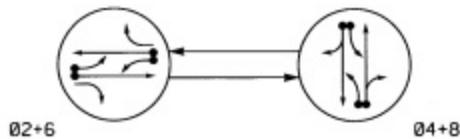


PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

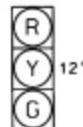
- ←●→ DETECTED MOVEMENT
- ←○→ UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- ←- - -> PEDESTRIAN MOVEMENT

TABLE OF OPERATION

SIGNAL FACE	PHASE		
	02+6	04+8	FLASH
21,22	G	R	Y
41,42	R	G	R
61,62	G	R	Y
81,82	R	G	R

SIGNAL FACE I.D.

All Heads L.E.D.



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

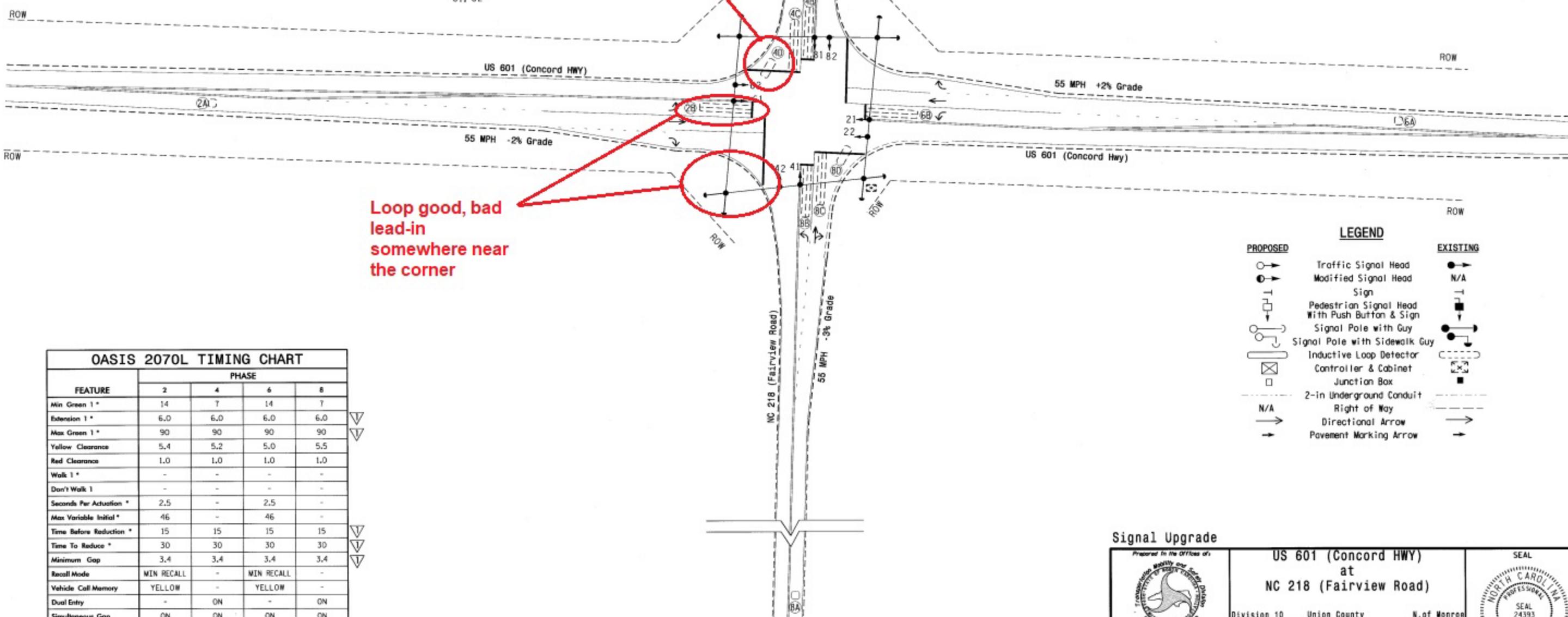
OASIS 2070L LOOP & DETECTOR INSTALLATION

LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	DETECTOR PROGRAMMING								
				NEW LOOP	PHASE	CALLING	EXTENSION	PULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
2A	6X6	420	EXIST	-	2	Y	Y	-	-	-	-	-
2B	6X40	0	EXIST	-	2	Y	Y	-	-	3	-	-
4A	6X6	420	6	Y	4	-	Y	-	-	-	-	Y
4B	6X40	0	EXIST	-	4	Y	Y	-	-	3	-	-
4C	6X40	0	EXIST	-	4	Y	Y	Y	2	5	-	-
4D	6X15	+5	EXIST	-	4	Y	Y	-	-	15	-	-
6A	6X6	420	EXIST	-	6	Y	Y	-	-	-	-	-
6B	6X40	0	EXIST	-	6	Y	Y	Y	-	3	-	-
8A	6X6	420	6	Y	8	-	Y	-	-	-	-	Y
8B	6X40	0	EXIST	-	8	Y	Y	-	-	3	-	-
8C	6X40	0	EXIST	-	8	Y	Y	Y	2	5	-	-
8D	6X15	+5	EXIST	-	8	Y	Y	-	-	15	-	-

2 Phase Fully Actuated Isolated

NOTES

- Refer to "Roadway Standard Drawings NCDOT" dated July 2006 and "Standard Specifications for Roads and Structures" dated July 2006.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Set all detector units to presence mode.



6X15, 4 Turns

Loop good, bad lead-in somewhere near the corner

OASIS 2070L TIMING CHART

FEATURE	PHASE			
	2	4	6	8
Min Green 1 *	14	7	14	7
Extension 1 *	6.0	6.0	6.0	6.0
Max Green 1 *	90	90	90	90
Yellow Clearance	5.4	5.2	5.0	5.5
Red Clearance	1.0	1.0	1.0	1.0
Walk 1 *	-	-	-	-
Don't Walk 1	-	-	-	-
Seconds Per Actuation *	2.5	-	2.5	-
Max Variable Initial *	46	-	46	-
Time Before Reduction *	15	15	15	15
Time To Reduce *	30	30	30	30
Minimum Gap	3.4	3.4	3.4	3.4
Recall Mode	MIN RECALL	-	MIN RECALL	-
Vehicle Call Memory	YELLOW	-	YELLOW	-
Dual Entry	-	ON	-	ON
Simultaneous Gap	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

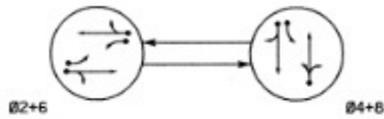
- | PROPOSED | EXISTING |
|----------|----------|
| | |
| | N/A |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

Signal Upgrade

Prepared in the Offices of:

US 601 (Concord Hwy) at NC 218 (Fairview Road)
 Division 10 Union County N. of Monroe
 PLAN DATE: March 2009 PREPARED BY: Jerry Yaravitz
 PREPARED BY: N. Mahbooba REVIEWED BY:
 SCALE: 1"=40'
 Add Volume Density Loops 4A & 8A and reassign existing Loops.
 DATE: 6/29/11
 SIGNATURE: [Signature]
 DATE: 6/22/09
 SEAL: [Seal]
 SIGNATURE: [Signature]
 DATE: 6/22/09
 SIG. INVENTORY NO. 10-1328

PHASING DIAGRAM

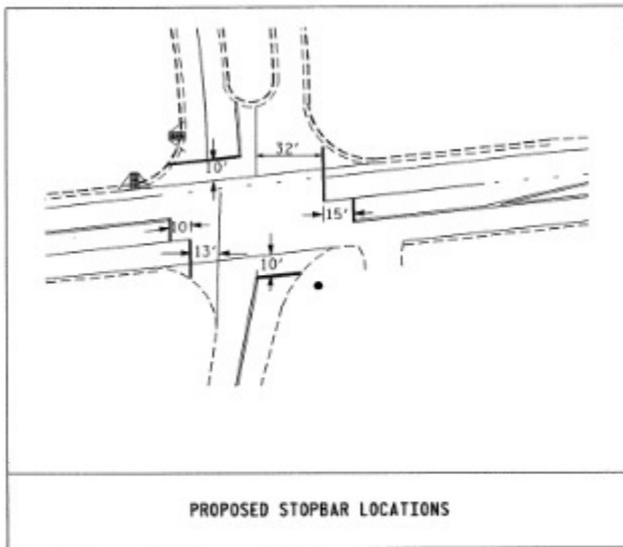


SIGNAL FACE	PHASE		
	01+08	04+40	02+01
21, 22	G	R	Y
41, 42	R	G	R
61, 62	G	R	Y
81, 82	R	G	R

- PHASING DIAGRAM DETECTION LEGEND
- DETECTED MOVEMENT
 - ◄ UNDETECTED MOVEMENT (OVERLAP)
 - ◄ UNSIGNALIZED MOVEMENT
 - ◄ PEDESTRIAN MOVEMENT

SIGNAL FACE I.D.

- Denotes L.E.D.
 - Ⓡ 12"
 - Ⓢ 12"
 - Ⓣ 12"
- 21, 22
41, 42
61, 62
81, 82



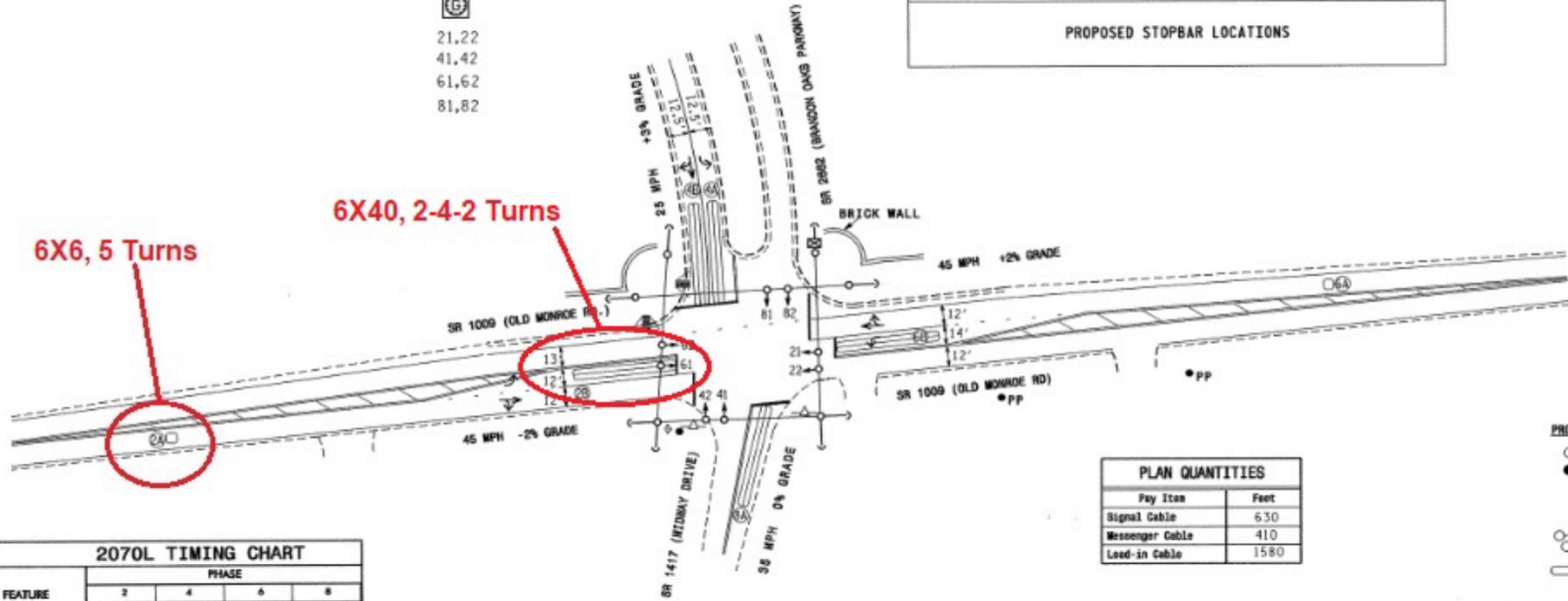
2-PHASE
FULLY ACTUATED
(ISOLATED)

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2002 and "Standard Specifications for Roads and Structures" dated January 2002.
2. Set all detector units to presence mode.
3. Program phase 4 and phase 8 for dual entry.

6X6, 5 Turns

6X40, 2-4-2 Turns



Item	Quantity
Pay Item	Feet
Signal Cable	630
Messenger Cable	410
Lead-in Cable	1580

FEATURE	PHASE			
	2	4	6	8
Min Green 1*	12	7	12	7
Extension 1*	6	1	6	1
Max Green 1*	90	25	90	25
Yellow Clearance	4.7	4.0	4.7	4.0
Red Clearance	1.5	1.5	1.5	1.5
Walk 1*	-	-	-	-
Don't Walk 1	-	-	-	-
Seconds Per Actuation *	2.5	-	2.5	-
Max Variable Initial*	34	-	34	-
Time Before Reduction *	15	-	15	-
Time To Reduction *	30	-	30	-
Minimum Gap	3.0	-	3.0	-
Recall Mode	MIN RECALL	-	MIN RECALL	-
Vehicle Call Memory	YELLOW	-	YELLOW	-
Dual Entry	-	ON	-	ON
Synchronous Gap	ON	ON	ON	ON

2070L LOOP & DETECTOR INSTALLATION												
INDUCTIVE LOOPS						DETECTOR PROGRAMMING						
LOOP	SIZE (FT)	TURNS	EXISTENCE FROM STOPBAR (FT)	NEW LOOP	PHASE	CALLING	EXTENSION	USE TIME RELAY	SYSTEM LOOP	STRETCH TIME	DELAY TIME	NEW CHD
2A	6X6	5	300	Y	2	Y	Y					Y
2B	6X40	2-4-2	0	Y	2	Y	Y	Y			3	Y
4A	6X60	2-4-2	0	Y	4	Y	Y					Y
4B	6X60	2-4-2	0	Y	4	Y	Y				10	Y
6A	6X6	4	300	Y	6	Y	Y					Y
6B	6X60	2-4-2	0	Y	6	Y	Y	Y			3	Y
8A	6X60	2-4-2	0	Y	8	Y	Y				10	Y

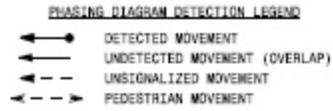
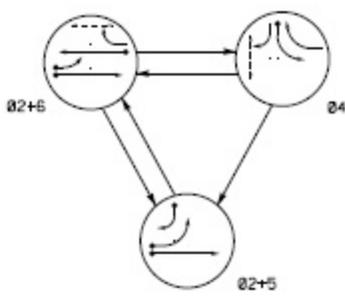
- LEGEND
- | | | | |
|---|---|-----|---|
| ○ | PROPOSED Traffic Signal Head | ● | EXISTING Traffic Signal Head |
| ○ | PROPOSED Modified Signal Head | N/A | EXISTING Modified Signal Head |
| ○ | PROPOSED Sign | ○ | EXISTING Sign |
| ○ | PROPOSED Pedestrian Signal Head With Push Button & Sign | ○ | EXISTING Pedestrian Signal Head With Push Button & Sign |
| ○ | PROPOSED Signal Pole with Guy | ○ | EXISTING Signal Pole with Guy |
| ○ | PROPOSED Signal Pole with Sidewalk Guy | ○ | EXISTING Signal Pole with Sidewalk Guy |
| ○ | PROPOSED Inductive Loop Detector | ○ | EXISTING Inductive Loop Detector |
| ○ | PROPOSED Controller & Cabinet | ○ | EXISTING Controller & Cabinet |
| ○ | PROPOSED Junction Box | ○ | EXISTING Junction Box |
| ○ | PROPOSED 2-in Underground Conduit | ○ | EXISTING 2-in Underground Conduit |
| ○ | PROPOSED Right of Way with Marker | ○ | EXISTING Right of Way with Marker |
| ○ | PROPOSED Directional Arrow | ○ | EXISTING Directional Arrow |
| ○ | PROPOSED Pavement Marking Arrow | ○ | EXISTING Pavement Marking Arrow |

NEW INSTALLATION

Prepared in the office of

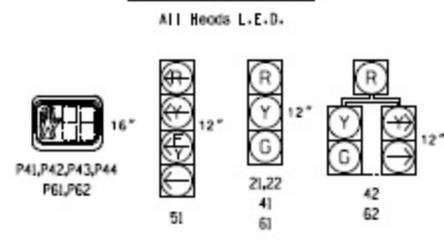
 SR 1009 (OLD MONROE ROAD)
 AT
 SR 1417 (MIDWAY DR.) /
 SR 2662 (BRANDON OAKS PKWY)
 DIVISION 10 UNION COUNTY INDIAN TRAIL
 PLAN DATE: FEBRUARY 2003 REVISIONS BY: *[Signature]*
 PREPARED BY: N. ADIMA REVISIONS BY:
 REVISIONS: DATE: INT. DATE: *[Signature]*
 SCALE: 1"=40'
 10-1987

PHASING DIAGRAM



SIGNAL FACE	PHASE			
	B 2 + 3	B 2 + 6	B 4	F L TURNS
21,22	G	G	R	Y
41	R	R	G	R
42	R	R	G	R
51				
61	R	G	R	Y
62	R	G	R	Y
P41,P42, P43,P44	DW	DW	Y	DRK
P61,P62	DW	W	DW	DRK

SIGNAL FACE I.D.



OASIS 2070 LOOP & DETECTOR INSTALLATION CHART

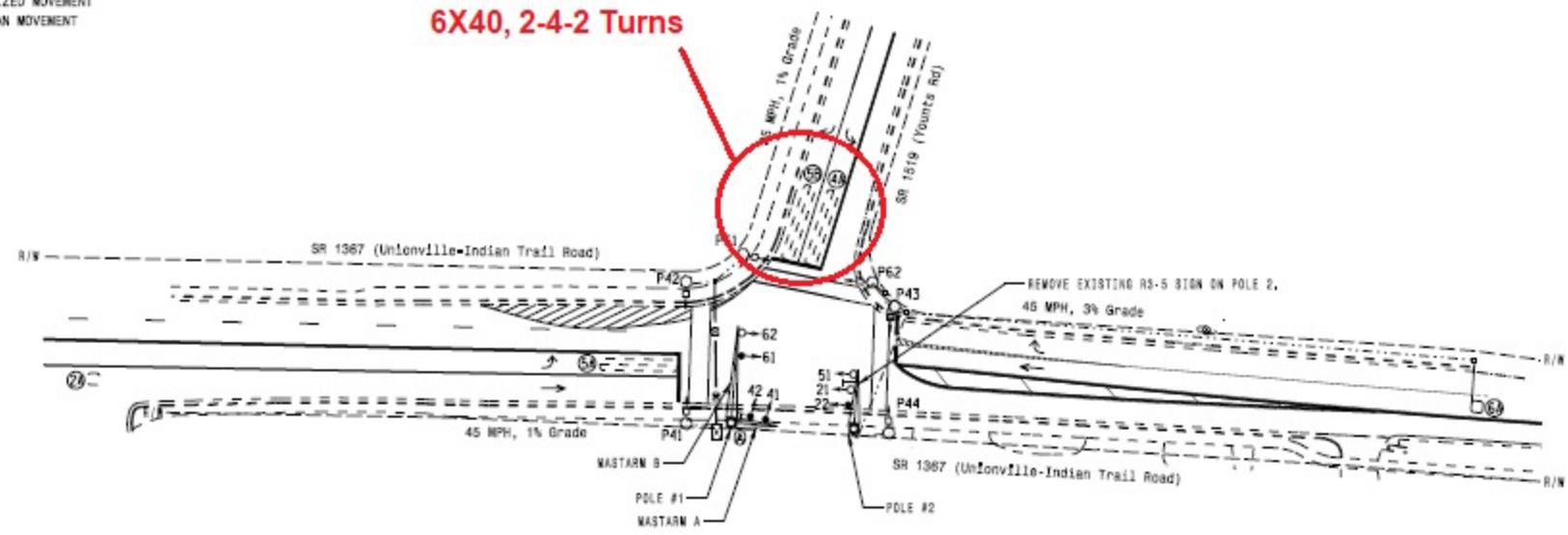
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	INDUCTIVE LOOPS				DETECTOR PROGRAMMING				
				NEW LOOP	PHASE	CALLING	DETRODIN	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD	
2A	6X6	300	EXIST	-	2	Y	Y	-	-	-	-	-
4A	6X40	0	2-4-2	-	4	Y	Y	-	-	3	-	-
5A	6X40	0	2-4-2	-	5	Y	Y	-	-	15	-	-
5B	6X40	0	2-4-2	-	5	Y	Y	-	-	15	-	-
6A	6X6	300	4	Y	6	Y	Y	-	-	-	-	-

3 Phase Fully Actuated Isolated

NOTES

- Refer to "Roadway Standard Drawings NCDOT" dated January 2012, "Standard Specifications for Roads and Structures" dated January 2012, 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/iss/>
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Phase 5 may be lagged.
- Reposition existing signal heads numbered 22.
- Set all detector units to presence mode.
- Omit "WALK" and "DON'T WALK" with no pedestrian calls.
- Program pedestrian heads to countdown the flashing "Don't Walk" time only.
- Pedestrian pedestals are conceptual and shown for reference only. See sheets P1-P3 for push button location details.
- Push button locations shall be located by division traffic engineer.
- Pedestal Type- Combination panel w/ pedestal extension (1700,01)

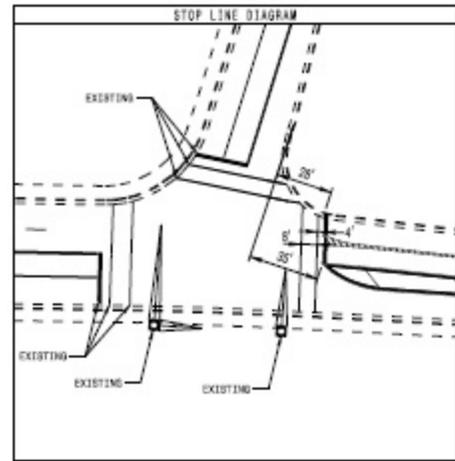
6X40, 2-4-2 Turns



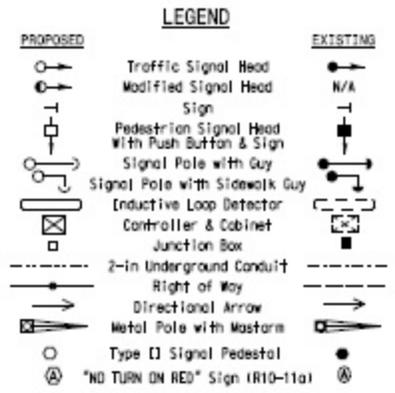
OASIS 2070L TIMING CHART

FEATURE	PHASE			
	2	4	5	6
Min Green 1 *	12	7	7	12
Extension 1 *	60	20	20	60
Max Green 1 *	75	40	20	75
Yellow Clearance	4.4	3.0	3.0	4.4
Red Clearance	1.6	2.1	2.9	1.6
Red Recall	2.0	2.0	2.0	2.0
Walk 1 *	-	4.0	-	4.0
Don't Walk 1	-	13	-	13
Seconds Per Actuation *	2.5	-	-	2.5
Max Yield to 1004 *	34	-	-	34
Time Before Reduction *	15	-	-	15
Time To Reduce *	45	-	-	45
Minimum Gap	3.0	-	-	3.0
Recall Heads	WIN RECALL	-	-	WIN RECALL
Vehicle Call Necessary	YELLOW	-	-	YELLOW
Dual Entry	-	-	-	-
Simultaneous Gap	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 Dept of Transportation
Division of Highways
Final Drawing Date: 7/21/2016
Prepared by: S. W. ...
ITS & Signals Unit



Signal Upgrade

SR 1367 (Unionville-Indian Trail Road) at SR 1519 (Younts Road)

Division 10 Union County Indian Trail

PLN DTD: May 2016 REVISION: T. Spack

DESIGNED BY: E. Ebery REVISION: E. Ebery

SCALE: 0 40 1"=40'

7/19/2016

7/19/2016

7/19/2016

Kimley-Horn
206 South Tryon Street, Suite 200
Charlotte, North Carolina 28202
919-333-0101

PHASING DIAGRAM

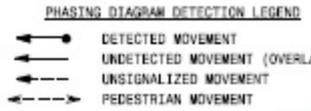
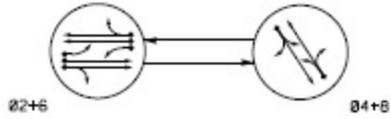


TABLE OF OPERATION

SIGNAL FACE	PHASE		
	G	R	Y
21, 22	G	R	Y
41, 42	R	G	R
61, 62	G	R	Y
81, 82	R	G	R

SIGNAL FACE I.D.

