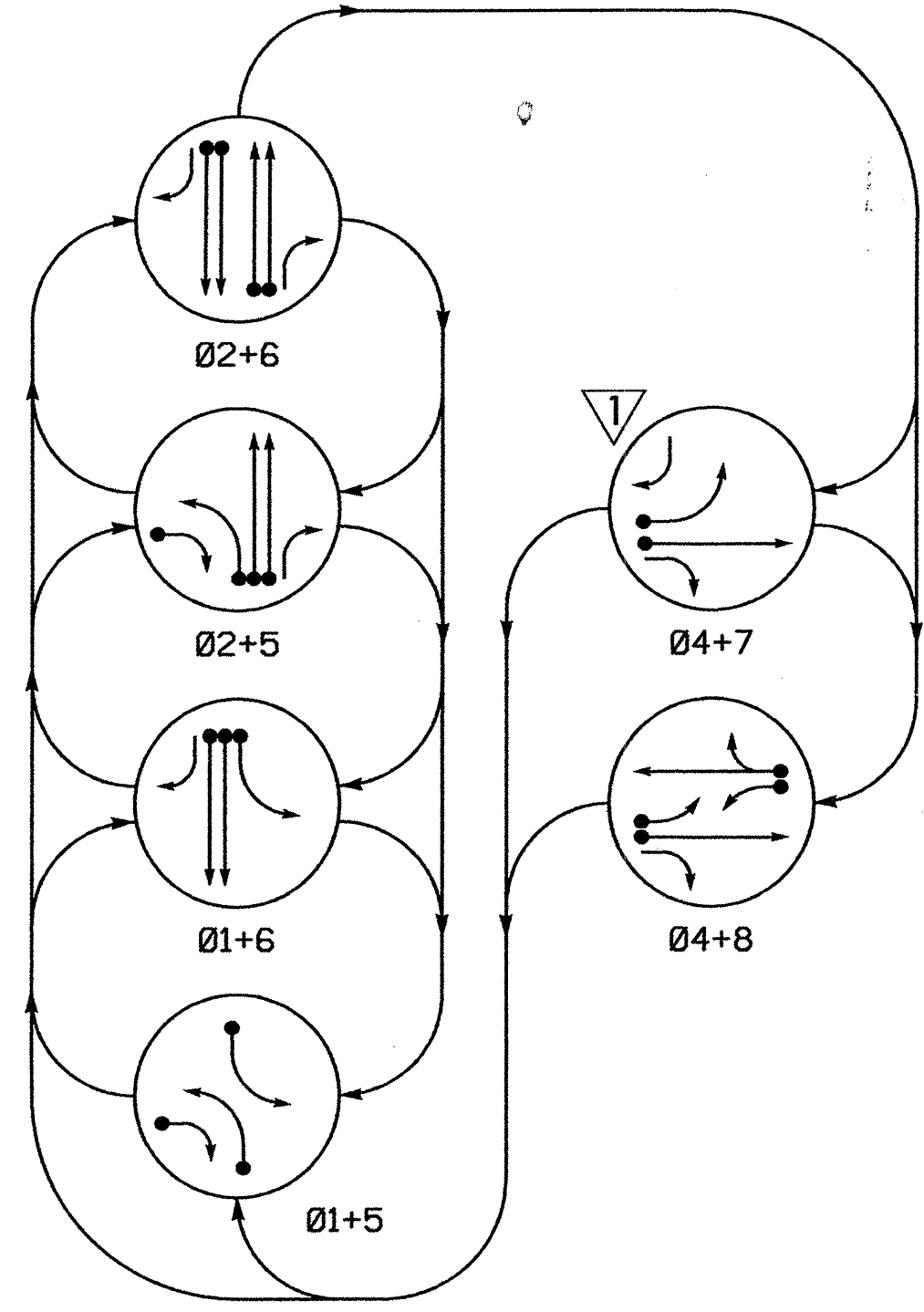


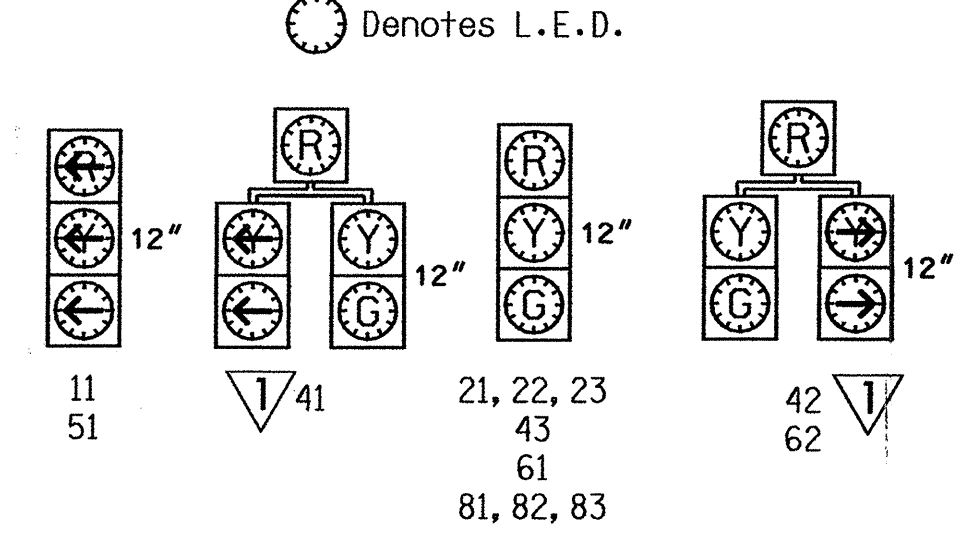
**PHASING DIAGRAM**



**PHASING DIAGRAM DETECTION LEGEND**

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

**SIGNAL FACE I.D.**



**TABLE OF OPERATION**

SIGNAL FACE	PHASE							
	Ø1+5	Ø1+6	Ø2+5	Ø2+6	Ø4+7	Ø4+8	FLASH	
11	-	-	-R	-R	-R	-R	-R	-R
21, 22, 23	R	R	G	G	R	R	Y	
41	R	R	R	R	G	G	R	
42	R	R	R	R	G	G	R	
43	R	R	R	R	G	G	R	
51	-	-R	-R	-R	-R	-R	-R	
61	R	G	R	G	R	R	Y	
62	R	G	R	G	R	R	Y	
81, 82, 83	R	R	R	R	R	G	R	

