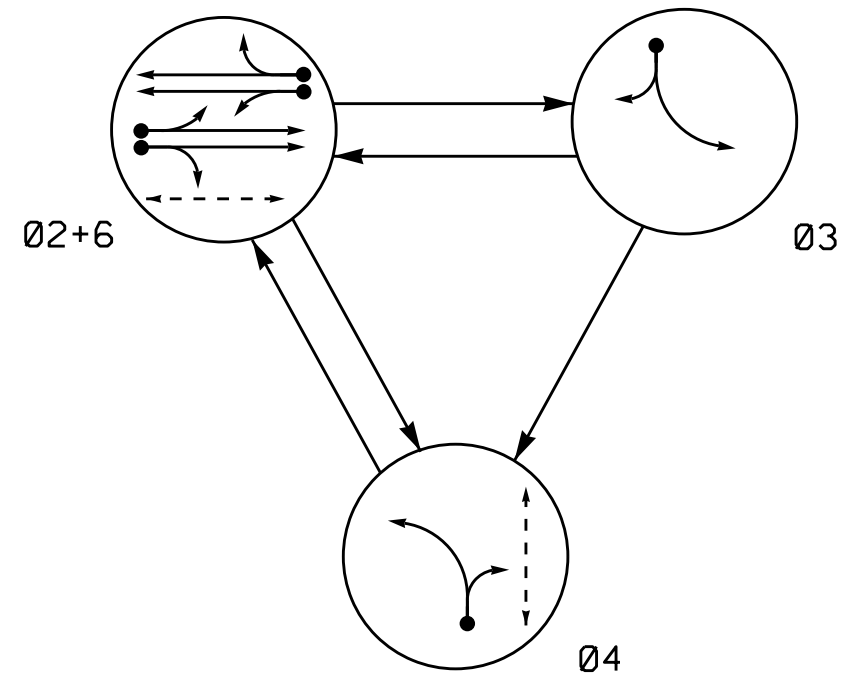


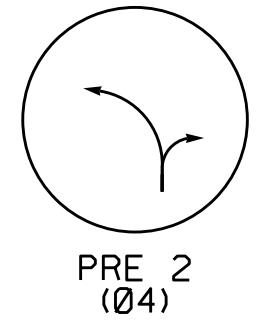
**PHASING DIAGRAM**



**PHASING DIAGRAM DETECTION LEGEND**

- DETECTED MOVEMENT
- ← UNDETECTED MOVEMENT (OVERLAP)
- UNSIGNALIZED MOVEMENT
- PEDESTRIAN MOVEMENT

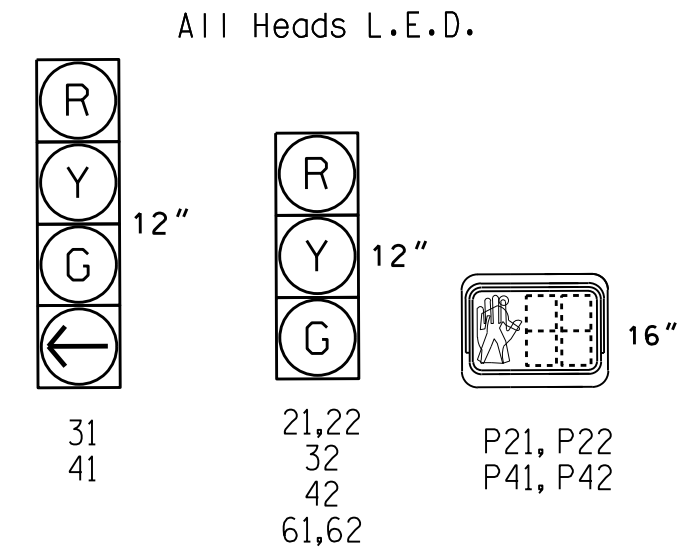
**EV PREEMPT PHASE**  
(Medium Priority)



**TABLE OF OPERATION**

SIGNAL FACE	PHASE				
	Ø 2+6	Ø 3	Ø 4	P 2	P 6
21,22	G	R	R	R	Y
31	R	G	R	R	R
32	R	G	R	R	R
41	R	R	G	G	R
42	R	R	G	G	R
61,62	G	R	R	R	Y
P21, P22	W	DW	DW	DW	DRK
P41, P42	DW	DW	W	DW	DRK

