

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2024 and "Standard Specifications for Roads and Structures" dated January 2024.
2. This location contains railroad preemption phasing. Do not program signal for late night flashing operation.
3. Phase 1 and/or phase 5 may be lagged.
4. Phase 3 and/or phase 7 may be lagged.
5. Set all detector units to presence mode.
6. 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.
7. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.
8. Ensure flashing operation does not alter operation of blank out signs.
9. This intersection uses video detection. Install detectors according to the manufacturer's instructions to achieve the desired detection.
10. 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.

PROPOSED		EXISTING
	Traffic Signal Head	
	Modified Signal Head	N/A
	Sign	
	Pedestrian Signal Head	
	Signal Pole with Guy	
	Signal Pole with Sidewalk Guy	
	Metal Strain Pole	
	Inductive Loop Detector	
	Non-intrusive Detection Area	
	Controller & Cabinet	
	Junction Box	
-----	2-in Underground Conduit	-----
N/A	Right of Way	-----
	Directional Arrow	
N/A	Railroad Tracks	
N/A	Railroad Cantilever	
N/A	Railroad Gate and Flasher	
	Construction Zone	
	Construction Zone Drums	
(A)	"NO RIGHT TURN - TRAIN" L.E.D. Blankout Sign	(A)
(B)	"STOP" Sign (R1-1)	(B)
(C)	"DO NOT STOP ON TRACKS" Sign (R8-8)	(C)
(D)	"DO NOT BLOCK INTERSECTION" Sign (R10-7)	(D)
(E)	"STOP HERE WHEN FLASHING" Sign (R8-10)	(E)

<i>Prepared For:</i>	NC 66/SR 2377 (W. Mountain St.) at NC 66 (Old Hollow Road) and SR 2649 (Hopkins Road)	SEAL																						
Division 9 Forsyth County Kernersville	PLAN DATE: August 2024 REVIEWED BY: KP Baumann																							
PREPARED BY: CF Davis		REVISIONS <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 60%;">INIT.</th> <th style="width: 40%;">DATE</th> </tr> </thead> <tbody> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </tbody> </table>	INIT.	DATE																				
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SCALE 0 50 1" = 50'		SIGNATURE _____ DATE _____																						
750 N.Greenfield Pkwy,Garner, NC 27529		Docusigned by: 7/14/2025 SDCT00A86CB47 SIG. INVENTORY NO. 08-05677T																						

The diagram illustrates the experimental task in three stages, each within a circle:

- Track Clear (4+7+39):** The top circle shows a horizontal track with a dashed line in the center. Arrows indicate a train moving from left to right, and a signal on the left shows a green light.
- Dwell 1 (2+6):** The middle circle shows the train stopped at a signal on the left. The signal now shows a red light. An arrow points from the 'Track Clear' stage to this one.
- Dwell 2 (9):** The bottom circle shows the train stopped at a signal on the right. The signal now shows a red light. An arrow points from the 'Dwell 1' stage to this one.

FUNCTION	PRE 1
Type	RAIL ROAD
Exit Phases	4.8
Delay	0
Call Extend Time	1.0
Max Presence	0
Enter Min Green	1
Enter Walk	0
Enter Ped Clear	0
Enter Yellow Change	4.9
Enter Red Clear	3.3
Track Green	28
Track Yellow Change	4.4
Track Red Clear	2.3
Dwell Green	0
Exit Min Green	25.5 *
Exit Yellow Change	25.5 *
Exit Red Clear	25.5 *
Exit Type	EXIT PHASES
Ped Clear Through Yellow	-
Require All Red Entry	-

This signal was designed
for advance preemption.

