

PHASING DIAGRAM

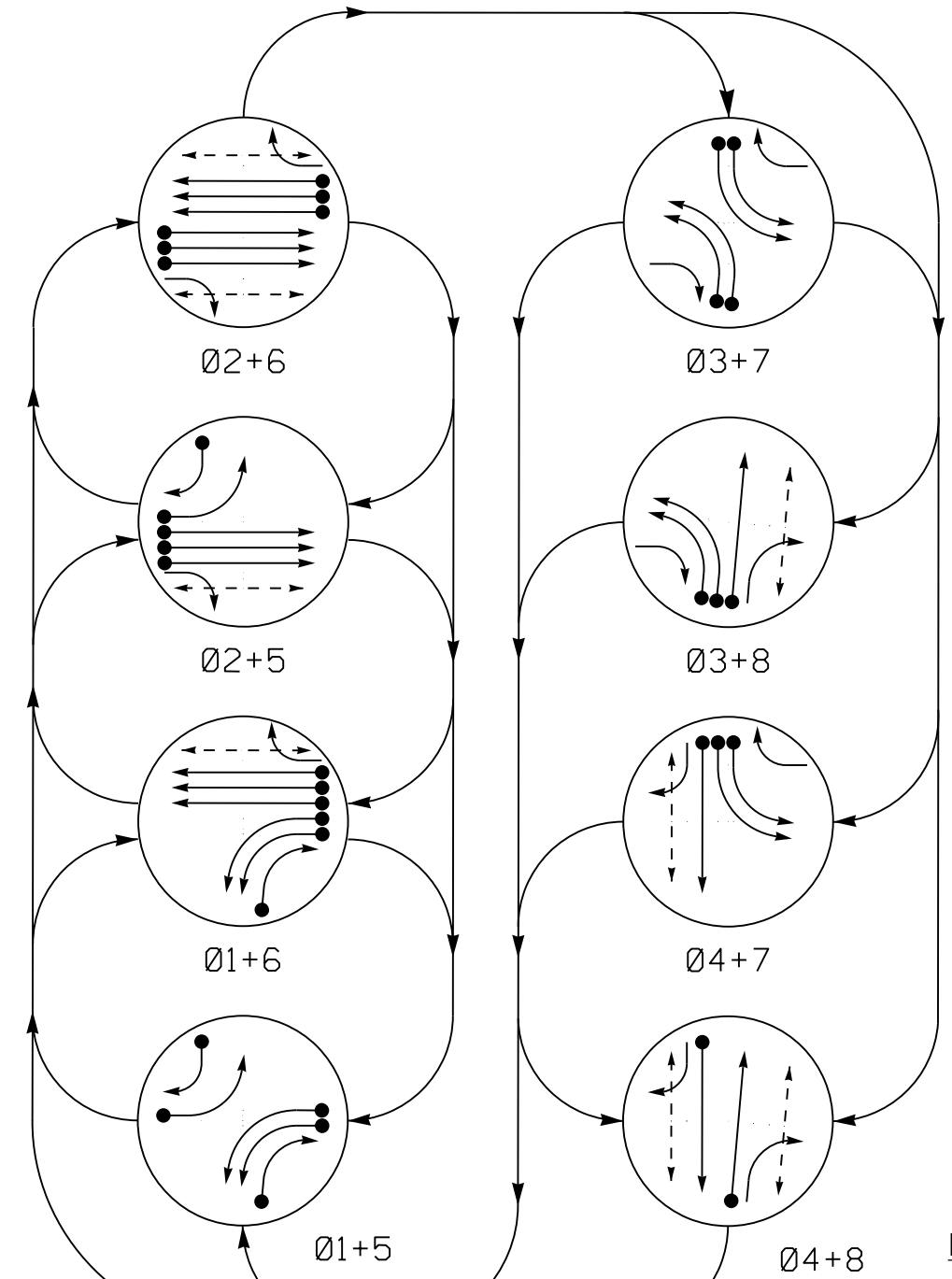
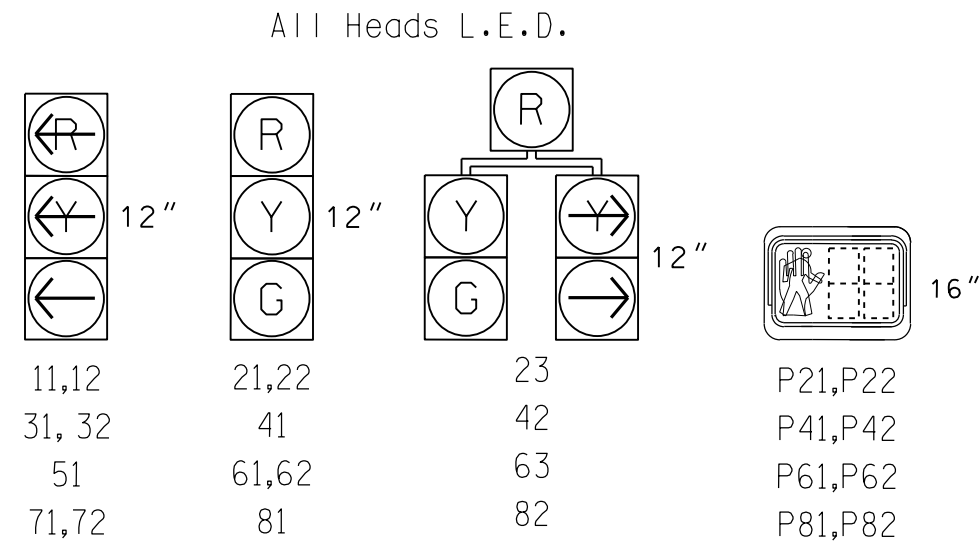


