

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

**PROPOSED
HIGHWAY PLANS**

**FAI 57 (I-57/US 50)
SECTION (61-3)RS-5
SMART RESURFACING RAMPS – CM
MARION COUNTY**

C-98-137-22

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(61-3)RS-5	MARION	10	1
		ILLINOIS	CONTRACT NO. 76R62	

D-98-105-22



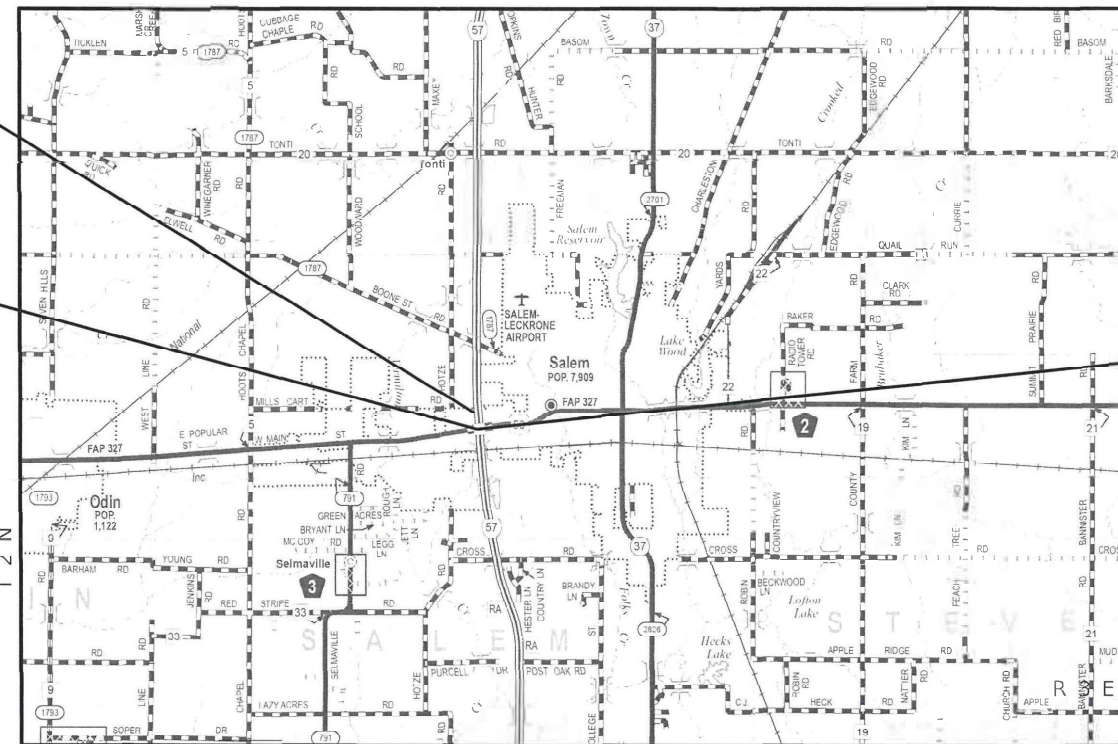
FOR INDEX OF SHEETS, SEE SHEET NO. 2

TRAFFIC DATA

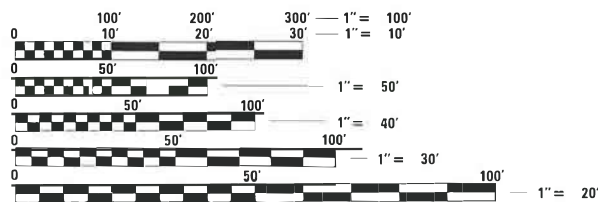
	RAMP A	RAMP B
ADT (CONSTRUCTION YR - 2023):	2150	1150
MU%	11.6	17.4
SU%	10.5	10.9

