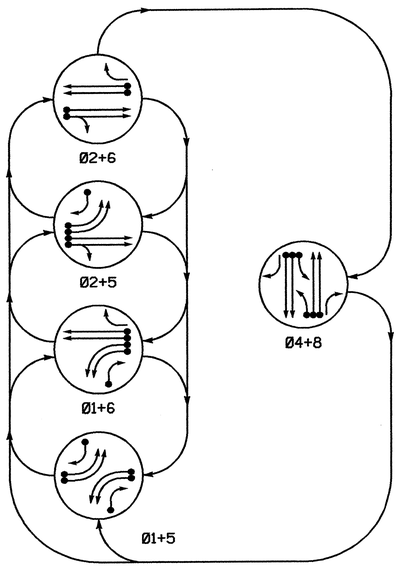
PROJECT REFERENCE NO.	SHEET NO.
U-0620	SIG.20

5 Phase
Fully Actuated
(Hope Mills Bypass Closed Loop System)

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND

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

TABLE OF OPERATION

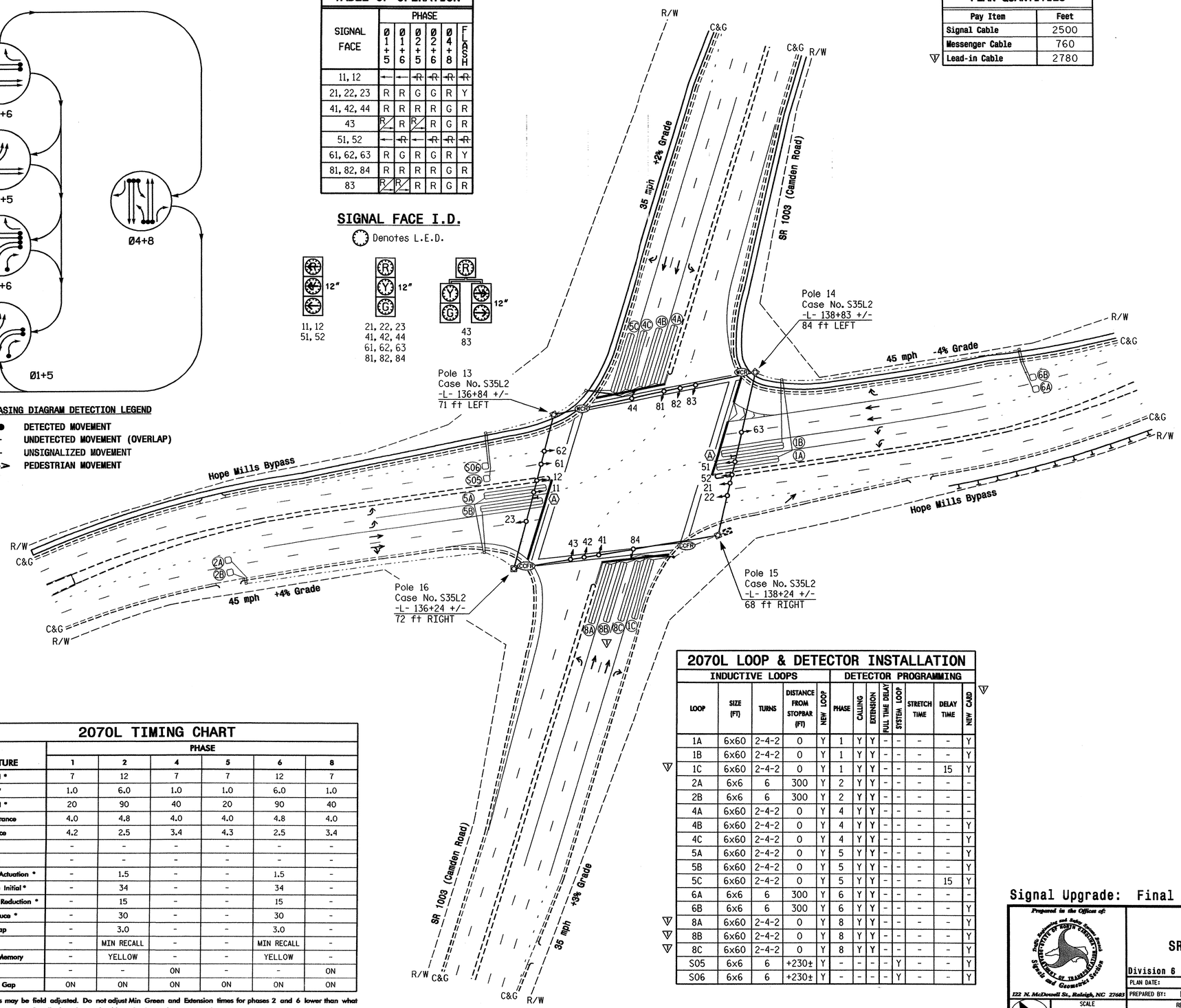
SIGNAL FACE	PHASE 01+5	01+6	02+5	02+6	04+8	FLASH
11, 12	←	←	~~R~~	~~R~~	~~R~~	~~R~~
21, 22, 23	R	R	G	G	R	Y
41, 42, 44	R	R	R	R	G	R
43	R/←	R	R/←	R	G	R
51, 52	←	~~R~~	←	~~R~~	~~R~~	~~R~~
61, 62, 63	R	G	R	G	R	Y
81, 82, 84	R	R	R	R	G	R
83	R/←	R/←	R	R	G	R

