DESIGN DESIGNATION ROUTE 141

A.A.D.T. = 31,196 V = 50 M.P.H.

FUNCTIONAL CLASSIFICATION-PRINCIPAL ARTERIAL

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION PLANS FOR PROPOSED

ROUTE 141 SIGNAL IMPROVEMENTS

Modot job no. jslo110

ST. LOUIS COUNTY

BEGIN PROJECT ROUTE 141 LOG MILE 12.207

LOCATION MAP NOT TO SCALE

INDEX OF SHEETS

EET MBEI
1
2-3
-63
1-66



DATE PREPARED

3/21/2024

ROUTE STATE

141 MO

DISTRICT SHEET NO.

COUNTY
ST LOUIS
JOB NO.
JSL0110

PROJECT NO.

DESCRIPTION
OL

LENGTH OF PROJECT

12.207 LOG MILE

23.769 LOG MILE

APPARENT LENGTH 11.6 MILES

FOR INFORMATION ONLY
ESTIMATED DISTURBED ACRES 0 ACRES

TITLE SHEET

ST. LOUIS COUNTY ROUTE 141 SIGNAL IMPROVEMENTS USA INC.

J. BROADWAY SUITE 2800
OUIS, MO 63102 (314) 206-444

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BEGINNING OF PROJECT

END OF PROJECT

NO NEW RIGHT OF WAY REQUIRED FOR THIS PROJECT

CONVENTIONAL SYMBOLS

	EXISTING	NEW
BUILDINGS AND STRUCTURES GUARD RAIL RIGHT-OF-WAY		••••
UTILITIES FIBER OPTICS OVERHEAD TELEPHONE UNDERGROUND TELEPHONE OVERHEAD POWER UNDERGROUND POWER GAS WATER	-F0- 	-F0
MANHOLE	SAN	SAN
FIRE HYDRANT	HAD	HAD
WATER VALVE	wv	₩ ′
WATER METER	wm	₩₩
DROP INLET	"	"
DITCH BLOCK	#	=
GROUND MOUNTED SIGN	SIGN	SIGN
LIGHT POLE	PP.	■
POWER POLE		
H-FRAME POWER POLE		$\overline{\Box}$
TELEPHONE PEDESTAL	PED	PED
FENCE CONSTRUCTION LIMITS EXISTING UTILITY EASEMENT TEMPORARY CONSTRUCTION EASEM	 MENT	_x_
BENCHMARK	ВМ	>

	FOR INFORMATION ONLY																													
	I-64 WB RAMPS	I-64 EB RAMPS	MILLDALE DR./ MANORS WAY	DUTCH MILL DR.	PARKWAY MIDDLE SCHOOL	CLAYWORTH DR.*	BURGUNDY LN.	HIGHLAND BLVD. DR./ WOODS MILLS RD.	MERAMEC STATION RD./ HOWARD GEORGE DR.	CARMAN RD.	BROMFIELD TER.	BRIARHURST DR.	BIG BEND RD.	HELFRICH RD.	VANCE RD./ FOREST AVE.	MARSHALL RD.	ELAM AVE.	I-44 WB RAMPS	I-44 EB RAMPS	MERAMEC STATION RD./ VALLEY DR.	CENTURION DR.	HAWKINS RD./ GLADIATOR DR.	BOWLES AVE.	SAN SIMEON WAY	GREGORY LN.	DIERBERGS CROSSING	MO-30 WB RAMPS	MO-30 EB RAMPS	GRAVOIS RD.	GRAVOIS BLUFFS BLVD.
ATC TRAFFIC SIGNAL CONTROLLER	1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
TRAFFIC SIGNAL VIDEO DETECTION SYSTEM (3 CAMERAS)	1	1			1	1				1	1	1					1		1							1	1	1		
TRAFFIC SIGNAL VIDEO DETECTION SYSTEM (4 CAMERAS)			1	1			1	1	1				1	1							1			1	1				1	
TRAFFIC SIGNAL VIDEO DETECTION SYSTEM (5 CAMERAS)																		1									·			
TRAFFIC SIGNAL VIDEO DETECTION SYSTEM (6 CAMERAS)															1	1				1		1	1							1
TRAFFIC SIGNAL ADVANCED DETECTION SYSTEM (2 UNITS)			1	1	1	1	1		1		1	1	1	1			1				1			1	1	1				
TRAFFIC SIGNAL ADVANCED DETECTION SYSTEM (3 UNITS)	1	1						1		1						1		1	1	1							1	1		
TRAFFIC SIGNAL ADVANCED DETECTION SYSTEM (4 UNITS)															1							1	1				·		1	1
REMOVAL OF IMPROVEMENTS	1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

^{*} CLAYWORTH SHARES A CONTROLLER WITH PARKWAY MIDDLE SCHOOL

ITEM NO.	ITEM DESCRIPTION	UNIT	QUANTITY
	ROADWAY ITEMS		' '
616-99.01	LUMP SUM TEMPORARY TRAFFIC CONTROL	LS	1
618-10.00	MOBILIZATION	LS	1
	SIGNAL ITEMS		
902-99.01	ATC TRAFFIC SIGNAL CONTROLLER	EA	29
902-99.02	TRAFFIC SIGNAL VIDEO DETECTION SYSTEM (3 CAMERAS)	EA	12
902-99.03	TRAFFIC SIGNAL VIDEO DETECTION SYSTEM (4 CAMERAS)	EA	11
902-99.04	TRAFFIC SIGNAL VIDEO DETECTION SYSTEM (5 CAMERAS)	EA	1
902-99.05	TRAFFIC SIGNAL VIDEO DETECTION SYSTEM (6 CAMERAS)	EA	6
902-99.06	TRAFFIC SIGNAL ADVANCED DETECTION SYSTEM (2 UNITS)	EA	15
902-99.07	TRAFFIC SIGNAL ADVANCED DETECTION SYSTEM (3 UNITS)	EA	10
902-99.08	TRAFFIC SIGNAL ADVANCED DETECTION SYSTEM (4 UNITS)	EA	5
902-99.09	REMOVAL OF IMPROVEMENTS	LS	1
902-99.10	TRAFFIC SIGNAL MAINTENANCE AND PROGRAMMING	LS	1
902-99.11	3 INCH CONDUIT, RIGID, IN-TRENCH OR PUSHED	LF	100
902-99.12	CONDUIT REPAIR	LF	100
902-99.13	REMOVE IN-PAVEMENT WIRELESS DETECTION SYSTEM SENSYS TRAVEL TIME	EA	8
910-88.11	PULL BOX, PREFORMED CLASS 2	EA	1
910-88.16	PULL BOX, PREFORMED CLASS 5	EA	1
910-99.01	AS-BUILT	LS	1
910-99.02	PULL ROPES	EA	29

DATE PREPARED

3/21/2024

OUTE
1 MO
SHEET NO.
2
7 ST LOUIS

JOB NO.

JSL 0 1 1 0

CONTRACT ID. PROJECT NO.

SUMMARY OF QUANTITIES

ST. LOUIS COUNTY ROUTE 141 SIGNAL IMPROVEMENTS

								_						EFFECTIVE: 04-01-2023
			TOTAL QTY TOTA							Y TOTAL SI				
		1 ' 1	AREA RELOC RELO					I .		OC RELOC NU	IM .			
SIGN	IN. SQ.FT		SQ.FT. EACH SQ.F	т.		SIGN	IN. S		CH SQ.FT. EA	CH SQ.FT.		ITEM		
			ING SIGNS		DESCRIPTION				IDE SIGNS		DESCRIPTION	NUMBER	QTY	DESCRIPTION
	48X48 16.0	-			TURN (SYMBOL LEFT ARROW)	E05-1	36X48				GORE EXIT	6122008		IMPACT ATTENUATOR 40 MPH (SAND BARRELS
WO1-1R WO1-2L	48X48 16.0				TURN (SYMBOL RIGHT ARROW) CURVE (SYMBOL LEFT ARROW)	E05-2 E05-2a	48X36 48X36				EXIT OPEN EXIT CLOSED	6122009		IMPACT ATTENUATOR 45 MPH (SAND BARREL: IMPACT ATTENUATOR 50 MPH (SAND BARREL:
WO1 - 2R	48X48 16.0				CURVE (SYMBOL RIGHT ARROW)	GO20 - 1	60X24				ROAD WORK NEXT XX MILES	6122012		IMPACT ATTENUATOR 55 MPH (SAND BARRELS
WO1 - 3L	48X48 16.0				REVERSE TURN (SYMBOL LEFT ARROW)	GO20-2	48X24				END ROAD WORK	6122014		IMPACT ATTENUATOR 60 MPH (SAND BARRELS
WO1 - 3R	48X48 16.0	0			REVERSE TURN (SYMBOL RIGHT ARROW)	GO20-4	36X18	4.50			PILOT CAR FOLLOW ME	6122017		IMPACT ATTENUATOR 65 MPH (SAND BARRELS
WO1-4L	48X48 16.0				REVERSE CURVE (SYMBOL LEFT ARROW)	-	42X30				PILOT CAR IN USE WAIT & FOLLOW	6122019		IMPACT ATTENUATOR 70 MPH (SAND BARRELS
WO1 - 4R	48X48 16.0				REVERSE CURVE (SYMBOL RIGHT ARROW)	+	18X12				PILOT CAR IN USE WAIT & FOLLOW	6122020		REPLACEMENT SAND BARREL
	48X48 16 0			_	DOUBLE ARROW REVERSE CURVE (SYMBOL LT ARROWS) DOUBLE ARROW REVERSE CURVE (SYMBOL RT ARROWS)	MO4 - 8a	24X18				WORK ZONE (PLAQUE) END DETOUR	6122030 6123000A		IMPACT ATTENUATOR (RELOCATION) TRUCK OR TRAILER MOUNTED ATTENUATOR (
	48X48 16.0				TRIPLE ARROW REVERSE CURVE (SYMBOL LT ARROWS)	MO4 - 9L	48X36				DETOUR (LEFT ARROW)	6161008		ADVANCED WARNING RAIL SYSTEM
WO1-4cR	48X48 16.0	0			TRIPLE ARROW REVERSE CURVE (SYMBOL RT ARROWS)	MO4 - 9R	48X36				DETOUR (RIGHT ARROW)	6161012		BUOYS (BOATS KEEP OUT)
WO1-6	60X30 12.5				HORIZONTAL ARROW (SYMBOL)	MO4-9P	48X12				STREET NAME (PLAQUE)	6161013		BUOYS (NO WAKE)
WO1-6a	72X36 18.0				HORIZ. ARROW (SYMBOL ON PERMANENT BARRICADE)	-	48X18				DETOUR (ARROW LEFT)	6161014	100	SPECIAL SIGN ASSEMBLY (BOATS KEEP OUT
WO1-7 WO1-7a	60X30 12.50 72X36 18.00				DOUBLE HEAD HORIZONTAL ARROW (SYMBOL) DOUBLE HEAD HORIZ. ARROW (SYMBOL ON PERM. BARR.)	MO4 - 10R	R 48X18		 GULATORY S	ICNS	DETOUR (ARROW RIGHT)	6161025		CHANNELIZER (TRIM LINE) TYPE III MOVEABLE BARRICADE
WO1-78	18X24 3 00			_	CHEVRON (SYMBOL)	R1-1	48X48		GOLATORT 3	10113	STOP	6161033		DIRECTION INDICATOR BARRICADE
WO1-8a	30X36 7.50				CHEVRON (SYMBOL FOR DIVIDED HIGHWAYS)	R1-2	48TR I				YIELD	6161040	1	FLASHING ARROW PANEL
WO3 - 1	48X48 16.0	0			STOP AHEAD (SYMBOL)	R1-2a	36X36	9.00			TO ONCOMING TRAFFIC (PLAQUE)	6161047		TYPE III OBJECT MARKER
WO3 - 2	48X48 16.0				YIELD AHEAD (SYMBOL)	R1-3P	30X12				ALL WAY (PLAQUE)	6161055		SEQUENTIAL FLASHING WARNING LIGHT
WO3 - 3	48X48 16.0				SIGNAL AHEAD (SYMBOL) BE PREPARED TO STOP	R2-1 R3-1	36X48				SPEED LIMIT XX	6161070		TUBULAR MARKER
WO3 - 4 WO3 - 5	48X48 16.0				SPEED LIMIT AHEAD	R3-1	48X48 48X48				NO RIGHT TURN (SYMBOL) NO LEFT TURN (SYMBOL)	6161095		RADAR SPEED ADVISORY SYSTEM CHANGEABLE MESSAGE SIGN,
WO4 - 1L	48X48 16.0				MERGE (SYMBOL FROM LEFT)	R3-3	36X36				NO TURNS	6161096		COMMISSION FURNISHED/RETAINED
WO4 - 1R	48X48 16.0				MERGE (SYMBOL FROM RIGHT)	R3-4	48X48				NO U-TURN (SYMBOL)			CHANGEABLE MESSAGE SIGN W/O COMM.
WO4-1aL	48X48 16.0	0			MERGE (ARROW SYMBOL)	R3-7L	30X30	6.25 2	12.5		LEFT LANE MUST TURN LEFT	6161098A		INTERFACE - CONTRACTOR FURNISHED/RETA
	48X48 16.0				MERGE (ARROW SYMBOL)	R3-7R	30X30				RIGHT LANE MUST TURN RIGHT			CHANGEABLE MESSAGE SIGN WITH COMM.
WO5 - 1 WO5 - 3	48X48 16.0				ROAD/BRIDGE/RAMP NARROWS	R4-1 R4-2	36X48 36X48				DO NOT PASS PASS WITH CARE	6161099 6162000A		INTERFACE - CONTRACTOR FURNISHED/RETA WORK ZONE TRAFFIC SIGNAL SYSTEM
WO5 - 5	48X48 16.0				ONE LANE BRIDGE NARROW LANES	R4-8a	36X48				KEEP LEFT (HORIZONTAL ARROW)	6162002		TEMPORARY LONG-TERM RUMBLE STRIPS
WO6 - 1	48X48 16.0				DIVIDED HIGHWAY (SYMBOL)	R4-7a	36X48				KEEP RIGHT (HORIZONTAL ARROW)	-		TEMPORARY TRAFFIC BARRIER
WO6 - 2	48X48 16.0	0			DIVIDED HIGHWAY END (SYMBOL)	R5-1	30X30	6.25			DO NOT ENTER	6173600D		CONTRACTOR FURNISHED/RETAINED
WO6 - 3	48X48 16.0				TWO WAY TRAFFIC (SYMBOL)	R5-1a	36X24				WRONG WAY			TEMPORARY TRAFFIC BARRIER
WO7 - 3a	30X24 5.00				NEXT XX MILES (PLAQUE)	R6-1L	54X18				ONE WAY ARROW (LEFT)	6173602B		CONTRACTOR FURNISHED/COMMISSION RETAIN
WO8 - 1 WO8 - 2	48X48 16.0				BUMP DIP	R6-1R R6-2L	54X18 24X30				ONE WAY ARROW (RIGHT) ONE WAY (LEFT)	6174000A 6175010A		TEMP. TRAFFIC BARRIER HEIGHT TRANSITION RELOCATING TEMPORARY TRAFFIC BARRIER
WO8 - 3	48X48 16.0			_	PAVEMENT ENDS	R6-2R	24X30				ONE WAY (RIGHT)	0173010A		TEMPORARY TRAFFIC BARRIER
WO8 - 4	48X48 16.0				SOFT SHOULDER	R9-9	24X12		4		SIDEWALK CLOSED	6176000B		COMMISSION FURNISHED/RETAINED
WO8 - 5	48X48 16.0	0			SLIPPERY WHEN WET (SYMBOL)						SIDEWALK CLOSED AHEAD,			TEMP. TRAFFIC BARRIER HEIGHT TRANSITION
WO8 - 6	48X48 16.0				TRUCK CROSSING (WITH FLAGS)	R9-11L	24X18	3.00 1	3		(ARROW LEFT) CROSS HERE	6177000B		COMMISSION FURNISHED/RETAINED
WO8 - 6 c	48X48 16.00 36X36 9.00				TRUCK ENTRANCE	R9-11R	24X18	2 00 1	3		SIDEWALK CLOSED AHEAD, (ARROW RIGHT) CROSS HERE	6208064A 9029400		TEMPORARY RAISED PAVEMENT MARKER
	36X36 9.00				LOOSE GRAVEL FRESH OIL/LOOSE GRAVEL	R10-6	24X16		3		STOP HERE ON RED (45^ ARROW)	9029400		TEMPORARY TRAFFIC SIGNALS TEMPORARY TRAFFIC SIGNALS AND LIGHTING
	48X48 16.0				LOW SHOULDER		48X30				ROAD CLOSED	3023101		TENION TO THE STORY OF THE ENGINEER PROPERTY.
WO8 - 11	48X48 16.0	0			UNEVEN LANES						ROAD CLOSED XX MILES AHEAD			
	48X48 16.0				NO CENTER LINE		60X30				LOCAL TRAFFIC ONLY			
	48X48 16.0				GROOVED PAVEMENT		60X30				ROAD CLOSED TO THRU TRAFFIC			
	30X24 5.00 48X48 16.0				MOTORCYCLE (PLAQUE) SHOULDER DROP-OFF (SYMBOL)	-	3A 60X48 :				FINE SIGN SPEEDING/PASSING (PLATE)			
	30X24 5.00				SHOULDER DROP-OFF (PLAQUE)	CONST-S	JA 30X12		SCELLANEOU	IS SIGNS	STEEDING/TASSING (TEATE)			<u></u>
I -	42RND 9 62				RAILROAD CROSSING	CONST-5	48X36				POINT OF PRESENCE			
WO12-1	24X24 4.00)			DOUBLE DOWN ARROW (SYMBOL)		96X48				POINT OF PRESENCE			
	48X48 16.0				LOW CLEARANCE (SYMBOL)		48X24				RATE OUR WORK ZONE			DISCLAIMER
	24X18 3.00				LOW CLEARANCE (PLAQUE)		7 72X36 3 48X36				RATE OUR WORK ZONE			SSIONAL WHOSE SIGNATURE AND PERSONAL
	84X24 14.0 120X60 50.0				OVERHEAD LOW CLEARANCE (FEET AND INCHES) LOW CLEARANCE XX FT XX IN XX MILES AHEAD	CONST-8	40830	12.00			WORK ZONE NO PHONE ZONE	1		AR HEREON ASSUMES RESPONSIBILITY WHAT APPEARS ON THIS PAGE, AND
	120X60 50.0				WIDTH RESTRICTION XX FT XX IN XX MILES AHEAD							-		(PURSUANT TO SECTION 327.411 RSMO)
WO13-1	30X30 6.25				ADVISORY SPEED (PLAQUE)							SPE	ECIFICA	TION, ESTIMATES, REPORTS, OR OTHER
-	30X24 5.00				XXX FEET (PLAQUE)									OR INSTRUMENTS NOT SEALED BY THE
	30X24 5.00				X MILE (PLAQUE)									ED PROFESSIONAL RELATING TO OR
	48X48 16.0		64		ROAD/BRIDGE/RAMP WORK AHEAD									TO BE USED FOR ANY PART OR PARTS OF CT TO WHICH THIS PAGE REFERS.
	48X48 16.0				DETOUR AHEAD ROAD CLOSED AHEAD									
	48X48 16.0				ONE LANE ROAD AHEAD	616-10	0.05		TOTAL	- 		J		
WO20-5	48X48 16.0	0 2	32		RIGHT/CENTER/LEFT LANE CLOSED AHEAD	-	RUCTION	I SIGNS						
	48X48 16.0				2 RIGHT/CENTER/LEFT LANES CLOSED AHEAD	616-10			-	TOTAL				
	48X48 16.0		32		RIGHT/CENTER/LEFT LANE CLOSED	RELOCA	ATED SI	GNS		*				
_	48X48 16.00 36X36 9.00				FLAGGER (SYMBOL, WITH FLAGS) FRESH OIL		TEMC CUS	WAL ON T	IC CUEET WY	DE DAID 500	LINDED TEMPODARY TRAFFIC CONTROL			
	48X48 16.0				SHOULDER WORK AHEAD		TEMS SHO MP SUM).	WIN ON IH	15 SHEEL WILL	. BE PAID FOR	UNDER TEMPORARY TRAFFIC CONTROL			SUMMARY OF QUANTITIES
	48X48 16.0				BLASTING ZONE AHEAD	1 .	•	a=				-		33
	42X36 10.5				TURN OFF 2-WAY RADIO AND PHONE	SIGN	AND DEVI	CE LOCAT	ION WILL BE F	· IELD VERIFIED	O AND APPROVED BY THE ENGINEER.			ST. LOUIS COUNTY
						1								

* NO DIRECT PAYMENT WILL BE MADE FOR RELOCATING OR COVERING/UNCOVERING

EXISTING OR TCP SIGNS UNLESS SPECIFIED.

WET PAINT (ARROW PIVOTS)

END BLASTING ZONE

WO22-3 | 42X36 | 10.50

GO22-1 21X15 2.19

DESCRIPTION IMPACT ATTENUATOR 40 MPH (SAND BARRELS) IMPACT ATTENUATOR 45 MPH (SAND BARRELS) IMPACT ATTENUATOR 50 MPH (SAND BARRELS) IMPACT ATTENUATOR 55 MPH (SAND BARRELS) IMPACT ATTENUATOR 60 MPH (SAND BARRELS)

TRUCK OR TRAILER MOUNTED ATTENUATOR (TMA)

INTERFACE - CONTRACTOR FURNISHED/RETAINED CHANGEABLE MESSAGE SIGN WITH COMM. INTERFACE - CONTRACTOR FURNISHED/RETAINED

CONTRACTOR FURNISHED/COMMISSION RETAINED TEMP. TRAFFIC BARRIER HEIGHT TRANSITION RELOCATING TEMPORARY TRAFFIC BARRIER

3/21/2024 141 MO SHEET NO. DISTRICT

3 SL COUNTY ST LOUIS JOB NO. JSL0110

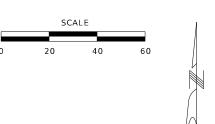
PROJECT NO.

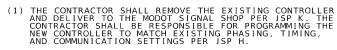
CONTRACT ID.

BRIDGE NO.

ST. LOUIS COUNTY ROUTE 141 SIGNAL IMPROVEMENTS







- (2) THE CONTRACTOR SHALL REMOVE THE EXISTING VIDEO DETECTION EQUIPMENT INCLUDING ANY UNUSED CAMERAS, CABINET HARDWARE, MOUNTING HARDWARE/BRACKETS AND CABLING. THE EXISTING VIDEO DETECTION EQUIPMENT SHALL BE DELIVERED TO THE MODOT SIGNAL SHOP PER JSP K. THE CONTRACTOR SHALL INSTALL A COMPLETE VIDEO DETECTION SYSTEM WITH ENCLOSURES, MOUNTING HARDWARE/BRACKETS, TERMINATION PANELS, POWER AND COMMUNICATION CABLES FOR STOP BAR DETECTION PER JSP I.
- (3) THE CONTRACTOR SHALL INSTALL RADAR DETECTION UNITS AND PROGRAM FOR ADVANCED DETECTION PER JSP J.
- (4) CONTRACTOR SHALL PROGRAM DATA COLLECTION ZONE IN ORDER TO COLLECT SPEED, CLASSIFICATION, AND VOLUME DATA FOR THIS LANE.

	TRAFFIC SIGNALS LEGEND
M	NEW CONTROLLER IN EXISTING CABINET
- 1 155	EXISTING SIGNAL HEAD
יבובי	EXISTING VIDEO/RADAR DETECTION UNIT
Þ₩	NEW VIDEO/RADAR COMBINATION DETECTION UNIT
XX	NEW VIDEO DETECTION UNIT
DOED.	NEW RADAR DETECTION UNIT
4	EXISTING GRIDSMART VIDEO DETECTION UNIT
*	EXISTING ACCESS POINT
r#	EXISTING REPEATER
(•)	EXISTING SENSYS DETECTOR PROBE
0	6 X 6 LOOP DETECTOR
E===3	6 X 15 LOOP DETECTOR
\{	30 X 6 LOOP DETECTOR
	EXISTING STOP BAR DETECTION ZONE
	PROPOSED STOP BAR DETECTION ZONE
CITILI	EXISTING MAST ARM

EXISTING TRUSS

TRAFFIC SIGNAL SHEET 1 OF 60

ST. LOUIS COUNTY
ROUTE 141 SIGNAL IMPROVEMENTS



DATE PREPARED

3/21/2024

JOB NO.

JOB NO.

CONTRACT ID.

PROJECT NO.

DESCRIPTION

BRIDGE NO.

COMMISSION

DOT

105 WEST CAPITO
JEFFERSON CITY, MO 6510

MISSOURI HIGHWAYS AND COMMISSI

■ USA INC. I. BROADWAY SUITE 2800 OUIS, MO 63102 (314) 206-4444

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L	_OC	AT]	I ON			POWER ASSE		CIF	COI.	T BREAKE	R TRIP R	AT I NG*	LIGHTING	CONTROL *		SERVIC	E POLE
10000101		6.7.		0.5		DRAWING	2014110			OLLER CONT &	POWER DISCO	SUPPLY NNECT	(ON POWER		CON	NTRACT	UTILITY
APPROACH		517	- ALLUN	UF	F SE I	DRAWING 902.15	DRAWING	AUX I L BRE A	.IARY AKER	SIGNAL	MAIN B	REAKER LIGHTING	120 VOLT CONTROL CABINET	MA I N BREAKER		RNISH	CÓMPÁNÝ
						Туре	U.I.P.	15	Amps	· Amps	Amps	Amps		Amps	CI.	Ft.	U.1.P.
	0		. 0	I	0	Туре		15	Amps	Amps	Amps	Amps		Amps	CI.	Ft.	

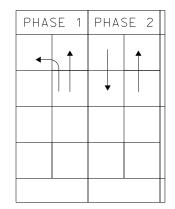
CONTROLLER ASSEMBLY AND AUXILIARY EQUIPMENT																					
LOCAT	ION		SYS MAS	TEM	A C T L I	ATED	ON-O SWI	FF* TCH	С	OORDINA	TION INT	ERFACE >	K				A CABI	170 CA		17	
APPROACH	STATION	OFFSET	(CLOSE	LOOP)	ACTO	AILU	TYF	PE	12C/7C H (IARDWIRE 1)	TIME	CLOSE) LOOP	FIBER	TIME *	_	TYPE *	TYP	E *	SOFTW	ARE *
AFFRUACH	STATION	OFFSET	NEMA	170																	
MO 141 & 1-64 WB RAMPS U.I.P. U.I.P. 1 1 1																					

			NEMA DETECTOR ASSIGNMENT											
				САІ	RD PO	DSITI	ON							
		1	2	3	4	5	6	7	8					
C H A	1			Ţ										
N N E L	2		•	<u> </u>		0								

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1	2	3	4	5	6	7	8	9	10	11	12
						Ρ.	9				

	DETECTOR SCHEE		
F	OR INFORMATION	ONLY	
		TY	PE
DETECTOR NUMBER	APPROACH	RADAR	VIDEO
11	NB (PHASE 1)		1
12	NB (PHASE 1)		1
21	SB (PHASE 2)		1
22 23	SB (PHASE 2)		1
23	SB (PHASE 2)		1
13	NB ADVANCE (PHASE 1)	1	
14	NB ADVANCE (PHASE 1)	1	
24 25	SB ADVANCE (PHASE 2) SB ADVANCE (PHASE 2)	1	
26	SB ADVANCE (PHASE 2)	1	
61	NB ADVANCE (PHASE 1)	1	
62	NB ADVANCE (PHASE 1)	1	
	TOTAL	7	5

- * ITEMS FOR WHICH SEPARATE PAYMENT WILL NOT BE MADE.
- (1) CABLING FOR THE NEW VIDEO DETECTION AND RADAR DETECTION SHOULD BE ROUTED THROUGH EXISTING CONDUITS. CONDUITS THAT ARE DAMAGED. COLLAPSED. OR UNUSABLE SHALL BE MARKED ON THE AS-BUILT PLANS PER JSP S.
- (2) THE INSTALLATION OF ALL EQUIPMENT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, DRAWINGS, AND ENGINEERING POLICY GUIDE.
- (3) THE CONTRACTOR SHALL HAVE RESPONSIBILITY OF LOCATING ALL UNDERGROUND AND OVERHEAD FACILITIES, STRUCTURES, AND UTILITIES.
- (4) THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL AND SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
- (5) ALL DRILLED OPENING FOR CABLE SHALL BE WEATHERPROOF.
 THERE WILL BE NO DIRECT PAYMENT FOR DRILLED OPENINGS.
 DISUSED OPENINGS SHALL BE PLUGGED BY THE CONTRACTOR.
- (6) THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROGRAMMING DETECTION ZONES PER JSP I AND JSP J. PER JSP I AND JSP J. COUNT ZONES SHOULD BE PROGRAMMED FOR EACH LANE AT THE INTERSECTION EVEN IF NO VEHICLE DETECTION ZONE IS REQUIRED FOR THAT LANE.
- (7) THE CONTRACTOR SHALL REMOVE ALL DISUSED EXISTING
 DETECTION CAMERA CABLE AS PART OF THE DETECTION
 LINESTAL LATION.
- (8) THE CONTRACTOR SHALL PULL ROPE THROUGH ANY USED CONDUITS PER JSP R.
- (9) MANUFACTURER'S REPRESENTATIVE SHALL BE PRESENT DURING PROGRAMMING OF DETECTION ZONES PER JSP I AND JSP J. MANUFACTURER'S REPRESENTATIVE SHALL PROVIDE GUIDANCE TO CONTRACTOR ON OPTIMAL PLACEMENT OF DETECTION EQUIPMENT AND PROGRAMMED DETECTION ZONES.



NOTE: FACE NUMBERS 61 AND 62 WIRED TO CONSTANT ON.

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TRAFFIC SIGNAL SHEET 2 OF 60

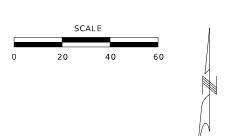
ST. LOUIS COUNTY ROUTE 141 SIGNAL IMPROVEMENTS

3/21/2024 141 MO SHEET NO. DISTRICT SL 5 COUNTY ST LOUIS JOB NO. JSL0110 CONTRACT ID. PROJECT NO BRIDGE NO

> WSP USA INC. 211 N. BROADWAY SUITE 2800 ST. LOUIS, MO 63102 (314) 206-44 MISSOURI CERTIFICATE OF AUTH

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- (2) THE CONTRACTOR SHALL REMOVE THE EXISTING VIDEO DETECTION EQUIPMENT INCLUDING ANY UNUSED CAMERAS, CABINET HARDWARE, MOUNTING HARDWARE/BRACKETS AND CABLING. THE EXISTING VIDEO DETECTION EQUIPMENT SHALL BE DELIVERED TO THE MODOT SIGNAL SHOP PER JSP K. THE CONTRACTOR SHALL INSTALL A COMPLETE VIDEO DETECTION SYSTEM WITH ENCLOSURES, MOUNTING HARDWARE/BRACKETS, TERMINATION PANELS, POWER AND COMMUNICATION CABLES FOR STOP BAR DETECTION PER JSP I.
- (3) THE CONTRACTOR SHALL INSTALL RADAR DETECTION UNITS AND PROGRAM FOR ADVANCED DETECTION PER JSP J.
- (4) CONTRACTOR SHALL PROGRAM DATA COLLECTION ZONES FOR THE NORTHBOUND RIGHT SLIP RAMP IN ORDER TO COLLECT SPEED, CLASSIFICATION, AND VOLUME DATA.

	TRAFFIC SIGNALS LEGEND
M	NEW CONTROLLER IN EXISTING CABINET
- 1 1>>	EXISTING SIGNAL HEAD
י>וֹ_יַי	EXISTING VIDEO/RADAR DETECTION UNIT
ÞVRI	NEW VIDEO/RADAR COMBINATION DETECTION UNIT
M	NEW VIDEO DETECTION UNIT
DE R	NEW RADAR DETECTION UNIT
4	EXISTING GRIDSMART VIDEO DETECTION UNIT
= +	EXISTING ACCESS POINT
C#	EXISTING REPEATER
(•)	EXISTING SENSYS DETECTOR PROBE
0	6 X 6 LOOP DETECTOR
E:::3	6 X 15 LOOP DETECTOR
\{	30 X 6 LOOP DETECTOR
	EXISTING STOP BAR DETECTION ZONE
	PROPOSED STOP BAR DETECTION ZONE
C	EXISTING MAST ARM

(T) EXISTING TRUSS

TRAFFIC SIGNAL SHEET 3 OF 60

ST. LOUIS COUNTY ROUTE 141 SIGNAL IMPROVEMENTS



3/21/2024 141 MO SHEET NO. SL 6

ST LOUIS JSL0110

CONTRACT ID.

PROJECT NO. BRIDGE NO

								Р	\bigcirc W	ER SI	JPPLY	,					
L	LOCATION				POWER ASSE		CIF	COI.	T BREAKE	R TRIP R	AT I NG*	LIGHTING	CONTROL *		SERVIC	E POLE	
10000101		6.7.		0.5		DRAWING	2014110			OLLER CONT &	POWER DISCO	SUPPLY NNECT	(ON POWER		CON	NTRACT	UTILITY
APPROACH		517	- ALLUN	UF	F SE I	DRAWING 902.15	DRAWING	AUX I L BRE A	.IARY AKER	SIGNAL	MAIN B	REAKER LIGHTING	120 VOLT CONTROL CABINET	MA I N BREAKER		RNISH	CÓMPÁNÝ
						Туре	U.I.P.	15	Amps	· Amps	Amps	Amps		Amps	CI.	Ft.	U.1.P.
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LOCAT	LOCATION			TEM TER	ACTUATED ON-			ON-OFF* COORDINATION INTERFACE *						NEMA CABINET			170 CABINET		170			
APPROACH	STATION	OFFSET	(CLOSED LOC		ACTO	AILU	TYPE		12C/7C F	HARDWIRE 1)	TIME	CLOSE	LOOP FIBER		TIME *	_	TYPE *	-	TYP	E *	SOFTW	ARE *
AFFRUACH	STATION	UFFSET	NEMA	170	NEMA	170	I	ΙI	MASTER	LOCAL	BASE	NEMA	170	FIBER		E	ΕV	DOUBLE	332	3365	BITRAN	WAPITI
MO 141 & I-64 EB RAMPS	U.I.P.	U.I.P.			1									1								

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1	2	3	4	5	6	7	8	9	10	11	12
						P	9				

F	DETECTOR SCHEDOR INFORMATION		
		TY	PE
DETECTOR NUMBER	APPROACH	RADAR	VIDEO
1 1	SB (PHASE 1)		1
12	SB (PHASE 1)		1
21	NB (PHASE 2)		1
22	NB (PHASE 2)		1
23	NB (PHASE 2)		1
31	EB (PHASE 3)		1
32 33	EB (PHASE 3) EB (PHASE 3)		1
33	EB (PHASE 3) EB (PHASE 3)		1
61	SB (PHASE 5)		1
62	SB (PHASE 6)		1
63	SB (PHASE 6)		1
- 03	SB (THASE 67		'
24	NB ADVANCE (PHASE 2)	1	
25	NB ADVANCE (PHASE 2)	1	
26	NB ADVANCE (PHASE 2)	1	
35	EB ADVANCE (PHASE 3)	1	
36	EB ADVANCE (PHASE 3)	1	
64	SB ADVANCE (PHASE 6)	1	
65	SB ADVANCE (PHASE 6)	1	
66	SB ADVANCE (PHASE 6)	1	
	TOTAL	8	12

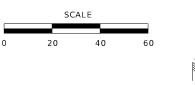
- * ITEMS FOR WHICH SEPARATE PAYMENT WILL NOT BE MADE.
- (1) CABLING FOR THE NEW VIDEO DETECTION AND RADAR DETECTION SHOULD BE ROUTED THROUGH EXISTING CONDUITS. CONDUITS THAT ARE DAMAGED, COLLAPSED, OR UNUSABLE SHALL BE MARKED ON THE AS-BUILT PLANS PER JSP S.
- (2) THE INSTALLATION OF ALL EQUIPMENT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, DRAWINGS, AND ENGINEERING POLICY GUIDE.
- (3) THE CONTRACTOR SHALL HAVE RESPONSIBILITY OF LOCATING ALL UNDERGROUND AND OVERHEAD FACILITIES, STRUCTURES, AND
- (4) THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL AND SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
- (5) ALL DRILLED OPENING FOR CABLE SHALL BE WEATHERPROOF.
 THERE WILL BE NO DIRECT PAYMENT FOR DRILLED OPENINGS. DISUSED OPENINGS SHALL BE PLUGGED BY THE CONTRACTOR.
- (6) THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROGRAMMING DETECTION ZONES PER JSP I AND JSP J. PER JSP I AND JSP J. COUNT ZONES SHOULD BE PROGRAMMED FOR EACH LANE AT THE INTERSECTION EVEN IF NO VEHICLE DETECTION ZONE IS REQUIRED FOR THAT LANE.
- (7) THE CONTRACTOR SHALL REMOVE ALL DISUSED EXISTING DETECTION CAMERA CABLE AS PART OF THE DETECTION
- (8) THE CONTRACTOR SHALL PULL ROPE THROUGH ANY USED CONDUITS PER JSP R.
- (9) MANUFACTURER'S REPRESENTATIVE SHALL BE PRESENT DURING PROGRAMMING OF DETECTION ZONES PER JSP I AND JSP J.
 MANUFACTURER'S REPRESENTATIVE SHALL PROVIDE GUIDANCE TO
 CONTRACTOR ON OPTIMAL PLACEMENT OF DETECTION EQUIPMENT AND PROGRAMMED DETECTION ZONES.

PHASE 1	PHASE 2	PHASE 3
		—
	↓	
	PHASE 6	

MO 141 AND I-64 EB RAMPS D - 37CINTERSECTION TRAFFIC SIGNAL SHEET 4 OF 60 ST. LOUIS COUNTY ROUTE 141 SIGNAL IMPROVEMENTS \\wsppw14ics01\iCS_pdf_work_dir\179208\790505_34\007_DTL_02_JSL0110.dgn 9:31:41 PM 3/21/2024

3/21/2024 141 MO SHEET NO. DISTRICT 7 SL COUNT ST LOUIS JOB NO. JSL0110 CONTRACT ID. PROJECT NO. BRIDGE NO







DATE PREPARED
3/21/2024
ROUTE STATE
141 MO

SL 8 ST LOUIS

SHEET NO.

