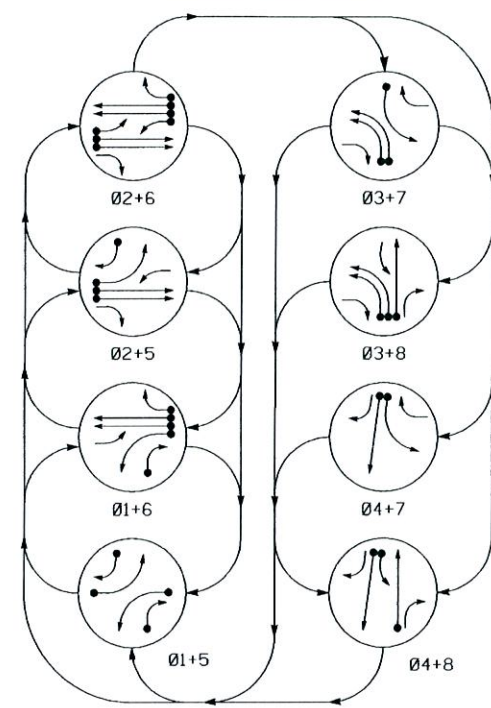


PHASING DIAGRAM



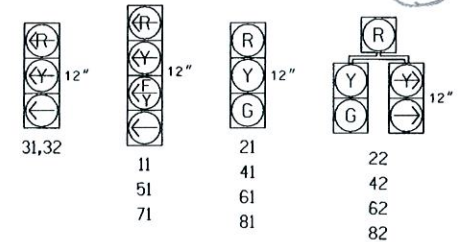
PHASING DIAGRAM DETECTION LEGEND
● DETECTED MOVEMENT
— UNDETECTED MOVEMENT (OVERLAP)
- - - UNSIGNALIZED MOVEMENT
- - - PEDESTRIAN MOVEMENT

SIGNAL FACE	PHASE							
	Ø 1 + 5	Ø 1 + 6	Ø 2 + 5	Ø 2 + 6	Ø 3 + 7	Ø 3 + 8	Ø 4 + 7	Ø 4 + 8
11	←	←	←	←	←	←	←	←
21	←	←	←	←	←	←	←	←
22	←	←	←	←	←	←	←	←
31,32	←	←	←	←	←	←	←	←
41	←	←	←	←	←	←	←	←
42	←	←	←	←	←	←	←	←
51	←	←	←	←	←	←	←	←
61	←	←	←	←	←	←	←	←
62	←	←	←	←	←	←	←	←
71	←	←	←	←	←	←	←	←
81	←	←	←	←	←	←	←	←
82	←	←	←	←	←	←	←	←

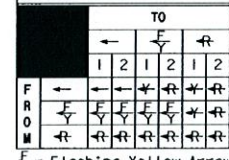
Flashing Yellow Arrow

SIGNAL FACE I.D.

All Heads L.E.D.



