

NOTES

1. BACKFILL MATERIAL SHALL BE UTILIZE EXCAVATED MATERIAL. EXCESS EXCAVATION MATERIAL SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND REMOVED FROM MODOT RIGHT OF WAY.
2. PIPE DRAIN OUTLETS SHALL BE CUT TO MATCH THE SIDE SLOPE OF THE REPLACED EMBANKMENT.

BASELINE
(EDGE OF
GOODFELLOW ON RAMP)

EX EMBANKMENT SLOPE

FERTILIZE, SEED, AND PLACE EROSION
CONTROL BLANKET ON DISTURBED AREAS

CONSTRUCTED SLOPE 1:2.5

EXCAVATION SLOPE 1:1

HEIGHT OF REPAIR

2'3" HEIGHT

CAP BLANKET DRAIN WITH 12" OF ONSITE SOIL

SHOULDER OF I-70 EB LANES

SLOPE 1/8" / FT

3'

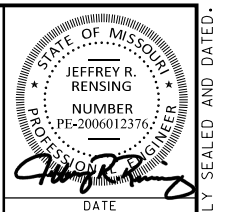
GEOTEXTILE SEPARATION LAYER (SPEC. 1011.3.4)
(TYPICAL BETWEEN ROCK AND SOIL)

6" SCH 40 PVC SOLID PIPE DRAIN OUTLET. END
SHALL BE CUT FLUSH WITH SLOPE AND HAVE A
RODENT SHIELD AS APPROVED BY THE ENGINEER.

6" PERFORATED SCH 40 PVC PIPE WITH PIPE
ELBOWS AT EACH END TO CONNECT TO THE
SOLID PIPE DRAIN. ELBOWS SHALL BE MADE
BY THE SAME MANUFACTURER OF THE PIPE.
PERFORATED PIPE SHALL BE ENCASED IN
FILTER SOCK.

SOUTHEAST QUADRANT BRIDGE EMBANKMENT
GOODFELLOW BLVD OVER I-70
STA. 11+40 TO 12+20

BLANKET DRAIN (ROCK FILL SPEC. 214)



DATE	1/12/17
DATE PREPARED	12/08/16
ROUTE	I-70
STATE	MO
DISTRICT	SL
SHEET NO.	2
COUNTY	ST LOUIS CITY
JOB NO.	WRS1070A
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

MISSOURI
LINDER Business Center 1
100 Linder Court, Suite 1
Coffeyville, IL 62224
Tel: 618-342-2200
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TYPICAL SECTION
SHEET 1 OF 1

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MOBILIZATION
1 LUMP SUM

TRAFFIC CONTROL
1 LUMP SUM

EXCAVATION							REMARKS
	CLASS A EXC. C.Y.	COMPACTING EMBANKMENT C.Y.	FURNISHNG ROCK FILL C.Y.	PLACING ROCK FILL C.Y.	SEPERATION GEOTEXTILE S.Y.	STRUCTURAL UNDERDRAIN L.F.	
	430	315	185	185			EXCESS EXCAVATION NOT USED ON SITE SHALL BE DISPOSED OF BY CONTRACTOR AT AN APPROVED OFFSITE LOCATION
					630		
						142	UNDERDRAIN IS A COMBINATION OF PERFORATED PIPE ENCASED IN A FILTER SOCK AND SOLID WALL PIPE. SEE DETAIL FOR LIMITS.
TOTAL	430	315	185	185	630	142	

Notes: 1. Compacting Embankment quantity assumes a 15% shrinkage factor for the in situ material.