JSL0110 CONTRACT ID.

PROJECT NO

BEIDGE NO.

- (1) THE CONTRACTOR SHALL REMOVE THE EXISTING CONTROLLER AND DELIVER TO THE MODOT SIGNAL SHOP PER JSP K. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROGRAMMING THE NEW CONTROLLER TO MATCH EXISTING PHASING, TIMING, AND COMMUNICATION SETTINGS PER JSP H.
- (2) THE CONTRACTOR SHALL DISCONNECT LOOP LEAD-IN WIRES AND REMOVE DETECTOR CARDS FROM DETECTOR RACK. EXISTING LOOP DETECTORS SHALL BE LEFT IN PLACE AND ABANDONED. THE CONTRACTOR SHALL INSTALL A COMPLETE VIDEO DETECTION SYSTEM WITH ENCLOSURES, MOUNTING HARDWARE/BRACKETS, TERMINATION PANELS, POWER AND COMMUNICATION CABLES FOR STOP BAR DETECTION PER JSP I.
- (3) THE CONTRACTOR SHALL INSTALL RADAR DETECTION UNITS AND PROGRAM FOR ADVANCED DETECTION PER JSP J.

TRAFFIC SIGNALS LEGEND

- NEW CONTROLLER IN EXISTING CABINET
- II
- EXISTING VIDEO/RADAR DETECTION UNIT
- NEW VIDEO/RADAR COMBINATION DETECTION UNIT
- NEW VIDEO DETECTION UNIT
- NEW RADAR DETECTION UNIT
- 🗘 EXISTING GRIDSMART VIDEO DETECTION UNIT
- EXISTING ACCESS POINT
- r# EXISTING REPEATER
- EXISTING SENSYS DETECTOR PROBE

6 X 6 LOOP DETECTOR

{----} 6 X 15 LOOP DETECTOR

30 X 6 LOOP DETECTOR

EXISTING STOP BAR DETECTION ZONE

PROPOSED STOP BAR DETECTION ZONE

()______ EXISTING MAST ARM

EXISTING TRUSS

TRAFFIC SIGNAL SHEET 5 OF 60

ST. LOUIS COUNTY
ROUTE 141 SIGNAL IMPROVEMENTS

MISSOURI HIGHWAYS AND TRANSPICOMMISSION

COMMISSION

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■ SP USA INC. I N. BROADWAY SUITE 2800 LOUIS, MO 63102 (314) 206-4444

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L	LOCATION				POWER ASSE		CIF	COI.	T BREAKE	R TRIP R	AT I NG*	LIGHTING	CONTROL *		SERVIC	E POLE	
10000101		6.7.		0.5		DRAWING	2014110			OLLER CONT &	POWER DISCO	SUPPLY NNECT	(ON POWER		CON	NTRACT	UTILITY
APPROACH		517	- ALLUN	UF	F SE I	DRAWING 902.15	DRAWING	AUX I L BRE A	.IARY AKER	SIGNAL	MAIN B	REAKER LIGHTING	120 VOLT CONTROL CABINET	MA I N BREAKER		RNISH	CÓMPÁNÝ
						Туре	U.I.P.	15	Amps	· Amps	Amps	Amps		Amps	CI.	Ft.	U.1.P.
	0		. 0	I	0	Туре		15	Amps	Amps	Amps	Amps		Amps	CI.	Ft.	

	CONTROLLER ASSEMBLY AND AUXILIARY EQUIPMENT																						
LOCATION			SYSTEM MASTER (CLOSED LOOP)		A C T L I	ATED	0N-01 SWI1	-OFF* VITCH COORDINATION INTERFACE *								NEMA CABINET		170 CABINET		17			
ADDDOACH	STATION DEESET	STATION OFFSE		(CLOSE	LOOP)	ACTO	AILU	TYF	PE 1	2C/7C H	HARDWIRE 1)	TIME	CLOSEC	L00P	FIBER	TIME *	-	TYPE *	-	TYPI	E *	SOFTW	ARE *
APPROACH STATION OFFSET NEMA 170 NEMA 170 I II MASTER LOCAL		LOCAL	BASE	NEMA	170	FIDER		E	ΕV	DOUBLE	332	336S	BITRAN	WAPITI									
MO 141 & MILLDALE DR/MANORS WAY	U.I.P.	U.I.P.			1									1									

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1	2	3	4	5	6	7	8	9	10	11	12
					I .	P	6				

F	DETECTOR SCHEDOR INFORMATION		
		TY	PE
DETECTOR NUMBER	APPROACH	RADAR	VIDEO
10	SB (PHASE 1)		1
21	NB (PHASE 2)		1
22	NB (PHASE 2)		1
23	NB (PHASE 2)		1
41	WB (PHASE 4)		1
50	NB (PHASE 5)		1
61	SB (PHASE 6)		1
62	SB (PHASE 6)		1
63	SB (PHASE 6)		1
81	EB (PHASE 8)		1
			1
24	NB ADVANCE (PHASE 2)	1	
25	NB ADVANCE (PHASE 2)	1	
26	NB ADVANCE (PHASE 2)	1	
42	WB ADVANCE (PHASE 4)	1	
64	SB ADVANCE (PHASE 6)	1	
65 66	SB ADVANCE (PHASE 6)	1	
66	SB ADVANCE (PHASE 6)	1	
	TOTAL	7	11

- * ITEMS FOR WHICH SEPARATE PAYMENT WILL NOT BE MADE.
- (1) CABLING FOR THE NEW VIDEO DETECTION AND RADAR DETECTION SHOULD BE ROUTED THROUGH EXISTING CONDUITS. CONDUITS THAT ARE DAMAGED. COLLAPSED. OR UNUSABLE SHALL BE MARKED ON THE AS-BUILT PLANS PER JSP S.
- (2) THE INSTALLATION OF ALL EQUIPMENT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, DRAWINGS, AND
- (3) THE CONTRACTOR SHALL HAVE RESPONSIBILITY OF LOCATING ALL UNDERGROUND AND OVERHEAD FACILITIES. STRUCTURES. AND
- (4) THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL AND SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
- (5) ALL DRILLED OPENING FOR CABLE SHALL BE WEATHERPROOF.
 THERE WILL BE NO DIRECT PAYMENT FOR DRILLED OPENINGS.
 DISUSED OPENINGS SHALL BE PLUGGED BY THE CONTRACTOR.
- (6) THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROGRAMMING
 DETECTION ZONES PER JSP I AND JSP J. PER JSP I AND JSP J.
 COUNT ZONES SHOULD BE PROGRAMMED FOR EACH LANE AT THE
 INTERSECTION EVEN IF NO VEHICLE DETECTION ZONE IS REQUIRED FOR THAT LANE.
- (7) THE CONTRACTOR SHALL REMOVE ALL DISUSED EXISTING DETECTION CAMERA CABLE AS PART OF THE DETECTION
- (8) THE CONTRACTOR SHALL PULL ROPE THROUGH ANY USED CONDUITS PER JSP R.
- (9) MANUFACTURER'S REPRESENTATIVE SHALL BE PRESENT DURING PROGRAMMING OF DETECTION ZONES PER JSP I AND JSP J. MANUFACTURER'S REPRESENTATIVE SHALL PROVIDE GUIDANCE TO CONTRACTOR ON OPTIMAL PLACEMENT OF DETECTION EQUIPMENT AND

PHASE 1	PHASE 2	PHASE 4			
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PHASE 5	PHASE 6	PHASE 8			

MO 141 AND MILLDALE DR/MANORS WAY D - 37CINTERSECTION TRAFFIC SIGNAL SHEET 6 OF 60 ST. LOUIS COUNTY ROUTE 141 SIGNAL IMPROVEMENTS

3/21/2024

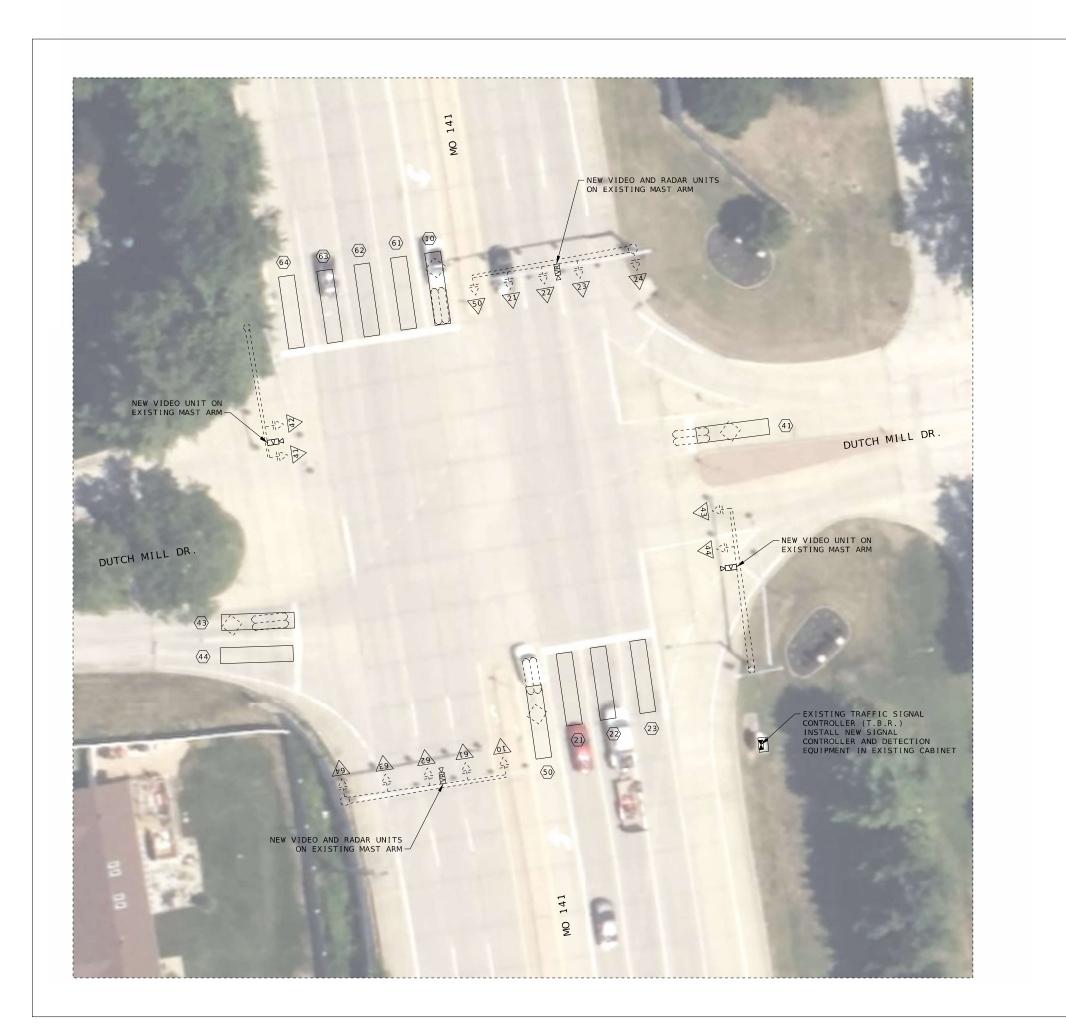
MO SHEET NO.

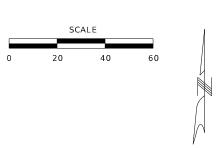
9 COUNTY ST LOUIS JOB NO. JSL0110 CONTRACT ID. PROJECT NO. BRIDGE NO

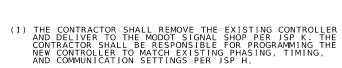
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DISTRICT SL

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(2) THE CONTRACTOR SHALL DISCONNECT LOOP LEAD-IN WIRES AND REMOVE DETECTOR CARDS FROM DETECTOR RACK. EXISTING LOOP DETECTORS SHALL BE LEFT IN PLACE AND ABANDONED. THE CONTRACTOR SHALL INSTALL A COMPLETE VIDEO DETECTION SYSTEM WITH ENCLOSURES, MOUNTING HARDWARE/BRACKETS, TERMINATION PANELS, POWER AND COMMUNICATION CABLES FOR STOP BAR DETECTION PER JSP I.

(3) THE CONTRACTOR SHALL INSTALL RADAR DETECTION UNITS AND PROGRAM FOR ADVANCED DETECTION PER JSP J.

TRAFFIC SIGNALS LEGEND

NEW CONTROLLER IN EXISTING CABINET $-\frac{1}{1}$ EXISTING SIGNAL HEAD 1>[_]_[EXISTING VIDEO/RADAR DETECTION UNIT ⊳\VR] NEW VIDEO/RADAR COMBINATION DETECTION UNIT $\bowtie \nabla$ NEW VIDEO DETECTION UNIT DE. NEW RADAR DETECTION UNIT EXISTING GRIDSMART VIDEO DETECTION UNIT EXISTING ACCESS POINT EXISTING REPEATER EXISTING SENSYS DETECTOR PROBE 6 X 6 LOOP DETECTOR {----} 6 X 15 LOOP DETECTOR EXISTING STOP BAR DETECTION ZONE

CITITITE EXISTING MAST ARM @كِنْ EXISTING TRUSS

TRAFFIC SIGNAL SHEET 7 OF 60

PROPOSED STOP BAR DETECTION ZONE

ST. LOUIS COUNTY ROUTE 141 SIGNAL IMPROVEMENTS



3/21/2024 141 MO SHEET NO. SL 10

ST LOUIS JSL0110

CONTRACT ID. PROJECT NO

	POWER SUPPLY																
L	_OC	AT]	I ON			POWER ASSE		CIF	COI.	T BREAKE	R TRIP R	AT I NG*	LIGHTING	CONTROL *		SERVIC	E POLE
10000101		6.7.		0.5		DRAWING	2014110			OLLER CONT &	POWER DISCO	SUPPLY NNECT	(ON POWER		CON	NTRACT	UTILITY
APPRUACE	APPROACH	STAT	- ALLUN	UF	F SE I	DRAWING 902.15	DRAWING	AUX I L BRE A	.IARY AKER	SIGNAL	MAIN B	REAKER LIGHTING	120 VOLT CONTROL CABINET	MA I N BREAKER		RNISH	CÓMPÁNÝ
						Туре	U.I.P.	15	Amps	· Amps	Amps	Amps		Amps	CI.	Ft.	U.1.P.
	0		. 0	I	0	Туре		15	Amps	Amps	Amps	Amps		Amps	CI.	Ft.	

	CONTROLLER ASSEMBLY AND AUXILIARY EQUIPMENT																					
LOCAT	LOCATION			TEM TER	ACTU	ON-OF SWIT	F * CH	С	OORDINA	TION INT	ERFACE *	K				A CABI		170 CA	ABINET	17	'0	
APPROACH	STATION	DEESET	(CLOSE	LOOP)	ACTO	AILU	TYP	E 1	12C/7C H	IARDWIRE 1)	TIME	CLOSE) LOOP	FIBER	TIME *	_	TYPE *		TYP	E *	SOFTW	ARE *
		STATION OFFSET	NEMA	170	NEMA	170	I	ΙΙ	MASTER	LOCAL	BASE	NEMA	170	FIBER		E	ΕV	DOUBLE	332	3365	BITRAN	WAPITI
MO 141 & DUTCH MILL DR	U.I.P.	U. J. P.			1									1								

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			CARD POSITION													
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_	DETECTOR SCHEE		
F	OR INFORMATION	UNLY	
		TY	PE
DETECTOR NUMBER	APPROACH	RADAR	VIDEO
10	SB (PHASE 1)		1
21	NB (PHASE 2)		1
22	NB (PHASE 2)		1
23	NB (PHASE 2)		1
41	WB (PHASE 4)		1
43	EB (PHASE 4)		1
44	EB (PHASE 4)		1
50	NB (PHASE 5)		1
61	SB (PHASE 6)		1
62	SB (PHASE 6)		1
63	SB (PHASE 6)		1
64	SB (PHASE 6)		1
24	NB ADVANCE (PHASE 2)	1	
25	NB ADVANCE (PHASE 2)	1	
26	NB ADVANCE (PHASE 2)	1	
65	SB ADVANCE (PHASE 6)	1	
66	SB ADVANCE (PHASE 6)	1	
67	SB ADVANCE (PHASE 6)	1	
	TOTAL	6	12

- * ITEMS FOR WHICH SEPARATE PAYMENT WILL NOT BE MADE.
- (1) CABLING FOR THE NEW VIDEO DETECTION AND RADAR DETECTION SHOULD BE ROUTED THROUGH EXISTING CONDUITS. CONDUITS THAT ARE DAMAGED, COLLAPSED, OR UNUSABLE SHALL BE MARKED ON THE AS-BUILT PLANS PER JSP S.
- (2) THE INSTALLATION OF ALL EQUIPMENT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, DRAWINGS, AND ENGINEERING POLICY GUIDE.
- (3) THE CONTRACTOR SHALL HAVE RESPONSIBILITY OF LOCATING ALL UNDERGROUND AND OVERHEAD FACILITIES. STRUCTURES. AND UTILITIES.
- (4) THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL AND SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
- (5) ALL DRILLED OPENING FOR CABLE SHALL BE WEATHERPROOF.
 THERE WILL BE NO DIRECT PAYMENT FOR DRILLED OPENINGS.
 DISUSED OPENINGS SHALL BE PLUGGED BY THE CONTRACTOR.
- (6) THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROGRAMMING DETECTION ZONES PER JSP I AND JSP J. PER JSP I AND JSP J. COUNT ZONES SHOULD BE PROGRAMMED FOR EACH LANE AT THE INTERSECTION EVEN IF NO VEHICLE DETECTION ZONE IS REQUIRED FOR THAT LANE.
- (7) THE CONTRACTOR SHALL REMOVE ALL DISUSED EXISTING DETECTION CAMERA CABLE AS PART OF THE DETECTION INSTALLATION.
- (8) THE CONTRACTOR SHALL PULL ROPE THROUGH ANY USED CONDUITS PER JSP R.
- (9) MANUFACTURER'S REPRESENTATIVE SHALL BE PRESENT DURING PROGRAMMING OF DETECTION ZONES PER JSP I AND JSP J. MANUFACTURER'S REPRESENTATIVE SHALL PROVIDE GUIDANCE TO CONTRACTOR ON OPTIMAL PLACEMENT OF DETECTION EQUIPMENT AND PROGRAMMED DETECTION ZONES.

3/21/2024 141 MO SHEET NO. DISTRICT SL 11 COUNTY ST LOUIS JOB NO. JSL0110 CONTRACT ID. PROJECT NO. BRIDGE NO D - 37C

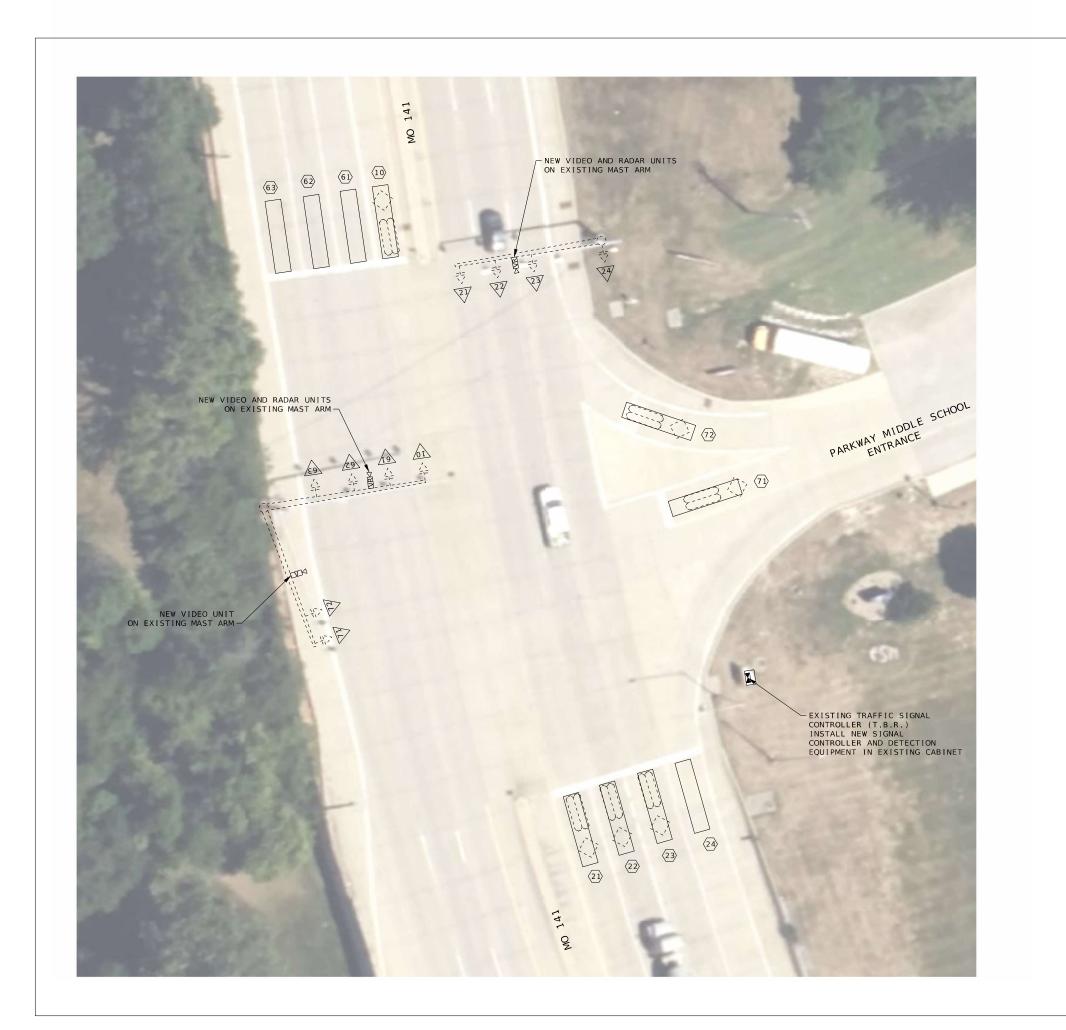
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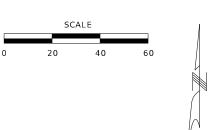
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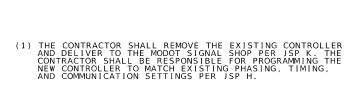
TRAFFIC SIGNAL SHEET 8 OF 60

ST. LOUIS COUNTY ROUTE 141 SIGNAL IMPROVEMENTS

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- (2) THE CONTRACTOR SHALL DISCONNECT LOOP LEAD-IN WIRES AND REMOVE DETECTOR CARDS FROM DETECTOR RACK EXISTING LOOP DETECTORS SHALL BE LEFT IN PLACE AND ABANDONED. THE CONTRACTOR SHALL INSTALL A COMPLETE VIDEO DETECTION SYSTEM WITH ENCLOSURES, MOUNTING HARDWARE/BRACKETS, TERMINATION PANELS, POWER AND COMMUNICATION CABLES FOR STOP BAR DETECTION PER JSP I
- (3) THE CONTRACTOR SHALL INSTALL RADAR DETECTION UNITS AND PROGRAM FOR ADVANCED DETECTION PER JSP J.

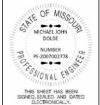
TRAFFIC SIGNALS LEGEND
NEW CONTROLLER IN EXISTING CABINET
EXISTING SIGNAL HEAD
EXISTING VIDEO/RADAR DETECTION UNIT
NEW VIDEO/RADAR COMBINATION DETECTION UNIT
NEW VIDEO DETECTION UNIT
NEW RADAR DETECTION UNIT
EXISTING GRIDSMART VIDEO DETECTION UNIT
EXISTING ACCESS POINT
EXISTING REPEATER
EXISTING SENSYS DETECTOR PROBE
6 X 6 LOOP DETECTOR
6 X 15 LOOP DETECTOR
30 X 6 LOOP DETECTOR

(EXISTING TRUSS

TRAFFIC SIGNAL SHEET 9 OF 60

EXISTING STOP BAR DETECTION ZONE PROPOSED STOP BAR DETECTION ZONE

ST. LOUIS COUNTY ROUTE 141 SIGNAL IMPROVEMENTS



3/21/2024 141 MO

SHEET NO. SL 12 ST LOUIS

JSL0110 CONTRACT ID.

PROJECT NO.

	POWER SUPPLY																
L	_OC	AT]	I ON			POWER ASSE		CIF	COI.	T BREAKE	R TRIP R	AT I NG*	LIGHTING	CONTROL *		SERVIC	E POLE
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APPRUACE	APPROACH	STAT	- ALLUN	UF	F SE I	DRAWING 902.15	DRAWING	AUX I L BRE A	.IARY AKER	SIGNAL	MAIN B	REAKER LIGHTING	120 VOLT CONTROL CABINET	MA I N BREAKER		RNISH	CÓMPÁNÝ
						Туре	U.I.P.	15	Amps	· Amps	Amps	Amps		Amps	CI.	Ft.	U.1.P.
	0		. 0	I	0	Туре		15	Amps	Amps	Amps	Amps		Amps	CI.	Ft.	

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APPROACH		STATION OFFSET	NEMA	170	NEMA	170	I	ΙI	MASTER	LOCAL	BASE	NEMA	170	FIBER		E	ΕV	DOUBLE	332	3365	BITRAN	WAPITI
MO 141 & PARKWAY MIDDLE SCHOOL	U.I.P.	U.I.P.			1									1								

					A DE SSIG											
			CARD POSITION													
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	NEMA LOAD SWITCH ASSIGNMENTS														
1	2	3	4	5	6	7	8	9	10	11	12				
				0		P	9								

F	DETECTOR SCHEDOR INFORMATION		
			PE
DETECTOR NUMBER	APPROACH	RADAR	VIDEO
10	SB (PHASE 1)		1
21	NB (PHASE 2)		1
22	NB (PHASE 2)		1
23	NB (PHASE 2)		1
24	NB (PHASE 2)		1
61	SB (PHASE 6)		1
62	SB (PHASE 6)		1
63 71	SB (PHASE 6) WB (PHASE 7)		1
72	WB (PHASE 7)		1
12	WD (THASE T)		
25	NB ADVANCE (PHASE 2)	1	
26	NB ADVANCE (PHASE 2)	1	
27	NB ADVANCE (PHASE 2)	1	
64	SB ADVANCE (PHASE 6)	1	
65	SB ADVANCE (PHASE 6)	1	
66	SB ADVANCE (PHASE 6)	1	
	TOTAL	6	10

- * ITEMS FOR WHICH SEPARATE PAYMENT WILL NOT BE MADE.
- (1) CABLING FOR THE NEW VIDEO DETECTION AND RADAR DETECTION SHOULD BE ROUTED THROUGH EXISTING CONDUITS. CONDUITS THAT ARE DAMAGED, COLLAPSED, OR UNUSABLE SHALL BE MARKED ON THE AS-BUILT PLANS PER JSP S.
- (2) THE INSTALLATION OF ALL EQUIPMENT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, DRAWINGS, AND ENGINEERING POLICY GUIDE.
- (3) THE CONTRACTOR SHALL HAVE RESPONSIBILITY OF LOCATING ALL UNDERGROUND AND OVERHEAD FACILITIES. STRUCTURES, AND UTILITIES.
- (4) THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL AND SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
- (5) ALL DRILLED OPENING FOR CABLE SHALL BE WEATHERPROOF.
 THERE WILL BE NO DIRECT PAYMENT FOR DRILLED OPENINGS.
 DISUSED OPENINGS SHALL BE PLUGGED BY THE CONTRACTOR.
- (6) THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROGRAMMING DETECTION ZONES PER JSP I AND JSP J. PER JSP I AND JSP J. COUNT ZONES SHOULD BE PROGRAMMED FOR EACH LANE AT THE INTERSECTION EVEN IF NO VEHICLE DETECTION ZONE IS REQUIRED FOR THAT LANE.
- (7) THE CONTRACTOR SHALL REMOVE ALL DISUSED EXISTING DETECTION CAMERA CABLE AS PART OF THE DETECTION INSTALLATION.
- (8) THE CONTRACTOR SHALL PULL ROPE THROUGH ANY USED CONDUITS PER JSP R.
- (9) MANUFACTURER'S REPRESENTATIVE SHALL BE PRESENT DURING PROGRAMMING OF DETECTION ZONES PER JSP I AND JSP J. MANUFACTURER'S REPRESENTATIVE SHALL PROVIDE GUIDANCE TO CONTRACTOR ON OPTIMAL PLACEMENT OF DETECTION EQUIPMENT AND PROGRAMMED DETECTION ZONES.

PHASE 1 PHASE 2 PHASE 3 PHASE 4

PARKWAY

CLAYWORTH

PARKWAY

CLAYWORTH

PHASE 5 PHASE 6 PHASE 7 PHASE 8

MO 141 AND PARKWAY MIDDLE SCHOOL

INTERSECTION

D-37C

TRAFFIC SIGNAL SHEET 10 OF 60

ST. LOUIS COUNTY ROUTE 141 SIGNAL IMPROVEMENTS THIS SHEET HAS BEEN SIGNED, SEALED AND DATED PREPARED 3/21/2024 ROUTE STATE 141 MO DISTRICT SHEET NO. SL 13 COUNTY ST LOUIS JOB NO.

JOB NO.

JSL0110

CONTRACT ID.

PROJECT NO.

11107201 11

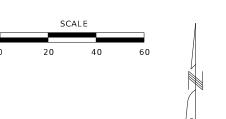
BRIDGE NO.

HIGHWAYS AND TRANSPORTATION
COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102

C. (D. WAY SUITE 2800 MO 63102 (314) 206-4444

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SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED

3/21/2024

ROUTE STATE
141 MO

DISTRICT SHEET NO.
SL 14

JOB NO.
JSL0110
CONTRACT ID.

PROJECT NO

BEIDGE NO.

- (1) THE CONTRACTOR SHALL REMOVE THE EXISTING CONTROLLER AND DELIVER TO THE MODOT SIGNAL SHOP PER JSP K. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROGRAMMING THE NEW CONTROLLER TO MATCH EXISTING PHASING, TIMING, AND COMMUNICATION SETTINGS PER JSP H.
- (2) THE CONTRACTOR SHALL DISCONNECT LOOP LEAD-IN WIRES AND REMOVE DETECTOR CARDS FROM DETECTOR RACK. EXISTING LOOP DETECTORS SHALL BE LEFT IN PLACE AND ABANDONED. THE CONTRACTOR SHALL INSTALL A COMPLETE VIDEO DETECTION SYSTEM WITH ENCLOSURES, MOUNTING HARDWARE/BRACKETS, TERMINATION PANELS, POWER AND COMMUNICATION CABLES FOR STOP BAR DETECTION PER JSP I.
- (3) THE CONTRACTOR SHALL INSTALL RADAR DETECTION UNITS AND PROGRAM FOR ADVANCED DETECTION PER JSP J.

TRAFFIC SIGNALS LEGEND

- NEW CONTROLLER IN EXISTING CABINET
- $-\frac{1}{1}$ EXISTING SIGNAL HEAD
- EXISTING VIDEO/RADAR DETECTION UNIT
- NEW VIDEO/RADAR COMBINATION DETECTION UNIT
- NEW VIDEO DETECTION UNIT
- ▷□R〕 NEW RADAR DETECTION UNIT
- 🗘 EXISTING GRIDSMART VIDEO DETECTION UNIT
- EXISTING ACCESS POINT
- r# EXISTING REPEATER
- EXISTING SENSYS DETECTOR PROBE

6 X 6 LOOP DETECTOR

{----} 6 X 15 LOOP DETECTOR

30 X 6 LOOP DETECTOR

EXISTING STOP BAR DETECTION ZONE

PROPOSED STOP BAR DETECTION ZONE

EXISTING TRUSS

TRAFFIC SIGNAL SHEET 11 OF 60

ST. LOUIS COUNTY
ROUTE 141 SIGNAL IMPROVEMENTS

C. DWAY SUITE 2800

								Р	OW	ER SI	JPPLY						
	LOC	ΑΤ	ION			POWER ASSE		Y CIRCUIT BREAKER TRIP RATING*					LIGHTING	CONTROL *		SERVIC	E POLE
	*DDD0*CH	СТ	4 T I ON	051	-657	DRAWING	DDAWING			OLLER CONT &	POWER DISCO	SUPPLY NNECT		R SUPPLY)	COI	NTRACT	UTILITY
	APPROACH	51.	ATION	UFI	- SE I	902.15	DRAWING	BRE A	. I ARY .KER	SIGNAL LAMPS	MAIN B	REAKER LIGHTING	120 VOLT CONTROL CABINET	MA I N BREAKER	FL	JRN I SH	COMPANY
Γ						Туре	U.I.P.	15	Amps	Amps	Amps	Amps		Amps	CI.	Ft.	U.1.P.
	•		0		0	Туре		15	Amps	Amps	Amps	Amps		Amps	CI.	Ft.	

	CONTROLLER ASSEMBLY AND AUXILIARY EQUIPMENT																					
LOCAT	ION			TEM STER	A C T I	ATED	ON-O SWI		(COORDINA	TION INT	ERFACE *	K				A CABI			ABINET	1 -	
APPROACH	STATION	OFFSET	(CLOSE	D LOOP)	ACTO	AILU	TYI	PE (12C/7C (HARDWIRE 1)	TIME	CLOSED LOOP FIBER			TIME * CLOCK		TYPE *	-	TYP	E *	SOFTW	ARE *
AFFRUACH	STATION	OFF SET	NEMA	170	NEMA	170	I	ΙΙ	MASTER	LOCAL	BASE	NEMA	170	FIBER		E	ΕV	DOUBLE	332	336S	BITRAN	WAPITI
MO 141 & CLAYWORTH DR	U.I.P.	U.I.P.																				

NOTE: CONTROLLER FOR THIS LOCATION IS LOCATED AT THE PARKWAY MIDDLE SCHOLL ENTRANCE CABINET.

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TOTAL NUMBER OF DETECTOR CARDS(2-CHANNEL) =

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1	2	3	4	5	6	7	8	9	10	11	12
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F	DETECTOR SCHEDOR INFORMATION		
		TY	PE
DETECTOR NUMBER	APPROACH	RADAR	VIDEO
21	NB (PHASE 2)		1
22	NB (PHASE 2)		1
23	NB (PHASE 2)		1
31	EB (PHASE 3)		1
32	EB (PHASE 3)		1
50	NB (PHASE 5)		1
61	SB (PHASE 6)		1
62 63	SB (PHASE 6)		1
64	SB (PHASE 6) SB (PHASE 6)		1
64	SB (FRASE 6)		-
24	NB ADVANCE (PHASE 2)	1	
25	NB ADVANCE (PHASE 2)	1	
26	NB ADVANCE (PHASE 2)	1	
65	SB ADVANCE (PHASE 6)	1	
66 67	SB ADVANCE (PHASE 6)	1	
61	SB ADVANCE (PHASE 6)	1	
	TOTAL	-	1.0
	TOTAL	6	10

- * ITEMS FOR WHICH SEPARATE PAYMENT WILL NOT BE MADE.
- (1) CABLING FOR THE NEW VIDEO DETECTION AND RADAR DETECTION SHOULD BE ROUTED THROUGH EXISTING CONDUITS. CONDUITS THAT ARE DAMAGED, COLLAPSED, OR UNUSABLE SHALL BE MARKED ON THE AS-BUILT PLANS PER JSP S.
- (2) THE INSTALLATION OF ALL EQUIPMENT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, DRAWINGS, AND ENGINEERING POLICY GUIDE.
- (3) THE CONTRACTOR SHALL HAVE RESPONSIBILITY OF LOCATING ALL UNDERGROUND AND OVERHEAD FACILITIES. STRUCTURES. AND UTILITIES.
- (4) THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL AND SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
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- (8) THE CONTRACTOR SHALL PULL ROPE THROUGH ANY USED CONDUITS PER JSP R.
- (9) MANUFACTURER'S REPRESENTATIVE SHALL BE PRESENT DURING PROGRAMMING OF DETECTION ZONES PER JSP I AND JSP J. MANUFACTURER'S REPRESENTATIVE SHALL PROVIDE GUIDANCE TO CONTRACTOR ON OPTIMAL PLACEMENT OF DETECTION EQUIPMENT AND PROGRAMMED DETECTION ZONES

PHASE 1 PHASE 2 PHASE 3 PHASE 4

PARKWAY

CLAYWORTH

PARKWAY

CLAYWORTH

PHASE 5 PHASE 6 PHASE 7 PHASE 8

MO 141 AND CLAYWORTH DR

INTERSECTION

D-37C

TRAFFIC SIGNAL SHEET 12 OF 60

ST. LOUIS COUNTY ROUTE 141 SIGNAL IMPROVEMENTS THE SHEET HAS BEEN SIGNED, SEALED AND DATED PREPARED 3/21/2024 ROUTE TATAL MOD DISTRICT SHEET NO. SL 15

JOB NO.
JSL0110
CONTRACT ID.

PROJECT NO.

DESCRIPTION

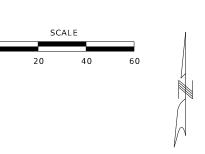
HIGHWAYS AND TRANSPORTATION
COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102

NY SUITE 2800 3102 (314) 206-4444

WSP USA INC. 211 N. BROADWAY SUITI ST. LOUIS, MO 63102 (3°

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3/21/2024

ROUTE STATE
141 MO
DISTRICT SHEET NO.
SL 16

COUNTY

JOB NO.
JSL0110
CONTRACT ID.

