUNICATIONS CABLE
- 27 STORE 100 FEET OF EACH COMMUNICATIONS CABLE
- 28 INSTALL FIBER OPTIC DELINEATOR MARKER
- 29 BOND MESSENGER CABLE TO POLE GROUND
- 30 MODIFY EXISTING ELECTRICAL SERVICE
- 31 INSTALL NEW ELECTRICAL SERVICE
- 32 INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
- 33 INSTALL GENERATOR ANCHOR IN FOUNDATION
- 34 RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
- 35 RECONNECT GENERATOR POWER INLET BOX
- 36 INSTALL CCTV CAMERA ASSEMBLY
- 37 INSTALL SMALL DMS ASSEMBLY
- 38 INSTALL LARGE DMS ASSEMBLY
- 39 INSTALL PEDESTAL STRUCTURE FOR SMALL DMS
- 40 INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
- 41 INSTALL ETHERNET SWITCH
- 42 INSTALL VIDEO CODEC UNIT
- 43 REMOVE EXISTING FIBER OPTIC TRANSCEIVER
- 44 INSTALL CELLULAR MODEM
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- 48 INSTALL OMNI-DIRECTIONAL ANTENNA
- 49 REMOVE EXISTING WIRELESS HARDWARE
- 50 INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
- 51 INSTALL NEW GENERATOR POWER INLET BOX
- 52 INSTALL CCTV UNIFIED CABLE
- 53 INSTALL ANTENNA CABLE
- 54 INSTALL DMS CONTROLLER
- 55 INSTALL SOLAR POWER ASSEMBLY

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
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Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

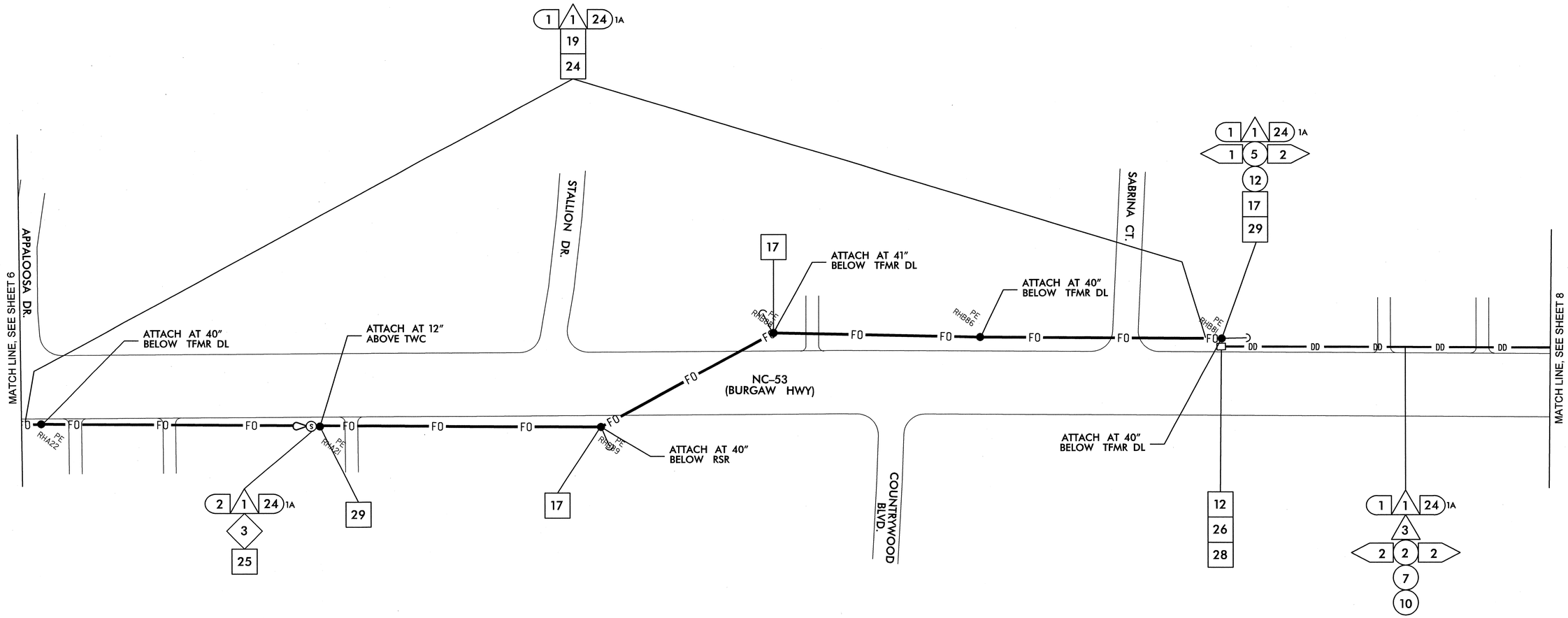
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSE#CAD#CR-005.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	7



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1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE
2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE
3	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA	54	INSTALL DMS CONTROLLER
4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY
5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE		
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT		
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX		
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND						
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE						
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE						
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE						
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION						
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT						
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX						
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY						
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY						
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER										

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

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

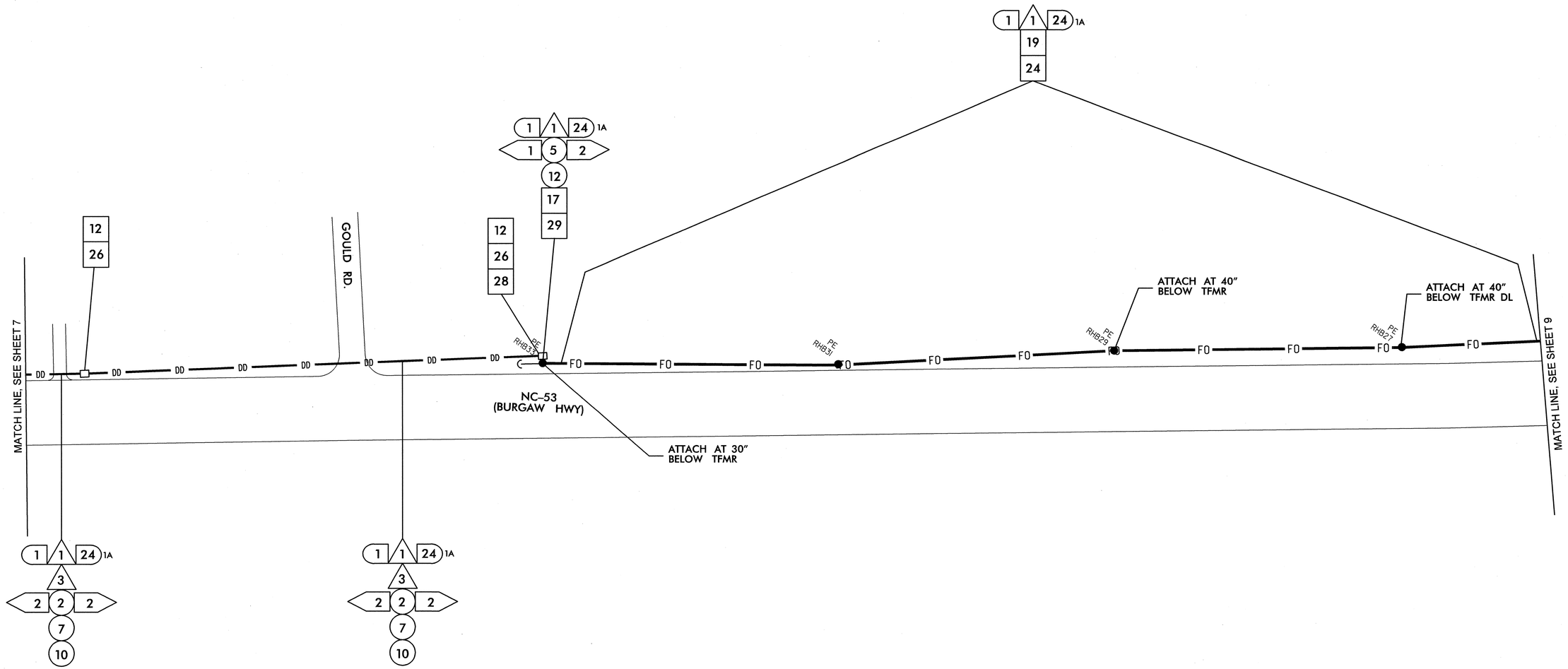
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 FS:E:\CADACR-007.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	8



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1	INSTALL SMFO CABLE
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2	REMOVE EXISTING CABINET FOUNDATION
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4	REMOVE EXISTING CONTROLLER AND CABINET
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6	INSTALL NEW 332 BASE MOUNTED CABINET
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CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

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SIGNATURE 7-20-11 DATE

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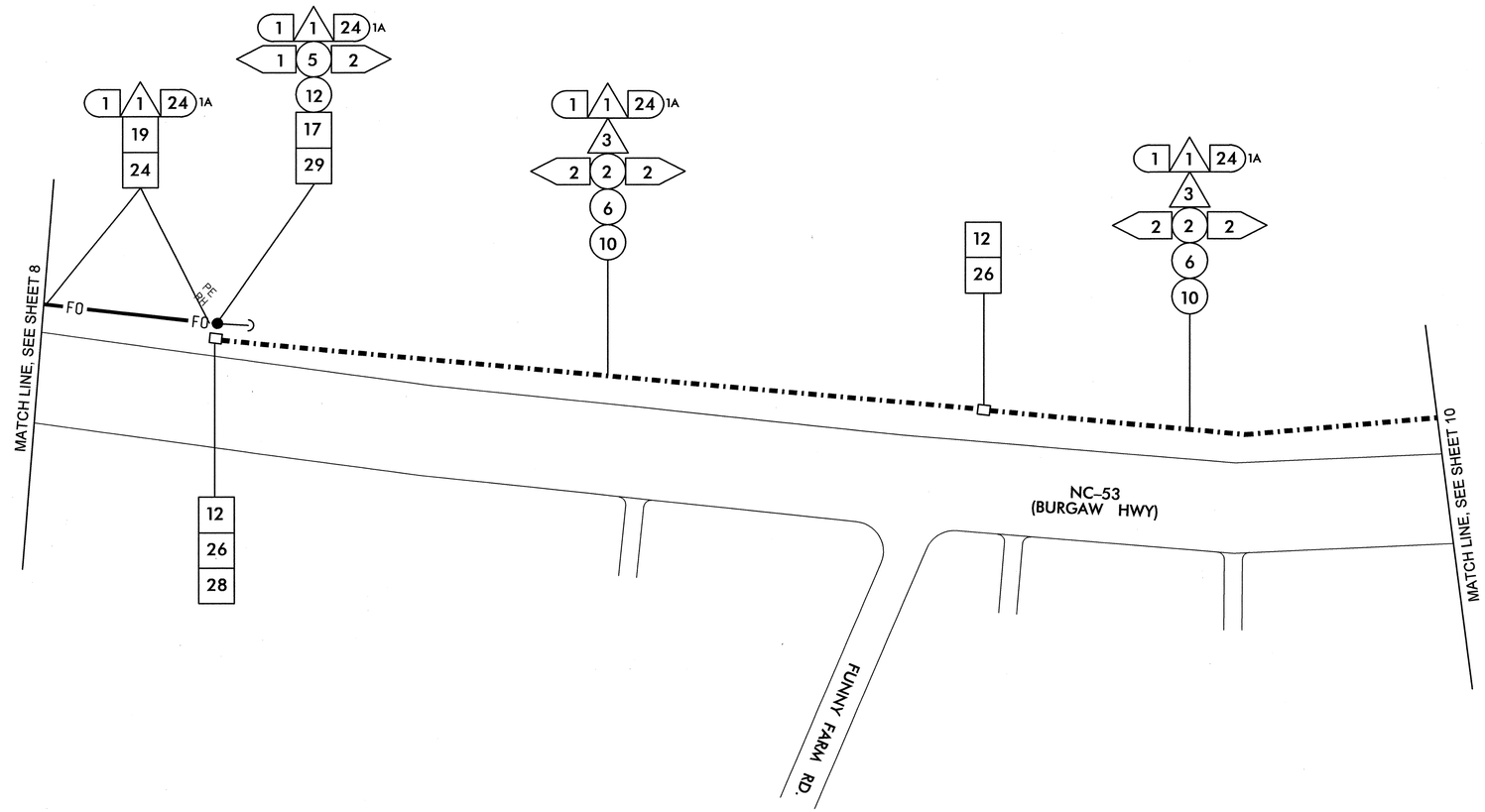
7/19/2011 $TIME$ susan.pennington ...#600 PSE#CADWCR-008.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	9



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10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER										

PLANS PREPARED IN THE OFFICE OF:

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

Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

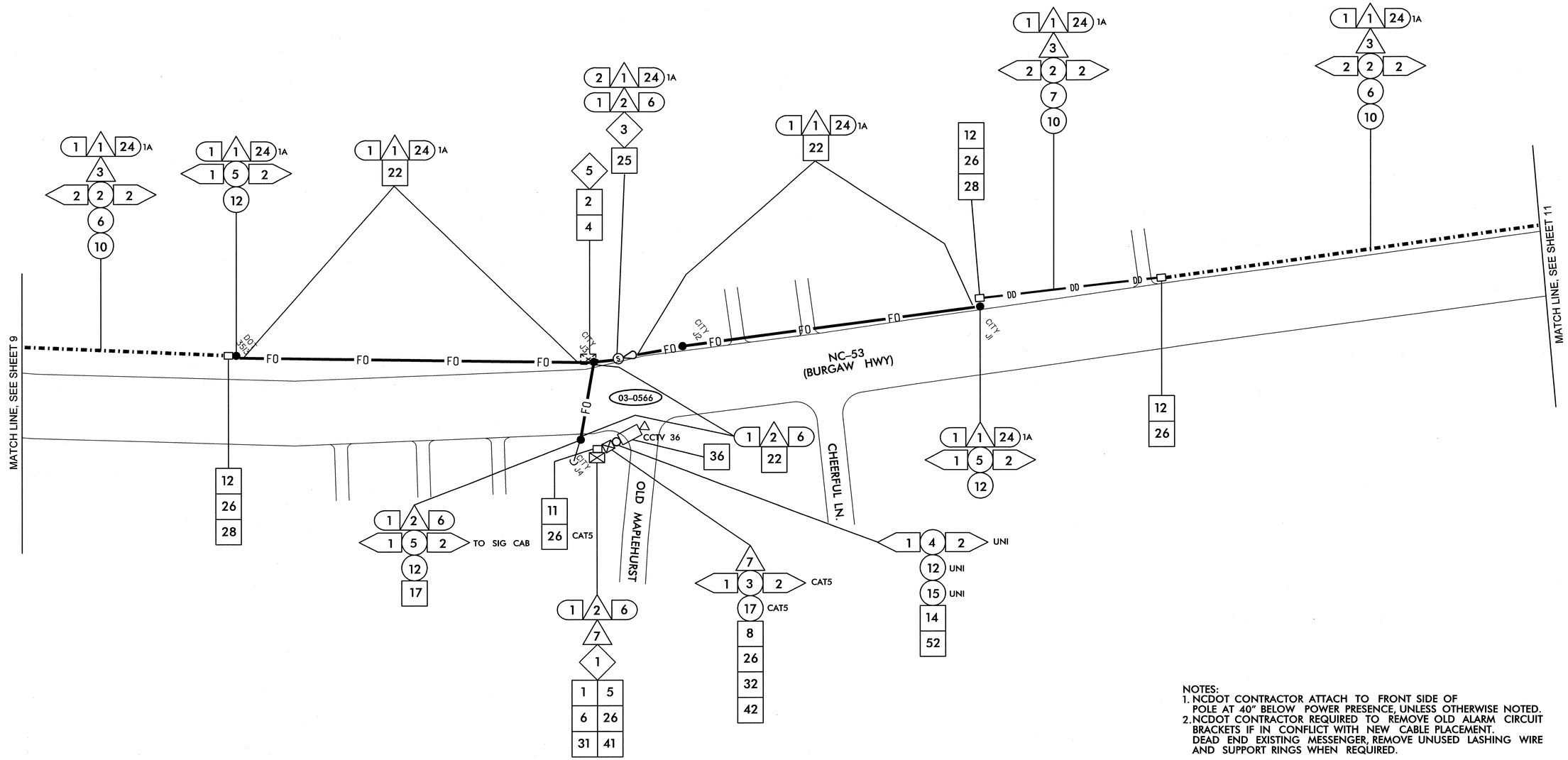
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filenames

7/19/2011 $TIME$ susan.pennington ...#600 PS&E#CUDWCR-009.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	10



NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.

1 INSTALL SMFO CABLE	11 INSTALL CABLE(S) IN EXISTING RISER	6 INSTALL NEW 332 BASE MOUNTED CABINET	22 LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38 INSTALL LARGE DMS ASSEMBLY	45 INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52 INSTALL CCTV UNIFIED CABLE	
2 INSTALL FIBER OPTIC DROP CABLE	12 INSTALL CABLE(S) IN NEW RISER	7 INSTALL NEW 336S BASE MOUNTED CABINET	23 LASH CABLE(S) TO EXISTING MESSENGER CABLE	39 INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46 INSTALL 2.4 GHz RADIO TRANSCEIVER	53 INSTALL ANTENNA CABLE	
3 INSTALL TRACER WIRE	13 INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8 INSTALL NEW 336S POLE MOUNTED CABINET	24 LASH CABLE(S) TO NEW MESSENGER CABLE	40 INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47 INSTALL YAGI ANTENNA	54 INSTALL DMS CONTROLLER	
4 REUSE EXISTING SMFO CABLE	14 INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9 INSTALL BASE ADAPTER	25 INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41 INSTALL ETHERNET SWITCH	48 INSTALL OMNI-DIRECTIONAL ANTENNA	55 INSTALL SOLAR POWER ASSEMBLY	
5 INSTALL PLENUM RATED SMFO CABLE	15 INSTALL NEW RISER INTO POLE MOUNTED CABINET	10 INSTALL PRE-FORMED CABINET FOUNDATION PAD	26 STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42 INSTALL VIDEO CODEC UNIT	49 REMOVE EXISTING WIRELESS HARDWARE		
6 INSTALL LOOP LEAD-IN CABLE	16 REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11 INSTALL STANDARD JUNCTION BOX	27 STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43 REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50 INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT		
7 INSTALL ETHERNET CABLE	17 INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12 INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28 INSTALL FIBER OPTIC DELINEATOR MARKER	44 INSTALL CELLULAR MODEM	51 INSTALL NEW GENERATOR POWER INLET BOX		
1 INSTALL PVC CONDUIT	1 INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13 INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29 BOND MESSENGER CABLE TO POLE GROUND				
2 INSTALL POLYETHYLENE CONDUIT	2 INSTALL UNDERGROUND SPLICE ENCLOSURE	14 INSTALL WOOD POLE	30 MODIFY EXISTING ELECTRICAL SERVICE				
3 INSTALL RIGID, GALVANIZED STEEL CONDUIT	3 INSTALL AERIAL SPLICE ENCLOSURE	15 REMOVE EXISTING WOOD POLE	31 INSTALL NEW ELECTRICAL SERVICE				
4 INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4 MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16 INSTALL AERIAL GUY ASSEMBLY	32 INSTALL POWER FROM EXISTING ELECTRICAL SERVICE				
5 INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5 INSTALL TERMINAL SPLICE BOX	17 INSTALL STANDARD GUY ASSEMBLY	33 INSTALL GENERATOR ANCHOR IN FOUNDATION				
6 TRENCH CONDUIT	1 INSTALL CABINET FOUNDATION	18 INSTALL SIDEWALK GUY ASSEMBLY	34 RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT				
7 DIRECTIONAL DRILL CONDUIT	2 REMOVE EXISTING CABINET FOUNDATION	19 INSTALL MESSENGER CABLE	35 RECONNECT GENERATOR POWER INLET BOX				
8 BORE AND JACK CONDUIT	3 MODIFY EXISTING CABINET FOUNDATION	20 REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36 INSTALL CCTV CAMERA ASSEMBLY				
9 INSTALL CABLE(S) IN EXISTING CONDUIT	4 REMOVE EXISTING CONTROLLER AND CABINET	21 REMOVE EXISTING COMMUNICATIONS CABLE	37 INSTALL SMALL DMS ASSEMBLY				
10 INSTALL CABLE(S) IN NEW CONDUIT	5 INSTALL NEW CONTROLLER						

PLANS PREPARED IN THE OFFICE OF:

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SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

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NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

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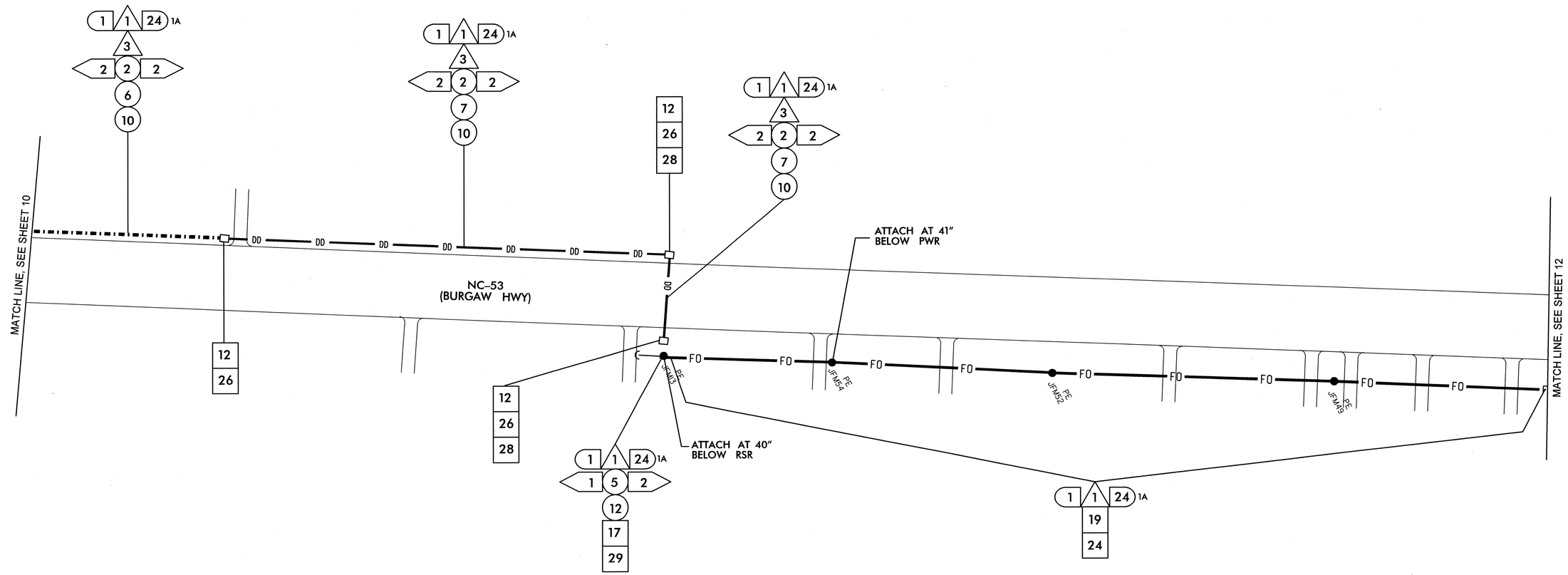
PROJECT REFERENCE NO.	SHEET NO.
U-5168	11



NOTES:
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1	INSTALL SMFO CABLE
2	INSTALL FIBER OPTIC DROP CABLE
3	INSTALL TRACER WIRE
4	REUSE EXISTING SMFO CABLE
5	INSTALL PLENUM RATED SMFO CABLE
6	INSTALL LOOP LEAD-IN CABLE
7	INSTALL ETHERNET CABLE
1	INSTALL PVC CONDUIT
2	INSTALL POLYETHYLENE CONDUIT
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
6	TRENCH CONDUIT
7	DIRECTIONAL DRILL CONDUIT
8	BORE AND JACK CONDUIT
9	INSTALL CABLE(S) IN EXISTING CONDUIT
10	INSTALL CABLE(S) IN NEW CONDUIT
11	INSTALL CABLE(S) IN EXISTING RISER
12	INSTALL CABLE(S) IN NEW RISER
13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS
14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)
15	INSTALL NEW RISER INTO POLE MOUNTED CABINET
16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET
1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2	INSTALL UNDERGROUND SPLICE ENCLOSURE
3	INSTALL AERIAL SPLICE ENCLOSURE
4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5	INSTALL TERMINAL SPLICE BOX
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION
3	MODIFY EXISTING CABINET FOUNDATION
4	REMOVE EXISTING CONTROLLER AND CABINET
5	INSTALL NEW CONTROLLER
6	INSTALL NEW 332 BASE MOUNTED CABINET
7	INSTALL NEW 336S BASE MOUNTED CABINET
8	INSTALL NEW 336S POLE MOUNTED CABINET
9	INSTALL BASE ADAPTER
10	INSTALL PRE-FORMED CABINET FOUNDATION PAD
11	INSTALL STANDARD JUNCTION BOX
12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
14	INSTALL WOOD POLE
15	REMOVE EXISTING WOOD POLE
16	INSTALL AERIAL GUY ASSEMBLY
17	INSTALL STANDARD GUY ASSEMBLY
18	INSTALL SIDEWALK GUY ASSEMBLY
19	INSTALL MESSENGER CABLE
20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
21	REMOVE EXISTING COMMUNICATIONS CABLE
22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
23	LASH CABLE(S) TO EXISTING MESSENGER CABLE
24	LASH CABLE(S) TO NEW MESSENGER CABLE
25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE
26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE
27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
28	INSTALL FIBER OPTIC DELINEATOR MARKER
29	BOND MESSENGER CABLE TO POLE GROUND
30	MODIFY EXISTING ELECTRICAL SERVICE
31	INSTALL NEW ELECTRICAL SERVICE
32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
33	INSTALL GENERATOR ANCHOR IN FOUNDATION
34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
35	RECONNECT GENERATOR POWER INLET BOX
36	INSTALL CCTV CAMERA ASSEMBLY
37	INSTALL SMALL DMS ASSEMBLY
38	INSTALL LARGE DMS ASSEMBLY
39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS
40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
41	INSTALL ETHERNET SWITCH
42	INSTALL VIDEO CODEC UNIT
43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER
44	INSTALL CELLULAR MODEM
45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)
46	INSTALL 2.4 GHz RADIO TRANSCEIVER
47	INSTALL YAGI ANTENNA
48	INSTALL OMNI-DIRECTIONAL ANTENNA
49	REMOVE EXISTING WIRELESS HARDWARE
50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
51	INSTALL NEW GENERATOR POWER INLET BOX
52	INSTALL CCTV UNIFIED CABLE
53	INSTALL ANTENNA CABLE
54	INSTALL DMS CONTROLLER
55	INSTALL SOLAR POWER ASSEMBLY

PLANS PREPARED IN THE OFFICE OF:
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SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011 REVIEWED BY: K.W. SMITH

PREPARED BY: S.P. PENNINGTON REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

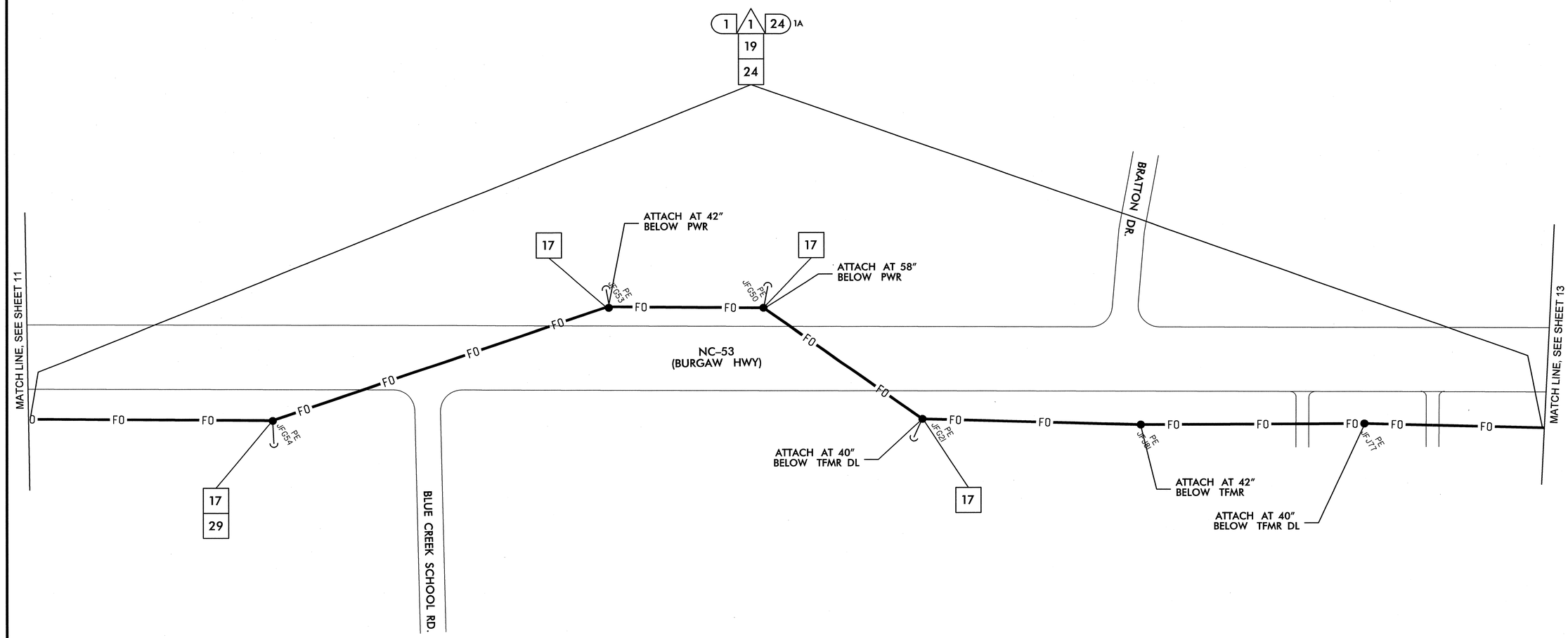
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSSEMCADWCR-011.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	12



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2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE						
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7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX						
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY						
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SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

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NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

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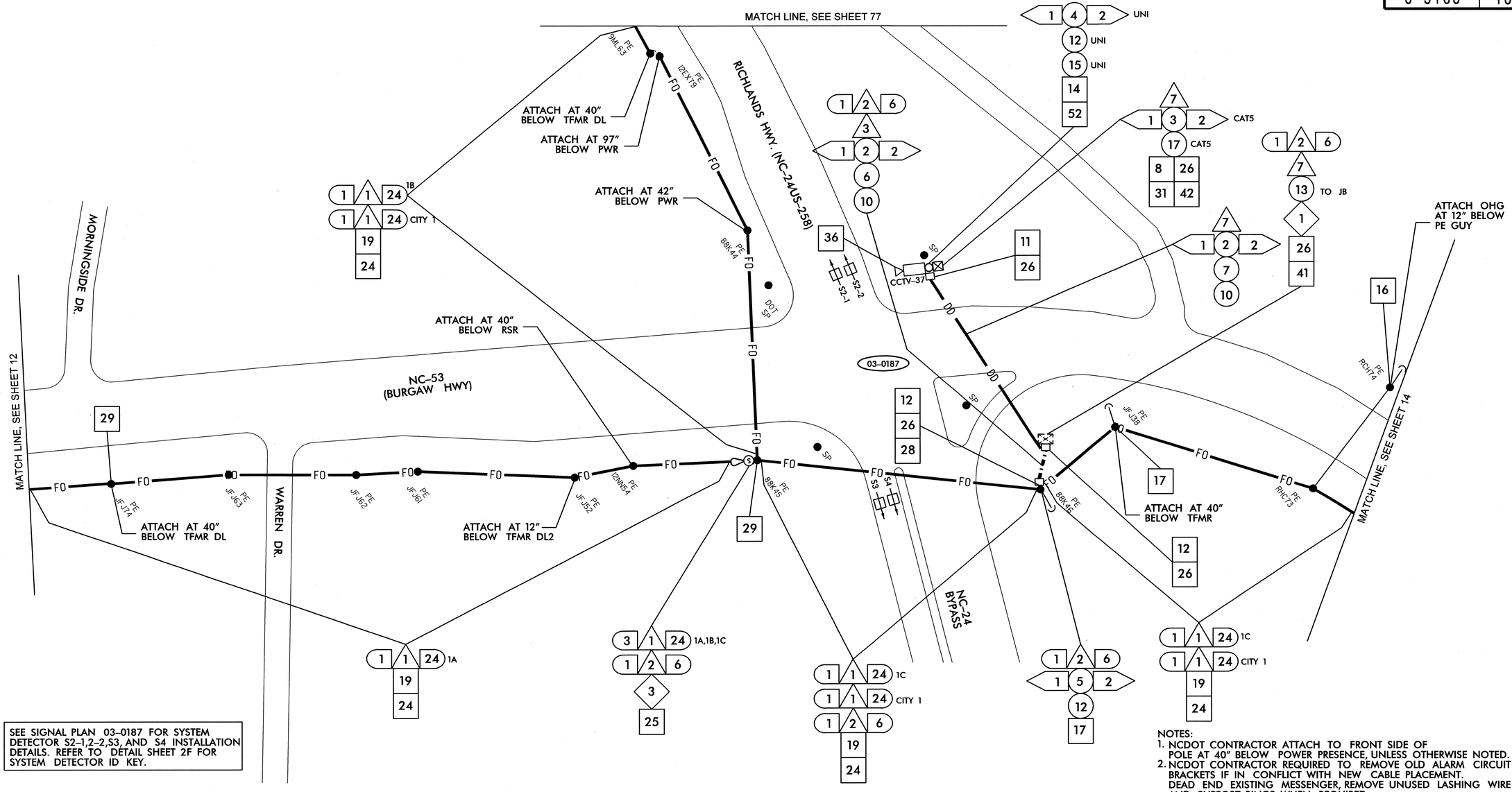

SEE SIGNAL PLAN 03-0187 FOR SYSTEM DETECTOR S2-1,2-2,S3, AND S4 INSTALLATION DETAILS. REFER TO DETAIL SHEET 2F FOR SYSTEM DETECTOR ID KEY.

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3. INSTALL AERIAL SPLICE ENCLOSURE
4. MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5. INSTALL TERMINAL SPLICE BOX
1. INSTALL CABINET FOUNDATION
2. REMOVE EXISTING CABINET FOUNDATION
3. MODIFY EXISTING CABINET FOUNDATION
4. REMOVE EXISTING CONTROLLER AND CABINET
5. INSTALL NEW CONTROLLER
6. INSTALL NEW 332 BASE MOUNTED CABINET
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CABLE ROUTING

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PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
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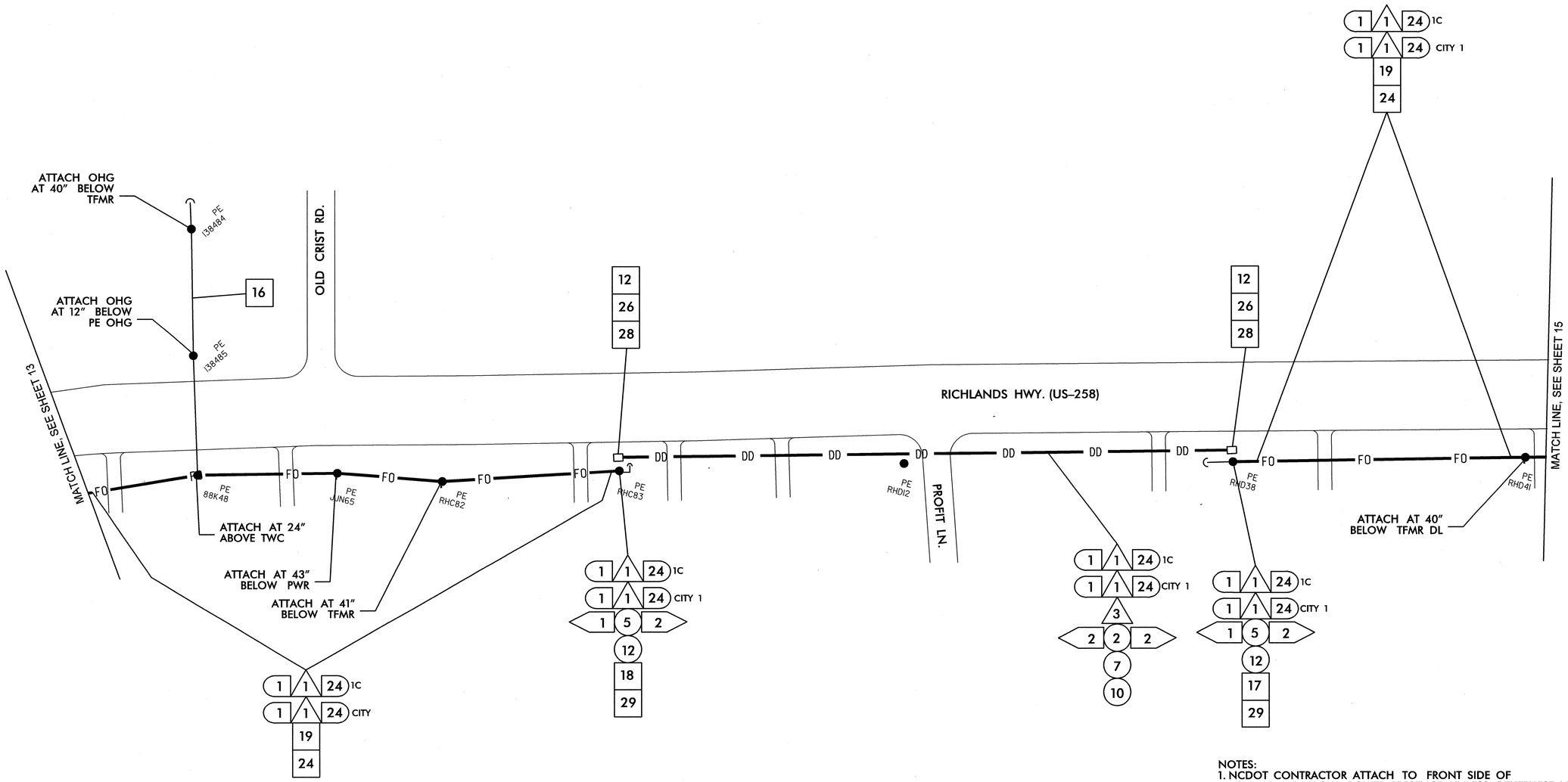
U-5168	14



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1	INSTALL SMFO CABLE
2	INSTALL FIBER OPTIC DROP CABLE
3	INSTALL TRACER WIRE
4	REUSE EXISTING SMFO CABLE
5	INSTALL PLENUM RATED SMFO CABLE
6	INSTALL LOOP LEAD-IN CABLE
7	INSTALL ETHERNET CABLE
1	INSTALL PVC CONDUIT
2	INSTALL POLYETHYLENE CONDUIT
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
6	TRENCH CONDUIT
7	DIRECTIONAL DRILL CONDUIT
8	BORE AND JACK CONDUIT
9	INSTALL CABLE(S) IN EXISTING CONDUIT
10	INSTALL CABLE(S) IN NEW CONDUIT
11	INSTALL CABLE(S) IN EXISTING RISER
12	INSTALL CABLE(S) IN NEW RISER
13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS
14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)
15	INSTALL NEW RISER INTO POLE MOUNTED CABINET
16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET
1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2	INSTALL UNDERGROUND SPLICE ENCLOSURE
3	INSTALL AERIAL SPLICE ENCLOSURE
4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5	INSTALL TERMINAL SPLICE BOX
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION
3	MODIFY EXISTING CABINET FOUNDATION
4	REMOVE EXISTING CONTROLLER AND CABINET
5	INSTALL NEW CONTROLLER
6	INSTALL NEW 332 BASE MOUNTED CABINET
7	INSTALL NEW 336S BASE MOUNTED CABINET
8	INSTALL NEW 336S POLE MOUNTED CABINET
9	INSTALL BASE ADAPTER
10	INSTALL PRE-FORMED CABINET FOUNDATION PAD
11	INSTALL STANDARD JUNCTION BOX
12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
14	INSTALL WOOD POLE
15	REMOVE EXISTING WOOD POLE
16	INSTALL AERIAL GUY ASSEMBLY
17	INSTALL STANDARD GUY ASSEMBLY
18	INSTALL SIDEWALK GUY ASSEMBLY
19	INSTALL MESSENGER CABLE
20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
21	REMOVE EXISTING COMMUNICATIONS CABLE
22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
23	LASH CABLE(S) TO EXISTING MESSENGER CABLE
24	LASH CABLE(S) TO NEW MESSENGER CABLE
25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE
26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE
27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
28	INSTALL FIBER OPTIC DELINEATOR MARKER
29	BOND MESSENGER CABLE TO POLE GROUND
30	MODIFY EXISTING ELECTRICAL SERVICE
31	INSTALL NEW ELECTRICAL SERVICE
32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
33	INSTALL GENERATOR ANCHOR IN FOUNDATION
34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
35	RECONNECT GENERATOR POWER INLET BOX
36	INSTALL CCTV CAMERA ASSEMBLY
37	INSTALL SMALL DMS ASSEMBLY
38	INSTALL LARGE DMS ASSEMBLY
39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS
40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
41	INSTALL ETHERNET SWITCH
42	INSTALL VIDEO CODEC UNIT
43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER
44	INSTALL CELLULAR MODEM
45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)
46	INSTALL 2.4 GHz RADIO TRANSCEIVER
47	INSTALL YAGI ANTENNA
48	INSTALL OMNI-DIRECTIONAL ANTENNA
49	REMOVE EXISTING WIRELESS HARDWARE
50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
51	INSTALL NEW GENERATOR POWER INLET BOX
52	INSTALL CCTV UNIFIED CABLE
53	INSTALL ANTENNA CABLE
54	INSTALL DMS CONTROLLER
55	INSTALL SOLAR POWER ASSEMBLY

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

Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE: 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

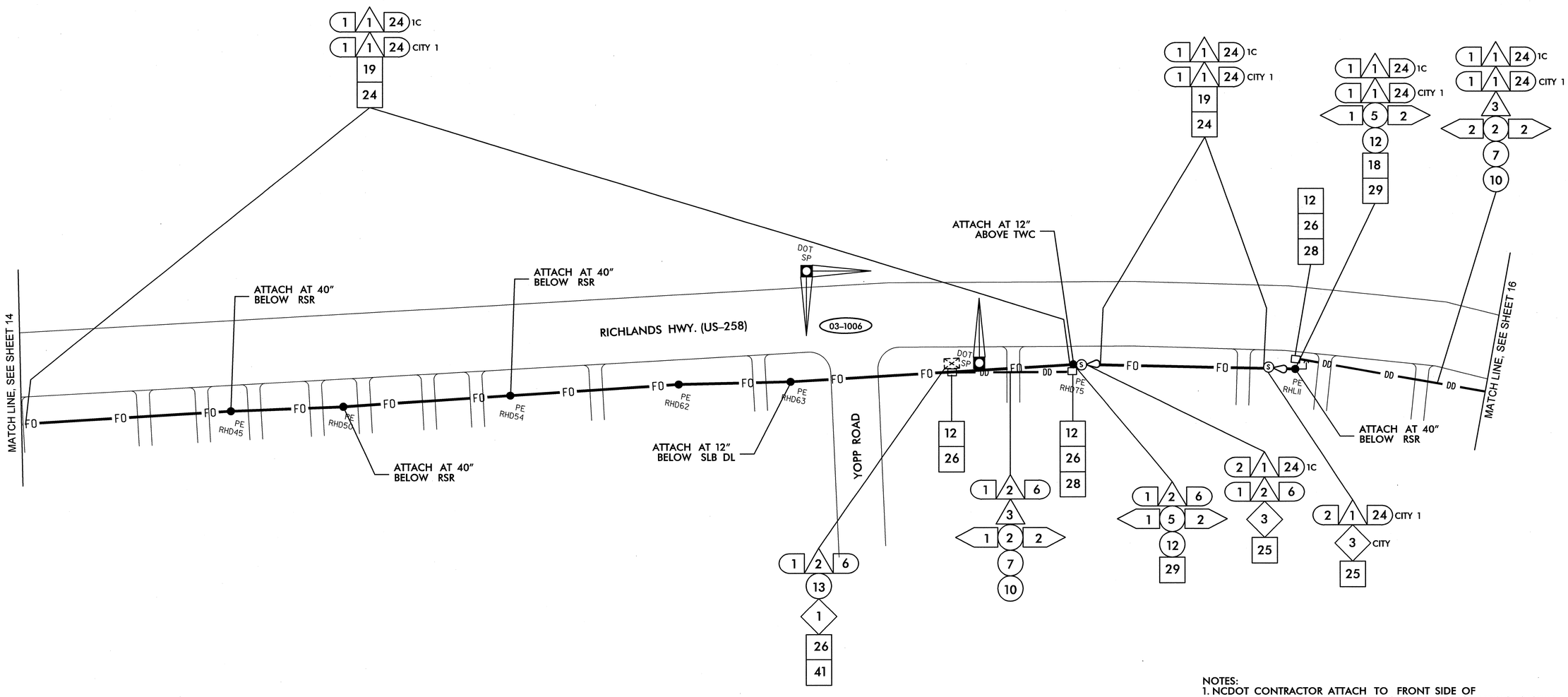
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filenames

7/19/2011 $TIME$ susan.pennington ...\600 PSE\WCADWCR-014.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	15



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2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE		
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4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY		
5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE				
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT				
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX				
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND								
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE								
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PLANS PREPARED IN THE OFFICE OF:
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SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

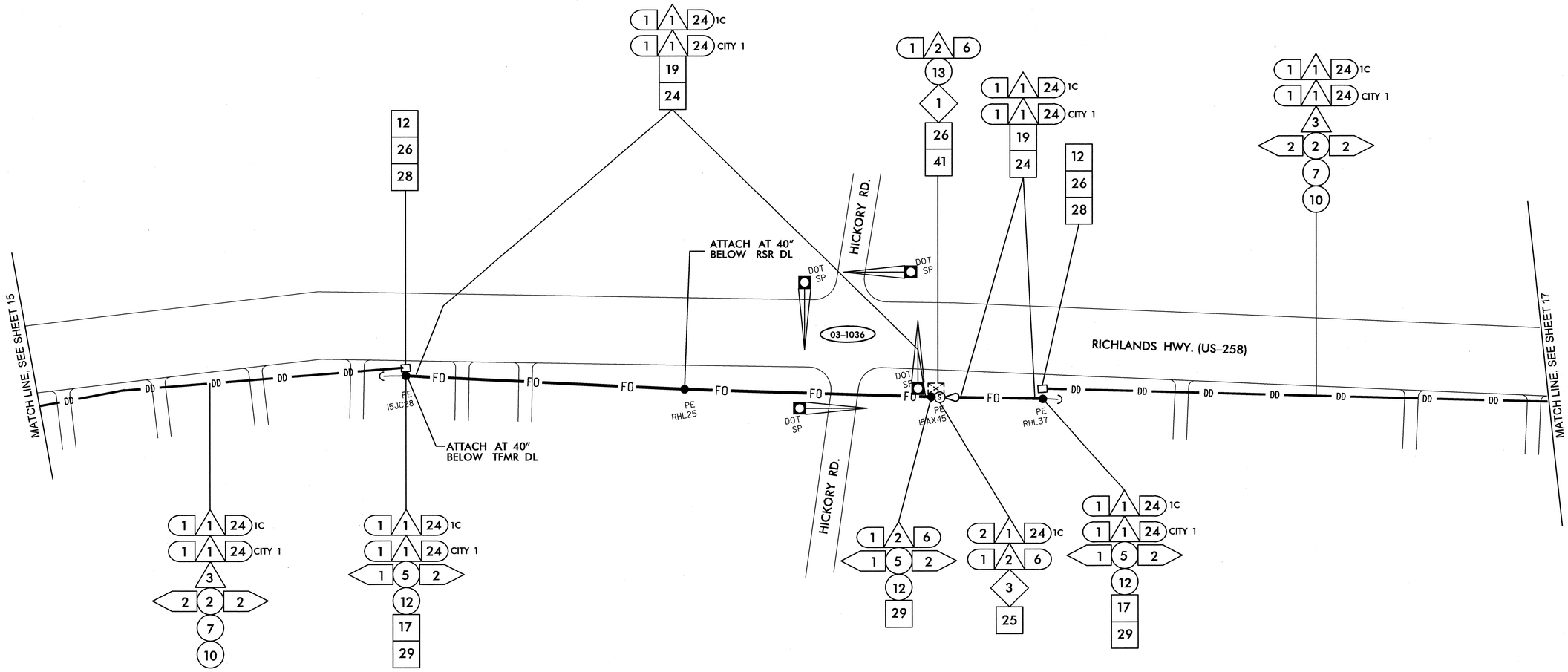
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...\R500 PSUE\WDWCR-015.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	16



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42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE				
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SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011 REVIEWED BY: K.W. SMITH

PREPARED BY: S.P. PENNINGTON REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

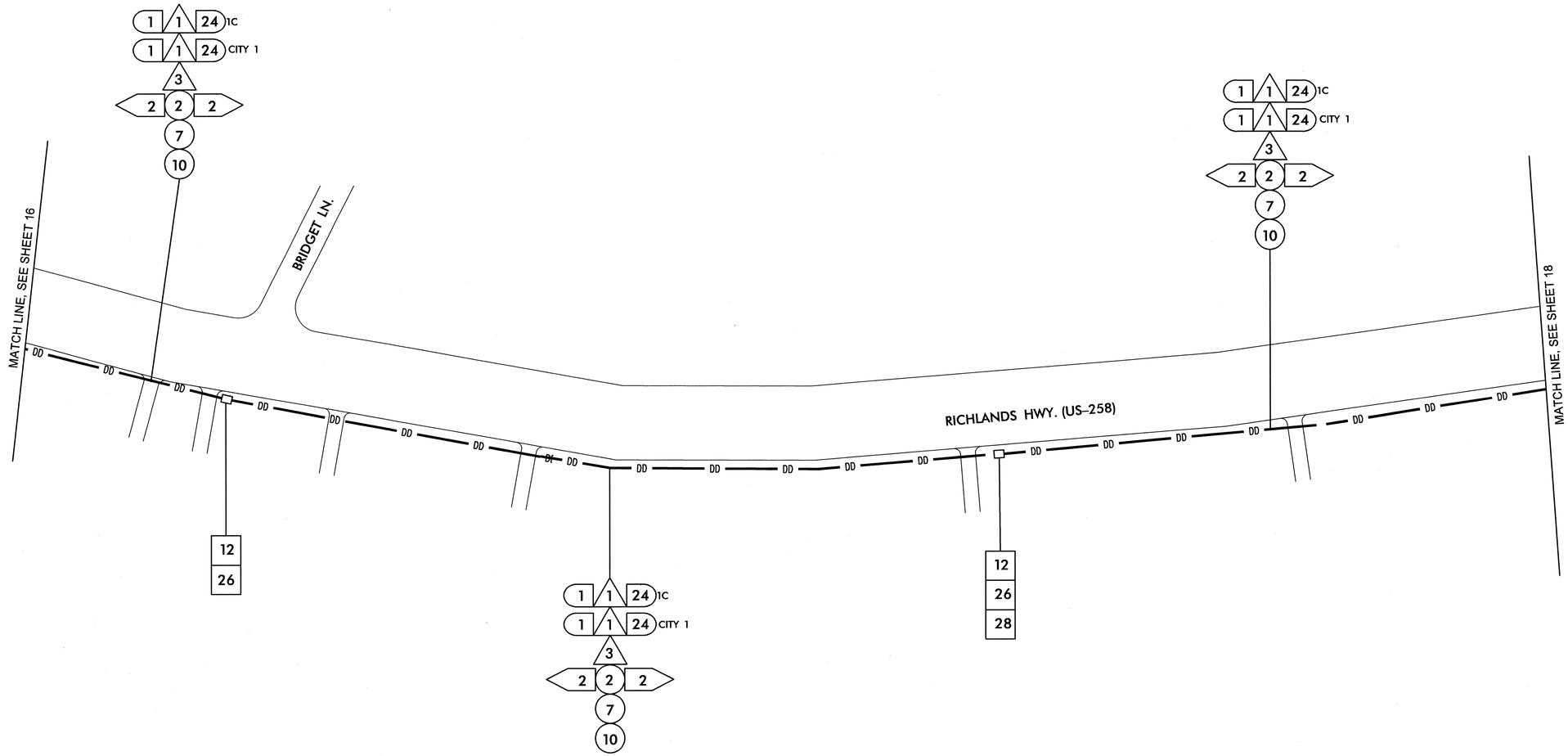
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/13/2011 $TIME$ susan.pennington ...#600 PSJENCADNCR-016.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	17



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CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
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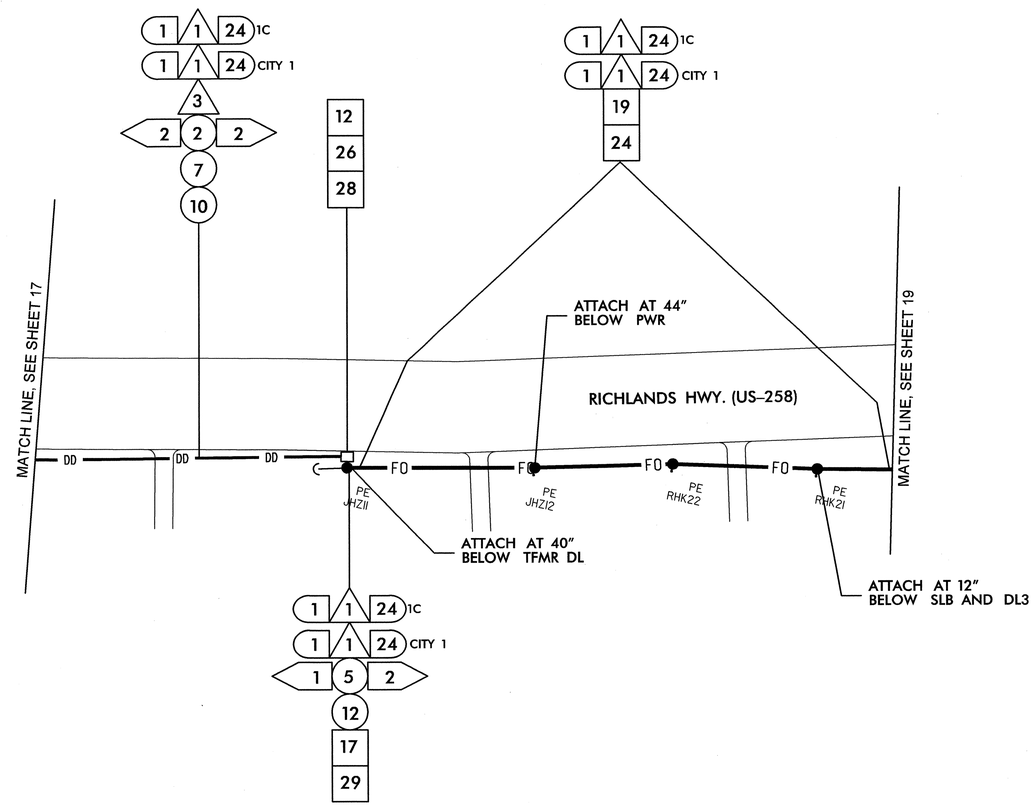
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSSE#CADWCR-017.dgn



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4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA
5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND			52	INSTALL CCTV UNIFIED CABLE
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE			53	INSTALL ANTENNA CABLE
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE			54	INSTALL DMS CONTROLLER
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE			55	INSTALL SOLAR POWER ASSEMBLY
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION				
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT				
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX				
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY				
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY				
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER								

PLANS PREPARED IN THE OFFICE OF:

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

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Mobility and Safety Division
Intermodal Transportation Systems
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

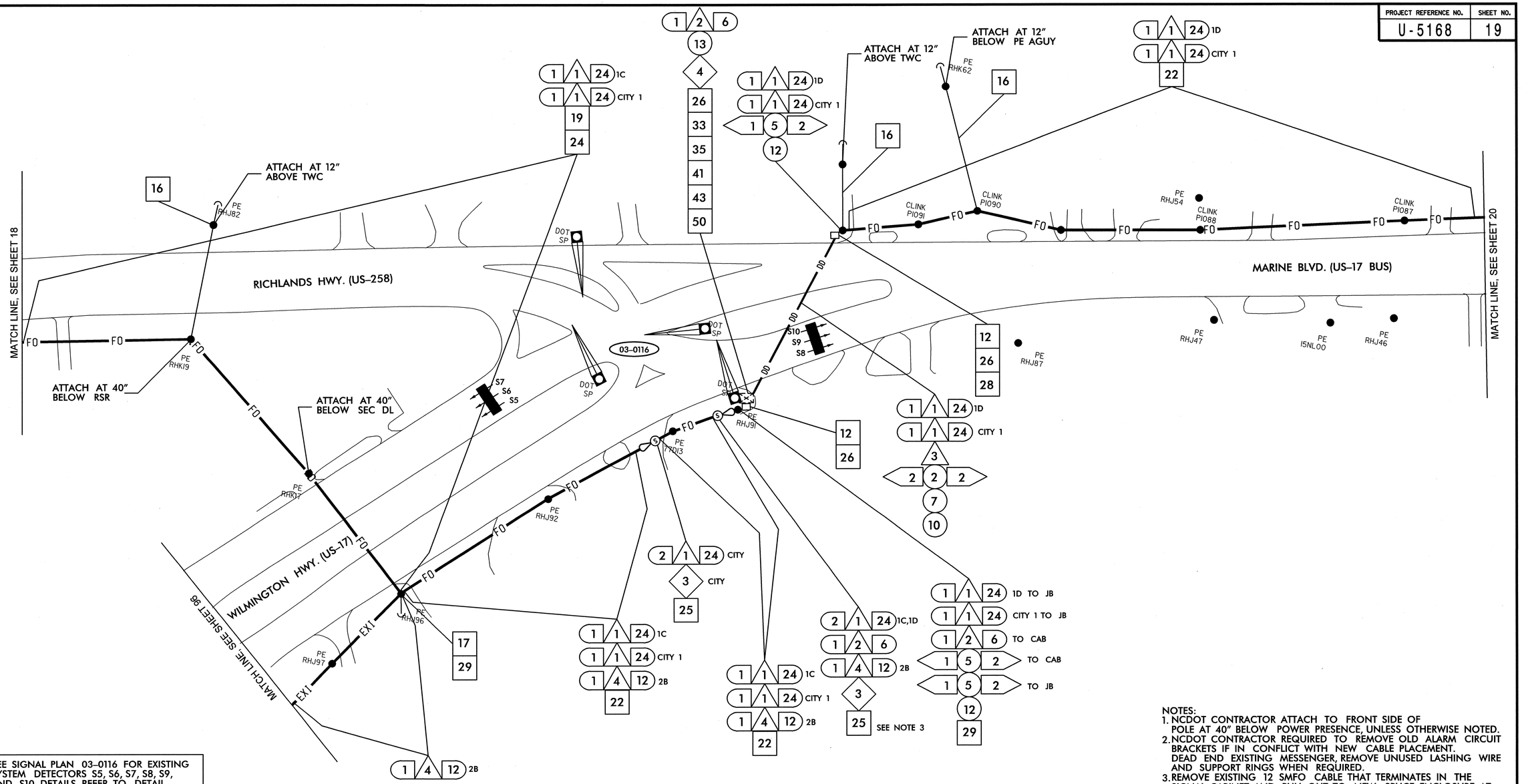
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...\R600 PSLE\RJONCR-018.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	19



SEE SIGNAL PLAN 03-0116 FOR EXISTING SYSTEM DETECTORS S5, S6, S7, S8, S9, AND S10 DETAILS. REFER TO DETAIL SHEET 1H FOR SYSTEM DETECTOR ID KEY.

NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.
3. REMOVE EXISTING 12 SMFO CABLE THAT TERMINATES IN THE SIGNAL CABINET AND PULL OUT TO NEW SPLICE ENCLOSURE AT POLE PE RHJ91.

1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE
2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE
3	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA	54	INSTALL DMS CONTROLLER
4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY
5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE		
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT		
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX		
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND						
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE						
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE						
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE						
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION						
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT						
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX						
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY						
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY						
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER										

PLANS PREPARED IN THE OFFICE OF:

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

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

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

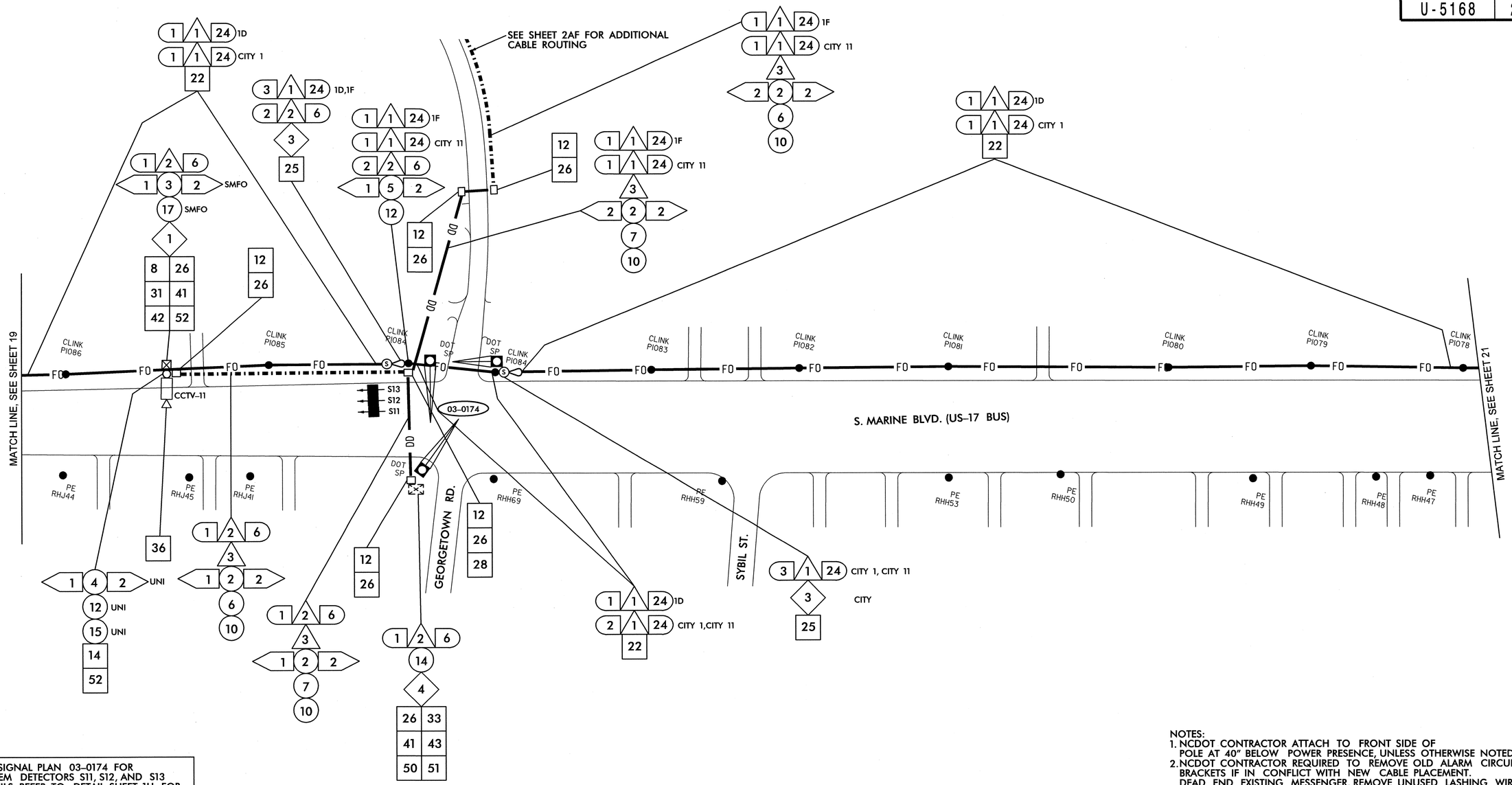
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSE#KJOWCR-019.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	20



SEE SIGNAL PLAN 03-0174 FOR SYSTEM DETECTORS S11, S12, AND S13 DETAILS. REFER TO DETAIL SHEET 1H FOR SYSTEM DETECTOR ID KEY.

NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.

1	INSTALL SMFO CABLE
2	INSTALL FIBER OPTIC DROP CABLE
3	INSTALL TRACER WIRE
4	REUSE EXISTING SMFO CABLE
5	INSTALL PLENUM RATED SMFO CABLE
6	INSTALL LOOP LEAD-IN CABLE
7	INSTALL ETHERNET CABLE
1	INSTALL PVC CONDUIT
2	INSTALL POLYETHYLENE CONDUIT
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
6	TRENCH CONDUIT
7	DIRECTIONAL DRILL CONDUIT
8	BORE AND JACK CONDUIT
9	INSTALL CABLE(S) IN EXISTING CONDUIT
10	INSTALL CABLE(S) IN NEW CONDUIT
11	INSTALL CABLE(S) IN EXISTING RISER
12	INSTALL CABLE(S) IN NEW RISER
13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS
14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)
15	INSTALL NEW RISER INTO POLE MOUNTED CABINET
16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET
1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2	INSTALL UNDERGROUND SPLICE ENCLOSURE
3	INSTALL AERIAL SPLICE ENCLOSURE
4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5	INSTALL TERMINAL SPLICE BOX
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION
3	MODIFY EXISTING CABINET FOUNDATION
4	REMOVE EXISTING CONTROLLER AND CABINET
5	INSTALL NEW CONTROLLER
6	INSTALL NEW 332 BASE MOUNTED CABINET
7	INSTALL NEW 336S BASE MOUNTED CABINET
8	INSTALL NEW 336S POLE MOUNTED CABINET
9	INSTALL BASE ADAPTER
10	INSTALL PRE-FORMED CABINET FOUNDATION PAD
11	INSTALL STANDARD JUNCTION BOX
12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
14	INSTALL WOOD POLE
15	REMOVE EXISTING WOOD POLE
16	INSTALL AERIAL GUY ASSEMBLY
17	INSTALL STANDARD GUY ASSEMBLY
18	INSTALL SIDEWALK GUY ASSEMBLY
19	INSTALL MESSENGER CABLE
20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
21	REMOVE EXISTING COMMUNICATIONS CABLE
22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
23	LASH CABLE(S) TO EXISTING MESSENGER CABLE
24	LASH CABLE(S) TO NEW MESSENGER CABLE
25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE
26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE
27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
28	INSTALL FIBER OPTIC DELINEATOR MARKER
29	BOND MESSENGER CABLE TO POLE GROUND
30	MODIFY EXISTING ELECTRICAL SERVICE
31	INSTALL NEW ELECTRICAL SERVICE
32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
33	INSTALL GENERATOR ANCHOR IN FOUNDATION
34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
35	RECONNECT GENERATOR POWER INLET BOX
36	INSTALL CCTV CAMERA ASSEMBLY
37	INSTALL SMALL DMS ASSEMBLY
38	INSTALL LARGE DMS ASSEMBLY
39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS
40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
41	INSTALL ETHERNET SWITCH
42	INSTALL VIDEO CODEC UNIT
43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER
44	INSTALL CELLULAR MODEM
45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)
46	INSTALL 2.4 GHz RADIO TRANSCEIVER
47	INSTALL YAGI ANTENNA
48	INSTALL OMNI-DIRECTIONAL ANTENNA
49	REMOVE EXISTING WIRELESS HARDWARE
50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
51	INSTALL NEW GENERATOR POWER INLET BOX
52	INSTALL CCTV UNIFIED CABLE
53	INSTALL ANTENNA CABLE
54	INSTALL DMS CONTROLLER
55	INSTALL SOLAR POWER ASSEMBLY

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

SCALE 0 50

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750 N. Greenfield Pkwy., Garner, NC 27529

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

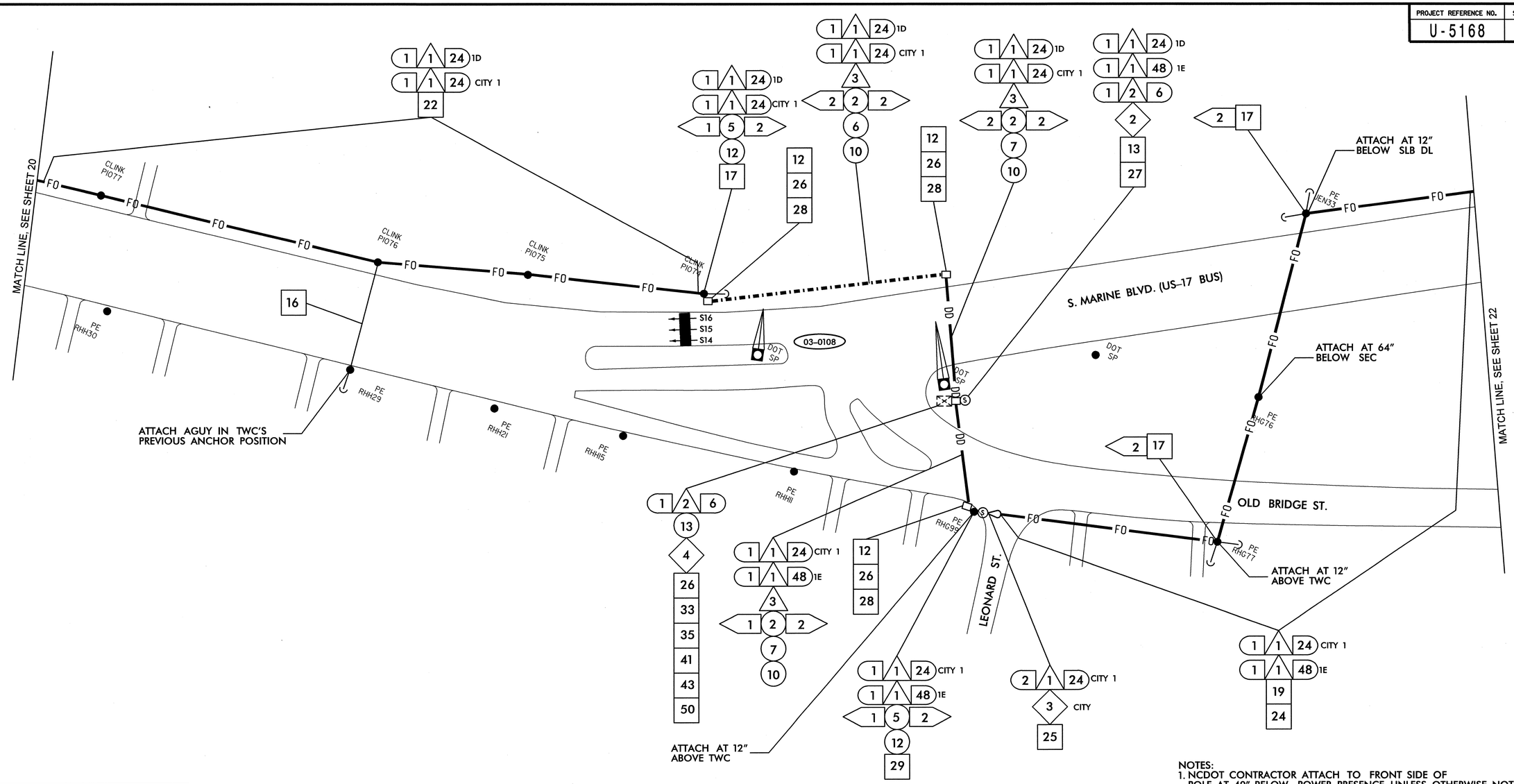
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-26-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSSE#2ADWCR-020.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	21



SEE SIGNAL PLAN 03-0108 FOR EXISTING SYSTEM DETECTORS S14,S15, AND S16 DETAILS. REFER TO DETAIL SHEET 1H FOR SYSTEM DETECTOR ID KEY.

NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.

1. INSTALL SMFO CABLE
2. INSTALL FIBER OPTIC DROP CABLE
3. INSTALL TRACER WIRE
4. REUSE EXISTING SMFO CABLE
5. INSTALL PLENUM RATED SMFO CABLE
6. INSTALL LOOP LEAD-IN CABLE
7. INSTALL ETHERNET CABLE
1. INSTALL PVC CONDUIT
2. INSTALL POLYETHYLENE CONDUIT
3. INSTALL RIGID, GALVANIZED STEEL CONDUIT
4. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5. INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
6. TRENCH CONDUIT
7. DIRECTIONAL DRILL CONDUIT
8. BORE AND JACK CONDUIT
9. INSTALL CABLE(S) IN EXISTING CONDUIT
10. INSTALL CABLE(S) IN NEW CONDUIT
11. INSTALL CABLE(S) IN EXISTING RISER
12. INSTALL CABLE(S) IN NEW RISER
13. INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS
14. INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)
15. INSTALL NEW RISER INTO POLE MOUNTED CABINET
16. REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
17. INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET
1. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2. INSTALL UNDERGROUND SPLICE ENCLOSURE
3. INSTALL AERIAL SPLICE ENCLOSURE
4. MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5. INSTALL TERMINAL SPLICE BOX
1. INSTALL CABINET FOUNDATION
2. REMOVE EXISTING CABINET FOUNDATION
3. MODIFY EXISTING CABINET FOUNDATION
4. REMOVE EXISTING CONTROLLER AND CABINET
5. INSTALL NEW CONTROLLER
6. INSTALL NEW 332 BASE MOUNTED CABINET
7. INSTALL NEW 336S BASE MOUNTED CABINET
8. INSTALL NEW 336S POLE MOUNTED CABINET
9. INSTALL BASE ADAPTER
10. INSTALL PRE-FORMED CABINET FOUNDATION PAD
11. INSTALL STANDARD JUNCTION BOX
12. INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
13. INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
14. INSTALL WOOD POLE
15. REMOVE EXISTING WOOD POLE
16. INSTALL AERIAL GUY ASSEMBLY
17. INSTALL STANDARD GUY ASSEMBLY
18. INSTALL SIDEWALK GUY ASSEMBLY
19. INSTALL MESSENGER CABLE
20. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
21. REMOVE EXISTING COMMUNICATIONS CABLE
22. LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
23. LASH CABLE(S) TO EXISTING MESSENGER CABLE
24. LASH CABLE(S) TO NEW MESSENGER CABLE
25. INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE
26. STORE 30 FEET OF EACH COMMUNICATIONS CABLE
27. STORE 100 FEET OF EACH COMMUNICATIONS CABLE
28. INSTALL FIBER OPTIC DELINEATOR MARKER
29. BOND MESSENGER CABLE TO POLE GROUND
30. MODIFY EXISTING ELECTRICAL SERVICE
31. INSTALL NEW ELECTRICAL SERVICE
32. INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
33. INSTALL GENERATOR ANCHOR IN FOUNDATION
34. RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
35. RECONNECT GENERATOR POWER INLET BOX
36. INSTALL CCTV CAMERA ASSEMBLY
37. INSTALL SMALL DMS ASSEMBLY
38. INSTALL LARGE DMS ASSEMBLY
39. INSTALL PEDESTAL STRUCTURE FOR SMALL DMS
40. INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
41. INSTALL ETHERNET SWITCH
42. INSTALL VIDEO CODEC UNIT
43. REMOVE EXISTING FIBER OPTIC TRANSCEIVER
44. INSTALL CELLULAR MODEM
45. INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)
46. INSTALL 2.4 GHz RADIO TRANSCEIVER
47. INSTALL YAGI ANTENNA
48. INSTALL OMNI-DIRECTIONAL ANTENNA
49. REMOVE EXISTING WIRELESS HARDWARE
50. INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
51. INSTALL NEW GENERATOR POWER INLET BOX
52. INSTALL CCTV UNIFIED CABLE
53. INSTALL ANTENNA CABLE
54. INSTALL DMS CONTROLLER
55. INSTALL SOLAR POWER ASSEMBLY

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

Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011 REVIEWED BY: K.W. SMITH

PREPARED BY: S.P. PENNINGTON REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

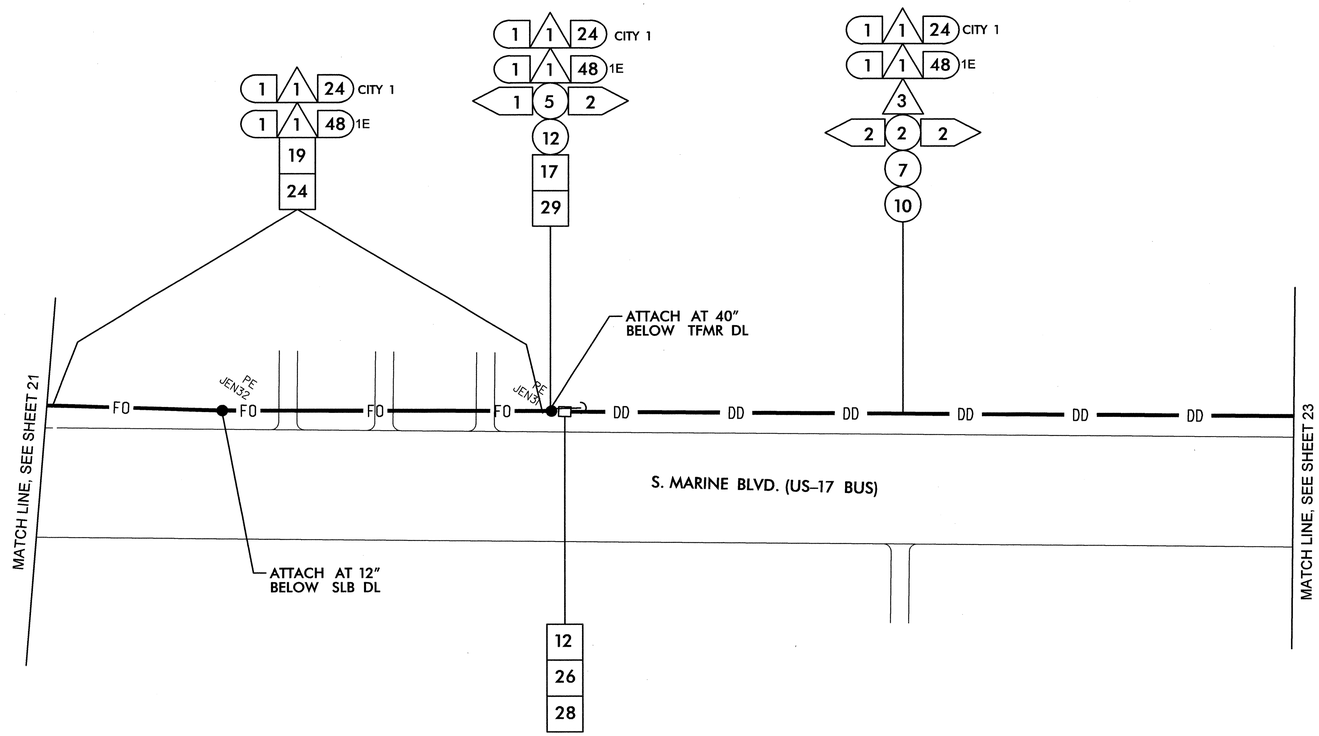
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSLE#CADWCR-021.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	22



NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.

1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE		
2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE		
3	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA	54	INSTALL DMS CONTROLLER		
4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY		
5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE				
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT				
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX				
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND								
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE								
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE								
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE								
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION								
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT								
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX								
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY								
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY								
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER												

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

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Mobility and Safety Division
Intermodal Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

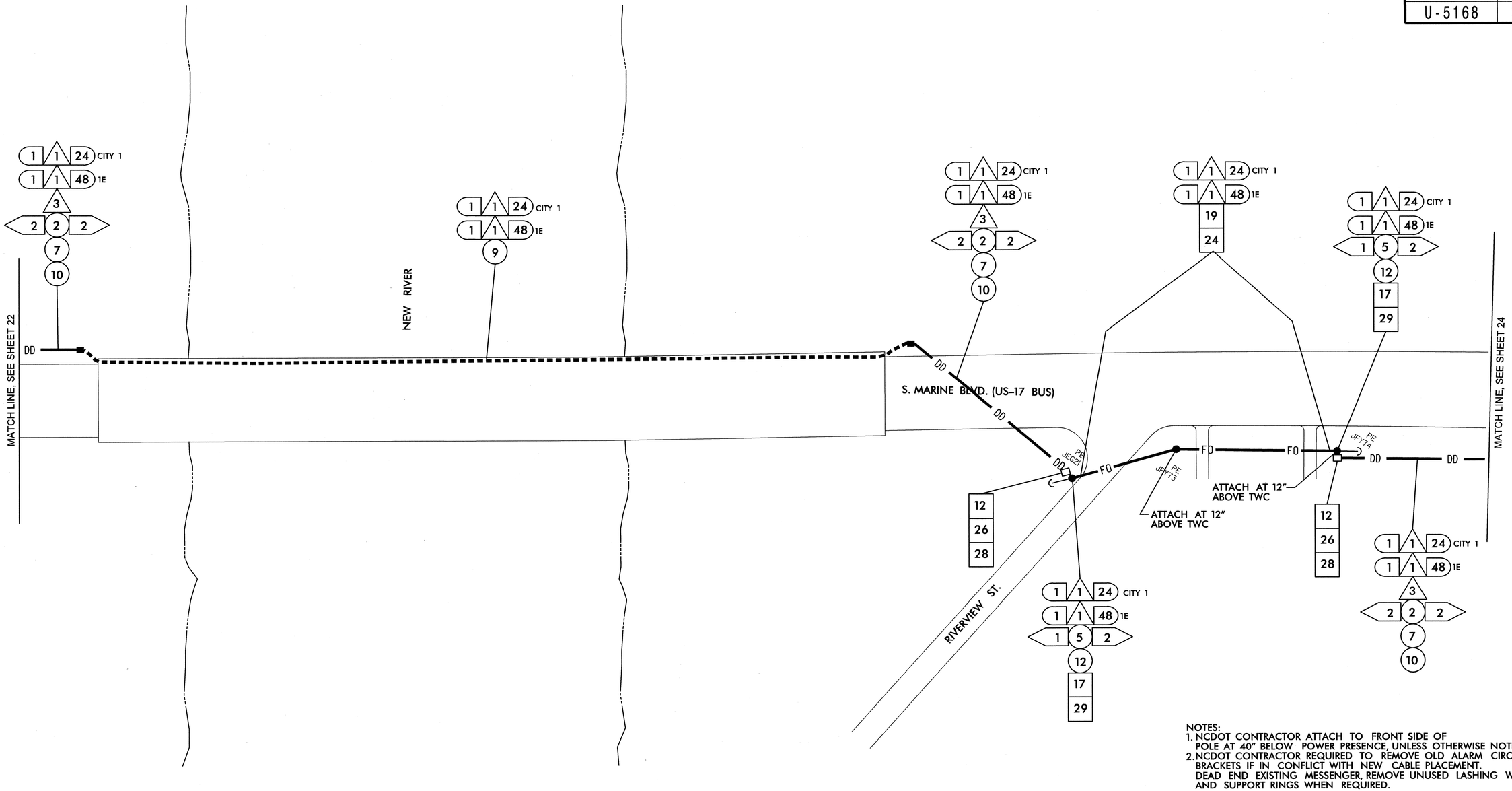
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...\600 PSEM\ADMIN-022.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	23



NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.

1	INSTALL SMFO CABLE
2	INSTALL FIBER OPTIC DROP CABLE
3	INSTALL TRACER WIRE
4	REUSE EXISTING SMFO CABLE
5	INSTALL PLENUM RATED SMFO CABLE
6	INSTALL LOOP LEAD-IN CABLE
7	INSTALL ETHERNET CABLE
1	INSTALL PVC CONDUIT
2	INSTALL POLYETHYLENE CONDUIT
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
6	TRENCH CONDUIT
7	DIRECTIONAL DRILL CONDUIT
8	BORE AND JACK CONDUIT
9	INSTALL CABLE(S) IN EXISTING CONDUIT
10	INSTALL CABLE(S) IN NEW CONDUIT
11	INSTALL CABLE(S) IN EXISTING RISER
12	INSTALL CABLE(S) IN NEW RISER
13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS
14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)
15	INSTALL NEW RISER INTO POLE MOUNTED CABINET
16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET
1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2	INSTALL UNDERGROUND SPLICE ENCLOSURE
3	INSTALL AERIAL SPLICE ENCLOSURE
4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5	INSTALL TERMINAL SPLICE BOX
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION
3	MODIFY EXISTING CABINET FOUNDATION
4	REMOVE EXISTING CONTROLLER AND CABINET
5	INSTALL NEW CONTROLLER
6	INSTALL NEW 332 BASE MOUNTED CABINET
7	INSTALL NEW 336S BASE MOUNTED CABINET
8	INSTALL NEW 336S POLE MOUNTED CABINET
9	INSTALL BASE ADAPTER
10	INSTALL PRE-FORMED CABINET FOUNDATION PAD
11	INSTALL STANDARD JUNCTION BOX
12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
14	INSTALL WOOD POLE
15	REMOVE EXISTING WOOD POLE
16	INSTALL AERIAL GUY ASSEMBLY
17	INSTALL STANDARD GUY ASSEMBLY
18	INSTALL SIDEWALK GUY ASSEMBLY
19	INSTALL MESSENGER CABLE
20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
21	REMOVE EXISTING COMMUNICATIONS CABLE
22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
23	LASH CABLE(S) TO EXISTING MESSENGER CABLE
24	LASH CABLE(S) TO NEW MESSENGER CABLE
25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE
26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE
27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
28	INSTALL FIBER OPTIC DELINEATOR MARKER
29	BOND MESSENGER CABLE TO POLE GROUND
30	MODIFY EXISTING ELECTRICAL SERVICE
31	INSTALL NEW ELECTRICAL SERVICE
32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
33	INSTALL GENERATOR ANCHOR IN FOUNDATION
34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
35	RECONNECT GENERATOR POWER INLET BOX
36	INSTALL CCTV CAMERA ASSEMBLY
37	INSTALL SMALL DMS ASSEMBLY
38	INSTALL LARGE DMS ASSEMBLY
39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS
40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
41	INSTALL ETHERNET SWITCH
42	INSTALL VIDEO CODEC UNIT
43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER
44	INSTALL CELLULAR MODEM
45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)
46	INSTALL 2.4 GHz RADIO TRANSCEIVER
47	INSTALL YAGI ANTENNA
48	INSTALL OMNI-DIRECTIONAL ANTENNA
49	REMOVE EXISTING WIRELESS HARDWARE
50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
51	INSTALL NEW GENERATOR POWER INLET BOX
52	INSTALL CCTV UNIFIED CABLE
53	INSTALL ANTENNA CABLE
54	INSTALL DMS CONTROLLER
55	INSTALL SOLAR POWER ASSEMBLY

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
Transportation Mobility and Safety Division
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011 REVIEWED BY: K.W. SMITH

PREPARED BY: S.P. PENNINGTON REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

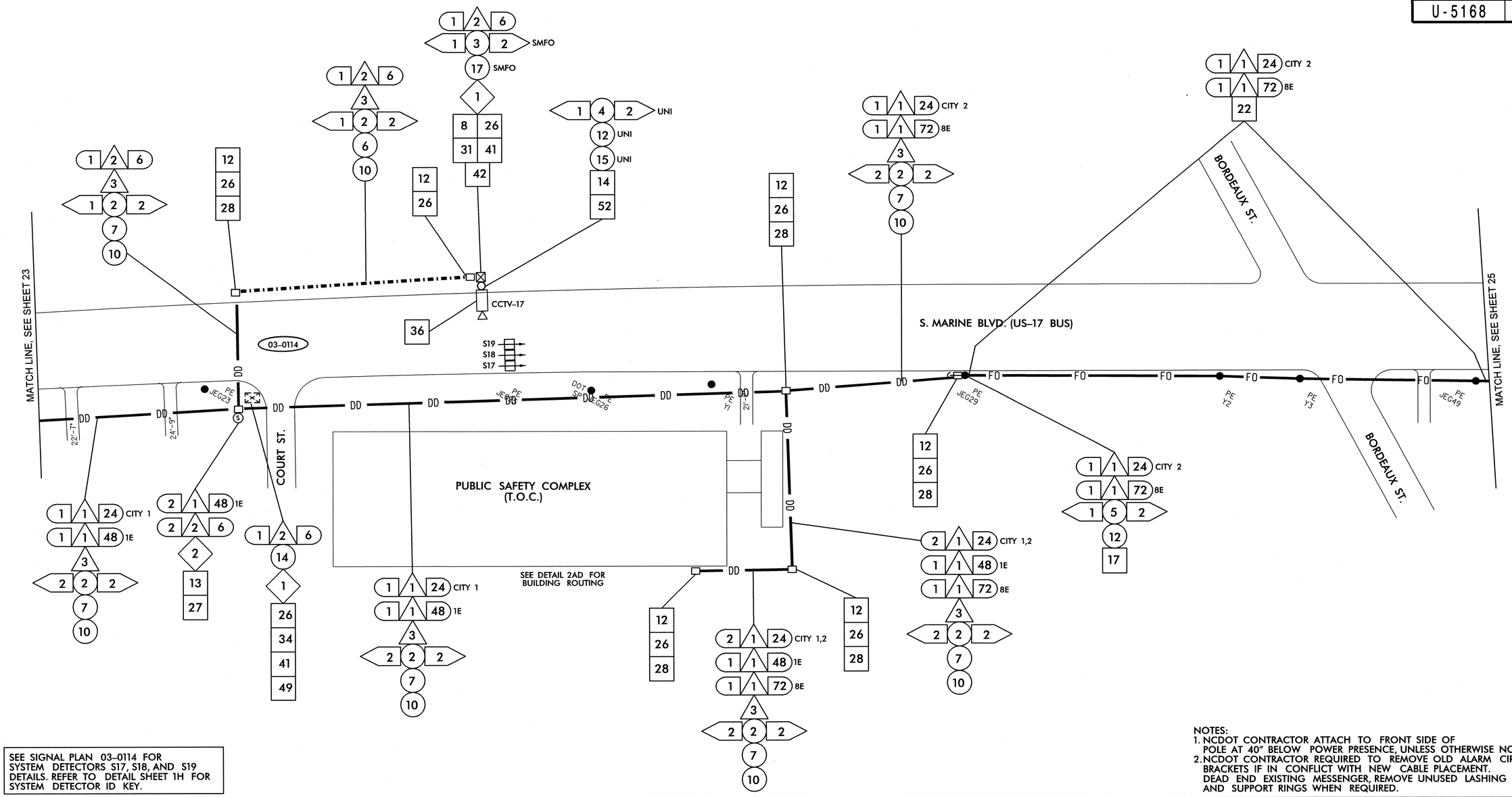
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...\600 PSSE\CADMCR-023.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	24



SEE SIGNAL PLAN 03-0114 FOR SYSTEM DETECTORS S17, S18, AND S19 DETAILS. REFER TO DETAIL SHEET 1H FOR SYSTEM DETECTOR ID KEY.

NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.

1	INSTALL SMFO CABLE
2	INSTALL FIBER OPTIC DROP CABLE
3	INSTALL TRACER WIRE
4	REUSE EXISTING SMFO CABLE
5	INSTALL PLENUM RATED SMFO CABLE
6	INSTALL LOOP LEAD-IN CABLE
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1	INSTALL PVC CONDUIT
2	INSTALL POLYETHYLENE CONDUIT
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
6	TRENCH CONDUIT
7	DIRECTIONAL DRILL CONDUIT
8	BORE AND JACK CONDUIT
9	INSTALL CABLE(S) IN EXISTING CONDUIT
10	INSTALL CABLE(S) IN NEW CONDUIT
11	INSTALL CABLE(S) IN EXISTING RISER
12	INSTALL CABLE(S) IN NEW RISER
13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS
14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)
15	INSTALL NEW RISER INTO POLE MOUNTED CABINET
16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET
1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2	INSTALL UNDERGROUND SPLICE ENCLOSURE
3	INSTALL AERIAL SPLICE ENCLOSURE
4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5	INSTALL TERMINAL SPLICE BOX
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION
3	MODIFY EXISTING CABINET FOUNDATION
4	REMOVE EXISTING CONTROLLER AND CABINET
5	INSTALL NEW CONTROLLER
6	INSTALL NEW 332 BASE MOUNTED CABINET
7	INSTALL NEW 336S BASE MOUNTED CABINET
8	INSTALL NEW 336S POLE MOUNTED CABINET
9	INSTALL BASE ADAPTER
10	INSTALL PRE-FORMED CABINET FOUNDATION PAD
11	INSTALL STANDARD JUNCTION BOX
12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
14	INSTALL WOOD POLE
15	REMOVE EXISTING WOOD POLE
16	INSTALL AERIAL GUY ASSEMBLY
17	INSTALL STANDARD GUY ASSEMBLY
18	INSTALL SIDEWALK GUY ASSEMBLY
19	INSTALL MESSENGER CABLE
20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
21	REMOVE EXISTING COMMUNICATIONS CABLE
22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
23	LASH CABLE(S) TO EXISTING MESSENGER CABLE
24	LASH CABLE(S) TO NEW MESSENGER CABLE
25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE
26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE
27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
28	INSTALL FIBER OPTIC DELINEATOR MARKER
29	BOND MESSENGER CABLE TO POLE GROUND
30	MODIFY EXISTING ELECTRICAL SERVICE
31	INSTALL NEW ELECTRICAL SERVICE
32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
33	INSTALL GENERATOR ANCHOR IN FOUNDATION
34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
35	RECONNECT GENERATOR POWER INLET BOX
36	INSTALL CCTV CAMERA ASSEMBLY
37	INSTALL SMALL DMS ASSEMBLY
38	INSTALL LARGE DMS ASSEMBLY
39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS
40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
41	INSTALL ETHERNET SWITCH
42	INSTALL VIDEO CODEC UNIT
43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER
44	INSTALL CELLULAR MODEM
45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)
46	INSTALL 2.4 GHz RADIO TRANSCEIVER
47	INSTALL YAGI ANTENNA
48	INSTALL OMNI-DIRECTIONAL ANTENNA
49	REMOVE EXISTING WIRELESS HARDWARE
50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
51	INSTALL NEW GENERATOR POWER INLET BOX
52	INSTALL CCTV UNIFIED CABLE
53	INSTALL ANTENNA CABLE
54	INSTALL DMS CONTROLLER
55	INSTALL SOLAR POWER ASSEMBLY

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

Transportation Mobility and Safety Division
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011 REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

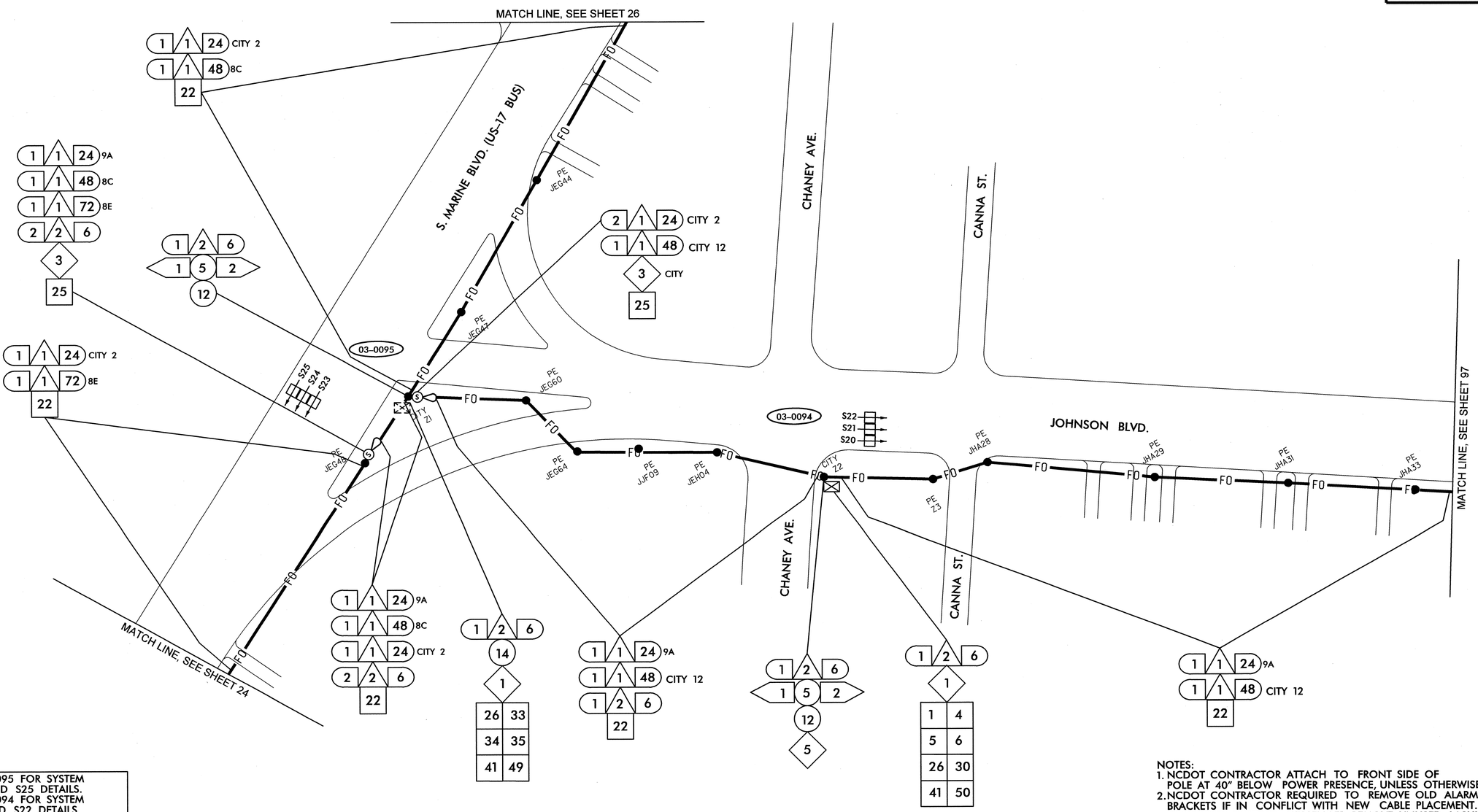
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-25-11 DATE

CADD Filename:

...*600 PSE*CADCR-024.dgn susan.pennington $TIME$ 7/25/2011

PROJECT REFERENCE NO.	SHEET NO.
U-5168	25



SEE SIGNAL PLAN 03-0095 FOR SYSTEM DETECTORS S23, S24, AND S25 DETAILS.
SEE SIGNAL PLAN 03-0094 FOR SYSTEM DETECTORS S20, S21, AND S22 DETAILS
REFER TO DETAIL SHEET 1H FOR SYSTEM DETECTOR ID KEY.

NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.

1	INSTALL SMFO CABLE
2	INSTALL FIBER OPTIC DROP CABLE
3	INSTALL TRACER WIRE
4	REUSE EXISTING SMFO CABLE
5	INSTALL PLENUM RATED SMFO CABLE
6	INSTALL LOOP LEAD-IN CABLE
7	INSTALL ETHERNET CABLE
1	INSTALL PVC CONDUIT
2	INSTALL POLYETHYLENE CONDUIT
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
6	TRENCH CONDUIT
7	DIRECTIONAL DRILL CONDUIT
8	BORE AND JACK CONDUIT
9	INSTALL CABLE(S) IN EXISTING CONDUIT
10	INSTALL CABLE(S) IN NEW CONDUIT
11	INSTALL CABLE(S) IN EXISTING RISER
12	INSTALL CABLE(S) IN NEW RISER
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2	INSTALL UNDERGROUND SPLICE ENCLOSURE
3	INSTALL AERIAL SPLICE ENCLOSURE
4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5	INSTALL TERMINAL SPLICE BOX
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION
3	MODIFY EXISTING CABINET FOUNDATION
4	REMOVE EXISTING CONTROLLER AND CABINET
5	INSTALL NEW CONTROLLER
6	INSTALL NEW 332 BASE MOUNTED CABINET
7	INSTALL NEW 336S BASE MOUNTED CABINET
8	INSTALL NEW 336S POLE MOUNTED CABINET
9	INSTALL BASE ADAPTER
10	INSTALL PRE-FORMED CABINET FOUNDATION PAD
11	INSTALL STANDARD JUNCTION BOX
12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
14	INSTALL WOOD POLE
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19	INSTALL MESSENGER CABLE
20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
21	REMOVE EXISTING COMMUNICATIONS CABLE
22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
23	LASH CABLE(S) TO EXISTING MESSENGER CABLE
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25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE
26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE
27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
28	INSTALL FIBER OPTIC DELINEATOR MARKER
29	BOND MESSENGER CABLE TO POLE GROUND
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32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
33	INSTALL GENERATOR ANCHOR IN FOUNDATION
34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
35	RECONNECT GENERATOR POWER INLET BOX
36	INSTALL CCTV CAMERA ASSEMBLY
37	INSTALL SMALL DMS ASSEMBLY
38	INSTALL LARGE DMS ASSEMBLY
39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS
40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
41	INSTALL ETHERNET SWITCH
42	INSTALL VIDEO CODEC UNIT
43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER
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46	INSTALL 2.4 GHz RADIO TRANSCEIVER
47	INSTALL YAGI ANTENNA
48	INSTALL OMNI-DIRECTIONAL ANTENNA
49	REMOVE EXISTING WIRELESS HARDWARE
50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
51	INSTALL NEW GENERATOR POWER INLET BOX
52	INSTALL CCTV UNIFIED CABLE
53	INSTALL ANTENNA CABLE
54	INSTALL DMS CONTROLLER
55	INSTALL SOLAR POWER ASSEMBLY

PLANS PREPARED IN THE OFFICE OF:
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Transportation Mobility and Safety Division
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
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SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

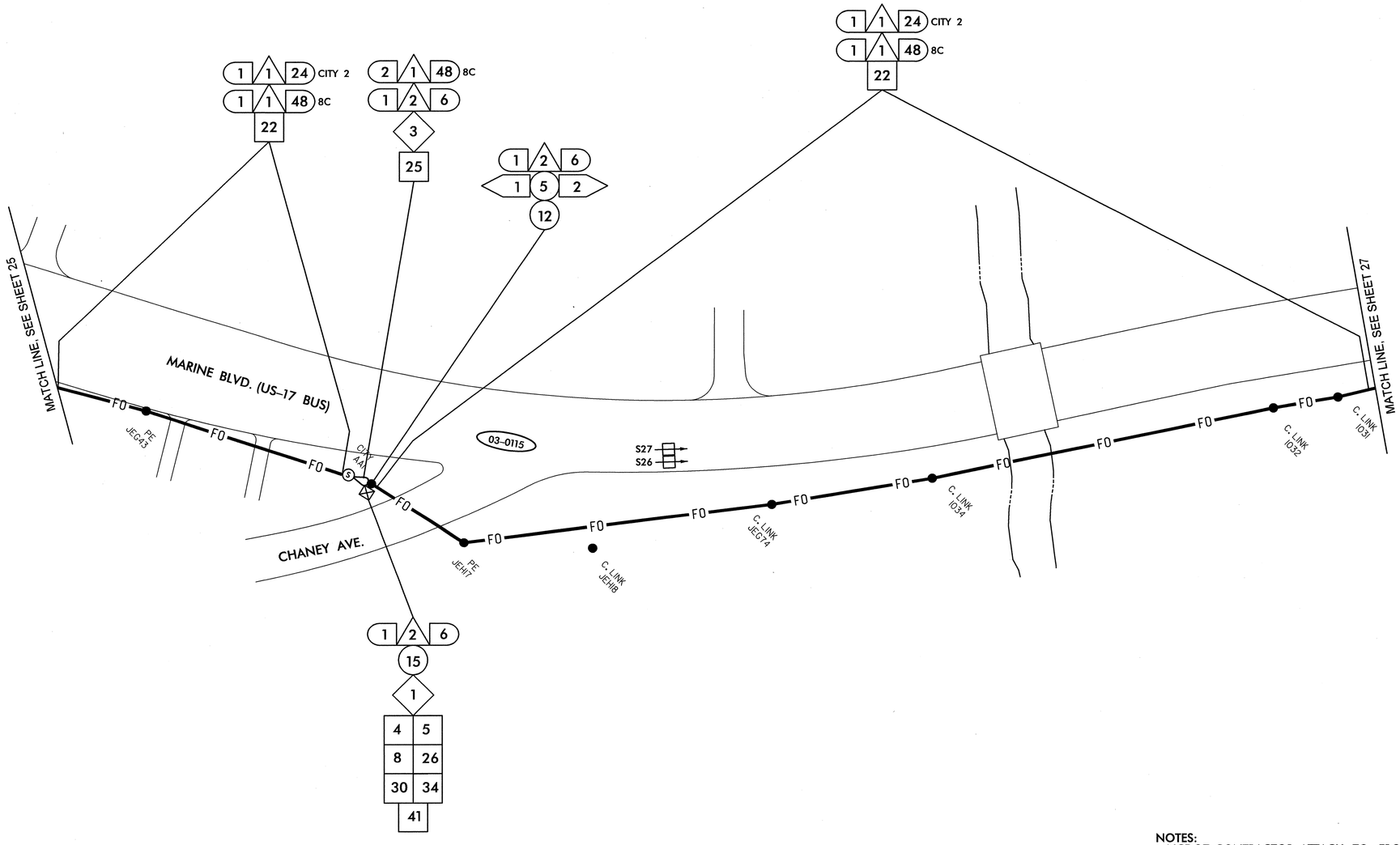
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-25-11 DATE

CADD Filename:

7/25/2011 $TIME$ susan.pennington ...*600 PSE*CADECR-025.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	26



SEE SIGNAL PLAN 03-0115 FOR SYSTEM DETECTORS S26 AND S27 DETAILS. REFER TO DETAIL SHEET 1H FOR SYSTEM DETECTOR ID KEY.

NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.

1 INSTALL SMFO CABLE	11 INSTALL CABLE(S) IN EXISTING RISER	6 INSTALL NEW 332 BASE MOUNTED CABINET	22 LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38 INSTALL LARGE DMS ASSEMBLY	45 INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52 INSTALL CCTV UNIFIED CABLE	
2 INSTALL FIBER OPTIC DROP CABLE	12 INSTALL CABLE(S) IN NEW RISER	7 INSTALL NEW 336S BASE MOUNTED CABINET	23 LASH CABLE(S) TO EXISTING MESSENGER CABLE	39 INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46 INSTALL 2.4 GHz RADIO TRANSCEIVER	53 INSTALL ANTENNA CABLE	
3 INSTALL TRACER WIRE	13 INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8 INSTALL NEW 336S POLE MOUNTED CABINET	24 LASH CABLE(S) TO NEW MESSENGER CABLE	40 INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47 INSTALL YAGI ANTENNA	54 INSTALL DMS CONTROLLER	
4 REUSE EXISTING SMFO CABLE	14 INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9 INSTALL BASE ADAPTER	25 INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41 INSTALL ETHERNET SWITCH	48 INSTALL OMNI-DIRECTIONAL ANTENNA	55 INSTALL SOLAR POWER ASSEMBLY	
5 INSTALL PLENUM RATED SMFO CABLE	15 INSTALL NEW RISER INTO POLE MOUNTED CABINET	10 INSTALL PRE-FORMED CABINET FOUNDATION PAD	26 STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42 INSTALL VIDEO CODEC UNIT	49 REMOVE EXISTING WIRELESS HARDWARE		
6 INSTALL LOOP LEAD-IN CABLE	16 REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11 INSTALL STANDARD JUNCTION BOX	27 STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43 REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50 INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT		
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1 INSTALL PVC CONDUIT	1 INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13 INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29 BOND MESSENGER CABLE TO POLE GROUND				
2 INSTALL POLYETHYLENE CONDUIT	2 INSTALL UNDERGROUND SPLICE ENCLOSURE	14 INSTALL WOOD POLE	30 MODIFY EXISTING ELECTRICAL SERVICE				
3 INSTALL RIGID, GALVANIZED STEEL CONDUIT	3 INSTALL AERIAL SPLICE ENCLOSURE	15 REMOVE EXISTING WOOD POLE	31 INSTALL NEW ELECTRICAL SERVICE				
4 INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4 MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16 INSTALL AERIAL GUY ASSEMBLY	32 INSTALL POWER FROM EXISTING ELECTRICAL SERVICE				
5 INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5 INSTALL TERMINAL SPLICE BOX	17 INSTALL STANDARD GUY ASSEMBLY	33 INSTALL GENERATOR ANCHOR IN FOUNDATION				
6 TRENCH CONDUIT	1 INSTALL CABINET FOUNDATION	18 INSTALL SIDEWALK GUY ASSEMBLY	34 RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT				
7 DIRECTIONAL DRILL CONDUIT	2 REMOVE EXISTING CABINET FOUNDATION	19 INSTALL MESSENGER CABLE	35 RECONNECT GENERATOR POWER INLET BOX				
8 BORE AND JACK CONDUIT	3 MODIFY EXISTING CABINET FOUNDATION	20 REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36 INSTALL CCTV CAMERA ASSEMBLY				
9 INSTALL CABLE(S) IN EXISTING CONDUIT	4 REMOVE EXISTING CONTROLLER AND CABINET	21 REMOVE EXISTING COMMUNICATIONS CABLE	37 INSTALL SMALL DMS ASSEMBLY				
10 INSTALL CABLE(S) IN NEW CONDUIT	5 INSTALL NEW CONTROLLER						

PLANS PREPARED IN THE OFFICE OF:

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

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Mobility and Safety Division
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011 REVIEWED BY: K.W. SMITH

PREPARED BY: S.P. PENNINGTON REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

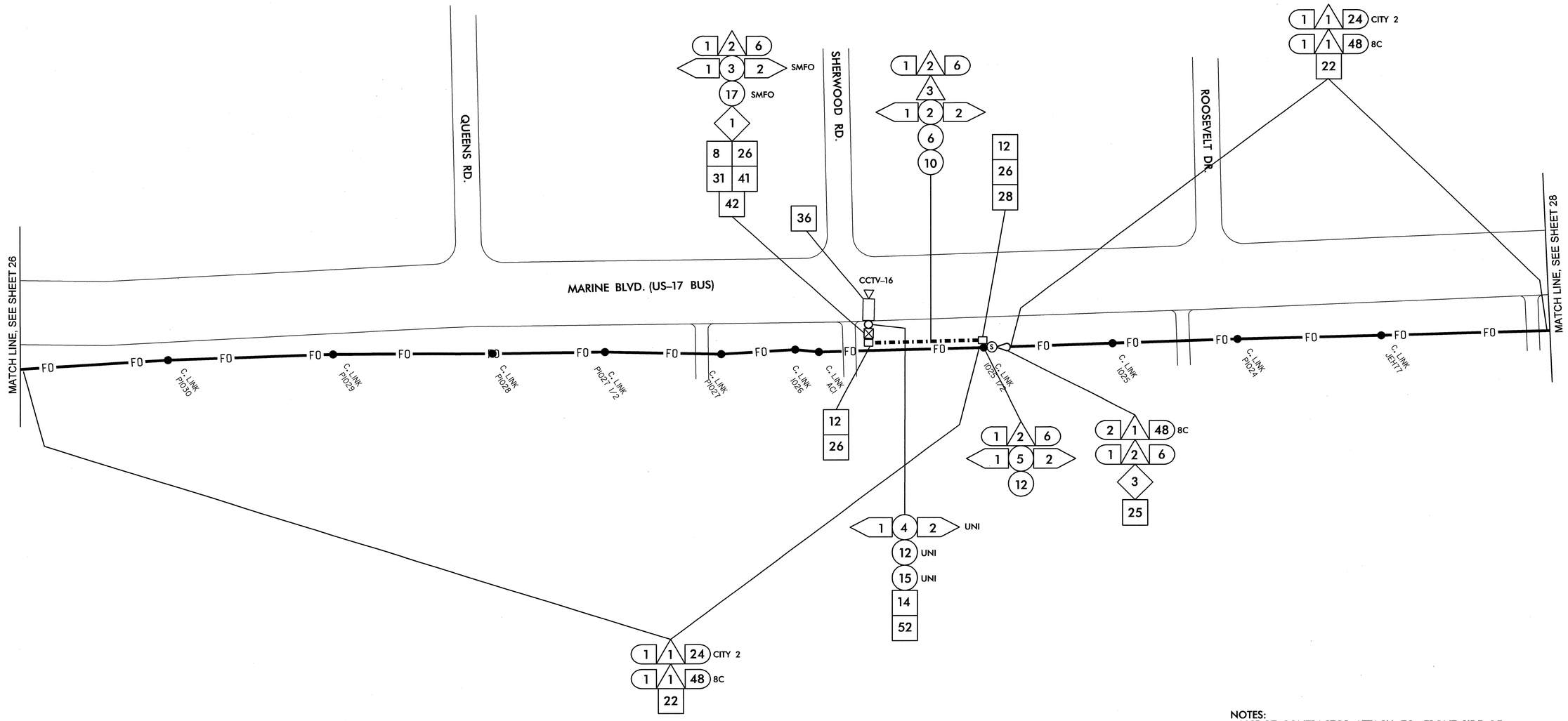
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PS&E#CADNCR-026.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	27



NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.

