



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

ROY COOPER  
GOVERNOR

J.R. "JOEY" HOPKINS  
SECRETARY

September 11, 2024

**Addendum No. 1**

RE: Contract # C204941

WBS # 54035.3.1

STATE FUNDED

**Davidson County (U-5757)**

NC-8 (WINSTON RD) FROM US-29/US-70 TO SR-1846 (ARRINGTON DR).

**September 17, 2024 Letting**

To Whom It May Concern:

Reference is made to the plans and proposal furnished to you on this project.

The following revisions have been made to the Signals Plans.

Sheet No.	Revision
Sig 4.0	"B" in the Legend that read "LEFT LANE ENDS 300 FEET" Sign (W19-10L) has been removed.
Sig 4.1, Sig 4.2	Sealed date reference updated.

Please void the above listed Sheets in your Plans and staple the revised Sheets thereto.

The following revisions have been made to the proposal.

Page No.	Revision
Proposal Cover	Note added that reads "Includes Addendum No. 1 Dated 09-11-2024".

Please void the above listed existing Page in your proposal and staple the revised Page thereto.

On the item sheets the following pay item revision has been made:

<u>Item</u>	<u>Description</u>	<u>Old Quantity</u>	<u>New Quantity</u>
0180-7636000000-N 1745	SIGN FOR SIGNALS	4 EA	3 EA

The Contractor's bid must include this pay item revision.

The electronic bidding file has been updated to reflect this revision. Please download the Addendum File and follow the instructions for applying the addendum. Bid Express will not accept your bid unless the addendum has been applied.

The contract will be prepared accordingly.

Sincerely,

Signed by:  
  
52C46046381F443...

Ronald E. Davenport, Jr., PE  
State Contract Officer

RED/cms  
Attachments

cc: Mr. Wiley W. Jones III, PE  
Mr. Pat Ivey, PE  
Mr. Ken Kennedy, PE  
Mr. Malcolm Bell  
Mr. Forrest Dungan, PE  
Ms. Jaci Kincaid  
Mr. Jon Weathersbee, PE  
Project File (2)

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
RALEIGH, N.C.

PROPOSAL

**INCLUDES ADDENDUM No. 1 DATED 09-11-2024**

DATE AND TIME OF BID OPENING: **Sep 17, 2024 AT 02:00 PM**

CONTRACT ID        C204941  
WBS                    54035.3.1

FEDERAL-AID NO.    STATE FUNDED  
COUNTY             DAVIDSON  
T.I.P NO.            U-5757  
MILES                 0.771  
ROUTE NO.            NC-8  
LOCATION                NC-8 (WINSTON RD) FROM US-29/US-70 TO SR-1846 (ARRINGTON DR).

TYPE OF WORK        GRADING, DRAINAGE, PAVING, AND SIGNALS.

**NOTICE:**

ALL BIDDERS SHALL COMPLY WITH ALL APPLICABLE LAWS REGULATING THE PRACTICE OF GENERAL CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA WHICH REQUIRES THE BIDDER TO BE LICENSED BY THE N.C. LICENSING BOARD FOR CONTRACTORS WHEN BIDDING ON ANY NON-FEDERAL AID PROJECT WHERE THE BID IS \$30,000 OR MORE, EXCEPT FOR CERTAIN SPECIALTY WORK AS DETERMINED BY THE LICENSING BOARD. BIDDERS SHALL ALSO COMPLY WITH ALL OTHER APPLICABLE LAWS REGULATING THE PRACTICES OF ELECTRICAL, PLUMBING, HEATING AND AIR CONDITIONING AND REFRIGERATION CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA. NOTWITHSTANDING THESE LIMITATIONS ON BIDDING, THE BIDDER WHO IS AWARDED ANY FEDERAL - AID FUNDED PROJECT SHALL COMPLY WITH CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA FOR LICENSING REQUIREMENTS WITHIN 60 CALENDAR DAYS OF BID OPENING.

**BIDS WILL BE RECEIVED AS SHOWN BELOW:**

**THIS IS A ROADWAY PROPOSAL**

**5% BID BOND OR BID DEPOSIT REQUIRED**

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County: DAVIDSON

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
<b>ROADWAY ITEMS</b>						
0001	0000100000-N	800	MOBILIZATION	Lump Sum	L.S.	
0002	0000400000-N	801	CONSTRUCTION SURVEYING	Lump Sum	L.S.	
0003	0043000000-N	226	GRADING	Lump Sum	L.S.	
0004	0050000000-E	226	SUPPLEMENTARY CLEARING & GRUBBING	1 ACR		
0005	0057000000-E	226	UNDERCUT EXCAVATION	5,000 CY		
0006	0134000000-E	240	DRAINAGE DITCH EXCAVATION	640 CY		
0007	0195000000-E	265	SELECT GRANULAR MATERIAL	4,810 CY		
0008	0196000000-E	270	GEOTEXTILE FOR SOIL STABILIZATION	5,010 SY		
0009	0255000000-E	SP	GENERIC GRADING ITEM HAULING AND DISPOSAL OF PETROLEUM CONTAMINATED SOIL	200 TON		
0010	0318000000-E	300	FOUNDATION CONDITIONING MATERIAL, MINOR STRUCTURES	1,125 TON		
0011	0321000000-E	300	FOUNDATION CONDITIONING GEOTEXTILE	4,668 SY		
0012	0335200000-E	305	15" DRAINAGE PIPE	252 LF		
0013	0335300000-E	305	18" DRAINAGE PIPE	64 LF		
0014	0335400000-E	305	24" DRAINAGE PIPE	128 LF		
0015	0335500000-E	305	30" DRAINAGE PIPE	40 LF		
0016	0335600000-E	305	36" DRAINAGE PIPE	164 LF		
0017	0366000000-E	310	15" RC PIPE CULVERTS, CLASS III	364 LF		

County: DAVIDSON

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0018	0372000000-E	310	18" RC PIPE CULVERTS, CLASS III	608 LF		
0019	0378000000-E	310	24" RC PIPE CULVERTS, CLASS III	224 LF		
0020	0384000000-E	310	30" RC PIPE CULVERTS, CLASS III	76 LF		
0021	0448200000-E	310	15" RC PIPE CULVERTS, CLASS IV	3,616 LF		
0022	0448300000-E	310	18" RC PIPE CULVERTS, CLASS IV	1,112 LF		
0023	0448400000-E	310	24" RC PIPE CULVERTS, CLASS IV	204 LF		
0024	0449000000-E	310	*** RC PIPE CULVERTS, CLASS V (15")	104 LF		
0025	0449000000-E	310	*** RC PIPE CULVERTS, CLASS V (30")	40 LF		
0026	0588000000-E	310	18" CS PIPE CULVERTS, 0.064" THICK	48 LF		
0027	0594000000-E	310	24" CS PIPE CULVERTS, 0.064" THICK	44 LF		
0028	0636000000-E	310	*** CS PIPE ELBOWS, ***** THICK (18", 0.064")	2 EA		
0029	0973100000-E	330	*** WELDED STEEL PIPE, ***** THICK, GRADE B IN SOIL (18", 0.250")	68 LF		
0030	0973300000-E	330	*** WELDED STEEL PIPE, ***** THICK, GRADE B NOT IN SOIL (18", 0.250")	68 LF		
0031	0995000000-E	340	PIPE REMOVAL	3,444 LF		
0032	1099500000-E	505	SHALLOW UNDERCUT	350 CY		
0033	1099700000-E	505	CLASS IV SUBGRADE STABILIZATION	800 TON		
0034	1112000000-E	505	GEOTEXTILE FOR SUBGRADE STABILIZATION	1,200 SY		

County: DAVIDSON

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0035	1121000000-E	520	AGGREGATE BASE COURSE	140 TON		
0036	1220000000-E	545	INCIDENTAL STONE BASE	500 TON		
0037	1297000000-E	607	MILLING ASPHALT PAVEMENT, **** DEPTH (1-1/2")	15,000 SY		
0038	1308000000-E	607	MILLING ASPHALT PAVEMENT, **** TO ***** (0" TO 3")	7,500 SY		
0039	1330000000-E	607	INCIDENTAL MILLING	7,500 SY		
0040	1491000000-E	610	ASPHALT CONC BASE COURSE, TYPE B25.0C	7,300 TON		
0041	1503000000-E	610	ASPHALT CONC INTERMEDIATE COURSE, TYPE I19.0C	6,600 TON		
0042	1523000000-E	610	ASPHALT CONC SURFACE COURSE, TYPE S9.5C	7,700 TON		
0043	1575000000-E	620	ASPHALT BINDER FOR PLANT MIX	1,100 TON		
0044	1693000000-E	654	ASPHALT PLANT MIX, PAVEMENT REPAIR	700 TON		
0045	2000000000-N	806	RIGHT-OF-WAY MARKERS	75 EA		
0046	2022000000-E	815	SUBDRAIN EXCAVATION	45 CY		
0047	2026000000-E	815	GEOTEXTILE FOR SUBSURFACE DRAINS	200 SY		
0048	2036000000-E	815	SUBDRAIN COARSE AGGREGATE	34 CY		
0049	2044000000-E	815	6" PERFORATED SUBDRAIN PIPE	200 LF		
0050	2070000000-N	815	SUBDRAIN PIPE OUTLET	1 EA		
0051	2077000000-E	815	6" OUTLET PIPE	6 LF		

