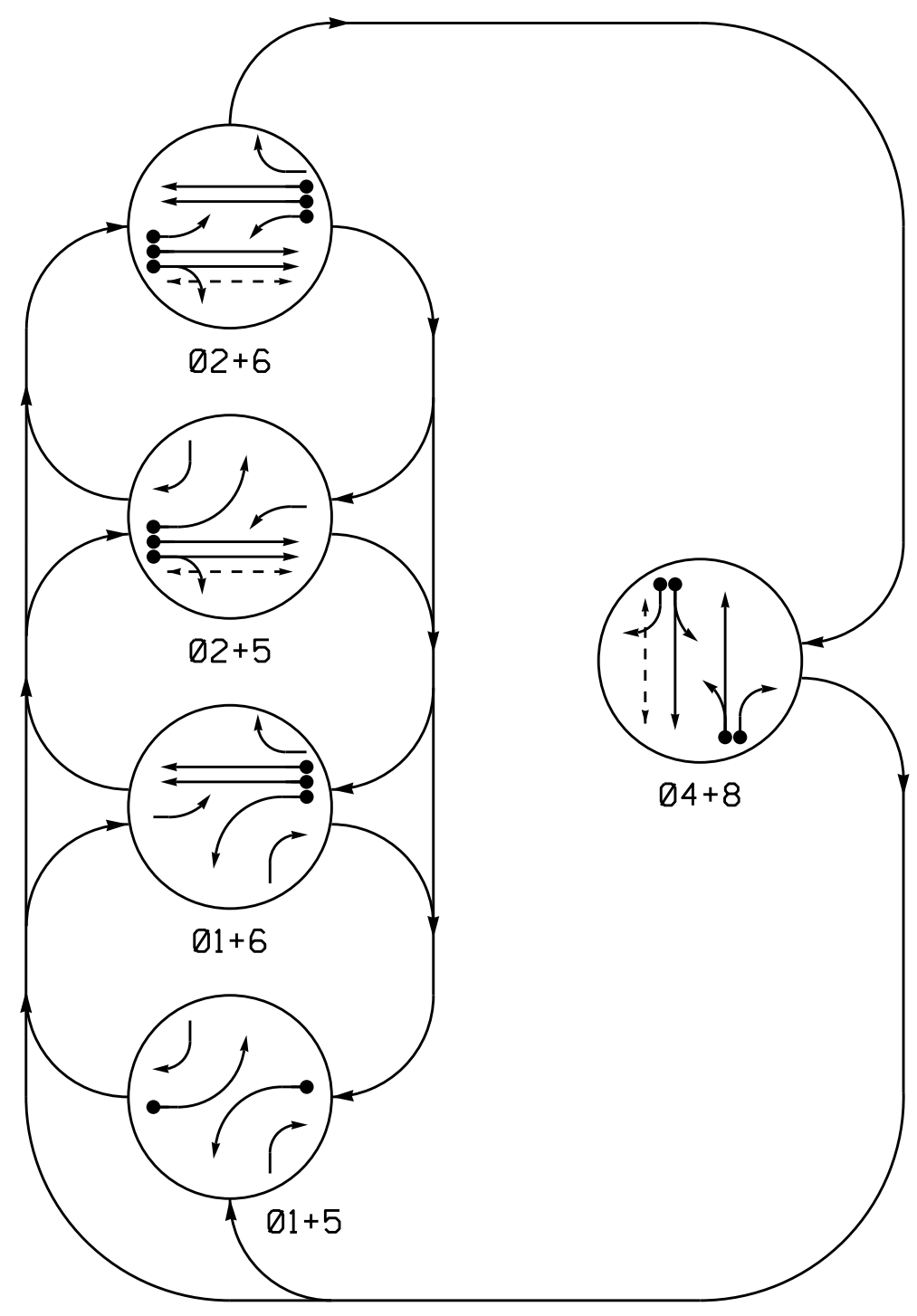


**PHASING DIAGRAM**



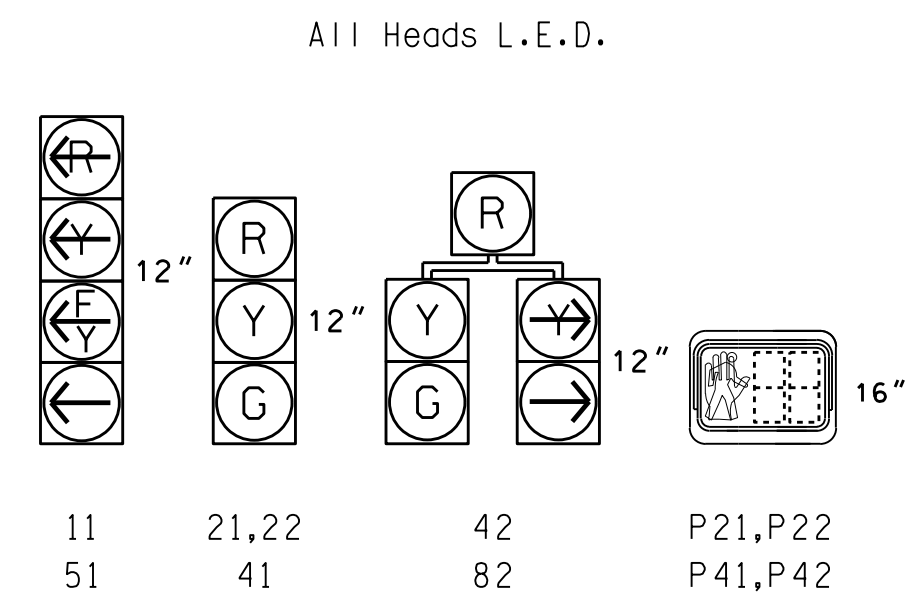
**PHASING DIAGRAM DETECTION LEGEND**

- ←●→ DETECTED MOVEMENT
- ←○→ UNDETECTED MOVEMENT (OVERLAP)
- ←- - -→ UNSIGNALIZED MOVEMENT
- ←- - -○→ PEDESTRIAN MOVEMENT

**TABLE OF OPERATION**

SIGNAL FACE	PHASE					FLASH
	Ø1+5	Ø2+5	Ø3+5	Ø4+8	Ø5+6	
11	---	---	F	F	-R	-Y
21,22	R	R	G	G	R	Y
41	R	R	R	R	G	R
42	R	R	R	R	G	R
51	---	---	F	F	-R	-Y
61,62	R	G	R	R	G	Y
81	R	R	R	R	G	R
82	R	R	R	R	G	R
P21,P22	DW	DW	W	W	DW	DRK
P41,P42	DW	DW	DW	DW	W	DRK

