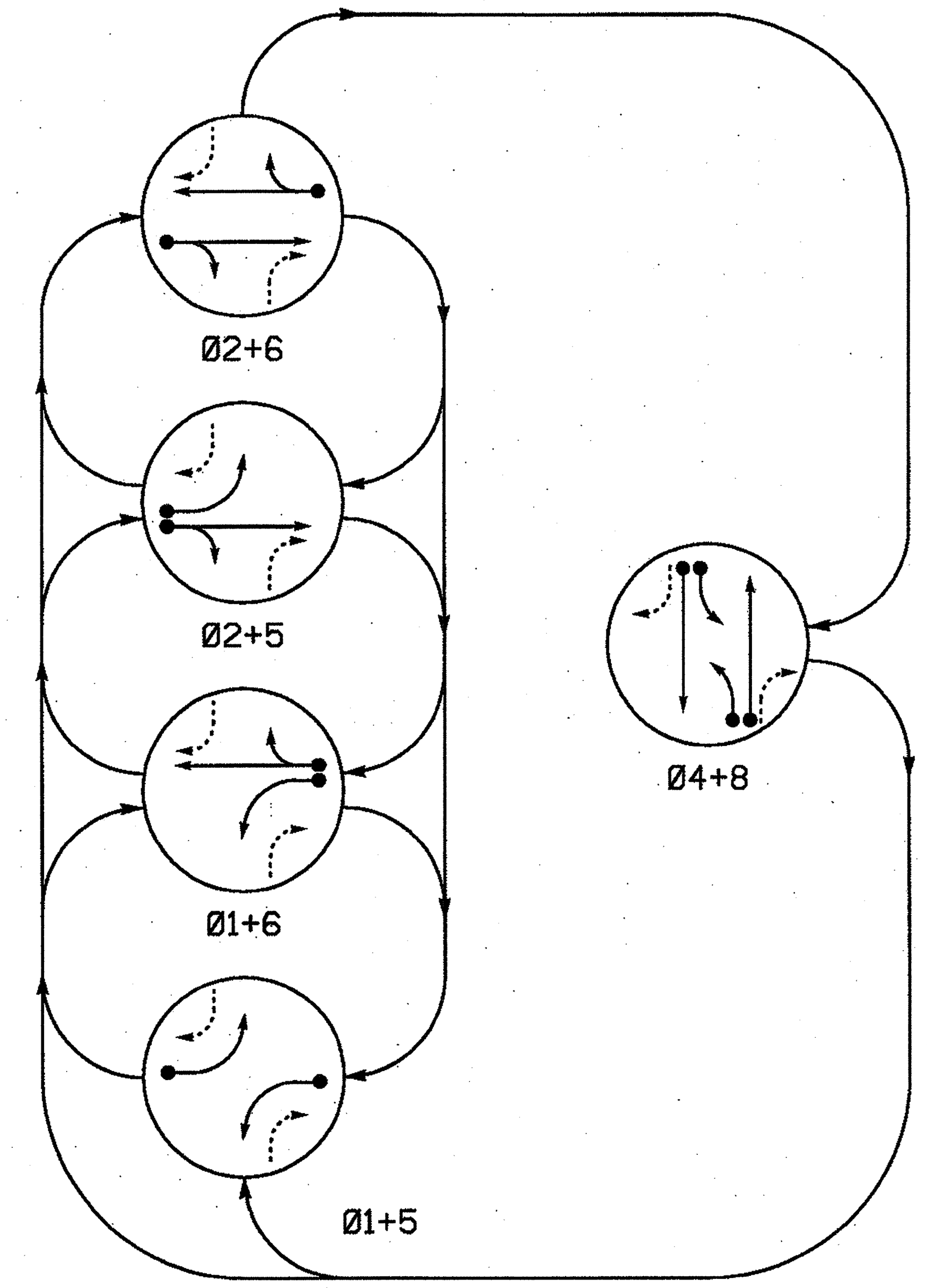
PROJECT REFERENCE NO.	SHEET NO.
36249.2960	SIG 1.1

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

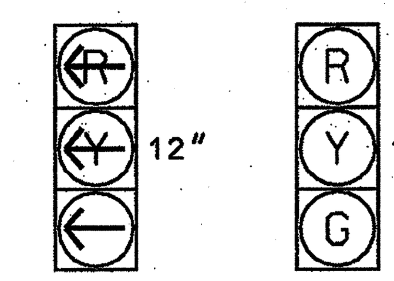
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE Ø1+5	Ø1+6	Ø2+5	Ø2+6	Ø4+8	FLASH
11	←	←	←R	←R	←R	←R
21,22	R	R	G	G	R	Y
41,42	R	R	R	R	G	R
51	←	←R	←	←R	←R	←R
61,62	R	G	R	G	R	Y
81,82	R	R	R	R	G	R

SIGNAL FACE I.D.

All Heads L.E.D.



11
51

21,22
41,42
61,62
81,82

OASIS 2070L LOOP & DETECTOR INSTALLATION

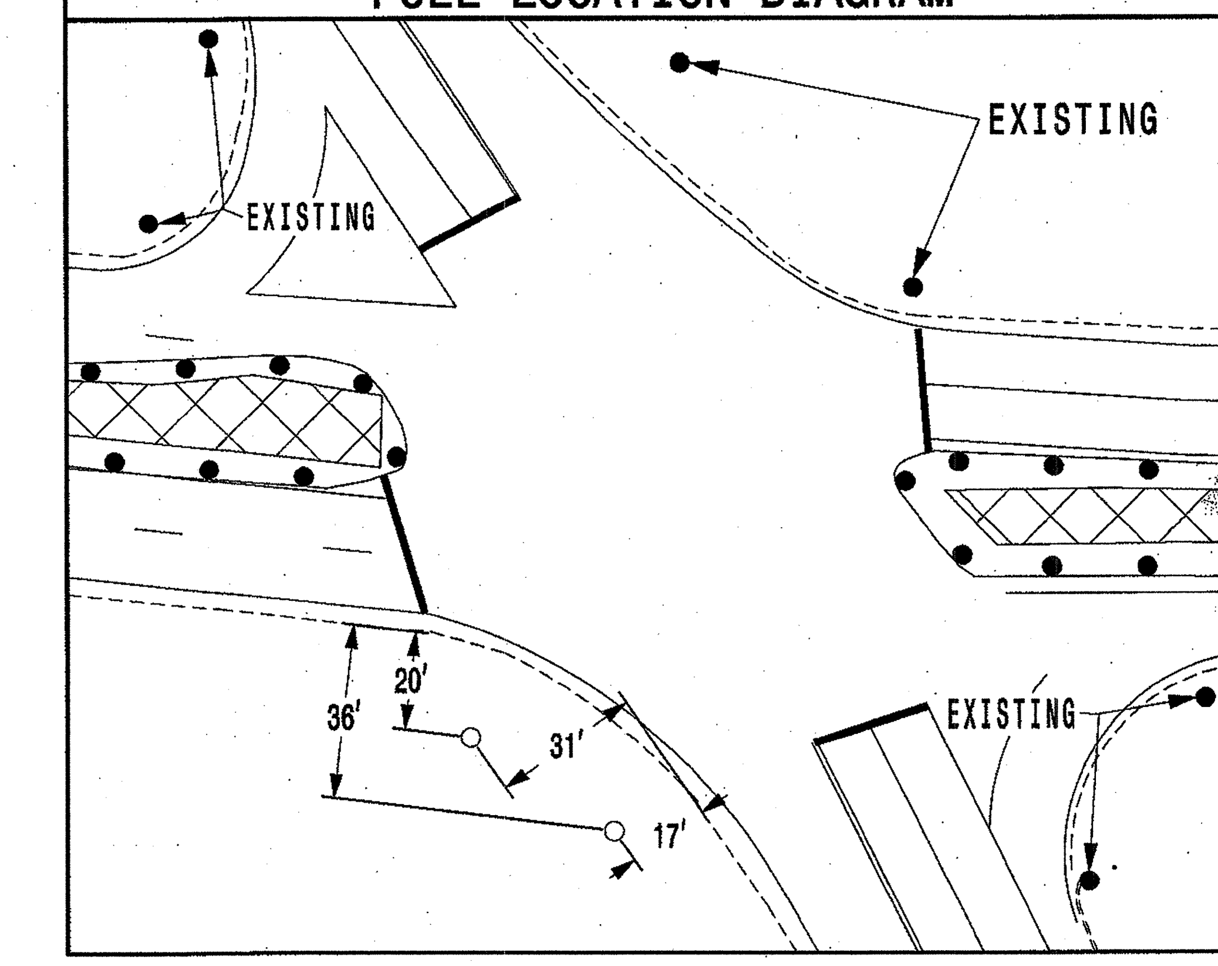
INDUCTIVE LOOPS					DETECTOR PROGRAMMING							
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
1A	6x40	0	2-4-2	Y	1	Y	Y	-	-	-	-	Y
2A	6x6	355	5	Y	2	Y	Y	-	-	-	-	Y
4A	6x40	0	2-4-2	Y	4	Y	Y	-	-	3	-	Y
4B	6x40	0	2-4-2	Y	4	Y	Y	-	-	-	-	Y
5A	6x40	0	2-4-2	Y	5	Y	Y	-	-	-	-	Y
6A	6x6	355	6	Y	6	Y	Y	-	-	-	-	Y
8A	6x40	0	2-4-2	Y	8	Y	Y	-	-	3	-	Y
8B	6x40	0	2-4-2	Y	8	Y	Y	-	-	-	-	Y

