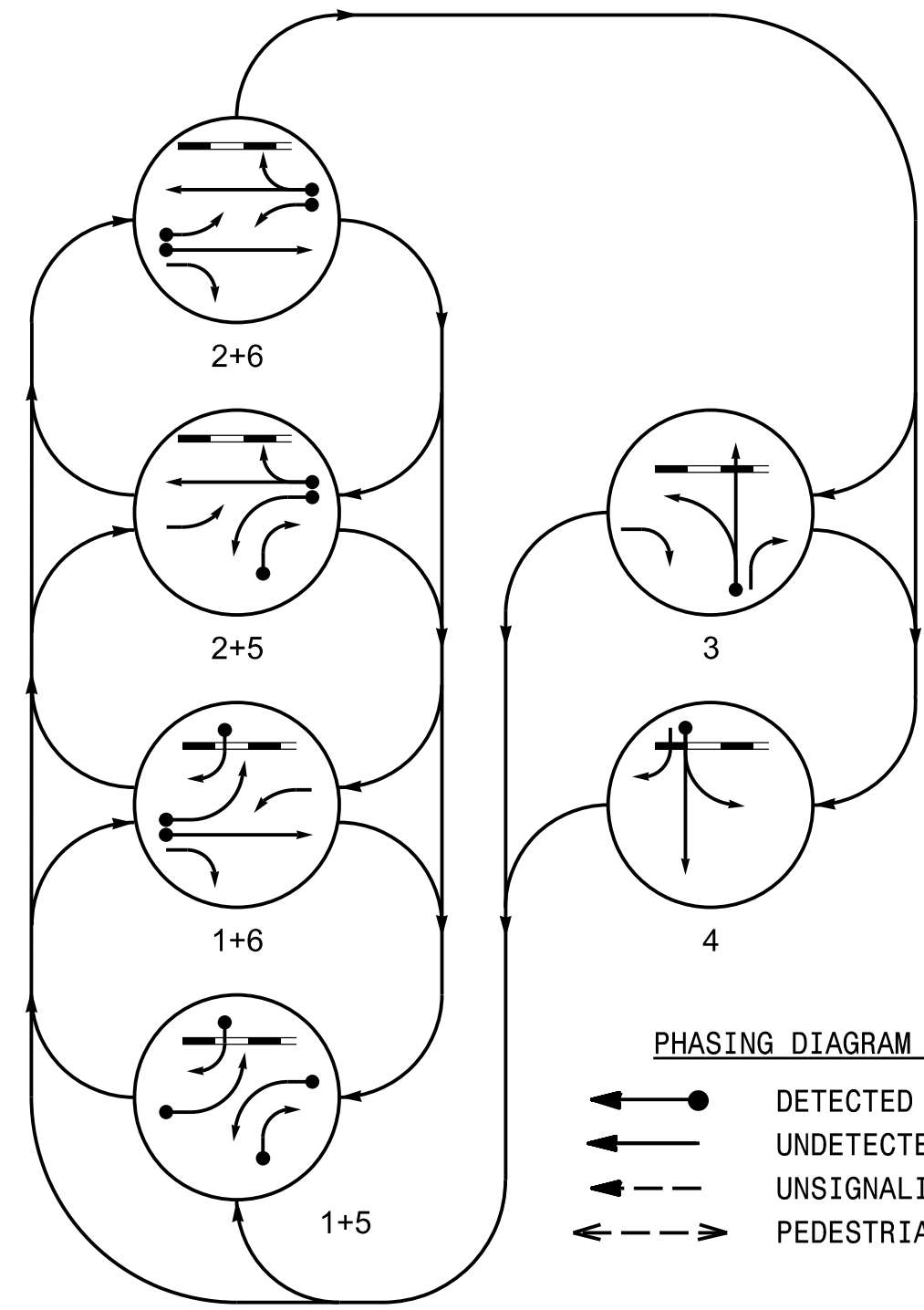
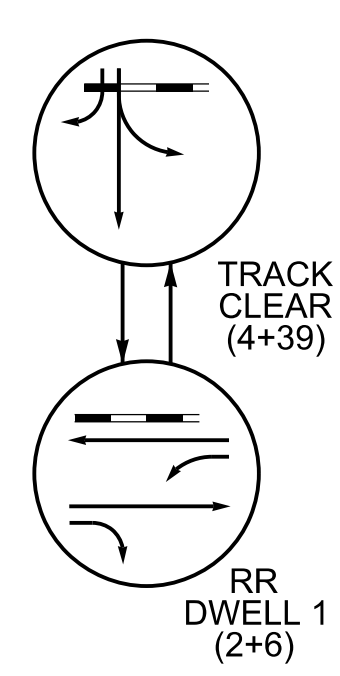