△1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE
△2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE
△3	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA	54	INSTALL DMS CONTROLLER
△4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY
△5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE		
△6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT		
△7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX		
1	INSTALL PVC CONDUIT	◇1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND						
2	INSTALL POLYETHYLENE CONDUIT	◇2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE						
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	◇3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE						
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	◇4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE						
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	◇5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION						
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT						
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX						
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY						
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY						
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER										

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SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

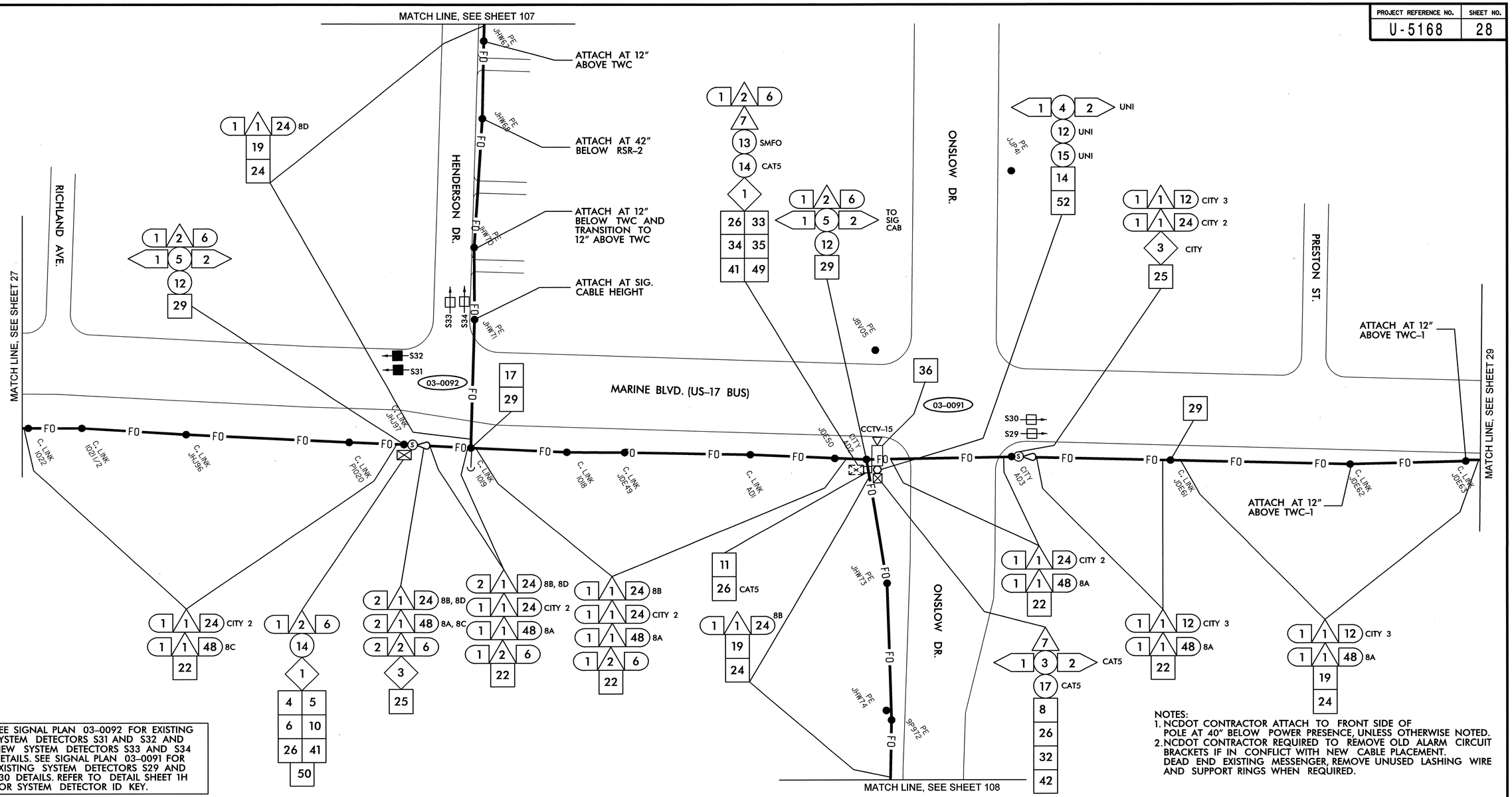
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filenames:

7/19/2011 $TIME$ susan.pennington ...#600 PSE#CADWCR-027.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	28



SEE SIGNAL PLAN 03-0092 FOR EXISTING SYSTEM DETECTORS S31 AND S32 AND NEW SYSTEM DETECTORS S33 AND S34 DETAILS. SEE SIGNAL PLAN 03-0091 FOR EXISTING SYSTEM DETECTORS S29 AND S30 DETAILS. REFER TO DETAIL SHEET 1H FOR SYSTEM DETECTOR ID KEY.

NOTES:
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1. INSTALL SMFO CABLE
2. INSTALL FIBER OPTIC DROP CABLE
3. INSTALL TRACER WIRE
4. REUSE EXISTING SMFO CABLE
5. INSTALL PLENUM RATED SMFO CABLE
6. INSTALL LOOP LEAD-IN CABLE
7. INSTALL ETHERNET CABLE
1. INSTALL PVC CONDUIT
2. INSTALL POLYETHYLENE CONDUIT
3. INSTALL RIGID, GALVANIZED STEEL CONDUIT
4. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5. INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
6. TRENCH CONDUIT
7. DIRECTIONAL DRILL CONDUIT
8. BORE AND JACK CONDUIT
9. INSTALL CABLE(S) IN EXISTING CONDUIT
10. INSTALL CABLE(S) IN NEW CONDUIT
11. INSTALL CABLE(S) IN EXISTING RISER
12. INSTALL CABLE(S) IN NEW RISER
13. INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS
14. INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)
15. INSTALL NEW RISER INTO POLE MOUNTED CABINET
16. REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
17. INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET
1. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2. INSTALL UNDERGROUND SPLICE ENCLOSURE
3. INSTALL AERIAL SPLICE ENCLOSURE
4. MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5. INSTALL TERMINAL SPLICE BOX
1. INSTALL CABINET FOUNDATION
2. REMOVE EXISTING CABINET FOUNDATION
3. MODIFY EXISTING CABINET FOUNDATION
4. REMOVE EXISTING CONTROLLER AND CABINET
5. INSTALL NEW CONTROLLER
6. INSTALL NEW 332 BASE MOUNTED CABINET
7. INSTALL NEW 336S BASE MOUNTED CABINET
8. INSTALL NEW 336S POLE MOUNTED CABINET
9. INSTALL BASE ADAPTER
10. INSTALL PRE-FORMED CABINET FOUNDATION PAD
11. INSTALL STANDARD JUNCTION BOX
12. INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
13. INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
14. INSTALL WOOD POLE
15. REMOVE EXISTING WOOD POLE
16. INSTALL AERIAL GUY ASSEMBLY
17. INSTALL STANDARD GUY ASSEMBLY
18. INSTALL SIDEWALK GUY ASSEMBLY
19. INSTALL MESSENGER CABLE
20. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
21. REMOVE EXISTING COMMUNICATIONS CABLE
22. LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
23. LASH CABLE(S) TO EXISTING MESSENGER CABLE
24. LASH CABLE(S) TO NEW MESSENGER CABLE
25. INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE
26. STORE 30 FEET OF EACH COMMUNICATIONS CABLE
27. STORE 100 FEET OF EACH COMMUNICATIONS CABLE
28. INSTALL FIBER OPTIC DELINEATOR MARKER
29. BOND MESSENGER CABLE TO POLE GROUND
30. MODIFY EXISTING ELECTRICAL SERVICE
31. INSTALL NEW ELECTRICAL SERVICE
32. INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
33. INSTALL GENERATOR ANCHOR IN FOUNDATION
34. RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
35. RECONNECT GENERATOR POWER INLET BOX
36. INSTALL CCTV CAMERA ASSEMBLY
37. INSTALL SMALL DMS ASSEMBLY
38. INSTALL LARGE DMS ASSEMBLY
39. INSTALL PEDESTAL STRUCTURE FOR SMALL DMS
40. INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
41. INSTALL ETHERNET SWITCH
42. INSTALL VIDEO CODEC UNIT
43. REMOVE EXISTING FIBER OPTIC TRANSCEIVER
44. INSTALL CELLULAR MODEM
45. INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)
46. INSTALL 2.4 GHz RADIO TRANSCEIVER
47. INSTALL YAGI ANTENNA
48. INSTALL OMNI-DIRECTIONAL ANTENNA
49. REMOVE EXISTING WIRELESS HARDWARE
50. INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
51. INSTALL NEW GENERATOR POWER INLET BOX
52. INSTALL CCTV UNIFIED CABLE
53. INSTALL ANTENNA CABLE
54. INSTALL DMS CONTROLLER
55. INSTALL SOLAR POWER ASSEMBLY

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
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750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

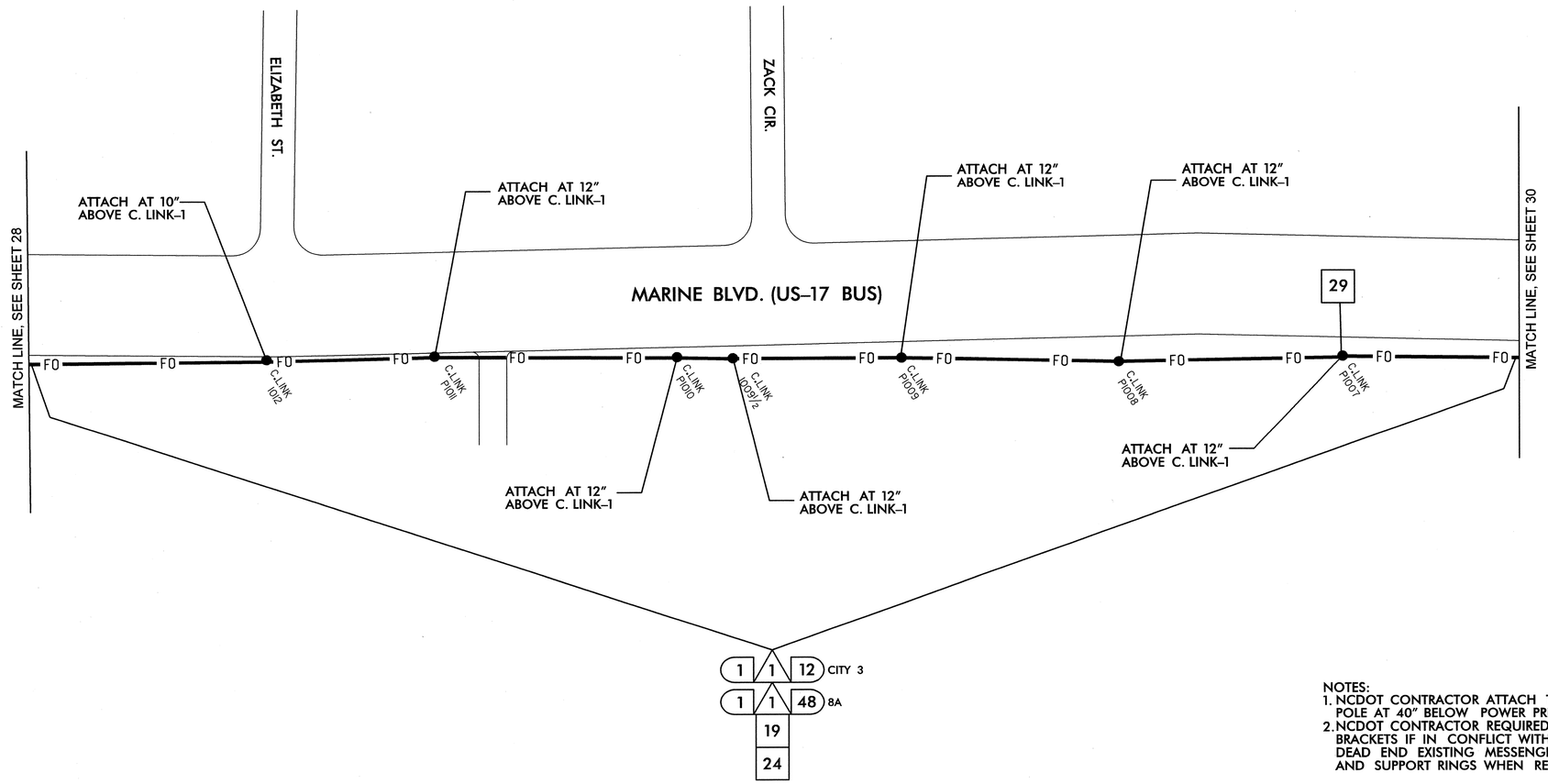
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filenames:

7/19/2011 $TIME$ susan.pennington ...#600 PSAE#0ADMIN-028.dgn



NOTES:
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1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE		
2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE		
3	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA	54	INSTALL DMS CONTROLLER		
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5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE				
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT				
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1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND								
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE								
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CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
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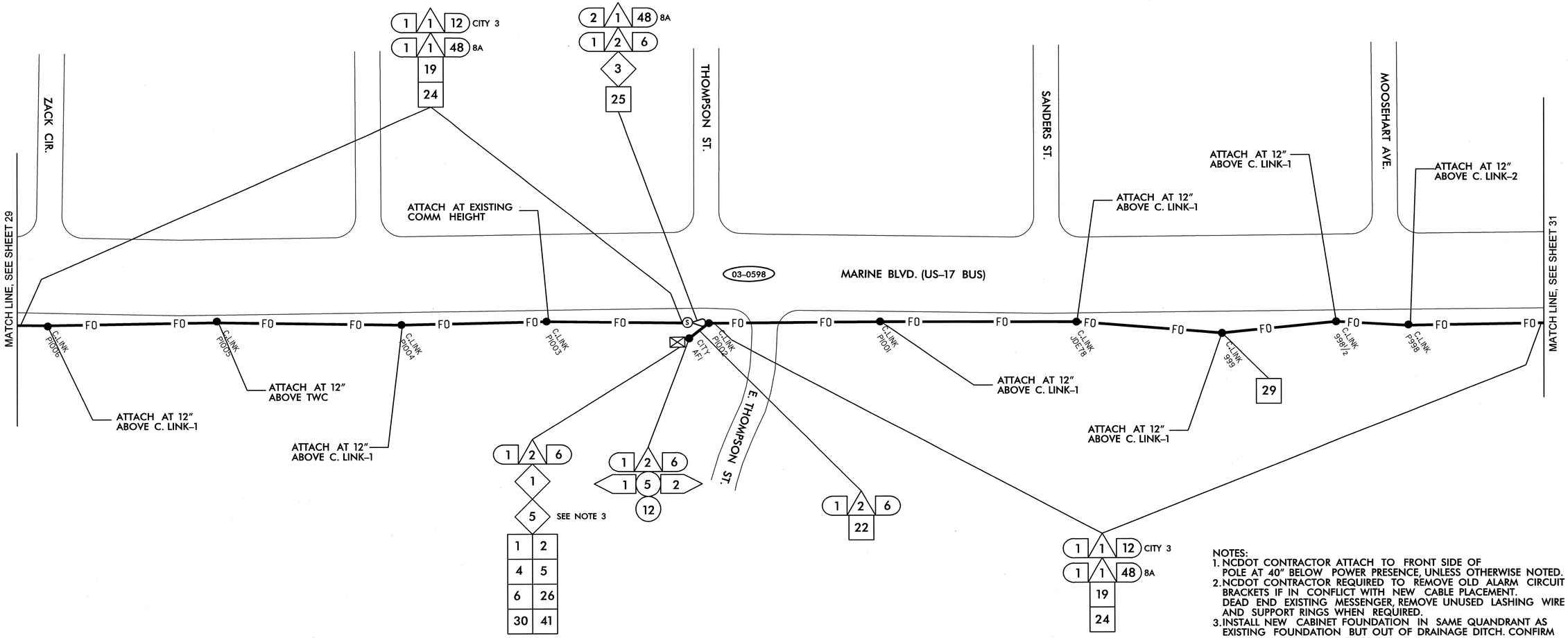
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE DATE 7-20-11

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSAE#CADWCR-029.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	30



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3. INSTALL NEW CABINET FOUNDATION IN SAME QUANDRANT AS EXISTING FOUNDATION BUT OUT OF DRAINAGE DITCH. CONFIRM NEW LOCATION WITH ENGINEER.

1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE		
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7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX								
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY								
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY								
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER												

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

750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

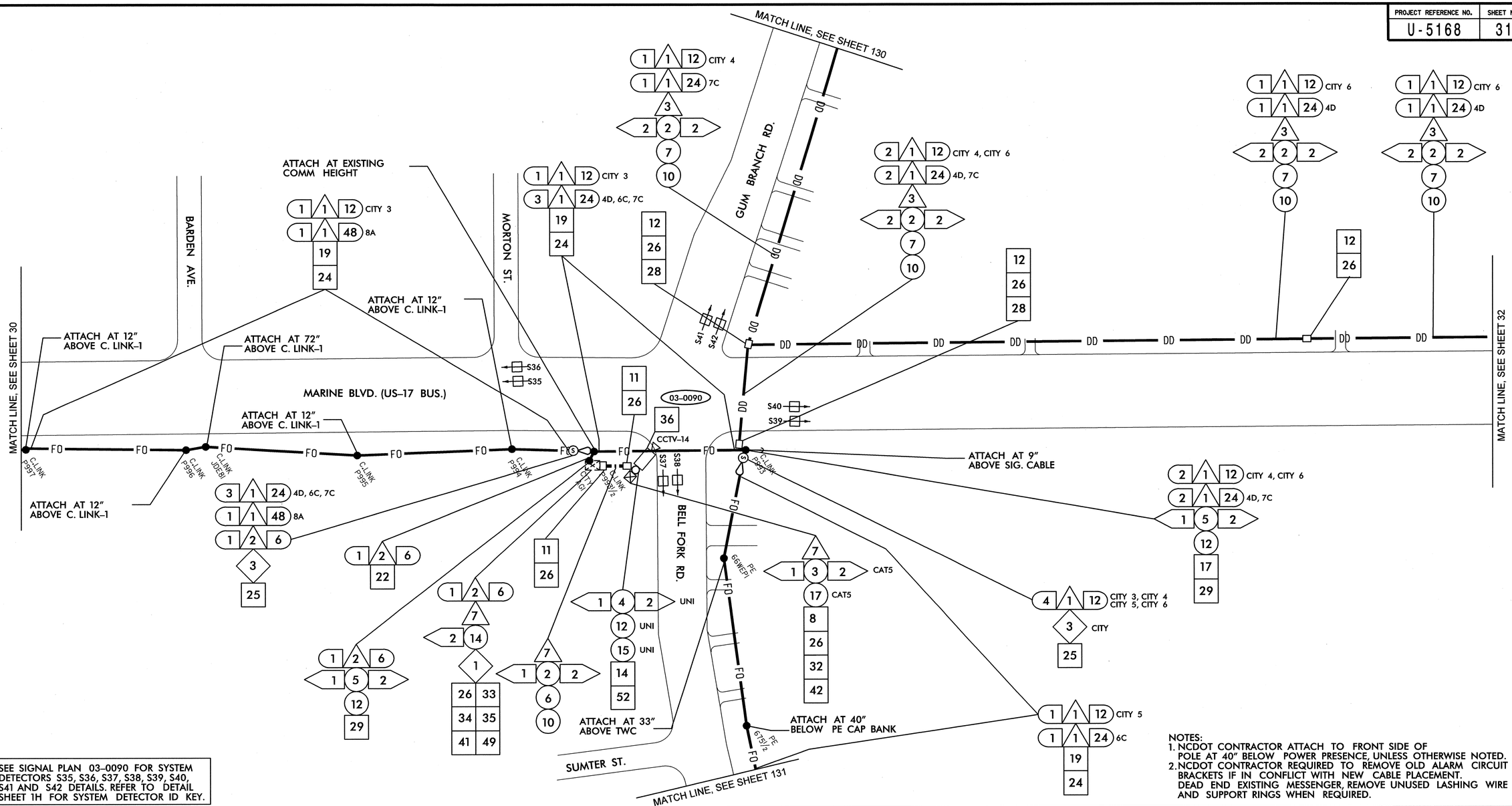
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE DATE 7-20-11

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSAE#CADWCR-030.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	31



SEE SIGNAL PLAN 03-0090 FOR SYSTEM DETECTORS S35, S36, S37, S38, S39, S40, S41 AND S42 DETAILS. REFER TO DETAIL SHEET 1H FOR SYSTEM DETECTOR ID KEY.

NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.

1	INSTALL SMFO CABLE
2	INSTALL FIBER OPTIC DROP CABLE
3	INSTALL TRACER WIRE
4	REUSE EXISTING SMFO CABLE
5	INSTALL PLENUM RATED SMFO CABLE
6	INSTALL LOOP LEAD-IN CABLE
7	INSTALL ETHERNET CABLE
1	INSTALL PVC CONDUIT
2	INSTALL POLYETHYLENE CONDUIT
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
6	TRENCH CONDUIT
7	DIRECTIONAL DRILL CONDUIT
8	BORE AND JACK CONDUIT
9	INSTALL CABLE(S) IN EXISTING CONDUIT
10	INSTALL CABLE(S) IN NEW CONDUIT
11	INSTALL CABLE(S) IN EXISTING RISER
12	INSTALL CABLE(S) IN NEW RISER
13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS
14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)
15	INSTALL NEW RISER INTO POLE MOUNTED CABINET
16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET
1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2	INSTALL UNDERGROUND SPLICE ENCLOSURE
3	INSTALL AERIAL SPLICE ENCLOSURE
4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5	INSTALL TERMINAL SPLICE BOX
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION
3	MODIFY EXISTING CABINET FOUNDATION
4	REMOVE EXISTING CONTROLLER AND CABINET
5	INSTALL NEW CONTROLLER
6	INSTALL NEW 332 BASE MOUNTED CABINET
7	INSTALL NEW 336S BASE MOUNTED CABINET
8	INSTALL NEW 336S POLE MOUNTED CABINET
9	INSTALL BASE ADAPTER
10	INSTALL PRE-FORMED CABINET FOUNDATION PAD
11	INSTALL STANDARD JUNCTION BOX
12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
14	INSTALL WOOD POLE
15	REMOVE EXISTING WOOD POLE
16	INSTALL AERIAL GUY ASSEMBLY
17	INSTALL STANDARD GUY ASSEMBLY
18	INSTALL SIDEWALK GUY ASSEMBLY
19	INSTALL MESSENGER CABLE
20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
21	REMOVE EXISTING COMMUNICATIONS CABLE
22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
23	LASH CABLE(S) TO EXISTING MESSENGER CABLE
24	LASH CABLE(S) TO NEW MESSENGER CABLE
25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE
26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE
27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
28	INSTALL FIBER OPTIC DELINEATOR MARKER
29	BOND MESSENGER CABLE TO POLE GROUND
30	MODIFY EXISTING ELECTRICAL SERVICE
31	INSTALL NEW ELECTRICAL SERVICE
32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
33	INSTALL GENERATOR ANCHOR IN FOUNDATION
34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
35	RECONNECT GENERATOR POWER INLET BOX
36	INSTALL CCTV CAMERA ASSEMBLY
37	INSTALL SMALL DMS ASSEMBLY
38	INSTALL LARGE DMS ASSEMBLY
39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS
40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
41	INSTALL ETHERNET SWITCH
42	INSTALL VIDEO CODEC UNIT
43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER
44	INSTALL CELLULAR MODEM
45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)
46	INSTALL 2.4 GHz RADIO TRANSCEIVER
47	INSTALL YAGI ANTENNA
48	INSTALL OMNI-DIRECTIONAL ANTENNA
49	REMOVE EXISTING WIRELESS HARDWARE
50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
51	INSTALL NEW GENERATOR POWER INLET BOX
52	INSTALL CCTV UNIFIED CABLE
53	INSTALL ANTENNA CABLE
54	INSTALL DMS CONTROLLER
55	INSTALL SOLAR POWER ASSEMBLY

PLANS PREPARED IN THE OFFICE OF:
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P.O. Box 33068
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750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

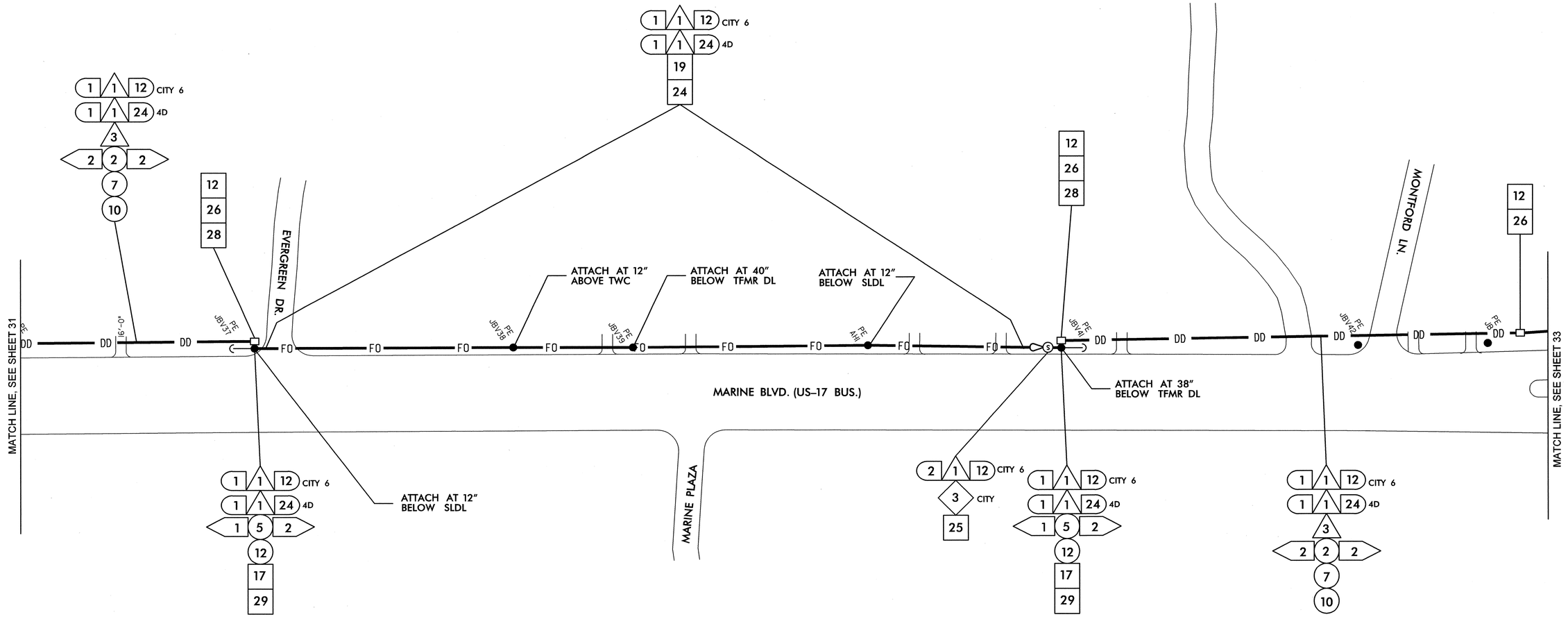
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...\600 PSSE\CADMCR-031.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	32



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1	INSTALL SMFO CABLE
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4	REUSE EXISTING SMFO CABLE
5	INSTALL PLENUM RATED SMFO CABLE
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1	INSTALL PVC CONDUIT
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17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET
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3	INSTALL AERIAL SPLICE ENCLOSURE
4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
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2	REMOVE EXISTING CABINET FOUNDATION
3	MODIFY EXISTING CABINET FOUNDATION
4	REMOVE EXISTING CONTROLLER AND CABINET
5	INSTALL NEW CONTROLLER
6	INSTALL NEW 332 BASE MOUNTED CABINET
7	INSTALL NEW 336S BASE MOUNTED CABINET
8	INSTALL NEW 336S POLE MOUNTED CABINET
9	INSTALL BASE ADAPTER
10	INSTALL PRE-FORMED CABINET FOUNDATION PAD
11	INSTALL STANDARD JUNCTION BOX
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55	INSTALL SOLAR POWER ASSEMBLY

PLANS PREPARED IN THE OFFICE OF:

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

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Mobility and Safety, Innovative Transportation System
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

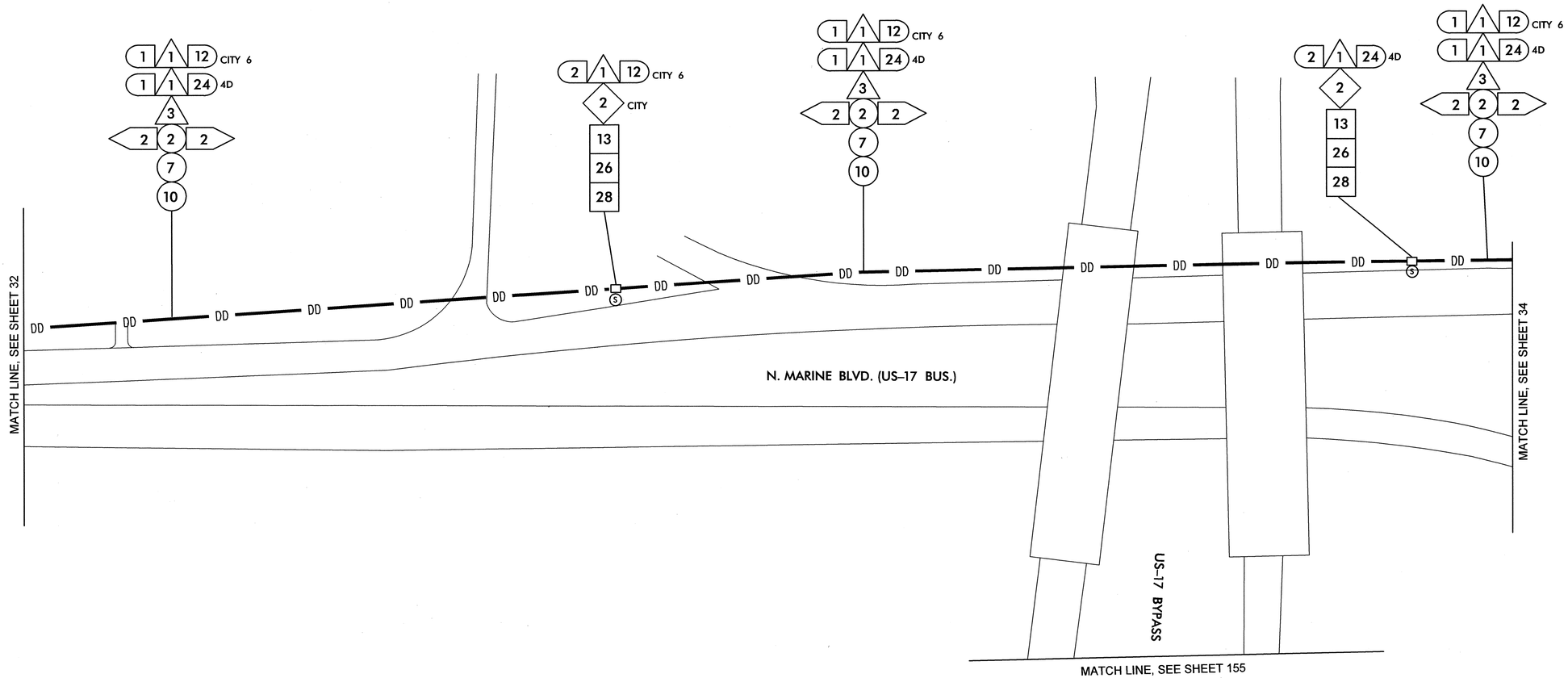
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSE#CADMCR-032.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	33



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1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE		
2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE		
3	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA	54	INSTALL DMS CONTROLLER		
4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY		
5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE				
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT				
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX				
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND								
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE								
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE								
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE								
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION								
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT								
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX								
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PLANS PREPARED IN THE OFFICE OF:

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SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

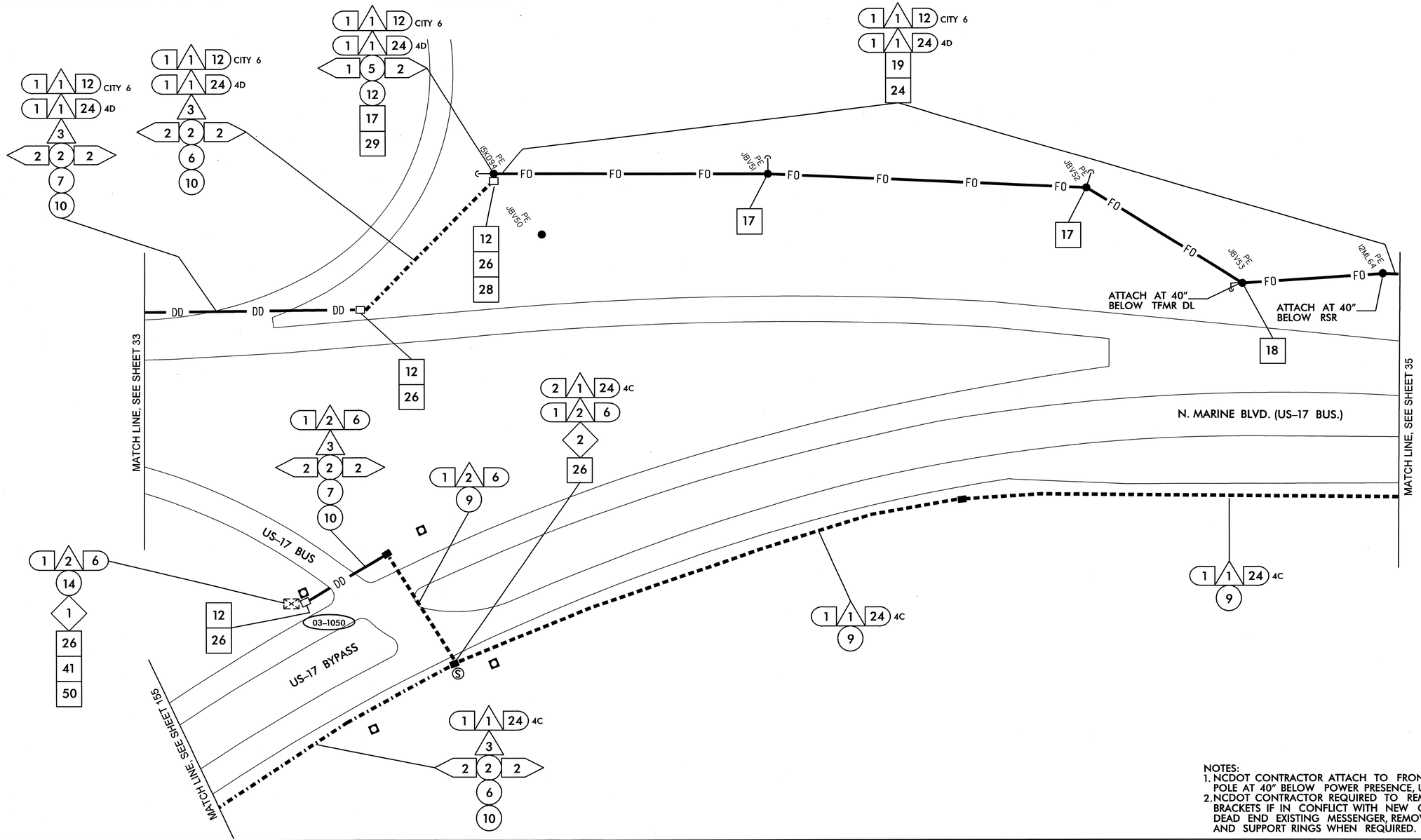
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSE#CADWCR-033.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	34



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47	INSTALL YAGI ANTENNA
48	INSTALL OMNI-DIRECTIONAL ANTENNA
49	REMOVE EXISTING WIRELESS HARDWARE
50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
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Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intermodal Transportation Building
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SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
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REVISIONS	INIT.	DATE

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NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE DATE 7-20-11

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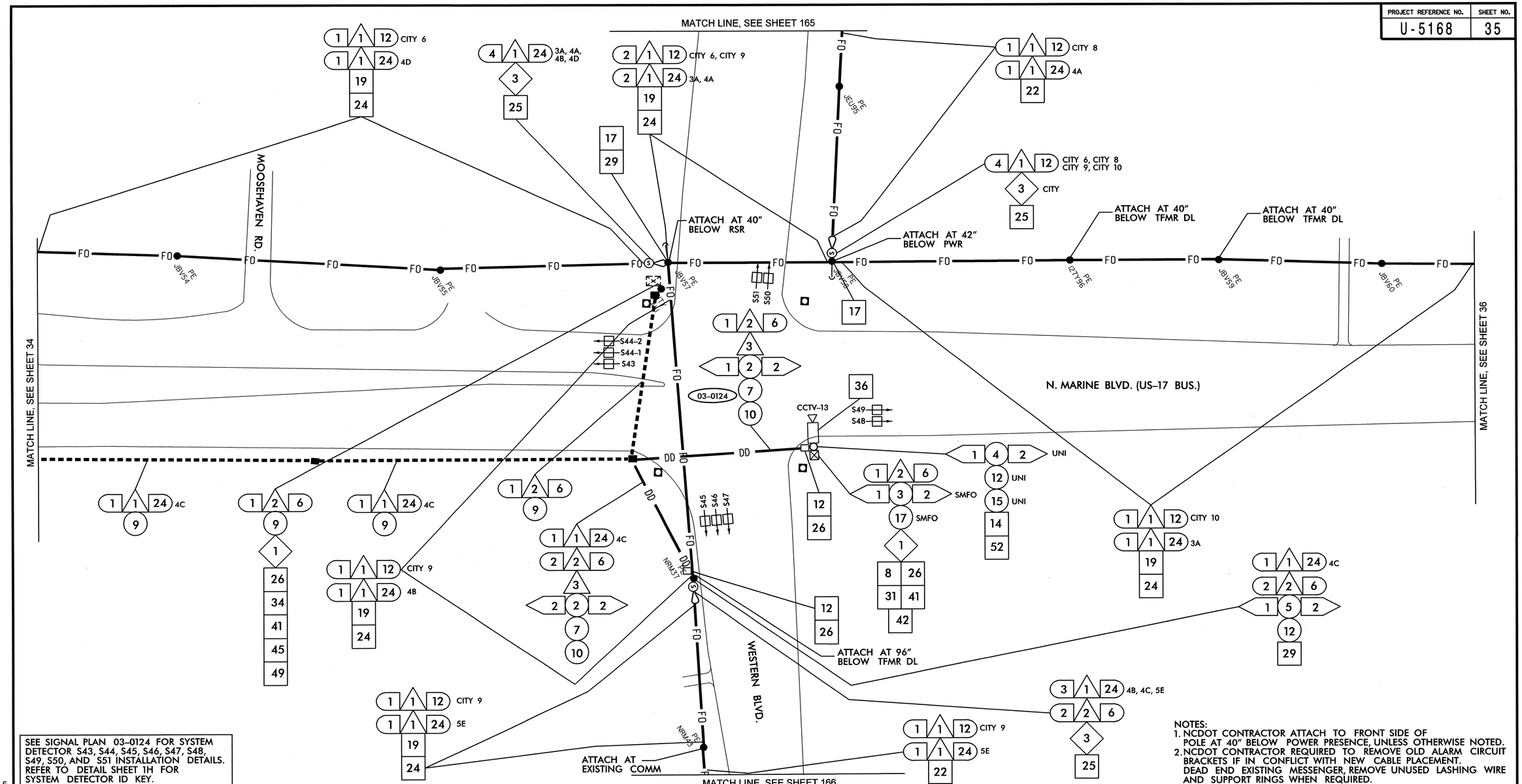
7/19/2011 $TIME$ susan.pennington ...#600 PSLE#CADMOR-034.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	35



SEE SIGNAL PLAN 03-0124 FOR SYSTEM DETECTOR S43, S44, S45, S46, S47, S48, S49, S50, AND S51 INSTALLATION DETAILS. REFER TO DETAIL SHEET 1H FOR SYSTEM DETECTOR ID KEY.

NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.

1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE
2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE
3	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA	54	INSTALL DMS CONTROLLER
4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY
5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE		
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT		
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX		
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND						
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE						
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE						
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE						
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION						
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT						
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX						
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY						
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY						
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER										

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

Transportation Mobility and Safety Division
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Integrated Mobility Division
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

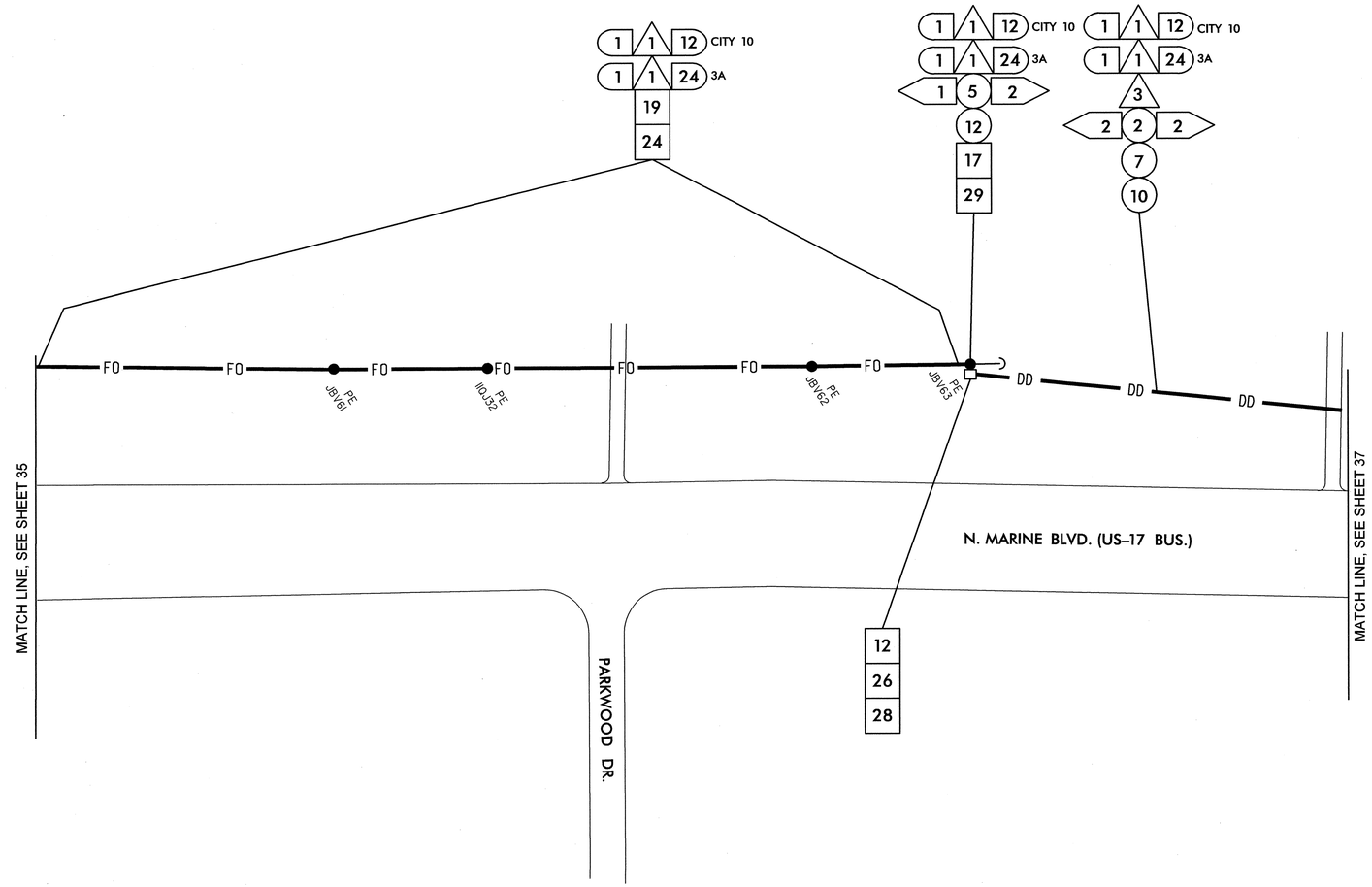
REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PS&E#2&DWCR-035.dgn



NOTES:
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2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.

△1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE
△2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE
△3	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA	54	INSTALL DMS CONTROLLER
△4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY
△5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE		
△6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT		
△7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX		
1	INSTALL PVC CONDUIT	◇1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND						
2	INSTALL POLYETHYLENE CONDUIT	◇2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE						
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	◇3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE						
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	◇4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE						
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	◇5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION						
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT						
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX						
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY						
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY						
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER										

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

Transportation Mobility and Safety Division
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intermodal Transportation Building Division
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

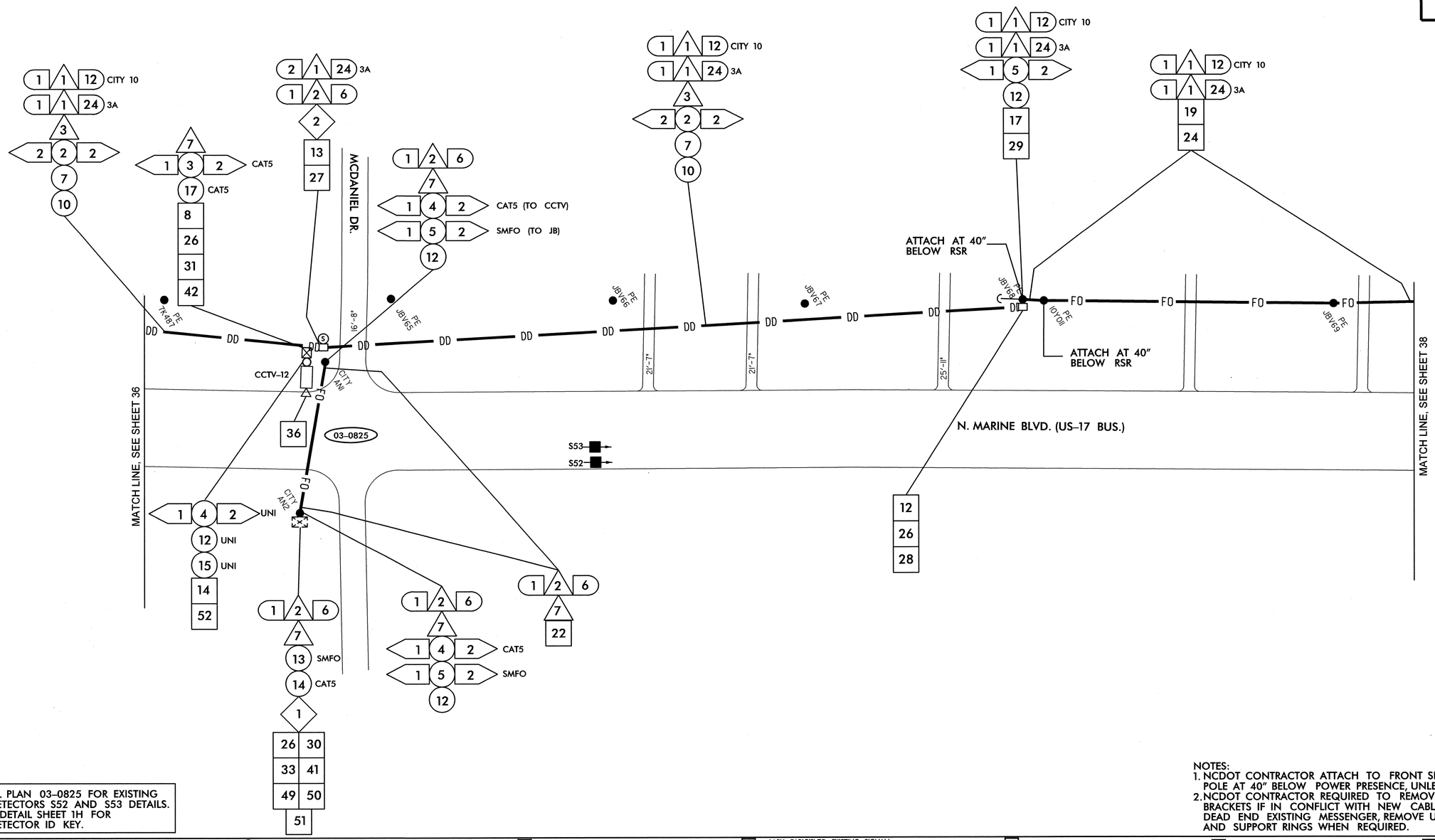
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...:\600 PSE\MCAD\MCR-036.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	37



SEE SIGNAL PLAN 03-0825 FOR EXISTING SYSTEM DETECTORS S52 AND S53 DETAILS. REFER TO DETAIL SHEET 1H FOR SYSTEM DETECTOR ID KEY.

NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.

1	INSTALL SMFO CABLE
2	INSTALL FIBER OPTIC DROP CABLE
3	INSTALL TRACER WIRE
4	REUSE EXISTING SMFO CABLE
5	INSTALL PLENUM RATED SMFO CABLE
6	INSTALL LOOP LEAD-IN CABLE
7	INSTALL ETHERNET CABLE
1	INSTALL PVC CONDUIT
2	INSTALL POLYETHYLENE CONDUIT
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
6	TRENCH CONDUIT
7	DIRECTIONAL DRILL CONDUIT
8	BORE AND JACK CONDUIT
9	INSTALL CABLE(S) IN EXISTING CONDUIT
10	INSTALL CABLE(S) IN NEW CONDUIT
11	INSTALL CABLE(S) IN EXISTING RISER
12	INSTALL CABLE(S) IN NEW RISER
13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS
14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)
15	INSTALL NEW RISER INTO POLE MOUNTED CABINET
16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET
1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2	INSTALL UNDERGROUND SPLICE ENCLOSURE
3	INSTALL AERIAL SPLICE ENCLOSURE
4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5	INSTALL TERMINAL SPLICE BOX
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION
3	MODIFY EXISTING CABINET FOUNDATION
4	REMOVE EXISTING CONTROLLER AND CABINET
5	INSTALL NEW CONTROLLER
6	INSTALL NEW 332 BASE MOUNTED CABINET
7	INSTALL NEW 336S BASE MOUNTED CABINET
8	INSTALL NEW 336S POLE MOUNTED CABINET
9	INSTALL BASE ADAPTER
10	INSTALL PRE-FORMED CABINET FOUNDATION PAD
11	INSTALL STANDARD JUNCTION BOX
12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
14	INSTALL WOOD POLE
15	REMOVE EXISTING WOOD POLE
16	INSTALL AERIAL GUY ASSEMBLY
17	INSTALL STANDARD GUY ASSEMBLY
18	INSTALL SIDEWALK GUY ASSEMBLY
19	INSTALL MESSENGER CABLE
20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
21	REMOVE EXISTING COMMUNICATIONS CABLE
22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
23	LASH CABLE(S) TO EXISTING MESSENGER CABLE
24	LASH CABLE(S) TO NEW MESSENGER CABLE
25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE
26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE
27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
28	INSTALL FIBER OPTIC DELINEATOR MARKER
29	BOND MESSENGER CABLE TO POLE GROUND
30	MODIFY EXISTING ELECTRICAL SERVICE
31	INSTALL NEW ELECTRICAL SERVICE
32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
33	INSTALL GENERATOR ANCHOR IN FOUNDATION
34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
35	RECONNECT GENERATOR POWER INLET BOX
36	INSTALL CCTV CAMERA ASSEMBLY
37	INSTALL SMALL DMS ASSEMBLY
38	INSTALL LARGE DMS ASSEMBLY
39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS
40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
41	INSTALL ETHERNET SWITCH
42	INSTALL VIDEO CODEC UNIT
43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER
44	INSTALL CELLULAR MODEM
45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)
46	INSTALL 2.4 GHz RADIO TRANSCEIVER
47	INSTALL YAGI ANTENNA
48	INSTALL OMNI-DIRECTIONAL ANTENNA
49	REMOVE EXISTING WIRELESS HARDWARE
50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
51	INSTALL NEW GENERATOR POWER INLET BOX
52	INSTALL CCTV UNIFIED CABLE
53	INSTALL ANTENNA CABLE
54	INSTALL DMS CONTROLLER
55	INSTALL SOLAR POWER ASSEMBLY

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

750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

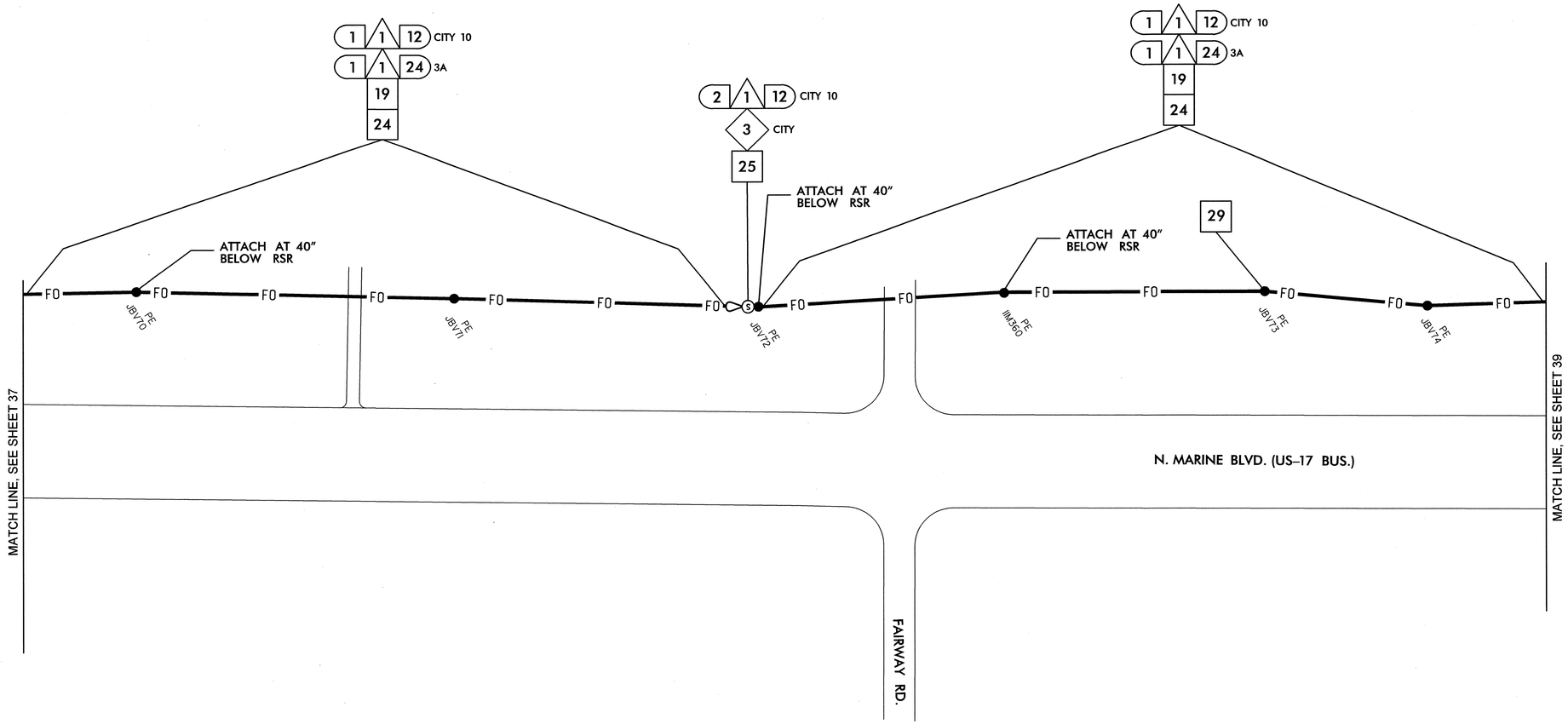
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-26-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSAE#CADWCR-037.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	38



NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.

1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE
2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE
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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

Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

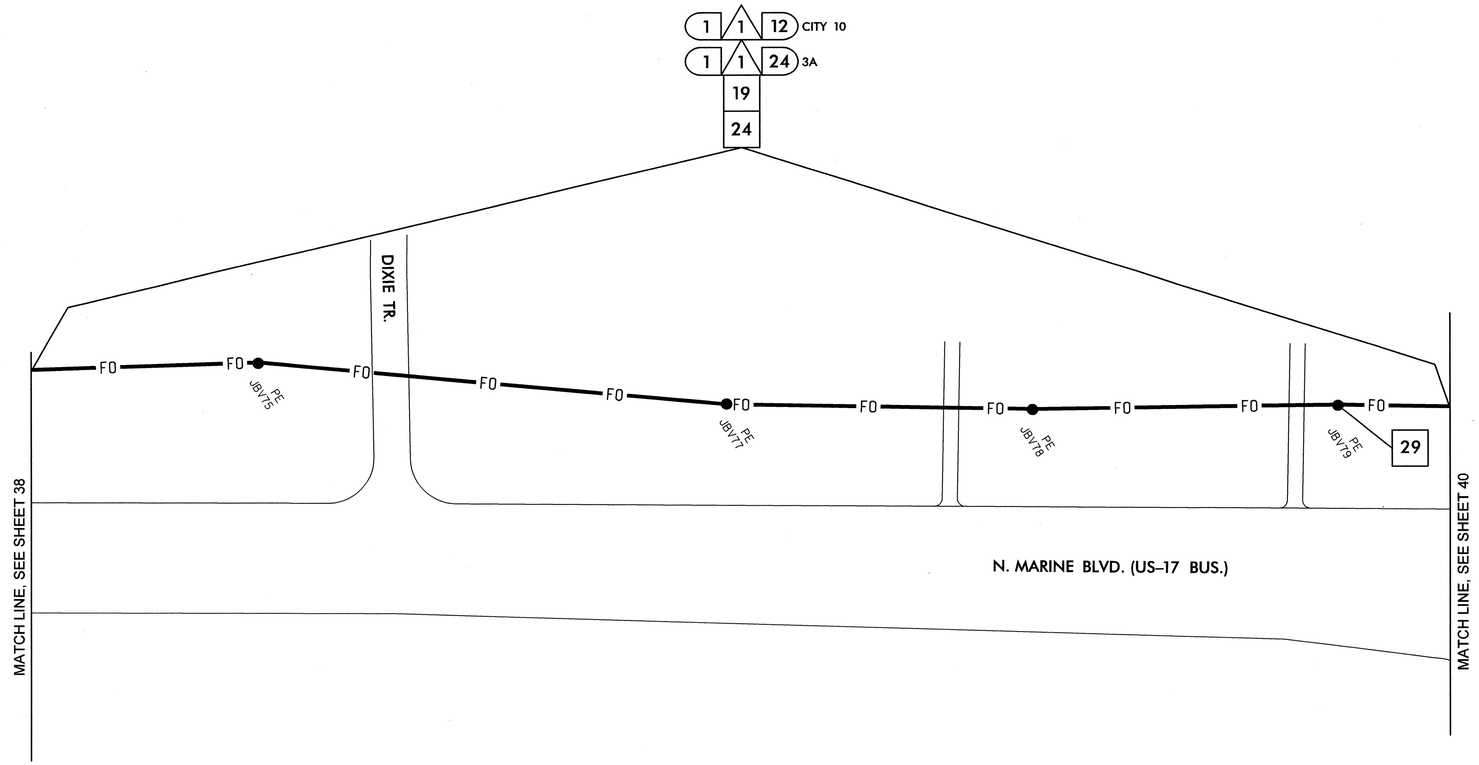
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filenames

7/19/2011 $TIME$ susan.pennington ...M600 PS3E#C1D#CR-038.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	39



NOTES:
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2. INSTALL FIBER OPTIC DROP CABLE
3. INSTALL TRACER WIRE
4. REUSE EXISTING SMFO CABLE
5. INSTALL PLENUM RATED SMFO CABLE
6. INSTALL LOOP LEAD-IN CABLE
7. INSTALL ETHERNET CABLE

1. INSTALL PVC CONDUIT
2. INSTALL POLYETHYLENE CONDUIT
3. INSTALL RIGID, GALVANIZED STEEL CONDUIT
4. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5. INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
6. TRENCH CONDUIT
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13. INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS
14. INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)
15. INSTALL NEW RISER INTO POLE MOUNTED CABINET
16. REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
17. INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET

1. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2. INSTALL UNDERGROUND SPLICE ENCLOSURE
3. INSTALL AERIAL SPLICE ENCLOSURE
4. MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5. INSTALL TERMINAL SPLICE BOX

1. INSTALL CABINET FOUNDATION
2. REMOVE EXISTING CABINET FOUNDATION
3. MODIFY EXISTING CABINET FOUNDATION
4. REMOVE EXISTING CONTROLLER AND CABINET
5. INSTALL NEW CONTROLLER
6. INSTALL NEW 332 BASE MOUNTED CABINET
7. INSTALL NEW 336S BASE MOUNTED CABINET
8. INSTALL NEW 336S POLE MOUNTED CABINET
9. INSTALL BASE ADAPTER
10. INSTALL PRE-FORMED CABINET FOUNDATION PAD
11. INSTALL STANDARD JUNCTION BOX
12. INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
13. INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
14. INSTALL WOOD POLE
15. REMOVE EXISTING WOOD POLE
16. INSTALL AERIAL GUY ASSEMBLY
17. INSTALL STANDARD GUY ASSEMBLY
18. INSTALL SIDEWALK GUY ASSEMBLY
19. INSTALL MESSENGER CABLE
20. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
21. REMOVE EXISTING COMMUNICATIONS CABLE
22. LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
23. LASH CABLE(S) TO EXISTING MESSENGER CABLE
24. LASH CABLE(S) TO NEW MESSENGER CABLE
25. INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE
26. STORE 30 FEET OF EACH COMMUNICATIONS CABLE
27. STORE 100 FEET OF EACH COMMUNICATIONS CABLE
28. INSTALL FIBER OPTIC DELINEATOR MARKER
29. BOND MESSENGER CABLE TO POLE GROUND
30. MODIFY EXISTING ELECTRICAL SERVICE
31. INSTALL NEW ELECTRICAL SERVICE
32. INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
33. INSTALL GENERATOR ANCHOR IN FOUNDATION
34. RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
35. RECONNECT GENERATOR POWER INLET BOX
36. INSTALL CCTV CAMERA ASSEMBLY
37. INSTALL SMALL DMS ASSEMBLY
38. INSTALL LARGE DMS ASSEMBLY
39. INSTALL PEDESTAL STRUCTURE FOR SMALL DMS
40. INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
41. INSTALL ETHERNET SWITCH
42. INSTALL VIDEO CODEC UNIT
43. REMOVE EXISTING FIBER OPTIC TRANSCEIVER
44. INSTALL CELLULAR MODEM
45. INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)
46. INSTALL 2.4 GHz RADIO TRANSCEIVER
47. INSTALL YAGI ANTENNA
48. INSTALL OMNI-DIRECTIONAL ANTENNA
49. REMOVE EXISTING WIRELESS HARDWARE
50. INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
51. INSTALL NEW GENERATOR POWER INLET BOX
52. INSTALL CCTV UNIFIED CABLE
53. INSTALL ANTENNA CABLE
54. INSTALL DMS CONTROLLER
55. INSTALL SOLAR POWER ASSEMBLY

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

750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

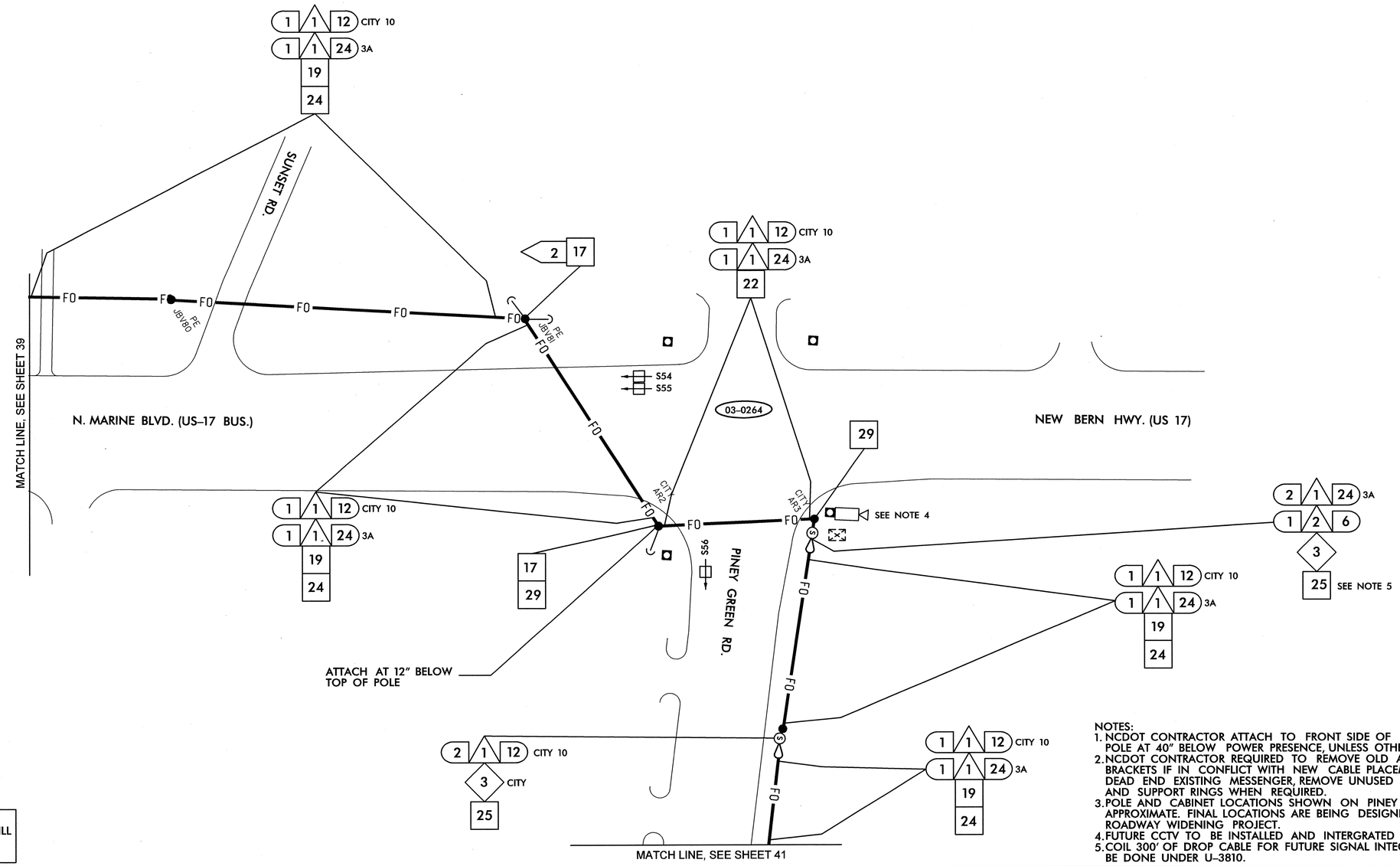
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSSE\MCAD\MCR-039.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	40



SYSTEM DETECTORS S54, S55, AND S56 WILL BE INSTALLED UNDER U-3810.

NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.
3. POLE AND CABINET LOCATIONS SHOWN ON PINEY GREEN RD. ARE APPROXIMATE. FINAL LOCATIONS ARE BEING DESIGNED UNDER ROADWAY WIDENING PROJECT.
4. FUTURE CCTV TO BE INSTALLED AND INTERGRATED UNDER U-3810.
5. COIL 300' OF DROP CABLE FOR FUTURE SIGNAL INTEGRATED TO BE DONE UNDER U-3810.

1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE		
2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE		
3	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA	54	INSTALL DMS CONTROLLER		
4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY		
5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE				
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT				
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX				
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND								
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE								
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE								
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE								
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION								
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT								
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX								
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY								
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY								
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER												

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

Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Statewide Transportation Safety Solutions
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011		REVIEWED BY: K.W. SMITH	
PREPARED BY: S.P. PENNINGTON		REVIEWED BY: T.F. BURCHETT	
REVISIONS		INIT.	DATE

SEAL

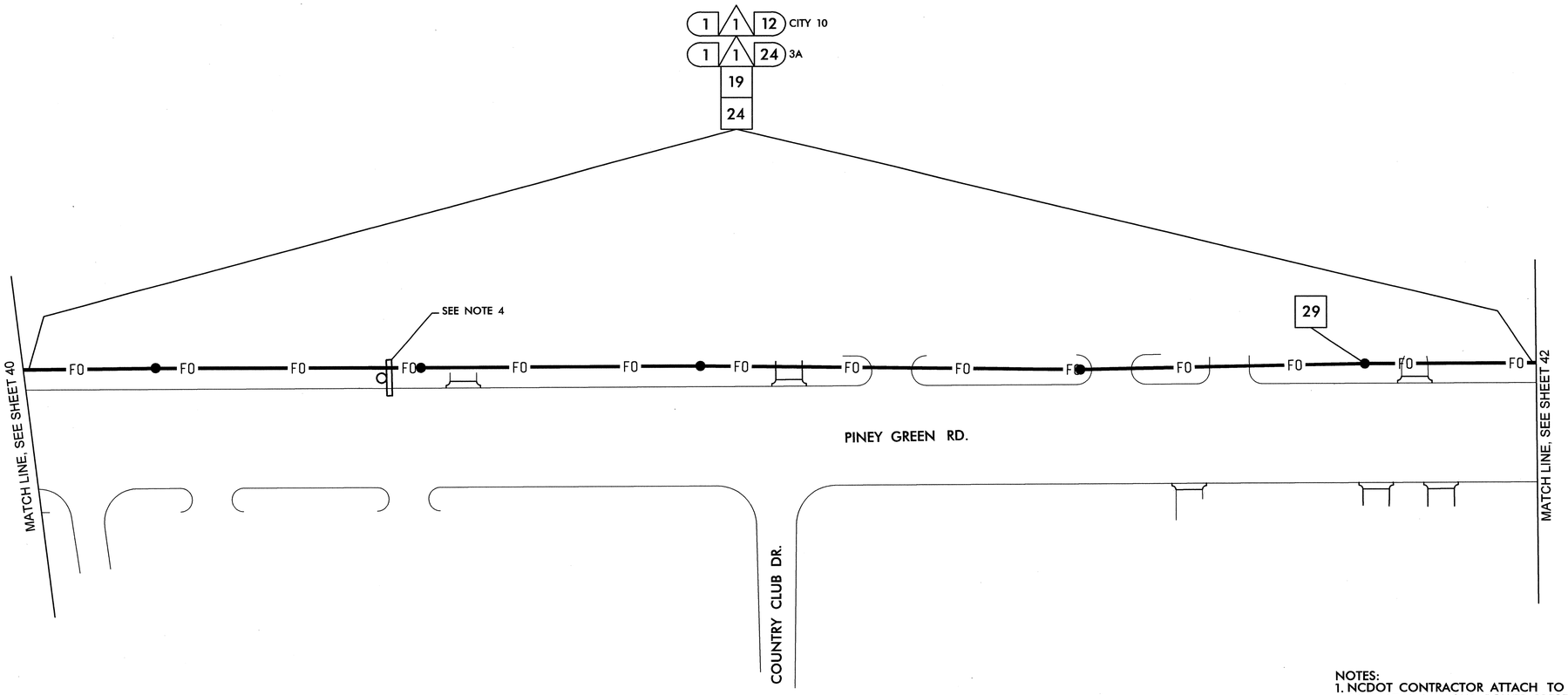
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...\R00 FS\E\CD\CR-040.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	41



NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.
3. POLE AND CABINET LOCATIONS SHOWN ON PINEY GREEN RD. ARE APPROXIMATE. FINAL LOCATIONS ARE BEING DESIGNED UNDER ROADWAY WIDENING PROJECT.
4. FUTURE DMS TO BE INSTALLED AND INTEGRATED UNDER U-3810.

1	INSTALL SMFO CABLE
2	INSTALL FIBER OPTIC DROP CABLE
3	INSTALL TRACER WIRE
4	REUSE EXISTING SMFO CABLE
5	INSTALL PLENUM RATED SMFO CABLE
6	INSTALL LOOP LEAD-IN CABLE
7	INSTALL ETHERNET CABLE
1	INSTALL PVC CONDUIT
2	INSTALL POLYETHYLENE CONDUIT
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
6	TRENCH CONDUIT
7	DIRECTIONAL DRILL CONDUIT
8	BORE AND JACK CONDUIT
9	INSTALL CABLE(S) IN EXISTING CONDUIT
10	INSTALL CABLE(S) IN NEW CONDUIT
11	INSTALL CABLE(S) IN EXISTING RISER
12	INSTALL CABLE(S) IN NEW RISER
13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS
14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)
15	INSTALL NEW RISER INTO POLE MOUNTED CABINET
16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET
1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2	INSTALL UNDERGROUND SPLICE ENCLOSURE
3	INSTALL AERIAL SPLICE ENCLOSURE
4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5	INSTALL TERMINAL SPLICE BOX
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION
3	MODIFY EXISTING CABINET FOUNDATION
4	REMOVE EXISTING CONTROLLER AND CABINET
5	INSTALL NEW CONTROLLER
6	INSTALL NEW 332 BASE MOUNTED CABINET
7	INSTALL NEW 336S BASE MOUNTED CABINET
8	INSTALL NEW 336S POLE MOUNTED CABINET
9	INSTALL BASE ADAPTER
10	INSTALL PRE-FORMED CABINET FOUNDATION PAD
11	INSTALL STANDARD JUNCTION BOX
12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
14	INSTALL WOOD POLE
15	REMOVE EXISTING WOOD POLE
16	INSTALL AERIAL GUY ASSEMBLY
17	INSTALL STANDARD GUY ASSEMBLY
18	INSTALL SIDEWALK GUY ASSEMBLY
19	INSTALL MESSENGER CABLE
20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
21	REMOVE EXISTING COMMUNICATIONS CABLE
22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
23	LASH CABLE(S) TO EXISTING MESSENGER CABLE
24	LASH CABLE(S) TO NEW MESSENGER CABLE
25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE
26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE
27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
28	INSTALL FIBER OPTIC DELINEATOR MARKER
29	BOND MESSENGER CABLE TO POLE GROUND
30	MODIFY EXISTING ELECTRICAL SERVICE
31	INSTALL NEW ELECTRICAL SERVICE
32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
33	INSTALL GENERATOR ANCHOR IN FOUNDATION
34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
35	RECONNECT GENERATOR POWER INLET BOX
36	INSTALL CCTV CAMERA ASSEMBLY
37	INSTALL SMALL DMS ASSEMBLY
38	INSTALL LARGE DMS ASSEMBLY
39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS
40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
41	INSTALL ETHERNET SWITCH
42	INSTALL VIDEO CODEC UNIT
43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER
44	INSTALL CELLULAR MODEM
45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)
46	INSTALL 2.4 GHz RADIO TRANSCEIVER
47	INSTALL YAGI ANTENNA
48	INSTALL OMNI-DIRECTIONAL ANTENNA
49	REMOVE EXISTING WIRELESS HARDWARE
50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
51	INSTALL NEW GENERATOR POWER INLET BOX
52	INSTALL CCTV UNIFIED CABLE
53	INSTALL ANTENNA CABLE
54	INSTALL DMS CONTROLLER
55	INSTALL SOLAR POWER ASSEMBLY

PLANS PREPARED IN THE OFFICE OF:

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

THE STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Mobility and Safety Division
Intermodal Transportation Systems Unit
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

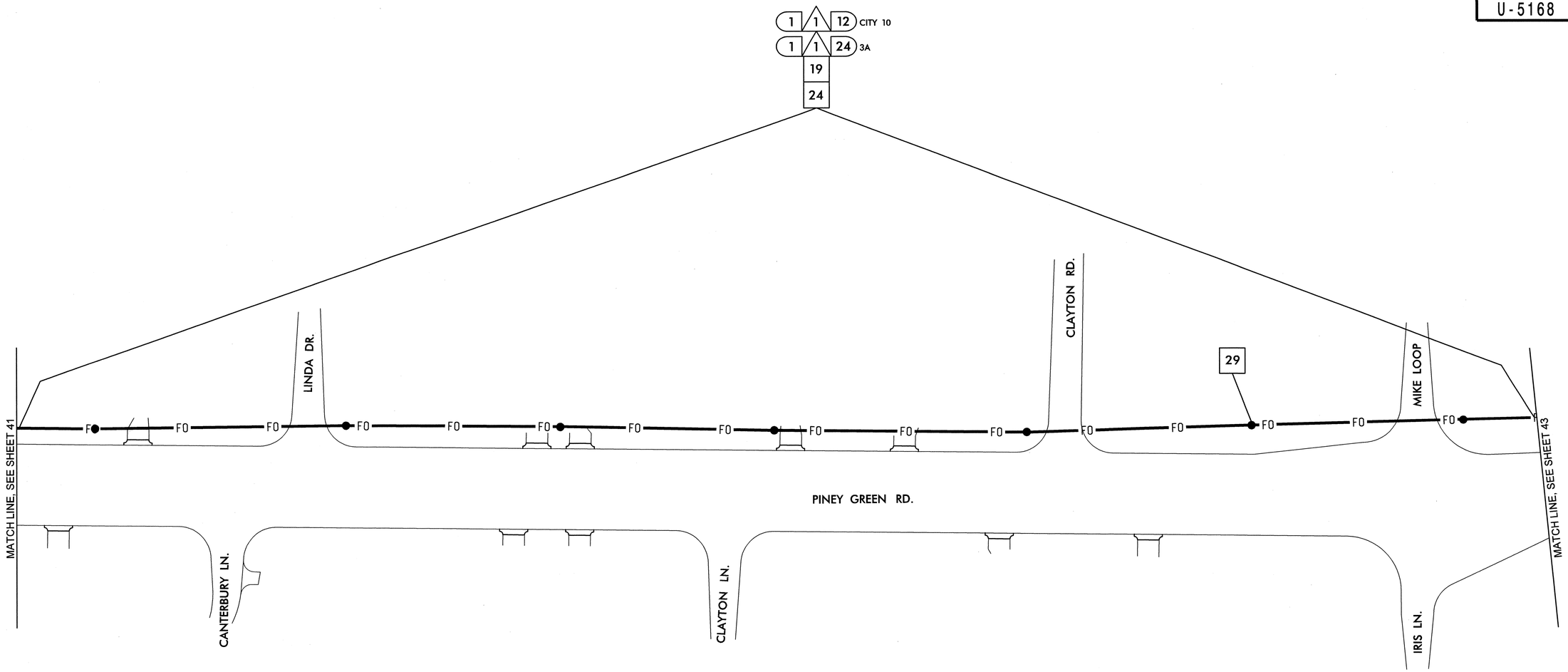
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...\600 PS&E\CADD\CR-041.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	42



NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.
3. POLE AND CABINET LOCATIONS SHOWN ON PINEY GREEN RD. ARE APPROXIMATE. FINAL LOCATIONS ARE BEING DESIGNED UNDER ROADWAY WIDENING PROJECT.

1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE
2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE
3	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA	54	INSTALL DMS CONTROLLER
4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY
5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE		
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT		
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PLANS PREPARED IN THE OFFICE OF:

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

Promoting Mobility and Safety Through Innovative Transportation Building Solutions
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

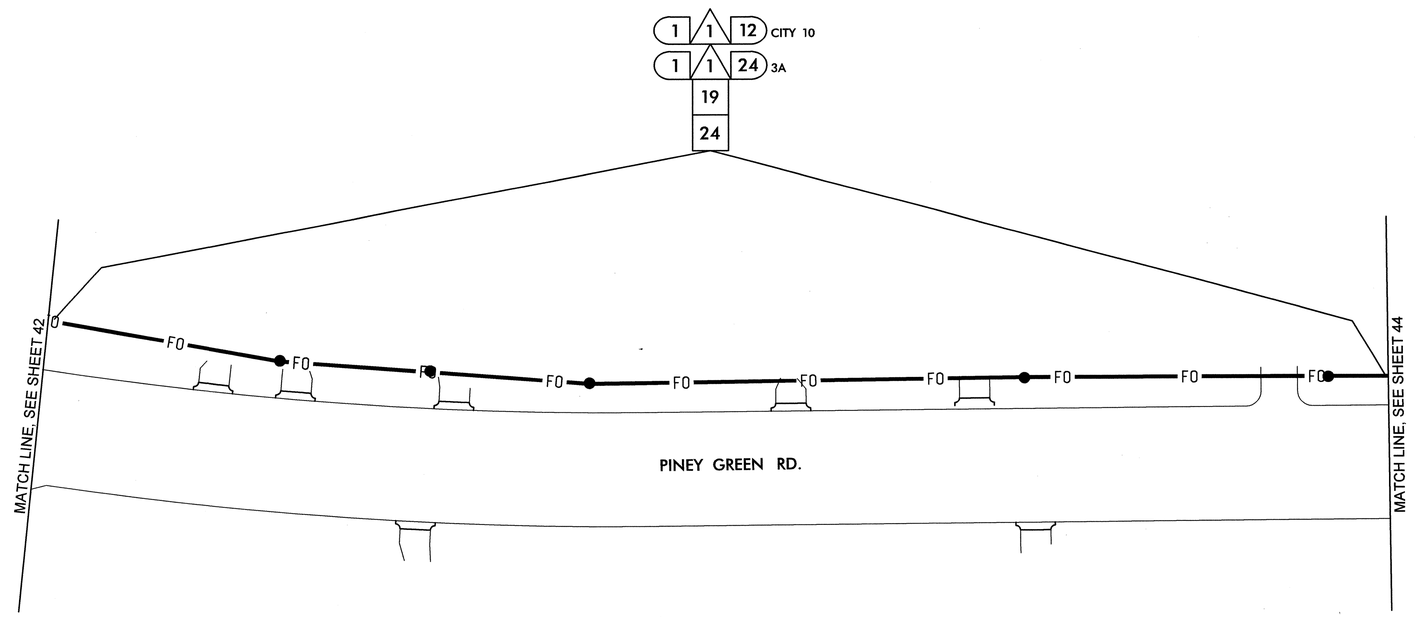
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filenames

7/19/2011 $TIME$ susan.pennington ...\600 PSE\CADD\CR-042.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	43



NOTES:
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4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY
5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE		
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT		
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX		
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND						
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE						
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE						
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE						
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION						
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT						
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX						
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY						
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY						
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER										

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

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Mobility and Safety Division
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

SCALE 0 50

REVISIONS	INIT.	DATE

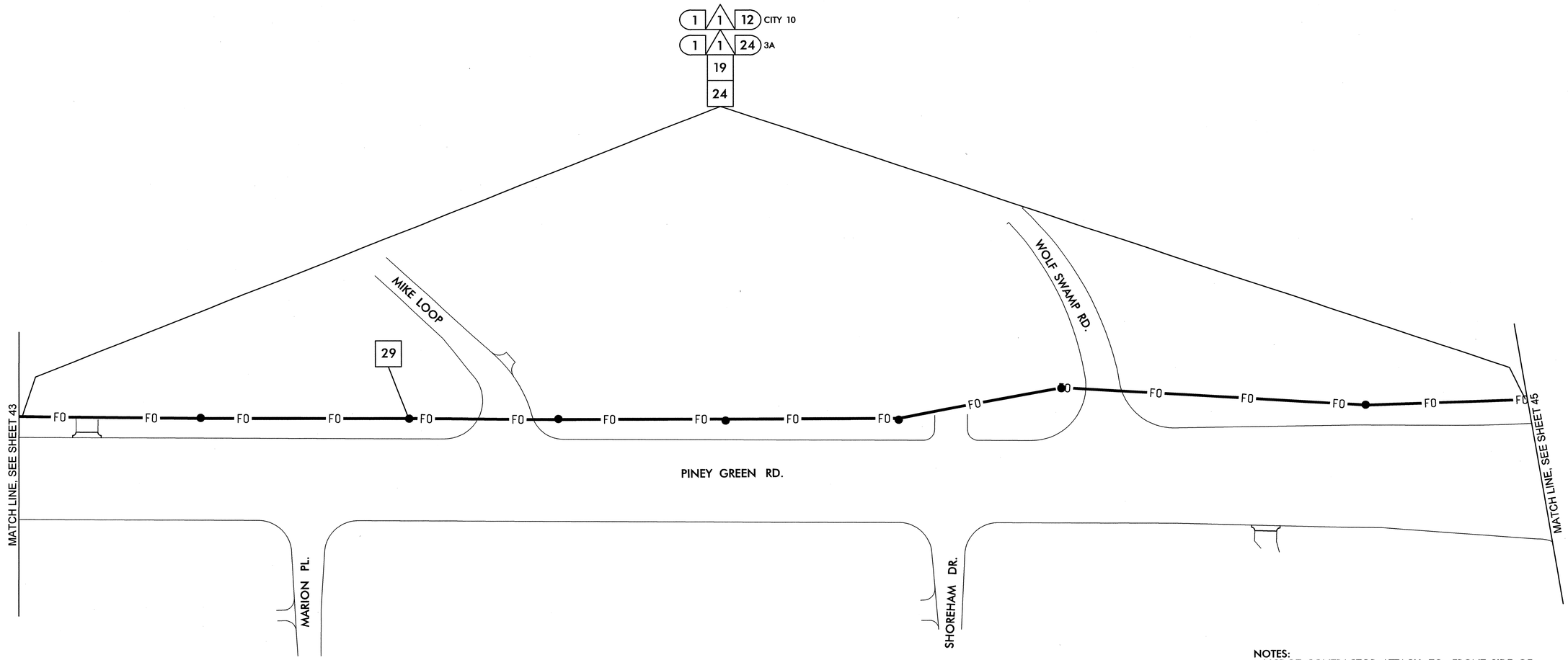
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE DATE 7-20-11

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSUE#CABNET-043.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	44



NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.
3. POLE AND CABINET LOCATIONS SHOWN ON PINEY GREEN RD. ARE APPROXIMATE. FINAL LOCATIONS ARE BEING DESIGNED UNDER ROADWAY WIDENING PROJECT.

1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE		
2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE		
3	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA	54	INSTALL DMS CONTROLLER		
4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY		
5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE				
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT				
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX				
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND								
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE								
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE								
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE								
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION								
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT								
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX								
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY								
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY								
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER												

PLANS PREPARED IN THE OFFICE OF:
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Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
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750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

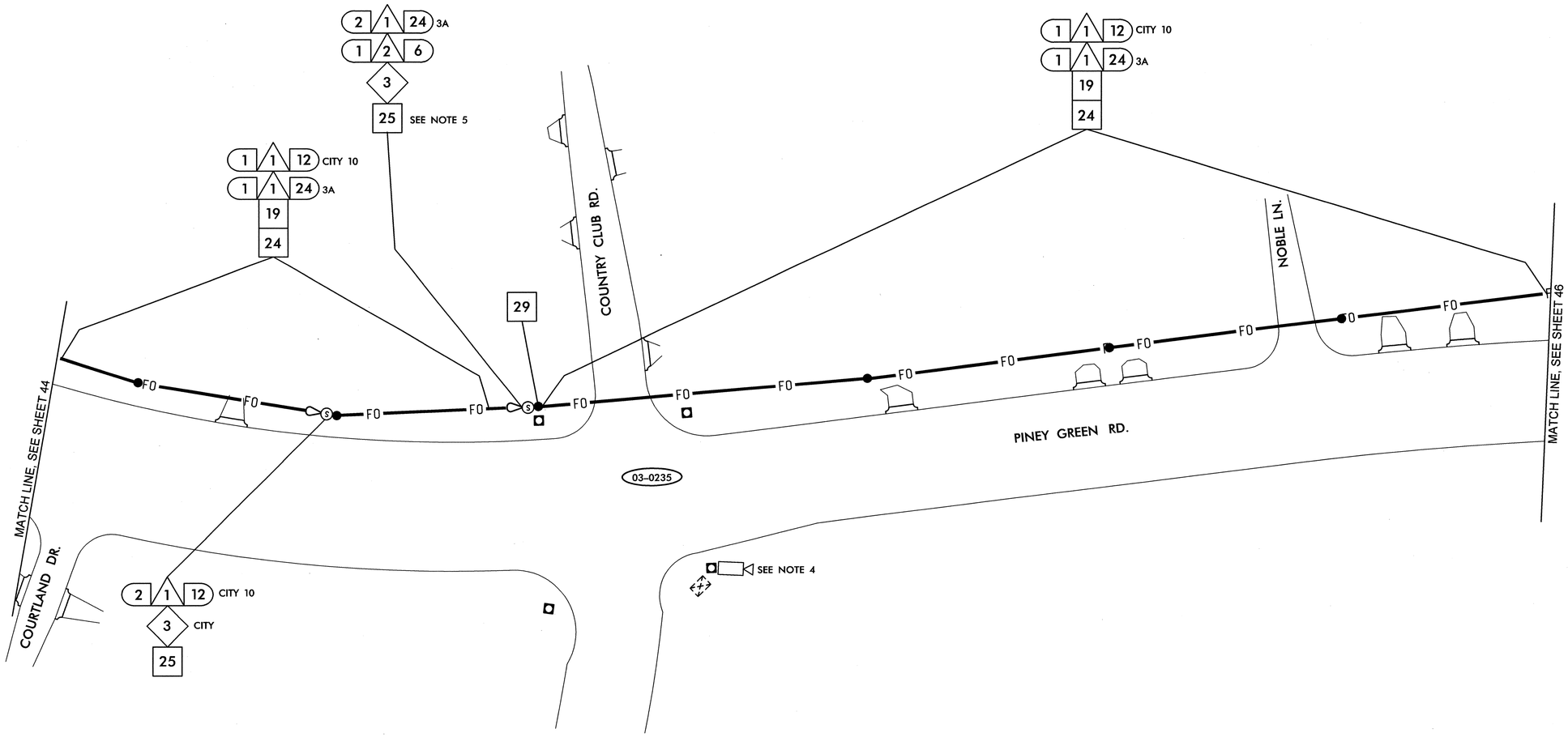
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 FS&E#CADMCR-044.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	45



NOTES:
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2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.
3. POLE AND CABINET LOCATIONS SHOWN ON PINEY GREEN RD. ARE APPROXIMATE. FINAL LOCATIONS ARE BEING DESIGNED UNDER ROADWAY WIDENING PROJECT.
4. FUTURE CCTV TO BE INSTALLED AND INTEGRATED UNDER U-3810.
5. COIL 300' OF DROP CABLE FOR FUTURE SIGNAL AND INTEGRATION TO BE DONE UNDER U-3810.

1 INSTALL SMFO CABLE	11 INSTALL CABLE(S) IN EXISTING RISER	6 INSTALL NEW 332 BASE MOUNTED CABINET	22 LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38 INSTALL LARGE DMS ASSEMBLY	45 INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52 INSTALL CCTV UNIFIED CABLE	
2 INSTALL FIBER OPTIC DROP CABLE	12 INSTALL CABLE(S) IN NEW RISER	7 INSTALL NEW 336S BASE MOUNTED CABINET	23 LASH CABLE(S) TO EXISTING MESSENGER CABLE	39 INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46 INSTALL 2.4 GHz RADIO TRANSCEIVER	53 INSTALL ANTENNA CABLE	
3 INSTALL TRACER WIRE	13 INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8 INSTALL NEW 336S POLE MOUNTED CABINET	24 LASH CABLE(S) TO NEW MESSENGER CABLE	40 INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47 INSTALL YAGI ANTENNA	54 INSTALL DMS CONTROLLER	
4 REUSE EXISTING SMFO CABLE	14 INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9 INSTALL BASE ADAPTER	25 INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41 INSTALL ETHERNET SWITCH	48 INSTALL OMNI-DIRECTIONAL ANTENNA	55 INSTALL SOLAR POWER ASSEMBLY	
5 INSTALL PLENUM RATED SMFO CABLE	15 INSTALL NEW RISER INTO POLE MOUNTED CABINET	10 INSTALL PRE-FORMED CABINET FOUNDATION PAD	26 STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42 INSTALL VIDEO CODEC UNIT	49 REMOVE EXISTING WIRELESS HARDWARE		
6 INSTALL LOOP LEAD-IN CABLE	16 REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11 INSTALL STANDARD JUNCTION BOX	27 STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43 REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50 INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT		
7 INSTALL ETHERNET CABLE	17 INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12 INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28 INSTALL FIBER OPTIC DELINEATOR MARKER	44 INSTALL CELLULAR MODEM	51 INSTALL NEW GENERATOR POWER INLET BOX		
1 INSTALL PVC CONDUIT	1 INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13 INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29 BOND MESSENGER CABLE TO POLE GROUND				
2 INSTALL POLYETHYLENE CONDUIT	2 INSTALL UNDERGROUND SPLICE ENCLOSURE	14 INSTALL WOOD POLE	30 MODIFY EXISTING ELECTRICAL SERVICE				
3 INSTALL RIGID, GALVANIZED STEEL CONDUIT	3 INSTALL AERIAL SPLICE ENCLOSURE	15 REMOVE EXISTING WOOD POLE	31 INSTALL NEW ELECTRICAL SERVICE				
4 INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4 MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16 INSTALL AERIAL GUY ASSEMBLY	32 INSTALL POWER FROM EXISTING ELECTRICAL SERVICE				
5 INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5 INSTALL TERMINAL SPLICE BOX	17 INSTALL STANDARD GUY ASSEMBLY	33 INSTALL GENERATOR ANCHOR IN FOUNDATION				
6 TRENCH CONDUIT	1 INSTALL CABINET FOUNDATION	18 INSTALL SIDEWALK GUY ASSEMBLY	34 RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT				
7 DIRECTIONAL DRILL CONDUIT	2 REMOVE EXISTING CABINET FOUNDATION	19 INSTALL MESSENGER CABLE	35 RECONNECT GENERATOR POWER INLET BOX				
8 BORE AND JACK CONDUIT	3 MODIFY EXISTING CABINET FOUNDATION	20 REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36 INSTALL CCTV CAMERA ASSEMBLY				
9 INSTALL CABLE(S) IN EXISTING CONDUIT	4 REMOVE EXISTING CONTROLLER AND CABINET	21 REMOVE EXISTING COMMUNICATIONS CABLE	37 INSTALL SMALL DMS ASSEMBLY				
10 INSTALL CABLE(S) IN NEW CONDUIT	5 INSTALL NEW CONTROLLER						

PLANS PREPARED IN THE OFFICE OF:

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

750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

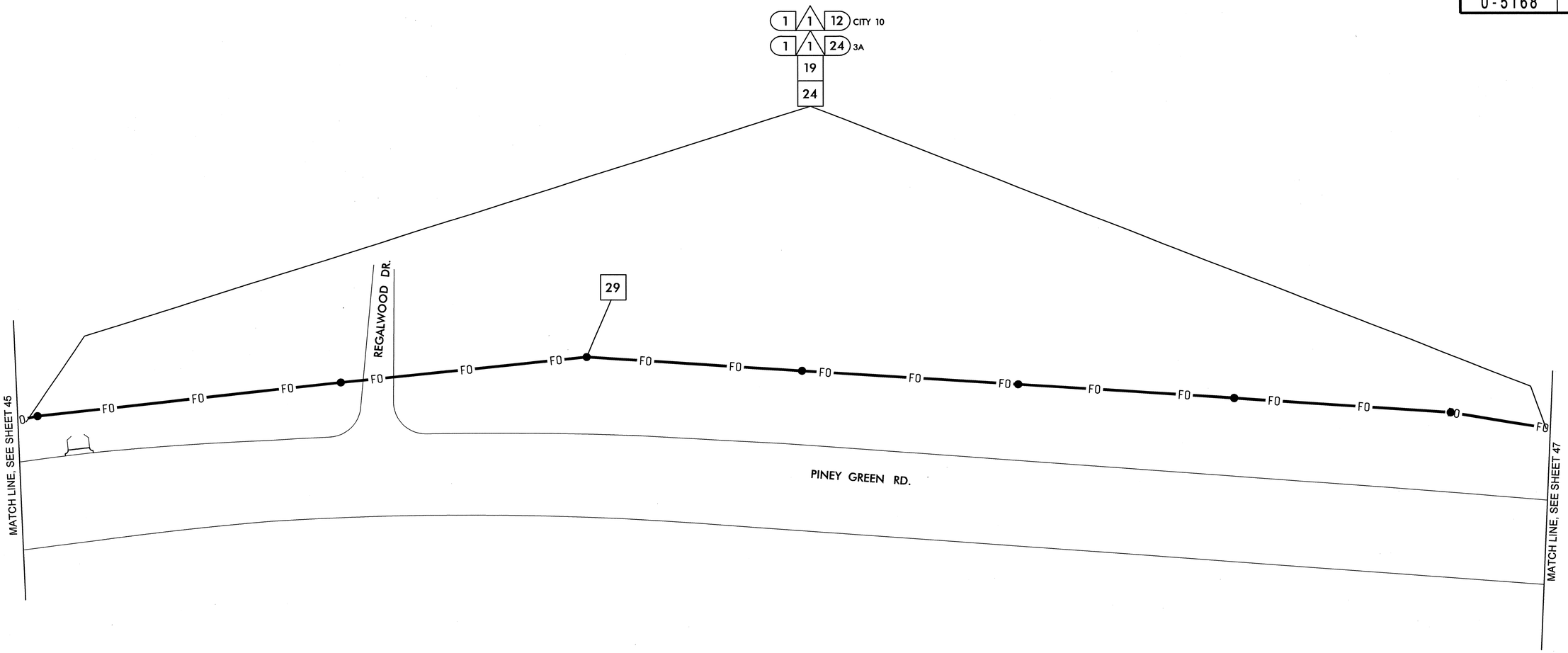
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE DATE 7-20-11

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...\600 PSE\ACADMCR-045.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	46



NOTES:
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2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.
3. POLE AND CABINET LOCATIONS SHOWN ON PINEY GREEN RD. ARE APPROXIMATE. FINAL LOCATIONS ARE BEING DESIGNED UNDER ROADWAY WIDENING PROJECT.

1. INSTALL SMFO CABLE
2. INSTALL FIBER OPTIC DROP CABLE
3. INSTALL TRACER WIRE
4. REUSE EXISTING SMFO CABLE
5. INSTALL PLENUM RATED SMFO CABLE
6. INSTALL LOOP LEAD-IN CABLE
7. INSTALL ETHERNET CABLE
1. INSTALL PVC CONDUIT
2. INSTALL POLYETHYLENE CONDUIT
3. INSTALL RIGID, GALVANIZED STEEL CONDUIT
4. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5. INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
6. TRENCH CONDUIT
7. DIRECTIONAL DRILL CONDUIT
8. BORE AND JACK CONDUIT
9. INSTALL CABLE(S) IN EXISTING CONDUIT
10. INSTALL CABLE(S) IN NEW CONDUIT
11. INSTALL CABLE(S) IN EXISTING RISER
12. INSTALL CABLE(S) IN NEW RISER
13. INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS
14. INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)
15. INSTALL NEW RISER INTO POLE MOUNTED CABINET
16. REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
17. INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET
1. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2. INSTALL UNDERGROUND SPLICE ENCLOSURE
3. INSTALL AERIAL SPLICE ENCLOSURE
4. MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5. INSTALL TERMINAL SPLICE BOX
1. INSTALL CABINET FOUNDATION
2. REMOVE EXISTING CABINET FOUNDATION
3. MODIFY EXISTING CABINET FOUNDATION
4. REMOVE EXISTING CONTROLLER AND CABINET
5. INSTALL NEW CONTROLLER
6. INSTALL NEW 332 BASE MOUNTED CABINET
7. INSTALL NEW 336S BASE MOUNTED CABINET
8. INSTALL NEW 336S POLE MOUNTED CABINET
9. INSTALL BASE ADAPTER
10. INSTALL PRE-FORMED CABINET FOUNDATION PAD
11. INSTALL STANDARD JUNCTION BOX
12. INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
13. INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
14. INSTALL WOOD POLE
15. REMOVE EXISTING WOOD POLE
16. INSTALL AERIAL GUY ASSEMBLY
17. INSTALL STANDARD GUY ASSEMBLY
18. INSTALL SIDEWALK GUY ASSEMBLY
19. INSTALL MESSENGER CABLE
20. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
21. REMOVE EXISTING COMMUNICATIONS CABLE
22. LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
23. LASH CABLE(S) TO EXISTING MESSENGER CABLE
24. LASH CABLE(S) TO NEW MESSENGER CABLE
25. INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE
26. STORE 30 FEET OF EACH COMMUNICATIONS CABLE
27. STORE 100 FEET OF EACH COMMUNICATIONS CABLE
28. INSTALL FIBER OPTIC DELINEATOR MARKER
29. BOND MESSENGER CABLE TO POLE GROUND
30. MODIFY EXISTING ELECTRICAL SERVICE
31. INSTALL NEW ELECTRICAL SERVICE
32. INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
33. INSTALL GENERATOR ANCHOR IN FOUNDATION
34. RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
35. RECONNECT GENERATOR POWER INLET BOX
36. INSTALL CCTV CAMERA ASSEMBLY
37. INSTALL SMALL DMS ASSEMBLY
38. INSTALL LARGE DMS ASSEMBLY
39. INSTALL PEDESTAL STRUCTURE FOR SMALL DMS
40. INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
41. INSTALL ETHERNET SWITCH
42. INSTALL VIDEO CODEC UNIT
43. REMOVE EXISTING FIBER OPTIC TRANSCEIVER
44. INSTALL CELLULAR MODEM
45. INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)
46. INSTALL 2.4 GHz RADIO TRANSCEIVER
47. INSTALL YAGI ANTENNA
48. INSTALL OMNI-DIRECTIONAL ANTENNA
49. REMOVE EXISTING WIRELESS HARDWARE
50. INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
51. INSTALL NEW GENERATOR POWER INLET BOX
52. INSTALL CCTV UNIFIED CABLE
53. INSTALL ANTENNA CABLE
54. INSTALL DMS CONTROLLER
55. INSTALL SOLAR POWER ASSEMBLY

PLANS PREPARED IN THE OFFICE OF:
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Transportation Mobility and Safety Division
DEPARTMENT OF TRANSPORTATION
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SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

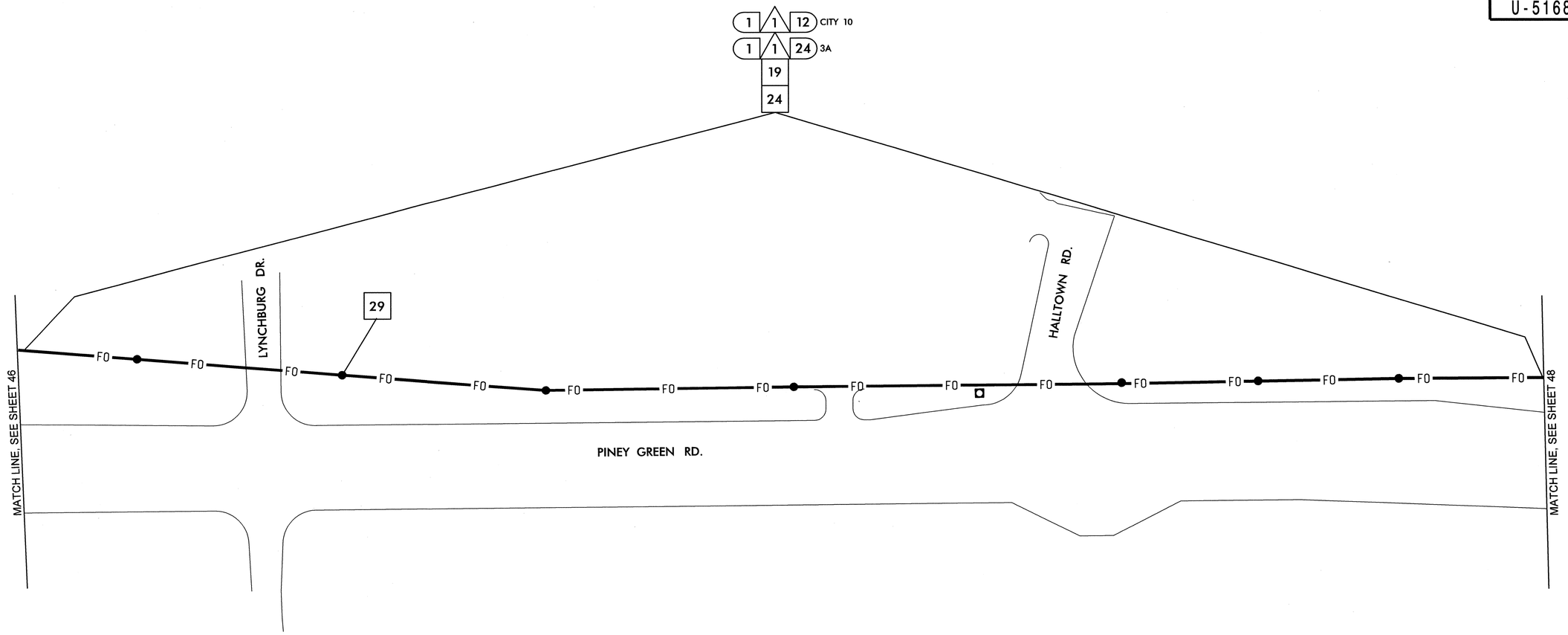
PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH
SIGNATURE 7-20-11 DATE
CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSUE#CJOMCR-046.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	47



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5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE				
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT				
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX				
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND								
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE								
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE								
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE								
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION								
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT								
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX								
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY								
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY								
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER												

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

Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011		REVIEWED BY: K.W. SMITH	
PREPARED BY: S.P. PENNINGTON		REVIEWED BY: T.F. BURCHETT	
REVISIONS		INIT.	DATE

SEAL

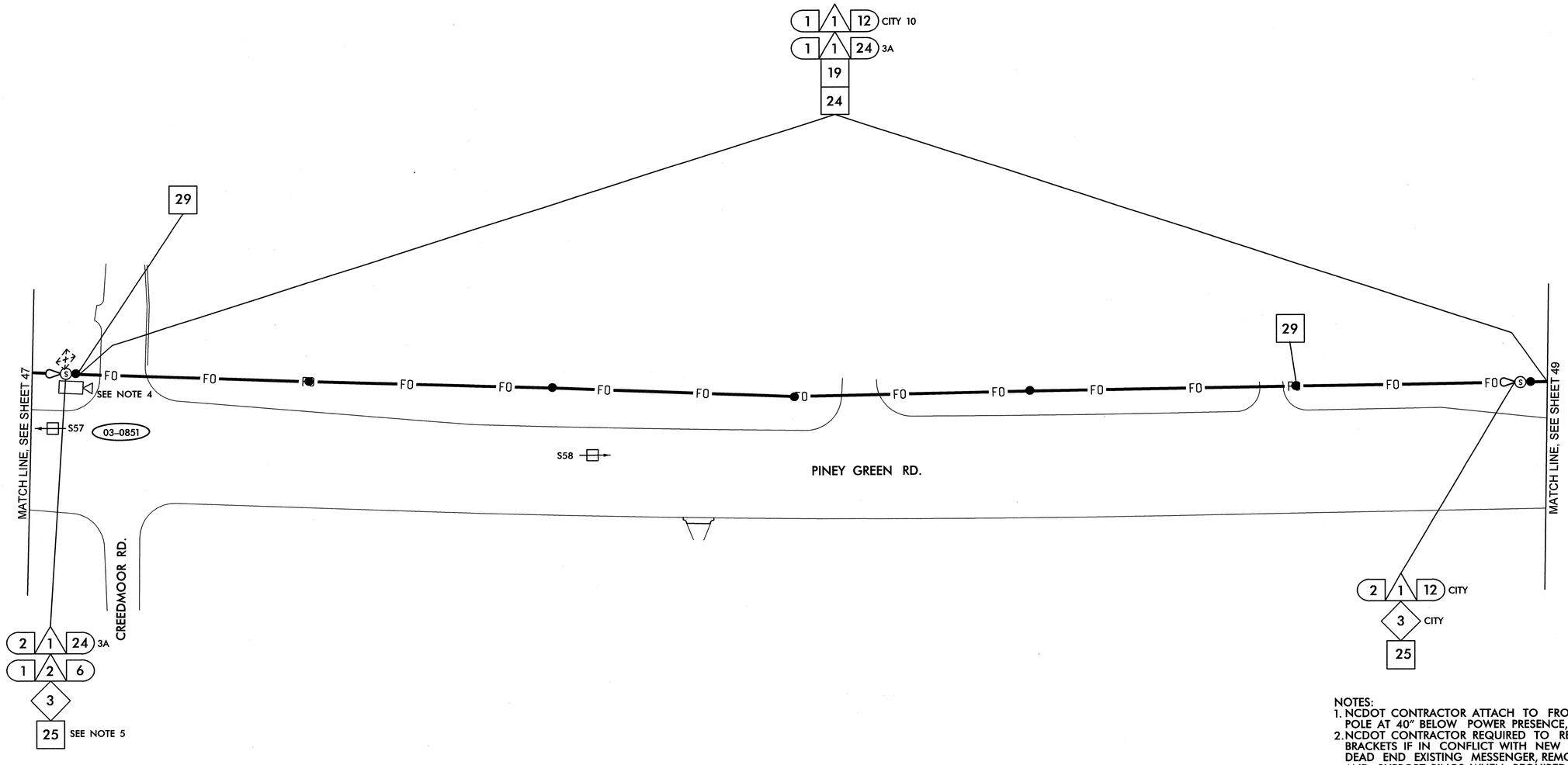
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSE#CADNCR-047.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	48



NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.
3. POLE AND CABINET LOCATIONS SHOWN ON PINEY GREEN RD. ARE APPROXIMATE. FINAL LOCATIONS ARE BEING DESIGNED UNDER ROADWAY WIDENING PROJECT.
4. FUTURE CCTV TO BE INSTALLED AND INTEGRATED UNDER U-3810.
5. COIL 300' OF DROP CABLE FOR FUTURE SIGNAL AND INTEGRATION TO BE DONE UNDER U-3810.

SYSTEM DETECTORS S57 AND S58 WILL BE INSTALLED UNDER U-3810.