County: DAVIDSON

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0052	2253000000-E	840	PIPE COLLARS	0.5 CY		
0053	2286000000-N	840	MASONRY DRAINAGE STRUCTURES	99 EA		
0054	2308000000-E	840	MASONRY DRAINAGE STRUCTURES	62 LF		
0055	2364000000-N	840	FRAME WITH TWO GRATES, STD 840.16	9 EA		
0056	2366000000-N	840	FRAME WITH TWO GRATES, STD 840.24	4 EA		
0057	2367000000-N	840	FRAME WITH TWO GRATES, STD 840.29	8 EA		
0058	2374000000-N	840	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (E)	12 EA		
0059	2374000000-N	840	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (F)	32 EA		
0060	2374000000-N	840	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (G)	29 EA		
0061	2396000000-N	840	FRAME WITH COVER, STD 840.54	5 EA		
0062	2440000000-N	852	CONCRETE TRANSITIONAL SECTION FOR CATCH BASIN	1 EA		
0063	2535000000-E	846	*** X *** CONCRETE CURB (8" X 18")	900 LF		
0064	2542000000-E	846	1'-6" CONCRETE CURB & GUTTER	2,250 LF		
0065	2549000000-E	846	2'-6" CONCRETE CURB & GUTTER	8,100 LF		
0066	2570000000-N	SP	MODIFIED CONCRETE FLUME	2 EA		
0067	2580000000-E	846	CONCRETE VALLEY GUTTER	1,000 LF		
0068	2591000000-E	848	4" CONCRETE SIDEWALK	2,950 SY		

County: DAVIDSON

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0069	2605000000-N	848	CONCRETE CURB RAMPS	32 EA		
0070	2612000000-E	848	6" CONCRETE DRIVEWAY	500 SY		
0071	2619000000-E	850	4" CONCRETE PAVED DITCH	11 SY		
0072	2655000000-E	852	5" MONOLITHIC CONCRETE ISLANDS (KEYED IN)	1,100 SY		
0073	2800000000-N	858	ADJUSTMENT OF CATCH BASINS	1 EA		
0074	3536000000-E	866	CHAIN LINK FENCE, 48" FABRIC	220 LF		
0075	3542000000-E	866	METAL LINE POSTS FOR 48" CHAIN LINK FENCE	19 EA		
0076	3548000000-E	866	METAL TERMINAL POSTS FOR 48" CHAIN LINK FENCE	2 EA		
0077	3628000000-E	876	RIP RAP, CLASS I	380 TON		
0078	3649000000-E	876	RIP RAP, CLASS B	4 TON		
0079	3656000000-E	876	GEOTEXTILE FOR DRAINAGE	1,129 SY		
0080	4072000000-E	903	SUPPORTS, 3-LB STEEL U-CHANNEL	750 LF		
0081	4102000000-N	904	SIGN ERECTION, TYPE E	27 EA		
0082	4108000000-N	904	SIGN ERECTION, TYPE F	4 EA		
0083	4116100000-N	904	SIGN ERECTION, RELOCATE TYPE **** (GROUND MOUNTED) (E)	1 EA		
0084	4155000000-N	907	DISPOSAL OF SIGN SYSTEM, U- CHANNEL	37 EA		
0085	4400000000-E	1110	WORK ZONE SIGNS (STATIONARY)	264 SF		



County: DAVIDSON

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0086	4405000000-E	1110	WORK ZONE SIGNS (PORTABLE)	242 SF		
0087	4410000000-E	1110	WORK ZONE SIGNS (BARRICADE MOUNTED)	10 SF		
0088	4415000000-N	1115	FLASHING ARROW BOARD	4 EA		
0089	4420000000-N	1120	PORTABLE CHANGEABLE MESSAGE SIGN	2 EA		
0090	4430000000-N	1130	DRUMS	300 EA		
0091	4435000000-N	1135	CONES	100 EA		
0092	4445000000-E	1145	BARRICADES (TYPE III)	64 LF		
0093	4447000000-E	SP	PEDESTRIAN CHANNELIZING DEVICES	30 LF		
0094	4455000000-N	1150	FLAGGER	60 DAY		
0095	4480000000-N	1165	TMA	2 EA		
0096	4516000000-N	1180	SKINNY DRUM	100 EA		
0097	4600000000-N	SP	GENERIC TRAFFIC CONTROL ITEM AUDIBLE WARNING DEVICE	2 EA		
0098	4685000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (4", 90 MILS)	18,828 LF		
0099	4695000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (8", 90 MILS)	4,130 LF		
0100	4709000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (24", 90 MILS)	700 LF		
0101	4725000000-E	1205	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS)	82 EA		
0102	4810000000-E	1205	PAINT PAVEMENT MARKING LINES (4")	26,231 LF		

County: DAVIDSON

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0103	4820000000-E	1205	PAINT PAVEMENT MARKING LINES (8")	4,276 LF		
0104	4835000000-E	1205	PAINT PAVEMENT MARKING LINES (24")	950 LF		
0105	4840000000-N	1205	PAINT PAVEMENT MARKING CHARACTER	8 EA		
0106	4845000000-N	1205	PAINT PAVEMENT MARKING SYMBOL	115 EA		
0107	5325600000-E	1510	6" WATER LINE	5,507 LF		
0108	5325800000-E	1510	8" WATER LINE	80 LF		
0109	5326600000-E	1510	16" WATER LINE	483 LF		
0110	5329000000-E	1510	DUCTILE IRON WATER PIPE FITTINGS	11,690 LB		
0111	5540000000-E	1515	6" VALVE	30 EA		
0112	5546000000-E	1515	8" VALVE	1 EA		
0113	5648000000-N	1515	RELOCATE WATER METER	23 EA		
0114	5649000000-N	1515	RECONNECT WATER METER	1 EA		
0115	5666000000-N	1515	FIRE HYDRANT	4 EA		
0116	5673000000-E	1515	FIRE HYDRANT LEG	104 LF		
0117	5686500000-E	1515	WATER SERVICE LINE	499 LF		
0118	5691300000-E	1520	8" SANITARY GRAVITY SEWER	824 LF		
0119	5768000000-N	1520	SANITARY SEWER CLEAN-OUT	11 EA		

County: DAVIDSON

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0120	5768500000-E	1520	SEWER SERVICE LINE	200 LF		
0121	5775000000-E	1525	4' DIA UTILITY MANHOLE	7 EA		
0122	5781000000-E	1525	UTILITY MANHOLE WALL 4' DIA	15 LF		
0123	5800000000-E	1530	ABANDON 6" UTILITY PIPE	5,311 LF		
0124	5801000000-E	1530	ABANDON 8" UTILITY PIPE	1,607 LF		
0125	5816000000-N	1530	ABANDON UTILITY MANHOLE	6 EA		
0126	5828000000-N	1530	REMOVE UTILITY MANHOLE	2 EA		
0127	5835700000-E	1540	16" ENCASEMENT PIPE	100 LF		
0128	6000000000-E	1605	TEMPORARY SILT FENCE	12,495 LF		
0129	6006000000-E	1610	STONE FOR EROSION CONTROL, CLASS A	645 TON		
0130	6009000000-E	1610	STONE FOR EROSION CONTROL, CLASS B	425 TON		
0131	6012000000-E	1610	SEDIMENT CONTROL STONE	625 TON		
0132	6015000000-E	1615	TEMPORARY MULCHING	17 ACR		
0133	6018000000-E	1620	SEED FOR TEMPORARY SEEDING	1,100 LB		
0134	6021000000-E	1620	FERTILIZER FOR TEMPORARY SEEDING	5.5 TON		
0135	6024000000-E	1622	TEMPORARY SLOPE DRAINS	200 LF		
0136	6029000000-E	SP	SAFETY FENCE	560 LF		

County: DAVIDSON

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0137	6030000000-E	1630	SILT EXCAVATION	1,100 CY		
0138	6036000000-E	1631	MATTING FOR EROSION CONTROL	7,585 SY		
0139	6042000000-E	1632	1/4" HARDWARE CLOTH	360 LF		
0140	6071002000-E	1642	FLOCCULANT	50 LB		
0141	6071030000-E	1640	COIR FIBER BAFFLE	25 LF		
0142	6084000000-E	1660	SEEDING & MULCHING	15 ACR		
0143	6087000000-E	1660	MOWING	12 ACR		
0144	6090000000-E	1661	SEED FOR REPAIR SEEDING	200 LB		
0145	6093000000-E	1661	FERTILIZER FOR REPAIR SEEDING	0.5 TON		
0146	6096000000-E	1662	SEED FOR SUPPLEMENTAL SEEDING	375 LB		
0147	6108000000-E	1665	FERTILIZER TOPDRESSING	11.25 TON		
0148	6114500000-N	1667	SPECIALIZED HAND MOWING	10 MHR		
0149	6114800000-N	SP	MANUAL LITTER REMOVAL	7 MHR		
0150	6114900000-E	SP	LITTER DISPOSAL	1 TON		
0151	6117000000-N	1675	RESPONSE FOR EROSION CONTROL	25 EA		
0152	6117500000-N	SP	CONCRETE WASHOUT STRUCTURE	6 EA		
0153	6132000000-N	SP	GENERIC EROSION CONTROL ITEM FABRIC INSERT INLET PROTECTION CLEANOUT	549 EA		