CONTRACTOR FURNISHED SURVEYING AND STAKING
1 LUMP SUM

EROSION CONTROL							REMARKS
STATION	STATION	LOCATION	SILT FENCE LINEAR FEET	TY 3 EROSION CONTROL BLANKET S.Y.	SEEDING COOL SEASON ACRE	CURB INLET CHECK EACH	
11+10	12+40	LT	174				
11+44						1	
11+10	12+40			360	0.1		PLACED OVER AREA OF SLOPE REPAIR
TOTAL			174	360	0.1	1	

REMOVAL OF IMPROVEMENTS					REMARKS
STATION	STATION	LOCATION	GUARDRAIL L.F.	ABANDONED HANDHOLE EACH	
11+29	12+20	LT	100		ENTRANCE RAMP GUARDRAIL SHALL BE REMOVED, STORED OFFSITE, AND REINSTALLED AT THE COMPLETION OF THE PROJECT.
12+02		LT		1	REMOVE AND DISPOSE OF HANDHOLE
TOTAL			100	1	



DATE
1/12/17
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11/1/16
ROUTE
I-70 STATE
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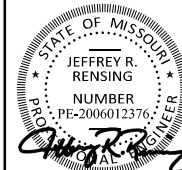
SUMMARY SHEET
SHEET 1 OF 2

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

SIGN	SIZE (IN.)	AREA (SQ. FT.)	QTY	TOTAL AREA	QTY RELOC	TOTAL RELOC AREA	DESCRIPTION
WARNING SIGNS							
W01-1L	48X48	16.00					TURN (SYMBOL LEFT ARROW)
W01-1R	48X48	16.00					TURN (SYMBOL RIGHT ARROW)
W01-2L	48X48	16.00					CURVE (SYMBOL LEFT ARROW)
W01-2R	48X48	16.00					CURVE (SYMBOL RIGHT ARROW)
W01-3L	48X48	16.00					REVERSE TURN (SYMBOL LEFT ARROW)
W01-3R	48X48	16.00					REVERSE TURN (SYMBOL RIGHT ARROW)
W01-4L	48X48	16.00					REVERSE CURVE (SYMBOL LEFT ARROW)
W01-4R	48X48	16.00					REVERSE CURVE (SYMBOL RIGHT ARROW)
W01-4bL	48X48	16.00					DOUBLE ARROW REVERSE CURVE (SYMBOL LEFT ARROWS)
W01-4bR	48X48	16.00					DOUBLE ARROW REVERSE CURVE (SYMBOL RIGHT ARROWS)
W01-4cL	48X48	16.00					TRIPLE ARROW REVERSE CURVE (SYMBOL LEFT ARROWS)
W01-4cR	48X48	16.00					TRIPLE ARROW REVERSE CURVE (SYMBOL RIGHT ARROWS)
W01-6	60X30	12.50					HORIZONTAL ARROW (SYMBOL)
W01-6a	72X36	18.00					HORIZONTAL ARROW (SYMBOL ON PERMANENT BARRICADE)
W01-7	60X30	12.50					DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)
W01-7a	72X36	18.00					DOUBLE HEAD HORIZONTAL ARROW (SYMBOL ON PERMANENT BARRICADE)
W01-8	18X24	3.00					CHEVRON (SYMBOL)