PROJECT NO

DESCRIPTION
OFFICER PTION

- (1) THE CONTRACTOR SHALL REMOVE THE EXISTING CONTROLLER AND DELIVER TO THE MODOT SIGNAL SHOP PER JSP K. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROGRAMMING THE NEW CONTROLLER TO MATCH EXISTING PHASING, TIMING, AND COMMUNICATION SETTINGS PER JSP H.
- (2) THE CONTRACTOR SHALL DISCONNECT LOOP LEAD-IN WIRES AND REMOVE DETECTOR CARDS FROM DETECTOR RACK. EXISTING LOOP DETECTORS SHALL BE LEFT IN PLACE AND ABANDONED. THE CONTRACTOR SHALL INSTALL A COMPLETE VIDEO DETECTION SYSTEM WITH ENCLOSURES, MOUNTING HARDWARE/BRACKETS, TERMINATION PANELS, POWER AND COMMUNICATION CABLES FOR STOP BAR DETECTION PER JSP I.
- (3) THE CONTRACTOR SHALL INSTALL RADAR DETECTION UNITS AND PROGRAM FOR ADVANCED DETECTION PER JSP J.

TRAFFIC SIGNALS LEGEND

- NEW CONTROLLER IN EXISTING CABINET
- $-\frac{1}{1}$ EXISTING SIGNAL HEAD
- EXISTING VIDEO/RADAR DETECTION UNIT
- NEW VIDEO/RADAR COMBINATION DETECTION UNIT
- NEW VIDEO DETECTION UNIT
- NEW RADAR DETECTION UNIT
- EXISTING GRIDSMART VIDEO DETECTION UNIT
- * EXISTING ACCESS POINT
- r# EXISTING REPEATER
- EXISTING SENSYS DETECTOR PROBE

6 X 6 LOOP DETECTOR

{----} 6 X 15 LOOP DETECTOR

EXISTING STOP BAR DETECTION ZONE

PROPOSED STOP BAR DETECTION ZONE

@كِنْ EXISTING TRUSS

TRAFFIC SIGNAL SHEET 13 OF 60

ST. LOUIS COUNTY
ROUTE 141 SIGNAL IMPROVEMENTS

MISSOURI HIGHWAYS AND TRANSPORTATIO
COMMISSION

MODOT

105 WEST CAPITO
JEFFERSON CITY, MO 6510

NSP USA INC. 11 N. BROADWAY SUITE 2800 T. LOUIS, MO 63102 (314) 206-4444

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APPROACH		517	- ALLUN	UF	F SE I	DRAWING 902.15	DRAWING	AUX I L BRE A	.IARY AKER	SIGNAL	MAIN B	REAKER LIGHTING	120 VOLT CONTROL CABINET	MA I N BREAKER		RNISH	CÓMPÁNÝ	
						Туре	U.I.P.	15	Amps	· Amps	Amps	Amps		Amps	CI.	Ft.	U.1.P.	
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LOCAT	ION		SYS	TEM TER	ACTI	IATED	ON-O SWI	FF* TCH	С	OORDINA	TION INT	ERFACE *	K				A CABI		170 CA		17	
APPROACH	STATION	OFFSET	(CLOSE	LOOP)	ACTO	AILU	TYF	PE	12C/7C H	IARDWIRE 1)	TIME	CLOSE	CLOSED LOOP		TIME *	_	TYPE *		TYP	E *	SOFTW	ARE *
AFFROACH	STATION	UFFSET	NEMA	170	NEMA	170	I	ΙI	MASTER	LOCAL	BASE	NEMA	170	FIBER		E	ΕV	DOUBLE	332	3365	BITRAN	WAPITI
MD 141 & BURGUNDY LN	U.I.P.	U.I.P.			1									1								

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_	DETECTOR SCHEE		
F	OR INFORMATION	UNLI	
		TY	PE
DETECTOR NUMBER	APPROACH	RADAR	VIDEO
10	SB (PHASE 1)		1
21	NB (PHASE 2)		1
22	NB (PHASE 2)		1
23	NB (PHASE 2)		1
41	EB (PHASE 4)		1
50	NB (PHASE 5)		1
61	SB (PHASE 6)		1
62	SB (PHASE 6)		1
63	SB (PHASE 6)		1
81	WB (PHASE 8)		1
24	NB ADVANCE (PHASE 2)	1	
25	NB ADVANCE (PHASE 2)	1	
26	NB ADVANCE (PHASE 2)	1	
64	SB ADVANCE (PHASE 6)	1	
65	SB ADVANCE (PHASE 6)	1	
66	SB ADVANCE (PHASE 6)	1	
	TOTAL	6	10

- * ITEMS FOR WHICH SEPARATE PAYMENT WILL NOT BE MADE.
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3/21/2024 141 MO SHEET NO. DISTRICT SL 17 ST LOUIS JOB NO. JSL0110 CONTRACT ID. PROJECT NO. BRIDGE NO

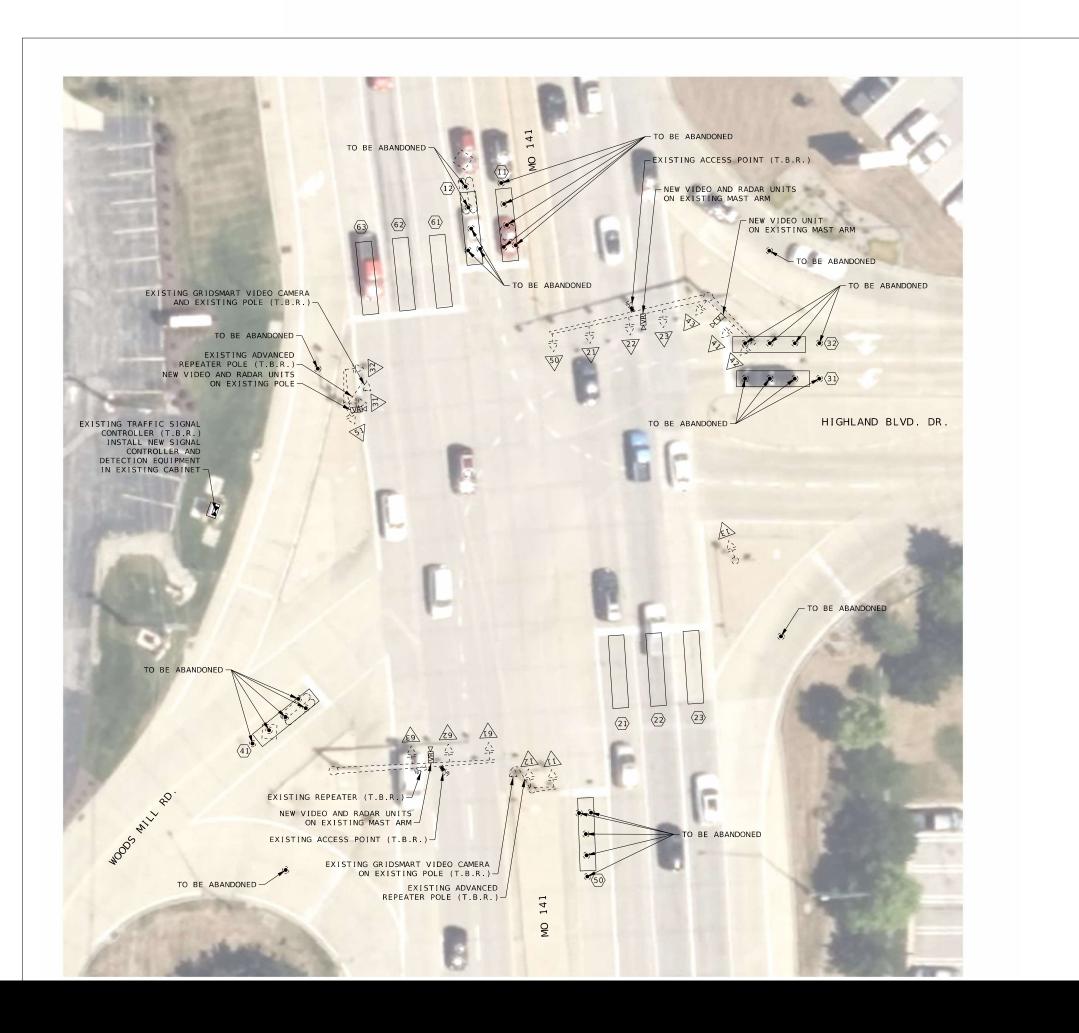
PHASE 1	PHASE 2	PHASE 4
	 	
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PHASE 5	PHASE 6	PHASE 8

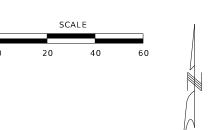
MO 141 AND BURGUNDY LN
INTERSECTION

D-37C

TRAFFIC SIGNAL SHEET 14 OF 60

ST. LOUIS COUNTY ROUTE 141 SIGNAL IMPROVEMENTS







SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED

3/21/2024

ROUTE STATE

141 MO

DISTRICT SHEET NO.

SL 18

JOB NO.

JOB NO.

CONTRACT ID.

PROJECT NO

BRIDGE NO.

- (1) THE CONTRACTOR SHALL REMOVE THE EXISTING CONTROLLER AND DELIVER TO THE MODOT SIGNAL SHOP PER JSP K. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROGRAMMING THE NEW CONTROLLER TO MATCH EXISTING PHASING, TIMING, AND COMMUNICATION SETTINGS PER JSP H.
- (2) THE CONTRACTOR SHALL DISCONNECT ACCESS POINTS AND REPEATERS. EXISTING SENSYS DETECTOR PROBES SHALL BE LEFT IN PLACE AND ABANDONED. THE CONTRACTOR SHALL INSTALL A COMPLETE VIDEO DETECTION SYSTEM WITH ENCLOSURES, MOUNTING HARDWARE/BRACKETS, TERMINATION PANELS, POWER AND COMMUNICATION CABLES FOR STOP BAR DETECTION PER JSP I.
- (3) THE CONTRACTOR SHALL INSTALL RADAR DETECTION UNITS AND PROGRAM FOR ADVANCED DETECTION PER JSP J.

TRAFFIC SIGNALS LEGEND

- NEW CONTROLLER IN EXISTING CABINET
- $-\frac{1}{1}$ EXISTING SIGNAL HEAD
- EXISTING VIDEO/RADAR DETECTION UNIT
- NEW VIDEO/RADAR COMBINATION DETECTION UNIT
- NEW VIDEO DETECTION UNIT
- NEW RADAR DETECTION UNIT
- EXISTING GRIDSMART VIDEO DETECTION UNIT
- EXISTING ACCESS POINT
- □# EXISTING REPEATER
- EXISTING SENSYS DETECTOR PROBE
- 6 X 6 LOOP DETECTOR

{----} 6 X 15 LOOP DETECTOR

EXISTING STOP BAR DETECTION ZONE

PROPOSED STOP BAR DETECTION ZONE

CITIEST EXISTING MAST ARM

(T) EXISTING TRUSS

TRAFFIC SIGNAL SHEET 15 OF 60

UIS COUNTY NAL IMPROVEMENTS MISSOURI HIGHWAYS AND TRANSPO
COMMISSION

MODOT

105 WEST

■
SP USA INC.
1 N. BROADWAY SUITE 2800
. LOUIS, MO 63102 (314) 206-4444

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LO	САТ	ION			POWER SUPPLY CIRCUIT BREAKER TRIP RATING* ASSEMBLY CONTROLLER POWER SUPPLY (ON POWER SUPPLY)								SERVIC	E POLE	
100001011			055657	DRAWING					POWER DISCO	SUPPLY NNECT			CON	NTRACT	UTILITY
APPROACH	51	AIIUN	OFFSET	902.15	DRAWING	BRE A	I ARY KER	S I GNAL LAMPS	MAIN B	REAKER LIGHTING	120 VOLT CONTROL CABINET	MA I N BREAKER		RNISH	COMPANY
				Туре	U.I.P.	15	Amps	· Amps	Amps	Amps		Amps	CI.	Ft.	U.1.P.
	9 .	0	0	Туре		15	Amps	Amps	Amps	Amps	·	Amps	CI.	F+.	

	CONTROLLER ASSEMBLY AND AUXILIARY EQUIPMENT																				
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APPROACH	MASTER (CLOSED L					AILU	TYPE	12C/7C	HARDWIRE 1)	TIME	CLOSED	LOOP	FIBER	TIME *	•	TYPE *		TYPI	*	SOFTWA	ARE *
AFFRUACH	STATION	OFFSET	NEMA	170	NEMA	170	I I I	MASTER	LOCAL	BASE	NEMA	170	LIDEK		E	ΕV	DOUBLE	332	336S	BITRAN	WAPITI
MO 141 & HIGHLANDS BLVD DR/WOODS MILL RD	U.I.P.	U.I.P.			1								1								

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F	DETECTOR SCHEDOR INFORMATION		
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DETECTOR NUMBER	APPROACH	RADAR	VIDEO
11	SB (PHASE 1)		1
12	SB (PHASE 1)		1
21	NB (PHASE 2)		1
22	NB (PHASE 2)		1 1
23 31	NB (PHASE 2) WB (PHASE 3)		1
32	WB (PHASE 3)		1
41	EB (PHASE 4)		1
50	NB (PHASE 5)		1
61	SB (PHASE 6)		<u> </u>
62	SB (PHASE 6)		1
63	SB (PHASE 6)		1
24	NB ADVANCE (PHASE 2) NB ADVANCE (PHASE 2)	1	
26	NB ADVANCE (PHASE 2) NB ADVANCE (PHASE 2)	1	
33	WB ADVANCE (PHASE 3)	1	
42	EB ADVANCE (PHASE 4)	1	
64	SB ADVANCE (PHASE 6)	1	
65	SB ADVANCE (PHASE 6)	1	
66	SB ADVANCE (PHASE 6)	1	
	TOTAL	8	12

- * ITEMS FOR WHICH SEPARATE PAYMENT WILL NOT BE MADE.
- (1) CABLING FOR THE NEW VIDEO DETECTION AND RADAR DETECTION SHOULD BE ROUTED THROUGH EXISTING CONDUITS. CONDUITS THAT ARE DAMAGED, COLLAPSED, OR UNUSABLE SHALL BE MARKED ON THE AS-BUILT PLANS PER JSP S.
- (2) THE INSTALLATION OF ALL EQUIPMENT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, DRAWINGS, AND ENGINEERING POLICY GUIDE.
- (3) THE CONTRACTOR SHALL HAVE RESPONSIBILITY OF LOCATING ALL UNDERGROUND AND OVERHEAD FACILITIES. STRUCTURES. AND UTILITIES.
- (4) THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL AND SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
- (5) ALL DRILLED OPENING FOR CABLE SHALL BE WEATHERPROOF.
 THERE WILL BE NO DIRECT PAYMENT FOR DRILLED OPENINGS.
 DISUSED OPENINGS SHALL BE PLUGGED BY THE CONTRACTOR.
- (6) THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROGRAMMING DETECTION ZONES PER JSP I AND JSP J. PER JSP I AND JSP J. COUNT ZONES SHOULD BE PROGRAMMED FOR EACH LANE AT THE INTERSECTION EVEN IF NO VEHICLE DETECTION ZONE IS REQUIRED FOR THAT LANE.
- (7) THE CONTRACTOR SHALL REMOVE ALL DISUSED EXISTING DETECTION CAMERA CABLE AS PART OF THE DETECTION INSTALLATION.
- (8) THE CONTRACTOR SHALL PULL ROPE THROUGH ANY USED CONDUITS PER JSP R.
- (9) MANUFACTURER'S REPRESENTATIVE SHALL BE PRESENT DURING PROGRAMMING OF DETECTION ZONES PER JSP I AND JSP J. MANUFACTURER'S REPRESENTATIVE SHALL PROVIDE GUIDANCE TO CONTRACTOR ON OPTIMAL PLACEMENT OF DETECTION EQUIPMENT AND PROGRAMMED DETECTION ZONES

3/21/2024 141 MO SHEET NO. DISTRICT SL 19 ST LOUIS JOB NO. JSL0110 CONTRACT ID. PROJECT NO. BRIDGE NO

PHASE 1	PHASE 2	PHASE 3	PHASE 4
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		↓	—
•			
	↓		
PHASE 5	PHASE 6		

MO 141 AND HIGHLANDS BLVD DR/WOODS MILL RD

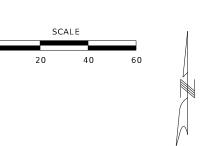
INTERSECTION

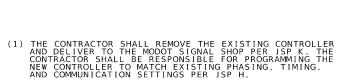
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TRAFFIC SIGNAL SHEET 16 OF 60

ST. LOUIS COUNTY ROUTE 141 SIGNAL IMPROVEMENTS





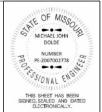


- (2) THE CONTRACTOR SHALL DISCONNECT LOOP LEAD-IN WIRES AND REMOVE DETECTOR CARDS FROM DETECTOR RACK. EXISTING LOOP DETECTORS SHALL BE LEFT IN PLACE AND ABANDONED. THE CONTRACTOR SHALL INSTALL A COMPLETE VIDEO DETECTION SYSTEM WITH ENCLOSURES, MOUNTING HARDWARE/BRACKETS, TERMINATION PANELS, POWER AND COMMUNICATION CABLES FOR STOP BAR DETECTION PER JSP I.
- (3) THE CONTRACTOR SHALL INSTALL RADAR DETECTION UNITS AND PROGRAM FOR ADVANCED DETECTION PER JSP J.

	TRAFFIC SIGNALS LEGEND
M	NEW CONTROLLER IN EXISTING CABINET
- 1155	EXISTING SIGNAL HEAD
'>ī'	EXISTING VIDEO/RADAR DETECTION UNIT
ÞVR	NEW VIDEO/RADAR COMBINATION DETECTION UNIT
	NEW VIDEO DETECTION UNIT
DR	NEW RADAR DETECTION UNIT
۲)	EXISTING GRIDSMART VIDEO DETECTION UNIT
m-ja	EXISTING ACCESS POINT
(T.)#	EXISTING REPEATER
(*)	EXISTING SENSYS DETECTOR PROBE
\Box	6 X 6 LOOP DETECTOR
£===3	6 X 15 LOOP DETECTOR
{	30 X 6 LOOP DETECTOR
	EXISTING STOP BAR DETECTION ZONE
	PROPOSED STOP BAR DETECTION ZONE
()	EXISTING MAST ARM
	EXISTING TRUSS

TRAFFIC SIGNAL SHEET 17 OF 60

ST. LOUIS COUNTY
ROUTE 141 SIGNAL IMPROVEMENTS



DATE PREPARED

3 / 21 / 2024

ROUTE STATE

1 4 1 MO

DISTRICT SHEET NO.

SL 20 ST LOUIS JOB NO. JSL0110

PROJECT NO.

BRIDGE NO.

COMMISSION

105 WEST CAPITOL

MISSOURI HIGHWAYS AND T
COMMISSION
MODOT

■ USA INC.
N. BROADWAY SUITE 2800
LOUIS, MO 63102 (314) 206-4444

						Р	\bigcirc W	ER SI	JPPLY						
LO	САТ	ION			POWER SUPPLY CIRCUIT BREAKER TRIP RATING* ASSEMBLY CONTROLLER POWER SUPPLY (ON POWER SUPPLY)								SERVIC	E POLE	
100001011			055657	DRAWING					POWER DISCO	SUPPLY NNECT			CON	NTRACT	UTILITY
APPROACH	51	AIIUN	OFFSET	902.15	DRAWING	BRE A	I ARY KER	S I GNAL LAMPS	MAIN B	REAKER LIGHTING	120 VOLT CONTROL CABINET	MA I N BREAKER		RNISH	COMPANY
				Туре	U.I.P.	15	Amps	· Amps	Amps	Amps		Amps	CI.	Ft.	U.1.P.
	9 .	0	0	Туре		15	Amps	Amps	Amps	Amps	·	Amps	CI.	F+.	

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APPROACH	MASTER (CLOSED L					AILU	TYPE	12C/7C	HARDWIRE 1)	TIME	CLOSE	L00P	FIBER	TIME *	•	TYPE *		TYPI	*	SOFTW	ARE *
AFFRUACH	STATION	OFFSET	NEMA	170	NEMA	170	I I I	MASTER	LOCAL	BASE	NEMA	170	FIDER		E	ΕV	DOUBLE	332	3365	BITRAN	WAPITI
MO 141 & MERAMEC STATION RD/HOWARD GEORGE	U.I.P.	U.I.P.			1								1								

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F	DETECTOR SCHEDOR INFORMATION		
		TY	PE
DETECTOR NUMBER	APPROACH	RADAR	VIDEO
10	SB (PHASE 1)		1
21	NB (PHASE 2)		1
22	NB (PHASE 2)		1
23	NB (PHASE 2)		1
30	EB (PHASE 3)		1
41	WB (PHASE 4)		1
50	NB (PHASE 5)		1
61	SB (PHASE 6)		1
62	SB (PHASE 6)		1
63	SB (PHASE 6)		1
70	WB (PHASE 7)		1
81	EB (PHASE 8)		1
24	NB ADVANCE (PHASE 2)	1	
25	NB ADVANCE (PHASE 2)	1	
26	NB ADVANCE (PHASE 2)	1	
64	SB ADVANCE (PHASE 6)	1	
65	SB ADVANCE (PHASE 6)	1	
66	SB ADVANCE (PHASE 6)	1	
	TOTAL	6	12

- * ITEMS FOR WHICH SEPARATE PAYMENT WILL NOT BE MADE.
- (1) CABLING FOR THE NEW VIDEO DETECTION AND RADAR DETECTION SHOULD BE ROUTED THROUGH EXISTING CONDUITS. CONDUITS THAT ARE DAMAGED, COLLAPSED, OR UNUSABLE SHALL BE MARKED ON THE AS-BUILT PLANS PER JSP S.
- (2) THE INSTALLATION OF ALL EQUIPMENT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, DRAWINGS, AND ENGINEERING POLICY GUIDE.
- (3) THE CONTRACTOR SHALL HAVE RESPONSIBILITY OF LOCATING ALL UNDERGROUND AND OVERHEAD FACILITIES. STRUCTURES. AND UTILITIES.
- (4) THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL AND SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
- (5) ALL DRILLED OPENING FOR CABLE SHALL BE WEATHERPROOF.
 THERE WILL BE NO DIRECT PAYMENT FOR DRILLED OPENINGS.
 DISUSED OPENINGS SHALL BE PLUGGED BY THE CONTRACTOR.
- (6) THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROGRAMMING DETECTION ZONES PER JSP I AND JSP J. PER JSP I AND JSP J. COUNT ZONES SHOULD BE PROGRAMMED FOR EACH LANE AT THE INTERSECTION EVEN IF NO VEHICLE DETECTION ZONE IS REQUIRED FOR THAT LANE.
- (7) THE CONTRACTOR SHALL REMOVE ALL DISUSED EXISTING DETECTION CAMERA CABLE AS PART OF THE DETECTION INSTALLATION.
- (8) THE CONTRACTOR SHALL PULL ROPE THROUGH ANY USED CONDUITS PER JSP R.
- (9) MANUFACTURER'S REPRESENTATIVE SHALL BE PRESENT DURING PROGRAMMING OF DETECTION ZONES PER JSP I AND JSP J. MANUFACTURER'S REPRESENTATIVE SHALL PROVIDE GUIDANCE TO CONTRACTOR ON OPTIMAL PLACEMENT OF DETECTION EQUIPMENT AND PROGRAMMED DETECTION ZONES.

3/21/2024 141 MO SHEET NO. DISTRICT SL 21 COUNTY ST LOUIS JOB NO. JSL0110 CONTRACT ID. PROJECT NO. BRIDGE NO

PHASE 1	PHASE 2	PHASE 3	PHASE 4
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PHASE 5	PHASE 6	PHASE 7	PHASE 8

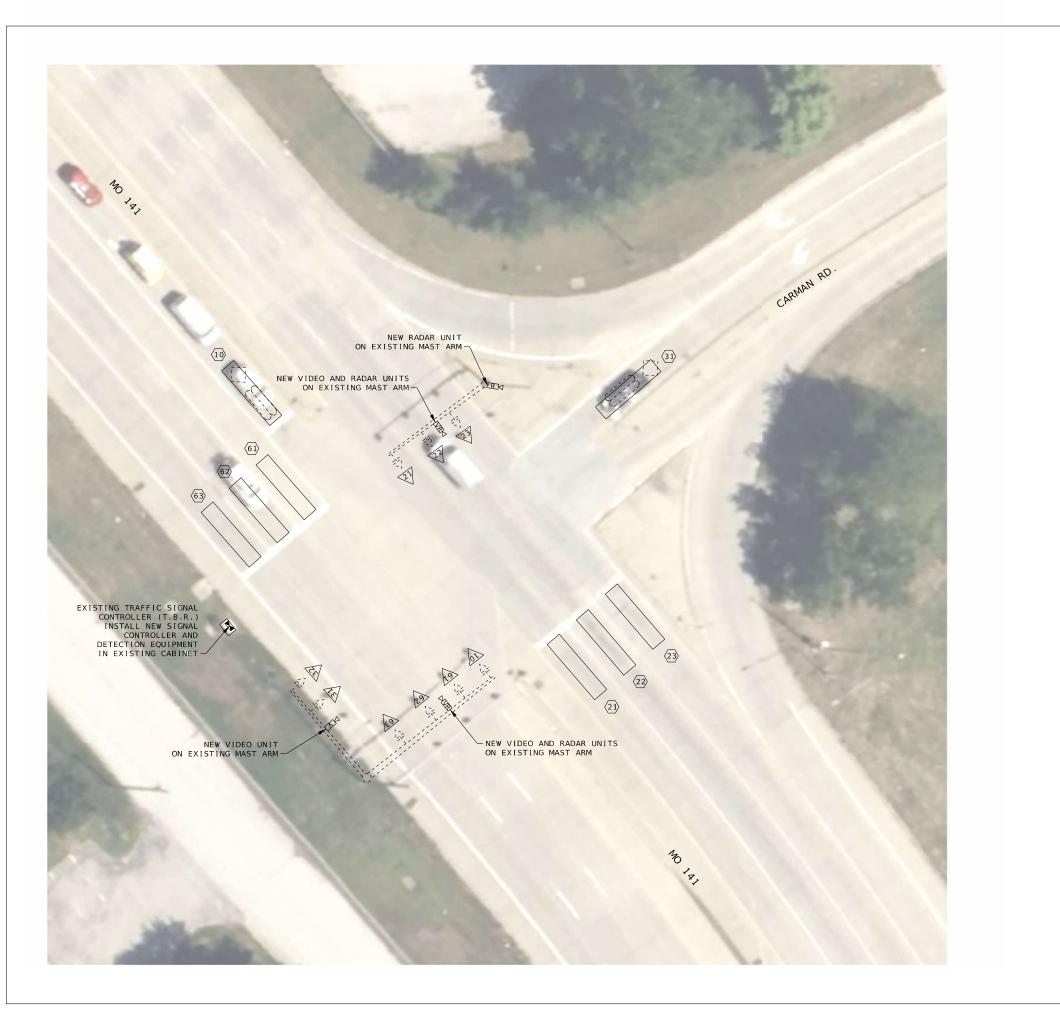
MO 141 AND MERAMEC STATION RD/HOWARD GEORGE

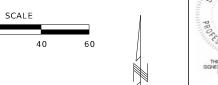
INTERSECTION

D-37C

TRAFFIC SIGNAL SHEET 18 OF 60

ST. LOUIS COUNTY ROUTE 141 SIGNAL IMPROVEMENTS







ATTE PREPARED

3/21/2024

ROUTE STATE

141 MO

DISTRICT SHEET NO.

SL 22

COUNTY

COUNTY

JOB NO.

JOB NO.

CONTRACT ID.

PROJECT NO

DESCORIDE NO.

- (1) THE CONTRACTOR SHALL REMOVE THE EXISTING CONTROLLER AND DELIVER TO THE MODOT SIGNAL SHOP PER JSP K. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROGRAMMING THE NEW CONTROLLER TO MATCH EXISTING PHASING, TIMING, AND COMMUNICATION SETTINGS PER JSP H.
- (2) THE CONTRACTOR SHALL DISCONNECT LOOP LEAD-IN WIRES AND REMOVE DETECTOR CARDS FROM DETECTOR RACK. EXISTING LOOP DETECTORS SHALL BE LEFT IN PLACE AND ABANDONED. THE CONTRACTOR SHALL INSTALL A COMPLETE VIDEO DETECTION SYSTEM WITH ENCLOSURES, MOUNTING HARDWARE/BRACKETS, TERMINATION PANELS, POWER AND COMMUNICATION CABLES FOR STOP BAR DETECTION PER JSP I.
- (3) THE CONTRACTOR SHALL INSTALL RADAR DETECTION UNITS AND PROGRAM FOR ADVANCED DETECTION PER JSP J.

TRAFFIC SIGNALS LEGEND

- NEW CONTROLLER IN EXISTING CABINET
- TIN EXISTING SIGNAL HEAD
- EXISTING VIDEO/RADAR DETECTION UNIT
- NEW VIDEO/RADAR COMBINATION DETECTION UNIT
- NEW VIDEO DETECTION UNIT
- NEW RADAR DETECTION UNIT
- EXISTING GRIDSMART VIDEO DETECTION UNIT
- EXISTING ACCESS POINT
- r# EXISTING REPEATER
- EXISTING SENSYS DETECTOR PROBE

6 X 6 LOOP DETECTOR

{----} 6 X 15 LOOP DETECTOR

30 X 6 LOOP DETECTOR

EXISTING STOP BAR DETECTION ZONE

PROPOSED STOP BAR DETECTION ZONE

- FYICTING MAGE ARM

TRAFFIC SIGNAL SHEET 19 OF 60

ST. LOUIS COUNTY
ROUTE 141 SIGNAL IMPROVEMENTS

MISSOUR I HIGHWAYS AND TRANSPORTACOMMISSION

105 WEST CAF
THEFRSON CITY, MO 6
1-888-ASK-MODOT (1-888-275-6

SP USA INC. 11 N. BROADWAY SUITE 2800 T. LOUIS, MO 63102 (314) 206-4444

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10000101		6.7.		0.5		DRAWING	2014110			OLLER CONT &			(ON POWER SUPPLY)				UTILITY
APPROACH		517	- ALLUN	UF	F SE I	DRAWING 902.15	DRAWING	AUX I L BRE A	.IARY AKER	SIGNAL	MAIN B	REAKER LIGHTING	120 VOLT CONTROL CABINET	MA I N BREAKER		RNISH	CÓMPÁNÝ
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LOCAT	ION		SYS	TEM TER	ACTI	ATED	ON-O SWI	FF* TCH	С	OORDINA	TION INT	ERFACE *	K				A CABI		170 C		17	
APPROACH	STATION	OFFSET	(CLOSED LOOP)		ACTUATED		TYPE		12C/7C F	HARDWIRE 1)	TIME	CLOSE	CLOSED LOOP FIBE		TIME *	_	TYPE *		TYP	E *	SOFTW	ARE *
AFFROACH	STATION	OFFSET	NEMA	170	NEMA	170	I	ΙI	MASTER	LOCAL	BASE	NEMA	170	FIBER		E	ΕV	DOUBLE	332	3365	BITRAN	WAPITI
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F	DETECTOR SCHEDOR INFORMATION		
		TY	PE
DETECTOR NUMBER	APPROACH	RADAR	VIDEO
10	SB (PHASE 1)		1
21	NB (PHASE 2)		1
22	NB (PHASE 2)		1
23	NB (PHASE 2)		1
31	WB (PHASE 3)		1
61	SB (PHASE 6)		1
62	SB (PHASE 6)		1
63	SB (PHASE 6)		1
24	NB ADVANCE (PHASE 2)	1	
25	NB ADVANCE (PHASE 2)	1	
26	NB ADVANCE (PHASE 2)	1	
31	WB ADVANCE (PHASE 3)	1	
64	SB ADVANCE (PHASE 6)	1	
65	SB ADVANCE (PHASE 6)	1	
66	SB ADVANCE (PHASE 6)	1	
<u> </u>			
	TOTAL	7	8

- * ITEMS FOR WHICH SEPARATE PAYMENT WILL NOT BE MADE.
- (1) CABLING FOR THE NEW VIDEO DETECTION AND RADAR DETECTION SHOULD BE ROUTED THROUGH EXISTING CONDUITS. CONDUITS THAT ARE DAMAGED, COLLAPSED, OR UNUSABLE SHALL BE MARKED ON THE AS-BUILT PLANS PER JSP S.
- (2) THE INSTALLATION OF ALL EQUIPMENT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, DRAWINGS, AND
- (3) THE CONTRACTOR SHALL HAVE RESPONSIBILITY OF LOCATING ALL UNDERGROUND AND OVERHEAD FACILITIES. STRUCTURES. AND
- (4) THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL AND SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.

(5) ALL DRILLED OPENING FOR CABLE SHALL BE WEATHERPROOF.
THERE WILL BE NO DIRECT PAYMENT FOR DRILLED OPENINGS.
DISUSED OPENINGS SHALL BE PLUGGED BY THE CONTRACTOR. (6) THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROGRAMMING
DETECTION ZONES PER JSP I AND JSP J. PER JSP I AND JSP J.
COUNT ZONES SHOULD BE PROGRAMMED FOR EACH LANE AT THE
INTERSECTION EVEN IF NO VEHICLE DETECTION ZONE IS REQUIRED FOR THAT LANE. (7) THE CONTRACTOR SHALL REMOVE ALL DISUSED EXISTING DETECTION CAMERA CABLE AS PART OF THE DETECTION (8) THE CONTRACTOR SHALL PULL ROPE THROUGH ANY USED CONDUITS PER JSP R. (9) MANUFACTURER'S REPRESENTATIVE SHALL BE PRESENT DURING PROGRAMMING OF DETECTION ZONES PER JSP I AND JSP J. MANUFACTURER'S REPRESENTATIVE SHALL PROVIDE GUIDANCE TO CONTRACTOR ON OPTIMAL PLACEMENT OF DETECTION EQUIPMENT AND PHASE 1 PHASE 2 PHASE 3 MO 141 AND CARMAN RD PHASE 6

3/21/2024 141 MO SHEET NO. DISTRICT SL 23 ST LOUIS JOB NO. JSL0110 CONTRACT ID. PROJECT NO. BRIDGE NO

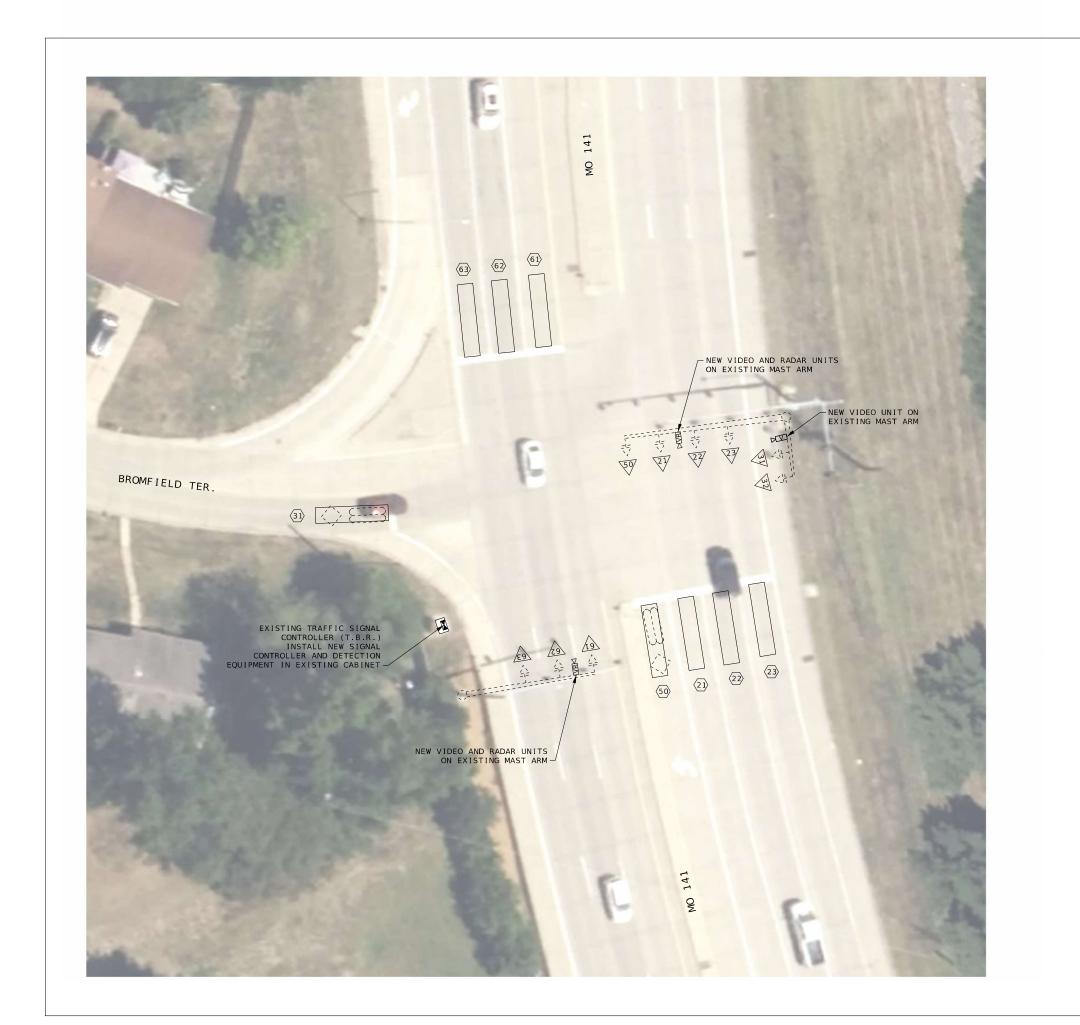
INTERSECTION

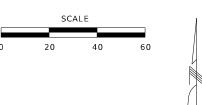
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TRAFFIC SIGNAL SHEET 20 OF 60

ST. LOUIS COUNTY

ROUTE 141 SIGNAL IMPROVEMENTS







DATE PREPARED

3 / 21 / 2024

ROUTE STATE

1 4 1 MO

SL 24

COUNTY

ST LOUIS

JOB NO.

JSL0110

CONTRACT ID.