**SIGNAL FACE I.D.**



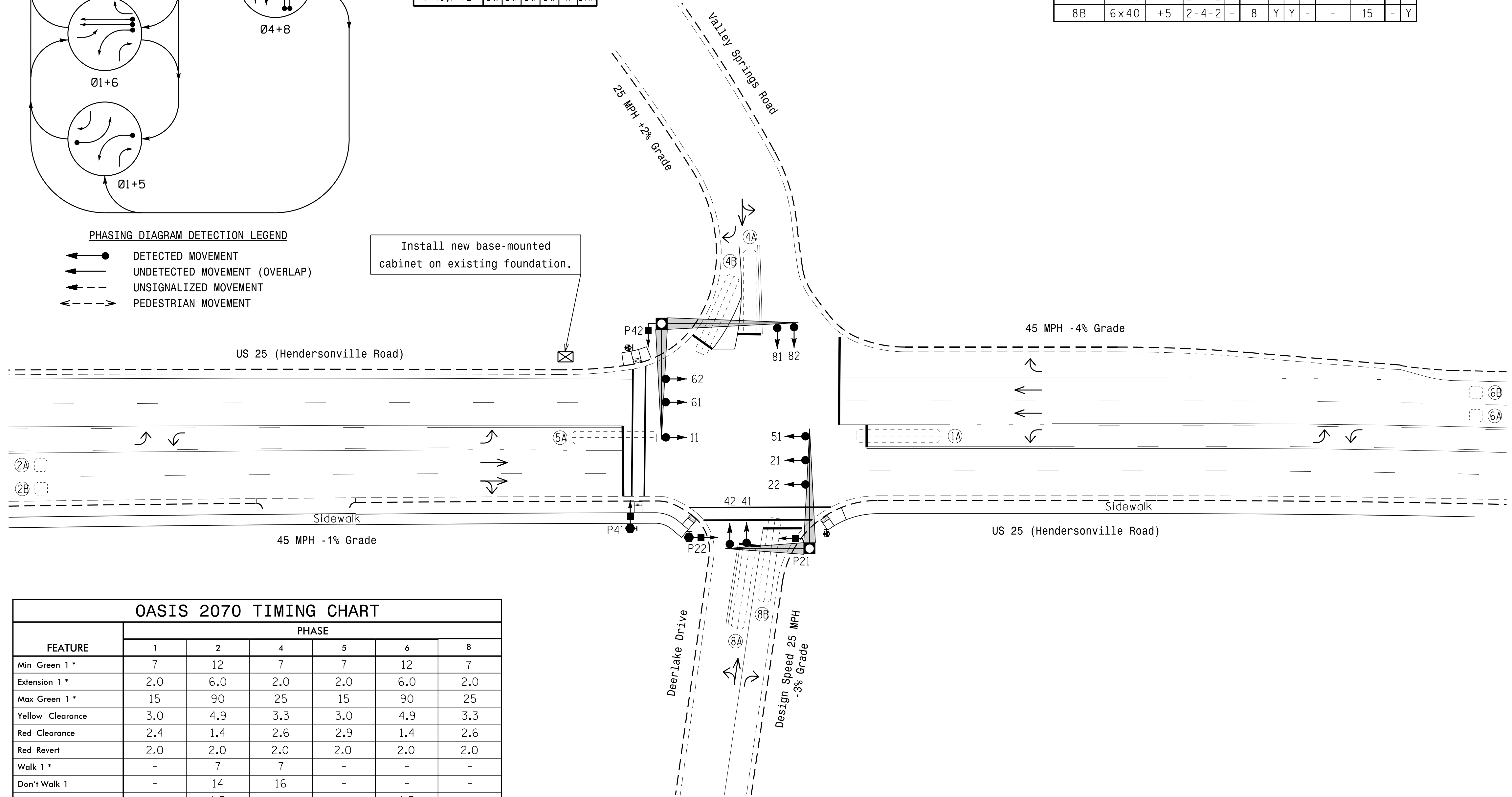
**OASIS 2070 LOOP & DETECTOR INSTALLATION CHART**

LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	DETECTOR PROGRAMMING				SYSTEM LOOP	NEW CARD	
					PHASE	CALLING	EXTENSION	FULL TIME DELAY			
1A	6x40	+5	2-4-2	-	1	Y	Y	-	15	-	Y
2A	6x6	275	5	-	2	Y	Y	-	-	-	Y
2B	6x6	275	5	-	2	Y	Y	-	-	-	Y
4A	6x40	0	2-4-2	-	4	Y	Y	-	3	-	Y
4B	6x40	+5	2-4-2	-	4	Y	Y	-	15	-	Y
5A	6x40	+16	2-4-2	-	5	Y	Y	-	15	-	Y
6A	6x6	300	5	-	6	Y	Y	-	-	-	Y
6B	6x6	300	5	-	6	Y	Y	-	-	-	Y
8A	6x40	0	2-4-2	-	8	Y	Y	-	3	-	Y
8B	6x40	+5	2-4-2	-	8	Y	Y	-	15	-	Y

**5 Phase Fully Actuated 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.
- Phase 1 and/or phase 5 may be lagged.
- 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.
- Pavement markings are existing.
- 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					
	1	2	4	5	6	8
Min Green 1*	7	12	7	7	12	7
Extension 1*	2.0	6.0	2.0	2.0	6.0	2.0
Max Green 1*	15	90	25	15	90	25
Yellow Clearance	3.0	4.9	3.3	3.0	4.9	3.3
Red Clearance	2.4	1.4	2.6	2.9	1.4	2.6
Red Revert	2.0	2.0	2.0	2.0	2.0	2.0
Walk 1*	-	7	7	-	-	-
Don't Walk 1	-	14	16	-	-	-
Seconds Per Actuation*	-	15	-	-	15	-
Max Variable Initial*	-	34	-	-	34	-
Time Before Reduction*	-	15	-	-	15	-
Time To Reduce*	-	30	-	-	30	-
Minimum Gap	-	3.0	-	-	3.0	-
Recall Mode	-	MIN RECALL	-	-	MIN RECALL	-
Vehicle Call Memory	-	YELLOW	-	-	YELLOW	-
Dual Entry	-	-	ON	-	-	ON
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.

**LEGEND**

- |  |  |  |  |
|--|--|--|--|
|  | PROPOSED Traffic Signal Head           |  | EXISTING Traffic Signal Head           |
|  | PROPOSED Modified Signal Head          |  | EXISTING Modified Signal Head          |
|  | PROPOSED Pushbutton & Sign             |  | EXISTING Pushbutton & Sign             |