W01-8a	30X36	7.50					CHEVRON (SYMBOL FOR DIVIDED HIGHWAYS)
W03-1	48X48	16.00					STOP AHEAD (SYMBOL)
W03-2	48X48	16.00					YIELD AHEAD (SYMBOL)
W03-3	48X48	16.00					SIGNAL AHEAD (SYMBOL)
W03-4	48X48	16.00					BE PREPARED TO STOP
W03-5	48X48	16.00					SPEED LIMIT AHEAD
W04-1L	48X48	16.00					MERGE (SYMBOL FROM LEFT)
W04-1R	48X48	16.00					MERGE (SYMBOL FROM RIGHT)
W05-1	48X48	16.00	3	48			ROAD/BRIDGE/RAMP NARROWS
W05-3	48X48	16.00					ONE LANE BRIDGE
W05-5	48X48	16.00					NARROW LANES
W06-1	48X48	16.00					DIVIDED HIGHWAY (SYMBOL)
W06-2	48X48	16.00					DIVIDED HIGHWAY END (SYMBOL)
W06-3	48X48	16.00					TWO WAY TRAFFIC (SYMBOL)
W07-3a	30X24	5.00					NEXT XX MILES (PLAQUE)
W08-1	48X48	16.00					BUMP
W08-2	48X48	16.00					DIP
W08-3	48X48	16.00					PAVEMENT ENDS
W08-4	48X48	16.00					SOFT SHOULDER
W08-5	48X48	16.00					SLIPPERY WHEN WET (SYMBOL)
W08-6	48X48	16.00					TRUCK CROSSING WITH FLAGS
W08-6c	48X48	16.00					TRUCK ENTRANCE
W08-7	36X36	9.00					LOOSE GRAVEL
W08-9	48X48	16.00					LOW SHOULDER
W08-11	48X48	16.00					UNEVEN LANES
W08-12	48X48	16.00					NO CENTER LINE
W10-1	42 RND.	9.62					RAILROAD CROSSING
W012-1	24X24	4.00					DOUBLE DOWN ARROW (SYMBOL)
W012-2	48X48	16.00					LOW CLEARANCE (SYMBOL)
W012-2x	24X18	3.00					LOW CLEARANCE (PLAQUE)
W012-2a	84X24	14.00					OVERHEAD LOW CLEARANCE (FEET AND INCHES)
W08-15	48X48	16.00					GROOVED PAVEMENT
W08-15p	30X24	5.00					MOTORCYCLE (PLAQUE)
W08-17	48X48	16.00					SHOULDER DROP-OFF (SYMBOL)
W08-17p	30X24	5.00					SHOULDER DROP-OFF (PLAQUE)
SPECIAL	120X60	50.00					LOW CLEARANCE XX FT XX IN XX MILES AHEAD
SPECIAL	120X60	50.00					WIDTH RESTRICTION XX FT XX IN XX MILES AHEAD
W013-1	30X30	6.25					ADVISORY SPEED (PLAQUE)
W016-2	30X24	5.00					XXX FEET (PLAQUE)
W016-3	30X24	5.00					X MILE (PLAQUE)
W020-1	48X48	16.00	4	64			ROAD/BRIDGE/RAMP WORK AHEAD
W020-2	48X48	16.00					DETOUR AHEAD
W020-3	48X48	16.00					ROAD CLOSED AHEAD
W020-4	48X48	16.00					ONE LANE ROAD AHEAD
W020-5	48X48	16.00	2	32			RIGHT/CENTER/LEFT LANE CLOSED AHEAD