PROJECT NO

DESCRIPTION

- (1) THE CONTRACTOR SHALL REMOVE THE EXISTING CONTROLLER AND DELIVER TO THE MODOT SIGNAL SHOP PER JSP K. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROGRAMMING THE NEW CONTROLLER TO MATCH EXISTING PHASING, TIMING, AND COMMUNICATION SETTINGS PER JSP H.
- (2) THE CONTRACTOR SHALL DISCONNECT LOOP LEAD-IN WIRES AND REMOVE DETECTOR CARDS FROM DETECTOR RACK. EXISTING LOOP DETECTORS SHALL BE LEFT IN PLACE AND ABANDONED. THE CONTRACTOR SHALL INSTALL A COMPLETE VIDEO DETECTION SYSTEM WITH ENCLOSURES, MOUNTING HARDWARE/BRACKETS, TERMINATION PANELS, POWER AND COMMUNICATION CABLES FOR STOP BAR DETECTION PER JSP I.
- (3) THE CONTRACTOR SHALL INSTALL RADAR DETECTION UNITS AND PROGRAM FOR ADVANCED DETECTION PER JSP J.

TRAFFIC SIGNALS LEGEND

NEW CONTROLLER IN EXISTING CABINET

 $-\frac{1}{1}$ EXISTING SIGNAL HEAD

EXISTING VIDEO/RADAR DETECTION UNIT

NEW VIDEO/RADAR COMBINATION DETECTION UNIT

NEW VIDEO DETECTION UNIT

NEW RADAR DETECTION UNIT

EXISTING GRIDSMART VIDEO DETECTION UNIT

* EXISTING ACCESS POINT

r# EXISTING REPEATER

EXISTING SENSYS DETECTOR PROBE

6 X 6 LOOP DETECTOR

{---} 6 X 15 LOOP DETECTOR

EXISTING STOP BAR DETECTION ZONE

PROPOSED STOP BAR DETECTION ZONE

CITITITITIES EXISTING MAST ARM

@كِنْ EXISTING TRUSS

TRAFFIC SIGNAL SHEET 21 OF 60

ST. LOUIS COUNTY
ROUTE 141 SIGNAL IMPROVEMENTS

MISSOURI HIGHWAYS AND TRANSPC COMMISSION

MODOT

105 WES

LEFFERSON CITY,

P USA INC.

N. BROADWAY SUITE 2800

LOUIS, MO 63102 (314) 206-4444

SOLIDI CEDITICATE OF ALTHORITY OF

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10000101		6.7.		0.5		DRAWING	2014110			OLLER CONT &			(ON POWER SUPPLY)				UTILITY
APPROACH		517	- ALLUN	UF	F SE I	DRAWING 902.15	DRAWING	AUX I L BRE A	.IARY AKER	SIGNAL	MAIN B	REAKER LIGHTING	120 VOLT CONTROL CABINET	MA I N BREAKER		RNISH	CÓMPÁNÝ
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AFFROACH	STATION	OFFSET	NEMA	170	NEMA	170	I	ΙΙ	MASTER	LOCAL	BASE	NEMA	170	FIBER		E	ΕV	DOUBLE	332	3365	BITRAN	WAPITI
MO 141 & BROMFIELD TERRACE	U.I.P.	U.I.P.			1									1								

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		TY	PE
DETECTOR NUMBER	APPROACH	RADAR	VIDEO
21	NB (PHASE 2)		1
22	NB (PHASE 2)		1
23	NB (PHASE 2)		1
31	EB (PHASE 3)		1
50	NB (PHASE 5)		1
61	SB (PHASE 6)		1
62	SB (PHASE 6)		1
63	SB (PHASE 6)		1
24	NB ADVANCE (PHASE 2)	1	
25	NB ADVANCE (PHASE 2)	1	
26	NB ADVANCE (PHASE 2)	1	
64	SB ADVANCE (PHASE 6)	1	
65	SB ADVANCE (PHASE 6)	1	
66	SB ADVANCE (PHASE 6)	1	
	TOTAL	6	8

- * ITEMS FOR WHICH SEPARATE PAYMENT WILL NOT BE MADE.
- (1) CABLING FOR THE NEW VIDEO DETECTION AND RADAR DETECTION SHOULD BE ROUTED THROUGH EXISTING CONDUITS. CONDUITS THAT ARE DAMAGED. COLLAPSED. OR UNUSABLE SHALL BE MARKED ON THE AS-BUILT PLANS PER JSP S.
- (2) THE INSTALLATION OF ALL EQUIPMENT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, DRAWINGS, AND ENGINEERING POLICY GUIDE.
- (3) THE CONTRACTOR SHALL HAVE RESPONSIBILITY OF LOCATING ALL UNDERGROUND AND OVERHEAD FACILITIES. STRUCTURES. AND UTILITIES.
- (4) THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL AND SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
- (5) ALL DRILLED OPENING FOR CABLE SHALL BE WEATHERPROOF.
 THERE WILL BE NO DIRECT PAYMENT FOR DRILLED OPENINGS.
 DISUSED OPENINGS SHALL BE PLUGGED BY THE CONTRACTOR.
- (6) THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROGRAMMING DETECTION ZONES PER JSP I AND JSP J. PER JSP I AND JSP J. COUNT ZONES SHOULD BE PROGRAMMED FOR EACH LANE AT THE INTERSECTION EVEN IF NO VEHICLE DETECTION ZONE IS REQUIRED FOR THAT LANE.
- (7) THE CONTRACTOR SHALL REMOVE ALL DISUSED EXISTING DETECTION CAMERA CABLE AS PART OF THE DETECTION INSTALLATION.
- (8) THE CONTRACTOR SHALL PULL ROPE THROUGH ANY USED CONDUITS PER JSP R.
- (9) MANUFACTURER'S REPRESENTATIVE SHALL BE PRESENT DURING PROGRAMMING OF DETECTION ZONES PER JSP I AND JSP J. MANUFACTURER'S REPRESENTATIVE SHALL PROVIDE GUIDANCE TO CONTRACTOR ON OPTIMAL PLACEMENT OF DETECTION EQUIPMENT AND PROGRAMMED DETECTION ZONES

	PHASE 2	PHASE 3
	↑	
	↓	
PHASE 5	PHASE 6	

	MISSOURI HIGHWAYS AND TRANSPORTATIC	MODOT		105 WEST CAPITC	JEFFERSON CITY, MO 6510	1-888-ASK-MODOT (1-888-275-6636
D-37C = 60	(151)		WSP USA INC.	211 N. BROADWAY SUITE 2800	ST. LOUIS, MO 63102 (314) 206-4444	MISSOLIBI CERTIFICATE OF ALITHORITY - 0011111
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3/21/2024

JOB NO.
JSL0110
CONTRACT ID.

PROJECT NO.

BRIDGE NO.

MO SHEET NO.

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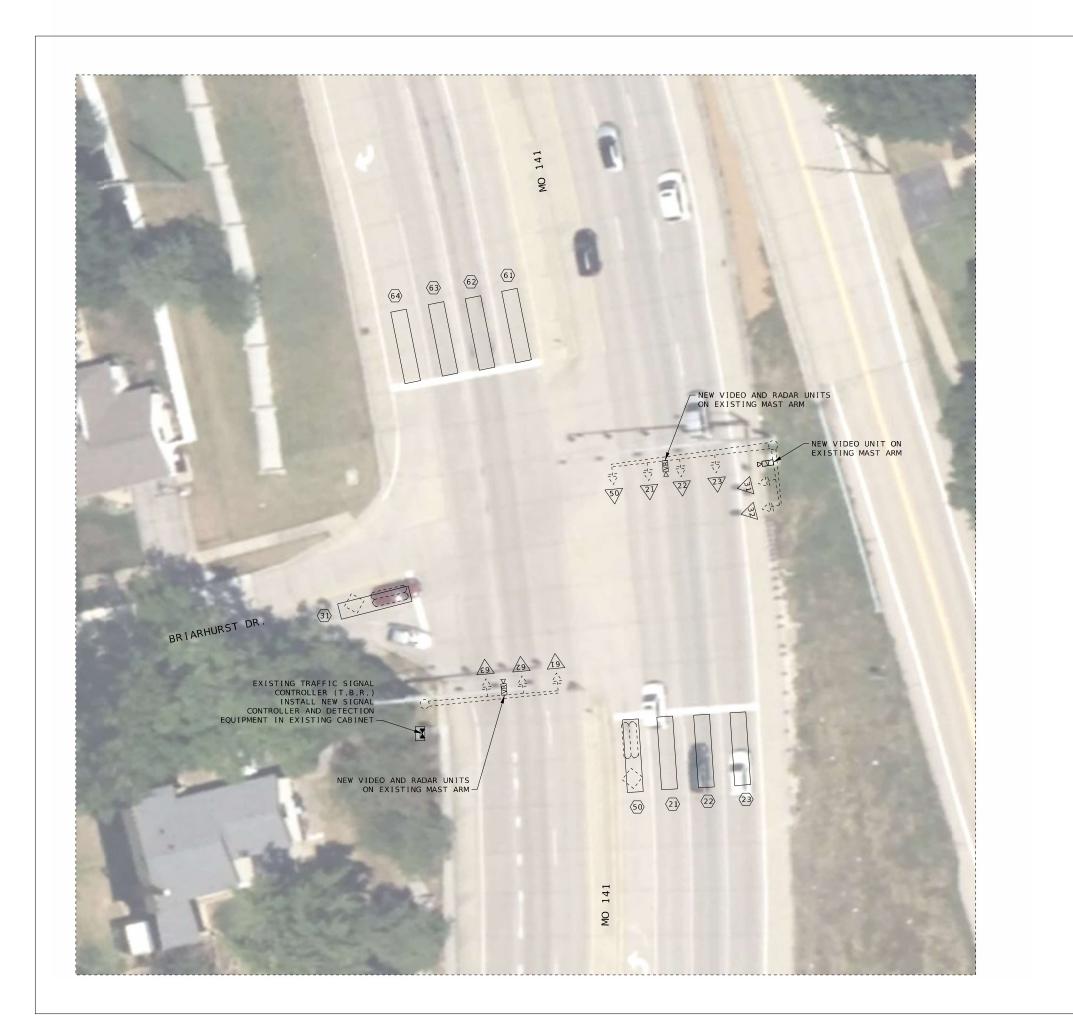
INTERSECTION D-3

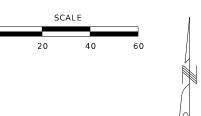
TRAFFIC SIGNAL SHEET 22 OF 60

MO 141 AND BROMFIELD TERRACE

ST. LOUIS COUNTY ROUTE 141 SIGNAL IMPROVEMENTS

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| DATE PREPARED | 3/21/2024 | | STATE | 141 | MO | | STATE | TATE | MO | SL | 26 | COUNTY | STATE | COUNTY | STATE | STATE | TATE | STATE | TATE | STATE | TATE | STATE | TATE | STATE | STATE

JOB NO.
JSL0110
CONTRACT ID.

PROJECT NO

DESCRIPTION

- (1) THE CONTRACTOR SHALL REMOVE THE EXISTING CONTROLLER AND DELIVER TO THE MODOT SIGNAL SHOP PER JSP K. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROGRAMMING THE NEW CONTROLLER TO MATCH EXISTING PHASING, TIMING, AND COMMUNICATION SETTINGS PER JSP H.
- (2) THE CONTRACTOR SHALL DISCONNECT LOOP LEAD-IN WIRES AND REMOVE DETECTOR CARDS FROM DETECTOR RACK. EXISTING LOOP DETECTORS SHALL BE LEFT IN PLACE AND ABANDONED. THE CONTRACTOR SHALL INSTALL A COMPLETE VIDEO DETECTION SYSTEM WITH ENCLOSURES, MOUNTING HARDWARE/BRACKETS, TERMINATION PANELS, POWER AND COMMUNICATION CABLES FOR STOP BAR DETECTION PER JSP I.
- (3) THE CONTRACTOR SHALL INSTALL RADAR DETECTION UNITS AND PROGRAM FOR ADVANCED DETECTION PER JSP J.

TRAFFIC SIGNALS LEGEND

- NEW CONTROLLER IN EXISTING CABINET
- $-\frac{1}{1}$ EXISTING SIGNAL HEAD
- EXISTING VIDEO/RADAR DETECTION UNIT
- NEW VIDEO/RADAR COMBINATION DETECTION UNIT
- NEW VIDEO DETECTION UNIT
- ▶□ R NEW RADAR DETECTION UNIT
- EXISTING GRIDSMART VIDEO DETECTION UNIT
- EXISTING ACCESS POINT
- r# EXISTING REPEATER
- EXISTING SENSYS DETECTOR PROBE

6 X 6 LOOP DETECTOR

{----} 6 X 15 LOOP DETECTOR

EXISTING STOP BAR DETECTION ZONE

PROPOSED STOP BAR DETECTION ZONE

@كِنْ EXISTING TRUSS

TRAFFIC SIGNAL SHEET 23 OF 60

ST. LOUIS COUNTY ROUTE 141 SIGNAL IMPROVEMENTS MISSOURI HIGHWAYS AND TRANSPOR
COMMISSION
THE STATE OF TH

SP USA INC. 11 N. BROADWAY SUITE 2800 T. LOUIS, MO 63102 (314) 206-4444

POWER SUPPLY															
LOC	LOCATION			POWER ASSE		CIR	CUI	T BREAKE	R TRIP R	AT I NG*	LIGHTING	CONTROL *		SERVIC	E POLE
100001011	6.7		055657	DRAWING	2012110			OLLER CONT &	POWER DISCO	SUPPLY NNECT	(ON POWER	SUPPLY)	CON	NTRACT	UTILITY
APPROACH	51	AIIUN	OFFSET	902.15	DRAWING	BRE A	I ARY KER	SIGNAL LAMPS	MAIN B	REAKER LIGHTING	120 VOLT CONTROL CABINET	MA I N BREAKER		RNISH	COMPANY
				Туре	U.I.P.	15	Amps	· Amps	Amps	Amps		Amps	CI.	Ft.	U.1.P.
•	_	9	0	Туре		15	Amps	Amps	Amps	Amps		Amps	CI.	F+.	

	CONTROLLER ASSEMBLY AND AUXILIARY EQUIPMENT																					
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APPROACH	STATION	OFFSET	(CLOSE	LOOP)	ACTO	ATED	TYF	PE 1	2C/7C H	HARDWIRE 1)	TIME	CLOSE	L00P	FIBER	TIME *	-	TYPE *	-	TYPI	E *	SOFTW	ARE *
AFFRUACH	STATION	UFFSET	NEMA	170	NEMA	170	I	H	MASTER	LOCAL	BASE	NEMA	170	FIBER		E	ΕV	DOUBLE	332	336S	BITRAN	WAPITI
MO 141 & BRIARHURST DR	U.I.P.	U.I.P.			1									1								

		NEMA DETECTOR ASSIGNMENT											
		CARD POSITION											
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NEMA LOAD SWITCH ASSIGNMENTS											
1	2	3	4	5	6	7	8	9	10	11	12
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F	DETECTOR SCHEDOR INFORMATION		
		TY	PE
DETECTOR NUMBER	APPROACH	RADAR	VIDEO
21	NB (PHASE 2)		1
22	NB (PHASE 2)		1
23	NB (PHASE 2)		1
31	EB (PHASE 3)		1
50	NB (PHASE 5)		1
61	SB (PHASE 6)		1
62	SB (PHASE 6)		1
63	SB (PHASE 6)		1
64	SB (PHASE 6)		1
2.4	ND ADVANCE (DUACE 2)	1	
24	NB ADVANCE (PHASE 2) NB ADVANCE (PHASE 2)	1	
26	NB ADVANCE (PHASE 2)	1	
65	SB ADVANCE (PHASE 2)	1	
66	SB ADVANCE (PHASE 6)	1	
67	SB ADVANCE (PHASE 6)	1	
	TOTAL	6	9

- * ITEMS FOR WHICH SEPARATE PAYMENT WILL NOT BE MADE.
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- (2) THE INSTALLATION OF ALL EQUIPMENT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, DRAWINGS, AND
- (3) THE CONTRACTOR SHALL HAVE RESPONSIBILITY OF LOCATING ALL UNDERGROUND AND OVERHEAD FACILITIES, STRUCTURES, AND
- (4) THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL AND SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
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 COUNT ZONES SHOULD BE PROGRAMMED FOR EACH LANE AT THE
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- (7) THE CONTRACTOR SHALL REMOVE ALL DISUSED EXISTING DETECTION CAMERA CABLE AS PART OF THE DETECTION
- (8) THE CONTRACTOR SHALL PULL ROPE THROUGH ANY USED CONDUITS PER JSP R.
- (9) MANUFACTURER'S REPRESENTATIVE SHALL BE PRESENT DURING PROGRAMMING OF DETECTION ZONES PER JSP I AND JSP J. MANUFACTURER'S REPRESENTATIVE SHALL PROVIDE GUIDANCE TO CONTRACTOR ON OPTIMAL PLACEMENT OF DETECTION EQUIPMENT AND PROGRAMMED DETECTION ZONES.

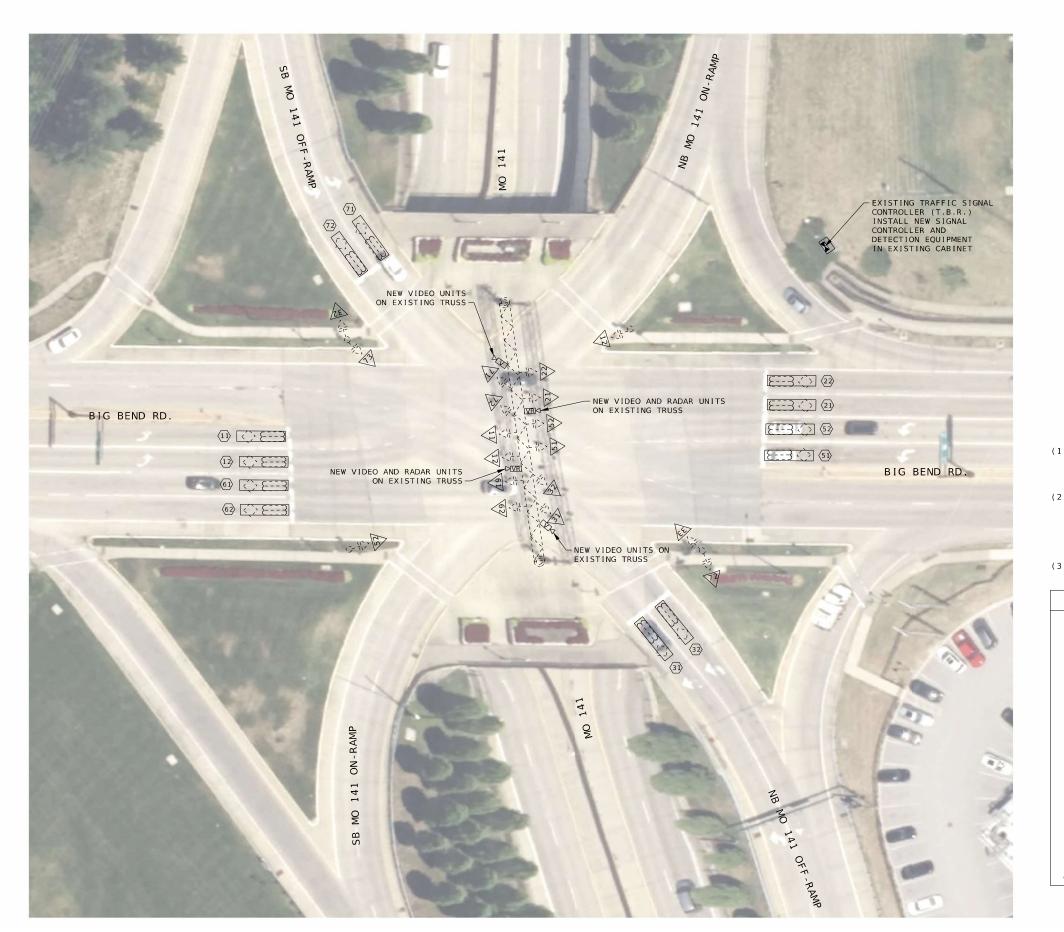
3/21/2024 141 MO SHEET NO. DISTRICT SL 27 COUNTY ST LOUIS JOB NO. JSL0110 CONTRACT ID. PROJECT NO. BRIDGE NO. D - 37CTRAFFIC SIGNAL SHEET 24 OF 60

	PHASE	Ξ 2	PHAS	SE 3
		↑		↑
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-				
	+			
PHASE 5	PHASE	Ξ 6		

MO 141 AND BRIARHURST DR INTERSECTION

ST. LOUIS COUNTY ROUTE 141 SIGNAL IMPROVEMENTS

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JOB NO.
JSL0110
CONTRACT ID.

PROJECT NO

DESCRIPTION

- (1) THE CONTRACTOR SHALL REMOVE THE EXISTING CONTROLLER AND DELIVER TO THE MODOT SIGNAL SHOP PER JSP K. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROGRAMMING THE NEW CONTROLLER TO MATCH EXISTING PHASING, TIMING, AND COMMUNICATION SETTINGS PER JSP H.
- (2) THE CONTRACTOR SHALL DISCONNECT LOOP LEAD-IN WIRES AND REMOVE DETECTOR CARDS FROM DETECTOR RACK. EXISTING LOOP DETECTORS SHALL BE LEFT IN PLACE AND ABANDONED. THE CONTRACTOR SHALL INSTALL A COMPLETE VIDEO DETECTION SYSTEM WITH ENCLOSURES, MOUNTING HARDWARE/BRACKETS, TERMINATION PANELS, POWER AND COMMUNICATION CABLES FOR STOP BAR DETECTION PER JSP I.
- (3) THE CONTRACTOR SHALL INSTALL RADAR DETECTION UNITS AND PROGRAM FOR ADVANCED DETECTION PER JSP J.

TRAFFIC SIGNALS LEGEND

NEW CONTROLLER IN EXISTING CABINET

EXISTING SIGNAL HEAD

EXISTING VIDEO/RADAR DETECTION UNIT

NEW VIDEO/RADAR COMBINATION DETECTION UNIT

NEW VIDEO DETECTION UNIT

NEW RADAR DETECTION UNIT

EXISTING GRIDSMART VIDEO DETECTION UNIT

EXISTING ACCESS POINT

* EXISTING REPEATER

EXISTING SENSYS DETECTOR PROBE

6 X 6 LOOP DETECTOR

{----} 6 X 15 LOOP DETECTOR

----- 30 X 6 LOOP DETECTOR

EXISTING STOP BAR DETECTION ZONE

PROPOSED STOP BAR DETECTION ZONE

EXISTING TRUSS

TRAFFIC SIGNAL SHEET 25 OF 60

ST. LOUIS COUNTY
ROUTE 141 SIGNAL IMPROVEMENTS

USA INC.
N BROADWAY SUITE 2800
-OUIS, MO 63102 (314) 206-4444

	POWER SUPPLY																
L	LOCATION				POWER ASSE		CIF	COI.	T BREAKE	R TRIP R	AT I NG*	LIGHTING	CONTROL *		SERVIC	E POLE	
10000101		6.7.		0.5		DRAWING	2014110			OLLER CONT &	POWER DISCO	SUPPLY NNECT	(ON POWER		CON	NTRACT	UTILITY
APPRUACE	APPROACH		- ALLUN	UF	F SE I	DRAWING 902.15	DRAWING	AUX I L BRE A	.IARY AKER	SIGNAL	MAIN B	REAKER LIGHTING	120 VOLT CONTROL CABINET	MA I N BREAKER		RNISH	CÓMPÁNÝ
						Туре	U.I.P.	15	Amps	· Amps	Amps	Amps		Amps	CI.	Ft.	U.1.P.
	0		. 0	I	0	Туре		15	Amps	Amps	Amps	Amps		Amps	CI.	Ft.	

	CONTROLLER ASSEMBLY AND AUXILIARY EQUIPMENT																					
LOCAT	LOCATION		SYS MAS	TEM	ACTI	IATED	ON-O SWI	FF* TCH	С	OORDINA	TION INT	ERFACE *	K				A CABI		170 CA		17	
APPROACH	STATION	OFFSET	(CLOSE	LOOP)	ACTO	AILU	TYF	PE	12C/7C H	IARDWIRE 1)	TIME	CLOSE) LOOP	FIBER	TIME *	_	TYPE *		TYP	E *	SOFTW	ARE *
	STATION	OFFSET	NEMA	170	NEMA	170	I	ΙI	MASTER	LOCAL	BASE	NEMA	170	FIBER		E	ΕV	DOUBLE	332	3365	BITRAN	WAPITI
MO 141 & BIC BEND RD	U.I.P.	U.I.P.			1									1								

		NEMA DETECTOR ASSIGNMENT											
		CARD POSITION											
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N N E L	2		•			0							

	NEMA LOAD SWITCH ASSIGNMENTS										
1	2	3	4	5	6	7	8	9	10	11	12
						P	9				

F	DETECTOR SCHEDOR INFORMATION		
		TY	PE
DETECTOR NUMBER	APPROACH	RADAR	VIDEO
11	EB (PHASE 1)		1
12	EB (PHASE 1)		1
21	WB (PHASE 2) WB (PHASE 2)		1
31	NB (PHASE 3)		1
32	NB (PHASE 3)		1
51	WB (PHASE 5)		1
52 61	WB (PHASE 5) EB (PHASE 6)		1
62	EB (PHASE 6)		1
71	SB (PHASE 7)		1
72	SB (PHASE 7)		1
23	WB ADVANCE (PHASE 2)	1	
24 63	WB ADVANCE (PHASE 2)	1	
63	EB ADVANCE (PHASE 6)	1	
64	EB ADVANCE (PHASE 6)	1	
	TOTAL	4	12

- * ITEMS FOR WHICH SEPARATE PAYMENT WILL NOT BE MADE.
- (1) CABLING FOR THE NEW VIDEO DETECTION AND RADAR DETECTION SHOULD BE ROUTED THROUGH EXISTING CONDUITS. CONDUITS THAT ARE DAMAGED. COLLAPSED. OR UNUSABLE SHALL BE MARKED ON THE AS-BUILT PLANS PER JSP S.
- (2) THE INSTALLATION OF ALL EQUIPMENT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, DRAWINGS, AND ENGINEERING POLICY GUIDE.
- (3) THE CONTRACTOR SHALL HAVE RESPONSIBILITY OF LOCATING ALL UNDERGROUND AND OVERHEAD FACILITIES, STRUCTURES, AND
- (4) THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL AND SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
- (5) ALL DRILLED OPENING FOR CABLE SHALL BE WEATHERPROOF.
 THERE WILL BE NO DIRECT PAYMENT FOR DRILLED OPENINGS.
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 COUNT ZONES SHOULD BE PROGRAMMED FOR EACH LANE AT THE
 INTERSECTION EVEN IF NO VEHICLE DETECTION ZONE IS REQUIRED FOR THAT LANE.
- (7) THE CONTRACTOR SHALL REMOVE ALL DISUSED EXISTING
 DETECTION CAMERA CABLE AS PART OF THE DETECTION
- (8) THE CONTRACTOR SHALL PULL ROPE THROUGH ANY USED CONDUITS PER JSP R.
- (9) MANUFACTURER'S REPRESENTATIVE SHALL BE PRESENT DURING PROGRAMMING OF DETECTION ZONES PER JSP I AND JSP J. MANUFACTURER'S REPRESENTATIVE SHALL PROVIDE GUIDANCE TO CONTRACTOR ON OPTIMAL PLACEMENT OF DETECTION EQUIPMENT AND PROGRAMMED DETECTION ZONES.

PHASE 1 PHASE 2 PHASE 3 PHASE 5 PHASE 6 PHASE 7

	MISS
141 AND BIG BEND RD	MAY SUITE 2800 63102 (314) 206-4444 THEIGATE OF AITHORITY - 001444
INTERSECTION D-37C	. ≥ ∩ ™
TRAFFIC SIGNAL SHEET 26 OF 60	SA INC. BROADWAY UIS, MO 631
ST. LOUIS COUNTY ROUTE 141 SIGNAL IMPROVEMENTS r\179208\790505_45\029_DTL_13_JSL0110.dgn 9:33	WSP U 211 N ST. LO MISSO

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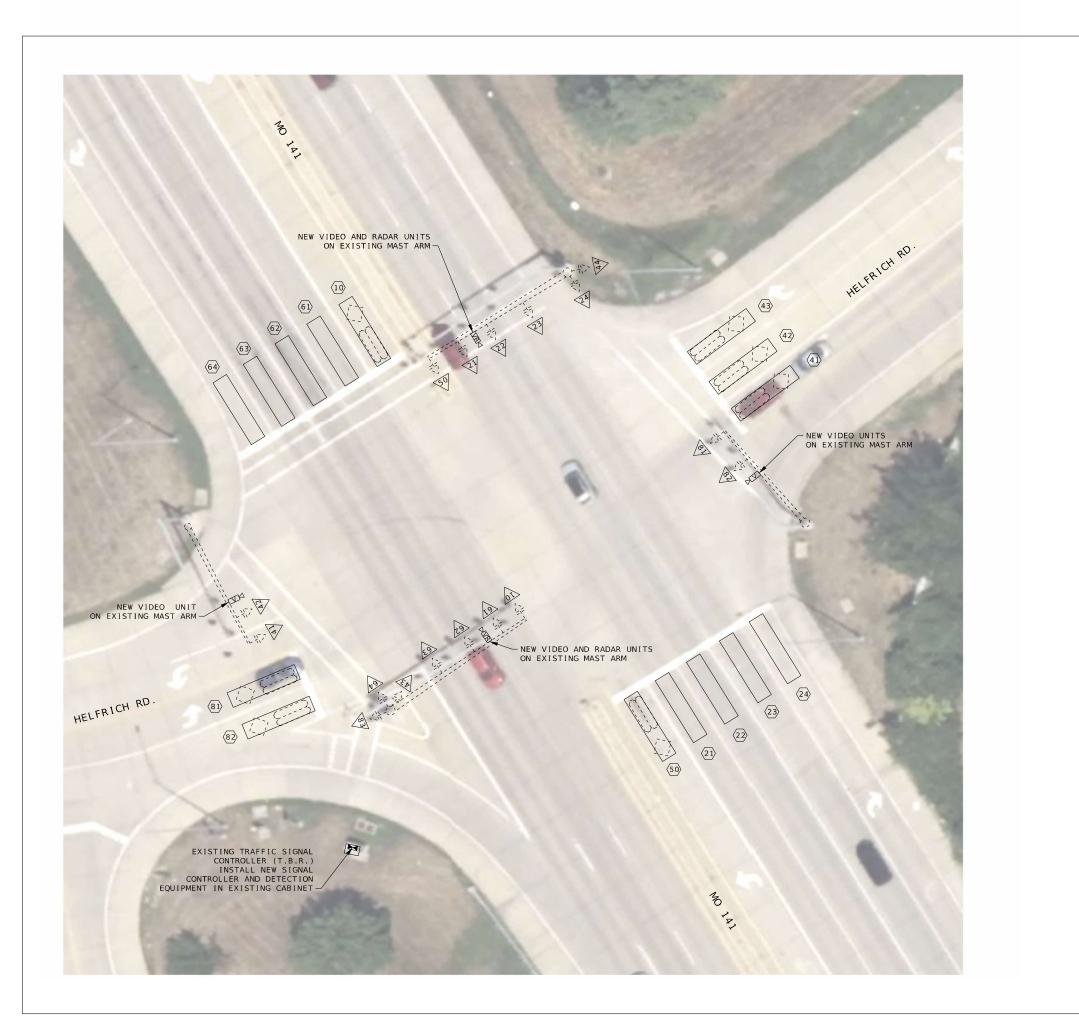
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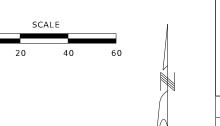
29 COUNTY ST LOUIS JOB NO. JSL0110 CONTRACT ID. PROJECT NO. BRIDGE NO.

141

DISTRICT SL

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DATE PREPARED

3 / 21 / 2024

ROUTE STATE

1 4 1 MO

SL 30

JOB NO.
JSL0110
CONTRACT ID.

PROJECT NO

BRIDGE NO.

(1) THE CONTRACTOR SHALL REMOVE THE EXISTING CONTROLLER AND DELIVER TO THE MODOT SIGNAL SHOP PER ISP K. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROGRAMMING THE NEW CONTROLLER TO MATCH EXISTING PHASING, TIMING, AND COMMUNICATION SETTINGS PER ISP H.

(2) THE CONTRACTOR SHALL DISCONNECT LOOP LEAD-IN WIRES AND REMOVE DETECTOR CARDS FROM DETECTOR RACK. EXISTING LOOP DETECTORS SHALL BE LEFT IN PLACE AND ABANDONED. THE CONTRACTOR SHALL INSTALL A COMPLETE VIDEO DETECTION SYSTEM WITH ENCLOSURES, MOUNTING HARDWARE/BRACKETS, TERMINATION PANELS, POWER AND COMMUNICATION CABLES FOR STOP BAR DETECTION PER JSP I.

(3) THE CONTRACTOR SHALL INSTALL RADAR DETECTION UNITS AND PROGRAM FOR ADVANCED DETECTION PER JSP J.

TRAFFIC SIGNALS LEGEND

NEW CONTROLLER IN EXISTING CABINET

 $-\frac{1}{11}$ EXISTING SIGNAL HEAD

EXISTING VIDEO/RADAR DETECTION UNIT

NEW VIDEO/RADAR COMBINATION DETECTION UNIT

NEW VIDEO DETECTION UNIT

NEW RADAR DETECTION UNIT

(EXISTING GRIDSMART VIDEO DETECTION UNIT

■ EXISTING ACCESS POINT

「♣ EXISTING REPEATER

EXISTING SENSYS DETECTOR PROBE

6 X 6 LOOP DETECTOR

{----} 6 X 15 LOOP DETECTOR

----- 30 X 6 LOOP DETECTOR

EXISTING STOP BAR DETECTION ZONE

PROPOSED STOP BAR DETECTION ZONE

CTITITITITY EXISTING MAST ARM

EXISTING TRUSS

TRAFFIC SIGNAL SHEET 27 OF 60

ST. LOUIS COUNTY ROUTE 141 SIGNAL IMPROVEMENTS



VSP USA INC. 111 N. BROADWAY SUITE 2800 5T. LOUIS, MO 63102 (314) 206-4444 MISSOURI CERTIFICATE OF AUTHORITY -

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L	LOCATION POWER SUP						CIF	COI.	T BREAKE	R TRIP R	AT I NG*	LIGHTING	CONTROL *		SERVIC	E POLE	
10000101		6.7.		0.5		DRAWING	2014110	CONTROLLER POWER SUPPLY		(ON POWER		CONTRACT		UTILITY			
APPROACH		517	- ALLUN	UF	F SE I	902.15	DRAWING	AUXILIARY BREAKER LAMPS SIGNALS LIGHTING		120 VOLT CONTROL CABINET	MA I N BREAKER		RNISH	CÓMPÁNÝ			
						Туре	U.I.P.	15	Amps	· Amps	Amps	Amps		Amps	CI.	Ft.	U.1.P.
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LOCAT	LOCATION				ACTUATED ON-			FF * TCH	COORDINATION INTERFACE *				NEMA CABINET			170 CABINET		17				
APPROACH	APPROACH STATION OFFSE		SYSTEM MASTER (CLOSED LO		ACTO	AILU	TYPE		12C/7C F	HARDWIRE 1)	TIME	CLOSE) LOOP	FIBER	TIME *	TYPE *		-	TYP	E *	SOFTW	ARE *
AFFROACH	STATION	OFFSET	NEMA	170	NEMA	170	I	ΙI	MASTER	LOCAL	BASE	NEMA	170	FIBER		E	ΕV	DOUBLE	332	3365	BITRAN	WAPITI
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		CARD POSITION											
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						Ρ.	9				

F	DETECTOR SCHEDOR INFORMATION		
		TY	PE
DETECTOR NUMBER	APPROACH	RADAR	VIDEO
10	SB (PHASE 1)		1
21	NB (PHASE 2)		1
22	NB (PHASE 2)		1
23	NB (PHASE 2)		1
24	NB (PHASE 2)		1
41	WB (PHASE 4)		1
42	WB (PHASE 4)		1
43	WB (PHASE 4)		1
50	NB (PHASE 5)		1
61	SB (PHASE 6)		1
62	SB (PHASE 6)		1
63	SB (PHASE 6)		1
64	SB (PHASE 6)		1
81	EB (PHASE 8)		1
82	EB (PHASE 8)		1
25	NB ADVANCE (PHASE 2)	1	
26	NB ADVANCE (PHASE 2)	1	
44	WB ADVANCE (PHASE 4)	1	
65	SB ADVANCE (PHASE 6)	1	
66	SB ADVANCE (PHASE 6)	1	
67	SB ADVANCE (PHASE 6)	1	
83	EB ADVANCE (PHASE 8)	1	
	TOTAL	7	15

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- (6) THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROGRAMMING DETECTION ZONES PER JSP I AND JSP J. PER JSP I AND JSP J. COUNT ZONES SHOULD BE PROGRAMMED FOR EACH LANE AT THE INTERSECTION EVEN IF NO VEHICLE DETECTION ZONE IS REQUIRED FOR THAT LANE.
- (7) THE CONTRACTOR SHALL REMOVE ALL DISUSED EXISTING DETECTION CAMERA CABLE AS PART OF THE DETECTION INSTALLATION.
- (8) THE CONTRACTOR SHALL PULL ROPE THROUGH ANY USED CONDUITS PER JSP R.
- (9) MANUFACTURER'S REPRESENTATIVE SHALL BE PRESENT DURING PROGRAMMING OF DETECTION ZONES PER JSP I AND JSP J. MANUFACTURER'S REPRESENTATIVE SHALL PROVIDE GUIDANCE TO CONTRACTOR ON OPTIMAL PLACEMENT OF DETECTION EQUIPMENT AND PROGRAMMED DETECTION ZONES

		T
PHASE 1	PHASE 2	PHASE 4
	<u> </u>	4
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•		^
	 	
PHASE 5	PHASE 6	PHASE 8

MD 141 AND HELFRICH RD

INTERSECTION

TRAFFIC SIGNAL SHEET 28 OF 60

ST. LOUIS COUNTY

ROUTE 141 SIGNAL IMPROVEMENTS

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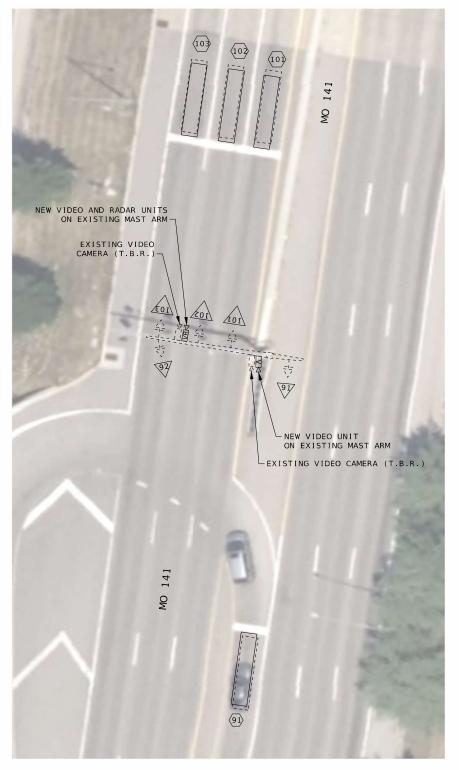
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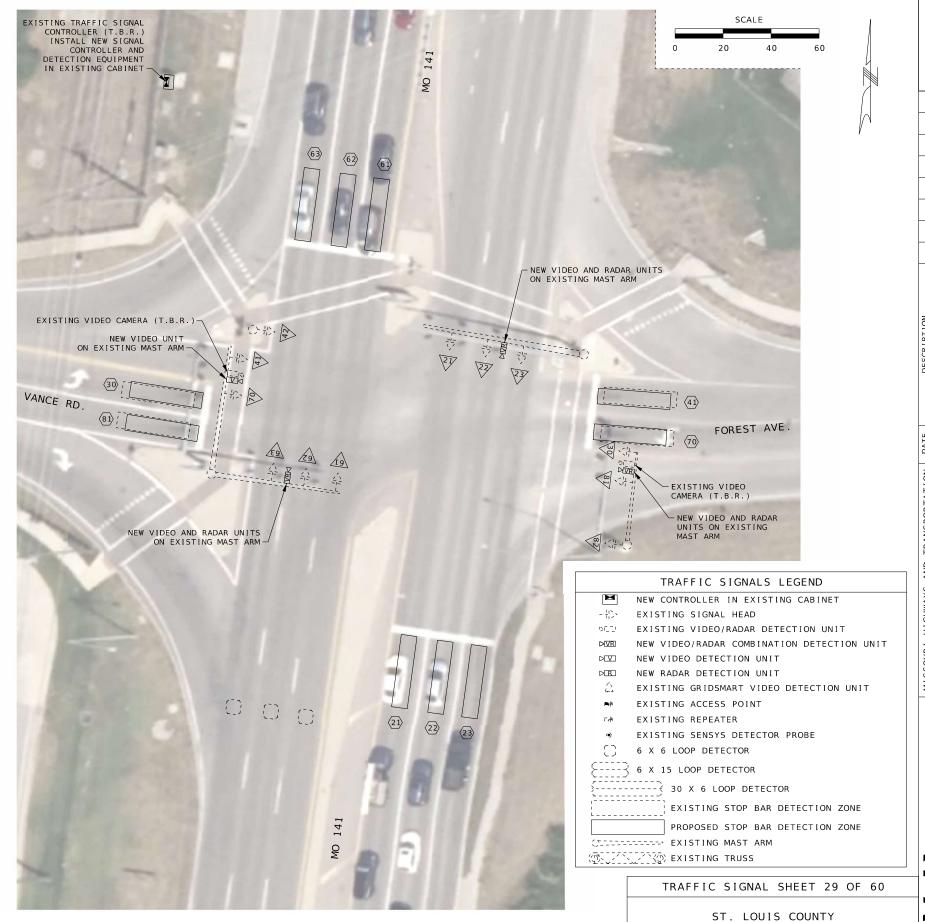
MO SHEET NO.