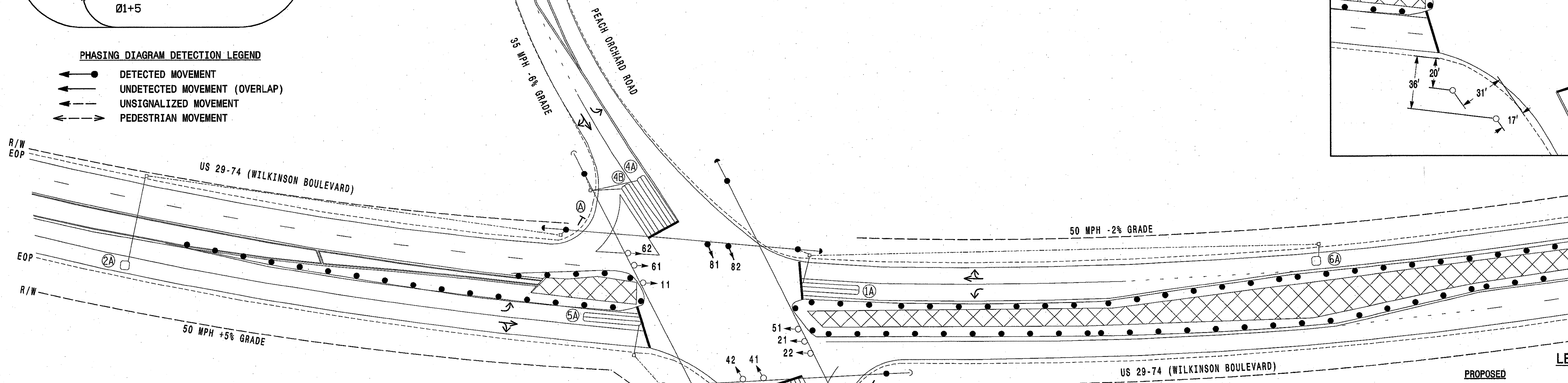
8 PHASE
FULLY ACTUATED
(ISOLATED)

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated July 2006, "Standard Specifications for Roads and Structures" dated July 2006, and all applicable sections of the latest version of the generic Project Special Provisions. The PSP can be accessed at the following website: http://www.ncdot.org/doh/preconstruct/traffic/ITSS/
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Phase 1 and/or phase 5 may be lagged.
4. Set all detector units to presence mode.
5. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.

POLE LOCATION DIAGRAM





OASIS 2070L TIMING CHART

FEATURE	PHASE 1	2	4	5	6	8
Min Green 1 *	7	14	7	7	14	7
Extension 1 *	2.0	6.0	2.0	2.0	6.0	2.0
Max Green 1 *	30	70	30	20	70	30
Yellow Clearance	3.0	4.4	4.3	3.0	5.0	4.8
Red Clearance	2.3	1.4	2.3	2.3	1.3	2.0
Walk 1 *	-	-	-	-	-	-
Don't Walk 1	-	-	-	-	-	-
Seconds Per Actuation *	-	2.5	-	-	2.5	-
Max Variable Initial *	-	40	-	-	40	-
Time Before Reduction *	-	15	-	-	15	-
Time To Reduce *	-	45	-	-	45	-
Minimum Gap	-	3.1	-	-	3.1	-
Recall Mode	-	MIN RECALL	-	-	MIN RECALL	-
Vehicle Call Memory	-	YELLOW	-	-	YELLOW	-
Dual Entry	-	-	ON	-	-	ON
Simultaneous Gap	ON	ON	ON	ON	ON	ON

* These values may be field adjusted. Do not adjust Min Green and Extension 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	●→
◐→	Modified Signal Head	N/A
⊣	Sign	⊣
□	Pedestrian Signal Head With Push Button & Sign	■
○—)	Signal Pole with Guy	●—)
○—⊥	Signal Pole with Sidewalk Guy	●—⊥
▭	Inductive Loop Detector	(dashed)
⊠	Controller & Cabinet	(dashed)
□	Junction Box	■
- - - -	2-in Underground Conduit	- · - · -
N/A	Right of Way	— — —
→	Directional Arrow	→
→	Pavement Marking Arrow	→
Ⓐ	"YIELD" Sign (R1-2)	Ⓐ

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
FINAL DRAWING Date: 12/17/10
(Zachary M. Little)
Traffic Engineering Branch

SIGNAL UPGRADE - TEMPORARY DESIGN ONE

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
NC License #F-0102
4651 Charlotte Park Dr.
Suite 300
Charlotte, NC 28217
(704) 333-5131, (704) 333-0845 Fax

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

SCALE 0 40'
1" = 40'

US 29-74 (WILKINSON BOULEVARD)
AT
SR 2014 (LAKEWOOD ROAD) /
PEACH ORCHARD ROAD

DIVISION 12 GASTON COUNTY CRAMERTON

PLAN DATE: AUGUST 2010	REVIEWED BY: T SPACEK
PREPARED BY: B FINKLEA	REVIEWED BY:

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 034207 ENGINEER ANTHONY J. SPACEK

SIGNATURE 12/1/10 DATE

SIG. INVENTORY NO. 12-0082 T1

12/1/2010 1:29:32 PM brady.finklea K:\CHL_Roadway\015557003 MBAJ Cramerton HS\09_SIGNALS\03_CADD\Wilkinson @ Lakewood T1.dgn

EDI MODEL 2010ECL-NC CONFLICT MONITOR PROGRAMMING DETAIL

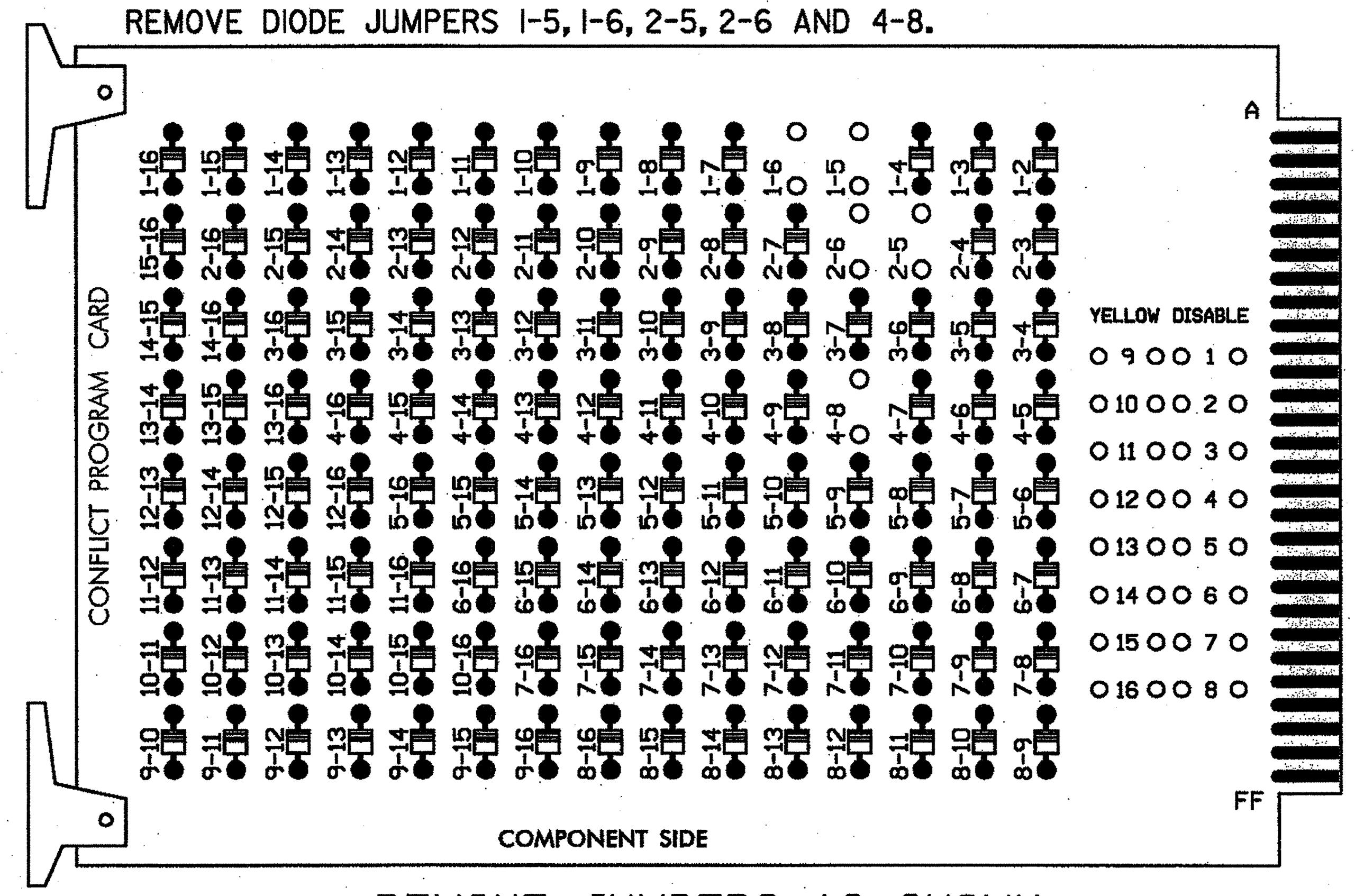
(remove jumpers and set switches as shown)

ON OFF

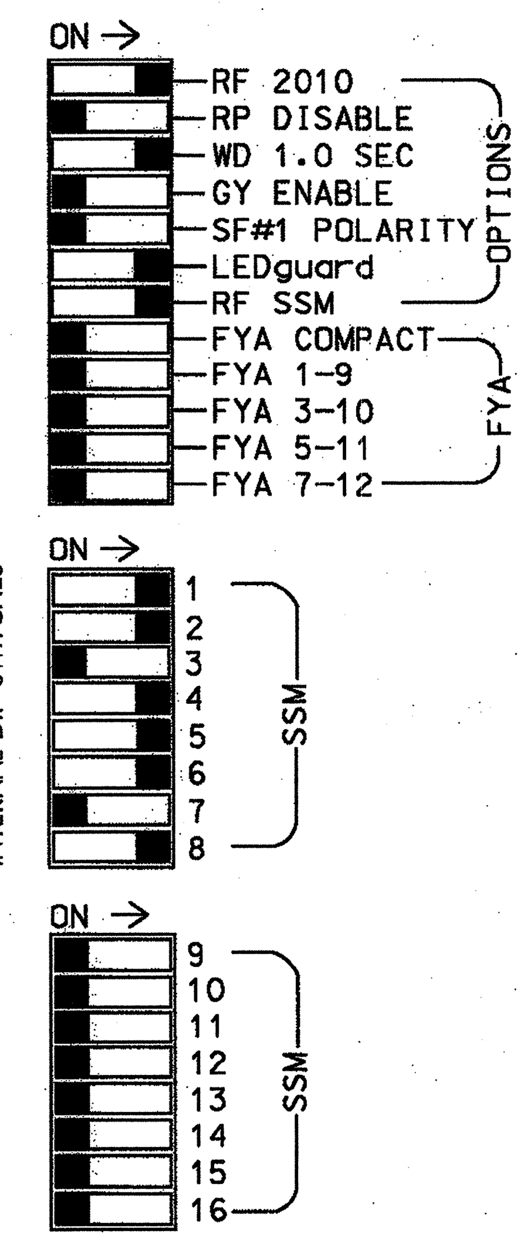
WD ENABLE

SW2

REMOVE DIODE JUMPERS 1-5, 1-6, 2-5, 2-6 AND 4-8.



