

FED. ROAD DIV. NO.	STATE	COUNTY	PROJECT ID	ROUTE NO.	SHEET NO.
3	SC	BEAUFORT	P030853	US 21 BUS.	TS1

SIGNAL EQUIPMENT

ONE (1) 8 PHASE FULLY ACTUATED STANDARD 2070 CONTROLLER WITH FLASHER, SIGNAL MONITOR UNIT, AND BASE - MOUNTED 336 CABINET. EXT. PROP.

6 MODEL 222, (2)-CHANNEL VEHICLE DETECTOR UNITS

4 PEDESTRIAN PUSHBUTTONS: EXT. PROP. W/ACT. & SIGN

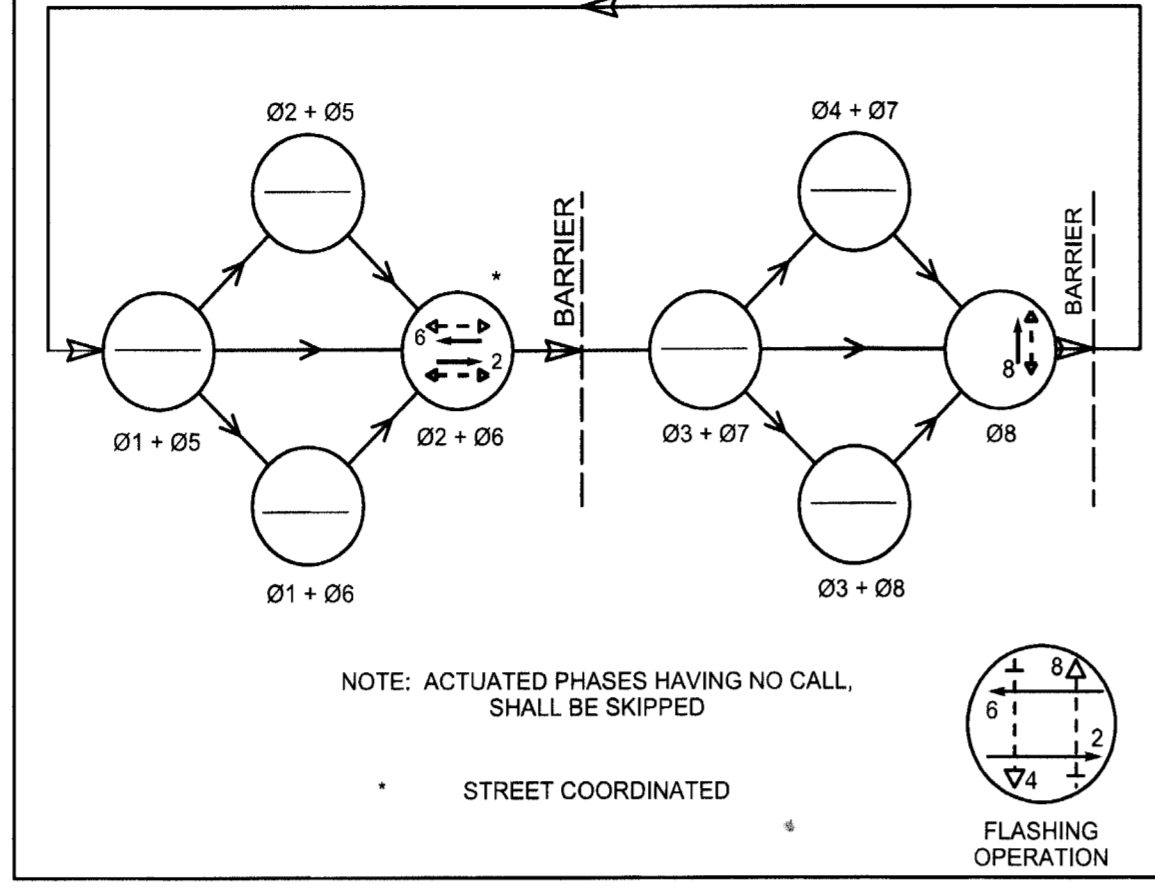
2 PEDESTRIAN PEDESTALS: EXT. PROP.