1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE				
2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE				
3	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA	54	INSTALL DMS CONTROLLER				
4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY				
5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE						
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1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND										
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE										
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6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT										
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PLANS PREPARED IN THE OFFICE OF:
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Transportation Mobility and Safety Division
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

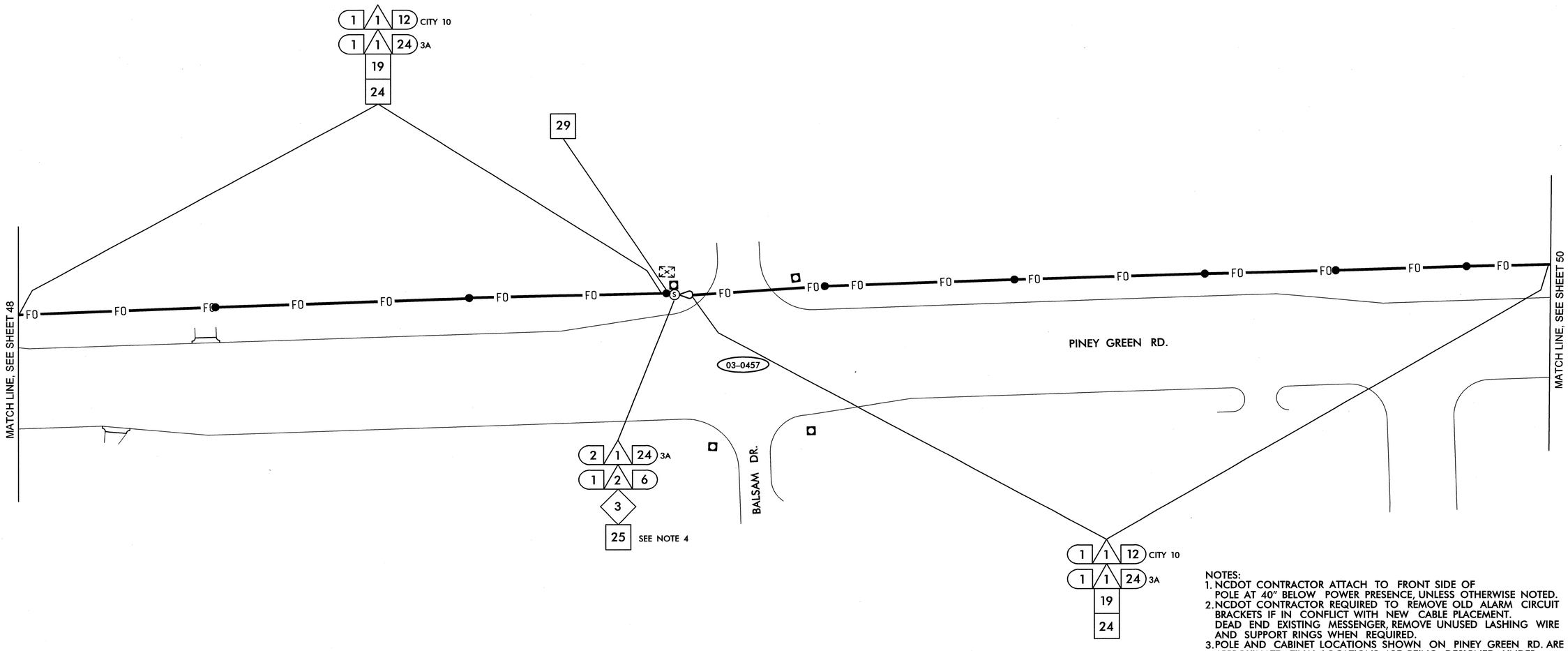
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSSE#CADWCR-048.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	49



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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

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Progressive Mobility and Safety Innovation
Intelligent Transportation System Solutions
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

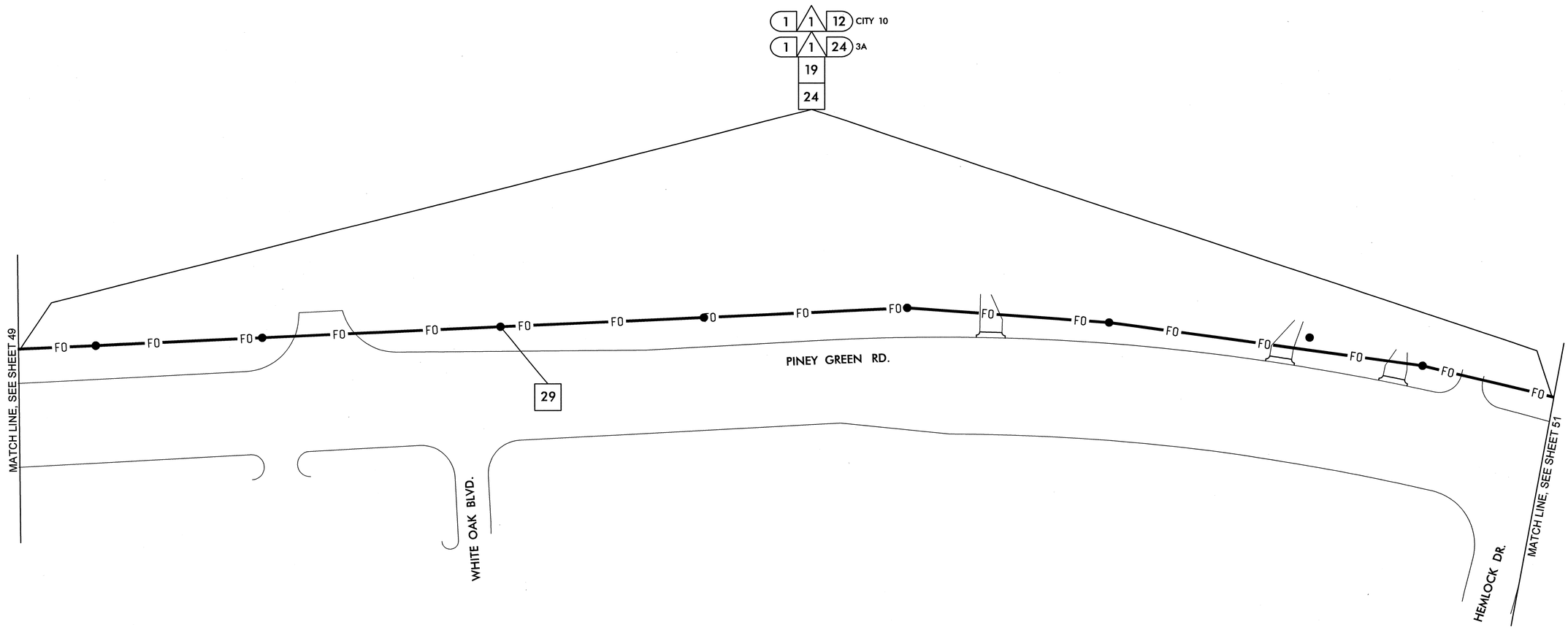
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSE#CADMCR-049.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	50



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SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
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REVISIONS	INIT.	DATE

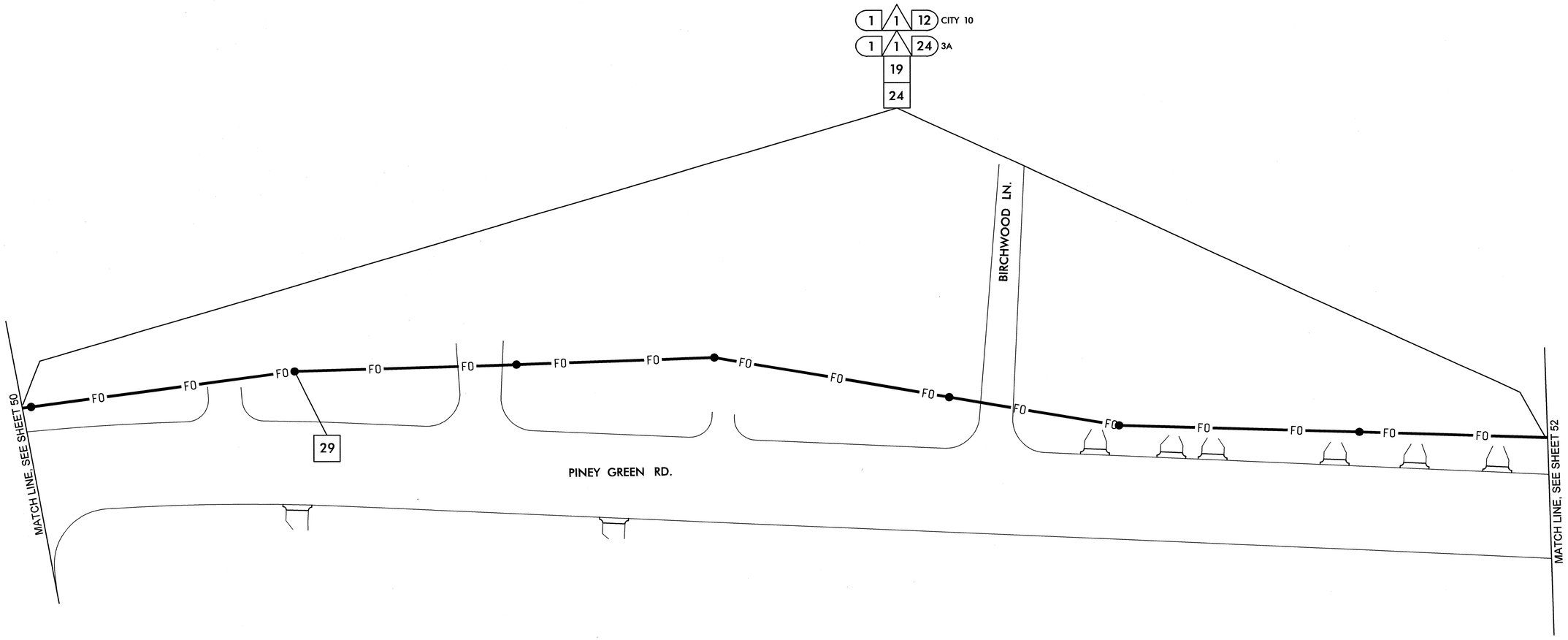
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...\R50 FS\E\CADR\CR-050.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	51



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1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND						
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE						
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE						
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE						
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION						
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT						
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX						
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY						
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY						
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER										

PLANS PREPARED IN THE OFFICE OF:

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

Transportation Mobility and Safety Division
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

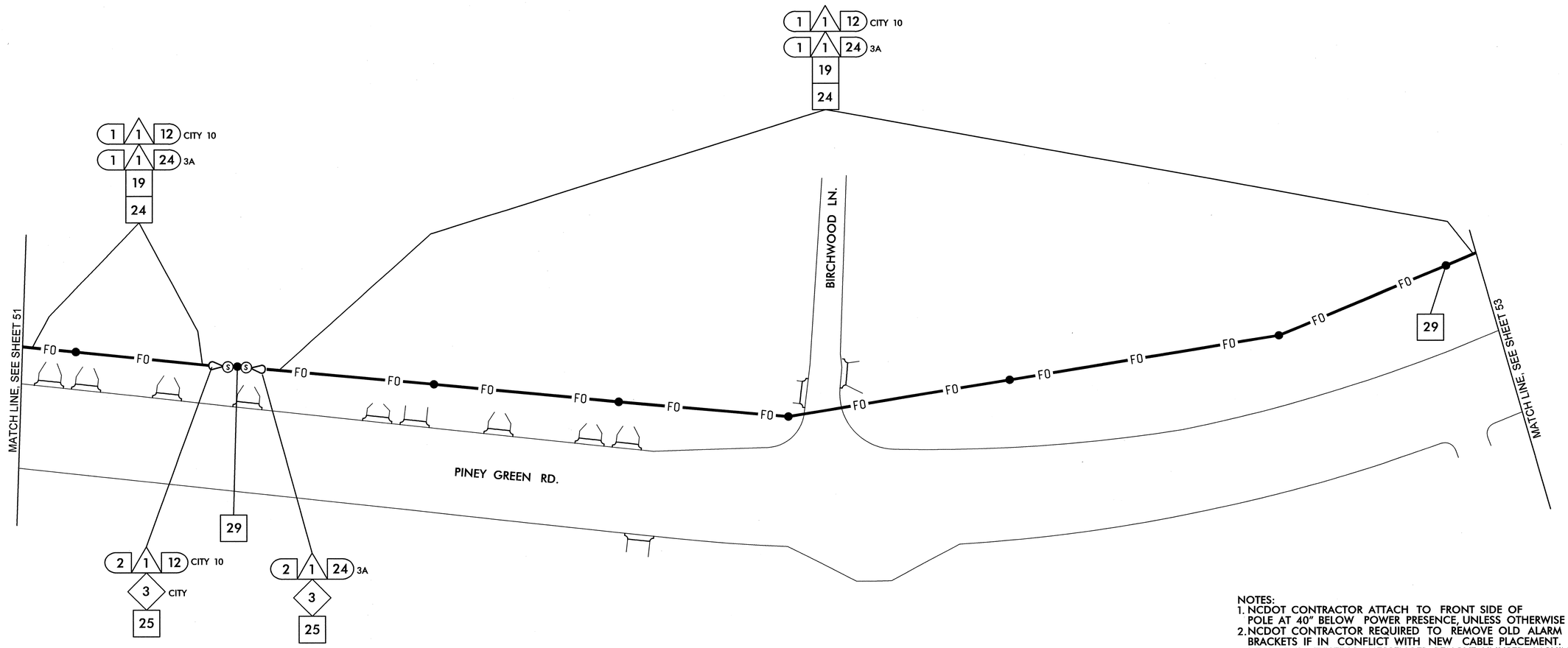
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filenames

7/19/2011 $TIME$ susan.pennington ...#600 PSAE#CADMCR-051.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	52



NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.
3. POLE AND CABINET LOCATIONS SHOWN ON PINEY GREEN RD. ARE APPROXIMATE. FINAL LOCATIONS ARE BEING DESIGNED UNDER ROADWAY WIDENING PROJECT.

1. INSTALL SMFO CABLE
2. INSTALL FIBER OPTIC DROP CABLE
3. INSTALL TRACER WIRE
4. REUSE EXISTING SMFO CABLE
5. INSTALL PLENUM RATED SMFO CABLE
6. INSTALL LOOP LEAD-IN CABLE
7. INSTALL ETHERNET CABLE
1. INSTALL PVC CONDUIT
2. INSTALL POLYETHYLENE CONDUIT
3. INSTALL RIGID, GALVANIZED STEEL CONDUIT
4. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5. INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
6. TRENCH CONDUIT
7. DIRECTIONAL DRILL CONDUIT
8. BORE AND JACK CONDUIT
9. INSTALL CABLE(S) IN EXISTING CONDUIT
10. INSTALL CABLE(S) IN NEW CONDUIT
11. INSTALL CABLE(S) IN EXISTING RISER
12. INSTALL CABLE(S) IN NEW RISER
13. INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS
14. INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)
15. INSTALL NEW RISER INTO POLE MOUNTED CABINET
16. REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
17. INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET
1. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2. INSTALL UNDERGROUND SPLICE ENCLOSURE
3. INSTALL AERIAL SPLICE ENCLOSURE
4. MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5. INSTALL TERMINAL SPLICE BOX
1. INSTALL CABINET FOUNDATION
2. REMOVE EXISTING CABINET FOUNDATION
3. MODIFY EXISTING CABINET FOUNDATION
4. REMOVE EXISTING CONTROLLER AND CABINET
5. INSTALL NEW CONTROLLER
6. INSTALL NEW 332 BASE MOUNTED CABINET
7. INSTALL NEW 336S BASE MOUNTED CABINET
8. INSTALL NEW 336S POLE MOUNTED CABINET
9. INSTALL BASE ADAPTER
10. INSTALL PRE-FORMED CABINET FOUNDATION PAD
11. INSTALL STANDARD JUNCTION BOX
12. INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
13. INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
14. INSTALL WOOD POLE
15. REMOVE EXISTING WOOD POLE
16. INSTALL AERIAL GUY ASSEMBLY
17. INSTALL STANDARD GUY ASSEMBLY
18. INSTALL SIDEWALK GUY ASSEMBLY
19. INSTALL MESSENGER CABLE
20. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
21. REMOVE EXISTING COMMUNICATIONS CABLE
22. LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
23. LASH CABLE(S) TO EXISTING MESSENGER CABLE
24. LASH CABLE(S) TO NEW MESSENGER CABLE
25. INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE
26. STORE 30 FEET OF EACH COMMUNICATIONS CABLE
27. STORE 100 FEET OF EACH COMMUNICATIONS CABLE
28. INSTALL FIBER OPTIC DELINEATOR MARKER
29. BOND MESSENGER CABLE TO POLE GROUND
30. MODIFY EXISTING ELECTRICAL SERVICE
31. INSTALL NEW ELECTRICAL SERVICE
32. INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
33. INSTALL GENERATOR ANCHOR IN FOUNDATION
34. RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
35. RECONNECT GENERATOR POWER INLET BOX
36. INSTALL CCTV CAMERA ASSEMBLY
37. INSTALL SMALL DMS ASSEMBLY
38. INSTALL LARGE DMS ASSEMBLY
39. INSTALL PEDESTAL STRUCTURE FOR SMALL DMS
40. INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
41. INSTALL ETHERNET SWITCH
42. INSTALL VIDEO CODEC UNIT
43. REMOVE EXISTING FIBER OPTIC TRANSCEIVER
44. INSTALL CELLULAR MODEM
45. INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)
46. INSTALL 2.4 GHz RADIO TRANSCEIVER
47. INSTALL YAGI ANTENNA
48. INSTALL OMNI-DIRECTIONAL ANTENNA
49. REMOVE EXISTING WIRELESS HARDWARE
50. INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
51. INSTALL NEW GENERATOR POWER INLET BOX
52. INSTALL CCTV UNIFIED CABLE
53. INSTALL ANTENNA CABLE
54. INSTALL DMS CONTROLLER
55. INSTALL SOLAR POWER ASSEMBLY

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

750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

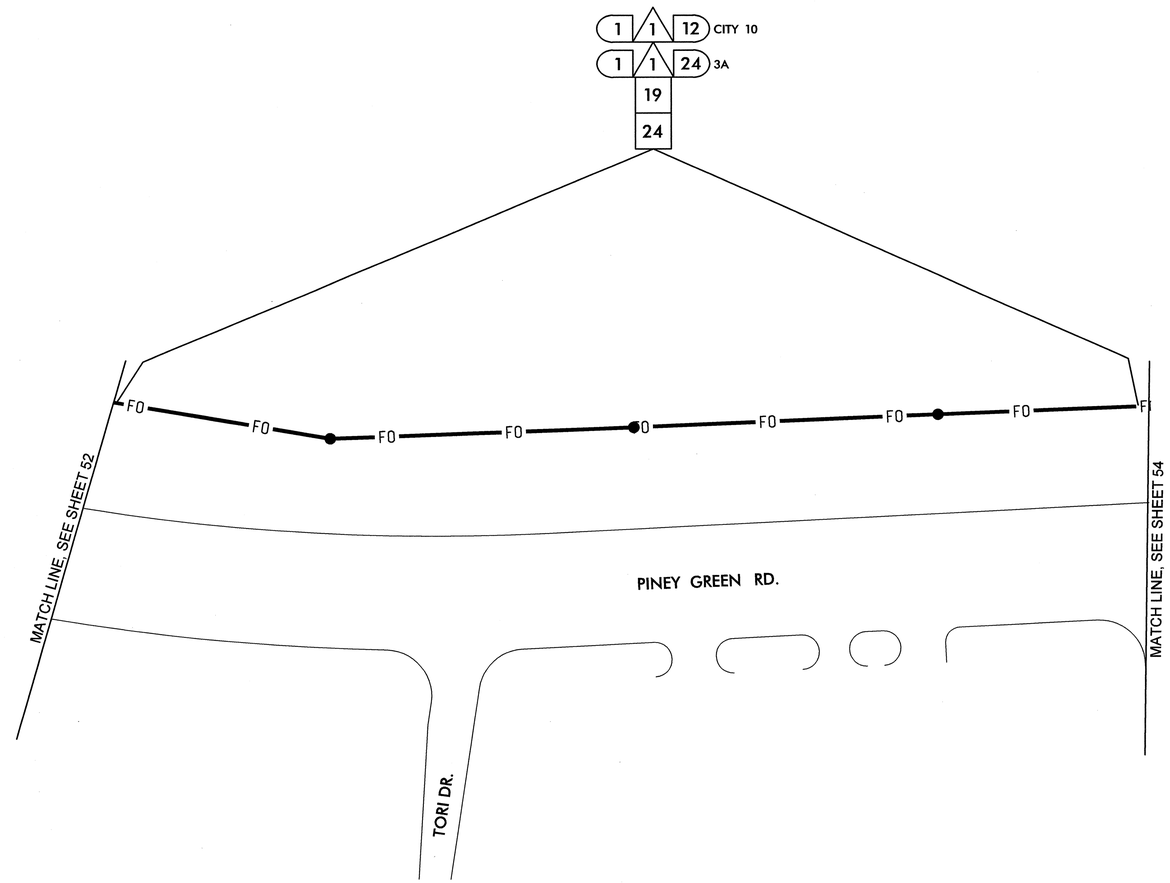
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSAE#CADWCR-052.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	53



NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.
3. POLE AND CABINET LOCATIONS SHOWN ON PINEY GREEN RD. ARE APPROXIMATE. FINAL LOCATIONS ARE BEING DESIGNED UNDER ROADWAY WIDENING PROJECT.

1	INSTALL SMFO CABLE
2	INSTALL FIBER OPTIC DROP CABLE
3	INSTALL TRACER WIRE
4	REUSE EXISTING SMFO CABLE
5	INSTALL PLENUM RATED SMFO CABLE
6	INSTALL LOOP LEAD-IN CABLE
7	INSTALL ETHERNET CABLE
1	INSTALL PVC CONDUIT
2	INSTALL POLYETHYLENE CONDUIT
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
6	TRENCH CONDUIT
7	DIRECTIONAL DRILL CONDUIT
8	BORE AND JACK CONDUIT
9	INSTALL CABLE(S) IN EXISTING CONDUIT
10	INSTALL CABLE(S) IN NEW CONDUIT
11	INSTALL CABLE(S) IN EXISTING RISER
12	INSTALL CABLE(S) IN NEW RISER
13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS
14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)
15	INSTALL NEW RISER INTO POLE MOUNTED CABINET
16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET
1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2	INSTALL UNDERGROUND SPLICE ENCLOSURE
3	INSTALL AERIAL SPLICE ENCLOSURE
4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5	INSTALL TERMINAL SPLICE BOX
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION
3	MODIFY EXISTING CABINET FOUNDATION
4	REMOVE EXISTING CONTROLLER AND CABINET
5	INSTALL NEW CONTROLLER
6	INSTALL NEW 332 BASE MOUNTED CABINET
7	INSTALL NEW 336S BASE MOUNTED CABINET
8	INSTALL NEW 336S POLE MOUNTED CABINET
9	INSTALL BASE ADAPTER
10	INSTALL PRE-FORMED CABINET FOUNDATION PAD
11	INSTALL STANDARD JUNCTION BOX
12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
14	INSTALL WOOD POLE
15	REMOVE EXISTING WOOD POLE
16	INSTALL AERIAL GUY ASSEMBLY
17	INSTALL STANDARD GUY ASSEMBLY
18	INSTALL SIDEWALK GUY ASSEMBLY
19	INSTALL MESSENGER CABLE
20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
21	REMOVE EXISTING COMMUNICATIONS CABLE
22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
23	LASH CABLE(S) TO EXISTING MESSENGER CABLE
24	LASH CABLE(S) TO NEW MESSENGER CABLE
25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE
26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE
27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
28	INSTALL FIBER OPTIC DELINEATOR MARKER
29	BOND MESSENGER CABLE TO POLE GROUND
30	MODIFY EXISTING ELECTRICAL SERVICE
31	INSTALL NEW ELECTRICAL SERVICE
32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
33	INSTALL GENERATOR ANCHOR IN FOUNDATION
34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
35	RECONNECT GENERATOR POWER INLET BOX
36	INSTALL CCTV CAMERA ASSEMBLY
37	INSTALL SMALL DMS ASSEMBLY
38	INSTALL LARGE DMS ASSEMBLY
39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS
40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
41	INSTALL ETHERNET SWITCH
42	INSTALL VIDEO CODEC UNIT
43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER
44	INSTALL CELLULAR MODEM
45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)
46	INSTALL 2.4 GHz RADIO TRANSCEIVER
47	INSTALL YAGI ANTENNA
48	INSTALL OMNI-DIRECTIONAL ANTENNA
49	REMOVE EXISTING WIRELESS HARDWARE
50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
51	INSTALL NEW GENERATOR POWER INLET BOX
52	INSTALL CCTV UNIFIED CABLE
53	INSTALL ANTENNA CABLE
54	INSTALL DMS CONTROLLER
55	INSTALL SOLAR POWER ASSEMBLY

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
Transportation Mobility and Safety Division
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011 REVIEWED BY: K.W. SMITH

PREPARED BY: S.P. PENNINGTON REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

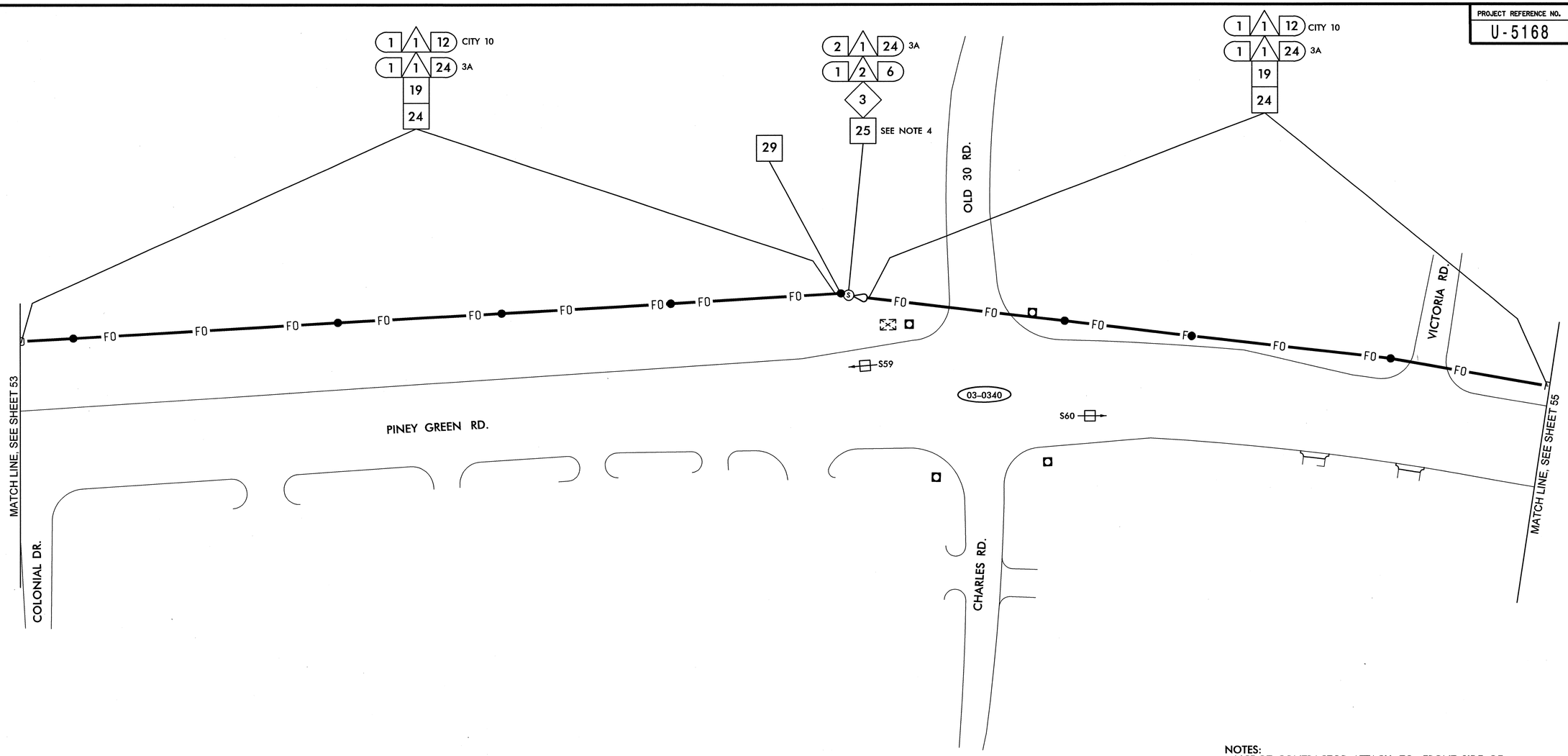
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE DATE 7-20-11

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSE#CAD#CR-053.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	54



NOTES:
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2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.
3. POLE AND CABINET LOCATIONS SHOWN ON PINEY GREEN RD. ARE APPROXIMATE. FINAL LOCATIONS ARE BEING DESIGNED UNDER ROADWAY WIDENING PROJECT.
4. COIL 300' OF DROP CABLE FOR FUTURE SIGNAL INTEGRATION TO BE DONE UNDER U-3810.

SYSTEM DETECTORS S59 AND S60 WILL BE INSTALLED UNDER U-3810.

△1	INSTALL SMFO CABLE	(11)	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE		
△2	INSTALL FIBER OPTIC DROP CABLE	(12)	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE		
△3	INSTALL TRACER WIRE	(13)	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA	54	INSTALL DMS CONTROLLER		
△4	REUSE EXISTING SMFO CABLE	(14)	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY		
△5	INSTALL PLENUM RATED SMFO CABLE	(15)	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE				
△6	INSTALL LOOP LEAD-IN CABLE	(16)	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT				
△7	INSTALL ETHERNET CABLE	(17)	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX				
(1)	INSTALL PVC CONDUIT	◇1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND								
(2)	INSTALL POLYETHYLENE CONDUIT	◇2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE								
(3)	INSTALL RIGID, GALVANIZED STEEL CONDUIT	◇3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE								
(4)	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	◇4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE								
(5)	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	◇5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION								
(6)	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT								
(7)	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX								
(8)	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY								
(9)	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY								
(10)	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER												

PLANS PREPARED IN THE OFFICE OF:
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SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011 REVIEWED BY: K.W. SMITH

PREPARED BY: S.P. PENNINGTON REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

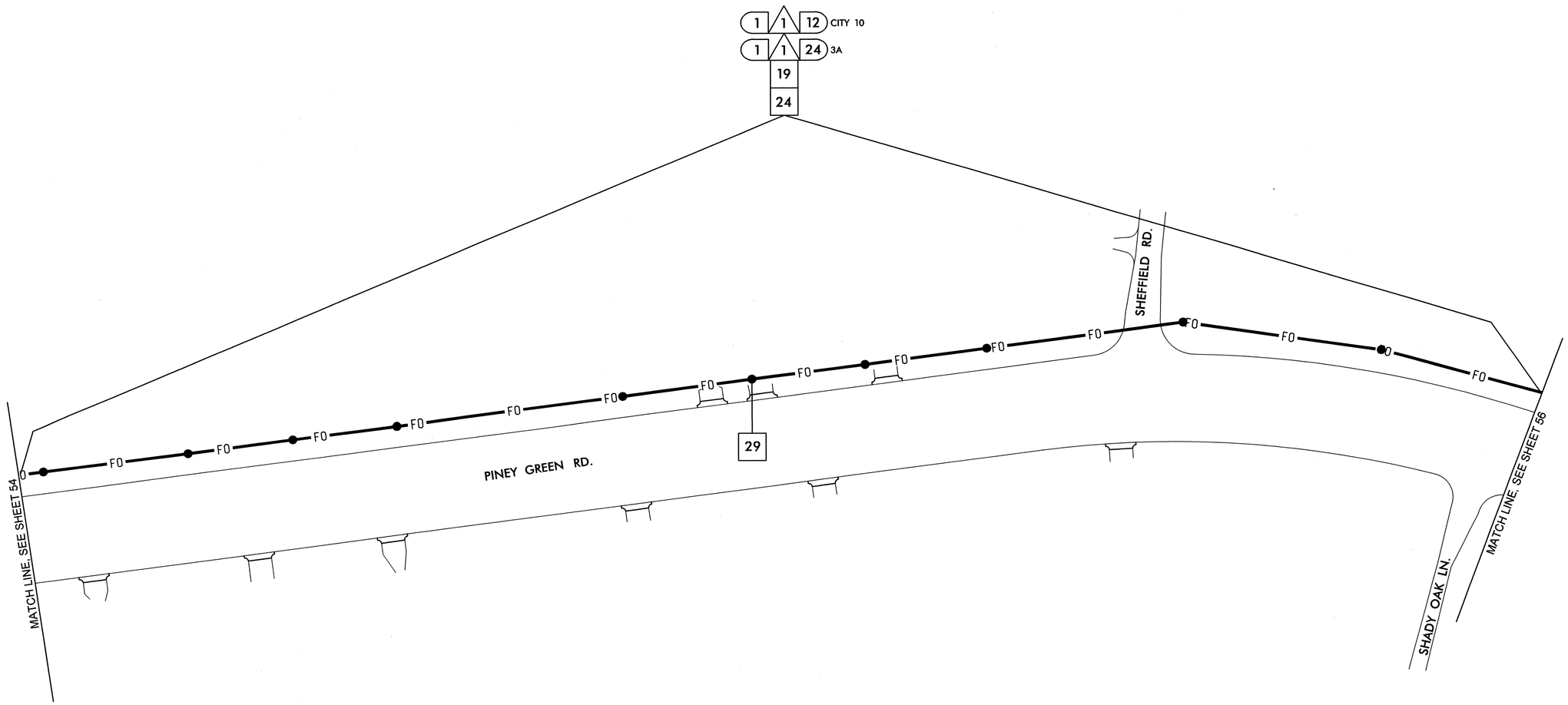
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSSE#CJDMCR-054.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	55



NOTES:
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1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE
2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE
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4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY
5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE		
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT		
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2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE						
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE						
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE						
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION						
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT						
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX						
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY						
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY						
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER										

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

Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intermodal Transportation Systems
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

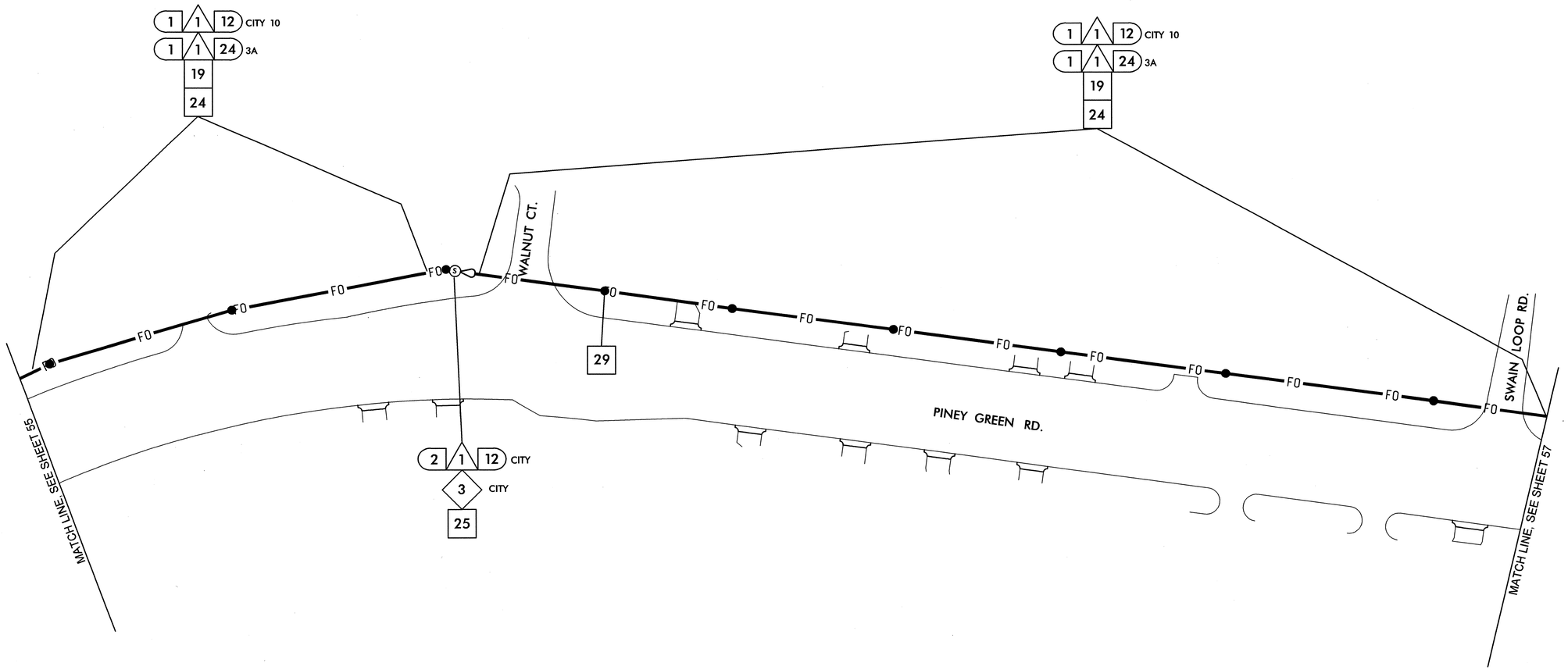
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSAE#0ADMCR-055.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	56



NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.
3. POLE AND CABINET LOCATIONS SHOWN ON PINEY GREEN RD. ARE APPROXIMATE. FINAL LOCATIONS ARE BEING DESIGNED UNDER ROADWAY WIDENING PROJECT.

1. INSTALL SMFO CABLE
2. INSTALL FIBER OPTIC DROP CABLE
3. INSTALL TRACER WIRE
4. REUSE EXISTING SMFO CABLE
5. INSTALL PLENUM RATED SMFO CABLE
6. INSTALL LOOP LEAD-IN CABLE
7. INSTALL ETHERNET CABLE
1. INSTALL PVC CONDUIT
2. INSTALL POLYETHYLENE CONDUIT
3. INSTALL RIGID, GALVANIZED STEEL CONDUIT
4. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5. INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
6. TRENCH CONDUIT
7. DIRECTIONAL DRILL CONDUIT
8. BORE AND JACK CONDUIT
9. INSTALL CABLE(S) IN EXISTING CONDUIT
10. INSTALL CABLE(S) IN NEW CONDUIT
11. INSTALL CABLE(S) IN EXISTING RISER
12. INSTALL CABLE(S) IN NEW RISER
13. INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS
14. INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)
15. INSTALL NEW RISER INTO POLE MOUNTED CABINET
16. REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
17. INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET
1. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2. INSTALL UNDERGROUND SPLICE ENCLOSURE
3. INSTALL AERIAL SPLICE ENCLOSURE
4. MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5. INSTALL TERMINAL SPLICE BOX
1. INSTALL CABINET FOUNDATION
2. REMOVE EXISTING CABINET FOUNDATION
3. MODIFY EXISTING CABINET FOUNDATION
4. REMOVE EXISTING CONTROLLER AND CABINET
5. INSTALL NEW CONTROLLER
6. INSTALL NEW 332 BASE MOUNTED CABINET
7. INSTALL NEW 336S BASE MOUNTED CABINET
8. INSTALL NEW 336S POLE MOUNTED CABINET
9. INSTALL BASE ADAPTER
10. INSTALL PRE-FORMED CABINET FOUNDATION PAD
11. INSTALL STANDARD JUNCTION BOX
12. INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
13. INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
14. INSTALL WOOD POLE
15. REMOVE EXISTING WOOD POLE
16. INSTALL AERIAL GUY ASSEMBLY
17. INSTALL STANDARD GUY ASSEMBLY
18. INSTALL SIDEWALK GUY ASSEMBLY
19. INSTALL MESSENGER CABLE
20. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
21. REMOVE EXISTING COMMUNICATIONS CABLE
22. LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
23. LASH CABLE(S) TO EXISTING MESSENGER CABLE
24. LASH CABLE(S) TO NEW MESSENGER CABLE
25. INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE
26. STORE 30 FEET OF EACH COMMUNICATIONS CABLE
27. STORE 100 FEET OF EACH COMMUNICATIONS CABLE
28. INSTALL FIBER OPTIC DELINEATOR MARKER
29. BOND MESSENGER CABLE TO POLE GROUND
30. MODIFY EXISTING ELECTRICAL SERVICE
31. INSTALL NEW ELECTRICAL SERVICE
32. INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
33. INSTALL GENERATOR ANCHOR IN FOUNDATION
34. RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
35. RECONNECT GENERATOR POWER INLET BOX
36. INSTALL CCTV CAMERA ASSEMBLY
37. INSTALL SMALL DMS ASSEMBLY
38. INSTALL LARGE DMS ASSEMBLY
39. INSTALL PEDESTAL STRUCTURE FOR SMALL DMS
40. INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
41. INSTALL ETHERNET SWITCH
42. INSTALL VIDEO CODEC UNIT
43. REMOVE EXISTING FIBER OPTIC TRANSCEIVER
44. INSTALL CELLULAR MODEM
45. INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)
46. INSTALL 2.4 GHz RADIO TRANSCEIVER
47. INSTALL YAGI ANTENNA
48. INSTALL OMNI-DIRECTIONAL ANTENNA
49. REMOVE EXISTING WIRELESS HARDWARE
50. INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
51. INSTALL NEW GENERATOR POWER INLET BOX
52. INSTALL CCTV UNIFIED CABLE
53. INSTALL ANTENNA CABLE
54. INSTALL DMS CONTROLLER
55. INSTALL SOLAR POWER ASSEMBLY

PLANS PREPARED IN THE OFFICE OF:

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

750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011 REVIEWED BY: K.W. SMITH

PREPARED BY: S.P. PENNINGTON REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

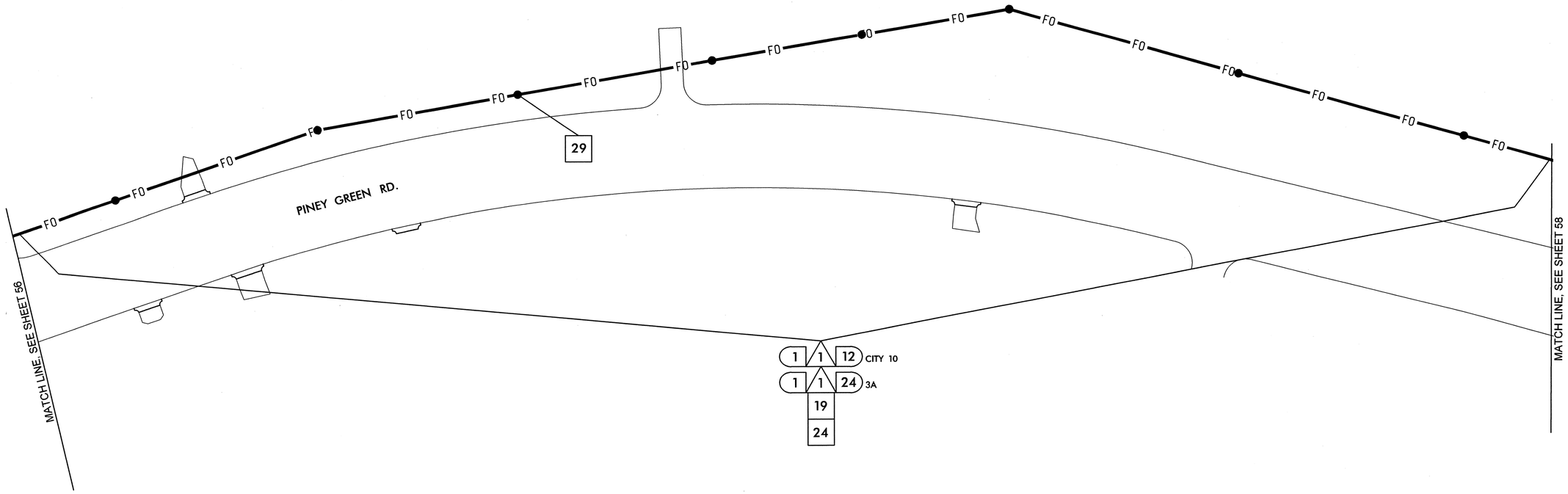
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...\600 PSSE\CADMCR-056.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	57



NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.
3. POLE AND CABINET LOCATIONS SHOWN ON PINEY GREEN RD. ARE APPROXIMATE. FINAL LOCATIONS ARE BEING DESIGNED UNDER ROADWAY WIDENING PROJECT.

1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)
2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER
3	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA
4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA
5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND			52	INSTALL CCTV UNIFIED CABLE
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE			53	INSTALL ANTENNA CABLE
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE			54	INSTALL DMS CONTROLLER
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE			55	INSTALL SOLAR POWER ASSEMBLY
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION				
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT				
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX				
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY				
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY				
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER								

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

Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011 REVIEWED BY: K.W. SMITH

PREPARED BY: S.P. PENNINGTON REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

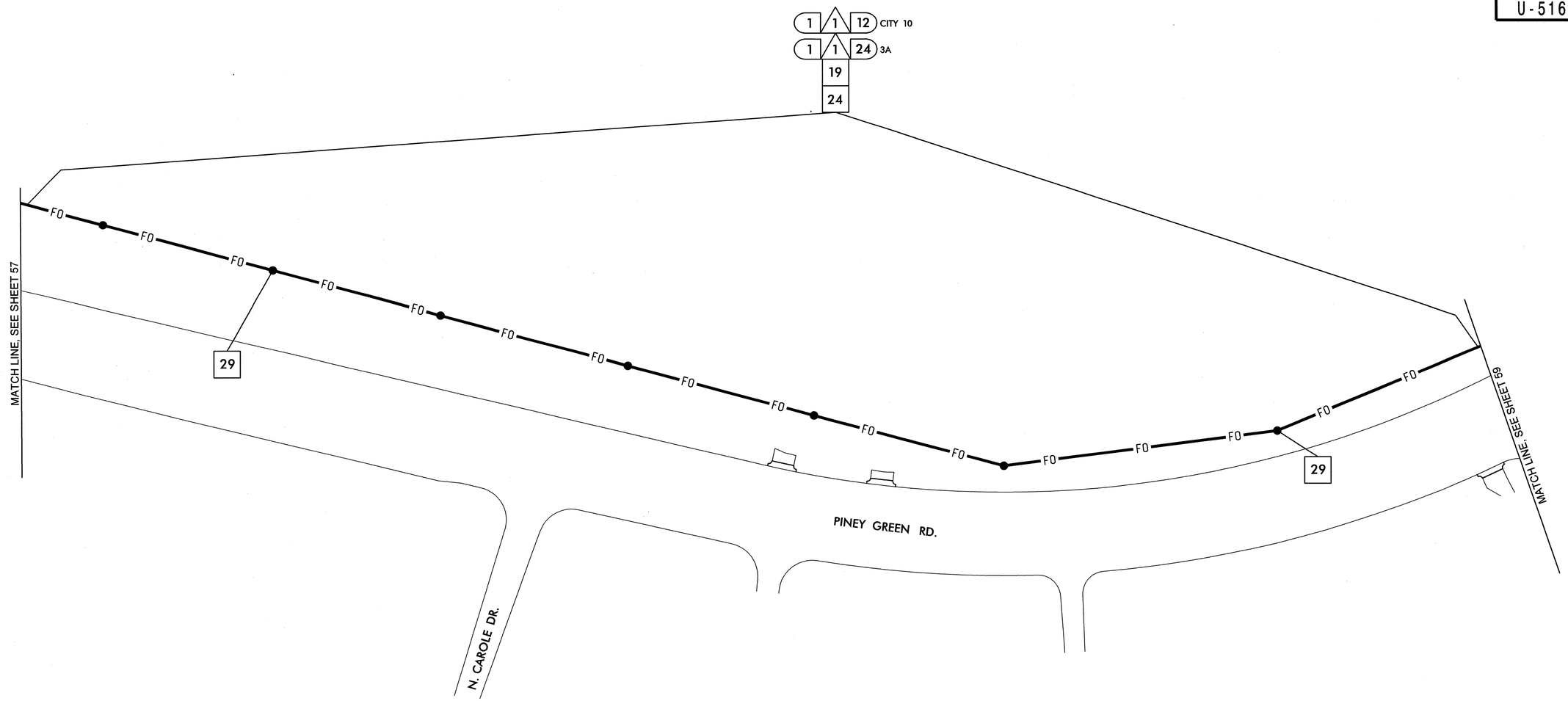
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...\500 FS\E#CABNCR-057.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	58



NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.
3. POLE AND CABINET LOCATIONS SHOWN ON PINEY GREEN RD. ARE APPROXIMATE. FINAL LOCATIONS ARE BEING DESIGNED UNDER ROADWAY WIDENING PROJECT.

1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE
2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE
3	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA	54	INSTALL DMS CONTROLLER
4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY
5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE		
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT		
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX		
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND						
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE						
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE						
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6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT						
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX						
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY						
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10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER										

PLANS PREPARED IN THE OFFICE OF:

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Transportation Mobility and Safety Division
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SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

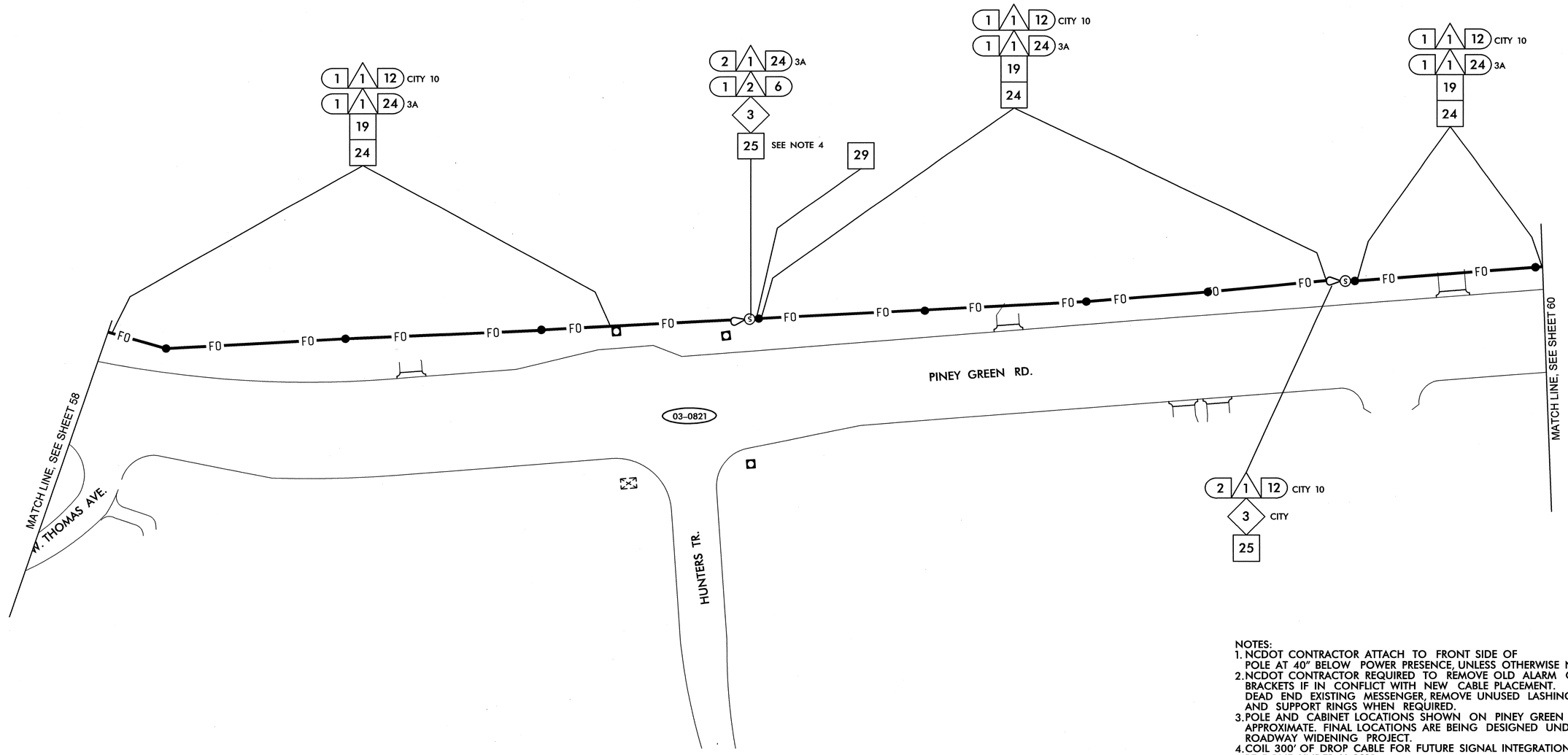
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filenames:

7/19/2011 $TIME$ susan.pennington ...#600 PSE#CADWCR-058.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	59



NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.
3. POLE AND CABINET LOCATIONS SHOWN ON PINEY GREEN RD. ARE APPROXIMATE. FINAL LOCATIONS ARE BEING DESIGNED UNDER ROADWAY WIDENING PROJECT.
4. COIL 300' OF DROP CABLE FOR FUTURE SIGNAL INTEGRATION TO BE DONE UNDER U-3810.

1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE		
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7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX								
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY								
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY								
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER												

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

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Mobility and Safety Division
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011 REVIEWED BY: K.W. SMITH

PREPARED BY: S.P. PENNINGTON REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

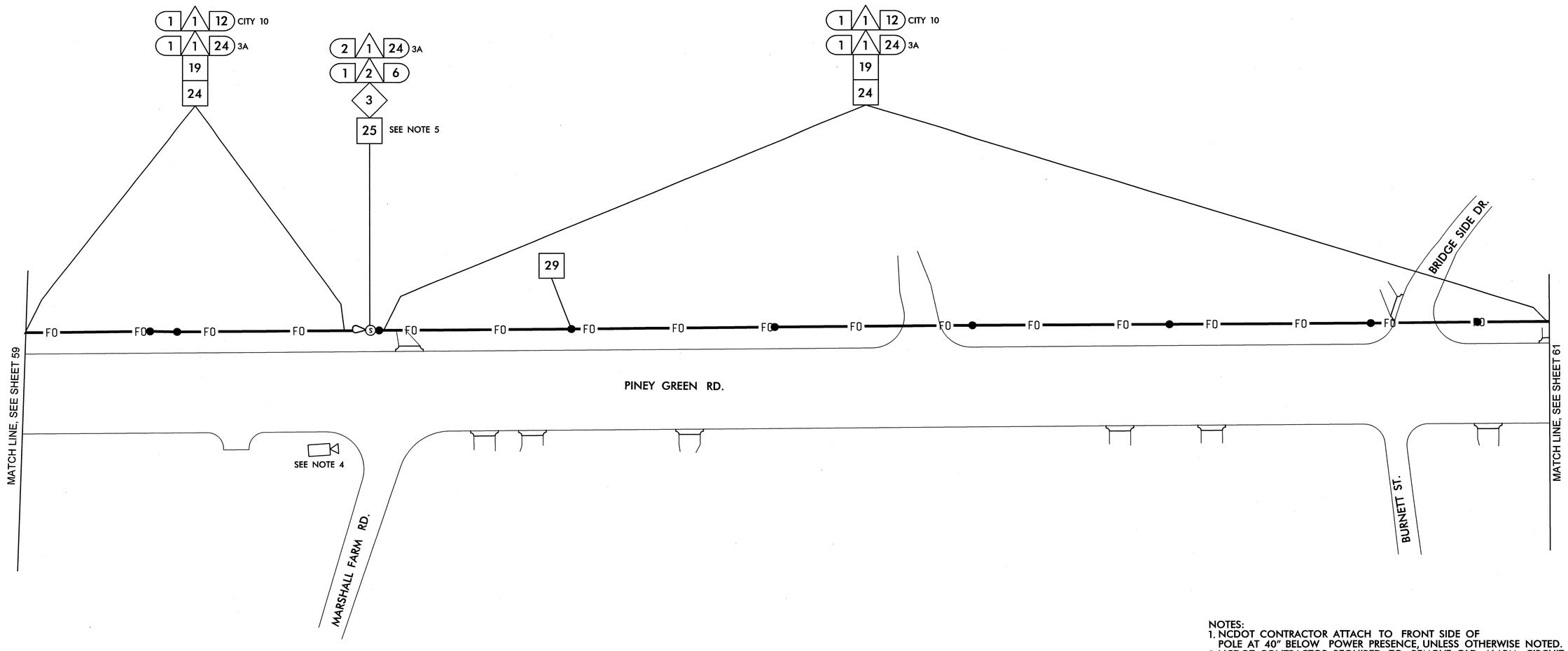
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#500 PS&E#CADNCR-059.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	60



NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.
3. POLE AND CABINET LOCATIONS SHOWN ON PINEY GREEN RD. ARE APPROXIMATE. FINAL LOCATIONS ARE BEING DESIGNED UNDER ROADWAY WIDENING PROJECT.
4. FUTURE CCTV TO BE INSTALLED AND INTEGRATED UNDER U-3810.
5. COIL 300' OF DROP CABLE FOR FUTURE SIGNAL INTEGRATION TO BE DONE UNDER U-3810.

1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE		
2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE		
3	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA	54	INSTALL DMS CONTROLLER		
4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY		
5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE				
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT				
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX				
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND								
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE								
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE								
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE								
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION								
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT								
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX								
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY								
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY								
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER												

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
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STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Mobility and Safety Division
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

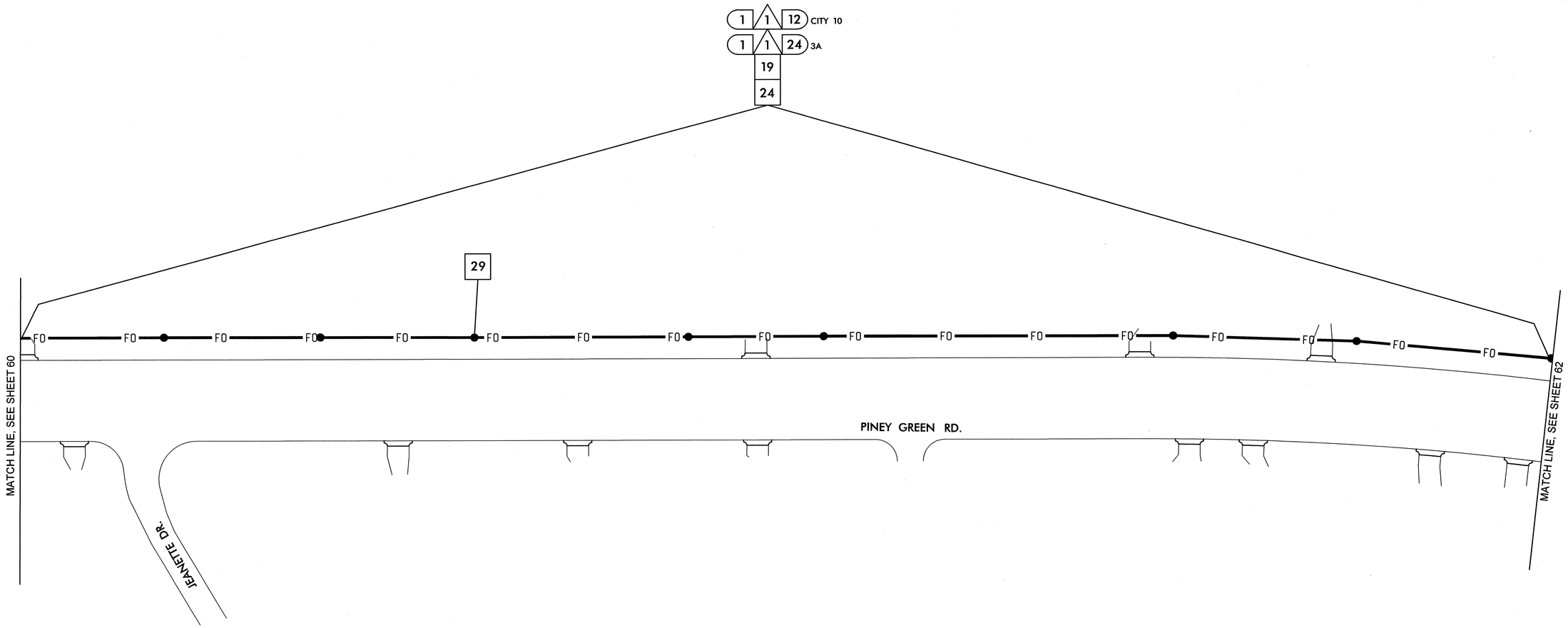
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...\600 PSE\CADD\CR-060.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	61



NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
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3. POLE AND CABINET LOCATIONS SHOWN ON PINEY GREEN RD. ARE APPROXIMATE. FINAL LOCATIONS ARE BEING DESIGNED UNDER ROADWAY WIDENING PROJECT.

A	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE				
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C	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA	54	INSTALL DMS CONTROLLER				
D	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY				
E	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE						
F	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT						
G	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX						
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND										
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE										
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE										
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6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT										
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX										
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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

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Mobility and Safety Division
Leading Transportation Solutions
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

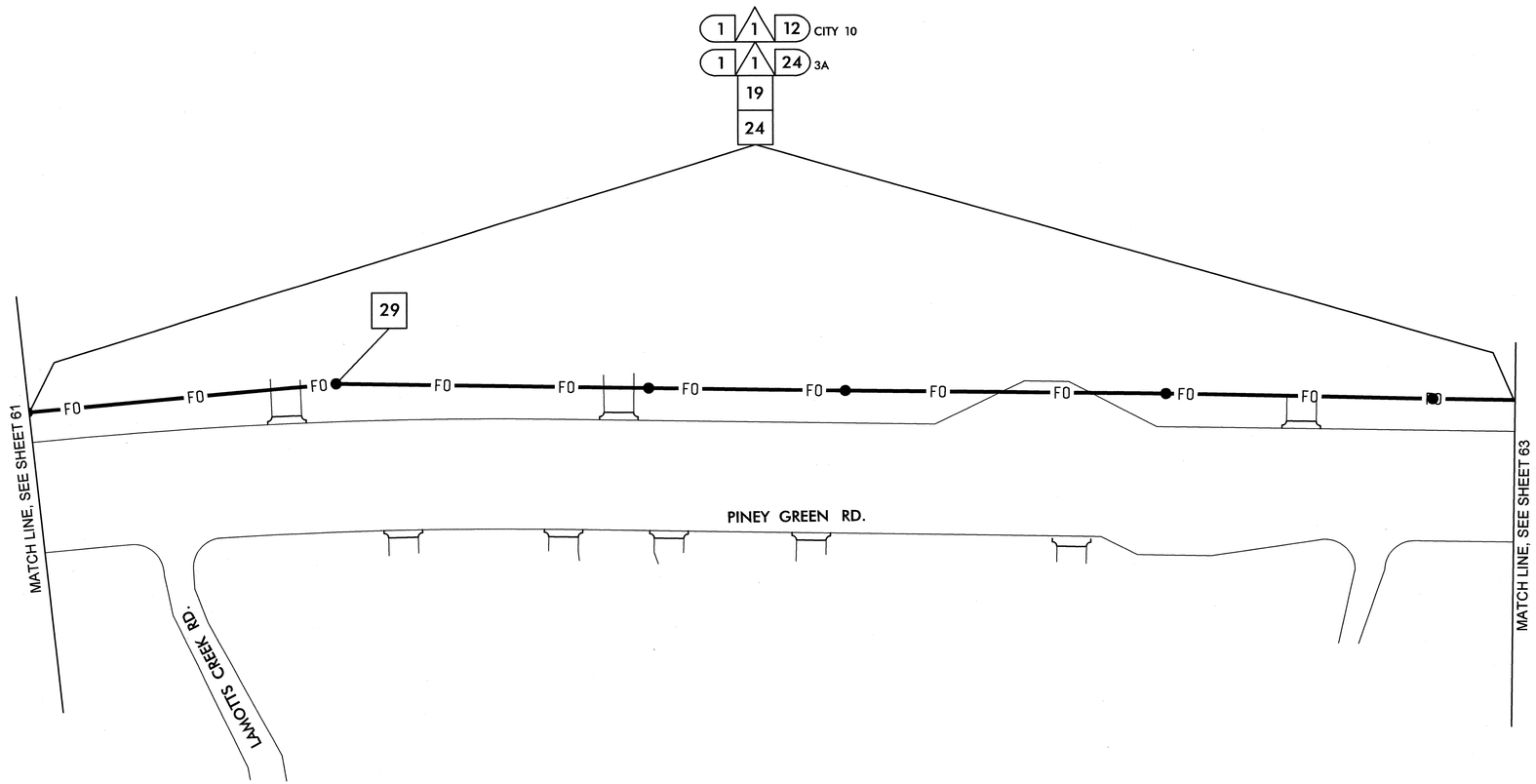
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...\600 PSE&RC\DMCR-061.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	62



NOTES:
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3. POLE AND CABINET LOCATIONS SHOWN ON PINEY GREEN RD. ARE APPROXIMATE. FINAL LOCATIONS ARE BEING DESIGNED UNDER ROADWAY WIDENING PROJECT.

1	INSTALL SMFO CABLE
2	INSTALL FIBER OPTIC DROP CABLE
3	INSTALL TRACER WIRE
4	REUSE EXISTING SMFO CABLE
5	INSTALL PLENUM RATED SMFO CABLE
6	INSTALL LOOP LEAD-IN CABLE
7	INSTALL ETHERNET CABLE
1	INSTALL PVC CONDUIT
2	INSTALL POLYETHYLENE CONDUIT
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
6	TRENCH CONDUIT
7	DIRECTIONAL DRILL CONDUIT
8	BORE AND JACK CONDUIT
9	INSTALL CABLE(S) IN EXISTING CONDUIT
10	INSTALL CABLE(S) IN NEW CONDUIT
11	INSTALL CABLE(S) IN EXISTING RISER
12	INSTALL CABLE(S) IN NEW RISER
13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS
14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)
15	INSTALL NEW RISER INTO POLE MOUNTED CABINET
16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET
1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2	INSTALL UNDERGROUND SPLICE ENCLOSURE
3	INSTALL AERIAL SPLICE ENCLOSURE
4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5	INSTALL TERMINAL SPLICE BOX
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION
3	MODIFY EXISTING CABINET FOUNDATION
4	REMOVE EXISTING CONTROLLER AND CABINET
5	INSTALL NEW CONTROLLER
6	INSTALL NEW 332 BASE MOUNTED CABINET
7	INSTALL NEW 336S BASE MOUNTED CABINET
8	INSTALL NEW 336S POLE MOUNTED CABINET
9	INSTALL BASE ADAPTER
10	INSTALL PRE-FORMED CABINET FOUNDATION PAD
11	INSTALL STANDARD JUNCTION BOX
12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
14	INSTALL WOOD POLE
15	REMOVE EXISTING WOOD POLE
16	INSTALL AERIAL GUY ASSEMBLY
17	INSTALL STANDARD GUY ASSEMBLY
18	INSTALL SIDEWALK GUY ASSEMBLY
19	INSTALL MESSENGER CABLE
20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
21	REMOVE EXISTING COMMUNICATIONS CABLE
22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
23	LASH CABLE(S) TO EXISTING MESSENGER CABLE
24	LASH CABLE(S) TO NEW MESSENGER CABLE
25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE
26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE
27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
28	INSTALL FIBER OPTIC DELINEATOR MARKER
29	BOND MESSENGER CABLE TO POLE GROUND
30	MODIFY EXISTING ELECTRICAL SERVICE
31	INSTALL NEW ELECTRICAL SERVICE
32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
33	INSTALL GENERATOR ANCHOR IN FOUNDATION
34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
35	RECONNECT GENERATOR POWER INLET BOX
36	INSTALL CCTV CAMERA ASSEMBLY
37	INSTALL SMALL DMS ASSEMBLY
38	INSTALL LARGE DMS ASSEMBLY
39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS
40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
41	INSTALL ETHERNET SWITCH
42	INSTALL VIDEO CODEC UNIT
43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER
44	INSTALL CELLULAR MODEM
45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)
46	INSTALL 2.4 GHz RADIO TRANSCEIVER
47	INSTALL YAGI ANTENNA
48	INSTALL OMNI-DIRECTIONAL ANTENNA
49	REMOVE EXISTING WIRELESS HARDWARE
50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
51	INSTALL NEW GENERATOR POWER INLET BOX
52	INSTALL CCTV UNIFIED CABLE
53	INSTALL ANTENNA CABLE
54	INSTALL DMS CONTROLLER
55	INSTALL SOLAR POWER ASSEMBLY

PLANS PREPARED IN THE OFFICE OF:

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SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

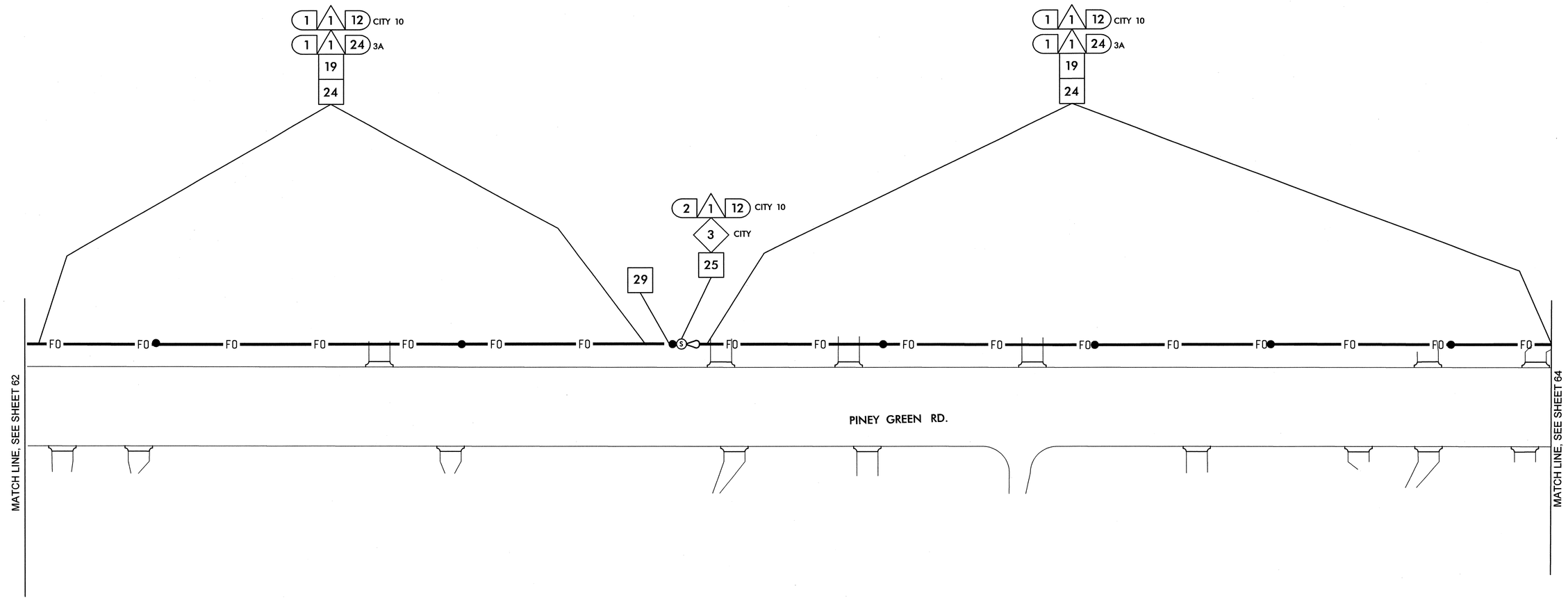
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSE#CADM02R-062.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	63



NOTES:
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1. INSTALL SMFO CABLE
2. INSTALL FIBER OPTIC DROP CABLE
3. INSTALL TRACER WIRE
4. REUSE EXISTING SMFO CABLE
5. INSTALL PLENUM RATED SMFO CABLE
6. INSTALL LOOP LEAD-IN CABLE
7. INSTALL ETHERNET CABLE
1. INSTALL PVC CONDUIT
2. INSTALL POLYETHYLENE CONDUIT
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16. REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
17. INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET
1. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2. INSTALL UNDERGROUND SPLICE ENCLOSURE
3. INSTALL AERIAL SPLICE ENCLOSURE
4. MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5. INSTALL TERMINAL SPLICE BOX
1. INSTALL CABINET FOUNDATION
2. REMOVE EXISTING CABINET FOUNDATION
3. MODIFY EXISTING CABINET FOUNDATION
4. REMOVE EXISTING CONTROLLER AND CABINET
5. INSTALL NEW CONTROLLER
6. INSTALL NEW 332 BASE MOUNTED CABINET
7. INSTALL NEW 336S BASE MOUNTED CABINET
8. INSTALL NEW 336S POLE MOUNTED CABINET
9. INSTALL BASE ADAPTER
10. INSTALL PRE-FORMED CABINET FOUNDATION PAD
11. INSTALL STANDARD JUNCTION BOX
12. INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
13. INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
14. INSTALL WOOD POLE
15. REMOVE EXISTING WOOD POLE
16. INSTALL AERIAL GUY ASSEMBLY
17. INSTALL STANDARD GUY ASSEMBLY
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27. STORE 100 FEET OF EACH COMMUNICATIONS CABLE
28. INSTALL FIBER OPTIC DELINEATOR MARKER
29. BOND MESSENGER CABLE TO POLE GROUND
30. MODIFY EXISTING ELECTRICAL SERVICE
31. INSTALL NEW ELECTRICAL SERVICE
32. INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
33. INSTALL GENERATOR ANCHOR IN FOUNDATION
34. RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
35. RECONNECT GENERATOR POWER INLET BOX
36. INSTALL CCTV CAMERA ASSEMBLY
37. INSTALL SMALL DMS ASSEMBLY
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55. INSTALL SOLAR POWER ASSEMBLY

PLANS PREPARED IN THE OFFICE OF:

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

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

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

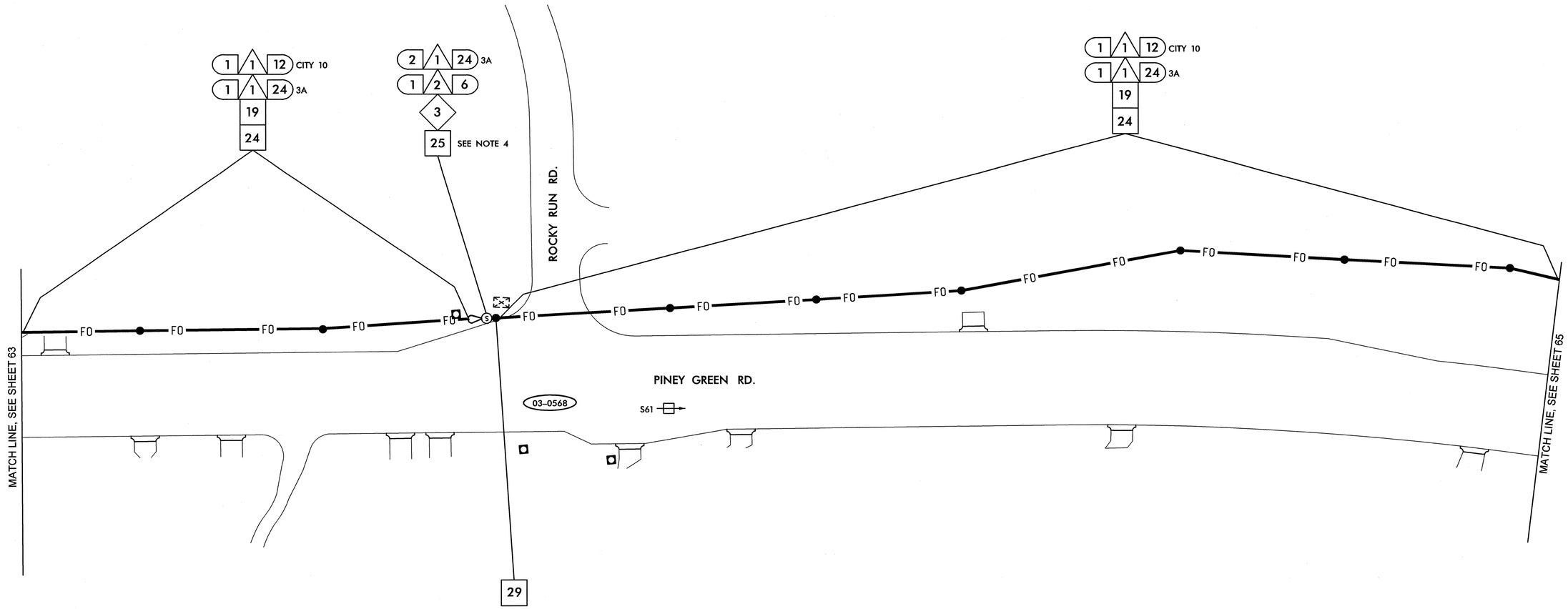
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSUE#CJDWCH-063.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	64



NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.
3. POLE AND CABINET LOCATIONS SHOWN ON PINEY GREEN RD. ARE APPROXIMATE. FINAL LOCATIONS ARE BEING DESIGNED UNDER ROADWAY WIDENING PROJECT.
4. COIL 300' OF DROP CABLE FOR FUTURE SIGNAL INTEGRATION TO BE DONE UNDER U-3810.

SYSTEM DETECTORS S61 WILL BE INSTALLED UNDER U-3810.

1	INSTALL SMFO CABLE
2	INSTALL FIBER OPTIC DROP CABLE
3	INSTALL TRACER WIRE
4	REUSE EXISTING SMFO CABLE
5	INSTALL PLENUM RATED SMFO CABLE
6	INSTALL LOOP LEAD-IN CABLE
7	INSTALL ETHERNET CABLE
1	INSTALL PVC CONDUIT
2	INSTALL POLYETHYLENE CONDUIT
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
6	TRENCH CONDUIT
7	DIRECTIONAL DRILL CONDUIT
8	BORE AND JACK CONDUIT
9	INSTALL CABLE(S) IN EXISTING CONDUIT
10	INSTALL CABLE(S) IN NEW CONDUIT
11	INSTALL CABLE(S) IN EXISTING RISER
12	INSTALL CABLE(S) IN NEW RISER
13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS
14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)
15	INSTALL NEW RISER INTO POLE MOUNTED CABINET
16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET
1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2	INSTALL UNDERGROUND SPLICE ENCLOSURE
3	INSTALL AERIAL SPLICE ENCLOSURE
4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5	INSTALL TERMINAL SPLICE BOX
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION
3	MODIFY EXISTING CABINET FOUNDATION
4	REMOVE EXISTING CONTROLLER AND CABINET
5	INSTALL NEW CONTROLLER
6	INSTALL NEW 332 BASE MOUNTED CABINET
7	INSTALL NEW 336S BASE MOUNTED CABINET
8	INSTALL NEW 336S POLE MOUNTED CABINET
9	INSTALL BASE ADAPTER
10	INSTALL PRE-FORMED CABINET FOUNDATION PAD
11	INSTALL STANDARD JUNCTION BOX
12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
14	INSTALL WOOD POLE
15	REMOVE EXISTING WOOD POLE
16	INSTALL AERIAL GUY ASSEMBLY
17	INSTALL STANDARD GUY ASSEMBLY
18	INSTALL SIDEWALK GUY ASSEMBLY
19	INSTALL MESSENGER CABLE
20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
21	REMOVE EXISTING COMMUNICATIONS CABLE
22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
23	LASH CABLE(S) TO EXISTING MESSENGER CABLE
24	LASH CABLE(S) TO NEW MESSENGER CABLE
25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE
26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE
27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
28	INSTALL FIBER OPTIC DELINEATOR MARKER
29	BOND MESSENGER CABLE TO POLE GROUND
30	MODIFY EXISTING ELECTRICAL SERVICE
31	INSTALL NEW ELECTRICAL SERVICE
32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
33	INSTALL GENERATOR ANCHOR IN FOUNDATION
34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
35	RECONNECT GENERATOR POWER INLET BOX
36	INSTALL CCTV CAMERA ASSEMBLY
37	INSTALL SMALL DMS ASSEMBLY
38	INSTALL LARGE DMS ASSEMBLY
39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS
40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
41	INSTALL ETHERNET SWITCH
42	INSTALL VIDEO CODEC UNIT
43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER
44	INSTALL CELLULAR MODEM
45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)
46	INSTALL 2.4 GHz RADIO TRANSCEIVER
47	INSTALL YAGI ANTENNA
48	INSTALL OMNI-DIRECTIONAL ANTENNA
49	REMOVE EXISTING WIRELESS HARDWARE
50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
51	INSTALL NEW GENERATOR POWER INLET BOX
52	INSTALL CCTV UNIFIED CABLE
53	INSTALL ANTENNA CABLE
54	INSTALL DMS CONTROLLER
55	INSTALL SOLAR POWER ASSEMBLY

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

Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

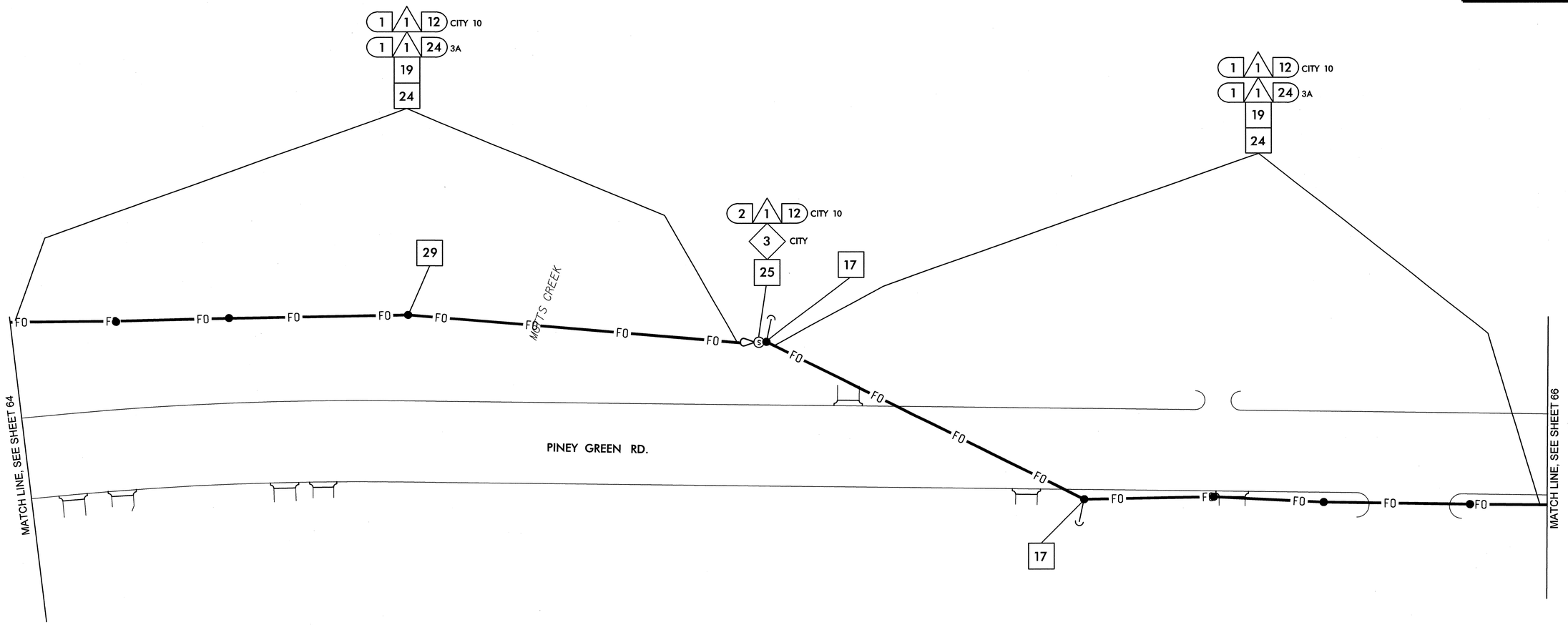
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...\600 PSE&CADWCR-064.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	65



NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.
3. POLE AND CABINET LOCATIONS SHOWN ON PINEY GREEN RD. ARE APPROXIMATE. FINAL LOCATIONS ARE BEING DESIGNED UNDER ROADWAY WIDENING PROJECT.

1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE		
2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE		
3	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA	54	INSTALL DMS CONTROLLER		
4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY		
5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE				
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT				
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX				
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND								
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE								
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE								
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE								
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION								
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT								
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX								
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY								
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY								
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER												

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

Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Integrated Mobility Division
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

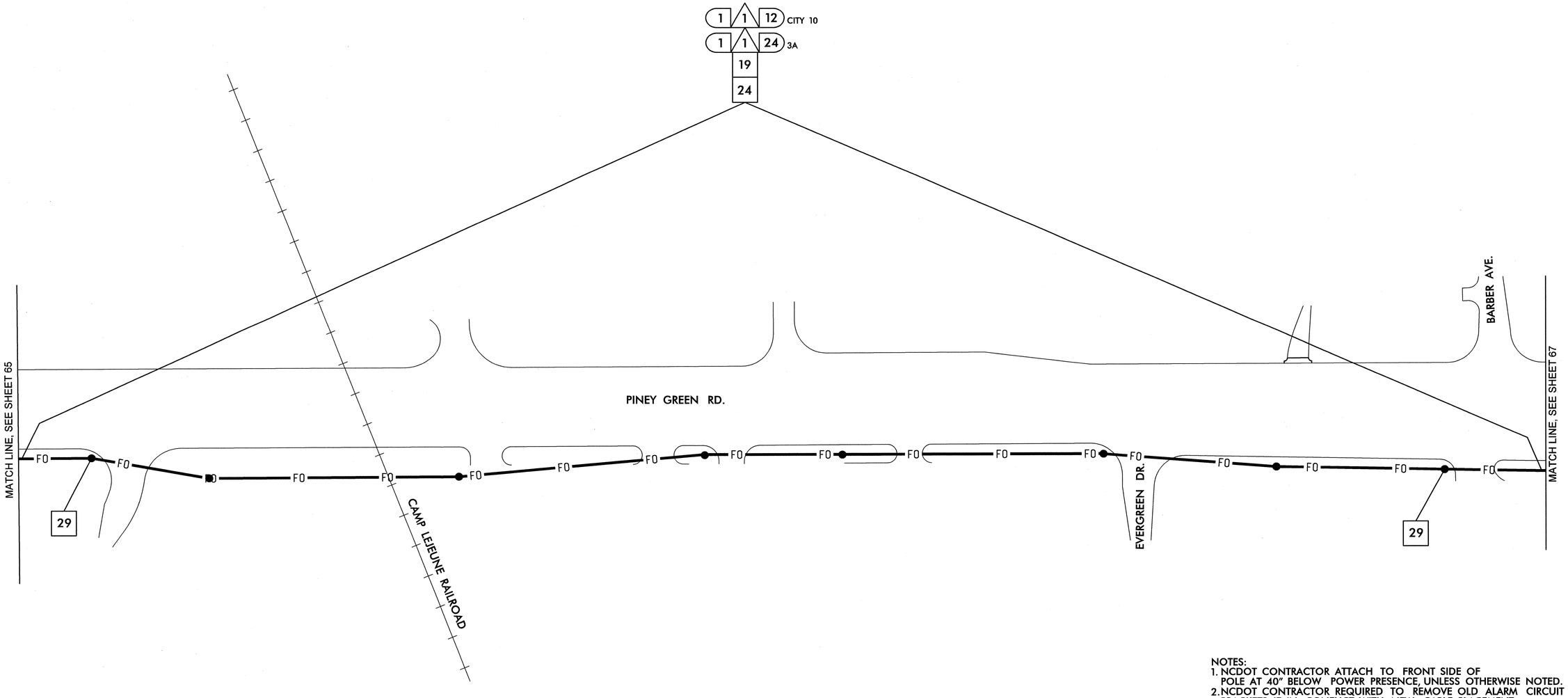
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PS&E#CAD#CR-065.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	66



NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.
3. POLE AND CABINET LOCATIONS SHOWN ON PINEY GREEN RD. ARE APPROXIMATE. FINAL LOCATIONS ARE BEING DESIGNED UNDER ROADWAY WIDENING PROJECT.

A	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE
B	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE
C	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA	54	INSTALL DMS CONTROLLER
D	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY
E	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE		
F	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT		
G	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX		
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND						
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE						
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE						
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE						
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION						
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT						
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX						
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY						
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY						
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER										

PLANS PREPARED IN THE OFFICE OF:

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

Transportation Mobility and Safety Division
Intelligent Transportation Systems Section
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

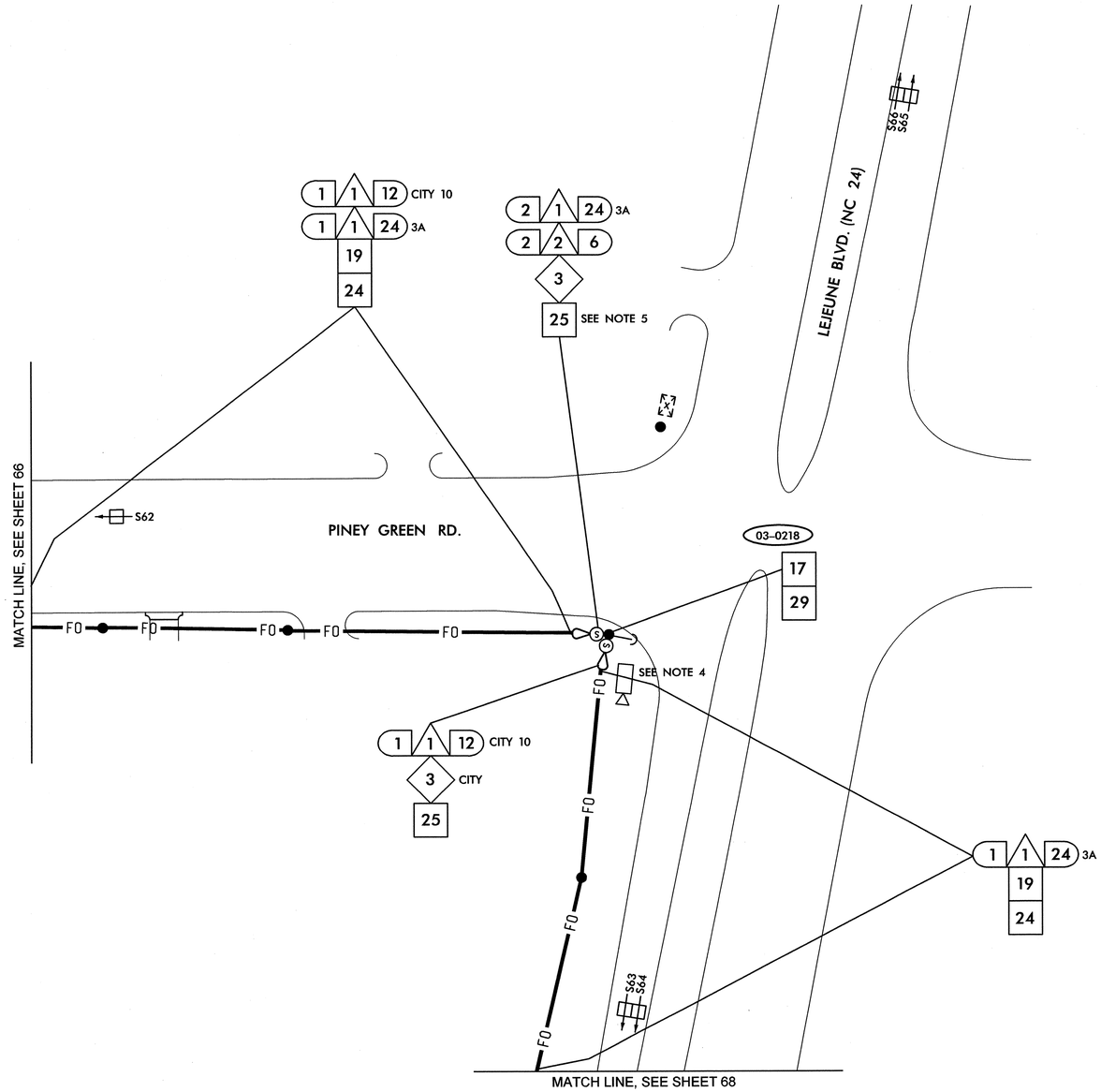
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSSE\ADMCR-066.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	67



SYSTEM DETECTORS S62, S63, S64, S65 AND S66 WILL BE INSTALLED UNDER U-3810.

NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.
3. POLE AND CABINET LOCATIONS SHOWN ON PINEY GREEN RD. ARE APPROXIMATE. FINAL LOCATIONS ARE BEING DESIGNED UNDER ROADWAY WIDENING PROJECT.
4. FUTURE CCTV TO BE INSTALLED AND INTEGRATED UNDER U-3810.
5. COIL 300' OF EACH DROP CABLE FOR FUTURE SIGNAL AND CCTV INTEGRATION TO BE DONE UNDER U-3810.

1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE
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5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE		
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6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT						
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX						
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PLANS PREPARED IN THE OFFICE OF:
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Intelligent Transportation Systems Section
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SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

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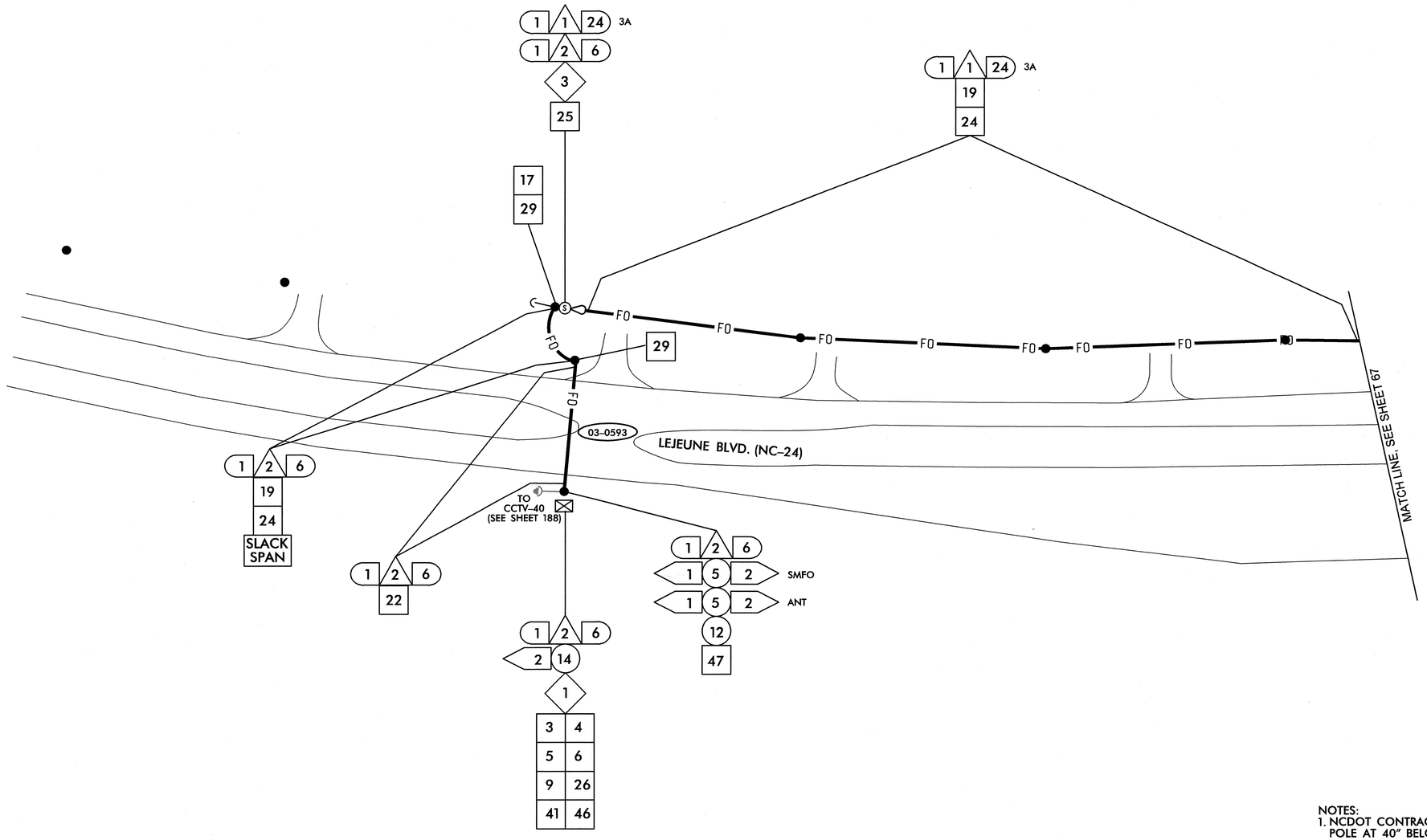
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSAE#CADD#CR-067.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	68



NOTES:
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3. POLE AND CABINET LOCATIONS SHOWN ON PINEY GREEN RD. ARE APPROXIMATE. FINAL LOCATIONS ARE BEING DESIGNED UNDER ROADWAY WIDENING PROJECT.

1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE
2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4/5.8 GHz RADIO TRANSCEIVER ▽	53	INSTALL ANTENNA CABLE
3	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL PANEL ANTENNA ▽	54	INSTALL DMS CONTROLLER
4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY
5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE		
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT		
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX		
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND						
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE						
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE						
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE						
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION						
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT						
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX						
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY						
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY						
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER										

PLANS PREPARED IN THE OFFICE OF:

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

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Mobility and Safety Division
Intermodal Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011 REVIEWED BY: K.W. SMITH

PREPARED BY: S.P. PENNINGTON REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE
▽ NEW WIRELESS RADIO DESIGN	KWS	10/28/11

SEAL

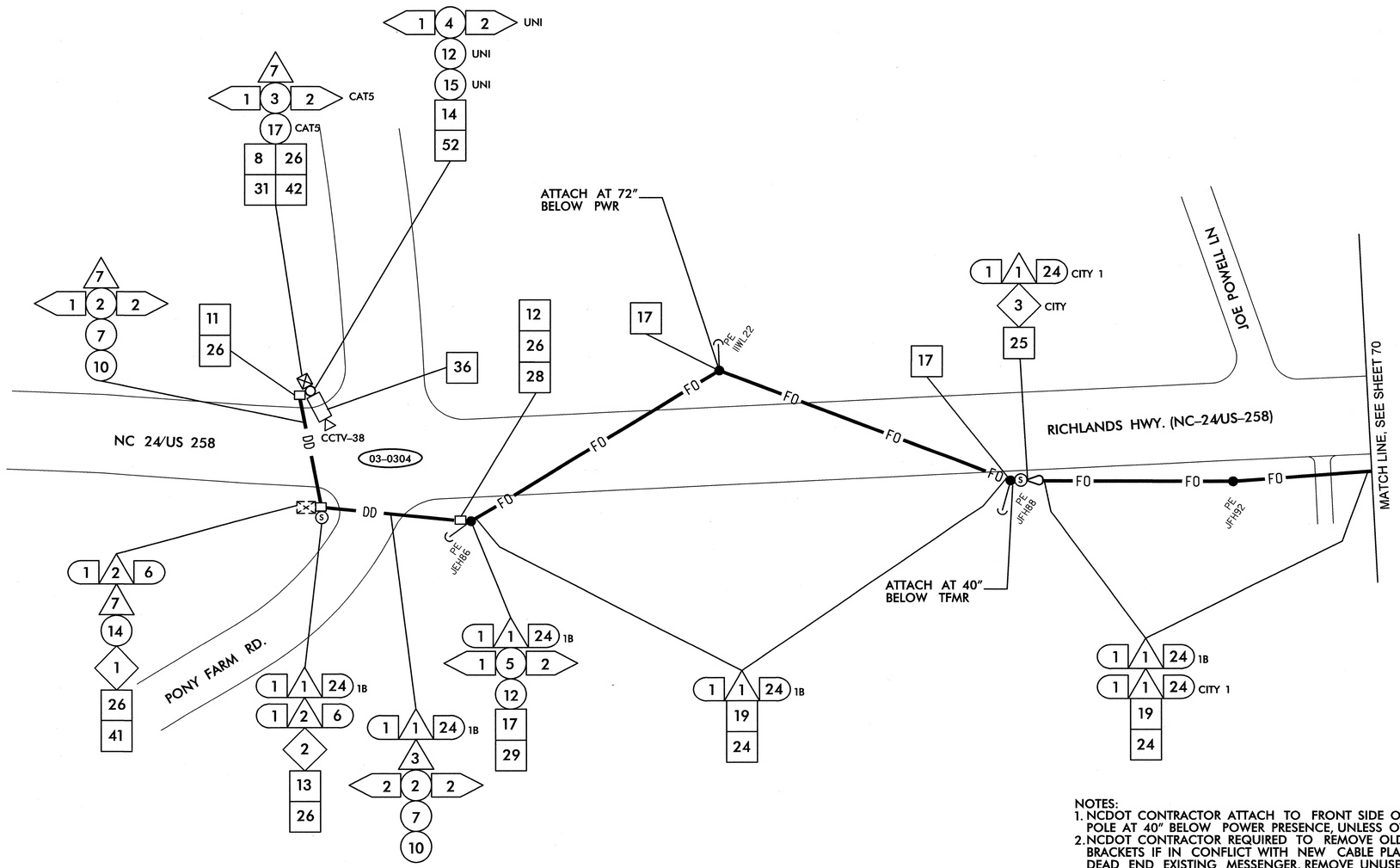
This document originally issued and sealed by Kevin W. Smith, 030472, on 07/20/11. This media shall not be considered a certified document.

SIGNATURE DATE

CADD Filename:

10/28/2011 $TIME$ jerry.cross ...#600 PS&E\WCAD\W28-068.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	69



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SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011		REVIEWED BY: K.W. SMITH	
PREPARED BY: S.P. PENNINGTON		REVIEWED BY: T.F. BURCHETT	
REVISIONS		INIT.	DATE

SEAL

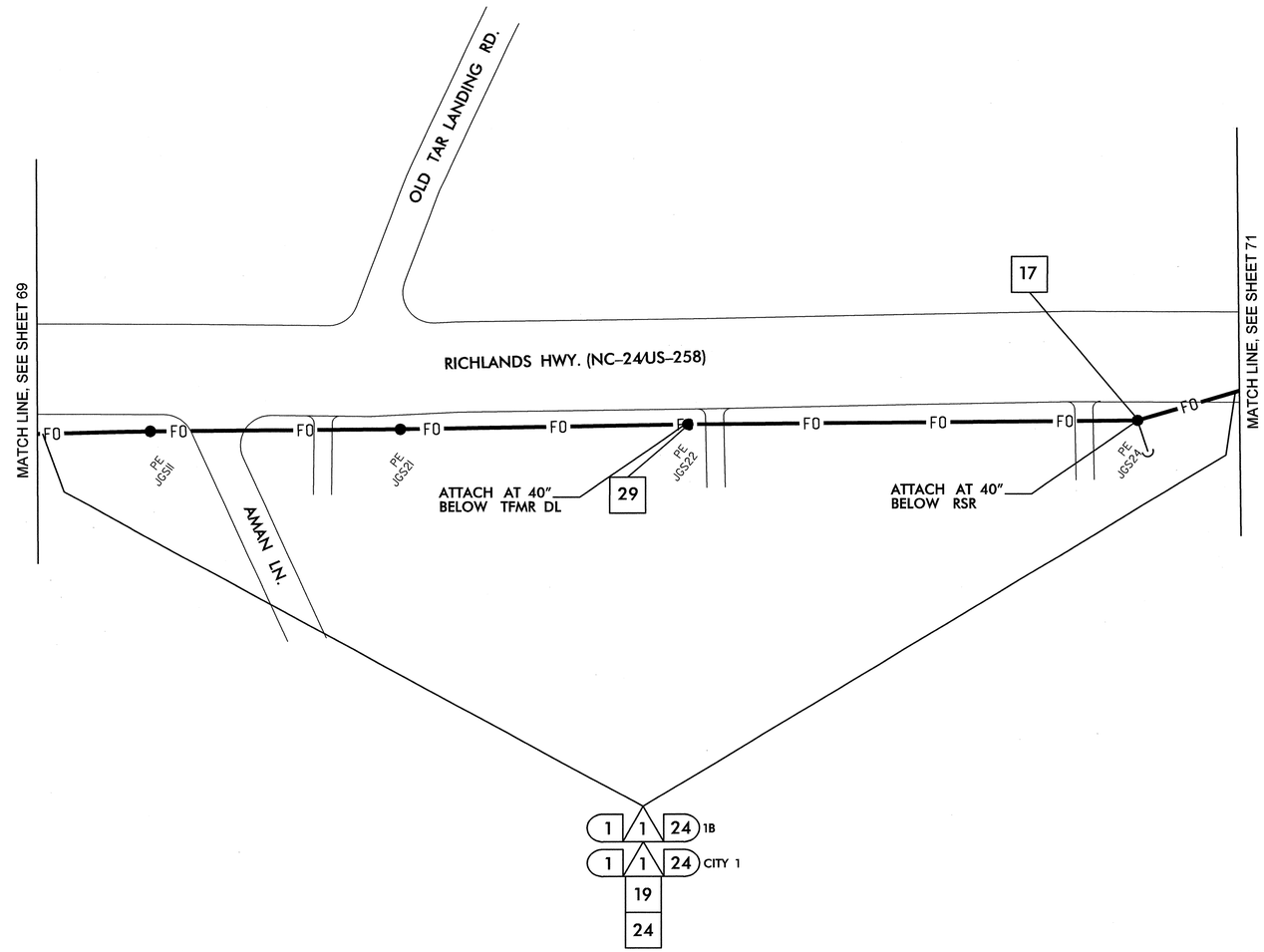
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE DATE 7-20-11

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSE#CADWCR-069.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	70



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SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011		REVIEWED BY: K.W. SMITH	
PREPARED BY: S.P. PENNINGTON		REVIEWED BY: T.F. BURCHETT	

REVISIONS	INIT.	DATE

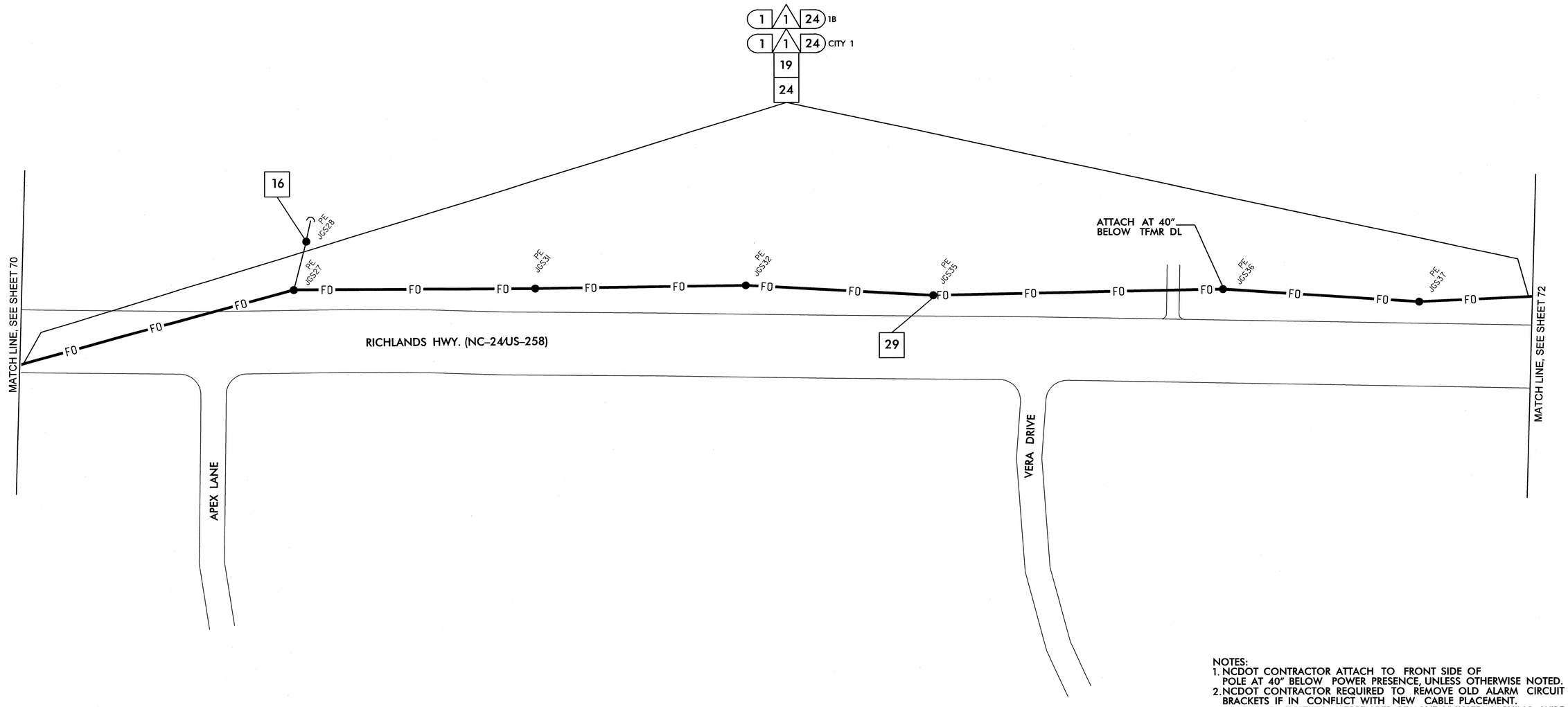
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filenames:

7/19/2011 $TIME$ susan.pennington ...\600 PSE&C\DWG\R-070.dgn



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CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
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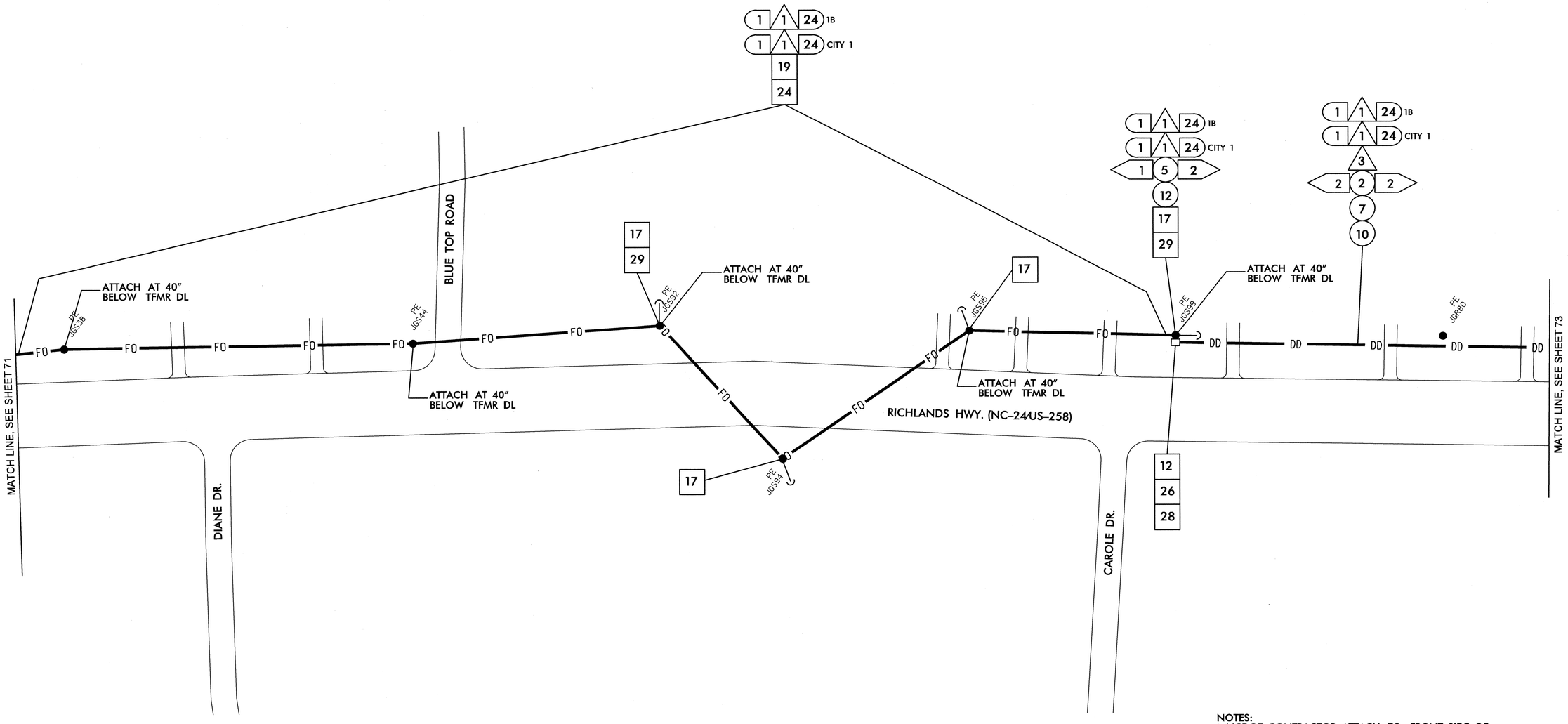
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSE#CADWCR-071.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	72



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4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY		
5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE				
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT				
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX				
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND								
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE								
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE								
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE								
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION								
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT								
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX								
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY								
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY								
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER												

PLANS PREPARED IN THE OFFICE OF:

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

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Mobility and Safety Division
Intelligent Transportation System Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

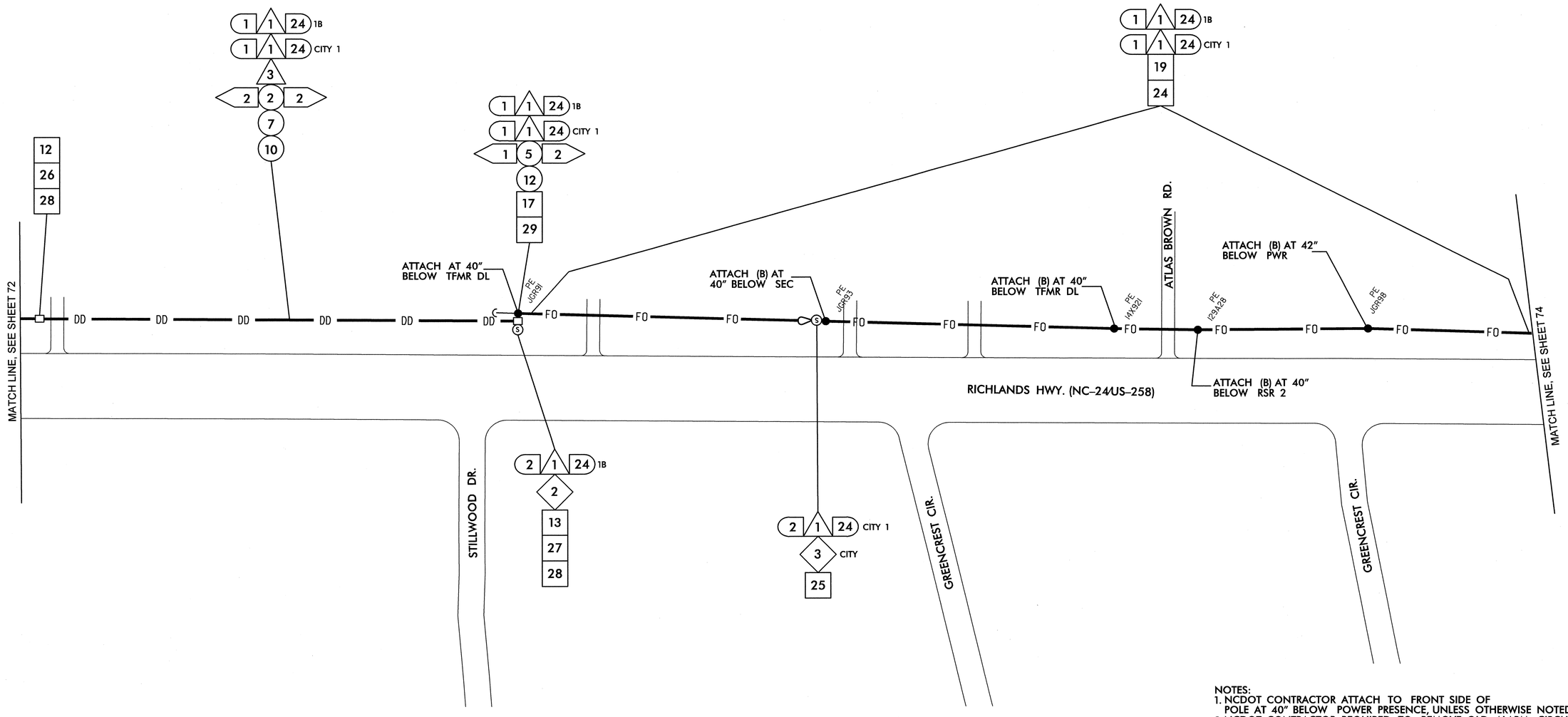
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...:\600 PSE\CAD\R28-072.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	73



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1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE		
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Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Integrated Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011 REVIEWED BY: K.W. SMITH

PREPARED BY: S.P. PENNINGTON REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

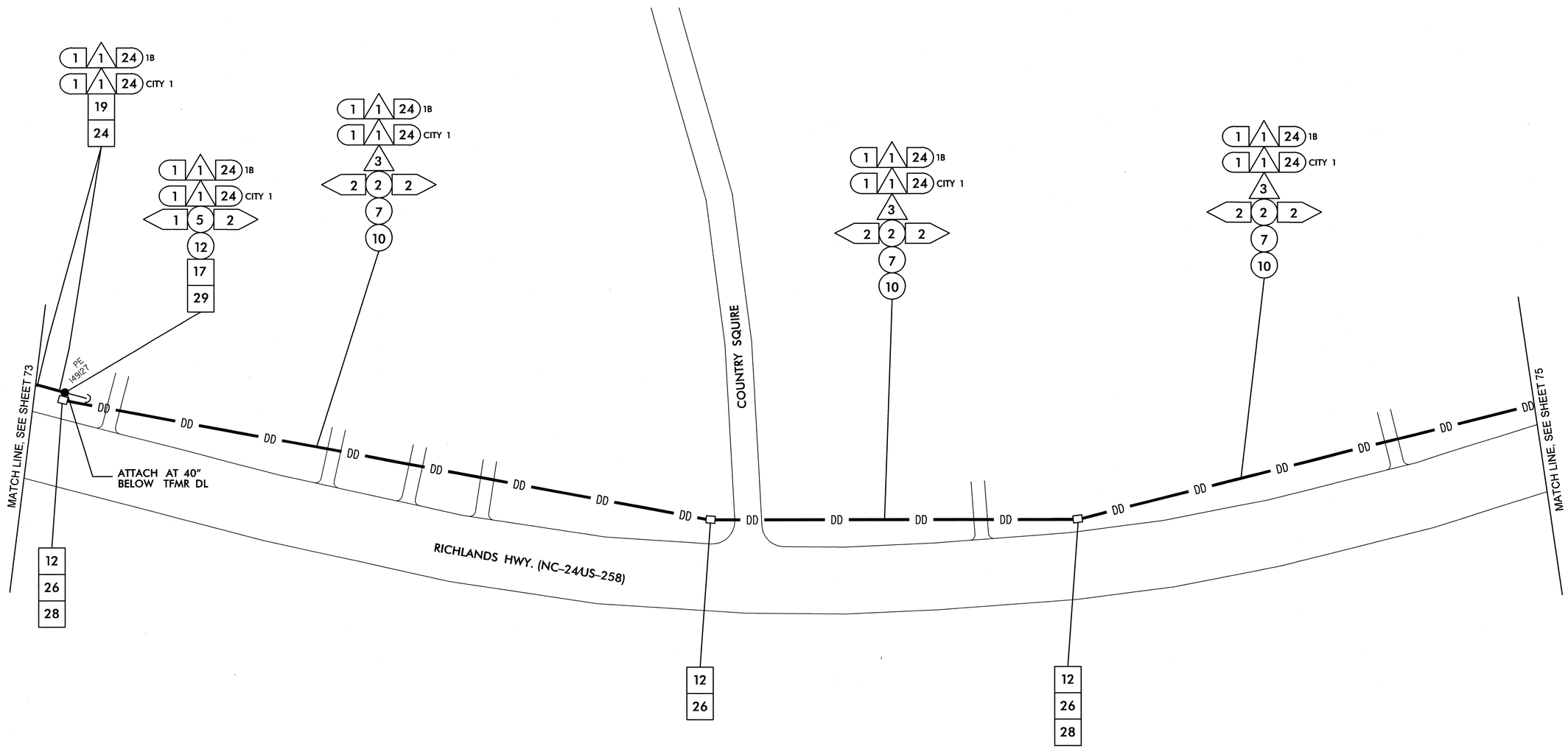
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSE&R\ADMCR-073.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	74



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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

Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

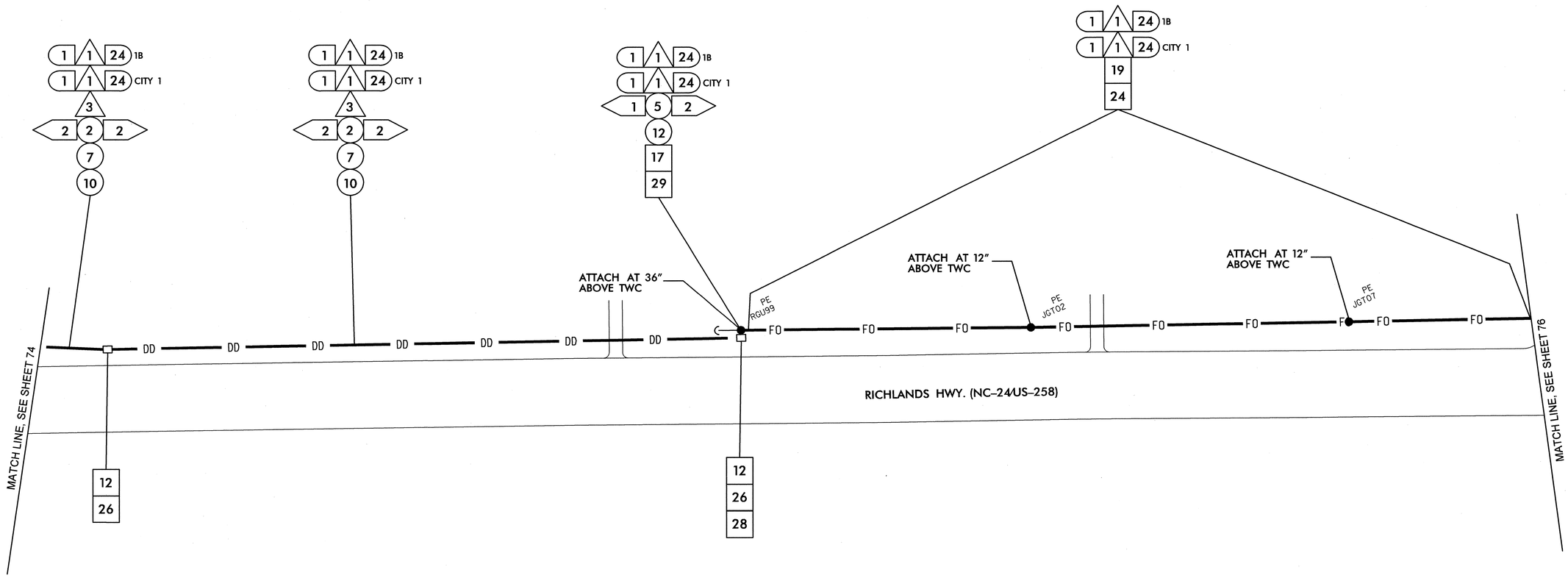
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...:\600 PSE\KJ\MCR-074.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	75



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1	INSTALL SMFO CABLE
2	INSTALL FIBER OPTIC DROP CABLE
3	INSTALL TRACER WIRE
4	REUSE EXISTING SMFO CABLE
5	INSTALL PLENUM RATED SMFO CABLE
6	INSTALL LOOP LEAD-IN CABLE
7	INSTALL ETHERNET CABLE
1	INSTALL PVC CONDUIT
2	INSTALL POLYETHYLENE CONDUIT
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
6	TRENCH CONDUIT
7	DIRECTIONAL DRILL CONDUIT
8	BORE AND JACK CONDUIT
9	INSTALL CABLE(S) IN EXISTING CONDUIT
10	INSTALL CABLE(S) IN NEW CONDUIT
11	INSTALL CABLE(S) IN EXISTING RISER
12	INSTALL CABLE(S) IN NEW RISER
13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS
14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)
15	INSTALL NEW RISER INTO POLE MOUNTED CABINET
16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET
1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2	INSTALL UNDERGROUND SPLICE ENCLOSURE
3	INSTALL AERIAL SPLICE ENCLOSURE
4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5	INSTALL TERMINAL SPLICE BOX
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION
3	MODIFY EXISTING CABINET FOUNDATION
4	REMOVE EXISTING CONTROLLER AND CABINET
5	INSTALL NEW CONTROLLER
6	INSTALL NEW 332 BASE MOUNTED CABINET
7	INSTALL NEW 336S BASE MOUNTED CABINET
8	INSTALL NEW 336S POLE MOUNTED CABINET
9	INSTALL BASE ADAPTER
10	INSTALL PRE-FORMED CABINET FOUNDATION PAD
11	INSTALL STANDARD JUNCTION BOX
12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
14	INSTALL WOOD POLE
15	REMOVE EXISTING WOOD POLE
16	INSTALL AERIAL GUY ASSEMBLY
17	INSTALL STANDARD GUY ASSEMBLY
18	INSTALL SIDEWALK GUY ASSEMBLY
19	INSTALL MESSENGER CABLE
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25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE
26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE
27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
28	INSTALL FIBER OPTIC DELINEATOR MARKER
29	BOND MESSENGER CABLE TO POLE GROUND
30	MODIFY EXISTING ELECTRICAL SERVICE
31	INSTALL NEW ELECTRICAL SERVICE
32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
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47	INSTALL YAGI ANTENNA
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PLANS PREPARED IN THE OFFICE OF:

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SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011 REVIEWED BY: K.W. SMITH

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REVISIONS	INIT.	DATE

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

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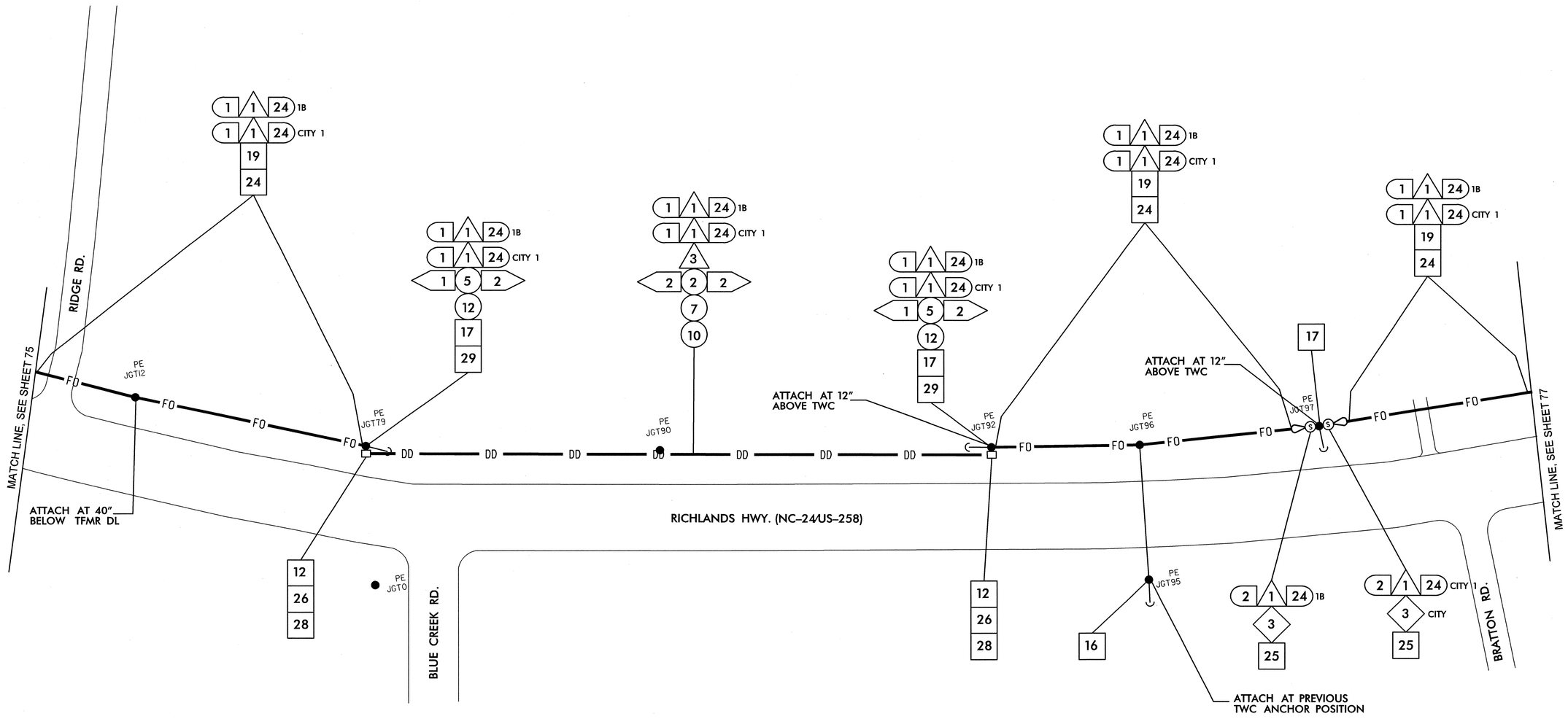
7/19/2011 $TIME$ susan.pennington ...#600 FS&E#CADWCR-075.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	76



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2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE						
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE						
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE						
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION						
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT						
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX						
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY						
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY						
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER										

PLANS PREPARED IN THE OFFICE OF:

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

Transportation Mobility and Safety Division
Intermodal Transportation Bureau Structures
DEPARTMENT OF TRANSPORTATION
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

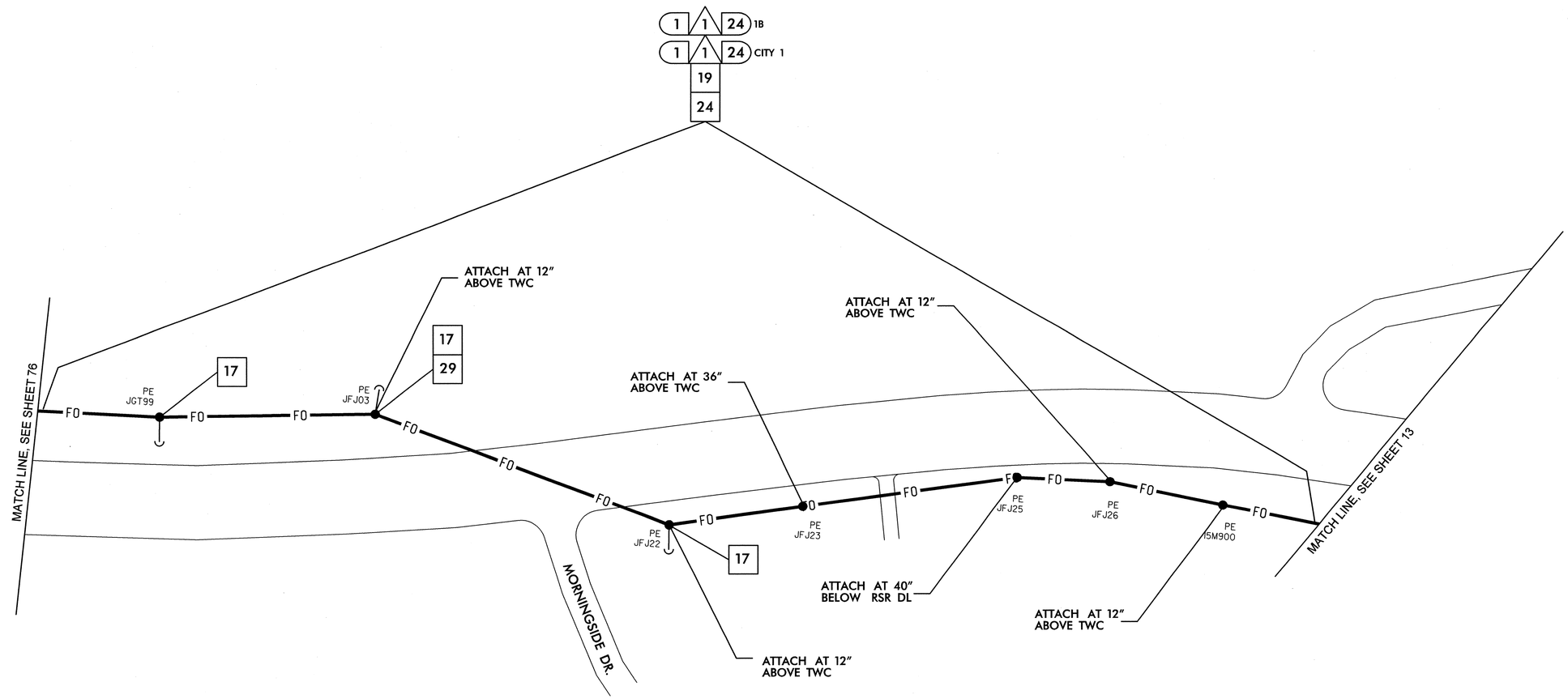
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...:\600 PSE\CJDNCR-076.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	77



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1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE		
2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE		
3	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA	54	INSTALL DMS CONTROLLER		
4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY		
5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE				
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT				
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX				
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PLANS PREPARED IN THE OFFICE OF:
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Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

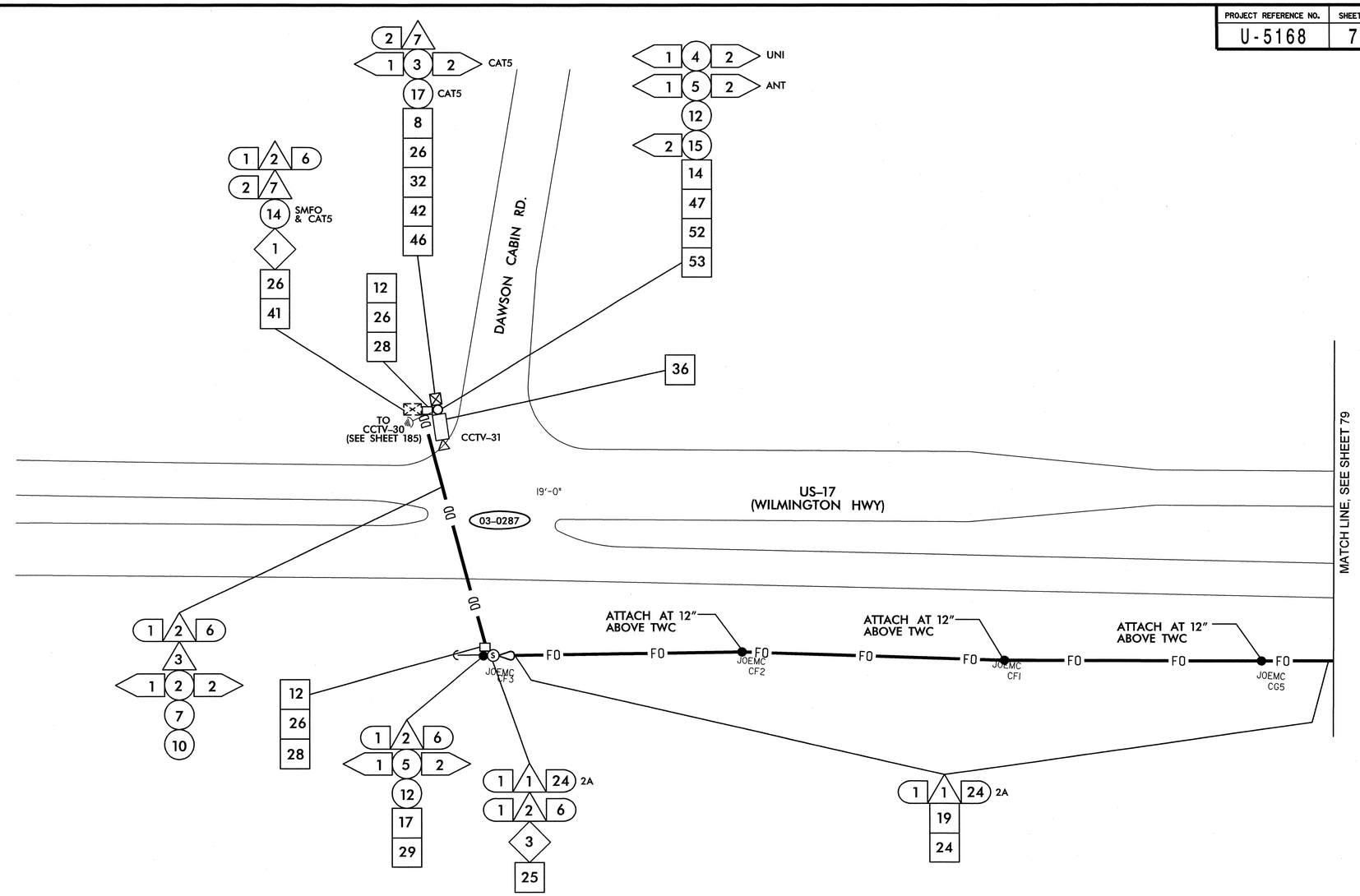
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...R600 PSAE#CADD#CR-077.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	78



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3	INSTALL TRACER WIRE
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5	INSTALL PLENUM RATED SMFO CABLE
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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	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5	INSTALL TERMINAL SPLICE BOX
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION
3	MODIFY EXISTING CABINET FOUNDATION
4	REMOVE EXISTING CONTROLLER AND CABINET
5	INSTALL NEW CONTROLLER
6	INSTALL NEW 332 BASE MOUNTED CABINET
7	INSTALL NEW 336S BASE MOUNTED CABINET
8	INSTALL NEW 336S POLE MOUNTED CABINET
9	INSTALL BASE ADAPTER
10	INSTALL PRE-FORMED CABINET FOUNDATION PAD
11	INSTALL STANDARD JUNCTION BOX
12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
14	INSTALL WOOD POLE
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35	RECONNECT GENERATOR POWER INLET BOX
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40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
41	INSTALL ETHERNET SWITCH
42	INSTALL VIDEO CODEC UNIT
43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER
44	INSTALL CELLULAR MODEM
45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)
46	INSTALL 2.45.8 GHz RADIO TRANSCEIVER
47	INSTALL PANEL ANTENNA
48	INSTALL OMNI-DIRECTIONAL ANTENNA
49	REMOVE EXISTING WIRELESS HARDWARE
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51	INSTALL NEW GENERATOR POWER INLET BOX
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55	INSTALL SOLAR POWER ASSEMBLY

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

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Mobility and Safety Division
Statewide Transportation Software Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011 REVIEWED BY: K.W. SMITH

PREPARED BY: S.P. PENNINGTON REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE
1 NEW WIRELESS RADIO DESIGN	KWS	10/28/11

SEAL

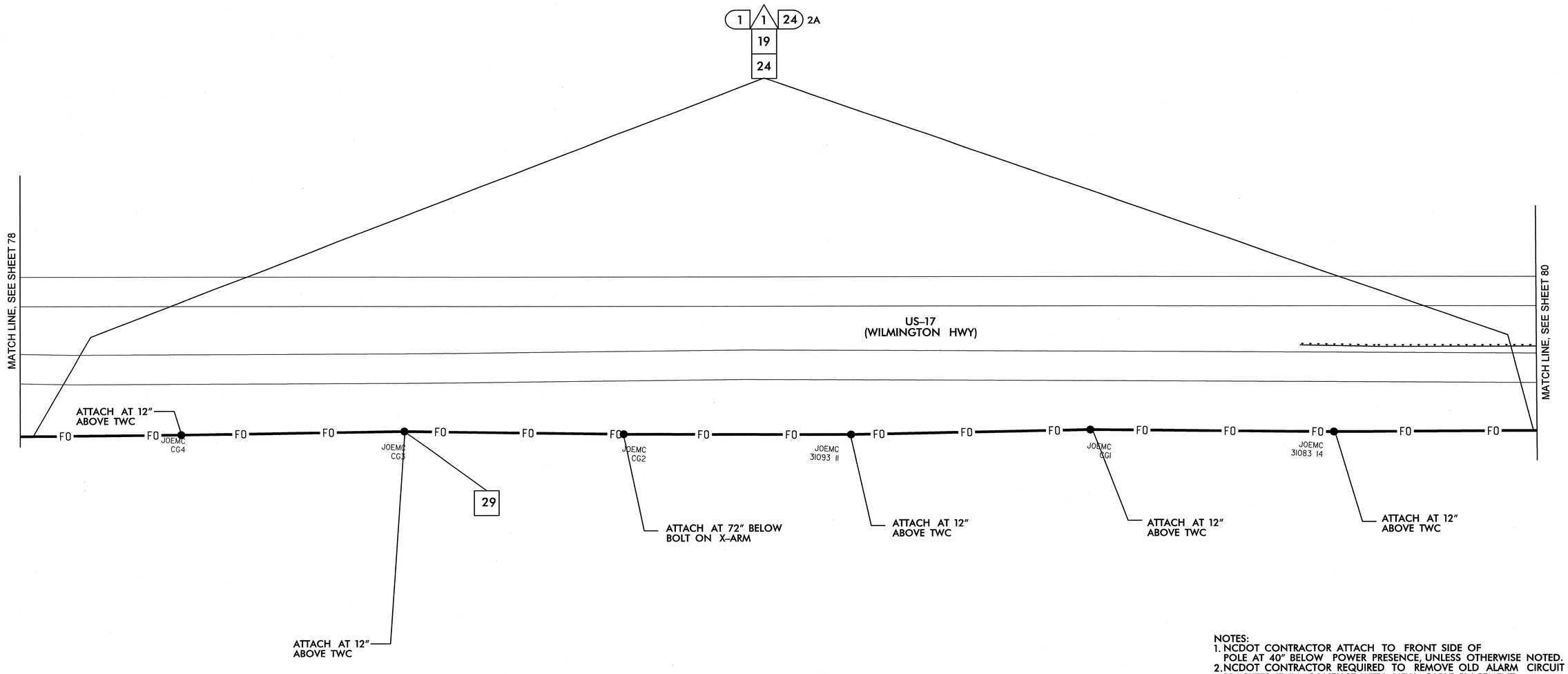
This document originally issued and sealed by Kevin W. Smith, 030472, on 07/20/11. This media shall not be considered a certified document.

SIGNATURE DATE

CADD Filename:

10/28/2011 $TIME$ jerry.cross ...*600 PSAE*CADMCR-078.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	79



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PLANS PREPARED IN THE OFFICE OF:
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SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

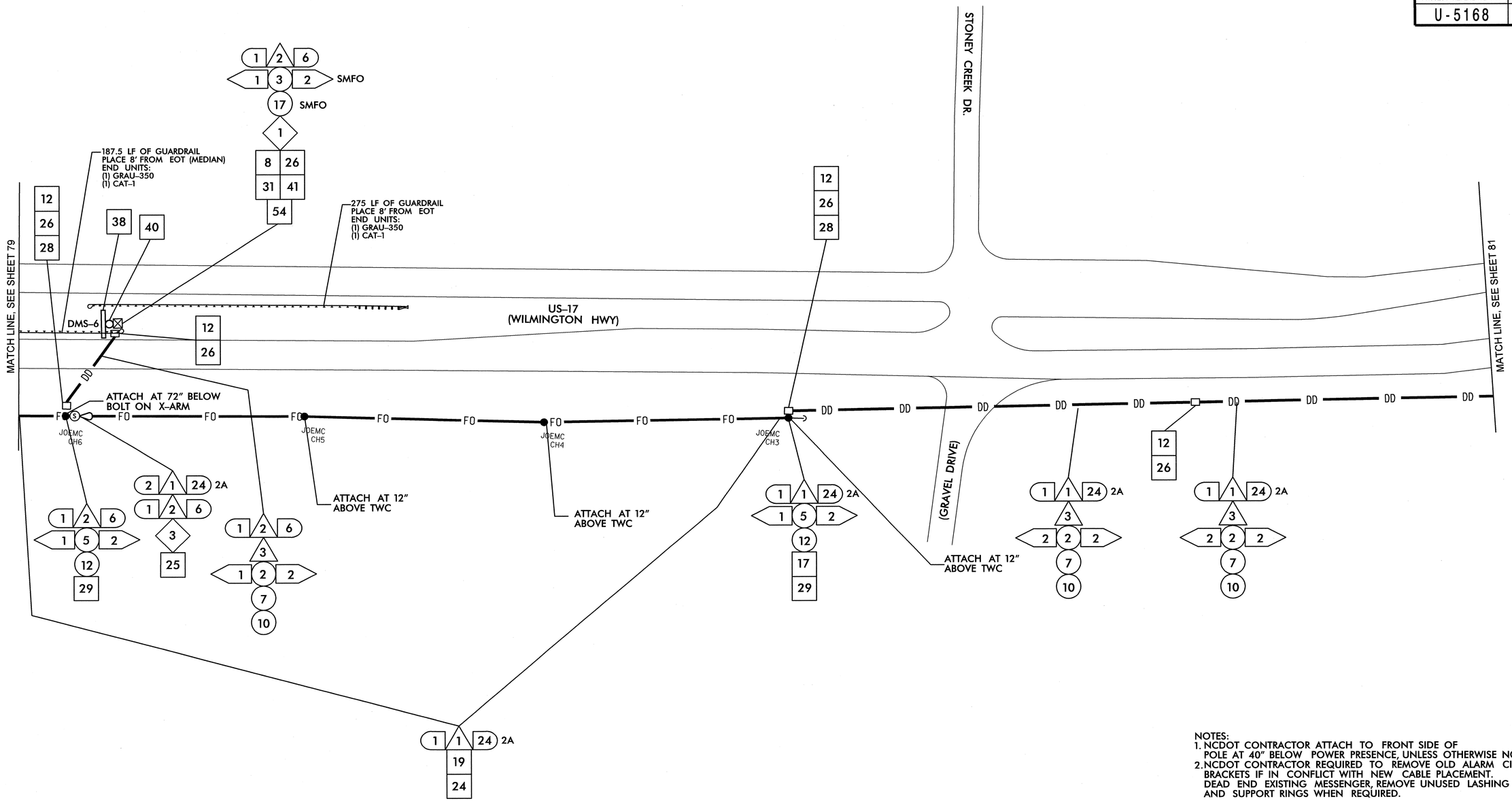
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSE#CADMCR-079.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	80



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52	INSTALL CCTV UNIFIED CABLE		
53	INSTALL ANTENNA CABLE		
54	INSTALL DMS CONTROLLER		
55	INSTALL SOLAR POWER ASSEMBLY		

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

750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011 REVIEWED BY: K.W. SMITH

PREPARED BY: S.P. PENNINGTON REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

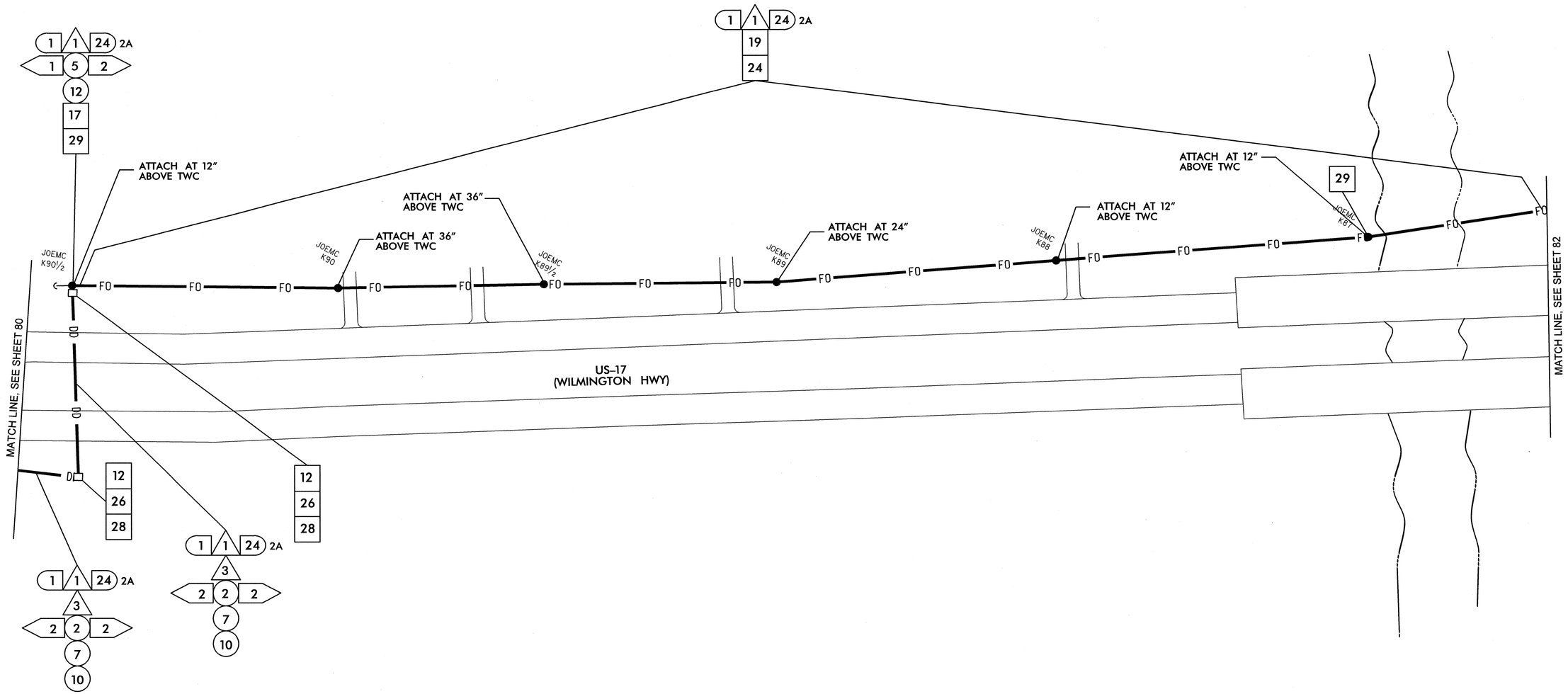
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...:\600 PSE\MCAD\MCT-080.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	81



NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.

1. INSTALL SMFO CABLE
2. INSTALL FIBER OPTIC DROP CABLE
3. INSTALL TRACER WIRE
4. REUSE EXISTING SMFO CABLE
5. INSTALL PLENUM RATED SMFO CABLE
6. INSTALL LOOP LEAD-IN CABLE
7. INSTALL ETHERNET CABLE
1. INSTALL PVC CONDUIT
2. INSTALL POLYETHYLENE CONDUIT
3. INSTALL RIGID, GALVANIZED STEEL CONDUIT
4. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5. INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
6. TRENCH CONDUIT
7. DIRECTIONAL DRILL CONDUIT
8. BORE AND JACK CONDUIT
9. INSTALL CABLE(S) IN EXISTING CONDUIT
10. INSTALL CABLE(S) IN NEW CONDUIT
11. INSTALL CABLE(S) IN EXISTING RISER
12. INSTALL CABLE(S) IN NEW RISER
13. INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS
14. INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)
15. INSTALL NEW RISER INTO POLE MOUNTED CABINET
16. REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
17. INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET
1. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2. INSTALL UNDERGROUND SPLICE ENCLOSURE
3. INSTALL AERIAL SPLICE ENCLOSURE
4. MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5. INSTALL TERMINAL SPLICE BOX
1. INSTALL CABINET FOUNDATION
2. REMOVE EXISTING CABINET FOUNDATION
3. MODIFY EXISTING CABINET FOUNDATION
4. REMOVE EXISTING CONTROLLER AND CABINET
5. INSTALL NEW CONTROLLER
6. INSTALL NEW 332 BASE MOUNTED CABINET
7. INSTALL NEW 336S BASE MOUNTED CABINET
8. INSTALL NEW 336S POLE MOUNTED CABINET
9. INSTALL BASE ADAPTER
10. INSTALL PRE-FORMED CABINET FOUNDATION PAD
11. INSTALL STANDARD JUNCTION BOX
12. INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
13. INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
14. INSTALL WOOD POLE
15. REMOVE EXISTING WOOD POLE
16. INSTALL AERIAL GUY ASSEMBLY
17. INSTALL STANDARD GUY ASSEMBLY
18. INSTALL SIDEWALK GUY ASSEMBLY
19. INSTALL MESSENGER CABLE
20. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
21. REMOVE EXISTING COMMUNICATIONS CABLE
22. LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
23. LASH CABLE(S) TO EXISTING MESSENGER CABLE
24. LASH CABLE(S) TO NEW MESSENGER CABLE
25. INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE
26. STORE 30 FEET OF EACH COMMUNICATIONS CABLE
27. STORE 100 FEET OF EACH COMMUNICATIONS CABLE
28. INSTALL FIBER OPTIC DELINEATOR MARKER
29. BOND MESSENGER CABLE TO POLE GROUND
30. MODIFY EXISTING ELECTRICAL SERVICE
31. INSTALL NEW ELECTRICAL SERVICE
32. INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
33. INSTALL GENERATOR ANCHOR IN FOUNDATION
34. RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
35. RECONNECT GENERATOR POWER INLET BOX
36. INSTALL CCTV CAMERA ASSEMBLY
37. INSTALL SMALL DMS ASSEMBLY
38. INSTALL LARGE DMS ASSEMBLY
39. INSTALL PEDESTAL STRUCTURE FOR SMALL DMS
40. INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
41. INSTALL ETHERNET SWITCH
42. INSTALL VIDEO CODEC UNIT
43. REMOVE EXISTING FIBER OPTIC TRANSCEIVER
44. INSTALL CELLULAR MODEM
45. INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)
46. INSTALL 2.4 GHz RADIO TRANSCEIVER
47. INSTALL YAGI ANTENNA
48. INSTALL OMNI-DIRECTIONAL ANTENNA
49. REMOVE EXISTING WIRELESS HARDWARE
50. INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
51. INSTALL NEW GENERATOR POWER INLET BOX
52. INSTALL CCTV UNIFIED CABLE
53. INSTALL ANTENNA CABLE
54. INSTALL DMS CONTROLLER
55. INSTALL SOLAR POWER ASSEMBLY

PLANS PREPARED IN THE OFFICE OF:
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Transportation Mobility and Safety Division
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

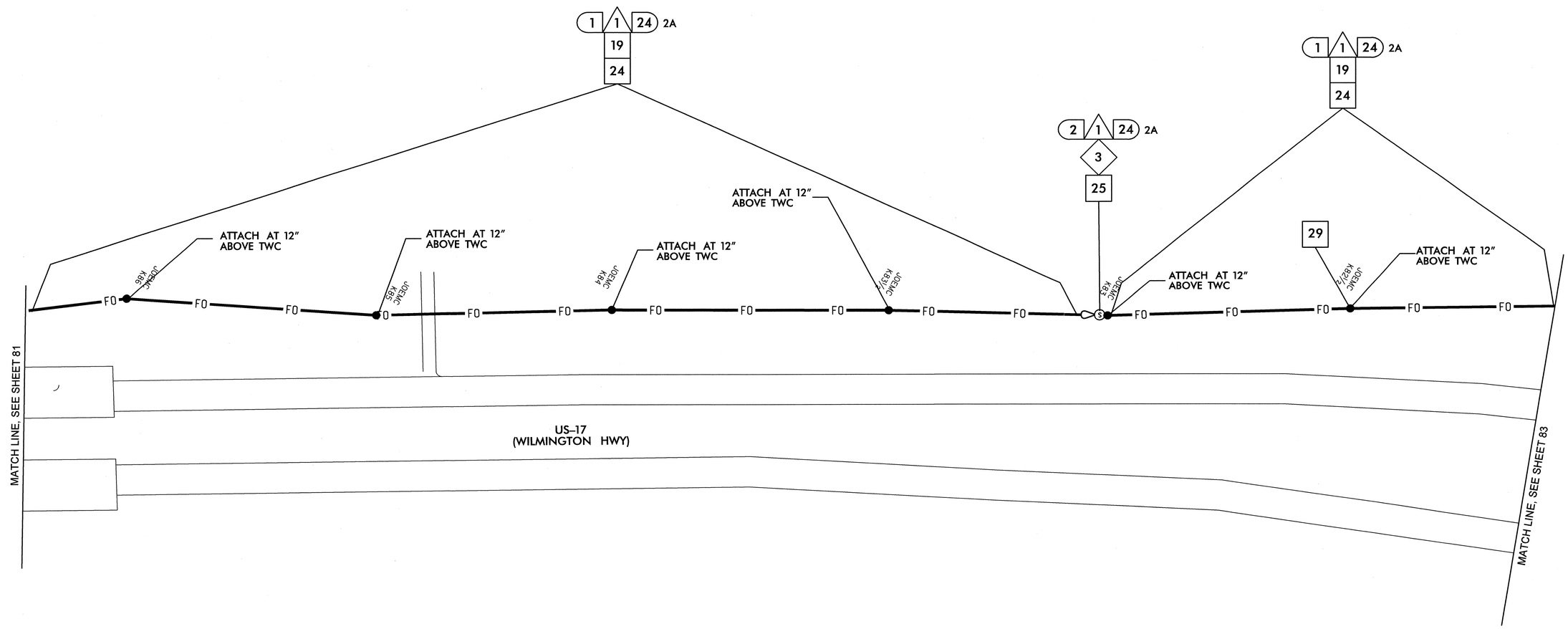
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSUE#CADWCR-081.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	82



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1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE		
2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE		
3	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA	54	INSTALL DMS CONTROLLER		
4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY		
5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE				
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT				
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX				
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND								
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE								
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE								
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE								
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION								
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT								
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX								
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY								
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY								
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER												

PLANS PREPARED IN THE OFFICE OF:

Kimley-Horn and Associates, Inc.
P.O. Box 33068
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750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011 REVIEWED BY: K.W. SMITH

PREPARED BY: S.P. PENNINGTON REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

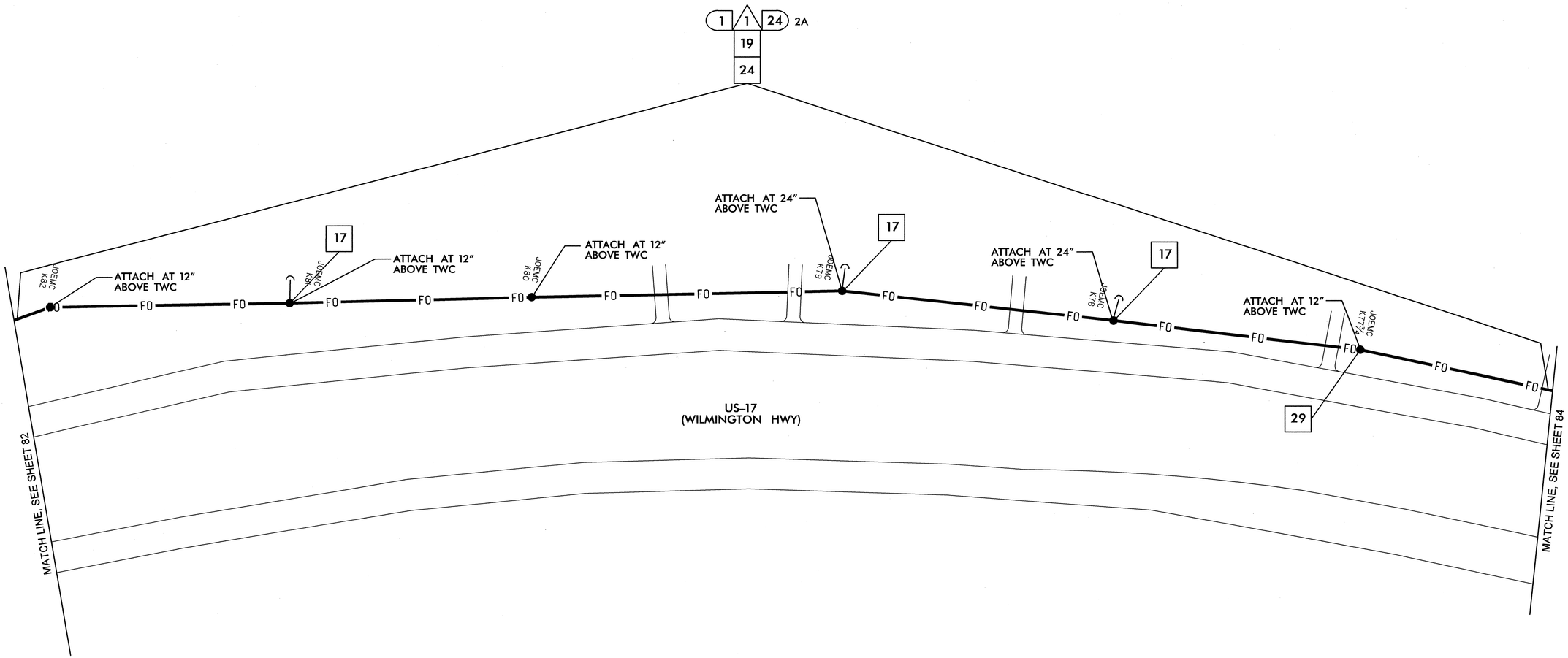
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PS&E\CADNCR-082.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	83



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PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
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SCALE 0 50

Transportation Mobility and Safety Division
Intelligent Transportation Systems Section
DEPARTMENT OF TRANSPORTATION
750 N. Greenfield Pkwy., Garner, NC 27529

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

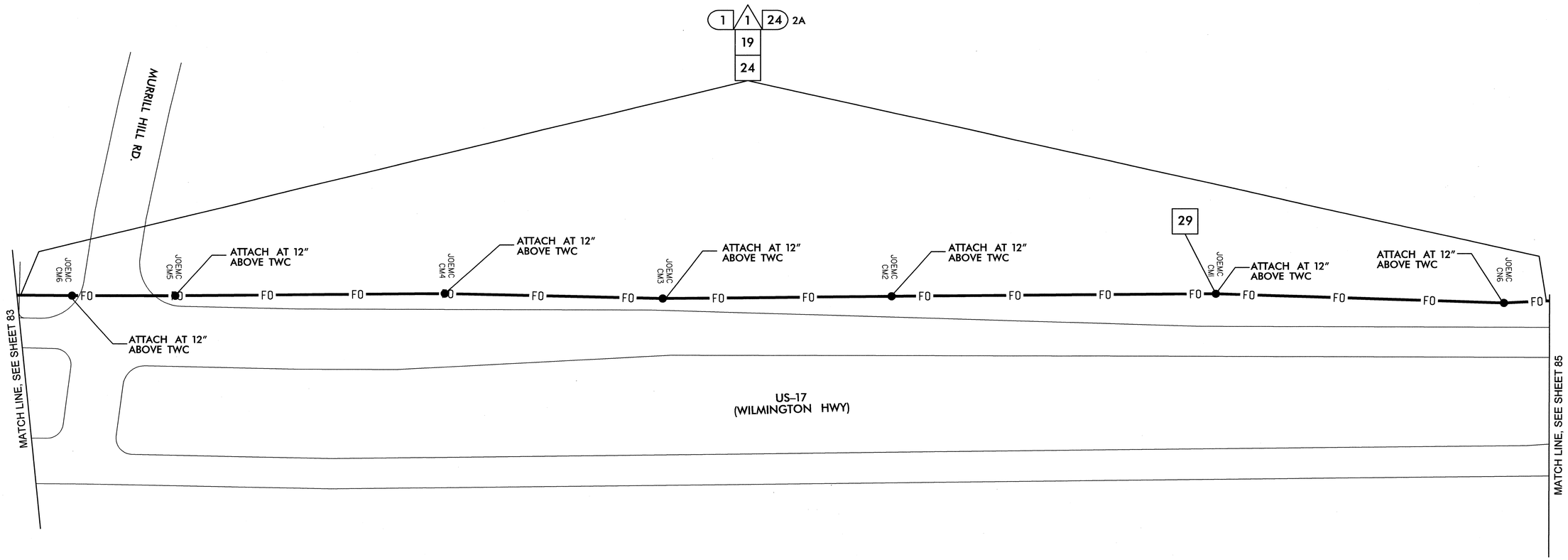
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSEMCADWCR-083.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	84



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Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intermodal Transportation Bypass Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

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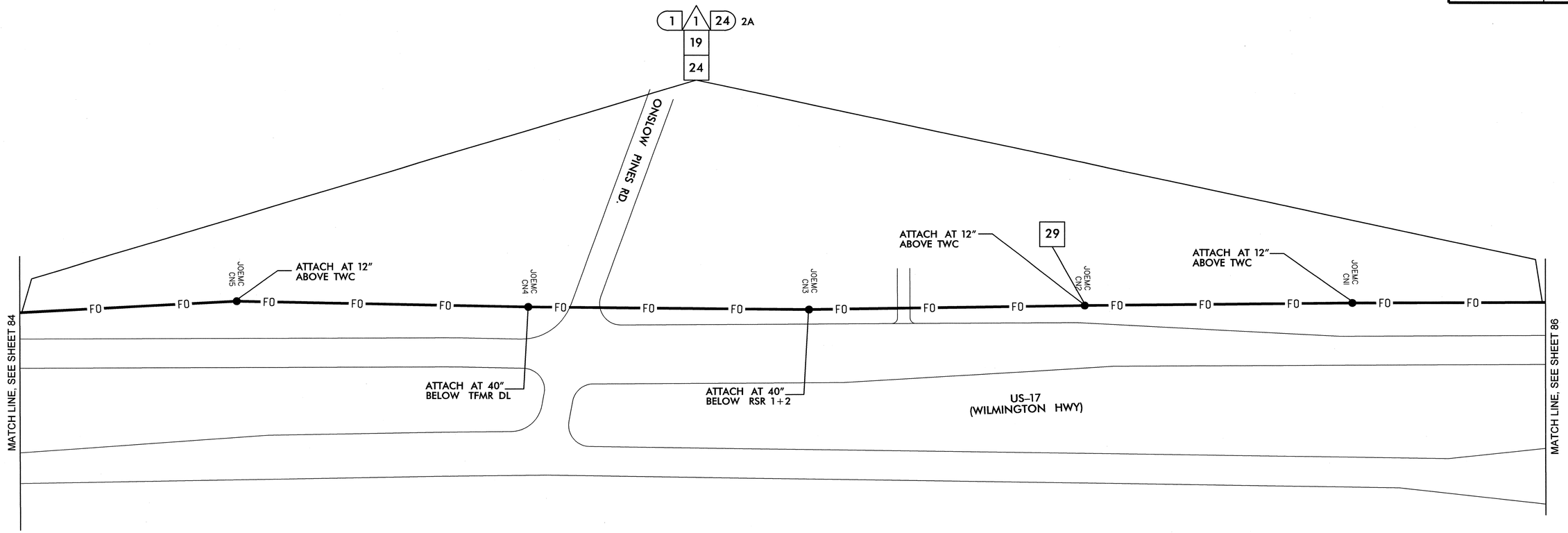
PROJECT REFERENCE NO.	SHEET NO.
U-5168	85



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1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE				
2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE				
3	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA	54	INSTALL DMS CONTROLLER				
4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY				
5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE						
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT						
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX						
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND										
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE										
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE										
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE										
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION										
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT										
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX										
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY										
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY										
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER														

PLANS PREPARED IN THE OFFICE OF:

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

Preservation, Mobility, and Safety through Innovative Transportation Science Solutions
INSTITUTE OF TRANSPORTATION RESEARCH & EDUCATION
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

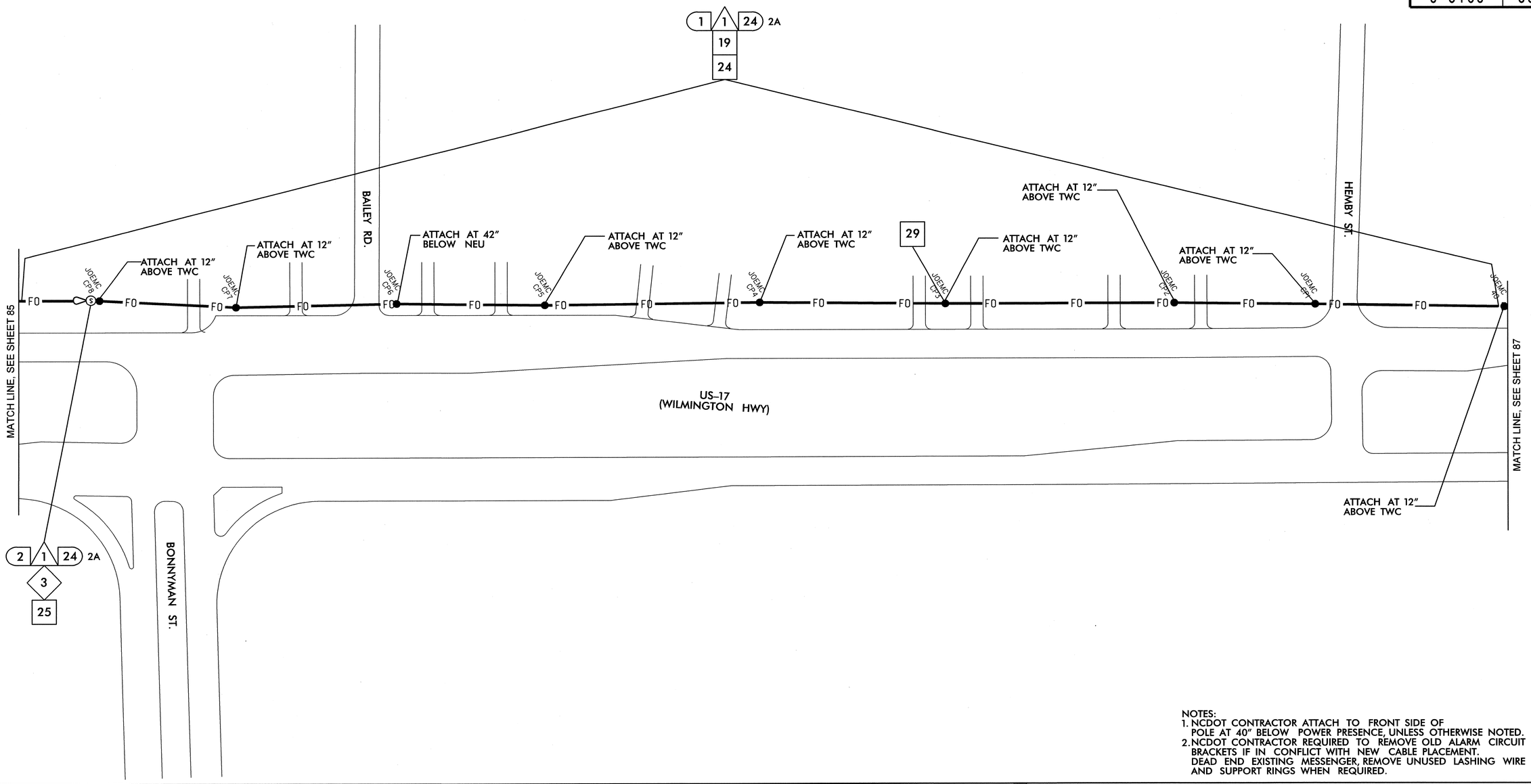
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSE=CADWCR-085.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	86



NOTES:
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2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.

1	INSTALL SMFO CABLE
2	INSTALL FIBER OPTIC DROP CABLE
3	INSTALL TRACER WIRE
4	REUSE EXISTING SMFO CABLE
5	INSTALL PLENUM RATED SMFO CABLE
6	INSTALL LOOP LEAD-IN CABLE
7	INSTALL ETHERNET CABLE
1	INSTALL PVC CONDUIT
2	INSTALL POLYETHYLENE CONDUIT
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
6	TRENCH CONDUIT
7	DIRECTIONAL DRILL CONDUIT
8	BORE AND JACK CONDUIT
9	INSTALL CABLE(S) IN EXISTING CONDUIT
10	INSTALL CABLE(S) IN NEW CONDUIT
11	INSTALL CABLE(S) IN EXISTING RISER
12	INSTALL CABLE(S) IN NEW RISER
13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS
14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)
15	INSTALL NEW RISER INTO POLE MOUNTED CABINET
16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET
1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2	INSTALL UNDERGROUND SPLICE ENCLOSURE
3	INSTALL AERIAL SPLICE ENCLOSURE
4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5	INSTALL TERMINAL SPLICE BOX
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION
3	MODIFY EXISTING CABINET FOUNDATION
4	REMOVE EXISTING CONTROLLER AND CABINET
5	INSTALL NEW CONTROLLER
6	INSTALL NEW 332 BASE MOUNTED CABINET
7	INSTALL NEW 336S BASE MOUNTED CABINET
8	INSTALL NEW 336S POLE MOUNTED CABINET
9	INSTALL BASE ADAPTER
10	INSTALL PRE-FORMED CABINET FOUNDATION PAD
11	INSTALL STANDARD JUNCTION BOX
12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
14	INSTALL WOOD POLE
15	REMOVE EXISTING WOOD POLE
16	INSTALL AERIAL GUY ASSEMBLY
17	INSTALL STANDARD GUY ASSEMBLY
18	INSTALL SIDEWALK GUY ASSEMBLY
19	INSTALL MESSENGER CABLE
20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
21	REMOVE EXISTING COMMUNICATIONS CABLE
22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
23	LASH CABLE(S) TO EXISTING MESSENGER CABLE
24	LASH CABLE(S) TO NEW MESSENGER CABLE
25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE
26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE
27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
28	INSTALL FIBER OPTIC DELINEATOR MARKER
29	BOND MESSENGER CABLE TO POLE GROUND
30	MODIFY EXISTING ELECTRICAL SERVICE
31	INSTALL NEW ELECTRICAL SERVICE
32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
33	INSTALL GENERATOR ANCHOR IN FOUNDATION
34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
35	RECONNECT GENERATOR POWER INLET BOX
36	INSTALL CCTV CAMERA ASSEMBLY
37	INSTALL SMALL DMS ASSEMBLY
38	INSTALL LARGE DMS ASSEMBLY
39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS
40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
41	INSTALL ETHERNET SWITCH
42	INSTALL VIDEO CODEC UNIT
43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER
44	INSTALL CELLULAR MODEM
45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)
46	INSTALL 2.4 GHz RADIO TRANSCEIVER
47	INSTALL YAGI ANTENNA
48	INSTALL OMNI-DIRECTIONAL ANTENNA
49	REMOVE EXISTING WIRELESS HARDWARE
50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
51	INSTALL NEW GENERATOR POWER INLET BOX
52	INSTALL CCTV UNIFIED CABLE
53	INSTALL ANTENNA CABLE
54	INSTALL DMS CONTROLLER
55	INSTALL SOLAR POWER ASSEMBLY

PLANS PREPARED IN THE OFFICE OF:

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

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Mobility and Safety Division
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011 REVIEWED BY: K.W. SMITH

PREPARED BY: S.P. PENNINGTON REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

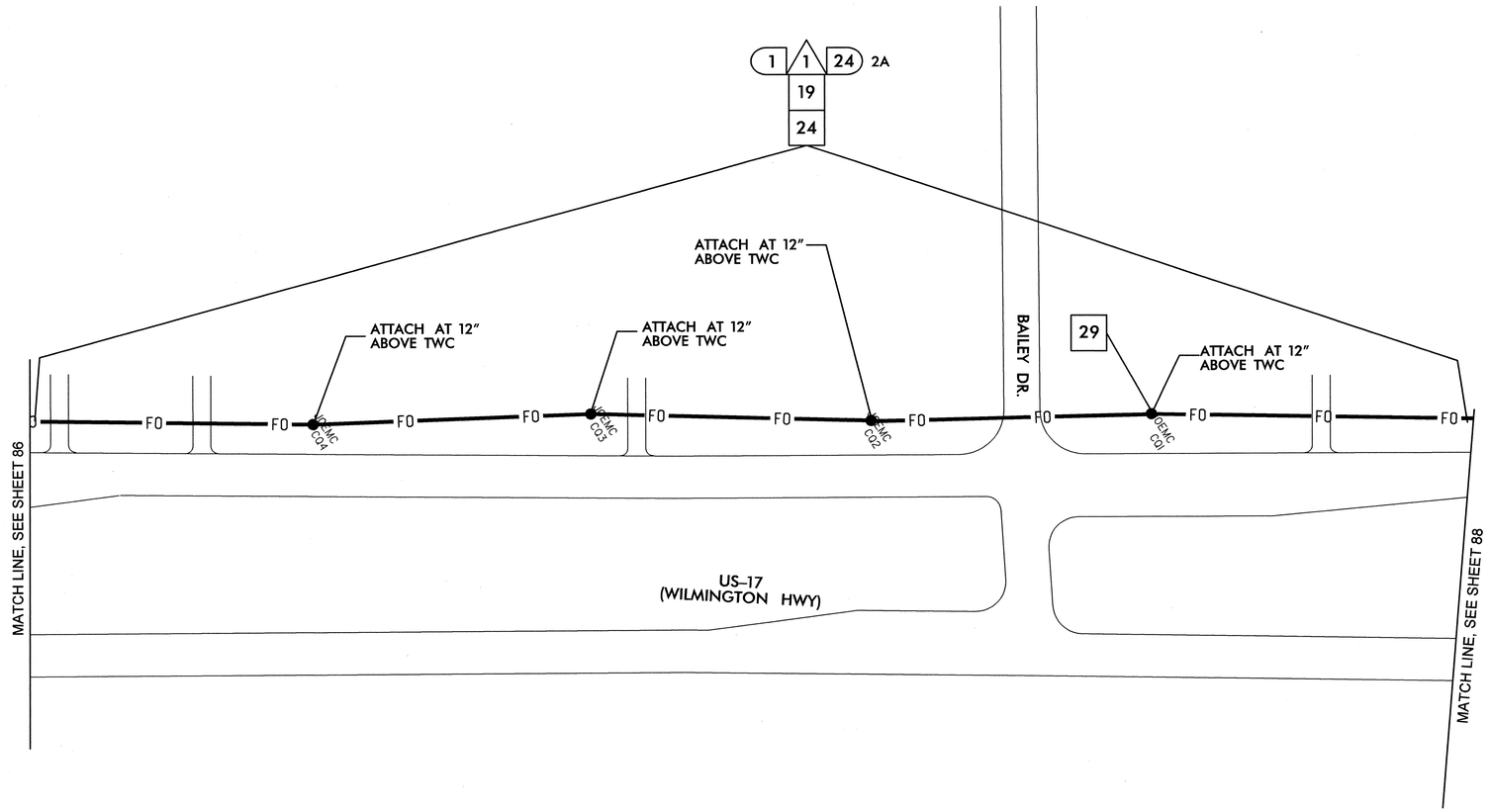
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filenames:

7/19/2011 $TIME$ susan.pennington ...*600 PSAE*CAD*CR-086.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	87



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1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE
2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE
3	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA	54	INSTALL DMS CONTROLLER
4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY
5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE		
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT		
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX		
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND						
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE						
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE						
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE						
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION						
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT						
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX						
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY						
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY						
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER										

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

Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Management System Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

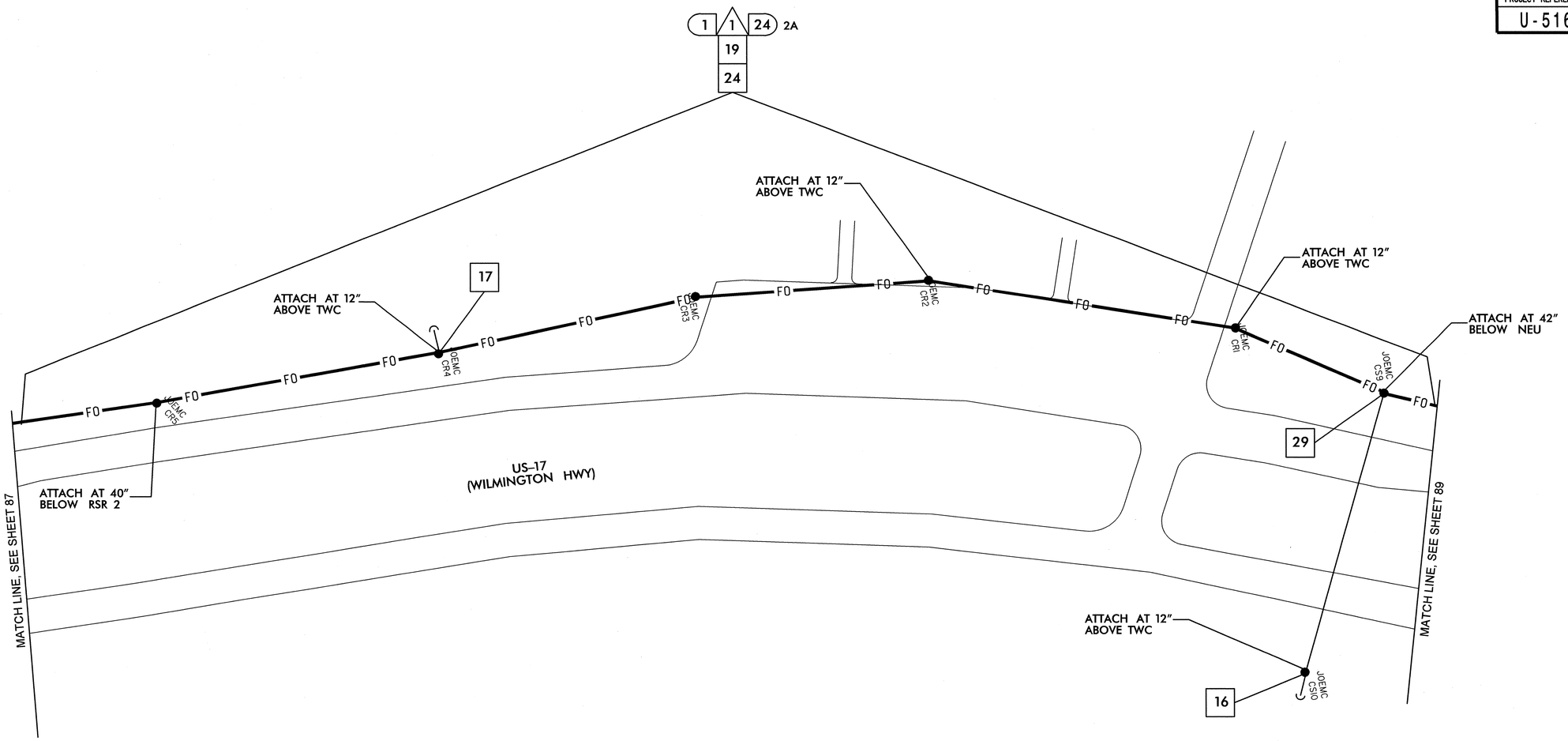
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...\600 PSE\CADWCR-087.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	88



NOTES:
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2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.

1. INSTALL SMFO CABLE
2. INSTALL FIBER OPTIC DROP CABLE
3. INSTALL TRACER WIRE
4. REUSE EXISTING SMFO CABLE
5. INSTALL PLENUM RATED SMFO CABLE
6. INSTALL LOOP LEAD-IN CABLE
7. INSTALL ETHERNET CABLE
1. INSTALL PVC CONDUIT
2. INSTALL POLYETHYLENE CONDUIT
3. INSTALL RIGID, GALVANIZED STEEL CONDUIT
4. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5. INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
6. TRENCH CONDUIT
7. DIRECTIONAL DRILL CONDUIT
8. BORE AND JACK CONDUIT
9. INSTALL CABLE(S) IN EXISTING CONDUIT
10. INSTALL CABLE(S) IN NEW CONDUIT
11. INSTALL CABLE(S) IN EXISTING RISER
12. INSTALL CABLE(S) IN NEW RISER
13. INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS
14. INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)
15. INSTALL NEW RISER INTO POLE MOUNTED CABINET
16. REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
17. INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET
1. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2. INSTALL UNDERGROUND SPLICE ENCLOSURE
3. INSTALL AERIAL SPLICE ENCLOSURE
4. MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5. INSTALL TERMINAL SPLICE BOX
1. INSTALL CABINET FOUNDATION
2. REMOVE EXISTING CABINET FOUNDATION
3. MODIFY EXISTING CABINET FOUNDATION
4. REMOVE EXISTING CONTROLLER AND CABINET
5. INSTALL NEW CONTROLLER
6. INSTALL NEW 332 BASE MOUNTED CABINET
7. INSTALL NEW 336S BASE MOUNTED CABINET
8. INSTALL NEW 336S POLE MOUNTED CABINET
9. INSTALL BASE ADAPTER
10. INSTALL PRE-FORMED CABINET FOUNDATION PAD
11. INSTALL STANDARD JUNCTION BOX
12. INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
13. INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
14. INSTALL WOOD POLE
15. REMOVE EXISTING WOOD POLE
16. INSTALL AERIAL GUY ASSEMBLY
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18. INSTALL SIDEWALK GUY ASSEMBLY
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21. REMOVE EXISTING COMMUNICATIONS CABLE
22. LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
23. LASH CABLE(S) TO EXISTING MESSENGER CABLE
24. LASH CABLE(S) TO NEW MESSENGER CABLE
25. INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE
26. STORE 30 FEET OF EACH COMMUNICATIONS CABLE
27. STORE 100 FEET OF EACH COMMUNICATIONS CABLE
28. INSTALL FIBER OPTIC DELINEATOR MARKER
29. BOND MESSENGER CABLE TO POLE GROUND
30. MODIFY EXISTING ELECTRICAL SERVICE
31. INSTALL NEW ELECTRICAL SERVICE
32. INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
33. INSTALL GENERATOR ANCHOR IN FOUNDATION
34. RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
35. RECONNECT GENERATOR POWER INLET BOX
36. INSTALL CCTV CAMERA ASSEMBLY
37. INSTALL SMALL DMS ASSEMBLY
38. INSTALL LARGE DMS ASSEMBLY
39. INSTALL PEDESTAL STRUCTURE FOR SMALL DMS
40. INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
41. INSTALL ETHERNET SWITCH
42. INSTALL VIDEO CODEC UNIT
43. REMOVE EXISTING FIBER OPTIC TRANSCEIVER
44. INSTALL CELLULAR MODEM
45. INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)
46. INSTALL 2.4 GHz RADIO TRANSCEIVER
47. INSTALL YAGI ANTENNA
48. INSTALL OMNI-DIRECTIONAL ANTENNA
49. REMOVE EXISTING WIRELESS HARDWARE
50. INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
51. INSTALL NEW GENERATOR POWER INLET BOX
52. INSTALL CCTV UNIFIED CABLE
53. INSTALL ANTENNA CABLE
54. INSTALL DMS CONTROLLER
55. INSTALL SOLAR POWER ASSEMBLY

PLANS PREPARED IN THE OFFICE OF:
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STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Mobility and Safety Division
Intermodal Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

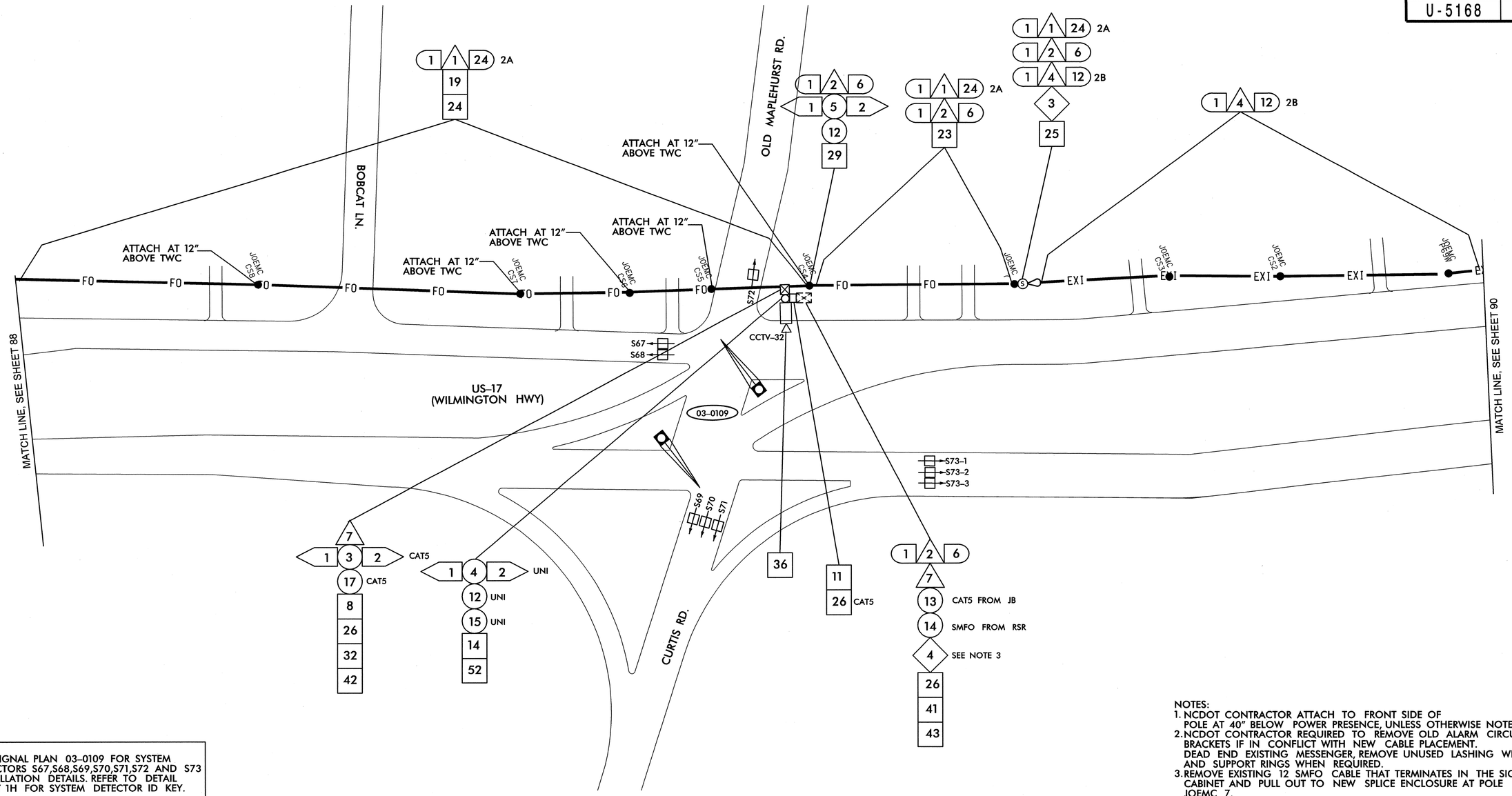
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...\R500 PSAE\CADD\R-088.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	89



SEE SIGNAL PLAN 03-0109 FOR SYSTEM DETECTORS S67,S68,S69,S70,S71,S72 AND S73 INSTALLATION DETAILS. REFER TO DETAIL SHEET 1H FOR SYSTEM DETECTOR ID KEY.

NOTES:
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3. REMOVE EXISTING 12 SMFO CABLE THAT TERMINATES IN THE SIGNAL CABINET AND PULL OUT TO NEW SPLICE ENCLOSURE AT POLE JOEMC 7.

1 INSTALL SMFO CABLE	11 INSTALL CABLE(S) IN EXISTING RISER	6 INSTALL NEW 332 BASE MOUNTED CABINET	22 LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38 INSTALL LARGE DMS ASSEMBLY	45 INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52 INSTALL CCTV UNIFIED CABLE	
2 INSTALL FIBER OPTIC DROP CABLE	12 INSTALL CABLE(S) IN NEW RISER	7 INSTALL NEW 336S BASE MOUNTED CABINET	23 LASH CABLE(S) TO EXISTING MESSENGER CABLE	39 INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46 INSTALL 2.4 GHz RADIO TRANSCEIVER	53 INSTALL ANTENNA CABLE	
3 INSTALL TRACER WIRE	13 INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8 INSTALL NEW 336S POLE MOUNTED CABINET	24 LASH CABLE(S) TO NEW MESSENGER CABLE	40 INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47 INSTALL YAGI ANTENNA	54 INSTALL DMS CONTROLLER	
4 REUSE EXISTING SMFO CABLE	14 INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9 INSTALL BASE ADAPTER	25 INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41 INSTALL ETHERNET SWITCH	48 INSTALL OMNI-DIRECTIONAL ANTENNA	55 INSTALL SOLAR POWER ASSEMBLY	
5 INSTALL PLENUM RATED SMFO CABLE	15 INSTALL NEW RISER INTO POLE MOUNTED CABINET	10 INSTALL PRE-FORMED CABINET FOUNDATION PAD	26 STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42 INSTALL VIDEO CODEC UNIT	49 REMOVE EXISTING WIRELESS HARDWARE		
6 INSTALL LOOP LEAD-IN CABLE	16 REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11 INSTALL STANDARD JUNCTION BOX	27 STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43 REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50 INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT		
7 INSTALL ETHERNET CABLE	17 INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12 INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28 INSTALL FIBER OPTIC DELINEATOR MARKER	44 INSTALL CELLULAR MODEM	51 INSTALL NEW GENERATOR POWER INLET BOX		
1 INSTALL PVC CONDUIT	1 INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13 INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29 BOND MESSENGER CABLE TO POLE GROUND				
2 INSTALL POLYETHYLENE CONDUIT	2 INSTALL UNDERGROUND SPLICE ENCLOSURE	14 INSTALL WOOD POLE	30 MODIFY EXISTING ELECTRICAL SERVICE				
3 INSTALL RIGID, GALVANIZED STEEL CONDUIT	3 INSTALL AERIAL SPLICE ENCLOSURE	15 REMOVE EXISTING WOOD POLE	31 INSTALL NEW ELECTRICAL SERVICE				
4 INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4 MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16 INSTALL AERIAL GUY ASSEMBLY	32 INSTALL POWER FROM EXISTING ELECTRICAL SERVICE				
5 INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5 INSTALL TERMINAL SPLICE BOX	17 INSTALL STANDARD GUY ASSEMBLY	33 INSTALL GENERATOR ANCHOR IN FOUNDATION				
6 TRENCH CONDUIT	1 INSTALL CABINET FOUNDATION	18 INSTALL SIDEWALK GUY ASSEMBLY	34 RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT				
7 DIRECTIONAL DRILL CONDUIT	2 REMOVE EXISTING CABINET FOUNDATION	19 INSTALL MESSENGER CABLE	35 RECONNECT GENERATOR POWER INLET BOX				
8 BORE AND JACK CONDUIT	3 MODIFY EXISTING CABINET FOUNDATION	20 REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36 INSTALL CCTV CAMERA ASSEMBLY				
9 INSTALL CABLE(S) IN EXISTING CONDUIT	4 REMOVE EXISTING CONTROLLER AND CABINET	21 REMOVE EXISTING COMMUNICATIONS CABLE	37 INSTALL SMALL DMS ASSEMBLY				
10 INSTALL CABLE(S) IN NEW CONDUIT	5 INSTALL NEW CONTROLLER						

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

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Mobility and Safety Division
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011 REVIEWED BY: K.W. SMITH

PREPARED BY: S.P. PENNINGTON REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

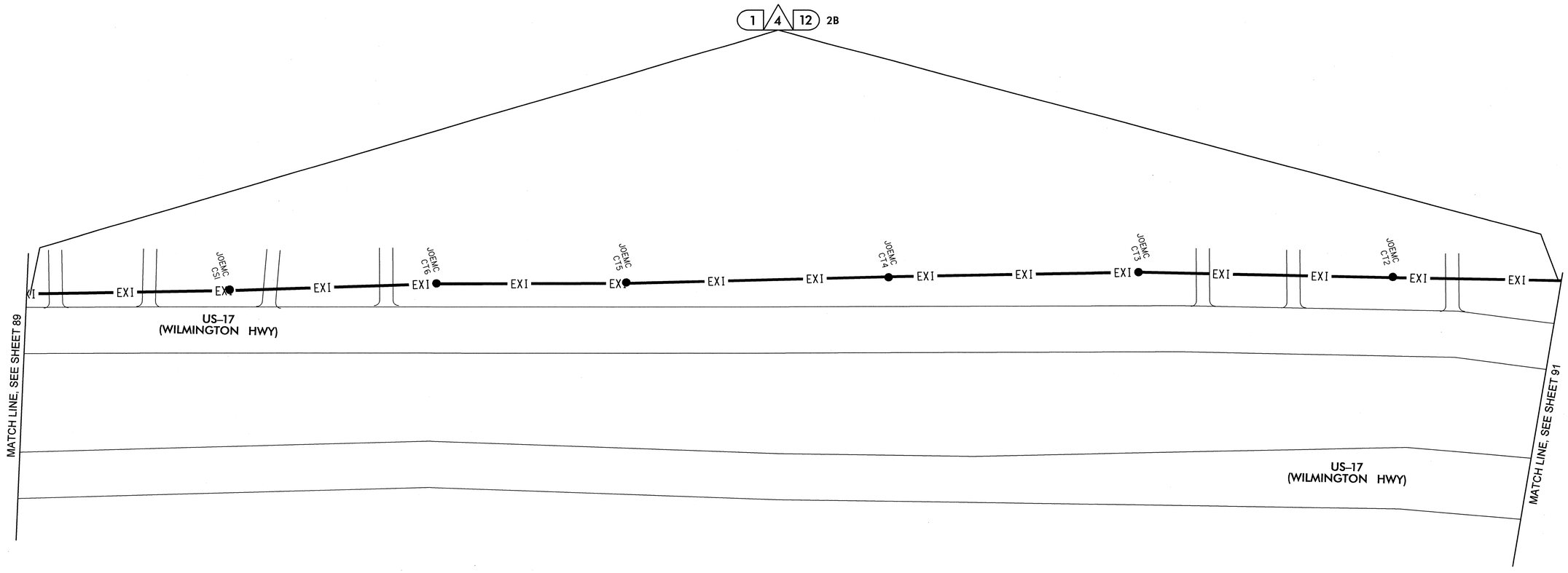
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filenames:

7/19/2011 $TIME$ susan.pennington ...\R600 PSAE\CAD\CR-089.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	90



NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.

1. INSTALL SMFO CABLE
2. INSTALL FIBER OPTIC DROP CABLE
3. INSTALL TRACER WIRE
4. REUSE EXISTING SMFO CABLE
5. INSTALL PLENUM RATED SMFO CABLE
6. INSTALL LOOP LEAD-IN CABLE
7. INSTALL ETHERNET CABLE

1. INSTALL PVC CONDUIT
2. INSTALL POLYETHYLENE CONDUIT
3. INSTALL RIGID, GALVANIZED STEEL CONDUIT
4. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5. INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
6. TRENCH CONDUIT
7. DIRECTIONAL DRILL CONDUIT
8. BORE AND JACK CONDUIT
9. INSTALL CABLE(S) IN EXISTING CONDUIT
10. INSTALL CABLE(S) IN NEW CONDUIT
11. INSTALL CABLE(S) IN EXISTING RISER
12. INSTALL CABLE(S) IN NEW RISER
13. INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS
14. INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)
15. INSTALL NEW RISER INTO POLE MOUNTED CABINET
16. REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
17. INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET

1. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2. INSTALL UNDERGROUND SPLICE ENCLOSURE
3. INSTALL AERIAL SPLICE ENCLOSURE
4. MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5. INSTALL TERMINAL SPLICE BOX

1. INSTALL CABINET FOUNDATION
2. REMOVE EXISTING CABINET FOUNDATION
3. MODIFY EXISTING CABINET FOUNDATION
4. REMOVE EXISTING CONTROLLER AND CABINET
5. INSTALL NEW CONTROLLER
6. INSTALL NEW 332 BASE MOUNTED CABINET
7. INSTALL NEW 336S BASE MOUNTED CABINET
8. INSTALL NEW 336S POLE MOUNTED CABINET
9. INSTALL BASE ADAPTER
10. INSTALL PRE-FORMED CABINET FOUNDATION PAD
11. INSTALL STANDARD JUNCTION BOX
12. INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
13. INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
14. INSTALL WOOD POLE
15. REMOVE EXISTING WOOD POLE
16. INSTALL AERIAL GUY ASSEMBLY
17. INSTALL STANDARD GUY ASSEMBLY
18. INSTALL SIDEWALK GUY ASSEMBLY
19. INSTALL MESSENGER CABLE
20. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
21. REMOVE EXISTING COMMUNICATIONS CABLE
22. LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
23. LASH CABLE(S) TO EXISTING MESSENGER CABLE
24. LASH CABLE(S) TO NEW MESSENGER CABLE
25. INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE
26. STORE 30 FEET OF EACH COMMUNICATIONS CABLE
27. STORE 100 FEET OF EACH COMMUNICATIONS CABLE
28. INSTALL FIBER OPTIC DELINEATOR MARKER
29. BOND MESSENGER CABLE TO POLE GROUND
30. MODIFY EXISTING ELECTRICAL SERVICE
31. INSTALL NEW ELECTRICAL SERVICE
32. INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
33. INSTALL GENERATOR ANCHOR IN FOUNDATION
34. RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
35. RECONNECT GENERATOR POWER INLET BOX
36. INSTALL CCTV CAMERA ASSEMBLY
37. INSTALL SMALL DMS ASSEMBLY
38. INSTALL LARGE DMS ASSEMBLY
39. INSTALL PEDESTAL STRUCTURE FOR SMALL DMS
40. INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
41. INSTALL ETHERNET SWITCH
42. INSTALL VIDEO CODEC UNIT
43. REMOVE EXISTING FIBER OPTIC TRANSCEIVER
44. INSTALL CELLULAR MODEM
45. INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)
46. INSTALL 2.4 GHz RADIO TRANSCEIVER
47. INSTALL YAGI ANTENNA
48. INSTALL OMNI-DIRECTIONAL ANTENNA
49. REMOVE EXISTING WIRELESS HARDWARE
50. INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
51. INSTALL NEW GENERATOR POWER INLET BOX
52. INSTALL CCTV UNIFIED CABLE
53. INSTALL ANTENNA CABLE
54. INSTALL DMS CONTROLLER
55. INSTALL SOLAR POWER ASSEMBLY

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

Transportation Mobility and Safety Division
DEPARTMENT OF TRANSPORTATION
Intermodal Transportation Bureau
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

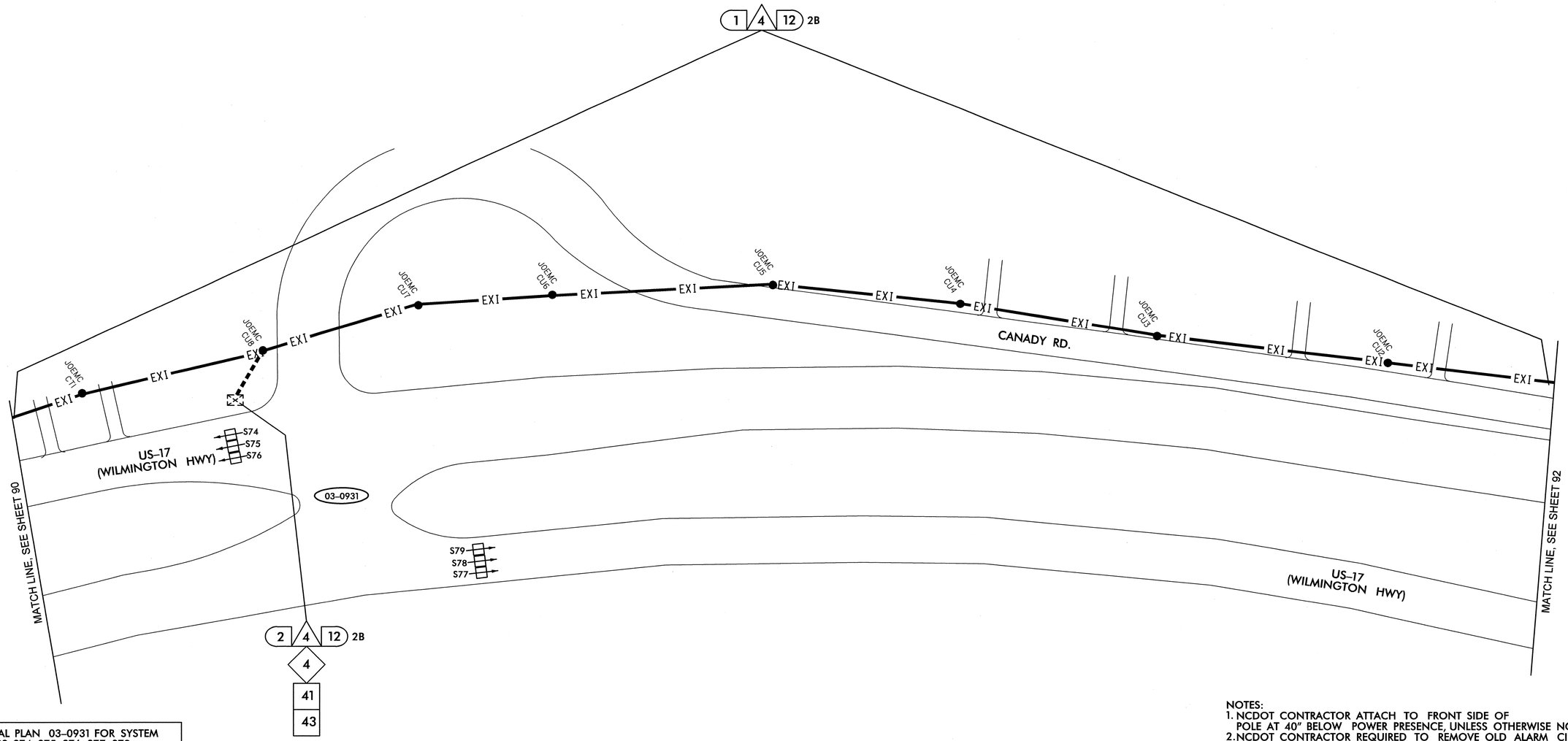
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...\#90 PSAE\AD\MCR-090.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	91



SEE SIGNAL PLAN 03-0931 FOR SYSTEM DETECTORS S74, S75, S76, S77, S78, AND S79 DETAILS. REFER TO DETAIL SHEET 1H FOR SYSTEM DETECTOR ID KEY.

NOTES:
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- 1 INSTALL SMFO CABLE
- 2 INSTALL FIBER OPTIC DROP CABLE
- 3 INSTALL TRACER WIRE
- 4 REUSE EXISTING SMFO CABLE
- 5 INSTALL PLENUM RATED SMFO CABLE
- 6 INSTALL LOOP LEAD-IN CABLE
- 7 INSTALL ETHERNET CABLE
- 1 INSTALL PVC CONDUIT
- 2 INSTALL POLYETHYLENE CONDUIT
- 3 INSTALL RIGID, GALVANIZED STEEL CONDUIT
- 4 INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
- 5 INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
- 6 TRENCH CONDUIT
- 7 DIRECTIONAL DRILL CONDUIT
- 8 BORE AND JACK CONDUIT
- 9 INSTALL CABLE(S) IN EXISTING CONDUIT
- 10 INSTALL CABLE(S) IN NEW CONDUIT
- 11 INSTALL CABLE(S) IN EXISTING RISER
- 12 INSTALL CABLE(S) IN NEW RISER
- 13 INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS
- 14 INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)
- 15 INSTALL NEW RISER INTO POLE MOUNTED CABINET
- 16 REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
- 17 INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET
- 1 INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
- 2 INSTALL UNDERGROUND SPLICE ENCLOSURE
- 3 INSTALL AERIAL SPLICE ENCLOSURE
- 4 MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
- 5 INSTALL TERMINAL SPLICE BOX
- 1 INSTALL CABINET FOUNDATION
- 2 REMOVE EXISTING CABINET FOUNDATION
- 3 MODIFY EXISTING CABINET FOUNDATION
- 4 REMOVE EXISTING CONTROLLER AND CABINET
- 5 INSTALL NEW CONTROLLER
- 6 INSTALL NEW 332 BASE MOUNTED CABINET
- 7 INSTALL NEW 336S BASE MOUNTED CABINET
- 8 INSTALL NEW 336S POLE MOUNTED CABINET
- 9 INSTALL BASE ADAPTER
- 10 INSTALL PRE-FORMED CABINET FOUNDATION PAD
- 11 INSTALL STANDARD JUNCTION BOX
- 12 INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
- 13 INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
- 14 INSTALL WOOD POLE
- 15 REMOVE EXISTING WOOD POLE
- 16 INSTALL AERIAL GUY ASSEMBLY
- 17 INSTALL STANDARD GUY ASSEMBLY
- 18 INSTALL SIDEWALK GUY ASSEMBLY
- 19 INSTALL MESSENGER CABLE
- 20 REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
- 21 REMOVE EXISTING COMMUNICATIONS CABLE
- 22 LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
- 23 LASH CABLE(S) TO EXISTING MESSENGER CABLE
- 24 LASH CABLE(S) TO NEW MESSENGER CABLE
- 25 INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE
- 26 STORE 30 FEET OF EACH COMMUNICATIONS CABLE
- 27 STORE 100 FEET OF EACH COMMUNICATIONS CABLE
- 28 INSTALL FIBER OPTIC DELINEATOR MARKER
- 29 BOND MESSENGER CABLE TO POLE GROUND
- 30 MODIFY EXISTING ELECTRICAL SERVICE
- 31 INSTALL NEW ELECTRICAL SERVICE
- 32 INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
- 33 INSTALL GENERATOR ANCHOR IN FOUNDATION
- 34 RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
- 35 RECONNECT GENERATOR POWER INLET BOX
- 36 INSTALL CCTV CAMERA ASSEMBLY
- 37 INSTALL SMALL DMS ASSEMBLY
- 38 INSTALL LARGE DMS ASSEMBLY
- 39 INSTALL PEDESTAL STRUCTURE FOR SMALL DMS
- 40 INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
- 41 INSTALL ETHERNET SWITCH
- 42 INSTALL VIDEO CODEC UNIT
- 43 REMOVE EXISTING FIBER OPTIC TRANSCEIVER
- 44 INSTALL CELLULAR MODEM
- 45 INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)
- 46 INSTALL 2.4 GHz RADIO TRANSCEIVER
- 47 INSTALL YAGI ANTENNA
- 48 INSTALL OMNI-DIRECTIONAL ANTENNA
- 49 REMOVE EXISTING WIRELESS HARDWARE
- 50 INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
- 51 INSTALL NEW GENERATOR POWER INLET BOX
- 52 INSTALL CCTV UNIFIED CABLE
- 53 INSTALL ANTENNA CABLE
- 54 INSTALL DMS CONTROLLER
- 55 INSTALL SOLAR POWER ASSEMBLY

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

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Mobility and Safety Division
Transportation Management Unit
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011		REVIEWED BY: K.W. SMITH	
PREPARED BY: S.P. PENNINGTON		REVIEWED BY: T.F. BURCHETT	
REVISIONS		INIT.	DATE

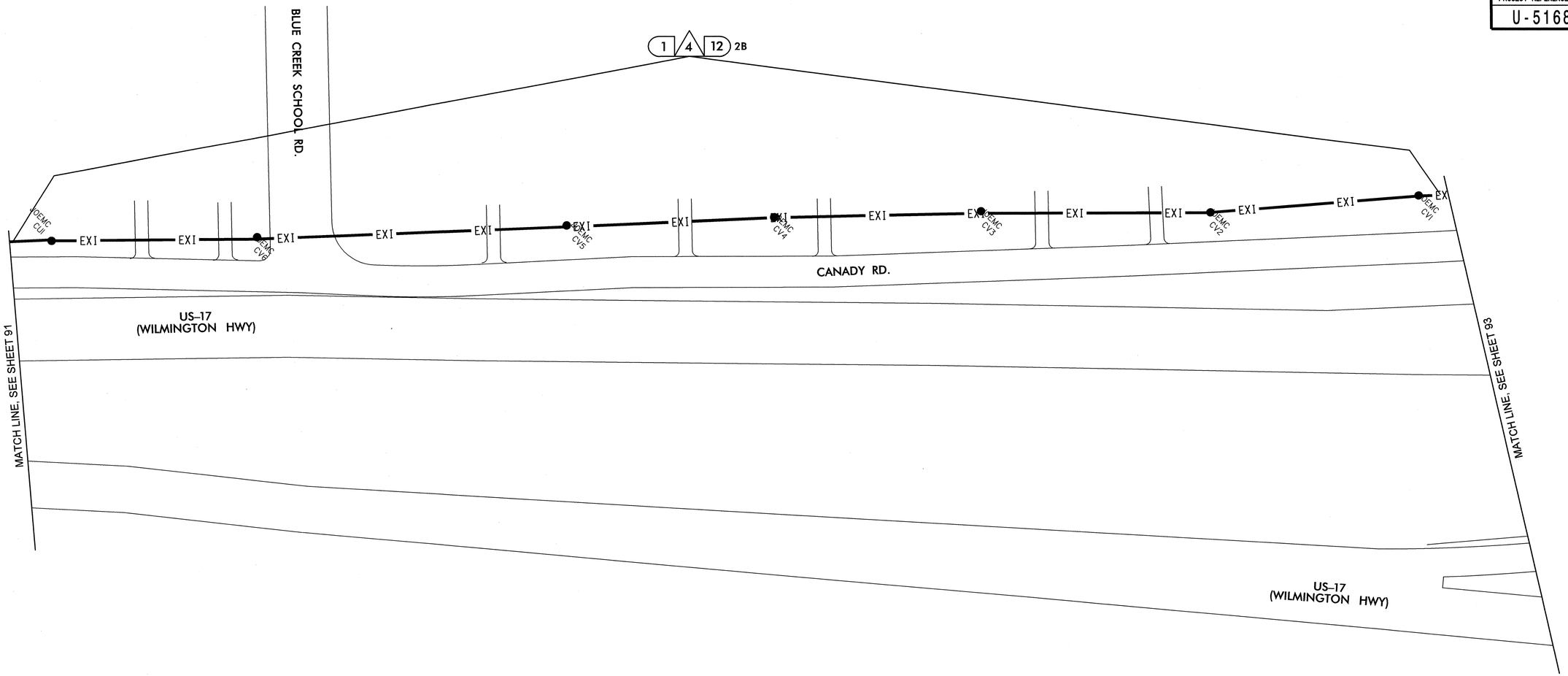
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE DATE 7-20-11

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSAE#CADNCDOT-091.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	92



NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.

1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE		
2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE		
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6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT				
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX				
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND								
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE								
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE								
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE								
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION								
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT								
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX								
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY								
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY								
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER												

PLANS PREPARED IN THE OFFICE OF:
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Transportation Mobility and Safety Building
DEPARTMENT OF TRANSPORTATION
Intermodal Transportation System Management
759 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

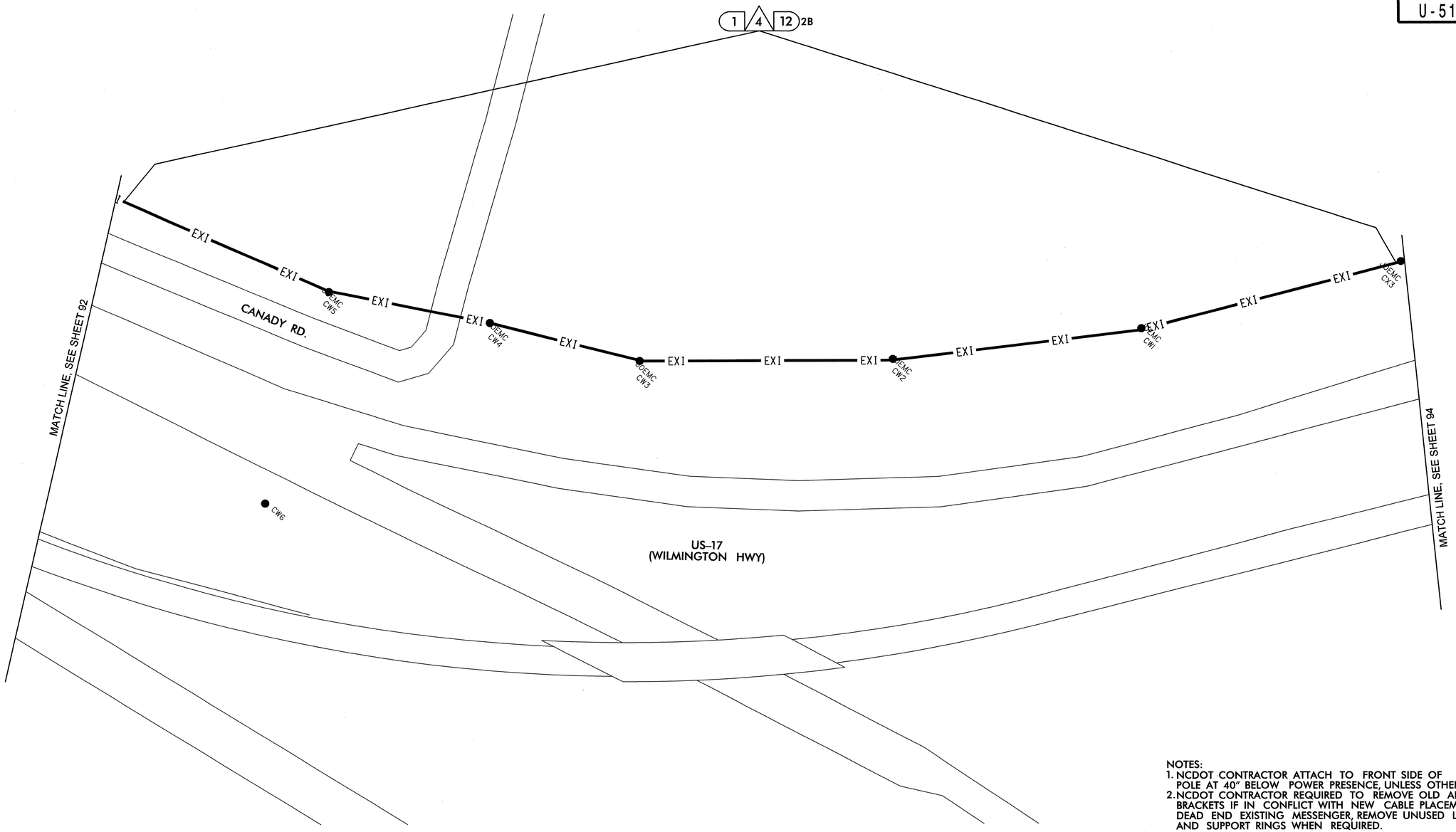
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...:\600 PSAE\NCADMCR-092.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	93



NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.

1	INSTALL SMFO CABLE
2	INSTALL FIBER OPTIC DROP CABLE
3	INSTALL TRACER WIRE
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12	INSTALL CABLE(S) IN NEW RISER
13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS
14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)
15	INSTALL NEW RISER INTO POLE MOUNTED CABINET
16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET
1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2	INSTALL UNDERGROUND SPLICE ENCLOSURE
3	INSTALL AERIAL SPLICE ENCLOSURE
4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5	INSTALL TERMINAL SPLICE BOX
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION
3	MODIFY EXISTING CABINET FOUNDATION
4	REMOVE EXISTING CONTROLLER AND CABINET
5	INSTALL NEW CONTROLLER
6	INSTALL NEW 332 BASE MOUNTED CABINET
7	INSTALL NEW 336S BASE MOUNTED CABINET
8	INSTALL NEW 336S POLE MOUNTED CABINET
9	INSTALL BASE ADAPTER
10	INSTALL PRE-FORMED CABINET FOUNDATION PAD
11	INSTALL STANDARD JUNCTION BOX
12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
14	INSTALL WOOD POLE
15	REMOVE EXISTING WOOD POLE
16	INSTALL AERIAL GUY ASSEMBLY
17	INSTALL STANDARD GUY ASSEMBLY
18	INSTALL SIDEWALK GUY ASSEMBLY
19	INSTALL MESSENGER CABLE
20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
21	REMOVE EXISTING COMMUNICATIONS CABLE
22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
23	LASH CABLE(S) TO EXISTING MESSENGER CABLE
24	LASH CABLE(S) TO NEW MESSENGER CABLE
25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE
26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE
27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
28	INSTALL FIBER OPTIC DELINEATOR MARKER
29	BOND MESSENGER CABLE TO POLE GROUND
30	MODIFY EXISTING ELECTRICAL SERVICE
31	INSTALL NEW ELECTRICAL SERVICE
32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
33	INSTALL GENERATOR ANCHOR IN FOUNDATION
34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
35	RECONNECT GENERATOR POWER INLET BOX
36	INSTALL CCTV CAMERA ASSEMBLY
37	INSTALL SMALL DMS ASSEMBLY
38	INSTALL LARGE DMS ASSEMBLY
39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS
40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
41	INSTALL ETHERNET SWITCH
42	INSTALL VIDEO CODEC UNIT
43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER
44	INSTALL CELLULAR MODEM
45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)
46	INSTALL 2.4 GHz RADIO TRANSCEIVER
47	INSTALL YAGI ANTENNA
48	INSTALL OMNI-DIRECTIONAL ANTENNA
49	REMOVE EXISTING WIRELESS HARDWARE
50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
51	INSTALL NEW GENERATOR POWER INLET BOX
52	INSTALL CCTV UNIFIED CABLE
53	INSTALL ANTENNA CABLE
54	INSTALL DMS CONTROLLER
55	INSTALL SOLAR POWER ASSEMBLY

PLANS PREPARED IN THE OFFICE OF:

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

750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

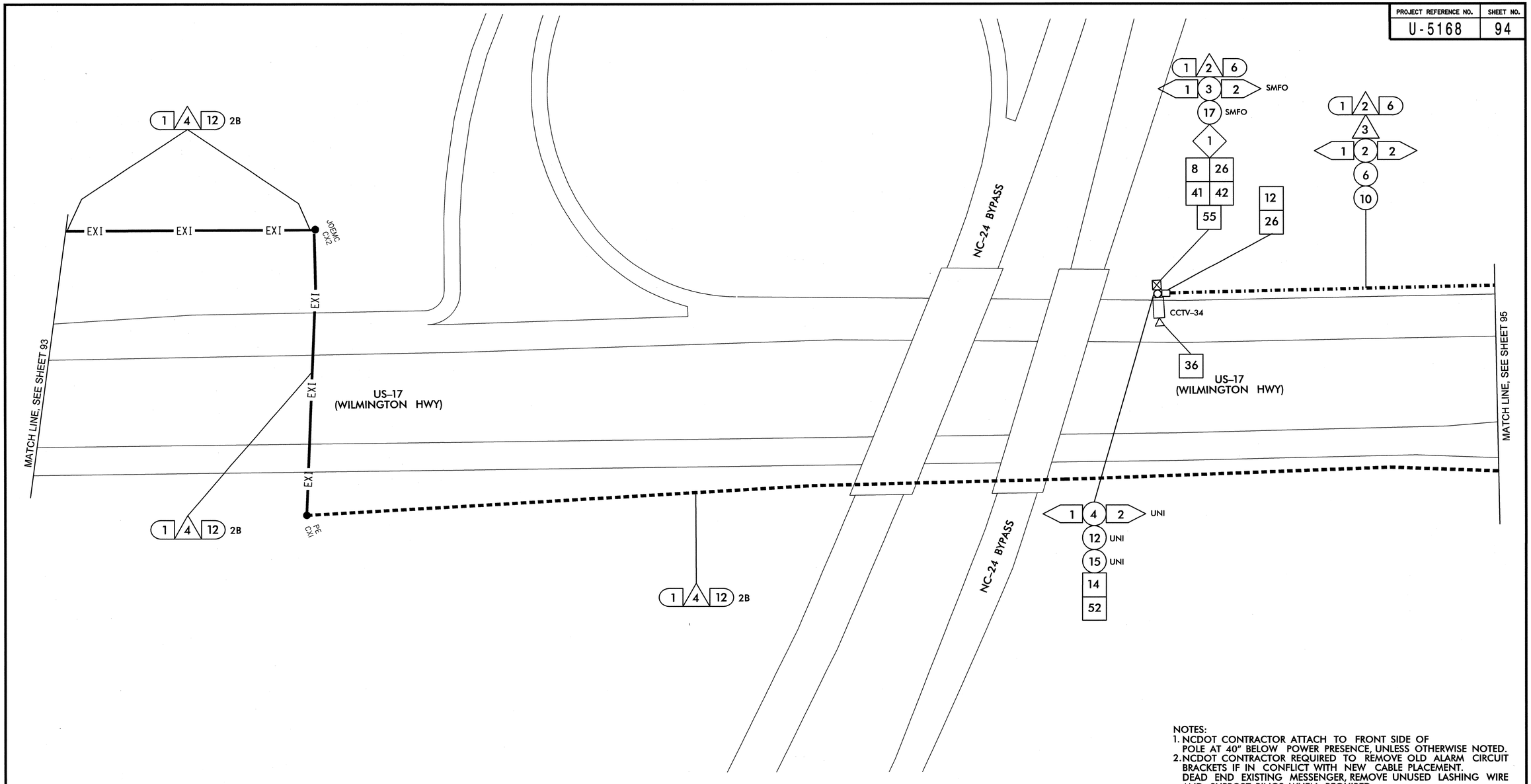
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE DATE 7-20-11

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...\650 PSE\CADD\CR-093.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	94



NOTES:
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2	INSTALL FIBER OPTIC DROP CABLE
3	INSTALL TRACER WIRE
4	REUSE EXISTING SMFO CABLE
5	INSTALL PLENUM RATED SMFO CABLE
6	INSTALL LOOP LEAD-IN CABLE
7	INSTALL ETHERNET CABLE
1	INSTALL PVC CONDUIT
2	INSTALL POLYETHYLENE CONDUIT
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
6	TRENCH CONDUIT
7	DIRECTIONAL DRILL CONDUIT
8	BORE AND JACK CONDUIT
9	INSTALL CABLE(S) IN EXISTING CONDUIT
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2	REMOVE EXISTING CABINET FOUNDATION
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6	INSTALL NEW 332 BASE MOUNTED CABINET
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PLANS PREPARED IN THE OFFICE OF:

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Transportation Mobility and Safety Division
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011 REVIEWED BY: K.W. SMITH

PREPARED BY: S.P. PENNINGTON REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

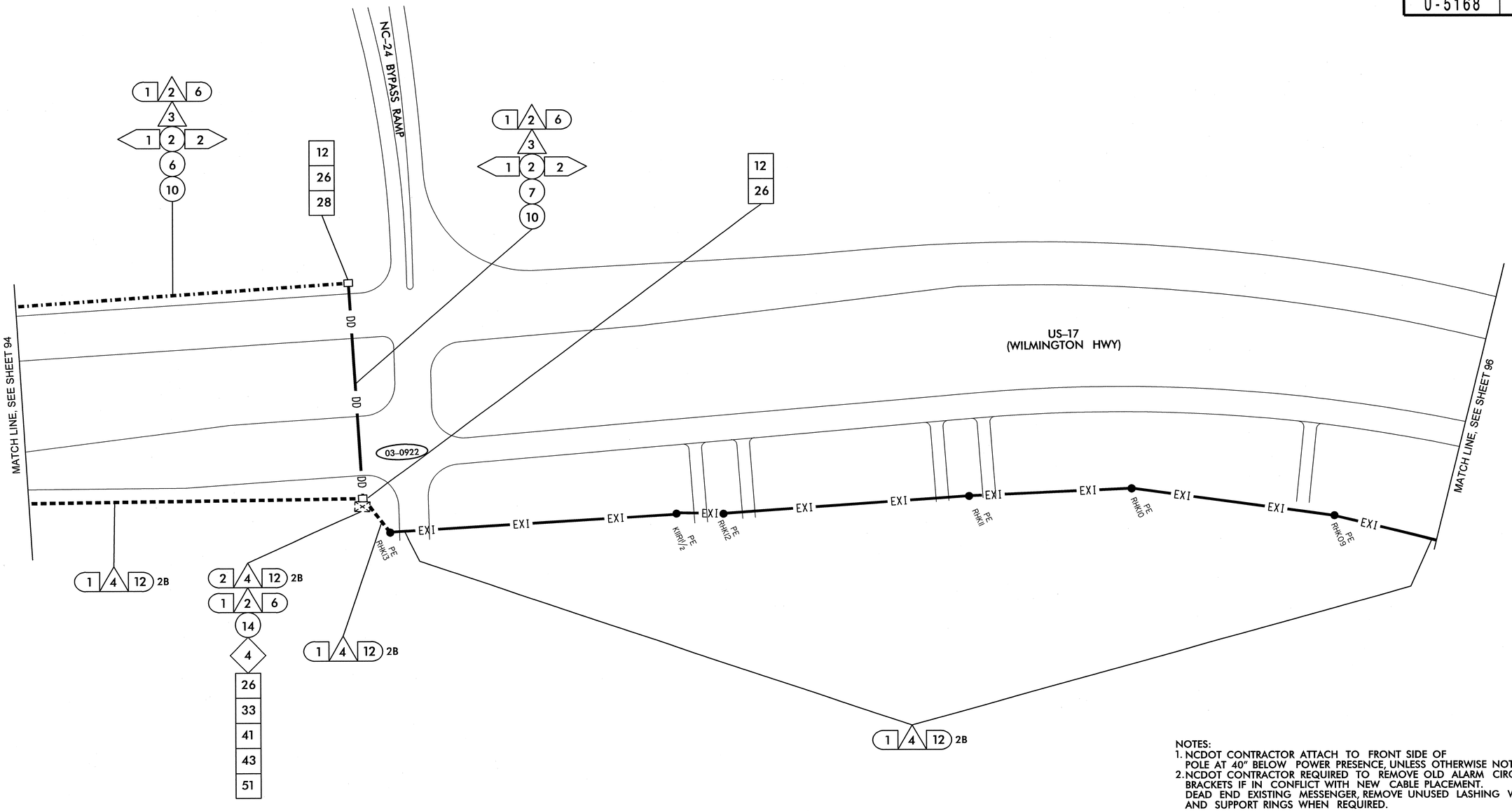
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-25-11 DATE

CADD Filename:

7/25/2011 $TIME$ susan.pennington ...*600 PS&E*CAD*CR-094.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	95



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1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE
2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE
3	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA	54	INSTALL DMS CONTROLLER
4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY
5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE		
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT		
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX		
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND						
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE						
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE						
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE						
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION						
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT						
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX						
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY						
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY						
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER										

PLANS PREPARED IN THE OFFICE OF:

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Transportation Mobility and Safety Division
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750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011 REVIEWED BY: K.W. SMITH

PREPARED BY: S.P. PENNINGTON REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

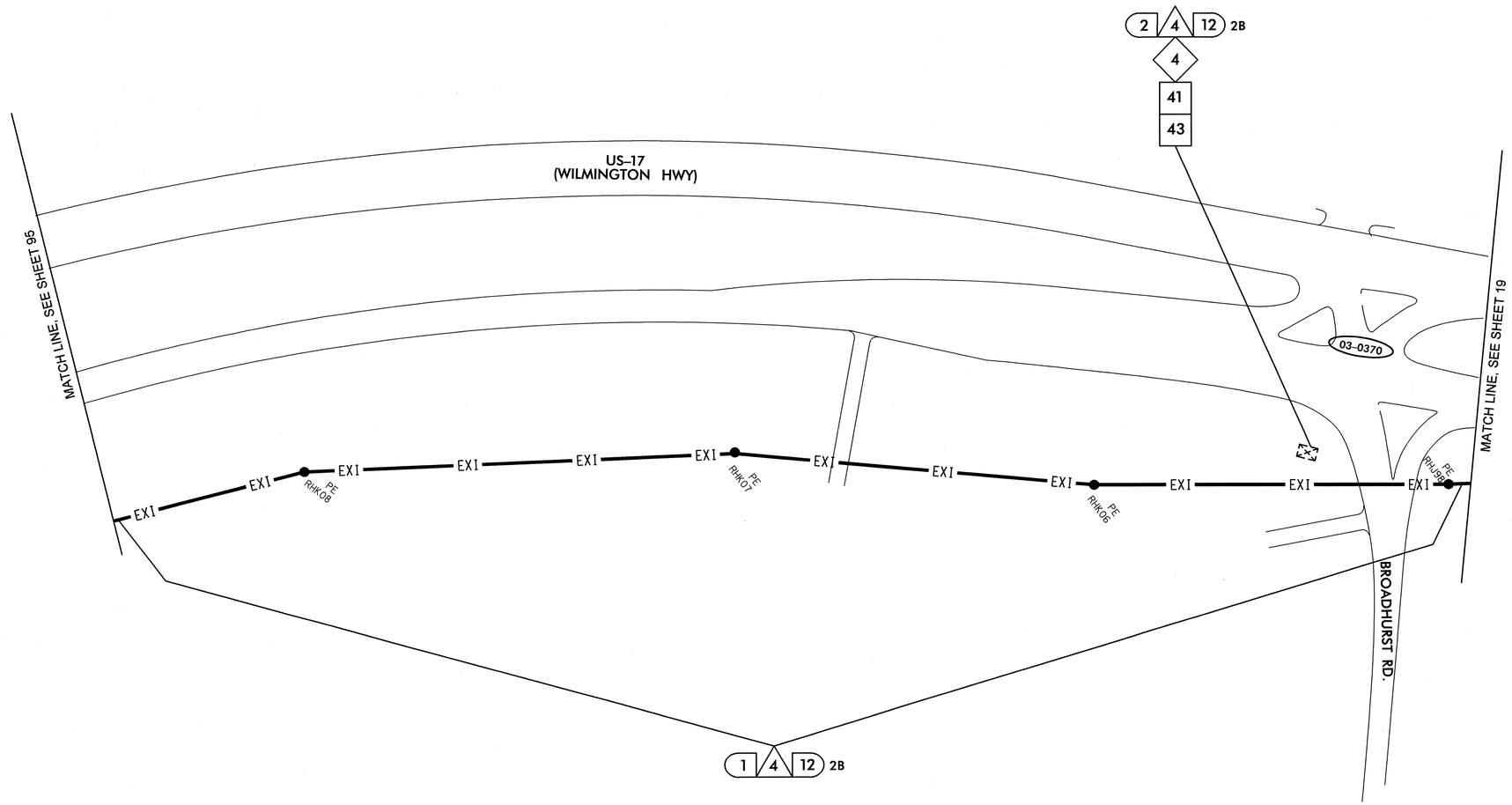
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-25-11 DATE

CADD Filename:

7/25/2011 $TIME$ susan.pennington ...:\600 PSSE\CJUNCTI-095.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	96



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CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011 REVIEWED BY: K.W. SMITH

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REVISIONS	INIT.	DATE

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NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

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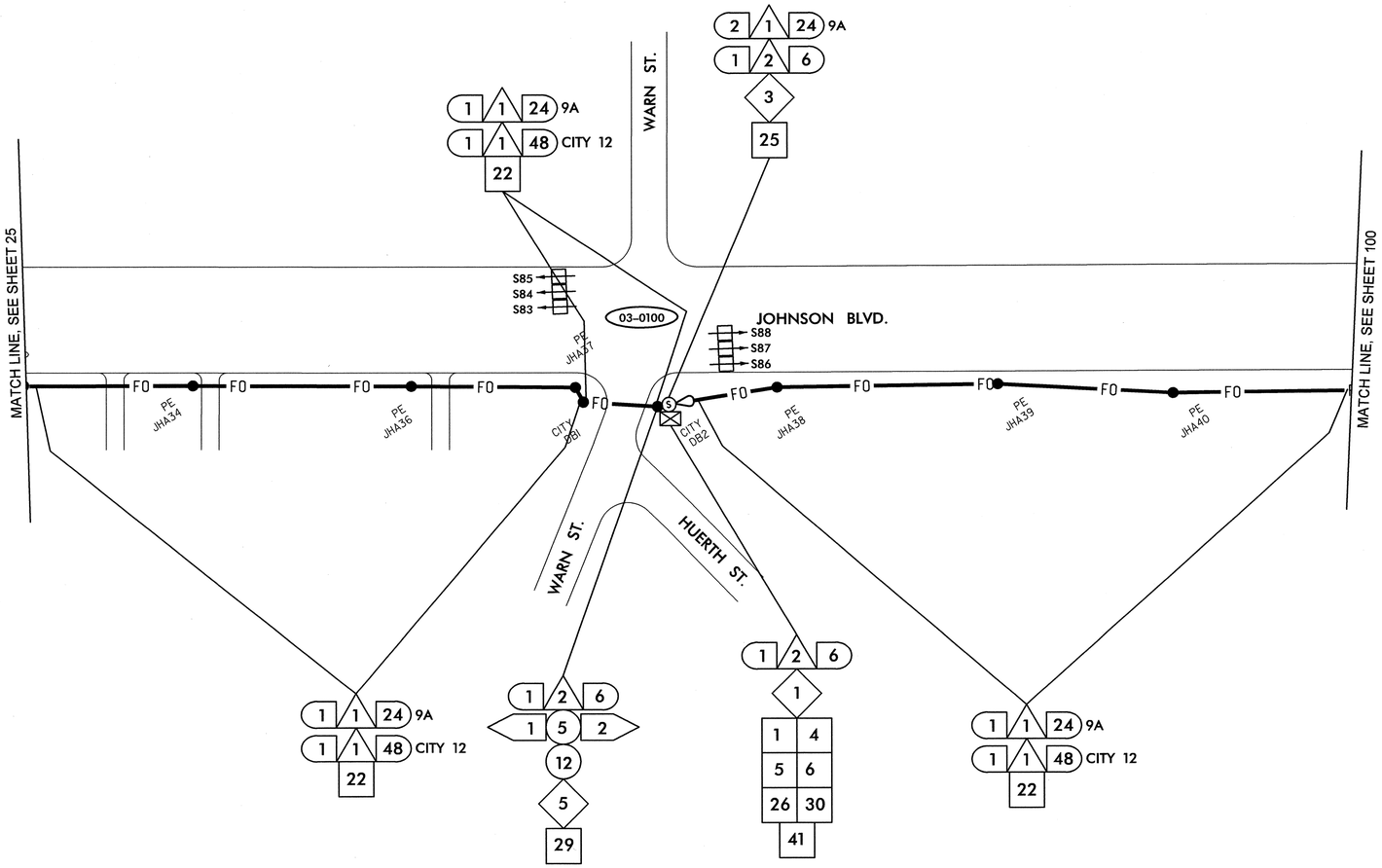
7/19/2011 $TIME$ susan.pennington ...#600 PSE#WCADRCR-096.dgn



SEE SIGNAL PLAN 03-0100 FOR SYSTEM DETECTORS S83, S84, S85, S86, S87 AND S88 INSTALLATION DETAILS. REFER TO DETAIL SHEET 1H FOR SYSTEM DETECTOR ID KEY.