TABLE OF OPERATION

SIGNAL FACE	PHASE								FLASH
	01+5	01+6	02+5	02+6	03+7	03+8	04+7	04+8	
11,12	←	←	←	←	←	←	←	←	←
21,22	R	R	G	G	R	R	R	R	Y
23	R	R	G	G	R	R	R	R	Y
31	←	←	←	←	←	←	←	←	←
41	R	R	R	R	R	R	G	G	R
42	R	R	R	R	R	R	G	G	R
51	←	←	←	←	←	←	←	←	←
61,62	R	G	R	G	R	R	R	R	Y
63	R	G	R	G	R	R	R	R	Y
71,72	←	←	←	←	←	←	←	←	←
81	R	R	R	R	R	G	R	G	R
82	R	R	R	R	R	G	R	G	R
P21,P22	DW	DW	W	DW	DW	DW	DRK	DRK	
P41,P42	DW	DW	DW	DW	DW	W	W	DRK	
P61,P62	DW	W	DW	W	DW	DW	DW	DRK	
P81,P82	DW	DW	DW	DW	W	DW	W	DRK	

SIGNAL FACE I.D.



ASC/3 DETECTOR INSTALLATION CHART

LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	PROGRAMMING							
					PHASE	CALLING	EXTEND TIME	DELAY TIME	UUSE ADDED INITIAL	TYPE	LOOP NEW CARD	
1A	6X40	0	2-4-2	X	1	Yes	-	-	-	S	-	X
1B	6X40	0	2-4-2	X	1	Yes	-	-	-	S	-	X
1C	6X40	0	2-4-2	X	1	Yes	-	15	-	S	-	X
2A	6X6	300	4	X	2	Yes	-	-	X	N	-	X
2B	6X6	300	4	X	2	Yes	-	-	X	N	-	X
2C	6X6	300	4	X	2	Yes	-	-	X	N	-	X
3A	6X40	0	2-4-2	X	3	Yes	-	-	-	S	-	X
3B	6X40	0	2-4-2	X	3	Yes	-	-	-	S	-	X
4A	6X40	0	2-4-2	X	4	Yes	-	-	-	S	-	X
5A	6X40	0	2-4-2	X	5	Yes	-	-	-	S	-	X
5B	6X40	0	2-4-2	X	5	Yes	-	15	-	S	-	X
6A	6X6	300	4	X	6	Yes	-	-	X	N	-	X
6B	6X6	300	4	X	6	Yes	-	-	X	N	-	X
6C	6X6	300	4	X	6	Yes	-	-	X	N	-	X
7A	6X40	0	2-4-2	X	7	Yes	-	3	-	S	-	X
7B	6X40	0	2-4-2	X	7	Yes	-	-	-	S	-	X
8A	6X40	0	2-4-2	X	8	Yes	-	-	-	S	-	X

