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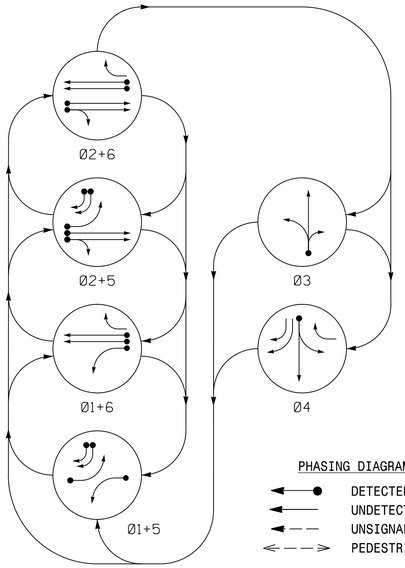
PROJECT REFERENCE NO.	SHEET NO.
U-5748	Sig. 15.0

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	03	04	FLASH
11	←	←	~~R~~	~~R~~	~~R~~	~~R~~	~~R~~
21, 22	R	R	G	G	R	R	Y
31	R	R	R	R	G	R	R
32	R	R	R	G	R	R	R
41	R	R	R	R	G	R	R
42, 43, 46	→	R	→	R	R	→	R
44, 45	R	R	R	R	R	G	R
51	←	~~R~~	←	~~R~~	~~R~~	~~R~~	~~R~~
61, 62	R	G	R	G	R	R	Y
63	R	→	R	→	R	→	~~Y~~

SE-PAC 2070 LOOP & DETECTOR UNIT INSTALLATION CHART

INDUCTIVE LOOPS						DETECTOR PROGRAMMING													
							TIMING		OPERATION MODE									STATUS	
ZONE NO.	SIZE (ft)	TURNS	DIST. FROM STOPBAR (ft)	NEW	EXISTING	ASSIGNED PHASE	DELAY	EXTEND (STRETCH)	0 VEHICLE	1 PEDESTRIAN	2 1 CALL	3 STOP A	4 STOP B	5 PROTPER LEFT	6 PROTPER THROUGH	7 AND	SWITCH	NEW	EXISTING
1A ✳	6X40	✳	0	✳	-	1	3 SEC.	- SEC.	X	-	-	-	-	-	-	-	-	✳	-
2A ✳	6X6	✳	355	✳	-	2	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	✳	-
2B ✳	6X6	✳	355	✳	-	2	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	✳	-
3A ✳	6X40	✳	0	✳	-	3	10 SEC.	- SEC.	X	-	-	-	-	-	-	-	-	✳	-
4A ✳	6X40	✳	0	✳	-	4	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	✳	-
5A ✳	6X40	✳	0	✳	-	5	3 SEC.	- SEC.	X	-	-	-	-	-	-	-	-	✳	-
5B ✳	6X40	✳	0	✳	-	5	15 SEC.	- SEC.	X	-	-	-	-	-	-	-	-	✳	-
5C ✳	6X40	✳	0	✳	-	5	15 SEC.	- SEC.	X	-	-	-	-	-	-	-	-	✳	-
6A ✳	6X6	✳	355	✳	-	6	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	✳	-
6B ✳	6X6	✳	355	✳	-	6	- SEC.	- SEC.	X	-	-	-	-	-	-	-	-	✳	-