SIGN	SIZE (IN.)	AREA (SQ. FT.)	QTY	TOTAL AREA	QTY RELOC	TOTAL RELOC AREA	DESCRIPTION
W020-5a	48X48	16.00					2 RIGHT/CENTER/LEFT LANES CLOSED AHEAD
W020-6a	48X48	16.00	2	32			RIGHT/CENTER/LEFT LANE CLOSED
W020-7a	48X48	16.00					FLAGGER (SYMBOL) WITH FLAGS
W021-2	36X36	9.00					FRESH OIL
W021-5b	48X48	16.00	1	16			SHOULDER WORK AHEAD
W022-1	48X48	16.00					BLASTING ZONE AHEAD
W022-2	42X36	10.50					TURN OFF 2-WAY RADIO AND PHONE
W022-3	42X36	10.50					END BLASTING ZONE
W022-6e	21X15	2.19					WET PAINT (ARROW PIVOTS)
GUIDE SIGNS							
SPECIAL	36X36	9.00					FRESH OIL/LOOSE GRAVEL
E05-1	36X48	12.00					GORE EXIT
E05-2	48X36	12.00					EXIT OPEN
E05-2a	48X36	12.00					EXIT CLOSED
G020-1	60X24	10.00					ROAD WORK NEXT XX MILES
G020-2	48X24	8.00					END ROAD WORK
G020-4	36X18	4.50					PILOT CAR FOLLOW ME
SPECIAL	42X30	8.75					PLEASE WAIT FOR PILOT CAR
G020-5aP	36X24	6.00					WORK ZONE (PLAQUE)
M04-8a	24X18	3.00					END DETOUR
M04-9L	48X36	12.00					DETOUR (LEFT ARROW)
M04-9R	48X36	12.00					DETOUR (RIGHT ARROW)
M04-10L	48X18	6.00					DETOUR (ARROW LEFT)
M04-10R	48X18	6.00					DETOUR (ARROW RIGHT)
REGULATORY SIGNS							
R1-1	48X48	13.25					STOP
R1-2	48 TRI.	6.93					YIELD
R1-2a	36X36	9.00					TO ONCOMING TRAFFIC (PLAQUE)
R1-3	20X9	1.25					X-WAY (PLAQUE)
R2-1	36X48	12.00					SPEED LIMIT XX
R3-1	48X48	16.00					NO RIGHT TURN (SYMBOL)
R3-2	48X48	16.00					NO LEFT TURN (SYMBOL)
R3-3	36X36	9.00					NO TURNS
R3-4	48X48	16.00					NO U-TURN (SYMBOL)
R3-7L	30X30	6.25					LEFT LANE MUST TURN LEFT
R3-7R	30X30	6.25					RIGHT LANE MUST TURN RIGHT
R4-1	36X48	12.00					DO NOT PASS
R4-2	36X48	12.00					PASS WITH CARE
R4-7aL	36X48	12.00					KEEP LEFT (HORIZONTAL ARROW)
R4-7a	36X48	12.00					KEEP RIGHT (HORIZONTAL ARROW)
R5-1	30X30	6.25					DO NOT ENTER
R5-1a	36X24	6.00					WRONG WAY
R6-1L	48X18	6.00					ONE WAY ARROW (LEFT)
R6-1R	48X18	6.00					ONE WAY ARROW (RIGHT)
R6-2L	24X30	5.00					ONE WAY (LEFT)
R6-2R	24X30	5.00					ONE WAY (RIGHT)
R10-6	24X36	6.00					STOP HERE ON RED (45° ARROW)
R11-2	48X30	10.00					ROAD CLOSED
R11-3a	60X30	12.50					ROAD CLOSED XX MILES AHEAD LOCAL TRAFFIC ONLY
R11-4	60X30	12.50					ROAD CLOSED TO THRU TRAFFIC
S4-4	36X15	3.75					WHEN FLASHING
CONST-3A	60X48	20.00					FINE SIGN
CONST-3X	56X12	4.67					SPEEDING/PASSING (PLATE)
MISCELLANEOUS SIGNS							
SPECIAL	36X48	12.00					POINT OF PRESENCE
SPECIAL	96X48	32.00					POINT OF PRESENCE
CONST-7-48	48X24	8.00					RATE OUR WORK ZONE
CONST-7-72	72X36	18.00					RATE OUR WORK ZONE
616-10.05				192			CONSTRUCTION SIGNS TOTAL
616-10.10							RELOCATED SIGNS TOTAL