County: DAVIDSON

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0154	6132000000-N	SP	GENERIC EROSION CONTROL ITEM FABRIC INSERT INLET PROTECTION, TYPE 1	183 EA		
0155	7048500000-E	1705	PEDESTRIAN SIGNAL HEAD (16", 1 SECTION W/COUNTDOWN)	22 EA		
0156	7060000000-E	1705	SIGNAL CABLE	13,525 LF		
0157	7120000000-E	1705	VEHICLE SIGNAL HEAD (12", 3 SECTION)	52 EA		
0158	7132000000-E	1705	VEHICLE SIGNAL HEAD (12", 4 SECTION)	12 EA		
0159	7204000000-N	1705	LOUVER	2 EA		
0160	7264000000-E	1710	MESSENGER CABLE (3/8")	1,450 LF		
0161	7300000000-E	1715	UNPAVED TRENCHING (***** (2, 2")	1,800 LF		
0162	7301000000-E	1715	DIRECTIONAL DRILL (***** (2, 2")	650 LF		
0163	7324000000-N	1716	JUNCTION BOX (STANDARD SIZE)	33 EA		
0164	7360000000-N	1720	WOOD POLE	13 EA		
0165	7372000000-N	1721	GUY ASSEMBLY	22 EA		
0166	7408000000-E	1722	1" RISER WITH WEATHERHEAD	3 EA		
0167	7420000000-E	1722	2" RISER WITH WEATHERHEAD	7 EA		
0168	7444000000-E	1725	INDUCTIVE LOOP SAWCUT	2,550 LF		
0169	7456100000-E	1726	LEAD-IN CABLE (14-2)	5,950 LF		
0170	7481000000-N	SP	SITE SURVEY	4 EA		

County: DAVIDSON

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0171	7481240000-N	SP	CAMERA WITHOUT INTERNAL LOOP EMULATOR PROCESSING UNIT	12 EA		
0172	7481260000-N	SP	EXTERNAL LOOP EMULATOR PROCESSING UNIT	4 EA		
0173	7575142010-N	1736	900MHZ SERIAL/ETHERNET SPREAD SPECTRUM RADIO	6 EA		
0174	7575142060-N	1737	MODIFY RADIO INSTALLATION	5 EA		
0175	7588000000-N	SP	METAL POLE WITH SINGLE MAST ARM	1 EA		
0176	7590000000-N	SP	METAL POLE WITH DUAL MAST ARM	5 EA		
0177	7613000000-N	SP	SOIL TEST	6 EA		
0178	7614100000-E	SP	DRILLED PIER FOUNDATION	54 CY		
0179	7631000000-N	SP	MAST ARM WITH METAL POLE DESIGN	6 EA		
0180	7636000000-N	1745	SIGN FOR SIGNALS	3 EA		
0181	7642100000-N	1743	TYPE I POST WITH FOUNDATION	8 EA		
0182	7642200000-N	1743	TYPE II PEDESTAL WITH FOUNDATION	9 EA		
0183	7642300000-N	1743	TYPE III PEDESTAL WITH FOUNDATION	1 EA		
0184	7684000000-N	1750	SIGNAL CABINET FOUNDATION	3 EA		
0185	7696000000-N	1751	CONTROLLERS WITH CABINET (*****) (2070LX, 332)	1 EA		
0186	7744000000-N	1751	DETECTOR CARD (TYPE 170)	19 EA		
0187	7960000000-N	SP	METAL POLE FOUNDATION REMOVAL	1 EA		

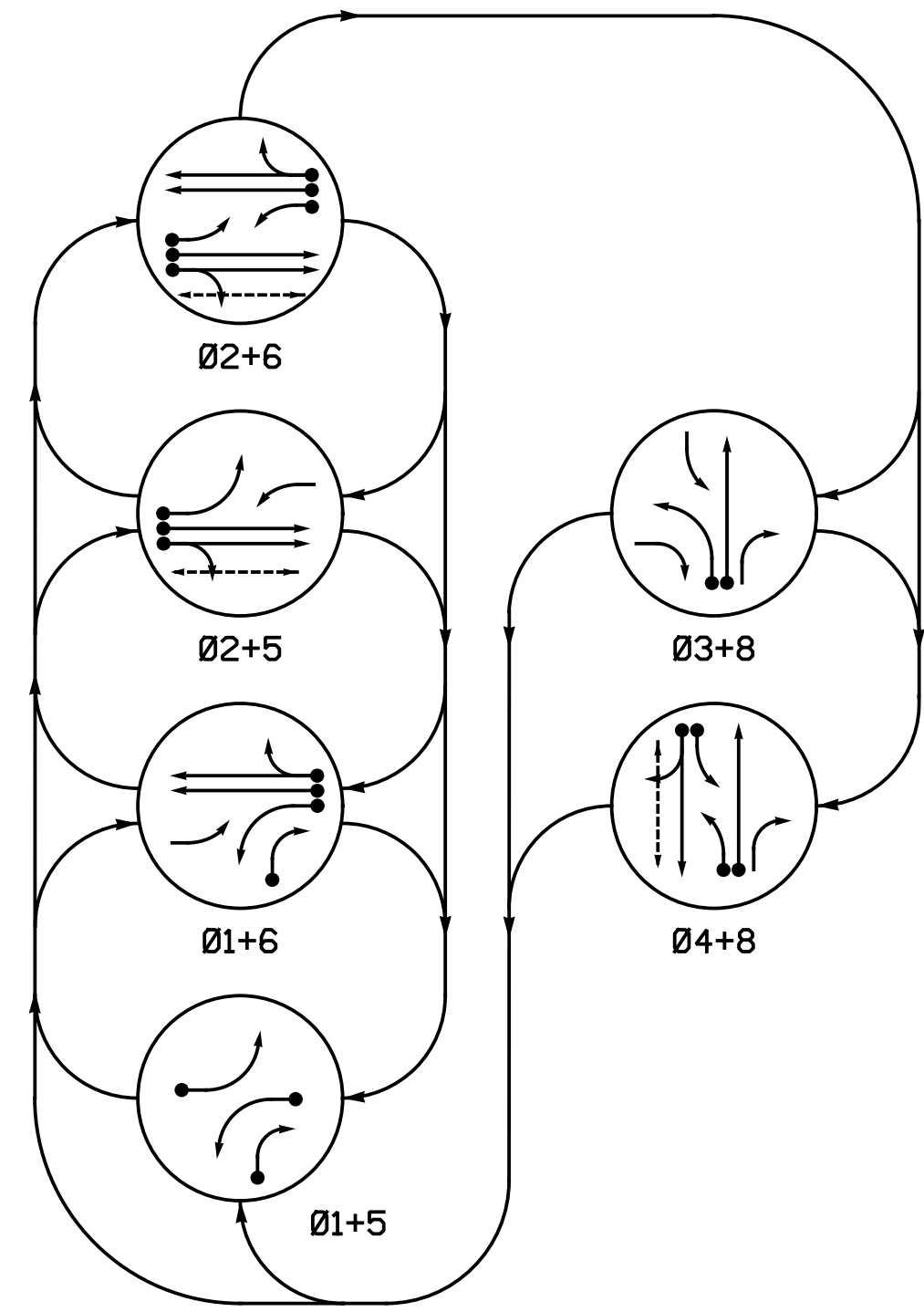
County: DAVIDSON

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0188	7972000000-N	SP	METAL POLE REMOVAL	1 EA		
0189	7980000000-N	SP	GENERIC SIGNAL ITEM 2070LX CONTROLLER	5 EA		
0190	7980000000-N	SP	GENERIC SIGNAL ITEM CABINET WITHOUT CONTROLLER (332)	2 EA		
0191	7980000000-N	SP	GENERIC SIGNAL ITEM ETHERNET EDGE SWITCH	6 EA		
0192	7980000000-N	SP	GENERIC SIGNAL ITEM LUMINAIRE ARM FOR TEMPORARY VIDEO SYSTEM	13 EA		
0193	7980000000-N	SP	GENERIC SIGNAL ITEM PROTECTIVE COATING FOR DUAL MAST ARM POLE (BLACK)	5 EA		
0194	7980000000-N	SP	GENERIC SIGNAL ITEM PROTECTIVE COATING FOR SINGLE MAST ARM POLE (BLACK)	1 EA		
0195	7980000000-N	SP	GENERIC SIGNAL ITEM PROTECTIVE COATING FOR TYPE I PUSHBUTTON POST (BLACK)	8 EA		
0196	7980000000-N	SP	GENERIC SIGNAL ITEM PROTECTIVE COATING FOR TYPE II SIGNAL PEDESTAL (BLACK)	9 EA		
0197	7980000000-N	SP	GENERIC SIGNAL ITEM PROTECTIVE COATING FOR TYPE III SIGNAL PEDESTAL (BLACK)	1 EA		