RAMP A (I-57 SB EXIT RAMP)
I-57 SB TO US 50
LAT: 38.626989
LONG: -88.974108

RAMP B (I-57 SB ENTRANCE RAMP)
US 50 TO I-57 SB
LAT: 38.626789
LONG: -88.973933



BRIDGE OMISSION
SN 061-0054



FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123
OR 811

LOCATION MAP



1" = 1 MILE

GROSS LENGTH = 3643 FT. = 0.69 MILE
NET LENGTH = 3478 FT. = 0.66 MILE

PROJECT ENGINEER: BILLIE OWEN
PROJECT MANAGER: MEIWU AN
CONTRACT NO. 76R62

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED Dec 9 2022
Willie Brown
REGIONAL ENGINEER

February 3, 2023
Scott A. Etk
ENGINEER OF DESIGN AND ENVIRONMENT

February 3, 2023
Stephen M. Smith
DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

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OF THE STATE OF ILLINOIS

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE	
				100% STATE	
				ROADWAY	URBAN
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	6793	6793	
40604174	POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, 1L-9.5, MIX "E", N90	TON	857	857	
44000155	HOT-MIX ASPHALT SURFACE REMOVAL, 1 1/2"	SQ YD	15093	15093	
44200050	WELDED WIRE REINFORCEMENT	SQ YD	677	677	
44200994	CLASS B PATCHES, TYPE II, 12 INCH	SQ YD	81	81	
44200998	CLASS B PATCHES, TYPE III, 12 INCH	SQ YD	323	323	
44201000	CLASS B PATCHES, TYPE IV, 12 INCH	SQ YD	91	91	
44201299	DOWEL BARS 1 1/2"	EACH	726	726	
44213200	SAW CUTS	FOOT	3374	3374	
44213204	TIE BARS 3/4"	EACH	525	525	
48102100	AGGREGATE WEDGE SHOULDER, TYPE B	TON	238	238	
48203100	HOT-MIX ASPHALT SHOULDERS	TON	418	418	
67100100	MOBILIZATION	L SUM	1	1	
70100800	TRAFFIC CONTROL AND PROTECTION, STANDARD 701401	L SUM	1	1	

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE	
				100% STATE	
				ROADWAY	URBAN
70100820	TRAFFIC CONTROL AND PROTECTION, STANDARD 701451	L SUM	1	1	
70102635	TRAFFIC CONTROL AND PROTECTION, STANDARD 701701	L SUM	1	1	
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	100	100	
70200100	NIGHTTIME WORK ZONE LIGHTING	L SUM	1	1	
70300100	SHORT TERM PAVEMENT MARKING	FOOT	736	736	
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	246	246	
* 78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	42.7	42.7	
* 78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	9973	9973	
* 78000500	THERMOPLASTIC PAVEMENT MARKING - LINE 8"	FOOT	565	565	
* 78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	40	40	
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	63	63	
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	63	63	
* 88600600	DETECTOR LOOP REPLACEMENT	FOOT	275	275	
X4406430	PARTIAL DEPTH REMOVAL, TYPE III, 3"	SQ YD	99	99	

* SPECIALTY ITEM

REV. - MS

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FILE: NAME: \\p0108-ana.bentley.com:PWIDOT\Documents\DOT_Offices\District_B\Projects\876662\CAD\3d\CA\Drawings\0876662-shu-plan.dgn

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DRAWN - _____	CHECKED - _____	REVISOR - _____
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PLOT DATE = 12/21/2022		