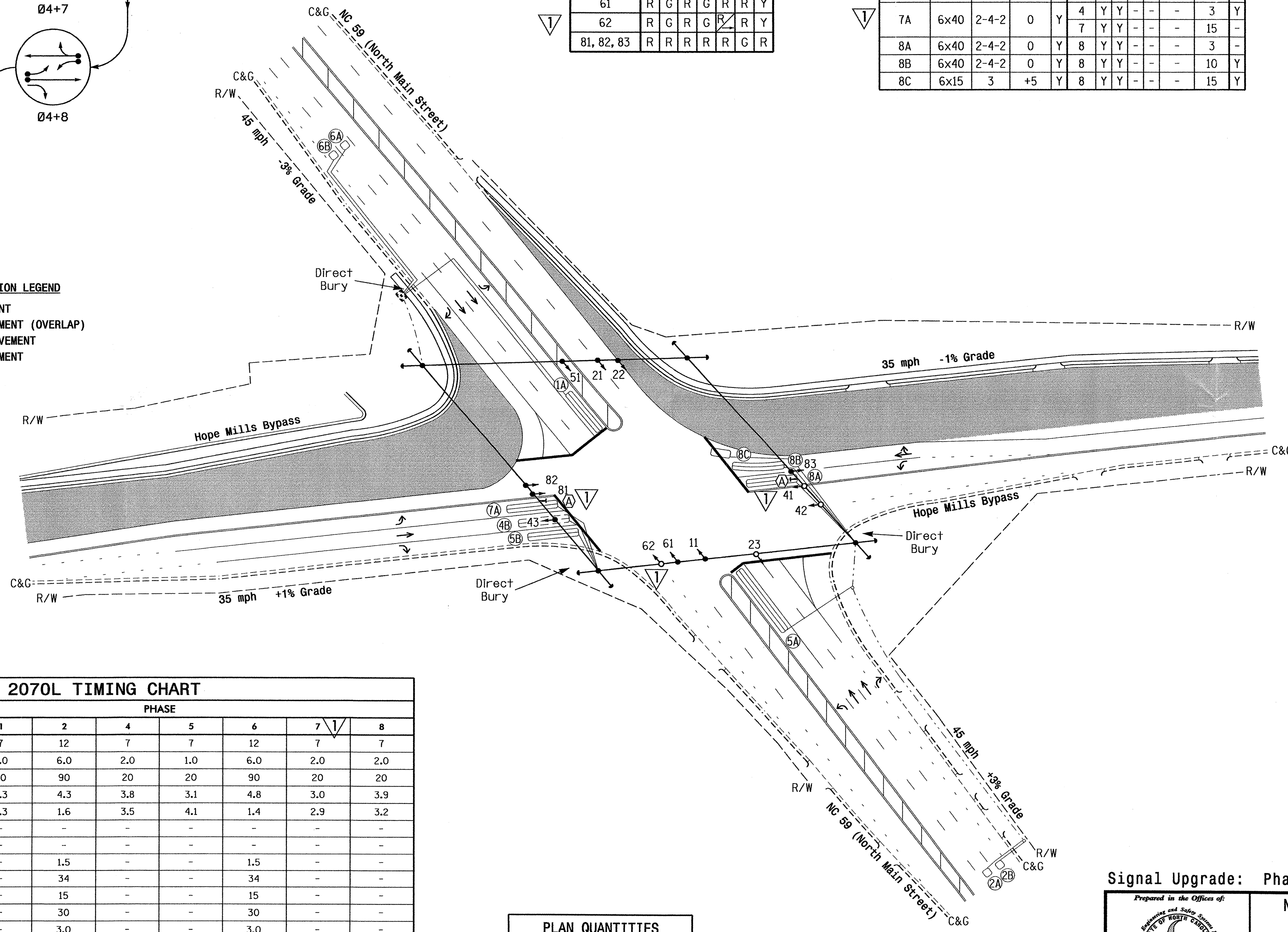
**2070L LOOP & DETECTOR INSTALLATION**

LOOP	INDUCTIVE LOOPS			DETECTOR PROGRAMMING							
	SIZE (FT)	TURNS	DISTANCE FROM STOPBAR (FT)	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	NEW CARD	
1A	6x40	2-4-2	0	Y	1	Y	Y	-	-	3	-
2A	6x6	6	300	Y	2	Y	Y	-	-	-	-
2B	6x6	6	300	Y	2	Y	Y	-	-	-	-
4B	6x40	2-4-2	0	-	4	Y	Y	-	-	-	Y
5A	6x60	2-4-2	0	Y	5	Y	Y	-	-	3	-
5B	6x40	2-4-2	0	Y	5	Y	Y	-	1	15	Y
6A	6x6	3	300	Y	6	Y	Y	-	-	-	-
6B	6x6	3	300	Y	6	Y	Y	-	-	-	-
7A	6x40	2-4-2	0	Y	4	Y	Y	-	-	3	Y
8A	6x40	2-4-2	0	Y	8	Y	Y	-	-	3	-
8B	6x40	2-4-2	0	Y	8	Y	Y	-	-	10	Y
8C	6x15	3	+5	Y	8	Y	Y	-	-	15	Y

▽  
6 Phase Fully Actuated (NC 59 Closed Loop Signal System)

**NOTES**

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2002 and "Standard Specifications for Roads and Structures" dated January 2002.
2. Reposition all existing signal heads.
3. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values shall supersede these values.
4. During coordination, phase 1 or phase 5 may be lagged.
5. Set all detector units to presence mode.
6. Closed loop system data: Controller Asset #0610.
- ▽ 7. Omit phase 7 during phase 8 on.



