

**6 PHASE FULLY ACTUATED GASTONIA CITY SIGNAL SYSTEM**

**NOTES**

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2002 and "Standard Specifications for Roads and Structures" dated January 2002.
2. Omit Phase 1 during Phase 2 on.
3. Omit Phase 5 during Phase 6 on.
4. Omit Phase 7 during Phase 8 on.
5. Program controller to clear from phase 2+6 to phase 1 and/or 5 by progressing through phase 4+8 (see Electrical Details).
6. Set all detector units to presence mode.
7. Ensure flashing operation does not alter operation of blankout signs.
8. Maximum times shown in timing chart are for free run operation only. Coordinated signal system timing values shall supersede these values.
9. System data: Controller Asset: 0012
10. This location contains railroad preemption phasing. Do not program signal for late night flashing operation.

**PLAN QUANTITIES**

Pay Item	Meters
Signal Cable	600
Messenger Cable	0
Loop Lead-in Cable	1260

**2070 RAIL PREEMPTION**

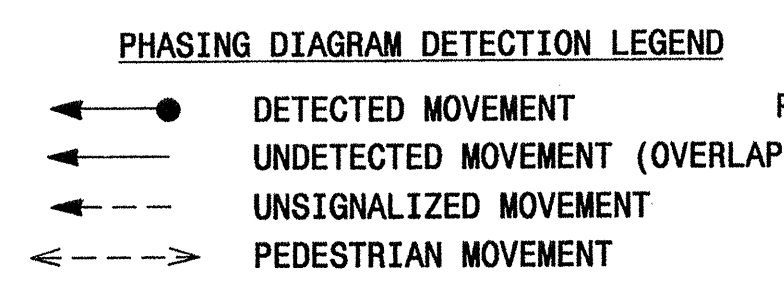
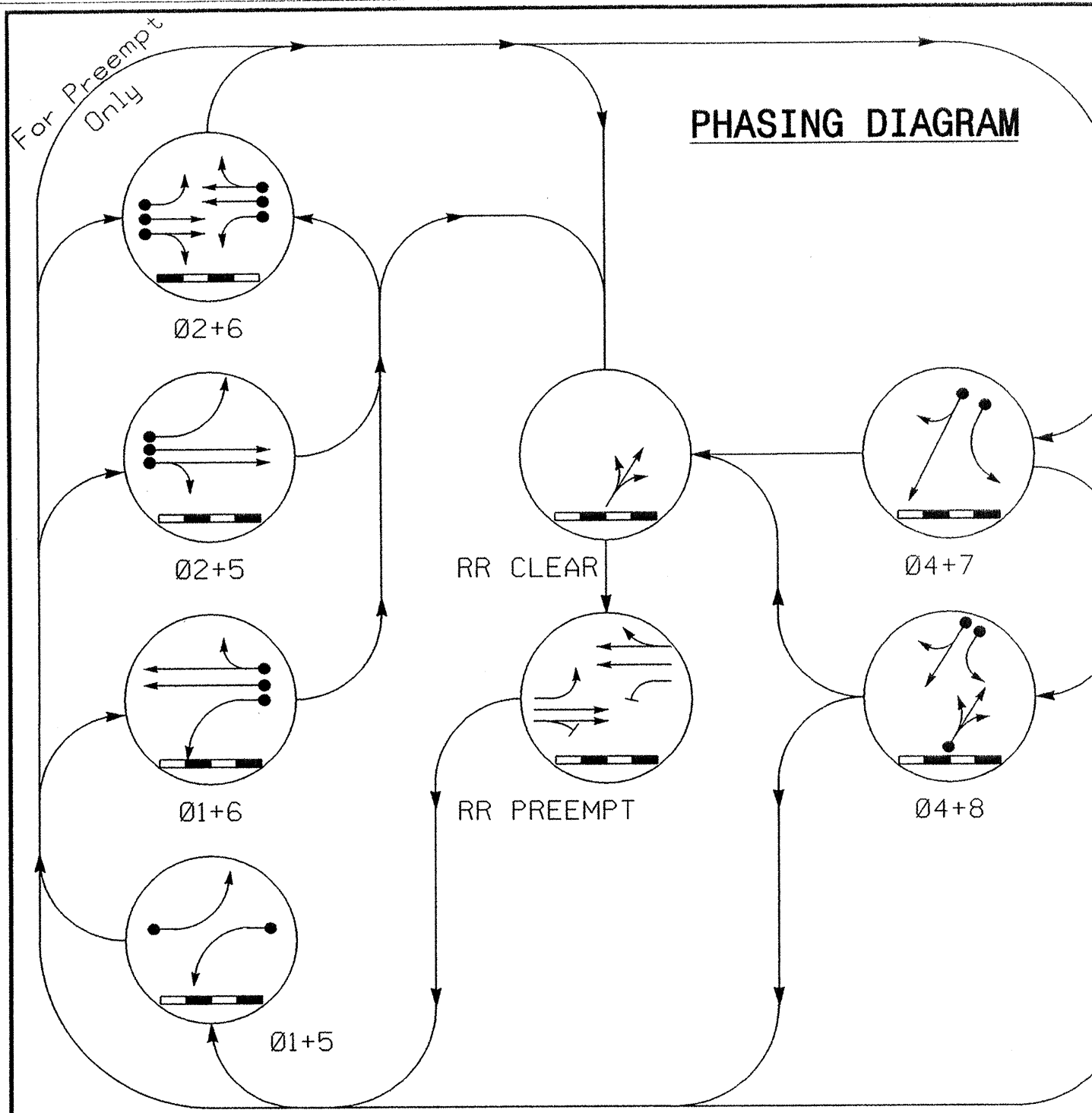
Interval 1 - Track Clearance Green	18
Interval 1 - Track Clearance Yellow	4.0
Interval 1 - Track Clearance Red	2.0
Interval 2 - Dwell Green	255
Interval 2 - Dwell Yellow	0.0*
Interval 2 - Dwell Red	0.0*
Interval 5 - Exit Green	0
Interval 5 - Exit Yellow	0.0*
Interval 5 - Exit Red	0.0*
Delay Time	0
Min Green Before Pre	1
Ped Clear Before Pre	0
Yellow Clear Before Pre	5.0
Red Clear Before Pre	3.0
Dwell Min Time	10
Ped Clear Through Yellow	N