SIGNAL FACE I.D.

Denotes L.E.D.

PLAN QUANTITIES

Pay Item	Feet
Signal Cable	2500
Messenger Cable	760
▽ Lead-in Cable	2780



NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2002 and "Standard Specifications for Roads and Structures" dated January 2002.
2. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values shall supersede these values.
3. During coordination, phase 1 or phase 5 may be lagged.
4. Set all detector units to presence mode.
5. Closed loop system data: Controller Asset #1255.

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 with Marker	
	Directional Arrow	
	Pavement Marking Arrow	
	Metal Strain Pole	
N/A	Wheelchair Ramp	WCR
N/A	Curb Cut for Future Ramp	CCFR
N/A	Guardrail	
Ⓐ	U-Turn "MUST YIELD" Sign (R3-27)	Ⓐ

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 *	20	90	40	20	90	40
Yellow Clearance	4.0	4.8	4.0	4.0	4.8	4.0
Red Clearance	4.2	2.5	3.4	4.3	2.5	3.4
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.

2070L LOOP & DETECTOR INSTALLATION

INDUCTIVE LOOPS					DETECTOR PROGRAMMING							
LOOP	SIZE (FT)	TURNS	DISTANCE FROM STOPBAR (FT)	NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	SYSTEM LOOP	STRETCH TIME	DELAY TIME	NEW CARD
1A	6x60	2-4-2	0	Y	1	Y	Y	-	-	-	-	Y
1B	6x60	2-4-2	0	Y	1	Y	Y	-	-	-	-	Y
▽ 1C	6x60	2-4-2	0	Y	1	Y	Y	-	-	-	15	Y
2A	6x6	6	300	Y	2	Y	Y	-	-	-	-	-
2B	6x6	6	300	Y	2	Y	Y	-	-	-	-	-
4A	6x60	2-4-2	0	Y	4	Y	Y	-	-	-	-	-
4B	6x60	2-4-2	0	Y	4	Y	Y	-	-	-	-	Y
4C	6x60	2-4-2	0	Y	4	Y	Y	-	-	-	-	Y
5A	6x60	2-4-2	0	Y	5	Y	Y	-	-	-	-	Y
5B	6x60	2-4-2	0	Y	5	Y	Y	-	-	-	-	Y
5C	6x60	2-4-2	0	Y	5	Y	Y	-	-	-	15	Y
6A	6x6	6	300	Y	6	Y	Y	-	-	-	-	-
6B	6x6	6	300	Y	6	Y	Y	-	-	-	-	Y
▽ 8A	6x60	2-4-2	0	Y	8	Y	Y	-	-	-	-	Y
▽ 8B	6x60	2-4-2	0	Y	8	Y	Y	-	-	-	-	Y
▽ 8C	6x60	2-4-2	0	Y	8	Y	Y	-	-	-	-	Y
S05	6x6	6	+230±	Y	-	-	-	-	Y	-	-	Y
S06	6x6	6	+230±	Y	-	-	-	-	Y	-	-	Y

Signal Upgrade: Final Design

Prepared in the Offices of:
Traffic Engineering and Safety Systems Branch
Signal and Geometrics Section
Division of Highways
Department of Transportation
1722 N. McDowell St., Raleigh, NC 27603

SCALE 0 50 1"=50'

Hope Mills Bypass at SR 1003 (Camden Road)

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	INIT.	DATE
▽ Revised loops 8A, 8B, 8C, and 1C to new, and updated loop chart accordingly. (rmd)		

REVISION ▽ SEAL

NORTH CAROLINA PROFESSIONAL SEAL 29026 ENGINEER RICHARD E. MULLINAX
29 August 03

SIGNATURE DATE

SEAL

Not a certified document as to the Original Document but Only as to the Revisions - This document originally Issued and sealed by Timothy J.Williams,24393 on 10/03 This document is only certified as to the revisions.

SIG. INVENTORY NO. 06-1255

29-AUG-2005 15:10
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