REMOVE JUMPERS AS SHOWN



NOTES:

1. Card is provided with all diode jumpers in place. Removal of any jumper allows its channels to run concurrently.
2. Make sure jumpers SEL2-SEL5 are present on the monitor board.

■ = DENOTES POSITION OF SWITCH

INPUT FILE POSITION LAYOUT

(front view)

		1	2	3	4	5	6	7	8	9	10	11	12	13	14
FILE "I"	U	Ø 1 1A	SLOT EMPTY	Ø 2 2A	SLOT EMPTY	SLOT EMPTY	Ø 4 4A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	FS DC ISOLATOR
	L	NOT USED		NOT USED			Ø 4 4B								ST DC ISOLATOR
FILE "J"	U	Ø 5 5A	Ø 6 6A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	Ø 8 8A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY
	L	NOT USED	NOT USED				Ø 8 8B								

EX.: 1A, 2A, ETC. = LOOP NO.'S

FS = FLASH SENSE
ST = STOP TIME

NOTES

1. 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 Plans.
2. Ensure that Red Enable is active at all times during normal operation. To prevent Red Failures on unused monitor channels, tie unused red monitor inputs 3,7,9,10, 11,12,13,14,15 & 16 to load switch AC+ per the cabinet manufacturer's instructions.
3. Program phases 4 and 8 for dual entry.
4. Enable Simultaneous Gap-Out for all phases.
5. Program phases 2 and 6 for Variable Initial and Gap Reduction.
6. Program phases 2 and 6 for Start Up In Green.
7. Program phases 2 and 6 for Yellow Flash.

EQUIPMENT INFORMATION

CONTROLLER..............CONTRACTOR SUPPLIED 2070L
CABINET.................CONTRACTOR SUPPLIED 332 W/ AUX
SOFTWARE................ECONOLITE OASIS
CABINET MOUNT...........BASE
OUTPUT FILE POSITIONS...18 (12-STD, 6 AUX)
LOAD SWITCHES USED......S1,S2,S4,S5,S6,S8
PHASES USED.............1,2,4,5,6,8
OVERLAPS................NONE

INPUT FILE CONNECTION & PROGRAMMING CHART

LOOP NO.	LOOP TERMINAL	INPUT FILE POS.	PIN NO.	INPUT ASSIGNMENT NO.	DETECTOR NO.	NEMA PHASE	CALL	EXTEND	FULL TIME DELAY	STRETCH TIME	DELAY TIME
1A	TB2-1,2	I1U	56	18	1	1	Y	Y			
2A	TB2-9,10	I3U	63	25	32	2	Y	Y			
4A	TB4-9,10	I6U	41	3	4	4	Y	Y			3
4B	TB4-11,12	I6L	45	7	14	4	Y	Y			
5A	TB3-1,2	J1U	55	17	5	5	Y	Y			
6A	TB3-5,6	J2U	40	2	6	6	Y	Y			
8A	TB5-9,10	J6U	42	4	8	8	Y	Y			3
8A	TB5-11,12	J6L	46	8	18	8	Y	Y			

INPUT FILE POSITION LEGEND: J2L

FILE J
SLOT 2
LOWER

PROJECT REFERENCE NO.	SHEET NO.
36249.2960	SIG. 1.2

SIGNAL HEAD HOOK-UP CHART

LOAD SWITCH NO.	S1	S2	S2P	S3	S4	S4P	S5	S6	S6P	S7	S8	S8P	S9	S10	S11	S12	S13	S14
PHASE	1	2	2 PED	3	4	4 PED	5	6	6 PED	7	8	8 PED	OLA	OLB	SPARE	OLC	OLD	SPARE
SIGNAL HEAD NO.	11	21,22	NU	NU	41,42	NU	51	61,62	NU	NU	81,82	NU	NU	NU	NU	NU	NU	NU
RED		128			101			134			107							
YELLOW		129			102			135			108							
GREEN		130			103			136			109							
RED ARROW	125						131											
YELLOW ARROW	126						132											
GREEN ARROW	127						133											
(hand)																		
(walk)																		

NU = Not Used

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 12-0082 T1
DESIGNED: AUGUST 2010
SEALED: DECEMBER 1, 2010
REVISED:

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
FINAL DRAWING Date: 12/17/10
(Zachary M. Little)
Traffic Engineering Branch

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
NC License #F-0102
4651 Charlotte Park Dr., Ste 300
Charlotte, NC 28217
(704) 333-5131, (704) 333-0845 Fax

SIGNAL UPGRADE - TEMPORARY DESIGN ONE

ELECTRICAL AND PROGRAMMING DETAILS FOR:

US 29-74 (WILKINSON BOULEVARD)
AT
SR 2014 (LAKEWOOD ROAD) /
PEACH ORCHARD ROAD

DIVISION 12 GASTON COUNTY CRAMERTON

PLAN DATE: AUGUST 2010 REVIEWED BY: T SPACEK
PREPARED BY: B FINKLEA REVIEWED BY:

REVISIONS	INIT.	DATE

Traffic Engineering and Safety Systems Branch
State of North Carolina Department of Transportation
Signals Management Section
700 N. Greenfield Parkway, Suite 750
Garner, NC 27529

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 034207 ENGINEER ANTHONY J. SPACEK

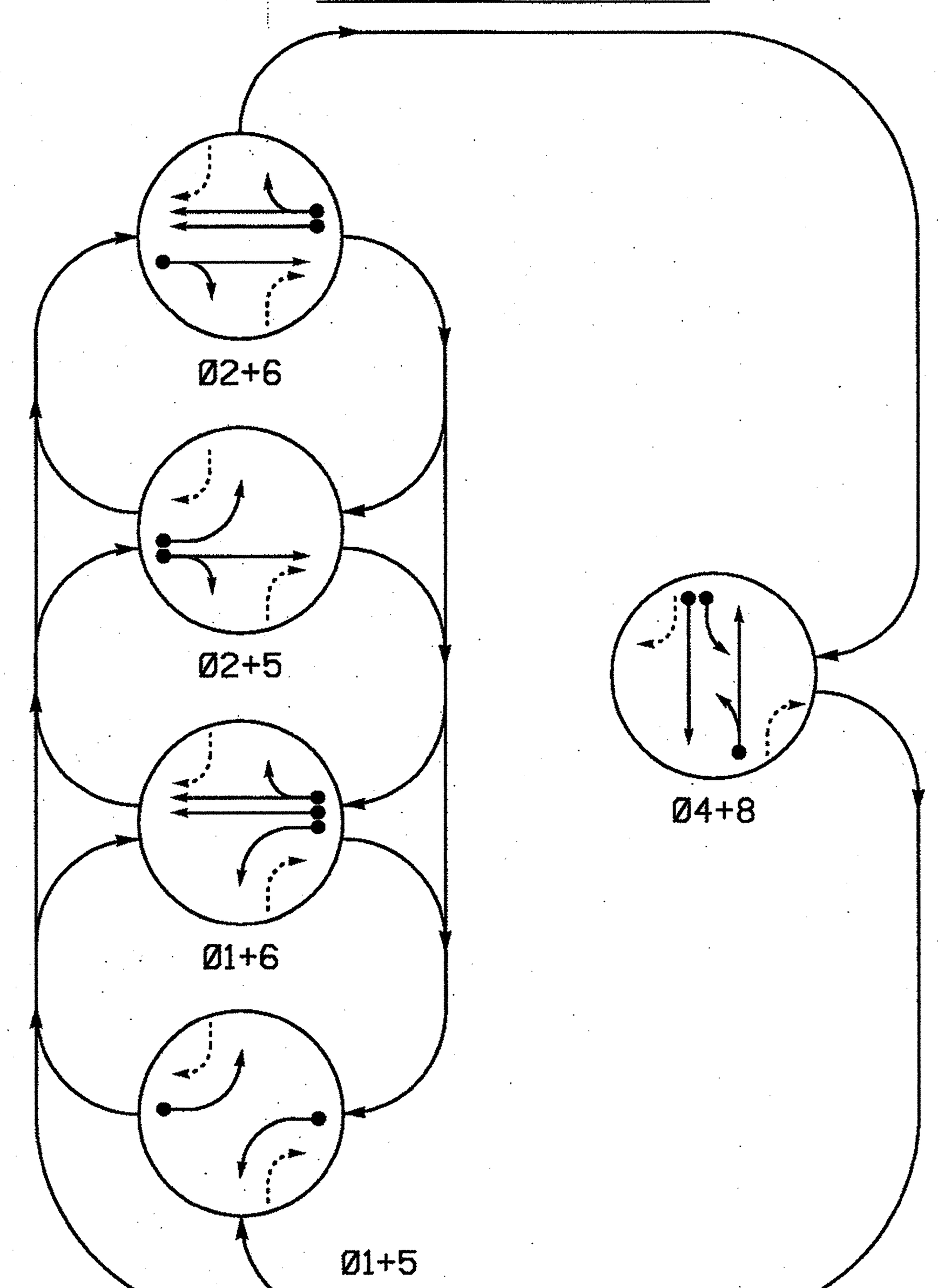
SIGNATURE 12/1/10 DATE

SIG. INVENTORY NO. 12-0082 T1

12/1/2010 1:29:52 PM brady.finklea K:\CHL_Roadway\015557003 MBAJ Cramerton HS\09_SIGNALS\03_CADD\Wilkinson @ Lakewood T1.ele

PROJECT REFERENCE NO.	SHEET NO.
36249.2960	SIG 1.3

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

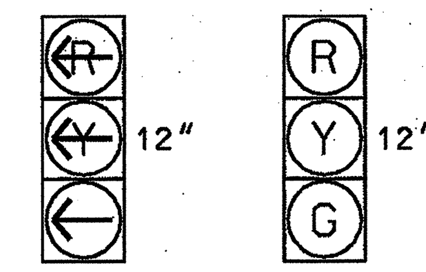
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE Ø1+5	Ø1+6	Ø2+5	Ø2+6	Ø4+8	FLASH
11	←	←	-R-	-R-	-R-	-R-
21,22	R	R	G	G	R	Y
41,42	R	R	R	R	G	R
51	←	-R-	←	-R-	-R-	-R-
61,62	R	G	R	G	R	Y
81,82	R	R	R	R	G	R

SIGNAL FACE I.D.