\* Clearance time defaults to time used for phase during normal operation.

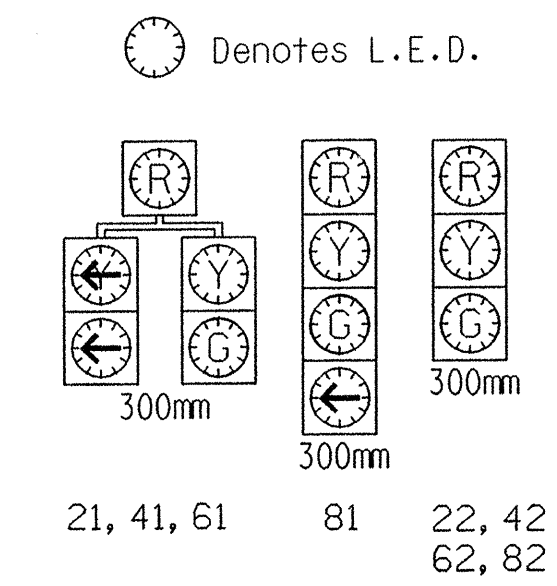
**TABLE OF OPERATION**

SIGNAL FACE	PHASE							
	01+5	02+5	02+6	04+7	04+8	01+6	01+5	04+8
21	R	R	G	R	R	G	R	Y
22	R	R	G	R	R	G	R	Y
41	R	R	R	R	G	R	R	R
42	R	R	R	R	G	R	R	R
61	R	R	R	R	G	R	R	Y
62	R	R	R	R	G	R	R	Y
81	R	R	R	R	R	G	R	R
82	R	R	R	R	R	G	R	R
SIGN B	OFF	OFF	OFF	OFF	OFF	ON	ON	*
SIGN C	OFF	OFF	OFF	OFF	OFF	ON	ON	*