All Heads L.E.D.



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

OASIS 2070 LOOP & DETECTOR INSTALLATION CHART

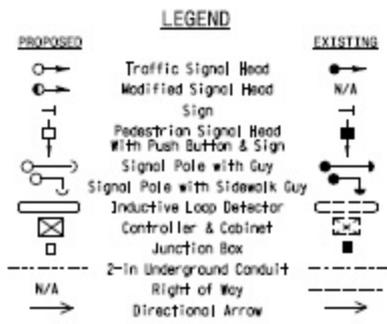
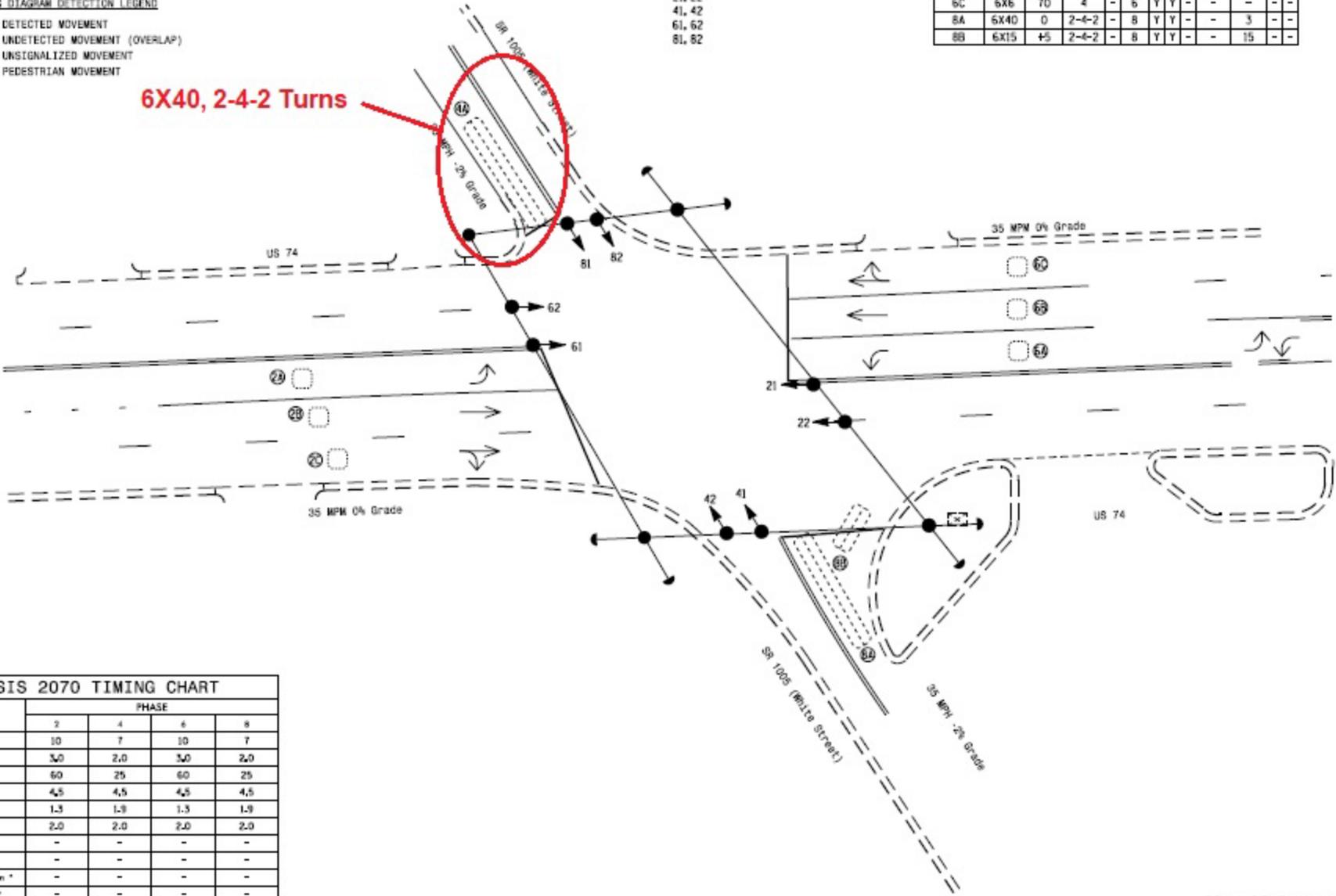
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	DETECTOR PROGRAMMING								
				NEW LOOP	PHASE	COUNTING	EXTENSION	FULL TIME THRU	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
2A	6X6	70	4	-	2	Y	Y	-	-	-	-	-
2B	6X6	70	4	-	2	Y	Y	-	-	-	-	-
2C	6X6	70	4	-	2	Y	Y	-	-	-	-	-
4A	6X40	0	2-4-2	-	4	Y	Y	-	-	10	-	-
6A	6X6	70	4	-	6	Y	Y	-	-	-	-	-
6B	6X6	70	4	-	6	Y	Y	-	-	-	-	-
6C	6X6	70	4	-	6	Y	Y	-	-	-	-	-
8A	6X40	0	2-4-2	-	8	Y	Y	-	-	3	-	-
8B	6X15	+5	2-4-2	-	8	Y	Y	-	-	15	-	-

2 Phase Fully Actuated US 74 (Marshville)

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Set all detector units to presence mode.
4. Pavement markings are existing.

6X40, 2-4-2 Turns



OASIS 2070 TIMING CHART

FEATURE	PHASE			
	2	4	6	8
Min Green 1"	10	7	10	7
Extension 1"	3.0	2.0	3.0	2.0
Max Green 1"	60	25	60	25
Yellow Clearance	4.5	4.5	4.5	4.5
Red Clearance	1.3	1.9	1.3	1.9
Red Revert	2.0	2.0	2.0	2.0
Walk 1"	-	-	-	-
Don't Walk 1	-	-	-	-
Seconds Per Actuation *	-	-	-	-
Max Variable Initial *	-	-	-	-
Time Before Reduction *	-	-	-	-
Time To Reduce *	-	-	-	-
Minimum Gap	-	-	-	-
Recall Mode	MDN RECALL	-	MDN RECALL	-
Vehicle Call Hierarchy	YELLOW	-	YELLOW	-
Dual Drive	-	ON	-	ON
Simultaneous Gap	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.

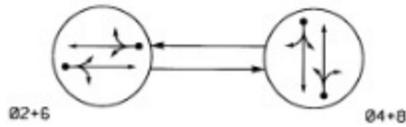
Plan Of Record

	<p>US 74 at SR 1005 (White Street)</p>		<p>Division 10 Union County, Marshville</p> <p>PLANNED BY: May 2018 REVIEWED BY: T. Williams</p> <p>PREPARED BY: W. Webbosta REVIEWED BY:</p>	<p>DATE: 5/23/2018</p>
	<p>SCALE: 1" = 20'</p>	<p>REVISIONS:</p>		

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER
TIMOTHY J. WILLIAMS
024395
DATE: 5/23/2018
SHEET NO. 10-2506

PHASING DIAGRAM



SIGNAL FACE	PHASE		
	02+6/04+8	02+6/04+8	02+6/04+8
21,22	G	R	Y
41,42	R	G	R
61,62	G	R	Y
81,82	R	G	R

PHASING DIAGRAM DETECTION LEGEND

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

SIGNAL FACE I.D.

All Heads L.E.D.

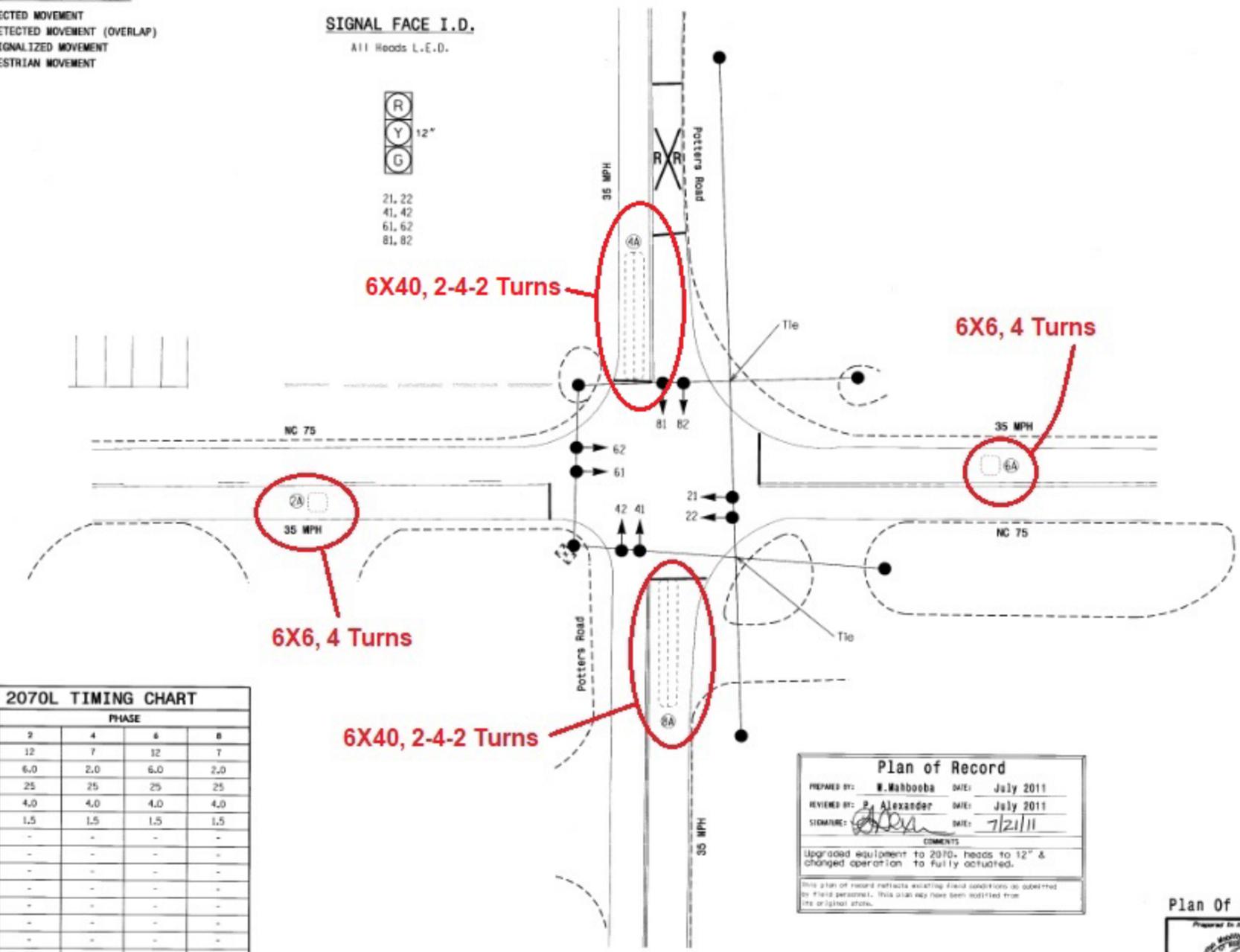


LOOP	INDUCTIVE LOOPS			DETECTOR PROGRAMMING				SYSTEM LOOP	NEW CARD
	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURN	NEW LOOP	PHASE	CALLING EXTENSION FULL TIME DELAY	STRETCH TIME		
2A	6X6	70	4	-	2	Y	Y	-	-
4A	6X40	0	2-4-2	-	4	Y	Y	-	10
6A	6X6	70	4	-	6	Y	Y	-	-
8A	6X40	0	2-4-2	-	8	Y	Y	-	10

2 Phase Fully Actuated Isolated

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated July 2006 and "Standard Specifications for Roads and Structures" dated July 2006.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Set all detector units to presence mode.
4. Pavement markings are existing.



PROPOSED	EXISTING
	N/A

FEATURE	PHASE			
	2	4	6	8
Min Green 1 *	12	7	12	7
Extension 1 *	6.0	2.0	6.0	2.0
Max Green 1 *	25	25	25	25
Yellow Clearance	4.0	4.0	4.0	4.0
Red Clearance	1.5	1.5	1.5	1.5
Walk 1 *	-	-	-	-
Don't Walk 1	-	-	-	-
Seconds Per Actuation *	-	-	-	-
Max Variable Initial *	-	-	-	-
Time Before Reduction *	-	-	-	-
Time To Reduce *	-	-	-	-
Minimum Gap	-	-	-	-
Recall Mode	MIN RECALL	-	MIN RECALL	-
Vehicle Call Memory	YELLOW	-	YELLOW	-
Dual Entry	-	ON	-	ON
Simultaneous Gap	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.

Plan of Record

PREPARED BY: W. Mahbooba DATE: July 2011
 REVIEWED BY: P. Alexander DATE: July 2011
 SIGNATURE: [Signature] DATE: 7/21/11

COMMENTS:
 Upgraded equipment to 2010, heads to 12" & changed operation to fully actuated.

This plan of record reflects existing field conditions as submitted by field personnel. This plan may have been modified from the original state.

Plan Of Record

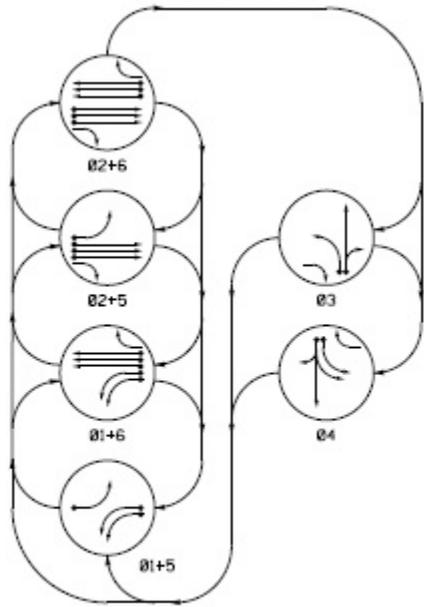
Prepared to the Office of:
NC 75 at Potters Road

Division 10 Union County Mineral Spring
 PLAN DATE: 9/7/1973 REVIEWED BY:
 PREPARED BY: TEB REVIEWED BY:

Scale: 0 20
 REVISIONS: [Table with columns for No., Date, Description]

Not a certified document. This document originally issued and reviewed on 9/28/1973. This document shall not be considered a certified document.

PHASING DIAGRAM

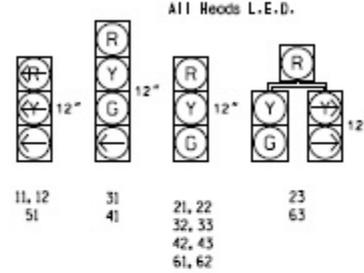


PHASING DIAGRAM DETECTION LEGEND

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

SIGNAL FACE	PHASE						F
	01+5	01+6	02+5	02+6	03	04	
11,12	R	R	G	G	R	R	Y
21,22	R	R	G	G	R	R	Y
23	R	R	G	G	R	R	Y
31	R	R	R	R	G	R	R
32, 33	R	R	R	R	G	R	R
41	R	R	R	R	G	R	R
42, 43	R	R	R	R	G	R	R
51	R	R	R	R	G	R	R
61,62	R	G	R	G	R	R	Y
63	R	G	R	G	R	R	Y

SIGNAL FACE I.D.



OASIS 2070 LOOP & DETECTOR INSTALLATION

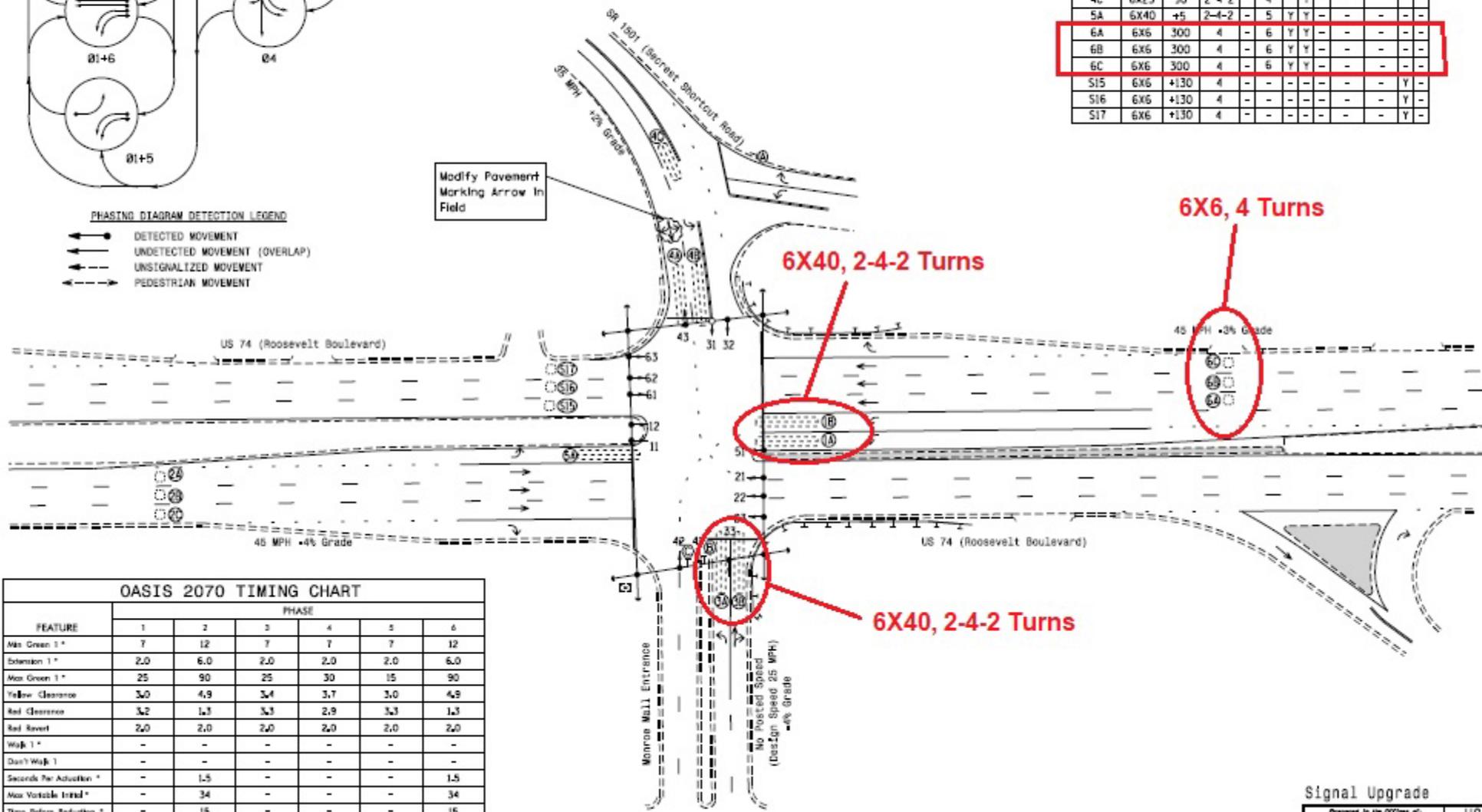
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	INDUCTIVE LOOPS		DETECTOR PROGRAMMING		STRETCH TIME	DELAY TIME	SYSTEM LOOP	LOOP CARD
				PHASE	CAUSING EXTENSION	CALL THE DELAY	CALL THE DELAY				
1A	6X40	+5	2-4-2	-	1	Y	Y	-	-	-	-
1B	6X40	+5	2-4-2	-	1	Y	Y	-	-	-	-
2A	6X6	300	6	-	2	Y	Y	-	-	-	-
2B	6X6	300	6	-	2	Y	Y	-	-	-	-
2C	6X6	300	6	-	2	Y	Y	-	-	-	-
3A	6X40	+5	2-4-2	-	3	Y	Y	-	-	-	-
3B	6X40	+5	2-4-2	-	3	Y	Y	-	-	10	-
4A	6X40	+5	2-4-2	-	4	Y	Y	-	-	10	-
4B	6X40	+5	2-4-2	-	4	Y	Y	-	-	3	-
4C	6X25	90	2-4-2	-	4	Y	Y	-	-	-	-
5A	6X40	+5	2-4-2	-	5	Y	Y	-	-	-	-
6A	6X6	300	4	-	6	Y	Y	-	-	-	-
6B	6X6	300	4	-	6	Y	Y	-	-	-	-
6C	6X6	300	4	-	6	Y	Y	-	-	-	-
S15	6X6	+130	4	-	-	-	-	-	-	Y	-
S16	6X6	+130	4	-	-	-	-	-	-	Y	-
S17	6X6	+130	4	-	-	-	-	-	-	Y	-

6 Phase Fully Actuated US 74-601 (Roosevelt Blvd.) CLS

NOTES

- Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Phase 1 and/or phase 5 may be logged.
- The order of phase 3 and phase 4 may be reversed.
- Renumber existing loops 7A, 7B & 8A, to 4B, 4C & 3B, respectively.
- Renumber existing signal heads 82 & 83, to 31 & 32, respectively.
- Reposition existing signal heads numbered 32 & 42.
- Set all detector units to presence mode.
- Pavement markings are existing.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
- Closed loop system data: Controller Asset # 0678.

