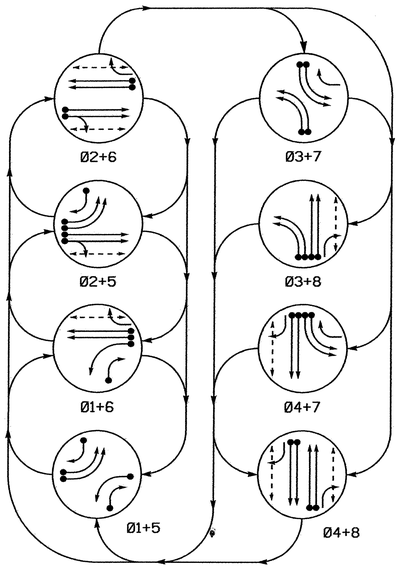
PROJECT REFERENCE NO.	SHEET NO.
U-0620	Sig. 26

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

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

TABLE OF OPERATION

SIGNAL FACE	PHASE							
	01+05	01+06	02+05	02+06	03+07	03+08	04+07	04+08	FLASH
11	←	←	R	R	R	R	R	R
21, 22	R	R	G	R	R	R	R	Y
31, 32	R	R	R	R	←	←	R	R	R
41	R	R	R	R	R	R	G	G	R
42	R/←	R	R/←	R	R	R	G	G	R
51, 52	←	R	←	R	R	R	R	R	R
61	R	G	R	G	R	R	R	R	Y
62	R	G	R	G	R/←	R	R/←	R	Y
71,72	R	R	R	R	←	R	←	R	R
81	R	R	R	R	R	G	R	G	R
82	R/←	R/←	R	R	R	G	R	G	R
P21, P22	DW	DW	W	W	DW	DW	DW	DW	DRK
P41, P42	DW	DW	DW	DW	DW	DW	W	W	DRK
P61, P62	DW	W	DW	W	DW	DW	DW	DW	DRK
P81, P82	DW	DW	DW	DW	DW	W	DW	W	DRK

SIGNAL FACE I.D.

Denotes L.E.D.

