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PROJECT REFERENCE NO.	SHEET NO.
R-5799	Sig. 15.0

PHASING DIAGRAM

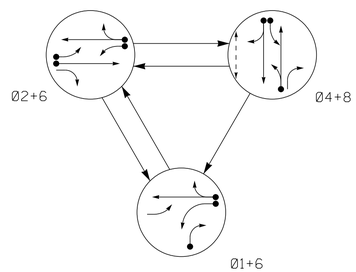
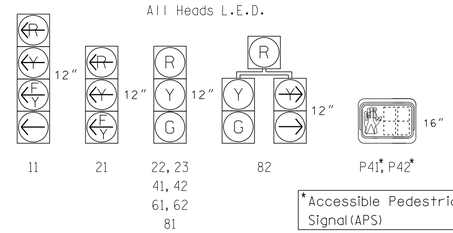


TABLE OF OPERATION

SIGNAL FACE	PHASE Ø1+6	Ø2+6	Ø4+8	FLASH
11	←●	←F Y	←R	←Y
21	←F Y	←F Y	←R	←Y
22, 23	R	G	R	Y
41, 42	R	R	G	R
61, 62	G	G	R	Y
81	R	R	G	R
82	R/	R	G	R
P41, P42	DW	DW	W	DRK

SIGNAL FACE I.D.

All Heads L.E.D.



*Accessible Pedestrian Signal (APS)

MAXTIME DETECTOR INSTALLATION CHART

DETECTOR					PROGRAMMING							
LOOP	SIZE (FT)	DISTANCE FROM STOPBAR (FT)	TURNS	NEW LOOP	CALL PHASE	DELAY TIME	EXTEND TIME	EXTEND	ADDED INITIAL	CALL	DELAY DURING GREEN	NEW CARD
1A	6X40	0	2-4-2	-	1	15.0	-	X	-	X	-	X
					6	3.0	-	X	-	X	X	X
1B	6X40	0	*	-	1	15.0	-	X	-	X	-	*
2A	6X6	353	6	-	2	-	-	X	X	X	-	X
2B	6X40	0	2-4-2	-	2	3.0	-	X	-	X	X	X
4A	6X40	0	2-4-2	-	4	3.0	-	X	-	X	-	X
4B	6X40	0	2-4-2	-	4	10.0	-	X	-	X	-	X
4C	6X6	0	3	-	4	15.0	-	X	-	X	-	X
6A	6X6	355	6	-	6	-	-	X	X	X	-	X
8A	6X40	0	*	-	8	-	-	X	-	X	-	*