SIGNAL FACE	PHASE											
	1 + 5	1 + 6	2 + 5	2 + 6	3 + 7	3 + 8	4 + 7	4 + 8	R C B	R D L F T	R D L F R	F L A S H
11	←	←	F	F	←	←	←	←	←	F	←	←
21	R	R	G	G	R	R	R	R	R	G	R	R
22	R	R	G	G	R	R	R	R	R	G	R	R
31	←	←	←	←	←	←	F	F	F	←	←	←
41	R	R	R	R	R	R	G	G	G	R	R	R
42	R	R	R	R	R	R	G	G	G	R	R	R
51	←	F	←	F	←	←	←	←	←	←	←	←
61	R	G	R	G	R	R	R	R	R	G	R	R
62	R	G	R	G	R	R	R	R	R	G	R	R
71	←	←	←	←	←	F	←	←	←	←	←	←
81	R	R	R	R	R	G	R	G	R	R	R	R
82	R	R	R	R	R	G	R	G	R	R	R	R
Sign A	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON	ON	*

SR	CR	SS	LR																	
7A	6X35	0	2-4-2	-	7	15.0	-	X	-	X										
7B	6X25	+12 #	2-4-2	-	7	3.0	-	X	-	X										
7C	6X25	0 ##	2-4-2	-	7	3.0	-	X	-	X										
8A	6X40	0	*	-	8	-	-	X	-	X										

From Stopbar at Railroad Gate.
 ## From Stopbar at SR 2403.
 * Video Detection Zone

DETECTOR					PROGRAMMING							
LOOP / ZONE	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP / ZONE	CALL PHASE	DELAY TIME	EXTEND TIME	EXTEND	ADDED INITIAL	CALL	DELAY DURING GREEN	NEW CARD
1A	6X40	0	2-4-2	-	1 6	15.0 3.0	-	X	-	X	-	-
1B	6X40	0	*	-	1/9	15.0	-	X	-	X	-	-
2A	6X6	355	*	X	2	-	-	X	X	X	-	-
3A	6X40	0	*	-	3/9 8	15.0 3.0	-	X	-	X	-	-
4A	6X40	0	2-4-2	-	4	-	-	X	-	X	-	-
4B	6X25	+12 #	2-4-2	-	4	-	-	X	-	X	-	-
4C	6X25	0 ##	2-4-2	-	4	-	-	X	-	X	-	-
4D	6X25	0 ##	2-4-2	-	4	5.0	-	X	-	X	-	-
5A	6X40	0	*	X	5 2	15.0 3.0	-	X	-	X	-	-
5B	6X40	0	2-4-2	-	5	15.0	-	X	-	X	-	-
5C	6X25	+12 #	2-4-2	-	5	10.0	-	X	-	X	-	-
6A	6X6	355	EXIST	-	6	-	-	X	X	X	-	-
7A	6X35	0	2-4-2	-	7 4	15.0 3.0	-	X	-	X	-	-
7B	6X25	+12 #	2-4-2	-	7	3.0	-	X	-	X	-	-
7C	6X25	0 ##	2-4-2	-	7	3.0	-	X	-	X	-	-
8A	6X40	0	*	-	8	-	-	X	-	X	-	-

* Video Detection Zone

	DETECTED MOVEMENT
	UNDETECTED MOVEMENT (OVERLAP)
	UNSIGNALIZED MOVEMENT
	PEDESTRIAN MOVEMENT

FEATURE	PHASE											
	1	2	3	4	5	6	7	8	9	39	40	
Walk *	–	–	–	–	–	–	–	–	–			
Ped Clear	–	–	–	–	–	–	–	–	–			
Min Green *	7	14	7	7	7	14	7	7	7			
Passage *	2.0	6.0	2.0	2.0	2.0	6.0	2.0	2.0	2.0			
Max 1 *	20	60	20	30	30	60	40	30	20			
Yellow Change	3.0	4.9	3.0	4.4	3.0	4.9	3.0	4.4	3.0	4.4	4.9	
Red Clear	2.4	1.1	3.3	1.9	2.9	1.1	2.3	1.9	3.3	2.3	3.3	
Added Initial *	–	2.5	–	–	–	2.5	–	–	–			
Maximum Initial *	–	40	–	–	–	40	–	–	–			
Time Before Reduction *	–	15	–	–	–	15	–	–	–			
Time To Reduce *	–	20	–	–	–	20	–	–	–			
Minimum Gap	–	3.0	–	–	–	3.0	–	–	–			
Advance Walk	–	–	–	–	–	–	–	–	–			
Non Lock Detector	X	–	X	X	X	–	X	X	X			
Vehicle Recall	–	MIN RECALL	–	–	–	MIN RECALL	–	–	–		MIN RECALL	
Dual Entry	–	–	–	X	–	–	–	X	–			

* 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.