Modify Pavement Marking Arrow In Field



6X6, 4 Turns

6X40, 2-4-2 Turns

6X40, 2-4-2 Turns

OASIS 2070 TIMING CHART

FEATURE	PHASE					
	1	2	3	4	5	6
Min Green 1"	7	12	7	7	7	12
Extension 1"	2.0	6.0	2.0	2.0	2.0	6.0
Max Green 1"	25	90	25	30	15	90
Yellow Clearance	3.0	4.9	3.4	3.7	3.0	4.9
Red Clearance	3.2	1.3	3.3	2.9	3.3	1.3
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0
Walk 1"	-	-	-	-	-	-
Don't Walk 1	-	-	-	-	-	-
Seconds Per Actuation *	-	1.5	-	-	-	1.5
Max Variable Interval *	-	34	-	-	-	34
Time Before Reduction *	-	15	-	-	-	15
Time To Reduce *	-	30	-	-	-	30
Minimum Gap	-	3.0	-	-	-	3.0
Recall Mode	-	WDN RECALL	-	-	-	WDN RECALL
Vehicle Call Memory	-	YELLOW	-	-	-	YELLOW
Dual Priority	-	-	-	-	-	-
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 |
|----------|----------|
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Signal Upgrade

Prepared in the Office of:

 US 74 (Roosevelt Boulevard) at SR 1501 (Secret Shortcut Road) / Monroe Mall Entrance
 Division 10 Union County Monroe
 PLAN DATE: September 2018 REVISION BY: S. V. Zinsler
 PREPARED BY: S. Webbosta REVISION BY:
 REVISIONS: DATE: DATE: DATE:
 SCALE: 1" = 40'
 SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 043914
 DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
 DATE: 11/18/2018
 I.D. SHEET NO. 10-2678

PHASING DIAGRAM

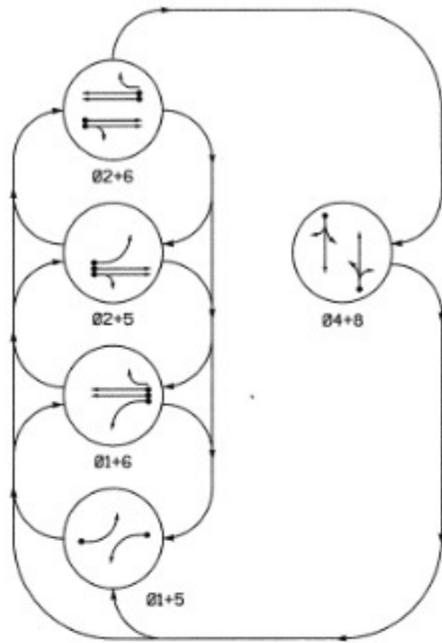
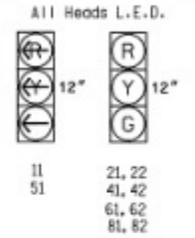


TABLE OF OPERATION

SIGNAL FACE	PHASE							
	01+5	01+6	02+5	02+6	04+8	04+9	04+10	04+11
11	---	---	---	---	---	---	---	---
21, 22	R	R	G	G	R	Y		
41, 42	R	R	R	R	G	R		
51	---	---	---	---	---	---	---	---
61, 62	R	G	R	G	R	Y		
81, 82	R	R	R	R	G	R		

SIGNAL FACE I.D.



2070L LOOP & DETECTOR INSTALLATION

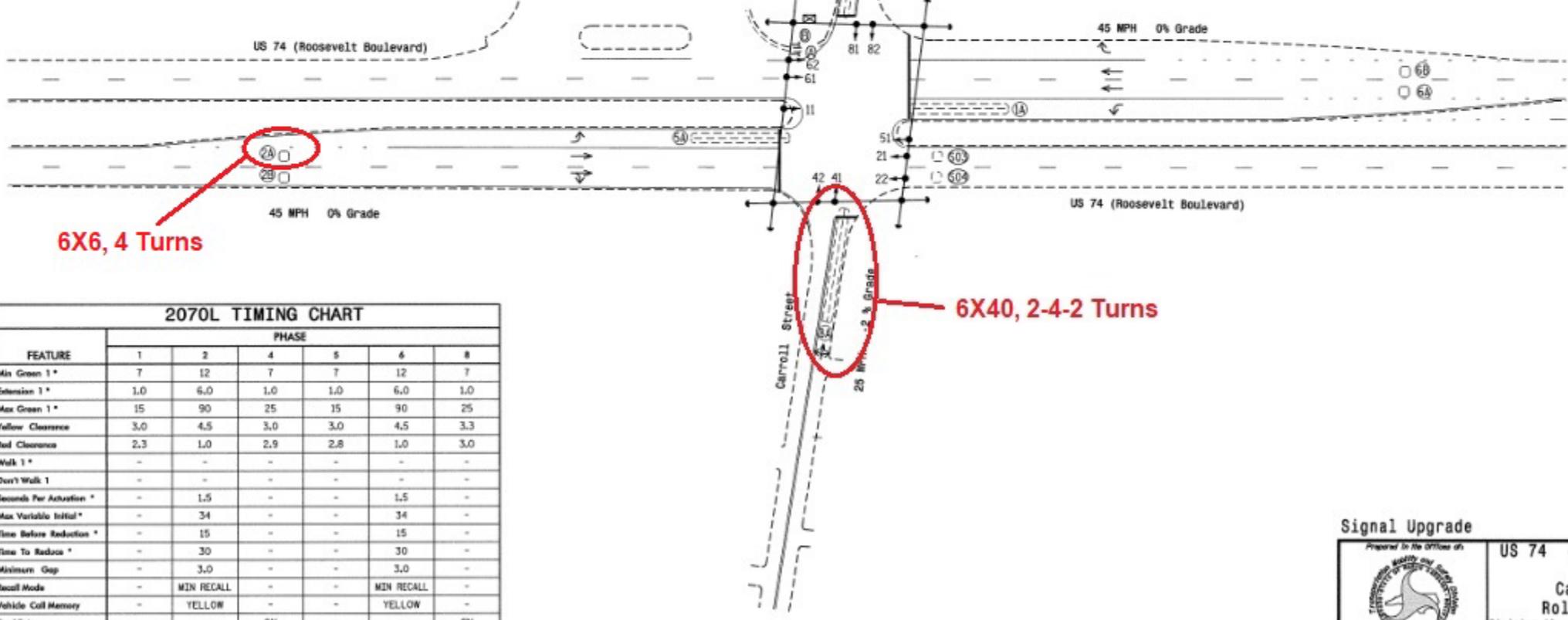
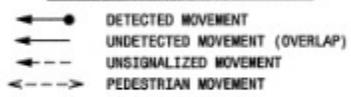
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	DETECTOR PROGRAMMING							
					PHASE	CALLING	EXTENSION	PULL TIME (SECS)	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CAB
1A	6X60	0	EXIST	-	1	Y	Y	-	-	-	-	Y
2A	6X6	300	4	Y	2	Y	Y	-	-	-	-	Y
2B	6X6	300	4	Y	2	Y	Y	-	-	-	-	Y
4A	6X60	+5	EXIST	-	4	Y	Y	-	-	5	-	Y
5A	6X60	+5	EXIST	-	5	Y	Y	-	-	-	-	Y
6A	6X6	300	4	Y	6	Y	Y	-	-	-	-	Y
6B	6X6	300	4	Y	6	Y	Y	-	-	-	-	Y
8A	6X40	0	EXIST	-	8	Y	Y	-	-	5	-	Y
S03	6X6	+90	EXIST	-	-	-	-	-	-	-	-	Y
S04	6X6	+90	EXIST	-	-	-	-	-	-	-	-	Y

5 PHASE FULLY ACTUATED US 74-601 (ROOSEVELT BLVD.) CLS

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated July 2006 and "Standard Specifications for Roads and Structures" dated July 2006.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Phase 1 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.
6. Remove existing "Left Turn Signal" sign-(R10-10L).
7. Pavement markings are existing.
8. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
9. Closed loop system data: Controller Asset # 0941.
10. The cabinet should be designed to include an Auxiliary Output File for future use.

PHASING DIAGRAM DETECTION LEGEND

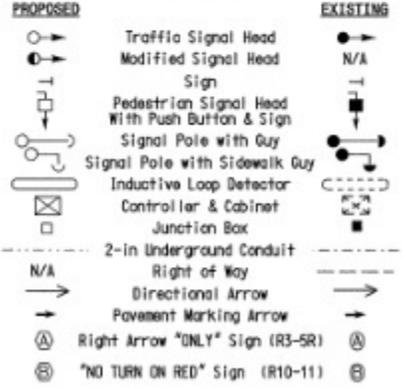


2070L TIMING CHART

FEATURE	PHASE							
	1	2	4	5	6	8		
Min Green 1*	7	12	7	7	12	7		
Extension 1*	1.0	6.0	1.0	1.0	6.0	1.0		
Max Green 1*	15	90	25	15	90	25		
Yellow Clearance	3.0	4.5	3.0	3.0	4.5	3.3		
Red Clearance	2.3	1.0	2.9	2.8	1.0	3.0		
Walk 1*	-	-	-	-	-	-		
Don't Walk 1	-	-	-	-	-	-		
Seconds Per Actuation*	-	1.5	-	-	1.5	-		
Max Variable Initial*	-	34	-	-	34	-		
Time Before Reduction*	-	15	-	-	15	-		
Time To Reduce*	-	30	-	-	30	-		
Minimum Gap	-	3.0	-	-	3.0	-		
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.

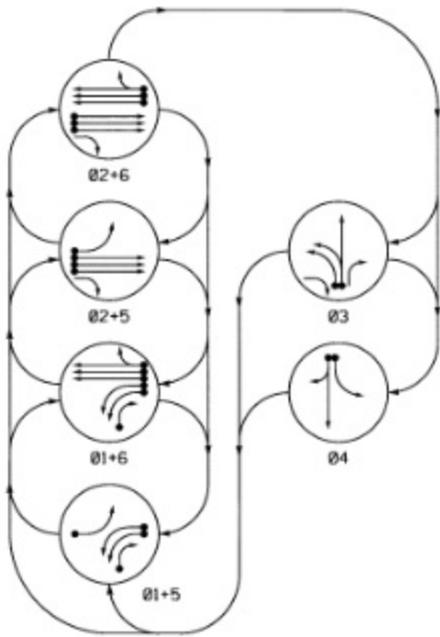
LEGEND



Signal Upgrade

Prepared in the Office of
North Carolina State Highway Design
 Division 10 Union County
 PLAN DATE: June 2009
 REVISIONS: [Table]
 SCALE: 1" = 40'
US 74 (Roosevelt Boulevard) at Carroll Street / Rolling Hills Drive
 REVIEWED BY: W. Waddaba
 PREPARED BY: C. Pierce
 REVIEWED BY: [Signature]
 SEAL: PROFESSIONAL ENGINEER, NORTH CAROLINA, SEAL 30630, DATE: 10-09-10

PHASING DIAGRAM



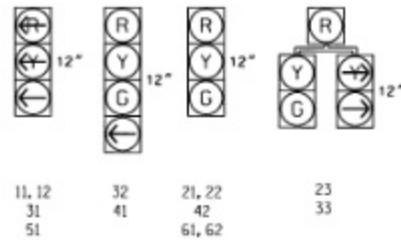
PHASING DIAGRAM DETECTION LEGEND

- ←●→ DETECTED MOVEMENT
- ←○→ UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- ←- - - PEDESTRIAN MOVEMENT

SIGNAL FACE	PHASE						
	01+5	01+6	02+5	02+6	03	04	30/30+7
11,12	---	---	---	---	---	---	---
21,22	R	R	G	G	R	R	Y
23	R	R	G	G	R	R	Y
31	---	---	---	---	---	---	---
32	R	R	R	R	C	R	R
33	R	R	R	R	C	R	R
41	R	R	R	R	C	R	R
42	R	R	R	R	C	R	R
51	---	---	---	---	---	---	---
61,62	R	G	R	G	R	R	Y

SIGNAL FACE I.D.

All Heads L.E.D.



OASIS 2070L LOOP & DETECTOR INSTALLATION

LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	DETECTOR PROGRAMMING				SYSTEM LOOP	NEW CUID
					PHASE	CALLING EXTENSION	FULL TIME DELAY	STRETCH TIME		
1A	6X40	0	2-4-2	-	1	Y	Y	-	-	-
1B	6X40	0	2-4-2	-	1	Y	Y	-	-	-
1C	6X40	+5	2-4-2	Y	1	Y	Y	-	15	-
2A	6X6	300	5	-	2	Y	Y	-	-	-
2B	6X6	300	5	-	2	Y	Y	-	-	-
2C	6X6	300	5	-	2	Y	Y	-	-	-
3A	6X40	0	2-4-2	Y	3	Y	Y	-	-	Y
3B	6X40	0	2-4-2	Y	3	Y	Y	-	-	-
4A	6X60	0	2-4-2	-	4	Y	Y	-	-	-
4B	6X60	0	2-4-2	-	4	Y	Y	-	10	-
5A	6X40	0	2-4-2	-	5	Y	Y	-	-	-
6A	6X6	300	5	-	6	Y	Y	-	-	-
6B	6X6	300	5	-	6	Y	Y	-	-	-
6C	6X6	300	5	-	6	Y	Y	-	-	-
S09	6X6	+135	EXIST	-	-	-	-	-	-	Y
S10	6X6	+135	EXIST	-	-	-	-	-	-	Y
S11	6X6	+135	EXIST	-	-	-	-	-	-	Y
S12	6X6	+130	EXIST	-	-	-	-	-	-	Y
S13	6X6	+130	EXIST	-	-	-	-	-	-	Y
S14	6X6	+130	EXIST	-	-	-	-	-	-	Y

6 Phase Fully Actuated US 74-601 (Roosevelt Blvd.) CLS

NOTES

- Refer to "Roadway Standard Drawings NCDOT dated July 2006 and "Standard Specifications for Roads and Structures" dated July 2006.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Phase 1 or Phase 5 may be lagged.
- The order of phase 3 and phase 4 may be reversed.
- Set all detector units to presence mode.
- Pavement markings are existing.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
- Closed loop system data: Master Asset # 11026, Controller Asset # 0670.

6X40, 2-4-2 Turns

6X6, 5 Turns

6X6, 5 Turns

6X40, 2-4-2 Turns

FEATURE	PHASE					
	1	2	3	4	5	6
Min Green 1 *	7	12	7	7	7	12
Extension 1 *	1.0	6.0	2.0	1.0	1.0	6.0
Max Green 1 *	15	90	30	20	15	90
Yellow Clearance	3.0	4.3	3.7	3.1	3.0	4.6
Red Clearance	3.4	1.6	3.0	3.2	3.1	1.5
Walk 1 *	-	-	-	-	-	-
Don't Walk 1	-	-	-	-	-	-
Seconds Per Actuation *	-	1.5	-	-	-	1.5
Max Variable Initial *	-	34	-	-	-	34
Time Before Reduction *	-	15	-	-	-	15
Time To Reduce *	-	30	-	-	-	30
Minimum Gap	-	3.0	-	-	-	3.0
Recall Mode	-	MIN RECALL	-	-	-	MIN RECALL
Vehicle Call Memory	-	YELLOW	-	-	-	YELLOW
Dual Entry	-	-	-	-	-	-
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

- | | | | |
|--|--|--|----------|
| | TRAFFIC SIGNAL HEAD | | EXISTING |
| | 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 |
| | MASTER CONTROLLER | | N/A |
| | JUNCTION BOX | | N/A |
| | 2-IN UNDERGROUND CONDUIT | | N/A |
| | RIGHT OF WAY | | N/A |
| | DIRECTIONAL ARROW | | N/A |
| | PAVEMENT MARKING ARROW | | N/A |
| | "U-TURN YIELD TO RIGHT TURN" SIGN (R10-16) | | N/A |
| | CURVED LEFT ARROW "ONLY" SIGN (R3-5L) | | N/A |
| | CURVED RIGHT ARROW "ONLY" SIGN (R3-5R) | | N/A |

Signal Upgrade

US 74 (Roosevelt Boulevard) at Dickerson Boulevard / Shopping Center Entrance

Division 10 Union County Monroe

PLAN DATE: April 2011 REVIEWED BY: [Signature]

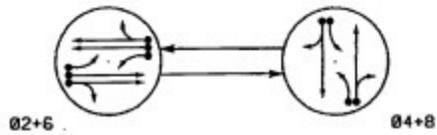
PREPARED BY: N. Williams REVIEWED BY: [Signature]

SCALE: 0 40 1"=40'

REVISIONS: [Table with columns for No., Description, Date, Initials]

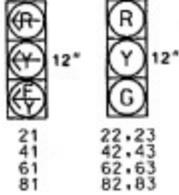
DATE: 4/27/11

SIG. INVENTORY NO. 10-0670



PHASING DIAGRAM DETECTION LEGEND

- ← ● → DETECTED MOVEMENT
- ← ○ → UNDETECTED MOVEMENT (OVERLAP)
- ← - - - → UNSIGNALIZED MOVEMENT
- ← - - - P → PEDESTRIAN MOVEMENT



STANDARD SIGNAL FACE CLEARANCES FOR FLASHING LEFT TURN SIGNAL

		TO			
		←	↔	→	↔
FROM	←	←	↔	→	↔
	↔	←	↔	→	↔
→	←	↔	→	↔	→
↔	←	↔	→	↔	→

↔ FLASHING YELLOW ARROW

SIGNAL FACE	DRIVE	PHASE	TYPE
21	W	THRU	Y
22,23	G	R	Y
41	W	THRU	Y
42,43	R	G	R
61	W	THRU	Y
62,63	G	R	Y
81	W	THRU	Y
82,83	R	G	R

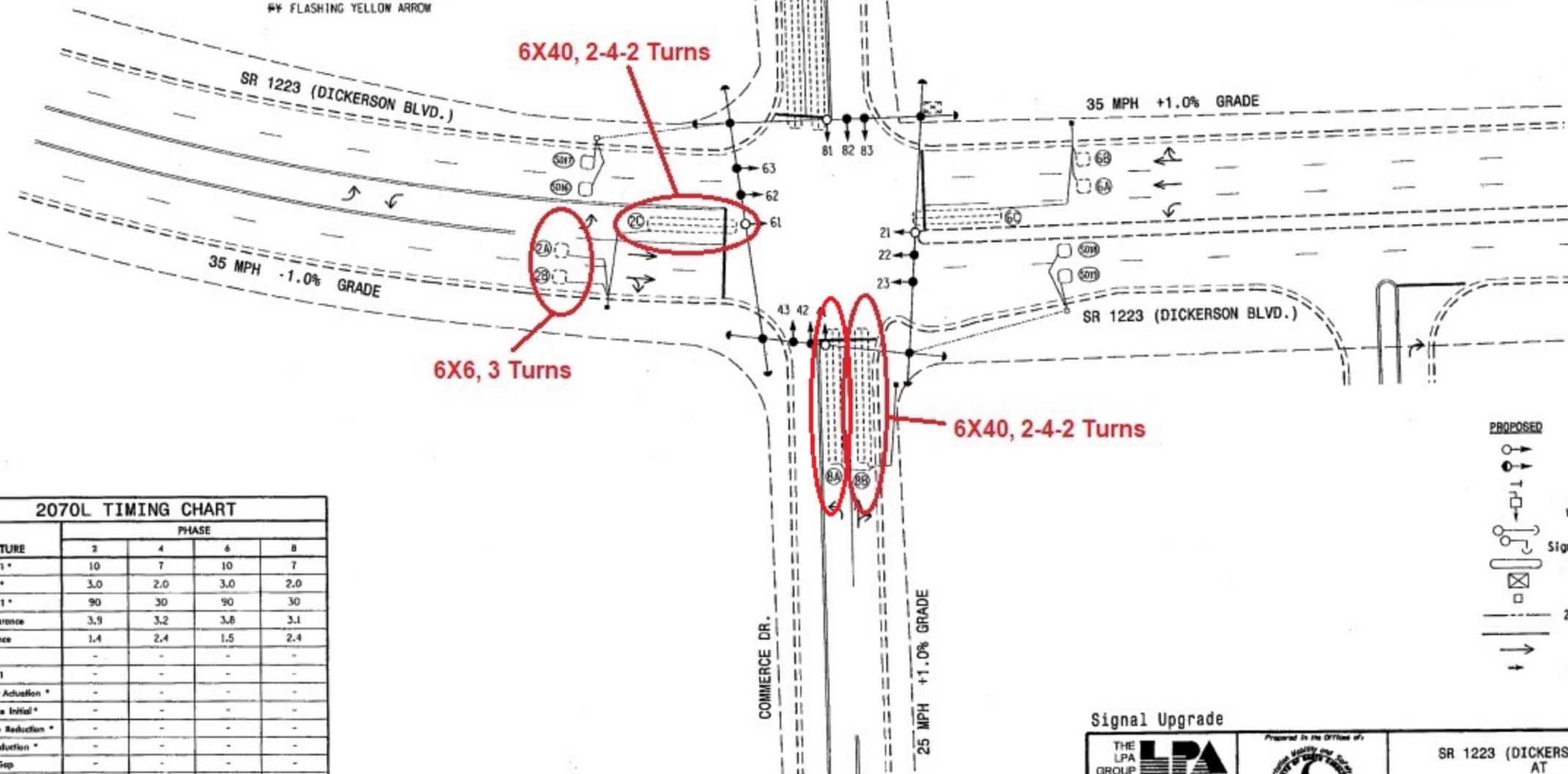
↔ FLASHING YELLOW ARROW

LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING EXTENSION	EXTENSION FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP NEW CARD
2A	6X6	70	3	-	2	Y	Y	-	-	-
2B	6X6	70	3	-	2	Y	Y	-	-	-
2C	6X40	0	2-4-2	-	2	Y	Y	-	-	-
4A	6X60	+5	2-4-2	-	4	Y	Y	-	3	-
4B	6X60	+5	2-4-2	-	4	Y	Y	-	15	-
6A	6X6	70	3	-	6	Y	Y	-	-	-
6B	6X40	70	3	-	6	Y	Y	-	-	-
6C	6X40	+5	2-4-2	-	6	Y	Y	-	-	-
8A	6X40	+5	2-4-2	-	8	Y	Y	-	3	-
8B	6X40	+5	2-4-2	-	8	Y	Y	-	15	-
S016	6X6	+60	3	Y	-	-	-	-	-	Y
S017	6X6	+60	3	Y	-	-	-	-	-	Y
S018	6X6	+60	3	Y	-	-	-	-	-	Y
S019	6X6	+60	3	Y	-	-	-	-	-	Y

2 PHASE
FULLY ACTUATED
SR 1223 (DICKERSON BLVD.)
CLOSED LOOP SYSTEM

NOTES

- Refer to "Roadway Standard Drawings NCDOT" dated July 2006 and "Standard Specifications for Roads and Structures" dated July 2006.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Reposition existing signal heads numbered 22,23,42,43,62,63,82, and 83
- Set all detector units to presence mode.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
- Closed loop system data: Controller Asset #: 1827



2070L TIMING CHART

FEATURE	PHASE			
	2	4	6	8
Min Green 1*	10	7	10	7
Extension 1*	3.0	2.0	3.0	2.0
Max Green 1*	90	30	90	30
Yellow Clearance	3.9	3.2	3.8	3.1
Red Clearance	1.4	2.4	1.5	2.4
Walk 1*	-	-	-	-
Don't Walk 1	-	-	-	-
Seconds Per Actuation*	-	-	-	-
Max Variable Initial*	-	-	-	-
Time Before Reduction*	-	-	-	-
Time To Reduction*	-	-	-	-
Minimum Gap	-	-	-	-
Recall Mode	MIN RECALL	-	MIN RECALL	-
Vehicle Call Memory	YELLOW	-	YELLOW	-
Dual Entry	-	ON	-	ON
Simultaneous Gap	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

Signal Upgrade

THE LPA GROUP
TRANSPORTATION CONSULTANTS
750 R. Greenfield Hwy, Garner, NC 27525

BE Blythe
Construction, Inc.