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25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE
26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE
27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
28	INSTALL FIBER OPTIC DELINEATOR MARKER
29	BOND MESSENGER CABLE TO POLE GROUND
30	MODIFY EXISTING ELECTRICAL SERVICE
31	INSTALL NEW ELECTRICAL SERVICE
32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
33	INSTALL GENERATOR ANCHOR IN FOUNDATION
34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
35	RECONNECT GENERATOR POWER INLET BOX
36	INSTALL CCTV CAMERA ASSEMBLY
37	INSTALL SMALL DMS ASSEMBLY
38	INSTALL LARGE DMS ASSEMBLY
39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS
40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
41	INSTALL ETHERNET SWITCH
42	INSTALL VIDEO CODEC UNIT
43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER
44	INSTALL CELLULAR MODEM
45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)
46	INSTALL 2.4 GHz RADIO TRANSCEIVER
47	INSTALL YAGI ANTENNA
48	INSTALL OMNI-DIRECTIONAL ANTENNA
49	REMOVE EXISTING WIRELESS HARDWARE
50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
51	INSTALL NEW GENERATOR POWER INLET BOX
52	INSTALL CCTV UNIFIED CABLE
53	INSTALL ANTENNA CABLE
54	INSTALL DMS CONTROLLER
55	INSTALL SOLAR POWER ASSEMBLY

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

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Mobility and Safety Division
Intelligent Transportation Systems Section

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

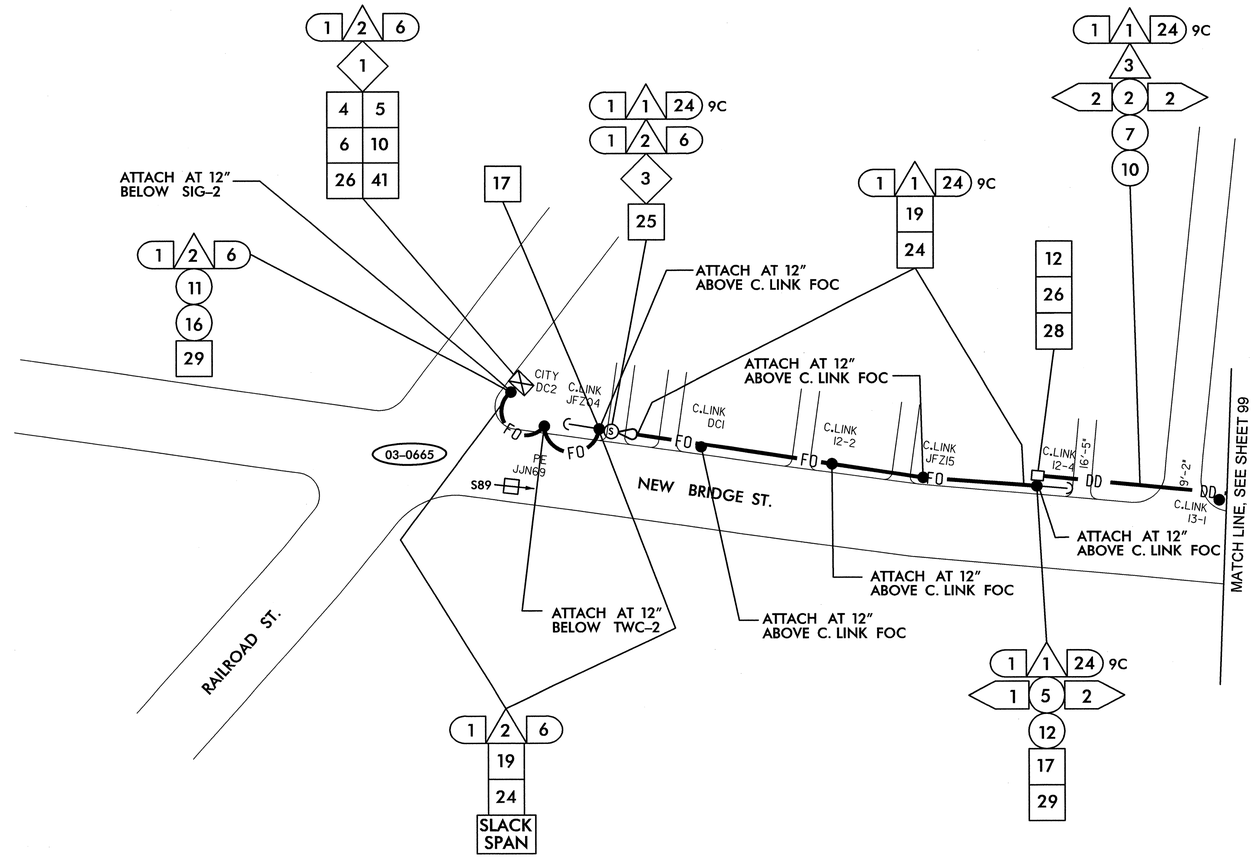
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSE#CADRCR-097.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	98



SEE SIGNAL PLAN 03-0665 FOR SYSTEM DETECTOR S89 INSTALLATION DETAILS. REFER TO DETAIL SHEET 1H FOR SYSTEM DETECTOR ID KEY.

NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.

1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE
2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE
3	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA	54	INSTALL DMS CONTROLLER
4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY
5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE		
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT		
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX		
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND						
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE						
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE						
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE						
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION						
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT						
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX						
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY						
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY						
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER										

PLANS PREPARED IN THE OFFICE OF:

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

Transportation Mobility and Safety Division
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE
CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

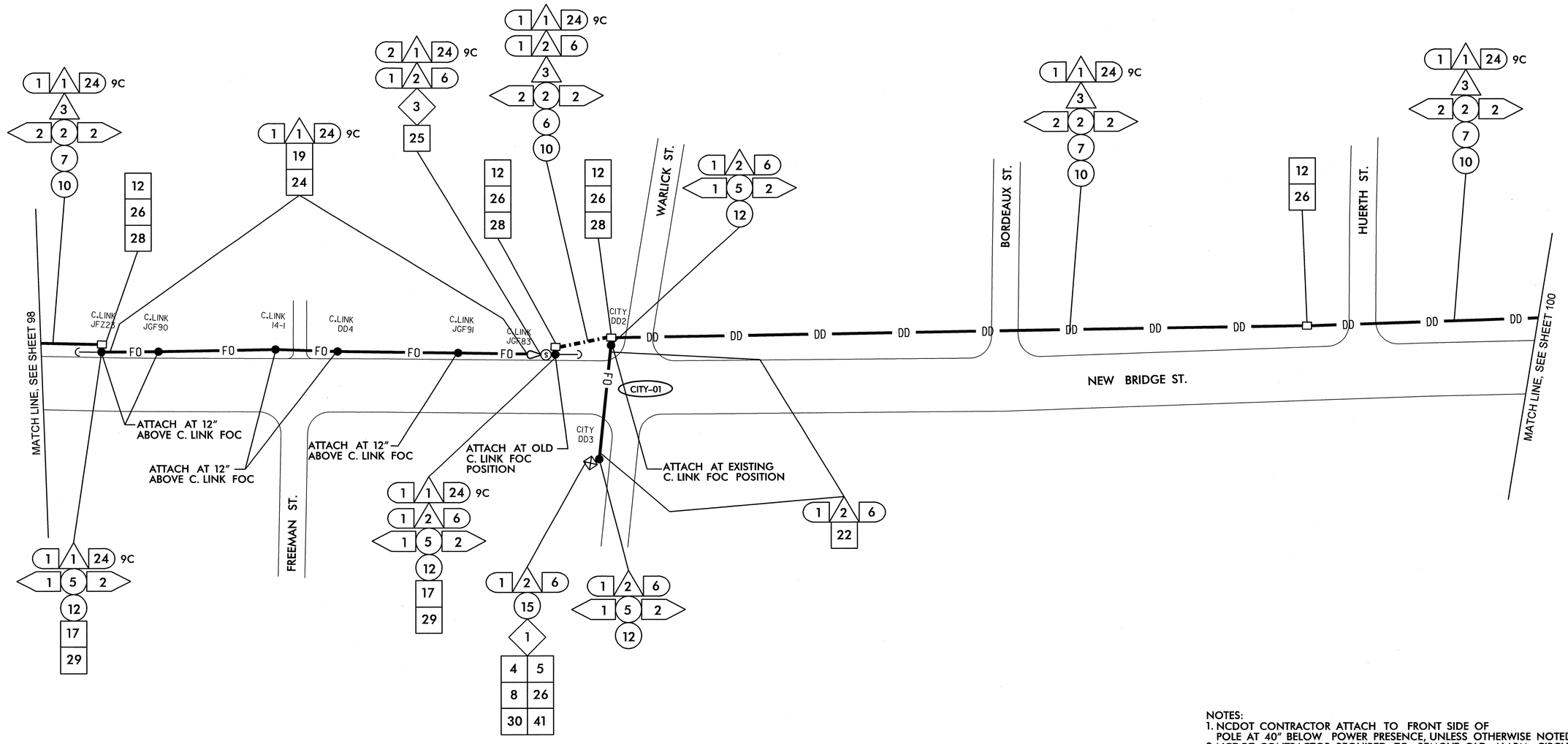
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...\600 PSSE\ADMCR-098.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	99



NOTES:
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10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER												

PLANS PREPARED IN THE OFFICE OF:

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

Transportation Mobility and Safety Division
DEPARTMENT OF TRANSPORTATION
Intermodal Transportation Building
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

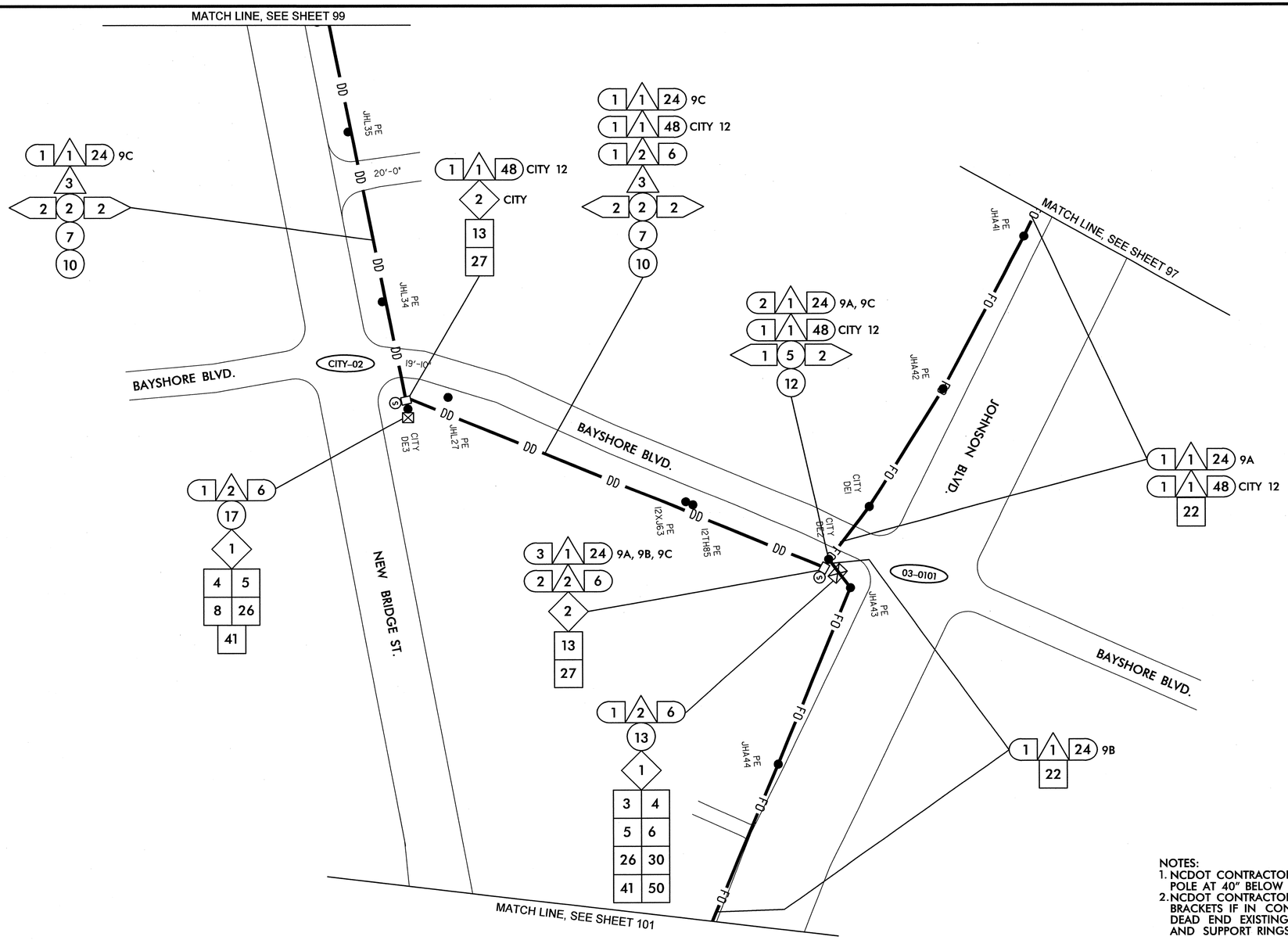
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSUE#CJDWC8-099.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	100



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2 INSTALL FIBER OPTIC DROP CABLE	12 INSTALL CABLE(S) IN NEW RISER	7 INSTALL NEW 336S BASE MOUNTED CABINET	23 LASH CABLE(S) TO EXISTING MESSENGER CABLE	39 INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46 INSTALL 2.4 GHz RADIO TRANSCEIVER	53 INSTALL ANTENNA CABLE	
3 INSTALL TRACER WIRE	13 INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8 INSTALL NEW 336S POLE MOUNTED CABINET	24 LASH CABLE(S) TO NEW MESSENGER CABLE	40 INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47 INSTALL YAGI ANTENNA	54 INSTALL DMS CONTROLLER	
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5 INSTALL PLENUM RATED SMFO CABLE	15 INSTALL NEW RISER INTO POLE MOUNTED CABINET	10 INSTALL PRE-FORMED CABINET FOUNDATION PAD	26 STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42 INSTALL VIDEO CODEC UNIT	49 REMOVE EXISTING WIRELESS HARDWARE		
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2 INSTALL POLYETHYLENE CONDUIT	2 INSTALL UNDERGROUND SPLICE ENCLOSURE	14 INSTALL WOOD POLE	30 MODIFY EXISTING ELECTRICAL SERVICE				
3 INSTALL RIGID, GALVANIZED STEEL CONDUIT	3 INSTALL AERIAL SPLICE ENCLOSURE	15 REMOVE EXISTING WOOD POLE	31 INSTALL NEW ELECTRICAL SERVICE				
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5 INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5 INSTALL TERMINAL SPLICE BOX	17 INSTALL STANDARD GUY ASSEMBLY	33 INSTALL GENERATOR ANCHOR IN FOUNDATION				
6 TRENCH CONDUIT	1 INSTALL CABINET FOUNDATION	18 INSTALL SIDEWALK GUY ASSEMBLY	34 RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT				
7 DIRECTIONAL DRILL CONDUIT	2 REMOVE EXISTING CABINET FOUNDATION	19 INSTALL MESSENGER CABLE	35 RECONNECT GENERATOR POWER INLET BOX				
8 BORE AND JACK CONDUIT	3 MODIFY EXISTING CABINET FOUNDATION	20 REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36 INSTALL CCTV CAMERA ASSEMBLY				
9 INSTALL CABLE(S) IN EXISTING CONDUIT	4 REMOVE EXISTING CONTROLLER AND CABINET	21 REMOVE EXISTING COMMUNICATIONS CABLE	37 INSTALL SMALL DMS ASSEMBLY				
10 INSTALL CABLE(S) IN NEW CONDUIT	5 INSTALL NEW CONTROLLER						

PLANS PREPARED IN THE OFFICE OF:
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Transportation Mobility and Safety Division
Intelligent Transportation Systems Section
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750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011 REVIEWED BY: K.W. SMITH

PREPARED BY: S.P. PENNINGTON REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

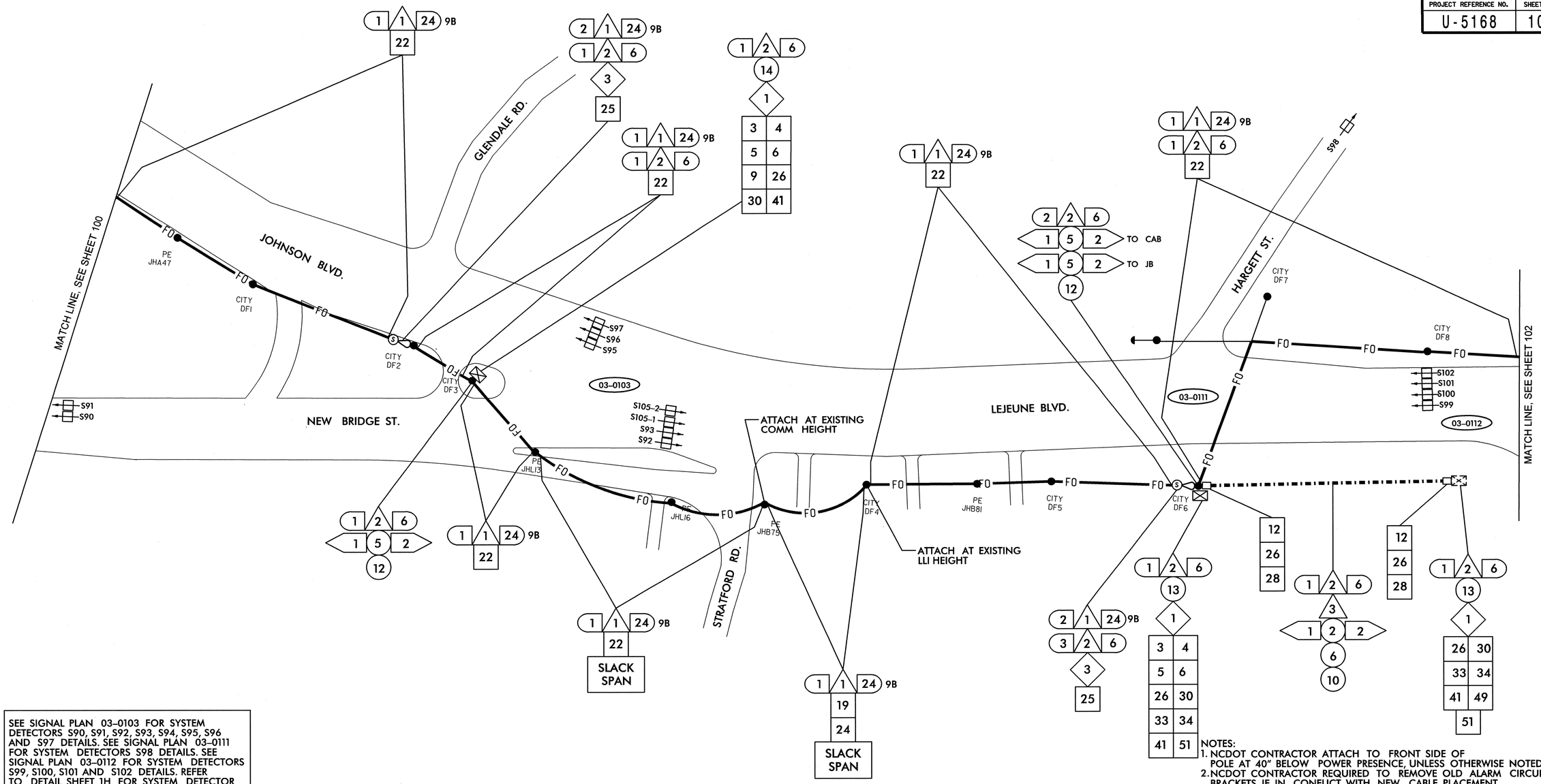
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-25-11 DATE

CADD Filename:

7/25/2011 $TIME$ susan.pennington ...#600 PSLE#CADWCR-100.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	101



SEE SIGNAL PLAN 03-0103 FOR SYSTEM DETECTORS S90, S91, S92, S93, S94, S95, S96 AND S97 DETAILS. SEE SIGNAL PLAN 03-0111 FOR SYSTEM DETECTORS S98 DETAILS. SEE SIGNAL PLAN 03-0112 FOR SYSTEM DETECTORS S99, S100, S101 AND S102 DETAILS. REFER TO DETAIL SHEET 1H FOR SYSTEM DETECTOR ID KEY.

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4. REUSE EXISTING SMFO CABLE
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15. INSTALL NEW RISER INTO POLE MOUNTED CABINET
16. REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
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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. MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5. INSTALL TERMINAL SPLICE BOX
1. INSTALL CABINET FOUNDATION
2. REMOVE EXISTING CABINET FOUNDATION
3. MODIFY EXISTING CABINET FOUNDATION
4. REMOVE EXISTING CONTROLLER AND CABINET
5. INSTALL NEW CONTROLLER
6. INSTALL NEW 332 BASE MOUNTED CABINET
7. INSTALL NEW 336S BASE MOUNTED CABINET
8. INSTALL NEW 336S POLE MOUNTED CABINET
9. INSTALL BASE ADAPTER
10. INSTALL PRE-FORMED CABINET FOUNDATION PAD
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13. INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
14. INSTALL WOOD POLE
15. REMOVE EXISTING WOOD POLE
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18. INSTALL SIDEWALK GUY ASSEMBLY
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20. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
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47. INSTALL YAGI ANTENNA
48. INSTALL OMNI-DIRECTIONAL ANTENNA
49. REMOVE EXISTING WIRELESS HARDWARE
50. INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
51. INSTALL NEW GENERATOR POWER INLET BOX
52. INSTALL CCTV UNIFIED CABLE
53. INSTALL ANTENNA CABLE
54. INSTALL DMS CONTROLLER
55. INSTALL SOLAR POWER ASSEMBLY

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

Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intermodal Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

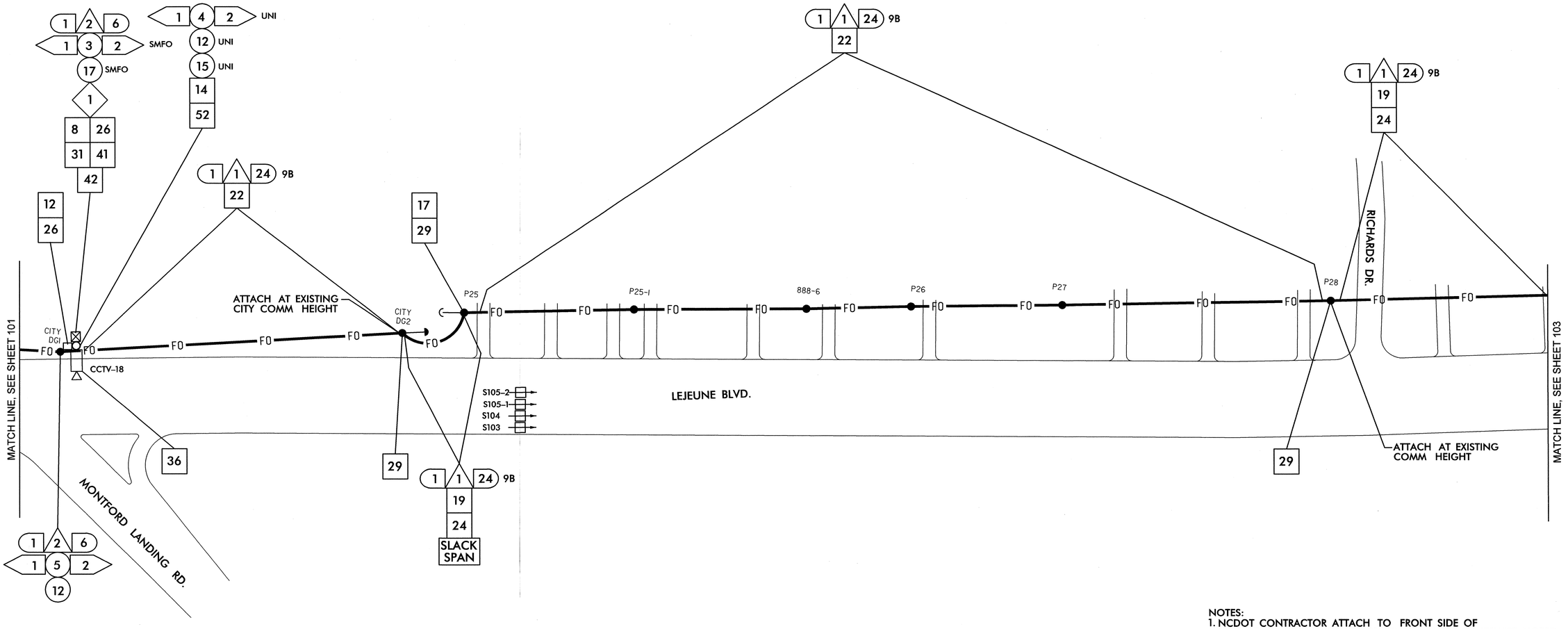
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE DATE 7-20-11

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...*600 PSAE*CADMCR-101.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	102



SEE SIGNAL PLAN 03-0112 FOR SYSTEM DETECTOR S103, S104, AND S105 INSTALLATION DETAILS. REFER TO DETAIL SHEET 1H FOR SYSTEM DETECTOR ID KEY.

NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.

1. INSTALL SMFO CABLE
2. INSTALL FIBER OPTIC DROP CABLE
3. INSTALL TRACER WIRE
4. REUSE EXISTING SMFO CABLE
5. INSTALL PLENUM RATED SMFO CABLE
6. INSTALL LOOP LEAD-IN CABLE
7. INSTALL ETHERNET CABLE
1. INSTALL PVC CONDUIT
2. INSTALL POLYETHYLENE CONDUIT
3. INSTALL RIGID, GALVANIZED STEEL CONDUIT
4. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5. INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
6. TRENCH CONDUIT
7. DIRECTIONAL DRILL CONDUIT
8. BORE AND JACK CONDUIT
9. INSTALL CABLE(S) IN EXISTING CONDUIT
10. INSTALL CABLE(S) IN NEW CONDUIT
11. INSTALL CABLE(S) IN EXISTING RISER
12. INSTALL CABLE(S) IN NEW RISER
13. INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS
14. INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)
15. INSTALL NEW RISER INTO POLE MOUNTED CABINET
16. REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
17. INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET
1. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2. INSTALL UNDERGROUND SPLICE ENCLOSURE
3. INSTALL AERIAL SPLICE ENCLOSURE
4. MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5. INSTALL TERMINAL SPLICE BOX
1. INSTALL CABINET FOUNDATION
2. REMOVE EXISTING CABINET FOUNDATION
3. MODIFY EXISTING CABINET FOUNDATION
4. REMOVE EXISTING CONTROLLER AND CABINET
5. INSTALL NEW CONTROLLER
6. INSTALL NEW 332 BASE MOUNTED CABINET
7. INSTALL NEW 336S BASE MOUNTED CABINET
8. INSTALL NEW 336S POLE MOUNTED CABINET
9. INSTALL BASE ADAPTER
10. INSTALL PRE-FORMED CABINET FOUNDATION PAD
11. INSTALL STANDARD JUNCTION BOX
12. INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
13. INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
14. INSTALL WOOD POLE
15. REMOVE EXISTING WOOD POLE
16. INSTALL AERIAL GUY ASSEMBLY
17. INSTALL STANDARD GUY ASSEMBLY
18. INSTALL SIDEWALK GUY ASSEMBLY
19. INSTALL MESSENGER CABLE
20. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
21. REMOVE EXISTING COMMUNICATIONS CABLE
22. LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
23. LASH CABLE(S) TO EXISTING MESSENGER CABLE
24. LASH CABLE(S) TO NEW MESSENGER CABLE
25. INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE
26. STORE 30 FEET OF EACH COMMUNICATIONS CABLE
27. STORE 100 FEET OF EACH COMMUNICATIONS CABLE
28. INSTALL FIBER OPTIC DELINEATOR MARKER
29. BOND MESSENGER CABLE TO POLE GROUND
30. MODIFY EXISTING ELECTRICAL SERVICE
31. INSTALL NEW ELECTRICAL SERVICE
32. INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
33. INSTALL GENERATOR ANCHOR IN FOUNDATION
34. RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
35. RECONNECT GENERATOR POWER INLET BOX
36. INSTALL CCTV CAMERA ASSEMBLY
37. INSTALL SMALL DMS ASSEMBLY
38. INSTALL LARGE DMS ASSEMBLY
39. INSTALL PEDESTAL STRUCTURE FOR SMALL DMS
40. INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
41. INSTALL ETHERNET SWITCH
42. INSTALL VIDEO CODEC UNIT
43. REMOVE EXISTING FIBER OPTIC TRANSCEIVER
44. INSTALL CELLULAR MODEM
45. INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)
46. INSTALL 2.4 GHz RADIO TRANSCEIVER
47. INSTALL YAGI ANTENNA
48. INSTALL OMNI-DIRECTIONAL ANTENNA
49. REMOVE EXISTING WIRELESS HARDWARE
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PLANS PREPARED IN THE OFFICE OF:
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STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Mobility and Safety Division
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

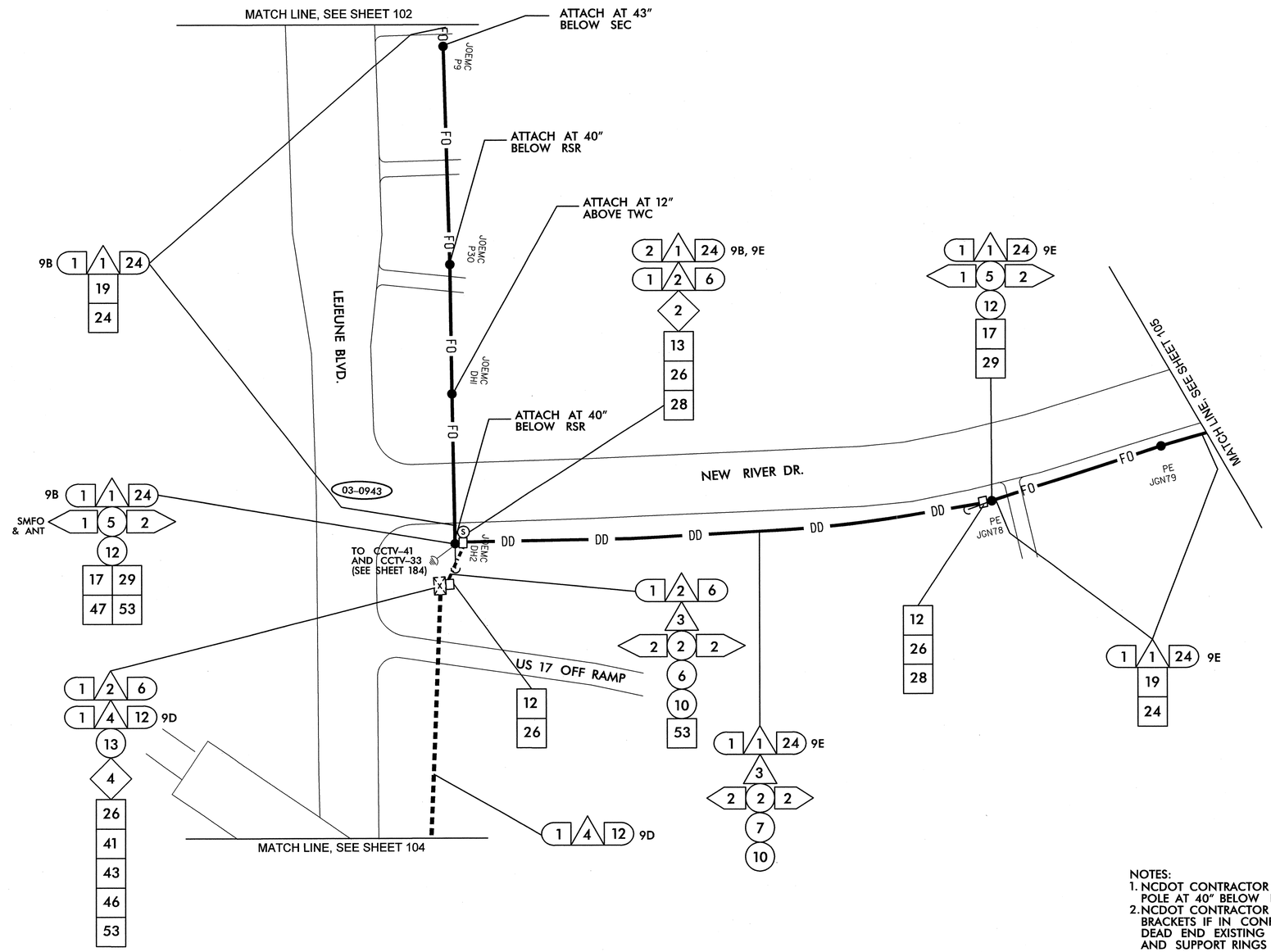
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE DATE 7-20-11

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSEWCADWCR-102.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	103



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1. INSTALL SMFO CABLE
2. INSTALL FIBER OPTIC DROP CABLE
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4. REUSE EXISTING SMFO CABLE
5. INSTALL PLENUM RATED SMFO CABLE
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2. INSTALL POLYETHYLENE CONDUIT
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2. REMOVE EXISTING CABINET FOUNDATION
3. MODIFY EXISTING CABINET FOUNDATION
4. REMOVE EXISTING CONTROLLER AND CABINET
5. INSTALL NEW CONTROLLER
6. INSTALL NEW 332 BASE MOUNTED CABINET
7. INSTALL NEW 336S BASE MOUNTED CABINET
8. INSTALL NEW 336S POLE MOUNTED CABINET
9. INSTALL BASE ADAPTER
10. INSTALL PRE-FORMED CABINET FOUNDATION PAD
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40. INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
41. INSTALL ETHERNET SWITCH
42. INSTALL VIDEO CODEC UNIT
43. REMOVE EXISTING FIBER OPTIC TRANSCEIVER
44. INSTALL CELLULAR MODEM
45. INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)
46. INSTALL 2.4/5.8 GHz RADIO TRANSCEIVER ▽
47. INSTALL PANEL ANTENNA ▽
48. INSTALL OMNI-DIRECTIONAL ANTENNA
49. REMOVE EXISTING WIRELESS HARDWARE
50. INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
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PLANS PREPARED IN THE OFFICE OF:
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Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE
▽ NEW WIRELESS RADIO DESIGN	KWS	10/28/11

SEAL

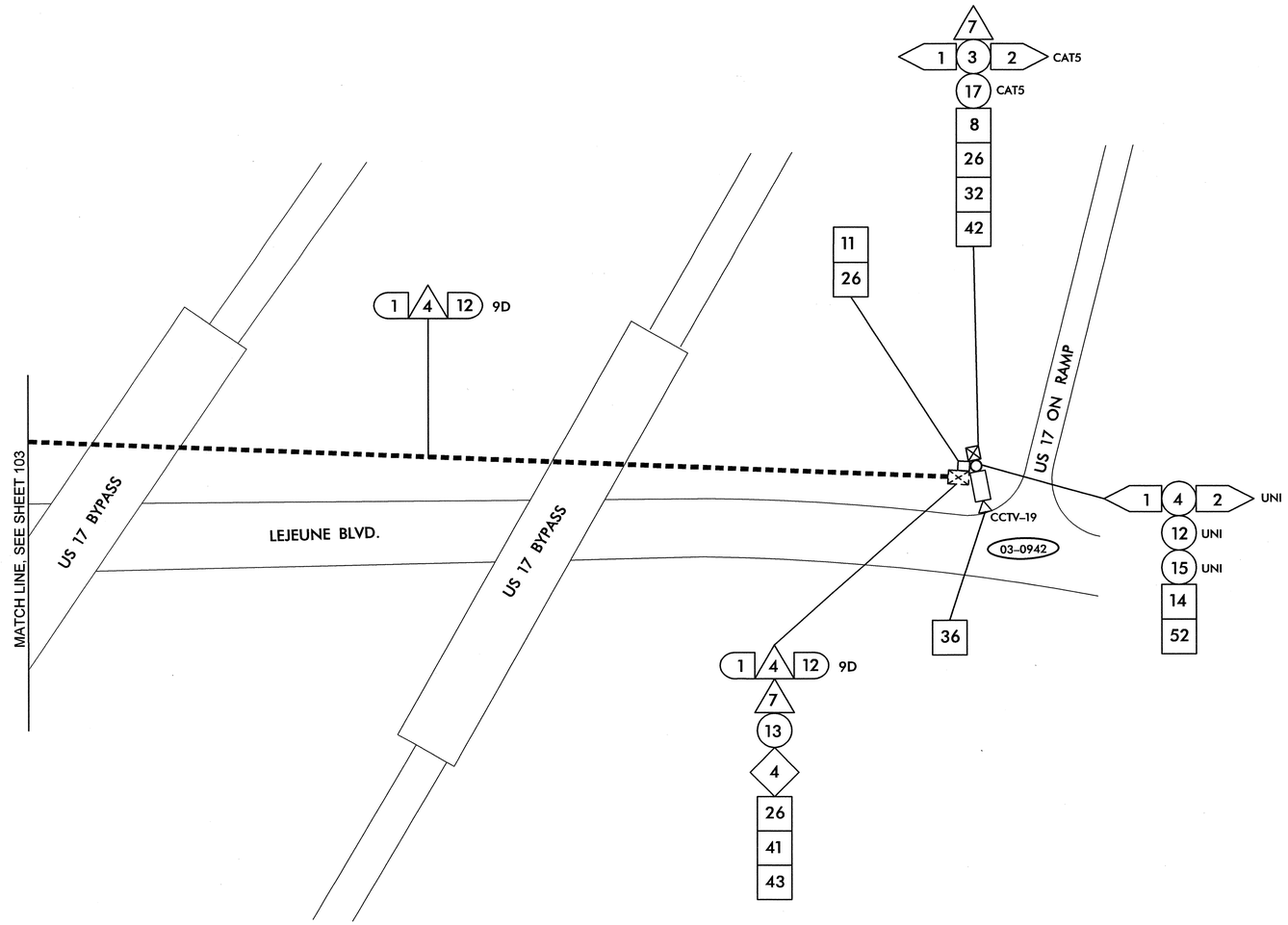
This document originally issued and sealed by Kevin W. Smith, 030472, on 07/20/11. This media shall not be considered a certified document.

SIGNATURE DATE

CADD Filename:

10/28/2011 $TIME$ jerry.cross ...*600 PSAE*CADD*CR-103.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	104



NOTES:
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2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE

1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE		
2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE		
3	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA	54	INSTALL DMS CONTROLLER		
4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY		
5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE				
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT				
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX				
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND								
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE								
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE								
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE								
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION								
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT								
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX								
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY								
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY								
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER												

PLANS PREPARED IN THE OFFICE OF:
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SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

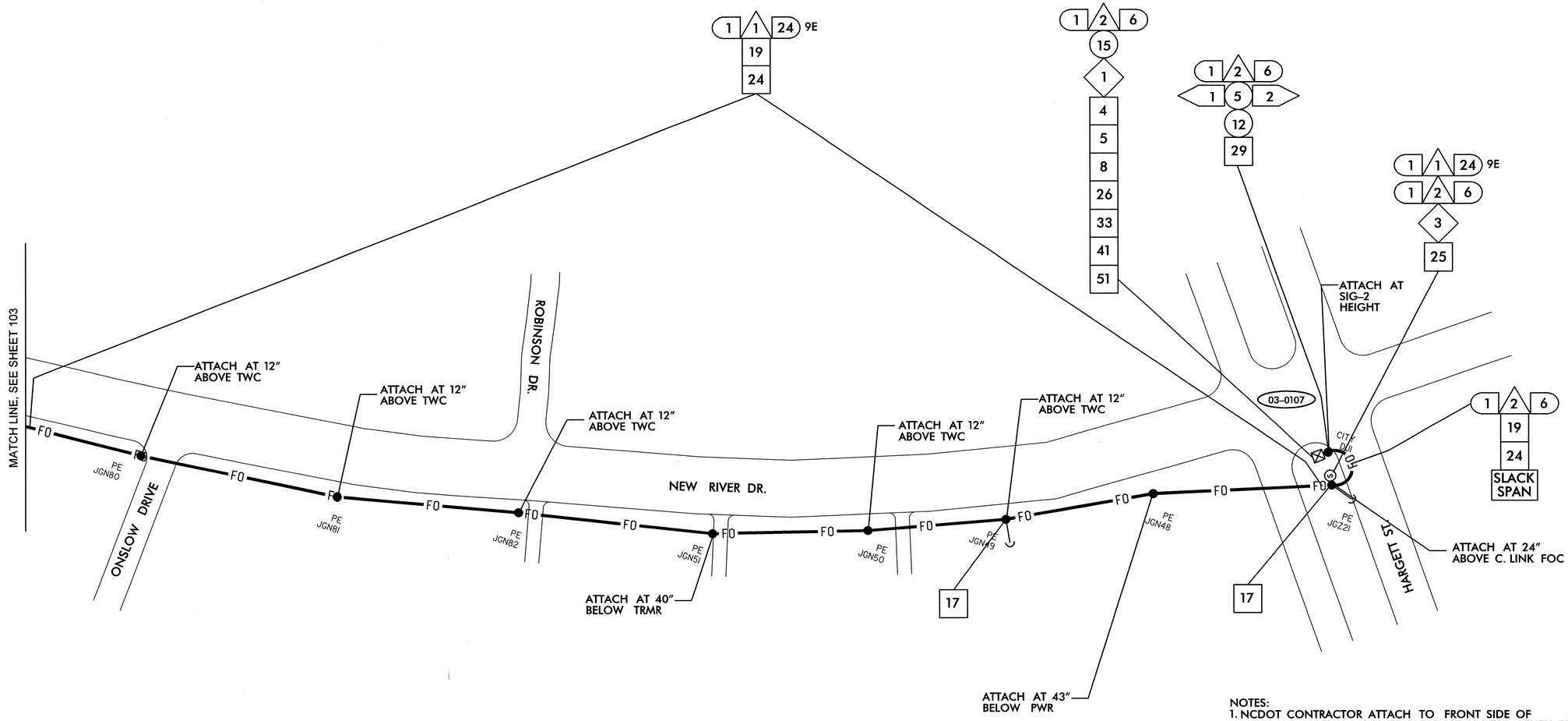
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...\R300 PSSE\CJONCR-104.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	105



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6	INSTALL NEW 332 BASE MOUNTED CABINET
7	INSTALL NEW 336S BASE MOUNTED CABINET
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SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011 REVIEWED BY: K.W. SMITH

PREPARED BY: S.P. PENNINGTON REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

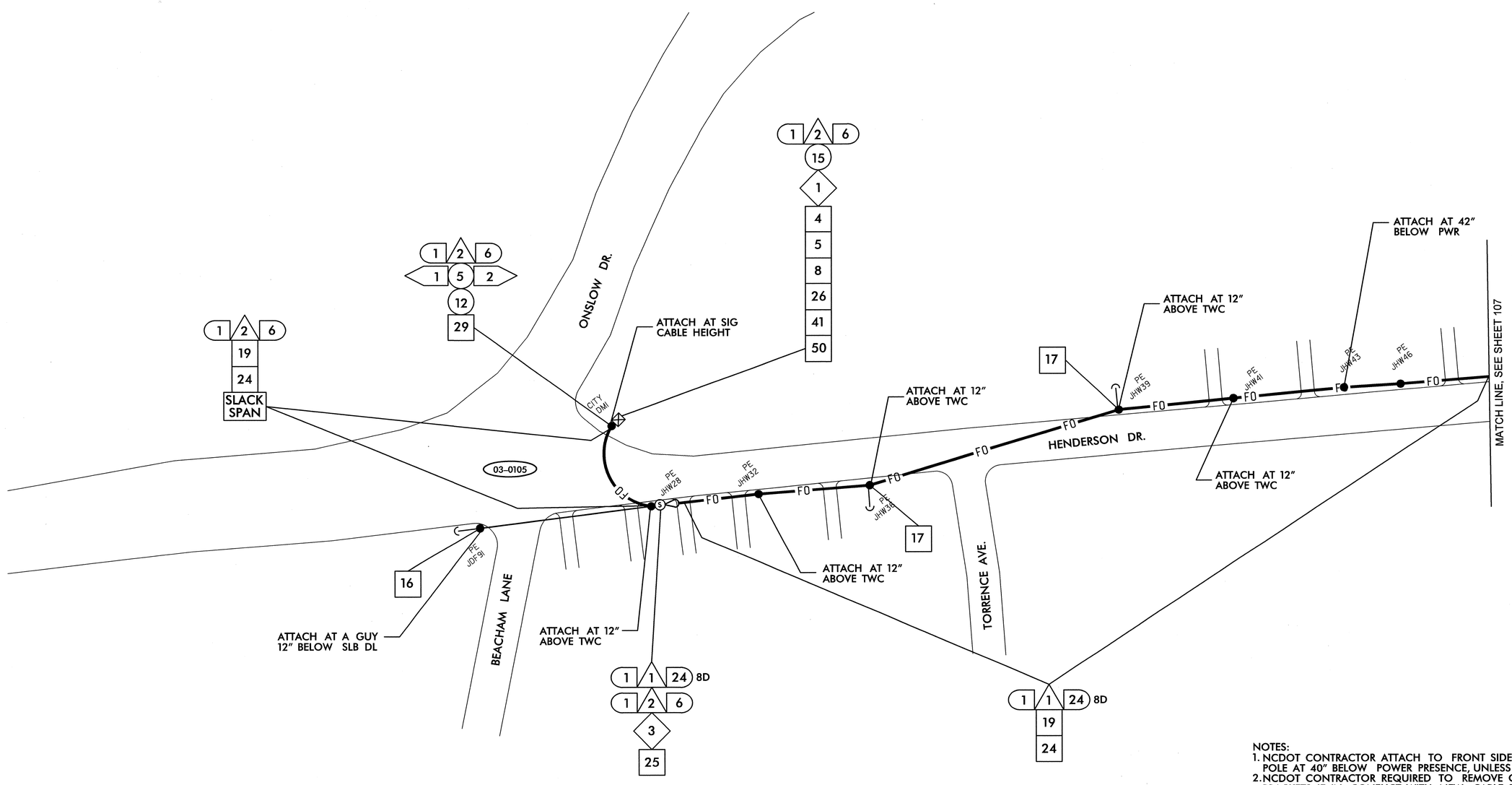
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...:\600 PSE\CADACR-105.dgn



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1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE		
2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE		
3	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA	54	INSTALL DMS CONTROLLER		
4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY		
5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE				
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT				
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX				
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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 N. Greenfield Pkwy., Garner, NC 27529

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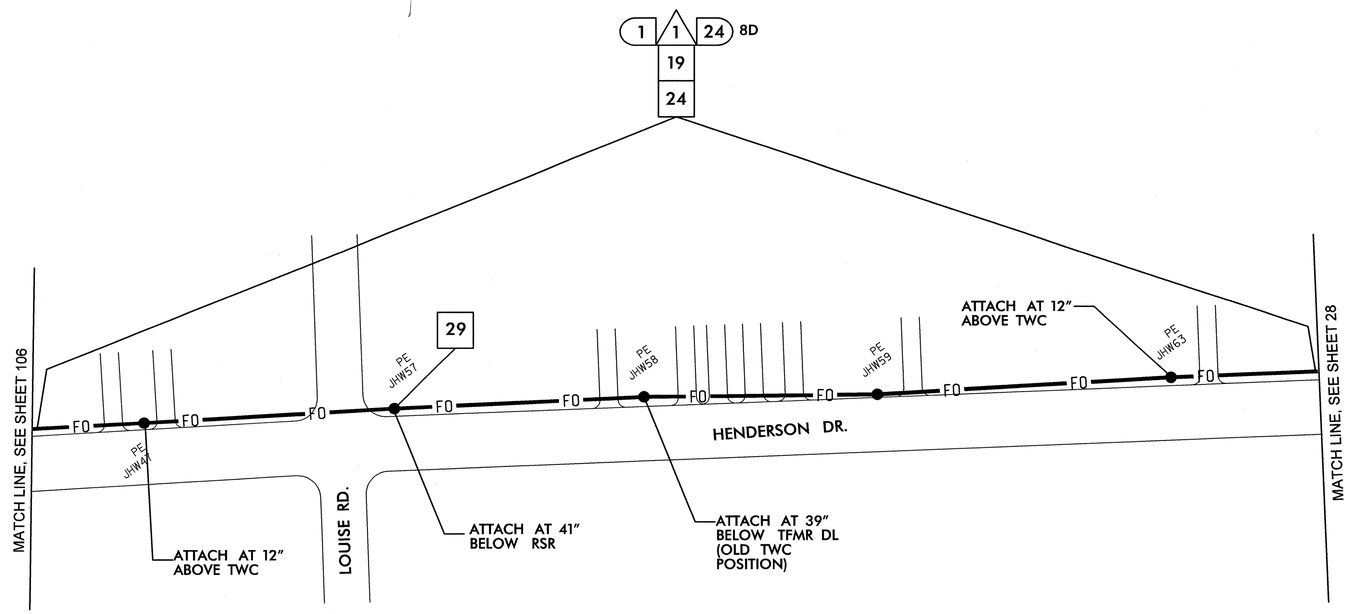

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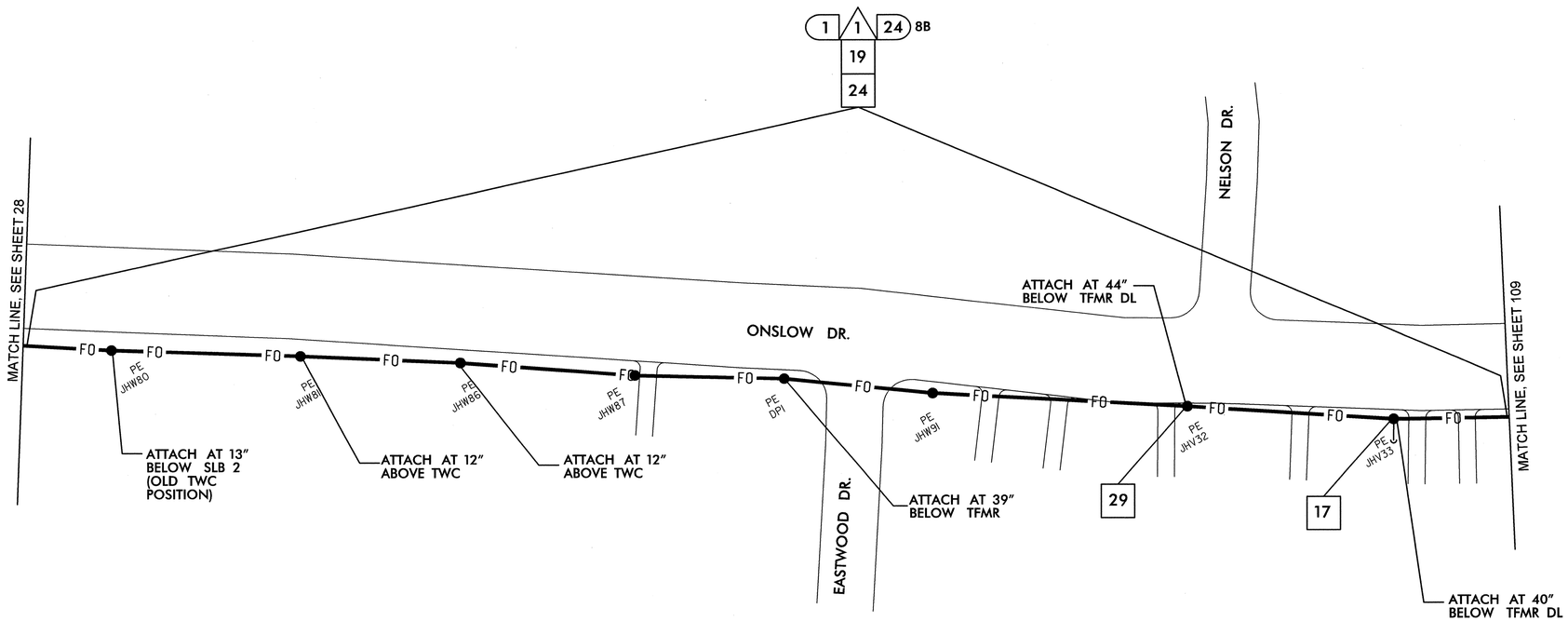

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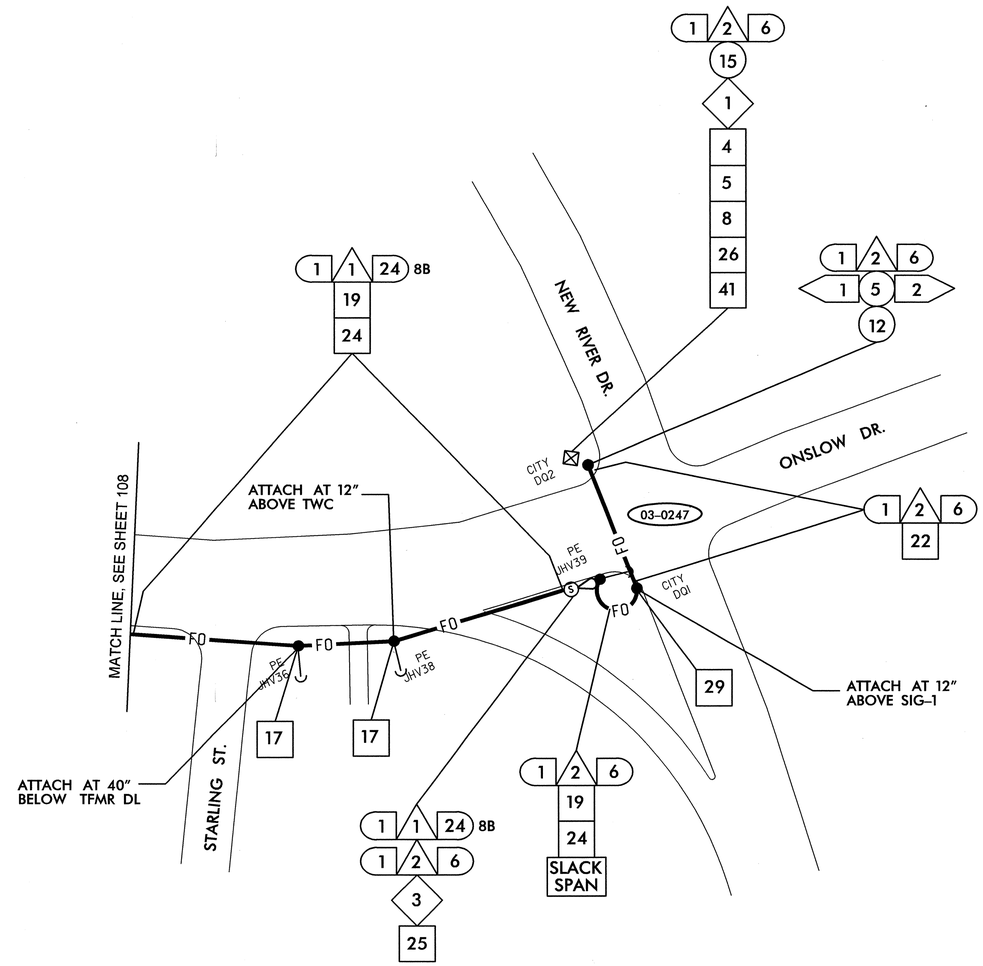

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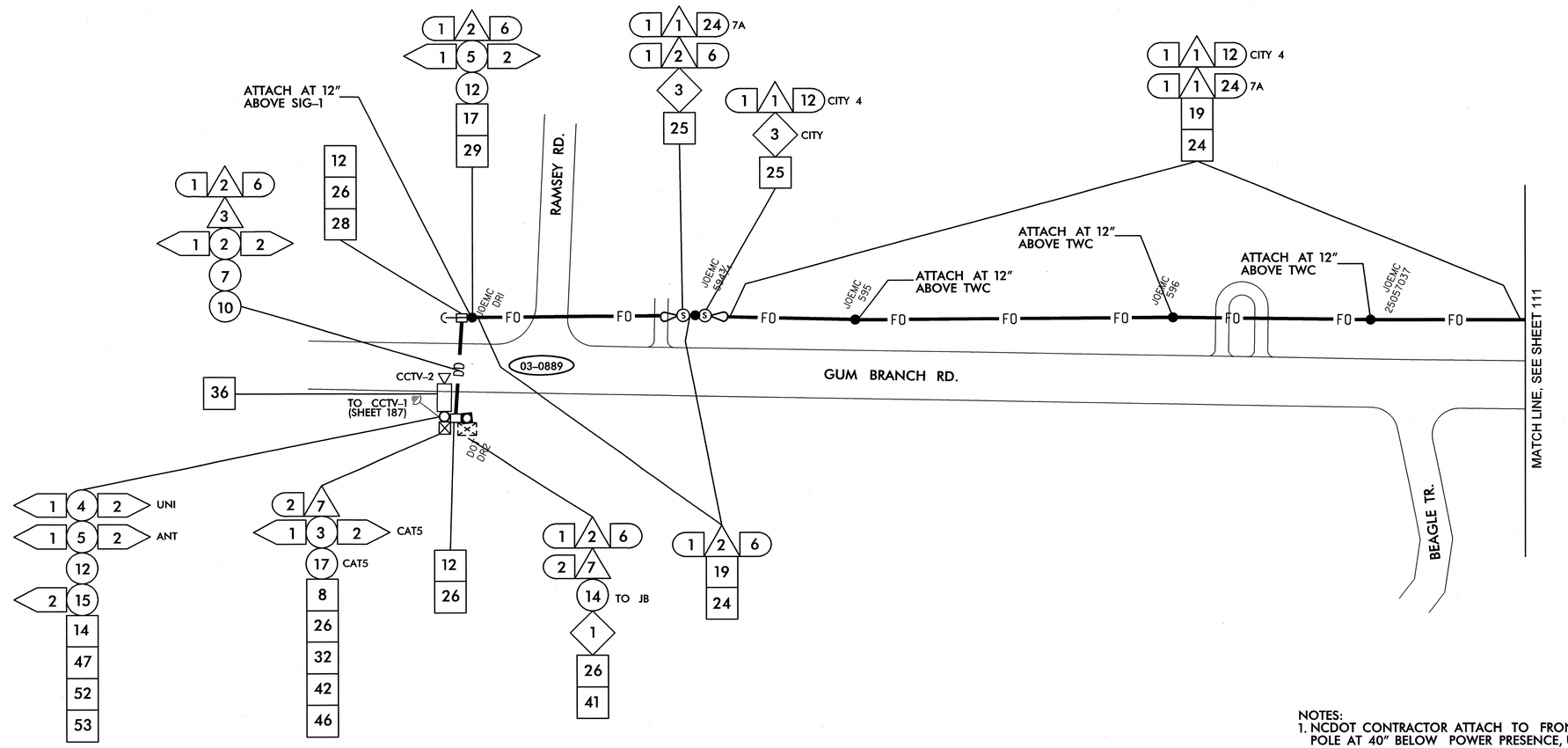

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5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND			52	INSTALL CCTV UNIFIED CABLE
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE			53	INSTALL ANTENNA CABLE
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE			54	INSTALL DMS CONTROLLER
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE			55	INSTALL SOLAR POWER ASSEMBLY
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION				
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT				
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX				
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY				
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY				
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER								

PLANS PREPARED IN THE OFFICE OF:

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

750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011 REVIEWED BY: K.W. SMITH

PREPARED BY: S.P. PENNINGTON REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE
1 NEW WIRELESS RADIO DESIGN	KWS	10/28/11

SEAL

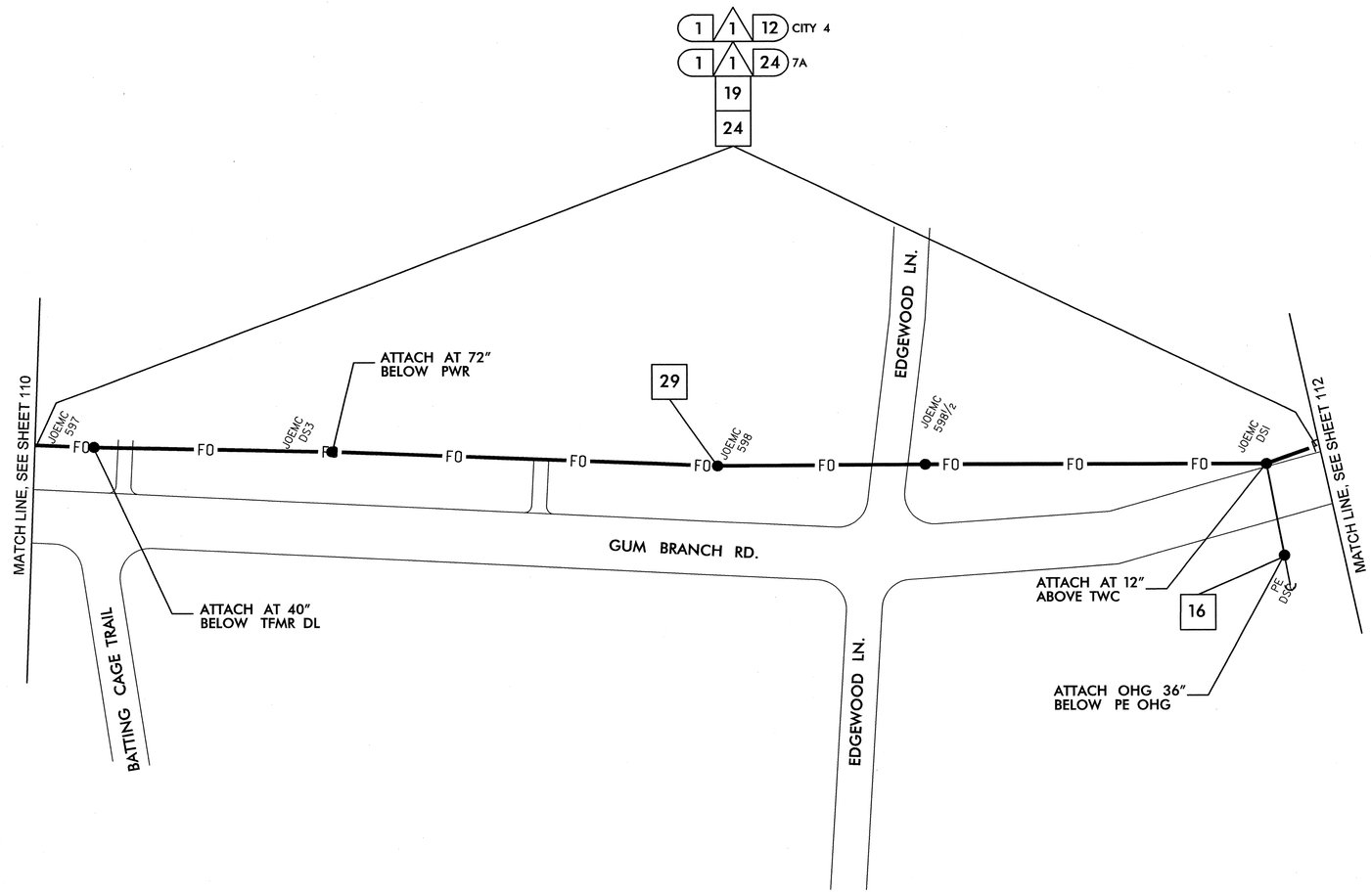
This document originally issued and sealed by Kevin W. Smith, 030412, on 07/20/11. This media shall not be considered a certified document.

SIGNATURE DATE

CADD Filename:

10/28/2011 $TIME$ jerry.cross ...#600 PSE#CADNCR-110.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	111



NOTES:
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2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.

1. INSTALL SMFO CABLE
2. INSTALL FIBER OPTIC DROP CABLE
3. INSTALL TRACER WIRE
4. REUSE EXISTING SMFO CABLE
5. INSTALL PLENUM RATED SMFO CABLE
6. INSTALL LOOP LEAD-IN CABLE
7. INSTALL ETHERNET CABLE

1. INSTALL PVC CONDUIT
2. INSTALL POLYETHYLENE CONDUIT
3. INSTALL RIGID, GALVANIZED STEEL CONDUIT
4. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5. INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
6. TRENCH CONDUIT
7. DIRECTIONAL DRILL CONDUIT
8. BORE AND JACK CONDUIT
9. INSTALL CABLE(S) IN EXISTING CONDUIT
10. INSTALL CABLE(S) IN NEW CONDUIT
11. INSTALL CABLE(S) IN EXISTING RISER
12. INSTALL CABLE(S) IN NEW RISER
13. INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS
14. INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)
15. INSTALL NEW RISER INTO POLE MOUNTED CABINET
16. REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
17. INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET

1. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2. INSTALL UNDERGROUND SPLICE ENCLOSURE
3. INSTALL AERIAL SPLICE ENCLOSURE
4. MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5. INSTALL TERMINAL SPLICE BOX

1. INSTALL CABINET FOUNDATION
2. REMOVE EXISTING CABINET FOUNDATION
3. MODIFY EXISTING CABINET FOUNDATION
4. REMOVE EXISTING CONTROLLER AND CABINET
5. INSTALL NEW CONTROLLER
6. INSTALL NEW 332 BASE MOUNTED CABINET
7. INSTALL NEW 336S BASE MOUNTED CABINET
8. INSTALL NEW 336S POLE MOUNTED CABINET
9. INSTALL BASE ADAPTER
10. INSTALL PRE-FORMED CABINET FOUNDATION PAD
11. INSTALL STANDARD JUNCTION BOX
12. INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
13. INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
14. INSTALL WOOD POLE
15. REMOVE EXISTING WOOD POLE
16. INSTALL AERIAL GUY ASSEMBLY
17. INSTALL STANDARD GUY ASSEMBLY
18. INSTALL SIDEWALK GUY ASSEMBLY
19. INSTALL MESSENGER CABLE
20. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
21. REMOVE EXISTING COMMUNICATIONS CABLE
22. LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
23. LASH CABLE(S) TO EXISTING MESSENGER CABLE
24. LASH CABLE(S) TO NEW MESSENGER CABLE
25. INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE
26. STORE 30 FEET OF EACH COMMUNICATIONS CABLE
27. STORE 100 FEET OF EACH COMMUNICATIONS CABLE
28. INSTALL FIBER OPTIC DELINEATOR MARKER
29. BOND MESSENGER CABLE TO POLE GROUND
30. MODIFY EXISTING ELECTRICAL SERVICE
31. INSTALL NEW ELECTRICAL SERVICE
32. INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
33. INSTALL GENERATOR ANCHOR IN FOUNDATION
34. RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
35. RECONNECT GENERATOR POWER INLET BOX
36. INSTALL CCTV CAMERA ASSEMBLY
37. INSTALL SMALL DMS ASSEMBLY
38. INSTALL LARGE DMS ASSEMBLY
39. INSTALL PEDESTAL STRUCTURE FOR SMALL DMS
40. INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
41. INSTALL ETHERNET SWITCH
42. INSTALL VIDEO CODEC UNIT
43. REMOVE EXISTING FIBER OPTIC TRANSCEIVER
44. INSTALL CELLULAR MODEM
45. INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)
46. INSTALL 2.4 GHz RADIO TRANSCEIVER
47. INSTALL YAGI ANTENNA
48. INSTALL OMNI-DIRECTIONAL ANTENNA
49. REMOVE EXISTING WIRELESS HARDWARE
50. INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
51. INSTALL NEW GENERATOR POWER INLET BOX
52. INSTALL CCTV UNIFIED CABLE
53. INSTALL ANTENNA CABLE
54. INSTALL DMS CONTROLLER
55. INSTALL SOLAR POWER ASSEMBLY

PLANS PREPARED IN THE OFFICE OF:
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P.O. Box 33068
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Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

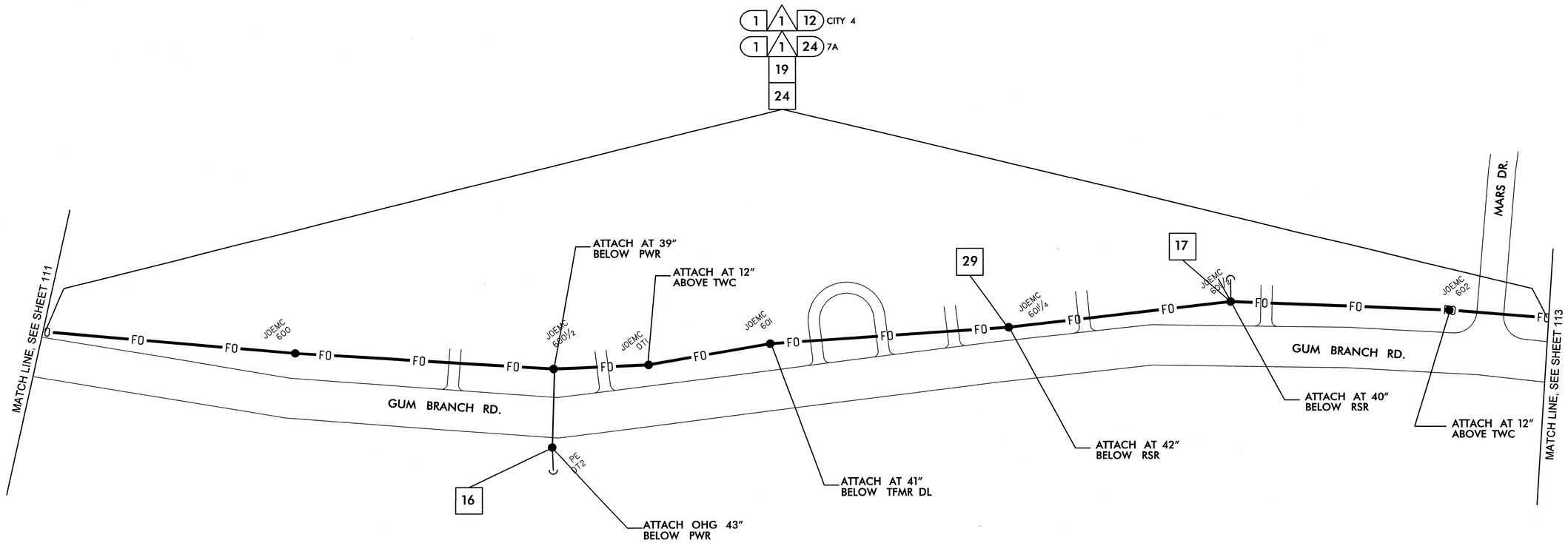
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-25-11 DATE

CADD Filename:

7/25/2011 $TIME$ susan.pennington ...#600 PSE#CAD#CR-111.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	112



NOTES:
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△1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE		
△2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE		
△3	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA	54	INSTALL DMS CONTROLLER		
△4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY		
△5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE				
△6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT				
△7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX				
(1)	INSTALL PVC CONDUIT	◇1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND								
(2)	INSTALL POLYETHYLENE CONDUIT	◇2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE								
(3)	INSTALL RIGID, GALVANIZED STEEL CONDUIT	◇3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE								
(4)	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	◇4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE								
(5)	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	◇5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION								
(6)	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT								
(7)	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX								
(8)	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY								
(9)	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY								
(10)	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER												

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

Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

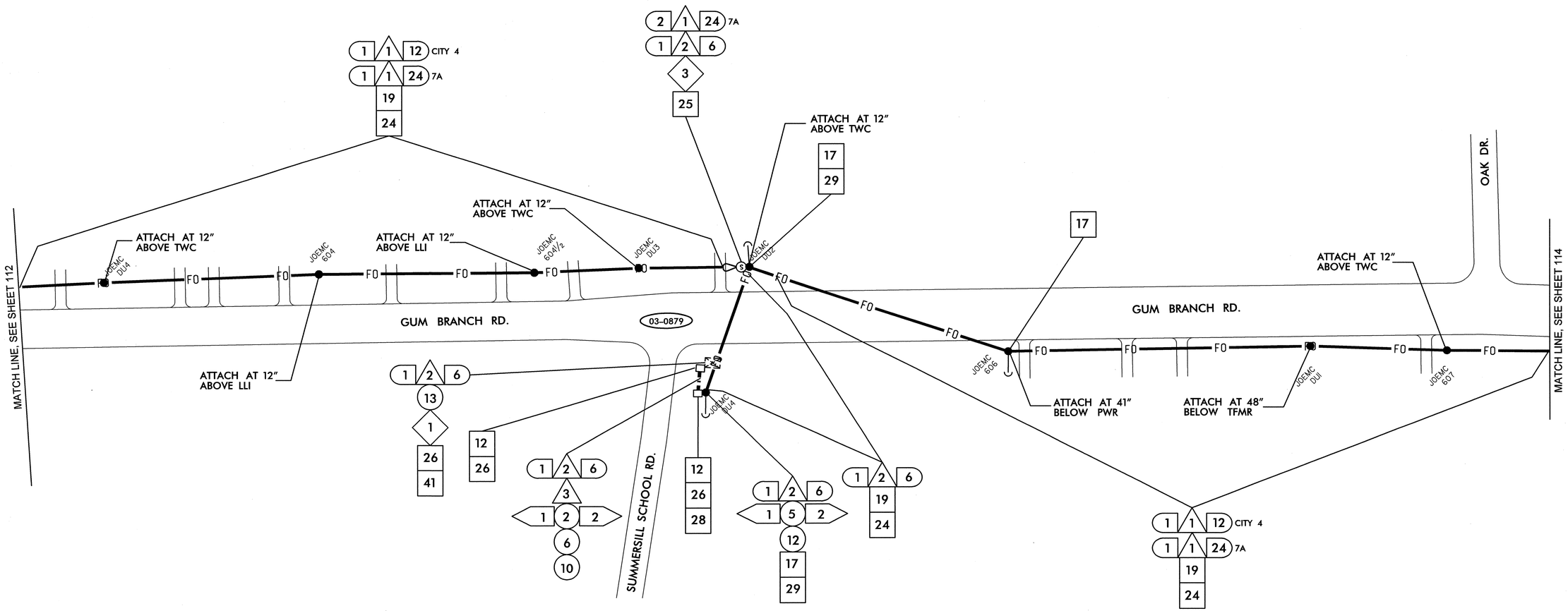
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filenames:

7/19/2011 $TIME$ susan.pennington ...#600 PSDE:CADWCr-112.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	113



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2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE								
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CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

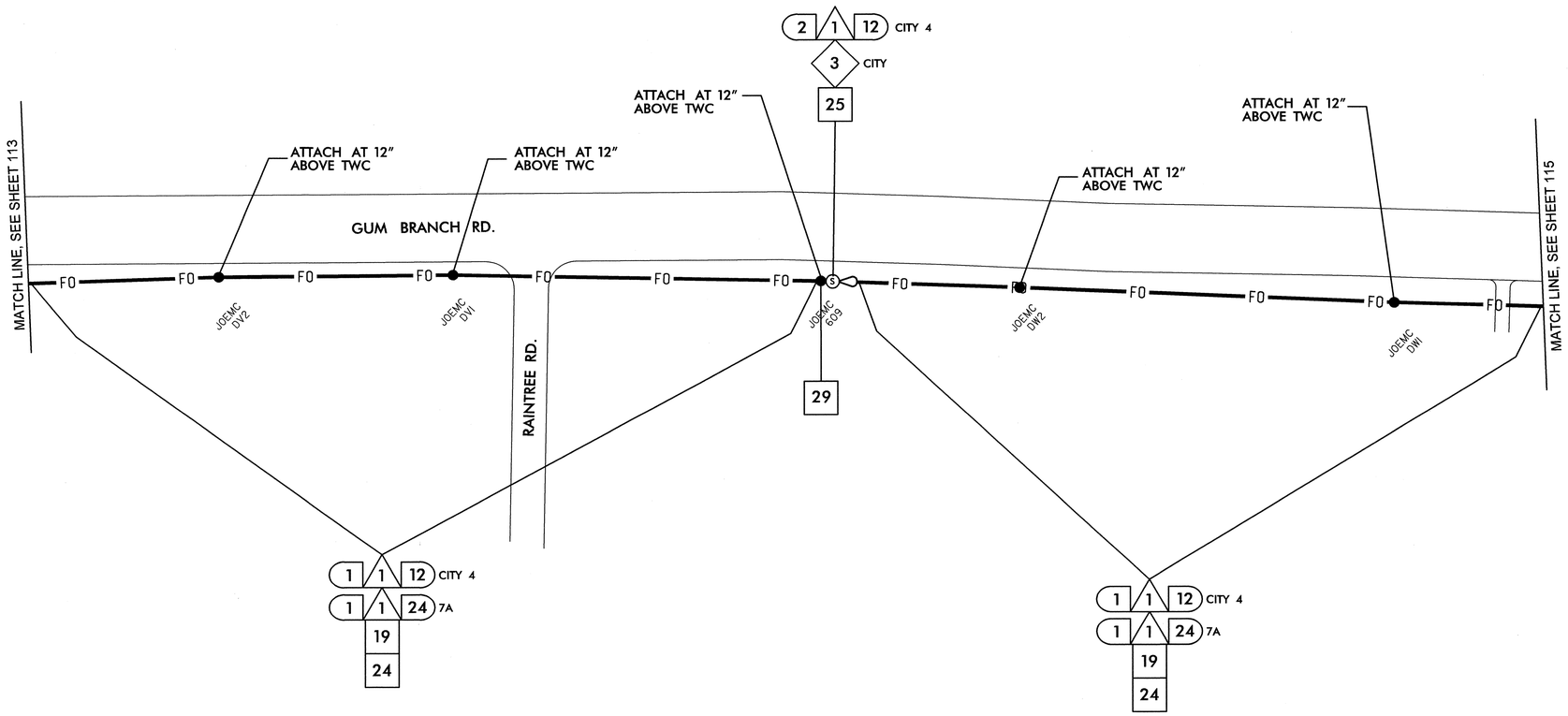
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSAE#CADWCR-113.dgn



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6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT		
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1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND						
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE						
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE						
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE						
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION						
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT						
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX						
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY						
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY						
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER										

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

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Mobility and Safety Division
Traffic Management Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

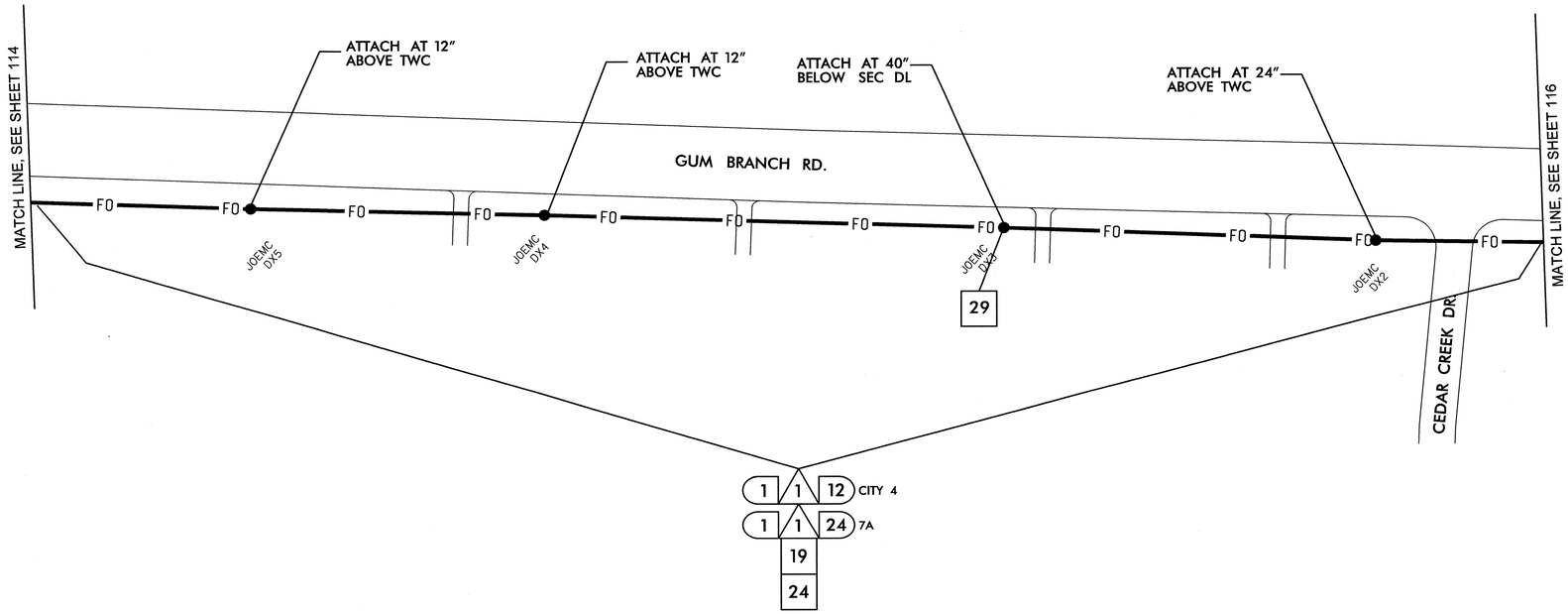
PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:



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△1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE		
△2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE		
△3	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA	54	INSTALL DMS CONTROLLER		
△4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY		
△5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE				
△6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT				
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PLANS PREPARED IN THE OFFICE OF:
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Transportation Mobility and Safety Division
Intelligent Transportation Systems Section
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

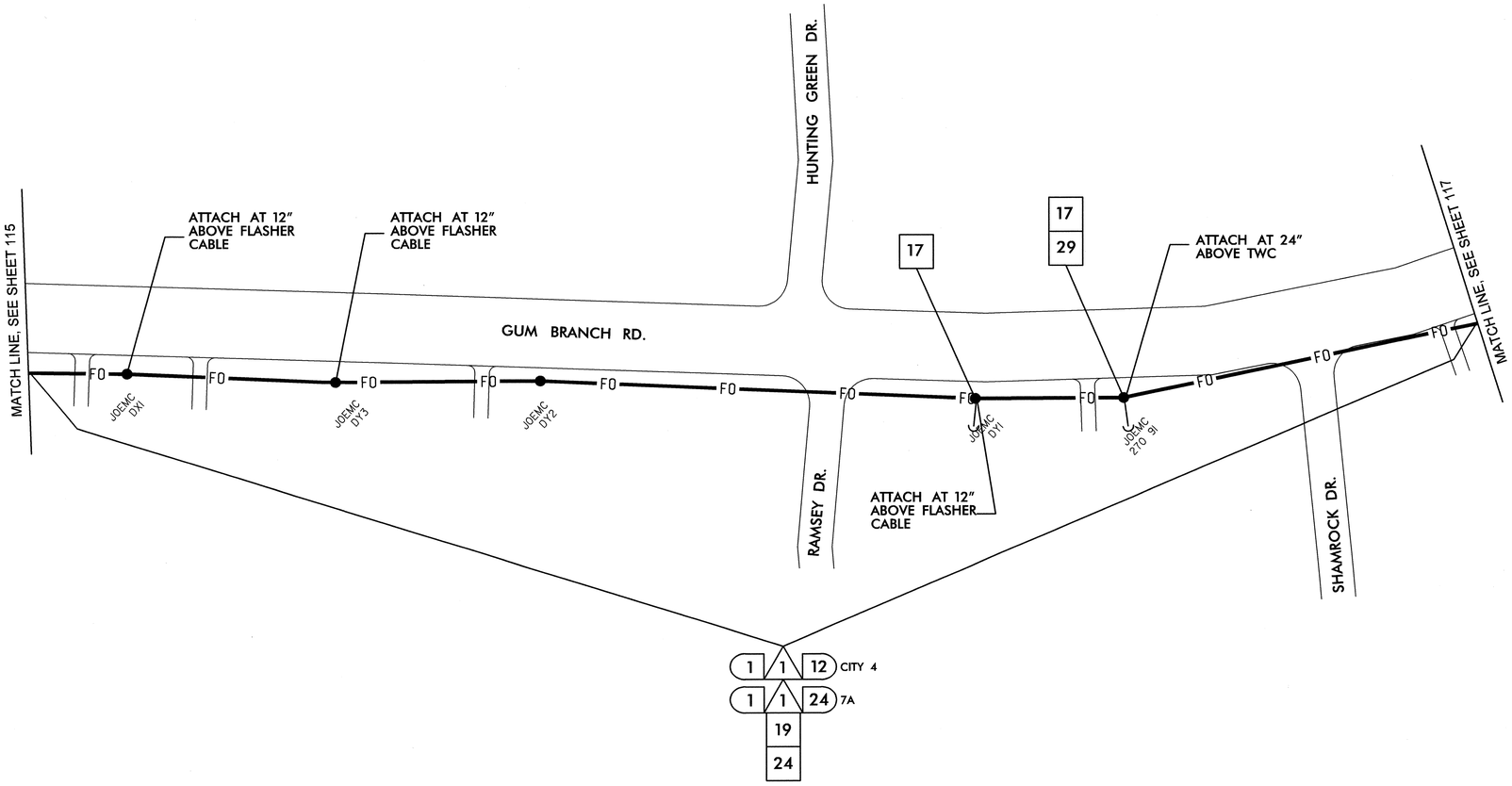
PLAN DATE: JULY 2011		REVIEWED BY: K.W. SMITH	
PREPARED BY: S.P. PENNINGTON		REVIEWED BY: T.F. BURCHETT	
REVISIONS		INIT.	DATE

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:



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PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
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(919) 677-2000

Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

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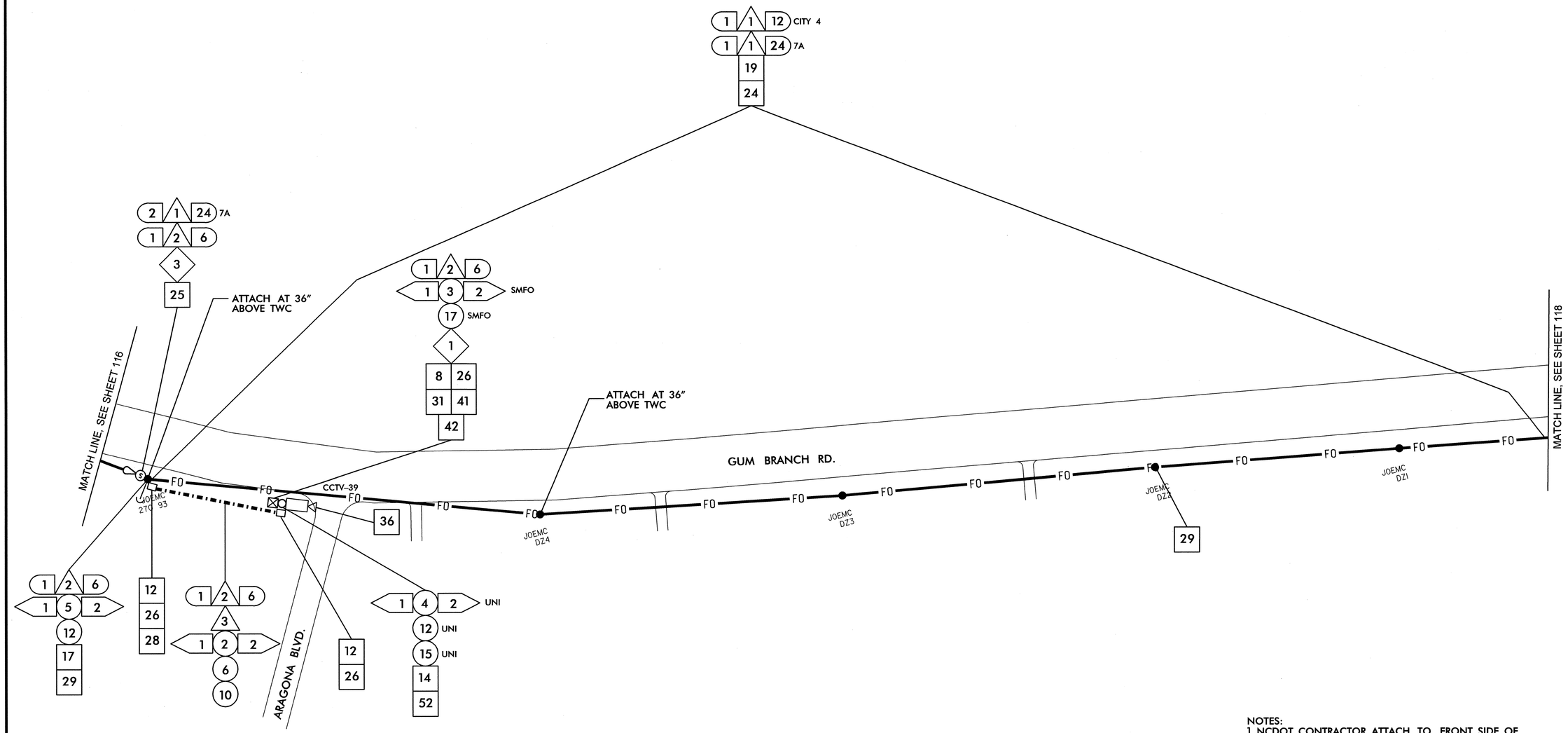

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- 1 INSTALL SMFO CABLE
- 2 INSTALL FIBER OPTIC DROP CABLE
- 3 INSTALL TRACER WIRE
- 4 REUSE EXISTING SMFO CABLE
- 5 INSTALL PLENUM RATED SMFO CABLE
- 6 INSTALL LOOP LEAD-IN CABLE
- 7 INSTALL ETHERNET CABLE
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- 2 INSTALL POLYETHYLENE CONDUIT
- 3 INSTALL RIGID, GALVANIZED STEEL CONDUIT
- 4 INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
- 5 INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
- 6 TRENCH CONDUIT
- 7 DIRECTIONAL DRILL CONDUIT
- 8 BORE AND JACK CONDUIT
- 9 INSTALL CABLE(S) IN EXISTING CONDUIT
- 10 INSTALL CABLE(S) IN NEW CONDUIT
- 11 INSTALL CABLE(S) IN EXISTING RISER
- 12 INSTALL CABLE(S) IN NEW RISER
- 13 INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS
- 14 INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)
- 15 INSTALL NEW RISER INTO POLE MOUNTED CABINET
- 16 REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
- 17 INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET
- 1 INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
- 2 INSTALL UNDERGROUND SPLICE ENCLOSURE
- 3 INSTALL AERIAL SPLICE ENCLOSURE
- 4 MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
- 5 INSTALL TERMINAL SPLICE BOX
- 1 INSTALL CABINET FOUNDATION
- 2 REMOVE EXISTING CABINET FOUNDATION
- 3 MODIFY EXISTING CABINET FOUNDATION
- 4 REMOVE EXISTING CONTROLLER AND CABINET
- 5 INSTALL NEW CONTROLLER
- 6 INSTALL NEW 332 BASE MOUNTED CABINET
- 7 INSTALL NEW 336S BASE MOUNTED CABINET
- 8 INSTALL NEW 336S POLE MOUNTED CABINET
- 9 INSTALL BASE ADAPTER
- 10 INSTALL PRE-FORMED CABINET FOUNDATION PAD
- 11 INSTALL STANDARD JUNCTION BOX
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- 13 INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
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- 15 REMOVE EXISTING WOOD POLE
- 16 INSTALL AERIAL GUY ASSEMBLY
- 17 INSTALL STANDARD GUY ASSEMBLY
- 18 INSTALL SIDEWALK GUY ASSEMBLY
- 19 INSTALL MESSENGER CABLE
- 20 REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
- 21 REMOVE EXISTING COMMUNICATIONS CABLE
- 22 LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
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- 26 STORE 30 FEET OF EACH COMMUNICATIONS CABLE
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- 28 INSTALL FIBER OPTIC DELINEATOR MARKER
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- 30 MODIFY EXISTING ELECTRICAL SERVICE
- 31 INSTALL NEW ELECTRICAL SERVICE
- 32 INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
- 33 INSTALL GENERATOR ANCHOR IN FOUNDATION
- 34 RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
- 35 RECONNECT GENERATOR POWER INLET BOX
- 36 INSTALL CCTV CAMERA ASSEMBLY
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- 55 INSTALL SOLAR POWER ASSEMBLY

PLANS PREPARED IN THE OFFICE OF:
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Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Integrated Transportation Systems
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SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSE#CADWCR-117.dgn

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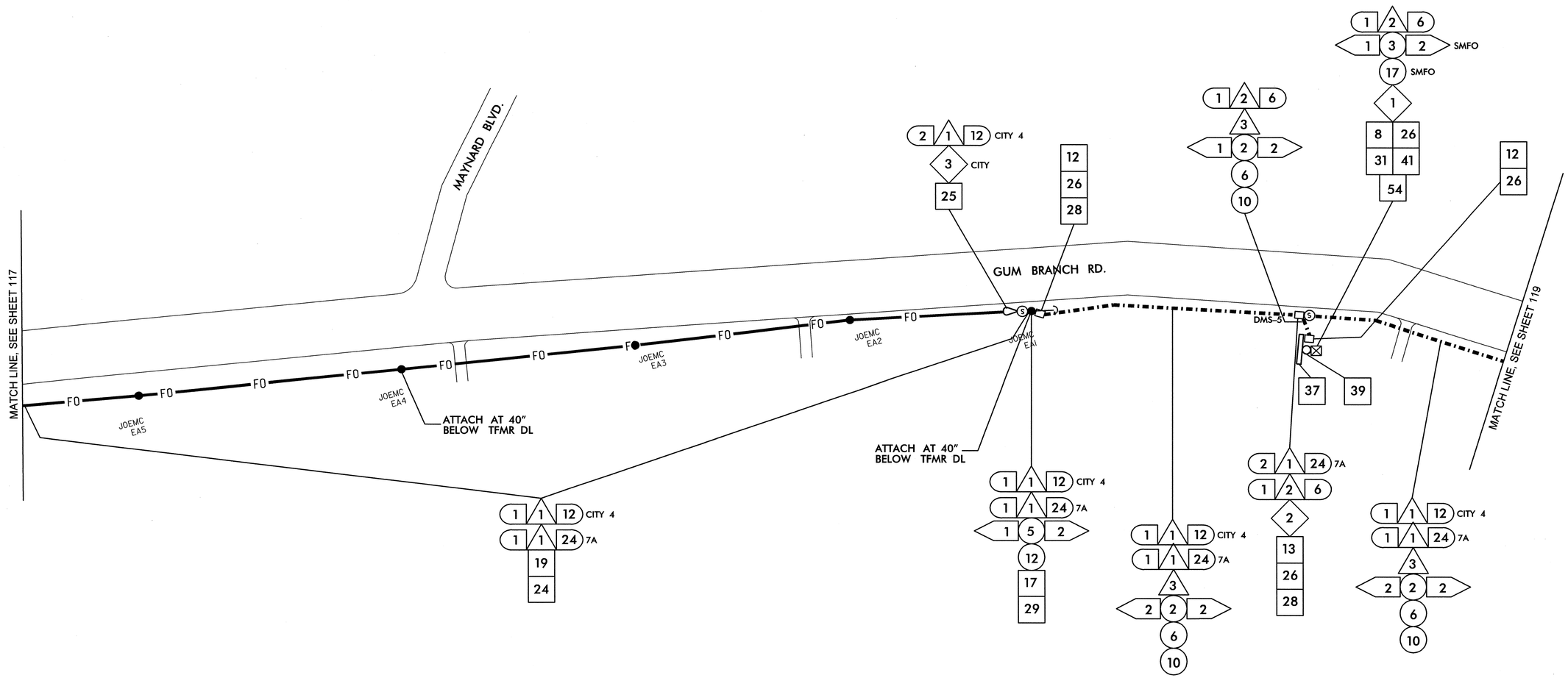
U-5168	118



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47	INSTALL YAGI ANTENNA
48	INSTALL OMNI-DIRECTIONAL ANTENNA
49	REMOVE EXISTING WIRELESS HARDWARE
50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
51	INSTALL NEW GENERATOR POWER INLET BOX
52	INSTALL CCTV UNIFIED CABLE
53	INSTALL ANTENNA CABLE
54	INSTALL DMS CONTROLLER
55	INSTALL SOLAR POWER ASSEMBLY

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

Transportation Mobility and Safety Division
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Integrated Mobility Division
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

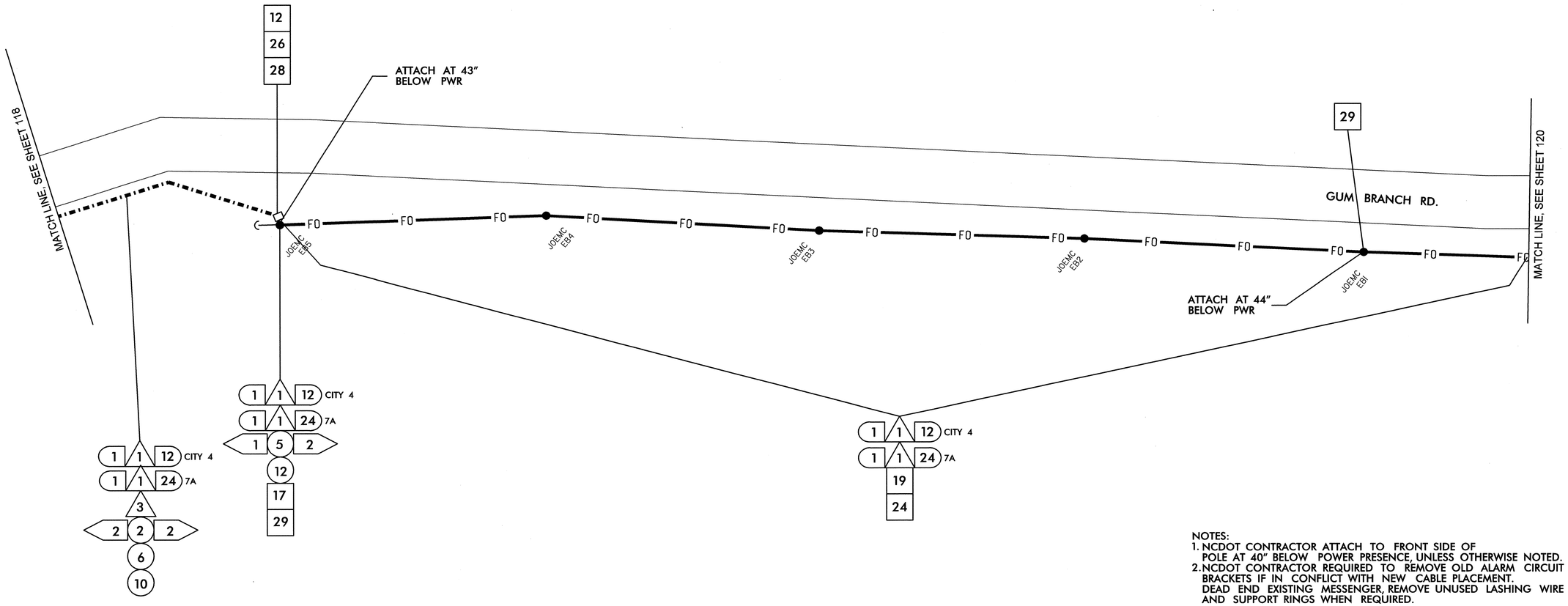
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE DATE 7-20-11

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...\R50 PSAE\AD\RCR-118.dgn



NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.

1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE		
2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE		
3	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA	54	INSTALL DMS CONTROLLER		
4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY		
5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE				
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT				
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX				
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND								
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE								
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE								
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE								
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION								
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT								
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX								
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY								
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY								
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER												

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

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

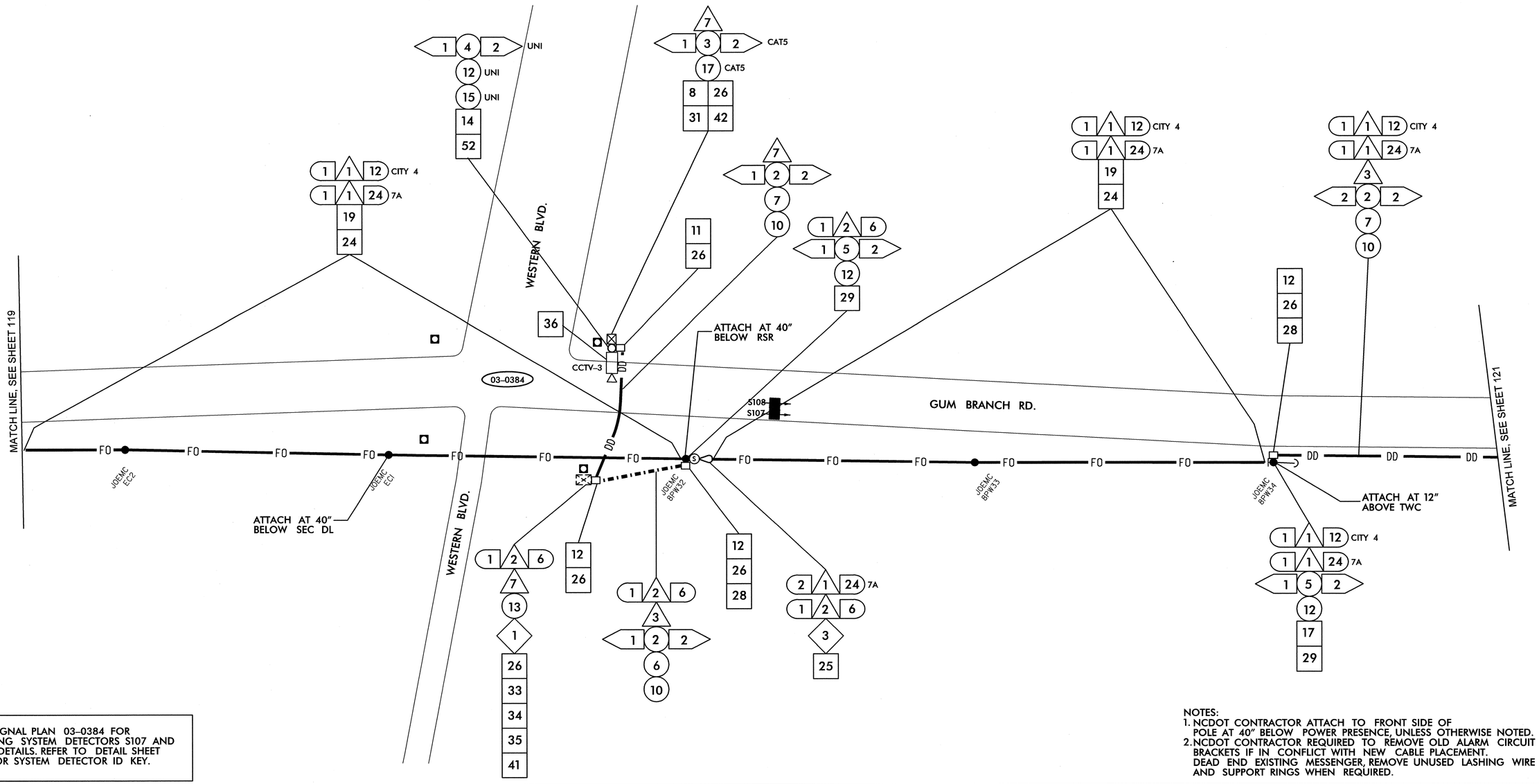
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSE&R\ADMIN-119.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	120



SEE SIGNAL PLAN 03-0384 FOR EXISTING SYSTEM DETECTORS S107 AND S108 DETAILS. REFER TO DETAIL SHEET 1H FOR SYSTEM DETECTOR ID KEY.

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1	INSTALL SMFO CABLE
2	INSTALL FIBER OPTIC DROP CABLE
3	INSTALL TRACER WIRE
4	REUSE EXISTING SMFO CABLE
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6	INSTALL LOOP LEAD-IN CABLE
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6	TRENCH CONDUIT
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9	INSTALL CABLE(S) IN EXISTING CONDUIT
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15	INSTALL NEW RISER INTO POLE MOUNTED CABINET
16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET
1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2	INSTALL UNDERGROUND SPLICE ENCLOSURE
3	INSTALL AERIAL SPLICE ENCLOSURE
4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5	INSTALL TERMINAL SPLICE BOX
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION
3	MODIFY EXISTING CABINET FOUNDATION
4	REMOVE EXISTING CONTROLLER AND CABINET
5	INSTALL NEW CONTROLLER
6	INSTALL NEW 332 BASE MOUNTED CABINET
7	INSTALL NEW 336S BASE MOUNTED CABINET
8	INSTALL NEW 336S POLE MOUNTED CABINET
9	INSTALL BASE ADAPTER
10	INSTALL PRE-FORMED CABINET FOUNDATION PAD
11	INSTALL STANDARD JUNCTION BOX
12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
14	INSTALL WOOD POLE
15	REMOVE EXISTING WOOD POLE
16	INSTALL AERIAL GUY ASSEMBLY
17	INSTALL STANDARD GUY ASSEMBLY
18	INSTALL SIDEWALK GUY ASSEMBLY
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PLANS PREPARED IN THE OFFICE OF:
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Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
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SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

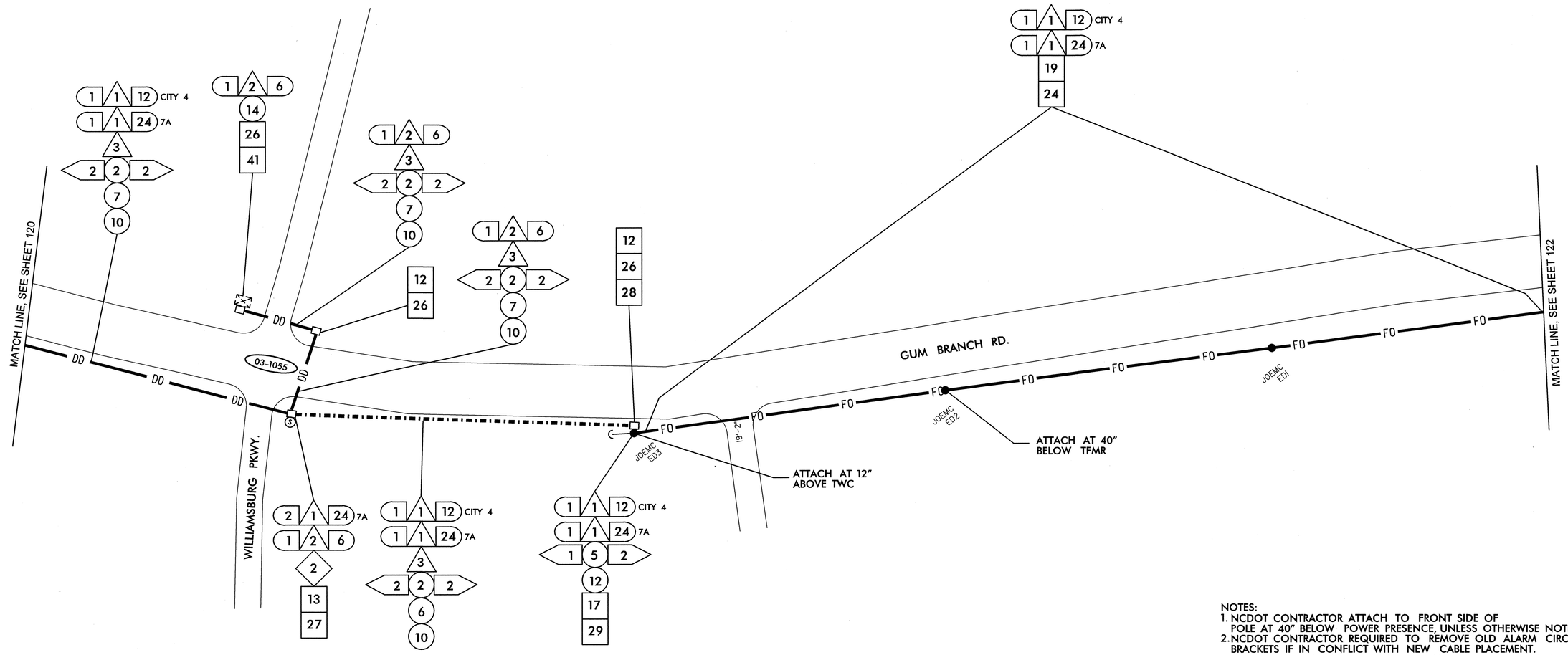
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filenames

7/19/2011 $TIME$ susan.pennington ...N600 PSSE#CADWCR-120.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	121



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PLANS PREPARED IN THE OFFICE OF:

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SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011 REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

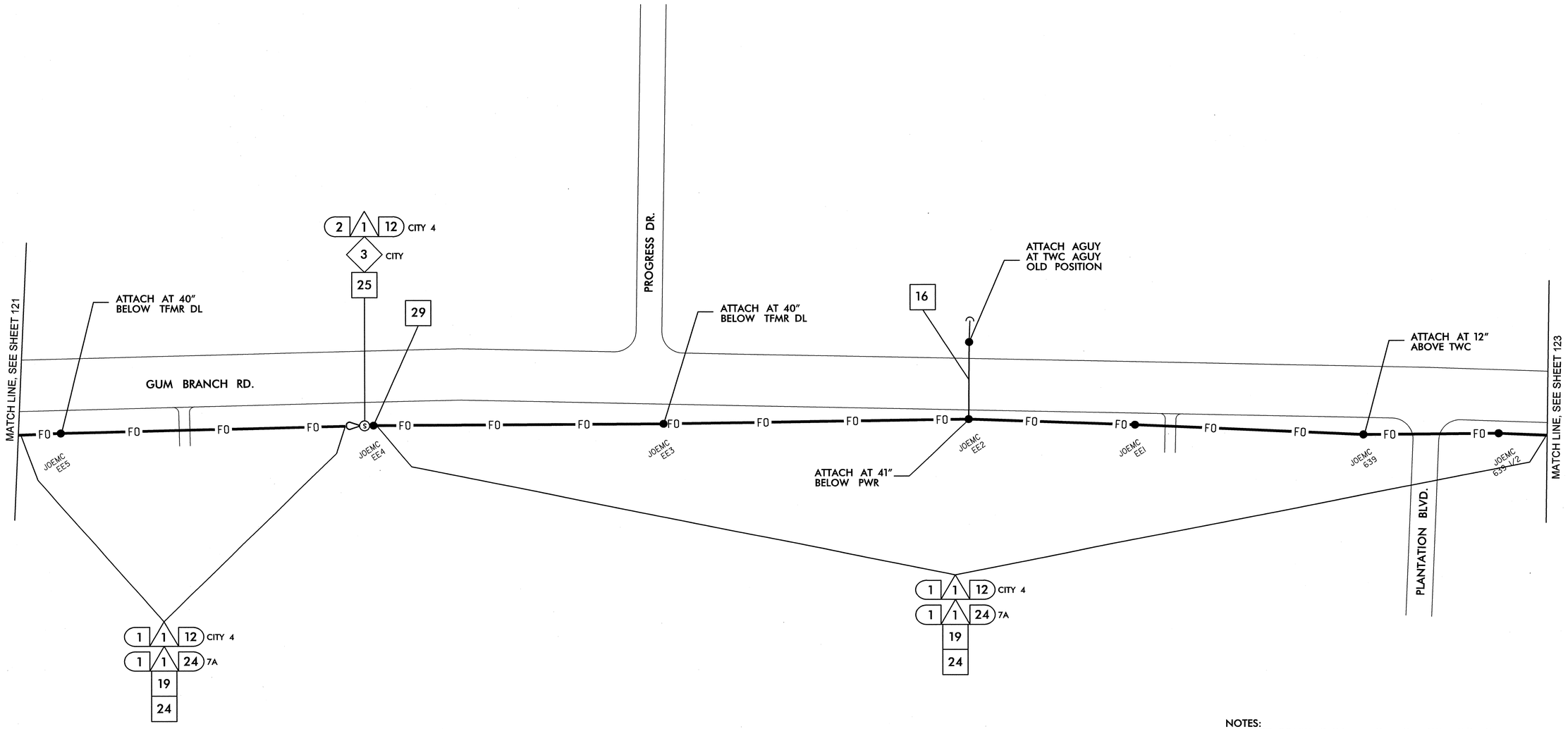
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...*600 PS\E\WD\R-121.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	122



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SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

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NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

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PROJECT REFERENCE NO.	SHEET NO.
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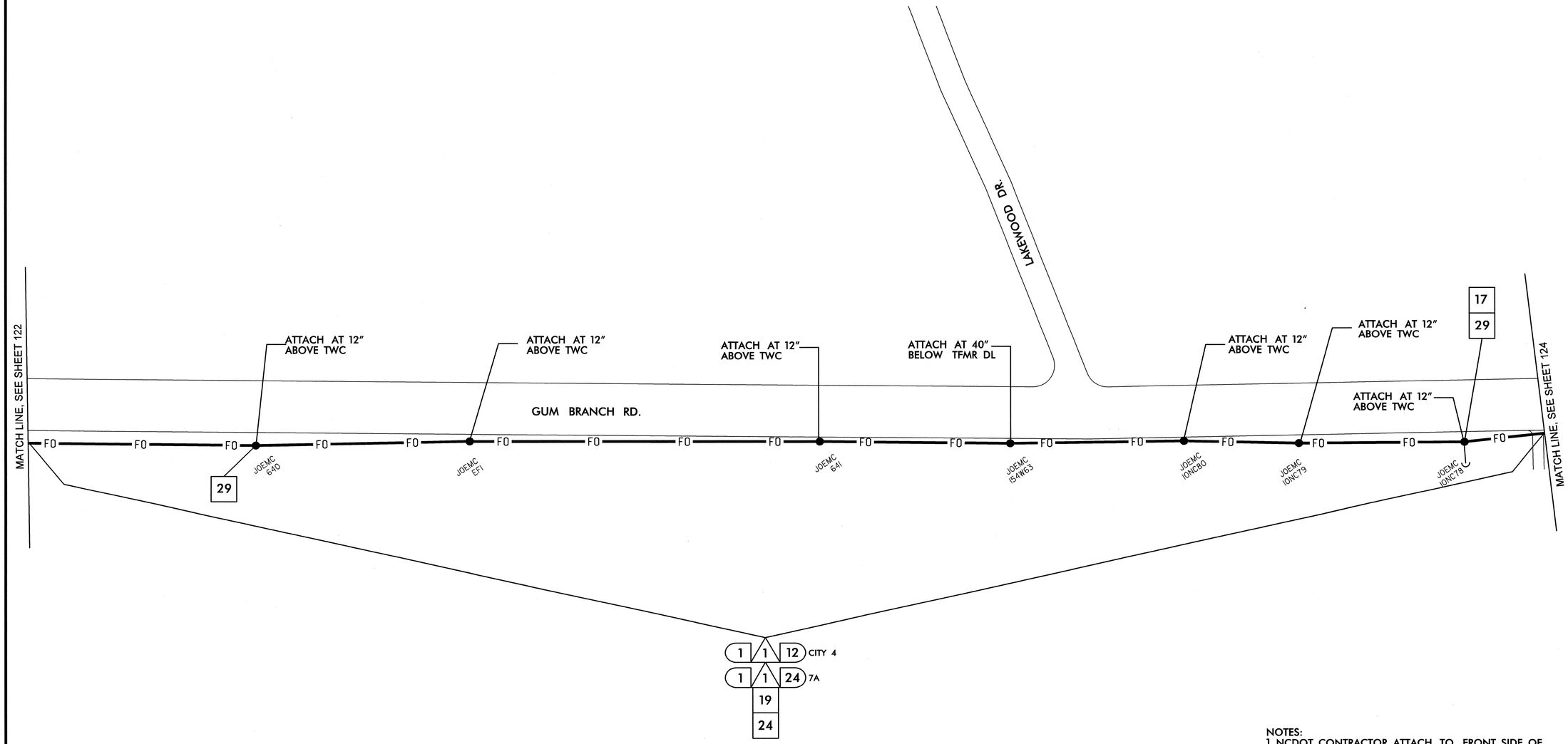


NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.