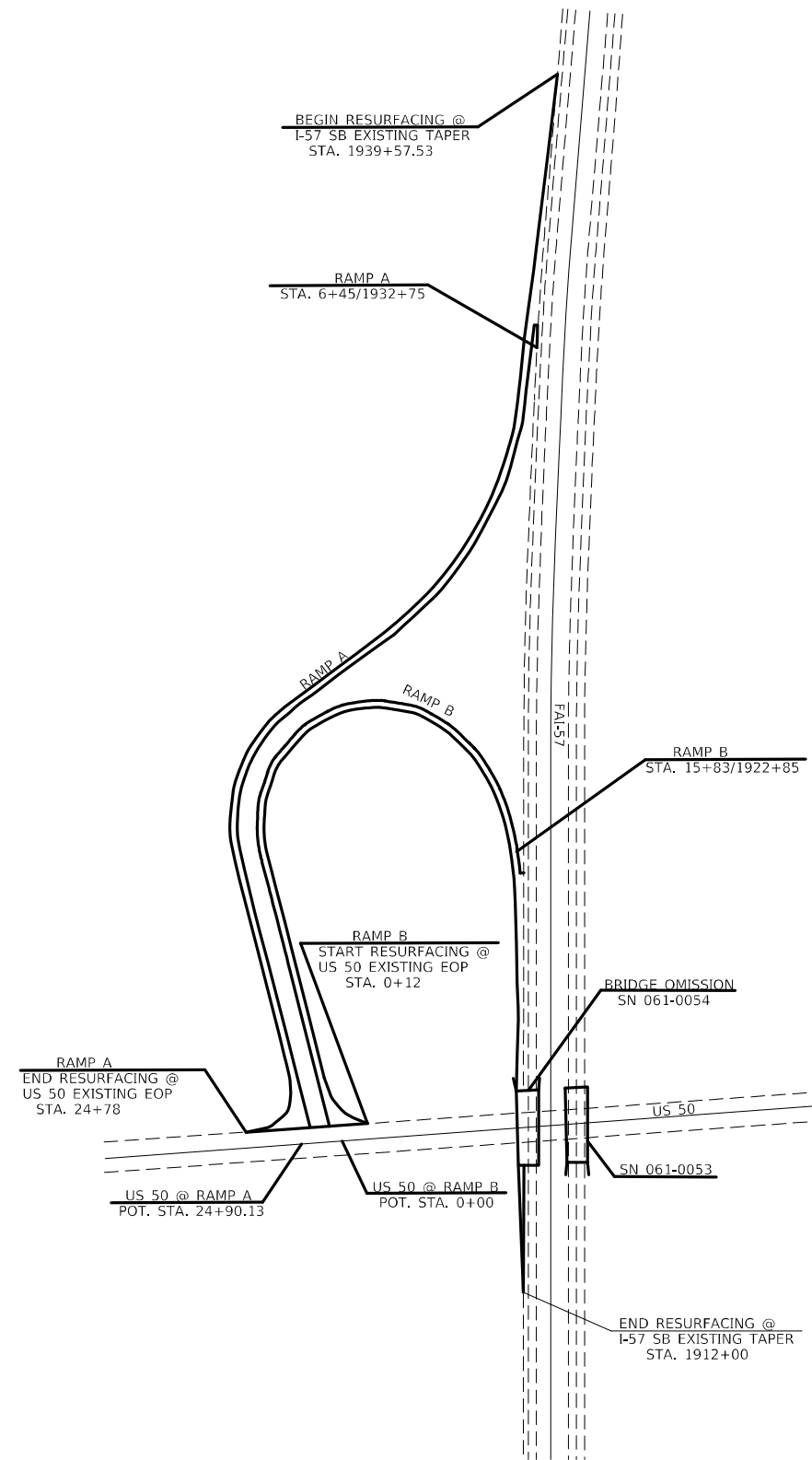
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SCALE: _____ SHEET 1 OF 2 SHEETS STA. _____ TO STA. _____

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(61-3)RS-5	MARION	10	3
CONTRACT NO. 76R62			ILLINOIS FED. AID PROJECT	