ITEM NUMBER	TOTAL QTY	DESCRIPTION
6122008		IMPACT ATTENUATOR (8 SAND BARRELS)
6122009		IMPACT ATTENUATOR (9 SAND BARRELS)
6122010		IMPACT ATTENUATOR (10 SAND BARRELS)
6122012		IMPACT ATTENUATOR (12 SAND BARRELS)
6122014		IMPACT ATTENUATOR (14 SAND BARRELS)
6122017		IMPACT ATTENUATOR (17 SAND BARRELS)
6122019		IMPACT ATTENUATOR (19 SAND BARRELS)
6122020		REPLACEMENT SAND BARREL
6122030		IMPACT ATTENUATOR ARRAY (RELOCATION)
6123000A		TRUCK OR TRAILER MOUNTED ATTENUATOR (TMA)
6161007		SPEED LIMIT AND STROBE LIGHT ASSEMBLY
6161008		ADVANCED WARNING RAIL SYSTEM
6161009	11	FLAG ASSEMBLY
6161020		CHANNELIZER (DRUM-LIKE)
6161022		CHANNELIZER (CONES)
6161024	47	CHANNELIZER (TRIM LINE) WITH LIGHT
6161025		CHANNELIZER (TRIM LINE)
6161026		CHANNELIZER (VERTICAL PANEL)
6161027		CHANNELIZER (VERTICAL PANEL) WITH LIGHT
6161028		CHANNELIZER
6161030		TYPE III MOVEABLE BARRICADE
6161031		TYPE III MOVEABLE BARRICADE WITH LIGHT
6161033		DIRECTION INDICATOR BARRICADE
6161034		DIRECTION INDICATOR BARRICADE, WITH LIGHT
6161040	1	FLASHING ARROW PANEL
6161047		TYPE III OBJECT MARKER
6161051		WARNING LIGHT, TYPE A
6161052		WARNING LIGHT, TYPE B
6161053		WARNING LIGHT, TYPE C
6161055		SEQUENTIAL FLASHING WARNING LIGHT
6161070		TUBULAR MARKER
6161095		RADAR SPEED ADVISORY SYSTEM
6161096		CHANGEABLE MESSAGE SIGN, COMMISSION FURNISHED/RETAINED
6161098	2	CHANGEABLE MESSAGE SIGN, CONTRACTOR FURNISHED/RETAINED
6161100		CHANGEABLE MESSAGE SIGN, CONTRACTOR FURNISHED/COMMISSION RETAINED
6173600D		CONTRACTOR FURNISHED/RETAINED TEMPORARY TRAFFIC BARRIER
6173602B		CONTRACTOR FURNISHED/COMMISSION RETAINED TEMPORARY TRAFFIC BARRIER
6174000A		TEMPORARY TRAFFIC BARRIER HEIGHT TRANSITION
6175010A		RELOCATING TEMPORARY TRAFFIC BARRIER
6176000B		COMMISSION FURNISHED/RETAINED TEMPORARY TRAFFIC BARRIER
6177000B		COMMISSION FURNISHED/RETAINED TEMPORARY TRAFFIC BARRIER HEIGHT TRANSITION
9019400		TEMPORARY LIGHTING
9029400		TEMPORARY TRAFFIC SIGNALS
9029401		TEMPORARY TRAFFIC SIGNALS AND LIGHTING



