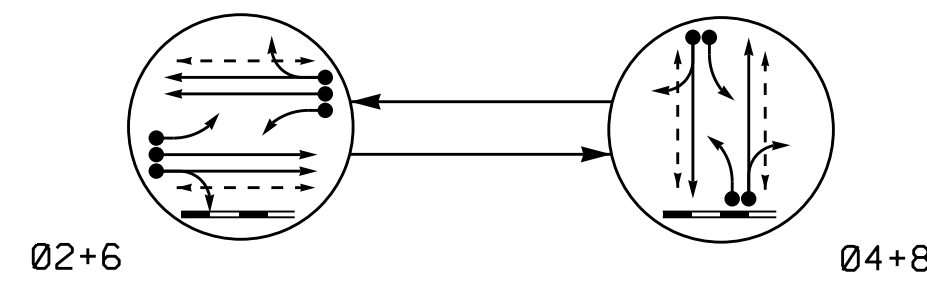


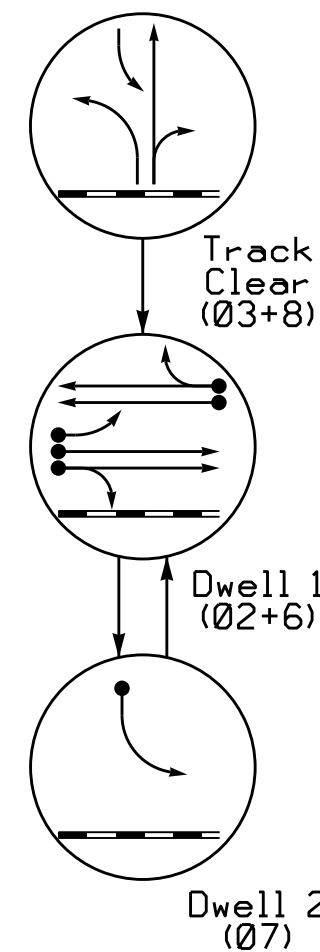
2 Phase Fully Actuated With Railroad Preemption (Greensboro Signal System)

PHASING DIAGRAM



PHASING DIAGRAM DETECTION LEGEND
 ← ● → DETECTED MOVEMENT
 ← ○ → UNDETECTED MOVEMENT (OVERLAP)
 - - - UNSIGNALIZED MOVEMENT
 ← - - - → PEDESTRIAN MOVEMENT

RAIL PREEMPT PHASES (High Priority)



SIGNAL FACE	PHASE							
	02+6	04+8	03+8	07	08	09	10	11
21	Y	R	R	G	G	Y		
22, 23	G	R	R	G	G	Y		
31	R	Y	R	R	R	R		
41, 42	R	G	R	R	R	R		
61	Y	R	R	R	R	Y		
62, 63	G	R	R	G	G	Y		
71	R	Y	Y	R	R	R		
81, 82	R	G	G	R	R	R		
P21, P22	W	DW	DW	DW	DW	DRK		
P41, P42	DW	W	DW	DW	DW	DRK		
P61, P62	W	DW	DW	DW	DW	DRK		
P81, P82	DW	W	DW	DW	DW	DRK		

LOOP & DETECTOR UNIT INSTALLATION CHART												
TRAFFICWARE APOGEE SOFTWARE 2070 CONTROLLER												
INDUCTIVE LOOPS						DETECTOR PROGRAMMING						
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PHASE	SWITCH (PHASE)	DELAY TIME	STRETCH TIME	CALLING	EXTENSION	ADDED INIT.	LOOP SYSTEM NEW CARD
2A	6X6	70	4	X	2	-	-	-	X	X	X	-
2B	6X6	70	4	X	2	-	-	-	X	X	X	-
2C	6X40	0	2-4-2	X	2	-	-	-	X	X	-	-
4A	6X40	0	2-4-2	X	4/7	-	3	-	X	X	-	-
4B	6X40	0	2-4-2	X	4	-	10	-	X	X	-	-
6A	6X6	70	4	X	6	-	-	-	X	X	X	-
6B	6X6	70	4	X	6	-	-	-	X	X	X	-
6C	6X40	0	2-4-2	X	6	-	-	-	X	X	-	-
8A	6X40	0	2-4-2	X	8	-	-	-	X	X	-	-
8B	6X40	0	2-4-2	X	8	-	10	-	X	X	-	-