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NOT TO SCALE

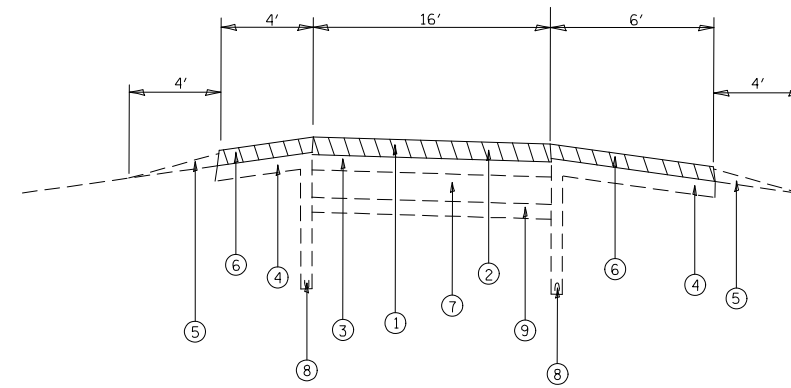
LOCATION MAP

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

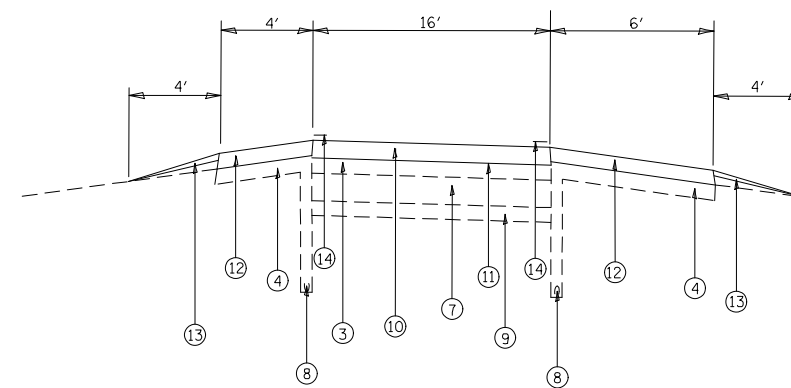
LOCATION MAP

SCALE: _____ SHEET 1 OF 1 SHEETS STA. _____ TO STA. _____

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(61-3)RS-5	MARION	10	5
CONTRACT NO. 76R62				
ILLINOIS FED. AID PROJECT				



EXISTING TYPICAL SECTION



PROPOSED TYPICAL SECTION
 RAMP A - STA. 6+45 - 24+78
 RAMP B - STA. 0+12 - 15+83

LEGEND

- ① PROPOSED HOT-MIX ASPHALT SURFACE COURSE REMOVAL 1 1/2"
- ② EXISTING POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, SUPERPAVE "D", N90, 1 1/2"
- ③ EXISTING RESURFACING, 1 1/2"
- ④ EXISTING HOT-MIX ASPHALT SHOULDERS
- ⑤ EXISTING AGGREGATE SHOULDER, TYPE B, (SPL)
- ⑥ EXISTING HOT-MIX ASPHALT SHOULDERS, 1"
- ⑦ EXISTING PCC PAVEMENT 9"
- ⑧ EXISTING PIPE UNDERDRAIN
- ⑨ EXISTING STABILIZED SUB-BASE, 4"
- ⑩ PROPOSED POLYMERIZED HOT-MIX ASPHALT SURFACE COURSE, MIX "E", IL-9.5, N90, 1 1/2"
- ⑪ PROPOSED BITUMINOUS MATERIALS (TACK COAT)
- ⑫ PROPOSED BITUMINOUS SHOULDERS
- ⑬ PROPOSED AGGREGATE SHOULDER WEDGE, TYPE B
- ⑭ PROPOSED THERMOPLASTIC PAVEMENT MARKING, 6"

MODEL: I:\MODELS\MAME
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PLOT SCALE = 2,0000' / in.	CHECKED - _____	REVISED - _____
PLOT DATE = 2/7/2023	DATE - _____	REVISED - _____

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

TYPICAL SECTIONS

SCALE: _____ SHEET 1 OF 1 SHEETS STA. _____ TO STA. _____

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(63-1)RS-5	MARION	10	6
CONTRACT NO. 76R62				
ILLINOIS FED. AID PROJECT				