141

DISTRICT



- (1) THE CONTRACTOR SHALL REMOVE THE EXISTING CONTROLLER AND DELIVER TO THE MODOT SIGNAL SHOP PER JSP K. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROGRAMMING THE NEW CONTROLLER TO MATCH EXISTING PHASING, TIMING, AND COMMUNICATION SETTINGS PER JSP H.
- (2) THE CONTRACTOR SHALL DISCONNECT LOOP LEAD-IN WIRES AND REMOVE DETECTOR CARDS FROM DETECTOR RACK. EXISTING LOOP DETECTORS SHALL BE LEFT IN PLACE AND ABANDONED. THE CONTRACTOR SHALL REMOVE THE EXISTING VIDEO DETECTION EQUIPMENT INCLUDING ANY UNUSED CAMERAS, CABINET HARDWARE, MOUNTING HARDWARE/BRACKETS AND CABLING. THE EXISTING VIDEO DETECTION EQUIPMENT SHALL BE DELIVERED TO THE MODOT SIGNAL SHOP PER JSP K. THE CONTRACTOR SHALL INSTALL A COMPLETE VIDEO DETECTION SYSTEM WITH ENCLOSURES, MOUNTING HARDWARE/BRACKETS, TERMINATION PANELS, POWER AND COMMUNICATION CABLES FOR STOP BAR DETECTION PER JSP I.
- (3) THE CONTRACTOR SHALL INSTALL RADAR DETECTION UNITS AND PROGRAM FOR ADVANCED DETECTION PER JSP J.



3/21/2024

JOB NO.

JOB NO.

CONTRACT ID.

PROJECT NO

MO SHEET NO

32

141

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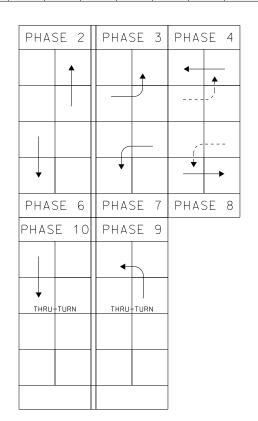
ROUTE 141 SIGNAL IMPROVEMENTS

						Р	\bigcirc W	ER SI	JPPLY						
LO	LOCATION POWER SUPPLY CIRCUIT BREAKER TRIP RATING*								CONTROL *		SERVIC	E POLE			
100001011			055657	DRAWING				OLLER CONT &	POWER DISCO	SUPPLY NNECT		R SUPPLY)	CON	NTRACT	UTILITY
APPROACH	51	AIIUN	OFFSET	902.15	DRAWING	BRE A	AUXILIARY BREAKER LAMPS SIGNALS LIGHTING		120 VOLT CONTROL CABINET	MA I N BREAKER		RNISH	COMPANY		
				Туре	U.I.P.	15	Amps	· Amps	Amps	Amps		Amps	CI.	Ft.	U.1.P.
	9 .	0	0	Туре		15	Amps	Amps	Amps	Amps	·	Amps	CI.	F+.	

				СС	NTRC	LLER) A S	SSE	EMBLY	/ AND) AUX	ILIAF	RY EC	UIPM	ENT							
LOCAT	LOCATION			TEM TER	A C T L I	ATED	ON-OF SWIT	-OFF* WITCH COORDINATION INTERFACE *							NEMA CABINET			170 CABINET		17	'0	
APPROACH	APPROACH STATION OFFS		(CLOSED LOOP		ACTOATED		TYF	E 1	12C/7C H	IARDWIRE 1)	TIME	CLOSE) LOOP	FIBER	TIME *	_	TYPE *		TYP	E *	SOFTW	ARE *
AFFRUACH	STATION	OFFSET	NEMA	170	NEMA	170	I	ΙΙ	MASTER	LOCAL	BASE	NEMA	170	FIBER		E	ΕV	DOUBLE	332	3365	BITRAN	WAPITI
MO 141 & VANCE RD/FOREST AVE	U.I.P.	U.I.P.			1									1								

					A DE SSIG									
			CARD POSITION											
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N E L	2													

		NEM.	A LC	AD S	SWIT	CH A	ASS I	GNME	NTS		
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					I .	P	9				



	DETECTOR SCHEE		
F	OR INFORMATION	UNLY	
		TY	PE
DETECTOR NUMBER	APPROACH	RADAR	VIDEO
21	NB (PHASE 2)		1
22	NB (PHASE 2)		1
23	NB (PHASE 2)		1
30	EB (PHASE 3)		1
41	WB (PHASE 4)		1
61	SB (PHASE 6)		1
62 63	SB (PHASE 6)		1
70	SB (PHASE 6) WB (PHASE 7)		1
81	EB (PHASE 8)		1
91	NB (PHASE 9)		1
101	SB (PHASE 10)		1
102	SB (PHASE 10)		1
103	SB (PHASE 10)		1
24	NB ADVANCE (PHASE 2)	1	
25	NB ADVANCE (PHASE 2)	1	
26	NB ADVANCE (PHASE 2)	1	
42 64	WB ADVANCE (PHASE 4) SB ADVANCE (PHASE 6)	1	
65	SB ADVANCE (PHASE 6)	1	
66	SB ADVANCE (PHASE 6)	1	
82	EB ADVANCE (PHASE 8)	1	
91	NB ADVANCE (PHASE 9)	1	
104	SB ADVANCE (PHASE 10)	1	
105	SB ADVANCE (PHASE 10)	1	
106	SB ADVANCE (PHASE 10)	1	
<u> </u>	TOTAL	12	14

- * ITEMS FOR WHICH SEPARATE PAYMENT WILL NOT BE MADE.
- (1) CABLING FOR THE NEW VIDEO DETECTION AND RADAR DETECTION SHOULD BE ROUTED THROUGH EXISTING CONDUITS. CONDUITS THAT ARE DAMAGED, COLLAPSED, OR UNUSABLE SHALL BE MARKED ON THE AS-BUILT PLANS PER JSP S.
- (2) THE INSTALLATION OF ALL EQUIPMENT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, DRAWINGS, AND ENGINEERING POLICY GUIDE.
- (3) THE CONTRACTOR SHALL HAVE RESPONSIBILITY OF LOCATING ALL UNDERGROUND AND OVERHEAD FACILITIES, STRUCTURES, AND UTILITIES.
- (4) THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL AND SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
- (5) ALL DRILLED OPENING FOR CABLE SHALL BE WEATHERPROOF.
 THERE WILL BE NO DIRECT PAYMENT FOR DRILLED OPENINGS.
 DISUSED OPENINGS SHALL BE PLUGGED BY THE CONTRACTOR.
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- (8) THE CONTRACTOR SHALL PULL ROPE THROUGH ANY USED CONDUITS PER JSP $\ensuremath{\mathrm{R}}.$
- (9) MANUFACTURER'S REPRESENTATIVE SHALL BE PRESENT DURING PROGRAMMING OF DETECTION ZONES PER JSP I AND JSP J. MANUFACTURER'S REPRESENTATIVE SHALL PROVIDE GUIDANCE TO CONTRACTOR ON OPTIMAL PLACEMENT OF DETECTION EQUIPMENT AND PROGRAMMED DETECTION ZONES.

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			JE.				
DESCRIPTION							
DATE							
MISSOURI HIGHWAYS AND TRANSPORTATION	COMMISSION		MoDOT		105 WEST CAPITOL	JEFFERSON CITY, MO 65102	1-888-ASK-MODOT (1-888-275-6636)
							1777

MU	141	AND	VANCE	KD/F UKES I	AVE

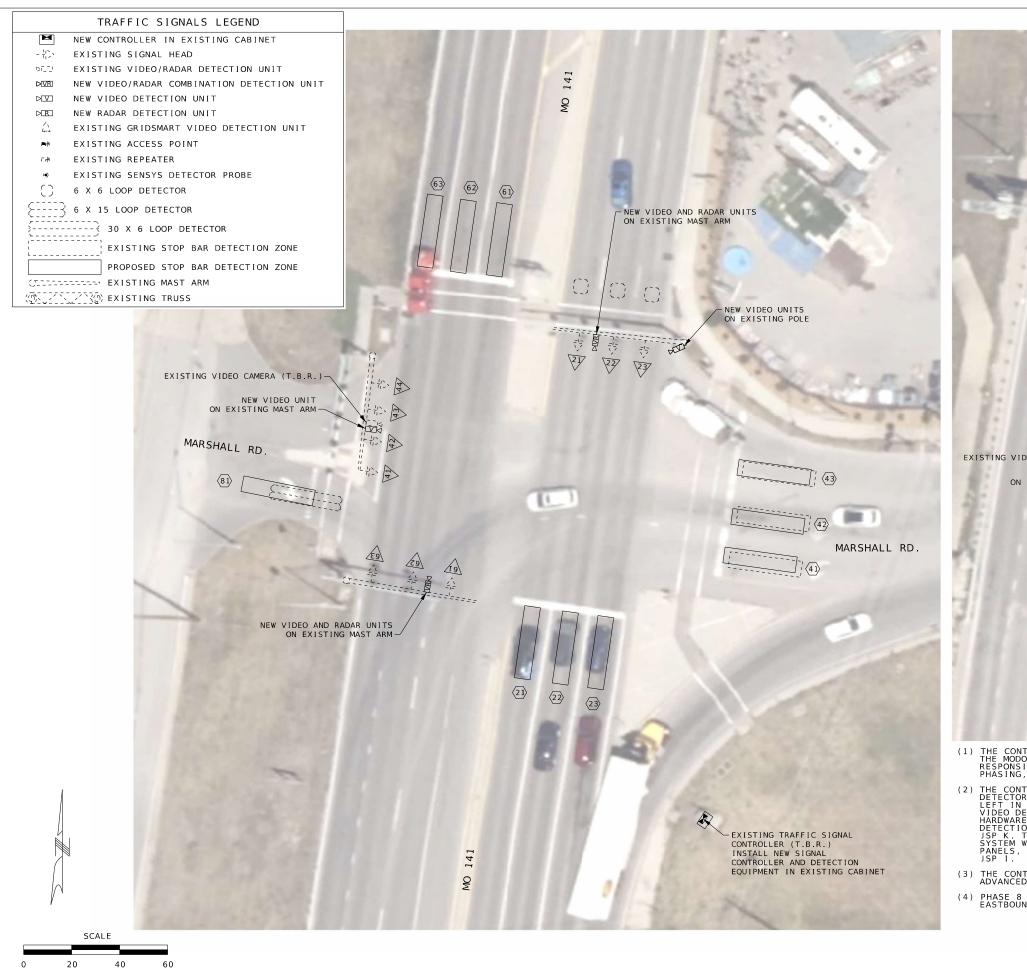
INTERSECTION

D-37C

TRAFFIC SIGNAL SHEET 30 OF 60

ST. LOUIS COUNTY ROUTE 141 SIGNAL IMPROVEMENTS

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(1) THE CONTRACTOR SHALL REMOVE THE EXISTING CONTROLLER AND DELIVER TO THE MODOT SIGNAL SHOP PER JSP K. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROGRAMMING THE NEW CONTROLLER TO MATCH EXISTING PHASING, TIMING, AND COMMUNICATION SETTINGS PER JSP H.

- (2) THE CONTRACTOR SHALL DISCONNECT LOOP LEAD-IN WIRES AND REMOVE DETECTOR CARDS FROM DETECTOR RACK. EXISTING LOOP DETECTORS SHALL BE LEFT IN PLACE AND ABANDONED. THE CONTRACTOR SHALL REMOVE THE EXISTING VIDEO DETECTION EQUIPMENT INCLUDING ANY UNUSED CAMERAS, CABINET HARDWARE, MOUNTING HARDWARE/BRACKETS AND CABLING. THE EXISTING VIDEO DETECTION EQUIPMENT SHALL BE DELIVERED TO THE MODOT SIGNAL SHOP PER JSP K. THE CONTRACTOR SHALL INSTALL A COMPLETE VIDEO DETECTION SYSTEM WITH ENCLOSURES, MOUNTING HARDWARE/BRACKETS, TERMINATION PANELS, POWER AND COMMUNICATION CABLES FOR STOP BAR DETECTION PER JSP I.
- (3) THE CONTRACTOR SHALL INSTALL RADAR DETECTION UNITS AND PROGRAM FOR ADVANCED DETECTION PER JSP J.
- (4) PHASE 8 IS A DUMMY PHASE TO ALLOW FOR A BRIEF ALL RED PERIOD WHEN EASTBOUND RIGHT TURN IS ACTUATED.

TRAFFIC SIGNAL SHEET 31 OF 60

ST. LOUIS COUNTY ROUTE 141 SIGNAL IMPROVEMENTS

3/21/2024 141 MO SHEET NO SL 34

ST LOUIS JSL0110

PROJECT NO

BRIDGE NO

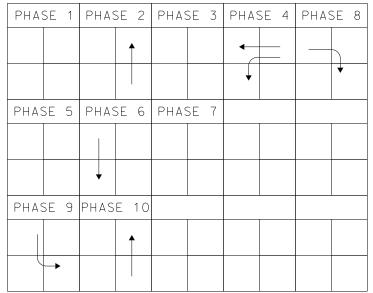
MISSOURI

	POWER SUPPLY																	
	LOCATION					POWER ASSE					CONTROL *	ONTROL * SERVICE POLE						
				T.1011	05/	-65.	DRAWING	2011110			OLLER CONT &	POWER DISCO			(ON POWER SUPPLY)		CONTRACT UTILITY	
APP	ROACH	1	O I A	TION	UFI	SEI	902.15	DRAWING	BRE,	.IARY AKER	SIGNAL LAMPS	MAIN B		120 VOLT CONTROL CABINET	MA I N BREAKER	FURNISH		COMPANY
					\vdash		Туре	U.I.P.	15	Amps	· Amps	Amps	Amps		Amps	CI.	Ft.	U.I.P.
		0		0		0	Type		15	Amps	Amps	Amps	Amps		Amps	CI.	Ft.	

CONTROLLER ASSEMBLY AND AUXILIARY EQUIPMENT																					
LOCATION			SYS MAS	TEM	A C T L I	ATED	ON-OFF SWITC	*	COORDINA	TION INT	ERFACE *	⊬				A CABI		170 CA		17	70
APPROACH STATIO		STATION OFFSET	(CLOSED LOOP		ACTOATED		TYPE	120/70	HARDWIRE	TIME	CLOSED	ED LOOP		TIME *	TYPE *			TYPE *		SOFTWARE *	
AFFROACH	STATION	UFFSET	NEMA	170	NEMA	170	I I	MASTE	R LOCAL	BASE	NEMA	170	FIBER		E	ΕV	DOUBLE	332	336S	BITRAN	WAPITI
MO 141 & MARSHALL RD	U.I.P.	U.I.P.			1								1								

			NEMA DETECTOR ASSIGNMENT									
				CARD POSITION								
		1	2	3	4	5	6	7	8			
Z D H O	1		1 1	Т								
N E L	2		0			0						

NEMA LOAD SWITCH ASSIGNMENTS											
1	2	3	4	5	6	7	8	9	10	11	12
					I .	P	9				



	DETECTOR SCHEE					
F	OR INFORMATION	ONLY				
		TYPE				
DETECTOR NUMBER	APPROACH	RADAR	VIDEO			
21	NB (PHASE 2)		1			
22	NB (PHASE 2)		1			
23	NB (PHASE 2) WB (PHASE 4)		1			
41	WB (PHASE 4)		1			
43	WB (PHASE 4)		1			
61	SB (PHASE 6)		1			
62	SB (PHASE 6)		1			
63	SB (PHASE 6)		1			
81 90	EB (PHASE 8) SB (PHASE 9)		1			
101	NB (PHASE 10)		1			
102	NB (PHASE 10)		1			
103	NB (PHASE 10)		1			
24	NB ADVANCE (PHASE 2)	1				
25	NB ADVANCE (PHASE 2)	i				
26	NB ADVANCE (PHASE 2)	1				
44	WB ADVANCE (PHASE 4)	1				
64	SB ADVANCE (PHASE 6)	1				
65 66	SB ADVANCE (PHASE 6) SB ADVANCE (PHASE 6)	1 1				
92	SB ADVANCE (PHASE 6)	1				
104	NB ADVANCE (PHASE 10)	1				
105	NB ADVANCE (PHASE 10)	1				
106	NB ADVANCE (PHASE 10)	1				
		4.4	4.4			
	TOTAL	11	14			

- * ITEMS FOR WHICH SEPARATE PAYMENT WILL NOT BE MADE.
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- (8) THE CONTRACTOR SHALL PULL ROPE THROUGH ANY USED CONDUITS PER JSP $\ensuremath{\mathrm{R}}.$
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3/21/2024 141 MO SHEET NO. DISTRICT 35 SL COUNTY ST LOUIS JOB NO. JSL0110 CONTRACT ID. PROJECT NO. BRIDGE NO HIGHWAYS AND TRANSPORTATION COMMISSION

■
A INC.
SROADWAY SUITE 2800
IIS, MO 63102 (314) 206-4444
IRI CERTIFICATE OF AUTHORITY - 00144

* PHASE 8 IS A DUMMY PHASE TO ALLOW FOR A BRIEF ALL RED PERIOD WHEN EAST BOUND RIGHT TURN IS ACTUATED.

MO 141 AND MARSHALL RD

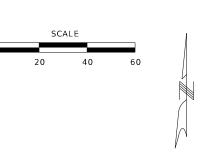
INTERSECTION

D-37C

TRAFFIC SIGNAL SHEET 32 OF 60

ST. LOUIS COUNTY ROUTE 141 SIGNAL IMPROVEMENTS







3/21/2024

ROUTE STATE
141 MO
DISTRICT SHEET NO.
SL 36

COUNTY
ST LOUIS
JOB NO.
JSL0110

CONTRACT ID.

BRIDGE NO.

(1) THE CONTRACTOR SHALL REMOVE THE EXISTING CONTROLLER AND DELIVER TO THE MODOT SIGNAL SHOP PER JSP K. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROGRAMMING THE NEW CONTROLLER TO MATCH EXISTING PHASING, TIMING, AND COMMUNICATION SETTINGS PER JSP H.

(2) THE CONTRACTOR SHALL DISCONNECT LOOP LEAD-IN WIRES AND REMOVE DETECTOR CARDS FROM DETECTOR RACK. EXISTING LOOP DETECTORS SHALL BE LEFT IN PLACE AND ABANDONED. THE CONTRACTOR SHALL INSTALL A COMPLETE VIDEO DETECTION SYSTEM WITH ENCLOSURES, MOUNTING HARDWARE/BRACKETS, TERMINATION PANELS, POWER AND COMMUNICATION CABLES FOR STOP BAR DETECTION PER JSP I.

(3) THE CONTRACTOR SHALL INSTALL RADAR DETECTION UNITS AND PROGRAM FOR ADVANCED DETECTION PER JSP J.

TRAFFIC SIGNALS LEGEND

- NEW CONTROLLER IN EXISTING CABINET
- $-\frac{1}{1}$ EXISTING SIGNAL HEAD
- EXISTING VIDEO/RADAR DETECTION UNIT
- NEW VIDEO/RADAR COMBINATION DETECTION UNIT
- NEW VIDEO DETECTION UNIT
- NEW RADAR DETECTION UNIT
- EXISTING GRIDSMART VIDEO DETECTION UNIT
- EXISTING ACCESS POINT
- 「♣ EXISTING REPEATER
- EXISTING SENSYS DETECTOR PROBE

6 X 6 LOOP DETECTOR

{---} 6 X 15 LOOP DETECTOR

----- 30 X 6 LOOP DETECTOR

EXISTING STOP BAR DETECTION ZONE

PROPOSED STOP BAR DETECTION ZONE

CITITION EXISTING MAST ARM

② EXISTING TRUSS

TRAFFIC SIGNAL SHEET 33 OF 60

ST. LOUIS COUNTY
ROUTE 141 SIGNAL IMPROVEMENTS



SP USA INC.
1 N. BROADWAY SUITE 2800
1 LOUIS, MO 63102 (314) 206-444

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L	_OC	AT]	I ON			POWER ASSE		CIF	COI.	T BREAKE	R TRIP R	AT I NG*	LIGHTING	CONTROL *		SERVIC	E POLE
10000101		6.7.		0.5		DRAWING	2014110			OLLER CONT &	POWER DISCO	SUPPLY NNECT	(ON POWER		CON	NTRACT	UTILITY
APPRUACE	APPROACH		- ALLUN	UF	F SE I	DRAWING 902.15	DRAWING	AUX I L BRE A	.IARY AKER	SIGNAL	MAIN B	REAKER LIGHTING	120 VOLT CONTROL CABINET	MA I N BREAKER		RNISH	CÓMPÁNÝ
						Туре	U.I.P.	15	Amps	· Amps	Amps	Amps		Amps	CI.	Ft.	U.1.P.
	0		. 0	I	0	Туре		15	Amps	Amps	Amps	Amps		Amps	CI.	Ft.	

	CONTROLLER ASSEMBLY AND AUXILIARY EQUIPMENT																				
LOCATI	LOCATION				SYSTEM ACTUATED			-OFF* COORDINATION INTERFACE * NEMA CABINET 170 CAB							17						
APPROACH	CTATION	DEESET	(CLOSE	LOOP)	ACTO	ATEU	TYPE	12C/7C	HARDWIRE	TIME	CLOSED	L00P	FIBER	TIME *	٦	TYPE *		TYP	E *	SOFTW	ARE *
	STATION	STATION OFFSET	NEMA	170	NEMA	170	I I	MASTE	R LOCAL	BASE	NEMA	170	FIDER		E	ΕV	DOUBLE	332	336S	BITRAN	WAPITI
MO 141 & ELAM AVE	U.I.P.	U.I.P.			1								1								

						ETEC NMEN									
			CARD POSITION												
		1 2 3 4 5 6 7 8													
СНА	1			Ţ											
N N E L	2		•			0									

	NEMA LOAD SWITCH ASSIGNMENTS													
1	2	3	4	5	6	7	8	9	10	11	12			
					I .	P	6							

F	DETECTOR SCHEDOR INFORMATION		
		TY	PE
DETECTOR NUMBER	APPROACH	RADAR	VIDEO
21	NB (PHASE 2)		1
22	NB (PHASE 2)		i
23	NB (PHASE 2)		<u>i</u>
31	EB (PHASE 3)		1
32	EB (PHASE 3)		1
50	NB (PHASE 5)		1
61	SB (PHASE 6)		1
62	SB (PHASE 6)		1
63	SB (PHASE 6)		
24	NB ADVANCE (PHASE 2)	1	
25	NB ADVANCE (PHASE 2)	1	
26	NB ADVANCE (PHASE 2)	1	
64	SB ADVANCE (PHASE 6)	1	
65	SB ADVANCE (PHASE 6)	1	
66	SB ADVANCE (PHASE 6)	1	
	TOTAL	6	8

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- (2) THE INSTALLATION OF ALL EQUIPMENT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, DRAWINGS, AND
- (3) THE CONTRACTOR SHALL HAVE RESPONSIBILITY OF LOCATING ALL UNDERGROUND AND OVERHEAD FACILITIES. STRUCTURES. AND
- (4) THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL AND SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
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 COUNT ZONES SHOULD BE PROGRAMMED FOR EACH LANE AT THE
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- (9) MANUFACTURER'S REPRESENTATIVE SHALL BE PRESENT DURING PROGRAMMING OF DETECTION ZONES PER JSP I AND JSP J. MANUFACTURER'S REPRESENTATIVE SHALL PROVIDE GUIDANCE TO CONTRACTOR ON OPTIMAL PLACEMENT OF DETECTION EQUIPMENT AND

	PHASE 2	PHASE 3
	↑	
	↓	
PHASE 5	PHASE 6	

DE								
DATE								
MISSOURI HIGHWAYS AND TRANSPORTATION	COMMISSION		Δ ₀ D0+		105 WEST CAPITOL	JEFFERSON CITY, MO 65102	1-888-ASK-MODOT (1-888-275-6636)	
			3	WSP USA INC.				
		MISSOURI HIGHWAYS AND TRANSPORTATION DATE COMMISSION	MISSOURI HIGHWAYS AND TRANSPORTATION DATE COMMISSION	MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION MODOT	MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION WSP USA INC.	WSP USA INC. 211 N. BROADWAY SUITE 2800	WSP USA INC. 211 N. BROADWAY SUITE 2800 ST. LOUIS, MO 63102 (314) 206-4444	WSP USA INC. 211 N. BROADWAY SUITE 2800 ST. LOUIS, MO 63102 (314) 206-4444 MISSOURI CERTIFICATE OF AUTHORITY - 001444

3/21/2024

ST LOUIS JOB NO JSL0110 CONTRACT ID. PROJECT NO BRIDGE NO

MO SHEET NO.

37

141

DISTRICT SL

INTERSECT	ION	
TRAFFIC	SIGNAL	SHEET

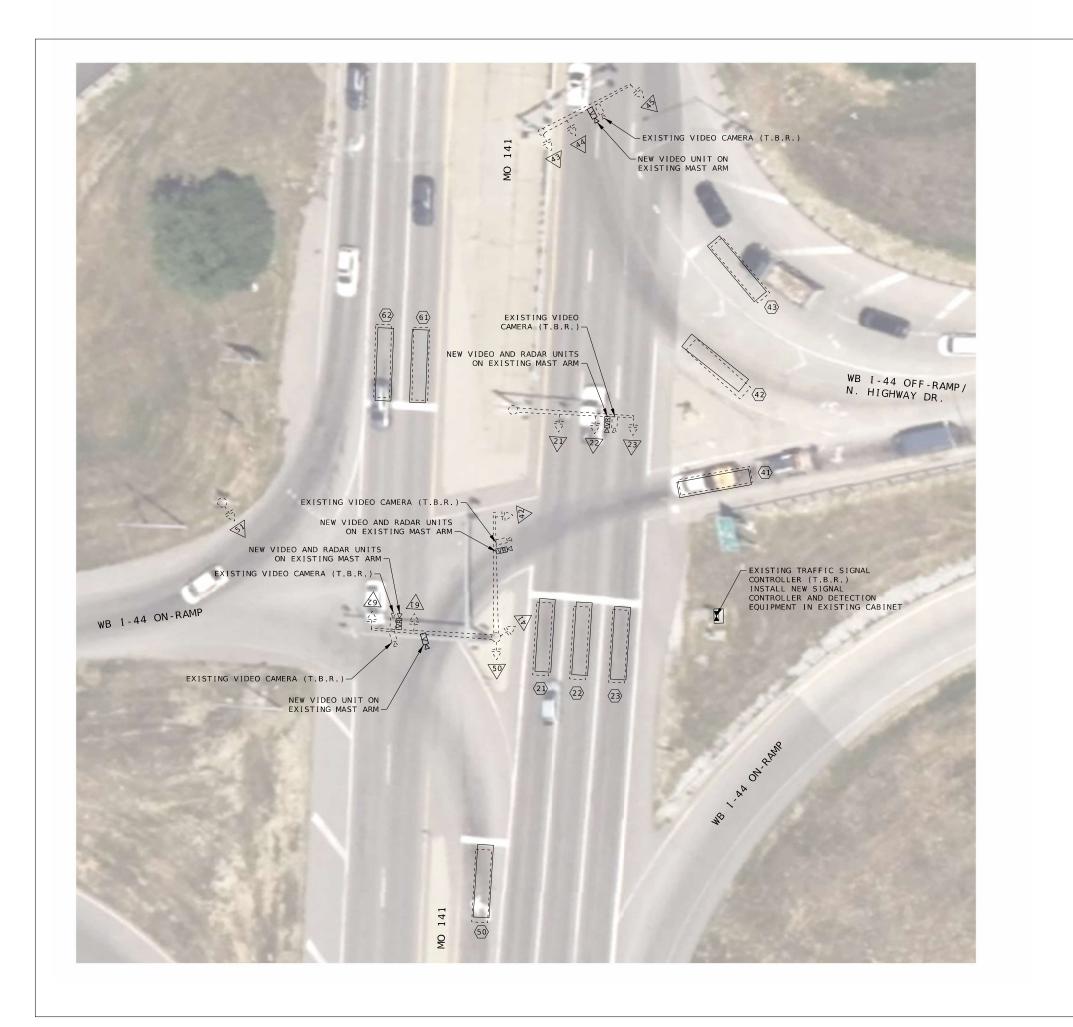
MO 141 AND ELAM AVE

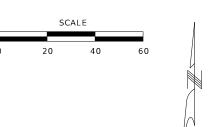
34 OF 60

D-3

ST. LOUIS COUNTY ROUTE 141 SIGNAL IMPROVEMENTS

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MO SHEET NO.

38

PROJECT NO

(1) THE CONTRACTOR SHALL REMOVE THE EXISTING CONTROLLER AND DELIVER TO THE MODOT SIGNAL SHOP PER JSP K. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROGRAMMING THE NEW CONTROLLER TO MATCH EXISTING PHASING, TIMING, AND COMMUNICATION SETTINGS PER JSP H.

(2) THE CONTRACTOR SHALL REMOVE THE EXISTING VIDEO DETECTION EQUIPMENT INCLUDING ANY UNUSED CAMERAS, CABINET HARDWARE, MOUNTING HARDWARE/BRACKETS AND CABLING. THE EXISTING VIDEO DETECTION EQUIPMENT SHALL BE DELIVERED TO THE MODOT SIGNAL SHOP PER JSP K. THE CONTRACTOR SHALL INSTALL A COMPLETE VIDEO DETECTION SYSTEM WITH ENCLOSURES, MOUNTING HARDWARE/BRACKETS, TERMINATION PANELS, POWER AND COMMUNICATION CABLES FOR STOP BAR DETECTION PER JSP I.

(3) THE CONTRACTOR SHALL INSTALL RADAR DETECTION UNITS AND PROGRAM FOR ADVANCED DETECTION PER JSP J.

TRAFFIC SIGNALS LEGEND

NEW CONTROLLER IN EXISTING CABINET

EXISTING SIGNAL HEAD

1>[_]_[EXISTING VIDEO/RADAR DETECTION UNIT

⊳\VR] NEW VIDEO/RADAR COMBINATION DETECTION UNIT

 $\bowtie \nabla$ NEW VIDEO DETECTION UNIT

D(R) NEW RADAR DETECTION UNIT

EXISTING GRIDSMART VIDEO DETECTION UNIT

EXISTING ACCESS POINT

EXISTING REPEATER

EXISTING SENSYS DETECTOR PROBE

6 X 6 LOOP DETECTOR

{----} 6 X 15 LOOP DETECTOR

EXISTING STOP BAR DETECTION ZONE

PROPOSED STOP BAR DETECTION ZONE

CTITITETE EXISTING MAST ARM

@كِنْ EXISTING TRUSS

TRAFFIC SIGNAL SHEET 35 OF 60





	POWER SUPPLY														
LOC	ΑTΙ	ON		POWER ASSE		CIF	SCOI.	T BREAKEI	R TRIP R	AT I NG*	LIGHTING	CONTROL *		SERVIC	E POLE
	STATION OFFS	05565	DRAWING 902.15	00.4			OLLER CONT &	POWER DISCO		(ON POWER	R SUPPLY)	CON	ITRACT	UTILITY	
APPROACH		STATION	UFF SE I	902.15	DRAWING	BRE A	. I ARY AKER	SIGNAL LAMPS	MAIN B	REAKER LIGHTING	120 VOLT CONTROL CABINET	MA I N BREAKER	FUI	RNISH	COMPANY
				Туре	U.I.P.	15	Amps	· Amps	Amps	Amps		Amps	CI.	Ft.	U.I.P.
0		. 0	0	Туре		15	Amps	Amps	Amps	Amps		Amps	CI.	F+.	