△1	INSTALL SMFO CABLE	(11)	INSTALL CABLE(S) IN EXISTING RISER	[6]	INSTALL NEW 332 BASE MOUNTED CABINET	[22]	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	[38]	INSTALL LARGE DMS ASSEMBLY	[45]	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	[52]	INSTALL CCTV UNIFIED CABLE						
△2	INSTALL FIBER OPTIC DROP CABLE	(12)	INSTALL CABLE(S) IN NEW RISER	[7]	INSTALL NEW 336S BASE MOUNTED CABINET	[23]	LASH CABLE(S) TO EXISTING MESSENGER CABLE	[39]	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	[46]	INSTALL 2.4 GHz RADIO TRANSCEIVER	[53]	INSTALL ANTENNA CABLE						
△3	INSTALL TRACER WIRE	(13)	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	[8]	INSTALL NEW 336S POLE MOUNTED CABINET	[24]	LASH CABLE(S) TO NEW MESSENGER CABLE	[40]	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	[47]	INSTALL YAGI ANTENNA	[54]	INSTALL DMS CONTROLLER						
△4	REUSE EXISTING SMFO CABLE	(14)	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	[9]	INSTALL BASE ADAPTER	[25]	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	[41]	INSTALL ETHERNET SWITCH	[48]	INSTALL OMNI-DIRECTIONAL ANTENNA	[55]	INSTALL SOLAR POWER ASSEMBLY						
△5	INSTALL PLENUM RATED SMFO CABLE	(15)	INSTALL NEW RISER INTO POLE MOUNTED CABINET	[10]	INSTALL PRE-FORMED CABINET FOUNDATION PAD	[26]	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	[42]	INSTALL VIDEO CODEC UNIT	[49]	REMOVE EXISTING WIRELESS HARDWARE								
△6	INSTALL LOOP LEAD-IN CABLE	(16)	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	[11]	INSTALL STANDARD JUNCTION BOX	[27]	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	[43]	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	[50]	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT								
△7	INSTALL ETHERNET CABLE	(17)	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	[12]	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	[28]	INSTALL FIBER OPTIC DELINEATOR MARKER	[44]	INSTALL CELLULAR MODEM	[51]	INSTALL NEW GENERATOR POWER INLET BOX								
(1)	INSTALL PVC CONDUIT	◇1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	[13]	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	[29]	BOND MESSENGER CABLE TO POLE GROUND												
(2)	INSTALL POLYETHYLENE CONDUIT	◇2	INSTALL UNDERGROUND SPLICE ENCLOSURE	[14]	INSTALL WOOD POLE	[30]	MODIFY EXISTING ELECTRICAL SERVICE												
(3)	INSTALL RIGID, GALVANIZED STEEL CONDUIT	◇3	INSTALL AERIAL SPLICE ENCLOSURE	[15]	REMOVE EXISTING WOOD POLE	[31]	INSTALL NEW ELECTRICAL SERVICE												
(4)	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	◇4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	[16]	INSTALL AERIAL GUY ASSEMBLY	[32]	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE												
(5)	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	◇5	INSTALL TERMINAL SPLICE BOX	[17]	INSTALL STANDARD GUY ASSEMBLY	[33]	INSTALL GENERATOR ANCHOR IN FOUNDATION												
(6)	TRENCH CONDUIT	[1]	INSTALL CABINET FOUNDATION	[18]	INSTALL SIDEWALK GUY ASSEMBLY	[34]	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT												
(7)	DIRECTIONAL DRILL CONDUIT	[2]	REMOVE EXISTING CABINET FOUNDATION	[19]	INSTALL MESSENGER CABLE	[35]	RECONNECT GENERATOR POWER INLET BOX												
(8)	BORE AND JACK CONDUIT	[3]	MODIFY EXISTING CABINET FOUNDATION	[20]	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	[36]	INSTALL CCTV CAMERA ASSEMBLY												
(9)	INSTALL CABLE(S) IN EXISTING CONDUIT	[4]	REMOVE EXISTING CONTROLLER AND CABINET	[21]	REMOVE EXISTING COMMUNICATIONS CABLE	[37]	INSTALL SMALL DMS ASSEMBLY												
(10)	INSTALL CABLE(S) IN NEW CONDUIT	[5]	INSTALL NEW CONTROLLER																

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

Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

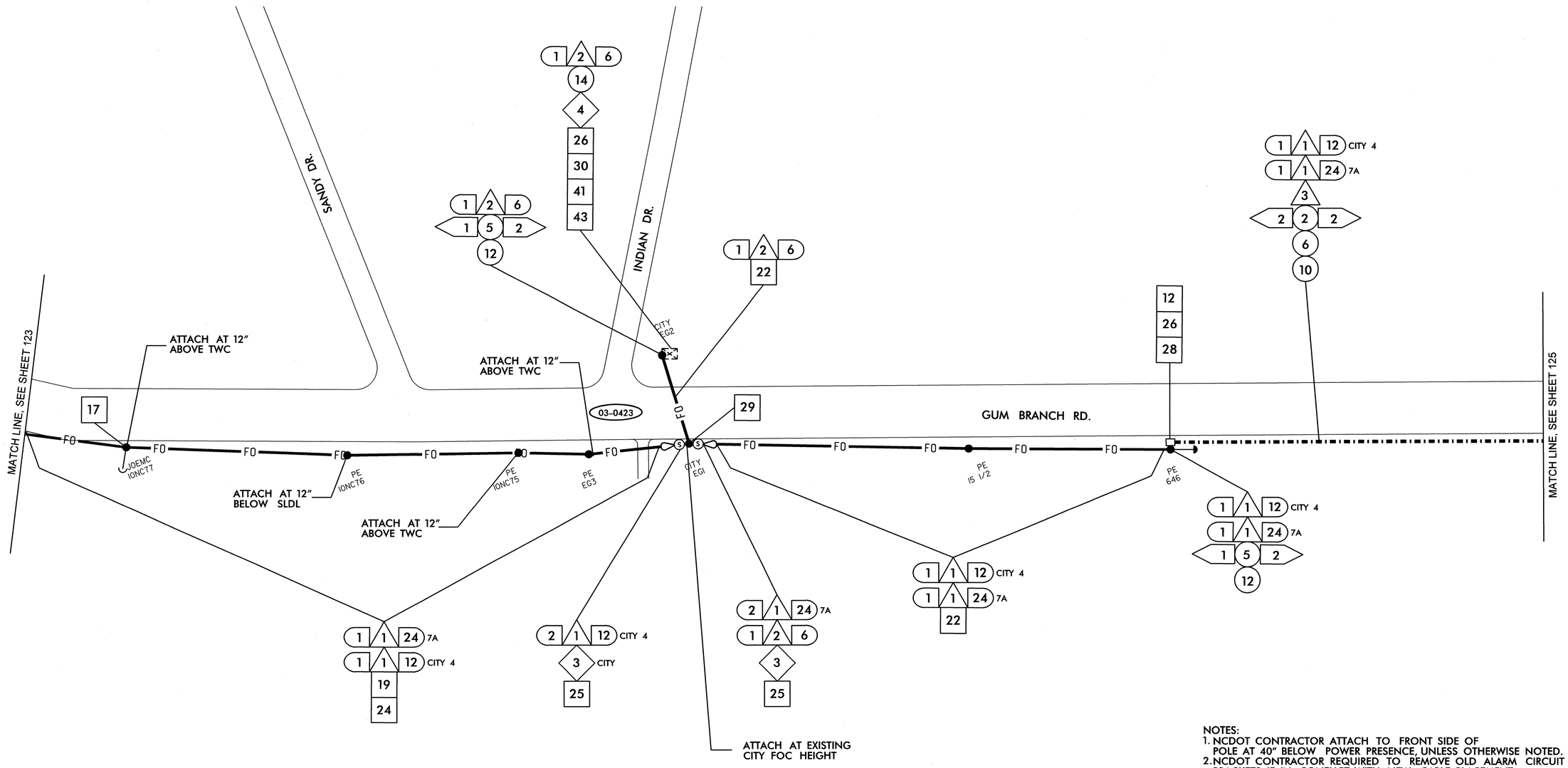
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSE#CJDWCR-123.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	124



NOTES:
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1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE
2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE
3	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA	54	INSTALL DMS CONTROLLER
4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY
5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE		
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT		
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX		
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND						
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE						
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE						
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE						
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION						
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT						
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX						
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY						
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY						
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER										

PLANS PREPARED IN THE OFFICE OF:

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

750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

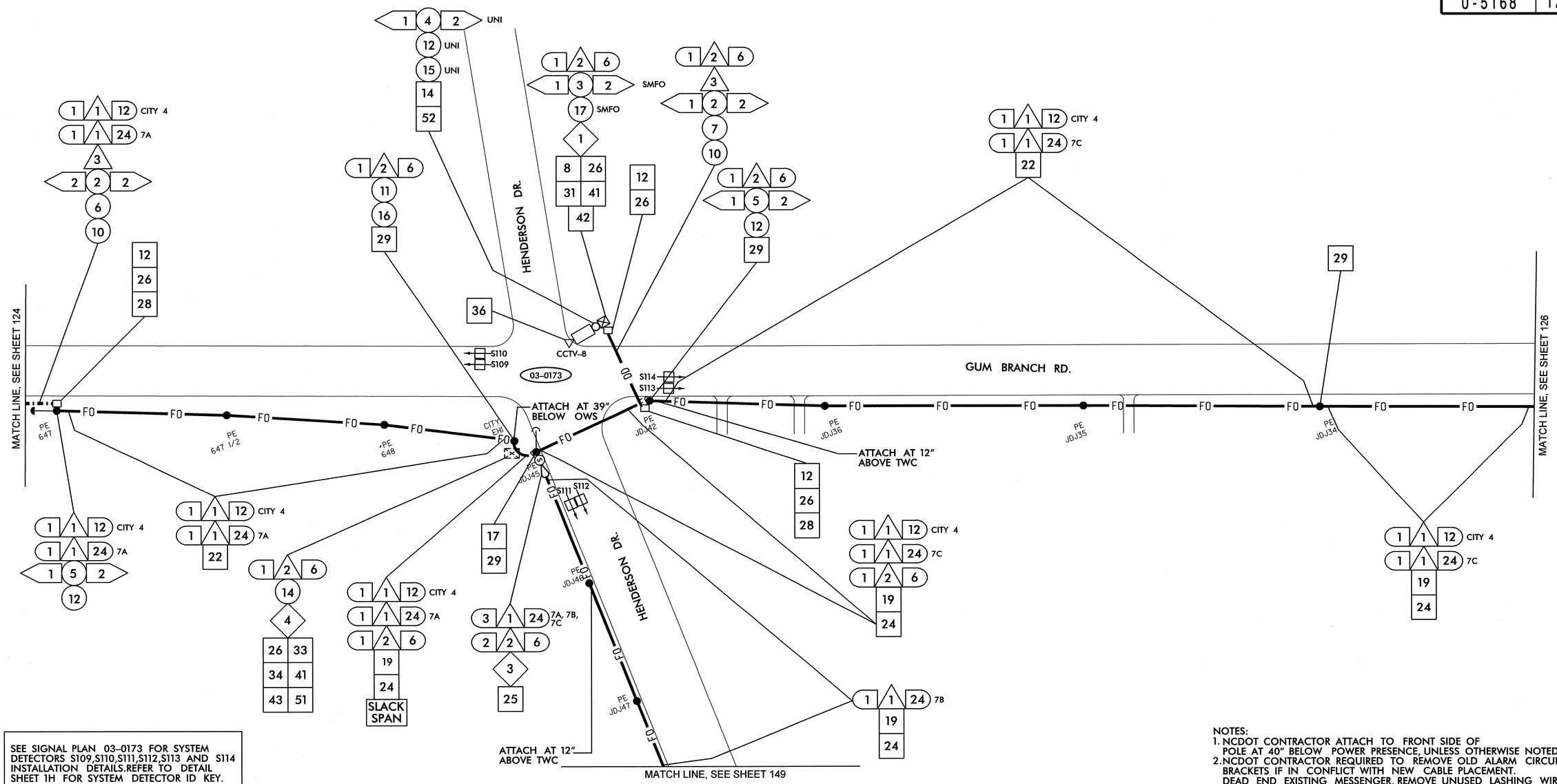
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE DATE 7-20-11

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSE&CADWCR-124.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	125



SEE SIGNAL PLAN 03-0173 FOR SYSTEM DETECTORS S109,S110,S111,S112,S113 AND S114 INSTALLATION DETAILS.REFER TO DETAIL SHEET 1H FOR SYSTEM DETECTOR ID KEY.

NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.

1	INSTALL SMFO CABLE
2	INSTALL FIBER OPTIC DROP CABLE
3	INSTALL TRACER WIRE
4	REUSE EXISTING SMFO CABLE
5	INSTALL PLENUM RATED SMFO CABLE
6	INSTALL LOOP LEAD-IN CABLE
7	INSTALL ETHERNET CABLE
1	INSTALL PVC CONDUIT
2	INSTALL POLYETHYLENE CONDUIT
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
6	TRENCH CONDUIT
7	DIRECTIONAL DRILL CONDUIT
8	BORE AND JACK CONDUIT
9	INSTALL CABLE(S) IN EXISTING CONDUIT
10	INSTALL CABLE(S) IN NEW CONDUIT
11	INSTALL CABLE(S) IN EXISTING RISER
12	INSTALL CABLE(S) IN NEW RISER
13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS
14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)
15	INSTALL NEW RISER INTO POLE MOUNTED CABINET
16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET
1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2	INSTALL UNDERGROUND SPLICE ENCLOSURE
3	INSTALL AERIAL SPLICE ENCLOSURE
4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5	INSTALL TERMINAL SPLICE BOX
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION
3	MODIFY EXISTING CABINET FOUNDATION
4	REMOVE EXISTING CONTROLLER AND CABINET
5	INSTALL NEW CONTROLLER
6	INSTALL NEW 332 BASE MOUNTED CABINET
7	INSTALL NEW 336S BASE MOUNTED CABINET
8	INSTALL NEW 336S POLE MOUNTED CABINET
9	INSTALL BASE ADAPTER
10	INSTALL PRE-FORMED CABINET FOUNDATION PAD
11	INSTALL STANDARD JUNCTION BOX
12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
14	INSTALL WOOD POLE
15	REMOVE EXISTING WOOD POLE
16	INSTALL AERIAL GUY ASSEMBLY
17	INSTALL STANDARD GUY ASSEMBLY
18	INSTALL SIDEWALK GUY ASSEMBLY
19	INSTALL MESSENGER CABLE
20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
21	REMOVE EXISTING COMMUNICATIONS CABLE
22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
23	LASH CABLE(S) TO EXISTING MESSENGER CABLE
24	LASH CABLE(S) TO NEW MESSENGER CABLE
25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE
26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE
27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
28	INSTALL FIBER OPTIC DELINEATOR MARKER
29	BOND MESSENGER CABLE TO POLE GROUND
30	MODIFY EXISTING ELECTRICAL SERVICE
31	INSTALL NEW ELECTRICAL SERVICE
32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
33	INSTALL GENERATOR ANCHOR IN FOUNDATION
34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
35	RECONNECT GENERATOR POWER INLET BOX
36	INSTALL CCTV CAMERA ASSEMBLY
37	INSTALL SMALL DMS ASSEMBLY
38	INSTALL LARGE DMS ASSEMBLY
39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS
40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
41	INSTALL ETHERNET SWITCH
42	INSTALL VIDEO CODEC UNIT
43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER
44	INSTALL CELLULAR MODEM
45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)
46	INSTALL 2.4 GHz RADIO TRANSCEIVER
47	INSTALL YAGI ANTENNA
48	INSTALL OMNI-DIRECTIONAL ANTENNA
49	REMOVE EXISTING WIRELESS HARDWARE
50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
51	INSTALL NEW GENERATOR POWER INLET BOX
52	INSTALL CCTV UNIFIED CABLE
53	INSTALL ANTENNA CABLE
54	INSTALL DMS CONTROLLER
55	INSTALL SOLAR POWER ASSEMBLY

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

750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

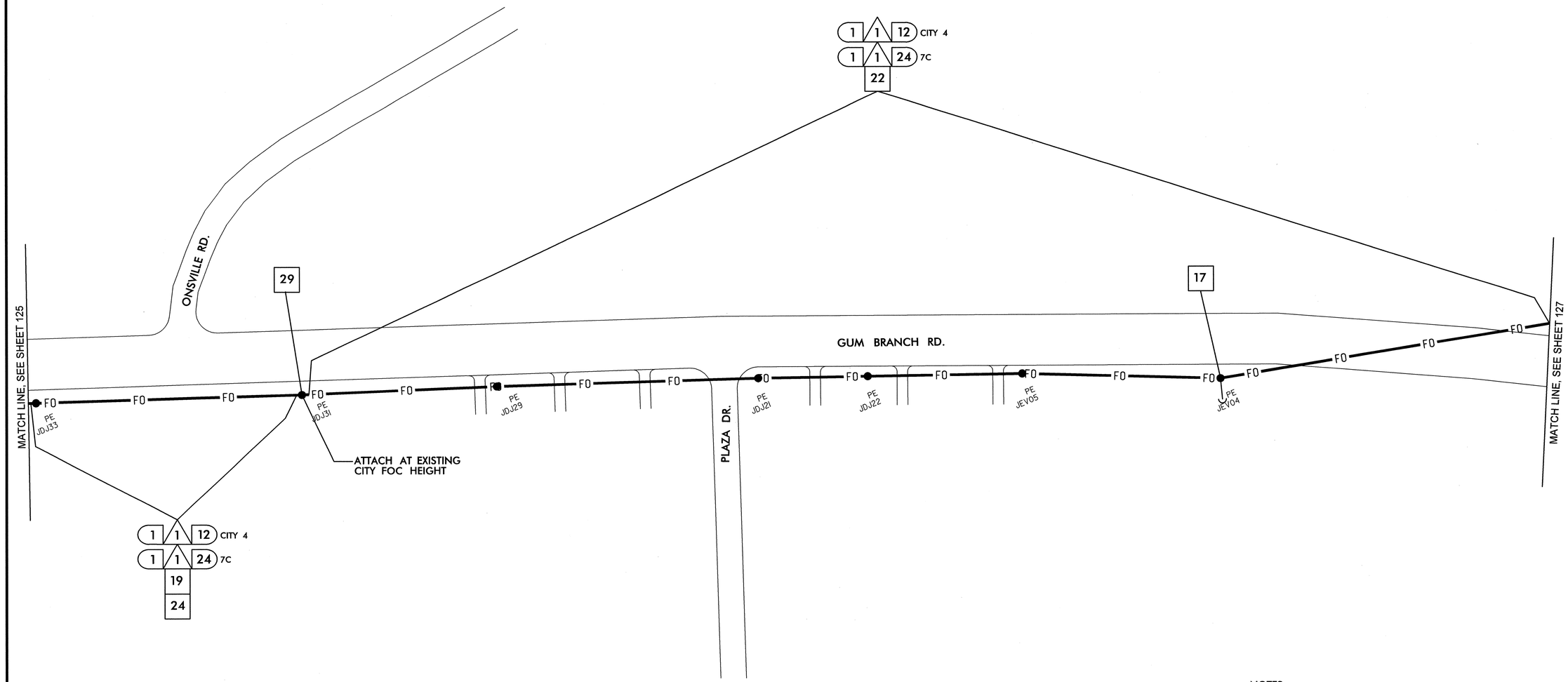
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-26-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 FSE#CADWCR-125.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	126



NOTES:
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1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE
2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE
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SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011		REVIEWED BY: K.W. SMITH	
PREPARED BY: S.P. PENNINGTON		REVIEWED BY: T.F. BURCHETT	
REVISIONS		INIT.	DATE

SEAL

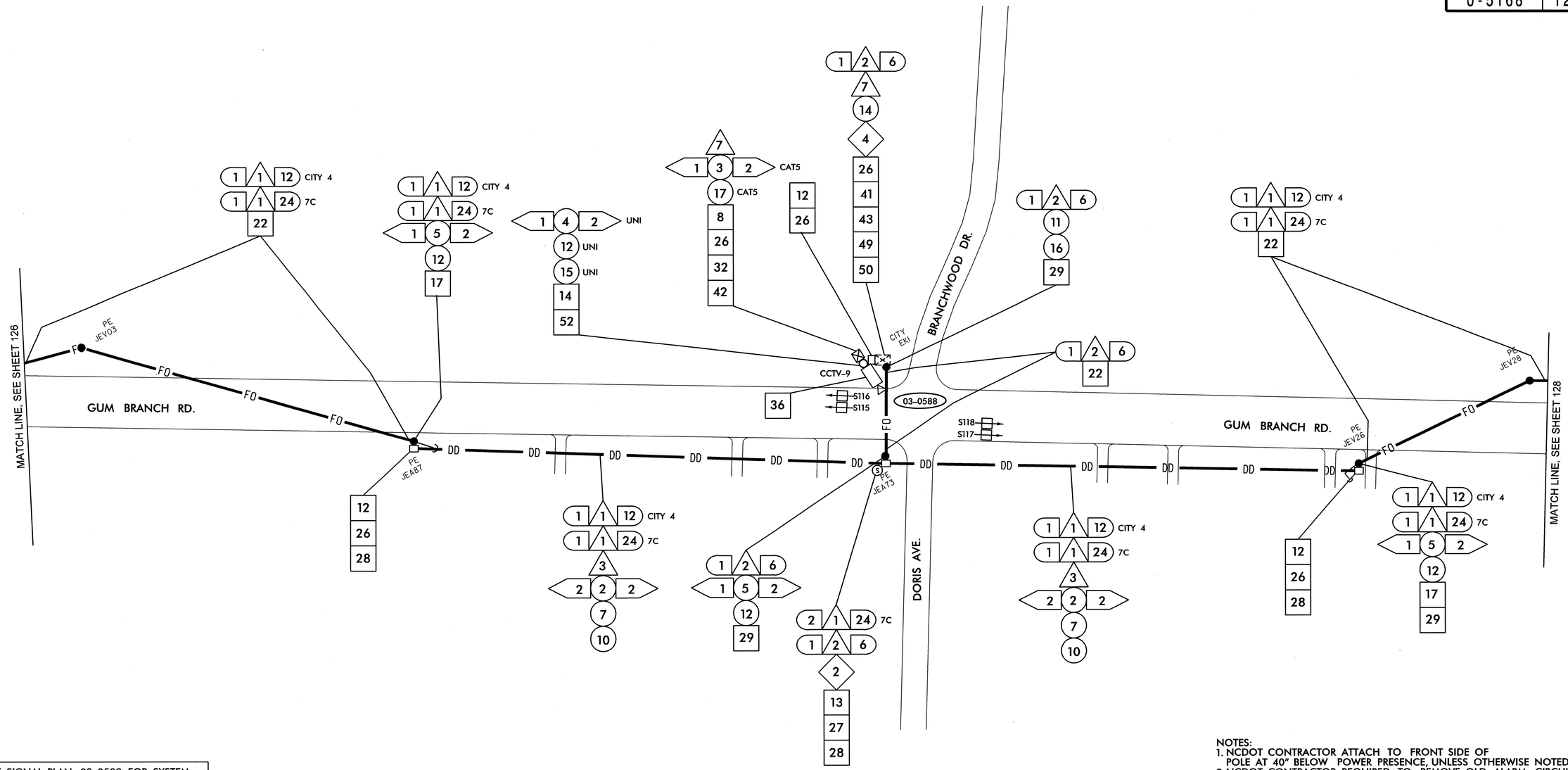
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 FSAE#CADWCR-126.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	127



SEE SIGNAL PLAN 03-0588 FOR SYSTEM DETECTOR S115, S116, S117, AND S118 INSTALLATION DETAILS. REFER TO DETAIL SHEET 1H FOR SYSTEM DETECTOR ID KEY.

NOTES:
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1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE		
2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE		
3	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA	54	INSTALL DMS CONTROLLER		
4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY		
5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE				
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT				
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX				
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND								
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE								
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE								
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE								
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION								
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT								
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX								
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY								
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY								
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER												

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

Transportation Mobility and Safety Division
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

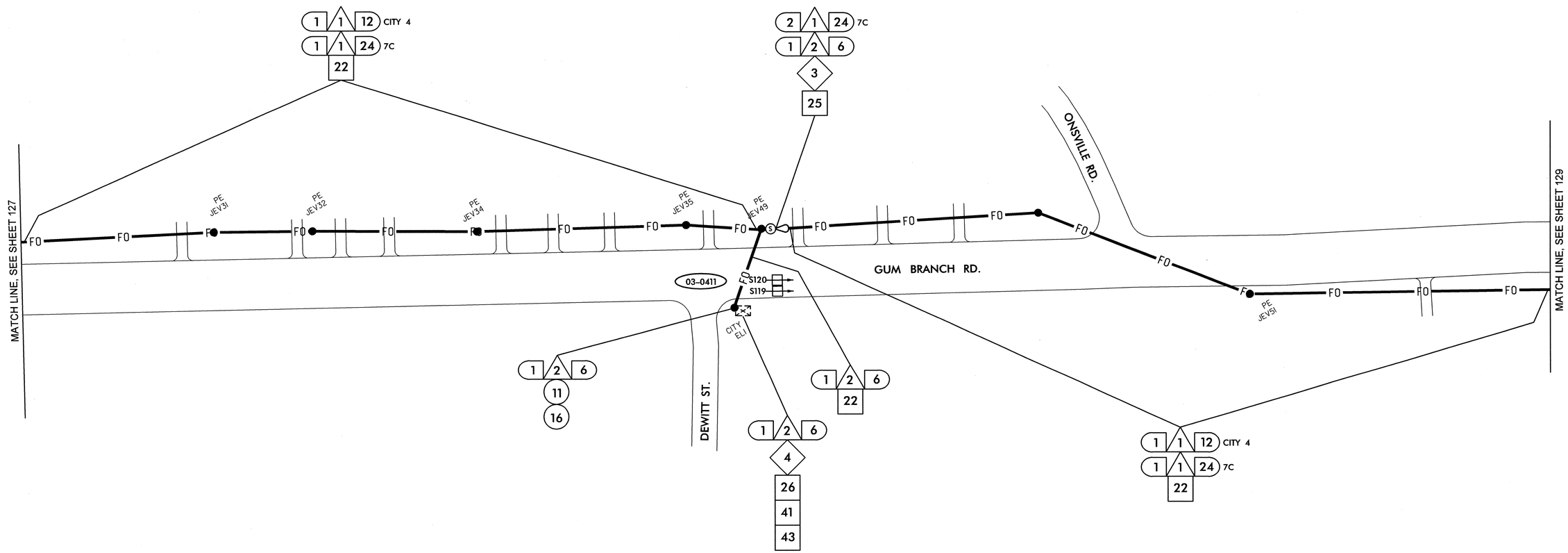
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filenames:

7/19/2011 $TIME$ susan.pennington ...#600 PSE#KJA#CR-127.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	128



SEE SIGNAL PLAN 03-0411 FOR SYSTEM DETECTORS S119 AND S120 DETAILS. REFER TO DETAIL SHEET 1H FOR SYSTEM DETECTOR ID KEY.

NOTES:
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2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.

1. INSTALL SMFO CABLE
2. INSTALL FIBER OPTIC DROP CABLE
3. INSTALL TRACER WIRE
4. REUSE EXISTING SMFO CABLE
5. INSTALL PLENUM RATED SMFO CABLE
6. INSTALL LOOP LEAD-IN CABLE
7. INSTALL ETHERNET CABLE
1. INSTALL PVC CONDUIT
2. INSTALL POLYETHYLENE CONDUIT
3. INSTALL RIGID, GALVANIZED STEEL CONDUIT
4. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5. INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
6. TRENCH CONDUIT
7. DIRECTIONAL DRILL CONDUIT
8. BORE AND JACK CONDUIT
9. INSTALL CABLE(S) IN EXISTING CONDUIT
10. INSTALL CABLE(S) IN NEW CONDUIT
11. INSTALL CABLE(S) IN EXISTING RISER
12. INSTALL CABLE(S) IN NEW RISER
13. INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS
14. INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)
15. INSTALL NEW RISER INTO POLE MOUNTED CABINET
16. REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
17. INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET
1. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2. INSTALL UNDERGROUND SPLICE ENCLOSURE
3. INSTALL AERIAL SPLICE ENCLOSURE
4. MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5. INSTALL TERMINAL SPLICE BOX
1. INSTALL CABINET FOUNDATION
2. REMOVE EXISTING CABINET FOUNDATION
3. MODIFY EXISTING CABINET FOUNDATION
4. REMOVE EXISTING CONTROLLER AND CABINET
5. INSTALL NEW CONTROLLER
6. INSTALL NEW 332 BASE MOUNTED CABINET
7. INSTALL NEW 336S BASE MOUNTED CABINET
8. INSTALL NEW 336S POLE MOUNTED CABINET
9. INSTALL BASE ADAPTER
10. INSTALL PRE-FORMED CABINET FOUNDATION PAD
11. INSTALL STANDARD JUNCTION BOX
12. INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
13. INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
14. INSTALL WOOD POLE
15. REMOVE EXISTING WOOD POLE
16. INSTALL AERIAL GUY ASSEMBLY
17. INSTALL STANDARD GUY ASSEMBLY
18. INSTALL SIDEWALK GUY ASSEMBLY
19. INSTALL MESSENGER CABLE
20. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
21. REMOVE EXISTING COMMUNICATIONS CABLE
22. LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
23. LASH CABLE(S) TO EXISTING MESSENGER CABLE
24. LASH CABLE(S) TO NEW MESSENGER CABLE
25. INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE
26. STORE 30 FEET OF EACH COMMUNICATIONS CABLE
27. STORE 100 FEET OF EACH COMMUNICATIONS CABLE
28. INSTALL FIBER OPTIC DELINEATOR MARKER
29. BOND MESSENGER CABLE TO POLE GROUND
30. MODIFY EXISTING ELECTRICAL SERVICE
31. INSTALL NEW ELECTRICAL SERVICE
32. INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
33. INSTALL GENERATOR ANCHOR IN FOUNDATION
34. RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
35. RECONNECT GENERATOR POWER INLET BOX
36. INSTALL CCTV CAMERA ASSEMBLY
37. INSTALL SMALL DMS ASSEMBLY
38. INSTALL LARGE DMS ASSEMBLY
39. INSTALL PEDESTAL STRUCTURE FOR SMALL DMS
40. INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
41. INSTALL ETHERNET SWITCH
42. INSTALL VIDEO CODEC UNIT
43. REMOVE EXISTING FIBER OPTIC TRANSCEIVER
44. INSTALL CELLULAR MODEM
45. INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)
46. INSTALL 2.4 GHz RADIO TRANSCEIVER
47. INSTALL YAGI ANTENNA
48. INSTALL OMNI-DIRECTIONAL ANTENNA
49. REMOVE EXISTING WIRELESS HARDWARE
50. INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
51. INSTALL NEW GENERATOR POWER INLET BOX
52. INSTALL CCTV UNIFIED CABLE
53. INSTALL ANTENNA CABLE
54. INSTALL DMS CONTROLLER
55. INSTALL SOLAR POWER ASSEMBLY

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
P.O. Box 33068
Raleigh N.C. 27636-3068
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Transportation Mobility and Safety Division
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011 REVIEWED BY: K.W. SMITH

PREPARED BY: S.P. PENNINGTON REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

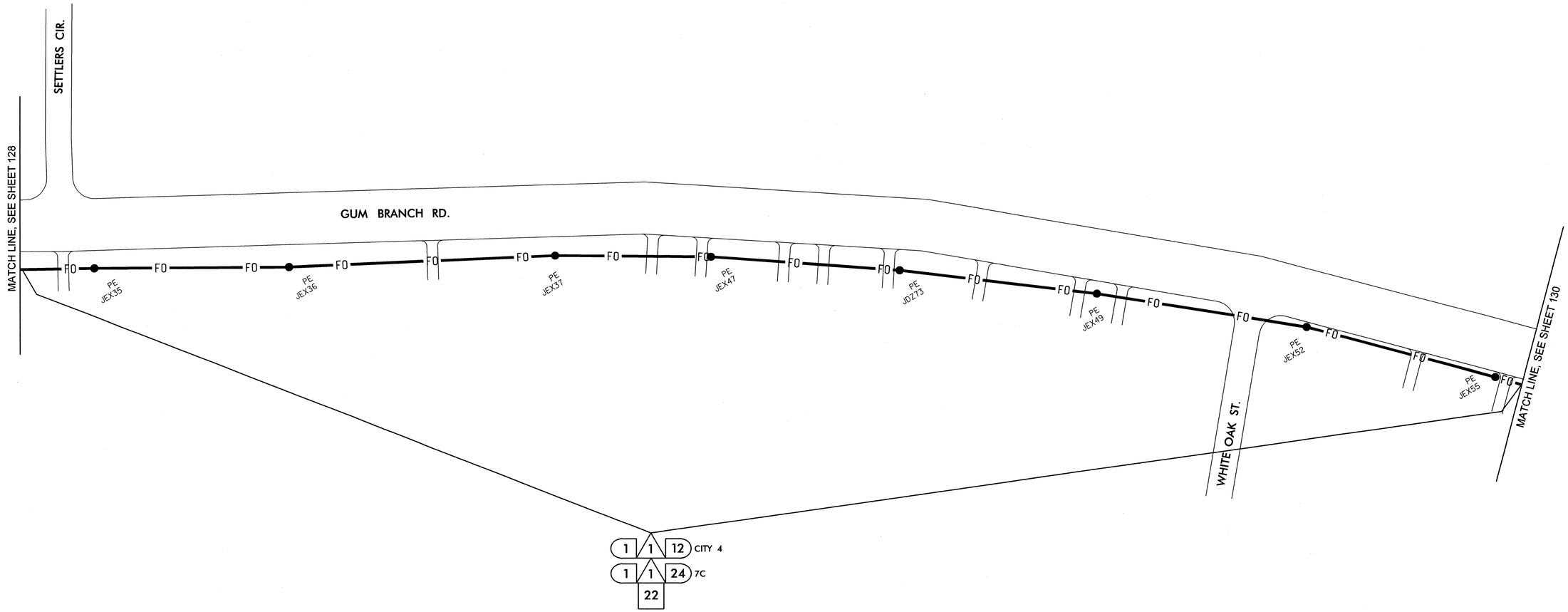
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSSE#CADD#CR-128.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	129



NOTES:
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1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE
2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE
3	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA	54	INSTALL DMS CONTROLLER
4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY
5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE		
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT		
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1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND						
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE						
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE						
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5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION						
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT						
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX						
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY						
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY						
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER										

PLANS PREPARED IN THE OFFICE OF:

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

Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation System Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

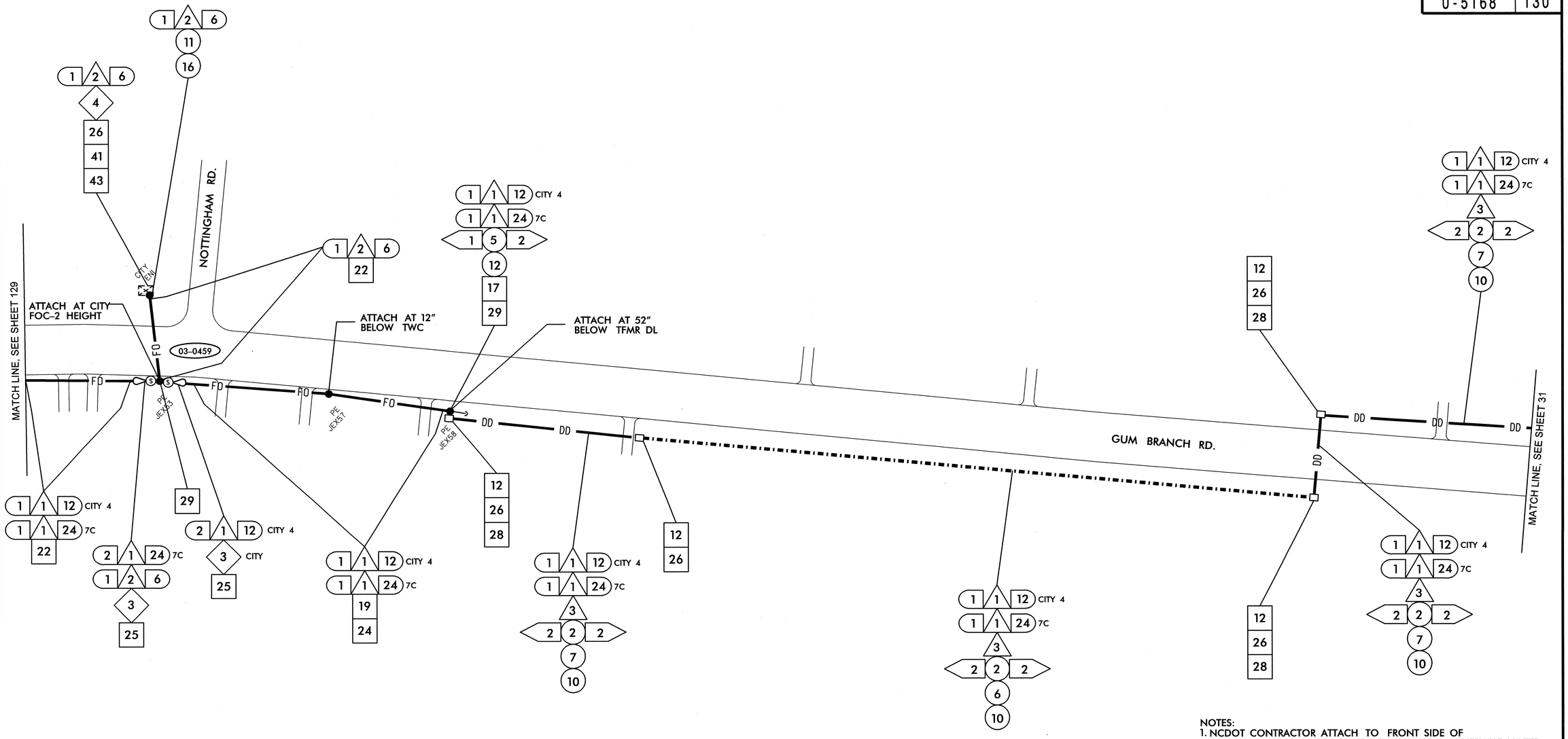
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSE#CADACR-129.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	130



NOTES:
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1	INSTALL SMFO CABLE
2	INSTALL FIBER OPTIC DROP CABLE
3	INSTALL TRACER WIRE
4	REUSE EXISTING SMFO CABLE
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1	INSTALL PVC CONDUIT
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8	BORE AND JACK CONDUIT
9	INSTALL CABLE(S) IN EXISTING CONDUIT
10	INSTALL CABLE(S) IN NEW CONDUIT
11	INSTALL CABLE(S) IN EXISTING RISER
12	INSTALL CABLE(S) IN NEW RISER
13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS
14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)
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17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET
1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2	INSTALL UNDERGROUND SPLICE ENCLOSURE
3	INSTALL AERIAL SPLICE ENCLOSURE
4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5	INSTALL TERMINAL SPLICE BOX
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION
3	MODIFY EXISTING CABINET FOUNDATION
4	REMOVE EXISTING CONTROLLER AND CABINET
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6	INSTALL NEW 332 BASE MOUNTED CABINET
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PLANS PREPARED IN THE OFFICE OF:
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Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Integrated Mobility Division
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

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NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

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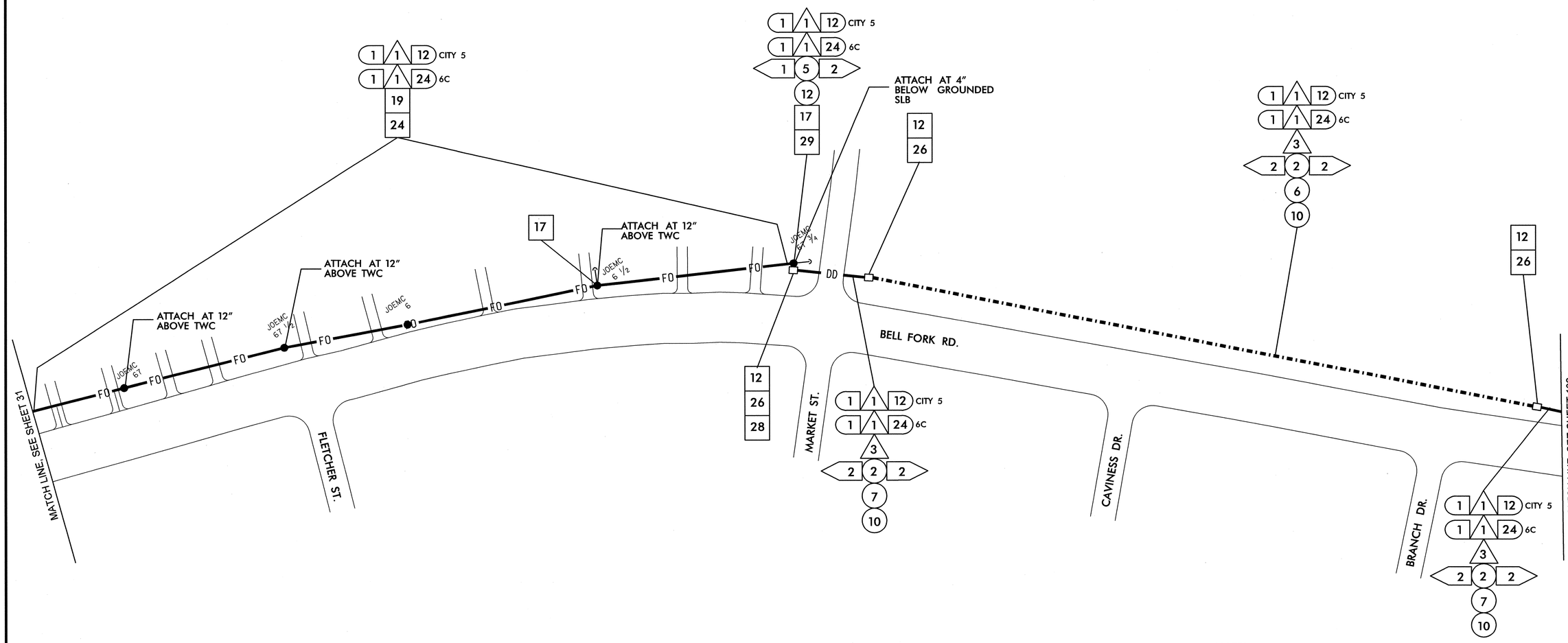

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3. INSTALL AERIAL SPLICE ENCLOSURE
4. MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5. INSTALL TERMINAL SPLICE BOX
1. INSTALL CABINET FOUNDATION
2. REMOVE EXISTING CABINET FOUNDATION
3. MODIFY EXISTING CABINET FOUNDATION
4. REMOVE EXISTING CONTROLLER AND CABINET
5. INSTALL NEW CONTROLLER
6. INSTALL NEW 332 BASE MOUNTED CABINET
7. INSTALL NEW 336S BASE MOUNTED CABINET
8. INSTALL NEW 336S POLE MOUNTED CABINET
9. INSTALL BASE ADAPTER
10. INSTALL PRE-FORMED CABINET FOUNDATION PAD
11. INSTALL STANDARD JUNCTION BOX
12. INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
13. INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
14. INSTALL WOOD POLE
15. REMOVE EXISTING WOOD POLE
16. INSTALL AERIAL GUY ASSEMBLY
17. INSTALL STANDARD GUY ASSEMBLY
18. INSTALL SIDEWALK GUY ASSEMBLY
19. INSTALL MESSENGER CABLE
20. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
21. REMOVE EXISTING COMMUNICATIONS CABLE
22. LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
23. LASH CABLE(S) TO EXISTING MESSENGER CABLE
24. LASH CABLE(S) TO NEW MESSENGER CABLE
25. INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE
26. STORE 30 FEET OF EACH COMMUNICATIONS CABLE
27. STORE 100 FEET OF EACH COMMUNICATIONS CABLE
28. INSTALL FIBER OPTIC DELINEATOR MARKER
29. BOND MESSENGER CABLE TO POLE GROUND
30. MODIFY EXISTING ELECTRICAL SERVICE
31. INSTALL NEW ELECTRICAL SERVICE
32. INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
33. INSTALL GENERATOR ANCHOR IN FOUNDATION
34. RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
35. RECONNECT GENERATOR POWER INLET BOX
36. INSTALL CCTV CAMERA ASSEMBLY
37. INSTALL SMALL DMS ASSEMBLY
38. INSTALL LARGE DMS ASSEMBLY
39. INSTALL PEDESTAL STRUCTURE FOR SMALL DMS
40. INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
41. INSTALL ETHERNET SWITCH
42. INSTALL VIDEO CODEC UNIT
43. REMOVE EXISTING FIBER OPTIC TRANSCEIVER
44. INSTALL CELLULAR MODEM
45. INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)
46. INSTALL 2.4 GHz RADIO TRANSCEIVER
47. INSTALL YAGI ANTENNA
48. INSTALL OMNI-DIRECTIONAL ANTENNA
49. REMOVE EXISTING WIRELESS HARDWARE
50. INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
51. INSTALL NEW GENERATOR POWER INLET BOX
52. INSTALL CCTV UNIFIED CABLE
53. INSTALL ANTENNA CABLE
54. INSTALL DMS CONTROLLER
55. INSTALL SOLAR POWER ASSEMBLY

PLANS PREPARED IN THE OFFICE OF:

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

750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

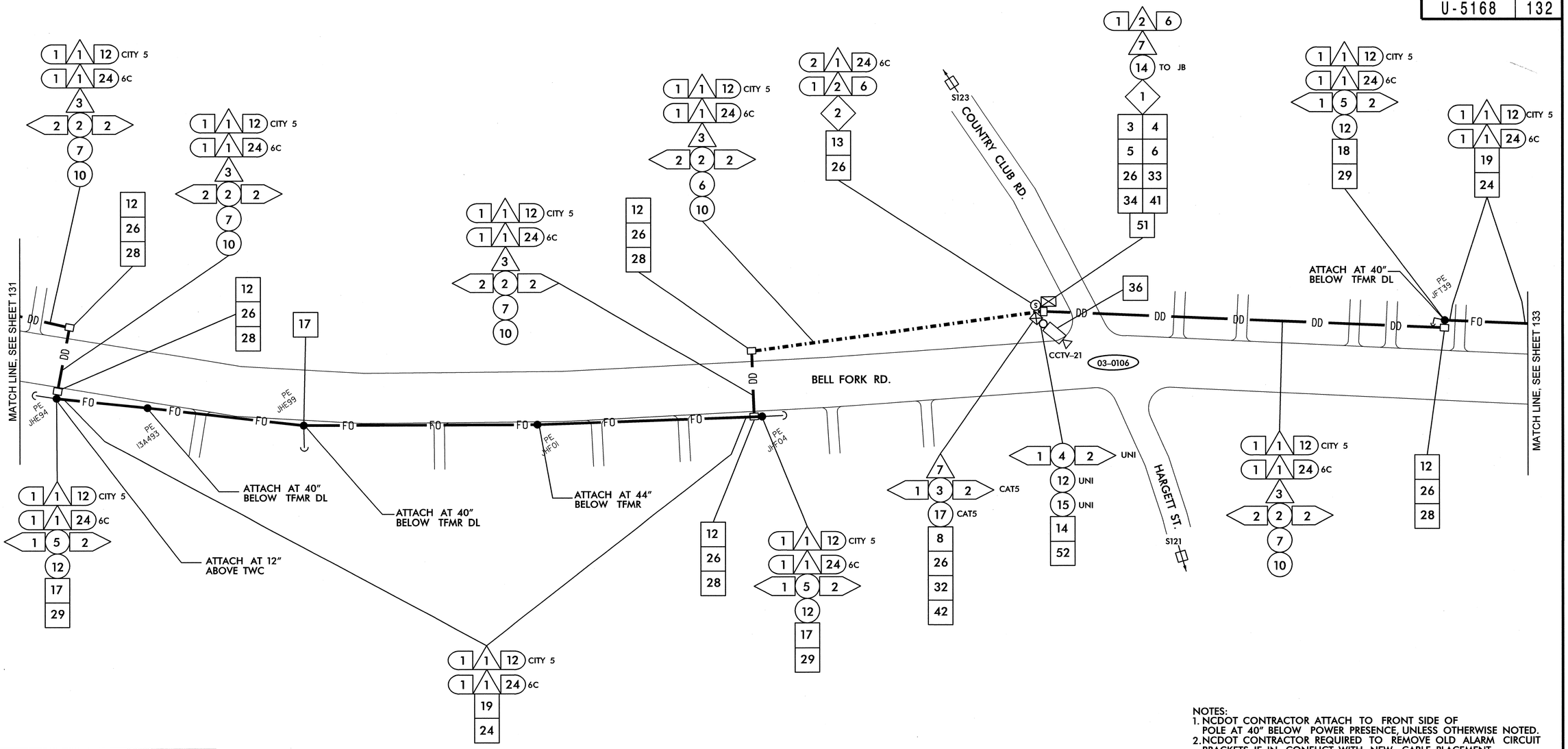
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSEACADMCR-131.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	132



NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.

SEE SIGNAL PLAN 03-0106 FOR SYSTEM DETECTOR S121, AND S123 INSTALLATION DETAILS. REFER TO DETAIL SHEET 1H FOR SYSTEM DETECTOR ID KEY.

1. INSTALL SMFO CABLE
2. INSTALL FIBER OPTIC DROP CABLE
3. INSTALL TRACER WIRE
4. REUSE EXISTING SMFO CABLE
5. INSTALL PLENUM RATED SMFO CABLE
6. INSTALL LOOP LEAD-IN CABLE
7. INSTALL ETHERNET CABLE
1. INSTALL PVC CONDUIT
2. INSTALL POLYETHYLENE CONDUIT
3. INSTALL RIGID, GALVANIZED STEEL CONDUIT
4. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5. INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
6. TRENCH CONDUIT
7. DIRECTIONAL DRILL CONDUIT
8. BORE AND JACK CONDUIT
9. INSTALL CABLE(S) IN EXISTING CONDUIT
10. INSTALL CABLE(S) IN NEW CONDUIT
11. INSTALL CABLE(S) IN EXISTING RISER
12. INSTALL CABLE(S) IN NEW RISER
13. INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS
14. INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)
15. INSTALL NEW RISER INTO POLE MOUNTED CABINET
16. REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
17. INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET
1. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
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2. REMOVE EXISTING CABINET FOUNDATION
3. MODIFY EXISTING CABINET FOUNDATION
4. REMOVE EXISTING CONTROLLER AND CABINET
5. INSTALL NEW CONTROLLER
6. INSTALL NEW 332 BASE MOUNTED CABINET
7. INSTALL NEW 336S BASE MOUNTED CABINET
8. INSTALL NEW 336S POLE MOUNTED CABINET
9. INSTALL BASE ADAPTER
10. INSTALL PRE-FORMED CABINET FOUNDATION PAD
11. INSTALL STANDARD JUNCTION BOX
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16. INSTALL AERIAL GUY ASSEMBLY
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22. LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
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PLANS PREPARED IN THE OFFICE OF:
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Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intermodal Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

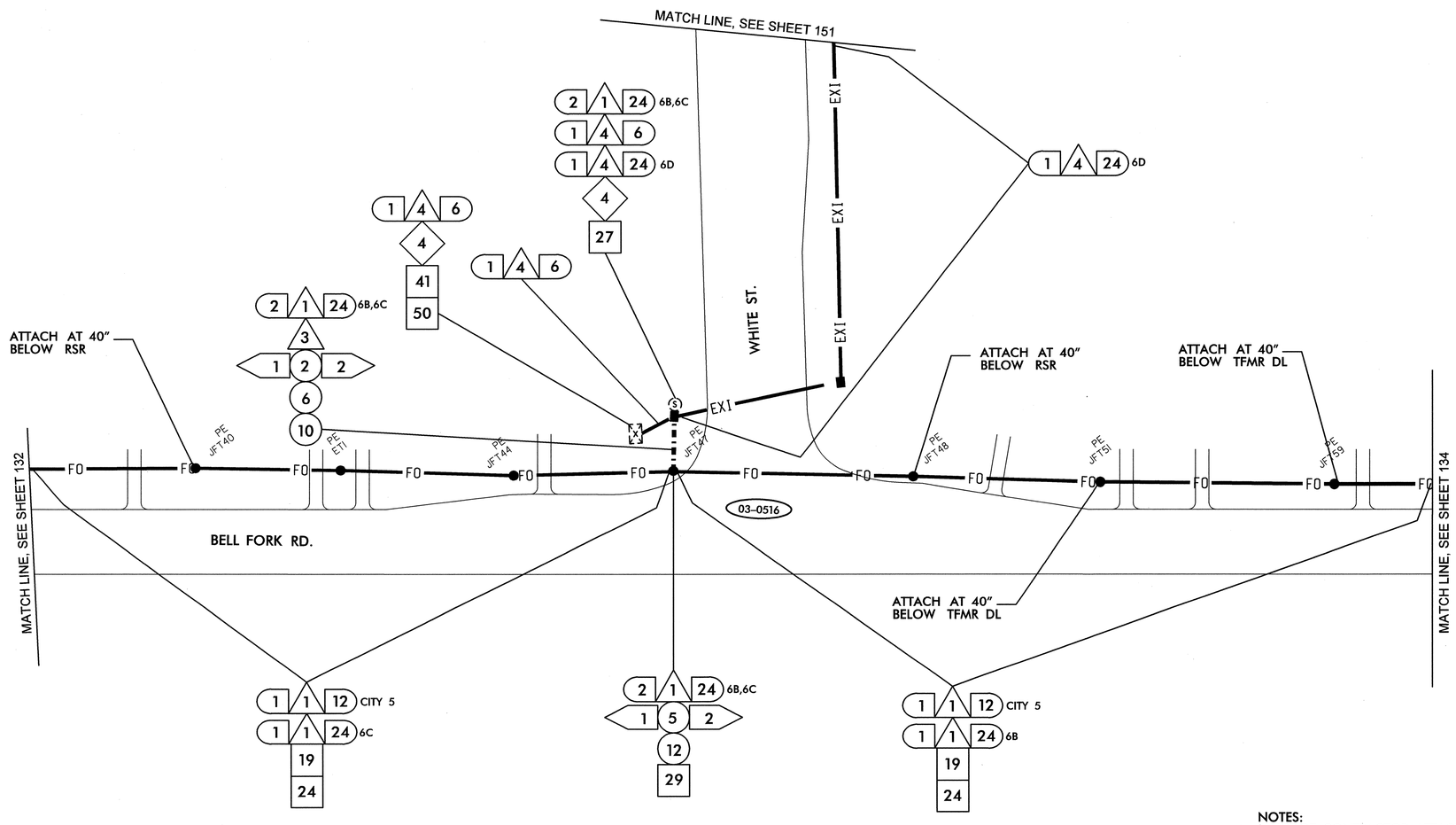
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE DATE 7-20-11

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSE&E&DAWCR-132.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	133



NOTES:
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1	INSTALL SMFO CABLE
2	INSTALL FIBER OPTIC DROP CABLE
3	INSTALL TRACER WIRE
4	REUSE EXISTING SMFO CABLE
5	INSTALL PLENUM RATED SMFO CABLE
6	INSTALL LOOP LEAD-IN CABLE
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1	INSTALL PVC CONDUIT
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3	INSTALL RIGID, GALVANIZED STEEL CONDUIT
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7	DIRECTIONAL DRILL CONDUIT
8	BORE AND JACK CONDUIT
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3	INSTALL AERIAL SPLICE ENCLOSURE
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5	INSTALL TERMINAL SPLICE BOX
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION
3	MODIFY EXISTING CABINET FOUNDATION
4	REMOVE EXISTING CONTROLLER AND CABINET
5	INSTALL NEW CONTROLLER
6	INSTALL NEW 332 BASE MOUNTED CABINET
7	INSTALL NEW 336S BASE MOUNTED CABINET
8	INSTALL NEW 336S POLE MOUNTED CABINET
9	INSTALL BASE ADAPTER
10	INSTALL PRE-FORMED CABINET FOUNDATION PAD
11	INSTALL STANDARD JUNCTION BOX
12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
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41	INSTALL ETHERNET SWITCH
42	INSTALL VIDEO CODEC UNIT
43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER
44	INSTALL CELLULAR MODEM
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46	INSTALL 2.4 GHz RADIO TRANSCEIVER
47	INSTALL YAGI ANTENNA
48	INSTALL OMNI-DIRECTIONAL ANTENNA
49	REMOVE EXISTING WIRELESS HARDWARE
50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
51	INSTALL NEW GENERATOR POWER INLET BOX
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53	INSTALL ANTENNA CABLE
54	INSTALL DMS CONTROLLER
55	INSTALL SOLAR POWER ASSEMBLY

PLANS PREPARED IN THE OFFICE OF:
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Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

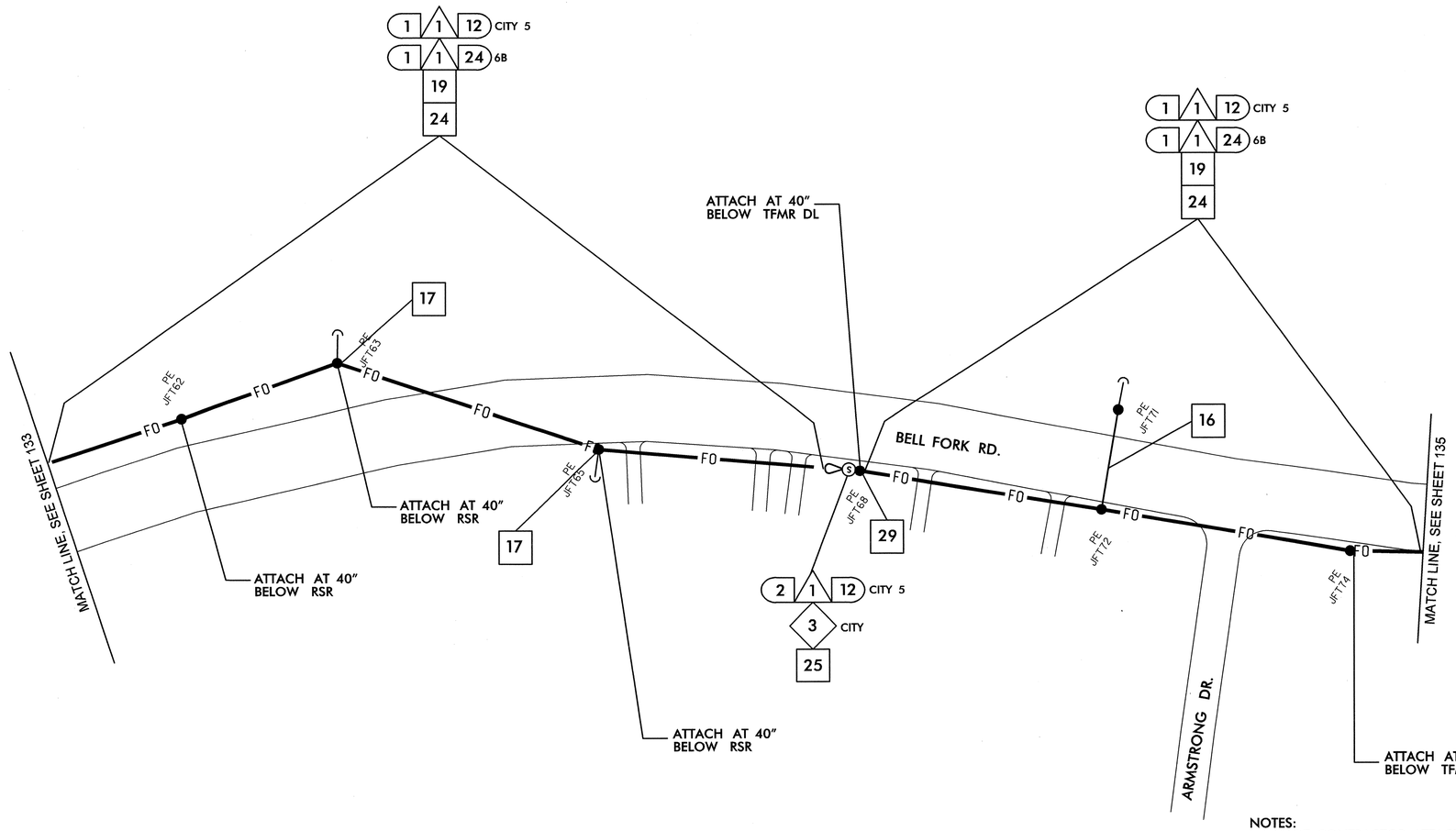
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSE#CADRCR-133.dgn



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1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE		
2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE		
3	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA	54	INSTALL DMS CONTROLLER		
4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY		
5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE				
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT				
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX				
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND								
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE								
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE								
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE								
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION								
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT								
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX								
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY								
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY								
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER												

PLANS PREPARED IN THE OFFICE OF:
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SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
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SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

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PROJECT REFERENCE NO.	SHEET NO.
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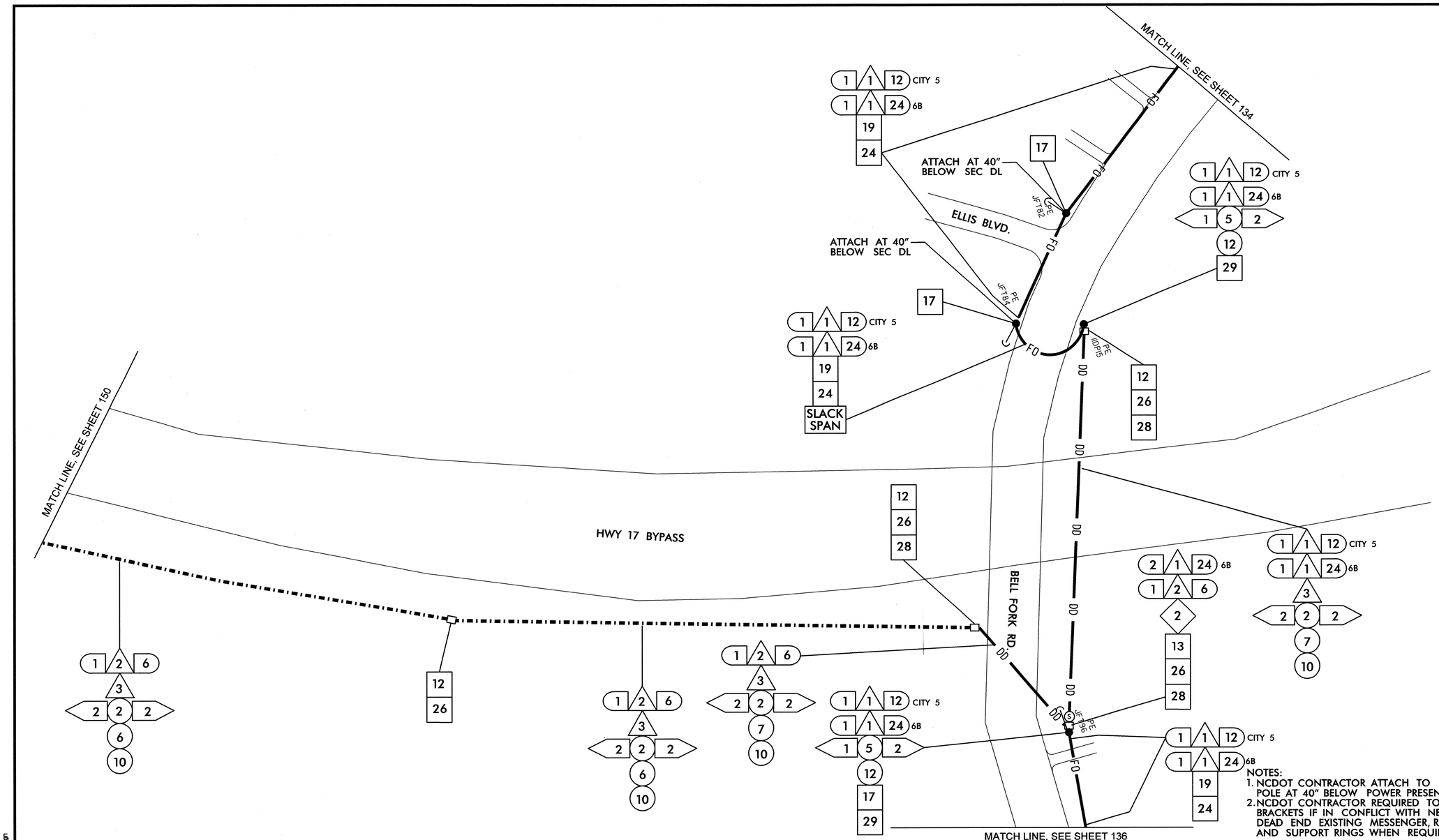

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2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE								
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE								
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE								
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION								
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT								
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX								
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY								
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY								
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER												

PLANS PREPARED IN THE OFFICE OF:

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

Transportation Mobility and Safety Division
DEPARTMENT OF TRANSPORTATION
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011 REVIEWED BY: K.W. SMITH

PREPARED BY: S.P. PENNINGTON REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

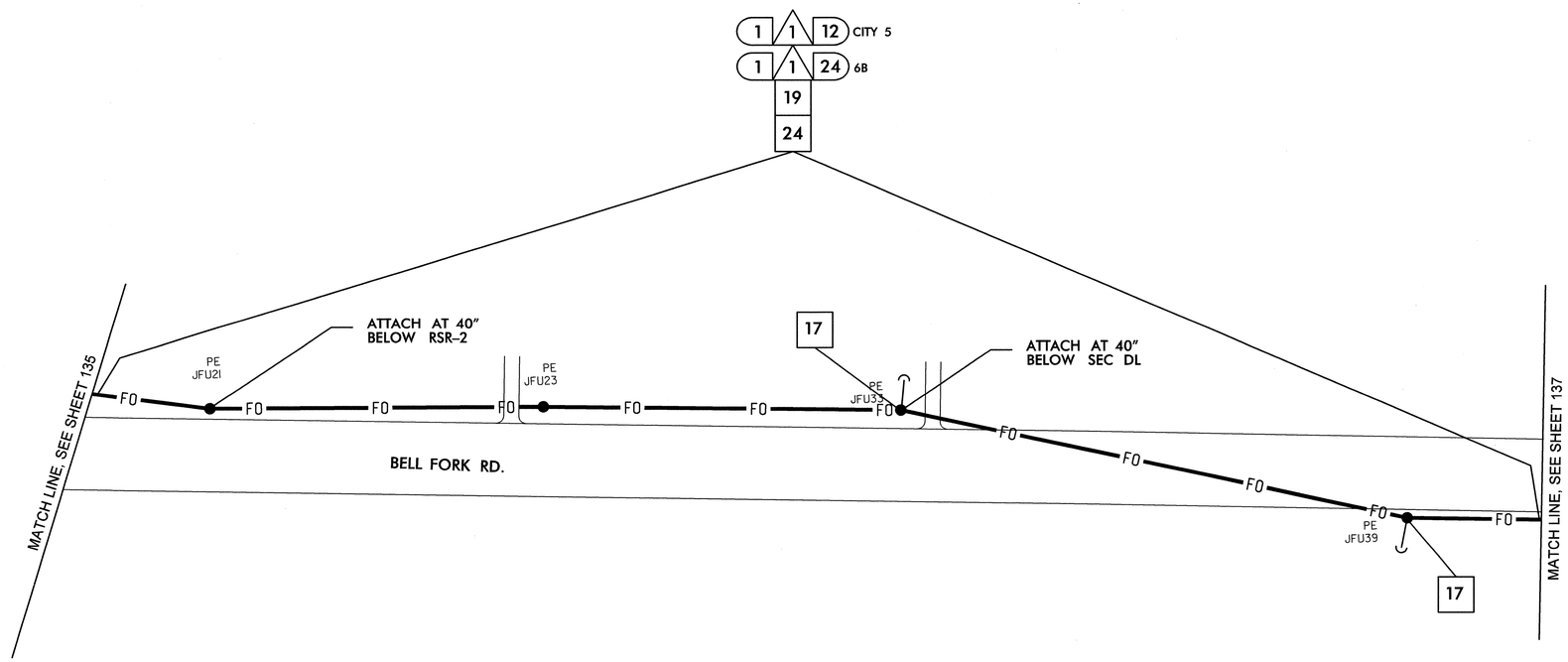
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...:\600 PSUE\CJDMCR-135.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	136



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5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE		
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT		
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STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intermodal Transportation Science Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

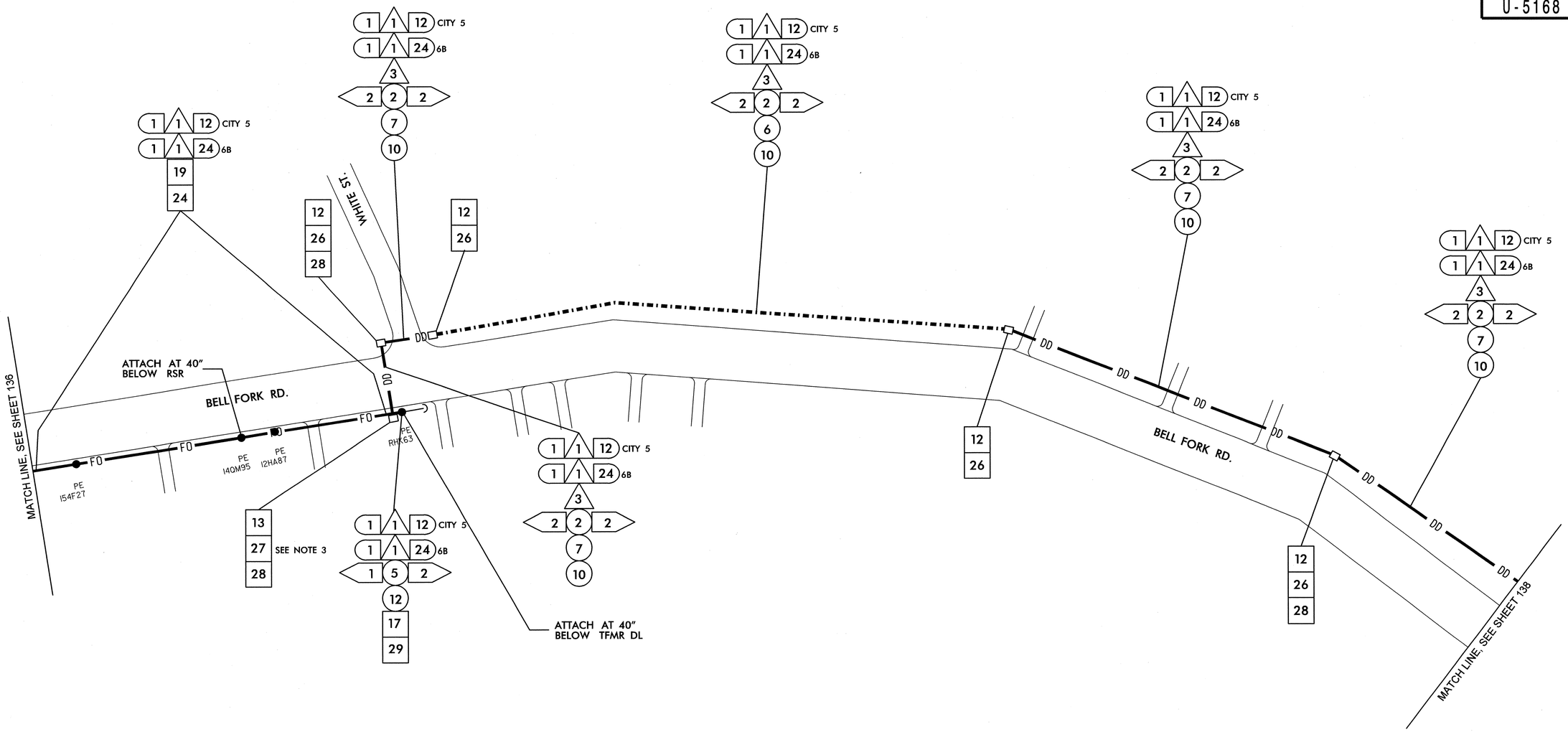
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 FS:EWCAD\CR-136.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	137



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3. COIL 300' OF FIBER OPTIC CABLE IN JUNCTION BOX FOR FUTURE SIGNAL TO BE INSTALLED AND INTEGRATED UNDER U-5132.

1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE		
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STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Mobility and Safety Division
Intermodal Transportation Division
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

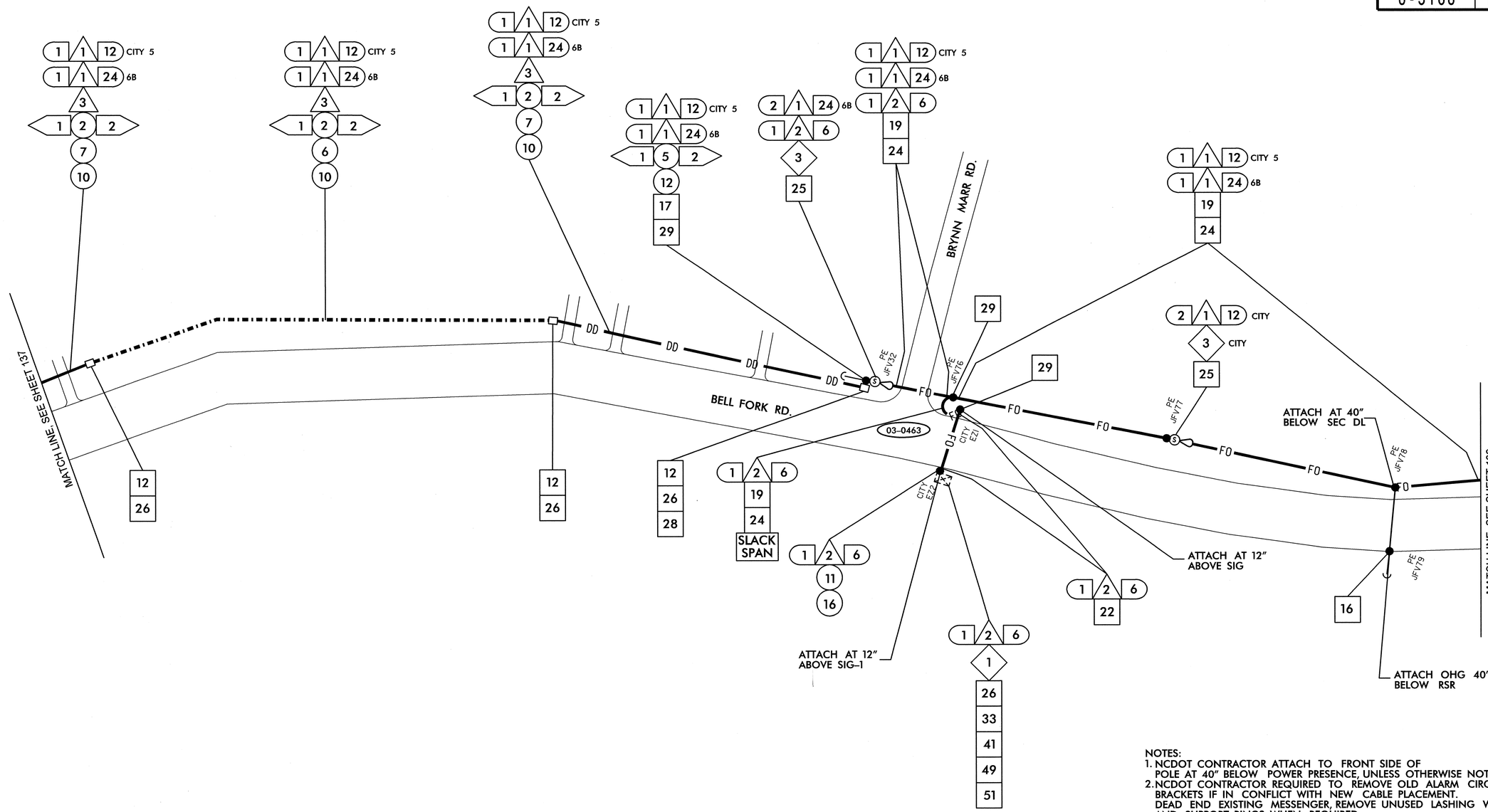
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-25-11 DATE

CADD Filename:

PROJECT REFERENCE NO.	SHEET NO.
U-5168	138



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Transportation Mobility and Safety Division
Traffic Engineering Business Services
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

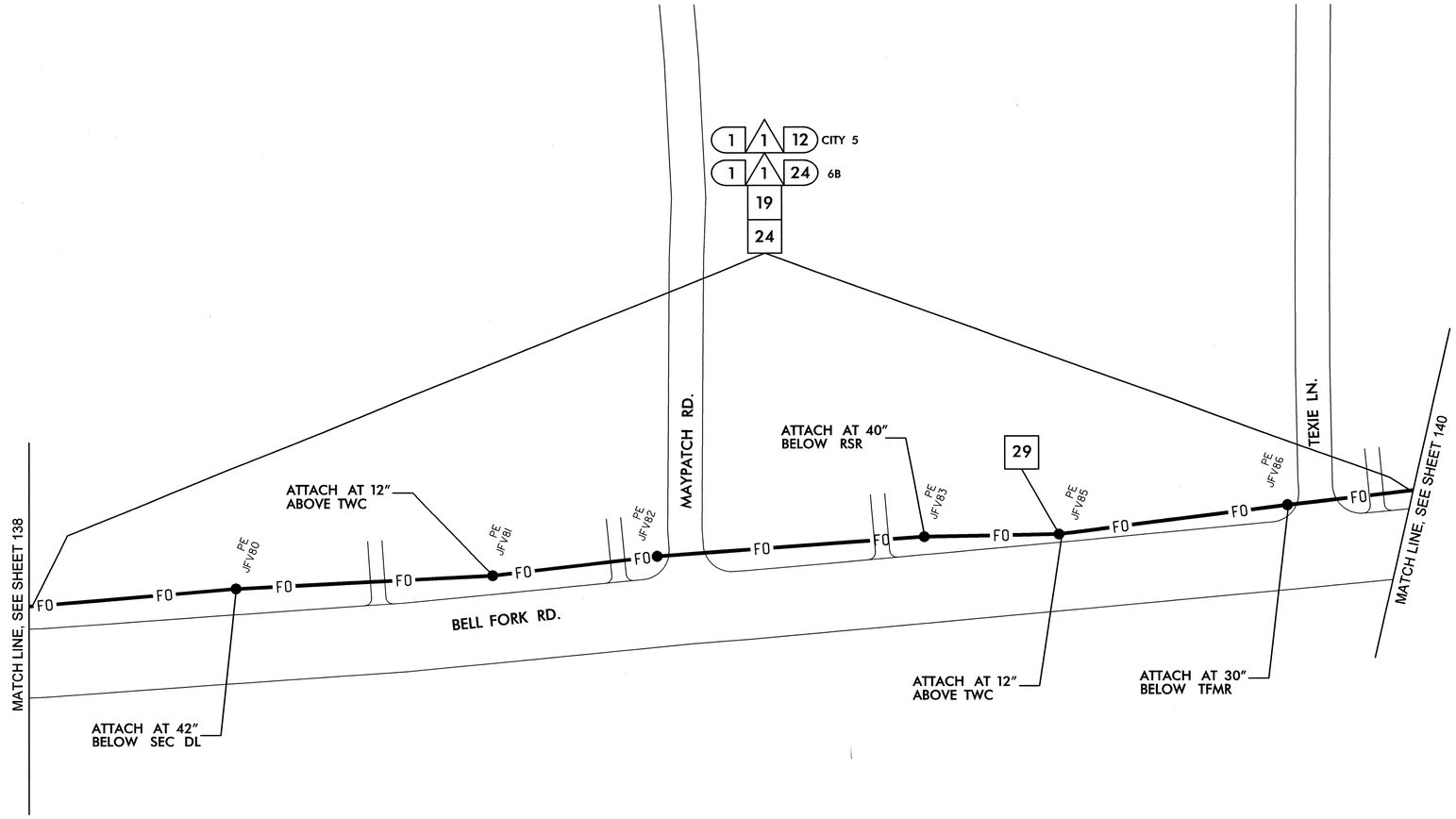
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSE#CADWCR-138.dgn



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750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

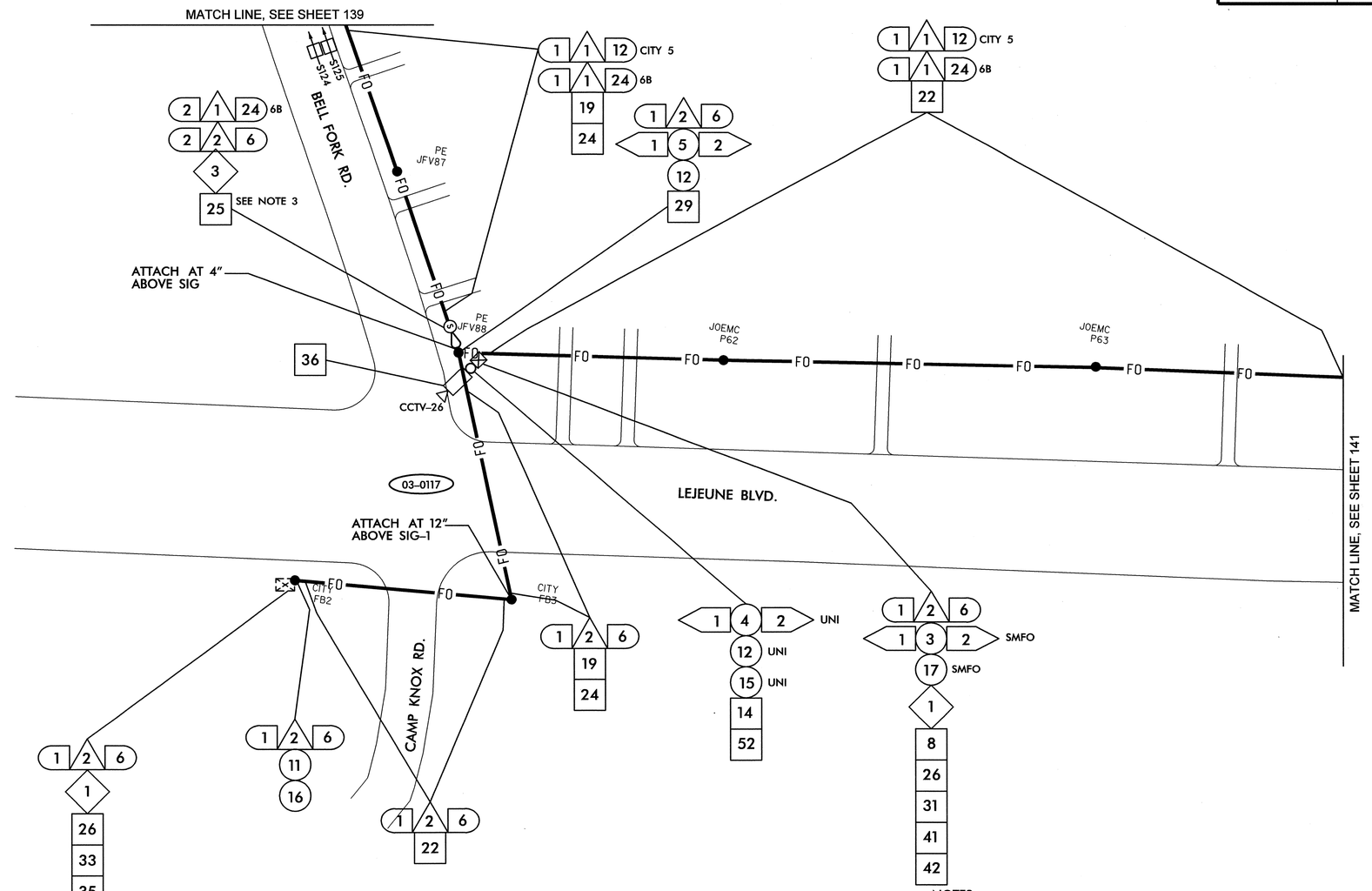
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filenames:

7/19/2011 $TIME$ susan.pennington ...1600 PSE#CADWCR-139.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	140



SEE SIGNAL PLAN 03-0117 FOR SYSTEM DETECTOR S124 AND S125 INSTALLATION DETAILS. REFER TO DETAIL SHEET 1H FOR SYSTEM DETECTOR ID KEY.

NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.
3. COIL 300' OF FIBER OPTIC CABLE AT AERIAL SPLICE ENCLOSURE TO ACCOMODATE FOR ROAD WIDENING PROJECT (U-5132).

1. INSTALL SMFO CABLE
2. INSTALL FIBER OPTIC DROP CABLE
3. INSTALL TRACER WIRE
4. REUSE EXISTING SMFO CABLE
5. INSTALL PLENUM RATED SMFO CABLE
6. INSTALL LOOP LEAD-IN CABLE
7. INSTALL ETHERNET CABLE
1. INSTALL PVC CONDUIT
2. INSTALL POLYETHYLENE CONDUIT
3. INSTALL RIGID, GALVANIZED STEEL CONDUIT
4. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5. INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
6. TRENCH CONDUIT
7. DIRECTIONAL DRILL CONDUIT
8. BORE AND JACK CONDUIT
9. INSTALL CABLE(S) IN EXISTING CONDUIT
10. INSTALL CABLE(S) IN NEW CONDUIT
11. INSTALL CABLE(S) IN EXISTING RISER
12. INSTALL CABLE(S) IN NEW RISER
13. INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS
14. INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)
15. INSTALL NEW RISER INTO POLE MOUNTED CABINET
16. REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
17. INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET
1. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2. INSTALL UNDERGROUND SPLICE ENCLOSURE
3. INSTALL AERIAL SPLICE ENCLOSURE
4. MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5. INSTALL TERMINAL SPLICE BOX
1. INSTALL CABINET FOUNDATION
2. REMOVE EXISTING CABINET FOUNDATION
3. MODIFY EXISTING CABINET FOUNDATION
4. REMOVE EXISTING CONTROLLER AND CABINET
5. INSTALL NEW CONTROLLER
6. INSTALL NEW 332 BASE MOUNTED CABINET
7. INSTALL NEW 336S BASE MOUNTED CABINET
8. INSTALL NEW 336S POLE MOUNTED CABINET
9. INSTALL BASE ADAPTER
10. INSTALL PRE-FORMED CABINET FOUNDATION PAD
11. INSTALL STANDARD JUNCTION BOX
12. INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
13. INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
14. INSTALL WOOD POLE
15. REMOVE EXISTING WOOD POLE
16. INSTALL AERIAL GUY ASSEMBLY
17. INSTALL STANDARD GUY ASSEMBLY
18. INSTALL SIDEWALK GUY ASSEMBLY
19. INSTALL MESSENGER CABLE
20. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
21. REMOVE EXISTING COMMUNICATIONS CABLE
22. LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
23. LASH CABLE(S) TO EXISTING MESSENGER CABLE
24. LASH CABLE(S) TO NEW MESSENGER CABLE
25. INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE
26. STORE 30 FEET OF EACH COMMUNICATIONS CABLE
27. STORE 100 FEET OF EACH COMMUNICATIONS CABLE
28. INSTALL FIBER OPTIC DELINEATOR MARKER
29. BOND MESSENGER CABLE TO POLE GROUND
30. MODIFY EXISTING ELECTRICAL SERVICE
31. INSTALL NEW ELECTRICAL SERVICE
32. INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
33. INSTALL GENERATOR ANCHOR IN FOUNDATION
34. RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
35. RECONNECT GENERATOR POWER INLET BOX
36. INSTALL CCTV CAMERA ASSEMBLY
37. INSTALL SMALL DMS ASSEMBLY
38. INSTALL LARGE DMS ASSEMBLY
39. INSTALL PEDESTAL STRUCTURE FOR SMALL DMS
40. INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
41. INSTALL ETHERNET SWITCH
42. INSTALL VIDEO CODEC UNIT
43. REMOVE EXISTING FIBER OPTIC TRANSCEIVER
44. INSTALL CELLULAR MODEM
45. INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)
46. INSTALL 2.4 GHz RADIO TRANSCEIVER
47. INSTALL YAGI ANTENNA
48. INSTALL OMNI-DIRECTIONAL ANTENNA
49. REMOVE EXISTING WIRELESS HARDWARE
50. INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
51. INSTALL NEW GENERATOR POWER INLET BOX
52. INSTALL CCTV UNIFIED CABLE
53. INSTALL ANTENNA CABLE
54. INSTALL DMS CONTROLLER
55. INSTALL SOLAR POWER ASSEMBLY

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

Transportation Mobility and Safety Division
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

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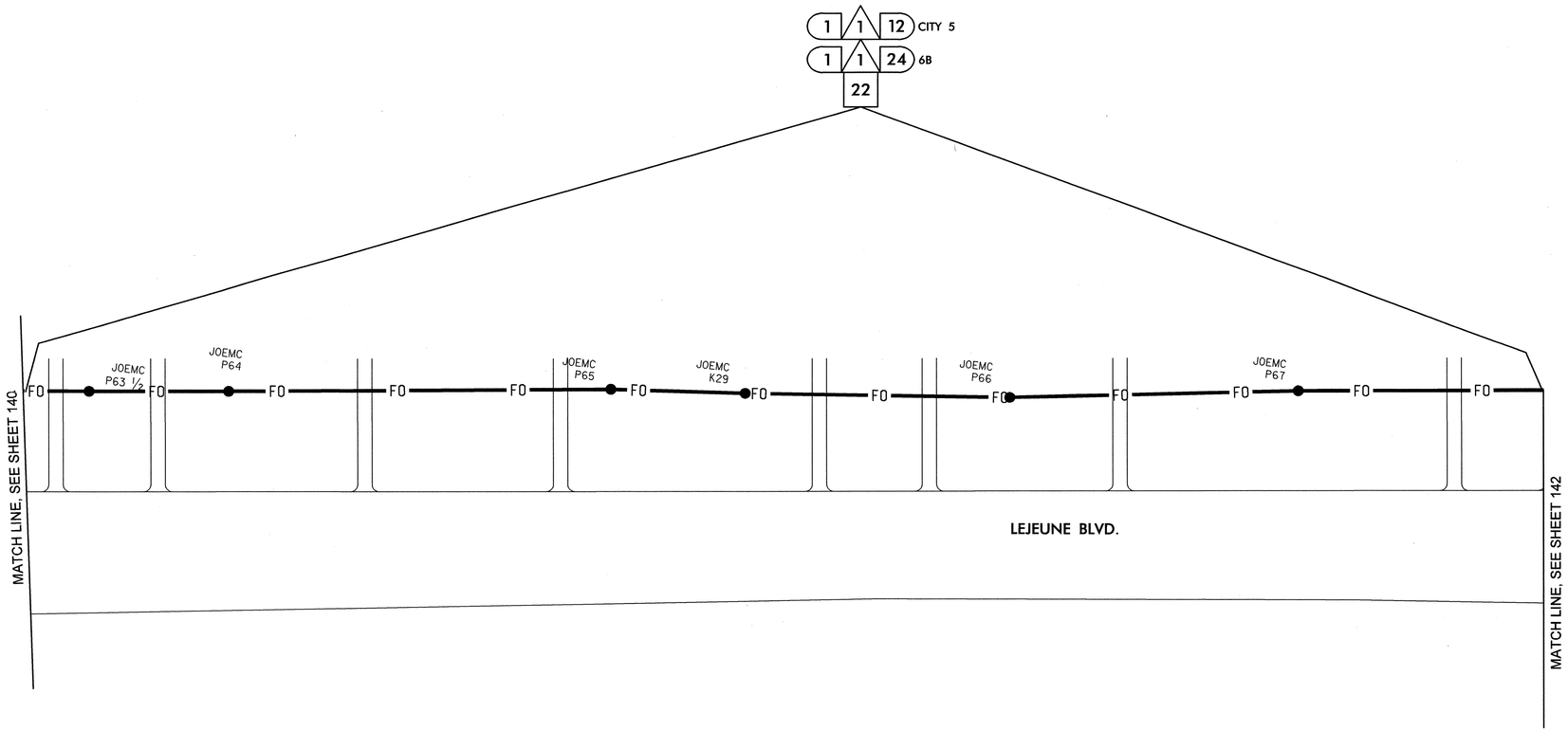

NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.

1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE		
2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE		
3	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA	54	INSTALL DMS CONTROLLER		
4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY		
5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE				
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT				
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX				
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND								
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE								
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE								
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE								
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION								
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT								
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX								
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY								
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY								
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER												

PLANS PREPARED IN THE OFFICE OF:

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Transportation Mobility and Safety Division
Intermodal Transportation Systems Section
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
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SCALE 0 50

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CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

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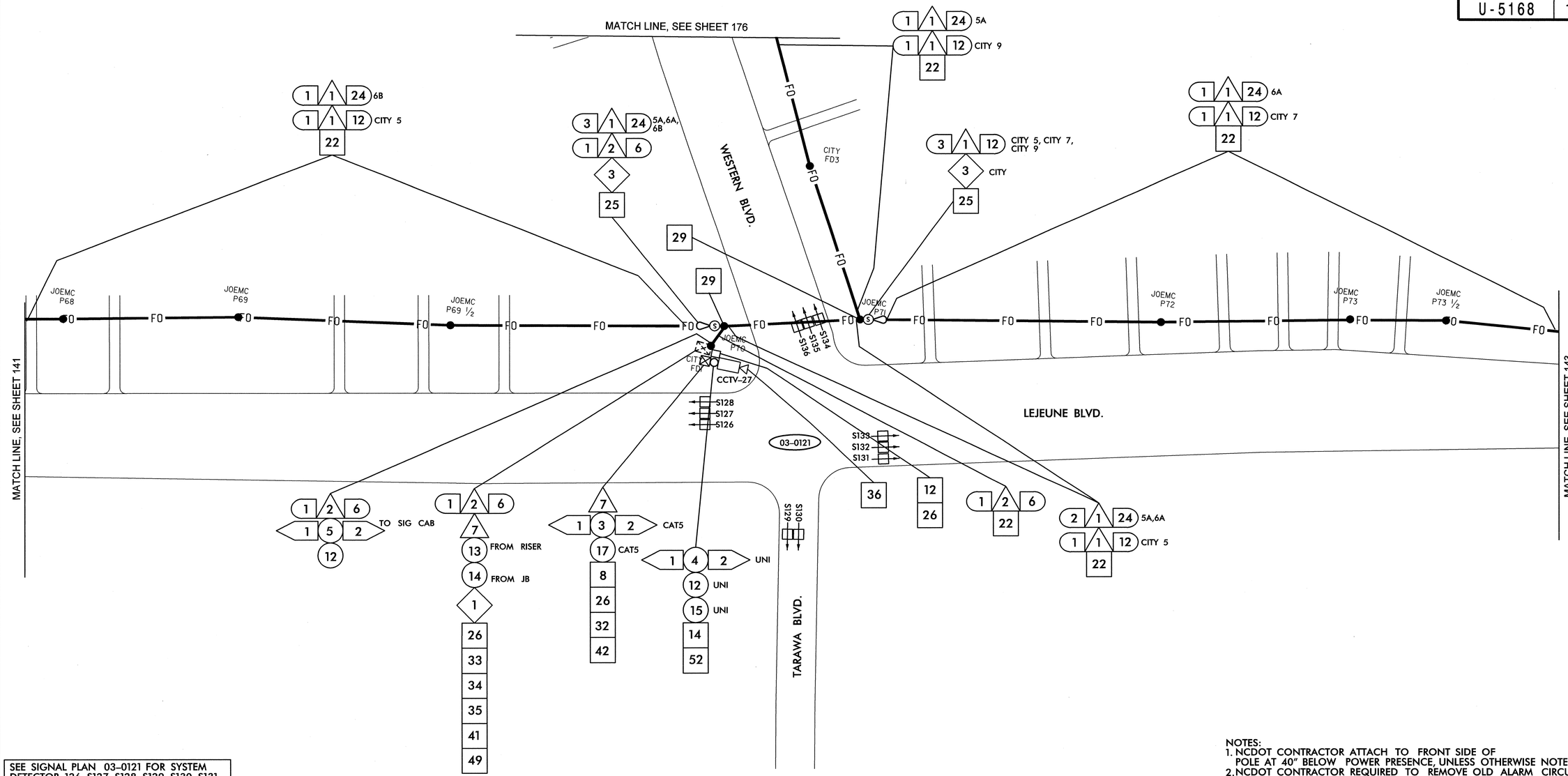

SEE SIGNAL PLAN 03-0121 FOR SYSTEM DETECTOR 126, S127, S128, S129, S130, S131, S132, S133, S134, S135, AND S136 INSTALLATION DETAILS. REFER TO DETAIL SHEET 1H FOR SYSTEM DETECTOR ID KEY.

NOTES:
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CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

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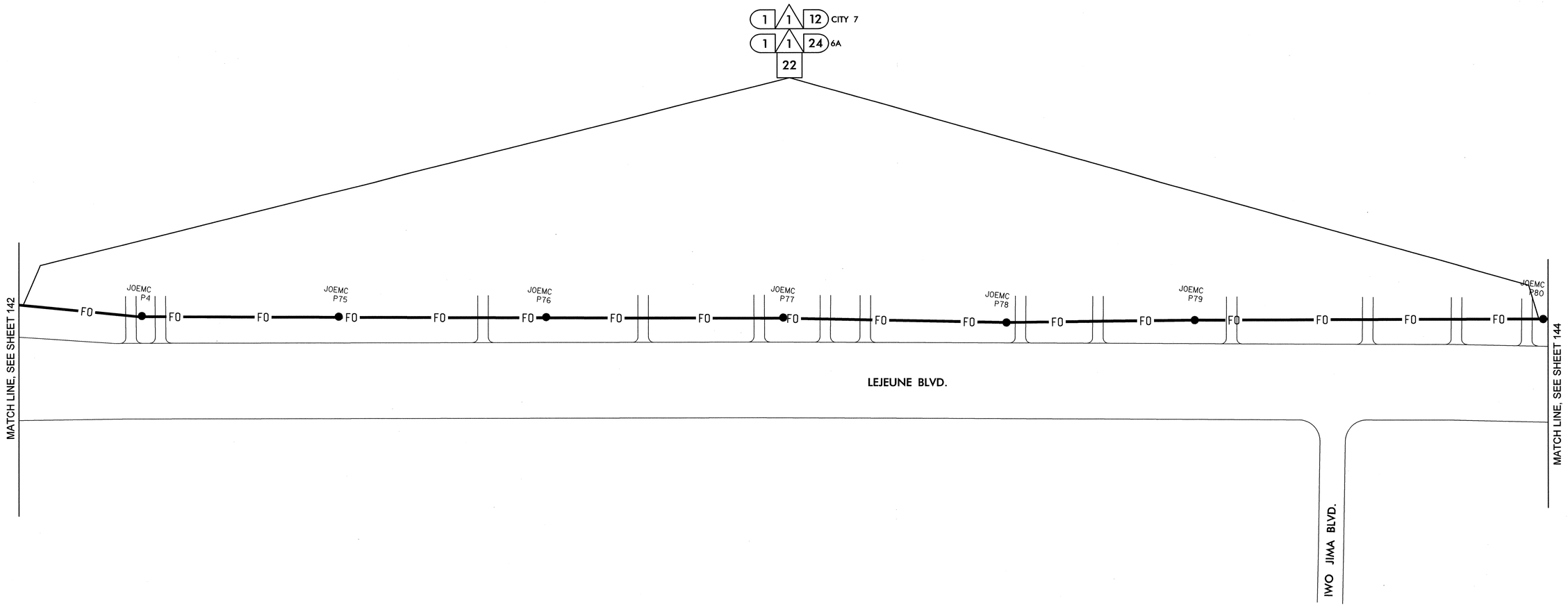

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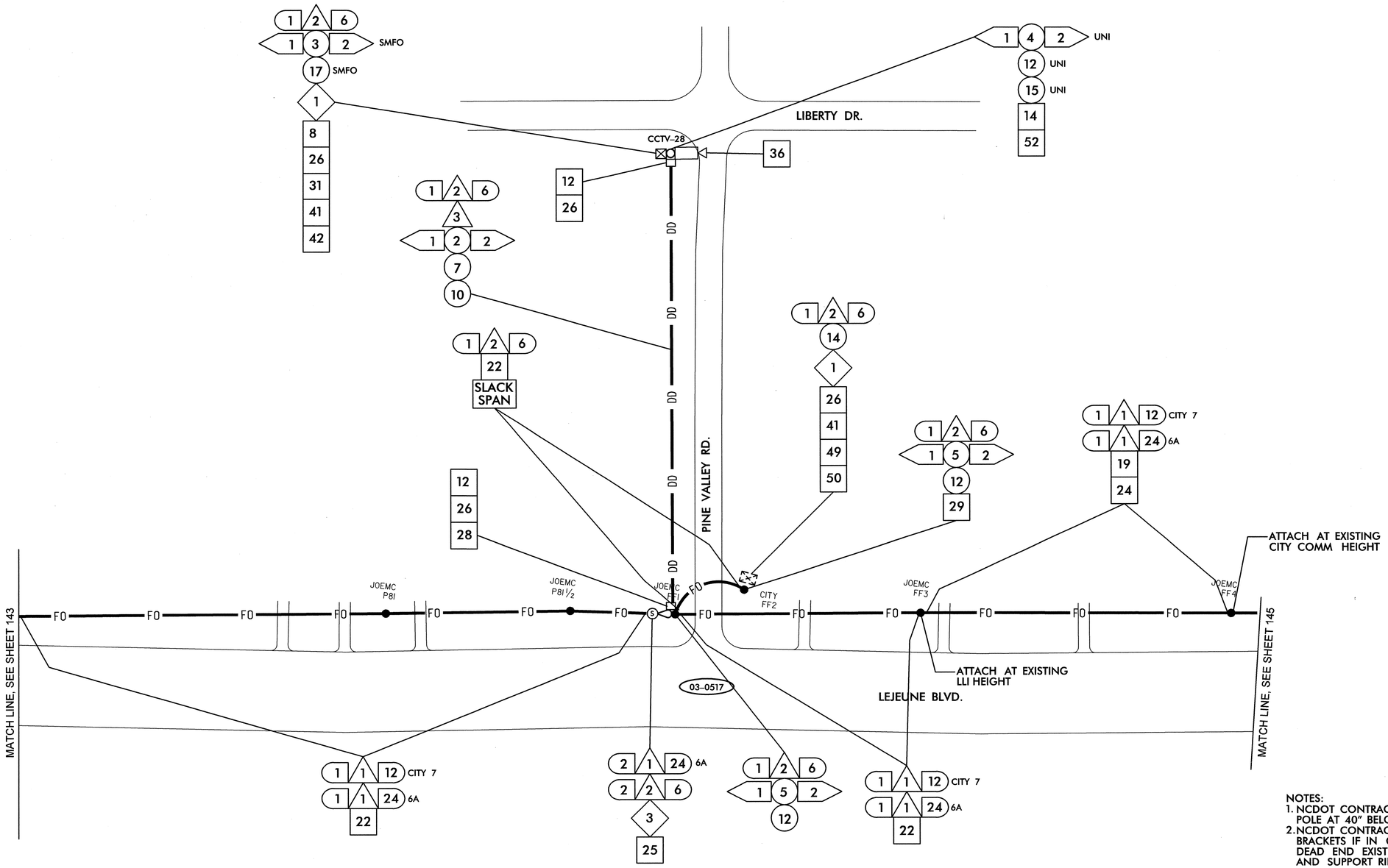

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1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE
2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE
3	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA	54	INSTALL DMS CONTROLLER
4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY
5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE		
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT		
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX		
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND						
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE						
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE						
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6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT						
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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

Transportation Mobility and Safety Division
Traffic Engineering Branch
Traffic Management Section
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

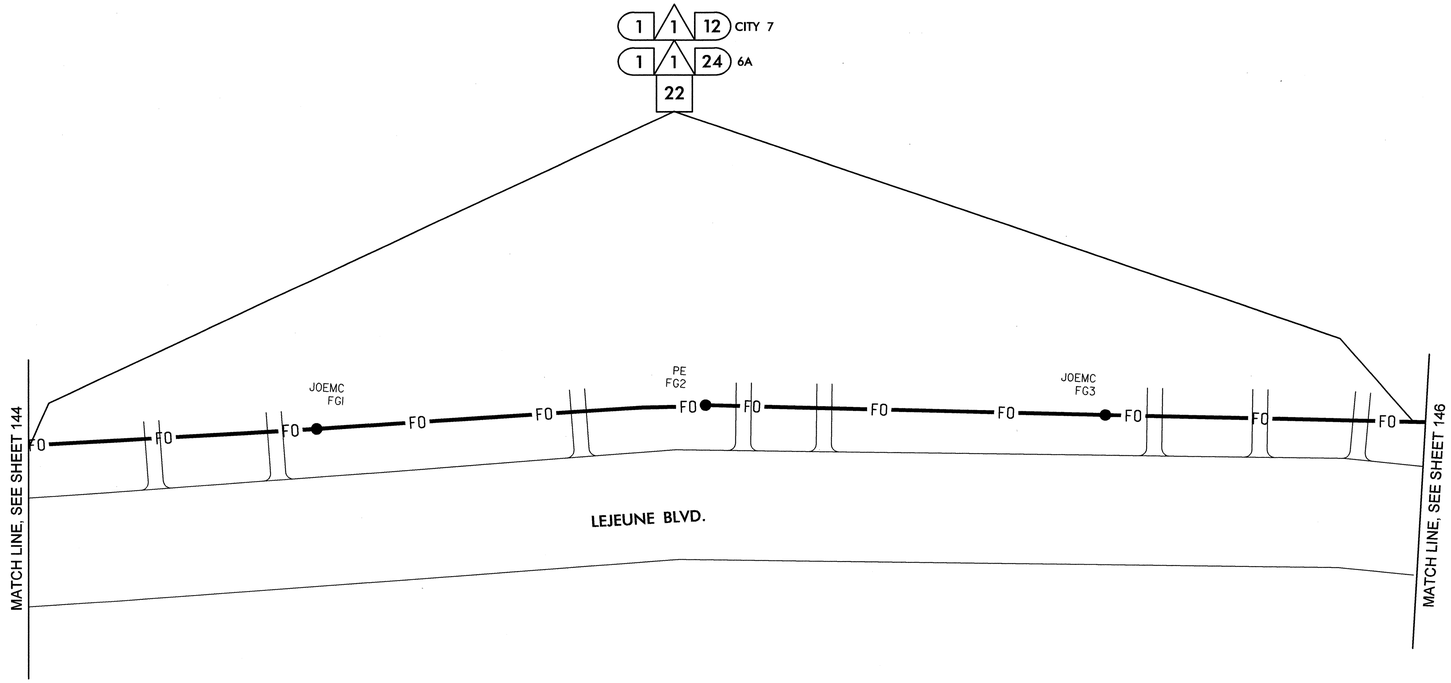
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSAEMCADMCR-144.dgn



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

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

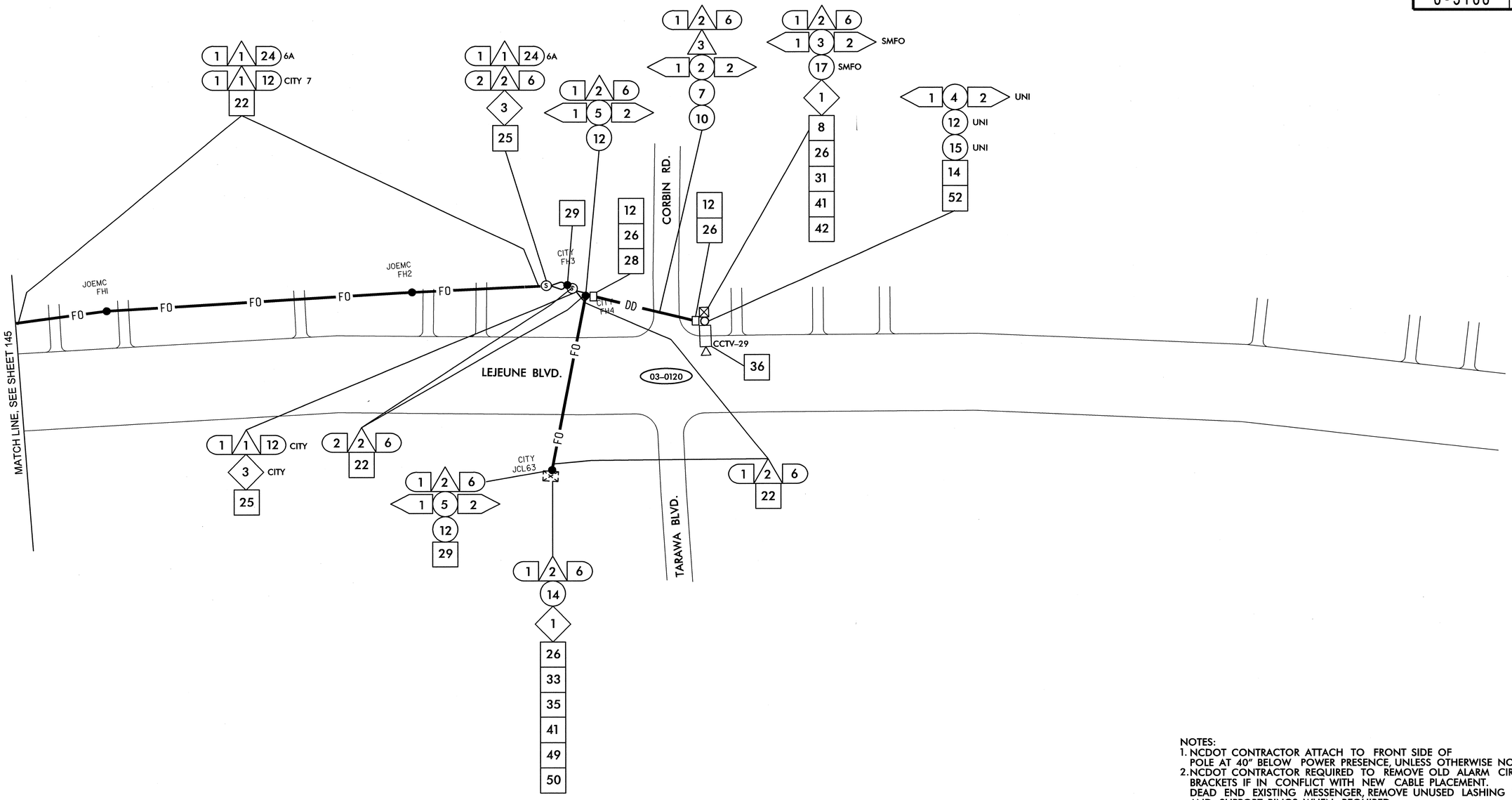
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...:\800 PSE\MOJWCR-145.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	146



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

Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intermodal Transportation Systems
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

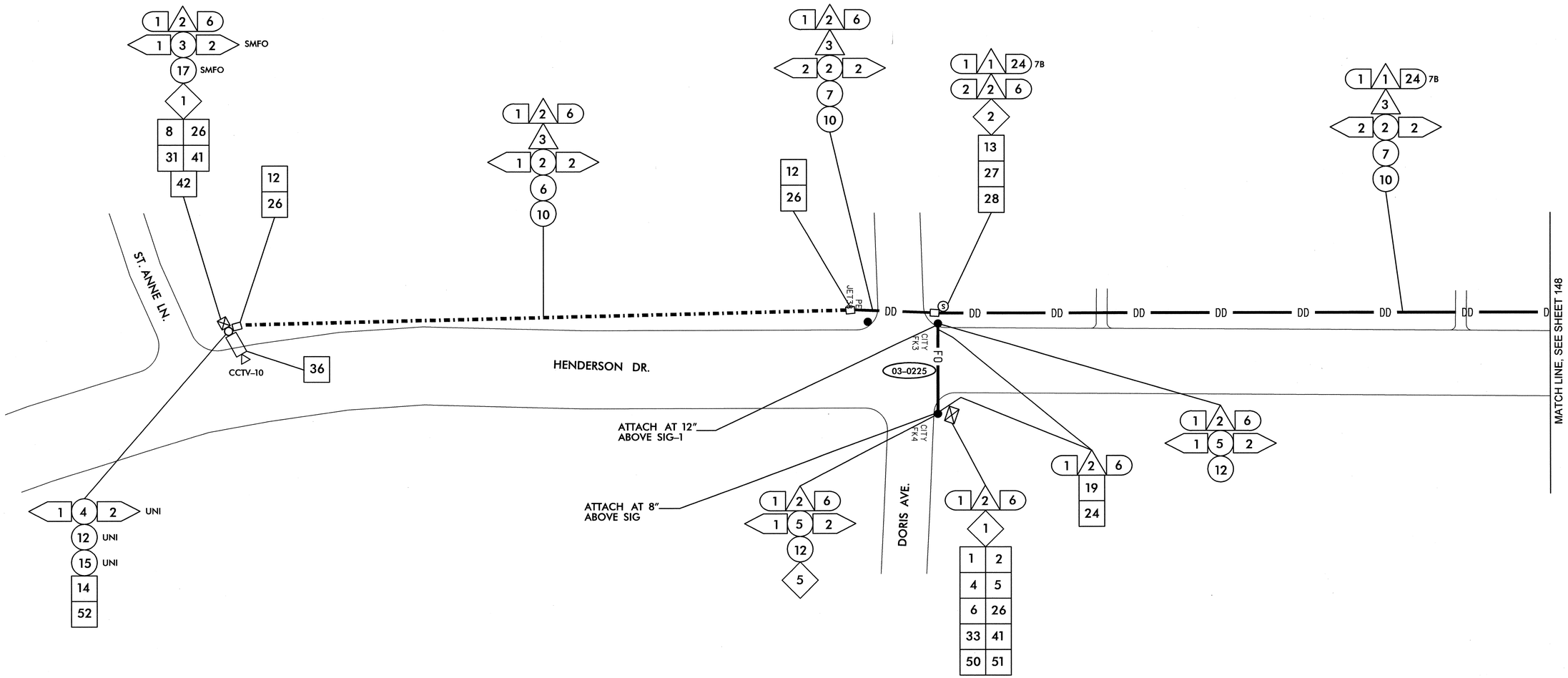
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSE#CJDWCR-146.dgn



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Transportation Mobility and Safety Division
ENGINEERING BUREAU
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
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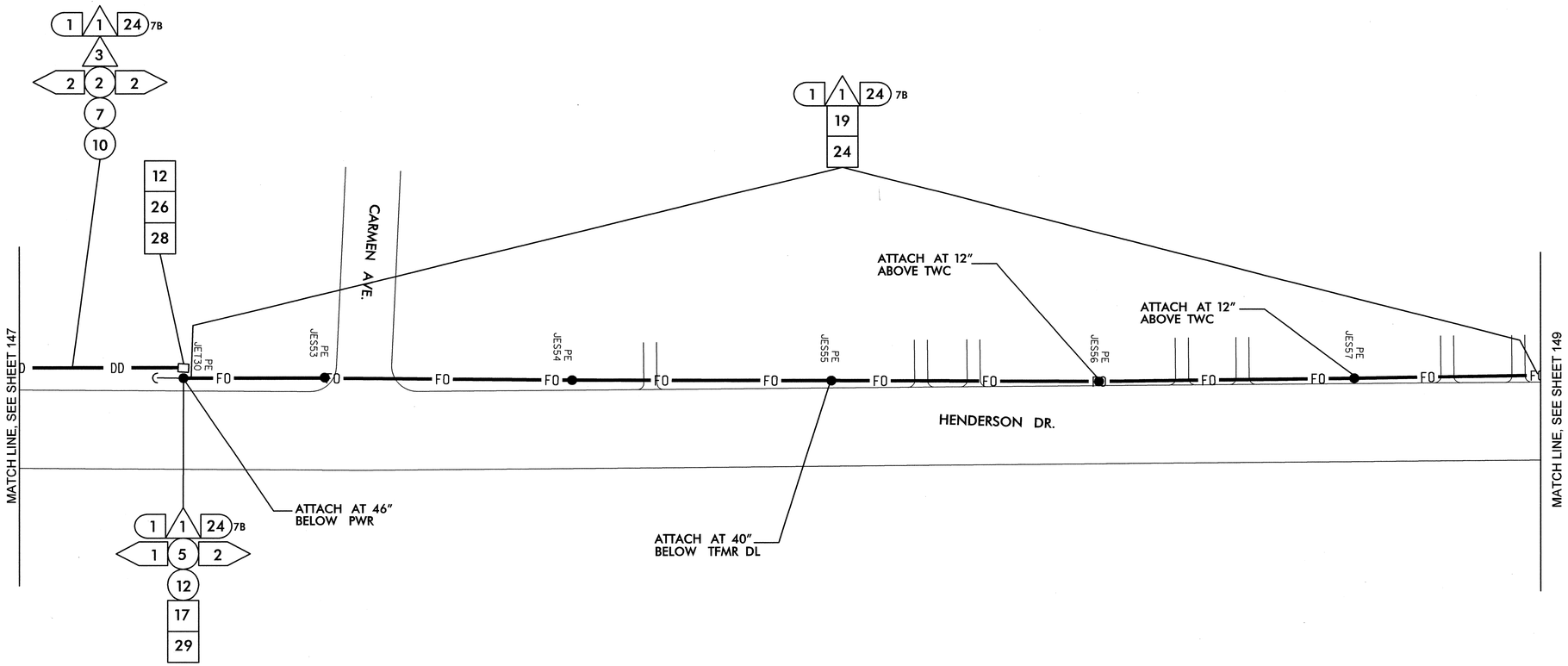

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6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT				
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX				
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND								
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE								
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE								
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE								
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION								
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT								
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX								
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY								
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY								
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER												

PLANS PREPARED IN THE OFFICE OF:

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

Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intermodal Transportation Division Building
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

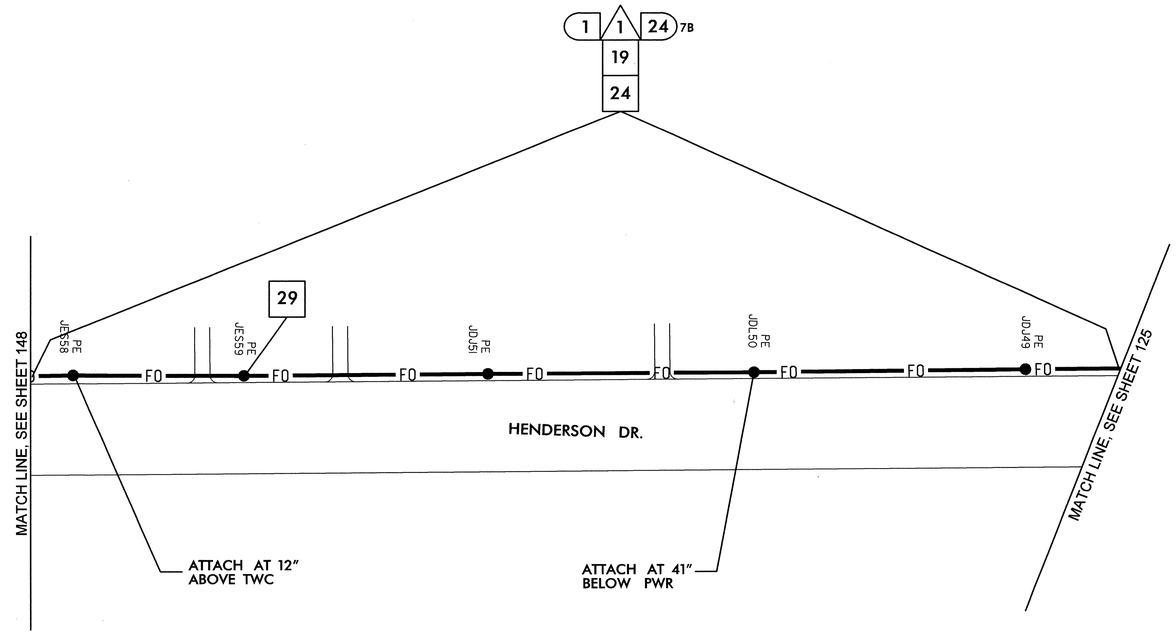
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE DATE 7-20-11

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSSE#2ADACR-148.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	149



NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.