RESURFACING SCHEDULE									
STATION TO STATION	DIMENSIONS		*HMA SURFACE REMOVAL 1 1/2 "	BITUMINOUS MATERIALS (TACK COAT)	POLYMERIZED HMA SURFACE COURSE IL-9.5 MIX E N90	HMA SHOULDERS	AGGREGATE SHOULDER WEDGE TYB		
	LENGTH	AVERAGE WIDTH							
	FOOT	FOOT						SQ YD	PCUND
TAPER (RAMP A)									
1939+57.53	-	1932+75	683	23	2048	922	147	26	19.9
RAMP A									
6+45	-	23+58	1713	16	4949	2227	256	160	99.9
23+58	-	24+78	120	60	854	384	68	5	3.5
RAMP B									
0+12	-	1+49	137	50	822	370	64	6	4.0
1+49	-	15+83	1434	16	4143	1365	215	134	83.6
TAPER (RAMP B)									
1922+85	-	1917+55	530	17	1590	716	85	50	15.5
OMISSION (SN 061-0054)									
1915+86	-	1912+00	386	6	687	309	22	37	11.3
TOTAL:					15093	6793	857	418	238

* HMA SHOULDER REMOVAL INCLUDES SHOULDER WIDTH

CLASS B PATCHING SCHEDULE - 12"

STATION	LOCATION	DIMENSIONS		TYPE II SQ YD	TYPE III SQ YD	TYPE IV SQ YD	SAWCUTS FOOT	WELDED WIRE REINFORCEMENT SQ YD	DOWEL BARS 1 1/2" EACH
		LENGTH	WIDTH						
		FOOT	FOOT						
6+25	RAMP A - EXIT RAMP I-57 SB TO US 50	12	16		21		72	21	28
7+25	RAMP A - EXIT RAMP I-57 SB TO US 50	12	16		22		72	22	28
12+25	RAMP A - EXIT RAMP I-57 SB TO US 50	10	16		18		68	18	28
14+25	RAMP A - EXIT RAMP I-57 SB TO US 50	10	16		18		68	18	28
18+00	RAMP A - EXIT RAMP I-57 SB TO US 50	10	16		18		68	18	28
19+00	RAMP A - EXIT RAMP I-57 SB TO US 50	10	16		18		68	18	28
20+00	RAMP A - EXIT RAMP I-57 SB TO US 50	10	16		18		68	18	28
20+90	RAMP A - EXIT RAMP I-57 SB TO US 50	10	16		18		68	18	28
21+90	RAMP A - EXIT RAMP I-57 SB TO US 50	8	16	15			64		28
24+20	RAMP A - EXIT RAMP I-57 SB TO US 50	40	10			45	110	45	16
0+45	RAMP B - ENTRANCE RAMP US 50 TO I-57 SB	6	22	15			78		40
0+50	RAMP B - ENTRANCE RAMP US 50 TO I-57 SB	6	18	12			66		32
0+87	RAMP B - ENTRANCE RAMP US 50 TO I-57 SB	10	32			36	116	36	56
1+70	RAMP B - ENTRANCE RAMP US 50 TO I-57 SB	10	16		18		68	18	28
2+60	RAMP B - ENTRANCE RAMP US 50 TO I-57 SB	8	16	15			64		28
2+80	RAMP B - ENTRANCE RAMP US 50 TO I-57 SB	8	16	15			64		28
3+75	RAMP B - ENTRANCE RAMP US 50 TO I-57 SB	10	16		18		68	18	28
4+80	RAMP B - ENTRANCE RAMP US 50 TO I-57 SB	10	16		18		68	18	28
5+80	RAMP B - ENTRANCE RAMP US 50 TO I-57 SB	10	16		18		68	18	28
12+50	RAMP B - ENTRANCE RAMP US 50 TO I-57 SB	12	16		22		72	22	28
14+50	RAMP B - ENTRANCE RAMP US 50 TO I-57 SB	12	16		22		72	22	28
16+50	RAMP B - ENTRANCE RAMP US 50 TO I-57 SB	12	16		22		72	22	28
SUBTOTAL:				72	288	81	1602	369	648
12%				9	35	10	193	45	78
TOTAL:				81	323	91	1795	414	726