All Heads L.E.D.



11
51

21,22
41,42
61,62
81,82

OASIS 2070L LOOP & DETECTOR INSTALLATION

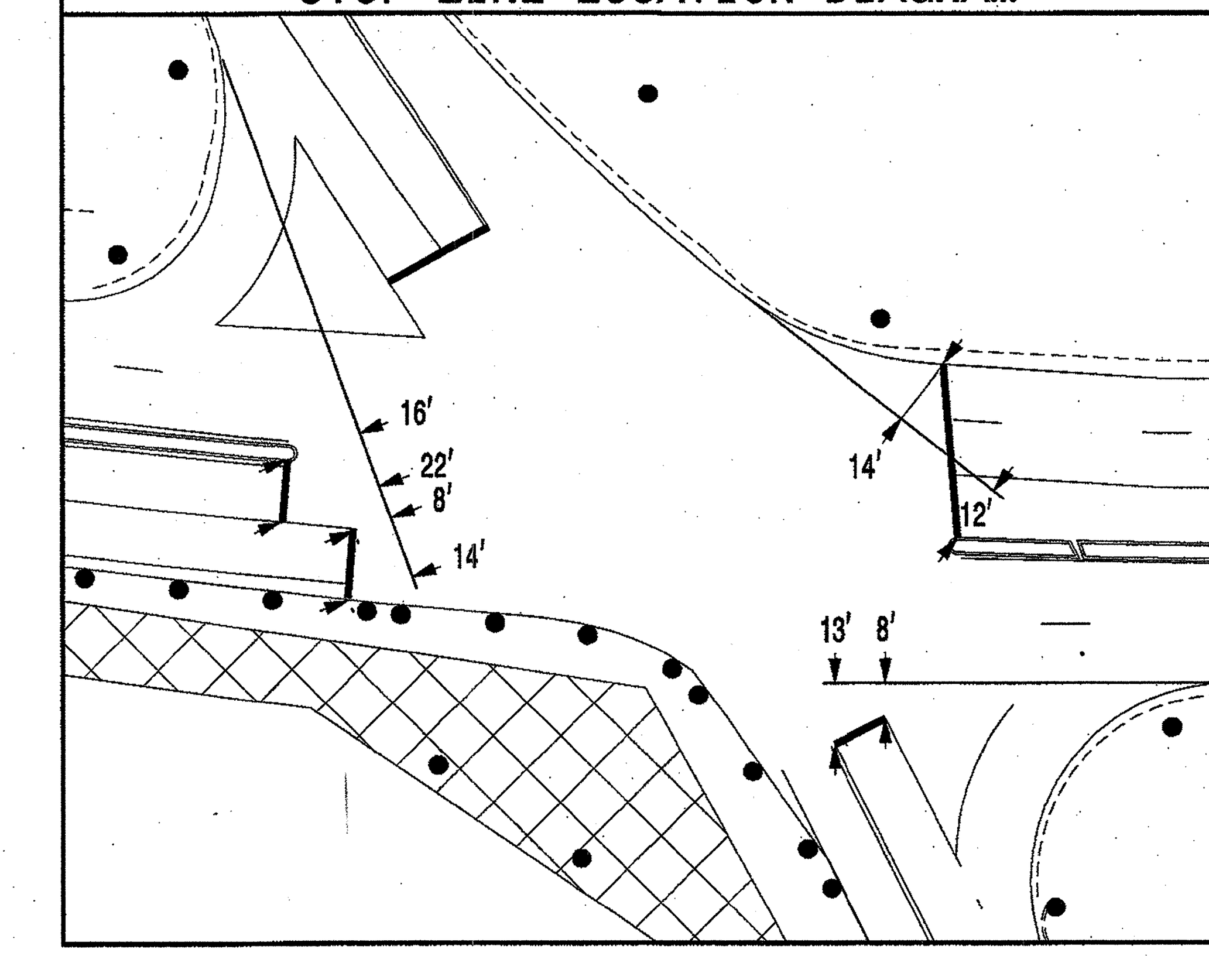
INDUCTIVE LOOPS					DETECTOR PROGRAMMING							
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
1A	6x40	0	2-4-2	Y	1	Y	Y	-	-	-	-	-
2A	6x6	355	5	Y	2	Y	Y	-	-	-	-	-
4A	EXIST.	0	2-4-2	-	4	Y	Y	-	-	3	-	-
4B	EXIST.	0	2-4-2	-	4	Y	Y	-	-	-	-	-
5A	6x40	0	2-4-2	Y	5	Y	Y	-	-	-	-	-
6A	6x6	355	6	Y	6	Y	Y	-	-	-	-	-
6B	6x6	355	6	Y	6	Y	Y	-	-	-	-	Y
8A	EXIST.	0	2-4-2	-	8	Y	Y	-	-	3	-	-

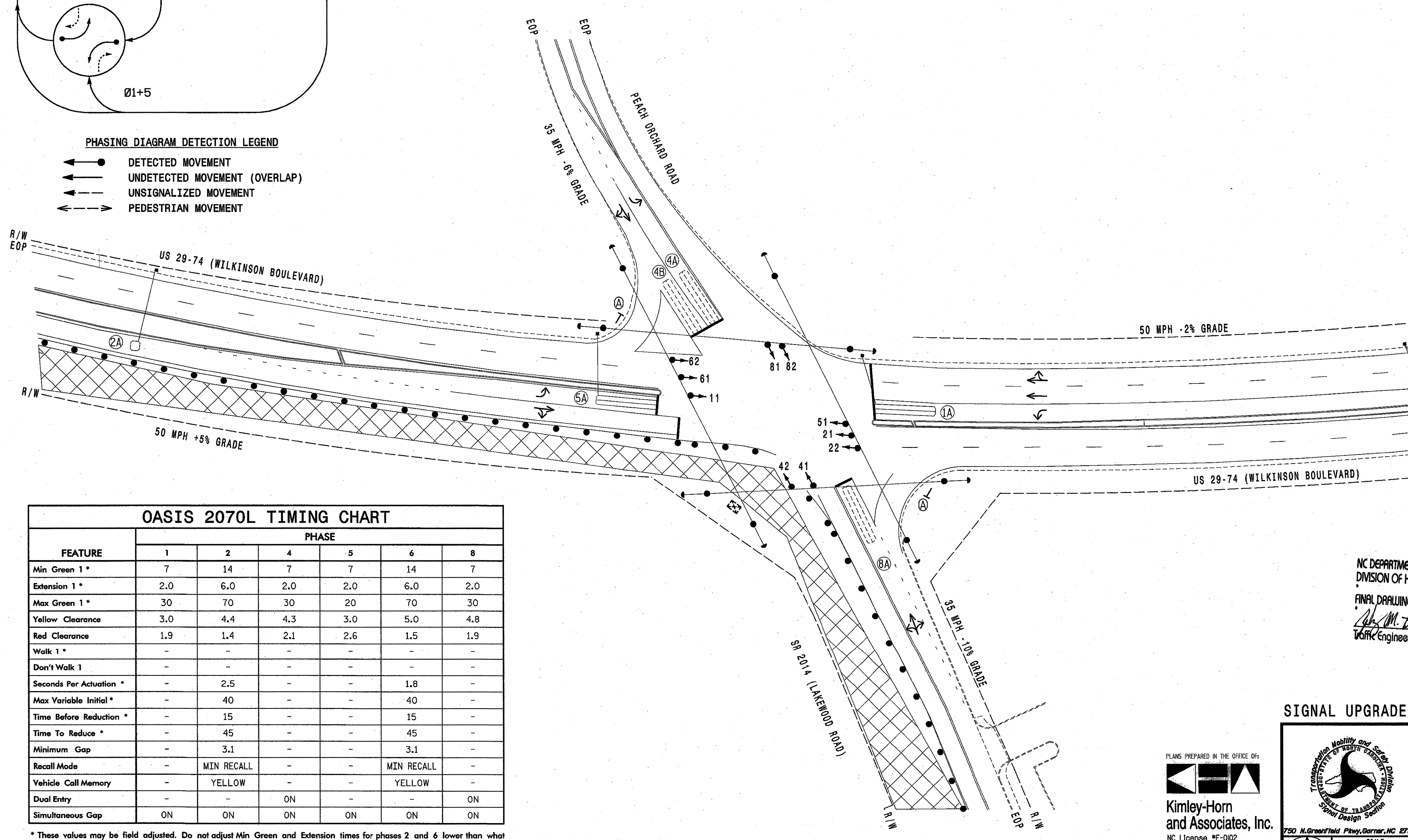
5 PHASE
FULLY ACTUATED
(ISOLATED)

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated July 2006, "Standard Specifications for Roads and Structures" dated July 2006, and all applicable sections of the latest version of the generic Project Special Provisions. The PSP can be accessed at the following website: http://www.ncdot.org/doh/preconstruct/traffic/ITSS/
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Phase 1 and/or phase 5 may be lagged.
4. Reposition signal heads numbered 11,21,22,51,61, 62,81 and 82.
5. Set all detector units to presence mode.
6. Signal contractor shall coordinate with roadway contractor to confirm sequence of construction on southwest corner of intersection.