Prepared in the Office of:

750 R. Greenfield Hwy, Garner, NC 27525
SCALE
0 30
1" = 30'

SR 1223 (DICKERSON BLVD.)
AT
COMMERCE DRIVE

Division 10 Union County Weldon

PLAN DATE: January 2010 REVIEWED BY: R Dubnicka
PREPARED BY: K W Cory REVIEWED BY:

REVISIONS	INIT.	DATE

Robert J. Dubnicka 2-3-2010
SIGNATURE DATE
SIC. INVENTORY NO. 10-1827

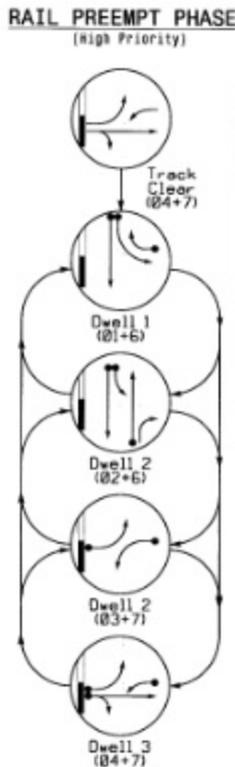
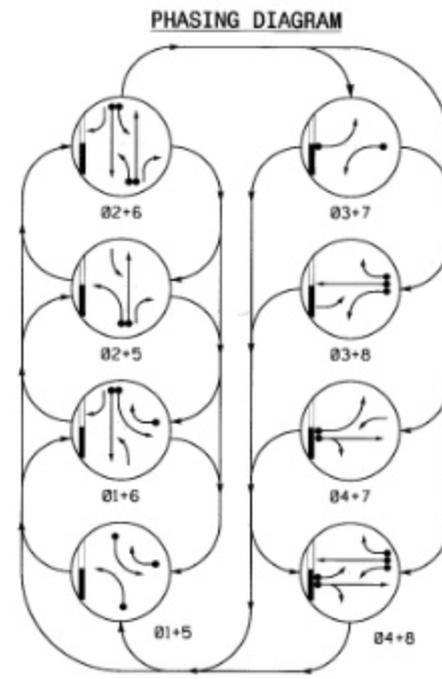
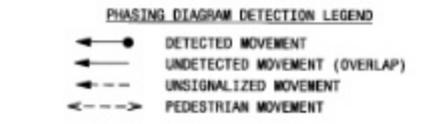
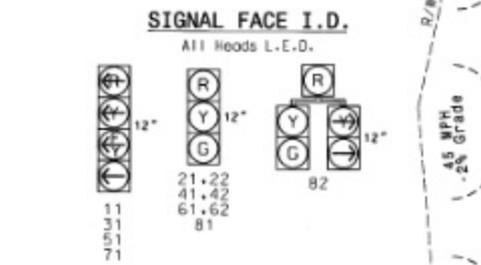


TABLE OF OPERATION

SIGNAL FACE	PHASE															
	01+5	01+6	02+5	02+6	03+7	03+8	04+7	04+8	RAIL							
11																
21,22	R	R	G	G	R	R	R	R	R	G	R	R	R	R	R	Y
31																
41,42	R	R	R	R	R	R	G	G	R	R	R	G	G	R		
51																
61,62	R	G	R	G	R	R	R	R	G	G	R	R	R	R	Y	
71																
81	R	R	R	R	R	R	G	G	R	R	R	R	R	R	R	
82	R	R	R	R	R	R	G	G	R	R	R	R	R	R	R	
Sign 'A'	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	*						



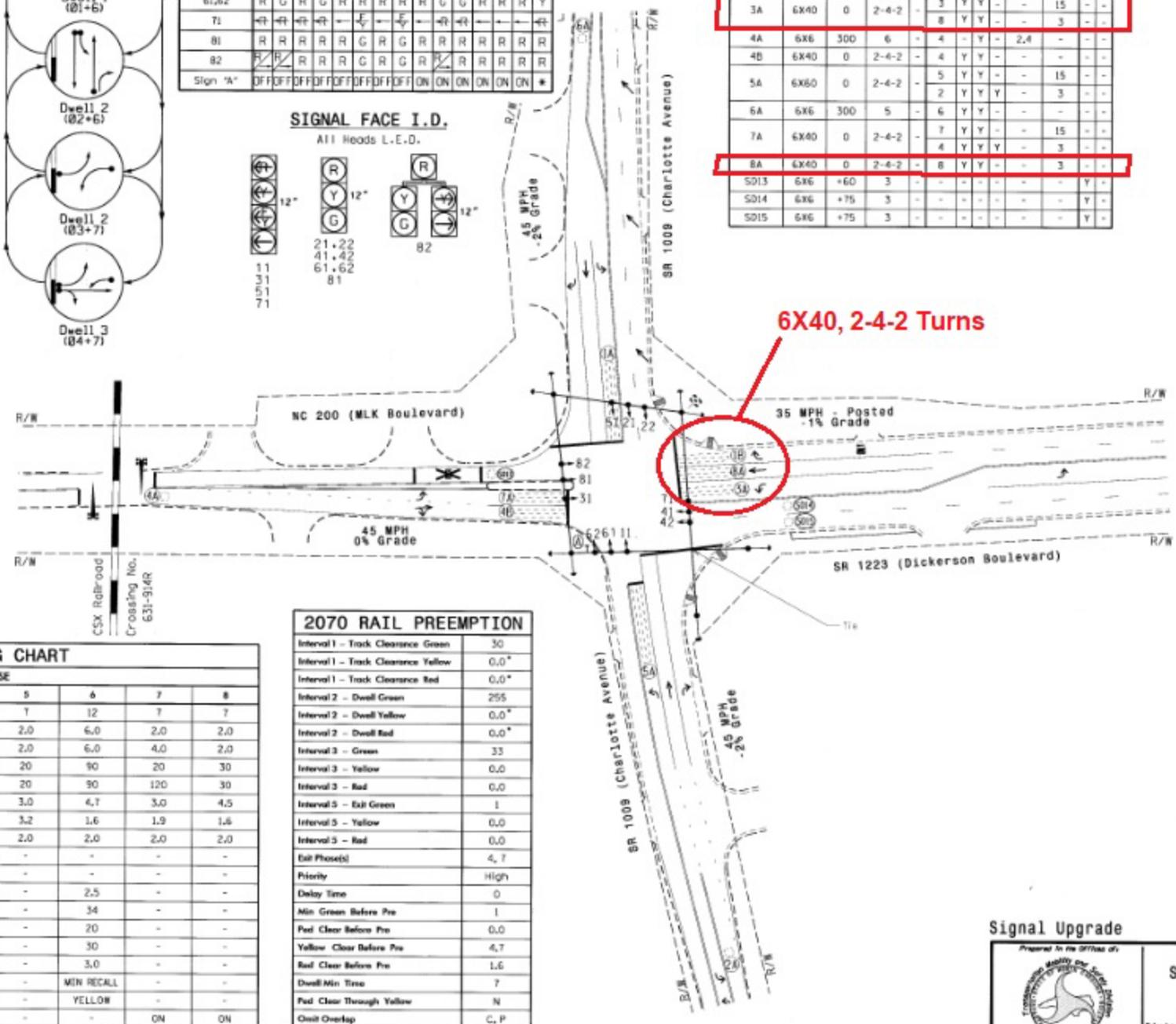
OASIS 2070L LOOP & DETECTOR INSTALLATION

LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURN	NEW LOOP	DETECTOR PROGRAMMING						
					PHASE	CALLING EXTENSION	PULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
1A	6X60	0	2-4-2	-	1	Y	Y	-	15	-	-
1B	6X40	0	2-4-2	-	1	Y	Y	-	15	-	-
2A	6X6	300	6	-	2	Y	Y	-	-	-	-
3A	6X40	0	2-4-2	-	3	Y	Y	-	15	-	-
4A	6X6	300	6	-	4	Y	Y	-	2.4	-	-
4B	6X40	0	2-4-2	-	4	Y	Y	-	-	-	-
5A	6X60	0	2-4-2	-	5	Y	Y	-	15	-	-
6A	6X6	300	5	-	6	Y	Y	-	-	-	-
7A	6X40	0	2-4-2	-	7	Y	Y	-	15	-	-
8A	6X40	0	2-4-2	-	8	Y	Y	-	3	-	-
SD13	6X6	+60	3	-	-	-	-	-	-	-	Y
SD14	6X6	+75	3	-	-	-	-	-	-	-	Y
SD15	6X6	+75	3	-	-	-	-	-	-	-	Y

8 Phase Fully Actuated
SR 1223 (MLK Jr Blvd/Dickerson Blvd) CLS

NOTES

- Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.
- This location contains railroad preemption phasing. Do not program signal for late night flashing operation.
- Phase 1 and/or phase 5 may be lagged.
- Phase 3 and/or phase 7 may be lagged.
- Set all detector units to presence mode.
- When leaving preemption, phase 4 and phase 7 shall use Maximum Green 2 and Extension 2.
- During Preemption, Loop 3A shall call Phase 3 and Phase 4.
- Pavement markings are existing.
- Ensure flashing operation does not alter operation of blankout signs.
- Program parent phases for Overlap "P" for all phases used in normal operation.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
- Closed loop system data: Controller Asset # 1237.



OASIS 2070L TIMING CHART

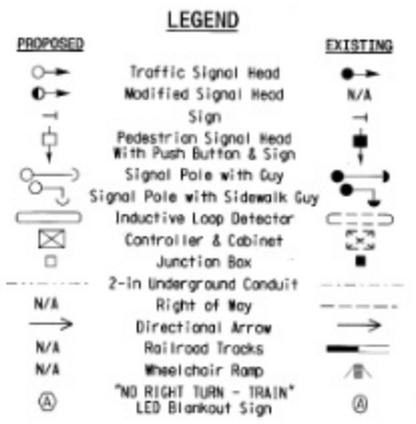
FEATURE	PHASE							
	1	2	3	4	5	6	7	8
Min Green 1 *	7	12	7	7	7	12	7	7
Extension 1 *	2.0	6.0	2.0	2.0	2.0	6.0	2.0	2.0
Extension 2 *	2.0	6.0	2.0	4.0	2.0	6.0	4.0	2.0
Max Green 1 *	20	90	20	30	20	90	20	30
Max Green 2 *	20	90	20	120	20	90	120	30
Yellow Clearance	3.0	4.7	3.0	4.5	3.0	4.7	3.0	4.5
Red Clearance	2.3	1.6	1.9	1.6	3.2	1.6	1.9	1.6
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk 1 *	-	-	-	-	-	-	-	-
Don't Walk 1	-	-	-	-	-	-	-	-
Seconds Per Actuation *	-	2.5	-	-	-	2.5	-	-
Max Variable Initial *	-	34	-	-	-	34	-	-
Time Before Reduction *	-	20	-	-	-	20	-	-
Time To Reduce *	-	30	-	-	-	30	-	-
Minimum Gap	-	3.0	-	-	-	3.0	-	-
Recall Mode	-	MIN RECALL	-	-	-	MIN RECALL	-	-
Vehicle Call Memory	-	YELLOW	-	-	-	YELLOW	-	-
Dual Entry	-	-	-	ON	-	-	ON	ON
Simultaneous Gap	ON	ON	ON	ON	ON	ON	ON	ON

2070 RAIL PREEMPTION

Interval 1 - Track Clearance Green	30
Interval 1 - Track Clearance Yellow	0.0*
Interval 1 - Track Clearance Red	0.0*
Interval 2 - Dwell Green	255
Interval 2 - Dwell Yellow	0.0*
Interval 2 - Dwell Red	0.0*
Interval 3 - Green	33
Interval 3 - Yellow	0.0
Interval 3 - Red	0.0
Interval 5 - Exit Green	1
Interval 5 - Yellow	0.0
Interval 5 - Red	0.0
Exit Phases	4, 7
Priority	High
Delay Time	0
Min Green Before Pre	1
Red Clear Before Pre	0.0
Yellow Clear Before Pre	4.7
Red Clear Before Pre	1.6
Dwell Min Time	7
Red Clear Through Yellow	N
Coast Overlap	C, P

* Time defaults to time used for phase during normal operation.

This signal was designed for Simultaneous preemption



Signal Upgrade

Prepared in the Office of

 Division 10
 PLAN DATE: November 2013
 PREPARED BY: W. Masbooba
 REVISIONS: _____

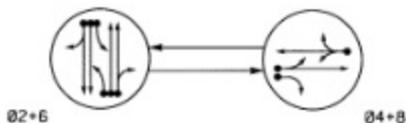
NC 200 (MLK Boulevard)/
 SR 1223 (Dickerson Boulevard)
 at
 SR 1009 (Charlotte Avenue)
 Union County
 REVISIONS: _____

SEAL
 NORTH CAROLINA
 SEAL 30530
 Z. LITTLE
 ENGINEER
 REVISIONS: _____

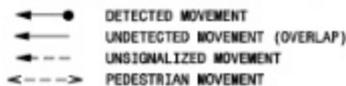
0 50
 1" = 50'

FIG. NUMBER NO. 10-1237

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND



SIGNAL FACE	PHASE		
	01+2/03	03+04	04+05/06
21,22	G	R	Y
41,42	R	G	R
61,62	G	R	Y
81,82,83	R	G	R

SIGNAL FACE I.D.

All Heads L.E.O.



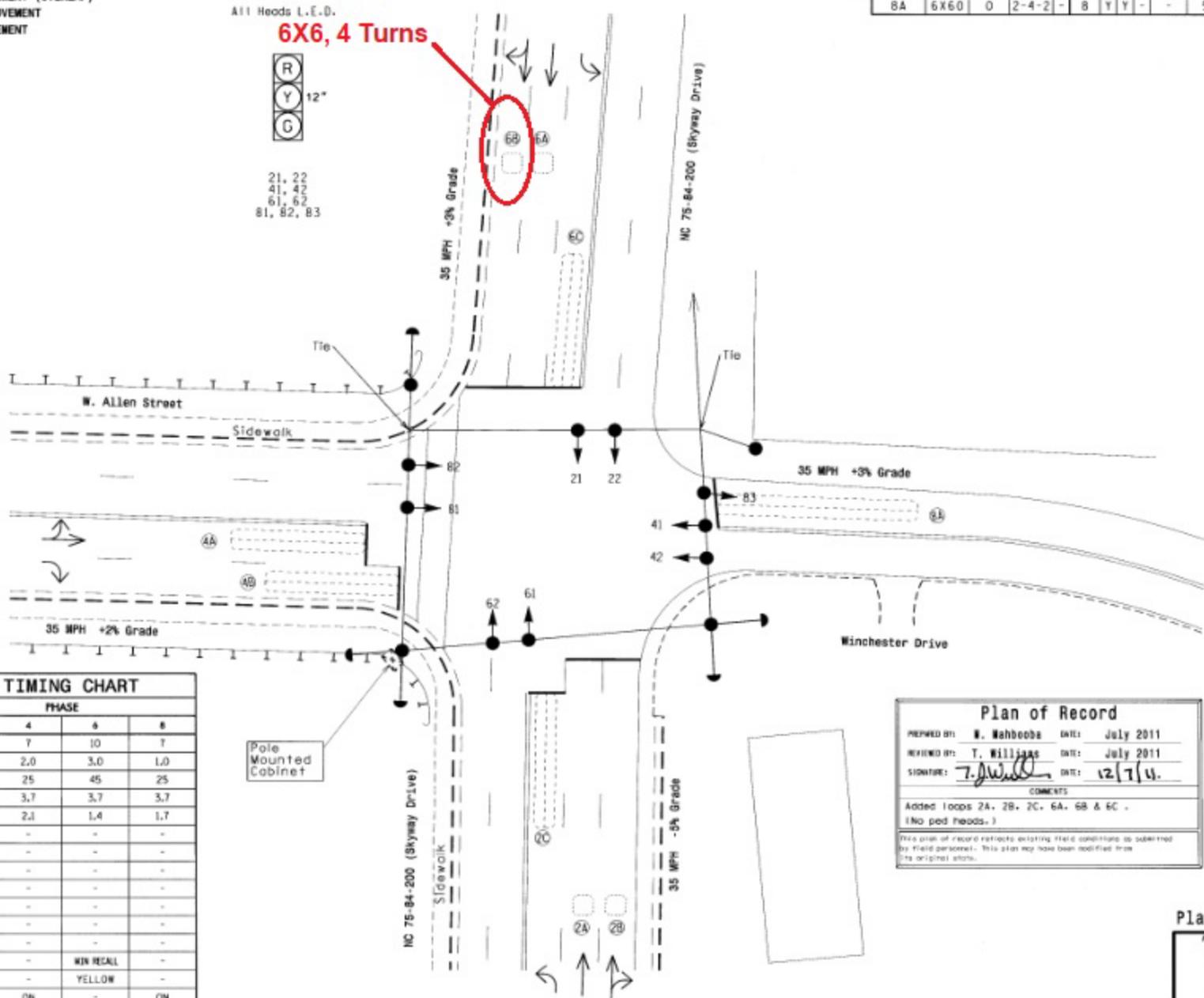
6X6, 4 Turns

OASIS 2070L LOOP & DETECTOR INSTALLATION												
INDUCTIVE LOOPS				DETECTOR PROGRAMMING								
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FAIL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
2A	6X6	70	4	-	2	Y	Y	-	-	-	-	-
2B	6X6	70	4	-	2	Y	Y	-	-	-	-	-
2C	6X60	0	2-4-2	-	2	Y	Y	-	-	-	-	-
4A	6X40	0	2-4-2	-	4	Y	Y	-	-	3	-	-
4B	6X40	0	2-4-2	-	4	Y	Y	-	-	15	-	-
6A	6X6	70	4	-	6	Y	Y	-	-	-	-	-
6B	6X6	70	4	-	6	Y	Y	-	-	-	-	-
6C	6X40	0	2-4-2	-	6	Y	Y	-	-	-	-	-
8A	6X60	0	2-4-2	-	8	Y	Y	-	-	5	-	-

2 Phase Fully Actuated Monroe Time Based System

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated July 2006 and "Standard Specifications for Roads and Structures" dated July 2006.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Set all detector units to presence mode.
4. Pavement Markings are existing.
5. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.



FEATURE	PHASE			
	2	4	6	8
Min Green 1*	10	7	10	7
Extension 1*	3.0	2.0	3.0	1.0
Max Green 1*	45	25	45	25
Yellow Clearance	4.2	3.7	3.7	3.7
Red Clearance	1.4	2.1	1.4	1.7
Walk 1*	-	-	-	-
Don't Walk 1	-	-	-	-
Seconds For Actuation *	-	-	-	-
Max Variable Initial *	-	-	-	-
Time Before Reduction *	-	-	-	-
Time To Reduce *	-	-	-	-
Minimum Gap	-	-	-	-
Recall Mode	MIN RECALL	-	MIN RECALL	-
Vehicle Call Memory	YELLOW	-	YELLOW	-
Dual Entry	-	ON	-	ON
Simultaneous Gap	ON	ON	ON	ON

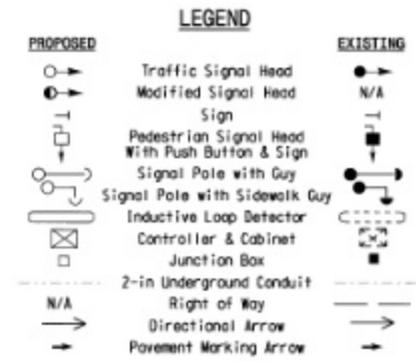
* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.

Plan of Record

PREPARED BY: W. Wahbeeba DATE: July 2011
 REVIEWED BY: T. Williams DATE: July 2011
 SIGNATURE: [Signature] DATE: 12/7/11

COMMENTS:
 Added loops 2A, 2B, 2C, 6A, 6B & 6C.
 (No ped heads.)

This plan of record reflects existing field conditions as submitted by field personnel. This plan may have been modified from the original plans.



Plan of Record

Prepared in the Office of:

 North Carolina Department of Transportation
 State Design System

NC 75-84-200 (Skyway Drive) at Winchester Drive / W. Allen Street

Division 10 Union County Monroe

PLAN DATE: April 2011 REVIEWED BY: W. Wahbeeba

PREPARED BY: [Signature] REVIEWED BY: [Signature]

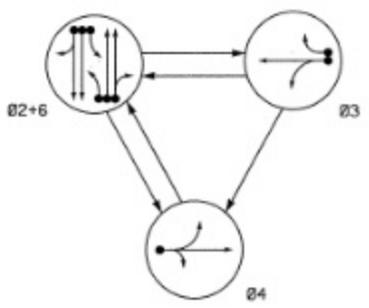
SCALE: 1"=20'

REVISIONS: [Table with columns for REVISIONS, INT., DATE]

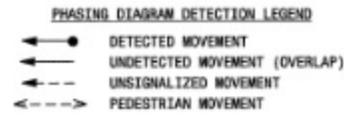
Not a certified document. This document originally issued and sealed by Timothy J. Williams, 24393 on 1/2/2009. This document shall not be considered a certified document.