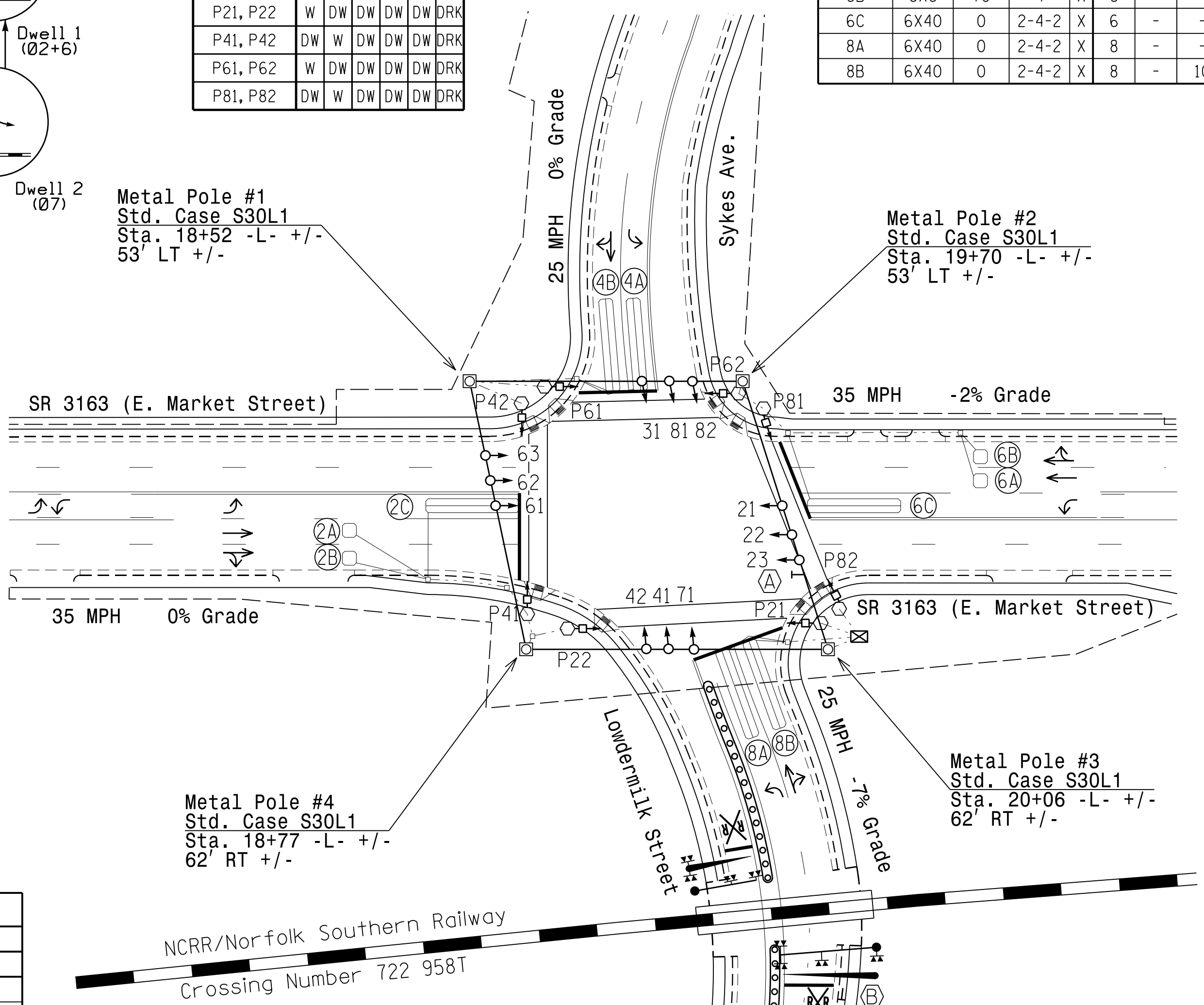
Function	PRE 1
Delay Before Preempt	0
Minimum Duration	10
Min Green Before Preempt	1
Min Walk Before Preempt	1
Ped Clear Before Preempt	5
Track Clearance Green	28
Minimum Dwell	0
Exit Ped Clear	0
Exit Yellow Change	25.5*
Exit Red Clear	25.5*
Enter Yellow Change	4.9
Enter Red Clear	2.9
Track Yellow Change	3.6
Track Red Clear	2.9
All-Red B4 Dwell	OFF
Lock Input	ON
Override Higher # Preempt	ON
Exit Preempt To	4+8

* Time defaults to time used for phase during normal operation.