**SIGNAL FACE I.D.**



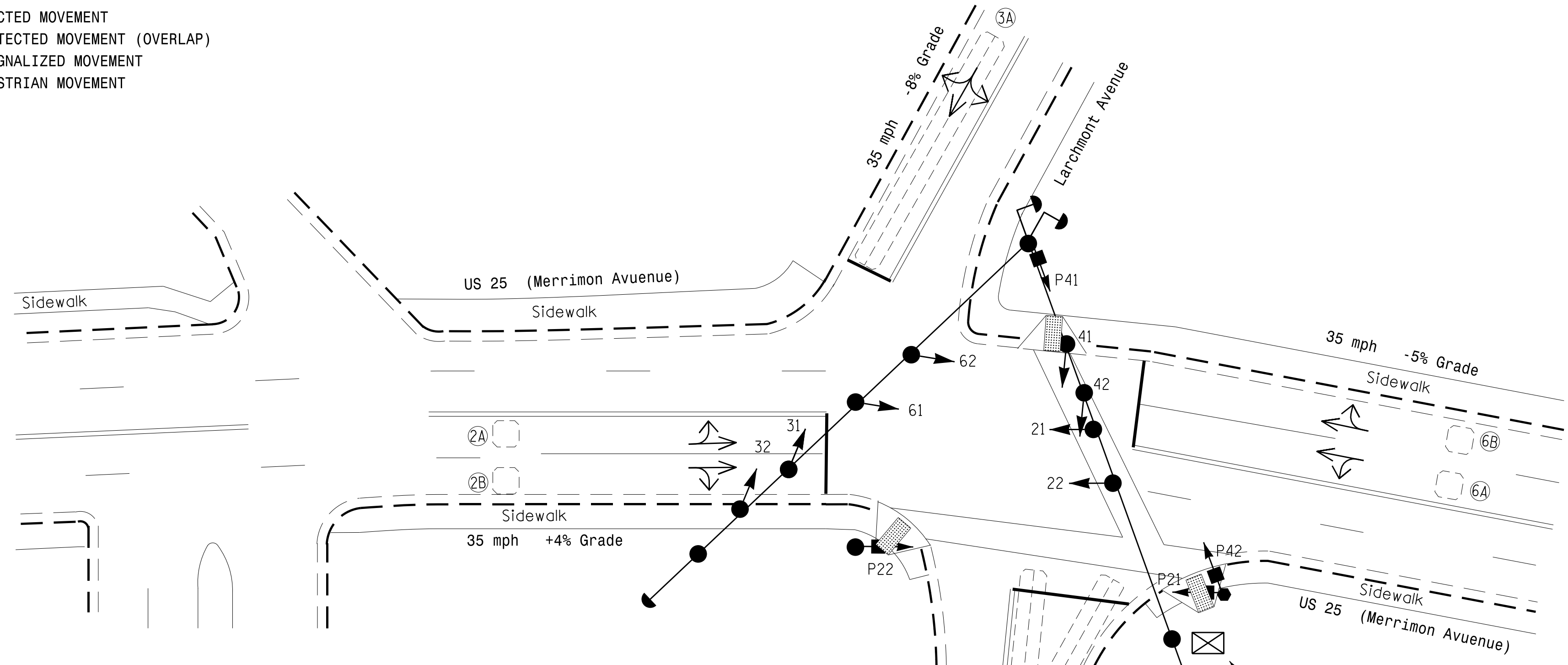
**OASIS 2070 LOOP & DETECTOR INSTALLATION CHART**

LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	DETECTOR PROGRAMMING									
				NEW LOOP	PHASE	CALLING	EXTENSION	FULL TIME DELAY	STRETCH TIME	DELAY TIME	SYSTEM LOOP	NEW CARD	
2A, 2B	6x6	70	4	-	2	Y	Y	-	-	-	-	-	Y
3A	6x60	0	2-4-2	-	3	Y	Y	-	-	-	5	-	Y
4A	6x40	+5	2-4-2	-	4	Y	Y	-	-	-	3	-	Y
4B	6x30	+5	2-4-2	-	4	Y	Y	-	-	-	15	-	Y
6A, 6B	6x6	70	4	-	6	Y	Y	-	-	-	-	-	Y