STOP LINE LOCATION DIAGRAM





OASIS 2070L TIMING CHART

FEATURE	PHASE 1	2	4	5	6	8
Min Green 1 *	7	14	7	7	14	7
Extension 1 *	2.0	6.0	2.0	2.0	6.0	2.0
Max Green 1 *	30	70	30	20	70	30
Yellow Clearance	3.0	4.4	4.3	3.0	5.0	4.8
Red Clearance	1.9	1.4	2.1	2.6	1.5	1.9
Walk 1 *	-	-	-	-	-	-
Don't Walk 1	-	-	-	-	-	-
Seconds Per Actuation *	-	2.5	-	-	1.8	-
Max Variable Initial *	-	40	-	-	40	-
Time Before Reduction *	-	15	-	-	15	-
Time To Reduce *	-	45	-	-	45	-
Minimum Gap	-	3.1	-	-	3.1	-
Recall Mode	-	MIN RECALL	-	-	MIN RECALL	-
Vehicle Call Memory	-	YELLOW	-	-	YELLOW	-
Dual Entry	-	-	ON	-	-	ON
Simultaneous Gap	ON	ON	ON	ON	ON	ON

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

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
FINAL DRAWING, Date: 12/17/10
(Zachary M. Little)
Traffic Engineering Branch

LEGEND

PROPOSED		EXISTING
	Traffic Signal Head	
	Modified Signal Head	N/A
	Sign	
	Pedestrian Signal Head With Push Button & Sign	
	Signal Pole with Guy	
	Signal Pole with Sidewalk Guy	
	Inductive Loop Detector	
	Controller & Cabinet	
	Junction Box	
	2-in Underground Conduit	
N/A	Right of Way	
	Directional Arrow	
	Pavement Marking Arrow	
Ⓐ	"YIELD" Sign (R1-2)	Ⓐ

SIGNAL UPGRADE - TEMPORARY DESIGN TWO

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
NC License #F-0102
4651 Charlotte Park Dr.
Suite 300
Charlotte, NC 28217
(704) 333-5131, (704) 333-0845 Fax

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

SCALE 0 40'
1" = 40'

US 29-74 (WILKINSON BOULEVARD) AT SR 2014 (LAKEWOOD ROAD) / PEACH ORCHARD ROAD

DIVISION 12 GASTON COUNTY CRAMERTON

PLAN DATE: AUGUST 2010	REVIEWED BY: T SPACEK
PREPARED BY: B FINKLEA	REVIEWED BY:

REVISIONS	INIT.	DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 034207 ENGINEER ANTHONY J. SPACEK

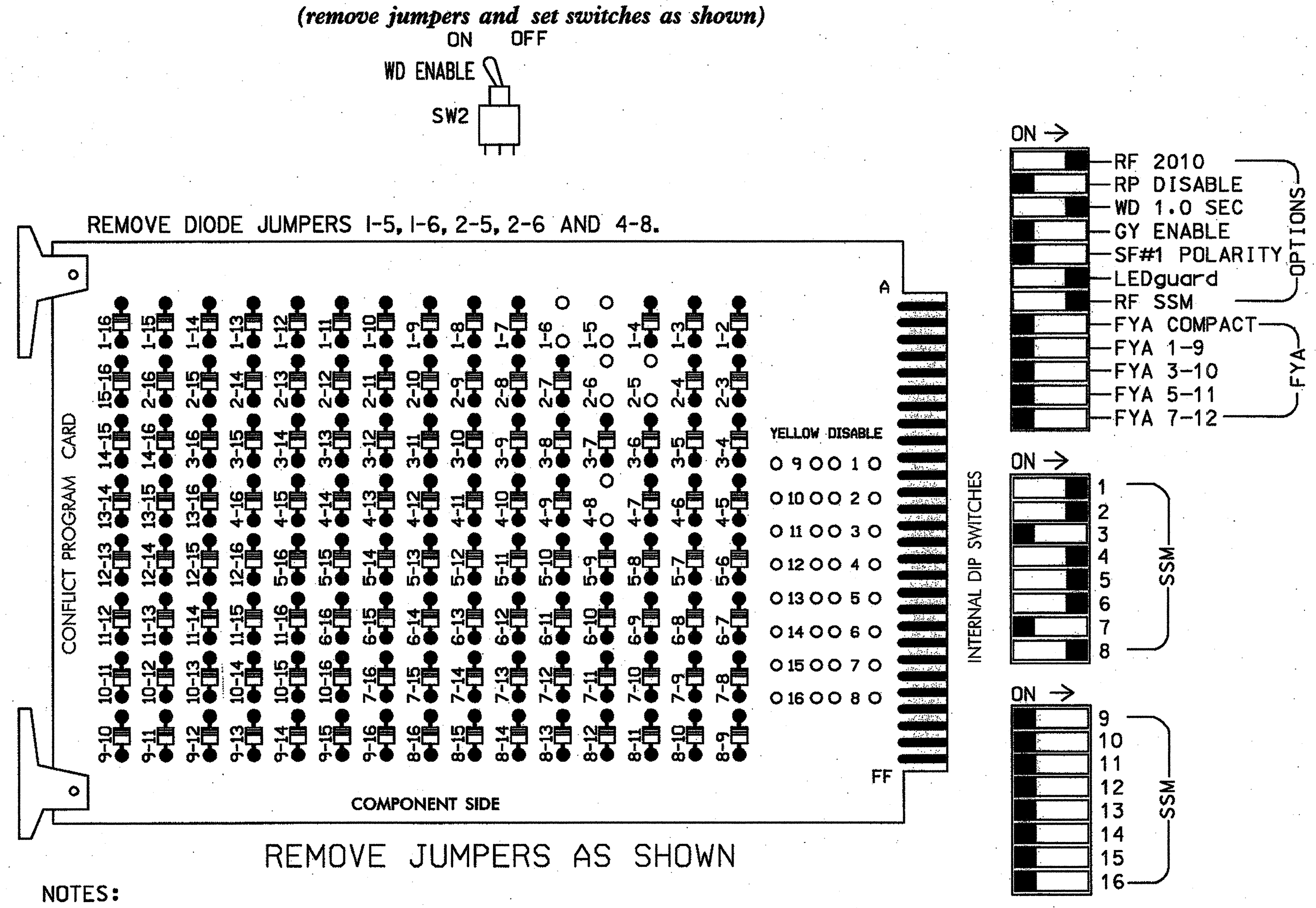
SIGNATURE 12/1/10 DATE

SIG. INVENTORY NO. 12-0082 T2

12/1/2010 1:30:25 PM brady.finklea K:\CHL_Roadway\015557003 MBAJ Cramerton HS\09_SIGNALS\03_CADD\Wilkinson @ Lakewood T2.dgn

EDI MODEL 2010ECL-NC CONFLICT MONITOR PROGRAMMING DETAIL

(remove jumpers and set switches as shown)



REMOVE JUMPERS AS SHOWN

■ = DENOTES POSITION OF SWITCH

NOTES:

1. Card is provided with all diode jumpers in place. Removal of any jumper allows its channels to run concurrently.
2. Make sure jumpers SEL2-SEL5 are present on the monitor board.

NOTES

1. 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 Plans.
2. Ensure that Red Enable is active at all times during normal operation. To prevent Red Failures on unused monitor channels, tie unused red monitor inputs 3,7,9,10, 11,12,13,14,15 & 16 to load switch AC+ per the cabinet manufacturer's instructions.
3. Program phases 4 and 8 for dual entry.
4. Enable Simultaneous Gap-Out for all phases.
5. Program phases 2 and 6 for Variable Initial and Gap Reduction.
6. Program phases 2 and 6 for Start Up In Green.
7. Program phases 2 and 6 for Yellow Flash.

PROJECT REFERENCE NO.	SHEET NO.
36249.2960	SIG. 1.4

SIGNAL HEAD HOOK-UP CHART

LOAD SWITCH NO.	S1	S2	S2P	S3	S4	S4P	S5	S6	S6P	S7	S8	S8P	S9	S10	S11	S12	S13	S14
PHASE	1	2	2 PED	3	4	4 PED	5	6	6 PED	7	8	8 PED	OLA	OLB	SPARE	OLC	OLD	SPARE
SIGNAL HEAD NO.	11	21,22	NU	NU	41,42	NU	51	61,62	NU	NU	81,82	NU	NU	NU	NU	NU	NU	NU
RED		128			101			134			107							
YELLOW		129			102			135			108							
GREEN		130			103			136			109							
RED ARROW	125						131											
YELLOW ARROW	126						132											
GREEN ARROW	127						133											
(Don't Walk symbol)																		
(Walk symbol)																		

NU = Not Used

INPUT FILE POSITION LAYOUT

(front view)

		1	2	3	4	5	6	7	8	9	10	11	12	13	14
FILE "I"	U	Ø1 1A	SLOT EMPTY	Ø2 2A	SLOT EMPTY	SLOT EMPTY	Ø4 4A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	FS DC ISOLATOR
	L	NOT USED		NOT USED			Ø4 4B								ST DC ISOLATOR
FILE "J"	U	Ø5 5A	Ø6 6A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	Ø8 8A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY
	L	NOT USED	Ø6 6B				NOT USED								

EX.: 1A, 2A, ETC. = LOOP NO.'S

FS = FLASH SENSE
ST = STOP TIME

EQUIPMENT INFORMATION

CONTROLLER..............EXISTING 2070L
CABINET.................EXISTING 332 W/ AUX
SOFTWARE................ECONOLITE OASIS
CABINET MOUNT...........BASE
OUTPUT FILE POSITIONS...18 (12-STD, 6 AUX)
LOAD SWITCHES USED......S1,S2,S4,S5,S6,S8
PHASES USED.............1,2,4,5,6,8
OVERLAPS................NONE