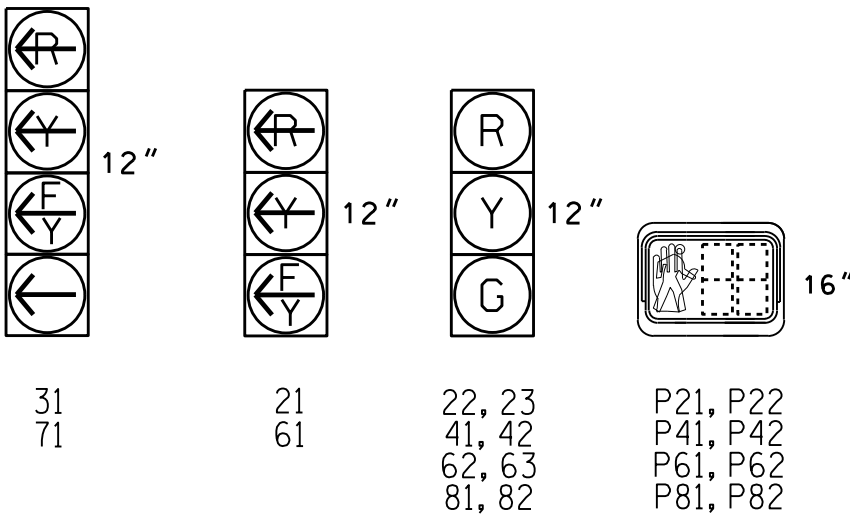
This signal was designed for advanced preemption.

FEATURE	PHASE				
	2	4	6	7	8
Min Green *	10	7	10	7	7
Gap, Extension *	3.0	2.0	3.0	2.0	2.0
Maximum Green 1 *	45	15	45	15	15
Maximum Green 2 *	60	30	60	20	30
Yellow Clear	4.0	3.6	4.0	3.0	3.6
Red Clear	2.4	2.9	2.4	3.1	2.9
Walk *	7	7	7	-	7
Pedestrian Clear	21	17	16	-	17
GreenPed Delay	3	3	3	-	3
Added Initial *	-	-	-	-	-
Maximum Initial *	-	-	-	-	-
Time Before Reduction *	-	-	-	-	-
Time To Reduce *	-	-	-	-	-
Minimum Gap	-	-	-	-	-
Recall Mode	MIN RECALL	-	MIN RECALL	-	-
Lock Calls	YES	-	YES	-	-
Dual Entry	-	ON	-	-	ON
Simultaneous Gap	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.



SIGNAL FACE I.D.
All Heads L.E.D.



- NOTES**
- Refer to "Roadway Standard Drawings NCDOT" dated January 2024 and "Standard Specifications for Roads and Structures" dated January 2024.
 - This location contains railroad preemption phasing. Do not program signal for late night flashing operation.
 - Set all detector units to presence mode.
 - Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
 - Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
 - Program pedestrian heads to countdown the flashing "Don't Walk" time only.
 - Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.

PROPOSED		EXISTING	
○	Traffic Signal Head	●	N/A
○	Modified Signal Head	○	N/A
○	Signal	○	N/A
○	Pedestrian Signal Head With Push Button & Sign	○	N/A
○	Signal Pole with Guy	○	N/A
○	Signal Pole with Sidewalk Guy	○	N/A
□	Inductive Loop Detector	□	N/A
□	Controller & Cabinet	□	N/A
□	Junction Box	□	N/A
□	2-in Underground Conduit	□	N/A
N/A	Right of Way	- - -	N/A
→	Directional Arrow	→	N/A
○	Type II Signal Pedestal	○	N/A
N/A	Railroad Cantilever	—	N/A
N/A	Railroad Gate and Flasher	—	N/A
N/A	Railroad Tracks	—	N/A
⊕	"NO RIGHT TURN - TRAIN" L.E.D. Blankout Sign	⊕	N/A
⊕	"DO NOT STOP ON TRACKS" Sign (R8-8)	⊕	N/A

New Installation

Prepared in the Offices of:
 Transportation Mobility and Safety Solutions
 STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 Signal Design Section

SR 3163 (E. Market Street) at Sykes Ave. & Lowermilk Street

Division 7 Guilford County Greensboro

PLAN DATE: November 2023 REVIEWED BY:
 PREPARED BY: I. O. Umzurike REVIEWED BY:

REVISIONS: _____ INIT. DATE

SCALE: 1" = 40'

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL: NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 026486 ENGINEER ROBERT J. ZIEGLER

DATE: 01/17/2024

SIGNATURE: _____ DATE: _____

SIG. INVENTORY NO. 07-0424

17-JAN-2024 11:02 \\p01\ref\p01\m\groups-TEC\CH1\TSS\JL\TSS\SIG\17-4807B\024_Signals\Central_Reg\04117_7\4807B\024_Signals\04117.dgn