11-25-20
RECONFIGURED

1257

Newest Reconfigured 6-26-18

Berryhill @ Bush River Done

3

SIGNAL EQUIPMENT

ONE (1) NEW 8-PHASE FULLY ACTUATED STANDARD 2070 CONTROLLER WITH FLASHER, SIGNAL MONITOR UNIT, AND BASE-MOUNTED 332A CABINET

SEVEN (7) NEW MODEL 222, 2-CHANNEL VEHICLE DETECTOR UNITS

EXT ▭ PROP. ▬

PEDESTRIAN SIGNALS EXT P PROP P W/ACT &SIGN

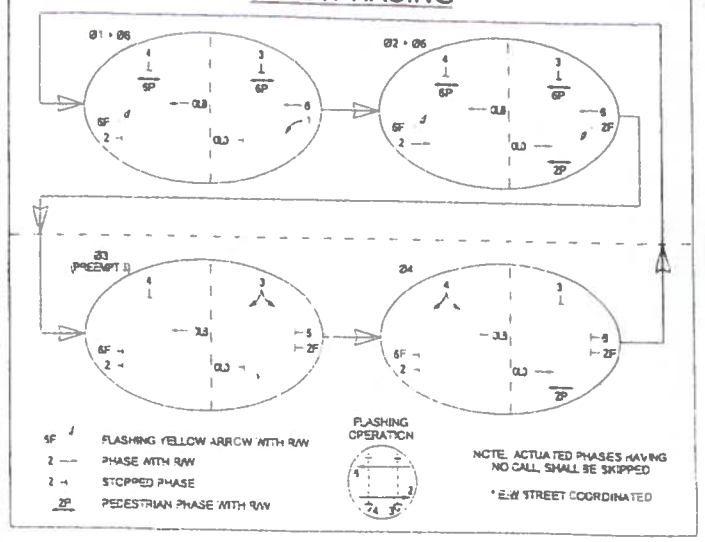
VEHICLE SIGNALS: EXT PROP

HEAD NUMBER	1,2F	2	3A	3B	4A	4B	6	6F	OLB	OLD	2P	6P
LENS	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G	R Y G	R FY G	R Y G	R Y G		
PHASE	1,OLA	2	3	3	4	4	6	OLC	OLB	OLD	2P	6P
SIZE	12"	12"	12"	12"	12"	12"	12"	12"	12"	12"	16"	16"
QUANTITY	1	2	2	2	1	1	2	1	2	2	2	6

OLA: Ø1+Ø2(FYA) OLC: Ø6(FYA)
OLB: Ø3+Ø6 OLD: Ø2+Ø4

METAL POLES W/O MAST ARMS	EXT	M	PROP	M
METAL POLES W/ MAST ARMS	EXT		PROP	
WOOD POLES AS NECESSARY	EXT	W	PROP	W
SPLICE BOXES AS NECESSARY	EXT		PROP	
INDUCTANCE LOOPS AS NECESSARY	EXT		PROP	
GUYS AS NECESSARY	EXT		PROP	
WIRELESS DETECTORS AS NECESSARY	EXT		PROP	

NEMA PHASING



SIGNAL TIMINGS

INTERVAL	PHASE 1	2	3	4	6
WALK	-	7	-	-	7
DON'T WALK	-	8	-	-	29
MIN INITIAL	8	15	6	6	15
MAX INITIAL	-	34	-	-	34
ADD/VEH	-	1.5	-	-	1.5
VEH EXT	2.5	6.0	2.5	2.5	6.0
TIME BFR REDUCT	-	20	-	-	20
TIME TO REDUCE	-	15	-	-	15
MIN GAP	-	2.5	-	-	2.5
MAX LIMIT	15	60	30	30	60
MAXIMUM 2	-	-	-	-	-
YELLOW	4.3	4.3	4.3	3.8	4.3
RED CLEAR	1.7	1.7	1.7	2.9	1.7