VEHICLE SIGNALS: EXT. PROP.

HEAD NUMBER	2	6	8	2P	8P
LENS	Y	Y	Y	Y	Y
PHASE	G	6	8	2	8
SIZE	12"	12"	16"	16"	16"
QUANTITY	2	2	2	2	2

OLA OLC
OLB OLD
METAL POLES AS NECESSARY: EXT. PROP. M
WOOD POLES AS NECESSARY: EXT. PROP. W

NEMA PHASING



MAST ARM NOTES:

1. Mast arm pole foundation designs to be the responsibility of Contractor.
2. Beaufort County to provide mast arms with street lighting, street name signs, & ped poles.
3. Mast arm lengths are estimated based on known field conditions. Mast arms of appropriate length to be furnished by Beaufort County based on final foundation locations.
4. SCDOT contractor to construct mast arm foundations and install mast arms with street lighting & street name signs.
5. Beaufort County to provide pedestrian poles and SCDOT contractor to install pedestrian pole foundations and poles.

SIGNAL DISPLAY SEQUENCE CHART

PHASE (ON)	NON-CONFLICTING PHASE (S)	CONFLICTING PHASE (S)
2	6, 2P	8, 8P
6	2, 2P	8, 8P
8	2, 2P	6, 6P

NOTE: ANY ACTUATED PHASE FOR WHICH THERE IS NO CALL SHALL BE OMITTED. NOTE: WHEN ONE PHASE IS ON ALONE, ANY NON-CONFLICTING PHASE MAY START TIMING CONCURRENTLY WITHOUT A CLEARANCE INTERVAL. CONFLICTING PHASES REQUIRE A CLEARANCE INTERVAL.

** WHEN CALLED, DISPLAY SOLID WALKING PERSON AND TIMES OUT WALK TIMING. THEN DISPLAYS FLASHING UPRAISED HAND AND TIMES WALK CLEARANCE (DON'T WALK TIMING). THEN DISPLAYS A SOLID UPRAISED HAND.

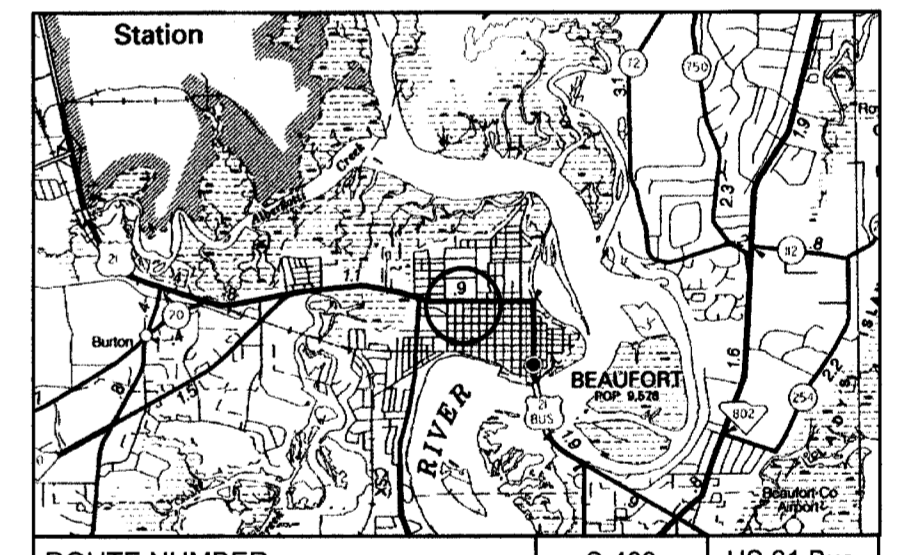
SIGNAL DISPLAY SEQUENCE (PREFERENTIAL PHASING)