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APPROACH	STATION	DEESET	(CLOSE	TER D LOOP)	ACTO	AILU	TY	PΕ	12C/7C	HARDWIRE 1)	TIME	CLOSE) LOOP	- FIBER	TIME *		TYPE *	-	TYP	E *	SOFTW	ARE *
AFFROACH		STATION OFFSET	NEMA	170	NEMA	170	I	ΙI	MASTER	LOCAL	BASE	NEMA	170	FIBER		E	ΕV	DOUBLE	332	336S	BITRAN	WAPITI
MO 141 & I-44 WB RAMPS	U. J. P.	U.I.P.			1									1								

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	NEMA LOAD SWITCH ASSIGNMENTS														
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	DETECTOR SCHED		
F	OR INFORMATION	UNLY	
		TY	PE
DETECTOR NUMBER	APPROACH	RADAR	VIDEO
21	NB (PHASE 2)		1
22	NB (PHASE 2)		1
23	NB (PHASE 2)		1
41	EB (PHASE 4)		1
42	EB (PHASE 4)		1
43	EB (PHASE 4)		1
50	NB (PHASE 5)		1
61	SB (PHASE 6)		1
62	SB (PHASE 6)		1
24	NB ADVANCE (PHASE 2)	1	
25	NB ADVANCE (PHASE 2)	1	
26	NB ADVANCE (PHASE 2)	1	
44	EB ADVANCE (PHASE 4)	1	
63	SB ADVANCE (PHASE 6)	1	
64	SB ADVANCE (PHASE 6)	1	
	TOTAL	6	9
	IUIAL	υ	J

- * ITEMS FOR WHICH SEPARATE PAYMENT WILL NOT BE MADE.
- (1) CABLING FOR THE NEW VIDEO DETECTION AND RADAR DETECTION SHOULD BE ROUTED THROUGH EXISTING CONDUITS. CONDUITS THAT ARE DAMAGED. COLLAPSED. OR UNUSABLE SHALL BE MARKED ON THE AS-BUILT PLANS PER JSP S.
- (2) THE INSTALLATION OF ALL EQUIPMENT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, DRAWINGS, AND ENGINEERING POLICY GUIDE.
- (3) THE CONTRACTOR SHALL HAVE RESPONSIBILITY OF LOCATING ALL UNDERGROUND AND OVERHEAD FACILITIES. STRUCTURES. AND UTILITIES.
- (4) THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL AND SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
- (5) ALL DRILLED OPENING FOR CABLE SHALL BE WEATHERPROOF.
 THERE WILL BE NO DIRECT PAYMENT FOR DRILLED OPENINGS.
 DISUSED OPENINGS SHALL BE PLUGGED BY THE CONTRACTOR.
- (6) THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROGRAMMING DETECTION ZONES PER JSP I AND JSP J. PER JSP I AND JSP J. COUNT ZONES SHOULD BE PROGRAMMED FOR EACH LANE AT THE INTERSECTION EVEN IF NO VEHICLE DETECTION ZONE IS REQUIRED FOR THAT LANE.
- (7) THE CONTRACTOR SHALL REMOVE ALL DISUSED EXISTING DETECTION CAMERA CABLE AS PART OF THE DETECTION INSTALLATION.
- (8) THE CONTRACTOR SHALL PULL ROPE THROUGH ANY USED CONDUITS PER JSP R.
- (9) MANUFACTURER'S REPRESENTATIVE SHALL BE PRESENT DURING PROGRAMMING OF DETECTION ZONES PER JSP I AND JSP J. MANUFACTURER'S REPRESENTATIVE SHALL PROVIDE GUIDANCE TO CONTRACTOR ON OPTIMAL PLACEMENT OF DETECTION EQUIPMENT AND PROGRAMMED DETECTION ZONES

3/21/2024 141 MO SHEET NO. DISTRICT SL 39 ST LOUIS JOB NO. JSL0110 CONTRACT ID. PROJECT NO. BRIDGE NO

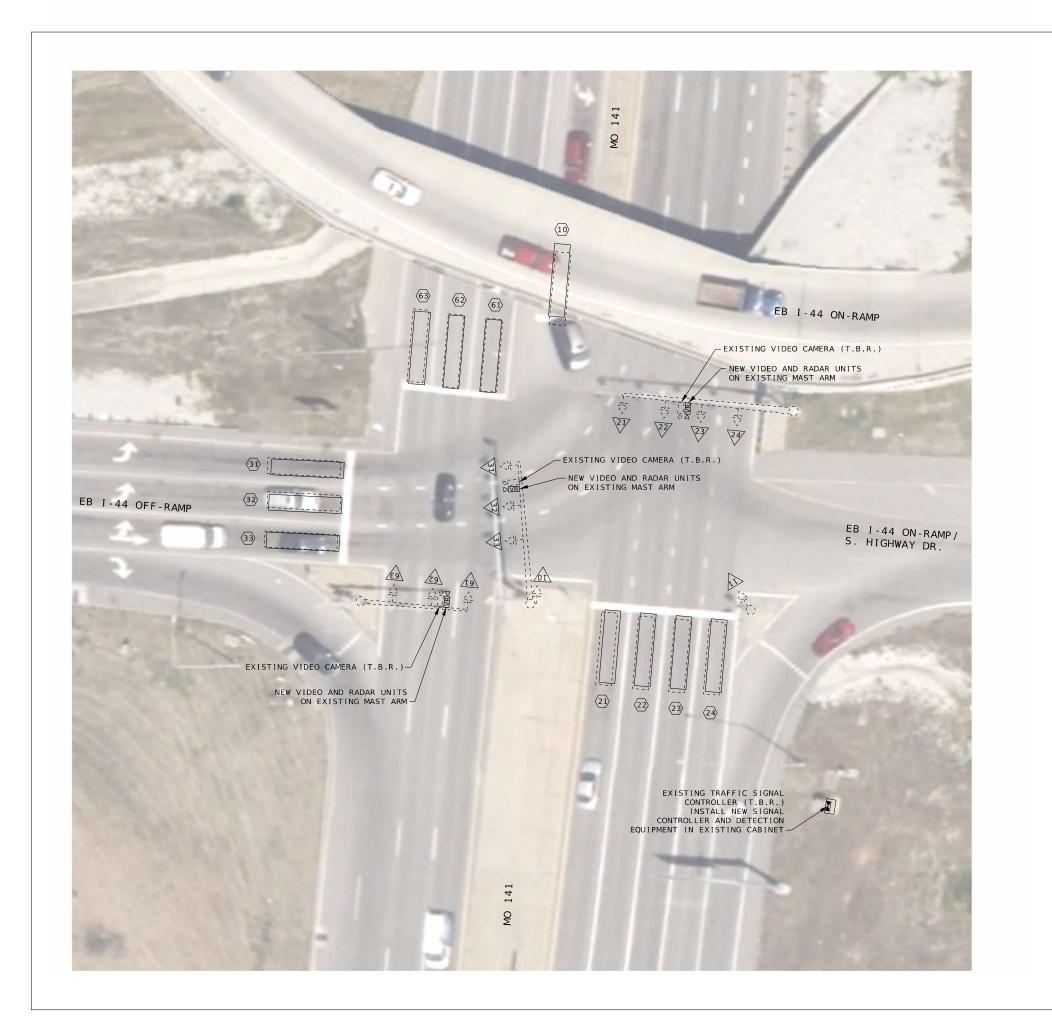
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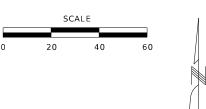
MO 141 AND I-44 WB RAMPS

INTERSECTION

D-37C

TRAFFIC SIGNAL SHEET 36 OF 60







| DATE | PREPARED | 3 / 21 / 20 24 | | ROUTE | STATE | 141 | MO | DISTRICT | SHEET NO. | SL | 40 | |

JOB NO.
JSL0110
CONTRACT ID.

PROJECT NO

BRIDGE NO.

- (1) THE CONTRACTOR SHALL REMOVE THE EXISTING CONTROLLER AND DELIVER TO THE MODOT SIGNAL SHOP PER ISP K. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROGRAMMING THE NEW CONTROLLER TO MATCH EXISTING PHASING, TIMING, AND COMMUNICATION SETTINGS PER JSP H.
- (2) THE CONTRACTOR SHALL REMOVE THE EXISTING VIDEO DETECTION EQUIPMENT INCLUDING ANY UNUSED CAMERAS, CABINET HARDWARE, MOUNTING HARDWARE/BRACKETS AND CABLING. THE EXISTING VIDEO DETECTION EQUIPMENT SHALL BE DELIVERED TO THE MODOT SIGNAL SHOP PER JSP K. THE CONTRACTOR SHALL INSTALL A COMPLETE VIDEO DETECTION SYSTEM WITH ENCLOSURES, MOUNTING HARDWARE/BRACKETS, TERMINATION PANELS, POWER AND COMMUNICATION CABLES FOR STOP BAR DETECTION PER JSP I.
- (3) THE CONTRACTOR SHALL INSTALL RADAR DETECTION UNITS AND PROGRAM FOR ADVANCED DETECTION PER JSP J.

TRAFFIC SIGNALS LEGEND

MEW CONTROLLER IN EXISTING CABINET

- II

EXISTING VIDEO/RADAR DETECTION UNIT

NEW VIDEO/RADAR COMBINATION DETECTION UNIT

NEW VIDEO DETECTION UNIT

NEW RADAR DETECTION UNIT

EXISTING GRIDSMART VIDEO DETECTION UNIT

EXISTING ACCESS POINT

r# EXISTING REPEATER

EXISTING SENSYS DETECTOR PROBE

6 X 6 LOOP DETECTOR

{----} 6 X 15 LOOP DETECTOR

----- 30 X 6 LOOP DETECTOR

EXISTING STOP BAR DETECTION ZONE

PROPOSED STOP BAR DETECTION ZONE

()_____ EXISTING MAST ARM

② EXISTING TRUSS

TRAFFIC SIGNAL SHEET 37 OF 60

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APPROACH		517	- ALLUN	UF	F SE I	DRAWING 902.15	DRAWING	AUX I L BRE A	.IARY AKER	SIGNAL	MAIN B	REAKER LIGHTING	120 VOLT CONTROL CABINET	MA I N BREAKER		RNISH	CÓMPÁNÝ
				Type U.I.P. 15 Amps · Amps		Amps	Amps		Amps	CI.	Ft.	U.1.P.					
	0		. 0	9 Туре				15	Amps	Amps	Amps	Amps		Amps	CI.	Ft.	

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ADDDOACH	STATION OFFSE	DEESET	(CLOSE	LOOP)	ACTO	AILU	TYI	PE.	12C/7C F	HARDWIRE 1)	TIME	CLOSE) LOOP	FIBER	TIME *	_	TYPE *		TYP	E *	SOFTW	ARE *
APPROACH STATION OF		APPROACH STATION OFFSE		NEMA	170	NEMA	170	I	ΙΙ	MASTER	LOCAL	BASE	NEMA	170	FIBER		E	ΕV	DOUBLE	332	3365	BITRAN
MO 141 & I-44 EB RAMPS	EB RAMPS U.I.P. U.I.P.			1									1									

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1	2	3	4	5	6	7	8	9	10	11	12
						P	9				

F	DETECTOR SCHEDOR INFORMATION		
		TY	PE
DETECTOR NUMBER	APPROACH	RADAR	VIDEO
10	SB (PHASE 1)		1
21	NB (PHASE 2)		1
22	NB (PHASE 2)		1
23	NB (PHASE 2)		1
24	NB (PHASE 2)		1
31	EB (PHASE 3)		1
32	EB (PHASE 3)		1
33 61	EB (PHASE 3) SB (PHASE 6)		1
62	SB (PHASE 6) SB (PHASE 6)		1
63	SB (PHASE 6)		1
0.5	SB (THASE 07		'
25	NB ADVANCE (PHASE 2)	1	
26	NB ADVANCE (PHASE 2)	1	
27	NB ADVANCE (PHASE 2)	1	
28	NB ADVANCE (PHASE 2) EB ADVANCE (PHASE 3)	1	
64	SB ADVANCE (PHASE 5)	1	
65	SB ADVANCE (PHASE 6)	1	
66	SB ADVANCE (PHASE 6)	1	
- 00	JU AUVANCE (THASE 6)		
	TOTAL	8	11

- * ITEMS FOR WHICH SEPARATE PAYMENT WILL NOT BE MADE.
- (1) CABLING FOR THE NEW VIDEO DETECTION AND RADAR DETECTION SHOULD BE ROUTED THROUGH EXISTING CONDUITS. CONDUITS THAT ARE DAMAGED, COLLAPSED, OR UNUSABLE SHALL BE MARKED ON THE AS-BUILT PLANS PER JSP S.
- (2) THE INSTALLATION OF ALL EQUIPMENT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, DRAWINGS, AND
- (3) THE CONTRACTOR SHALL HAVE RESPONSIBILITY OF LOCATING ALL UNDERGROUND AND OVERHEAD FACILITIES. STRUCTURES. AND
- (4) THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL AND SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
- (5) ALL DRILLED OPENING FOR CABLE SHALL BE WEATHERPROOF.
 THERE WILL BE NO DIRECT PAYMENT FOR DRILLED OPENINGS.
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 COUNT ZONES SHOULD BE PROGRAMMED FOR EACH LANE AT THE
 INTERSECTION EVEN IF NO VEHICLE DETECTION ZONE IS REQUIRED FOR THAT LANE.
- (7) THE CONTRACTOR SHALL REMOVE ALL DISUSED EXISTING DETECTION CAMERA CABLE AS PART OF THE DETECTION
- (8) THE CONTRACTOR SHALL PULL ROPE THROUGH ANY USED CONDUITS PER JSP R.
- (9) MANUFACTURER'S REPRESENTATIVE SHALL BE PRESENT DURING PROGRAMMING OF DETECTION ZONES PER JSP I AND JSP J. MANUFACTURER'S REPRESENTATIVE SHALL PROVIDE GUIDANCE TO CONTRACTOR ON OPTIMAL PLACEMENT OF DETECTION EQUIPMENT AND PROPRAMMED DETECTION ZONES

PHASE 1	PHASE 2	PHASE 3
	 	
•		-
	+	
	PHASE 6	

MO 141 AND I-44 EB RAMPS D - 37CINTERSECTION TRAFFIC SIGNAL SHEET 38 OF 60 ST. LOUIS COUNTY ROUTE 141 SIGNAL IMPROVEMENTS \\wsppw14ics01\iCS_pdf_work_dir\179208\790505_51\041_DTL_19_JSL0110.dgn 9:32:29 PM 3/21/2024

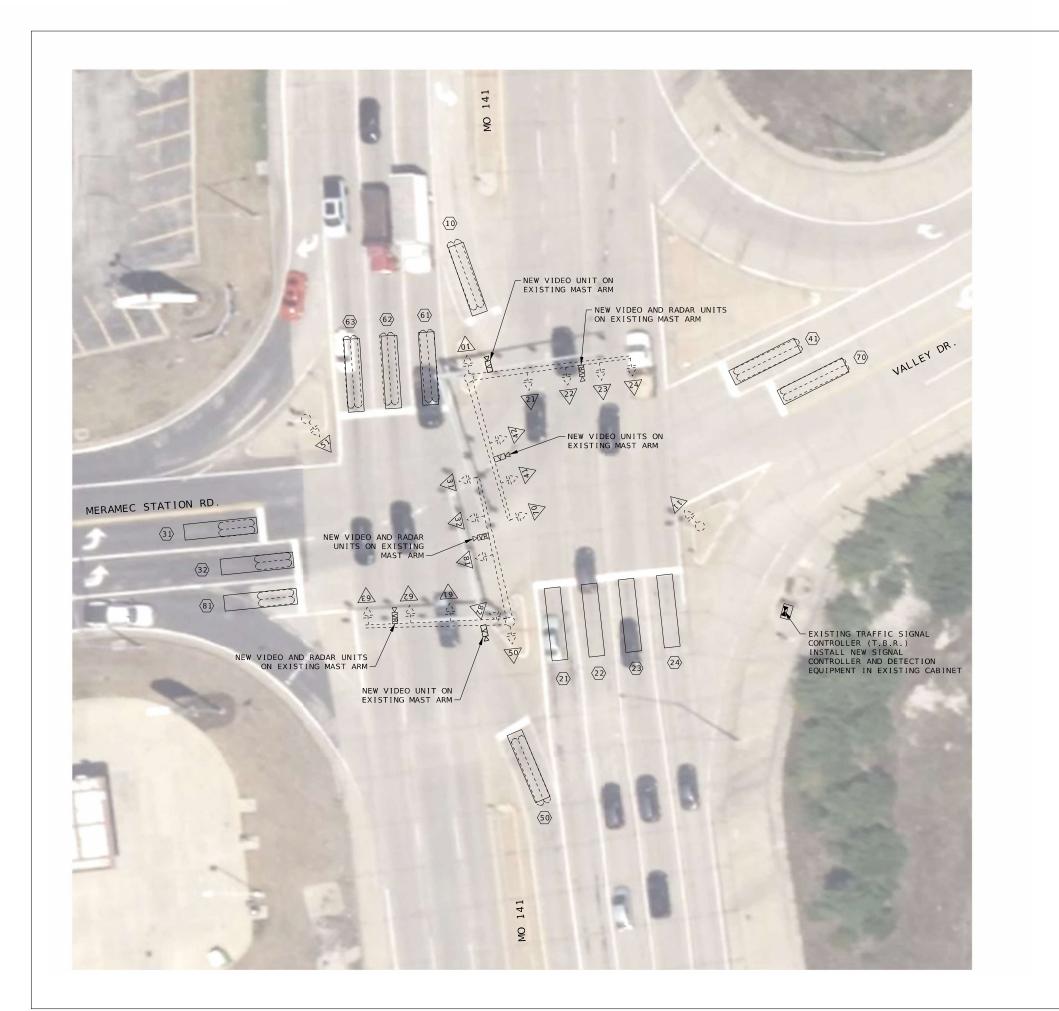
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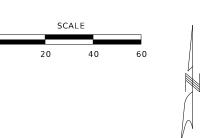
MO SHEET NO.

41 COUNTY ST LOUIS JOB NO. JSL0110 CONTRACT ID. PROJECT NO. BRIDGE NO

141

DISTRICT SL







- (2) THE CONTRACTOR SHALL DISCONNECT LOOP LEAD-IN WIRES AND REMOVE DETECTOR CARDS FROM DETECTOR RACK. EXISTING LOOP DETECTORS SHALL BE LEFT IN PLACE AND ABANDONED. THE CONTRACTOR SHALL INSTALL A COMPLETE VIDEO DETECTION SYSTEM WITH ENCLOSURES, MOUNTING HARDWARE/BRACKETS, TERMINATION PANELS, POWER AND COMMUNICATION CABLES FOR STOP BAR DETECTION PER JSP I.
- (3) THE CONTRACTOR SHALL INSTALL RADAR DETECTION UNITS AND PROGRAM FOR ADVANCED DETECTION PER JSP J.

	TRAFFIC SIGNALS LEGEND
M	NEW CONTROLLER IN EXISTING CABINET
- 115	EXISTING SIGNAL HEAD
'>==!	EXISTING VIDEO/RADAR DETECTION UNIT
ÞVRI	NEW VIDEO/RADAR COMBINATION DETECTION UNIT
MV	NEW VIDEO DETECTION UNIT
DE R	NEW RADAR DETECTION UNIT
43	EXISTING GRIDSMART VIDEO DETECTION UNIT
(114)	EXISTING ACCESS POINT
C#	EXISTING REPEATER
(*)	EXISTING SENSYS DETECTOR PROBE
\Box	6 X 6 LOOP DETECTOR
£===3	6 X 15 LOOP DETECTOR
\{	30 X 6 LOOP DETECTOR
	EXISTING STOP BAR DETECTION ZONE
	PROPOSED STOP BAR DETECTION ZONE
C111111	EXISTING MAST ARM

EXISTING TRUSS

TRAFFIC SIGNAL SHEET 39 OF 60

ST. LOUIS COUNTY ROUTE 141 SIGNAL IMPROVEMENTS

3/21/2024

141 MO SHEET NO. SL 42

ST LOUIS JSL0110 CONTRACT ID.

PROJECT NO.

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		L	.OC	ΑТ	ION			POWER ASSE		CIF	COI.	T BREAKE	R TRIP R	AT I NG*	LIGHTING	CONTROL *		SERVIC	E POLE
	4.D.D.D.O.4	APPROACH STATION OFF			CCT	DRAWING				CONT &	POWER DISCO	SUPPLY NNECT	(ON POWER	R SUPPLY)	cor	NTRACT	UTILITY		
	APPRUA	APPROACH STATION OFF		FSEI	DRAWING 902.15	DRAWING	BRE A	. I ARY AKER	SIGNAL	MAIN B	REAKER LIGHTING	120 VOLT CONTROL CABINET	MA I N BREAKER	FU	JRNISH	COMPANY			
Γ								Туре	U.I.P.	15 Amps · Amp			Amps	Amps		Amps	CI.	F+.	U.1.P.
		J	0		- 0		0	Туре	ne			Amps	Amps	Amps		Amps	CI.	Ft.	

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APPROACH	STATION	OFFSET	(CLOSE	LOOP)	ACTO	AILU	TYF	PE	12C/7C F	HARDWIRE 1)	TIME	CLOSE) LOOP	FIBER	TIME *	_	TYPE *		TYP	E *	SOFTW	ARE *
AFFRUACH	STATION	OFFSET	NEMA	170	NEMA	170	I	ΙI	MASTER	LOCAL	BASE	NEMA	170	FIBER		E	ΕV	DOUBLE	332	3365	BITRAN	WAPITI
MD 141 & MERAMEC STATION RD/VALLEY DR	U.I.P.	P. 1																				

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			CARD POSITION												
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TYPE		DETECTOR SCHE		
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NUMBER APPROACH 10 SB (PHASE 1) 1 21 NB (PHASE 2) 1 22 NB (PHASE 2) 1 23 NB (PHASE 2) 1 24 NB (PHASE 2) 1 31 EB (PHASE 3) 1 32 EB (PHASE 3) 1 32 EB (PHASE 3) 1 41 WB (PHASE 4) 1 50 NB (PHASE 5) 1 61 SB (PHASE 6) 1 62 SB (PHASE 6) 1 63 SB (PHASE 6) 1 63 SB (PHASE 6) 1 81 EB (PHASE 7) 1 81 EB (PHASE 8) 1 25 NB ADVANCE (PHASE 2) 1 27 NB ADVANCE (PHASE 2) 1 29 NB ADVANCE (PHASE 2) 1 29 NB ADVANCE (PHASE 2) 1 29 SB ADVANCE (PHASE 2) 1 64 SB ADVANCE (PHASE 6) 1 65 SB ADVANCE (PHASE 6) 1			TY	PE
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66 SB ADVANCE (PHASE 6) 1				
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TOTAL 8 14		TOTAL	8	14

- * ITEMS FOR WHICH SEPARATE PAYMENT WILL NOT BE MADE.
- (1) CABLING FOR THE NEW VIDEO DETECTION AND RADAR DETECTION SHOULD BE ROUTED THROUGH EXISTING CONDUITS. CONDUITS THAT ARE DAMAGED, COLLAPSED, OR UNUSABLE SHALL BE MARKED ON THE AS-BUILT PLANS PER JSP S.
- (2) THE INSTALLATION OF ALL EQUIPMENT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, DRAWINGS, AND
- (3) THE CONTRACTOR SHALL HAVE RESPONSIBILITY OF LOCATING ALL UNDERGROUND AND OVERHEAD FACILITIES. STRUCTURES. AND
- (4) THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL AND SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
- (5) ALL DRILLED OPENING FOR CABLE SHALL BE WEATHERPROOF.
 THERE WILL BE NO DIRECT PAYMENT FOR DRILLED OPENINGS.
 DISUSED OPENINGS SHALL BE PLUGGED BY THE CONTRACTOR.
- (6) THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROGRAMMING
 DETECTION ZONES PER JSP I AND JSP J. PER JSP I AND JSP J.
 COUNT ZONES SHOULD BE PROGRAMMED FOR EACH LANE AT THE
 INTERSECTION EVEN IF NO VEHICLE DETECTION ZONE IS REQUIRED FOR THAT LANE.
- (7) THE CONTRACTOR SHALL REMOVE ALL DISUSED EXISTING DETECTION CAMERA CABLE AS PART OF THE DETECTION
- (8) THE CONTRACTOR SHALL PULL ROPE THROUGH ANY USED CONDUITS PER JSP R.
- (9) MANUFACTURER'S REPRESENTATIVE SHALL BE PRESENT DURING PROGRAMMING OF DETECTION ZONES PER JSP I AND JSP J. MANUFACTURER'S REPRESENTATIVE SHALL PROVIDE GUIDANCE TO CONTRACTOR ON OPTIMAL PLACEMENT OF DETECTION EQUIPMENT AND

3/21/2024 141 MO SHEET NO. DISTRICT 43 SL ST LOUIS JOB NO JSL0110 CONTRACT ID. PROJECT NO. BRIDGE NO

MO 141 AND MERAMEC STATION RD/VALLEY DR

INTERSECTION

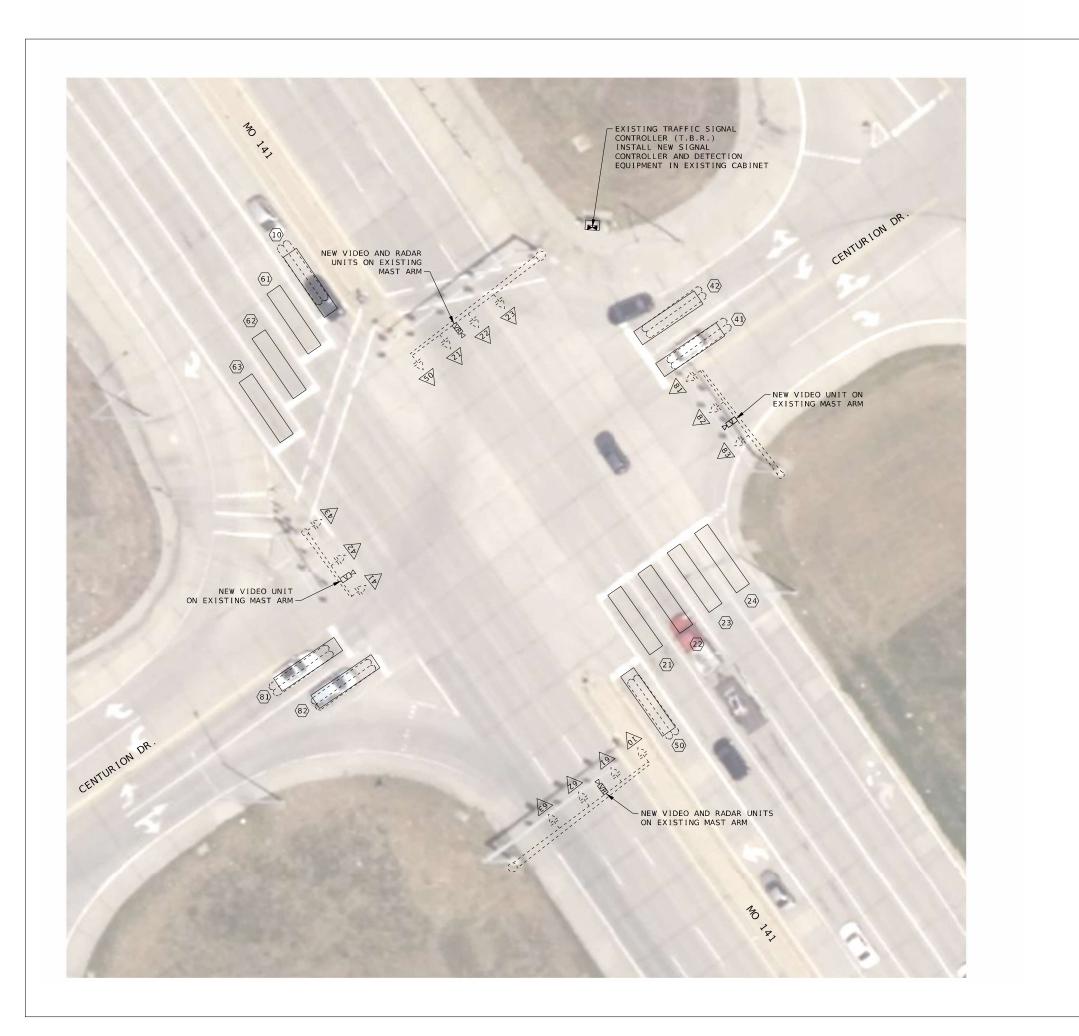
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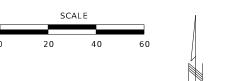
ST. LOUIS COUNTY ROUTE 141 SIGNAL IMPROVEMENTS

TRAFFIC SIGNAL SHEET 40 OF 60

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PHASE 1 PHASE 2 PHASE 3 PHASE 4 PHASE 5 PHASE 6 PHASE 7 PHASE 8







3/21/2024 141 MO SHEET NO SL 44

ST LOUIS JSL0110 CONTRACT ID.

PROJECT NO

- (1) THE CONTRACTOR SHALL REMOVE THE EXISTING CONTROLLER AND DELIVER TO THE MODOT SIGNAL SHOP PER JSP K. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROGRAMMING THE NEW CONTROLLER TO MATCH EXISTING PHASING, TIMING, AND COMMUNICATION SETTINGS PER JSP H.
- (2) THE CONTRACTOR SHALL DISCONNECT LOOP LEAD-IN WIRES AND REMOVE DETECTOR CARDS FROM DETECTOR RACK. EXISTING LOOP DETECTORS SHALL BE LEFT IN PLACE AND ABANDONED. THE CONTRACTOR SHALL INSTALL A COMPLETE VIDEO DETECTION SYSTEM WITH ENCLOSURES, MOUNTING HARDWARE/BRACKETS, TERMINATION PANELS, POWER AND COMMUNICATION CABLES FOR STOP BAR DETECTION PER JSP I.
- (3) THE CONTRACTOR SHALL INSTALL RADAR DETECTION UNITS AND PROGRAM FOR ADVANCED DETECTION PER JSP J.

TRAFFIC SIGNALS LEGEND

- NEW CONTROLLER IN EXISTING CABINET
- $-\frac{1}{1}$ EXISTING SIGNAL HEAD
- 1>[_]_[EXISTING VIDEO/RADAR DETECTION UNIT
- ⊳\VR] NEW VIDEO/RADAR COMBINATION DETECTION UNIT
- $\bowtie \nabla$ NEW VIDEO DETECTION UNIT
- D(R) NEW RADAR DETECTION UNIT
- EXISTING GRIDSMART VIDEO DETECTION UNIT
- EXISTING ACCESS POINT
- EXISTING REPEATER
- EXISTING SENSYS DETECTOR PROBE

6 X 6 LOOP DETECTOR

{----} 6 X 15 LOOP DETECTOR

EXISTING STOP BAR DETECTION ZONE

PROPOSED STOP BAR DETECTION ZONE

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TRAFFIC SIGNAL SHEET 41 OF 60

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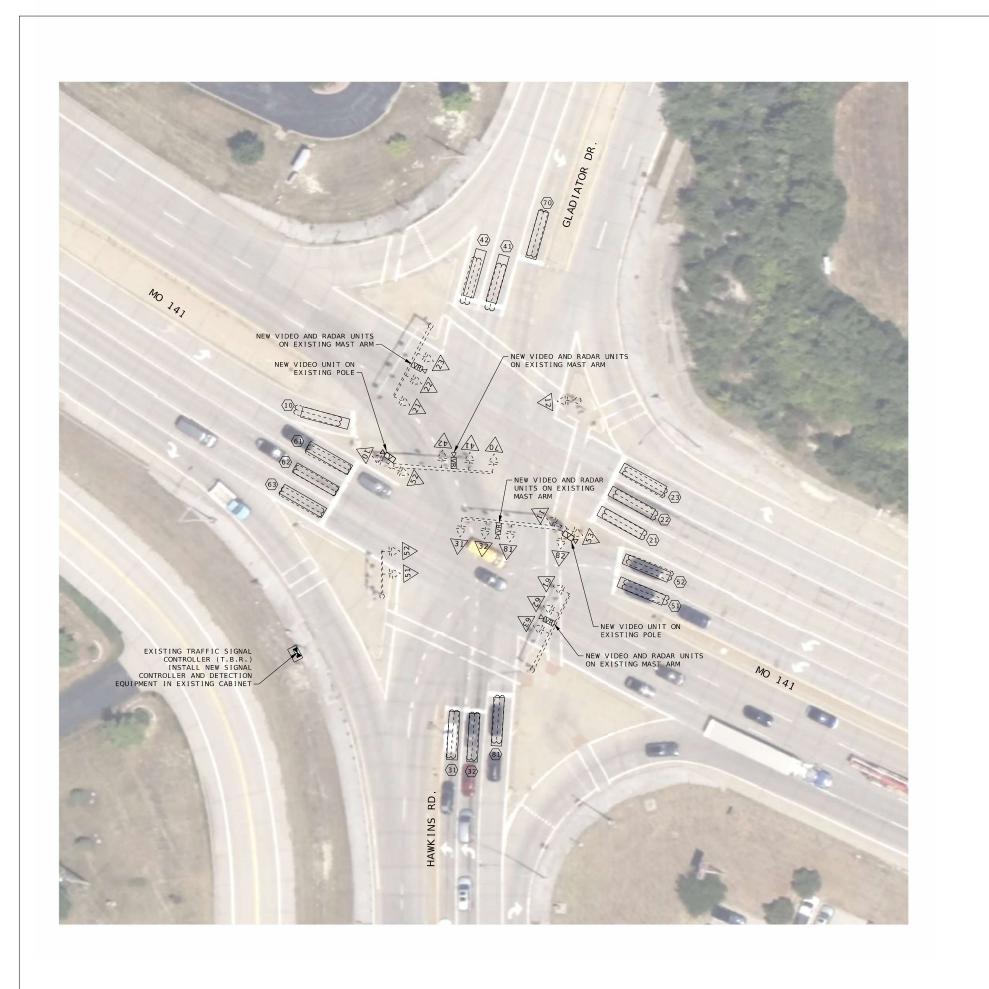
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F	OR INFORMATION	ONLY	
		TY	PE
DETECTOR NUMBER	APPROACH	RADAR	VIDEO
10	SB (PHASE 1)		1
21	NB (PHASE 2)		1
22	NB (PHASE 2)		1
23	NB (PHASE 2)		1
24	NB (PHASE 2)		1
41	WB (PHASE 4)		1
42	WB (PHASE 4)		1
50	NB (PHASE 5)		1
61	SB (PHASE 6)		11
62	SB (PHASE 6)		1
63	SB (PHASE 6)		1
81	EB (PHASE 8)		1
82	EB (PHASE 8)		1
25	NB ADVANCE (PHASE 2)	1	
26	NB ADVANCE (PHASE 2)	1	
27	NB ADVANCE (PHASE 2)	1	
43	WB ADVANCE (PHASE 4)	1	
64	SB ADVANCE (PHASE 6)	1	
65	SB ADVANCE (PHASE 6)	1	
66	SB ADVANCE (PHASE 6)	1	
	TOTAL	7	13

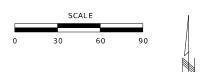
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- (5) ALL DRILLED OPENING FOR CABLE SHALL BE WEATHERPROOF.
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- (9) MANUFACTURER'S REPRESENTATIVE SHALL BE PRESENT DURING PROGRAMMING OF DETECTION ZONES PER JSP I AND JSP J. MANUFACTURER'S REPRESENTATIVE SHALL PROVIDE GUIDANCE TO CONTRACTOR ON OPTIMAL PLACEMENT OF DETECTION EQUIPMENT AND REPORTANCE DETECTION ZONES

PHASE 1	PHASE 2	PHASE 4
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PHASE 5	PHASE 6	PHASE 8

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3/21/2024 141 MO SHEET NO. DISTRICT SL 45 ST LOUIS JOB NO. JSL0110 CONTRACT ID. PROJECT NO. BRIDGE NO







THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED

| DATE | PREPARED | 3 / 21 / 20 24 | | ROUTE | STATE | 141 | MO | DISTRICT | SHEET NO. | SL | 46 | COLINTY |

JOB NO.

JOB NO.

CONTRACT ID.

PROJECT NO.

DESCRIPTION BEIDGE NO.

- (1) THE CONTRACTOR SHALL REMOVE THE EXISTING CONTROLLER AND DELIVER TO THE MODOT SIGNAL SHOP PER JSP K. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROGRAMMING THE NEW CONTROLLER TO MATCH EXISTING PHASING, TIMING, AND COMMUNICATION SETTINGS PER JSP H.
- (2) THE CONTRACTOR SHALL DISCONNECT LOOP LEAD-IN WIRES AND REMOVE DETECTOR CARDS FROM DETECTOR RACK.
 EXISTING LOOP DETECTORS SHALL BE LEFT IN PLACE AND ABANDONED. THE CONTRACTOR SHALL INSTALL A COMPLETE VIDEO DETECTION SYSTEM WITH ENCLOSURES, MOUNTING HARDWARE/BRACKETS, TERMINATION PANELS, POWER AND COMMUNICATION CABLES FOR STOP BAR DETECTION PER ISP I.
- (3) THE CONTRACTOR SHALL INSTALL RADAR DETECTION UNITS AND PROGRAM FOR ADVANCED DETECTION PER JSP J.

TRAFFIC SIGNALS LEGEND

NEW CONTROLLER IN EXISTING CABINET

EXISTING SIGNAL HEAD

EXISTING VIDEO/RADAR DETECTION UNIT

NEW VIDEO/RADAR COMBINATION DETECTION UNIT

NEW VIDEO DETECTION UNIT

NEW RADAR DETECTION UNIT

 \mathcal{L}_{Σ} EXISTING GRIDSMART VIDEO DETECTION UNIT

→ EXISTING ACCESS POINT

EXISTING REPEATER

EXISTING SENSYS DETECTOR PROBE

6 X 6 LOOP DETECTOR

{----} 6 X 15 LOOP DETECTOR

PROPOSED STOP BAR DETECTION ZONE

Consideration PROPOSED STOP BAR DETI

EXISTING TRUSS

TRAFFIC SIGNAL SHEET 43 OF 60

ST. LOUIS COUNTY
ROUTE 141 SIGNAL IMPROVEMENTS



■
SP USA INC.
1 N. BROADWAY SUITE 2800
. LOUIS, MO 63102 (314) 206-4444

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	CONTROLLER ASSEMBLY AND AUXILIARY EQUIPMENT																					
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DETECTOR NUMBER	APPROACH	RADAR	VIDEO
10	SB (PHASE 1)		1
21	NB (PHASE 2)		1
22	NB (PHASE 2)		1
23	NB (PHASE 2)		1
31	EB (PHASE 3)		1
32	EB (PHASE 3)		1
41	WB (PHASE 4)		1
42	WB (PHASE 4)		1
51	NB (PHASE 5)		1
52	NB (PHASE 5)		1
61	SB (PHASE 6)		1
62	SB (PHASE 6)		1
63	SB (PHASE 6)		1
70	WB (PHASE 7)		1
81	EB (PHASE 8)		1
2.4	ND ADVANCE (DUACE O)	4	
24	NB ADVANCE (PHASE 2)	1	
25 27	NB ADVANCE (PHASE 2) NB ADVANCE (PHASE 2)	1	
43	WB ADVANCE (PHASE 2)	1	
43	WB ADVANCE (PHASE 4)	1	
64	SB ADVANCE (PHASE 4)	1	
65	SB ADVANCE (PHASE 6)	1	
66	SB ADVANCE (PHASE 6)	1	
82	EB ADVANCE (PHASE 8)	1	
83	EB ADVANCE (PHASE 8)	1	
0.5	LD ADVANCE (THASE 0)	1	
	TOTAL	10	15

DETECTOR SCHEDULE

- st ITEMS FOR WHICH SEPARATE PAYMENT WILL NOT BE MADE.
- (1) CABLING FOR THE NEW VIDEO DETECTION AND RADAR DETECTION SHOULD BE ROUTED THROUGH EXISTING CONDUITS. CONDUITS THAT ARE DAMAGED. COLLAPSED. OR UNUSABLE SHALL BE MARKED ON THE AS-BUILT PLANS PER JSP S.
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3/21/2024 141 MO SHEET NO. DISTRICT SL 47 COUNTY ST LOUIS JOB NO. JSL0110 CONTRACT ID. PROJECT NO. BRIDGE NO

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PHASE 7 PHASE 8

PHASE 5 PHASE 6

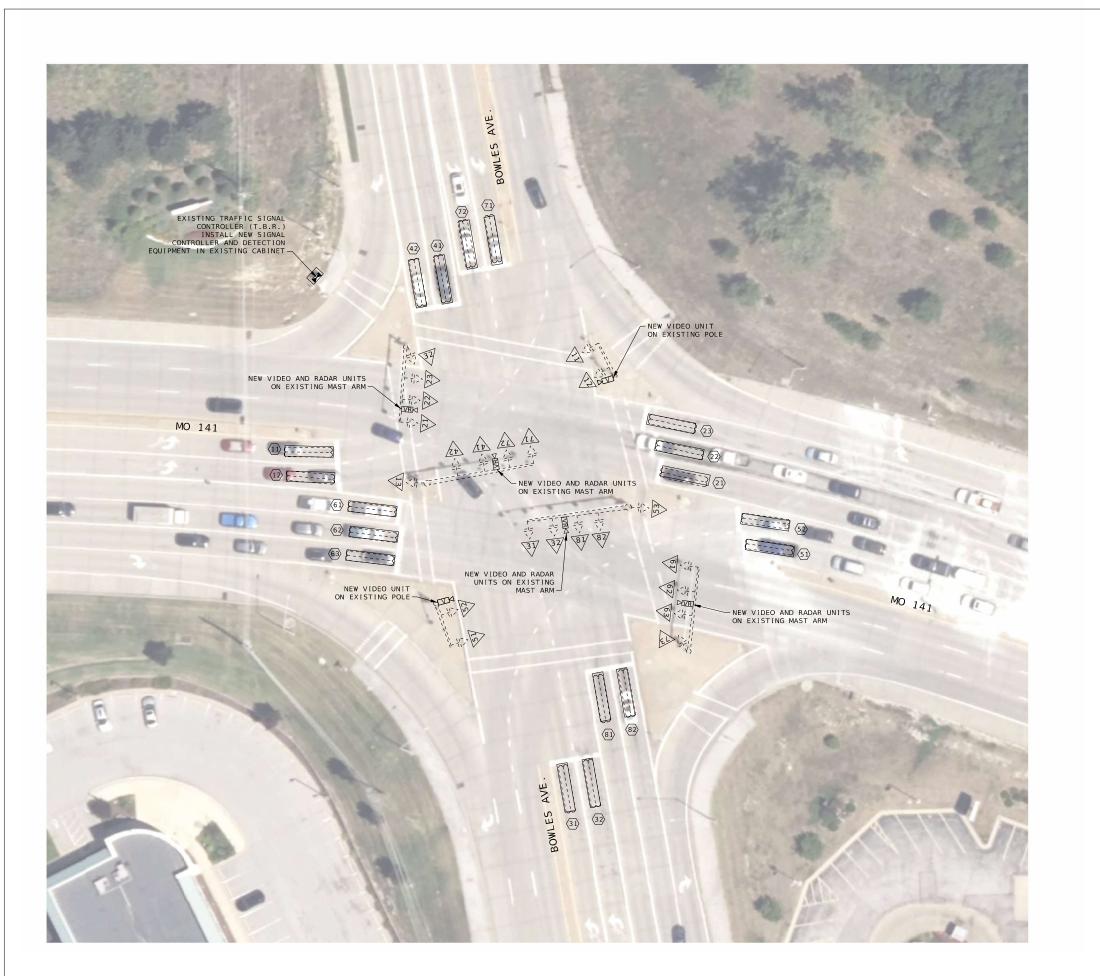
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MO 141 AND HAWKINS RD/GLADIATOR DR INTERSECTION

> ST. LOUIS COUNTY ROUTE 141 SIGNAL IMPROVEMENTS

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3/21/2024 141 MO

 SL 48 ST LOUIS

JSL0110 CONTRACT ID.