0959/Sep11/Q244640.75/D849536916070/E197

Total Amount Of Bid For Entire Project :

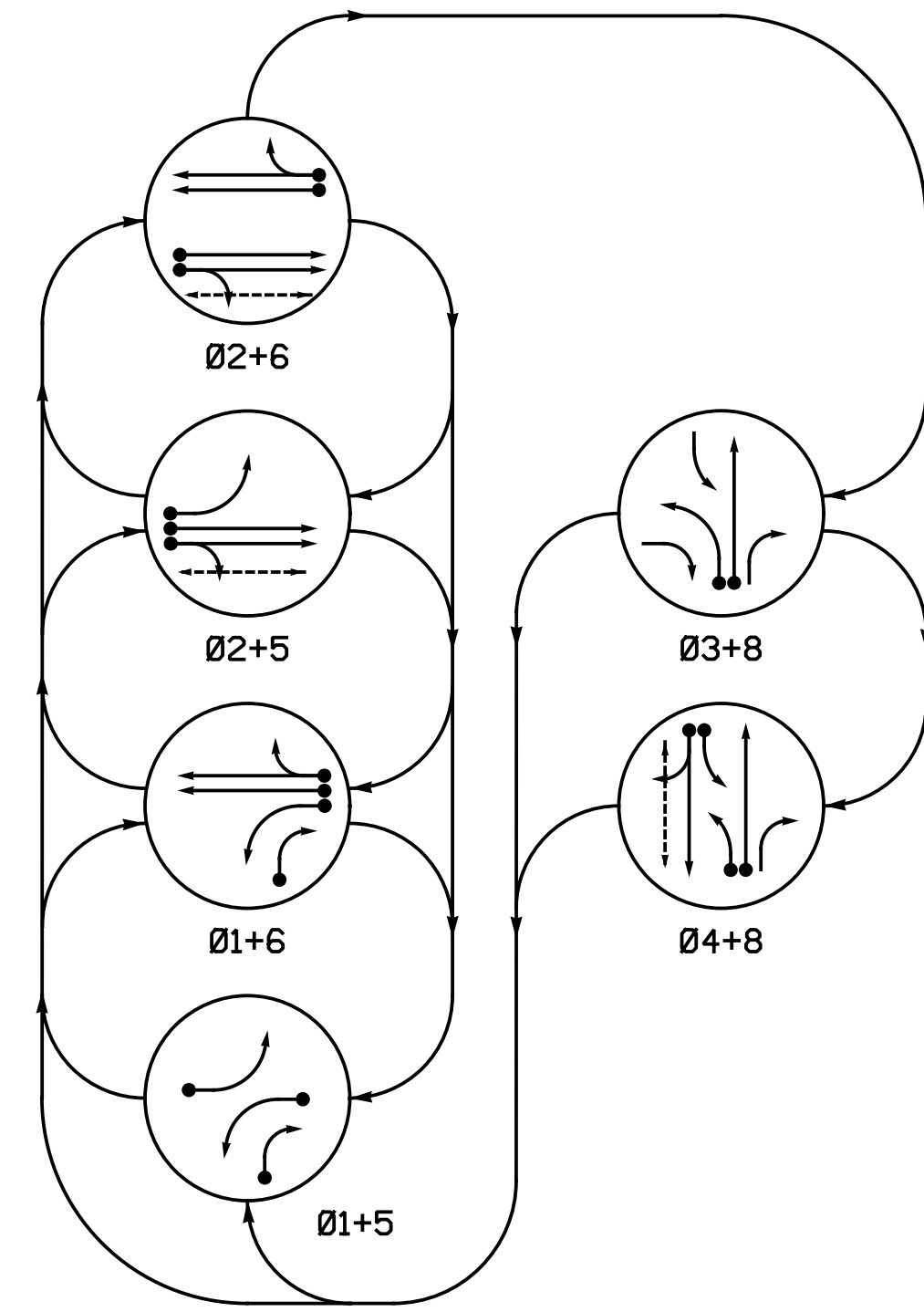
**DELAULT PHASING DIAGRAM**



**DEFAULT PHASING TABLE OF OPERATION**

SIGNAL FACE	PHASE						F
	01+5	01+6	02+5	02+6	03+8	04+8	
11	-	-	-	-	-	-	-
21	R	R	G	G	R	R	Y
22	R	R	G	G	R	R	Y
31	R	R	R	R	-	-	R
41	R	R	R	R	-	-	R
42,43	R	R	R	R	G	R	-
51	-	-	-	-	-	-	-
61,62	R	G	R	G	R	R	Y
81	R	R	R	R	G	G	R
82	R	R	R	R	G	G	R
P21,P22	DW	DW	W	W	DW	DW	DRK

**ALTERNATE PHASING DIAGRAM**



**ALTERNATE PHASING TABLE OF OPERATION**

SIGNAL FACE	PHASE						F
	01+5	01+6	02+5	02+6	03+8	04+8	
11	-	-	-	-	-	-	-
21	R	R	G	G	R	R	Y
22	R	R	G	G	R	R	Y
31	R	R	R	R	-	-	R
41	R	R	R	R	-	-	R
42,43	R	R	R	R	G	R	-
51	-	-	-	-	-	-	-
61,62	R	G	R	G	R	R	Y
81	R	R	R	R	G	G	R
82	R	R	R	R	G	G	R
P21,P22	DW	DW	W	W	DW	DW	DRK

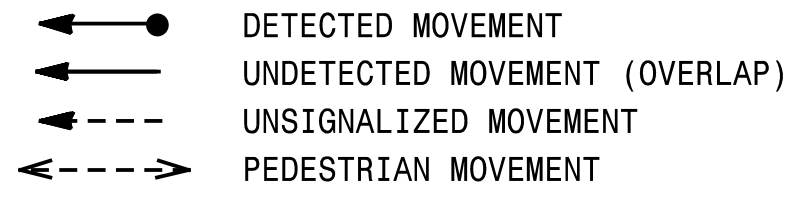
**MAXTIME DETECTOR INSTALLATION CHART**

LOOP/ZONE	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP/ZONE	PROGRAMMING							
					CALL PHASE	DELAY TIME	EXTEND TIME	EXTEND	ADDED INITIAL CALL	DELAY DURING GREEN	NEW CARD	
1A*	6X40	0	*	*	1	15.0**	-	X	-	X	-	-
1B	6X40	0	2-4-2	-	1	15.0	-	X	-	X	-	-
2A,2B	6X6	70	4	-	2	-	-	X	-	X	-	-
3A	6X40	0	2-4-2	-	3	15.0	-	X	-	X	-	-
4A	6X40	0	2-4-2	-	4	3.0	-	X	-	X	-	-
4B	6X40	0	2-4-2	-	4	10.0	-	X	-	X	-	-
4C	6X6	0	4	-	4	15.0	-	X	-	X	-	-
5A	6X40	0	2-4-2	-	5	15.0**	-	X	-	X	-	-
6A*	6X6	70	*	*	6	-	-	X	-	X	-	-
6B*	6X6	70	*	*	6	-	-	X	-	X	-	-
8A	6X40	0	2-4-2	-	8	-	-	X	-	X	-	-