CLASS C PATCHING SCHEDULE - 12" (SPECIAL)

STATION	LOCATION	DIMENSIONS		TYPE IV SQ YD	TIE BARS 3/4" EACH	SAWCUTS FOOT	WELDED WIRE REINFORCEMENT SQ YD
		LENGTH	WIDTH				
		FOOT	FOOT				
6+50 TO 13+50	RAMP B - ENT. RAMP US 50 TO I-57 SB (RT. EDGE)	700	3	234	468	1409	234
SUBTOTAL:				234	468	1409	234
12%				29	57	170	29
TOTAL:				263	525	1579	263

PARTIAL DEPTH PATCHING SCHEDULE

LOCATION	DIMENSIONS		PARTIAL DEPTH REMOVAL 3"	PARTIAL DEPTH PATCHING
	LENGTH	WIDTH	TYPE III	TONS
	FOOT	FOOT	SQ YD	
JOINT BETWEEN I-57 SB AND EXIT RAMP A	400	2	88	15
SUB TOTAL			88	15
12% SUBTOTAL*			11	2
TOTAL			99	17

USER NAME = Default
 PLOT SCALE = 1.9973 ' / in.
 PLOT DATE = 12/21/2022

DESIGNED - _____
 DRAWN - _____
 CHECKED - _____
 DATE - _____

REVISED - _____
 REVISED - _____
 REVISED - _____
 REVISED - _____

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

SCHEDULE OF QUANTITIES

SCALE: _____ SHEET 2 OF 3 SHEETS STA. _____ TO STA. _____

F.A.I.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(61-3)RS-5	MARION	10	8
CONTRACT NO. 76R62			ILLINOIS FED. AID PROJECT	

PAVEMENT MARKING SCHEDULE

STATION TO STATION	LENGTH	SHORT TERM PAVEMENT MARKING	SHORT TERM PAVEMENT MARKING REMOVAL	THERMOPLASTIC PAVEMENT MARKING					RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	RAISED REFLECTIVE PAVEMENT MARKER (CRYSTAL)
		4" WHITE (DIAGONAL)		6" SOLID WHITE	6" SOLID YELLOW	8" SOLID WHITE	24" SOLID WHITE	LETTERS AND SYMBOLS		
		FOOT		FOOT	FOOT	FOOT	FOOT	SQ FT		
TAPER (RAMP A)										
1939+57.53 - 1932+33	725			1449					18	18
RAMP A										
5+81.79 - 23+58	1776	360	120	1776	1776				44	44
23+58 - 24+78	120	24	8	120	120					
GORE										
ISLAND										
MEDIAN										
STRAIGHT ARROW										
RIGHT TURN ARROW										
LEFT TURN ARROW										
STOP BARS (2)										
RAMP B										
0+12 - 1+49	137	32	11	137						
1+49 - 17+27.92	1579	320	107	1579	1579					
GORE										
TAPER (RAMP B)										
1921+64 - 1916+30	534			534						
1914+65 - 1910+94	371			371						
US 50										
SUBTOTAL:		736	246	6266	3707	565	40	42.7	63	63
TOTAL:		736	246	9973		565	40	42.7	63	63