PROJECT NO

- (1) THE CONTRACTOR SHALL REMOVE THE EXISTING CONTROLLER AND DELIVER TO THE MODOT SIGNAL SHOP PER ISP K. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROGRAMMING THE NEW CONTROLLER TO MATCH EXISTING PHASING, TIMING, AND COMMUNICATION SETTINGS PER ISP H.
- (3) THE CONTRACTOR SHALL INSTALL RADAR DETECTION UNITS AND PROGRAM FOR ADVANCED DETECTION PER JSP J.

TRAFFIC SIGNALS LEGEND

NEW CONTROLLER IN EXISTING CABINET

EXISTING SIGNAL HEAD

N-11 EXISTING VIDEO/RADAR DETECTION UNIT

NEW VIDEO/RADAR COMBINATION DETECTION UNIT

NEW VIDEO DETECTION UNIT

▶□ NEW RADAR DETECTION UNIT EXISTING GRIDSMART VIDEO DETECTION UNIT

EXISTING ACCESS POINT

EXISTING REPEATER

EXISTING SENSYS DETECTOR PROBE

6 X 6 LOOP DETECTOR

----} 6 X 15 LOOP DETECTOR 30 X 6 LOOP DETECTOR

PROPOSED STOP BAR DETECTION ZONE

EXISTING TRUSS

TRAFFIC SIGNAL SHEET 45 OF 60



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LO	САТ	ION		POWER ASSE	SUPPLY MBLY	CIR	CUIT	T BREAKEI	R TRIP R	AT I NG*	I IGHTING (CONTROL *		SERVIC	E POLE
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APPRUACH	APPROACH STATION OFFSE				DRAWING	BRE A	I ARY KER	S I GNAL LAMPS	MAIN B	REAKER LIGHTING	120 VOLT CONTROL CABINET	MA I N BREAKER		RNISH	COMPANY
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AFFROACH	STATION	UFFSET	NEMA	170	NEMA	170	I	ΙΙ	MASTER	LOCAL	BASE	NEMA	170	FIBER		E	ΕV	DOUBLE	332	3365	BITRAN	WAPITI
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PHASE 1	PHASE 2	PHASE 3	PHASE 4		
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PHASE 5	PHASE 6	PHASE 7	PHASE 8		

F	DETECTOR SCHEDOR INFORMATION		
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		TY	P'E
DETECTOR NUMBER	APPROACH	RADAR	VIDEO
11	EB (PHASE 1)		1
12	EB (PHASE 1)		1
21	WB (PHASE 2)		1
22	WB (PHASE 2)		1
23	WB (PHASE 2)		1
31	NB (PHASE 3)		1
32 41	NB (PHASE 3) SB (PHASE 4)		1
41	SB (PHASE 4)		1
51	WB (PHASE 5)		1
52	WB (PHASE 5)		1
61	EB (PHASE 6)		1
62	EB (PHASE 6)		1
63	EB (PHASE 6)		1
7 1	SB (PHASE 7)		1
72	SB (PHASE 7)		1
81	NB (PHASE 8)		1
82	NB (PHASE 8)		1
24	WB ADVANCE (PHASE 2)	1	
25	WB ADVANCE (PHASE 2)	1	
26	WB ADVANCE (PHASE 2)	1	
43	SB ADVANCE (PHASE 4)	1	
44	SB ADVANCE (PHASE 4)	1	
64 65	EB ADVANCE (PHASE 6) EB ADVANCE (PHASE 6)	1	
66	EB ADVANCE (PHASE 6)	1	
83	NB ADVANCE (PHASE 8)	1	
84	NB ADVANCE (PHASE 8)	1	
	TOTAL	10	18

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- (3) THE CONTRACTOR SHALL HAVE RESPONSIBILITY OF LOCATING ALL UNDERGROUND AND OVERHEAD FACILITIES. STRUCTURES. AND UTILITIES.
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- (7) THE CONTRACTOR SHALL REMOVE ALL DISUSED EXISTING DETECTION CAMERA CABLE AS PART OF THE DETECTION INSTALLATION.
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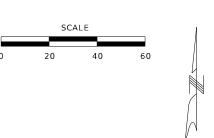
MO 141 AND BOWLES AVE

TRAFFIC SIGNAL SHEET 46 OF 60

ST. LOUIS COUNTY
ROUTE 141 SIGNAL IMPROVEMENTS

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- (2) THE CONTRACTOR SHALL DISCONNECT LOOP LEAD-IN WIRES AND REMOVE DETECTOR CARDS FROM DETECTOR RACK. EXISTING LOOP DETECTORS SHALL BE LEFT IN PLACE AND ABANDONED. THE CONTRACTOR SHALL INSTALL A COMPLETE VIDEO DETECTION SYSTEM WITH ENCLOSURES, MOUNTING HARDWARE/BRACKETS, TERMINATION PANELS, POWER AND COMMUNICATION CABLES FOR STOP BAR DETECTION PER JSP I.
- (3) THE CONTRACTOR SHALL INSTALL RADAR DETECTION UNITS AND PROGRAM FOR ADVANCED DETECTION PER JSP J.
- (4) THE CONTRACTOR SHALL AIM THE CAMERA TO DETECT NORTHBOUND LEFT/THRU AND RIGHT TURN LANES.

	TRAFFIC SIGNALS LEGEND
	NEW CONTROLLER IN EXISTING CABINET
- 1 1 >>	EXISTING SIGNAL HEAD
'>===!	EXISTING VIDEO/RADAR DETECTION UNIT
ÞVRI	NEW VIDEO/RADAR COMBINATION DETECTION UNIT
ÞV	NEW VIDEO DETECTION UNIT
DER:	NEW RADAR DETECTION UNIT
43	EXISTING GRIDSMART VIDEO DETECTION UNIT
(194)	EXISTING ACCESS POINT
C-A	EXISTING REPEATER
(0)	EXISTING SENSYS DETECTOR PROBE
O	6 X 6 LOOP DETECTOR
£===3	6 X 15 LOOP DETECTOR
}	30 X 6 LOOP DETECTOR
	EXISTING STOP BAR DETECTION ZONE
	PROPOSED STOP BAR DETECTION ZONE
C1111111	EXISTING MAST ARM
	EXISTING TRUSS

TRAFFIC SIGNAL SHEET 47 OF 60

ST. LOUIS COUNTY ROUTE 141 SIGNAL IMPROVEMENTS



3/21/2024 141 MO SHEET NO. SL 50

ST LOUIS JSL0110 CONTRACT ID.

PROJECT NO.

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F	OR INFORMATION		
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DETECTOR NUMBER	APPROACH	RADAR	VIDEO
10	EB (PHASE 1)		1
21	WB (PHASE 2)		1
22	WB (PHASE 2)		1
23	WB (PHASE 2)		1
24	WB (PHASE 2)		1
41	SB (PHASE 4)		1
50	WB (PHASE 5)		1
61	EB (PHASE 6)		1
62	EB (PHASE 6)		1
63	EB (PHASE 6)		1
64	EB (PHASE 6)		1
81	NB (PHASE 8)		1
82	NB (PHASE 8)		1
25	WB ADVANCE (PHASE 2)	1	
26	WB ADVANCE (PHASE 2)	1	
27	WB ADVANCE (PHASE 2)	1	
42	SB ADVANCE (PHASE 4)	1	
65	EB ADVANCE (PHASE 6)	1	
66	EB ADVANCE (PHASE 6)	1	
67	EB ADVANCE (PHASE 6)	1	
83	NB ADVANCE (PHASE 8)	1	
	TOTAL	8	13

DETECTOR SCHEDULE

- * ITEMS FOR WHICH SEPARATE PAYMENT WILL NOT BE MADE.
- (1) CABLING FOR THE NEW VIDEO DETECTION AND RADAR DETECTION SHOULD BE ROUTED THROUGH EXISTING CONDUITS. CONDUITS THAT ARE DAMAGED, COLLAPSED, OR UNUSABLE SHALL BE MARKED ON THE AS-BUILT PLANS PER JSP S.
- (2) THE INSTALLATION OF ALL EQUIPMENT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, DRAWINGS, AND ENGINEERING POLICY GUIDE.
- (3) THE CONTRACTOR SHALL HAVE RESPONSIBILITY OF LOCATING ALL UNDERGROUND AND OVERHEAD FACILITIES. STRUCTURES. AND UTILITIES.
- (4) THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL AND SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
- (5) ALL DRILLED OPENING FOR CABLE SHALL BE WEATHERPROOF.
 THERE WILL BE NO DIRECT PAYMENT FOR DRILLED OPENINGS.
 DISUSED OPENINGS SHALL BE PLUGGED BY THE CONTRACTOR.
- (6) THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROGRAMMING DETECTION ZONES PER JSP I AND JSP J. PER JSP I AND JSP J. COUNT ZONES SHOULD BE PROGRAMMED FOR EACH LANE AT THE INTERSECTION EVEN IF NO VEHICLE DETECTION ZONE IS REQUIRED FOR THAT LANE.
- (7) THE CONTRACTOR SHALL REMOVE ALL DISUSED EXISTING DETECTION CAMERA CABLE AS PART OF THE DETECTION INSTALLATION.
- (8) THE CONTRACTOR SHALL PULL ROPE THROUGH ANY USED CONDUITS PER JSP R.
- (9) MANUFACTURER'S REPRESENTATIVE SHALL BE PRESENT DURING PROGRAMMING OF DETECTION ZONES PER JSP I AND JSP J. MANUFACTURER'S REPRESENTATIVE SHALL PROVIDE GUIDANCE TO CONTRACTOR ON OPTIMAL PLACEMENT OF DETECTION EQUIPMENT AND PROGRAMMED DETECTION ZONES

PHASE 1	PHASE 2	PHASE 4
 		
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PHASE 5	PHASE 6	PHASE 8

	DESCRIPTION						
	DATE						
	MISSOURI HIGHWAYS AND TRANSPORTATION DATE	COMMISSION	LOQ MoDO LOQ MoDO MoDO		105 WEST CAPITOL	JEFFERSON CITY, MO 65102	COCCO IN HOUSE VIN COC I
D-37C = 60 ENTS				WSP USA INC.	211 N. BROADWAY SUITE 2800		

3/21/2024

JOB NO.
JSL0110
CONTRACT ID.

PROJECT NO.

BRIDGE NO.

MO SHEET NO.

51

141

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ST. LOUIS COUNTY ROUTE 141 SIGNAL IMPROVEMENTS

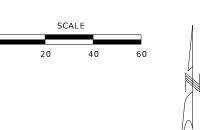
TRAFFIC SIGNAL SHEET 48 OF 60

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MO 141 AND SAN SIMEON WAY

INTERSECTION







| DATE | PREPARED | 3 / 21 / 20 24 | | ROUTE | STATE | 141 | MO | DISTRICT | SHEET NO. | SL | 52 | | SCOUNTY | STATE |

JOB NO.
JSL0110
CONTRACT ID.

PROJECT NO.

DESCRIPTION

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DESCRIPTION

- (1) THE CONTRACTOR SHALL REMOVE THE EXISTING CONTROLLER AND DELIVER TO THE MODOT SIGNAL SHOP PER JSP K. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROGRAMMING THE NEW CONTROLLER TO MATCH EXISTING PHASING, TIMING, AND COMMUNICATION SETTINGS PER JSP H.
- (2) THE CONTRACTOR SHALL DISCONNECT LOOP LEAD-IN WIRES AND REMOVE DETECTOR CARDS FROM DETECTOR RACK. EXISTING LOOP DETECTORS SHALL BE LEFT IN PLACE AND ABANDONED. THE CONTRACTOR SHALL INSTALL A COMPLETE VIDEO DETECTION SYSTEM WITH ENCLOSURES, MOUNTING HARDWARE/BRACKETS, TERMINATION PANELS, POWER AND COMMUNICATION CABLES FOR STOP BAR DETECTION PER JSP I.
- (3) THE CONTRACTOR SHALL INSTALL RADAR DETECTION UNITS AND PROGRAM FOR ADVANCED DETECTION PER JSP J.

TRAFFIC SIGNALS LEGEND

■ NEW CONTROLLER IN EXISTING CABINET

- Ti> EXISTING SIGNAL HEAD

EXISTING VIDEO/RADAR DETECTION UNIT

NEW VIDEO/RADAR COMBINATION DETECTION UNIT

NEW VIDEO DETECTION UNIT

NEW RADAR DETECTION UNIT

EXISTING GRIDSMART VIDEO DETECTION UNIT

* EXISTING ACCESS POINT

r# EXISTING REPEATER

EXISTING SENSYS DETECTOR PROBE

6 X 6 LOOP DETECTOR

{----} 6 X 15 LOOP DETECTOR

30 X 6 LOOP DETECTOR

EXISTING STOP BAR DETECTION ZONE

PROPOSED STOP BAR DETECTION ZONE

()______ EXISTING MAST ARM

EXISTING TRUSS

TRAFFIC SIGNAL SHEET 49 OF 60

ST. LOUIS COUNTY
ROUTE 141 SIGNAL IMPROVEMENTS

MISSOURI HIGHWAYS AND TRANSPORT.

COMMISSION

THE COMMISSION

105 WEST C.

105 WEST C.

■
P USA INC.
N. BROADWAY SUITE 2800
LOUIS, MO 63102 (314) 206-4444

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DETECTOR NUMBER	APPROACH	RADAR	VIDEO
10 21 22 23 50 61	EB (PHASE 1) WB (PHASE 2) WB (PHASE 2) WB (PHASE 2) WB (PHASE 5) EB (PHASE 6)		1 1 1 1 1
62 63 71 72 81 82	EB (PHASE 6) EB (PHASE 6) SB (PHASE 7) SB (PHASE 7) NB (PHASE 8) NB (PHASE 8)		1 1 1 1 1
24 25 26 64	WB ADVANCE (PHASE 2) WB ADVANCE (PHASE 2) WB ADVANCE (PHASE 2) EB ADVANCE (PHASE 6)	1 1 1	
65 66	EB ADVANCE (PHASE 6) EB ADVANCE (PHASE 6)	1	
	TOTAL	6	12

- * ITEMS FOR WHICH SEPARATE PAYMENT WILL NOT BE MADE.
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MISSOURI HIGHWAYS AND TRANSPORTATION DATE	COMMISSION		Modol		105 WEST CAPITOL	JEFFERSON CITY, MO 65102	1-888-ASK-MODOT (1-888-275-6636)	IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALE
					ADWAY SUITE 2800	MO 63102 (314) 206-4444	CERTIFICATE OF AUTHORITY - 001444	

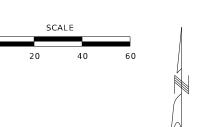
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PHASE 5	PHASE 6	PHASE 7	PHASE 8

MO 141 AND GREGORY LN
INTERSECTION

D-370

TRAFFIC SIGNAL SHEET 50 OF 60







ST LOUIS

JOB NO.

JSL0110

CONTRACT ID.

PROJECT NO.

TE DESCRIPTION

- (1) THE CONTRACTOR SHALL REMOVE THE EXISTING CONTROLLER AND DELIVER TO THE MODOT SIGNAL SHOP PER JSP K. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROGRAMMING THE NEW CONTROLLER TO MATCH EXISTING PHASING, TIMING, AND COMMUNICATION SETTINGS PER JSP H.
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- (3) THE CONTRACTOR SHALL INSTALL RADAR DETECTION UNITS AND PROGRAM FOR ADVANCED DETECTION PER JSP J.

TRAFFIC SIGNALS LEGEND

- NEW CONTROLLER IN EXISTING CABINET
- $-\frac{1}{1}$ EXISTING SIGNAL HEAD
- EXISTING VIDEO/RADAR DETECTION UNIT
- NEW VIDEO/RADAR COMBINATION DETECTION UNIT
- NEW VIDEO DETECTION UNIT
- NEW RADAR DETECTION UNIT
- 🗘 EXISTING GRIDSMART VIDEO DETECTION UNIT
- * EXISTING ACCESS POINT
- r# EXISTING REPEATER
- EXISTING SENSYS DETECTOR PROBE

6 X 6 LOOP DETECTOR

{----} 6 X 15 LOOP DETECTOR

30 X 6 LOOP DETECTOR

EXISTING STOP BAR DETECTION ZONE

EXISTING STOL BAR BETECTION ZON

PROPOSED STOP BAR DETECTION ZONE

CTITITITITY EXISTING MAST ARM

(T) EXISTING TRUSS

TRAFFIC SIGNAL SHEET 51 OF 60

ST. LOUIS COUNTY
ROUTE 141 SIGNAL IMPROVEMENTS

MISSOURI HIGHWAYS AND TRANSPORCOMMISSION

COMMISSION

TODOT

105 WEST

HEFERSON CITY, 105 WEST

■ SP USA INC. 11 N. BROADWAY SUITE 2800 F. LOUIS, MO 63102 (314) 206-4444

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F	DETECTOR SCHEDOR INFORMATION		
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DETECTOR NUMBER	APPROACH	RADAR	VIDEO
21	WB (PHASE 2)		1
22	WB (PHASE 2)		1
23	WB (PHASE 2)		1
31	NB (PHASE 3)		1
32	NB (PHASE 3)		1
50	WB (PHASE 5)		1
61	EB (PHASE 6)		1
62	EB (PHASE 6)		1
63	EB (PHASE 6)		1
24	WB ADVANCE (PHASE 2)	1	
25	WB ADVANCE (PHASE 2)	1	
26	WB ADVANCE (PHASE 2)	1	
64	EB ADVANCE (PHASE 6)	1	
65	EB ADVANCE (PHASE 6)	1	
66	EB ADVANCE (PHASE 6)	1	
32	NB ADVANCE (PHASE 3)	1	
33	NB ADVANCE (PHASE 3)	1	
	TOTAL	8	9

- * ITEMS FOR WHICH SEPARATE PAYMENT WILL NOT BE MADE.
- (1) CABLING FOR THE NEW VIDEO DETECTION AND RADAR DETECTION SHOULD BE ROUTED THROUGH EXISTING CONDUITS. CONDUITS THAT ARE DAMAGED, COLLAPSED, OR UNUSABLE SHALL BE MARKED ON THE AS-BUILT PLANS PER JSP S.
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3/21/2024 141 MO SHEET NO. DISTRICT SL 55 ST LOUIS JOB NO. JSL0110 CONTRACT ID. PROJECT NO. BRIDGE NO

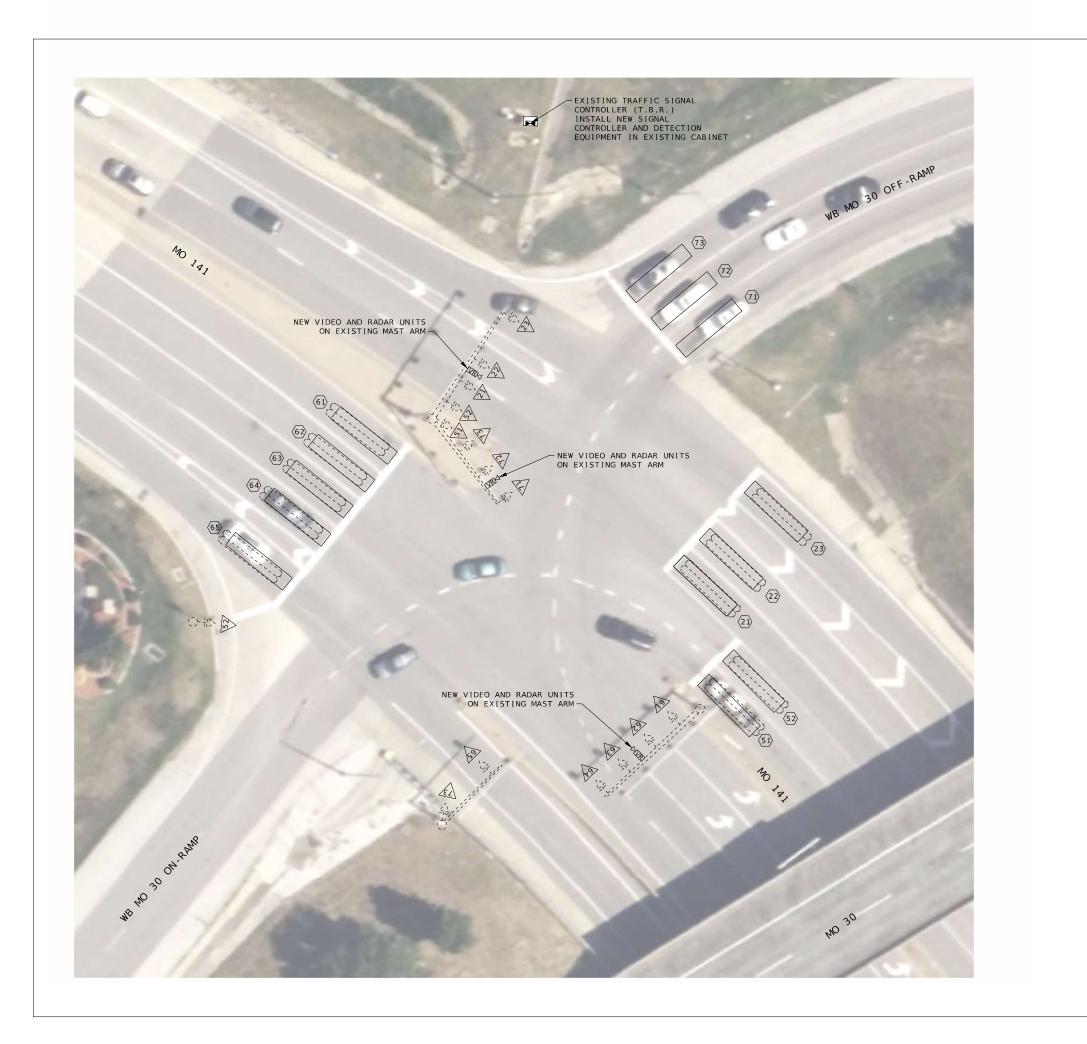
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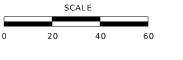
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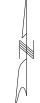
INTERSECTION

D - 37C

TRAFFIC SIGNAL SHEET 52 OF 60









JOB NO.
JSL0110
CONTRACT ID.

PROJECT NO.

DESCRIPTION

DESCRIPTION

- (1) THE CONTRACTOR SHALL REMOVE THE EXISTING CONTROLLER AND DELIVER TO THE MODOT SIGNAL SHOP PER JSP K. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROGRAMMING THE NEW CONTROLLER TO MATCH EXISTING PHASING, TIMING, AND COMMUNICATION SETTINGS PER JSP H.
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- (3) THE CONTRACTOR SHALL INSTALL RADAR DETECTION UNITS AND PROGRAM FOR ADVANCED DETECTION PER JSP J.

TRAFFIC SIGNALS LEGEND

- NEW CONTROLLER IN EXISTING CABINET
- II
- EXISTING VIDEO/RADAR DETECTION UNIT
- NEW VIDEO/RADAR COMBINATION DETECTION UNIT
- NEW VIDEO DETECTION UNIT
- ▷□R] NEW RADAR DETECTION UNIT
- 🗘 EXISTING GRIDSMART VIDEO DETECTION UNIT
- ★ EXISTING ACCESS POINT
- r# EXISTING REPEATER
- EXISTING SENSYS DETECTOR PROBE

6 X 6 LOOP DETECTOR

{----} 6 X 15 LOOP DETECTOR

----- 30 X 6 LOOP DETECTOR

EXISTING STOP BAR DETECTION ZONE

PROPOSED STOP BAR DETECTION ZONE

()_____ EXISTING MAST ARM

EXISTING TRUSS

TRAFFIC SIGNAL SHEET 53 OF 60

ST. LOUIS COUNTY
ROUTE 141 SIGNAL IMPROVEMENTS

MISSOURI HIGHWAYS AND TRANSPOR
COMMISSION
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TO THE TO T

■
P USA INC.
N. BROADWAY SUITE 2800
LOUIS, MO 63102 (314) 206-4444

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LO	САТ	ION		POWER ASSE	SUPPLY MBLY	CIR	CUIT	T BREAKEI	R TRIP R	AT I NG*	I IGHTING (CONTROL *		SERVIC	E POLE
100001011			055657	DRAWING				OLLER CONT &	POWER DISCO	SUPPLY NNECT		R SUPPLY)	CON	NTRACT	UTILITY
APPRUACH	APPROACH STATION OFFSET DRAWING 902.15 DRAW					BRE A	I ARY KER	S I GNAL LAMPS	MAIN B	REAKER LIGHTING	120 VOLT CONTROL CABINET	MA I N BREAKER		RNISH	COMPANY
				Туре	U.I.P.	15	Amps	· Amps	Amps	Amps		Amps	CI.	Ft.	U.1.P.
	9 .	0	0	Туре		15	Amps	Amps	Amps	Amps	·	Amps	CI.	F+.	

				CC	NTRC	LLER	Α	SS	EMBLY	Y AND) AUX	ILIAF	RY EC	UIPM	ENT							
LOCAT	I ON		SYS MAS	TEM	A C T I	ATED	ON-C SWI		. С	COORDINA	TION INT	ERFACE *	⊬				A CABI		170 C		17	
ABBBOACH	(0				ACTO	AILU	ΤY	PE	12C/7C F	HARDWIRE 1)	TIME	CLOSE	L00P	FIBER	TIME *		TYPE *	-	TYP	E *	SOF TW.	ARE *
AFFRUACH	APPROACH STATION OFFSET NEMA 170 NEMA 170 I				ΙI	MASTER	LOCAL	BASE	NEMA	170	FIBER		E	ΕV	DOUBLE	332	3365	BITRAN	WAPITI			
MD 141 & MO 30 WB RAMPS	U.I.P.	U. J. P.			1									1								

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	DETECTOR SCHEDOR INFORMATION		
	UN INFUNMATION	UNLI	
		TYI	PE
DETECTOR NUMBER	APPROACH	RADAR	VIDEO
21 22 23 24 51	NB (PHASE 2)		1 1 1 1
52 61 62 63	NB (PHASE 2) SB (PHASE 6) SB (PHASE 6) SB (PHASE 6)		1 1 1
64 65 71 72	SB (PHASE 6) SB (PHASE 6) WB (PHASE 7) WB (PHASE 7)		1 1 1
73	WB (PHASE 7)		1
24 25 26	NB ADVANCE (PHASE 2) NB ADVANCE (PHASE 2) NB ADVANCE (PHASE 2)	1 1 1	
66 67 68	SB ADVANCE (PHASE 6) SB ADVANCE (PHASE 6) SB ADVANCE (PHASE 6)	1 1 1	
74 75	WB ADVANCE (PHASE 7) WB ADVANCE (PHASE 7)	1	
	TOTAL	8	14

- * ITEMS FOR WHICH SEPARATE PAYMENT WILL NOT BE MADE.
- (1) CABLING FOR THE NEW VIDEO DETECTION AND RADAR DETECTION SHOULD BE ROUTED THROUGH EXISTING CONDUITS. CONDUITS THAT ARE DAMAGED, COLLAPSED, OR UNUSABLE SHALL BE MARKED ON THE AS-BUILT PLANS PER JSP S.
- (2) THE INSTALLATION OF ALL EQUIPMENT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, DRAWINGS, AND ENGINEERING POLICY GUIDE.
- (3) THE CONTRACTOR SHALL HAVE RESPONSIBILITY OF LOCATING ALL UNDERGROUND AND OVERHEAD FACILITIES. STRUCTURES. AND UTILITIES.
- (4) THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL AND SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
- (5) ALL DRILLED OPENING FOR CABLE SHALL BE WEATHERPROOF.
 THERE WILL BE NO DIRECT PAYMENT FOR DRILLED OPENINGS.
 DISUSED OPENINGS SHALL BE PLUGGED BY THE CONTRACTOR.
- (6) THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROGRAMMING DETECTION ZONES PER JSP I AND JSP J. PER JSP I AND JSP J. COUNT ZONES SHOULD BE PROGRAMMED FOR EACH LANE AT THE INTERSECTION EVEN IF NO VEHICLE DETECTION ZONE IS REQUIRED FOR THAT LANE.
- (7) THE CONTRACTOR SHALL REMOVE ALL DISUSED EXISTING DETECTION CAMERA CABLE AS PART OF THE DETECTION INSTALLATION.
- (8) THE CONTRACTOR SHALL PULL ROPE THROUGH ANY USED CONDUITS PER JSP R.
- (9) MANUFACTURER'S REPRESENTATIVE SHALL BE PRESENT DURING PROGRAMMING OF DETECTION ZONES PER JSP I AND JSP J. MANUFACTURER'S REPRESENTATIVE SHALL PROVIDE GUIDANCE TO CONTRACTOR ON OPTIMAL PLACEMENT OF DETECTION EQUIPMENT AND PROGRAMMED DETECTION ZONES

	PHASE 2	
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PHASE 5	PHASE 6	PHASE 7

MO 141 AND MO 30 WB RAMPS

INTERSECTION D-37C

TRAFFIC SIGNAL SHEET 54 OF 60

ST. LOUIS COUNTY

ROUTE 141 SIGNAL IMPROVEMENTS

3/21/2024 141 MO SHEET NO. DISTRICT SL 57 ST LOUIS JOB NO. JSL0110 CONTRACT ID. PROJECT NO. BRIDGE NO

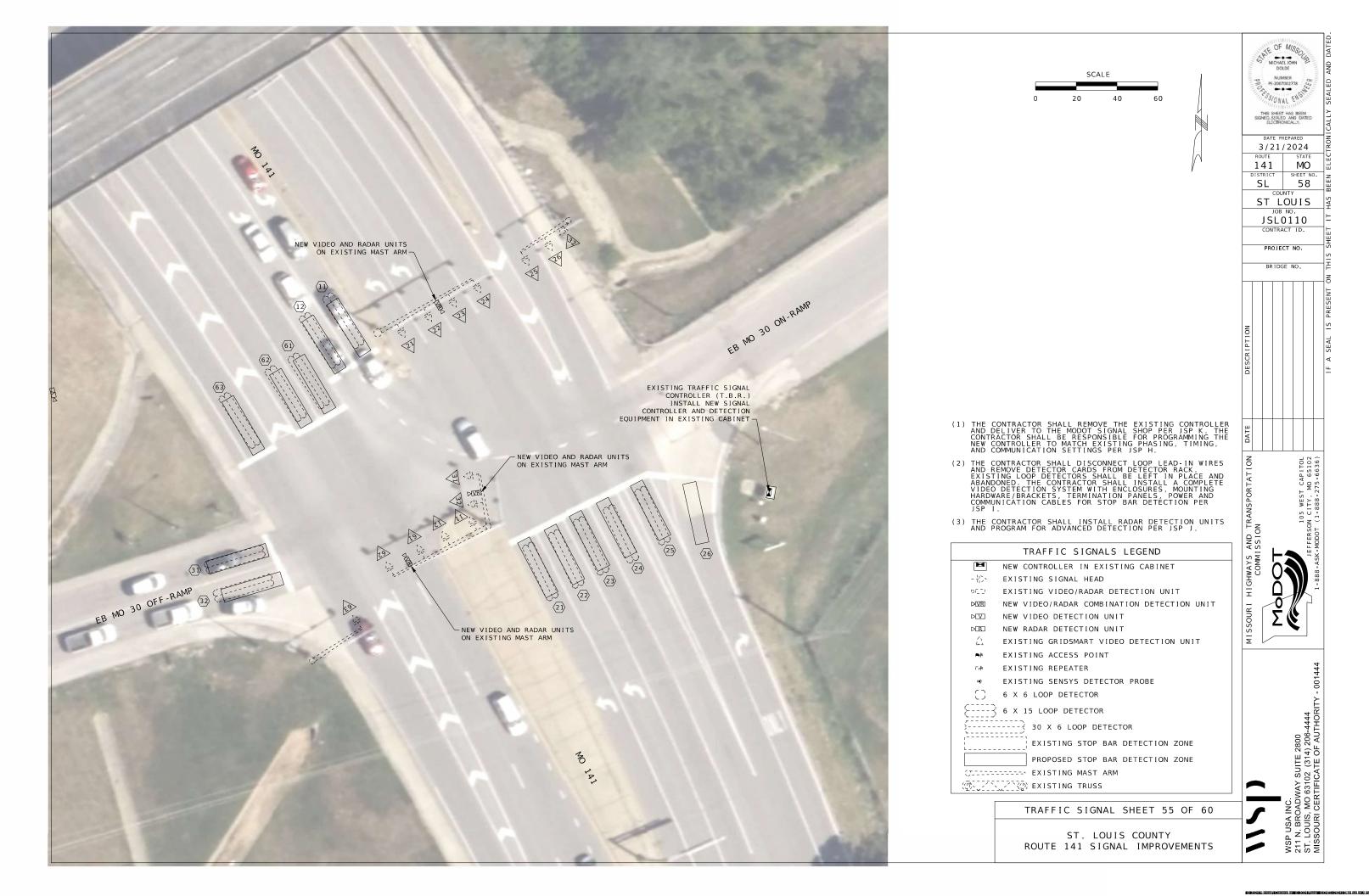
INC.

ROADWAY SUITE 2800

S. MO 63102 (314) 206-4444

R. CERTIFICATE OF AUTHORITY - C

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LO	САТ	ION		POWER ASSE	SUPPLY MBLY	CIR	CUIT	T BREAKEI	R TRIP R	AT I NG*	I IGHTING (CONTROL *		SERVIC	E POLE
100001011			055657	DRAWING				OLLER CONT &	POWER DISCO	SUPPLY NNECT		R SUPPLY)	CON	NTRACT	UTILITY
APPRUACH	APPROACH STATION OFFSET DRAWING 902.15 DRAW					BRE A	I ARY KER	S I GNAL LAMPS	MAIN B	REAKER LIGHTING	120 VOLT CONTROL CABINET	MA I N BREAKER		RNISH	COMPANY
				Туре	U.I.P.	15	Amps	· Amps	Amps	Amps		Amps	CI.	Ft.	U.1.P.
	9 .	0	0	Туре		15	Amps	Amps	Amps	Amps	·	Amps	CI.	F+.	