NOTE: COORDINATED TIMINGS WILL SUPERCEDE THESE VALUES

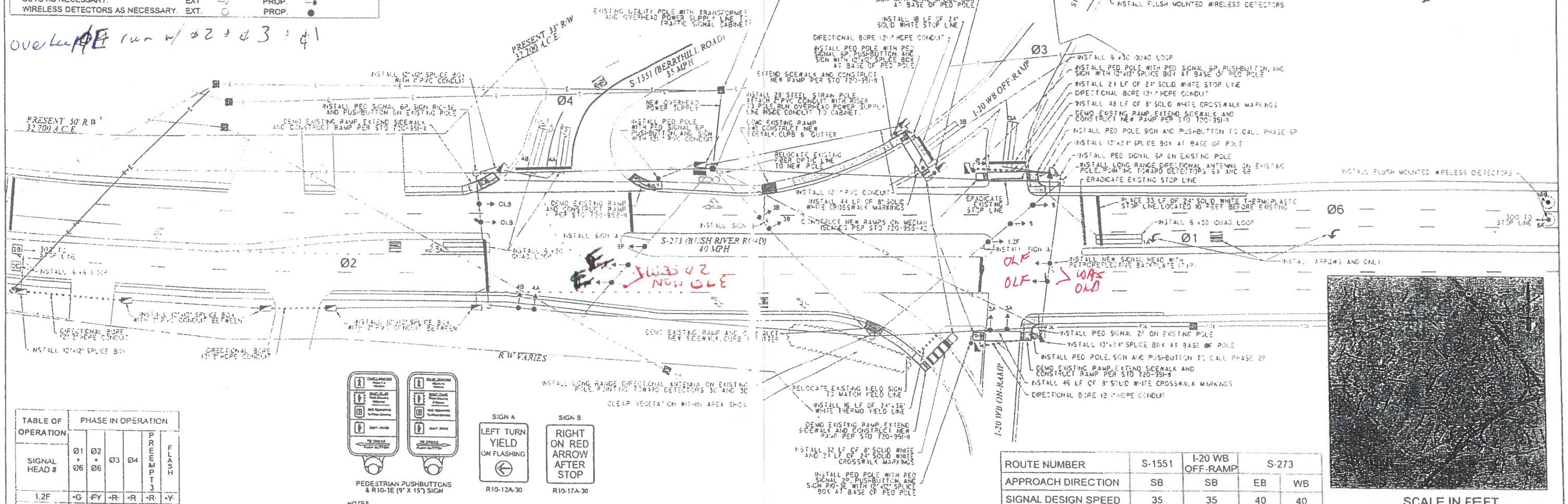
COUNTY	PROJECT ID	ROUTE NO.	ROUTE NAME	SHEET NO.
LEXINGTON	P030226	S-273	BUSH RIVER ROAD	TS3

DETECTOR INSTALLATION CHART

PHASE/ LOOP LTR	DETECTOR AMP NO	DETECTOR CHAN NO.	WIRED TO PHASE(S)	LOCK X	NON-LOCK X	PULSE X	PRES X	OPERATION DELAY SEC	OPERATION EXT SEC	SPECIAL FEATURES TIME OF DAY-TOD SWITCHING, etc.	LOOP DESIGN SIZE X	NO. OF TURNS	DIST. FROM ⊄
1A	1	—	1	-	X	-	X	15	—	Quadrupole	6'x30'	2-4-2	-3'
2A	2	—	2	-	X	-	X	—	—	Quadrupole	6'x30'	2-4-2	-3'
2B	3	—	2	X	-	-	X	—	—	—	6'x6'	4	300'
2C	3	—	2	X	-	-	X	—	—	—	6'x6'	4	300'
3A	4	—	3	-	X	-	X	—	—	Quadrupole	6'x30'	2-4-2	-3'
3B	4	—	3	-	X	-	X	15	—	Quadrupole	6'x30'	2-4-2	-3'
*3C, 3D	5	—	PREEMPT 3	-	X	-	X	8	—	Wireless Detector PREEMPT 3	6' DIAM. EA.	-	500'
4A	6	—	4	-	X	-	X	3	—	Quadrupole	6'x30'	2-4-2	-3'
4B	6	—	4	-	X	-	X	10	—	Quadrupole	6'x30'	2-4-2	-3'
6A	7	—	6	X	-	-	X	—	—	Wireless Detector	6' DIAM.	-	300'
6B	7	—	6	X	-	-	X	—	—	Wireless Detector	6' DIAM.	-	300'

*AFTER 8 SECONDS OF CONTINUOUS ACTIVATION, SENSORS 3C & 3D WILL CALL PREEMPT 3 TO DISPERSE QUEUE.