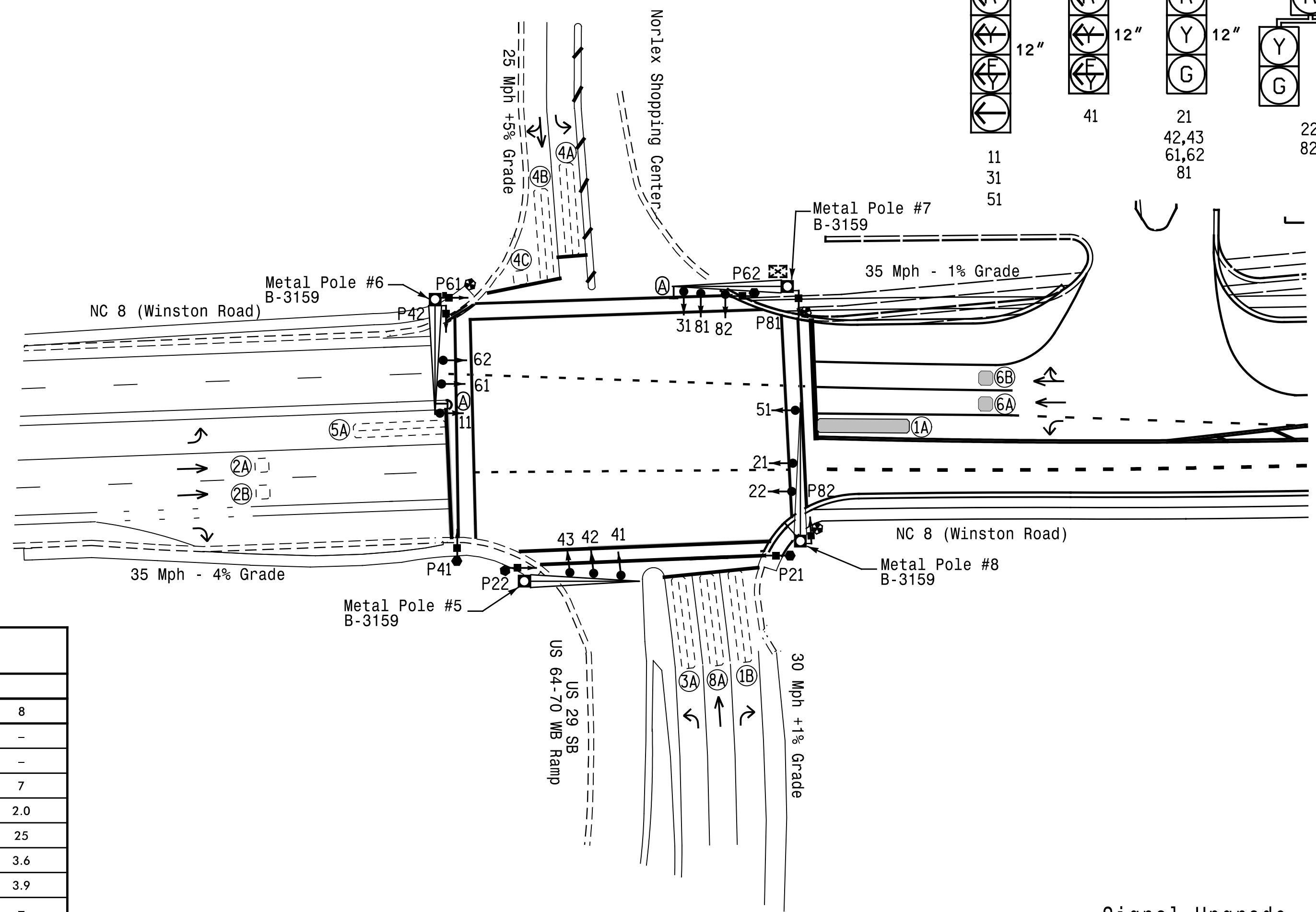
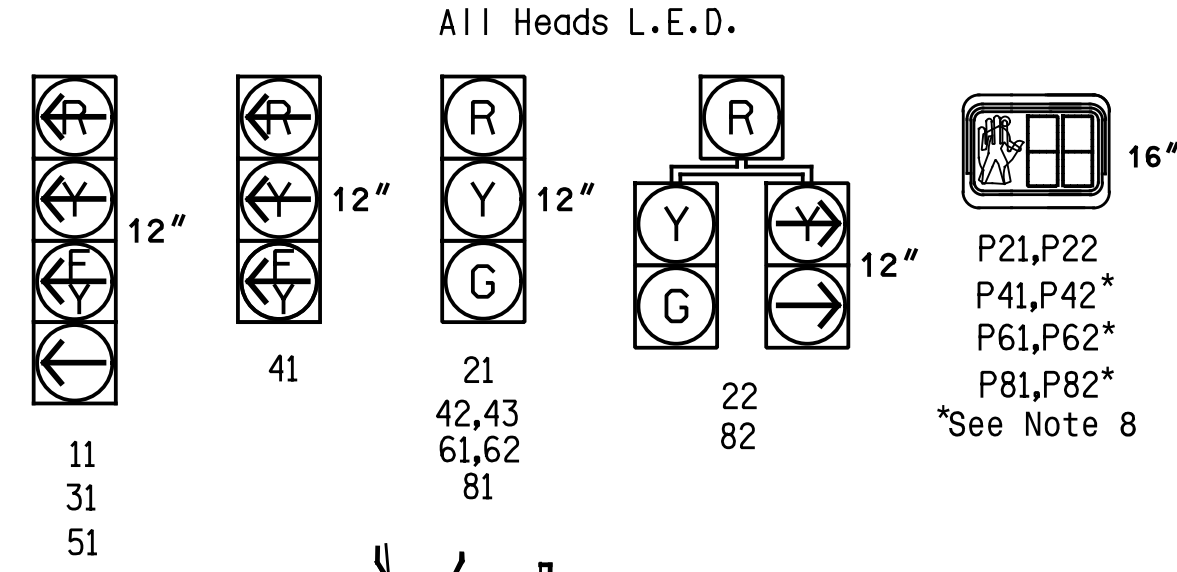
\*Video Detection Zone  
 \*\*Disable delay during alternate phasing operation  
 # Disable phase call for loop(s) during alternate phasing operation

- 6 Phase Fully Actuated NC 8 (Winston Road) CLS Signal System #:D09-19.Lexington
- NOTES**
- Refer to "Roadway Standard Drawings NCDOT" dated January 2024 and "Standard Specifications for Roads and Structures" dated January 2024.
  - Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
  - Phase 1 and/or Phase 5 may be lagged.
  - Phase 3 may be lagged.
  - Set all detector units to presence mode.
  - Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
  - Program pedestrian heads to countdown the flashing "Don't Walk" time only.
  - Due to sidewalk closures during TMP II, disconnect and bag Pedestrian Heads P41, P42, P61, P62, P81 & P82 during this phase of construction.
  - The Division Traffic Engineer will determine the hours of use for each phasing plan.
  - This intersection uses video detection. Install detectors according to the manufacturer's instructions to achieve the desired detection.
  - Maximum times in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.

**PHASING DIAGRAM DETECTION LEGEND**



**SIGNAL FACE I.D.**



**MAXTIME TIMING CHART**

FEATURE	PHASE							
	1	2	3	4	5	6	7	8
Walk *	-	13	-	-	-	-	-	-
Ped Clear *	-	25	-	-	-	-	-	-
Min Green *	7	10	7	7	7	10	7	7
Passage *	2.0	3.0	2.0	2.0	2.0	3.0	2.0	2.0
Max 1 *	20	50	20	25	15	50	25	25
Yellow Change	3.0	4.1	3.0	3.6	3.0	4.1	3.6	3.6
Red Clear	3.3	3.0	2.0	3.9	2.9	3.0	3.9	3.9
Added Initial *	-	-	-	-	-	-	-	-
Maximum Initial *	-	-	-	-	-	-	-	-
Time Before Reduction *	-	-	-	-	-	-	-	-
Time To Reduce *	-	-	-	-	-	-	-	-
Minimum Gap	-	-	-	-	-	-	-	-
Advance Walk	-	6	-	-	-	-	-	-
Non Lock Detector	X	-	X	X	X	-	X	X
Vehicle Recall	-	MIN RECALL	-	-	-	MIN RECALL	-	-
Dual Entry	-	-	-	X	-	-	-	X

\* These values may be field adjusted. Do not adjust Min Green and Passage times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.

**LEGEND**

PROPOSED	EXISTING
Traffic Signal Head	N/A
Modified Signal Head	N/A
Sign	N/A
Pedestrian Signal Head With Push Button & Sign	N/A
Signal Pole with Guy	N/A
Signal Pole with Sidewalk Guy	N/A
Inductive Loop Detector	N/A
Video Detection Zone	N/A
Controller & Cabinet	N/A
Junction Box	N/A
2-in Underground Conduit	N/A
Metal Pole with Mastarm	N/A
N/A	N/A
Right of Way	N/A
Directional Arrow	N/A
Type I Pushbutton Post	N/A
Type II Signal Pedestal	N/A
"U-TURN YIELD TO RIGHT TURN" Sign (R10-16)	N/A

Signal Upgrade - Temporary Design 2(TMP Phase II)

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

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Prepared for the Office of:  
 TRANSPORTATION MOBILITY AND SAFETY  
 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
 SIGNAL DESIGN SECTION

NC 8 (Winston Road)  
 at  
 US 29 SB/US 64-70 WB Ramp

Division 9 Davidson County Lexington

PLAN DATE: May 2024 REVIEWED BY: G.G. Murr, Jr.  
 PREPARED BY: B.E. Wynn REVIEWED BY:

SEAL  
 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
 PROFESSIONAL ENGINEER  
 SEAL 14543  
 GENE G. MURR, JR.  
 DATE: 9/10/2024  
 SIGNATURE: Gene G. Murr, Jr.  
 DATE: 9/10/2024  
 SIG. INVENTORY NO. 09-073572