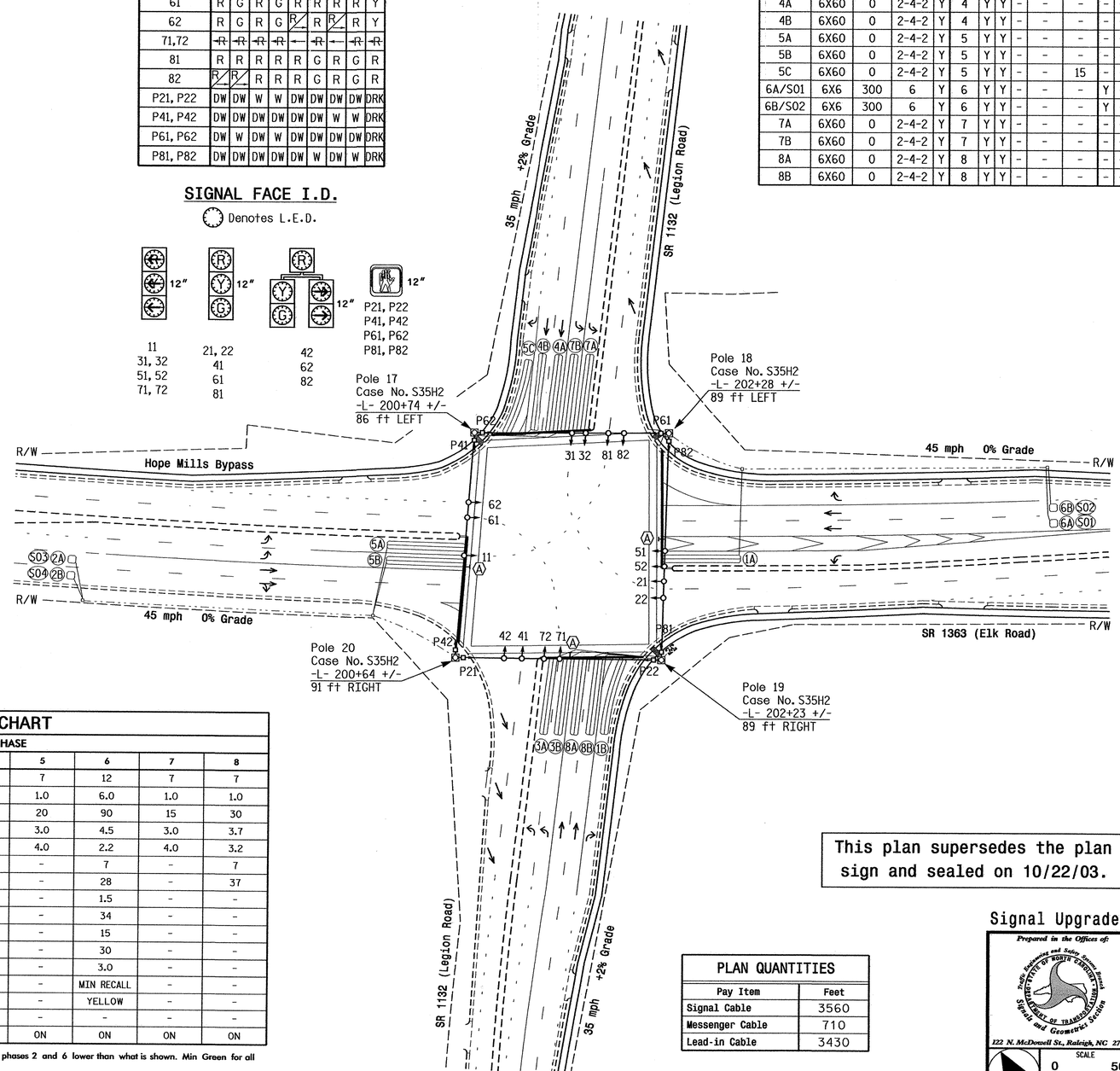
2070L LOOP & DETECTOR INSTALLATION

INDUCTIVE LOOPS					DETECTOR PROGRAMMING							
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
1A	6X60	0	2-4-2	Y	1	Y	Y	-	-	-	-	-
1B	6X60	0	2-4-2	Y	1	Y	Y	-	-	15	-	-
2A/S03	6X6	300	6	Y	2	Y	Y	-	-	-	Y	-
2B/S04	6X6	300	6	Y	2	Y	Y	-	-	-	Y	-
3A	6X60	0	2-4-2	Y	3	Y	Y	-	-	-	-	-
3B	6X60	0	2-4-2	Y	3	Y	Y	-	-	-	-	-
4A	6X60	0	2-4-2	Y	4	Y	Y	-	-	-	-	-
4B	6X60	0	2-4-2	Y	4	Y	Y	-	-	-	-	-
5A	6X60	0	2-4-2	Y	5	Y	Y	-	-	-	-	-
5B	6X60	0	2-4-2	Y	5	Y	Y	-	-	-	-	-
5C	6X60	0	2-4-2	Y	5	Y	Y	-	-	15	-	-
6A/S01	6X6	300	6	Y	6	Y	Y	-	-	-	Y	-
6B/S02	6X6	300	6	Y	6	Y	Y	-	-	-	Y	-
7A	6X60	0	2-4-2	Y	7	Y	Y	-	-	-	-	-
7B	6X60	0	2-4-2	Y	7	Y	Y	-	-	-	-	-
8A	6X60	0	2-4-2	Y	8	Y	Y	-	-	-	-	-
8B	6X60	0	2-4-2	Y	8	Y	Y	-	-	-	-	-

8 Phase
Fully Actuated
(Hope Mills Closed Loop System)

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2002 and "Standard Specifications for Roads and Structures" dated January 2002.
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. Phase 3 or phase 7 may be lagged.
5. Set all detector units to presence mode.
6. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
7. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
8. Closed loop system data:
   Master Asset # 10604
   Controller Asset # 0455



LEGEND

PROPOSED		EXISTING
○→	Traffic Signal Head	●→
◐→	Modified Signal Head	N/A
⊣	Sign	⊣
⊓↓	Pedestrian Signal Head With Push Button & Sign	■↓
○→ ○↓	Signal Pole with Guy	●→ ●↓
○↓	Signal Pole with Sidewalk Guy	●↓
▭	Inductive Loop Detector	▭
⊠	Controller & Cabinet	⊠
□	Junction Box	■
----------	2-in Underground Conduit	----------
N/A	Right of Way	----------
→	Directional Arrow	→
→	Pavement Marking Arrow	→
N/A	Wheelchair Ramp	♿
◎	Metal Strain Pole	◘
Ⓐ	"U-TURN YIELD TO RIGHT TURN" Sign (R10-16)	Ⓐ

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 *	1.0	6.0	1.0	1.0	1.0	6.0	1.0	1.0
Max Green 1 *	20	90	15	30	20	90	15	30
Yellow Clearance	3.0	4.5	3.0	3.7	3.0	4.5	3.0	3.7
Red Clearance	3.6	2.2	3.8	3.2	4.0	2.2	4.0	3.2
Walk 1 *	-	7	-	7	-	7	-	7
Don't Walk 1	-	31	-	36	-	28	-	37
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	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.

This plan supersedes the plan sign and sealed on 10/22/03.

PLAN QUANTITIES

Pay Item	Feet
Signal Cable	3560
Messenger Cable	710
Lead-in Cable	3430

Signal Upgrade- Final Design

Prepared in the Offices of:
Traffic Engineering and Safety Systems Branch
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Signals and Geometrics Section
122 N. McDowell St., Raleigh, NC 27603

Hope Mills Bypass/ SR 1363 (Elk Road) at SR 1132 (Legion Road)

Division 6 Cumberland County Hope Mills

PLAN DATE:	July 2006	REVIEWED BY:	
PREPARED BY:	R M Duffy	REVIEWED BY:	

REVISIONS	INIT.	DATE

SCALE 0 50 1"=50'

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 24393 ENGINEER TIMOTHY JAMES WILLIAMS
SIGNATURE 8/10/06. DATE

SIG. INVENTORY NO. 06-0455

16-AUG-2006 08:30
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