SIG. INVENTORY NO. 10-0629

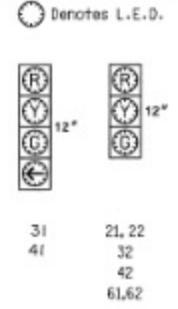
PHASING DIAGRAM



SIGNAL FACE	PHASE			
	Ø 2+6	Ø 3	Ø 4	Ø 2+6
21,22	G	R	R	Y
31	R	G	R	R
32	R	G	R	R
41	R	R	G	R
42	R	R	G	R
61,62	G	R	R	Y



SIGNAL FACE I.D.



2070L LOOP & DETECTOR INSTALLATION

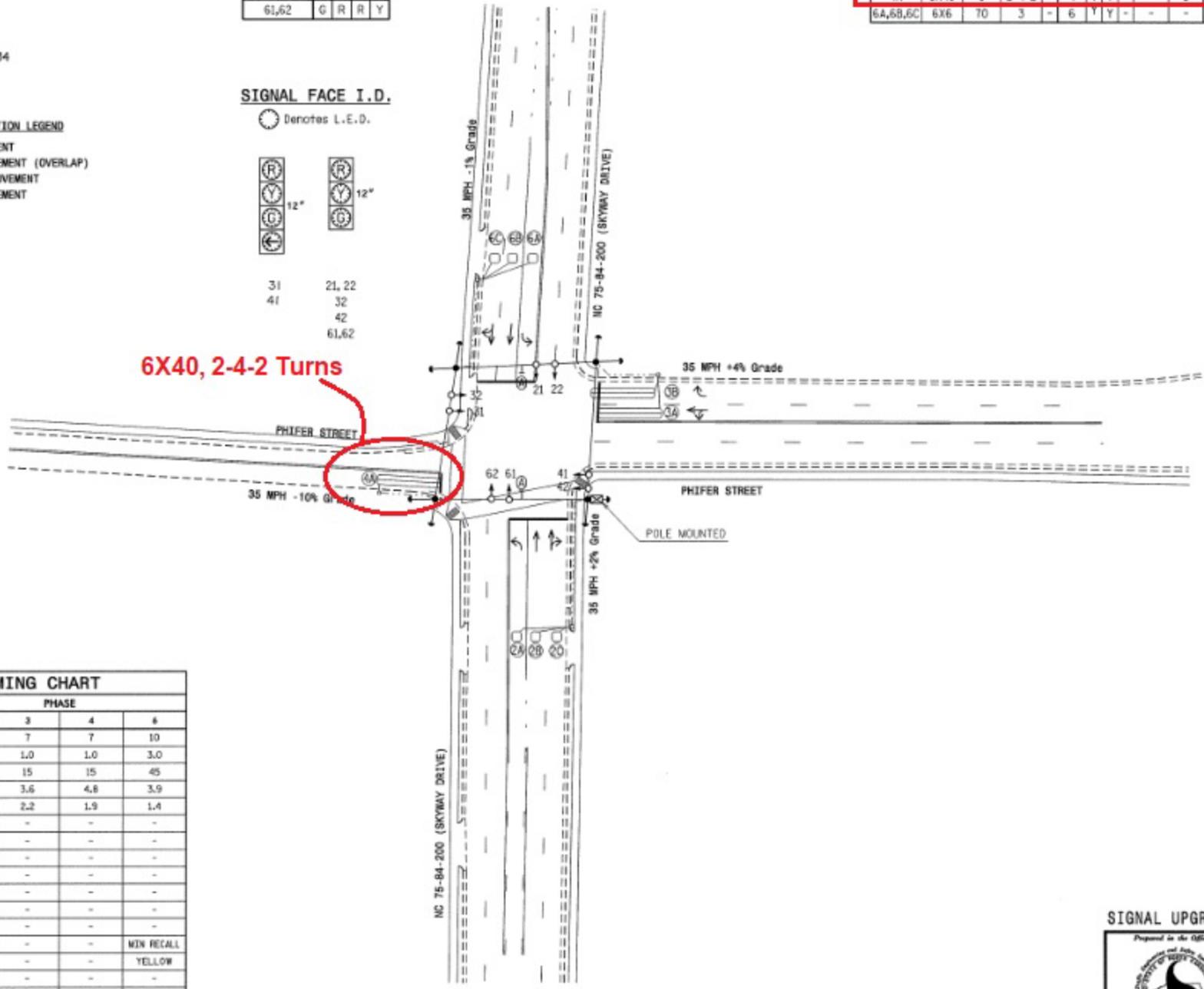
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	DETECTOR PROGRAMMING							
				PHASE	CAUSING	EXTENSION	STRETCH TIME	DELAY TIME	SYSTEM LOOP		
2A,2B,2C	6X6	70	3	-	2	Y	Y	-	-	-	Y
3A	6X40	0	2-4-2	-	3	Y	Y	-	-	3	-
3B	6X40	+5	2-4-2	-	3	Y	Y	-	-	-	-
4A	6X40	0	2-4-2	-	4	Y	Y	-	-	5	-
6A,6B,6C	6X6	70	3	-	6	Y	Y	-	-	-	-

3 PHASE FULLY ACTUATED ISOLATED

NOTES

- Refer to "Roadway Standard Drawings NCDOT" dated July 2006 and "Standard Specifications for Roads and Structures" dated July 2006.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Set all detector units to presence mode.
- Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
- Pavement markings are existing.
- Clearance interval timings may be adjusted incrementally until required values are reached.
- Remove existing "RIGHT TURN SIGNAL" sign (R10-10R).

6X40, 2-4-2 Turns



2070L TIMING CHART

FEATURE	PHASE			
	2	3	4	6
Min Green 1 *	10	7	7	10
Extension 1 *	3.0	1.0	1.0	3.0
Max Green 1 *	45	15	15	45
Yellow Clearance	3.7	3.6	4.8	3.9
Red Clearance	1.7	2.2	1.9	1.4
Walk 1 *	-	-	-	-
Don't Walk 1	-	-	-	-
Seconds Per Actuation *	-	-	-	-
Max Variable Initial *	-	-	-	-
Time Before Reduction *	-	-	-	-
Time To Reduce *	-	-	-	-
Minimum Gap	-	-	-	-
Road Mode	MIN RECALL	-	-	MIN RECALL
Vehicle Call Memory	YELLOW	-	-	YELLOW
Dual Entry	-	-	-	-
Simultaneous Gap	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



SIGNAL UPGRADE

Prepared in the Office of

 NC 75-84-200 (SKYWAY DRIVE)
 AT
 PHIFER STREET

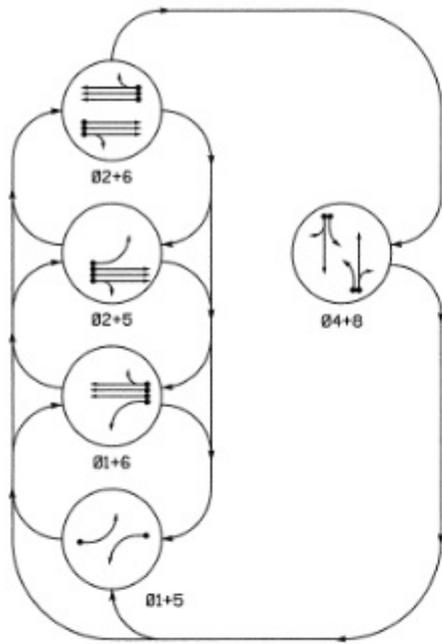
DIVISION 10 UNION COUNTY IN MONROE
 PLAN DATE: JULY 2007 REVIEWED BY: M. WAHBOBA
 PREPARED BY: ANNA GREGORY REVIEWED BY: [Signature]
 REVISIONS: [Table with columns for REVISIONS, DATE, and DATE]

750 N. Gresham St., Cary, NC 27513
 SCALE: 0 40
 1"=40'

Seal of Anna Gregory, Professional Engineer, No. 29904, State of North Carolina.

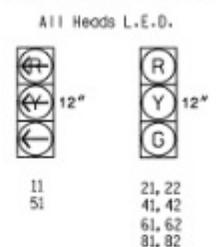
SIG. INVENTORY NO. 19-0631

PHASING DIAGRAM



SIGNAL FACE	PHASE					
	01+5	01+6	02+5	02+6	04+0	04+0
11	---	---	---	---	---	---
21, 22	R	R	G	G	R	Y
41, 42	R	R	R	R	G	R
51	---	---	---	---	---	---
61, 62	R	G	R	G	R	Y
81, 82	R	R	R	R	G	R

SIGNAL FACE I.D.



2070L LOOP & DETECTOR INSTALLATION

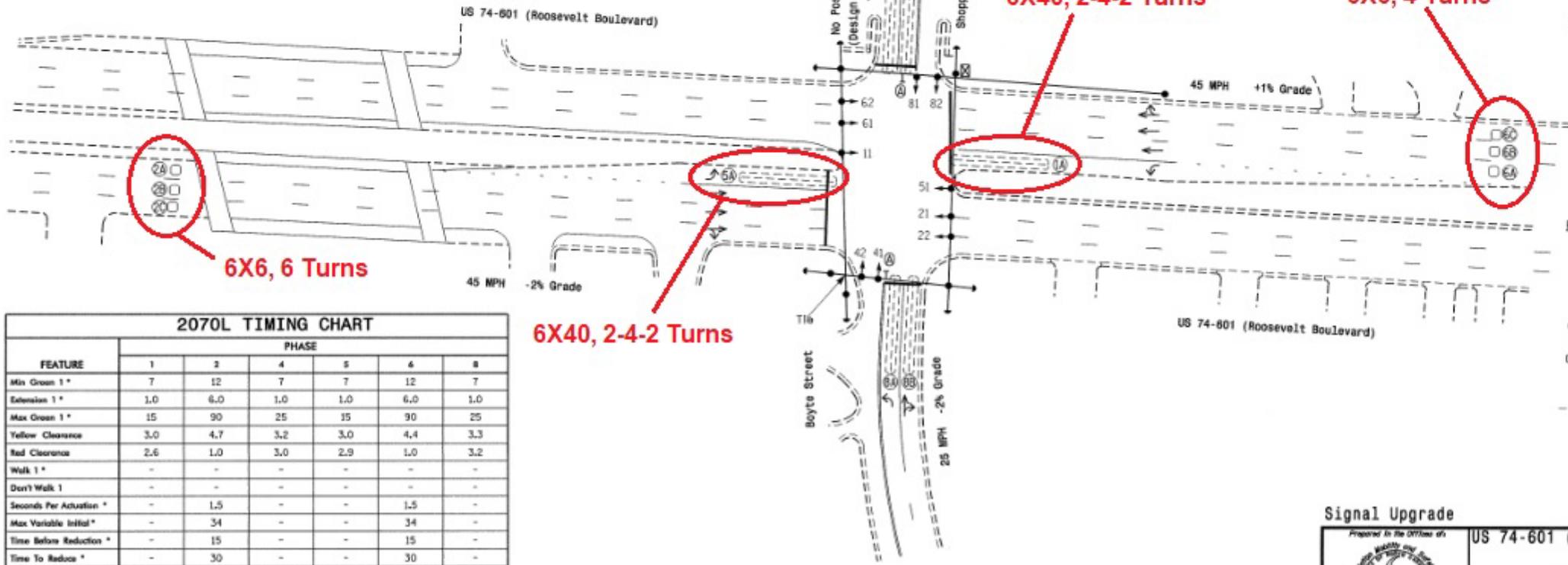
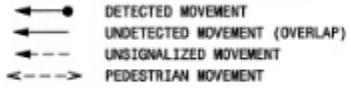
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	DETECTOR PROGRAMMING						
					PHASE	CALLING EXTENSION	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CAB	
1A	6X40	0	EXIST	-	1	Y	-	-	-	-	Y
2A	6X6	300	6	Y	2	Y	Y	-	-	-	Y
2B	6X6	300	6	Y	2	Y	Y	-	-	-	Y
2C	6X6	300	6	Y	2	Y	Y	-	-	-	Y
4A	6X60	+5	EXIST	-	4	Y	Y	-	-	3	Y
4B	6X60	+5	EXIST	-	4	Y	Y	-	-	10	Y
5A	6X40	0	EXIST	-	5	Y	Y	-	-	-	Y
6A	6X6	300	4	Y	6	Y	Y	-	-	-	Y
6B	6X6	300	4	Y	6	Y	Y	-	-	-	Y
6C	6X6	300	4	Y	6	Y	Y	-	-	-	Y
8A	6X60	+5	EXIST	-	8	Y	Y	-	-	3	Y
8B	6X60	+5	EXIST	-	8	Y	Y	-	-	10	Y

5 PHASE FULLY ACTUATED US 74-601 (ROOSEVELT BLVD.) CLS

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated July 2006 and "Standard Specifications for Roads and Structures" dated July 2006.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Phase 1 or phase 5 may be lagged.
4. Set all detector units to presence mode.
5. Pavement markings are existing.
6. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
7. Remove existing "Left Turn Signal" sign (R10-10L).
8. Closed loop system data: Controller Asset # 0592.
9. Place cabinet so as not to obstruct sight distance of vehicles turning right on red.
10. The cabinet should be designed to include an Auxiliary Output file for future use.

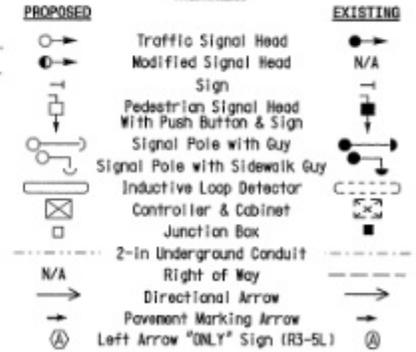
PHASING DIAGRAM DETECTION LEGEND



FEATURE	PHASE					
	1	2	4	5	6	8
Min Green 1*	7	12	7	7	12	7
Extension 1*	1.0	6.0	1.0	1.0	6.0	1.0
Max Green 1*	15	90	25	35	90	25
Yellow Clearance	3.0	4.7	3.2	3.0	4.4	3.3
Red Clearance	2.6	1.0	3.0	2.9	1.0	3.2
Walk 1*	-	-	-	-	-	-
Don't Walk 1	-	-	-	-	-	-
Seconds Per Actuation*	-	1.5	-	-	1.5	-
Max Variable Initial*	-	34	-	-	34	-
Time Before Reduction*	-	15	-	-	15	-
Time To Reduce*	-	30	-	-	30	-
Minimum Gap	-	3.0	-	-	3.0	-
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



Signal Upgrade

US 74-601 (Roosevelt Boulevard) at Boyte Street / Shopping Center Entrance

Division 10 Union County Monroe

PLAN DATE: July 2009 REVISIONS BY: W. Malboosa

PREPARED BY: C. Pierce REVISIONS BY:

Scale: 0 40 feet, 1" = 40'

NO.	REVISIONS	INIT.	DATE

PHASING DIAGRAM

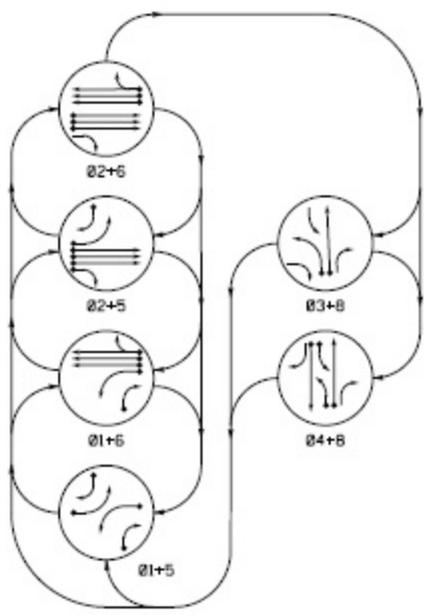


TABLE OF OPERATION

SIGNAL FACE	PHASE							
	01+6	02+5	02+6	03+6	04+6	05+6	06+6	F-1
11	-	-	-	-	-	-	-	-
21,22	R	R	G	G	R	R	Y	-
23	R	R	G	G	R	R	Y	-
31	-	-	-	-	-	-	-	-
41	-	-	-	-	-	-	-	-
42,44	R	R	R	R	R	G	R	-
43	R	R	R	R	R	G	R	-
51	-	-	-	-	-	-	-	-
61,62	R	G	R	G	R	R	Y	-
81,83	R	R	R	R	G	G	R	-
82	R	R	R	R	G	G	R	-

OASIS 2070L LOOP & DETECTOR INSTALLATION

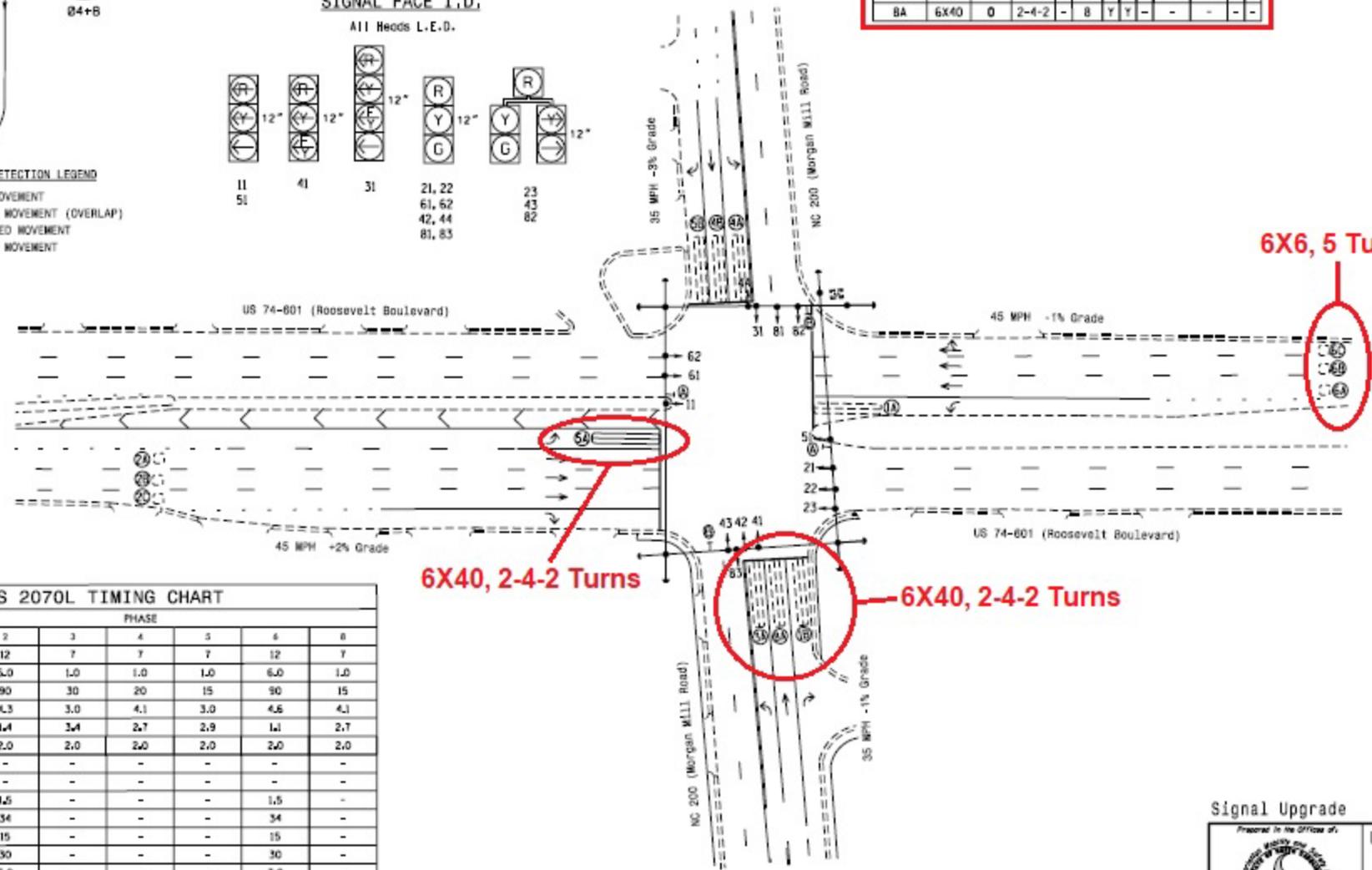
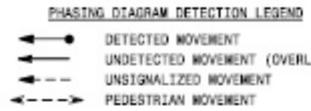
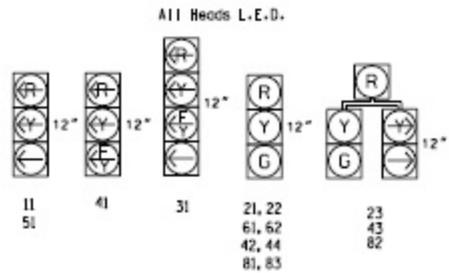
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	DETECTOR PROGRAMMING									
				NEW LOOP	PHASE	CALLING	STRETCH	PULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD	
1A	6X40	0	2-4-2	-	1	Y	Y	-	-	-	-	-	-
1B	6X40	0	2-4-2	-	1	Y	Y	-	-	15	-	-	-
2A	6X6	300	5	-	2	Y	Y	-	-	-	-	-	-
2B	6X6	300	5	-	2	Y	Y	-	-	-	-	-	-
2C	6X6	300	5	-	2	Y	Y	-	-	-	-	-	-
3A	6X40	0	2-4-2	-	3	Y	Y	-	-	15	-	-	-
4A	6X40	0	2-4-2	-	4	Y	Y	-	-	3	-	-	-
4B	6X40	0	2-4-2	-	4	Y	Y	-	-	-	-	-	-
5A	6X40	0	2-4-2	Y	5	Y	Y	-	-	-	-	-	-
5B	6X40	0	2-4-2	-	5	Y	Y	-	-	15	-	-	-
6A	6X6	300	5	-	6	Y	Y	-	-	-	-	-	-
6B	6X6	300	5	-	6	Y	Y	-	-	-	-	-	-
6C	6X6	300	5	-	6	Y	Y	-	-	-	-	-	-
8A	6X40	0	2-4-2	-	8	Y	Y	-	-	-	-	-	-

6 Phase Fully Actuated US 74-601 (Roosevelt Blvd.) CLS East System

NOTES

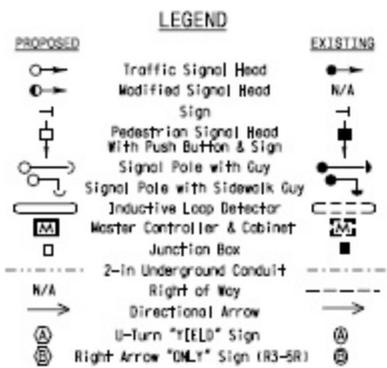
1. Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Phase 1 and/or phase 5 may be lagged.
4. Phase 3 may be lagged.
5. Reposition existing signal heads numbered 51.
6. Set all detector units to presence mode.
7. Pavement markings are existing.
8. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
9. Closed loop system data: Master Asset # 11039, Controller Asset # 0516.