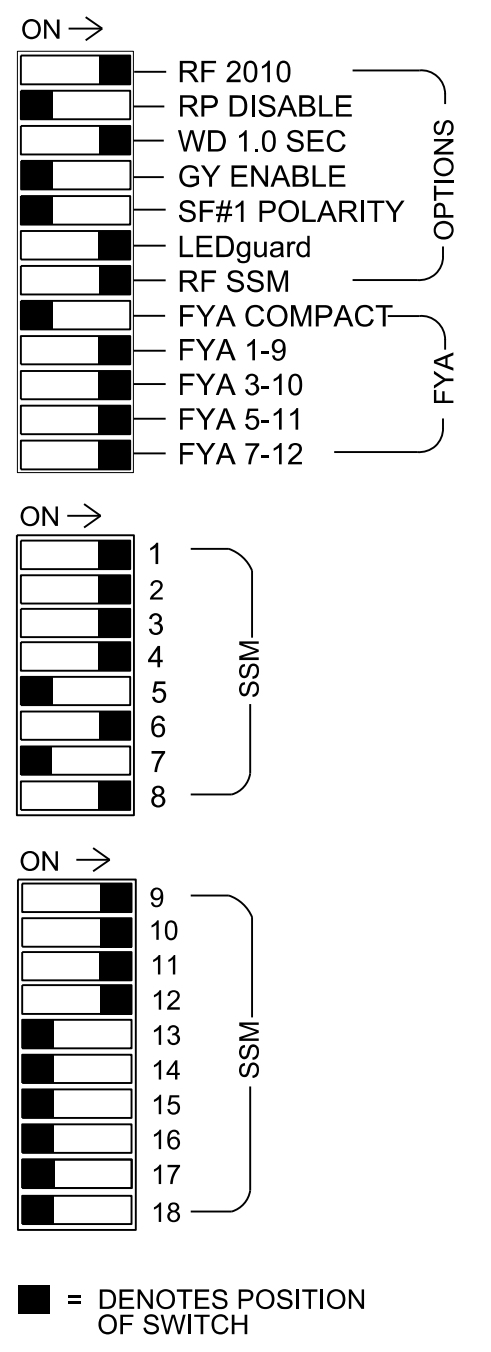
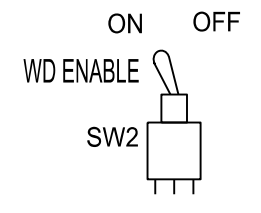
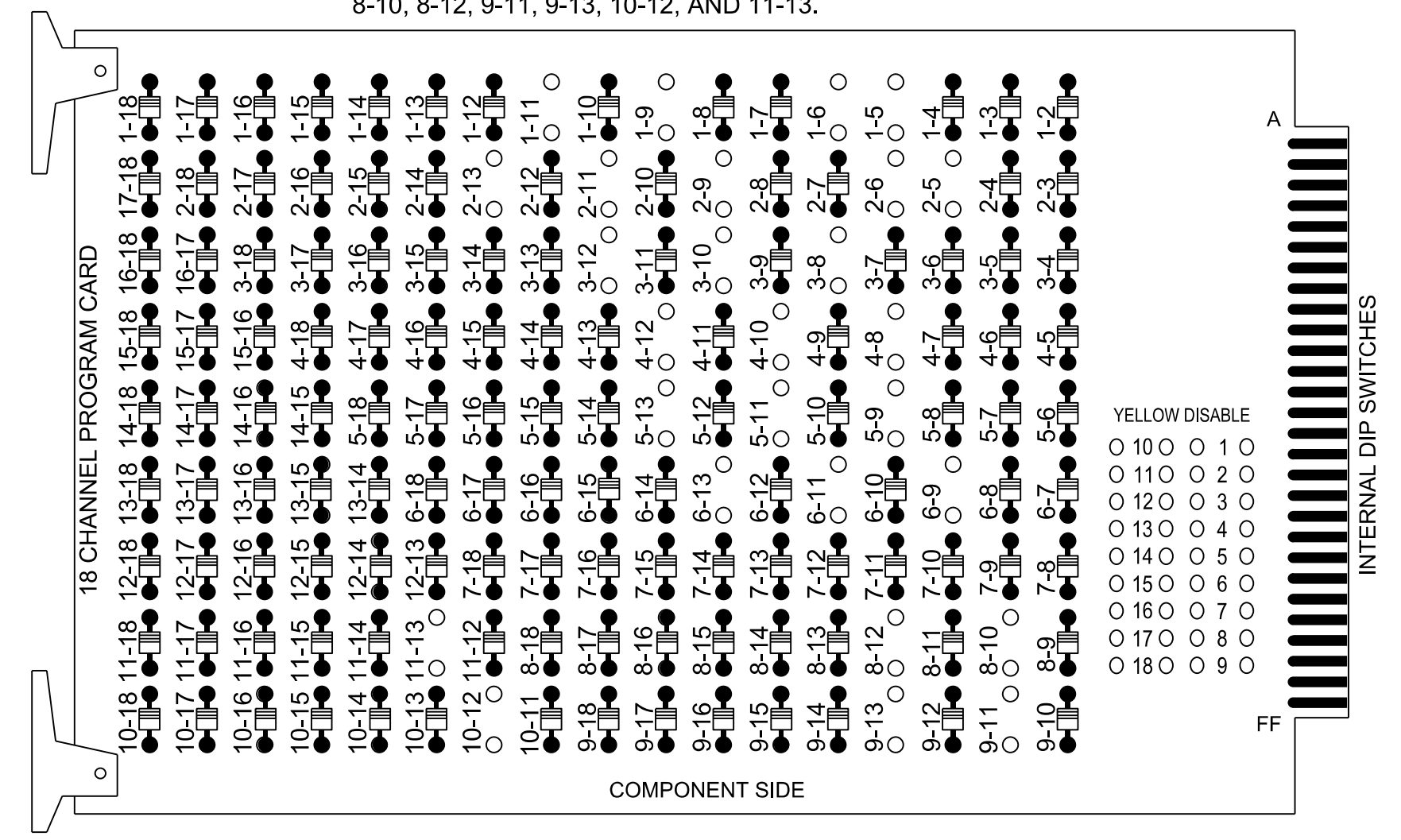
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 DWYIM



### 18 CHANNEL CONFLICT MONITOR PROGRAMMING DETAIL

(remove jumpers and set switches as shown)

REMOVE DIODE JUMPERS 1-5, 1-6, 1-9, 1-11, 2-5, 2-6, 2-9, 2-11, 2-13, 3-8, 3-10, 3-12, 4-8, 4-10, 4-12, 5-9, 5-11, 5-13, 6-9, 6-11, 6-13, 8-10, 8-12, 9-11, 9-13, 10-12, AND 11-13.



- NOTES:
- Card is provided with all diode jumpers in place. Removal of any jumper allows its channels to run concurrently.
  - Ensure jumpers SEL2-SEL5 and SEL9 are present on the monitor board.
  - Ensure that the Red Enable is active at all times during normal operation.
  - Connect serial cable from conflict monitor to comm. port 1 of 2070 controller. Ensure conflict monitor communicates with 2070.

### NOTES

- To prevent "flash-conflict" problems, insert red flash program blocks for all unused vehicle load switches in the output file. The installer shall verify that signal heads flash in accordance with the signal plan.
- Program phases 4 and 8 for Dual Entry.
- Program controller to start up in phase 2 Green No Walk and 6 Green No Walk.
- If this signal will be managed by an ATMS software, enable controller and detector logging for all detectors used at this location.
- The cabinet and controller are part of the NC 8 (Winston Road) Closed Loop System (Signal System D09-19 Lexington).

### EQUIPMENT INFORMATION

Controller.....2070LX  
 Cabinet.....332 w/ Aux  
 Software.....Q-Free MAXTIME  
 Cabinet Mount.....Base  
 Output File Positions.....18 With Aux. Output File  
 Load Switches Used.....S1, S2, S3, S4, S5, S7, S8, S11, AUX S1, AUX S2, AUX S4, AUX S5  
 Phases Used.....1, 2, 2 PED, 3, 4, 5, 6, 8  
 Overlap "1".....\*  
 Overlap "2".....\*  
 Overlap "3".....\*  
 Overlap "4".....\*  
 \*See overlap programming detail on sheet 2