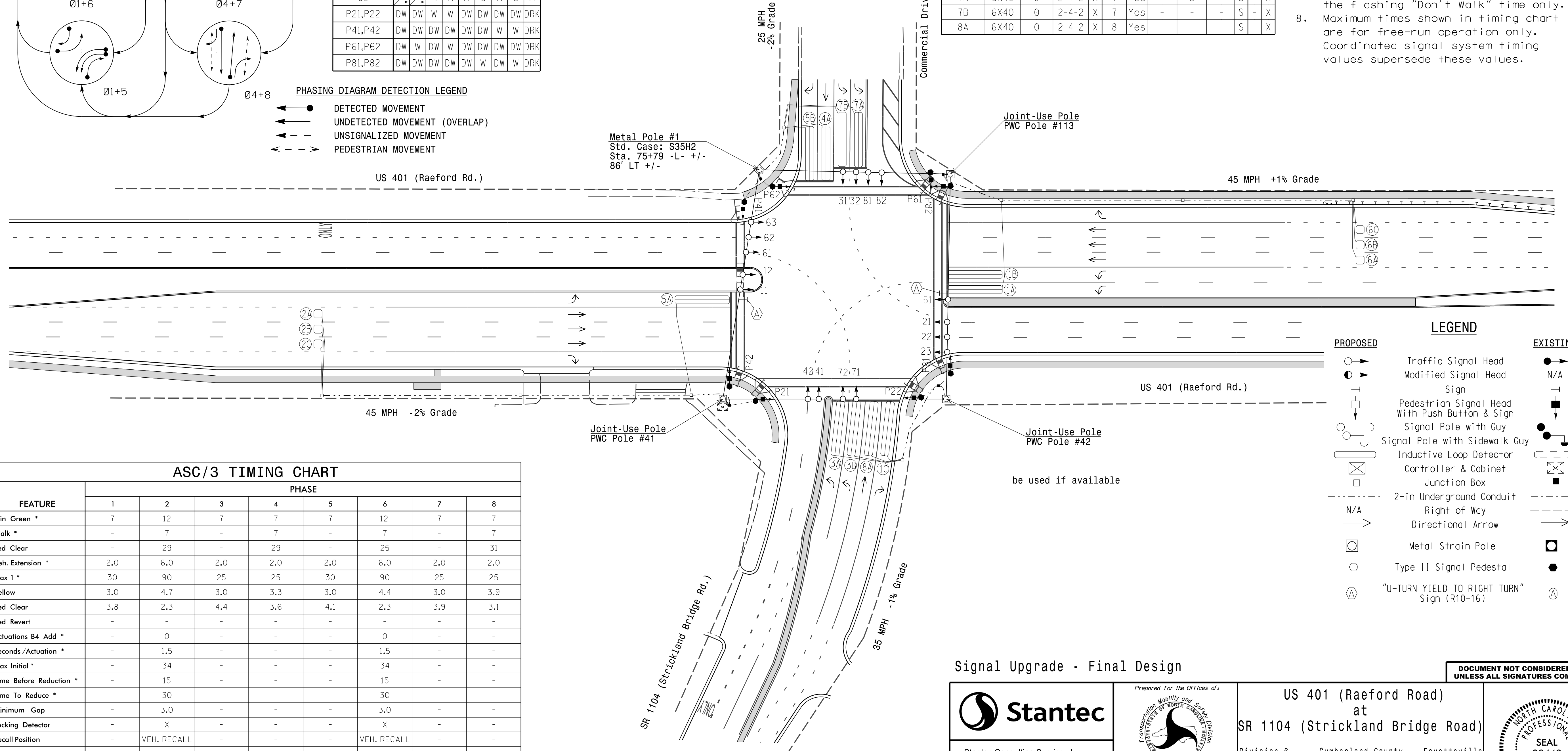
8 Phase Fully Actuated Fayetteville Signal System

NOTES

- Refer to "Roadway Standard Drawings NCDOT" dated January 2018 and "Standard Specifications for Roads and Structures" dated January 2018.
- Do not program signal for late night flashing operation unless otherwise directed by the Engineer.
- Phase 1 and/or phase 5 may be lagged.
- Phase 3 and/or phase 7 may be lagged.
- Set all detector units to presence mode.
- Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
- Program pedestrian heads to countdown the flashing "Don't Walk" time only.
- Maximum times shown in timing chart are for free-run operation only. Coordinated signal system timing values supersede these values.