	CONTROLLER ASSEMBLY AND AUXILIARY EQUIPMENT																					
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AFFRUACH	STATION	OFF SET	NEMA	170	NEMA	170	I	I I MA	ASTER	LOCAL	BASE	NEMA	170	FIDER		E	ΕV	DOUBLE	332	3365	BITRAN	WAPITI
MD 141 & MO 30 EB RAMPS	U.I.P.	U.I.P.			1									1								

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F	DETECTOR SCHEE OR INFORMATION		
		TY	PE
DETECTOR NUMBER	APPROACH	RADAR	VIDEO
11	SB (PHASE 1)		1
12	SB (PHASE 1)		1
21	NB (PHASE 2)		1
22	NB (PHASE 2)		1
23	NB (PHASE 2)		1
24	NB (PHASE 2)		1
25	NB (PHASE 2)		1
26	NB (PHASE 2)		1
31	EB (PHASE 3)		1
32	EB (PHASE 3)		1
61	SB (PHASE 6)		1
62	SB (PHASE 6)		1
63	SB (PHASE 6)		1
27	NB ADVANCE (PHASE 2)	1	
28	NB ADVANCE (PHASE 2)	i	
29	NB ADVANCE (PHASE 2)	1	
64	SB ADVANCE (PHASE 6)	i	
65	SB ADVANCE (PHASE 6)	1	
66	SB ADVANCE (PHASE 6)	1	
32	EB ADVANCE (PHASE 3)	1	
33	EB ADVANCE (PHASE 3)	1	
	TOTAL	8	13

- * ITEMS FOR WHICH SEPARATE PAYMENT WILL NOT BE MADE.
- (1) CABLING FOR THE NEW VIDEO DETECTION AND RADAR DETECTION SHOULD BE ROUTED THROUGH EXISTING CONDUITS. CONDUITS THAT ARE DAMAGED. COLLAPSED. OR UNUSABLE SHALL BE MARKED ON THE AS-BUILT PLANS PER JSP S.
- (2) THE INSTALLATION OF ALL EQUIPMENT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, DRAWINGS, AND ENGINEERING POLICY GUIDE.
- (3) THE CONTRACTOR SHALL HAVE RESPONSIBILITY OF LOCATING ALL UNDERGROUND AND OVERHEAD FACILITIES. STRUCTURES. AND UTILITIES.
- (4) THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL AND SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
- (5) ALL DRILLED OPENING FOR CABLE SHALL BE WEATHERPROOF.
 THERE WILL BE NO DIRECT PAYMENT FOR DRILLED OPENINGS.
 DISUSED OPENINGS SHALL BE PLUGGED BY THE CONTRACTOR.
- (6) THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROGRAMMING DETECTION ZONES PER JSP I AND JSP J. PER JSP I AND JSP J. COUNT ZONES SHOULD BE PROGRAMMED FOR EACH LANE AT THE INTERSECTION EVEN IF NO VEHICLE DETECTION ZONE IS REQUIRED FOR THAT LANE.
- (7) THE CONTRACTOR SHALL REMOVE ALL DISUSED EXISTING
 DETECTION CAMERA CABLE AS PART OF THE DETECTION
 INSTALLATION.
- (8) THE CONTRACTOR SHALL PULL ROPE THROUGH ANY USED CONDUITS PER JSP R.
- (9) MANUFACTURER'S REPRESENTATIVE SHALL BE PRESENT DURING PROGRAMMING OF DETECTION ZONES PER JSP I AND JSP J. MANUFACTURER'S REPRESENTATIVE SHALL PROVIDE GUIDANCE TO CONTRACTOR ON OPTIMAL PLACEMENT OF DETECTION EQUIPMENT AND PROGRAMMED DETECTION ZONES

3/21/2024 141 MO SHEET NO. DISTRICT SL 59 ST LOUIS JSL0110 CONTRACT ID. PROJECT NO. BRIDGE NO

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PHASE 1 PHASE 2 PHASE 3

MO 141 AND MO 30 EB RAMPS

INTERSECTION

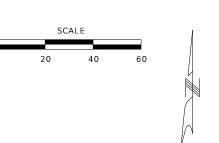
D-37C

TRAFFIC SIGNAL SHEET 56 OF 60

ST. LOUIS COUNTY ROUTE 141 SIGNAL IMPROVEMENTS

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DATE PREPARED

3/21/2024

ROUTE STATE

ROUTE STATE

141 MO

DISTRICT SHEET NO

SL 60

JOB NO.
JSL0110
CONTRACT ID.

PROJECT NO

DESCRIPTION

(1) THE CONTRACTOR SHALL REMOVE THE EXISTING CONTROLLER AND DELIVER TO THE MODOT SIGNAL SHOP PER JSP K. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROGRAMMING THE NEW CONTROLLER TO MATCH EXISTING PHASING, TIMING, AND COMMUNICATION SETTINGS PER JSP H.

(2) THE CONTRACTOR SHALL DISCONNECT LOOP LEAD-IN WIRES AND REMOVE DETECTOR CARDS FROM DETECTOR RACK. EXISTING LOOP DETECTORS SHALL BE LEFT IN PLACE AND ABANDONED. THE CONTRACTOR SHALL INSTALL A COMPLETE VIDEO DETECTION SYSTEM WITH ENCLOSURES, MOUNTING HARDWARE/BRACKETS, TERMINATION PANELS, POWER AND COMMUNICATION CABLES FOR STOP BAR DETECTION PER JSP I.

(3) THE CONTRACTOR SHALL INSTALL RADAR DETECTION UNITS AND PROGRAM FOR ADVANCED DETECTION PER JSP J.

TRAFFIC SIGNALS LEGEND

NEW CONTROLLER IN EXISTING CABINET

 $-\frac{11}{11}$ EXISTING SIGNAL HEAD

EXISTING VIDEO/RADAR DETECTION UNIT

NEW VIDEO/RADAR COMBINATION DETECTION UNIT

NEW VIDEO DETECTION UNIT

NEW RADAR DETECTION UNIT

(2)
EXISTING GRIDSMART VIDEO DETECTION UNIT

** EXISTING ACCESS POINT

「♣ EXISTING REPEATER

● EXISTING SENSYS DETECTOR PROBE

6 X 6 LOOP DETECTOR

{----} 6 X 15 LOOP DETECTOR

30 X 6 LOOP DETECTOR

EXISTING STOP BAR DETECTION ZONE

PROPOSED STOP BAR DETECTION ZONE

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@كِنْ EXISTING TRUSS

TRAFFIC SIGNAL SHEET 57 OF 60

ST. LOUIS COUNTY
ROUTE 141 SIGNAL IMPROVEMENTS

MISSOURI HIGHWAYS AND TRANSPORTAT
COMMISSION
MODOT

105 WEST CAP
LIFFERSON CITY, MO 6

SP USA INC.
1 N. BROADWAY SUITE 2800
1 LOUIS, MO 63102 (314) 206-4444

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L	_OC	AT]	I ON			POWER ASSE		CIF	COI.	T BREAKE	R TRIP R	AT I NG*	LIGHTING	CONTROL *		SERVIC	E POLE
10000101		6.7.		0.5		DRAWING	2014110			OLLER CONT &	POWER DISCO	SUPPLY NNECT	(ON POWER		CON	NTRACT	UTILITY
APPROACH		517	- ALLUN	UF	F SE I	902.15	DRAWING	AUXILIARY BREAKER LAMPS SIGNALS LIGHTING				120 VOLT CONTROL CABINET	MA I N BREAKER		RNISH	CÓMPÁNÝ	
						Туре	U.I.P.	15	Amps	· Amps	Amps	Amps		Amps	CI.	Ft.	U.1.P.
	0		. 0	I	0	Туре		15	Amps	Amps	Amps	Amps		Amps	CI.	Ft.	

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APPROACH	STATION	OFFSET	(CLOSE	LOOP)	ACTO	AILU	TYF	PE	12C/7C H	IARDWIRE 1)	TIME	CLOSE) LOOP	FIBER	TIME *	_	TYPE *		TYP	E *	SOFTW	ARE *
AFFROACH	STATION	OFFSET	NEMA	170	NEMA	170	I	ΙΙ	MASTER	LOCAL	BASE	NEMA	170	FIBER		E	ΕV	DOUBLE	332	3365	BITRAN	WAPITI
MO 141 & GRAVOIS RD	U.I.P.	U.I.P.			1									1								

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						P	9				

F	OR INFORMATION	ONLY	
		TYI	PE
DETECTOR NUMBER	APPROACH	RADAR	VIDEO
10	SB (PHASE 1)		1
11	SB (PHASE 1)		1
21	NB (PHASE 2)		1
22	NB (PHASE 2)		1
23	NB (PHASE 2)		1
30	EB (PHASE 3)		1
41	WB (PHASE 4)		1
50	NB (PHASE 5)		1
51	NB (PHASE 5)		1
61	SB (PHASE 6)		1
62	SB (PHASE 6)		1
63	SB (PHASE 6)		1
70	WB (PHASE 7)		1
71	WB (PHASE 7)		1
81	EB (PHASE 8)		1
24	NB ADVANCE (PHASE 2)	1	
25	NB ADVANCE (PHASE 2)	1	
26	NB ADVANCE (PHASE 2)	1	
42	WB ADVANCE (PHASE 2)	1	
43	WB ADVANCE (PHASE 4)	1	
64	SB ADVANCE (PHASE 6)	1	
65	SB ADVANCE (PHASE 6)	1	
66	SB ADVANCE (PHASE 6)	1	
82	EB ADVANCE (PHASE 8)	1	
52	23 .15 //1102 (1111132 0)		
	TOTAL	9	15

DETECTOR SCHEDULE

- * ITEMS FOR WHICH SEPARATE PAYMENT WILL NOT BE MADE.
- (1) CABLING FOR THE NEW VIDEO DETECTION AND RADAR DETECTION SHOULD BE ROUTED THROUGH EXISTING CONDUITS. CONDUITS THAT ARE DAMAGED. COLLAPSED. OR UNUSABLE SHALL BE MARKED ON THE AS-BUILT PLANS PER JSP S.
- (2) THE INSTALLATION OF ALL EQUIPMENT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, DRAWINGS, AND
- (3) THE CONTRACTOR SHALL HAVE RESPONSIBILITY OF LOCATING ALL UNDERGROUND AND OVERHEAD FACILITIES. STRUCTURES. AND
- (4) THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL AND SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
- (5) ALL DRILLED OPENING FOR CABLE SHALL BE WEATHERPROOF.
 THERE WILL BE NO DIRECT PAYMENT FOR DRILLED OPENINGS.
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 COUNT ZONES SHOULD BE PROGRAMMED FOR EACH LANE AT THE
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- (7) THE CONTRACTOR SHALL REMOVE ALL DISUSED EXISTING DETECTION CAMERA CABLE AS PART OF THE DETECTION
- (8) THE CONTRACTOR SHALL PULL ROPE THROUGH ANY USED CONDUITS PER JSP R.
- (9) MANUFACTURER'S REPRESENTATIVE SHALL BE PRESENT DURING PROGRAMMING OF DETECTION ZONES PER JSP I AND JSP J. MANUFACTURER'S REPRESENTATIVE SHALL PROVIDE GUIDANCE TO CONTRACTOR ON OPTIMAL PLACEMENT OF DETECTION EQUIPMENT AND

PHASE 1	PHASE 2	PHASE 3	PHASE 4
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PHASE 5	PHASE 6	PHASE 7	PHASE 8

MO 141 AND GRAVOIS RD		Y SUITE 2800 3102 (314) 206-4444
INTERSECTION D-37C		 0 631
TRAFFIC SIGNAL SHEET 58 OF 60		A INC ROAL S. MC
ST. LOUIS COUNTY ROUTE 141 SIGNAL IMPROVEMENTS	1	WSP US/ 211 N. BF ST. LOUI

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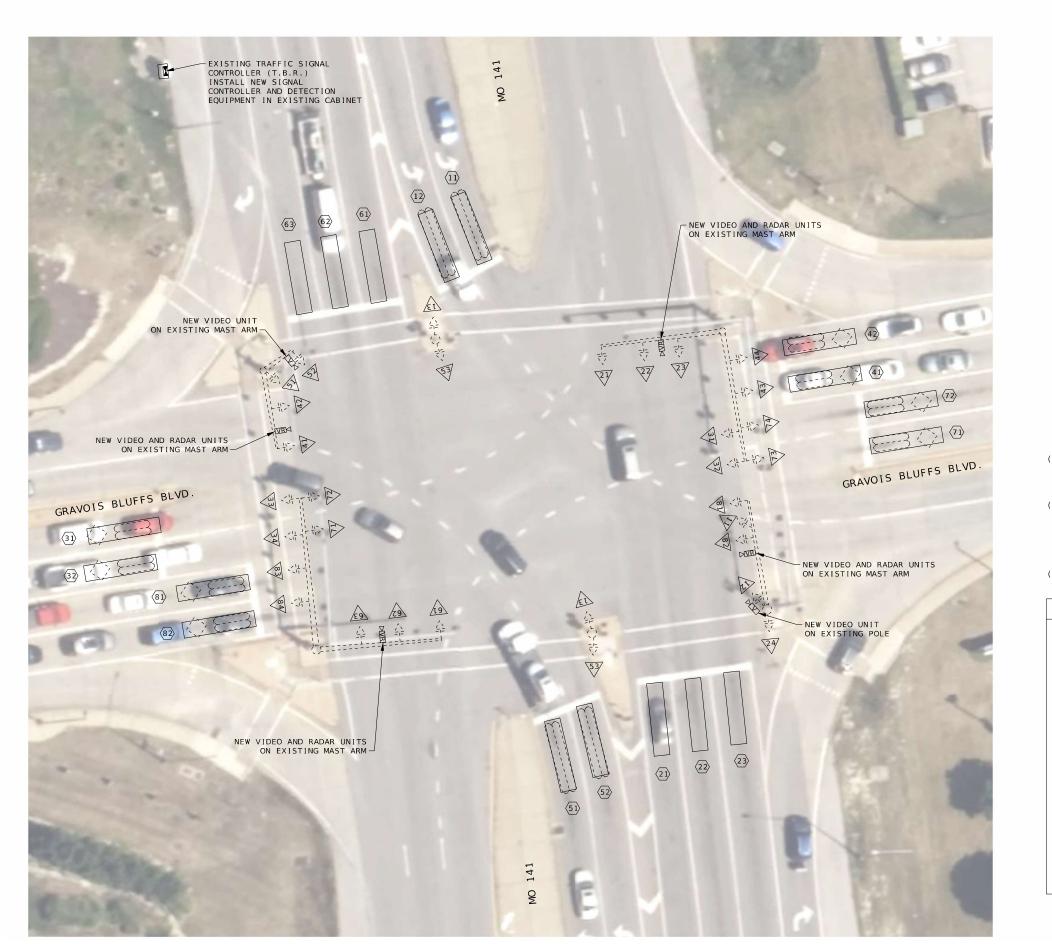
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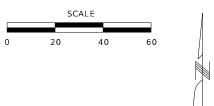
MO SHEET NO.

61 COUNTY ST LOUIS JOB NO. JSL0110 CONTRACT ID. PROJECT NO. BRIDGE NO

141

DISTRICT SL







| DATE | PREPARED | 3/21/2024 | ROUTE | STATE | 141 | MO | DISTRICT | SHEET NO. | SL | 62 | COLINTY |

JOB NO.

JOB NO.

CONTRACT ID.

PROJECT NO

DESCRIPTION BRIDGE NO.

- (1) THE CONTRACTOR SHALL REMOVE THE EXISTING CONTROLLER AND DELIVER TO THE MODOT SIGNAL SHOP PER JSP K. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROGRAMMING THE NEW CONTROLLER TO MATCH EXISTING PHASING, TIMING, AND COMMUNICATION SETTINGS PER JSP H.
- (2) THE CONTRACTOR SHALL DISCONNECT LOOP LEAD-IN WIRES AND REMOVE DETECTOR CARDS FROM DETECTOR RACK. EXISTING LOOP DETECTORS SHALL BE LEFT IN PLACE AND ABANDONED. THE CONTRACTOR SHALL INSTALL A COMPLETE VIDEO DETECTION SYSTEM WITH ENCLOSURES, MOUNTING HARDWARE/BRACKETS, TERMINATION PANELS, POWER AND COMMUNICATION CABLES FOR STOP BAR DETECTION PER JSP I.
- (3) THE CONTRACTOR SHALL INSTALL RADAR DETECTION UNITS AND PROGRAM FOR ADVANCED DETECTION PER JSP J.

TRAFFIC SIGNALS LEGEND

MEW CONTROLLER IN EXISTING CABINET

- TIN EXISTING SIGNAL HEAD

EXISTING VIDEO/RADAR DETECTION UNIT

NEW VIDEO/RADAR COMBINATION DETECTION UNIT

NEW VIDEO DETECTION UNIT

NEW RADAR DETECTION UNIT

EXISTING GRIDSMART VIDEO DETECTION UNIT

EXISTING ACCESS POINT

r# EXISTING REPEATER

● EXISTING SENSYS DETECTOR PROBE

6 X 6 LOOP DETECTOR

{----} 6 X 15 LOOP DETECTOR

30 X 6 LOOP DETECTOR

EXISTING STOP BAR DETECTION ZONE

PROPOSED STOP BAR DETECTION ZONE

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TRAFFIC SIGNAL SHEET 59 OF 60

ST. LOUIS COUNTY
ROUTE 141 SIGNAL IMPROVEMENTS

COMMISS MODOT 444

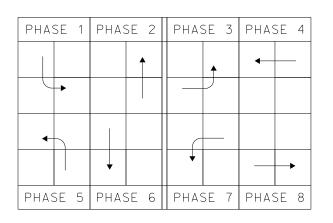
> WSP USA INC. 211 N. BROADWAY SUITE 2800 ST. LOUIS, MO 63102 (314) 206-

	POWER SUPPLY														
LOCATION					WER SUPPLY CIRCUIT BR			T BREAKEI	BREAKER TRIP RATING*			CONTROL *	SERVICE POLE		E POLE
100001011			055657	DRAWING				OLLER CONT &	POWER DISCO	SUPPLY NNECT	(ON POWER SUPPLY)		CON	NTRACT	UTILITY
APPROACH	51	AIIUN	OFFSET	902.15	DRAWING	BRE A	I ARY KER	SIGNAL LAMPS	MAIN B	REAKER LIGHTING	120 VOLT MAIN CONTROL BREAKER CABINET BREAKER			RNISH	COMPANY
				Туре	U.I.P.	15	Amps	· Amps	Amps	Amps		Amps	CI.	Ft.	U.1.P.
	0	0	0	Туре		15	Amps	Amps	Amps	Amps	·	Amps	CI.	Ft.	

	CONTROLLER ASSEMBLY AND AUXILIARY EQUIPMENT																					
LOCATION SYSTEM MASTER (CLOSED LOOP			TEM	A C T L I	ACTUATED ON-OFF* SWITCH			C	COORDINA	TION INT	ERFACE *	⊬				A CABI		170 CA		17		
APPROACH	APPROACH STATION OFFSE		(CLOSE	LOOP)	ACTO	ATEU	TYF	PE 1:	2C/7C H	HARDWIRE 1)	TIME	CLOSEC	L00P	FIBER	TIME *	-	TYPE *	-	TYPI	E *	SOFTW	ARE *
AFFRUACH	STATION	OFFSET	NEMA	170	NEMA	170	I	II	MASTER	LOCAL	BASE	NEMA	170	FIBER		E	ΕV	DOUBLE	332	336S	BITRAN	WAPITI
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F	DETECTOR SCHEDOR INFORMATION		
DETECTOR		TY	PE
NUMBER	APPROACH	RADAR	VIDEO
11 12 21 22 23 31	SB (PHASE 1) SB (PHASE 1) NB (PHASE 2) NB (PHASE 2) NB (PHASE 2) EB (PHASE 3)		1 1 1 1 1
32 41 42 51 52	EB (PHASE 3) WB (PHASE 4) WB (PHASE 4) NB (PHASE 5) NB (PHASE 5)		1 1 1 1 1
61 62 63 71 72 81	SB (PHASE 6) SB (PHASE 6) SB (PHASE 6) WB (PHASE 7) WB (PHASE 7) EB (PHASE 8)		1 1 1 1 1
82	EB (PHASE 8) NB ADVANCE (PHASE 2)	1	1
25 26 43 44 64 65	NB ADVANCE (PHASE 2) NB ADVANCE (PHASE 2) WB ADVANCE (PHASE 4) WB ADVANCE (PHASE 4) SB ADVANCE (PHASE 6) SB ADVANCE (PHASE 6)	1 1 1 1 1	
66 83 84	SB ADVANCE (PHASE 6) EB ADVANCE (PHASE 8) EB ADVANCE (PHASE 8)	1 1 1	
	TOTAL	10	18

- * ITEMS FOR WHICH SEPARATE PAYMENT WILL NOT BE MADE.
- (1) CABLING FOR THE NEW VIDEO DETECTION AND RADAR DETECTION SHOULD BE ROUTED THROUGH EXISTING CONDUITS. CONDUITS THAT ARE DAMAGED, COLLAPSED, OR UNUSABLE SHALL BE MARKED ON THE AS-BUILT PLANS PER JSP S.
- (2) THE INSTALLATION OF ALL EQUIPMENT SHALL BE IN ACCORDANCE WITH THE LATEST EDITION MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, DRAWINGS, AND
- (3) THE CONTRACTOR SHALL HAVE RESPONSIBILITY OF LOCATING ALL UNDERGROUND AND OVERHEAD FACILITIES. STRUCTURES. AND
- (4) THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL AND SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND MISSOURI DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
- (5) ALL DRILLED OPENING FOR CABLE SHALL BE WEATHERPROOF.
 THERE WILL BE NO DIRECT PAYMENT FOR DRILLED OPENINGS.
 DISUSED OPENINGS SHALL BE PLUGGED BY THE CONTRACTOR.
- (6) THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROGRAMMING
 DETECTION ZONES PER JSP I AND JSP J. PER JSP I AND JSP J.
 COUNT ZONES SHOULD BE PROGRAMMED FOR EACH LANE AT THE
 INTERSECTION EVEN IF NO VEHICLE DETECTION ZONE IS REQUIRED FOR THAT LANE.
- (7) THE CONTRACTOR SHALL REMOVE ALL DISUSED EXISTING DETECTION CAMERA CABLE AS PART OF THE DETECTION
- (8) THE CONTRACTOR SHALL PULL ROPE THROUGH ANY USED CONDUITS PER JSP R.
- (9) MANUFACTURER'S REPRESENTATIVE SHALL BE PRESENT DURING PROGRAMMING OF DETECTION ZONES PER JSP I AND JSP J. MANUFACTURER'S REPRESENTATIVE SHALL PROVIDE GUIDANCE TO CONTRACTOR ON OPTIMAL PLACEMENT OF DETECTION EQUIPMENT AND

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ROUTE 141 SIGNAL IMPROVEMENTS

D - 37CTRAFFIC SIGNAL SHEET 60 OF 60 ST. LOUIS COUNTY

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616.8.22 (TA-22) RIGHT LANE CLOSURE AT INTERSECTION WORK ON NEAR OR FAR SIDE - DE/CM

SPEED	SIGN SPA	CING (FT.)	TAPER LENG	TH (FT.)	OPTIONAL	CHANNEL I ZER	SPACING (FT.)			
PERMANENT POSTED (MPH)	UNDIVIDED (S)	DIVIDED (S)	SHOULDER (1) (T1)	LANE (2) (T2)	BUFFER LENGTH (FT.) (B)	TAPERS	BUFFER/ WORK AREAS			
0-35	200	200	70	245	280	35	40			
40-45	350	500	150	540	400	40	80			
50-55	500	1000	185	660	560	50	80			
60-70	1000	SA - 1000 SB - 1500 SC - 2640	235	840	840	60	120			
1. 00020	1. SHOULDER TAPER LENGTH BASED ON 10 FT (STANDARD SHOULDER WIDTH) OFFSET. 2. LANE TAPER LENGTH BASED ON 12 FT (STANDARD LANE WIDTH OFFSET.									

NOTES:

- 1. SEE EPG 616.12 WORK ZONE SPEED LIMITS FOR SPEED LIMIT GUIDELINES.
- 2. REVIEW TYPICAL APPLICATION 616.8.22A (TA-22A) LANE CLOSURE OF RIGHT LANE ON FAR SIDE OF INTERSECTION.

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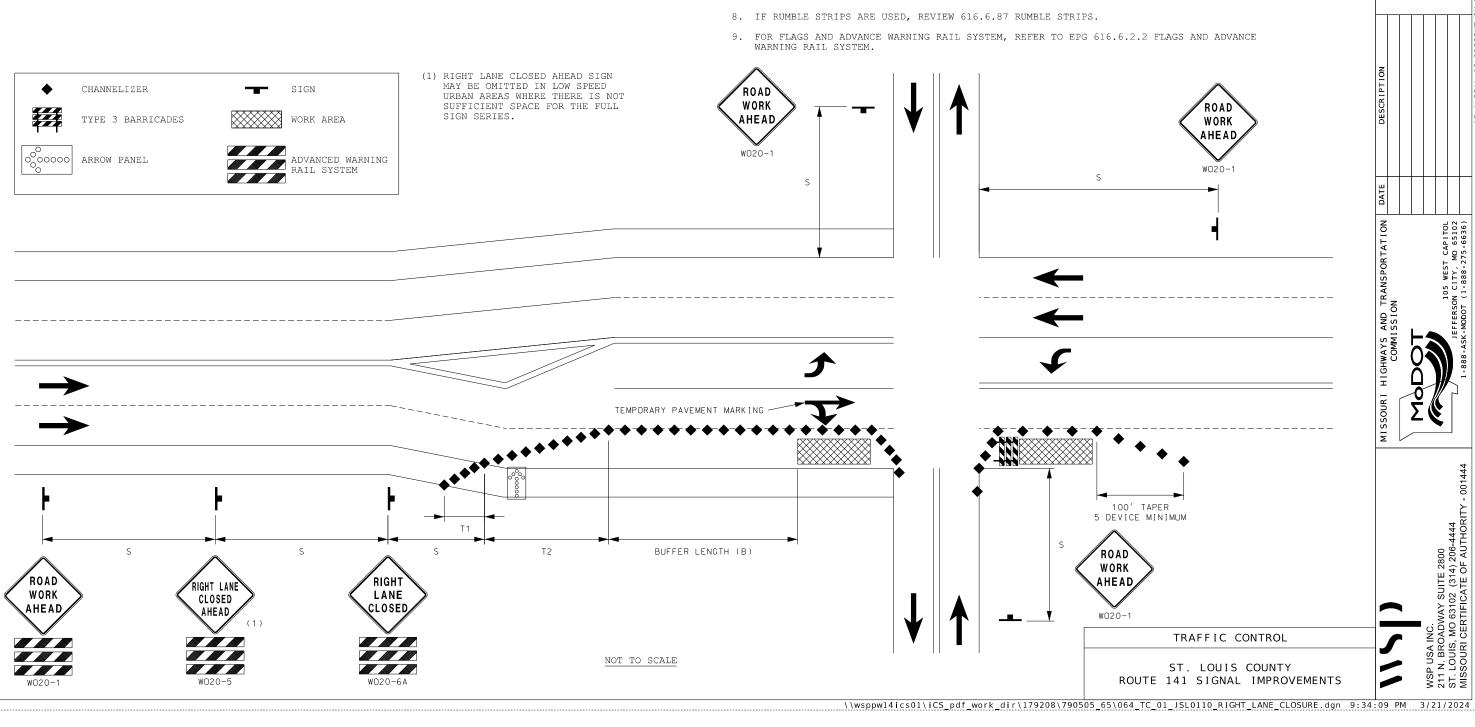
SHEET NO.

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SL

- 3. FOR SIGNALIZED INTERSECTIONS, ADJUSTMENTS MAY NEED TO BE MADE TO SIGNAL PHASING, TIMING, INDICATIONS OR DETECTOR SETTINGS.
- 4. REMOVE AND/OR MODIFY EXISTING PAVEMENT MARKINGS AS NEEDED.
- 5. PAVEMENT MARKING AND BARRICADES OPTIONAL FOR SHORT TERM OPERATIONS.
- 6. TEMPORARY PAVEMENT MARKING REQUIRED WITH LONG TERM LANE CLOSURES.
- 7. FOR SHORT TERM OPERATIONS, WHERE IT IS NOT FEASIBLE TO MODIFY PAVEMENT MARKINGS, A 10-FOOT DEVICE SPACING IS USED WHERE TRAFFIC IS GUIDED ACROSS DOUBLE YELLOW LINES OR OTHER CONFLICTING PAVEMENT MARKINGS. ALL OTHER SPACING IS ONE-HALF OF THE SPACING.



616.8.23 (TA-23) LANE CLOSURE OF LEFT LANE ON FAR SIDE OF INTERSECTION WORK ON NEAR OR FAR SIDE - DE/CM

SPEED	SIGN SPA	CING (FT.)	TAPER LENG	TH (FT.)	OPTIONAL	CHANNEL IZER S	SPACING (FT.)				
PERMANENT POSTED (MPH)	UNDIVIDED (S)	DIVIDED (S)	SHOULDER (1)	LANE (2) (T2)	BUFFER LENGTH (FT.) (B)	TAPERS	BUFFER/ WORK AREAS				
0-35	200	200	70	245	280	35	40				
40-45	350	500	150	540	400	40	80				
50-55	500	1000	185	660	560	50	80				
60-70	1000	SA - 1000 SB - 1500 SC - 2640	235	840	840	60	120				
1. 00020	1. SHOULDER TAPER LENGTH BASED ON 10 FT (STANDARD SHOULDER WIDTH) OFFSET. 2. LANE TAPER LENGTH BASED ON 12 FT (STANDARD LANE WIDTH OFFSET.										

NOTES:

- 1. SEE EPG 616.12 WORK ZONE SPEED LIMITS FOR SPEED LIMIT GUIDELINES.
- 2. REVIEW TYPICAL APPLICATION 616.8.23A (TA-23A) LEFT LANE CLOSURE AT INTERSECTION WORK ON FAR SIDE ONLY - DE/CM.

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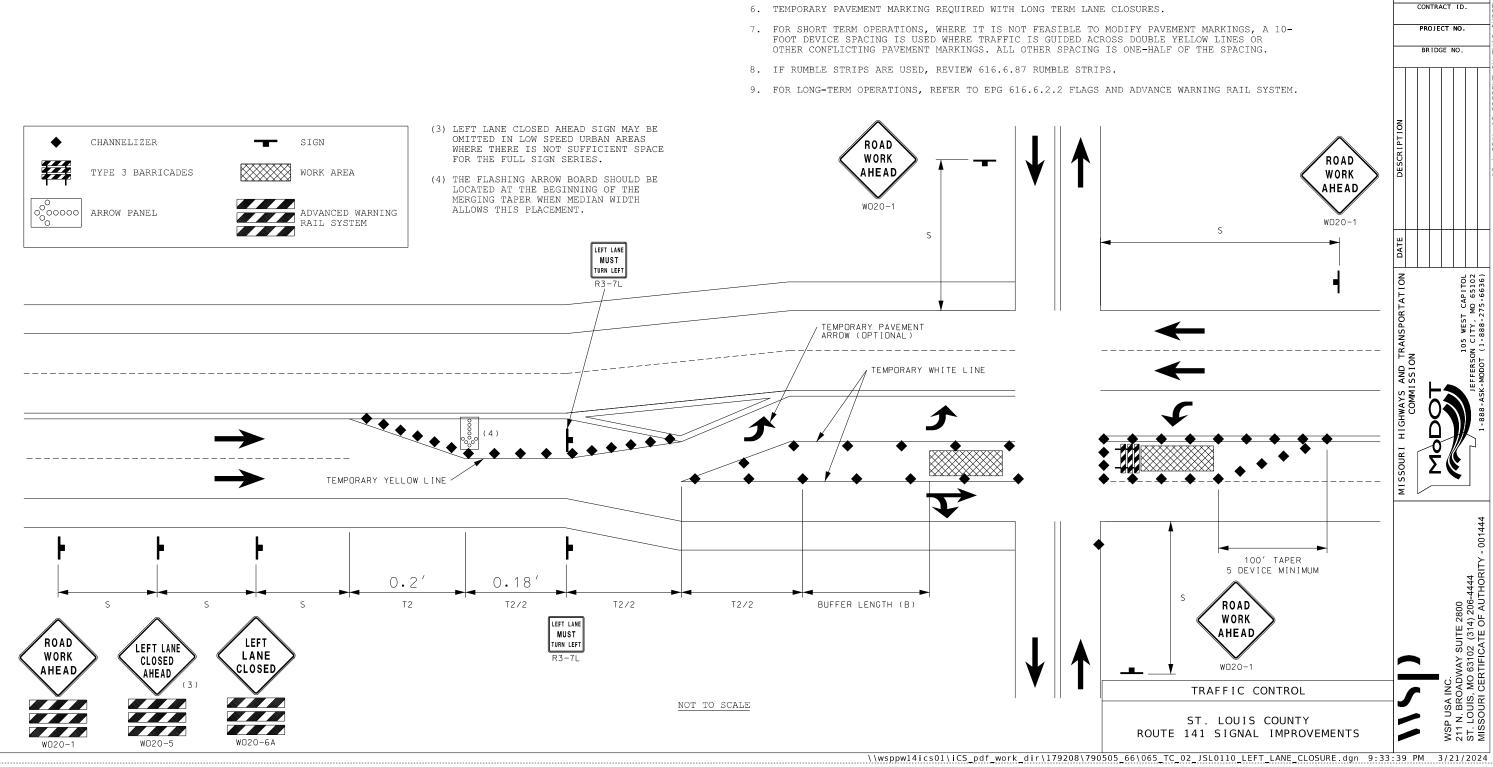
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DISTRICT SL

- 3. FOR SIGNALIZED INTERSECTIONS, ADJUSTMENTS MAY NEED TO BE MADE TO SIGNAL PHASING, TIMING, INDICATIONS OR DETECTOR SETTINGS.
- 4. REMOVE AND/OR MODIFY EXISTING PAVEMENT MARKINGS AS NEEDED.
- 5. PAVEMENT MARKING AND BARRICADES OPTIONAL FOR SHORT TERM OPERATIONS.
- 6. TEMPORARY PAVEMENT MARKING REQUIRED WITH LONG TERM LANE CLOSURES.

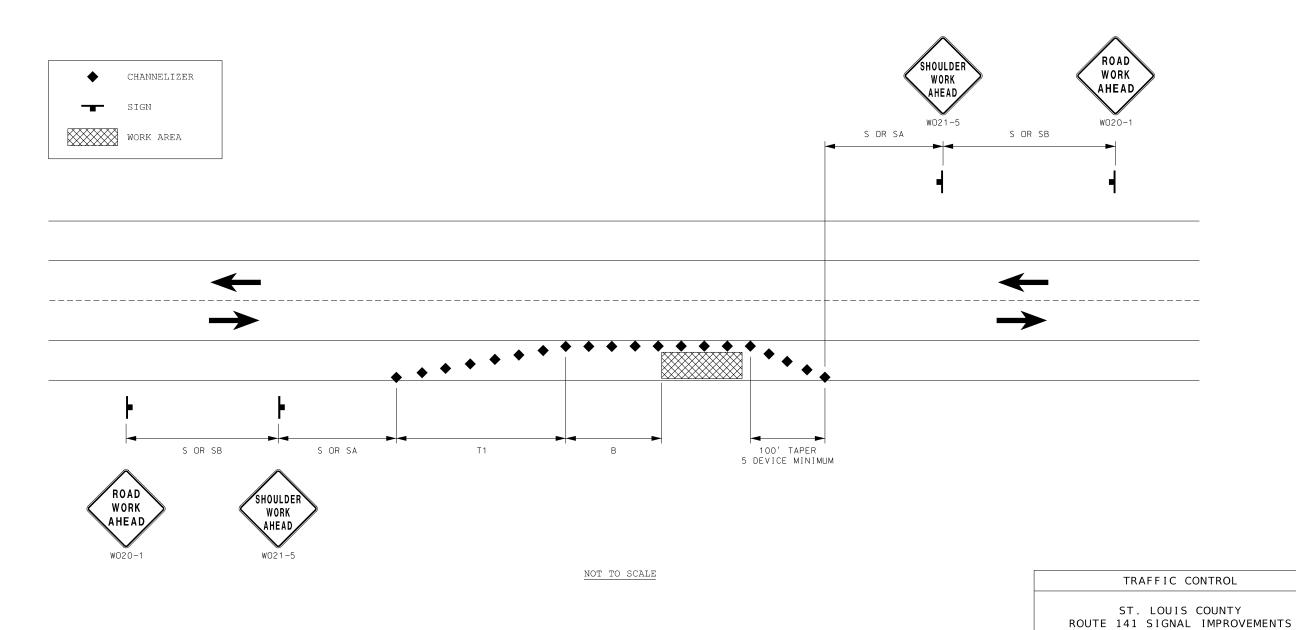


616.8.3 (TA-3) WORK ON THE SHOULDER ON DIVIDED AND UNDIVIDED HIGHWAYS - DE/CM

SPEED	SIGN SPA	CING (FT.)	TAPER LENG	TH (FT.)	OPTIONAL	CHANNEL I ZER	SPACING (FT.)			
PERMANENT POSTED (MPH)	UNDIVIDED (S)	DIVIDED (S)	SHOULDER (1) (T1)	LANE (2) (T2)	BUFFER LENGTH (FT.) (B)	TAPERS	BUFFER/ WORK AREAS			
0-35	200	200	70	245	280	35	40			
40-45	350	500	150	540	400	40	80			
50-55	500	1000	185	660	560	50	80			
60-70	1000	SA - 1000 SB - 1500 SC - 2640	235	840	840	60	120			
00020	1. SHOULDER TAPER LENGTH BASED ON 10 FT (STANDARD SHOULDER WIDTH) OFFSET. 2. LANE TAPER LENGTH BASED ON 12 FT (STANDARD LANE WIDTH OFFSET.									

NOTES:

- 1. PROVIDE SIGNS ON LEFT AND RIGHT SIDES OF DIVIDED HIGHWAYS.
- 2. ROAD WORK AHEAD SIGN NOT NEEDED IF SHOULDER WORK IS LOCATED WITHIN THE LIMITS OF AN ACTIVITY AREA WHERE ANOTHER ROAD WORK AHEAD SIGN IS ALREADY USED.
- 3. SEE EPG 616.12 WORK ZONE SPEED LIMITS FOR SPEED LIMIT GUIDELINES.
- 4. VEHICLE HAZARD WARNING SIGNALS SHALL NOT BE USED INSTEAD OF THE VEHICLE'S ROTATING LIGHTS OR STROBE LIGHTS.
- 5. WHEN PAVED SHOULDERS HAVING A WIDTH OF 8 FEET OR MORE ARE CLOSED, AT LEAST ONE ADVANCE WARNING SIGN SHALL BE USED. IN ADDITION, CHANNELIZING DEVICES SHALL BE USED TO CLOSE THE SHOULDER IN ADVANCE TO DELINEATE THE BEGINNING OF THE WORK SPACE AND DIRECT VEHICULAR TRAFFIC TO REMAIN WITHIN THE TRAVELED WAY.



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