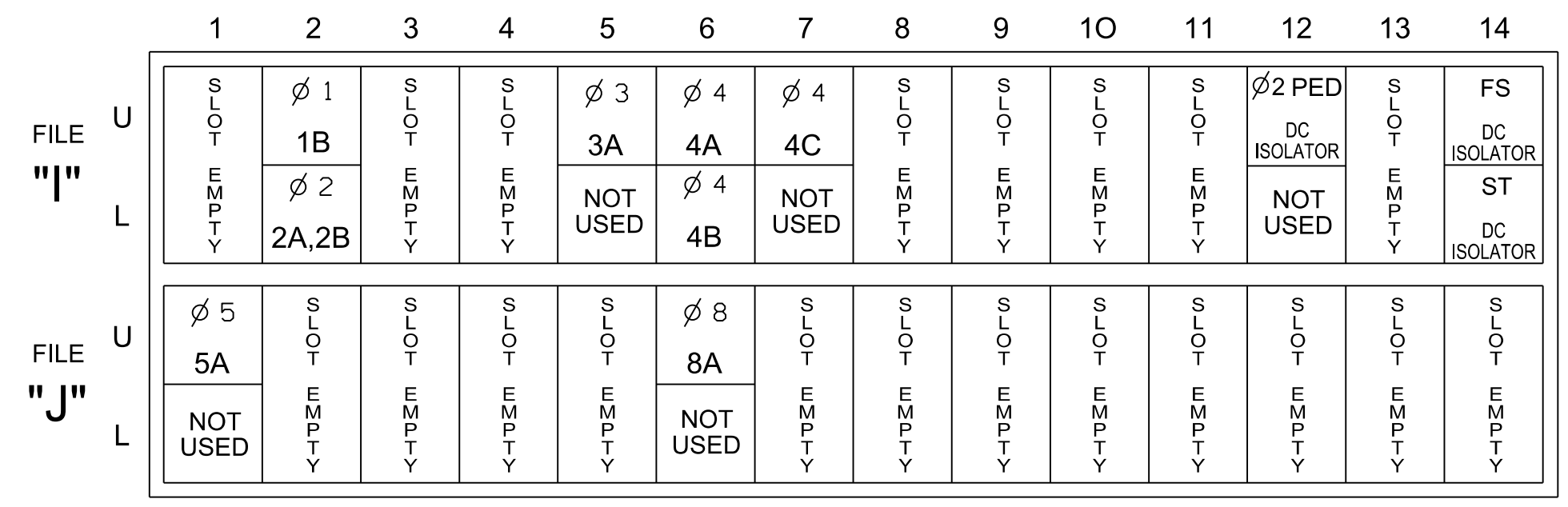
### SIGNAL HEAD HOOK-UP CHART

LOAD SWITCH NO.	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	AUX S1	AUX S2	AUX S3	AUX S4	AUX S5	AUX S6		
CMU CHANNEL NO.	1	2	13	3	4	14	5	6	15	7	8	16	9	10	17	11	12	18		
PHASE	1	2	2 PED	3	4	4 PED	5	6	6 PED	7	8	8 PED	OL1	OL2	SPARE	OL3	OL4	SPARE		
SIGNAL HEAD NO.	82	11*	21,22	P21, P22	22	31*	42,43	NU	51*	61,62	NU	NU	81,82	NU	11*	31*	NU	51*	41*	NU
RED		*	128		*	101			134		107									
YELLOW			129			102		*	135		108									
GREEN			130			103			136		109									
RED ARROW																A121	A124		A114	A101
YELLOW ARROW	126					117										A122	A125		A115	A102
FLASHING YELLOW ARROW																A123	A126		A116	A103
GREEN ARROW	127	127		118	118			133												
Hand icon																				
Person icon																				

NU = Not Used  
 \* Denotes install load resistor. See load resistor installation detail this sheet.  
 \*See pictorial of head wiring in detail this sheet.

### INPUT FILE POSITION LAYOUT

(front view)



EX. : 1A, 2A, ETC. = LOOP NO.'S  
 FS = FLASH SENSE  
 ST = STOP TIME

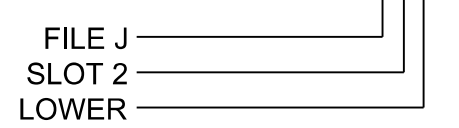
### INPUT FILE CONNECTION & PROGRAMMING CHART

LOOP NO.	LOOP TERMINAL	INPUT FILE POS.	PIN NO.	INPUT POINT	DETECTOR NO.	CALL PHASE	DELAY TIME	EXTEND TIME	EXTEND	ADDED INITIAL	CALL	DELAY DURING GREEN
1B	TB2-5,6	I2U	39	1	2	1	15.0	...	X	-	X	-
2A,2B	TB2-7,8	I2L	43	5	3	2	...	...	X	-	X	-
3A	TB4-5,6	I5U	58	20	7	3	15.0	...	X	-	X	-
				-	30	8	...	...	X	-	X	-
4A	TB4-9,10	I6U	41	3	8	4	3.0	...	X	-	X	-
4B	TB4-11,12	I6L	45	7	9	4	10.0	...	X	-	X	-
4C	TB6-1,2	I7U	65	31	10	4	15.0	...	X	-	X	-
5A	TB3-1,2	J1U	55	17	15	5	15.0	...	X	-	X	-
				-	31	2	...	...	X	-	X	-
8A	TB5-9,10	J6U	42	4	22	8	...	...	X	-	X	-
PED PUSH BUTTONS												
P21,P22	TB8-4,6	I12U	67	33	2	PED 2	...	...	X	-	X	-

NOTE: INSTALL DC ISOLATORS IN INPUT FILE SLOT I12.

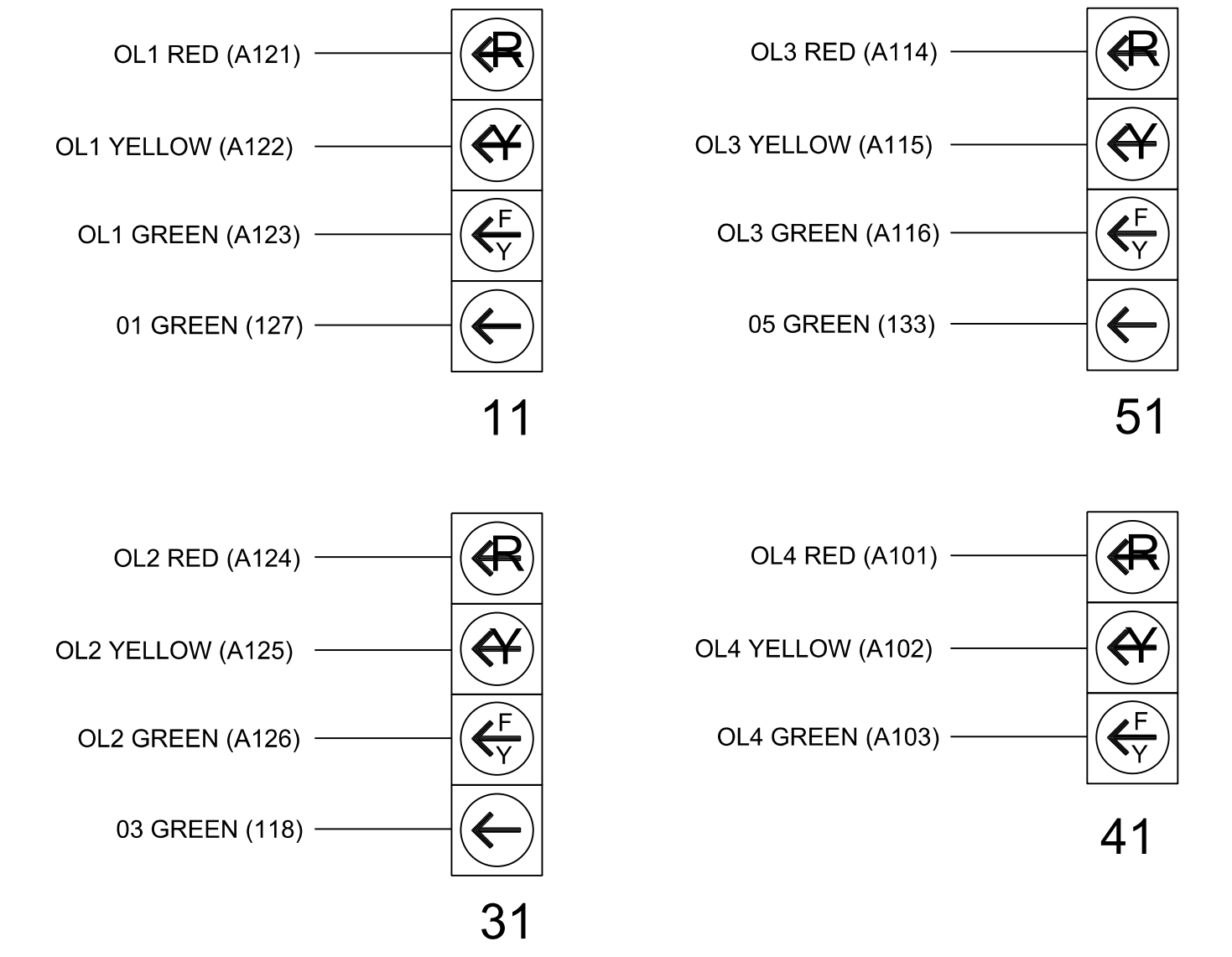
\* For the detectors to work as shown on the signal design plan, see the Vehicle Detector Programming Detail for Alternate Phasing Loops 1A & 5A on sheet 2.