INPUT FILE CONNECTION & PROGRAMMING CHART

LOOP NO.	LOOP TERMINAL	INPUT FILE POS.	PIN NO.	INPUT ASSIGNMENT NO.	DETECTOR NO.	NEMA PHASE	CALL	EXTEND	FULL TIME DELAY	STRETCH TIME	DELAY TIME
1A	TB2-1,2	I1U	56	18	1	1	Y	Y			
2A	TB2-9,10	I3U	63	25	32	2	Y	Y			
4A	TB4-9,10	I6U	41	3	4	4	Y	Y			3
4B	TB4-11,12	I6L	45	7	14	4	Y	Y			
5A	TB3-1,2	J1U	55	17	5	5	Y	Y			
6A	TB3-5,6	J2U	40	2	6	6	Y	Y			
6B	TB3-7,8	J2L	44	6	16	6	Y	Y			
8A	TB5-9,10	J6U	42	4	8	8	Y	Y			3

INPUT FILE POSITION LEGEND: J2L
FILE J
SLOT 2
LOWER

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 12-0082 T2
DESIGNED: AUGUST 2010
SEALED: DECEMBER 1, 2010
REVISED:

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
FINAL DRAWING Date: 12/17/10
(Zachary M. Little)
Traffic Engineering Branch

PLANS PREPARED IN THE OFFICE OF:
Kimley-Horn and Associates, Inc.
NC License #F-0102
4651 Charlotte Park Dr., Ste 300
Charlotte, NC 28217
(704) 333-5131, (704) 333-0845 Fax

SIGNAL UPGRADE - TEMPORARY DESIGN TWO

ELECTRICAL AND PROGRAMMING DETAILS FOR:

US 29-74 (WILKINSON BOULEVARD)
AT
SR 2014 (LAKEWOOD ROAD) /
PEACH ORCHARD ROAD

DIVISION 12 GASTON COUNTY CRAMERTON

PLAN DATE: AUGUST 2010	REVIEWED BY: T SPACEK
PREPARED BY: B FINKLEA	REVIEWED BY:

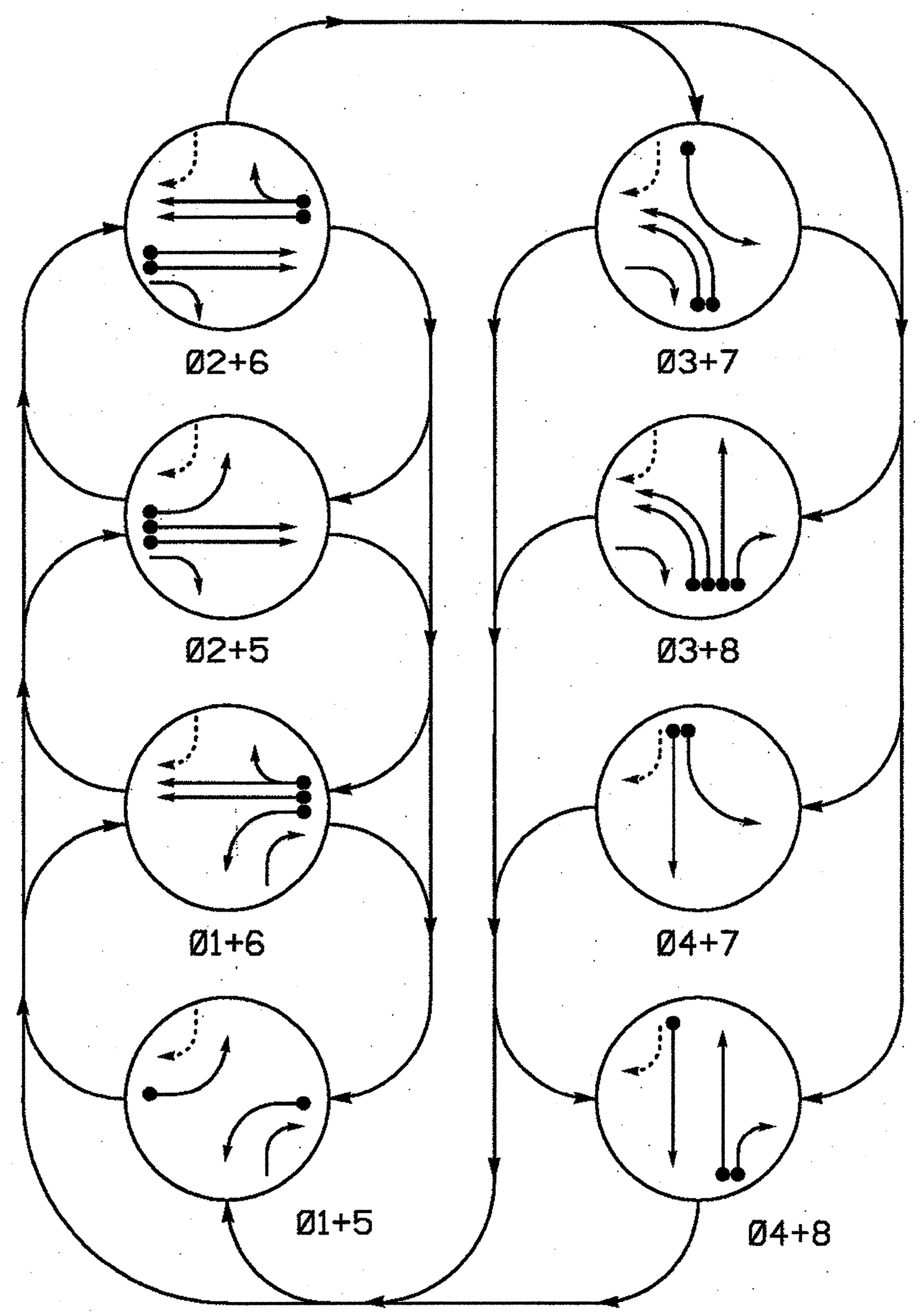
REVISIONS	INIT.	DATE

Traffic Engineering and Safety Systems Branch, Signals Management Section
700 N. Greenfield Parkway, Suite 750
Garner, NC 27529

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 034207 ENGINEER ANTHONY J. SPACEK
SIGNATURE 12/1/10 DATE

SIG. INVENTORY NO. 12-0082 T2

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

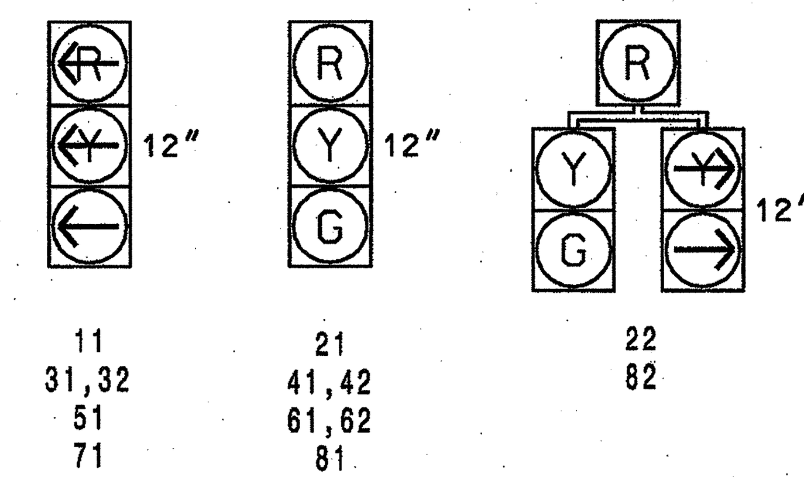
- DETECTED MOVEMENT
- UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE Ø1+5	Ø1+6	Ø2+5	Ø2+6	Ø3+7	Ø3+8	Ø4+7	Ø4+8	FLASH
11	←	←	←R	←R	←R	←R	←R	←R	←R
21	R	R	G	G	R	R	R	R	Y
22	R	R	G	G	R/→	R/→	R	R	Y
31,32	←R	←R	←R	←R	←	←	←R	←R	←R
41,42	R	R	R	R	R	R	G	G	R
51	←	←R	←	←R	←R	←R	←R	←R	←R
61,62	R	G	R	G	R	R	R	R	Y
71	←R	←R	←R	←R	←	←R	←	←R	←R
81	R	R	R	R	R	G	R	G	R
82	R/→	R/→	R	R	R	G	R	G	R

SIGNAL FACE I.D.

All Heads L.E.D.