SIGNAL FACE I.D.



OASIS 2070L TIMING CHART

FEATURE	PHASE							
	1	2	3	4	5	6	8	
Min Green 1"	7	12	7	7	7	12	7	
Extension 1"	1.0	6.0	1.0	1.0	1.0	6.0	1.0	
Max Green 1"	15	90	30	20	15	90	15	
Yellow Clearance	3.0	4.3	3.0	4.1	3.0	4.6	4.1	
Red Clearance	3.1	1.4	3.4	2.7	2.9	1.4	2.7	
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Walk 1"	-	-	-	-	-	-	-	
Don't Walk 1"	-	-	-	-	-	-	-	
Seconds Per Actuation *	-	1.5	-	-	-	1.5	-	
Max Vehicle Delay *	-	34	-	-	-	34	-	
Time Before Reduction *	-	15	-	-	-	15	-	
Time To Red *	-	30	-	-	-	30	-	
Minimum Gap	-	3.0	-	-	-	3.0	-	
Recall Mode	-	MIN RECALL	-	-	-	MIN RECALL	-	
Vehicle Call Memory	-	YELLOW	-	-	-	YELLOW	-	
Dual Entry	-	-	-	ON	-	-	ON	
Simultaneous Gap	ON	ON	ON	ON	ON	ON	ON	



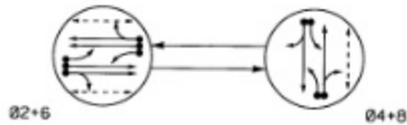
Signal Upgrade

Prepared in the Office of:

 US 74-601(Roosevelt Boulevard) at NC 200 (Morgan Mill Road)
 Division 10 Union County
 PLAN DATE: September 2013 REVISIONS:
 PREPARED BY: G. Pierce REVISIONS BY:
 SCALE: 1"=40'
 DATE: 8/29/2014
 SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 30530
 SIGNATURE: [Signature] DATE: [Date]
 SEAL: 10-0516

* 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.

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

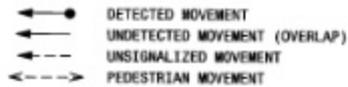


TABLE OF OPERATION

SIGNAL FACE	PHASE		
	G+NB	R	Y
21,22	G	R	Y
41,42	R	G	R
61,62	G	R	Y
81,82	R	G	R
P21,P22	W	DW	DRK
P41,P42	DW	W	DRK
P61,P62	W	DW	DRK

W - Walk
 DW - Don't Walk
 DRK - Dark

SIGNAL FACE I.D.

All Heads L.E.D.



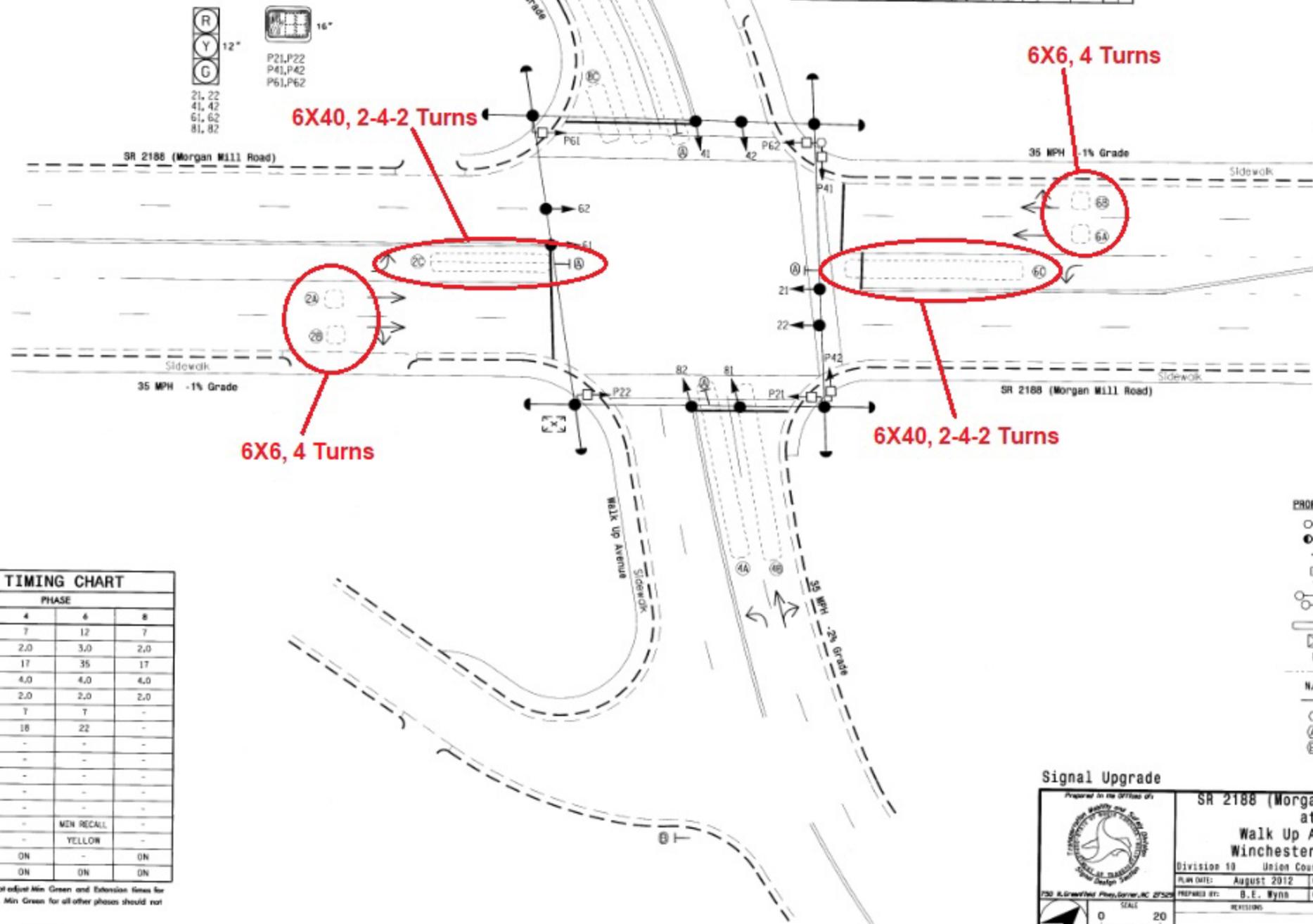
OASIS 2070L LOOP & DETECTOR INSTALLATION CHART

LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	DETECTOR PROGRAMMING							
					PHASE	CALLING	EXTENSION	PULL TIME DEBAY	STRETCH TIME	DELAY TIME	SISTEM LOOP	NEW CARD
2A	6X6	70	EXIST	-	2	Y	Y	-	-	-	-	-
2B	6X6	70	EXIST	-	2	Y	Y	-	-	-	-	-
2C	6X40	0	2-4-2	-	2	Y	Y	-	-	-	-	-
4A	6X60	+10	EXIST	-	4	Y	Y	-	-	3	-	-
4B	6X60	+10	EXIST	-	4	Y	Y	-	-	10	-	-
6A	6X6	77	EXIST	-	6	Y	Y	-	-	-	-	-
6B	6X6	77	EXIST	-	6	Y	Y	-	-	-	-	-
6C	6X6		EXIST	-	6	Y	Y	-	-	-	-	-
8A	6X60	+5	EXIST	-	8	Y	Y	-	-	3	-	-
8B	6X60	+5	EXIST	-	8	Y	Y	-	-	-	-	-
8C	6X20	+5	EXIST	-	8	Y	Y	-	-	10	-	-

2 Phase Fully Actuated Isolated

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Set all detector units to presence mode.
4. In the event of loop replacement, refer to the current ITS and Signals Design Manual and submit a Plan of Record to the Signal Design Section.
5. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
6. Program pedestrian heads to countdown the flashing "Don't Walk" time only.



OASIS 2070L TIMING CHART

FEATURE	PHASE			
	2	4	6	8
Min Green 1*	12	7	12	7
Extension 1*	3.0	2.0	3.0	2.0
Max Green 1*	35	17	35	17
Yellow Clearance	4.0	4.0	4.0	4.0
Red Clearance	2.0	2.0	2.0	2.0
Walk 1*	7	7	7	-
Don't Walk 1	17	18	22	-
Seconds Per Actuation *	-	-	-	-
Max Variable Initial *	-	-	-	-
Time Before Reduction *	-	-	-	-
Time To Reduce *	-	-	-	-
Minimum Gap	-	-	-	-
Recall Mode	MIN RECALL	-	MIN RECALL	-
Vehicle Call Memory	YELLOW	-	YELLOW	-
Dual Entry	-	ON	-	ON
Simultaneous Gap	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 phases should not be lower than 4 seconds.



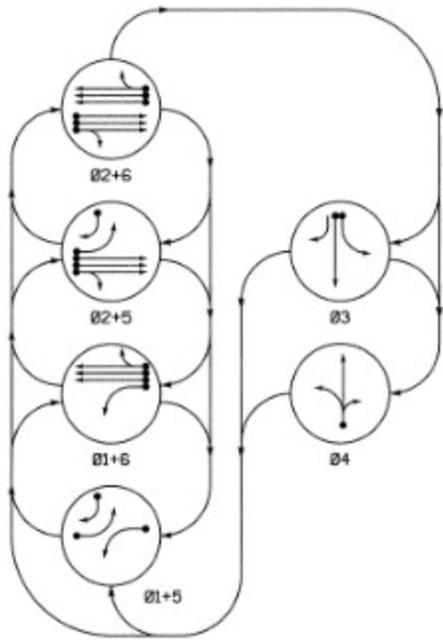
Signal Upgrade

Prepared in the Office of:

 SR 2188 (Morgan Mill Road) at Walk Up Avenue / Winchester Avenue
 Division 10 Union County Winston
 PLAN DATE: August 2012 REVIEWED BY:
 PREPARED BY: B.E. Wynn REVIEWED BY:
 REVISIONS: INTL. DATE:
 SCALE: 1"=20'

 J. Williams
 10-0630

PHASING DIAGRAM



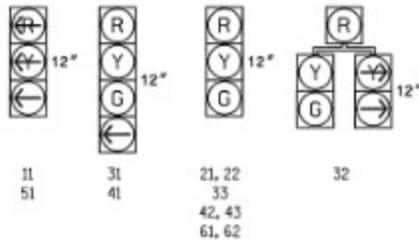
PHASING DIAGRAM DETECTION LEGEND

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

SIGNAL FACE	PHASE					
	01+5	01+6	02+5	02+6	03	04
11						
21,22	R	R	G	G	R	Y
31	R	R	R	R	G	R
32	Y	R	Y	R	G	R
33	R	R	R	R	G	R
41	R	R	R	R	R	G
42,43	R	R	R	R	R	G
51						
61,62	R	G	R	G	R	Y

SIGNAL FACE I.D.

All Heads L.E.D.



2070L LOOP & DETECTOR INSTALLATION

LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	DETECTOR PROGRAMMING							
					PHASE	CALLING EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CAB	
1A	6X60	+5	EXIST	-	1	Y	Y	-	-	-	-	Y
2A	6X6	300	5	Y	2	Y	Y	-	-	-	-	Y
2B	6X6	300	5	Y	2	Y	Y	-	-	-	-	Y
2C	6X6	300	5	Y	2	Y	Y	-	-	-	-	Y
3A	6X40	+5	EXIST	-	3	Y	Y	-	-	3	-	Y
3B	6X60	+5	EXIST	-	3	Y	Y	-	-	-	-	Y
4A	6X60	+5	EXIST	-	4	Y	Y	-	-	3	-	Y
5A	6X60	+5	EXIST	-	5	Y	Y	-	-	-	-	Y
5B	6X60	+5	EXIST	-	5	Y	Y	-	-	15	-	Y
6A	6X6	300	5	Y	6	Y	Y	-	-	-	-	Y
6B	6X6	300	5	Y	6	Y	Y	-	-	-	-	Y
6C	6X6	300	5	Y	6	Y	Y	-	-	-	-	Y
S21	6X6	+135	EXIST	-	-	-	-	-	-	-	-	Y
S22	6X6	+135	EXIST	-	-	-	-	-	-	-	-	Y
S23	6X6	+135	EXIST	-	-	-	-	-	-	-	-	Y

6 Phase Fully Actuated US 74-601 (Roosevelt Blvd.) CLS

NOTES

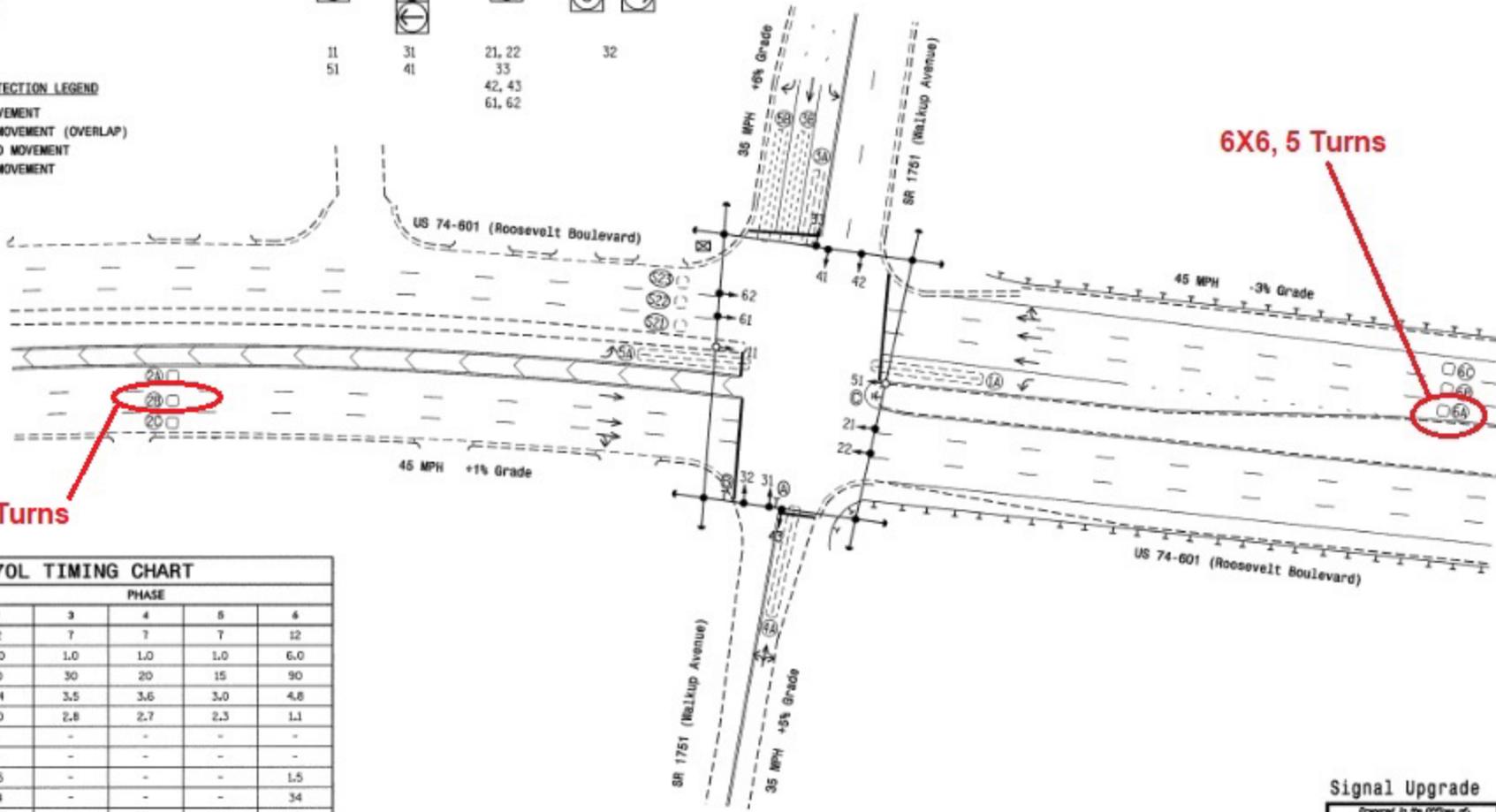
- Refer to "Roadway Standard Drawings NCDOT" dated July 2006 and "Standard Specifications for Roads and Structures" dated July 2006.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Phase 1 or Phase 5 may be logged.
- The order of phase 3 and phase 4 may be reversed.
- Set all detector units to presence mode.
- Remove existing "Left Turn Signal" signs.
- Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
- Pavement markings are existing.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
- Closed loop system data: Controller Asset # 0515.
- The cabinet should be designed to include an Auxiliary Output File for future use.

LEGEND

- | | | | |
|--|--|--|----------|
| | Traffic Signal Head | | EXISTING |
| | Modified Signal Head | | N/A |
| | Sign | | |
| | Pedestrian Signal Head | | |
| | Signal Pole with Guy | | |
| | Signal Pole with Sidewalk Guy | | |
| | Inductive Loop Detector | | |
| | Controller & Cabinet | | |
| | Junction Box | | |
| | 2-in Underground Conduit | | |
| | Right of Way | | |
| | Directional Arrow | | |
| | Pavement Marking Arrow | | |
| | Curved Left Arrow "ONLY" Sign (R3-5L) | | |
| | Curved Right Arrow "ONLY" Sign (R3-SR) | | |
| | U-Turn "YIELD" Sign | | |

6X6, 5 Turns

6X6, 5 Turns



2070L TIMING CHART

FEATURE	PHASE					
	1	2	3	4	5	6
Min Green 1*	7	12	7	7	7	12
Extension 1*	1.0	6.0	1.0	1.0	1.0	6.0
Max Green 1*	15	90	30	20	15	90
Yellow Clearance	3.0	4.4	3.5	3.6	3.0	4.8
Red Clearance	2.8	1.0	2.8	2.7	2.3	1.1
Walk 1*	-	-	-	-	-	-
Don't Walk 1	-	-	-	-	-	-
Seconds Per Actuation*	-	1.5	-	-	-	1.5
Max Variable Initial*	-	34	-	-	-	34
Time Before Reduction*	-	15	-	-	-	15
Time To Reduce*	-	30	-	-	-	30
Minimum Gap	-	3.0	-	-	-	3.0
Recall Mode	-	MIN RECALL	-	-	-	MIN RECALL
Vehicle Call Memory	-	YELLOW	-	-	-	YELLOW
Dual Entry	-	-	-	-	-	-
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.

Signal Upgrade

250 N. Greenfield Pkwy, Garner, NC 27530

US 74-601(Roosevelt Boulevard) at SR 1751 (Walkup Avenue)

Division 10 Union County Monroe

PLM DATE: June 2009 REVIEWED BY: W. Wahbooba

PREPARED BY: C. Pierce REVIEWED BY:

SEAL 30530

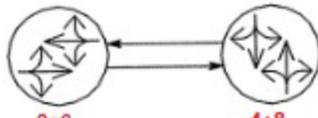
ENGINEER

SCALE 40

1"=40'

REV. DATE

PHASING DIAGRAM



NOTE: Arrows are representative of movements, not individual lanes

SIGNAL FACE	PHASE		
	Ø 1	Ø 2	F L R
11, 12	G	R	R
13, 14	G	R	R
21, 22	R	G	Y
23, 24	R	G	Y

SIGNAL FACE I.D.

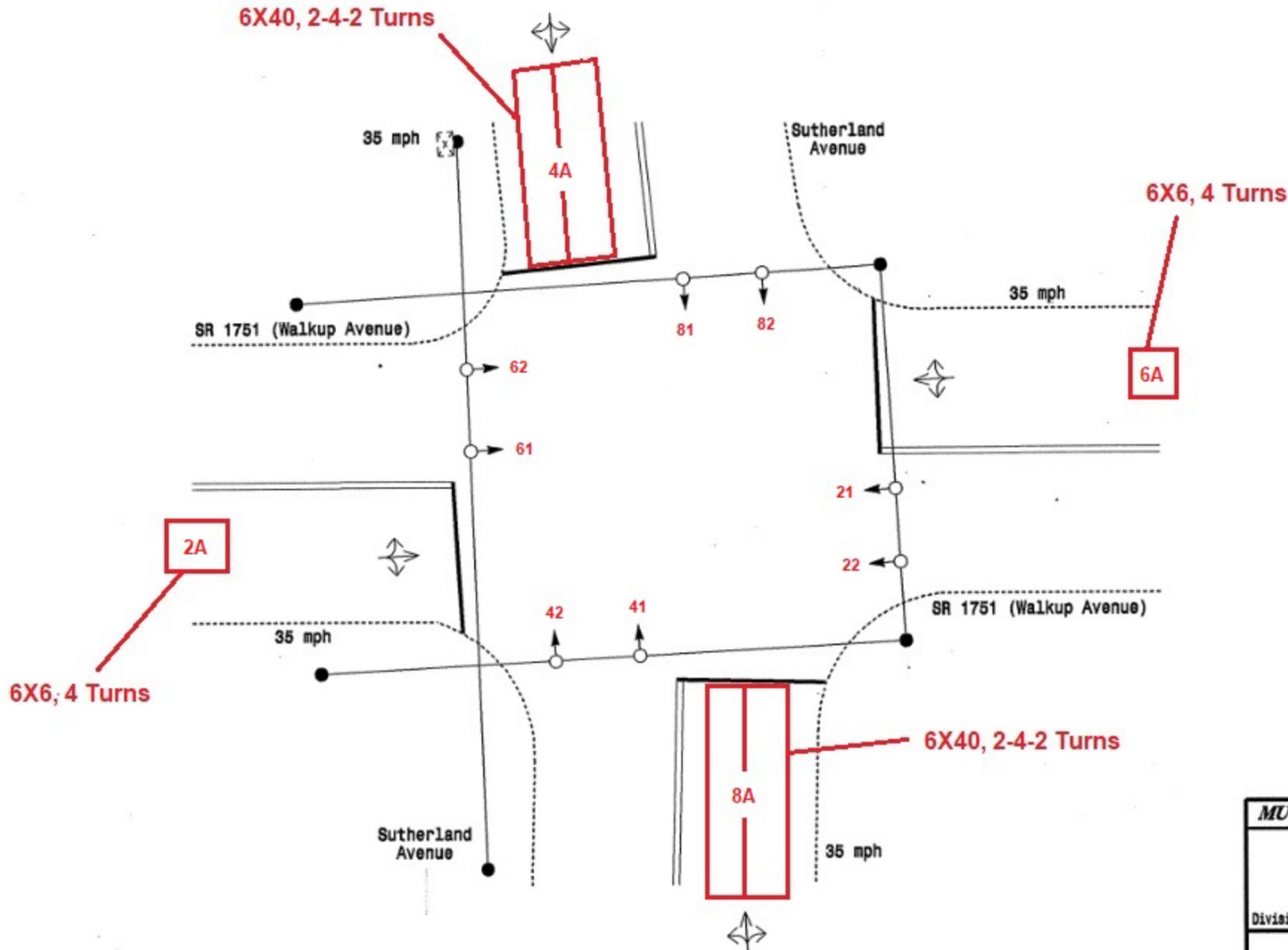
○ Denotes L.E.D.