PHASING DIAGRAM



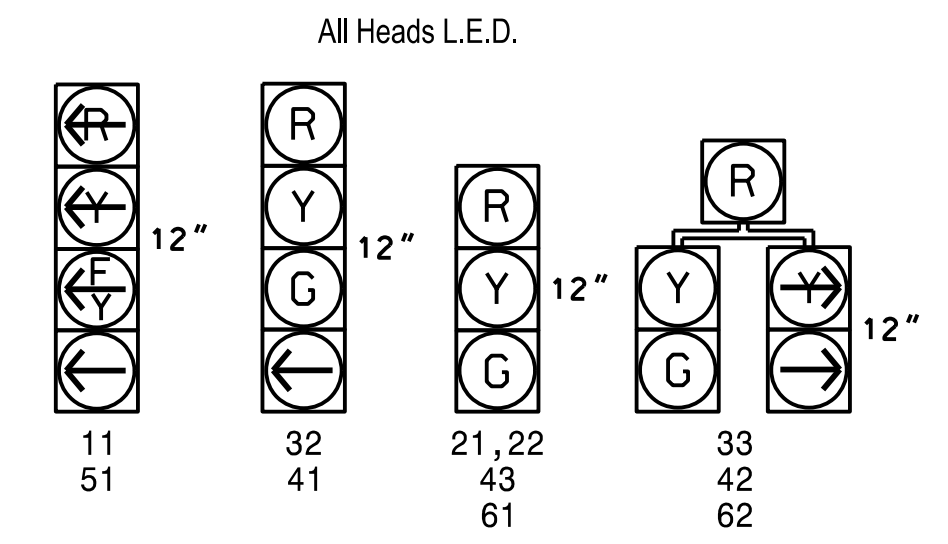
RAIL PREEMPT PHASES (High Priority)



SIGNAL FACE	PHASE											
	1+5	1+6	2+5	2+6	3	4	39	40	41	42	43	
11												
21,22	R	R	G	G	R	R	R	G	R			
32												
33	R	R	G	G	R	R	R	G	R			
41	R	R	R	R	R	G	G	R	R			
42	R	R	R	R	R	G	G	R	R			
43	R	R	R	R	R	G	G	R	R			
51												
61	R	G	R	G	R	R	R	G	R			
62	R	G	R	G	R	R	R	G	R			
Sign C	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	*			

*See Note 7

SIGNAL FACE I.D.



MAXTIME DETECTOR INSTALLATION CHART												
DETECTOR				PROGRAMMING								
LOOP/ZONE	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	CALL PHASE	DELAY TIME	EXTEND TIME	EXTEND	ADDED INITIAL	CALL	DELAY DURING GREEN	NEW CARD
1A*	6X60	0	*	*	1	15.0	-	X	-	X	-	*
1B	6X40	# +5	EXIST	-	6	3.0	-	X	-	X	X	*
1C*	6X40	0	*	*	1	15.0	2.0	X	-	X	-	*
2A*	6X6	300	*	*	2	-	-	X	X	X	-	*
3A*	6X40	0	*	*	3	3.0	-	X	-	X	-	*
4A	6X40	# +5	EXIST	-	4	-	2.0	X	-	X	-	*
4B*	6X40	0	*	*	4	3.0	-	X	-	X	-	*
5A*	6X60	0	*	*	5	15.0	-	X	-	X	-	*
5B*	6X40	0	*	*	2	3.0	-	X	-	X	X	*
6A*	6X6	300	*	*	5	-	-	X	X	X	-	*