STANDARD SIGNAL FACE CLEARANCES FOR FLASHING LEFT TURN SIGNAL



2070L LOOP & DETECTOR INSTALLATION

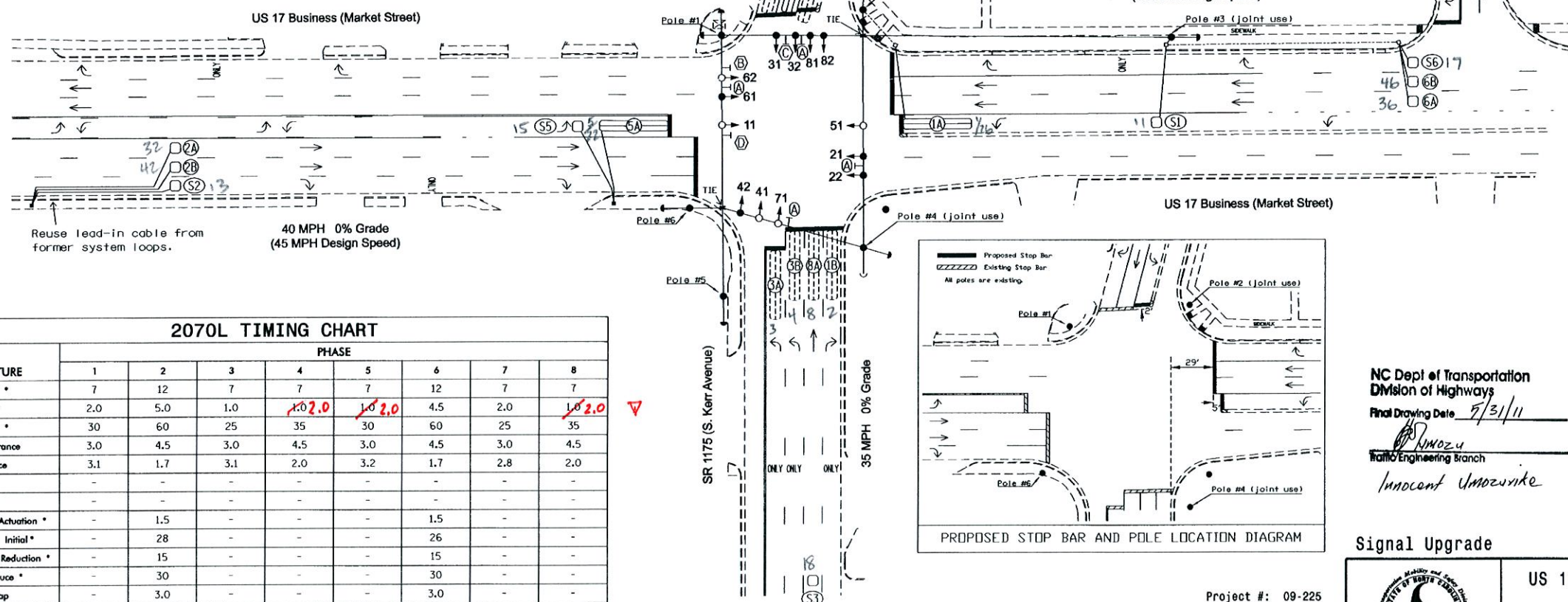
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	DETECTOR PROGRAMMING							
				NEW LOOP	PHASE	CALLING	EXTENSION	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD
1A	6x40	0	2-4-2	Y	1	Y	Y	19.5	3	-	-
1B	6x40	0	Existing	-	1	Y	Y	-	15	-	-
2A	6x6	300	6	Y	2	Y	Y	-	-	-	-
2B	6x6	300	6	Y	2	Y	Y	-	-	-	-
3A	6x40	0	Existing	-	3	Y	Y	-	3	-	-
3B	6x40	0	Existing	-	3	Y	Y	-	-	-	-
4A*	6x40	0	2-4-2	Y	4	Y	Y	19.5	3	-	-
5A	6x40	0	2-4-2	Y	5	Y	Y	-	-	-	-
5B	6x40	0	Existing	-	5	Y	Y	-	15	-	-
6A	6x6	300	5	Y	6	Y	Y	-	-	-	-
6B	6x6	300	5	Y	6	Y	Y	-	-	-	-
7A	6x40	+5	Existing	-	7	Y	Y	-	19.5	-	-
8A	6x40	0	Existing	-	8	Y	Y	-	-	-	-
S1	6x6	150	4	Y	-	-	-	-	-	Y	-
S2	6x6	300	6	Y	-	-	-	-	-	Y	-
S3*	6x6	200	5	Y	-	-	-	-	-	Y	-
S4*	6x6	200	3	Y	-	-	-	-	-	Y	-
S5	6x6	50	4	Y	-	-	-	-	-	Y	-
S6	6x6	300	5	Y	-	-	-	-	-	Y	-

* See note #8.