**3 Phase Fully Actuated w/ Emergency Vehicle Preemption Asheville Signal System**

**NOTES**

- Refer to "Roadway Standard Drawings NCDOT" dated January 2012 and "Standard Specifications for Roads and Structures" dated January 2012.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- The order of phase 3 and phase 4 may be reversed.
- 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.
- Locate new cabinet so as not to obstruct sight distance of vehicles turning right on red.
- The cabinet should be designed to include an Auxiliary Output file for future use.
- Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
- Program pedestrian heads to countdown the flashing "Don't Walk" time only.
- Pavement markings are existing.
- The Division Traffic Engineer will determine the Delay before Preempt and Preempt Dwell Min Green time for the emergency vehicle preemption timing.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.



**OASIS 2070 TIMING CHART**

FEATURE	PHASE			
	2	3	4	6
Min Green 1 *	10	7	7	10
Extension 1 *	3.0	1.0	1.0	3.0
Max Green 1 *	40	20	20	40
Yellow Clearance	4.2	4.5	3.7	4.2
Red Clearance	1.4	1.2	1.6	1.4
Red Revert	2.0	2.0	2.0	2.0
Walk 1 *	7	-	7	-
Don't Walk 1	17	-	16	-
Seconds Per Actuation *	-	-	-	-
Max Variable Initial *	-	-	-	-
Time Before Reduction *	-	-	-	-
Time To Reduce *	-	-	-	-
Minimum Gap	-	-	-	-
Recall Mode	MIN RECALL	-	-	MIN RECALL
Vehicle Call Memory	YELLOW	-	-	YELLOW
Dual Entry	-	-	-	-
Simultaneous Gap	ON	ON	ON	ON

**OASIS 2070 EV PREEMPT**

FUNCTION	PRE 2
Interval 1 - Dwell Green	255
Interval 1 - Dwell Yellow	0.0*
Interval 1 - Dwell Red	0.0*
Interval 5 - Exit Green	1
Interval 5 - Yellow	0.0
Interval 5 - Red	0.0
Exit Phase(s)	2+6
Priority	MEDIUM
Delay Time	30**
Min Green Before Pre	1
Ped Clear Before Pre	0*
Yellow Clear Before Pre	4.5
Red Clear Before Pre	1.2
Dwell Min Time	40**
Enable Backup Protection	N
Ped Clear Through Yellow	Y
Omit Overlaps	-

\* Time defaults to time used for phase during normal operation  
\*\* See Note 10

Install new base-mounted cabinet on existing foundation.

**LEGEND**

PROPOSED	EXISTING
○ Traffic Signal Head	● N/A
● Modified Signal Head	○ N/A
⊥ Sign	⊥
⊥ Pedestrian Signal Head With Push Button & Sign	⊥
○ 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 with Marker	△
→ Directional Arrow	→
→ Pavement Marking Arrow	→
○ Type II Signal Pedestal	●
N/A Curb Ramp	⊠

\* 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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 S:\ITS\ASU\ITS\_Signal\Signal\Western Region\01\13\41-4715B (Asheville) Signal System\Signal Design\Signal Design\13-0437\30437\_sig\_dsn\_2016mdd-dgn.rvt  
 R.N.Zinsler

**Signal Upgrade**

Prepared in the Office of:  
  
 750 N. Greenfield Pkwy, Garner, NC 27529

**US 25 (Merrimon Avenue) at Larchmont Road**

Division 13 Buncombe County Asheville  
 PLAN DATE: June 2016 REVIEWED BY: T.J. Williams  
 PREPARED BY: R.N. Zinsler REVIEWED BY:

REVISIONS: \_\_\_\_\_ INIT. DATE

SCALE: 0 20  
1"=20'

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL  
  
 Richard N. Zinsler 8/10/2016  
 F1388973472248F DATE  
 SIG. INVENTORY NO. 13-0437