OASIS 2070L LOOP & DETECTOR INSTALLATION

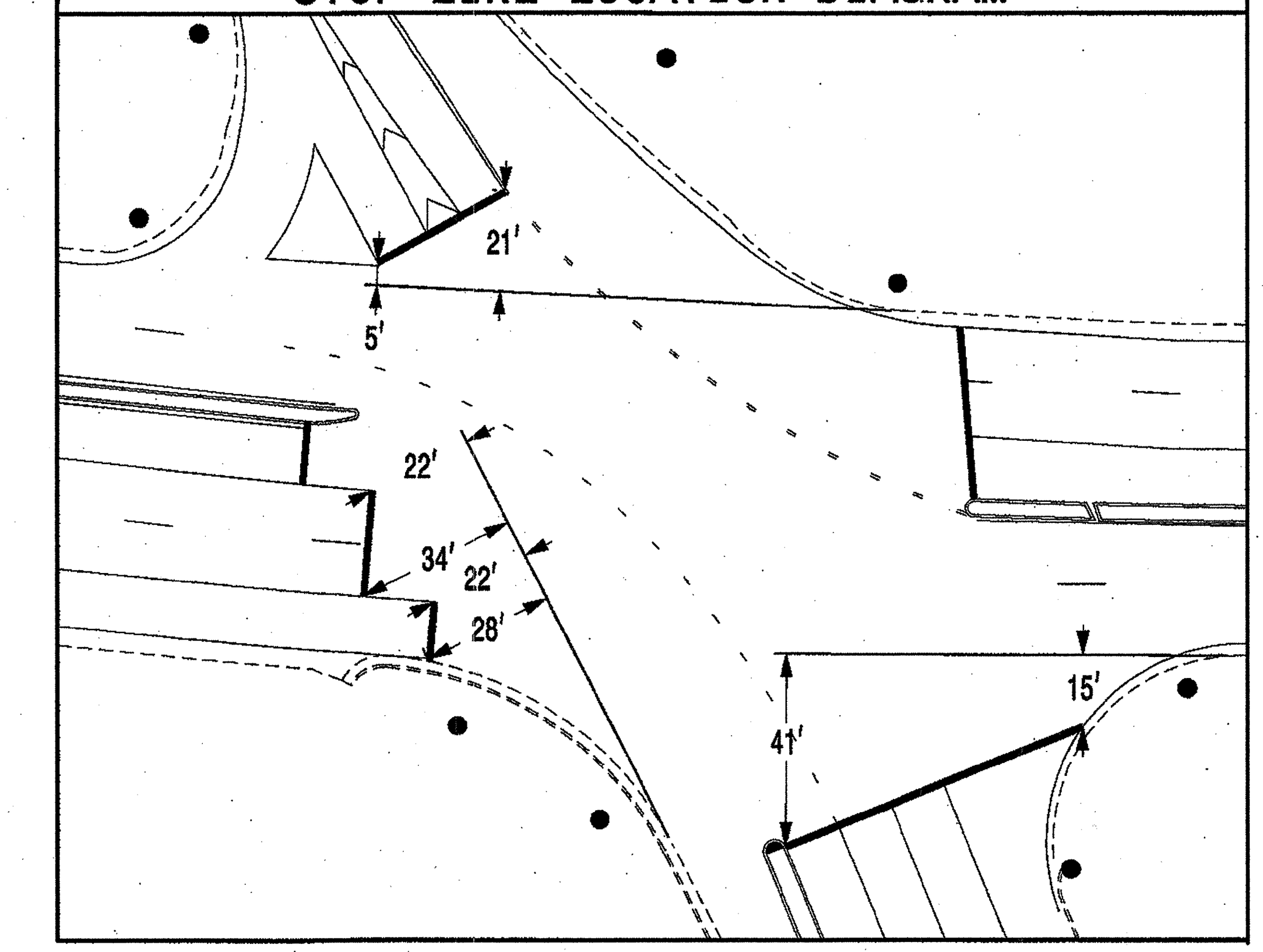
INDUCTIVE LOOPS					DETECTOR PROGRAMMING							
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
1A	EXIST.	0	2-4-2	-	1	Y	Y	-	-	-	-	-
1B	6x40	0	2-4-2	Y	1	Y	Y	-	-	15	-	Y
1C	6x6	0	2-4-2	Y	1	Y	Y	-	-	15	-	Y
2A	6x6	355	5	Y	2	Y	Y	-	-	-	-	-
2B	6x6	355	5	Y	2	Y	Y	-	-	-	-	Y
3A	6x40	0	2-4-2	Y	3	Y	Y	-	-	-	-	Y
3B	6x40	0	2-4-2	Y	3	Y	Y	-	-	-	-	Y
4A	6x40	0	2-4-2	Y	4	Y	Y	-	-	-	-	Y
5A	6x40	0	2-4-2	Y	5	Y	Y	-	-	-	-	-
6A	EXIST.	355	6	-	6	Y	Y	-	-	-	-	-
6B	EXIST.	355	6	-	6	Y	Y	-	-	-	-	-
7A	EXIST.	0	2-4-2	-	7	Y	Y	-	-	3	-	Y
8A	6x40	0	2-4-2	Y	8	Y	Y	-	-	-	-	Y

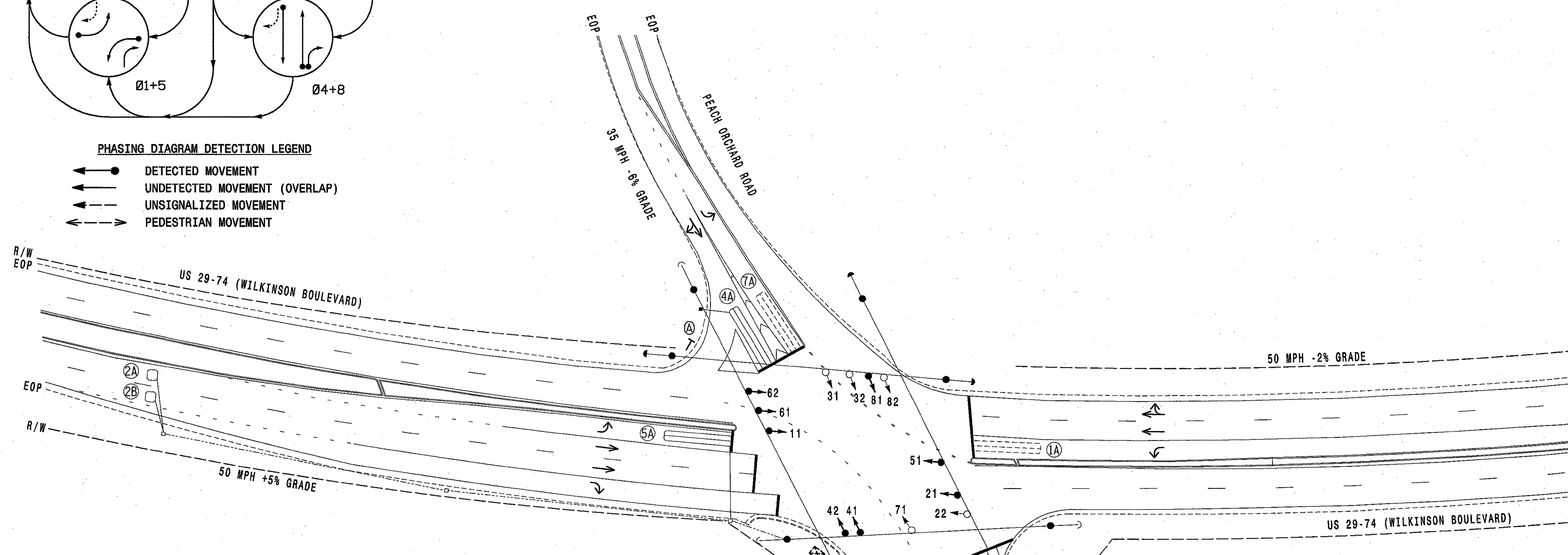
8 PHASE FULLY ACTUATED (ISOLATED)

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated July 2006, "Standard Specifications for Roads and Structures" dated July 2006, and all applicable sections of the latest version of the generic Project Special Provisions. The PSP can be accessed at the following website: http://www.ncdot.org/doh/preconstruct/traffic/ITSS/
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Phase 1 and/or phase 5 may be lagged.
4. Phase 3 and/or phase 7 may be lagged.
5. Reposition existing signal heads numbered 21,41,42, 51 and 81.
6. Set all detector units to presence mode.

STOP LINE LOCATION DIAGRAM





OASIS 2070L TIMING CHART

FEATURE	PHASE 1	2	3	4	5	6	7	8
Min Green 1 *	7	14	7	7	7	14	7	7
Extension 1 *	2.0	6.0	2.0	2.0	2.0	6.0	2.0	2.0
Max Green 1 *	30	70	20	30	20	70	20	30
Yellow Clearance	3.0	4.4	3.4	4.3	3.0	5.0	3.1	4.8
Red Clearance	3.1	1.6	3.9	2.0	3.1	1.6	3.4	2.3
Walk 1 *	-	-	-	-	-	-	-	-
Don't Walk 1	-	-	-	-	-	-	-	-
Seconds Per Actuation *	-	1.8	-	-	-	1.8	-	-
Max Variable Initial *	-	40	-	-	-	40	-	-
Time Before Reduction *	-	15	-	-	-	15	-	-
Time To Reduce *	-	45	-	-	-	45	-	-
Minimum Gap	-	3.1	-	-	-	3.1	-	-
Recall Mode	-	MIN RECALL	-	-	-	MIN RECALL	-	-
Vehicle Call Memory	-	YELLOW	-	-	-	YELLOW	-	-
Dual Entry	-	-	-	-	-	-	-	-
Simultaneous Gap	ON	ON	ON	ON	ON	ON	ON	ON

* These values may be field adjusted. Do not adjust Min Green and Extension 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	●→
◐→	Modified Signal Head	N/A
⊣	Sign	⊣
□	Pedestrian Signal Head With Push Button & Sign	■
○—)	Signal Pole with Guy	●—)
○┐	Signal Pole with Sidewalk Guy	●┐
▭	Inductive Loop Detector	⬚
⊠	Controller & Cabinet	⊠
□	Junction Box	■
-------	2-in Underground Conduit	-·-·-·-
N/A	Right of Way	— — —
→	Directional Arrow	→
→	Pavement Marking Arrow	→
Ⓐ	"YIELD" Sign (R1-2)	Ⓐ

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Transportation Mobility and Safety Division — Signal Design Section
750 N.Greenfield Pkwy,Garner,NC 27529

SCALE 0 40'
1" = 40'

US 29-74 (WILKINSON BOULEVARD) AT SR 2014 (LAKEWOOD ROAD) / PEACH ORCHARD ROAD

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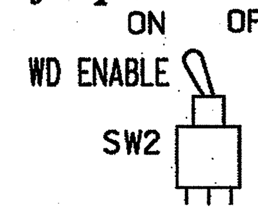
SIGNATURE 12/1/10 DATE