2 Phase
Semi-Actuated

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2002 and "Standard Specifications for Roads and Structures" dated January 2002.



LEGEND

PROPOSED	EXISTING
○ → Traffic Signal Head	● →
● → Modify Signal Head	NA
○ Wood Signal Pole	●
NA Metal Signal Pole	⊗
NA Controller & Cabinet	⊞

MUTCD Signal Head Upgrade Project 2003

SR 1751 (Walkup Avenue)
at
Sutherland Avenue

Division 10 Union County Monroe

N.C. Department of Transportation
Traffic Engineering and Safety Systems Branch
Signals and Geometrics Section
122 N. McDowell Street, Raleigh, NC 27603

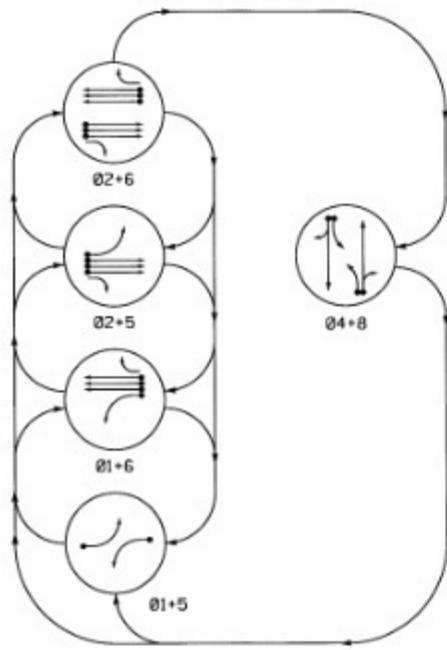


SEAL

SIGNATURE: *L. Alexander* DATE: 10/14/02

SCALE: None	DATE: September 2002
PREPARED BY: PJ Porter	
REVIEWED BY: CK Krause	
SIG. INVENTORY NO. 10-0538	

PHASING DIAGRAM



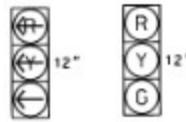
PHASING DIAGRAM DETECTION LEGEND

- ← ● → DETECTED MOVEMENT
- ← ○ → UNDETECTED MOVEMENT (OVERLAP)
- ← - - - → UNSIGNALIZED MOVEMENT
- ← - - - - - → PEDESTRIAN MOVEMENT

SIGNAL FACE	PHASE					
	01+5	01+6	02+5	02+6	04+8	EXHIBIT 11
11	---	---	---	---	---	---
21, 22, 23	R	R	G	G	R	Y
41, 42, 43	R	R	R	R	G	R
51	---	---	---	---	---	---
61, 62, 63	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

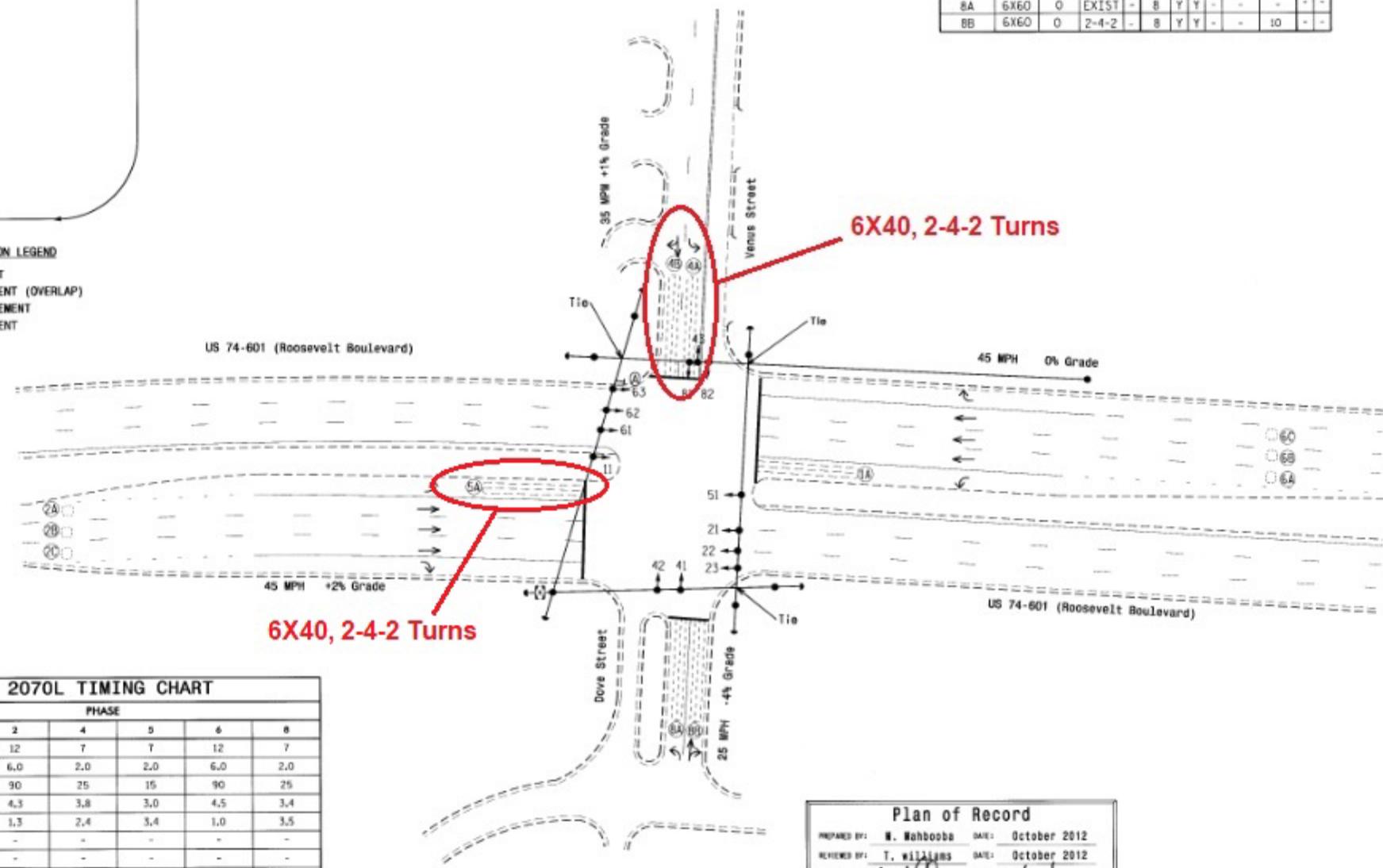
21, 22, 23
41, 42, 43
61, 62, 63
81, 82

OASIS 2070L LOOP & DETECTOR INSTALLATION											
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	DETECTOR PROGRAMMING						
					PHASE	CALLING	EXTENSION	PULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP
1A	6X60	0	EXIST	-	1	Y	Y	-	-	-	-
2A	6X6	300	6	-	2	Y	Y	-	-	-	-
2B	6X6	300	6	-	2	Y	Y	-	-	-	-
2C	6X6	300	6	-	2	Y	Y	-	-	-	-
4A	6X40	0	2-4-2	-	4	Y	Y	-	-	3	-
4B	6X40	0	2-4-2	-	4	Y	Y	-	-	10	-
5A	6X40	0	EXIST	-	5	Y	Y	-	-	-	-
6A	6X6	300	4	-	6	Y	Y	-	-	-	-
6B	6X6	300	4	-	6	Y	Y	-	-	-	-
6C	6X6	300	4	-	6	Y	Y	-	-	-	-
8A	6X60	0	EXIST	-	8	Y	Y	-	-	-	-
8B	6X60	0	2-4-2	-	8	Y	Y	-	-	10	-

5 PHASE FULLY ACTUATED US 74-601 (ROOSEVELT BLVD.) CLS

NOTES

- Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Phase 1 or phase 5 may be lagged.
- Set all detector units to presence mode.
- Pavement markings are existing.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
- Closed loop system data: Controller Asset # 0914.
- The cabinet should be designed to include an Auxiliary Output File for future use.



FEATURE	PHASE					
	1	2	4	5	6	8
Min Green 1 *	7	12	7	7	12	7
Extension 1 *	2.0	6.0	2.0	2.0	6.0	2.0
Max Green 1 *	15	90	25	15	90	25
Yellow Clearance	3.0	4.3	3.8	3.0	4.5	3.4
Red Clearance	3.2	1.3	2.4	3.4	1.0	3.5
Walk 1 *	-	-	-	-	-	-
Don't Walk 1	-	-	-	-	-	-
Seconds Per Actuation *	-	1.5	-	-	1.5	-
Max Variable Initial *	-	34	-	-	34	-
Time Before Reduction *	-	15	-	-	15	-
Time To Reduce *	-	30	-	-	30	-
Minimum Gap	-	3.0	-	-	3.0	-
Recall Mode	-	WIN RECALL	-	-	WIN 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 4 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.

PROPOSED		EXISTING	
○ →	Traffic Signal Head	● →	N/A
○ →	Modified Signal Head	○ →	N/A
⊥	Sign	⊥	N/A
⊥	Pedestrian Signal Head	⊥	N/A
⊥	With Push Button & Sign	⊥	N/A
⊥	Signal Pole with Guy	⊥	N/A
⊥	Signal Pole with Sidewalk Guy	⊥	N/A
⊥	Inductive Loop Detector	⊥	N/A
⊥	Controller & Cabinet	⊥	N/A
⊥	Junction Box	⊥	N/A
⊥	2-in Underground Conduit	⊥	N/A
N/A	Right of Way	N/A	N/A
→	Directional Arrow	→	N/A
→	Pavement Marking Arrow	→	N/A
⊙	Right Arrow "ONLY" Sign (R3-5L)	⊙	N/A

Plan of Record

PREPARED BY: **M. Mahbooba** DATE: **October 2012**

REVIEWED BY: **T. Williams** DATE: **October 2012**

SIGNATURE: *T. Williams* DATE: **10/15/12**

COMMENTS: **Unit right turn overlap & replaced head 82 with 3-section head, reassigned loop 18 to phase 8 (left) & revised extension time.**

This plan of record reflects existing field conditions as submitted by field personnel. This plan may have been modified from its original status.

Plan Of Record

Prepared in the Office of:
US 74-601(Roosevelt Boulevard) at Dove Street/Venus Street

Division 10 Union County Moore

PREPARED BY: **August 2009** REVIEWED BY: **M. Mahbooba**

PREPARED BY: **G. Pierce** REVIEWED BY:

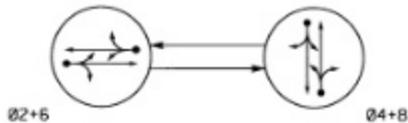
REVISIONS: _____

SCALE: **0 40**
1" = 40'

Not a certified document. This document originally issued and sealed by Zachary M. Little, PE 30530 on 4/28/2009. This document shall not be considered a certified document.

SIC. MEMORY NO. 10-0914

PHASING DIAGRAM



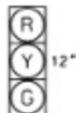
PHASING DIAGRAM DETECTION LEGEND

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

SIGNAL FACE	PHASE		
	Q1+NB	Q2+SB	Q3+WB
21,22	C	R	Y
41,42	R	G	R
61,62	G	R	Y
81,82	R	G	R

SIGNAL FACE I.D.

All Heads L.E.O.



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

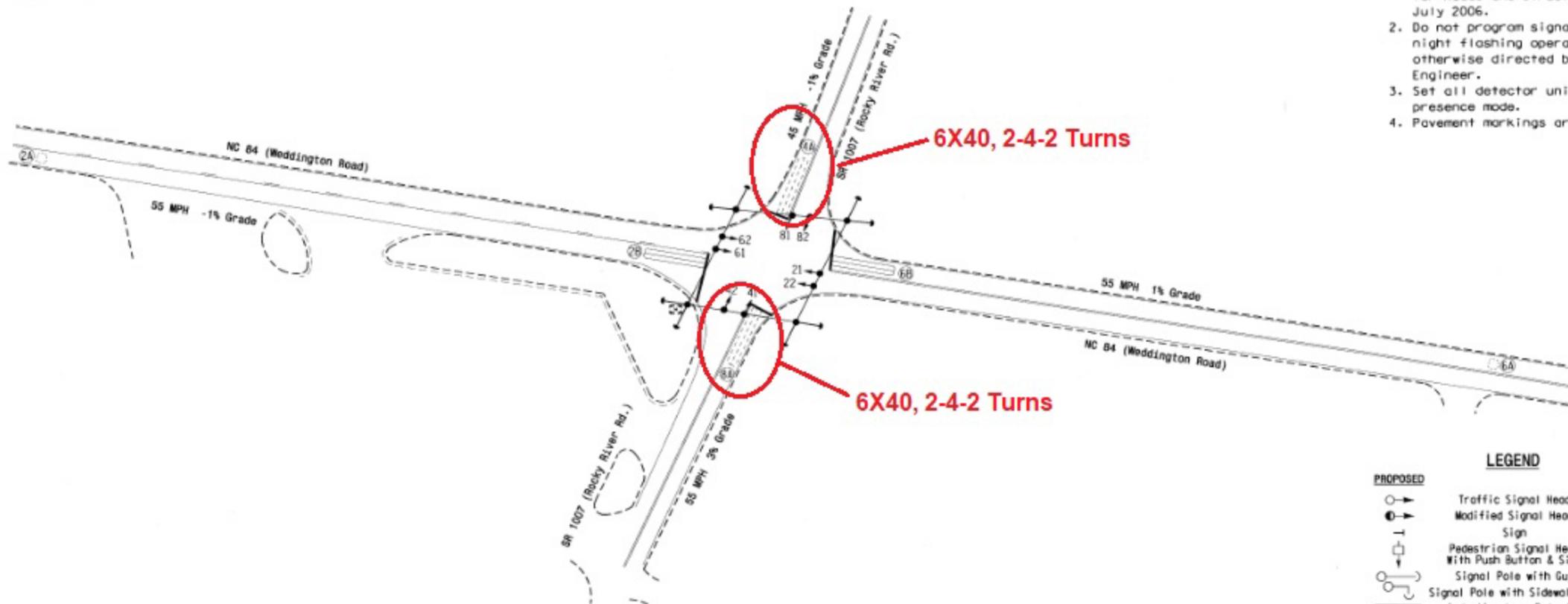
OASIS 2070L LOOP & DETECTOR INSTALLATION CHART

LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	DETECTOR PROGRAMMING								
				NEW LOOP	PHASE	CALLING EXTENSION	REAL TIME DELAY	STITCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD	
2A	6X6	420	4	-	2	Y	Y	-	-	-	-	-
2B	6X40	0	2-4-2	Y	2	Y	Y	Y	2	5	-	Y
4A	6X40	0	4	-	4	Y	Y	-	-	10	-	-
6A	6X6	420	2-4-2	-	6	Y	Y	-	-	-	-	-
6B	6X40	0	2-4-2	Y	6	Y	Y	Y	2	5	-	Y
8A	6X40	0	2-4-2	-	8	Y	Y	-	-	10	-	-

2 Phase Fully Actuated Isolated

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated July 2006 and "Standard Specifications for Roads and Structures" dated July 2006.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Set all detector units to presence mode.
4. Pavement markings are existing.



FEATURE	PHASE			
	2	4	6	8
Min Green 1*	12	7	12	7
Extension 1*	6.0	2.0	6.0	2.0
Max Green 1*	50	30	50	30
Yellow Clearance	5.3	5.0	5.1	5.0
Red Clearance	1.0	1.0	1.0	1.0
Walk 1*	-	-	-	-
Don't Walk 1	-	-	-	-
Seconds Per Actuation*	-	-	-	-
Max Variable Initial*	-	-	-	-
Time Before Reduction*	5	-	5	-
Time To Reduce*	15	-	15	-
Minimum Gap	3.4	-	3.4	-
Recall Mode	MIN RECALL	-	MIN RECALL	-
Vehicle Call Memory	-	-	-	-
Dual Entry	-	ON	-	ON
Simultaneous Gap	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 other phases should not be lower than 4 seconds.

Plan of Record

PREPARED BY: M. Mahbooba DATE: May 2011
 REVIEWED BY: T.J. Williams DATE: May 2011
 SIGNATURE: T.J. Williams DATE: 5/2/11

COMMENTS:
 Upgraded equipment to 2070 & loops operations to Volume Density

This plan of record reflects existing field conditions as submitted by field personnel. This plan may have been modified from its original state.

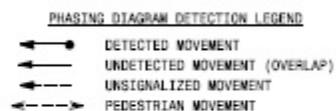
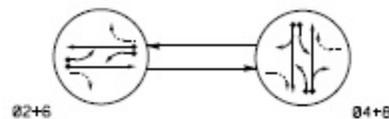
PROPOSED	LEGEND	EXISTING
○	Traffic Signal Head	●
○	Modified Signal Head	N/A
○	Sign	-
○	Pedestrian Signal Head With Push Button & Sign	○
○	Signal Pole with Guy	○
○	Signal Pole with Sidewalk Guy	○
⊠	Inductive Loop Detector	⊠
⊠	Controller & Cabinet Junction Box	⊠
- - -	2-in Underground Conduit	- - -
- - -	Right of Way	- - -
→	Directional Arrow	→

Signal Revision

REVISION SEAL NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 24393 TIMOTHY J. WILLIAMS ENGINEER	NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 14543 GENE G. MURPHY, JR. ENGINEER	NC 84 (Weddington Road) at SR 1007 (Rocky River Road)	
		Division 10 Union County Morroco	PREPARED BY: WEB REVIEWED BY: WEB
SCALE: 1"=40' DATE: 5/2/11		Add loops 2B & 6B, Volume Density timing & revise Clearance & Max. times for phases 2 & 6.	

Not a certified document. This document originally issued and sealed by Gene G. Murphy, Jr., PE 14543 on 9/25/1990. This document shall not be considered a certified document.

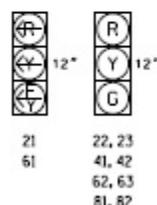
PHASING DIAGRAM



SIGNAL FACE	PHASE			
	THRU	THRU	THRU	THRU
21	Y	Y	Y	Y
22, 23	G	R	Y	
41, 42	R	G	R	
61	Y	Y	Y	Y
62, 63	G	R	Y	
81, 82	R	G	R	

SIGNAL FACE I, D.

All Heads L.E.O.

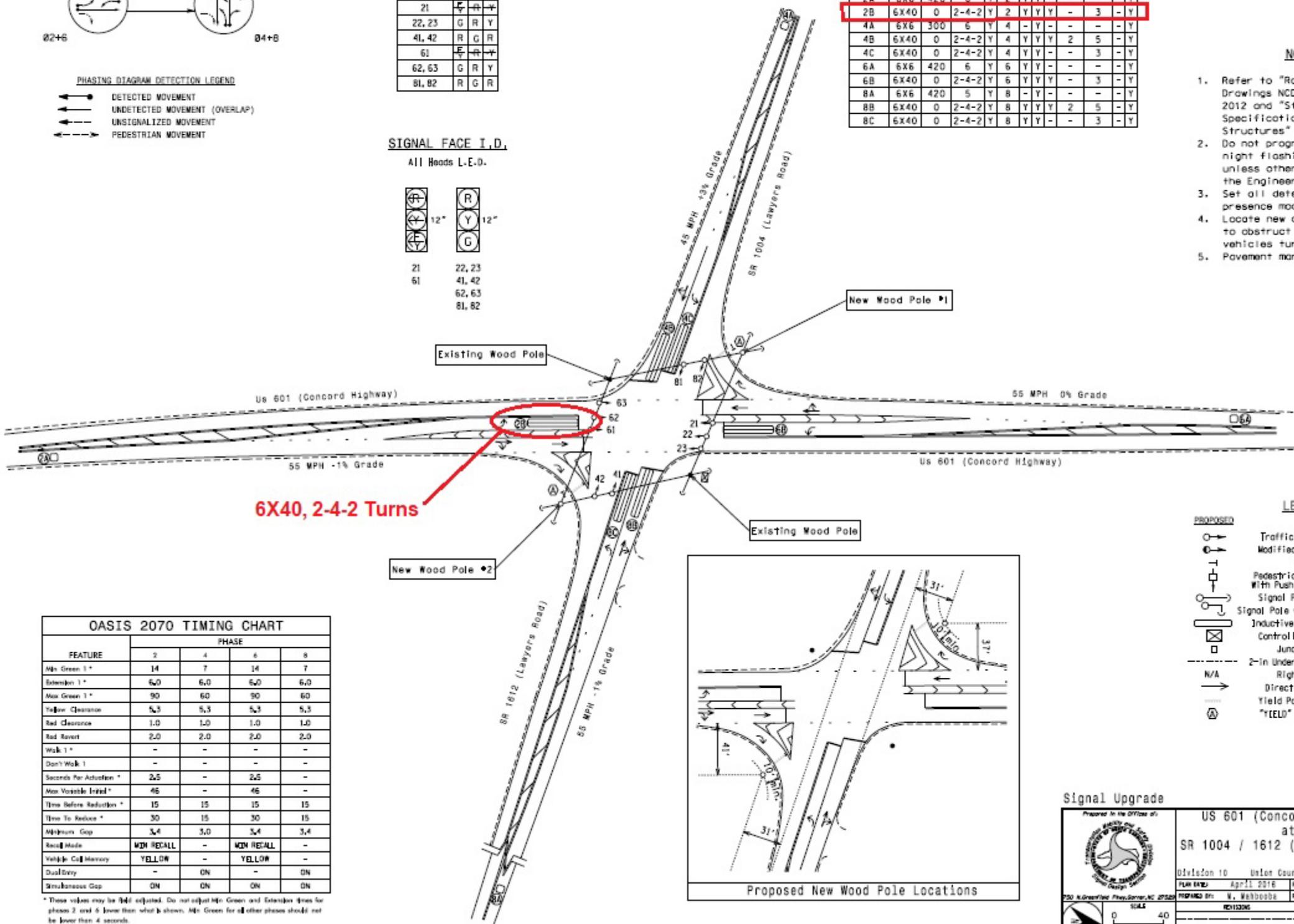


OASIS 2070 LOOP & DETECTOR INSTALLATION CHART												
INDUCTIVE LOOPS					DETECTOR PROGRAMMING							
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	TRAIL TIME (SECS)	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CABLE
2A	6X6	420	6	Y	2	Y	Y	-	-	-	-	Y
2B	6X40	0	2-4-2	Y	2	Y	Y	-	-	3	-	Y
4A	6X6	300	6	Y	4	-	Y	-	-	-	-	Y
4B	6X40	0	2-4-2	Y	4	Y	Y	Y	2	5	-	Y
4C	6X40	0	2-4-2	Y	4	Y	Y	-	-	3	-	Y
6A	6X6	420	6	Y	6	Y	Y	-	-	-	-	Y
6B	6X40	0	2-4-2	Y	6	Y	Y	Y	-	3	-	Y
8A	6X6	420	6	Y	8	-	Y	-	-	-	-	Y
8B	6X40	0	2-4-2	Y	8	Y	Y	Y	2	5	-	Y
8C	6X40	0	2-4-2	Y	8	Y	Y	-	-	3	-	Y

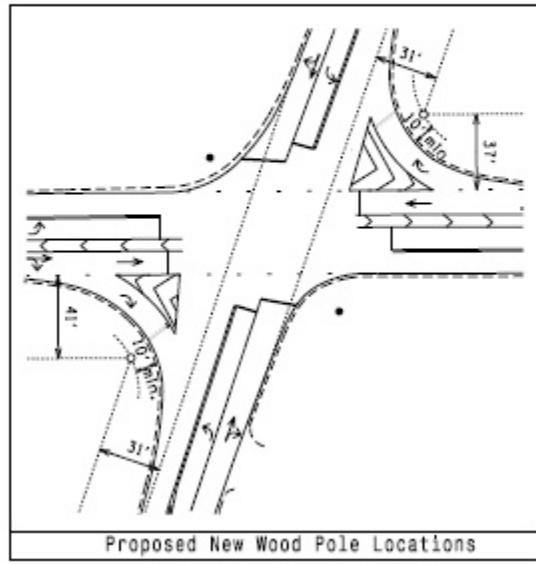
2 Phase Fully Actuated Isolated

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Set all detector units to presence mode.
4. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
5. Pavement markings are existing.