Located at Stopbar at RR Gate
* Video Detection Zone

6 Phase Fully Actuated W/ Railroad Preemption (Isolated)

NOTES

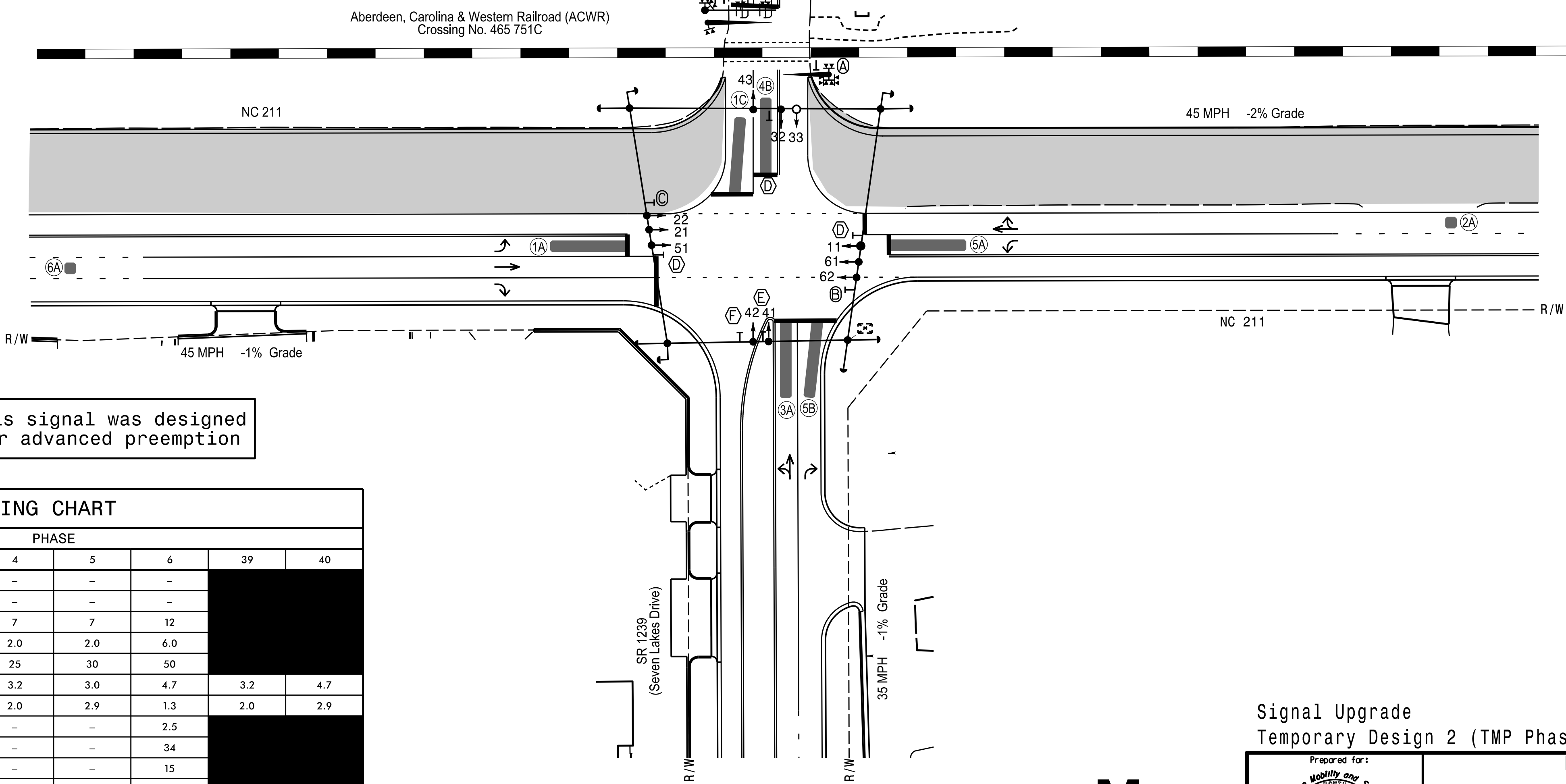
- Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
- This location contains railroad preemption phasing. Do not program signal for late night flashing operation.
- Phase 1 and/or phase 5 may be lagged.
- The order of phase 3 and phase 4 may be reversed.
- Reposition existing signal heads numbered 11,21,22,32,51,61, and 62.
- Set all detector units to presence mode.
- Ensure flashing operation does not alter operation of blankout signs.
- Program phase 40 to run concurrently with all phases during normal operation. Phase 39 must be incompatible with Phase 40 and included as a track clear phase.
- This intersection uses video detection. Install detectors according to the manufacturer's instructions to achieve the desired detection.