SIG. INVENTORY NO. 12-0082

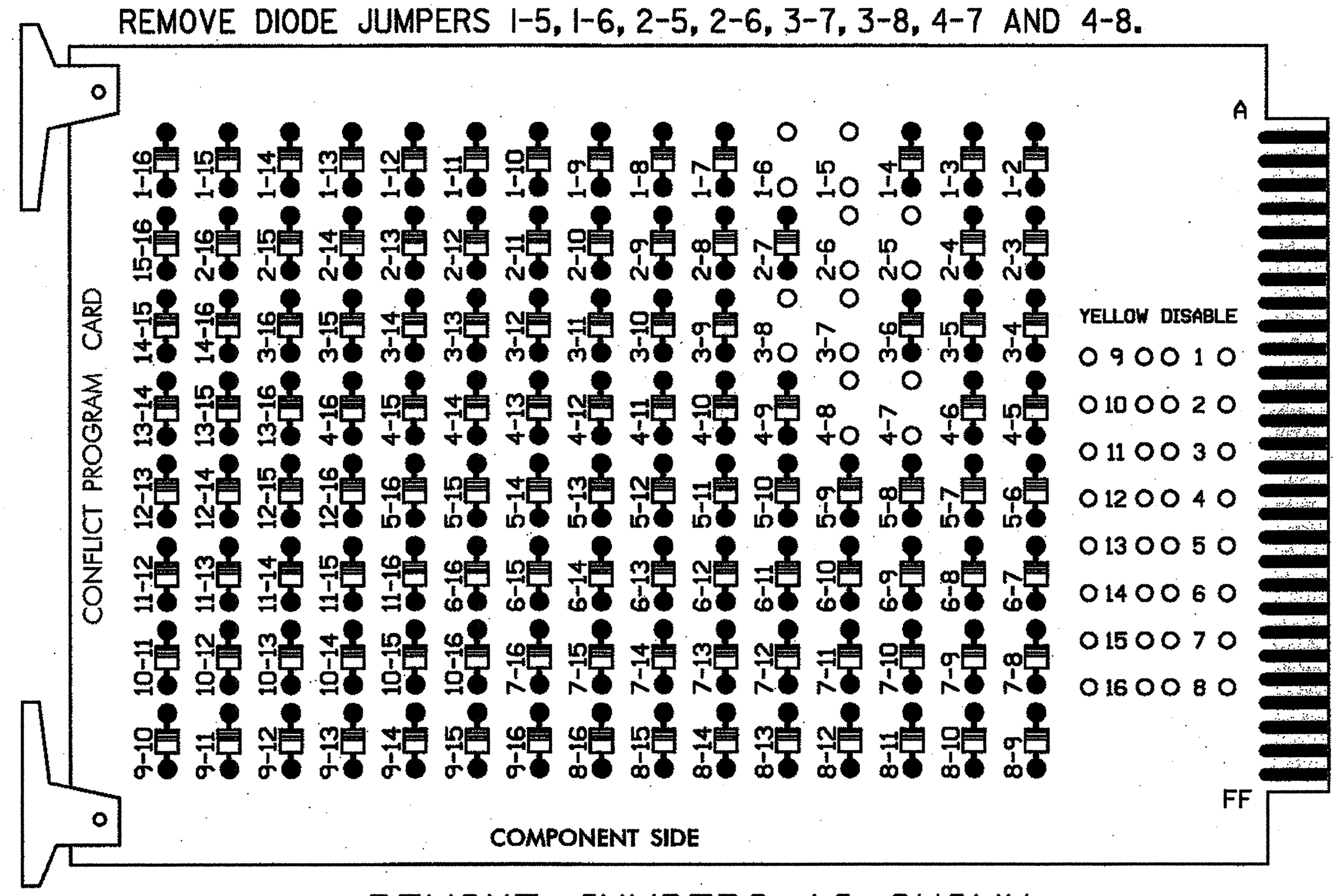
PROJECT REFERENCE NO.	SHEET NO.
36249.2960	SIG. 1.6

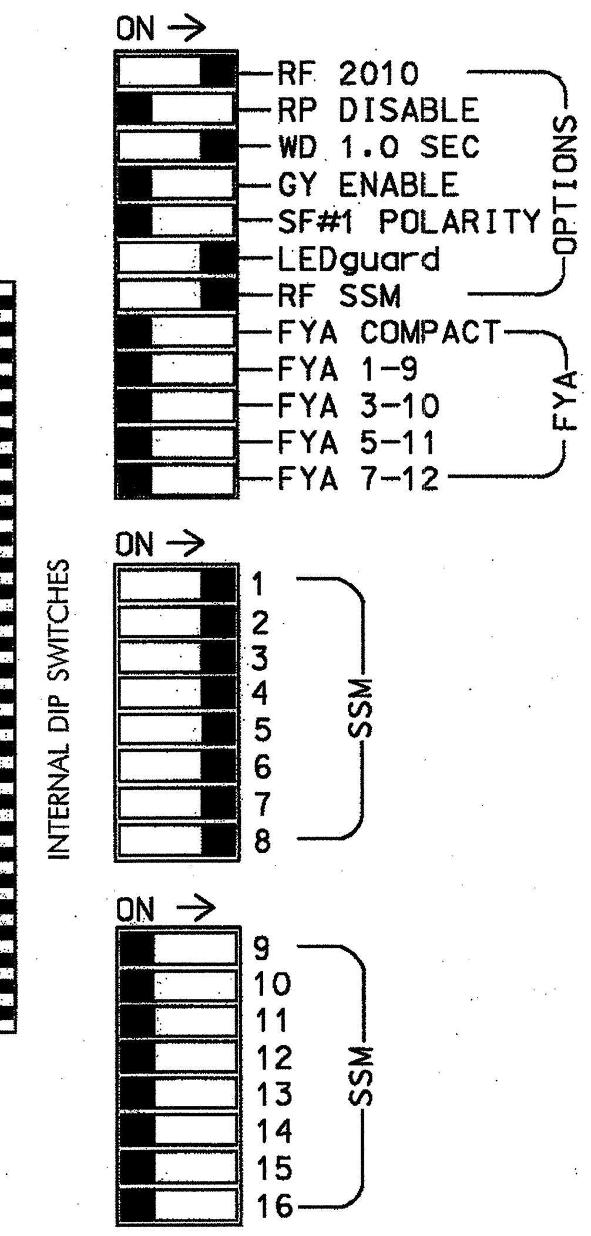
EDI MODEL 2010ECL-NC CONFLICT MONITOR PROGRAMMING DETAIL

(remove jumpers and set switches as shown)



REMOVE DIODE JUMPERS 1-5, 1-6, 2-5, 2-6, 3-7, 3-8, 4-7 AND 4-8.





REMOVE JUMPERS AS SHOWN

NOTES:

1. Card is provided with all diode jumpers in place. Removal of any jumper allows its channels to run concurrently.
2. Make sure jumpers SEL2-SEL5 are present on the monitor board.

■ = DENOTES POSITION OF SWITCH

NOTES

1. 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 Plans.
2. Ensure that Red Enable is active at all times during normal operation. To prevent Red Failures on unused monitor channels, tie unused red monitor inputs 9,10,11, 12,13,14,15 & 16 to load switch AC+ per the cabinet manufacturer's instructions.
3. Enable Simultaneous Gap-Out for all phases.
4. Program phases 2 and 6 for Variable Initial and Gap Reduction.
5. Program phases 2 and 6 for Start Up In Green.
6. Program phases 2 and 6 for Yellow Flash.

SIGNAL HEAD HOOK-UP CHART

LOAD SWITCH NO.	S1		S2	S2P	S3		S4	S4P	S5	S6	S6P	S7	S8	S8P	S9	S10	S11	S12	S13	S14
PHASE	1		2	2 PED	3		4	4 PED	5	6	6 PED	7	8	8 PED	OLA	OLB	SPARE	OLC	OLD	SPARE
SIGNAL HEAD NO.	11	82	21,22	NU	22	31,32	41,42	NU	51	61,62	NU	71	81,82	NU	NU	NU	NU	NU	NU	NU
RED			128				101			134			107							
YELLOW			129				102			135			108							
GREEN			130				103			136			109							
RED ARROW	125					116			131			122								
YELLOW ARROW	126	126			117	117			132			123								
GREEN ARROW	127	127			118	118			133			124								
✋																				
🚶																				

NU = Not Used

EQUIPMENT INFORMATION

CONTROLLER.............EXISTING 2070L
CABINET................EXISTING 332 W/ AUX
SOFTWARE...............ECONOLITE OASIS
CABINET MOUNT..........BASE
OUTPUT FILE POSITIONS...18 (12-STD, 6 AUX)
LOAD SWITCHES USED......S1,S2,S3,S4,S5,S6,S7,S8
PHASES USED............1,2,3,4,5,6,7,8
OVERLAPS...............NONE

INPUT FILE POSITION LAYOUT

(front view)

		1	2	3	4	5	6	7	8	9	10	11	12	13	14
FILE "I"	U	Ø1 1A	Ø1 1B	Ø2 2A	SLOT EMPTY	Ø3 3A	Ø4 4A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	FS DC ISOLATOR
	L	NOT USED	Ø1 1C	Ø2 2B		Ø3 3B	NOT USED								ST DC ISOLATOR
FILE "J"	U	Ø5 5A	Ø6 6A	SLOT EMPTY	SLOT EMPTY	Ø7 7A	Ø8 8A	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY	SLOT EMPTY
	L	NOT USED	Ø6 6B			NOT USED	NOT USED								

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 ASSIGNMENT NO.	DETECTOR NO.	NEMA PHASE	CALL	EXTEND	FULL TIME DELAY	STRETCH TIME	DELAY TIME
1A	TB2-1,2	I1U	56	18	1	1	Y	Y			
1B	TB2-5,6	I2U	39	1	2	1	Y	Y			15
1C	TB2-7,8	I2L	43	5	12	1	Y	Y			15
2A	TB2-9,10	I3U	63	25	32	2	Y	Y			
2B	TB2-11,12	I3L	76	38	42	2	Y	Y			
3A	TB4-5,6	I5U	58	20	3	3	Y	Y			
3B	TB4-7,8	I5L	58	20	3	3	Y	Y			
4A	TB4-9,10	I6U	41	3	4	4	Y	Y			
5A	TB3-1,2	J1U	55	17	5	5	Y	Y			
6A	TB3-5,6	J2U	40	2	6	6	Y	Y			
6B	TB3-7,8	J2L	44	6	16	6	Y	Y			
7A	TB5-5,6	J5U	57	19	7	7	Y	Y			3
8A	TB5-9,10	J6U	42	4	8	8	Y	Y			

INPUT FILE POSITION LEGEND: J2L

FILE J
SLOT 2
LOWER

THIS ELECTRICAL DETAIL IS FOR
THE SIGNAL DESIGN: 12-0082
DESIGNED: AUGUST 2010
SEALED: DECEMBER 1, 2010
REVISED:

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