JEFFREY R. RENNING
REGISTERED PROFESSIONAL ENGINEER
NUMBER PE-2006012376

DATE: 1/12/17
DATE PREPARED: 11/3/16

ROUTE: I-70 STATE: MO
DISTRICT: SL SHEET NO.: 3

COUNTY: ST LOUIS CITY
JOB NO.: WRS1070A
CONTRACT ID.:

PROJECT NO.:


BRIDGE NO.:

DESCRIPTION

DATE


MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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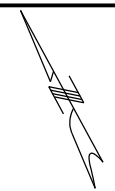
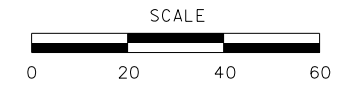
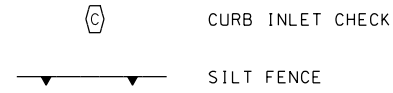


DATES ASSOCIATES
Engineering + Architecture
MISSOURI DESIGN FIRM PE-001186

SUMMARY SHEET
SHEET 2 OF 2

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

TEMPORARY EROSION CONTROL LEGEND



DATE		1/12/17
DATE PREPARED		11/3/16
ROUTE	STATE	
I-70	MO	
DISTRICT	SHEET NO.	
SL	4	
COUNTY		
ST LOUIS CITY		
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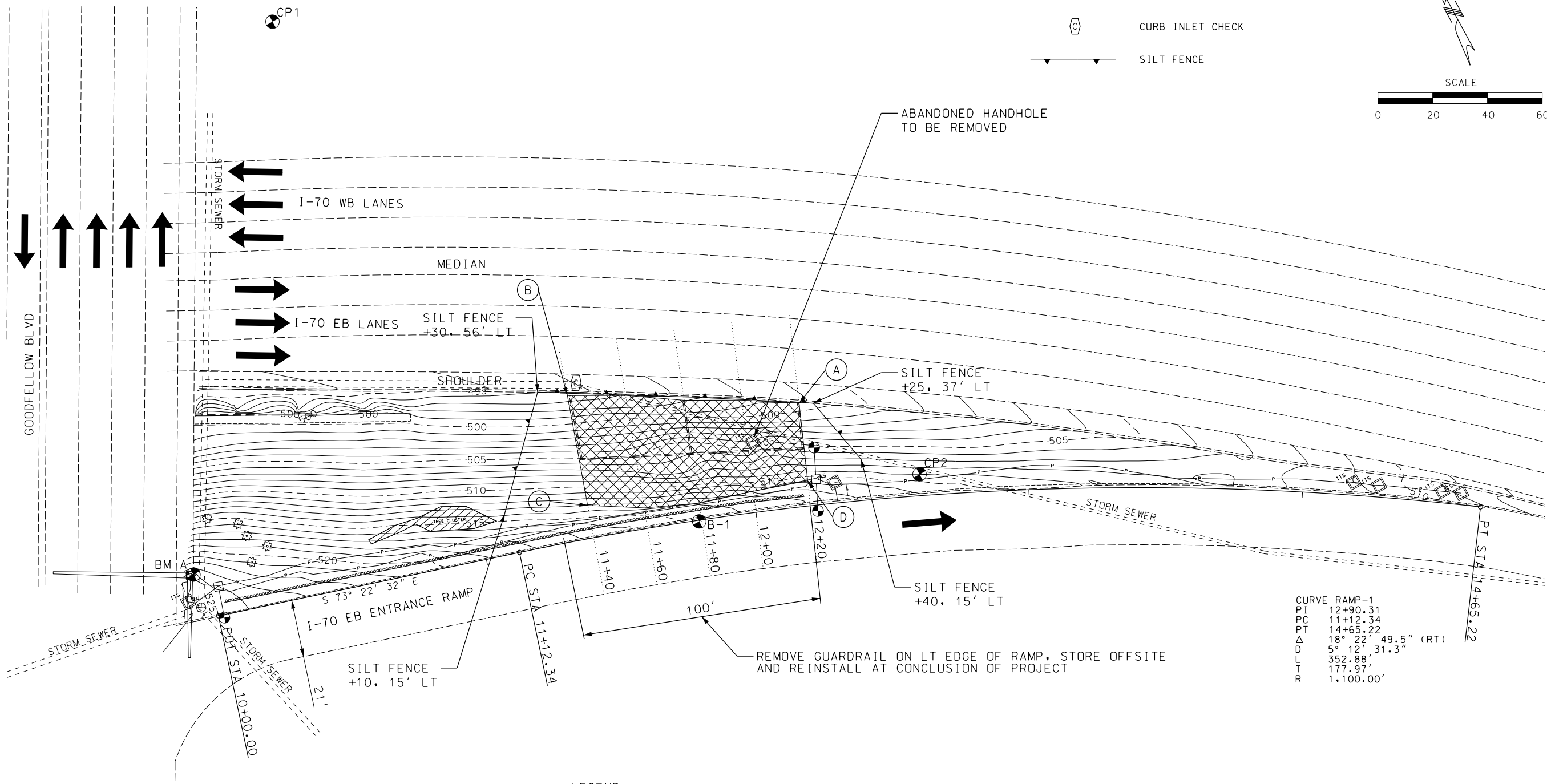
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OATES ASSOCIATES
Engineering + Architecture
MISSOURI DESIGN FIRM PE-01186

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



CURVE RAMP-1

PI	12+90.31
PC	11+12.34
PT	14+65.22
Δ	18° 22' 49.5" (RT)
D	5° 12' 31.3"
L	352.88'
T	177.97'
R	1,100.00'

LEGEND



SLIDE REPAIR AREA

- (A) N: 1,043,920.68
E: 887,851.77
- (B) N: 1,043,894.27
E: 887,840.97
- (C) N: 1,043,924.74
E: 887,766.11
- (D) N: 1,043,963.53
E: 887,778.74