1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE
2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE
3	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA	54	INSTALL DMS CONTROLLER
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Transportation Mobility and Safety Division
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

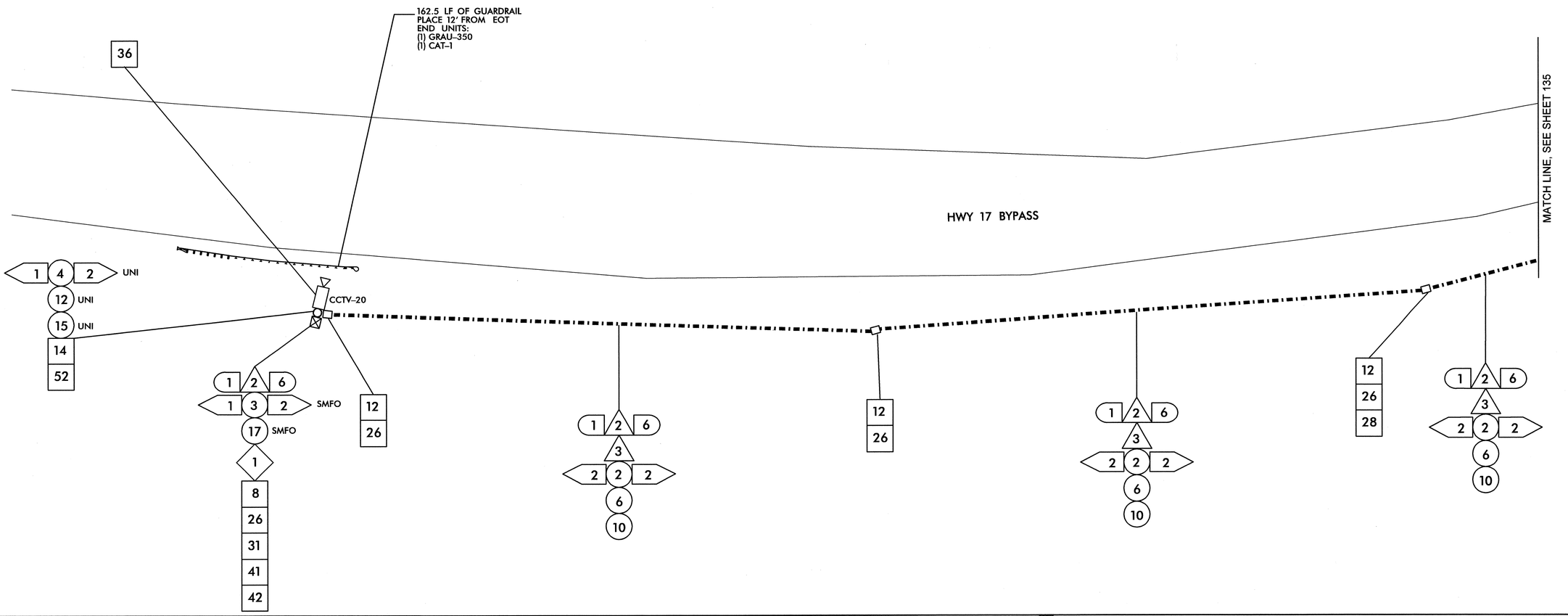
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSE#CADWCR-149.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	150



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Transportation Mobility and Safety Division
DEPARTMENT OF TRANSPORTATION
Intermodal Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

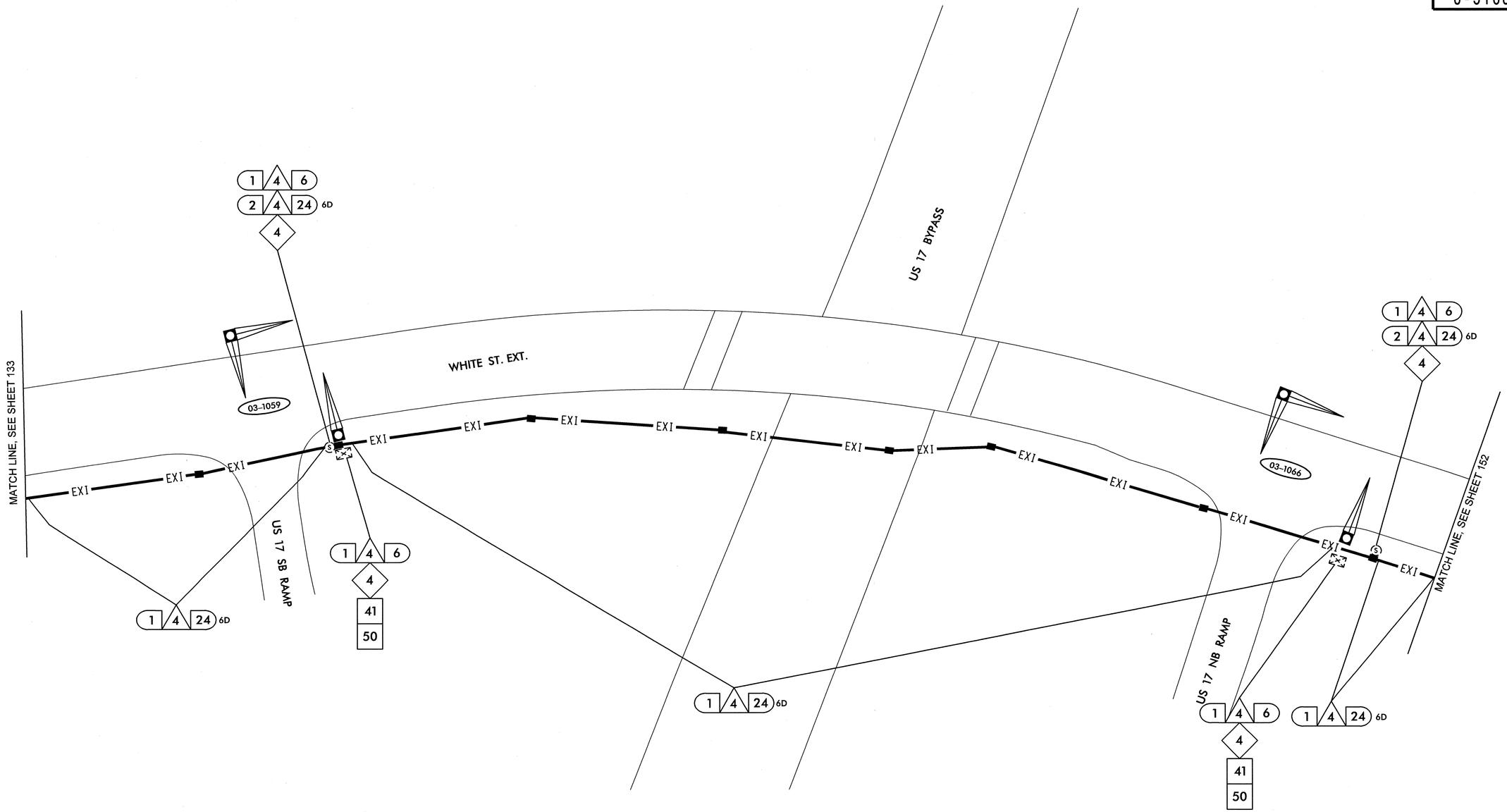
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSE&CADWCR-150.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	151



1	INSTALL SMFO CABLE
2	INSTALL FIBER OPTIC DROP CABLE
3	INSTALL TRACER WIRE
4	REUSE EXISTING SMFO CABLE
5	INSTALL PLENUM RATED SMFO CABLE
6	INSTALL LOOP LEAD-IN CABLE
7	INSTALL ETHERNET CABLE
1	INSTALL PVC CONDUIT
2	INSTALL POLYETHYLENE CONDUIT
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
6	TRENCH CONDUIT
7	DIRECTIONAL DRILL CONDUIT
8	BORE AND JACK CONDUIT
9	INSTALL CABLE(S) IN EXISTING CONDUIT
10	INSTALL CABLE(S) IN NEW CONDUIT
11	INSTALL CABLE(S) IN EXISTING RISER
12	INSTALL CABLE(S) IN NEW RISER
13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS
14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)
15	INSTALL NEW RISER INTO POLE MOUNTED CABINET
16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET
1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2	INSTALL UNDERGROUND SPLICE ENCLOSURE
3	INSTALL AERIAL SPLICE ENCLOSURE
4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5	INSTALL TERMINAL SPLICE BOX
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION
3	MODIFY EXISTING CABINET FOUNDATION
4	REMOVE EXISTING CONTROLLER AND CABINET
5	INSTALL NEW CONTROLLER
6	INSTALL NEW 332 BASE MOUNTED CABINET
7	INSTALL NEW 336S BASE MOUNTED CABINET
8	INSTALL NEW 336S POLE MOUNTED CABINET
9	INSTALL BASE ADAPTER
10	INSTALL PRE-FORMED CABINET FOUNDATION PAD
11	INSTALL STANDARD JUNCTION BOX
12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
14	INSTALL WOOD POLE
15	REMOVE EXISTING WOOD POLE
16	INSTALL AERIAL GUY ASSEMBLY
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18	INSTALL SIDEWALK GUY ASSEMBLY
19	INSTALL MESSENGER CABLE
20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
21	REMOVE EXISTING COMMUNICATIONS CABLE
22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
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30	MODIFY EXISTING ELECTRICAL SERVICE
31	INSTALL NEW ELECTRICAL SERVICE
32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
33	INSTALL GENERATOR ANCHOR IN FOUNDATION
34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
35	RECONNECT GENERATOR POWER INLET BOX
36	INSTALL CCTV CAMERA ASSEMBLY
37	INSTALL SMALL DMS ASSEMBLY
38	INSTALL LARGE DMS ASSEMBLY
39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS
40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
41	INSTALL ETHERNET SWITCH
42	INSTALL VIDEO CODEC UNIT
43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER
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46	INSTALL 2.4 GHz RADIO TRANSCEIVER
47	INSTALL YAGI ANTENNA
48	INSTALL OMNI-DIRECTIONAL ANTENNA
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PLANS PREPARED IN THE OFFICE OF:
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SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011 REVIEWED BY: K.W. SMITH

PREPARED BY: S.P. PENNINGTON REVIEWED BY: T.F. BURCHETT

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NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

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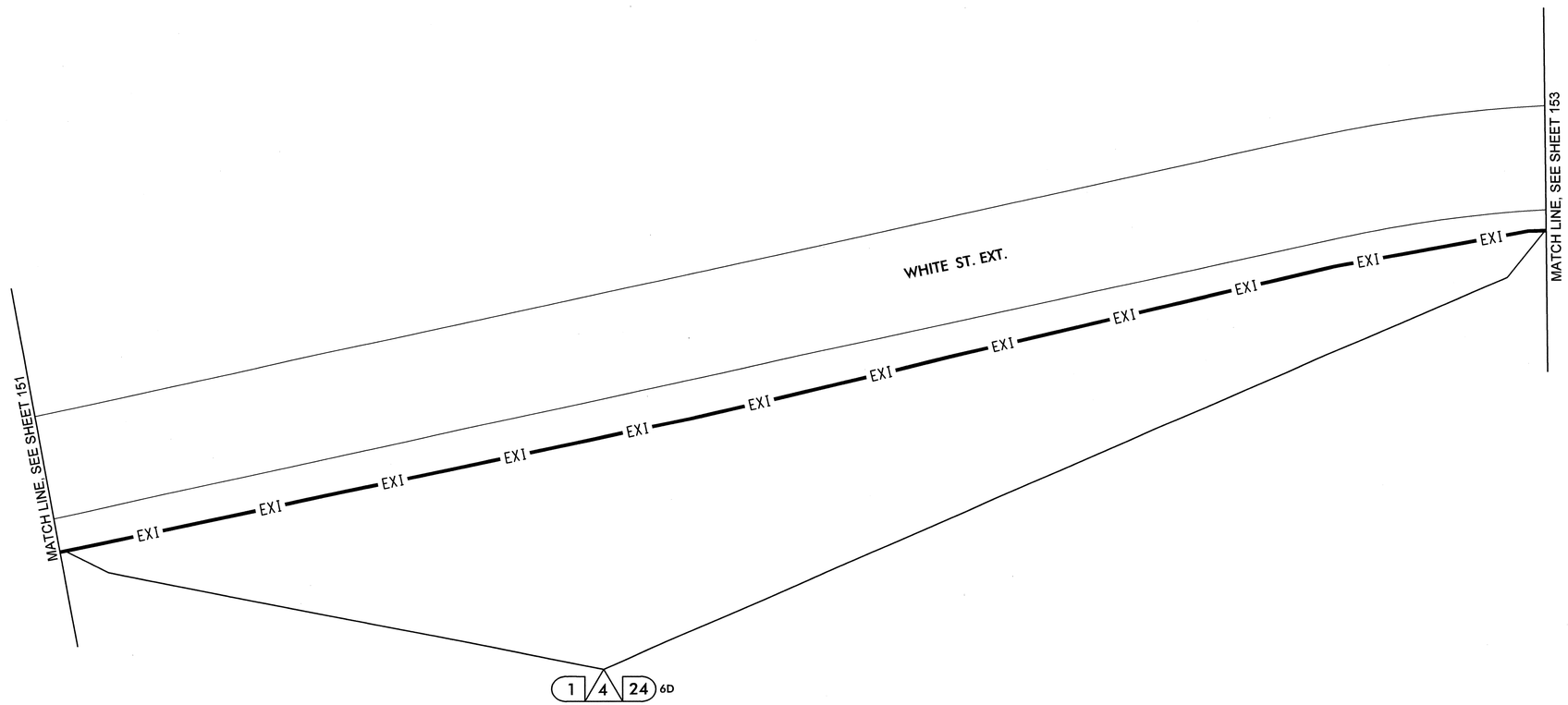
7/19/2011 $TIME$ susan.pennington ...#600 PSAE#CADWCR-151.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	152



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N

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

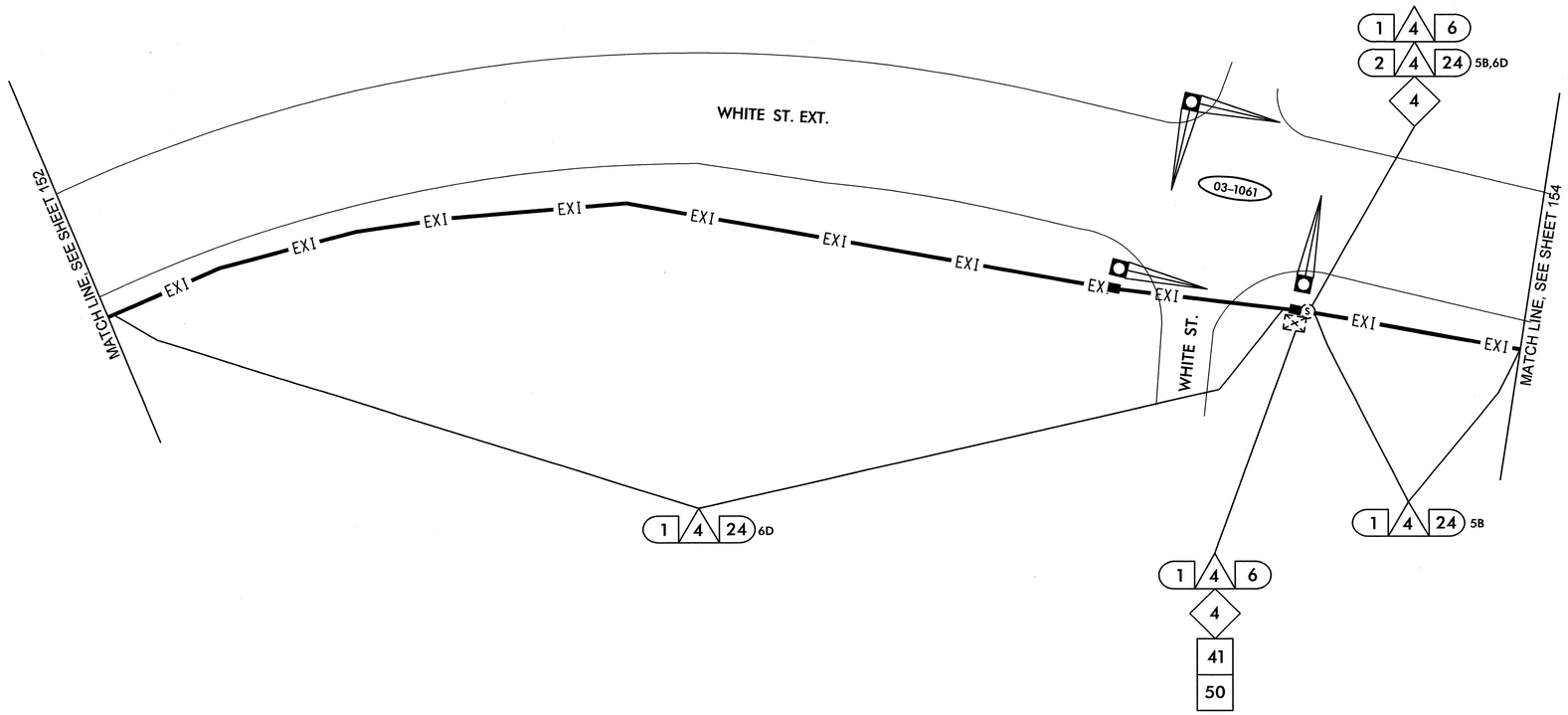
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filenames

7/19/2011 $TIME$ susan.pennington ...#600 PSE&CADWCR-152.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	153



1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE				
2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE				
3	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA	54	INSTALL DMS CONTROLLER				
4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY				
5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE						
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT						
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX						
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND										
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE										
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE										
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE										
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION										
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT										
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX										
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY										
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY										
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER														

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

Transportation Mobility and Safety Division
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Integrity Teamwork Quality Service
750 N. Greenfield Pkwy., Garner, NC 27529

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CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE CABLE ROUTING

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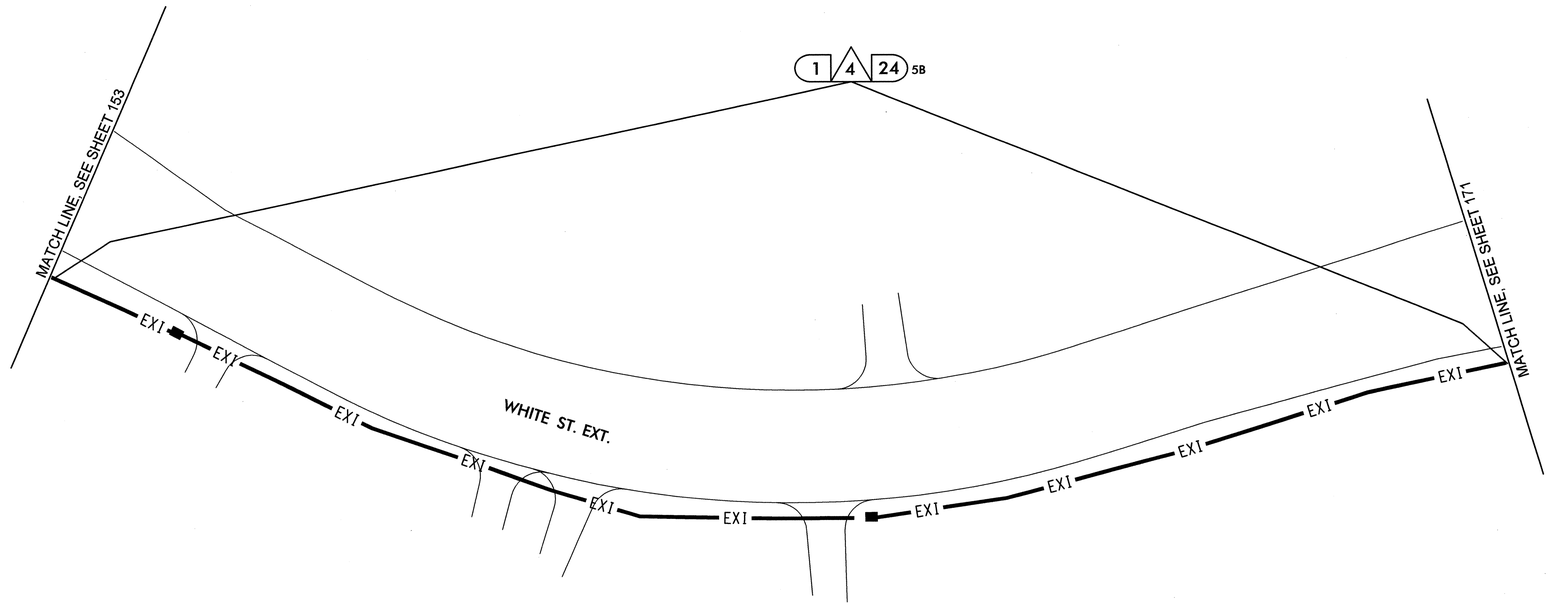

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Intermodal Transportation System Development
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CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

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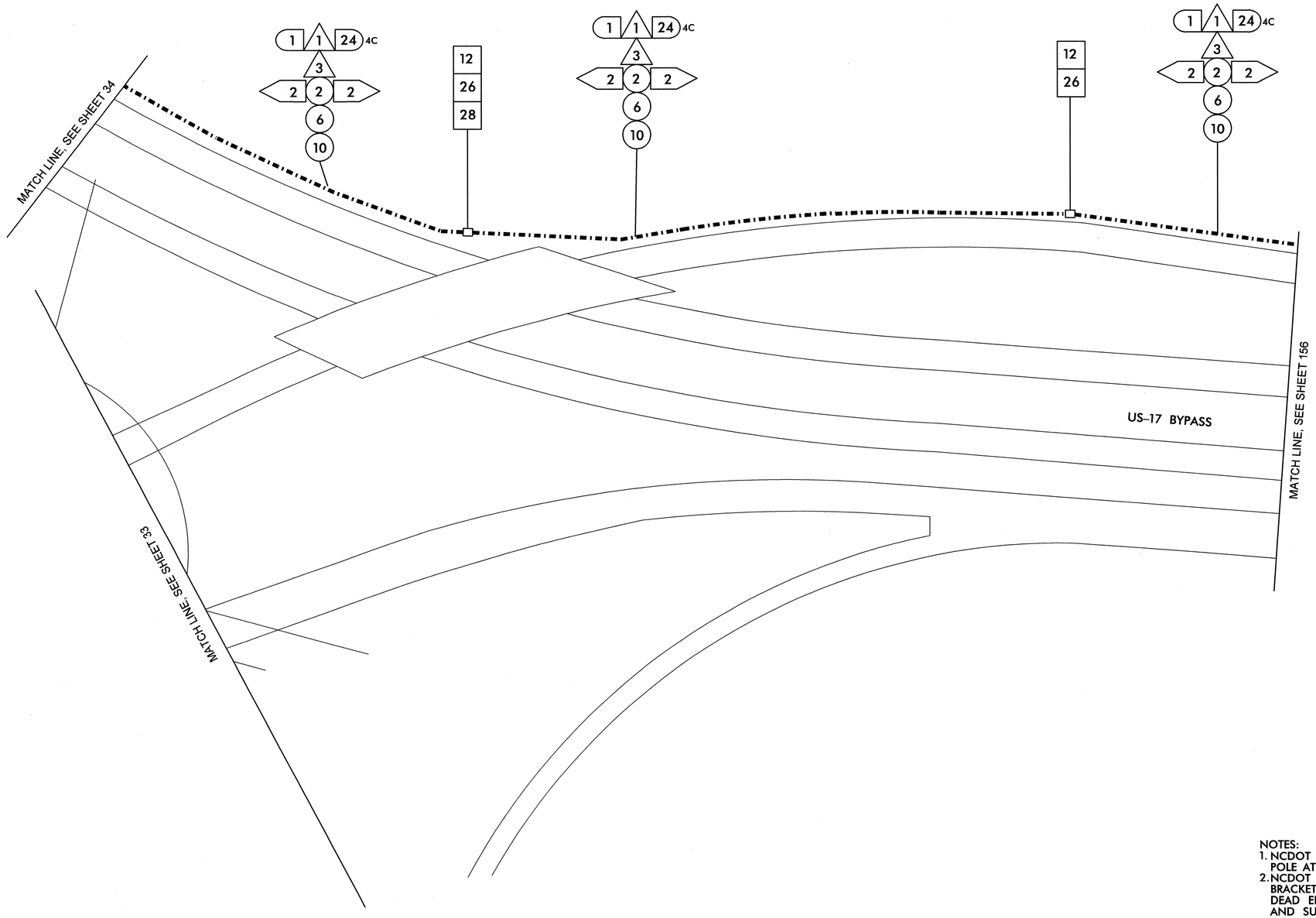

NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
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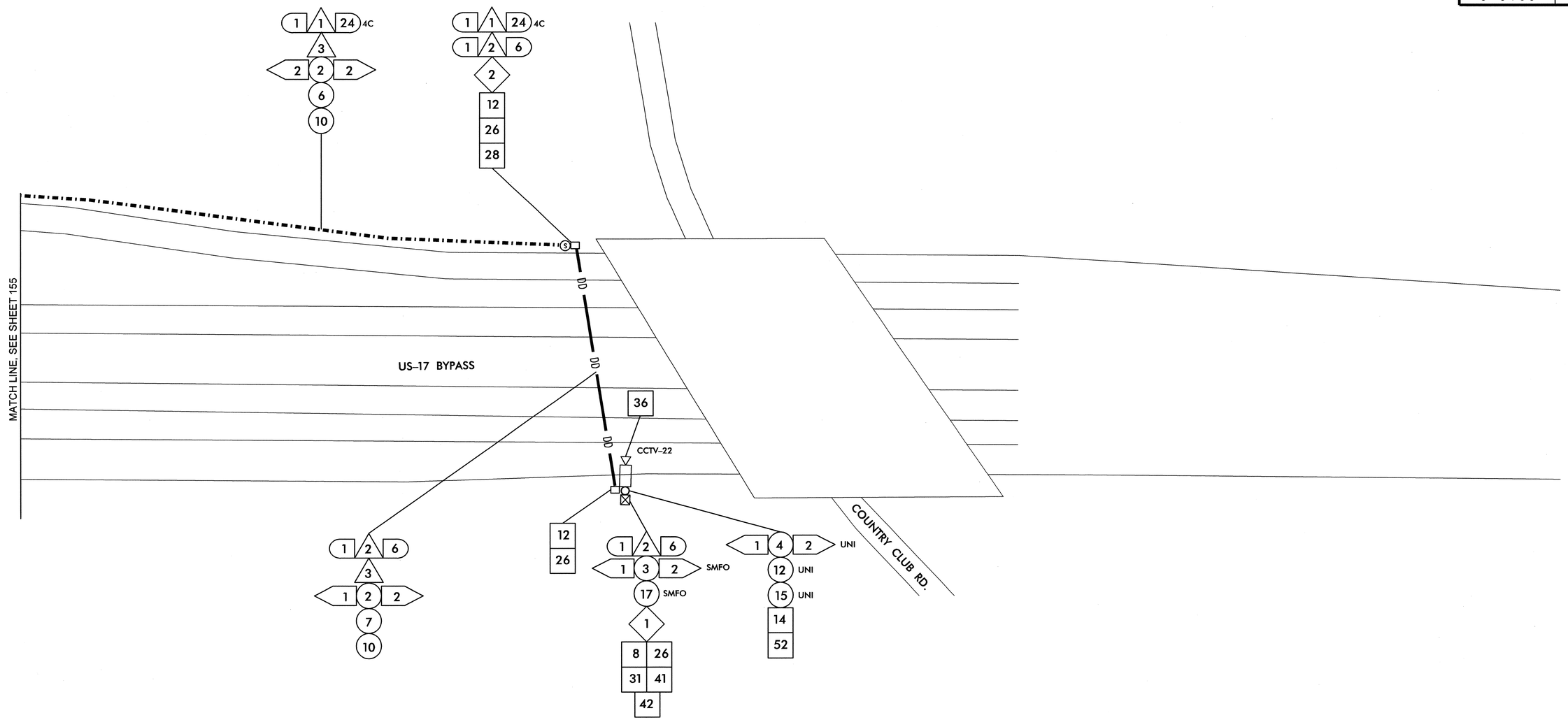

NOTES:
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2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.

1	INSTALL SMFO CABLE
2	INSTALL FIBER OPTIC DROP CABLE
3	INSTALL TRACER WIRE
4	REUSE EXISTING SMFO CABLE
5	INSTALL PLENUM RATED SMFO CABLE
6	INSTALL LOOP LEAD-IN CABLE
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2	INSTALL UNDERGROUND SPLICE ENCLOSURE
3	INSTALL AERIAL SPLICE ENCLOSURE
4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5	INSTALL TERMINAL SPLICE BOX
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION
3	MODIFY EXISTING CABINET FOUNDATION
4	REMOVE EXISTING CONTROLLER AND CABINET
5	INSTALL NEW CONTROLLER
6	INSTALL NEW 332 BASE MOUNTED CABINET
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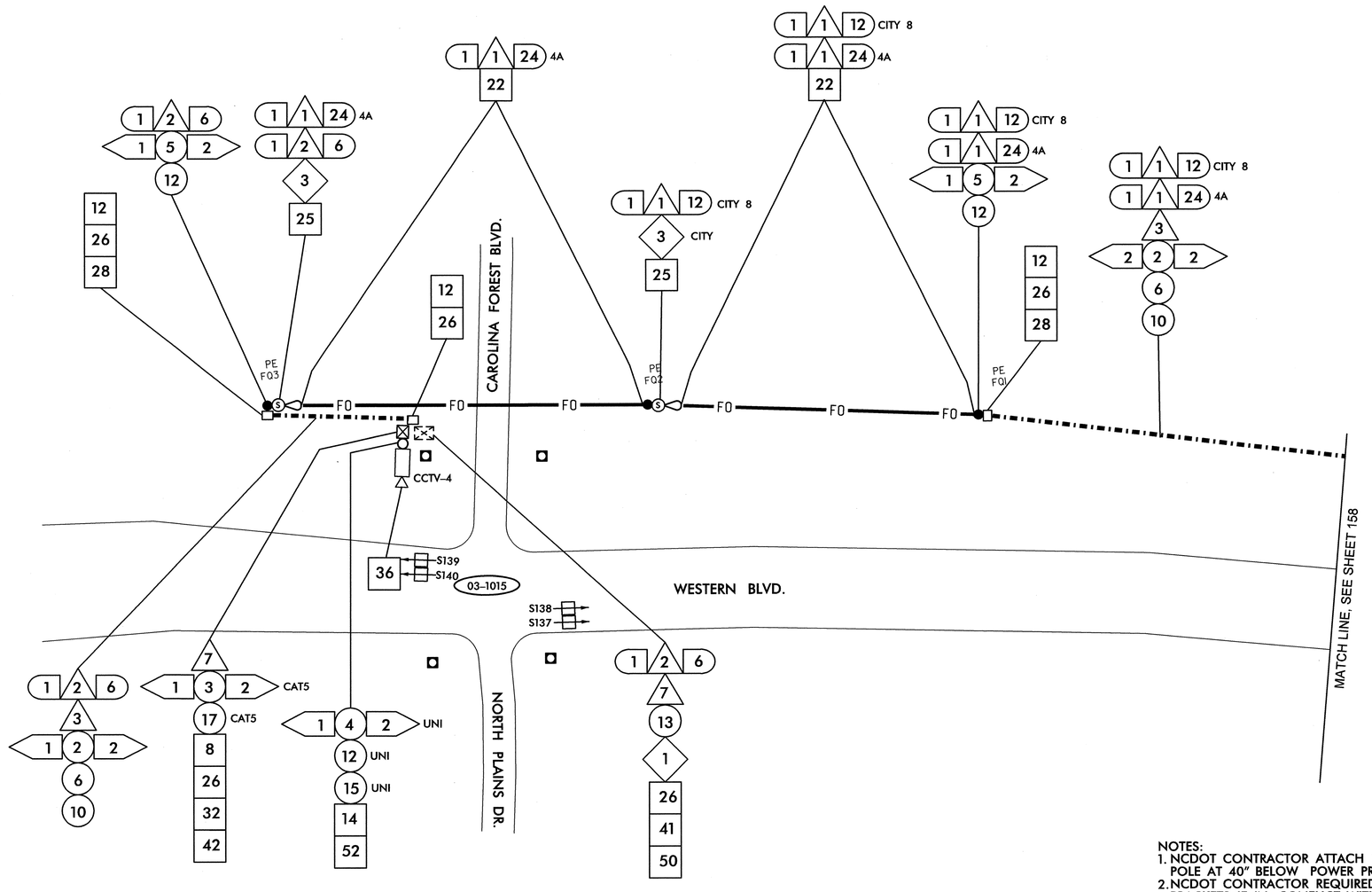

SEE SIGNAL PLAN 03-1015 FOR SYSTEM DETECTORS S137, S138, S139 AND S140 DETAILS. REFER TO DETAIL SHEET 1H FOR SYSTEM DETECTOR ID KEY.

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2	INSTALL UNDERGROUND SPLICE ENCLOSURE
3	INSTALL AERIAL SPLICE ENCLOSURE
4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5	INSTALL TERMINAL SPLICE BOX
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION
3	MODIFY EXISTING CABINET FOUNDATION
4	REMOVE EXISTING CONTROLLER AND CABINET
5	INSTALL NEW CONTROLLER
6	INSTALL NEW 332 BASE MOUNTED CABINET
7	INSTALL NEW 336S BASE MOUNTED CABINET
8	INSTALL NEW 336S POLE MOUNTED CABINET
9	INSTALL BASE ADAPTER
10	INSTALL PRE-FORMED CABINET FOUNDATION PAD
11	INSTALL STANDARD JUNCTION BOX
12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
14	INSTALL WOOD POLE
15	REMOVE EXISTING WOOD POLE
16	INSTALL AERIAL GUY ASSEMBLY
17	INSTALL STANDARD GUY ASSEMBLY
18	INSTALL SIDEWALK GUY ASSEMBLY
19	INSTALL MESSENGER CABLE
20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
21	REMOVE EXISTING COMMUNICATIONS CABLE
22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
23	LASH CABLE(S) TO EXISTING MESSENGER CABLE
24	LASH CABLE(S) TO NEW MESSENGER CABLE
25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE
26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE
27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
28	INSTALL FIBER OPTIC DELINEATOR MARKER
29	BOND MESSENGER CABLE TO POLE GROUND
30	MODIFY EXISTING ELECTRICAL SERVICE
31	INSTALL NEW ELECTRICAL SERVICE
32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
33	INSTALL GENERATOR ANCHOR IN FOUNDATION
34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
35	RECONNECT GENERATOR POWER INLET BOX
36	INSTALL CCTV CAMERA ASSEMBLY
37	INSTALL SMALL DMS ASSEMBLY
38	INSTALL LARGE DMS ASSEMBLY
39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS
40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
41	INSTALL ETHERNET SWITCH
42	INSTALL VIDEO CODEC UNIT
43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER
44	INSTALL CELLULAR MODEM
45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)
46	INSTALL 2.4 GHz RADIO TRANSCEIVER
47	INSTALL YAGI ANTENNA
48	INSTALL OMNI-DIRECTIONAL ANTENNA
49	REMOVE EXISTING WIRELESS HARDWARE
50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
51	INSTALL NEW GENERATOR POWER INLET BOX
52	INSTALL CCTV UNIFIED CABLE
53	INSTALL ANTENNA CABLE
54	INSTALL DMS CONTROLLER
55	INSTALL SOLAR POWER ASSEMBLY

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

Transportation Mobility and Safety Division
Intelligent Transportation Systems Section
DEPARTMENT OF TRANSPORTATION
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

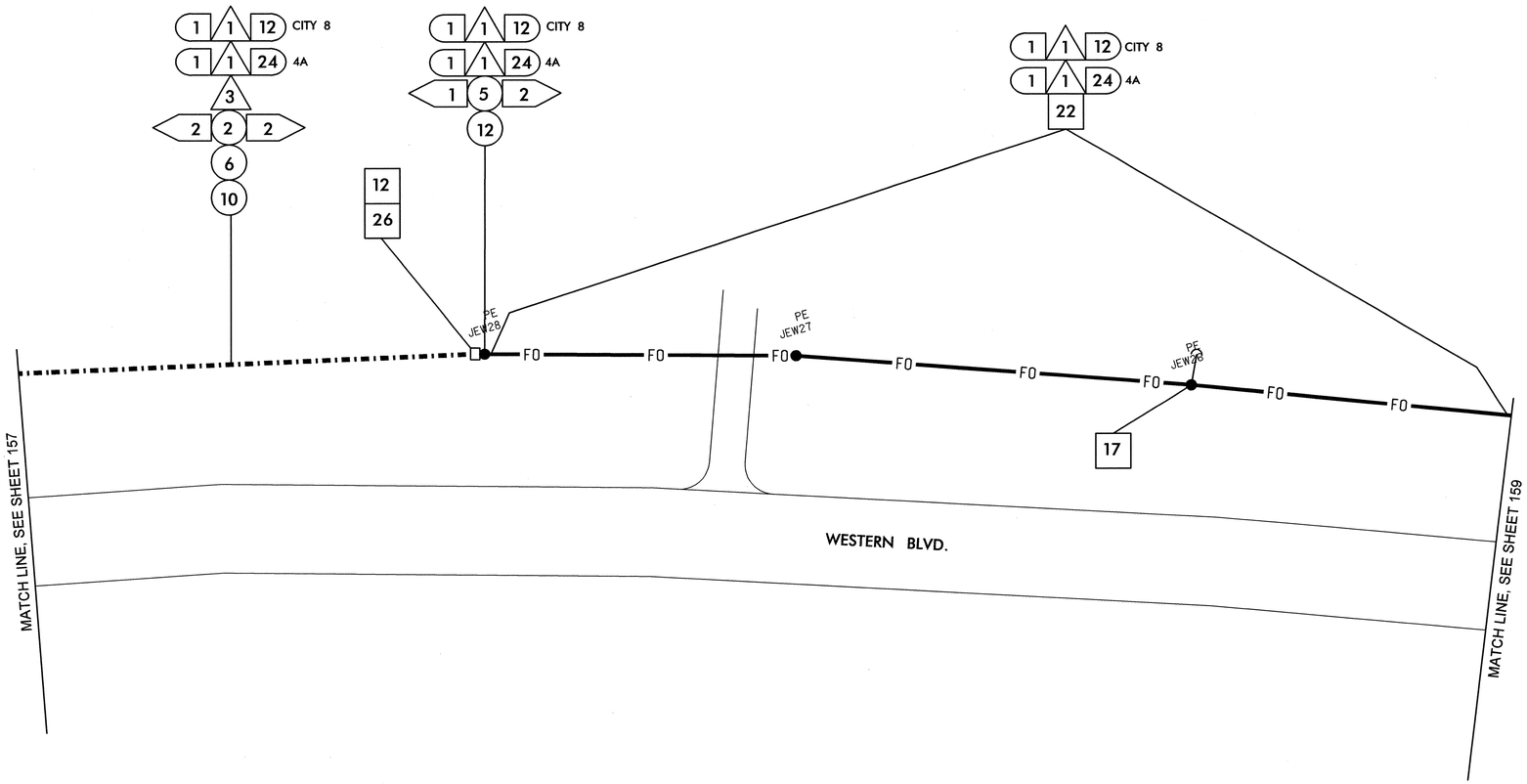
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PS&E#CAD#CR-157.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	158



NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.

1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE
2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE
3	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA	54	INSTALL DMS CONTROLLER
4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY
5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE		
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT		
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX		
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND						
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE						
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE						
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE						
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION						
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT						
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX						
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY						
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY						
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER										

PLANS PREPARED IN THE OFFICE OF:

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P.O. Box 33068
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(919) 677-2000

750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011 REVIEWED BY: K.W. SMITH

PREPARED BY: S.P. PENNINGTON REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

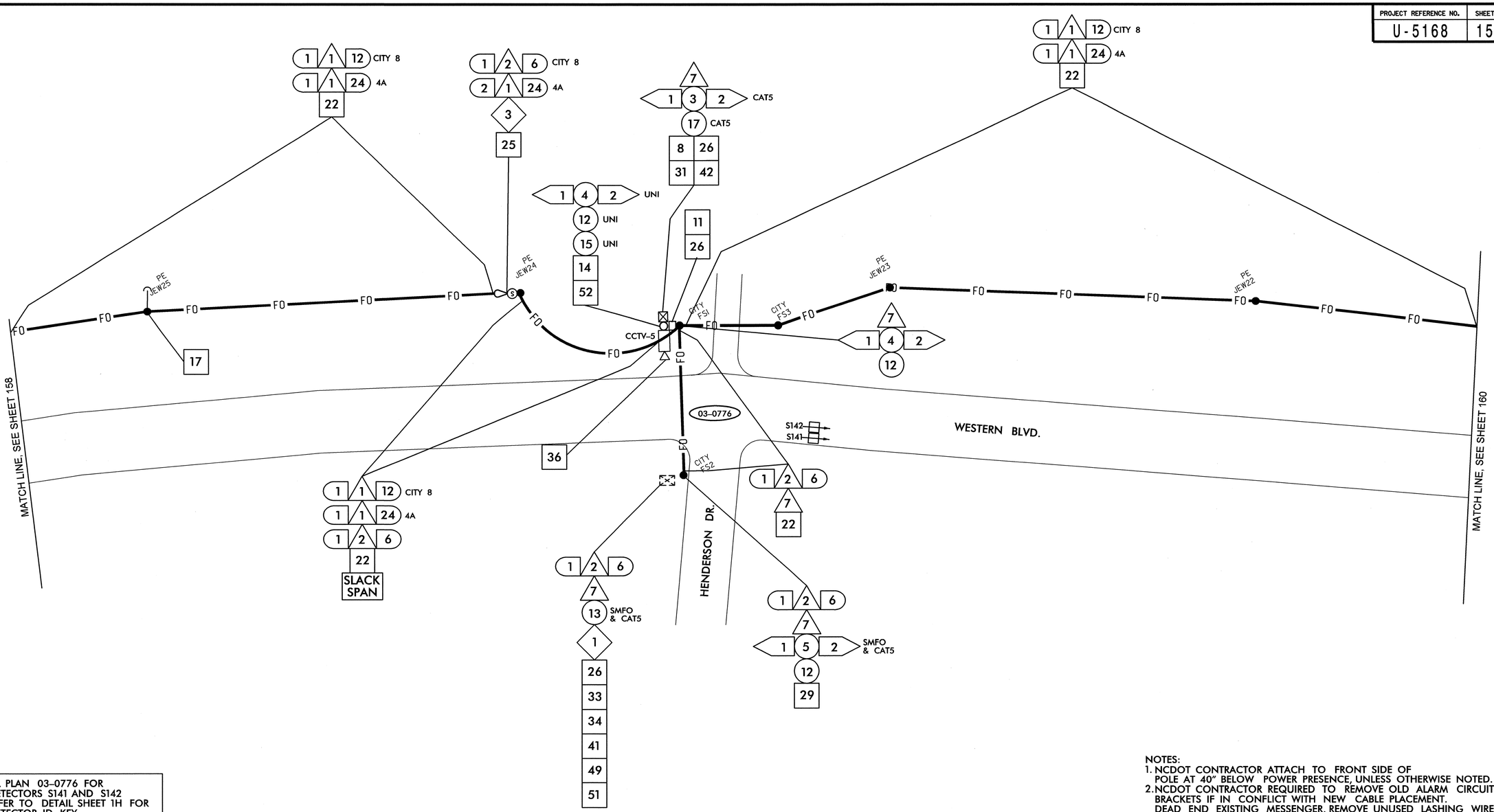
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...\R600 PS&E\CADMCR-158.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	159



SEE SIGNAL PLAN 03-0776 FOR SYSTEM DETECTORS S141 AND S142 DETAILS. REFER TO DETAIL SHEET 1H FOR SYSTEM DETECTOR ID KEY.

NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.

1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE		
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4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY		
5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE				
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT				
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX				
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND								
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE								
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE								
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE								
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6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT								
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX								
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10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER												

PLANS PREPARED IN THE OFFICE OF:

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

Transportation Mobility and Safety Division
DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

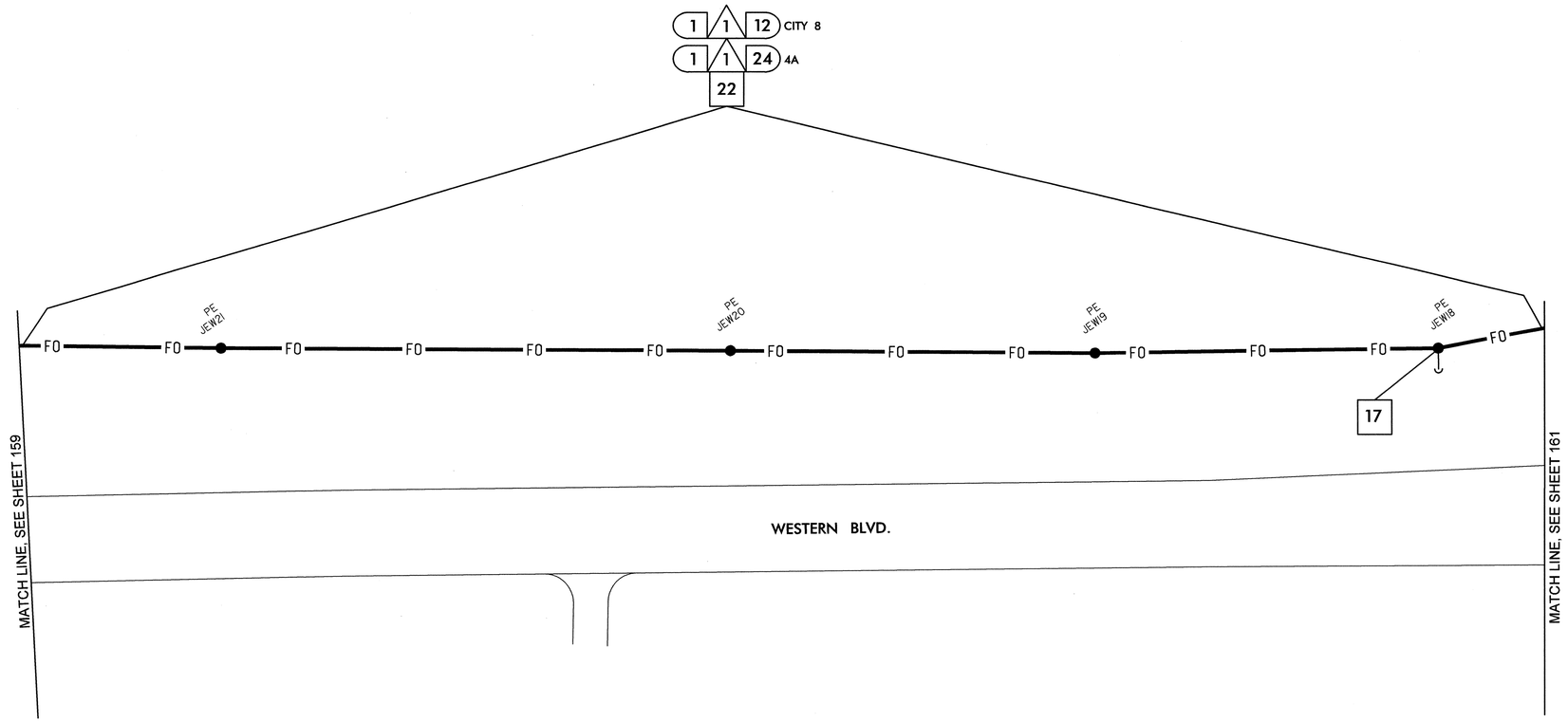
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filenames:

7/19/2011 $TIME$ susan.pennington ...#600 PSE#CADWCR-159.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	160



NOTES:
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2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.

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2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE		
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7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX				
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND								
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE								
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4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE								
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6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT								
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SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

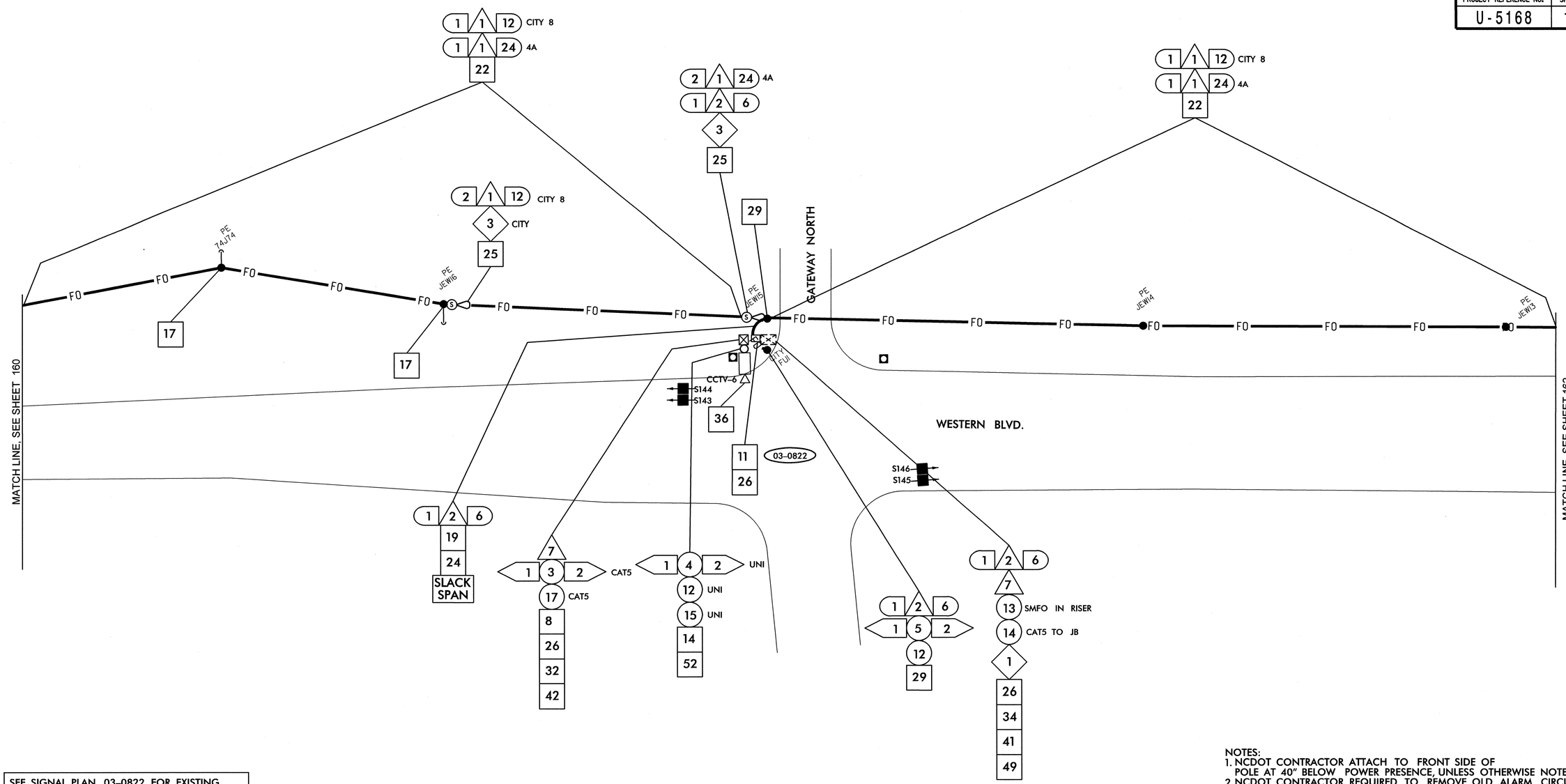
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...\600 PSE&C\JACH-160.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	161



SEE SIGNAL PLAN 03-0822 FOR EXISTING SYSTEM DETECTOR S143, S144, S145, AND S146 INSTALLATION DETAILS. REFER TO DETAIL SHEET 1H FOR SYSTEM DETECTOR ID KEY.

NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
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4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE								
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION								
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT								
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX								
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY								
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY								
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER												

PLANS PREPARED IN THE OFFICE OF:

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

SCALE 0 50

750 N. Greenfield Pkwy., Garner, NC 27529

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

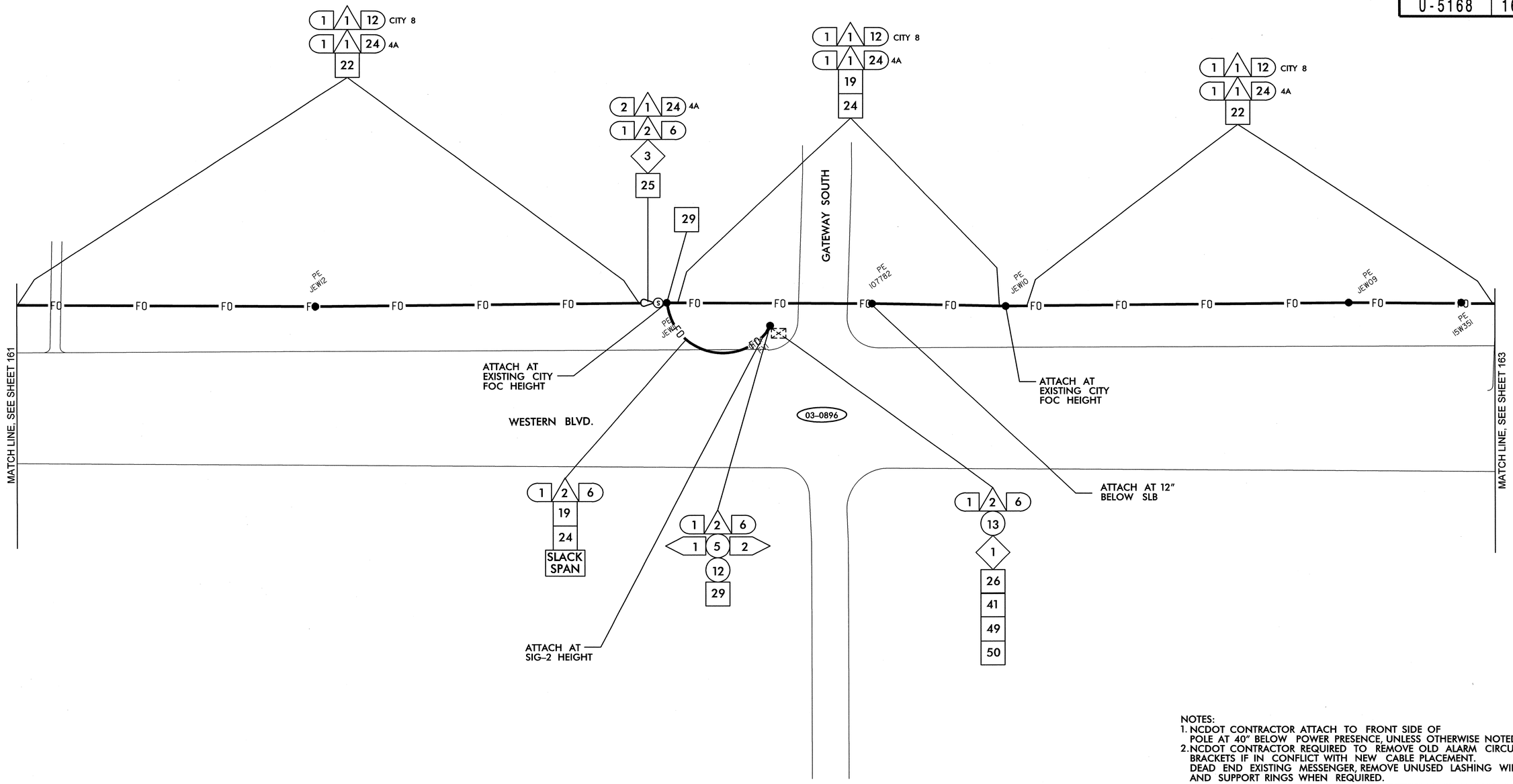
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSAE#UADWCR-161.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	162



NOTES:
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1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE		
2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE		
3	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA	54	INSTALL DMS CONTROLLER		
4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY		
5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE				
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT				
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX				
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND								
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE								
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE								
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE								
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PLANS PREPARED IN THE OFFICE OF:

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Transportation Mobility and Safety Division
Intelligent Transportation Systems Section
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

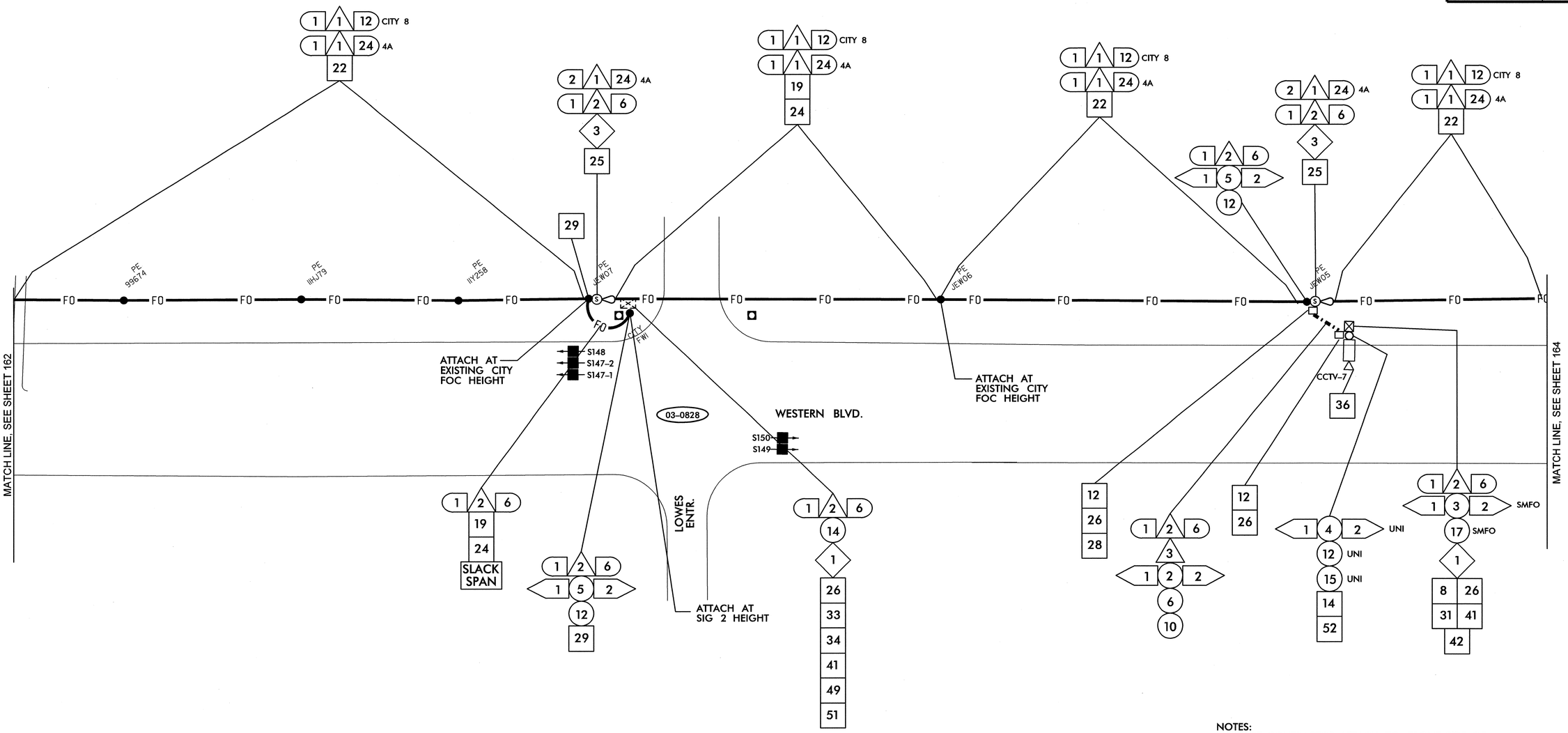
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE: K.W. Smith DATE: 7-20-11

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...\600 PSAE\CADMCR-162.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	163



SEE SIGNAL PLAN 03-0828 FOR EXISTING SYSTEM DETECTOR S147, S148, S149, AND S150 DETAILS. REFER TO DETAIL SHEET 1H FOR SYSTEM DETECTOR ID KEY.

NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
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7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX		
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PLANS PREPARED IN THE OFFICE OF:
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(919) 677-2000

Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intermodal Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

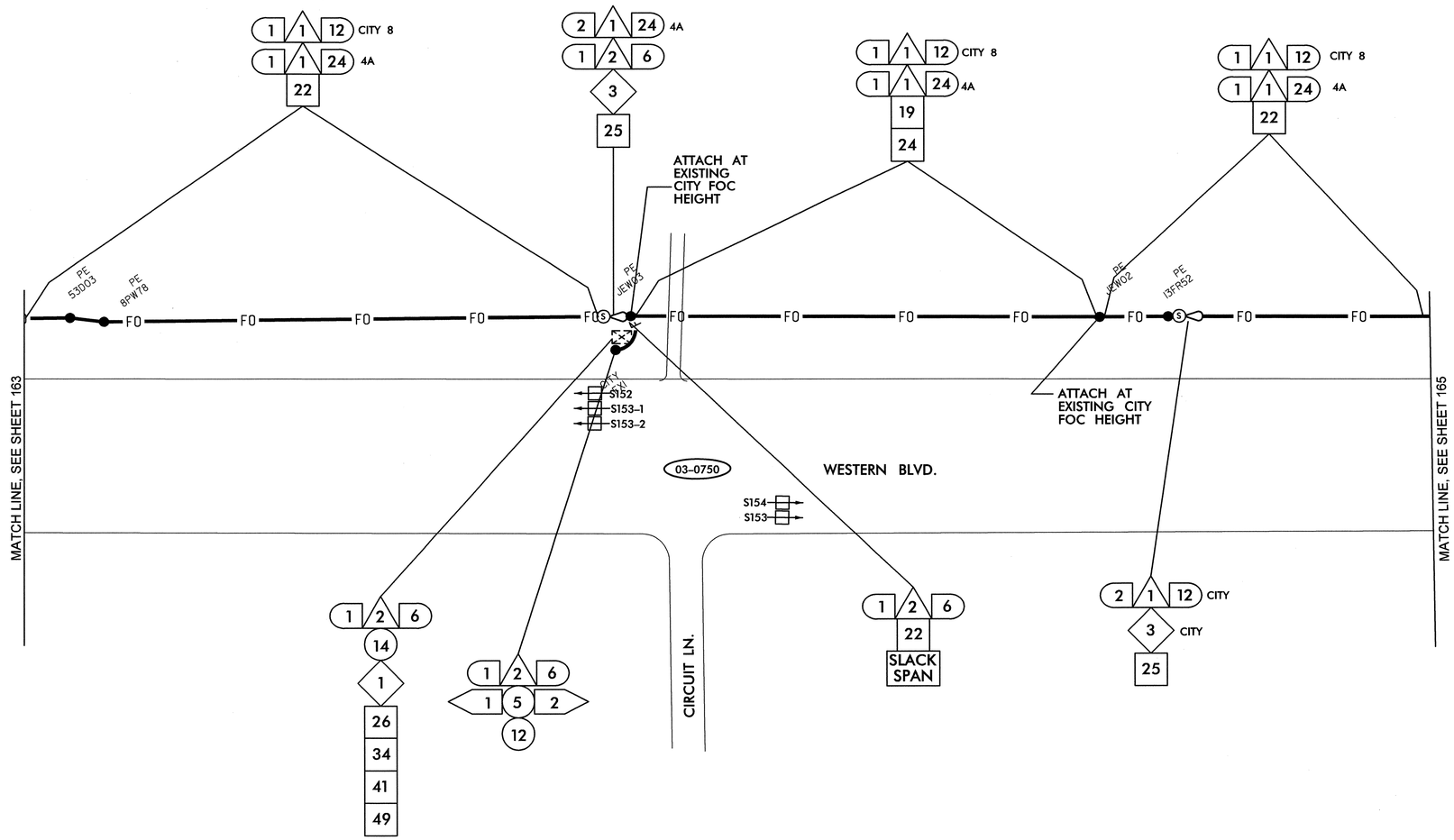
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE DATE 7-20-11

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSE#CADWCR-163.dgn



SEE SIGNAL PLAN 03-0750 FOR SYSTEM DETECTOR S151-1, S151-2, S152, S153, AND S154 INSTALLATION DETAILS. REFER TO DETAIL SHEET 1H FOR SYSTEM DETECTOR ID KEY.

NOTES:
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PLANS PREPARED IN THE OFFICE OF:
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Transportation Mobility and Safety Division
Intermodal Transportation Branch Section
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

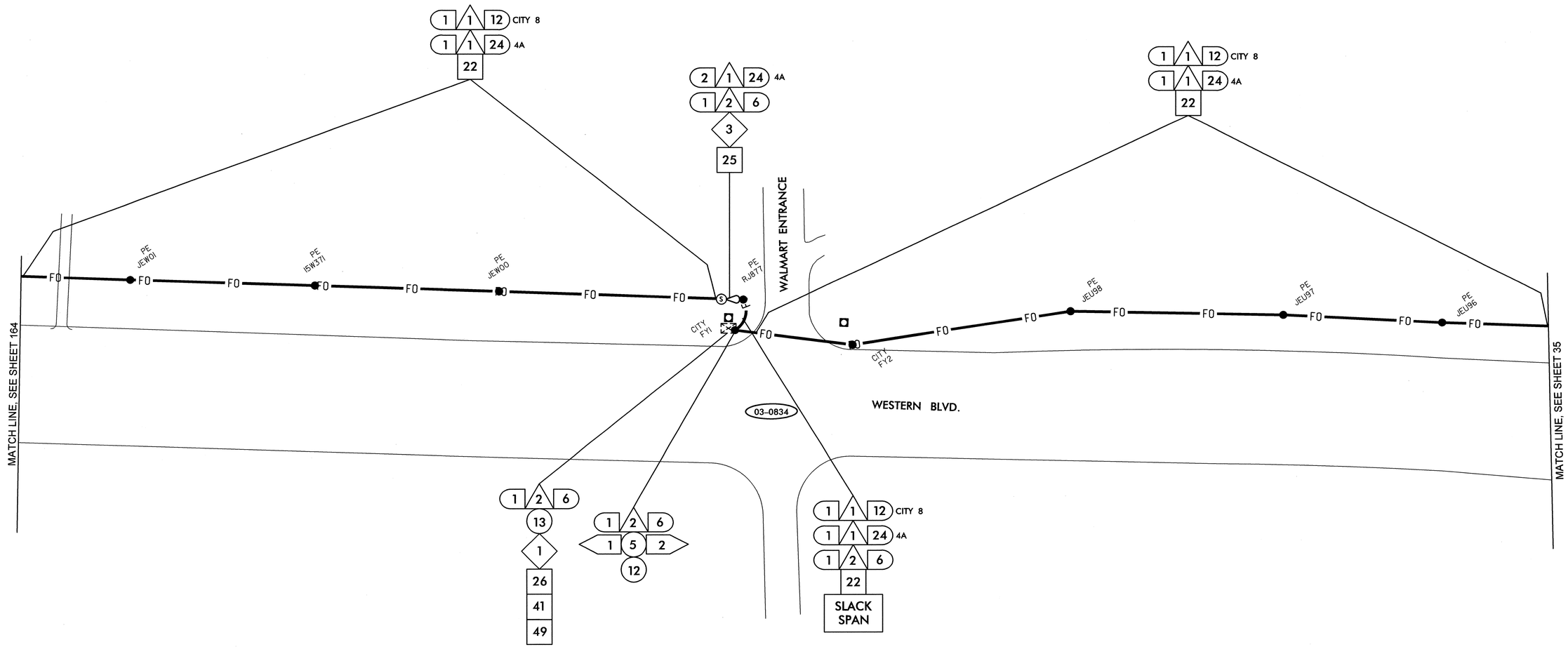
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filenames

PROJECT REFERENCE NO.	SHEET NO.
U-5168	165



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CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
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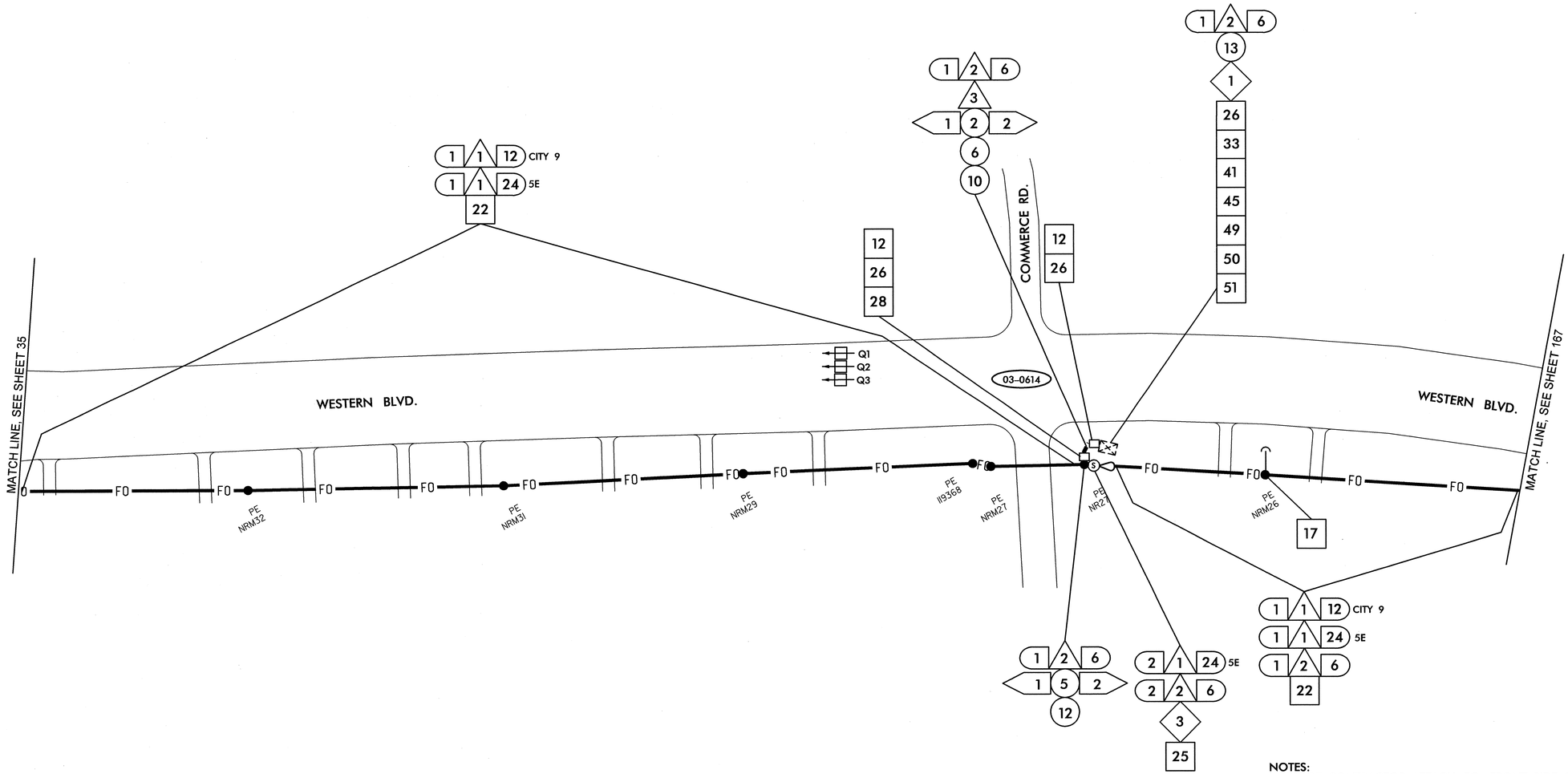
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSAE#CJOWCR-165.dgn



SEE SIGNAL PLAN 03-0614 FOR QUEUE DETECTORS Q1, Q2, AND Q3 INSTALLATION DETAILS. REFER TO DETAIL SHEET 1H FOR SYSTEM DETECTOR ID KEY.

NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.

1. INSTALL SMFO CABLE
2. INSTALL FIBER OPTIC DROP CABLE
3. INSTALL TRACER WIRE
4. REUSE EXISTING SMFO CABLE
5. INSTALL PLENUM RATED SMFO CABLE
6. INSTALL LOOP LEAD-IN CABLE
7. INSTALL ETHERNET CABLE
1. INSTALL PVC CONDUIT
2. INSTALL POLYETHYLENE CONDUIT
3. INSTALL RIGID, GALVANIZED STEEL CONDUIT
4. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5. INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
6. TRENCH CONDUIT
7. DIRECTIONAL DRILL CONDUIT
8. BORE AND JACK CONDUIT
9. INSTALL CABLE(S) IN EXISTING CONDUIT
10. INSTALL CABLE(S) IN NEW CONDUIT
11. INSTALL CABLE(S) IN EXISTING RISER
12. INSTALL CABLE(S) IN NEW RISER
13. INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS
14. INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)
15. INSTALL NEW RISER INTO POLE MOUNTED CABINET
16. REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
17. INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET
1. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2. INSTALL UNDERGROUND SPLICE ENCLOSURE
3. INSTALL AERIAL SPLICE ENCLOSURE
4. MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5. INSTALL TERMINAL SPLICE BOX
1. INSTALL CABINET FOUNDATION
2. REMOVE EXISTING CABINET FOUNDATION
3. MODIFY EXISTING CABINET FOUNDATION
4. REMOVE EXISTING CONTROLLER AND CABINET
5. INSTALL NEW CONTROLLER
6. INSTALL NEW 332 BASE MOUNTED CABINET
7. INSTALL NEW 336S BASE MOUNTED CABINET
8. INSTALL NEW 336S POLE MOUNTED CABINET
9. INSTALL BASE ADAPTER
10. INSTALL PRE-FORMED CABINET FOUNDATION PAD
11. INSTALL STANDARD JUNCTION BOX
12. INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
13. INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
14. INSTALL WOOD POLE
15. REMOVE EXISTING WOOD POLE
16. INSTALL AERIAL GUY ASSEMBLY
17. INSTALL STANDARD GUY ASSEMBLY
18. INSTALL SIDEWALK GUY ASSEMBLY
19. INSTALL MESSENGER CABLE
20. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
21. REMOVE EXISTING COMMUNICATIONS CABLE
22. LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
23. LASH CABLE(S) TO EXISTING MESSENGER CABLE
24. LASH CABLE(S) TO NEW MESSENGER CABLE
25. INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE
26. STORE 30 FEET OF EACH COMMUNICATIONS CABLE
27. STORE 100 FEET OF EACH COMMUNICATIONS CABLE
28. INSTALL FIBER OPTIC DELINEATOR MARKER
29. BOND MESSENGER CABLE TO POLE GROUND
30. MODIFY EXISTING ELECTRICAL SERVICE
31. INSTALL NEW ELECTRICAL SERVICE
32. INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
33. INSTALL GENERATOR ANCHOR IN FOUNDATION
34. RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
35. RECONNECT GENERATOR POWER INLET BOX
36. INSTALL CCTV CAMERA ASSEMBLY
37. INSTALL SMALL DMS ASSEMBLY
38. INSTALL LARGE DMS ASSEMBLY
39. INSTALL PEDESTAL STRUCTURE FOR SMALL DMS
40. INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
41. INSTALL ETHERNET SWITCH
42. INSTALL VIDEO CODEC UNIT
43. REMOVE EXISTING FIBER OPTIC TRANSCEIVER
44. INSTALL CELLULAR MODEM
45. INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)
46. INSTALL 2.4 GHz RADIO TRANSCEIVER
47. INSTALL YAGI ANTENNA
48. INSTALL OMNI-DIRECTIONAL ANTENNA
49. REMOVE EXISTING WIRELESS HARDWARE
50. INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
51. INSTALL NEW GENERATOR POWER INLET BOX
52. INSTALL CCTV UNIFIED CABLE
53. INSTALL ANTENNA CABLE
54. INSTALL DMS CONTROLLER
55. INSTALL SOLAR POWER ASSEMBLY

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

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Mobility and Safety Division
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

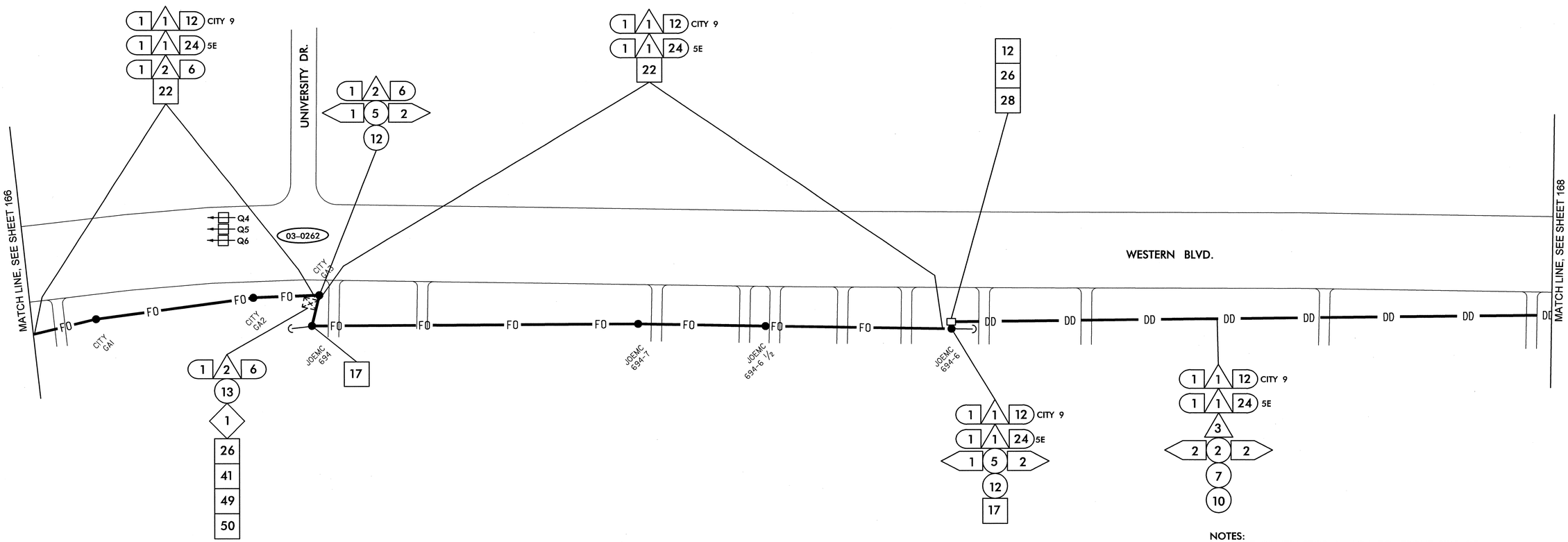
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE DATE 7-20-11

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSLE#CJDWC2-166.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	167



SEE SIGNAL PLAN 03-0262 FOR QUEUE DETECTORS Q4, Q5, AND Q6 INSTALLATION DETAILS. REFER TO DETAIL SHEET 1H FOR SYSTEM DETECTOR ID KEY.

NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.

1	INSTALL SMFO CABLE
2	INSTALL FIBER OPTIC DROP CABLE
3	INSTALL TRACER WIRE
4	REUSE EXISTING SMFO CABLE
5	INSTALL PLENUM RATED SMFO CABLE
6	INSTALL LOOP LEAD-IN CABLE
7	INSTALL ETHERNET CABLE
1	INSTALL PVC CONDUIT
2	INSTALL POLYETHYLENE CONDUIT
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
6	TRENCH CONDUIT
7	DIRECTIONAL DRILL CONDUIT
8	BORE AND JACK CONDUIT
9	INSTALL CABLE(S) IN EXISTING CONDUIT
10	INSTALL CABLE(S) IN NEW CONDUIT
11	INSTALL CABLE(S) IN EXISTING RISER
12	INSTALL CABLE(S) IN NEW RISER
13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS
14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)
15	INSTALL NEW RISER INTO POLE MOUNTED CABINET
16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET
1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2	INSTALL UNDERGROUND SPLICE ENCLOSURE
3	INSTALL AERIAL SPLICE ENCLOSURE
4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5	INSTALL TERMINAL SPLICE BOX
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION
3	MODIFY EXISTING CABINET FOUNDATION
4	REMOVE EXISTING CONTROLLER AND CABINET
5	INSTALL NEW CONTROLLER
6	INSTALL NEW 332 BASE MOUNTED CABINET
7	INSTALL NEW 336S BASE MOUNTED CABINET
8	INSTALL NEW 336S POLE MOUNTED CABINET
9	INSTALL BASE ADAPTER
10	INSTALL PRE-FORMED CABINET FOUNDATION PAD
11	INSTALL STANDARD JUNCTION BOX
12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
14	INSTALL WOOD POLE
15	REMOVE EXISTING WOOD POLE
16	INSTALL AERIAL GUY ASSEMBLY
17	INSTALL STANDARD GUY ASSEMBLY
18	INSTALL SIDEWALK GUY ASSEMBLY
19	INSTALL MESSENGER CABLE
20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
21	REMOVE EXISTING COMMUNICATIONS CABLE
22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
23	LASH CABLE(S) TO EXISTING MESSENGER CABLE
24	LASH CABLE(S) TO NEW MESSENGER CABLE
25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE
26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE
27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
28	INSTALL FIBER OPTIC DELINEATOR MARKER
29	BOND MESSENGER CABLE TO POLE GROUND
30	MODIFY EXISTING ELECTRICAL SERVICE
31	INSTALL NEW ELECTRICAL SERVICE
32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
33	INSTALL GENERATOR ANCHOR IN FOUNDATION
34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
35	RECONNECT GENERATOR POWER INLET BOX
36	INSTALL CCTV CAMERA ASSEMBLY
37	INSTALL SMALL DMS ASSEMBLY
38	INSTALL LARGE DMS ASSEMBLY
39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS
40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
41	INSTALL ETHERNET SWITCH
42	INSTALL VIDEO CODEC UNIT
43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER
44	INSTALL CELLULAR MODEM
45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)
46	INSTALL 2.4 GHz RADIO TRANSCEIVER
47	INSTALL YAGI ANTENNA
48	INSTALL OMNI-DIRECTIONAL ANTENNA
49	REMOVE EXISTING WIRELESS HARDWARE
50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
51	INSTALL NEW GENERATOR POWER INLET BOX
52	INSTALL CCTV UNIFIED CABLE
53	INSTALL ANTENNA CABLE
54	INSTALL DMS CONTROLLER
55	INSTALL SOLAR POWER ASSEMBLY

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

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Mobility and Safety Division
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

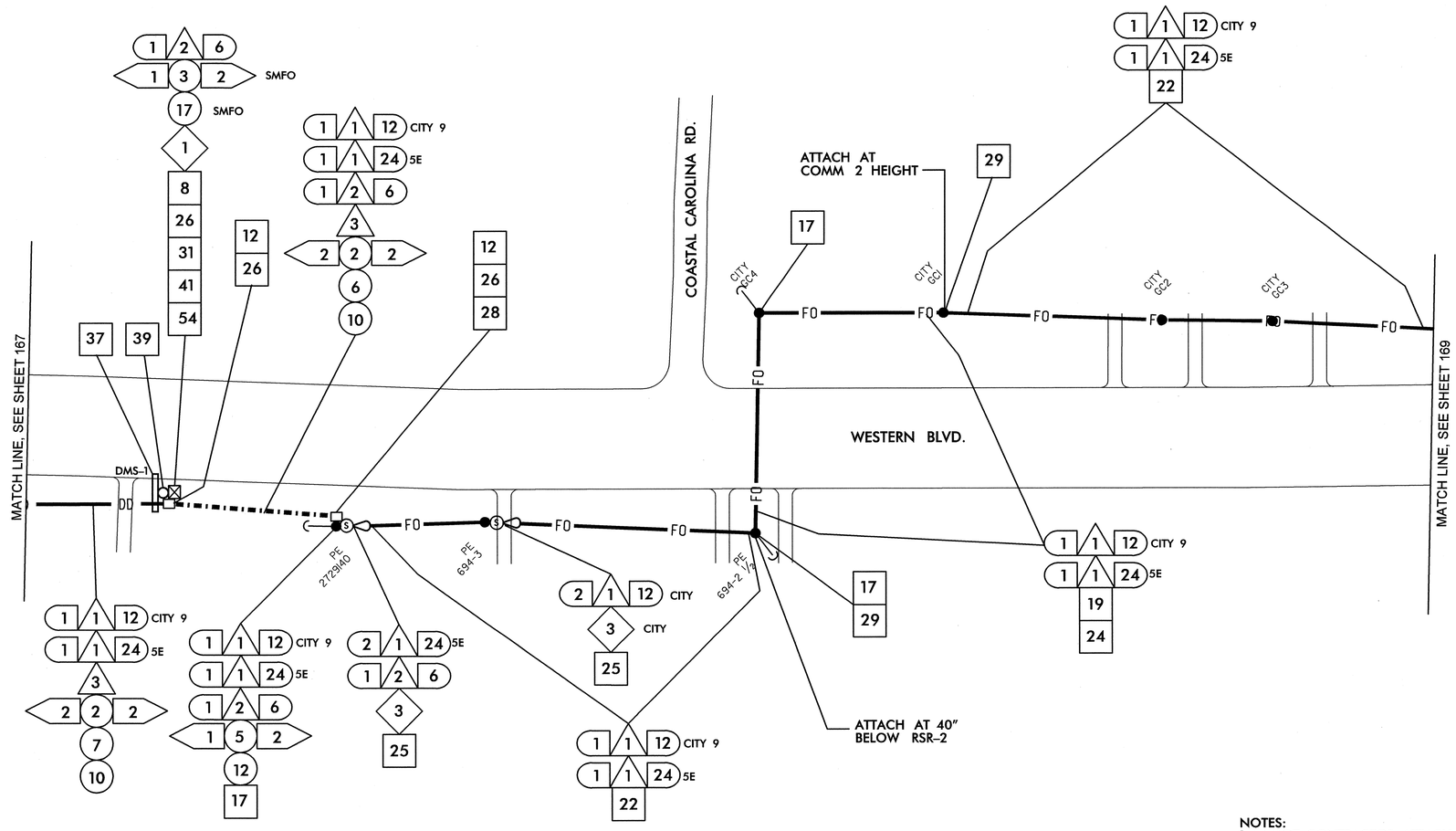
REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...\600 PSE&MC\ADMCR-167.dgn



NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.

1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE
2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE
3	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA	54	INSTALL DMS CONTROLLER
4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY
5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE		
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT		
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX		
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND						
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE						
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE						
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE						
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION						
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT						
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX						
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY						
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY						
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER										

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

SCALE 0 50

750 N. Greenfield Pkwy., Garner, NC 27529

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

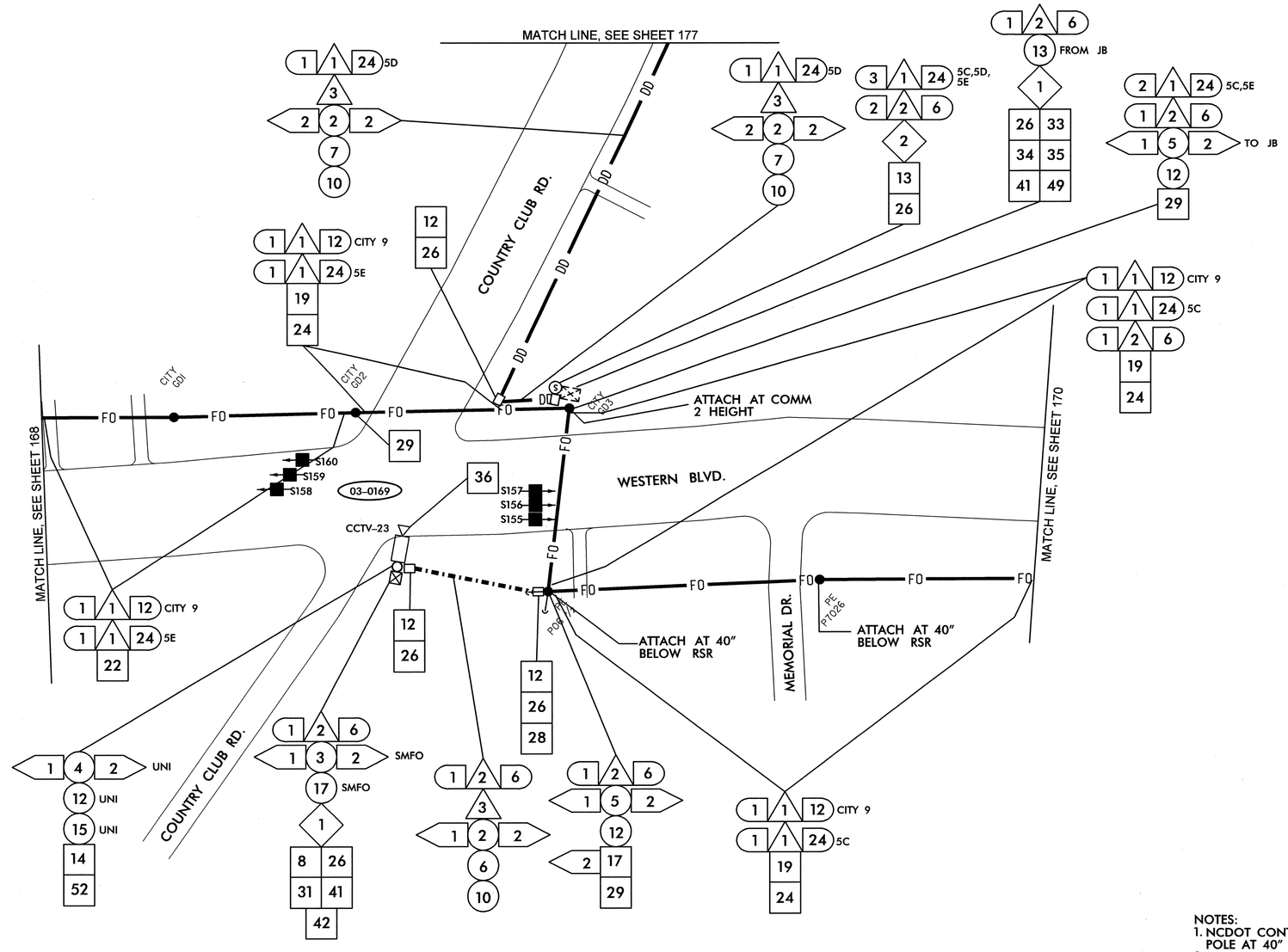
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSE&CADWCR-168.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	169



SEE SIGNAL PLAN 03-0169 FOR EXISTING SYSTEM DETECTORS S155,S156,S157,S158,S159 AND S160 DETAILS. REFER TO DETAIL SHEET 1H FOR SYSTEM DETECTOR ID KEY.

NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.

1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE		
2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE		
3	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA	54	INSTALL DMS CONTROLLER		
4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY		
5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE				
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT				
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX				
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND								
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE								
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE								
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE								
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION								
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT								
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX								
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY								
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY								
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER												

PLANS PREPARED IN THE OFFICE OF:
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STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
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SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

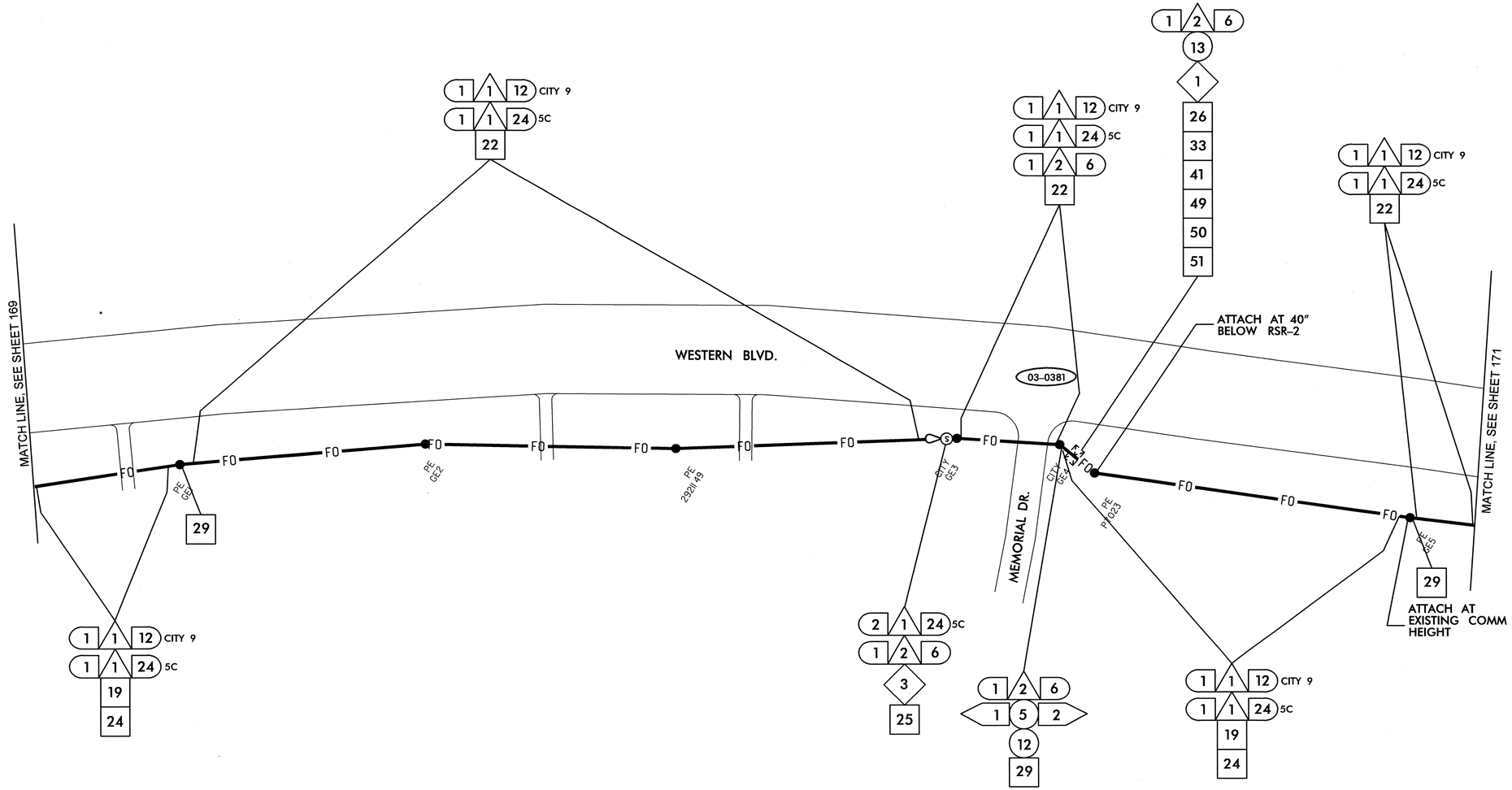
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSE#CADRCR-169.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	170



NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.

△1	INSTALL SMFO CABLE	(11)	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE		
△2	INSTALL FIBER OPTIC DROP CABLE	(12)	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE		
△3	INSTALL TRACER WIRE	(13)	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA	54	INSTALL DMS CONTROLLER		
△4	REUSE EXISTING SMFO CABLE	(14)	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY		
△5	INSTALL PLENUM RATED SMFO CABLE	(15)	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE				
△6	INSTALL LOOP LEAD-IN CABLE	(16)	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT				
△7	INSTALL ETHERNET CABLE	(17)	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX				
(1)	INSTALL PVC CONDUIT	◇1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND								
(2)	INSTALL POLYETHYLENE CONDUIT	◇2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE								
(3)	INSTALL RIGID, GALVANIZED STEEL CONDUIT	◇3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE								
(4)	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	◇4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE								
(5)	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	◇5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION								
(6)	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT								
(7)	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX								
(8)	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY								
(9)	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY								
(10)	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER												

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

Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Building
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

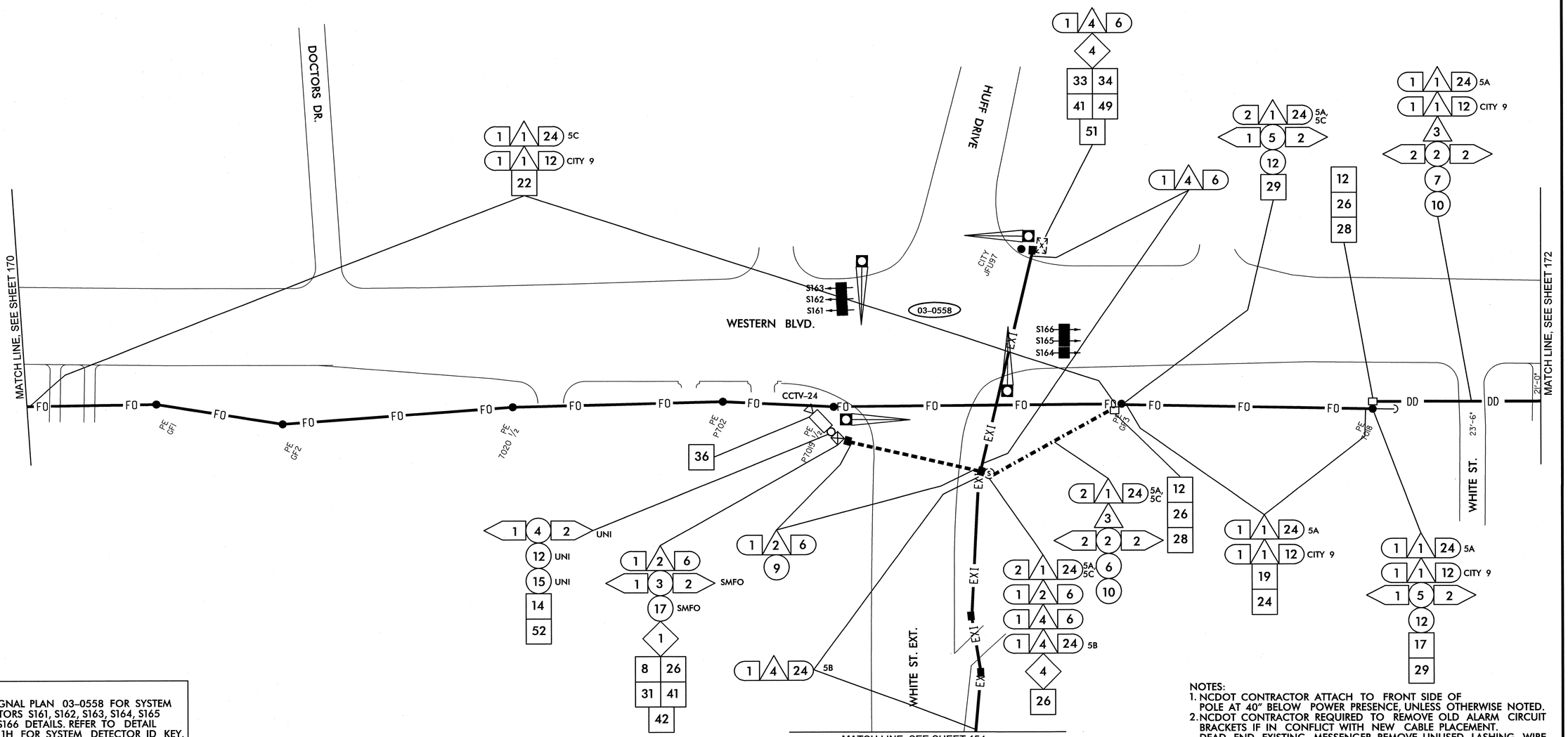
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSE#CJDWCR-170.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	171



SEE SIGNAL PLAN 03-0558 FOR SYSTEM DETECTORS S161, S162, S163, S164, S165 AND S166 DETAILS. REFER TO DETAIL SHEET 1H FOR SYSTEM DETECTOR ID KEY.

NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
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4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY
5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE		
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2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE						
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE						
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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 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

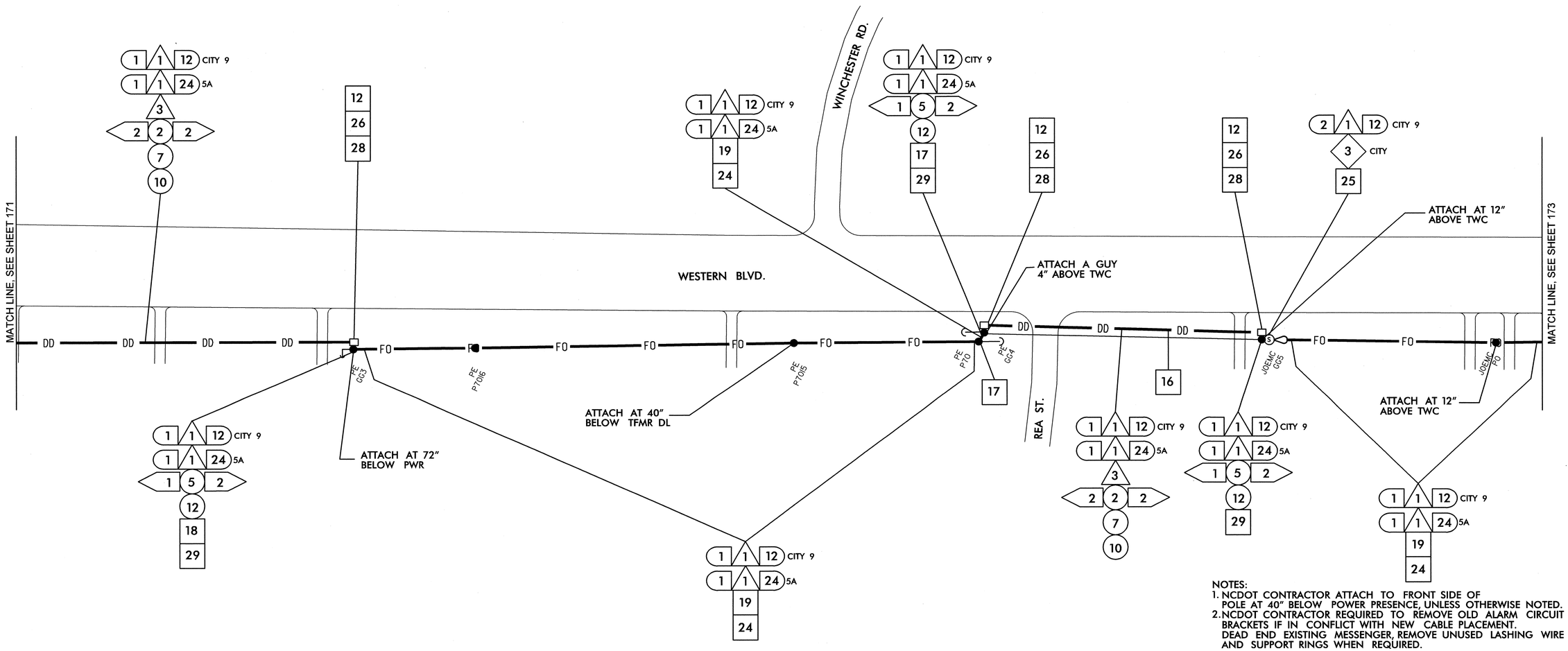
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-25-11 DATE

CADD Filename:

7/25/2011 $TIME$ susan.pennington ...#600 PSE#CADWCR-171.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	172



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2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE				
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE				
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10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER								

52	INSTALL CCTV UNIFIED CABLE	
53	INSTALL ANTENNA CABLE	
54	INSTALL DMS CONTROLLER	
55	INSTALL SOLAR POWER ASSEMBLY	

PLANS PREPARED IN THE OFFICE OF:

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

Transportation Mobility and Safety Division
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation System Solutions
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

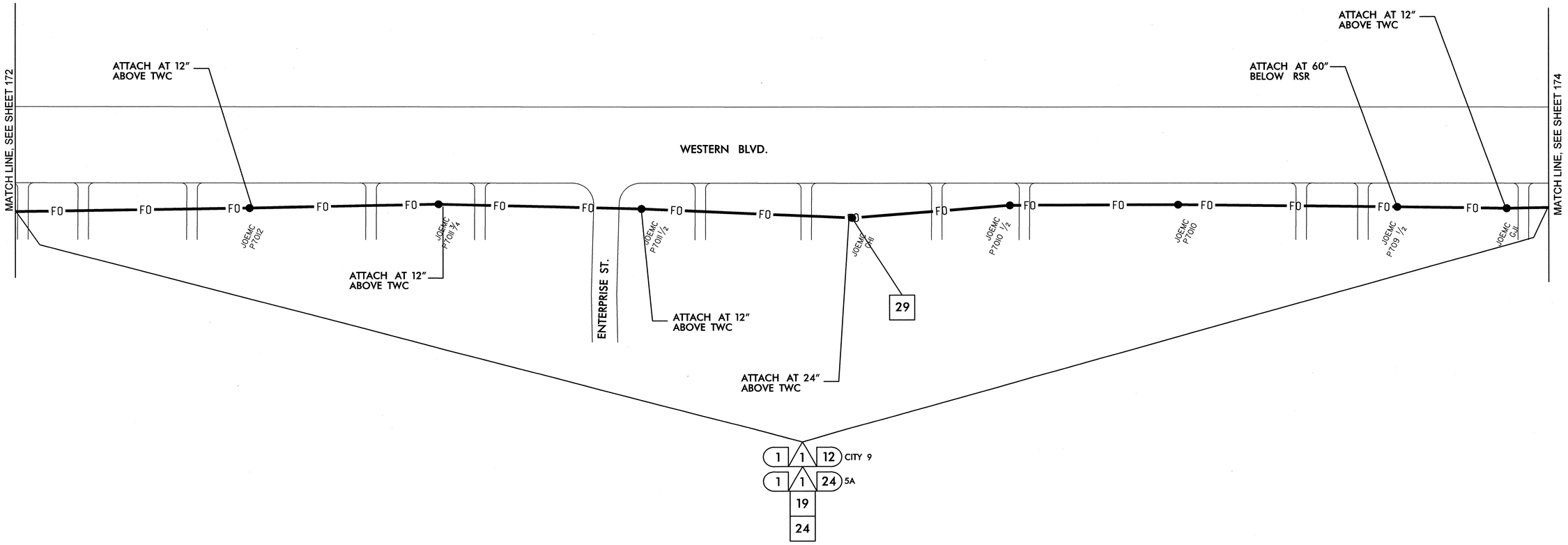
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filenames:

7/19/2011 $TIME$ susan.pennington ...#600 PSAE#CADWKR-172.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	173



NOTES:
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2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.