8 Phase Fully Actuated (Wilmington Signal System)

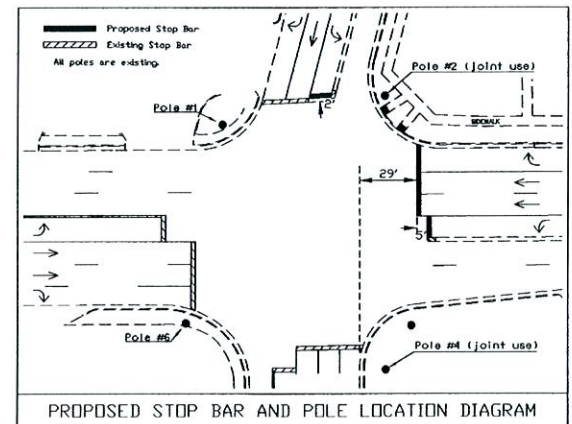
NOTES

- Refer to "Roadway Standard Drawings NCDOT" dated July 2006, "Standard Specifications for Roads and Structures" dated July 2006, and all applicable sections of the latest version of the generic Project SpecialProvisions. The PSP can be accessed at the following website: <http://www.ncdot.org/doh/preconstruct/traffic/its/>
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Disable Backup Protect for phase 2 and the Dynamic/Backup Control Function for phase 4 (see Electrical Details).
- Phase 1 or phase 5 may be lagged.
- Phase 3 or phase 7 may be lagged.
- Set all detector units to presence mode.
- 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.
- Loops 4A, S3, and S4 are to be installed by others.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
- Signal system data: Controller asset #: 0049.



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	5.0	1.0	2.0	2.0	4.5	2.0	2.0
Max Green 1 *	30	60	25	35	30	60	25	35
Yellow Clearance	3.0	4.5	3.0	4.5	3.0	4.5	3.0	4.5
Red Clearance	3.1	1.7	3.1	2.0	3.2	1.7	2.8	2.0
Walk 1 *	-	-	-	-	-	-	-	-
Don't Walk 1	-	-	-	-	-	-	-	-
Seconds Per Actuation *	-	1.5	-	-	-	1.5	-	-
Max Variable Initial *	-	28	-	-	-	26	-	-
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
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.



LEGEND	
PROPOSED	EXISTING
○ Traffic Signal Head	● Traffic Signal Head
○ Modified Signal Head	○ Modified Signal Head
□ Pedestrian Signal Head With Push Button & Sign	□ Pedestrian Signal Head With Push Button & Sign
□ Signal Pole with Guy	□ Signal Pole with Guy
□ Signal Pole with Sidewalk Guy	□ Signal Pole with Sidewalk Guy
□ Inductive Loop Detector	□ Inductive Loop Detector
□ Controller & Cabinet	□ Controller & Cabinet
□ Junction Box	□ Junction Box
□ 2-in Underground Conduit	□ 2-in Underground Conduit
N/A Right of Way	N/A Right of Way
N/A Directional Arrow	N/A Directional Arrow
N/A Street Name Sign	N/A Street Name Sign
Ⓟ Right Arrow "ONLY" Sign (R3-5R)	Ⓟ Right Arrow "ONLY" Sign (R3-5R)
Ⓢ No U-Turn Sign (R3-4)	Ⓢ No U-Turn Sign (R3-4)
Ⓣ "U-TURN YIELD TO RIGHT TURN" Sign (R10-16)	Ⓣ "U-TURN YIELD TO RIGHT TURN" Sign (R10-16)

NC Dept of Transportation
Division of Highways
Final Drawing Date 5/31/11
Innocent Umazurike
Traffic Engineering Branch

Signal Upgrade

Project #: 09-225
DAVENPORT
TRANSPORTATION CONSULTING
HOME OFFICE:
305 WEST FOURTH STREET, SUITE 2A
WINSTON-SALEM, NC 27101
336.744.1636 www.davenportnc.com
NOBELS FROM LICENSE NO. C-2522

US 17 Bus. (Market Street) at SR 1175 (Kerr Avenue)
Division 3 New Hanover County Wilmington
PLAN DATE: May 2011
PREPARED BY: R. Winshaw
REVIEWED BY:
REVISIONS
1. LOOP DELAYS, EXTENSION
SCALE 0 40
1"=40'
SEAL
NORTH CAROLINA PROFESSIONAL ENGINEER
SEAL 032117
ROYAL HINSHAW
J. Royal Hinshaw 5/19/11
SIG. INVENTORY NO. 03-0049