MAXTIME PREEMPTION CHART	
FUNCTION	PRE 1
Type	RAIL ROAD
Exit Phases	4
Delay	0
Max Presence	0
Enter Min Green	1
Enter Walk	0
Enter Ped Clear	0
Enter Yellow Change	4.7*
Enter Red Clear	2.9*
Track Green	22
Track Yellow Change	3.2
Track Red Clear	2.0
Dwell Green	0
Exit Min Green	255*
Exit Yellow Change	25.5*
Exit Red Clear	25.5*
Call Extend Time	1.0
Exit Type	EXIT PHASES
Ped Clear Through Yellow	-
Require All Red Entry	-

This signal was designed for advanced preemption

MAXTIME TIMING CHART							
FEATURE	PHASE						
	1	2	3	4	5	6	39
Walk *	-	-	-	-	-	-	
Ped Clear *	-	-	-	-	-	-	
Min Green *	7	12	7	7	7	12	
Passage *	2.0	6.0	2.0	2.0	2.0	6.0	
Max 1 *	30	50	30	25	30	50	
Yellow Change	3.0	4.7	3.9	3.2	3.0	4.7	3.2
Red Clear	2.9	1.3	1.2	2.0	2.9	1.3	2.0
Added Initial *	-	2.5	-	-	-	2.5	
Maximum Initial *	-	34	-	-	-	34	
Time Before Reduction *	-	15	-	-	-	15	
Time To Reduce *	-	30	-	-	-	30	
Minimum Gap	-	3.0	-	-	-	3.0	
Advance Walk	-	-	-	-	-	-	
Non Lock Detector	X	-	X	X	X	-	
Vehicle Recall	-	MIN RECALL	-	-	-	MIN RECALL	MIN RECALL
Dual Entry	-	-	-	-	-	-	

* These values may be field adjusted. Do not adjust Min Green and Passage 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
(A) "DO NOT STOP ON TRACKS" Sign (R8-8)	(A) "DO NOT STOP ON TRACKS" Sign (R8-8)
(B) "NO TURN ON RED" Sign (R10-11)	(B) "NO TURN ON RED" Sign (R10-11)
(C) "NO RIGHT TURN - TRAIN" LED Blankout Sign	(C) "NO RIGHT TURN - TRAIN" LED Blankout Sign
(D) "U-TURN YIELD TO RIGHT TURN" Sign (R10-16)	(D) "U-TURN YIELD TO RIGHT TURN" Sign (R10-16)
(E) Dual Turn and Through Arrows Sign (R3-6L)	(E) Dual Turn and Through Arrows Sign (R3-6L)
(F) Right Arrow "ONLY" Sign (R3-5R)	(F) Right Arrow "ONLY" Sign (R3-5R)
(G) "STOP HERE ON RED" Sign (R10-6)	(G) "STOP HERE ON RED" Sign (R10-6)

Signal Upgrade Temporary Design 2 (TMP Phase II)

MOTT MACDONALD
MOTT MACDONALD I & E, LLC
930 Main Campus Drive
Suite 200
RALEIGH, NC 27606
License No. F-0669

Prepared for: **NC 211 at SR 1239 (Seven Lakes Drive) and SR 1190 (Lakeway Drive)**
Division 8 Moore County Seven Lakes
PLAN DATE: June 2024 REVIEWED BY: R. Mullinax
PREPARED BY: LD Stouchko REVIEWED BY:
SCALE: 1" = 40'
REVISIONS: _____
INIT. DATE
SIGNATURE: _____ DATE
DOCUMENT NOT CONSIDERED FINAL UNTIL ALL SIGNATURES COMPLETED.
SEAL: MOTT MACDONALD PROFESSIONAL ENGINEER SEAL 034437
LD Stouchko
SIC INVENTORY NO. 08-04102