Overlap OLE run w/ Ø2 & Ø3 : Ø1



SIGN A: LEFT TURN YIELD ON FLASHING (R10-12A-30)

SIGN B: RIGHT ON RED ARROW AFTER STOP (R10-17A-30)

TABLE OF OPERATION	PHASE IN OPERATION Ø1 + Ø6	Ø2 + Ø6	Ø3	Ø4	PREEMPT 3	FLASH
SIGNAL HEAD #						
1,2F	G	FY	R	R	R	Y
2	R	G	R	R	R	Y
3A	R	R	G	R	G	R
3B	R	R	G	R	G	R
4A	R	R	R	G	R	R
4B	R	R	R	G	R	R
6	G	G	R	R	R	Y
6F	FY	FY	R	R	R	Y
OLB	G	G	G	R	G	Y
OLD	R	G	R	G	R	Y
2P	DW	WALK/DW	DW	DW	DW	DRK
6P	WALK/DW	WALK/DW	DW	DW	DW	DRK

FLASHING YELLOW ARROW HEAD WIRING DETAIL

1,2F: R, Y, FY, G → OLA R, OLA Y, OLA G, Ø1 G

6F: R, Y, FY, G → OLC R, OLC Y, OLC G

NOTES
1. COORDINATE WITH EXISTING UTILITIES FOR CONDUIT PLACEMENT.
2. RELOCATE AND REINSTALL EXISTING FIBER OPTIC CABLE, FIBER SPLICE PANEL AND ETHERNET SWITCH. THIS WORK TO BE PERFORMED UNDER TEMPORARY ADJUSTMENT OF TRAFFIC SIGNAL EQUIPMENT PAY ITEM
3. INSTALL NEW SIGNAL HEADS WITH RETROREFLECTIVE BACKPLATES ON ALL APPROACHES.
4. RETURN EXISTING SIGNAL EQUIPMENT TO THE SCDOT DISTRICT 1 SIGNAL SHOP
5. SEE FLASHING YELLOW ARROW HEAD WIRING DETAIL FOR WIRING OF FLASHING YELLOW ARROW HEAD(S).
6. PROVIDE A CONTINUOUS RUN OF 4 CONDUCTOR GRAY WIRE TO EACH LOOP. 4 CONDUCTOR GRAY SHALL NOT BE SPLICED FROM THE CABINET TO THE LOOP LEAD INS.
7. PED PUSHBUTTONS SHALL BE SOLID STATE WITH LATCHING LIGHT.
8. OVERHEAD POWER SUPPLY LINE SHALL BE ATTACHED AT THE TOP OF THE SIGNAL SUPPORT POLE WITH A MINIMUM 12" CLEARANCE BETWEEN THE POWER SUPPLY ATTACHMENT POINT AND THE SIGNAL SPAN ATTACHMENT POINT.
9. REPLACE MISSING HANDHOLD COVERS AND CAPS ON THE TOP OF EXISTING POLES.
10. INSTALL VISORS FOR THE PHASE 3B SIGNAL HEADS AND FIELD ADJUST SO THAT THEY ARE ONLY VISIBLE TO THE MOVEMENT THEY CONTROL.
11. FOR CLEARING VEGETATION, PERFORM WORK UNDER BID PRICE FOR CLEARING AND GRUBBING

SCALE IN FEET
0 30 60 120

ROUTE NUMBER	S-1551	I-20 WB OFF-RAMP	S-273	
APPROACH DIRECTION	SB	SB	EB	WB
SIGNAL DESIGN SPEED	35	35	40	40
GRADE (%)	-1.1%	+1.3%	+1.9%	-0.9%

DKT. NO. 32.700 SHEET NO. 18, 29, 32

PLANS PREPARED BY:

Stantec

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Tel: 843.740.7700
Fax: 843.740.7707
www.stantec.com

SOUTH CAROLINA CERTIFICATE OF AUTHORIZATION — STANTEC CONSULTING SERVICES, INC. No. C00310

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER — No 24051 — BRET GILLIS — 8/10/16

REV. NO.	BY	DATE	DESCRIPTION OF REVISION
4			
3			
2			
1			

TOPO. DATE
DISC. DATE
R/W DATE
GROUP

SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

LEXINGTON COUNTY
S-273 (BUSH RIVER ROAD) @ I-20 WB RAMPS & S-1551 (BERRYHILL ROAD) (SIGNAL ID TSI257)
TRAFFIC SIGNAL PLAN

SCALE: 1" = 30' RTE. S-273

User: degan
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9/16/2016