PHASING DIAGRAM DETECTION LEGEND

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



ASC/3 TIMING CHART

FEATURE	PHASE							
	1	2	3	4	5	6	7	8
Min Green *	7	12	7	7	7	12	7	7
Walk *	-	7	-	7	-	7	-	7
Ped Clear	-	29	-	29	-	25	-	31
Veh. Extension *	2.0	6.0	2.0	2.0	2.0	6.0	2.0	2.0
Max I *	30	90	25	25	30	90	25	25
Yellow	3.0	4.7	3.0	3.3	3.0	4.4	3.0	3.9
Red Clear	3.8	2.3	4.4	3.6	4.1	2.3	3.9	3.1
Red Revert	-	-	-	-	-	-	-	-
Actions B4 Add *	-	0	-	-	-	0	-	-
Seconds / Actuation *	-	1.5	-	-	-	1.5	-	-
Max Initial *	-	34	-	-	-	34	-	-
Time Before Reduction *	-	15	-	-	-	15	-	-
Time To Reduce *	-	30	-	-	-	30	-	-
Minimum Gap	-	3.0	-	-	-	3.0	-	-
Locking Detector	-	X	-	-	-	X	-	-
Recall Position	-	VEH. RECALL	-	-	-	VEH. RECALL	-	-
Dual Entry	-	-	-	-	-	-	-	-
Simultaneous Gap	X	X	X	X	X	X	X	X

* 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 | EXISTING |
|--|--|
| ○ → Traffic Signal Head | ● → N/A |
| ● → Modified Signal Head | ○ → N/A |
| ⊥ Sign | ⊥ Sign |
| ⊥ Pedestrian Signal Head With Push Button & Sign | ⊥ Sign |
| ⊥ Signal Pole with Guy | ⊥ Sign |
| ⊥ Signal Pole with Sidewalk Guy | ⊥ Sign |
| ⊥ Inductive Loop Detector | ⊥ Sign |
| ⊥ Controller & Cabinet | ⊥ Sign |
| ⊥ Junction Box | ⊥ Sign |
| --- 2-in Underground Conduit | --- 2-in Underground Conduit |
| N/A Right of Way | → Right of Way |
| → Directional Arrow | → Directional Arrow |
| ○ Metal Strain Pole | ○ Metal Strain Pole |
| ○ Type II Signal Pedestal | ○ Type II Signal Pedestal |
| ⊥ "U-TURN YIELD TO RIGHT TURN" Sign (R10-16) | ⊥ "U-TURN YIELD TO RIGHT TURN" Sign (R10-16) |

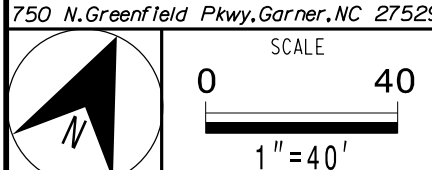
Signal Upgrade - Final Design

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Prepared for the Offices of:
 Transportation Mobility and Safety Division
 NORTH CAROLINA PROFESSIONAL ENGINEERS
 SEAL 29449
 JEFFREY L. WATSON
 3/29/2018

US 401 (Raeford Road) at SR 1104 (Strickland Bridge Road)
 Division 6 Cumberland County Fayetteville
 PLAN DATE: March 2018 REVIEWED BY: E D Harris
 PREPARED BY: A D Smith REVIEWED BY: B L Watson

REVISIONS
 INIT. DATE
 DATE
 3/29/2018
 SIG. INVENTORY NO. 06-0596



3/29/2018
 User: rfmancey
 C:\Users\rfmancey\Documents\Signal Design\4405_Sig.dsn_06-0596_Final.dgn