INPUT FILE POSITION LEGEND: J2L



### FYA SIGNAL WIRING DETAIL

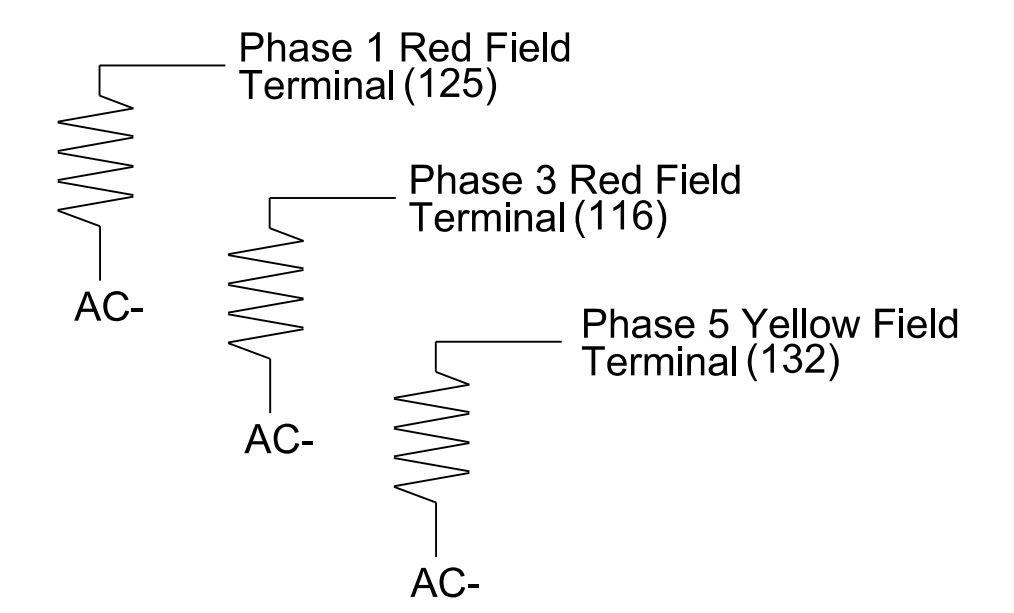
(wire signal heads as shown)



### LOAD RESISTOR INSTALLATION DETAIL

(install resistors as shown)

Value (ohms)	Wattage
1.5K - 1.9K	25W (min)
2.0K - 3.0K	10W (min)



### SPECIAL DETECTOR NOTE

Install a video detection system for vehicle detection in zones 1A, 6A, and 6B. Perform installation according to manufacturer's directions and NCDOT engineer approved mounting locations to accomplish the detection schemes shown on the Signal Design Plans.

For zone 1A, inputs associated with the typical NCDOT installation slots are compatible with time of day instructions located on sheet 2.

### COUNTDOWN PEDESTRIAN SIGNAL OPERATION

Countdown Ped Signals are required to display timing only during Ped Clearance Interval. Consult Ped Signal Module user's manual for instructions on selecting this feature.

THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 09-0735T2  
 DESIGNED: May 2024  
 SEALED: 09-10-2024  
 REVISED: N/A

Electrical Detail - Sheet 1 of 2

Prepared for the Offices of: **TRANSYSTEMS**

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 License: F-0453

NC 8 (Winston Road) at US 29 SB / US 64-70 WB Ramp

Division 9 Davidson County Lexington

PLAN DATE: May 2024 REVIEWED BY: J.T. Rowe, Jr.  
 PREPARED BY: J.T. Rowe, Jr. REVIEWED BY: G.G. Murr, Jr.

REVISIONS: INIT. DATE

Seal: JOHN T. ROWE, JR. PROFESSIONAL ENGINEER No. 008453

Signed by: John T. Rowe, Jr. DATE: 09/10/2024

SIG. INVENTORY NO. 09-0735T2

### OVERLAP PROGRAMMING DETAIL FOR DEFAULT PHASING

Front Panel  
Main Menu >Controller >Overlap >Overlap Parameters/Overlap Timings

Web Interface  
Home >Controller >Overlap Configuration >Overlaps

Overlap Plan 1

Overlap	1	2	3	4
Type	FYA 4 - Section	FYA 4 - Section	FYA 4 - Section	FYA 4 - Section
Included Phases	2	4	6	8
Modifier Phases	1	3	5	
Modifier Overlaps	-	-	-	-
Trail Green	0	0	0	0
Trail Yellow	0.0	0.0	0.0	0.0
Trail Red	0.0	0.0	0.0	0.0

### MAXTIME OVERLAP PROGRAMMING DETAIL FOR ALTERNATE PHASING

Front Panel  
Main Menu >Controller >Overlap >Overlap Parameters/Overlap Timings

Web Interface  
Home >Controller >Overlap Configuration >Overlaps

In the table view of the web interface, right click on "Overlap" in the top left corner of the table. Copy the entire contents of Overlap Plan 1. Paste Overlap Plan 1 into Overlap Plan 2. Modify Overlap Plan 2 as shown below and save changes.

Overlap Plan 2

Overlap	1	2	3	4
Type	FYA 4 - Section	FYA 4 - Section	FYA 4 - Section	FYA 4 - Section
Included Phases	-	4	-	8
Modifier Phases	1	3	5	
Modifier Overlaps	-	-	-	-
Trail Green	0	0	0	0
Trail Yellow	0.0	0.0	0.0	0.0
Trail Red	0.0	0.0	0.0	0.0

NOTICE REMOVED INCLUED PHASES

Note: If Loop 1A is detected using the Vehicle Detectors shown in the charts below, use the steps shown below. If different Vehicle Detectors are used, substitute the appropriate Vehicle Detector numbers for the ones shown below.

### VEHICLE DETECTOR PROGRAMMING DETAIL FOR ALTERNATE PHASING LOOPS 1A & 5A

Front Panel  
Main Menu >Controller >Detector >Veh Det Plans

Web Interface  
Home >Controller >Detector Configuration >Vehicle Detectors

In the table view of web interface right click on "Detector" in the top left corner of the table. Copy the entire contents of Detector Plan 1. Paste Detector Plan 1 into Detector Plan 2. Modify Detector Plan 2 as shown below and save changes.

Plan 2

Detector	Call Phase	Delay
1	1	0.0
29	0	0.0

1A

Detector	Call Phase	Delay
15	5	0.0
31	0	0.0

5A

### MAXTIME ALTERNATE PHASING PATTERN PROGRAMMING DETAIL

Front Panel  
Main Menu >Controller >Coordination >Patterns

Web Interface  
Home >Controller >Coordination >Patterns

Pattern Parameters

Pattern	Veh Det Plan	Overlap Plan
*	2	2

\* The Pattern number(s) are to be determined by the Division and/or City Traffic Engineer.

### MAXTIME ALTERNATE PHASING ACTIVATION DETAIL

To run alternate phasing, select a Pattern that is programmed to run Overlap Plan 2 and Detector Plan 2. A Pattern can be selected through the scheduler or manually by changing the Operational Mode.

PHASING	OVERLAP PLAN	VEH DET PLAN
ACTIVE PLAN REQUIRED TO RUN DEFAULT PHASING	1	1
ACTIVE PLAN REQUIRED TO RUN ALTERNATE PHASING	2	2

### FLASHER CIRCUIT MODIFICATION DETAIL

IN ORDER TO INSURE THAT SIGNALS FLASH CONCURRENTLY ON THE SAME APPROACH, MAKE THE FOLLOWING FLASHER CIRCUIT CHANGES:

- ON REAR OF PDA - REMOVE WIRE FROM TERM. T2-4 AND TERMINATE ON T2-2.
- ON REAR OF PDA - REMOVE WIRE FROM TERM. T2-5 AND TERMINATE ON T2-3.
- REMOVE FLASHER UNIT 2.

THE CHANGES LISTED ABOVE TIES ALL PHASES AND OVERLAPS TO FLASHER UNIT 1.

### ALTERNATE PHASING CHANGE SUMMARY

THE FOLLOWING IS A SUMMARY OF WHAT TAKES PLACE WHEN OVERLAP PLAN 2 AND VEHICLE DETECTOR PLAN 2 ACTIVATE TO CALL THE "ALTERNATE PHASING":

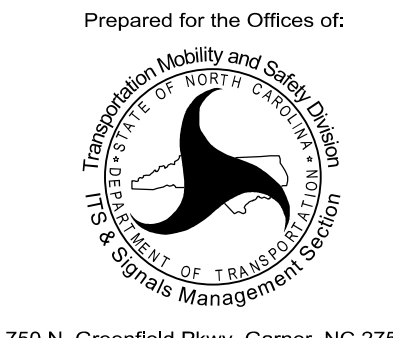
OVERLAP PLAN 2: Modifies overlap included phases for heads 11 and 51 to run protected turns only.

VEH DET PLAN 2: Disables phase 6 call on loop 1A and reduces delay time for phase 1 call on loop 1A to 0 seconds.

Disables phase 2 call on loop 5A and reduces delay time for phase 5 call on loop 5A to 0 seconds.

THIS ELECTRICAL DETAIL IS FOR THE SIGNAL DESIGN: 09-0735T2  
DESIGNED: May 2024  
SEALED: 09-10-2024  
REVISED: N/A

Electrical Detail Sheet 2 of 2

Prepared for the Offices of:  
  
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Division 9 Davidson County Lexington

PLAN DATE: May 2024 REVIEWED BY:

PREPARED BY: J.T. Rowe REVISIONS

REVIEWED BY: G.G. Murr, Jr. INIT. DATE

Signed by: John T. Rowe, Jr. 09/10/2024  
240203080472445

SEAL  
NORTH CAROLINA  
PROFESSIONAL  
ENGINEER  
J.T. ROWE, JR.  
008453

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SIG. INVENTORY NO. 09-0735T2