SIGNAL HEAD NUMBER	PHASE	SEQUENCE	SEQUENCE	SEQUENCE	SEQUENCE
Y	2	Y R	Y R	Y R	Y R
Y	6	G	Y R	G	R R
R	8	R	Y R	G	Y R
DRK	2P	W	DWDW	DW	DWDW
DRK	8P	DW	DWDW	W	DWDW

NOTES:

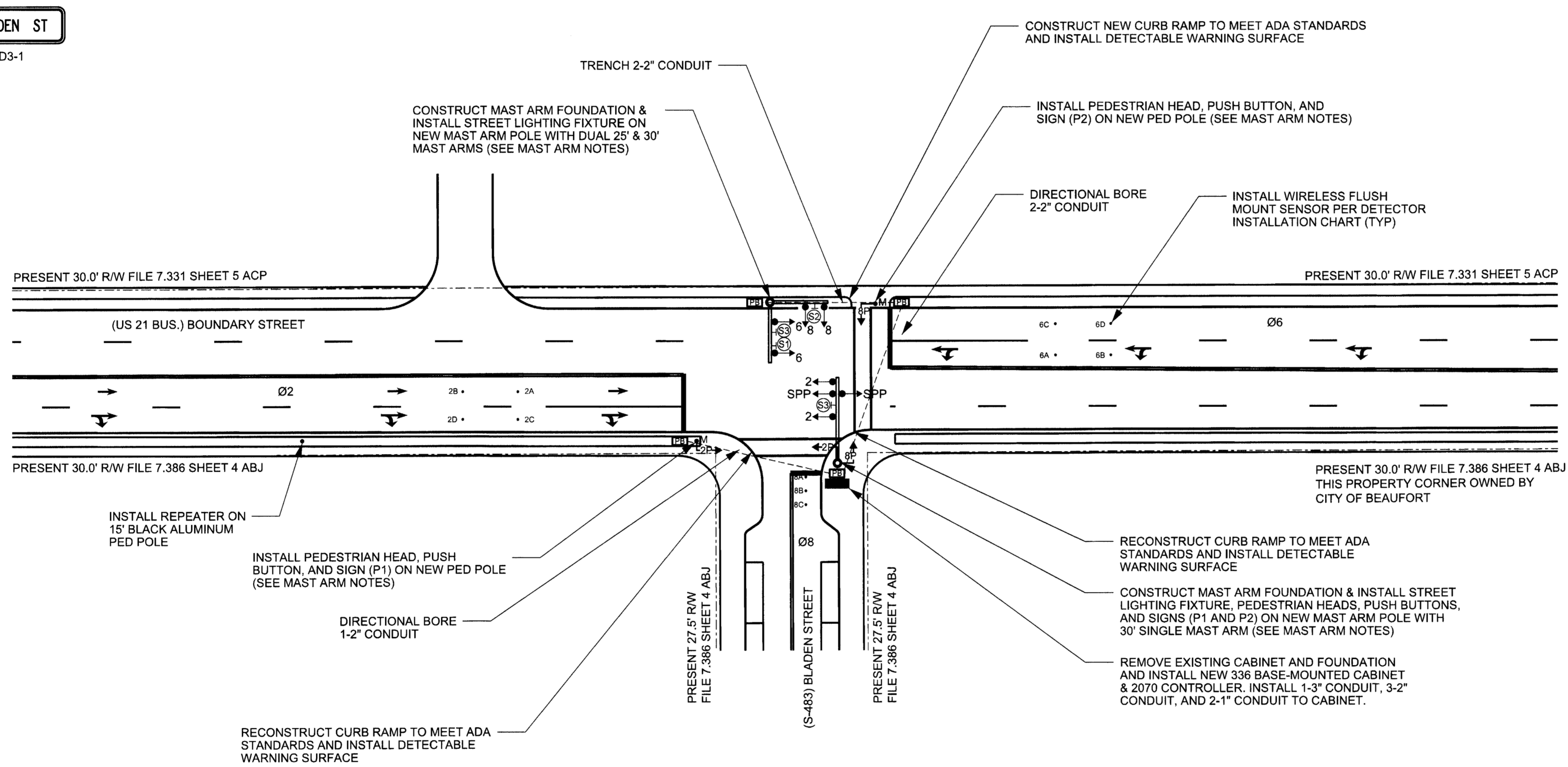
1. All signal heads and signs shall be mounted in agreement with SCDOT specifications & standards.
2. All materials and workmanship shall meet SCDOT and Beaufort County specifications & standards.
3. Contractor shall coordinate with existing utilities with regard to pole and conduit locations.
4. Provide a minimum 36" coverage for high-density polyethylene conduit.
5. All pull boxes shall be 13"x24"x18" unless otherwise specified.
6. All overhead signs shown on the plan are to be new with new mounting brackets.
7. Beaufort County Traffic Engineering to be included in any pre-construction conferences and shall be notified prior to signal being placed in operation.
8. Ped buttons shall be solid state with audio and tone and must be MUTCD compliant.
9. Furnish & install wireless detection system that integrates with Beaufort County's SNAPS system.
10. All signal heads shall be installed with retro reflective backplates.
11. Maintain all existing pavement markings. Replace any markings damaged during construction.
12. Street lights to be on separate power circuit from signal pole.
13. Any relocation of communications equipment to be paid under temporary adjustment of traffic signal equipment.