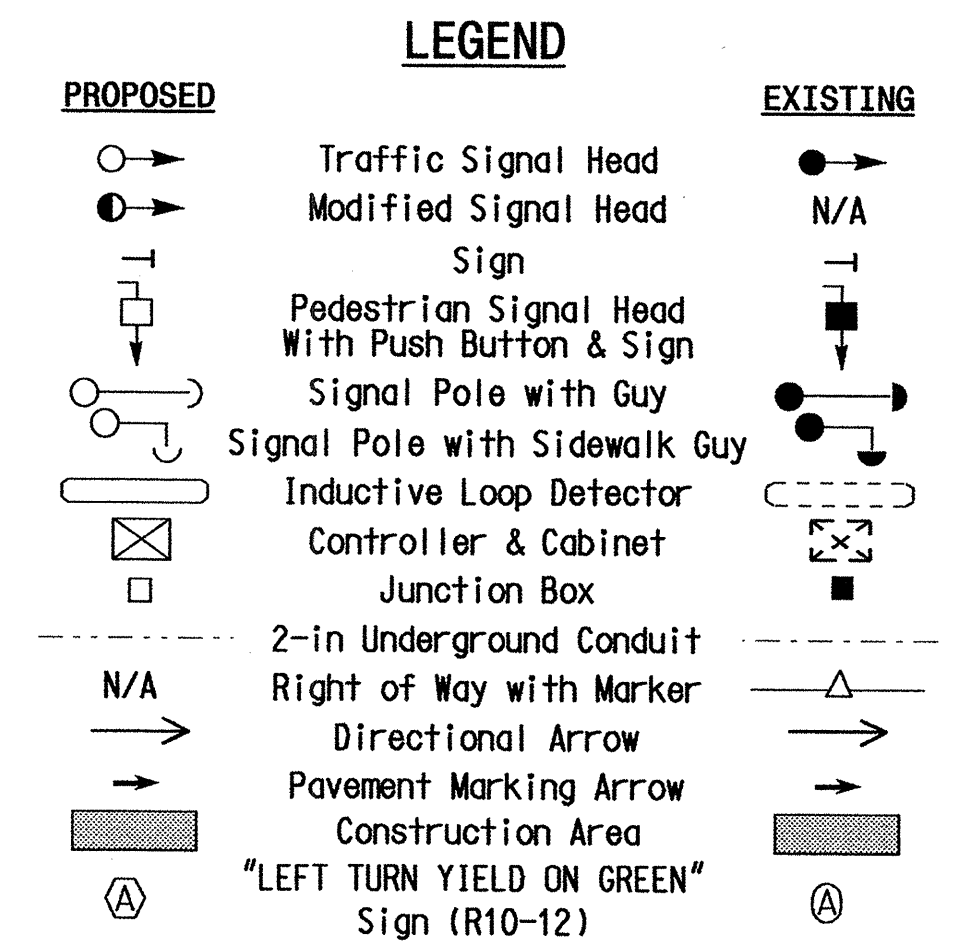
**2070L TIMING CHART**

FEATURE	PHASE							
	1	2	4	5	6	7	8	
Min Green 1 *	7	12	7	7	12	7	7	
Extension 1 *	2.0	6.0	2.0	1.0	6.0	2.0	2.0	
Max Green 1 *	20	90	20	20	90	20	20	
Yellow Clearance	3.3	4.3	3.8	3.1	4.8	3.0	3.9	
Red Clearance	4.3	1.6	3.5	4.1	1.4	2.9	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	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 QUANTITIES**

Pay Item	Feet
Signal Cable	910
Messenger Cable	0
Lead-in Cable	2400



**Signal Upgrade: Phase III Temporary Design 2**

122 N. McDowell St., Raleigh, NC 27603

**NC 59 (North Main Street) at Hope Mills Bypass**

Division 6 Cumberland County Hope Mills

PLAN DATE: May 2003 REVIEWED BY: L.A. Elliott

PREPARED BY: P.J. Porter REVIEWED BY: STF/JPG

REVISIONS: Revised eastbound left to protected/permissive (RMD/TST)

INIT. DATE: J.W. B. 10/22/03

SIGNATURE: J.W. B. DATE: 10/22/03

SCALE: 1"=50'

SEAL 24393

ENGINEER TIMOTHY J. WILLIAMS

SIG. INVENTORY NO. 06-0610T2