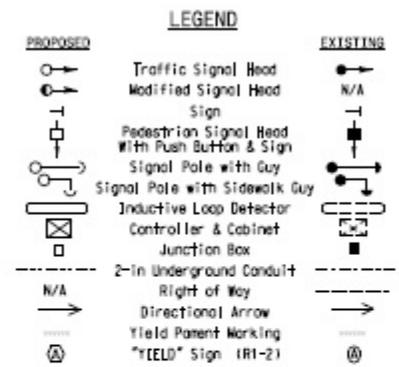


6X40, 2-4-2 Turns



FEATURE	PHASE			
	2	4	6	8
Min Green 1"	14	7	14	7
Extension 1"	6.0	6.0	6.0	6.0
Max Green 1"	90	60	90	60
Yellow Clearance	5.3	5.3	5.3	5.3
Red Clearance	1.0	1.0	1.0	1.0
Red Raven	2.0	2.0	2.0	2.0
Walk 1"	-	-	-	-
Don't Walk 1	-	-	-	-
Seconds Per Actuation *	2.5	-	2.5	-
Max Variable Intial *	46	-	46	-
Time Before Reduction *	15	15	15	15
Time To Reduce *	30	15	30	15
Minimum Gap	3.4	3.0	3.4	3.4
Recall Mode	MON RECALL	-	MON RECALL	-
Yellow Call Memory	YELLOW	-	YELLOW	-
Dual Entry	-	ON	-	ON
Simultaneous Gap	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.



Signal Upgrade

Prepared in the Office of:

US 601 (Concord Highway) at SR 1004 / 1612 (Lawyers Road)

Division 10 Union County

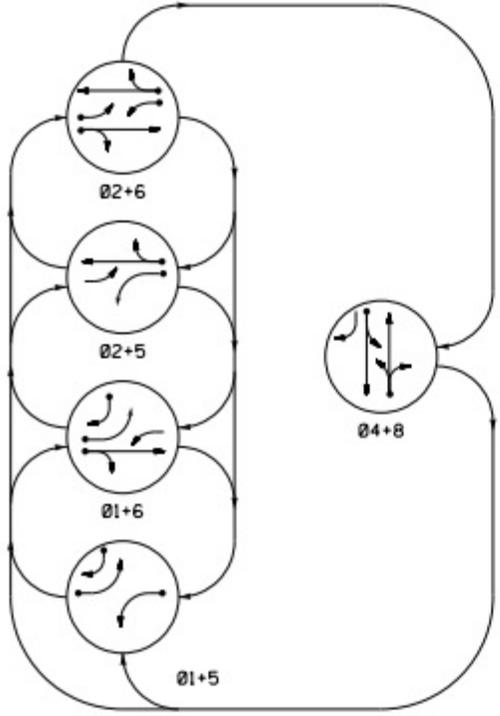
PLANNED BY: April 2016
DESIGNED BY: N. Webbode
CHECKED BY: T. Williams
REVISIONS: DATE: DATE: DATE:

SCALE: 1" = 40'

DATE: 5/24/2016

PROJECT NO. 10-1672

PHASING DIAGRAM



SIGNAL FACE I.D.

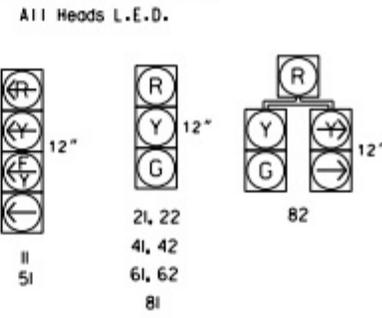


TABLE OF OPERATION

SIGNAL FACE	PHASE							
	01+5	01+6	02+5	02+6	04+8	01+5	01+6	02+5
11	-	-	-	-	-	-	-	-
21, 22	R	R	G	G	R	R	R	Y
41, 42	R	R	R	R	G	R	R	Y
51	-	-	-	-	-	-	-	-
61, 62	R	G	R	G	R	R	R	Y
81	R	R	R	R	G	R	R	Y
82	R	R	R	R	G	R	R	Y

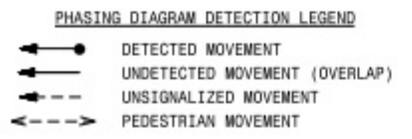
OASIS 2070E LOOP & DETECTOR INSTALLATION CHART

LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	DETECTOR PROGRAMMING								
				NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
1A	6X40	0	2-4-2	-	1	Y	Y	-	-	15	-	Y
1B	6X40	0	2-4-2	-	1	Y	Y	-	-	15	-	Y
2A	6X6	420	5	-	2	Y	Y	-	-	-	-	Y
4A	6X40	0	2-4-2	-	4	Y	Y	-	-	10	-	Y
5A	6X40	0	4	-	5	Y	Y	-	-	15	-	Y
6A	6X6	420	5	-	6	Y	Y	-	-	-	-	Y
8A	6X40	0	2-4-2	-	8	Y	Y	-	-	3	-	Y

5 Phase Fully Actuated Isolated

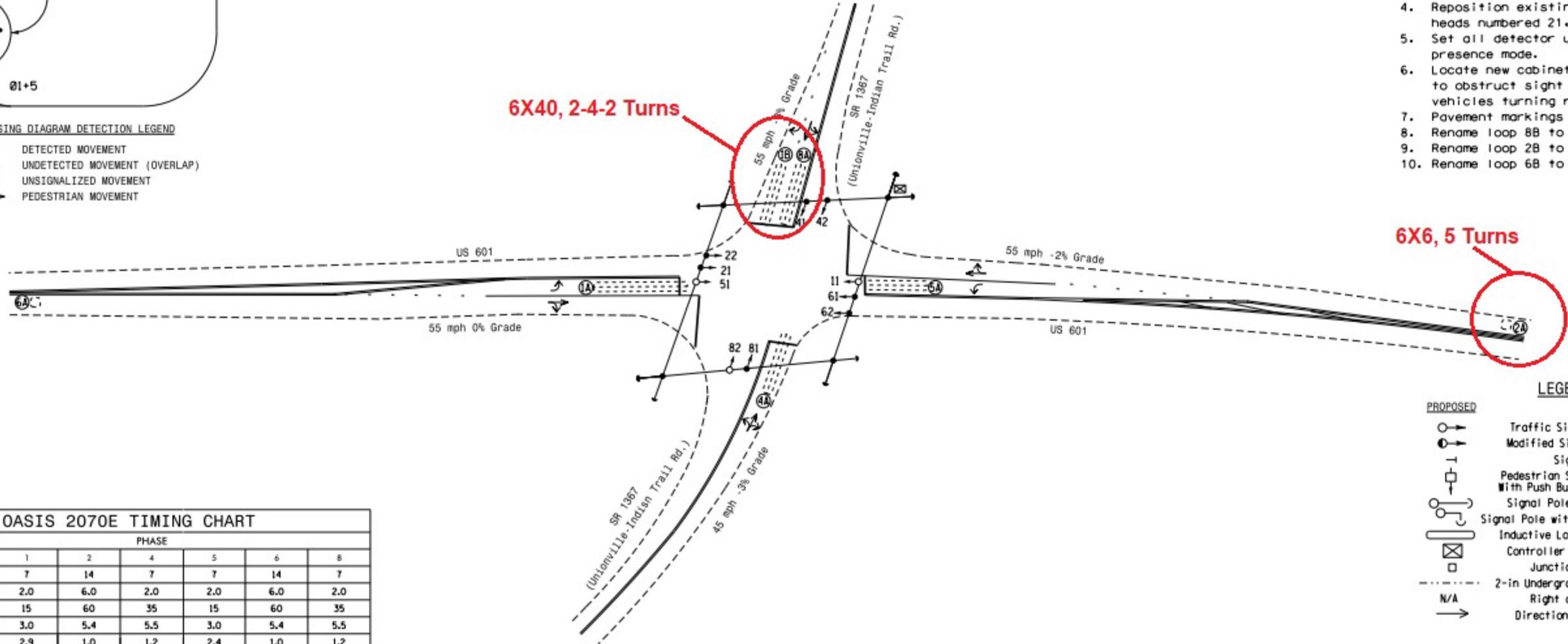
NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
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 existing signal heads numbered 21, 22, 61 and 62.
5. Set all detector units to presence mode.
6. Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
7. Pavement markings are existing.
8. Rename loop 8B to 1B.
9. Rename loop 2B to 5A.
10. Rename loop 6B to 1A.

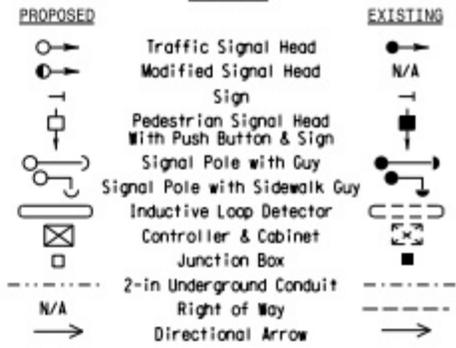


6X40, 2-4-2 Turns

6X6, 5 Turns



LEGEND



OASIS 2070E 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*	15	60	35	15	60	35
Yellow Clearance	3.0	5.4	5.5	3.0	5.4	5.5
Red Clearance	2.9	1.0	1.2	2.4	1.0	1.2
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0
Walk 1*	-	-	-	-	-	-
Don't Walk 1	-	-	-	-	-	-
Seconds Per Actuation*	-	2.5	-	-	2.5	-
Max Variable Initial*	-	46	-	-	46	-
Time Before Reduction*	-	15	-	-	15	-
Time To Reduce*	-	15	-	-	15	-
Minimum Gap	-	3.4	-	-	3.4	-
Recall Mode	-	MIN RECALL	-	-	MIN RECALL	-
Vehicle Call Memory	-	YELLOW	-	-	YELLOW	-
Dual Entry	-	-	ON	-	-	ON
Simultaneous Gap	ON	ON	ON	ON	ON	ON

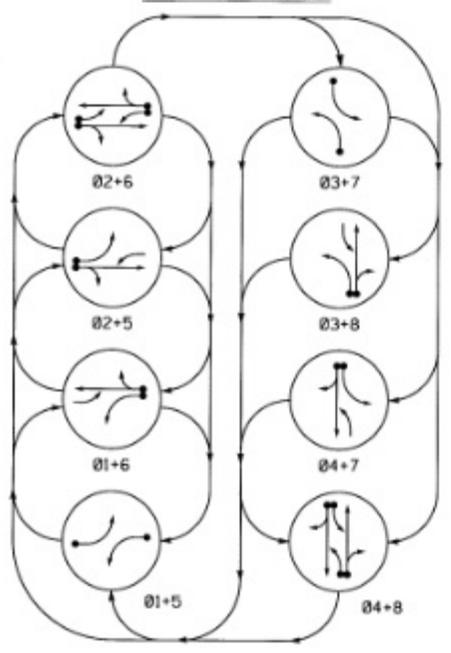
* These values may be field adjusted. Do not adjust Min Green and Extension times for phases 2 and 6 lower than what is shown. Min Green for all other phases should not be lower than 4 seconds.

Signal Upgrade

Prepared in the Office of:

 US 601 at SR 1367 (Unionville-Indian Trail Road)
 Division 10 Union County Unionville
 PLAN DATE: January 2019 REVIEWED BY:
 PREPARED BY: G. Pierce REVIEWED BY:
 REVISIONS: INIT. DATE
 SCALE: 1"=40'
 DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED
 SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER RICHARD N. ZINER
 DATE: 2/20/2019
 SIG. INVENTORY NO. 10-1561

PHASING DIAGRAM



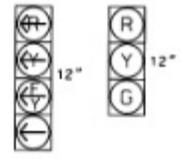
PHASING DIAGRAM DETECTION LEGEND

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

SIGNAL FACE	PHASE								FLOOR
	01+5	02+6	03+7	04+8	01+6	02+5	03+8	04+7	
11	---	Y	Y	Y	Y	Y	Y	Y	Y
21, 22	R	R	G	G	R	R	R	R	Y
31	---	Y	Y	Y	Y	Y	Y	Y	Y
41, 42	R	R	R	R	R	R	R	G	G
51	---	Y	Y	Y	Y	Y	Y	Y	Y
61, 62	R	G	R	C	R	R	R	R	Y
71	---	Y	Y	Y	Y	Y	Y	Y	Y
81, 82	R	R	R	R	R	G	R	G	R

SIGNAL FACE I.D.

All Heads L.E.D.



11 21, 22
 31 41, 42
 51 61, 62
 71 81, 82

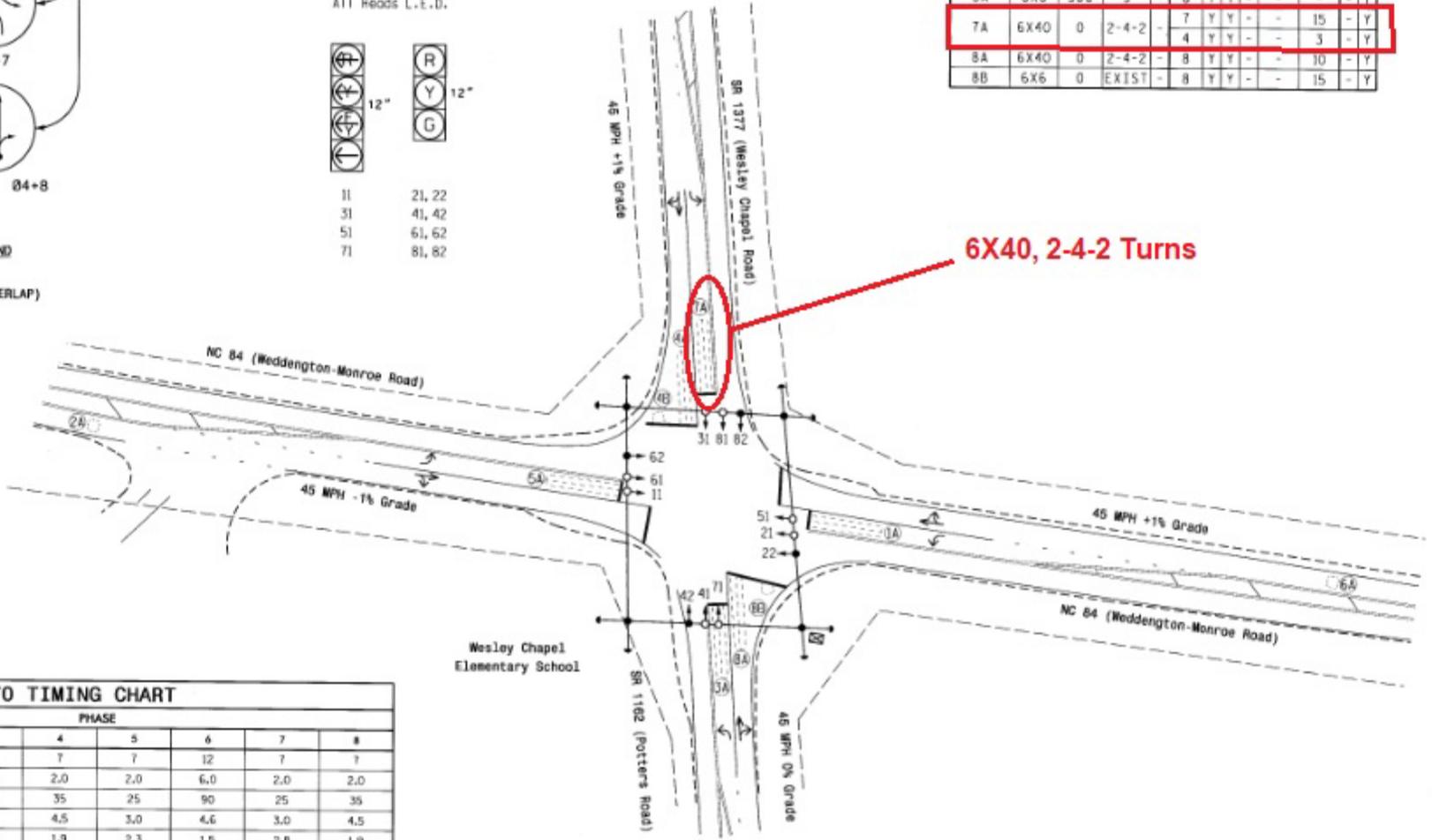
OASIS 2070 LOOP & DETECTOR INSTALLATION CHART

LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	DETECTOR PROGRAMMING							
					PHASE	CALLING	EXTENSION	PULL TIME DELAY	SWITCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
1A	6X40	0	2-4-2	-	1	Y	Y	-	-	15	-	Y
2A	6X6	300	5	-	2	Y	Y	-	-	3	-	Y
3A	6X40	0	2-4-2	-	3	Y	Y	-	-	15	-	Y
4A	6X40	0	2-4-2	-	4	Y	Y	-	-	10	-	Y
4B	6X6	0	4	-	4	Y	Y	-	-	15	-	Y
5A	6X40	0	2-4-2	-	5	Y	Y	-	-	15	-	Y
6A	6X6	300	5	-	6	Y	Y	-	-	3	-	Y
7A	6X40	0	2-4-2	-	7	Y	Y	-	-	15	-	Y
8A	6X40	0	2-4-2	-	8	Y	Y	-	-	10	-	Y
8B	6X6	0	EXIST	-	8	Y	Y	-	-	15	-	Y

8 Phase Fully Actuated Isolated

NOTES

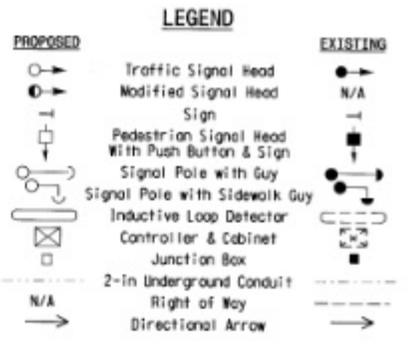
- Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Phase 1 and/or phase 5 may be logged.
- Phase 3 and/or phase 7 may be logged.
- Reposition existing signal heads numbered 22, 42, 62 & 82.
- Set all detector units to presence mode.
- Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
- Pavement markings are existing.



6X40, 2-4-2 Turns

FEATURE	PHASE							
	1	2	3	4	5	6	7	8
Min Green 1*	7	12	7	7	7	12	7	7
Extension 1*	2.0	6.0	2.0	2.0	2.0	6.0	2.0	2.0
Max Green 1*	25	90	25	35	25	90	25	35
Yellow Clearance	3.0	4.6	3.0	4.5	3.0	4.6	3.0	4.5
Red Clearance	2.5	1.5	2.9	1.9	2.3	1.5	2.8	1.9
Red Recall	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Walk 1*	-	-	-	-	-	-	-	-
Don't Walk 1	-	-	-	-	-	-	-	-
Seconds Per Actuation *	-	2.5	-	-	-	2.5	-	-
Max Variable Initial *	-	34	-	-	-	34	-	-
Time Before Reduction *	-	15	-	-	-	15	-	-
Time To Reduce *	-	40	-	-	-	40	-	-
Minimum Gap	-	3.0	-	-	-	3.0	-	-
Recall Mode	-	MIN RECALL	-	-	-	MIN RECALL	-	-
Vehicle Call Memory	-	YELLOW	-	-	-	YELLOW	-	-
Dual Entry	-	-	-	ON	-	-	-	ON
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.



Signal Upgrade

	NC 84 (Weddington-Monroe Road) at SR 1162 (Potters Road) / SR 1377 (Wesley Chapel Road)		
	Division 10 Union County Weddington		
PREPARED BY: W. Mahabooda	REVIEWED BY: T. Williams	DATE: April 2014	DATE:
REVISIONS:	INT:	DATE:	DATE:

Scale: 1"=40'

Inventory No: 10-0959