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Intermodal Transportation Building
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SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

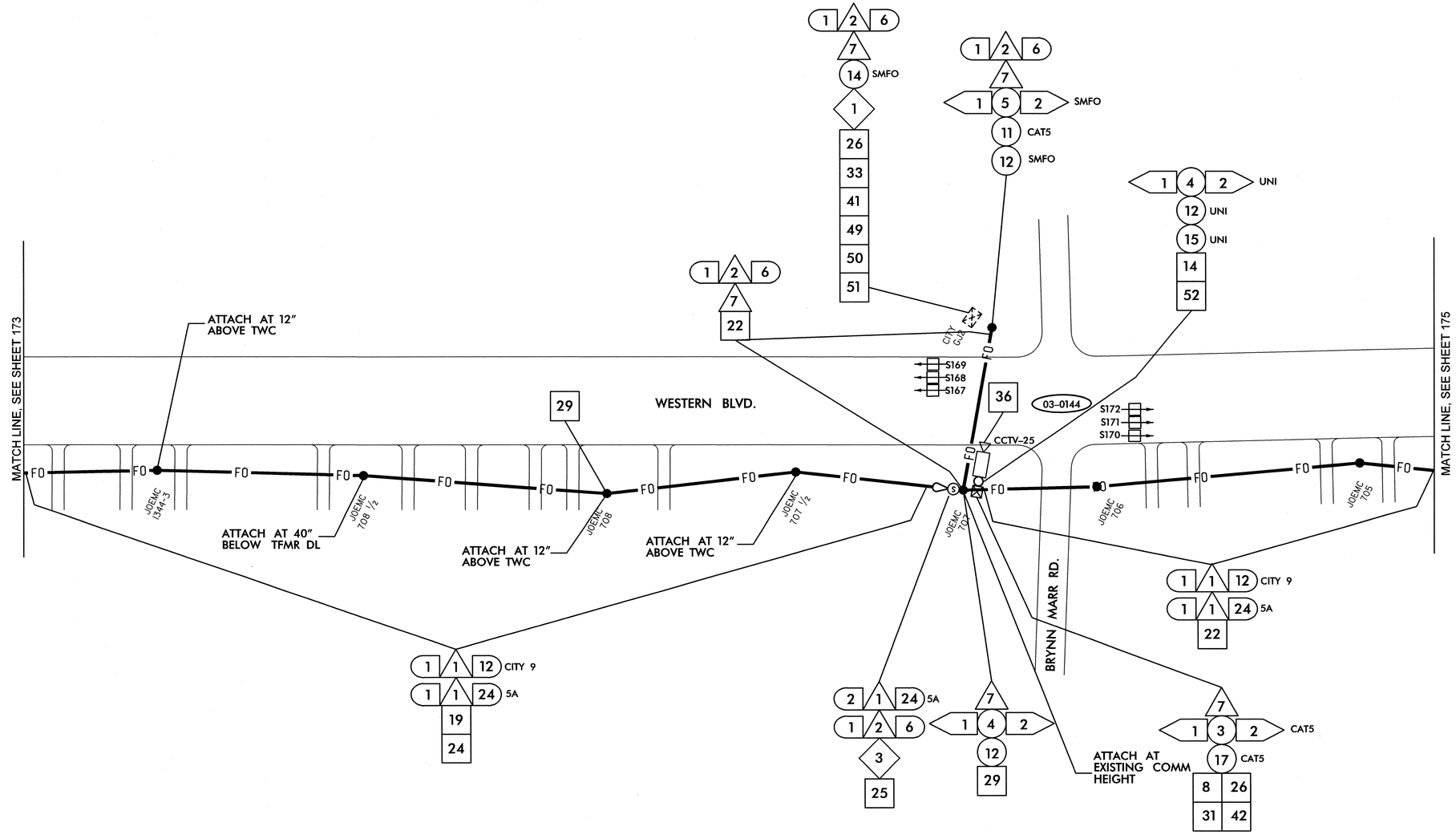
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PS&E#CADWCR-173.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	174



SEE SIGNAL PLAN 03-0144 FOR SYSTEM DETECTOR S167, S168, S169, S170, S171, AND S172 INSTALLATION DETAILS. REFER TO DETAIL SHEET 1H FOR SYSTEM DETECTOR ID KEY.

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2. INSTALL FIBER OPTIC DROP CABLE
3. INSTALL TRACER WIRE
4. REUSE EXISTING SMFO CABLE
5. INSTALL PLENUM RATED SMFO CABLE
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7. INSTALL ETHERNET CABLE
1. INSTALL PVC CONDUIT
2. INSTALL POLYETHYLENE CONDUIT
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16. REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
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1. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
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4. MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5. INSTALL TERMINAL SPLICE BOX
1. INSTALL CABINET FOUNDATION
2. REMOVE EXISTING CABINET FOUNDATION
3. MODIFY EXISTING CABINET FOUNDATION
4. REMOVE EXISTING CONTROLLER AND CABINET
5. INSTALL NEW CONTROLLER
6. INSTALL NEW 332 BASE MOUNTED CABINET
7. INSTALL NEW 336S BASE MOUNTED CABINET
8. INSTALL NEW 336S POLE MOUNTED CABINET
9. INSTALL BASE ADAPTER
10. INSTALL PRE-FORMED CABINET FOUNDATION PAD
11. INSTALL STANDARD JUNCTION BOX
12. INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
13. INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
14. INSTALL WOOD POLE
15. REMOVE EXISTING WOOD POLE
16. INSTALL AERIAL GUY ASSEMBLY
17. INSTALL STANDARD GUY ASSEMBLY
18. INSTALL SIDEWALK GUY ASSEMBLY
19. INSTALL MESSENGER CABLE
20. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
21. REMOVE EXISTING COMMUNICATIONS CABLE
22. LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
23. LASH CABLE(S) TO EXISTING MESSENGER CABLE
24. LASH CABLE(S) TO NEW MESSENGER CABLE
25. INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE
26. STORE 30 FEET OF EACH COMMUNICATIONS CABLE
27. STORE 100 FEET OF EACH COMMUNICATIONS CABLE
28. INSTALL FIBER OPTIC DELINEATOR MARKER
29. BOND MESSENGER CABLE TO POLE GROUND
30. MODIFY EXISTING ELECTRICAL SERVICE
31. INSTALL NEW ELECTRICAL SERVICE
32. INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
33. INSTALL GENERATOR ANCHOR IN FOUNDATION
34. RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
35. RECONNECT GENERATOR POWER INLET BOX
36. INSTALL CCTV CAMERA ASSEMBLY
37. INSTALL SMALL DMS ASSEMBLY
38. INSTALL LARGE DMS ASSEMBLY
39. INSTALL PEDESTAL STRUCTURE FOR SMALL DMS
40. INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
41. INSTALL ETHERNET SWITCH
42. INSTALL VIDEO CODEC UNIT
43. REMOVE EXISTING FIBER OPTIC TRANSCEIVER
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48. INSTALL OMNI-DIRECTIONAL ANTENNA
49. REMOVE EXISTING WIRELESS HARDWARE
50. INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
51. INSTALL NEW GENERATOR POWER INLET BOX
52. INSTALL CCTV UNIFIED CABLE
53. INSTALL ANTENNA CABLE
54. INSTALL DMS CONTROLLER
55. INSTALL SOLAR POWER ASSEMBLY

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

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

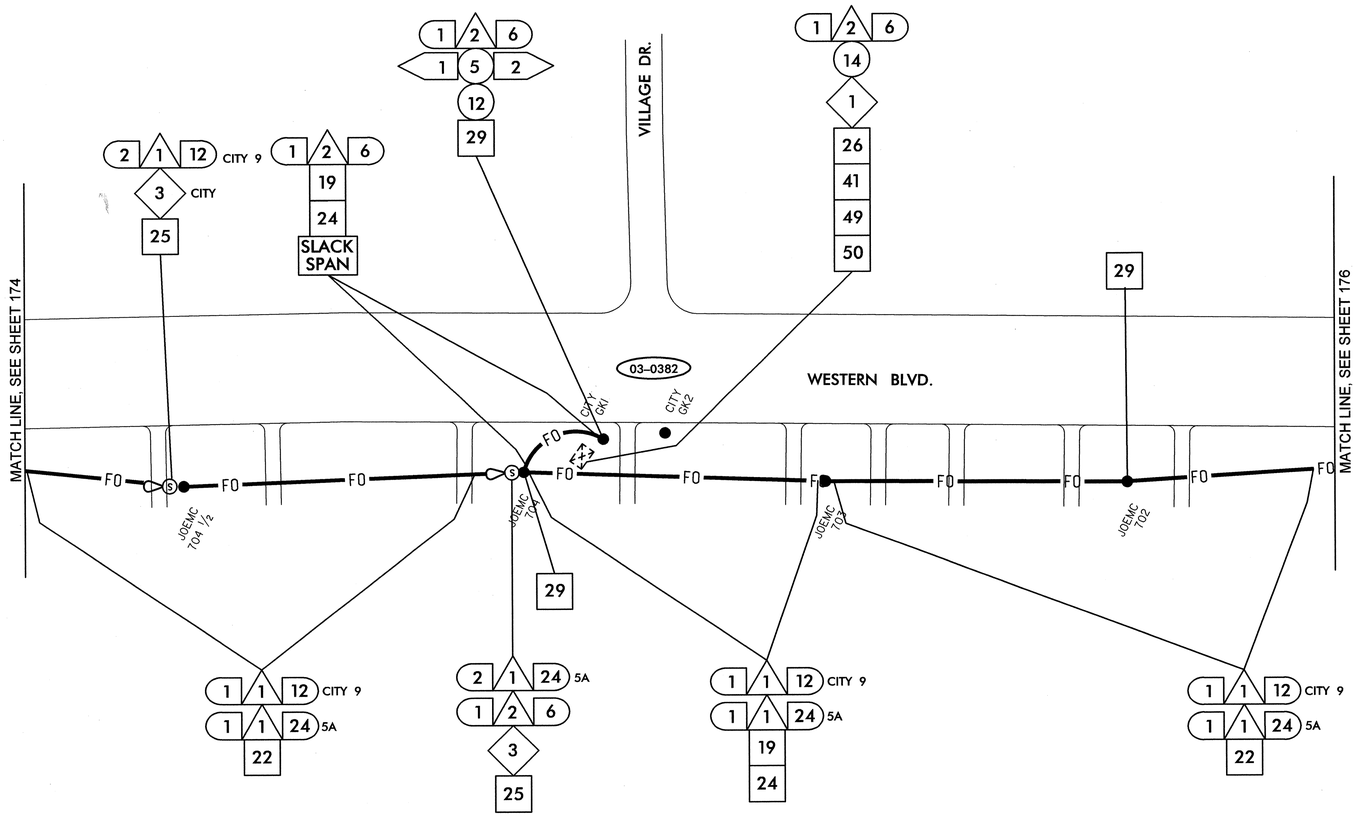
REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSEE#2ADACR-174.dgn



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1 INSTALL SMFO CABLE	11 INSTALL CABLE(S) IN EXISTING RISER	6 INSTALL NEW 332 BASE MOUNTED CABINET	22 LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38 INSTALL LARGE DMS ASSEMBLY	45 INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52 INSTALL CCTV UNIFIED CABLE	
2 INSTALL FIBER OPTIC DROP CABLE	12 INSTALL CABLE(S) IN NEW RISER	7 INSTALL NEW 336S BASE MOUNTED CABINET	23 LASH CABLE(S) TO EXISTING MESSENGER CABLE	39 INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46 INSTALL 2.4 GHz RADIO TRANSCEIVER	53 INSTALL ANTENNA CABLE	
3 INSTALL TRACER WIRE	13 INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8 INSTALL NEW 336S POLE MOUNTED CABINET	24 LASH CABLE(S) TO NEW MESSENGER CABLE	40 INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47 INSTALL YAGI ANTENNA	54 INSTALL DMS CONTROLLER	
4 REUSE EXISTING SMFO CABLE	14 INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9 INSTALL BASE ADAPTER	25 INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41 INSTALL ETHERNET SWITCH	48 INSTALL OMNI-DIRECTIONAL ANTENNA	55 INSTALL SOLAR POWER ASSEMBLY	
5 INSTALL PLENUM RATED SMFO CABLE	15 INSTALL NEW RISER INTO POLE MOUNTED CABINET	10 INSTALL PRE-FORMED CABINET FOUNDATION PAD	26 STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42 INSTALL VIDEO CODEC UNIT	49 REMOVE EXISTING WIRELESS HARDWARE		
6 INSTALL LOOP LEAD-IN CABLE	16 REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11 INSTALL STANDARD JUNCTION BOX	27 STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43 REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50 INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT		
7 INSTALL ETHERNET CABLE	17 INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12 INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28 INSTALL FIBER OPTIC DELINEATOR MARKER	44 INSTALL CELLULAR MODEM	51 INSTALL NEW GENERATOR POWER INLET BOX		
1 INSTALL PVC CONDUIT	1 INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13 INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29 BOND MESSENGER CABLE TO POLE GROUND				
2 INSTALL POLYETHYLENE CONDUIT	2 INSTALL UNDERGROUND SPLICE ENCLOSURE	14 INSTALL WOOD POLE	30 MODIFY EXISTING ELECTRICAL SERVICE				
3 INSTALL RIGID, GALVANIZED STEEL CONDUIT	3 INSTALL AERIAL SPLICE ENCLOSURE	15 REMOVE EXISTING WOOD POLE	31 INSTALL NEW ELECTRICAL SERVICE				
4 INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4 MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16 INSTALL AERIAL GUY ASSEMBLY	32 INSTALL POWER FROM EXISTING ELECTRICAL SERVICE				
5 INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5 INSTALL TERMINAL SPLICE BOX	17 INSTALL STANDARD GUY ASSEMBLY	33 INSTALL GENERATOR ANCHOR IN FOUNDATION				
6 TRENCH CONDUIT	1 INSTALL CABINET FOUNDATION	18 INSTALL SIDEWALK GUY ASSEMBLY	34 RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT				
7 DIRECTIONAL DRILL CONDUIT	2 REMOVE EXISTING CABINET FOUNDATION	19 INSTALL MESSENGER CABLE	35 RECONNECT GENERATOR POWER INLET BOX				
8 BORE AND JACK CONDUIT	3 MODIFY EXISTING CABINET FOUNDATION	20 REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36 INSTALL CCTV CAMERA ASSEMBLY				
9 INSTALL CABLE(S) IN EXISTING CONDUIT	4 REMOVE EXISTING CONTROLLER AND CABINET	21 REMOVE EXISTING COMMUNICATIONS CABLE	37 INSTALL SMALL DMS ASSEMBLY				
10 INSTALL CABLE(S) IN NEW CONDUIT	5 INSTALL NEW CONTROLLER						

PLANS PREPARED IN THE OFFICE OF:

Kimley-Horn and Associates, Inc.
P.O. Box 33068
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STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Transportation Mobility and Safety Division
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

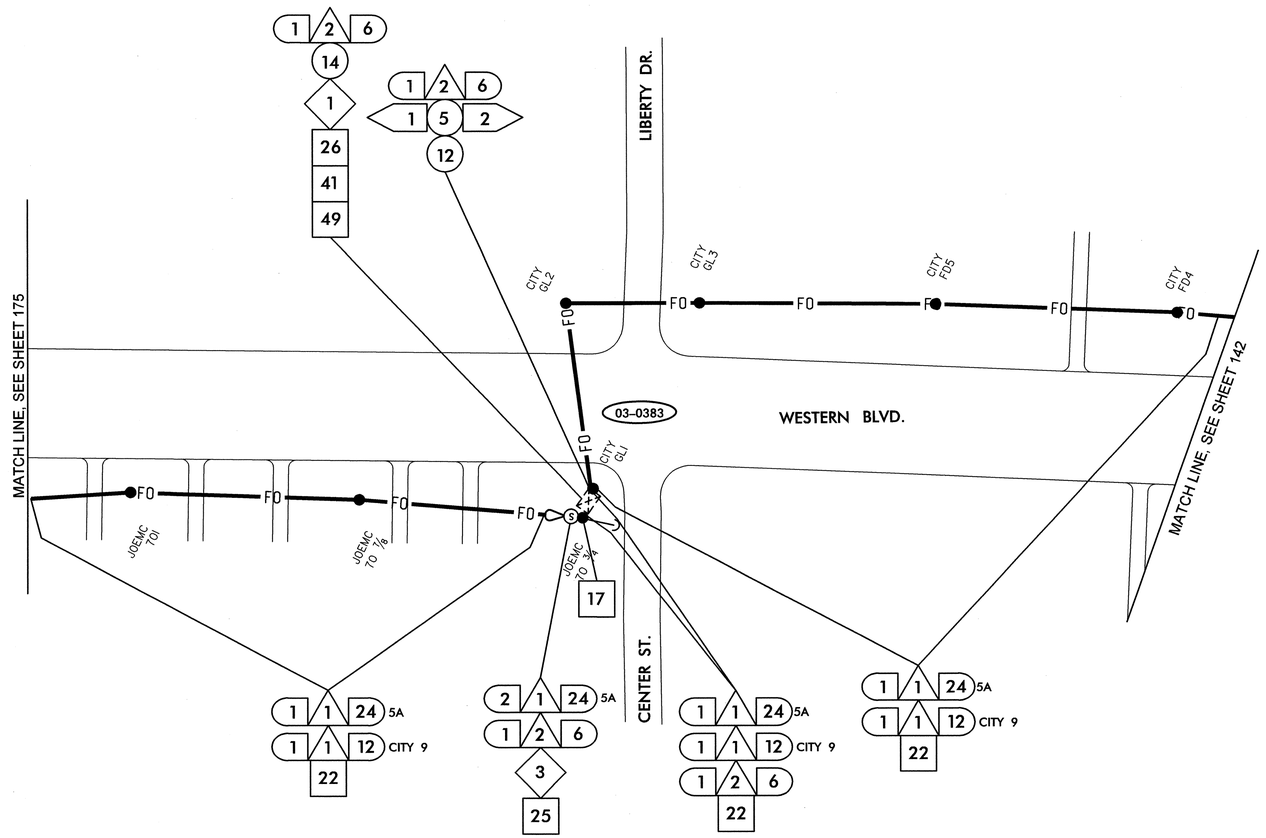
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-25-11 DATE

CADD Filename:

PROJECT REFERENCE NO.	SHEET NO.
U-5168	176



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2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE
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5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE		
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT		
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX		
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND						
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE						
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE						
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE						
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6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT						
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX						
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10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER										

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
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Transportation Mobility and Safety Division
Intelligent Transportation Systems Section
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

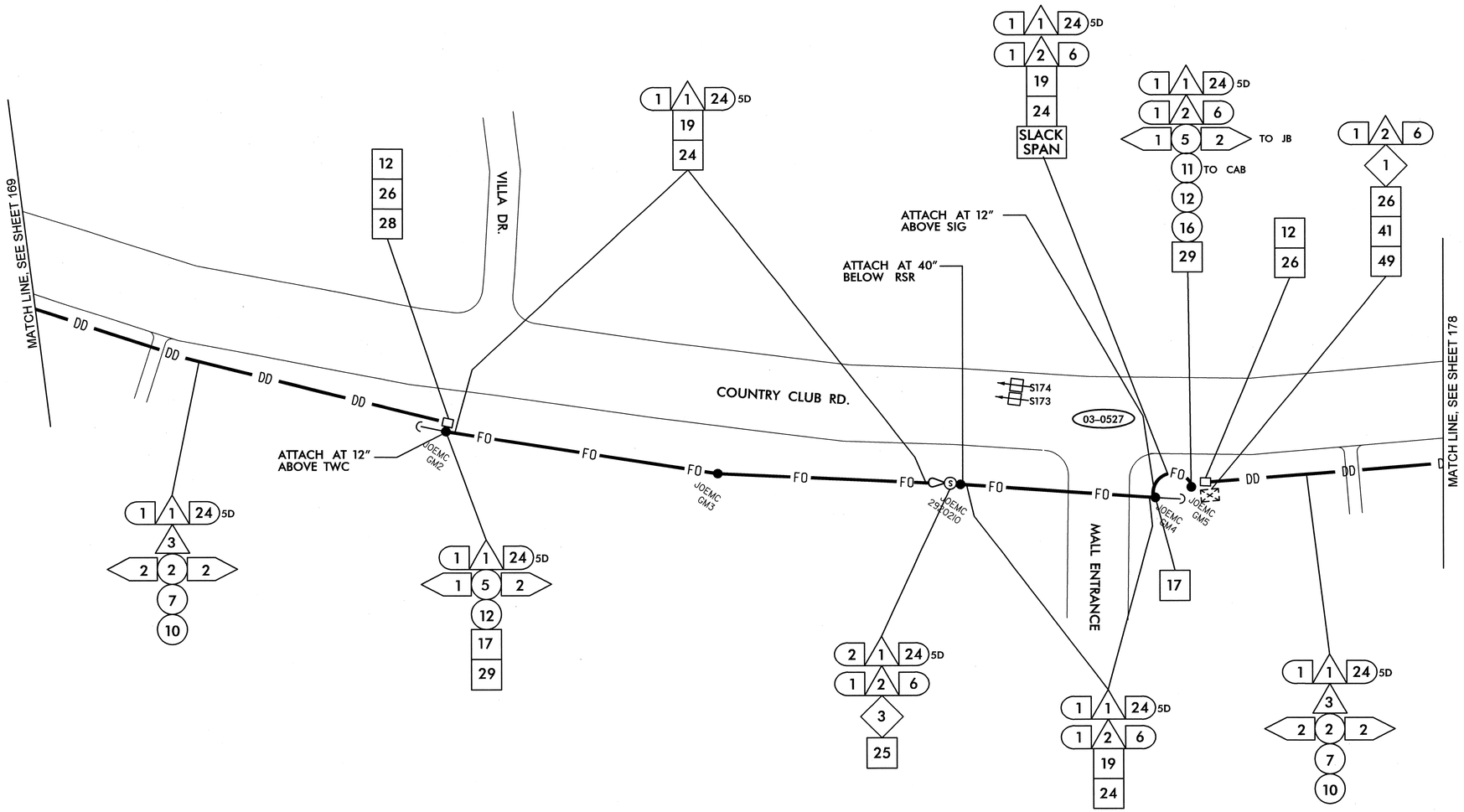
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PS&E#CADWCR-176.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	177



SEE SIGNAL PLAN 03-0527 FOR SYSTEM DETECTORS S173 AND S174 DETAILS. REFER TO DETAIL SHEET 1H FOR SYSTEM DETECTOR ID KEY.

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Intermodal Transportation Systems Section
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SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

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NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

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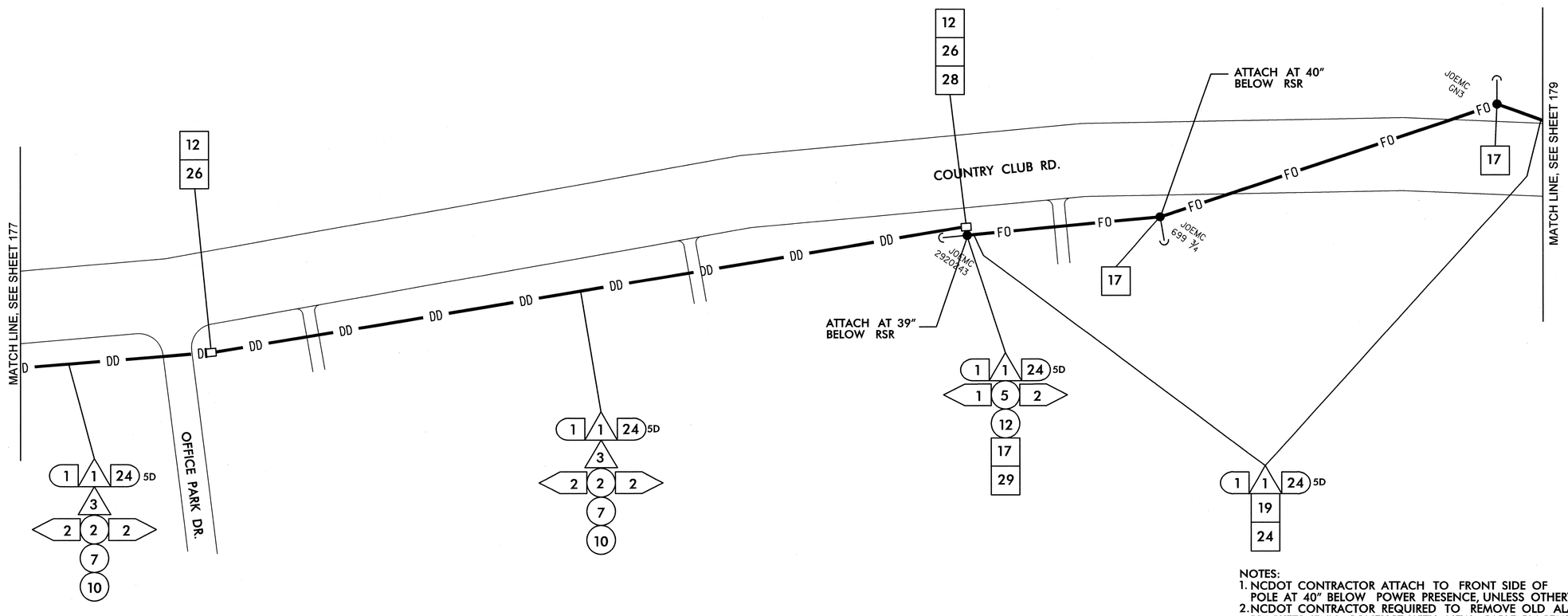
PROJECT REFERENCE NO.	SHEET NO.
U-5168	178



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34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
35	RECONNECT GENERATOR POWER INLET BOX
36	INSTALL CCTV CAMERA ASSEMBLY
37	INSTALL SMALL DMS ASSEMBLY
38	INSTALL LARGE DMS ASSEMBLY
39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS
40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
41	INSTALL ETHERNET SWITCH
42	INSTALL VIDEO CODEC UNIT
43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER
44	INSTALL CELLULAR MODEM
45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)
46	INSTALL 2.4 GHz RADIO TRANSCEIVER
47	INSTALL YAGI ANTENNA
48	INSTALL OMNI-DIRECTIONAL ANTENNA
49	REMOVE EXISTING WIRELESS HARDWARE
50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
51	INSTALL NEW GENERATOR POWER INLET BOX
52	INSTALL CCTV UNIFIED CABLE
53	INSTALL ANTENNA CABLE
54	INSTALL DMS CONTROLLER
55	INSTALL SOLAR POWER ASSEMBLY

PLANS PREPARED IN THE OFFICE OF:

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

750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

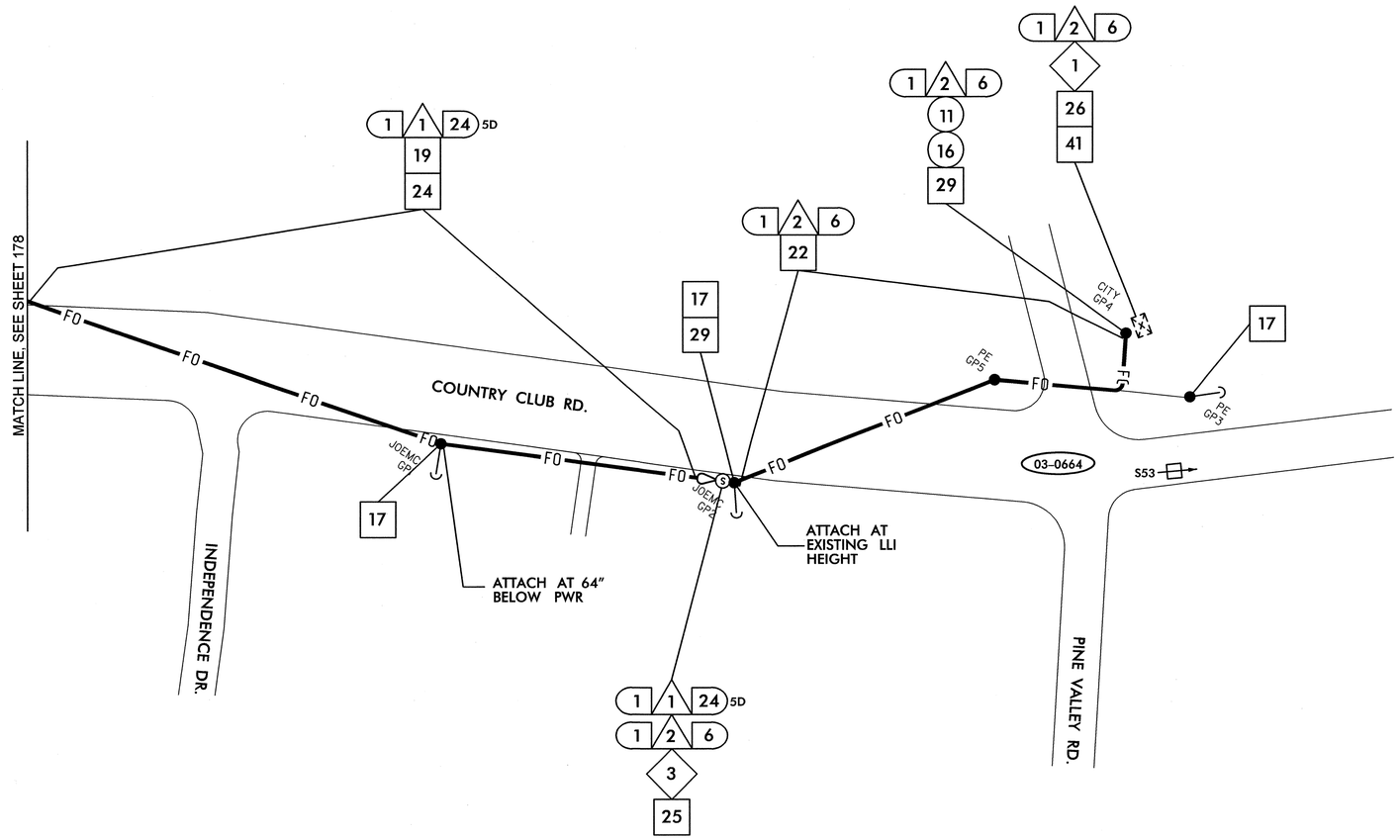
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSEC#2ADACR-178.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	179



SEE SIGNAL PLAN 03-0664 FOR SYSTEM DETECTOR S175 INSTALLATION DETAILS. REFER TO DETAIL SHEET 1H FOR SYSTEM DETECTOR ID KEY.

NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.

1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE
2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE
3	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA	54	INSTALL DMS CONTROLLER
4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY
5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE		
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT		
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX		
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND						
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE						
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6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT						
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX						
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PLANS PREPARED IN THE OFFICE OF:

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Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intermodal Transportation Bypass Stands
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

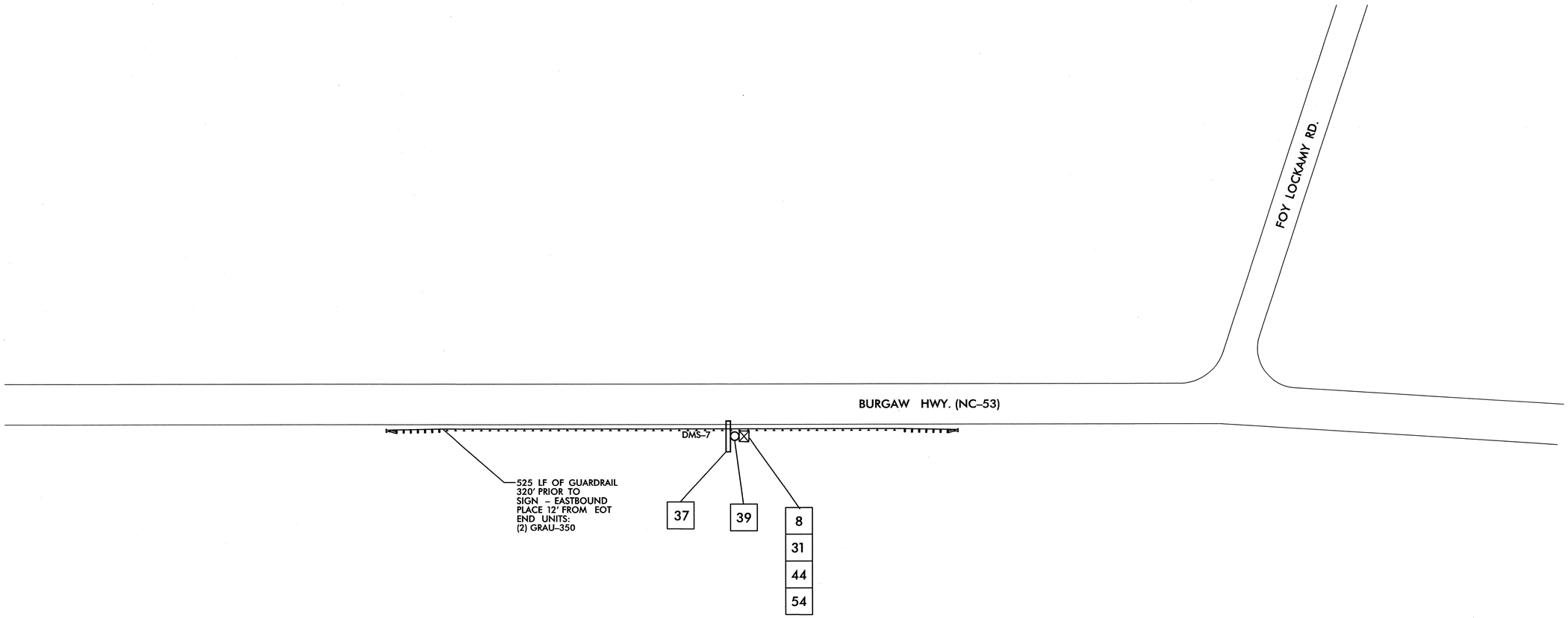
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...\600 PSSE\CADKCR-179.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	180



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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

Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Integrated Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

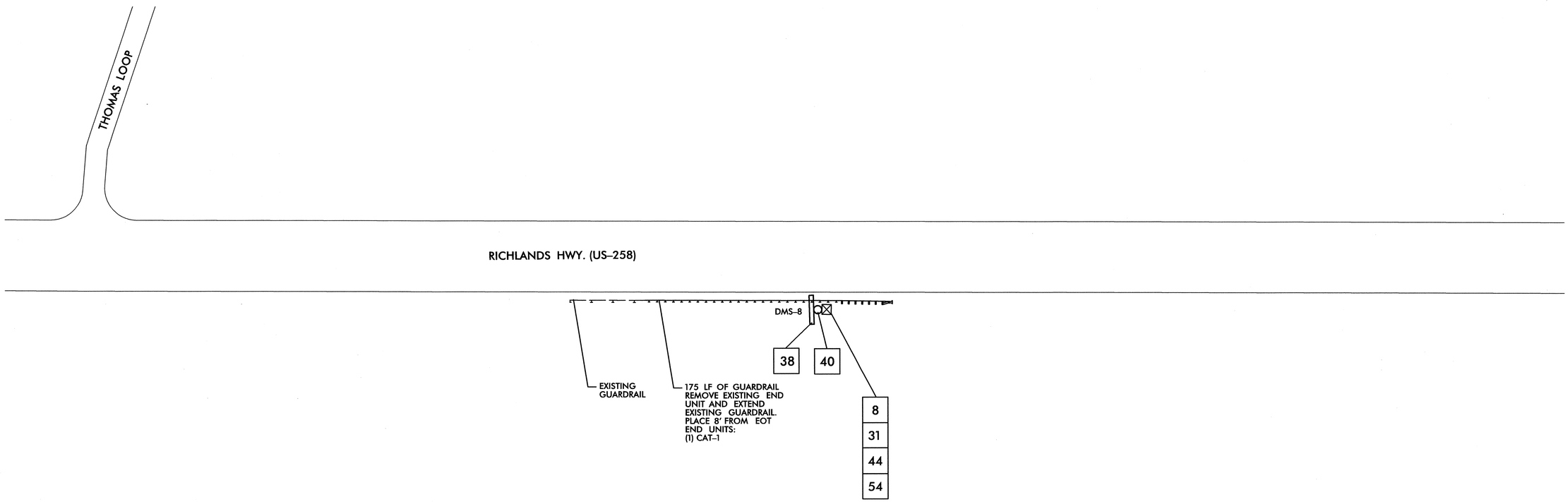
SEAL

NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSSE#2\ADACR-180.dgn



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

Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

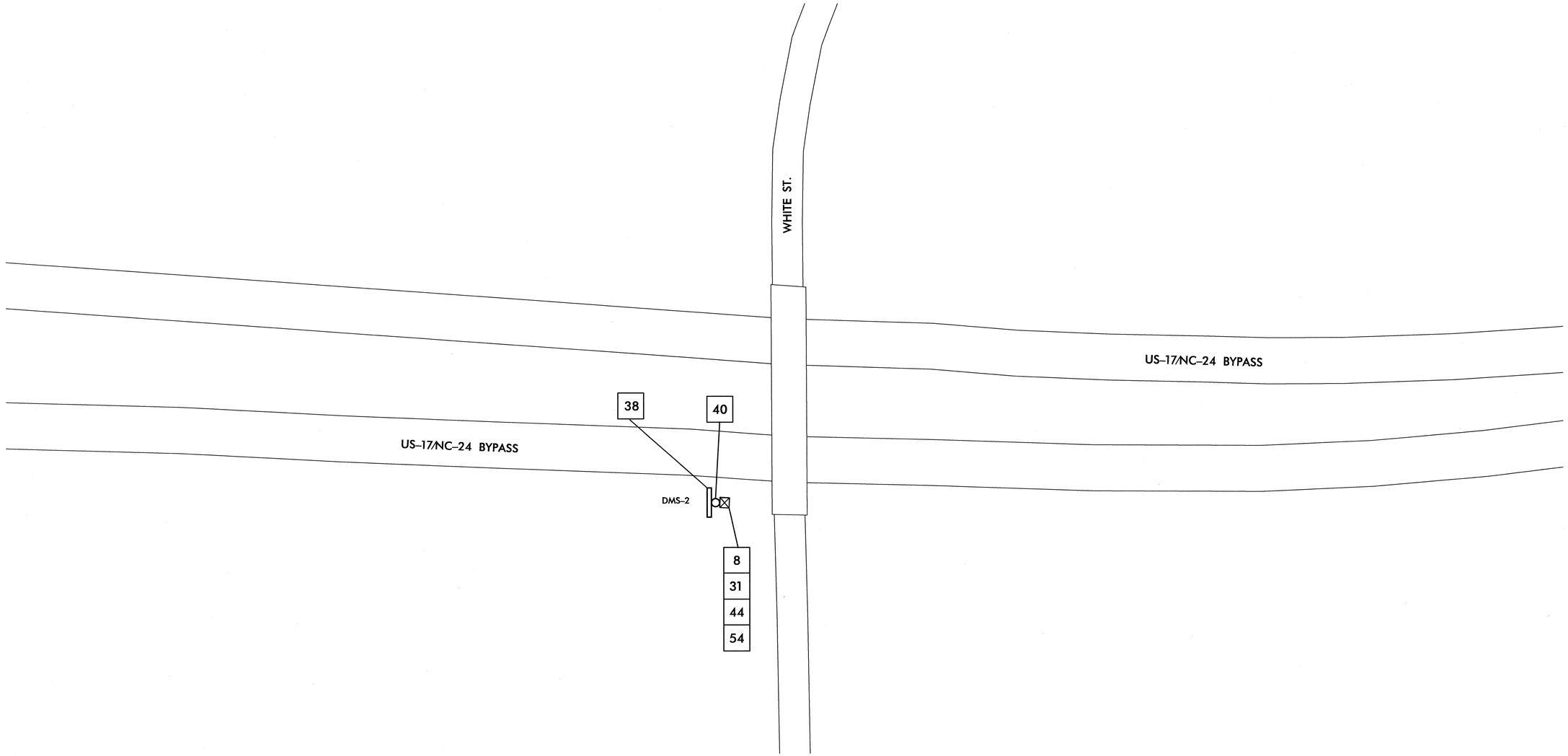
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSE&MC\DMCR-181.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	182



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SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
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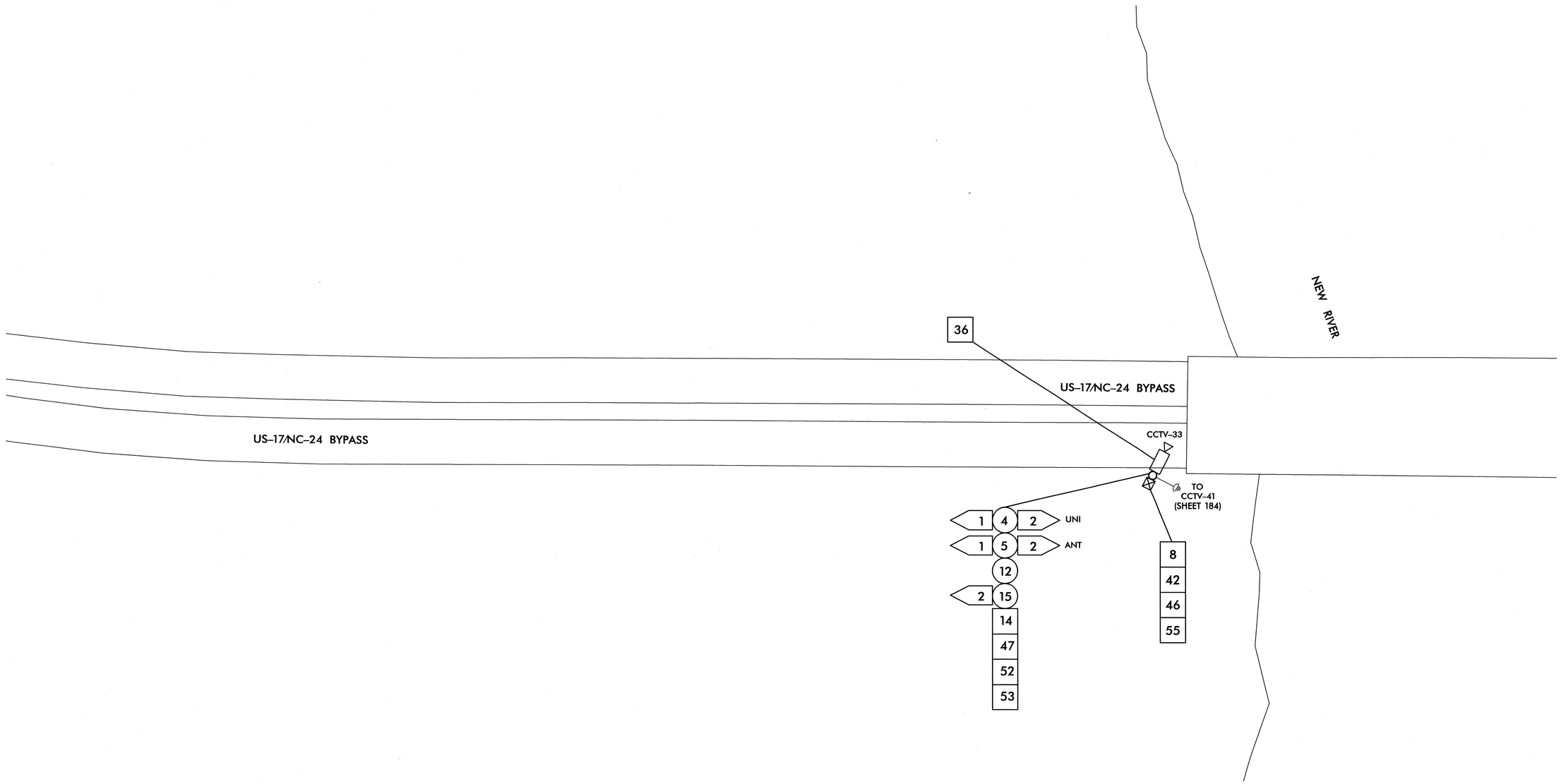
U-5168	183



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2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.45.8 GHz RADIO TRANSCEIVER
3	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL PANEL ANTENNA
4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA
5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND			52	INSTALL CCTV UNIFIED CABLE
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE			53	INSTALL ANTENNA CABLE
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE			54	INSTALL DMS CONTROLLER
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE			55	INSTALL SOLAR POWER ASSEMBLY
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION				
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT				
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX				
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY				
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY				
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER								

PLANS PREPARED IN THE OFFICE OF:

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

750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE
NEW WIRELESS RADIO DESIGN	KWS	10/28/11

SEAL

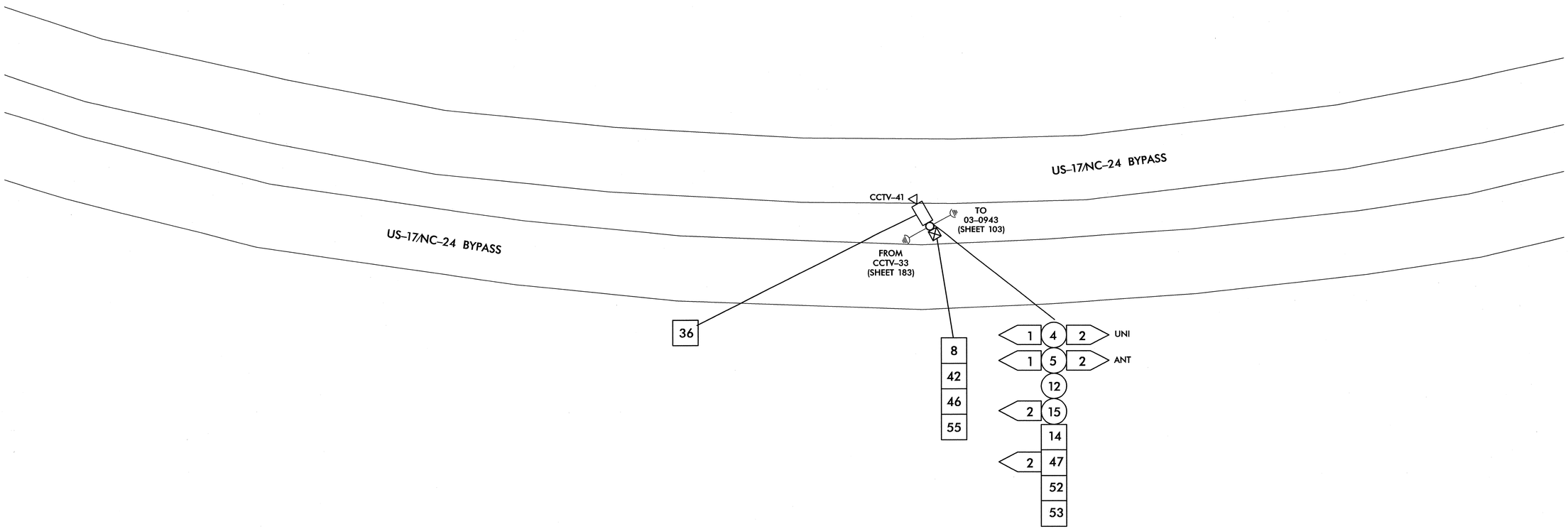
This document originally issued and sealed by Kevin W. Smith, 030472, on 07/20/11. This media shall not be considered a certified document.

SIGNATURE DATE

CADD Filename:

10/28/2011 $TIME$ jerry.cross ...#600 PSAE\NCADMIN\R-183.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	184



1	INSTALL SMFO CABLE
2	INSTALL FIBER OPTIC DROP CABLE
3	INSTALL TRACER WIRE
4	REUSE EXISTING SMFO CABLE
5	INSTALL PLENUM RATED SMFO CABLE
6	INSTALL LOOP LEAD-IN CABLE
7	INSTALL ETHERNET CABLE
1	INSTALL PVC CONDUIT
2	INSTALL POLYETHYLENE CONDUIT
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
6	TRENCH CONDUIT
7	DIRECTIONAL DRILL CONDUIT
8	BORE AND JACK CONDUIT
9	INSTALL CABLE(S) IN EXISTING CONDUIT
10	INSTALL CABLE(S) IN NEW CONDUIT
11	INSTALL CABLE(S) IN EXISTING RISER
12	INSTALL CABLE(S) IN NEW RISER
13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS
14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)
15	INSTALL NEW RISER INTO POLE MOUNTED CABINET
16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET
1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2	INSTALL UNDERGROUND SPLICE ENCLOSURE
3	INSTALL AERIAL SPLICE ENCLOSURE
4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5	INSTALL TERMINAL SPLICE BOX
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION
3	MODIFY EXISTING CABINET FOUNDATION
4	REMOVE EXISTING CONTROLLER AND CABINET
5	INSTALL NEW CONTROLLER
6	INSTALL NEW 332 BASE MOUNTED CABINET
7	INSTALL NEW 336S BASE MOUNTED CABINET
8	INSTALL NEW 336S POLE MOUNTED CABINET
9	INSTALL BASE ADAPTER
10	INSTALL PRE-FORMED CABINET FOUNDATION PAD
11	INSTALL STANDARD JUNCTION BOX
12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
14	INSTALL WOOD POLE
15	REMOVE EXISTING WOOD POLE
16	INSTALL AERIAL GUY ASSEMBLY
17	INSTALL STANDARD GUY ASSEMBLY
18	INSTALL SIDEWALK GUY ASSEMBLY
19	INSTALL MESSENGER CABLE
20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
21	REMOVE EXISTING COMMUNICATIONS CABLE
22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
23	LASH CABLE(S) TO EXISTING MESSENGER CABLE
24	LASH CABLE(S) TO NEW MESSENGER CABLE
25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE
26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE
27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
28	INSTALL FIBER OPTIC DELINEATOR MARKER
29	BOND MESSENGER CABLE TO POLE GROUND
30	MODIFY EXISTING ELECTRICAL SERVICE
31	INSTALL NEW ELECTRICAL SERVICE
32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
33	INSTALL GENERATOR ANCHOR IN FOUNDATION
34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
35	RECONNECT GENERATOR POWER INLET BOX
36	INSTALL CCTV CAMERA ASSEMBLY
37	INSTALL SMALL DMS ASSEMBLY
38	INSTALL LARGE DMS ASSEMBLY
39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS
40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
41	INSTALL ETHERNET SWITCH
42	INSTALL VIDEO CODEC UNIT
43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER
44	INSTALL CELLULAR MODEM
45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)
46	INSTALL 2.4/5.8 GHz RADIO TRANSCEIVER ▽
47	INSTALL PANEL ANTENNA ▽
48	INSTALL OMNI-DIRECTIONAL ANTENNA
49	REMOVE EXISTING WIRELESS HARDWARE
50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
51	INSTALL NEW GENERATOR POWER INLET BOX
52	INSTALL CCTV UNIFIED CABLE
53	INSTALL ANTENNA CABLE
54	INSTALL DMS CONTROLLER
55	INSTALL SOLAR POWER ASSEMBLY

PLANS PREPARED IN THE OFFICE OF:

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

750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011 REVIEWED BY: K.W. SMITH

PREPARED BY: S.P. PENNINGTON REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE
▽ NEW WIRELESS RADIO DESIGN	KWS	10/28/11

SEAL

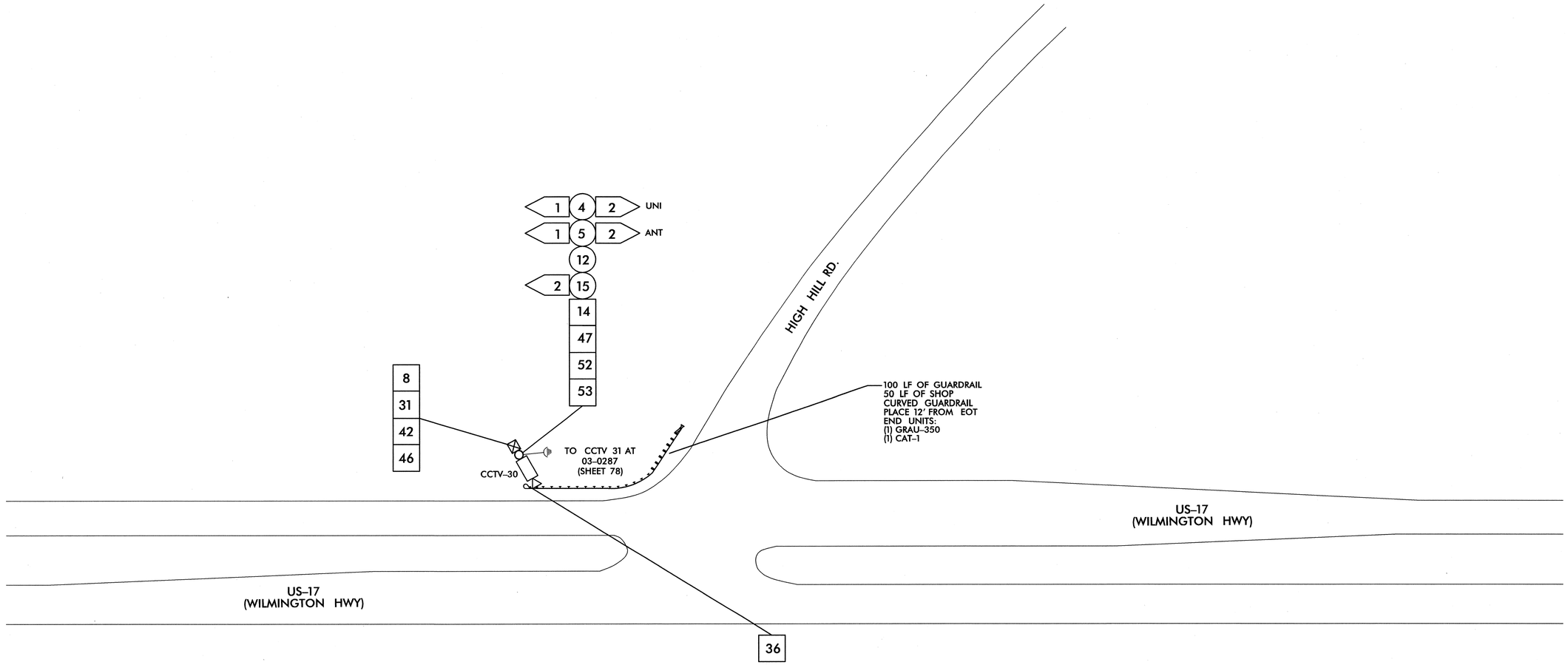
This document originally issued and sealed by Kevin W. Smith, 030472, on 07/20/11. This media shall not be considered a certified document.

SIGNATURE DATE

CADD Filename:

10/28/2011 $TIME$ jerry.cross ...=600 PSAE=CADD=CR-184.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	185



1	INSTALL SMFO CABLE
2	INSTALL FIBER OPTIC DROP CABLE
3	INSTALL TRACER WIRE
4	REUSE EXISTING SMFO CABLE
5	INSTALL PLENUM RATED SMFO CABLE
6	INSTALL LOOP LEAD-IN CABLE
7	INSTALL ETHERNET CABLE
1	INSTALL PVC CONDUIT
2	INSTALL POLYETHYLENE CONDUIT
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
6	TRENCH CONDUIT
7	DIRECTIONAL DRILL CONDUIT
8	BORE AND JACK CONDUIT
9	INSTALL CABLE(S) IN EXISTING CONDUIT
10	INSTALL CABLE(S) IN NEW CONDUIT
11	INSTALL CABLE(S) IN EXISTING RISER
12	INSTALL CABLE(S) IN NEW RISER
13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS
14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)
15	INSTALL NEW RISER INTO POLE MOUNTED CABINET
16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET
1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2	INSTALL UNDERGROUND SPLICE ENCLOSURE
3	INSTALL AERIAL SPLICE ENCLOSURE
4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5	INSTALL TERMINAL SPLICE BOX
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION
3	MODIFY EXISTING CABINET FOUNDATION
4	REMOVE EXISTING CONTROLLER AND CABINET
5	INSTALL NEW CONTROLLER
6	INSTALL NEW 332 BASE MOUNTED CABINET
7	INSTALL NEW 336S BASE MOUNTED CABINET
8	INSTALL NEW 336S POLE MOUNTED CABINET
9	INSTALL BASE ADAPTER
10	INSTALL PRE-FORMED CABINET FOUNDATION PAD
11	INSTALL STANDARD JUNCTION BOX
12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
14	INSTALL WOOD POLE
15	REMOVE EXISTING WOOD POLE
16	INSTALL AERIAL GUY ASSEMBLY
17	INSTALL STANDARD GUY ASSEMBLY
18	INSTALL SIDEWALK GUY ASSEMBLY
19	INSTALL MESSENGER CABLE
20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
21	REMOVE EXISTING COMMUNICATIONS CABLE
22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
23	LASH CABLE(S) TO EXISTING MESSENGER CABLE
24	LASH CABLE(S) TO NEW MESSENGER CABLE
25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE
26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE
27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE
28	INSTALL FIBER OPTIC DELINEATOR MARKER
29	BOND MESSENGER CABLE TO POLE GROUND
30	MODIFY EXISTING ELECTRICAL SERVICE
31	INSTALL NEW ELECTRICAL SERVICE
32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
33	INSTALL GENERATOR ANCHOR IN FOUNDATION
34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
35	RECONNECT GENERATOR POWER INLET BOX
36	INSTALL CCTV CAMERA ASSEMBLY
37	INSTALL SMALL DMS ASSEMBLY
38	INSTALL LARGE DMS ASSEMBLY
39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS
40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
41	INSTALL ETHERNET SWITCH
42	INSTALL VIDEO CODEC UNIT
43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER
44	INSTALL CELLULAR MODEM
45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)
46	INSTALL 2.4/5.8 GHz RADIO TRANSCEIVER ▽
47	INSTALL PANEL ANTENNA ▽
48	INSTALL OMNI-DIRECTIONAL ANTENNA
49	REMOVE EXISTING WIRELESS HARDWARE
50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
51	INSTALL NEW GENERATOR POWER INLET BOX
52	INSTALL CCTV UNIFIED CABLE
53	INSTALL ANTENNA CABLE
54	INSTALL DMS CONTROLLER
55	INSTALL SOLAR POWER ASSEMBLY

PLANS PREPARED IN THE OFFICE OF:

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

Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Connecting People, Places, Products, and Services
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011 REVIEWED BY: K.W. SMITH

PREPARED BY: S.P. PENNINGTON REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE
▽ NEW WIRELESS RADIO DESIGN	KWS	10/28/11

SEAL

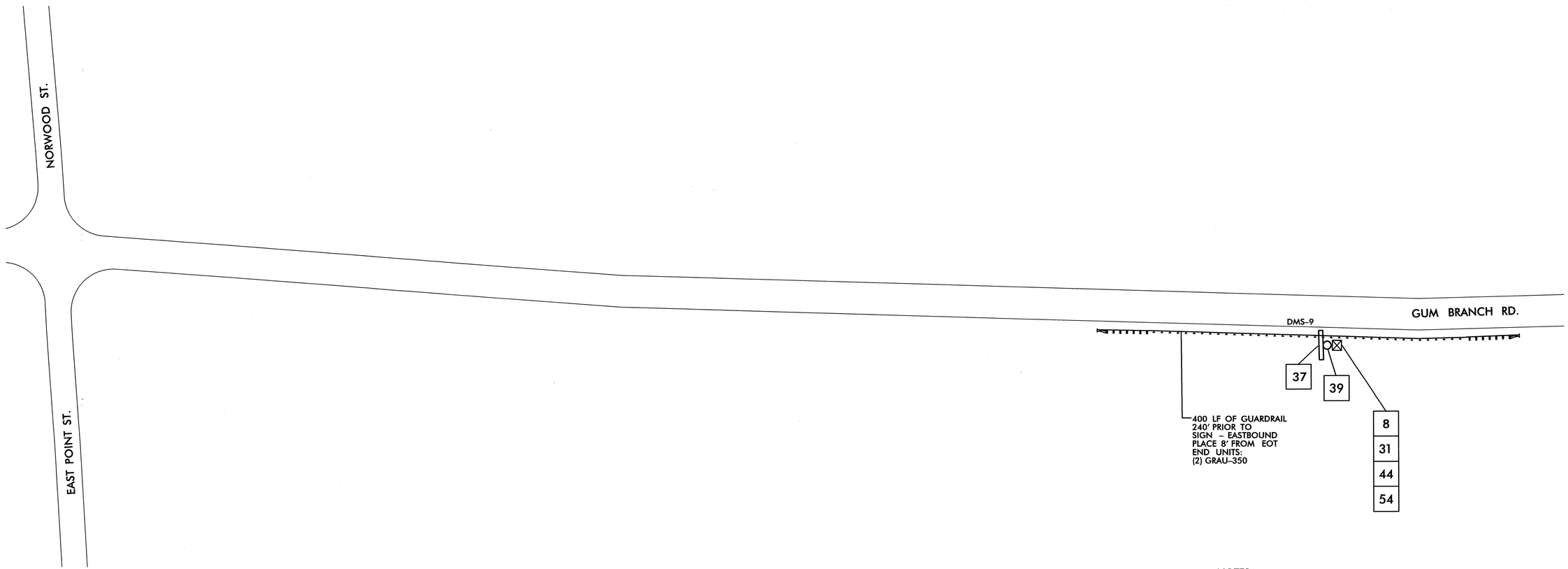
This document originally issued and sealed by Kevin W. Smith, 030472, on 07/20/11. This media shall not be considered a certified document.

SIGNATURE DATE

CADD Filename:

10/28/2011 $TIME$ jerry.cross ...#600 PSUE#CJDWCR-185.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	186



NOTES:
1. NCDOT CONTRACTOR ATTACH TO FRONT SIDE OF POLE AT 40" BELOW POWER PRESENCE, UNLESS OTHERWISE NOTED.
2. NCDOT CONTRACTOR REQUIRED TO REMOVE OLD ALARM CIRCUIT BRACKETS IF IN CONFLICT WITH NEW CABLE PLACEMENT. DEAD END EXISTING MESSENGER, REMOVE UNUSED LASHING WIRE AND SUPPORT RINGS WHEN REQUIRED.

1	INSTALL SMFO CABLE
2	INSTALL FIBER OPTIC DROP CABLE
3	INSTALL TRACER WIRE
4	REUSE EXISTING SMFO CABLE
5	INSTALL PLENUM RATED SMFO CABLE
6	INSTALL LOOP LEAD-IN CABLE
7	INSTALL ETHERNET CABLE
1	INSTALL PVC CONDUIT
2	INSTALL POLYETHYLENE CONDUIT
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
6	TRENCH CONDUIT
7	DIRECTIONAL DRILL CONDUIT
8	BORE AND JACK CONDUIT
9	INSTALL CABLE(S) IN EXISTING CONDUIT
10	INSTALL CABLE(S) IN NEW CONDUIT
11	INSTALL CABLE(S) IN EXISTING RISER
12	INSTALL CABLE(S) IN NEW RISER
13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS
14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)
15	INSTALL NEW RISER INTO POLE MOUNTED CABINET
16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET
1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2	INSTALL UNDERGROUND SPLICE ENCLOSURE
3	INSTALL AERIAL SPLICE ENCLOSURE
4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5	INSTALL TERMINAL SPLICE BOX
1	INSTALL CABINET FOUNDATION
2	REMOVE EXISTING CABINET FOUNDATION
3	MODIFY EXISTING CABINET FOUNDATION
4	REMOVE EXISTING CONTROLLER AND CABINET
5	INSTALL NEW CONTROLLER
6	INSTALL NEW 332 BASE MOUNTED CABINET
7	INSTALL NEW 336S BASE MOUNTED CABINET
8	INSTALL NEW 336S POLE MOUNTED CABINET
9	INSTALL BASE ADAPTER
10	INSTALL PRE-FORMED CABINET FOUNDATION PAD
11	INSTALL STANDARD JUNCTION BOX
12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
14	INSTALL WOOD POLE
15	REMOVE EXISTING WOOD POLE
16	INSTALL AERIAL GUY ASSEMBLY
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22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
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29	BOND MESSENGER CABLE TO POLE GROUND
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32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
33	INSTALL GENERATOR ANCHOR IN FOUNDATION
34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
35	RECONNECT GENERATOR POWER INLET BOX
36	INSTALL CCTV CAMERA ASSEMBLY
37	INSTALL SMALL DMS ASSEMBLY
38	INSTALL LARGE DMS ASSEMBLY
39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS
40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
41	INSTALL ETHERNET SWITCH
42	INSTALL VIDEO CODEC UNIT
43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER
44	INSTALL CELLULAR MODEM
45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)
46	INSTALL 2.4 GHz RADIO TRANSCEIVER
47	INSTALL YAGI ANTENNA
48	INSTALL OMNI-DIRECTIONAL ANTENNA
49	REMOVE EXISTING WIRELESS HARDWARE
50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
51	INSTALL NEW GENERATOR POWER INLET BOX
52	INSTALL CCTV UNIFIED CABLE
53	INSTALL ANTENNA CABLE
54	INSTALL DMS CONTROLLER
55	INSTALL SOLAR POWER ASSEMBLY

PLANS PREPARED IN THE OFFICE OF:

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

SCALE 0 50

Transportation Mobility and Safety Division
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011	REVIEWED BY: K.W. SMITH
PREPARED BY: S.P. PENNINGTON	REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE

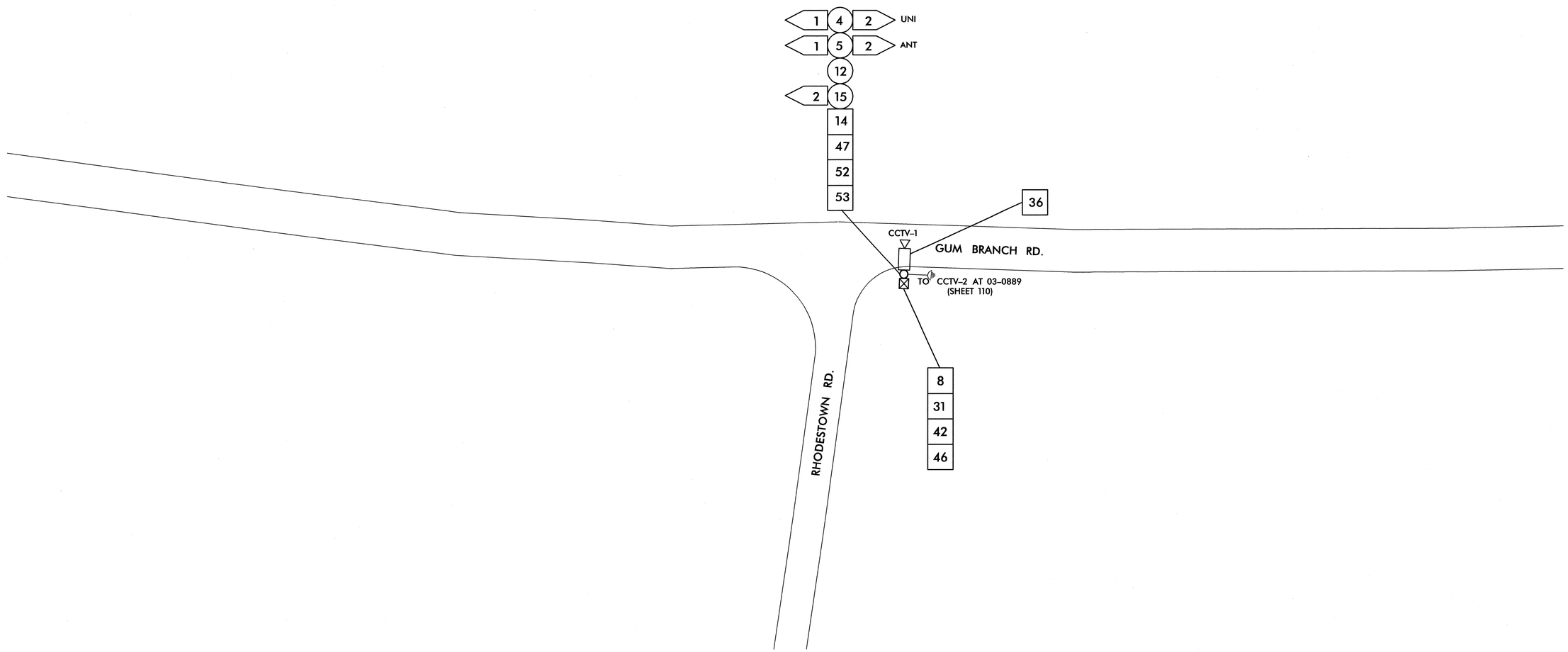
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...#600 PSE#CADWCR-186.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	187



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2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.45.8 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE
3	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL PANEL ANTENNA	54	INSTALL DMS CONTROLLER
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6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT		
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX		
1	INSTALL PVC CONDUIT	1	INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET	13	INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX	29	BOND MESSENGER CABLE TO POLE GROUND						
2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE						
3	INSTALL RIGID, GALVANIZED STEEL CONDUIT	3	INSTALL AERIAL SPLICE ENCLOSURE	15	REMOVE EXISTING WOOD POLE	31	INSTALL NEW ELECTRICAL SERVICE						
4	INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD	4	MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER	16	INSTALL AERIAL GUY ASSEMBLY	32	INSTALL POWER FROM EXISTING ELECTRICAL SERVICE						
5	INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING	5	INSTALL TERMINAL SPLICE BOX	17	INSTALL STANDARD GUY ASSEMBLY	33	INSTALL GENERATOR ANCHOR IN FOUNDATION						
6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT						
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX						
8	BORE AND JACK CONDUIT	3	MODIFY EXISTING CABINET FOUNDATION	20	REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE	36	INSTALL CCTV CAMERA ASSEMBLY						
9	INSTALL CABLE(S) IN EXISTING CONDUIT	4	REMOVE EXISTING CONTROLLER AND CABINET	21	REMOVE EXISTING COMMUNICATIONS CABLE	37	INSTALL SMALL DMS ASSEMBLY						
10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER										

PLANS PREPARED IN THE OFFICE OF:

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

750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011 REVIEWED BY: K.W. SMITH

PREPARED BY: S.P. PENNINGTON REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE
1 NEW WIRELESS RADIO DESIGN	KWS	10/28/11

SEAL

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SIGNATURE DATE

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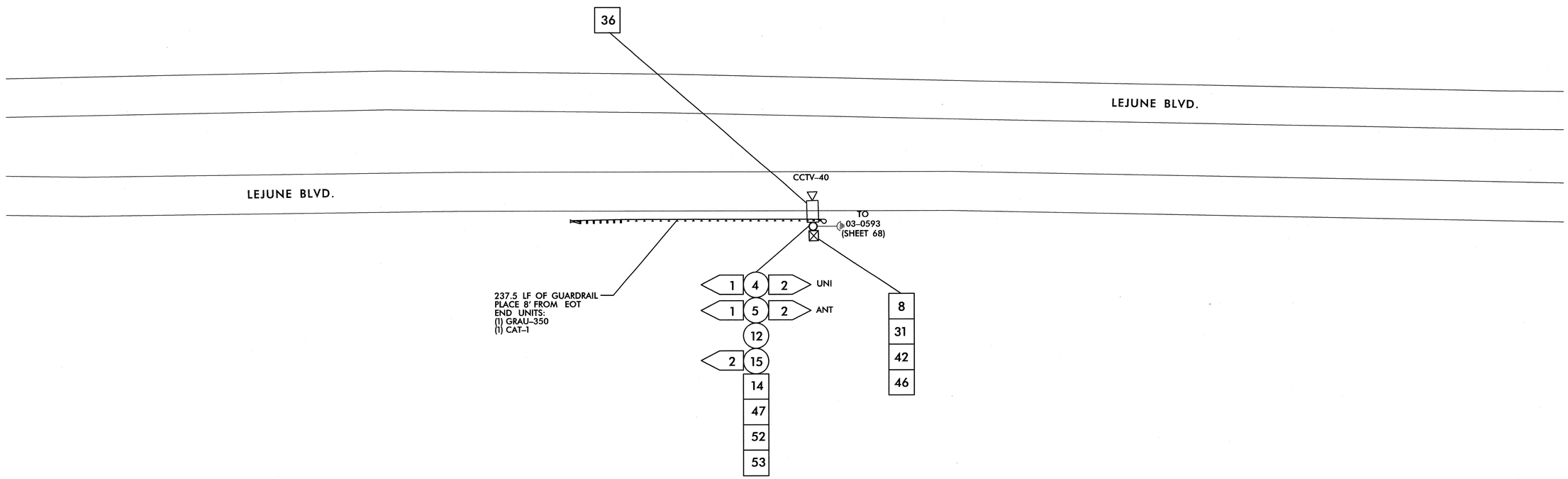
10/28/2011 $TIME$ jerry.cross ...#600 PSE&CAD&CR-187.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	188



1. INSTALL SMFO CABLE
2. INSTALL FIBER OPTIC DROP CABLE
3. INSTALL TRACER WIRE
4. REUSE EXISTING SMFO CABLE
5. INSTALL PLENUM RATED SMFO CABLE
6. INSTALL LOOP LEAD-IN CABLE
7. INSTALL ETHERNET CABLE

1. INSTALL PVC CONDUIT
2. INSTALL POLYETHYLENE CONDUIT
3. INSTALL RIGID, GALVANIZED STEEL CONDUIT
4. INSTALL RIGID, GALVANIZED STEEL RISER WITH WEATHERHEAD
5. INSTALL RIGID, GALVANIZED STEEL RISER WITH HEAT SHRINK TUBING
6. TRENCH CONDUIT
7. DIRECTIONAL DRILL CONDUIT
8. BORE AND JACK CONDUIT
9. INSTALL CABLE(S) IN EXISTING CONDUIT
10. INSTALL CABLE(S) IN NEW CONDUIT
11. INSTALL CABLE(S) IN EXISTING RISER
12. INSTALL CABLE(S) IN NEW RISER
13. INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS
14. INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)
15. INSTALL NEW RISER INTO POLE MOUNTED CABINET
16. REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING
17. INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET

1. INSTALL INTERCONNECT CENTER, PATCH PANEL, JUMPERS, AND FUSION SPLICE CABLE IN CABINET
2. INSTALL UNDERGROUND SPLICE ENCLOSURE
3. INSTALL AERIAL SPLICE ENCLOSURE
4. MODIFY EXISTING SPLICE ENCLOSURE OR INTERCONNECT CENTER
5. INSTALL TERMINAL SPLICE BOX

1. INSTALL CABINET FOUNDATION
2. REMOVE EXISTING CABINET FOUNDATION
3. MODIFY EXISTING CABINET FOUNDATION
4. REMOVE EXISTING CONTROLLER AND CABINET
5. INSTALL NEW CONTROLLER
6. INSTALL NEW 332 BASE MOUNTED CABINET
7. INSTALL NEW 336S BASE MOUNTED CABINET
8. INSTALL NEW 336S POLE MOUNTED CABINET
9. INSTALL BASE ADAPTER
10. INSTALL PRE-FORMED CABINET FOUNDATION PAD
11. INSTALL STANDARD JUNCTION BOX
12. INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
13. INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
14. INSTALL WOOD POLE
15. REMOVE EXISTING WOOD POLE
16. INSTALL AERIAL GUY ASSEMBLY
17. INSTALL STANDARD GUY ASSEMBLY
18. INSTALL SIDEWALK GUY ASSEMBLY
19. INSTALL MESSENGER CABLE
20. REMOVE EXISTING COMMUNICATIONS CABLE AND MESSENGER CABLE
21. REMOVE EXISTING COMMUNICATIONS CABLE
22. LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE
23. LASH CABLE(S) TO EXISTING MESSENGER CABLE
24. LASH CABLE(S) TO NEW MESSENGER CABLE
25. INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE
26. STORE 30 FEET OF EACH COMMUNICATIONS CABLE
27. STORE 100 FEET OF EACH COMMUNICATIONS CABLE
28. INSTALL FIBER OPTIC DELINEATOR MARKER
29. BOND MESSENGER CABLE TO POLE GROUND
30. MODIFY EXISTING ELECTRICAL SERVICE
31. INSTALL NEW ELECTRICAL SERVICE
32. INSTALL POWER FROM EXISTING ELECTRICAL SERVICE
33. INSTALL GENERATOR ANCHOR IN FOUNDATION
34. RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT
35. RECONNECT GENERATOR POWER INLET BOX
36. INSTALL CCTV CAMERA ASSEMBLY
37. INSTALL SMALL DMS ASSEMBLY
38. INSTALL LARGE DMS ASSEMBLY
39. INSTALL PEDESTAL STRUCTURE FOR SMALL DMS
40. INSTALL PEDESTAL STRUCTURE FOR LARGE DMS
41. INSTALL ETHERNET SWITCH
42. INSTALL VIDEO CODEC UNIT
43. REMOVE EXISTING FIBER OPTIC TRANSCEIVER
44. INSTALL CELLULAR MODEM
45. INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)
46. INSTALL 2.45.8 GHz RADIO TRANSCEIVER
47. INSTALL PANEL ANTENNA
48. INSTALL OMNI-DIRECTIONAL ANTENNA
49. REMOVE EXISTING WIRELESS HARDWARE
50. INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT
51. INSTALL NEW GENERATOR POWER INLET BOX
52. INSTALL CCTV UNIFIED CABLE
53. INSTALL ANTENNA CABLE
54. INSTALL DMS CONTROLLER
55. INSTALL SOLAR POWER ASSEMBLY

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

Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Intelligent Transportation Systems Section
750 N. Greenfield Pkwy., Garner, NC 27529

SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE: JULY 2011 REVIEWED BY: K.W. SMITH

PREPARED BY: S.P. PENNINGTON REVIEWED BY: T.F. BURCHETT

REVISIONS	INIT.	DATE
NEW WIRELESS RADIO DESIGN	KWS	10/28/11

SEAL

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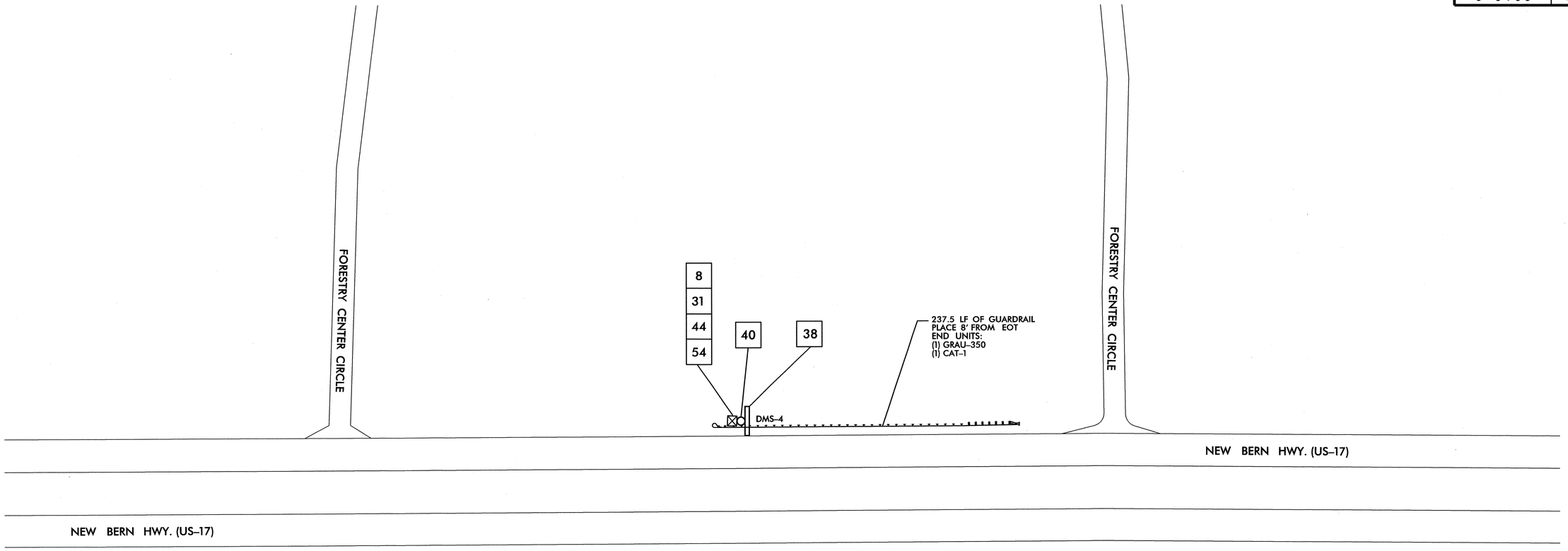
PROJECT REFERENCE NO.	SHEET NO.
U-5168	189



1	INSTALL SMFO CABLE	11	INSTALL CABLE(S) IN EXISTING RISER	6	INSTALL NEW 332 BASE MOUNTED CABINET	22	LASH CABLE(S) TO EXISTING SIGNAL/ COMMUNICATIONS CABLE	38	INSTALL LARGE DMS ASSEMBLY	45	INSTALL FIBER OPTIC TRANSCEIVER (CONTACT CLOSURE)	52	INSTALL CCTV UNIFIED CABLE		
2	INSTALL FIBER OPTIC DROP CABLE	12	INSTALL CABLE(S) IN NEW RISER	7	INSTALL NEW 336S BASE MOUNTED CABINET	23	LASH CABLE(S) TO EXISTING MESSENGER CABLE	39	INSTALL PEDESTAL STRUCTURE FOR SMALL DMS	46	INSTALL 2.4 GHz RADIO TRANSCEIVER	53	INSTALL ANTENNA CABLE		
3	INSTALL TRACER WIRE	13	INSTALL NEW CABLE(S) IN EXISTING CONDUIT STUBOUTS	8	INSTALL NEW 336S POLE MOUNTED CABINET	24	LASH CABLE(S) TO NEW MESSENGER CABLE	40	INSTALL PEDESTAL STRUCTURE FOR LARGE DMS	47	INSTALL YAGI ANTENNA	54	INSTALL DMS CONTROLLER		
4	REUSE EXISTING SMFO CABLE	14	INSTALL NEW CONDUIT INTO EXISTING CABINET BASE (USE EXISTING CONDUIT STUBOUTS WHERE AVAILABLE)	9	INSTALL BASE ADAPTER	25	INSTALL CABLE STORAGE RACKS (SNOW SHOES) AND STORE 100 FEET OF EACH CABLE	41	INSTALL ETHERNET SWITCH	48	INSTALL OMNI-DIRECTIONAL ANTENNA	55	INSTALL SOLAR POWER ASSEMBLY		
5	INSTALL PLENUM RATED SMFO CABLE	15	INSTALL NEW RISER INTO POLE MOUNTED CABINET	10	INSTALL PRE-FORMED CABINET FOUNDATION PAD	26	STORE 30 FEET OF EACH COMMUNICATIONS CABLE	42	INSTALL VIDEO CODEC UNIT	49	REMOVE EXISTING WIRELESS HARDWARE				
6	INSTALL LOOP LEAD-IN CABLE	16	REPLACE EXISTING WEATHERHEAD WITH HEAT SHRINK TUBING	11	INSTALL STANDARD JUNCTION BOX	27	STORE 100 FEET OF EACH COMMUNICATIONS CABLE	43	REMOVE EXISTING FIBER OPTIC TRANSCEIVER	50	INSTALL EMERGENCY VEHICLE PREEMPTION EQUIPMENT				
7	INSTALL ETHERNET CABLE	17	INSTALL RIGID METAL CONDUIT INTO POLE MOUNTED CABINET	12	INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX	28	INSTALL FIBER OPTIC DELINEATOR MARKER	44	INSTALL CELLULAR MODEM	51	INSTALL NEW GENERATOR POWER INLET BOX				
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2	INSTALL POLYETHYLENE CONDUIT	2	INSTALL UNDERGROUND SPLICE ENCLOSURE	14	INSTALL WOOD POLE	30	MODIFY EXISTING ELECTRICAL SERVICE								
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6	TRENCH CONDUIT	1	INSTALL CABINET FOUNDATION	18	INSTALL SIDEWALK GUY ASSEMBLY	34	RECONNECT EMERGENCY VEHICLE PREEMPTION EQUIPMENT								
7	DIRECTIONAL DRILL CONDUIT	2	REMOVE EXISTING CABINET FOUNDATION	19	INSTALL MESSENGER CABLE	35	RECONNECT GENERATOR POWER INLET BOX								
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10	INSTALL CABLE(S) IN NEW CONDUIT	5	INSTALL NEW CONTROLLER												

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SCALE 0 50

CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

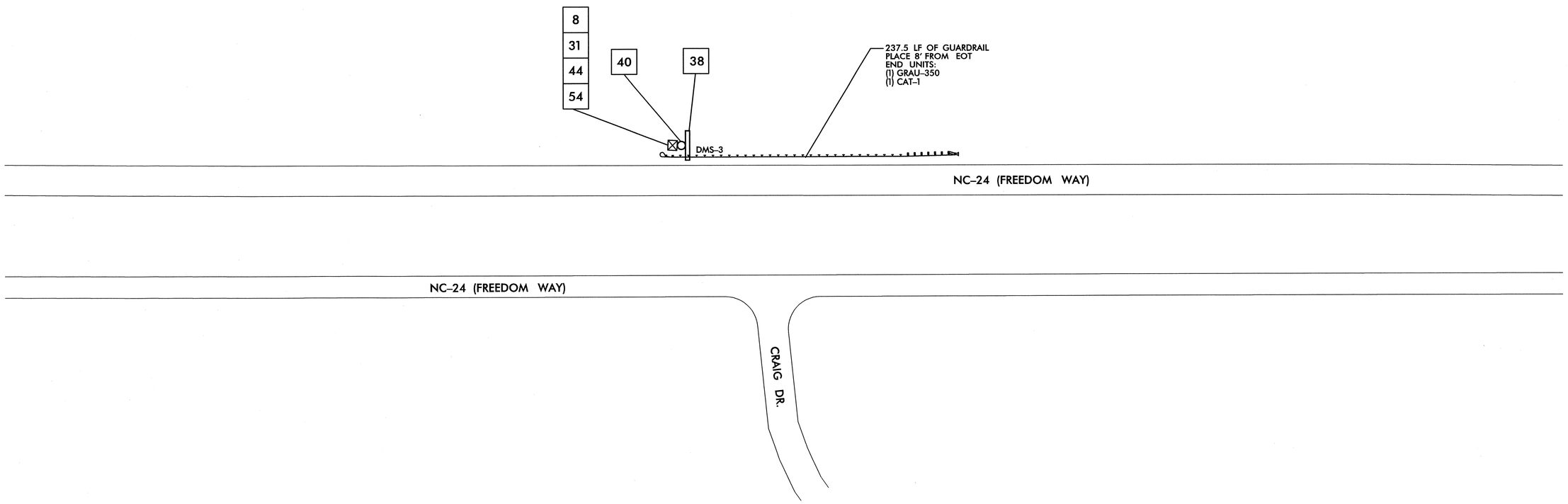
NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE 7-20-11 DATE

CADD Filenames:

7/19/2011 $TIME$ susan.pennington ...#600 PSJE#CADWCR-189.dgn

PROJECT REFERENCE NO.	SHEET NO.
U-5168	190



1. INSTALL SMFO CABLE
2. INSTALL FIBER OPTIC DROP CABLE
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4. REUSE EXISTING SMFO CABLE
5. INSTALL PLENUM RATED SMFO CABLE
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5. INSTALL TERMINAL SPLICE BOX

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2. REMOVE EXISTING CABINET FOUNDATION
3. MODIFY EXISTING CABINET FOUNDATION
4. REMOVE EXISTING CONTROLLER AND CABINET
5. INSTALL NEW CONTROLLER
6. INSTALL NEW 332 BASE MOUNTED CABINET
7. INSTALL NEW 336S BASE MOUNTED CABINET
8. INSTALL NEW 336S POLE MOUNTED CABINET
9. INSTALL BASE ADAPTER
10. INSTALL PRE-FORMED CABINET FOUNDATION PAD
11. INSTALL STANDARD JUNCTION BOX
12. INSTALL OVERSIZED HEAVY-DUTY JUNCTION BOX
13. INSTALL SPECIAL OVERSIZED HEAVY-DUTY JUNCTION BOX
14. INSTALL WOOD POLE
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28. INSTALL FIBER OPTIC DELINEATOR MARKER
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33. INSTALL GENERATOR ANCHOR IN FOUNDATION
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CITY OF JACKSONVILLE COMPUTERIZED SIGNAL SYSTEM UPGRADE

CABLE ROUTING

DIVISION 3 ONSLOW COUNTY JACKSONVILLE

PLAN DATE:	JULY 2011	REVIEWED BY:	K.W. SMITH
PREPARED BY:	S.P. PENNINGTON	REVIEWED BY:	T.F. BURCHETT

REVISIONS	INIT.	DATE

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 030472 ENGINEER KEVIN W. SMITH

SIGNATURE DATE 7-20-11

CADD Filename:

7/19/2011 $TIME$ susan.pennington ...*600 PSAE*CADD*CR-190.dgn

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

CITY OF JACKSONVILLE
ONSLOW COUNTY

SHEET NO.
TMP-1

U-5168

TIP PROJECT:

ROADWAY STANDARD DRAWINGS

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

STD. NO.	TITLE
1101.02	TEMPORARY LANE CLOSURES
1101.03	TEMPORARY ROAD CLOSURES
1101.04	TEMPORARY SHOULDER CLOSURES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.02	PORTABLE WORK ZONE SIGNS
1115.01	FLASHING ARROW PANELS
1130.01	DRUM
1135.01	CONES
1145.01	BARRICADES
1150.01	FLAGGERS
1165.01	TRUCK MOUNTED IMPACT ATTENUATOR
1180.01	SKINNY-DRUM
1205.01	PAVEMENT MARKINGS - LINE TYPES & OFFSETS
1205.04	PAVEMENT MARKINGS - INTERSECTIONS
1205.07	PAVEMENT MARKINGS - PEDESTRIAN CROSSWALKS

INDEX OF SHEETS

SHEET NO.	TITLE
TMP-1	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, INDEX OF SHEETS, LEGEND, AND TAFFIC CONTROL NARRATIVE
TMP-2	PROJECT NOTES
TMP-3	PEDESTRIAN DETOUR SHEET
TMP-4	DRAWING FOR TWO-WAY UNDIVIDED AND URBAN FREEWAYS ADVANCED WORK ZONE WARNING SIGNS
TMP-5	ADVANCE WORKZONE WARNING SIGNS DETAIL DRAWING FOR MULTILANE FACILITIES

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- WORK AREA

TRAFFIC CONTROL DEVICES

- TYPE III BARRICADE
- PORTABLE SIGN
- CHANGEABLE MESSAGE SIGN
- POLICE
- FLAGGER

TRAFFIC CONTROL NARRATIVE

STEP 1: PERFORM ALL WORK ASSOCIATED WITH THE INSTALLATION OF THE PROPOSED SIGNALS AND TRAFFIC MANAGEMENT SYSTEM AS SHOWN IN THE CONTRACT, CONTRUCTION PLANS AND/OR SPECIAL PROVISIONS IN ACCORDANCE WITH THE "NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES - JANUARY 2006" AND USING SHEETS TMP-3, 4 & 5 AS REQUIRED.

NOTE: ADDRESS ANY SAFETY HAZARDS CONCERNING MOTORISTS AND PEDESTRIANS BEFORE REMOVING TEMPORARY TRAFFIC CONTROL DEVICES AND WORK ZONE WARNING SIGNS. RETURN TRAFFIC TO ITS EXISTING TRAFFIC PATTERN AT THE END OF EACH WORK PERIOD.

NOTE: WHEN PERFORMING WORK REQUIRING THE CLOSURE OF A SIDEWALK; USE AND MODIFY, AS NECESSARY, TMP-3 PEDESTRIAN DETOUR.

NOTE: WHEN SPANNING AN ENTIRE ROADWAY WITH OVERHEAD CONDUIT, POLICE MAY BE USED TO STOP BOTH DIRECTIONS OF TRAFFIC AS NECESSARY.

SET UP TRAFFIC CONTROL IN ACCORDANCE WITH RSD 1101.03, SHEET 8. THE TYPE III BARRICADE MAY BE OMITTED.

NOTE: WHEN CHANGING OUT CONTROLLER CABINETS, USE A POLICE OFFICER(S) TO DIRECT TRAFFIC THROUGH THE INTERSECTION WHILE TRAFFIC SIGNAL IS NOT IN OPERATION. DO NOT TAKE TRAFFIC SIGNAL OUT OF OPERATION FOR MORE THAN 3 HOURS AT A GIVEN INTERSECTION. DO NOT TAKE ANY TRAFFIC SIGNAL OUT OF OPERATION TO PERFORM CONTROLLER CABINET CHANGEOUT BETWEEN THE HOURS OF 4:00 PM AND 9:00 AM THE FOLLOWING MORNING.

STEP 2: UPON COMPLETION OF THE PROJECT, REMOVE ALL TRAFFIC CONTROL DEVICES.

WORK ZONE SAFETY & MOBILITY
"from the MOUNTAINS to the COAST"

N.C.D.O.T. WORK ZONE TRAFFIC CONTROL
1580 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1580
1020 BIRCH RIDGE DRIVE, RALEIGH, NC 27610 (DELIVERY)
PHONE: (919) 250-4094 FAX: (919) 250-4098

J. S. BOURNE, P.E. — STATE TRAFFIC MANAGEMENT ENGINEER
STEVE KITE, P.E. — TRAFFIC CONTROL PROJECT ENGINEER
DON PARKER — TRAFFIC CONTROL PROJECT DESIGN ENGINEER
DOUG JOYNER — TRAFFIC CONTROL DESIGN ENGINEER /TECHNICIAN

DIVISION OF HIGHWAYS * STATE OF NORTH CAROLINA * DEPARTMENT OF TRANSPORTATION * WORK ZONE TRAFFIC CONTROL

APPROVED: [signature]
DATE: August 1, 2011

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 022104 ENGINEER JOHN S. KITE, JR.

29-JUL-2011 11:48
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dougjoyner AT TE244749

PROJ. REFERENCE NO.	SHEET NO.
U-5168	TMP-2

PROJECT NOTES

GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

TIME RESTRICTIONS

A) DO NOT CLOSE OR NARROW TRAVEL LANES AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS
ANY ROAD	MONDAY THRU SUNDAY 5:30 AM TO 8:00 PM

B) DO NOT CLOSE OR NARROW TRAVEL LANES DURING HOLIDAYS AND SPECIAL EVENTS AS FOLLOWS:

ROAD NAME

ANY ROAD

HOLIDAY

1. FOR ANY UNEXPECTED OCCURRENCE THAT CREATES UNUSUALLY HIGH TRAFFIC VOLUMES, AS DIRECTED BY THE ENGINEER.
2. FOR NEW YEAR'S, BETWEEN THE HOURS OF 5:30 A.M. DECEMBER 31st TO 8:00 P.M. JANUARY 2ND. IF NEW YEAR'S DAY IS ON A FRIDAY, SATURDAY, SUNDAY, OR MONDAY THEN UNTIL 8:00 P.M. THE FOLLOWING TUESDAY.
3. FOR EASTER, BETWEEN THE HOURS OF 5:30 A.M. THURSDAY AND 8:00 P.M. MONDAY.
4. FOR MEMORIAL DAY, BETWEEN THE HOURS OF 5:30 A.M. FRIDAY TO 8:00 P.M. TUESDAY.
5. FOR INDEPENDENCE DAY, BETWEEN THE HOURS OF 5:30 A.M. THE DAY BEFORE INDEPENDENCE DAY AND 8:00 P.M. THE DAY AFTER INDEPENDENCE DAY.

   IF INDEPENDENCE DAY IS ON A FRIDAY, SATURDAY, SUNDAY OR MONDAY THEN BETWEEN THE HOURS OF 5:30 A.M. THE THURSDAY BEFORE INDEPENDENCE DAY AND 8:00 P.M. THE TUESDAY AFTER INDEPENDENCE DAY.
6. FOR LABOR DAY, BETWEEN THE HOURS OF 5:30 A.M. FRIDAY AND 8:00 P.M. TUESDAY.
7. FOR THANKSGIVING DAY, BETWEEN THE HOURS OF 5:30 A.M. TUESDAY TO 8:00 P.M. MONDAY.
8. FOR CHRISTMAS, BETWEEN THE HOURS OF 5:30 A.M. THE FRIDAY BEFORE THE WEEK OF CHRISTMAS DAY AND 8:00 P.M. THE FOLLOWING TUESDAY AFTER THE WEEK OF CHRISTMAS DAY.

C) DO NOT STOP TRAFFIC AS FOLLOWS:

ROAD NAME	DAY AND TIME RESTRICTIONS	DURATION AND OPERATION
ANY ROAD	MONDAY THRU SUNDAY 5:30 AM TO 12:00 MIDNIGHT	20 MINUTES INSTALLING CABLE ACROSS ROAD

LANE AND SHOULDER CLOSURE REQUIREMENTS

D) REMOVE LANE CLOSURE DEVICES FROM THE LANE WHEN WORK IS NOT BEING PERFORMED BEHIND THE LANE CLOSURE OR WHEN A LANE CLOSURE IS NO LONGER NEEDED OR AS DIRECTED BY THE ENGINEER.

E) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN 15 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN SHOULDER USING ROADWAY STANDARD DRAWING NO. 1101.04 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL OR A LANE CLOSURE IS INSTALLED.

F) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO AN UNDIVIDED FACILITY AND WITHIN 5 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

   WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING ON THE SHOULDER ADJACENT TO A DIVIDED FACILITY AND WITHIN 10 FT OF AN OPEN TRAVEL LANE, CLOSE THE NEAREST OPEN TRAVEL LANE USING ROADWAY STANDARD DRAWING NO. 1101.02 UNLESS THE WORK AREA IS PROTECTED BY BARRIER OR GUARDRAIL.

G) WHEN PERSONNEL AND/OR EQUIPMENT ARE WORKING WITHIN A LANE OF TRAVEL OF AN UNDIVIDED OR DIVIDED FACILITY, CLOSE THE LANE ACCORDING TO THE TRAFFIC CONTROL PLANS, ROADWAY STANDARD DRAWINGS, OR AS DIRECTED BY THE ENGINEER. CONDUCT THE WORK SO THAT ALL PERSONNEL AND/OR EQUIPMENT REMAIN WITHIN THE CLOSED TRAVEL LANE.

SIGNING

H) INSTALL ADVANCE WORK ZONE WARNING SIGNS WHEN WORK IS WITHIN 40 FT FROM THE EDGE OF TRAVEL LANE AND NO MORE THAN THREE (3) DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION.

I) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.

TRAFFIC CONTROL DEVICES

J) SPACE CHANNELIZING DEVICES IN WORK AREAS NO GREATER IN FEET THAN TWICE THE POSTED SPEED LIMIT (MPH), EXCEPT 10 FT ON-CENTER IN RADII, AND 3 FT OFF THE EDGE OF AN OPEN TRAVELWAY WHEN LANE CLOSURES ARE NOT IN EFFECT. WHEN SKINNY DRUMS ARE ALLOWED REFER TO SECTION 1180 OF STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES OR AS SHOWN IN THE PLANS.

K) PLACE ADDITIONAL SETS OF THREE CHANNELIZING DEVICES PERPENDICULAR TO THE EDGE OF TRAVELWAY ON 500 FT CENTERS WHEN UNOPENED LANES ARE CLOSED TO TRAFFIC.

MISCELLANEOUS

L) POLICE MAY BE USED TO MAINTAIN TRAFFIC THROUGH THE WORK AREA AND/OR INTERSECTIONS AS DIRECTED BY THE ENGINEER.

M) CONTRACTOR SHALL MAINTAIN SIDEWALK ACCESS AT ALL TIMES AS STATED IN THE PHASING. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TEMPORARY SIDEWALKS (CONCRETE, ASPHALT, OR OTHER SUITABLE MATERIAL AS APPROVED BY THE ENGINEER) AT ALL LOCATIONS WHERE THE OPEN PEDESTRIAN TRAVELWAY HAS BEEN REMOVED FOR CONSTRUCTION OPERATIONS (UTILITIES, DRAINAGE, ETC.).

APPROVED: DATE 9/12/11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022104 ENGINEER JOHN S. KITE, JR.

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

PROJECT NOTES

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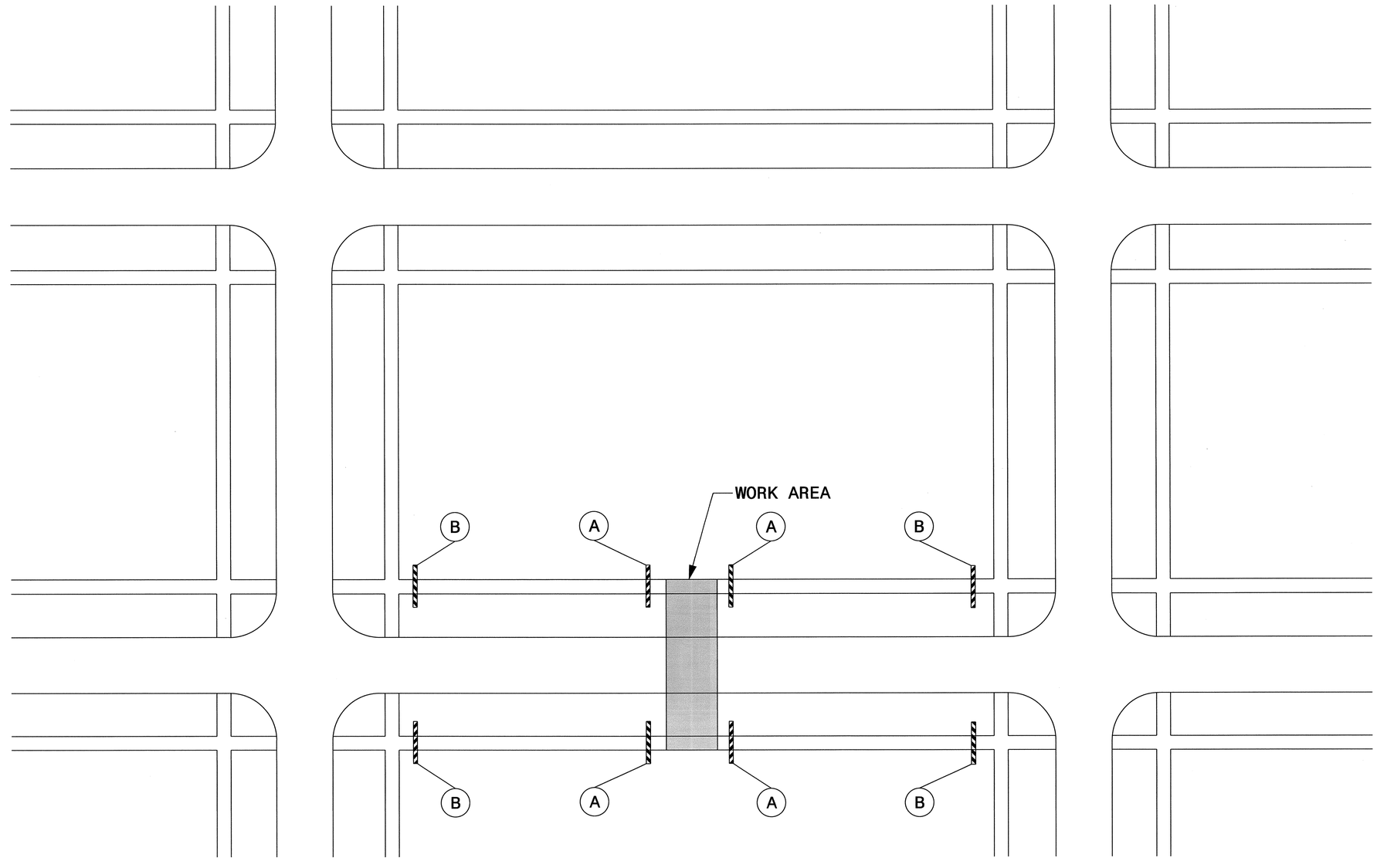
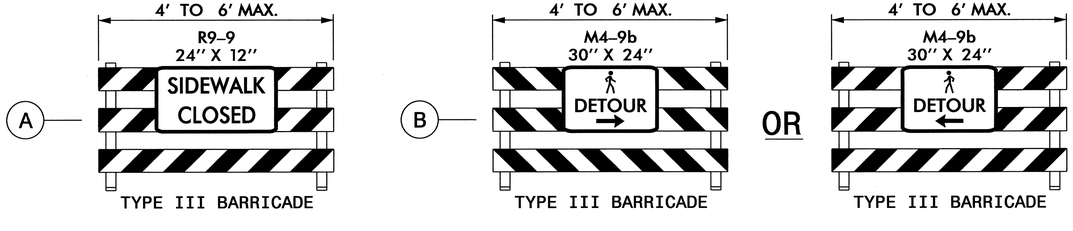
PROJ. REFERENCE NO.	SHEET NO.
U-5168	TMP-3





NOTE: USE AND MODIFY AS DIRECTED BY THE ENGINEER FOR WORK REQUIRING THE CLOSURE OF A SIDEWALK.

APPROVED: DATE: 8/1/11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022104 ENGINEER JOHN S. KITE, JR.

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

PEDESTRIAN DETOUR

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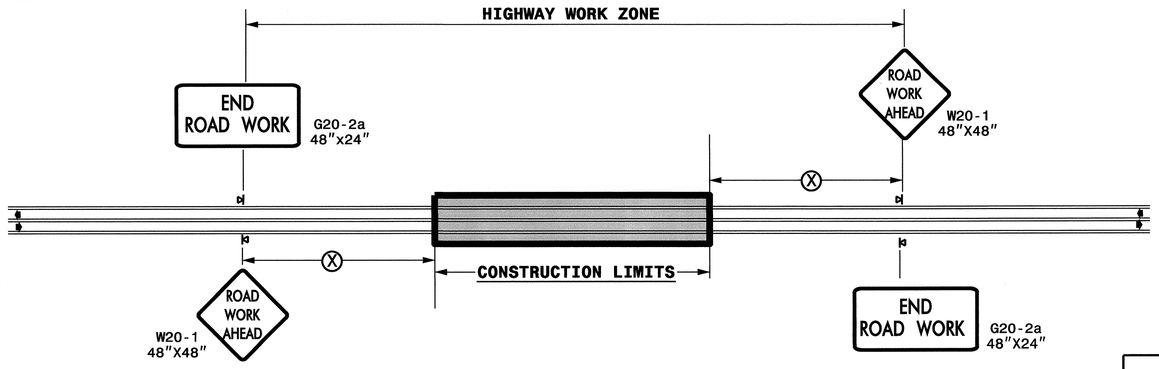
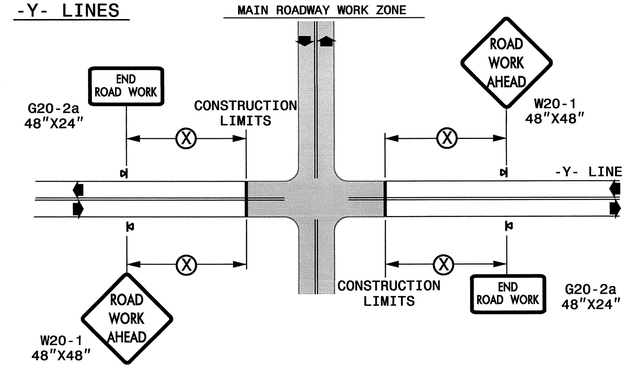
TWO-WAY UNDIVIDED ** (L-LINES)



POSTED SPEED LIMIT (M.P.H.)	RECOMMENDED MINIMUM SIGN SPACING (X)
≤ 50	500′
≥ 55	1000′

NOTE: USE ONLY IF DIRECTED BY THE ENGINEER.

ROADWAYS INTERSECTING ALONG 2 WAY UNDIVIDED WORK ZONE (Y-LINES)



GENERAL NOTES

- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCED WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT OVERNIGHT. FOR SHORT-TERM DAILY MAINTENANCE TYPE OPERATIONS, THIS SIGNING APPLICATION IS OPTIONAL; MAY USE ONLY APPLICABLE ROADWAY STANDARD DRAWINGS INSTEAD. HOWEVER, IF THIS SIGNING APPLICATION IS USED, SIGNS MAY BE PORTABLE MOUNTED.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.
- ** TWO-WAY UNDIVIDED ADVANCE WARNING SIGN CONFIGURATION MAY BE USED ON URBAN MULTI-LANE FACILITIES WHERE CONDITIONS LIMIT THE USE OF DUAL MOUNTED SIGNS AS DETERMINED BY THE ENGINEER.

LEGEND

PORTABLE SIGN

DIRECTION OF TRAFFIC FLOW

APPROVED: DATE: 8/1/11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022104 ENGINEER JOHN S. KITE, JR.

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

DETAIL DRAWING FOR TWO-WAY UNDIVIDED AND URBAN FREEWAYS

WORK ZONE WARNING SIGNS

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

DETAIL DRAWING FOR TWO-WAY UNDIVIDED WORK ZONE WARNING SIGNS

SHEET 1 OF 1

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ADVANCED WORK ZONE WARNING SIGNING FOR FREEWAYS (4 LANES OR GREATER)

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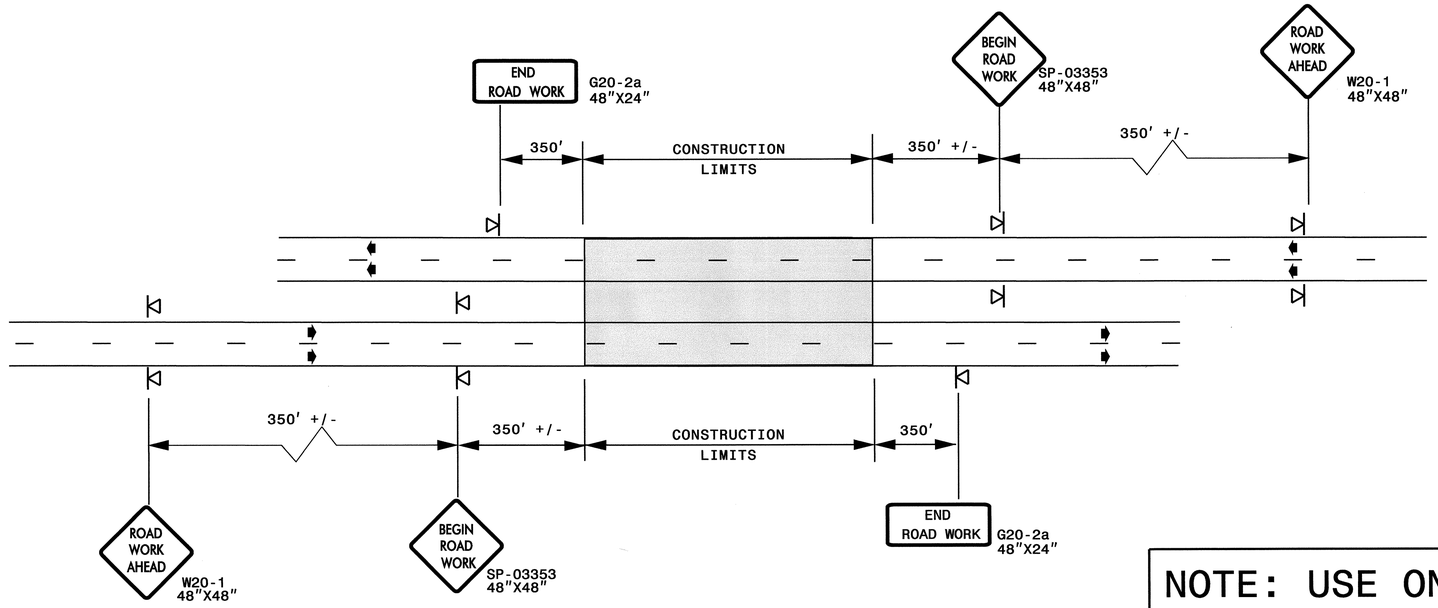
U-5168	TMP-5

DETAIL A



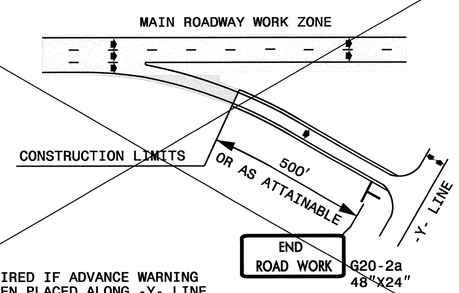
LEGEND

- PORTABLE SIGN
- DIRECTION OF TRAFFIC FLOW

NOTE: USE ONLY IF DIRECTED BY THE ENGINEER.

DETAIL B

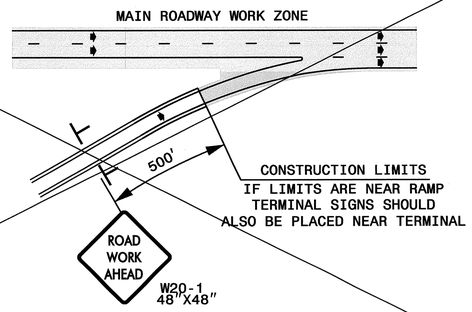
EXIT RAMPS



NOTE: SIGN NOT REQUIRED IF ADVANCE WARNING SIGNS HAVE BEEN PLACED ALONG -Y- LINE THAT RAMP INTERSECTS. IF CONSTRUCTION LIMITS ARE AT END OF RAMP, PLACE SIGN AT END OF RAMP.

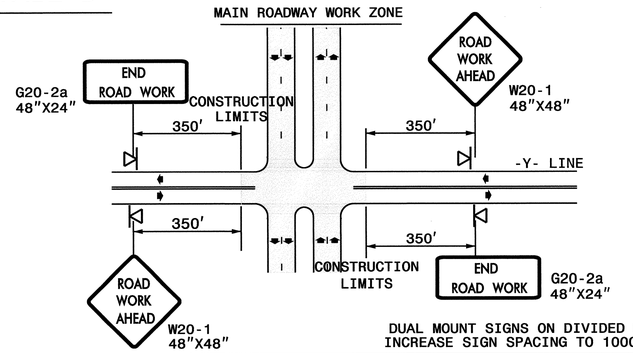
DETAIL C

ENTRANCE RAMPS



DETAIL D

-Y- LINES



DUAL MOUNT SIGNS ON DIVIDED HIGHWAYS AND INCREASE SIGN SPACING TO 1000'+/-.

GENERAL NOTES

- USE FLUORESCENT ORANGE SHEETING (TYPE VII OR HIGHER) ON ALL ADVANCED WORK ZONE SIGNS.
- DO NOT INSTALL ADVANCE WARNING SIGNS MORE THAN 3 DAYS PRIOR TO BEGINNING OF WORK.
- SIGNS SHOWN ARE REQUIRED FOR WORK ZONES THAT WILL REMAIN IN EFFECT OVERNIGHT. FOR SHORT-TERM DAILY MAINTENANCE TYPE OPERATIONS, THIS SIGNING APPLICATION IS OPTIONAL; MAY USE ONLY APPLICABLE ROADWAY STANDARD DRAWINGS INSTEAD. HOWEVER, IF THIS SIGNING APPLICATION IS USED, SIGNS MAY BE PORTABLE MOUNTED.
- ALL SIGN SPACING DIMENSIONS ARE APPROXIMATE, FIELD ADJUST AS NECESSARY OR AS DIRECTED.

APPROVED: DATE: 8/1/11

SEAL

NORTH CAROLINA PROFESSIONAL SEAL 022104 ENGINEER JOHN S. KITE, JR.

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION WORK ZONE TRAFFIC CONTROL

ADVANCED WORK ZONE WARNING SIGNS FOR MULTILANE FACILITIES

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