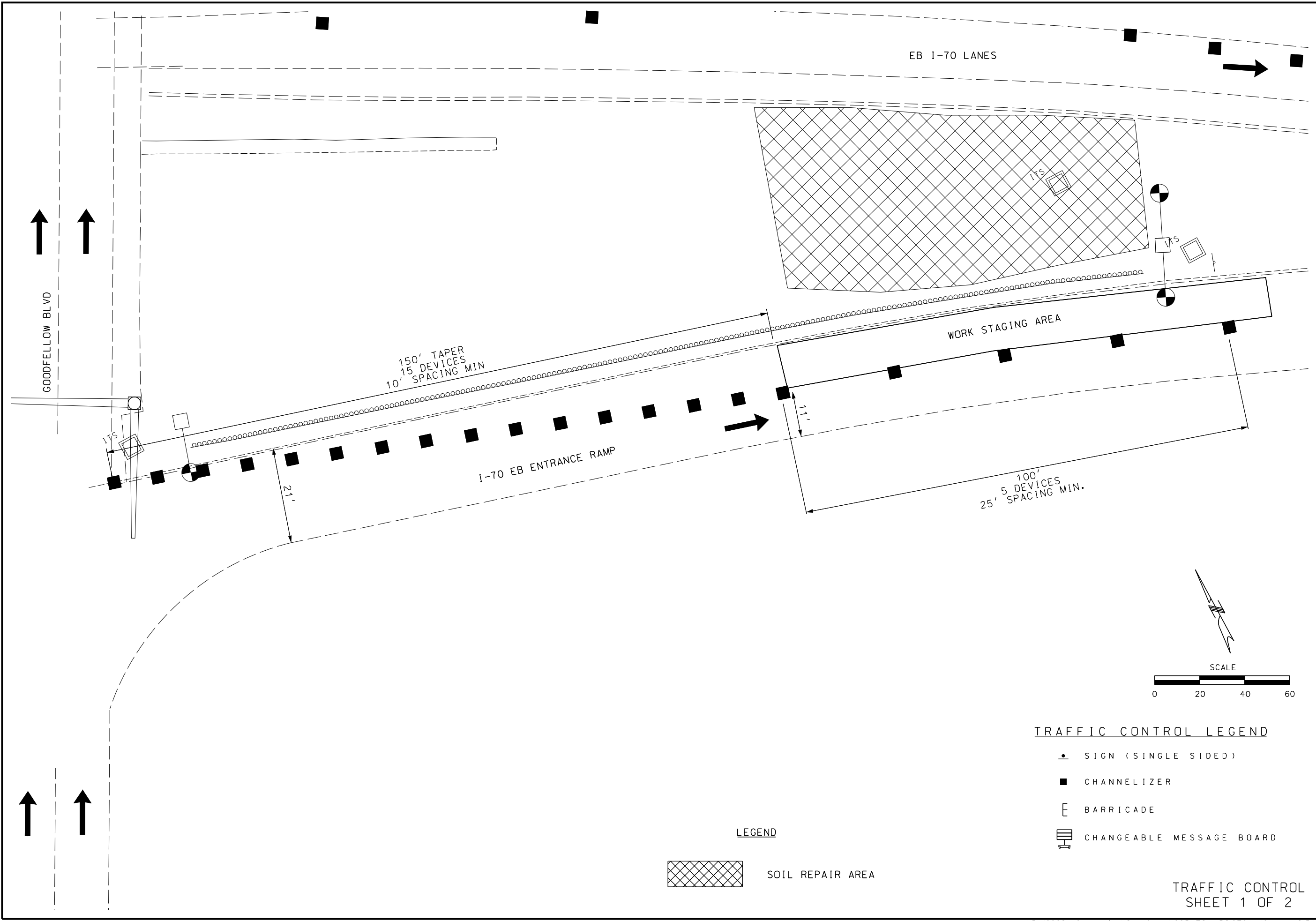
NOTES

- CONTRACTOR SHALL NOT DISTURB EXISTING POWER LINES ALONG EDGE OF RAMP. UNDERGROUND POWER LINES SHALL BE PROTECTED DURING SLOPE REPAIR.

PROJECT CONTROL

BM A CUT SQUARE ON TRAFFIC SIGNAL BASE IN SE QUAD OF I-70/GOODFELLOW ELEV 526.92
CP1 IRON BAR W/ CAP N: 1,044,134.93 E: 887,749.35 GROUND COORDINATES
CP2 IRON BAR W/ CAP N: 1,043,876.83 E: 887,878.01 GROUND COORDINATES

PLAN VIEW
SHEET 1 OF 1



DATE
1/12/17
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ROUTE I-70 STATE MO
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LEGEND

SOIL REPAIR AREA

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- CHANNELIZER
- BARRICADE
- CHANGEABLE MESSAGE BOARD

TRAFFIC CONTROL SHEET 1 OF 2

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