\* - SEE NOTE 7



**SIGNAL FACE I.D.**



**2070L TIMING CHART**

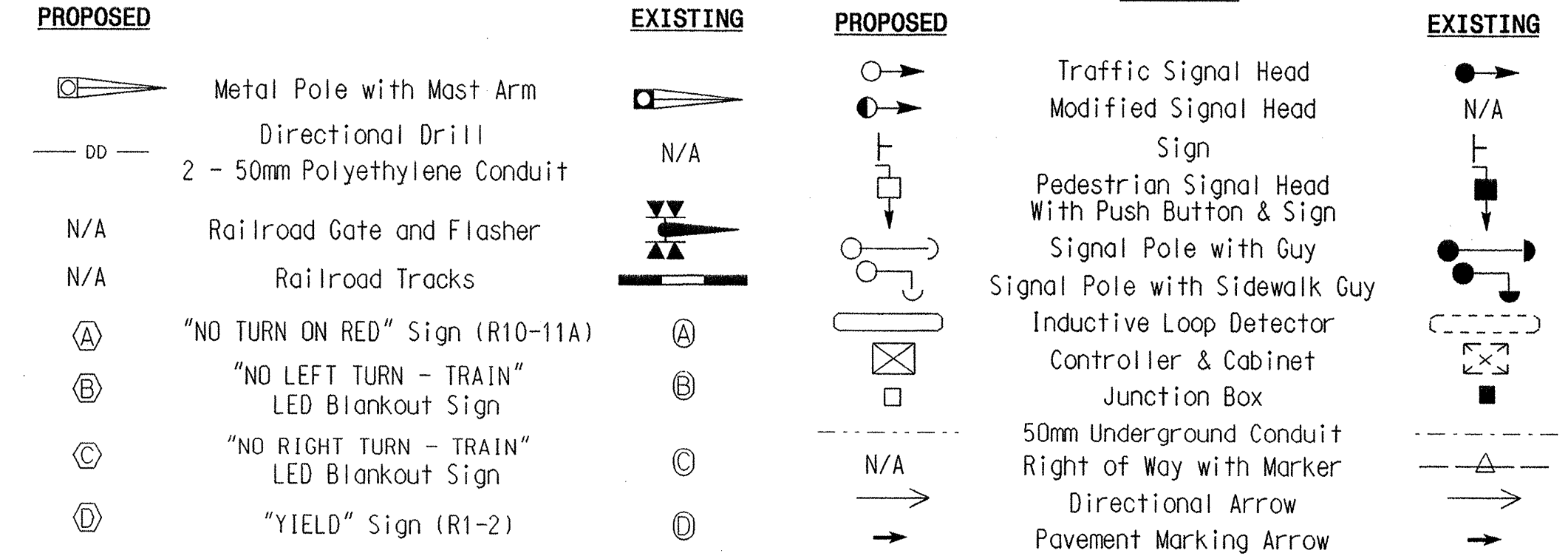
FEATURE	PHASE							
	1	2	4	5	6	7	8	
Min Green 1*	7	12	7	7	12	7	7	
Extension 1*	1.0	2.0	1.0	1.0	2.0	1.0	1.0	
Max Green 1*	15	45	20	15	45	15	20	
Yellow Clearance	5.0	5.0	4.0	5.0	5.0	4.0	4.0	
Red Clearance	3.0	3.0	2.0	3.0	3.0	1.0	2.0	
Walk 1*	-	-	-	-	-	-	-	
Don't Walk 1	-	-	-	-	-	-	-	
Seconds Per Actuation*	-	-	-	-	-	-	-	
Max Variable Initial*	-	-	-	-	-	-	-	
Time Before Reduction*	-	-	-	-	-	-	-	
Time To Reduce*	-	-	-	-	-	-	-	
Minimum Gap	-	-	-	-	-	-	-	
Recall Mode	-	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.

**2070L LOOP & DETECTOR INSTALLATION**

INDUCTIVE LOOPS				DETECTOR PROGRAMMING								
LOOP	SIZE (m)	TURNS	DISTANCE FROM STOPBAR (m)	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	SYSTEM LOOP	STRETCH TIME	DELAY TIME	NEW CARD
1A	1.8 X 18	2-4-2	+1	Y	1	Y	Y	-	-	-	15	Y
2A,2B	1.8 X 1.8	6	90	Y	2	Y	Y	-	-	1.8	-	Y
2C,2D	1.8 X 1.8	5	27	Y	2	Y	Y	-	-	-	-	Y
4A	1.8 X 18	2-4-2	+1	-	4	Y	Y	-	-	-	10	-
5A	1.8 X 18	2-4-2	+1	Y	5	Y	Y	-	-	-	15	-
6A,6B	1.8 X 1.8	4	90	Y	6	Y	Y	-	-	1.8	-	Y
6C,6D	1.8 X 1.8	4	27	Y	6	Y	Y	-	-	-	-	Y
7A	1.8 X 18	2-4-2	+1	-	7	Y	Y	-	-	-	15	-
8A	1.8 X 12	2-4-2	0	-	8	Y	Y	-	-	-	10	-

**LEGEND**



**SIGNAL UPGRADE - FINAL DESIGN**

Prepared in the Office of:  
**THE LPA GROUP**  
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 Raleigh, North Carolina 27609

**NC 274 (BESSEMER CITY ROAD) AT NC 275 (DALLAS-BESSEMER CITY ROAD) AND SR 1312 (OATES ROAD) GASTONIA**

DIVISION 12 GASTON COUNTY GASTONIA

PLAN DATE: OCT. 30, 2003 REVIEWED BY: R. DUBNICKA, P.E.  
 PREPARED BY: RGL REVIEWED BY:

SCALE: 1:500

REVISIONS: INIT. DATE

SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 027742

SIG. INVENTORY NO. 12-0012