|  | PROPOSED Pedestrian Signal Head        |  | EXISTING Pedestrian Signal Head        |
|  | PROPOSED Signal Pole with Guy          |  | EXISTING Signal Pole with Guy          |
|  | PROPOSED Signal Pole with Sidewalk Guy |  | EXISTING Signal Pole with Sidewalk Guy |
|  | PROPOSED Inductive Loop Detector       |  | EXISTING Inductive Loop Detector       |
|  | PROPOSED Controller & Cabinet          |  | EXISTING Controller & Cabinet          |
|  | PROPOSED Junction Box                  |  | EXISTING Junction Box                  |
|  | PROPOSED 2-in Underground Conduit      |  | EXISTING 2-in Underground Conduit      |
|  | PROPOSED Right of Way                  |  | EXISTING Right of Way                  |
|  | PROPOSED Directional Arrow             |  | EXISTING Directional Arrow             |
|  | PROPOSED Metal Pole with Mastarm       |  | EXISTING Metal Pole with Mastarm       |
|  | PROPOSED Type I Pushbutton Post        |  | EXISTING Type I Pushbutton Post        |
|  | PROPOSED Type II Signal Pedestal       |  | EXISTING Type II Signal Pedestal       |

**Signal Upgrade**

**US 25 (Hendersonville Road) at Valley Springs Road/Deerlake Drive**

Division 13 Buncombe County Biltmore Forest

PLAN DATE: February 2016 REVIEWED BY: P. Alexander

PREPARED BY: M. Mahbooba REVIEWED BY:

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL

8/18/2016

SIG. INVENTORY NO. 13-1193

SCALE: 1"=30'

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

18-AUG-2016 11:11 S:\TDS\AS\13\Sig\Signal\Western Region\01\13\4715B (Asheville) Signal System\Signal Design\Signal Design\13-1193\31193.sig.dgn, 20160817.dgn  
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