✳ Video Detection Zone

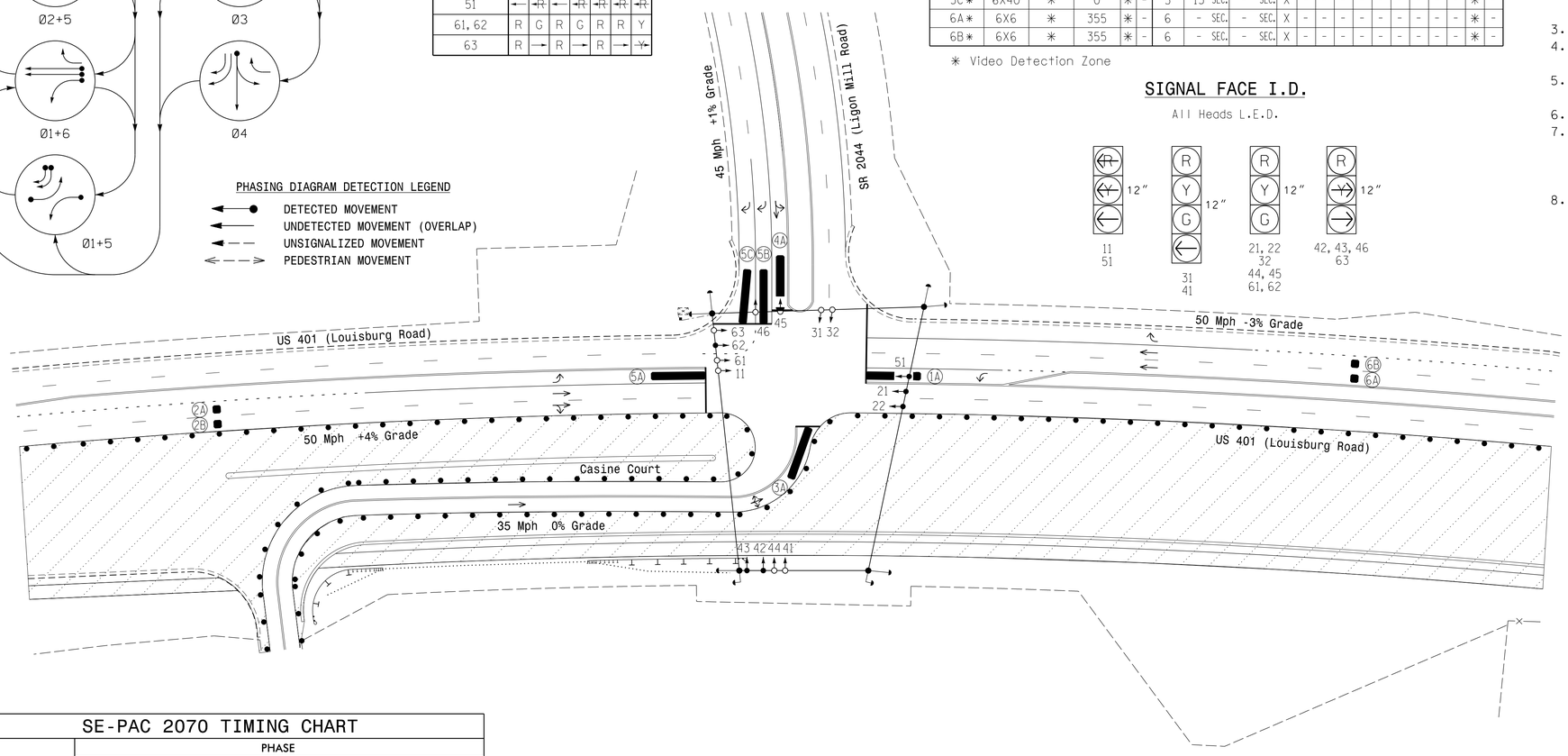
SIGNAL FACE I.D.

All Heads L.E.D.

6 Phase
Fully Actuated
(Raleigh Signal System)

NOTES

1. Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
2. Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
3. Phase 1 and/or phase 5 may be lagged.
4. The order of phase 3 and phase 4 may be reversed.
5. Reposition existing signal heads numbered 21, 22, 42, 43, 51, and 62.
6. Set all detector units to presence mode.
7. This intersection uses video detection. Install detectors according to the manufacturer's instructions to achieve the desired detection.
8. Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.



LEGEND

PROPOSED		EXISTING
	Traffic Signal Head	
	Modified Signal Head	N/A
	Sign	
	Pedestrian Signal Head	
	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	
	Directional Arrow	
	Video Detection Zone	
	Construction Zone	
	Construction Zone Drums	
N/A	Noise Wall	
N/A	Guardrail	

SE-PAC 2070 TIMING CHART

FEATURE	PHASE 1	2	3	4	5	6
Min Green *	7	14	7	7	7	14
Passage Gap *	2.0	6.0	2.0	2.0	2.0	6.0
Maximum Green *	20	120	30	30	35	120
Yellow Change	3.0	4.5	3.8	4.4	3.0	5.1
Red Clear	2.3	1.5	2.5	1.4	3.2	1.7
Walk *	-	-	-	-	-	-
Pedestrian Clear	-	-	-	-	-	-
Added Initial *	-	1.5	-	-	-	1.5
Maximum Initial *	-	40	-	-	-	40
Time Before Reduction *	-	20	-	-	-	20
Time To Reduce *	-	40	-	-	-	40
Minimum Gap	-	3.0	-	-	-	3.0
Recall Mode	-	MIN RECALL	-	-	-	MIN RECALL
Vehicle Call Memory	NON-LOCK	LOCK	NON-LOCK	NON-LOCK	NON-LOCK	LOCK
Dual Entry	-	-	-	-	-	-
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.

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Phone: 919-461-1100

Signal Upgrade - Temp Design 2 (TPM Phase III)

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

Prepared for the Offices of:
Transportation Mobility and Safety Division
STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
Signal Design Section
750 N.Greenfield Pkwy,Garner,NC 27529

US 401 (Louisburg Road)
at
SR 2044 (Ligon Mill Road)

Division 5 | Wake County | Raleigh

PLAN DATE: Jan 2023 | REVIEWED BY: F.A. Campbell
PREPARED BY: H.W. Surti | REVIEWED BY:

SCALE 0 50 1"=50'

REVISIONS | INIT. | DATE

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 034481 ENGINEER HEMANG M. SURTI

DocuSigned by: Hemang M. Surti 1/24/2023
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SIG. INVENTORY NO. 05-I252T2

1/24/2023
pw://aecomnaprod.bentley.com:AECOM_DS21_NA_2020:Documents:60609754-U-5748 Ligon Mill:900-CAD GIS:910_CAD:70_NCDOT_TIP:Traffic:Signals:Design:Signals:05125212_sig_dsn_2022XXXX.dgn
michael.cavenaugh