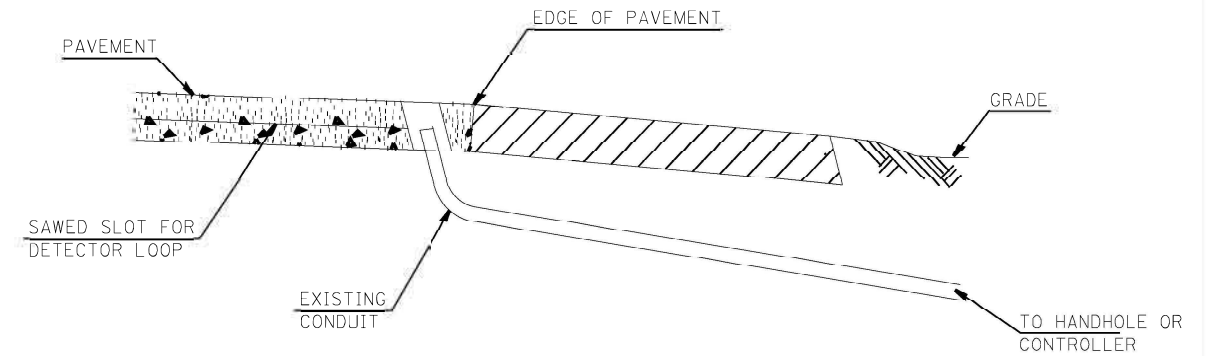
PAY CODE NO.	ITEM	QUANTITY	TOTAL
88600600	DETECTOR LOOP REPLACEMENT	FOOT	275

DETECTOR LOOP 161 REQUIREMENTS AND CALCULATIONS FOR ILL 003 & NIEDERHANGHAUS					
LOOP#	PHASE#	LOOPSIZE (FT. X FT.)	REQUIRED # OF TURNS	CALCULATED INDUCTANCE MICROHENRES	CALCULATED RESISTANCE OHMS
1. EB CCO 1	6	6' x 6'	6	355.64	2.65
2. EB CCO 2	6	6' x 6'	6	353.44	2.60
3. EB LT CD	6	6' x 50'	6	1200.46	2.14
4. EB THRU 1 CD	1	6' x 35'	6	889.10	1.65
5. EB THRU 2 CD	6	6' x 35'	6	887.78	1.62
6. WB CCO 1	6	6' x 6'	6	381.38	3.24
7. WB CCO 2	2	6' x 6'	6	379.18	3.19
8. WB THRU 1 CD	2	6' x 35'	6	947.18	2.97
9. WB THRU 2 CD	2	6' x 35'	6	944.98	2.92
10. SB CCO 1	4	6' x 6'	7	496.27	3.38
11. SB CCO 2	4	6' x 6'	7	494.07	3.33
12. SB LT CD	4	6' x 50'	6	1284.92	3.85
13. SB RT CD	4	6' x 40'	6	1071.86	3.54

THE ABOVE VALUES ARE CALCULATED OF COMBINED LOOP AND LEAD-IN INDUCTANCE AND RESISTANCE. ACTUAL MEASURED VALUES SHOULD BE WITHIN +/- 20% OF THESE VALUES.