* Video Detection Zone

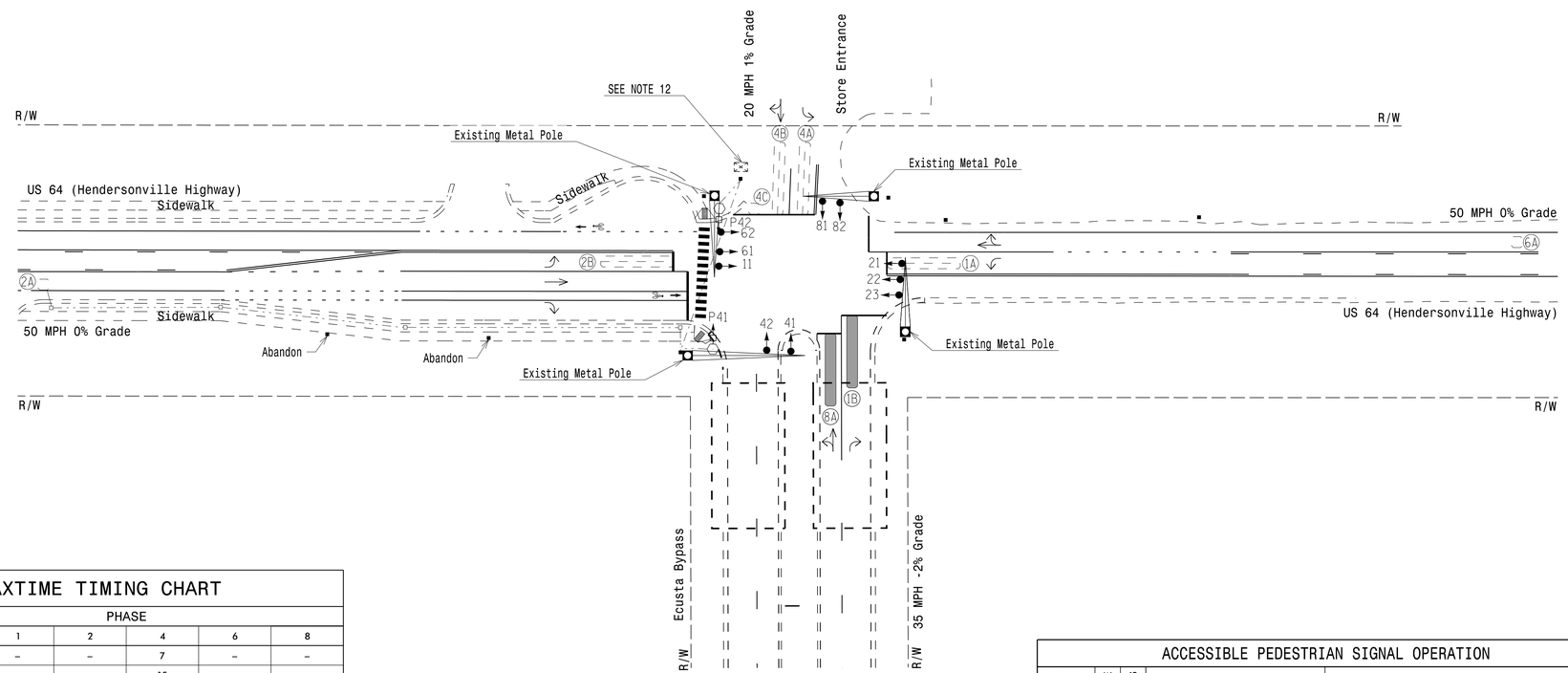
3 Phase
Fully Actuated
Isolated

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 may be lagged.
4. Set all detector units to presence mode.
5. Omit "WALK" and flashing "DON'T WALK" with no pedestrian calls.
6. Program pedestrian heads to countdown the flashing "Don't Walk" time only.
7. Portions of high visibility crosswalk not shown for clarity.
8. All pedestrian pushbuttons shall be Vibro-Tactile.
9. All APS shall use "Rapid Tick" sound.
10. Relocate eastbound approach stopbar as shown.
11. Install new 2070 LX controller in existing signal cabinet.
12. Install NCDOT-supplied cell modem. Request cell modem from Division Traffic Engineer eight weeks prior to deployment.

PHASING DIAGRAM DETECTION LEGEND

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



LEGEND

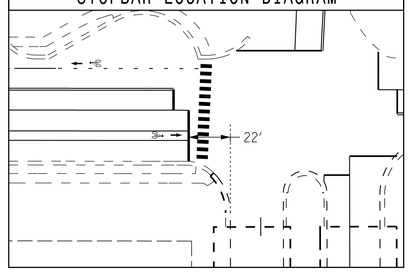
PROPOSED		EXISTING
	Traffic Signal Head	
	Modified Signal Head	N/A
	Pedestrian Signal Head With Push Button & Sign	
	Sign	
	Metal Pole with Mastarm	
	Signal Pole with Guy	
	Signal Pole with Sidewalk Guy	
	Inductive Loop Detector	
	Video Detection Zone	
	Controller & Cabinet	
	Junction Box	
	Oversized Junction Box	
	Type I Pushbutton Post	
	Type II Signal Pedestal	
	Strain Pole	
	Curb Ramp	
	2-in Underground Conduit	
DD	Directional Drill	N/A
	Directional Arrow	
N/A	Right of Way	

MAXTIME TIMING CHART

FEATURE	PHASE 1	2	4	6	8
Walk *	–	–	7	–	–
Ped Clear *	–	–	15	–	–
Min Green	7	14	7	14	7
Passage *	2.0	6.0	2.0	6.0	3.0
Max 1 *	15	90	20	90	20
Yellow Change	3.0	4.8	3.0	4.8	4.0
Red Clear	2.6	1.5	2.1	1.5	1.6
Added Initial *	–	2.5	–	2.5	–
Maximum Initial *	–	40	–	40	–
Time Before Reduction *	–	15	–	15	–
Time To Reduce *	–	30	–	30	–
Minimum Gap	–	3.0	–	3.0	–
Advance Walk	–	–	–	–	–
Non Lock Detector	X	–	X	–	X
Vehicle Recall	–	MIN. RECALL	–	MIN. RECALL	–
Dual Entry	–	–	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.

STOPBAR LOCATION DIAGRAM



ACCESSIBLE PEDESTRIAN SIGNAL OPERATION

SIGNAL FACE	VOICE	TONES	INTERVAL	SPEECH MESSAGE
P41	-	X	Walk	(Percussive Tone)
	X	-	Flashing Don't Walk / Don't Walk	Wait. Wait to cross Hendersonville.
P42	-	X	Walk	(Percussive Tone)
	X	-	Flashing Don't Walk / Don't Walk	Wait. Wait to cross Hendersonville.

Signal Upgrade

RS&H
NC FIRM LICENSE No: F-0493
1520 SOUTH BOULEVARD, SUITE 200
CHARLOTTE, NC 28203
(704) 752-0610

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

SCALE 0 40 1"=40'

US 64 (Hendersonville Highway)
at
Ecusta Bypass / Store Entrance

Division 14 Transylvania County Brevard

PLAN DATE:	April 2023	REVIEWED BY:	S.G. Haynie
PREPARED BY:	P. Koloski	REVIEWED BY:	

REVISIONS	INIT.	DATE

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

SEAL
NORTH CAROLINA PROFESSIONAL SEAL 029531 ENGINEER STEVEN G. HAYNIE

DocuSigned by: Steven G. Haynie 4/28/2023
DESIGN ENGINEER SIGNATURE DATE

Sig Inventory No. 14-1288

4/28/2023
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