LOCATION MAP - NOT TO SCALE



ROUTE NUMBER	S-483	US 21 Bus.
APPROACH DIRECTION	NB	EB WB
SIGNAL DESIGN SPEED	30	35 35
GRADE (%)	1	1 1

* ESTIMATED



SIGNAL TIMINGS

INTERVAL	PHASE			
	2	6	8	8P
WALK	7			7
DON'T WALK	9			13
MIN INITIAL	15		15	8
MAX INITIAL				
ADD/VEH				
VEH EXT	3.5		3.5	3.5
TIM BFR REDUC				
TIME TO REDUC				
MIN GAP				
MAX LIMIT	45		45	35
MAXIMUM 2				
YELLOW	3.5		3.5	3.2
RED CLEAR	1.7		1.7	1.7

LOOP DETECTOR INSTALLATION CHART

PHASE/ LOOP LTR#	DETECTOR AMP NO.	DETECTOR CHAN NO.	WIRED TO PHASE(S)	LOCK			PULSE	OPERATION DELAY SEC	EXT SEC	SPECIAL FEATURES TIME OF DAY-TOD, SWITCHING, etc.	LOOP DESIGN	
				X	X	X					SIZE X	DIST. FROM STOP BAR
2A, 2B			2	X			X			WIRELESS SENSOR	6'X20'	60', 80'
2C, 2D			2	X			X			WIRELESS SENSOR	6'X20'	60', 80'
6A, 6B			6	X			X			WIRELESS SENSOR	6'X20'	60', 80'
6C, 6D			6	X			X			WIRELESS SENSOR	6'X20'	60', 80'
8A, 8B, 8C			8		X		X			WIRELESS SENSOR	6'X30'	3', 18', 33'

Note: Signal is part of a coordinated system. Signal timings are for free operation. Contact Beaufort County Traffic Engineering for Time of Day plan details.

1-12-2017



BEAUFORT COUNTY TRAFFIC ENGINEERING DEPARTMENT

DATE	REVISIONS	SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION ENGINEERING DIVISION CHARLESTON, S.C.	
		SUBJECT TITLE: District 6 Signal Rebuilds	
		SPECIFIC LOCATION: US-21 BUSINESS (BOUNDARY ST) @ S-7-483 (BLADEN ST)	
		CITY: Beaufort	COUNTY: Beaufort
DESIGNED	ACP	APPROVED BY	
CHECKED	SCK	DISTRICT #6 TRAFFIC ENGINEER	ENGINEER
REVIEWED		SCALE: 1" = 30'	DATE: 11/16
RECOMMENDED		SHEET NO.	INDEX NO.