Q=QUADRAPOLE

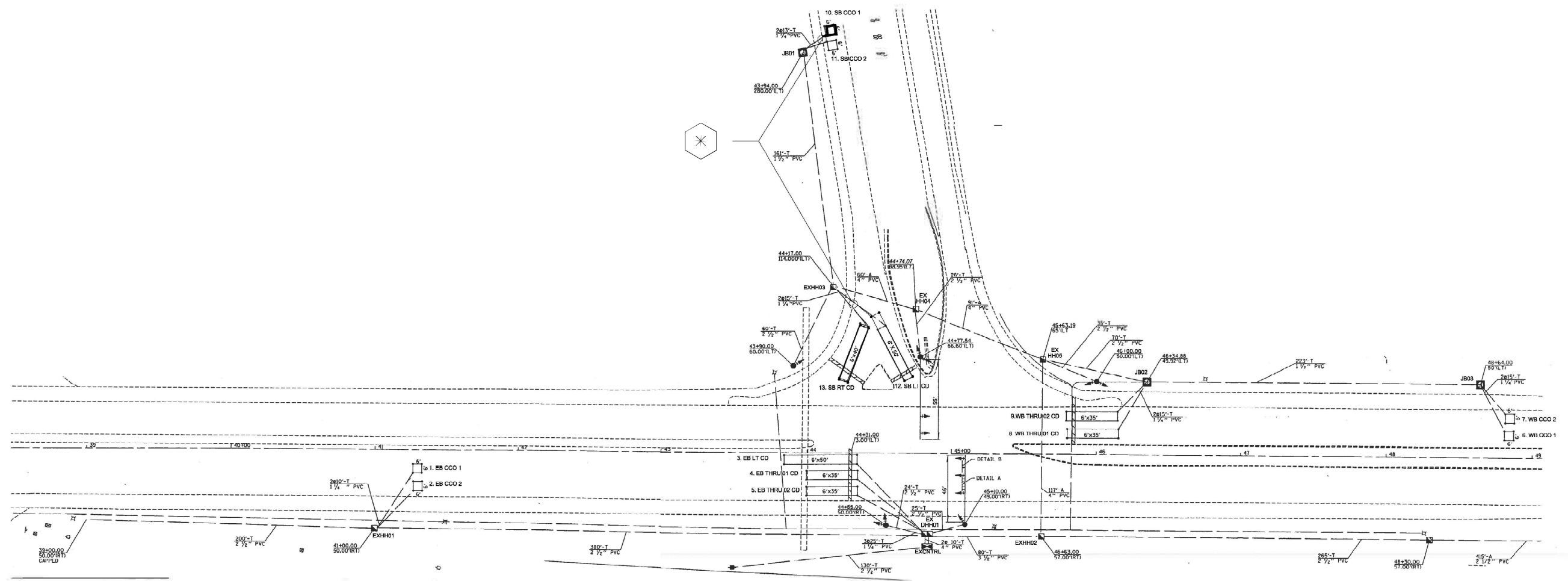
⊗ =SEE DETAIL "A"



DETAIL A
(NO SCALE)
RE-USE EXISTING DETECTOR LOOP LEAD-IN CONDUIT

- 1 DRILL OUT PAVEMENT SEALANT AND CLEAN EXISTING CONDUIT.
- 2 REMOVE EXISTING CABLE TO HANDHOLE.
- 3 INSTALL LOOP LEAD-IN CONDUCTORS IN CONDUIT.
- 4 SPLICE NEW DETECTOR LOOP LEAD-IN CONDUCTORS TO EXISTING LEAD-IN CABLE IN HANDHOLE.
- 5 FILL HOLE WITH APPROVED SEALER. PREVENT SEALER FROM ENTERING INTO CONDUIT.

NOT A PAY ITEM. THE COST OF THIS WORK SHALL BE INCLUDED IN THE PAY ITEM "DETECTOR LOOP REPLACEMENT".
THE CONTRACTOR WILL BE RESPONSIBLE FOR PROTECTING THE EXISTING CONDUIT DURING CONSTRUCTION. SHOULD ANY DAMAGE TO THE CONDUIT OCCUR DUE TO THE OPERATIONS, REPAIR SHALL BE MADE TO THE SATISFACTION OF THE ENGINEER AND WILL BE DONE AT THE CONTRACTOR'S EXPENSE.



MODEL: D:\default
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	DRAWN -	REVISED -
PLOT SCALE = 80.0000' / in.	CHECKED -	REVISED -
PLOT DATE = 12/16/2022	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

**SCHEDULE OF QUANTITIES AND DETAIL W/
SB I-57 EXIT TO US 50
DETECTOR LOOP REPLACEMENT PLAN**

SCALE: NTS SHEET 1 OF 1 SHEETS STA. TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
57	(61-3)RS-5	MARION	10	10
CONTRACT NO. 76R62				
ILLINOIS FED. AID PROJECT				