STANDARDS, SEE SHEET NO. 2

### STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

\* 33 + 11 = 44 TOTAL SHEETS

D-91-223-23



LOCATION OF SECTION INDICATED THUS: -

PROJECT LOCATED IN CITY OF HARVARD

FOR INDEX OF SHEETS AND HIGHWAY

### **PROPOSED** HIGHWAY PLANS

ROUTE FAP 324: US 14 (DIVISION STREET) AT RUSH CREEK, 0.1-MILES NORTH of IL 23 **SECTION FAP ROUTE 0324 22 BJ PROJECT NHPP-6190(770)** BRIDGE DECK OVERLAY, JOINT REPLACEMENT/REPAIRS **MCHENRY COUNTY** 

C-91-276-22

TRAFFIC DATA

2021 ADT: 15,400

**POSTED SPEED LIMIT: 45 MPH DESIGN SPEED LIMIT: 45 MPH** 

**FUNCTIONAL CLASSIFICATION:** 

OTHER PRINCIPAL ARTERIAL

PROJECT LOCATION U.S. ROUTE 14 **OVER RUSH CREEK STRUCTURE NO. 056-0052** 

ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS 1-800-892-0123

PROJECT ENGINEER: VESELIN VELICHKOV (847) 705-4432 PROJECT MANAGER: FAWAD AQUEEL

R 5E E BRINK STREET LOCATION MAP (NOT TO SCALE)

**TOWNSHIPS: DUNHAM** 

GROSS LENGTH = 200 FT. = 0.0379 MILE NET LENGTH = 200 FT. = 0.0379 MILE

A E G ATLAS ENGINEERING GROUP, LTD.

CONTACT: PETAR KNEZEVIC (847) 753-8020

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

> PRINTED BY THE AUTHORITY OF THE S TATE OF ILINOI S

> > **REV-SEP**



ATLAS ENGINEERING GROUP, LTD. Date: 01-19-2024 PETAR KNEZEVIC Expires: 11-30-2025 Sheet No.:1-11 22-33

ATLAS ENGINEERING GROUP, LTD. Jennifer K. Loesche Expires: 11-30-2024 Sheet No -12-21

CONTRACT NO. 62T00

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### **INDEX OF SHEETS**

### SHEET NO.

1	COVER	SHEET

- INDEX OF SHEETS, IDOT HIGHWAY STANDARDS, HMA MIX TABLE & GENERAL NOTES 2
- 3 5 SUMMARY OF OUANTITIES
- SUGGESTED STAGES OF CONSTRUCTION AND TRAFFIC CONTROL 6 - 9
- 10 ROADWAY PLAN
- 11 PAVEMENT MARKING PLAN
- 11A 11J TEMPORARY TRAFFIC SIGNAL PLANS
- 12 21 STRUCTURAL DRAWINGS S.N. 056-0052
- 22 DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING (BD-08)
- 23 BUTT JOINT AND HMA TAPER DETAILS (BD-32)
- 24 27 REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL (BM-21)
- 28 TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS (TC-10)
- 29 TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT) (TC-11)
- 30 TYPICAL PAVEMENT MARKINGS (TC-13)
- NOT USED 31
- 32 NOT USED
- 33 ARTERIAL ROAD INFORMATION SIGN (TC-22)
- 33A DRIVEWAY ENTRANCE SIGNING (TC-26)

### HIGHWAY STANDARDS

STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS

001006 DECIMAL OF AN INCH AND OF A FOOT

701301-04 LANE CLOSURE 2L, 2W, SHORT TIME OPERATIONS

701311-03 LANE CLOSURE 2L, 2W MOVING OPERATIONS - DAY ONLY

701502-09 URBAN LANE CLOSURE, 2L, 2W, WITH BIDIRECTIONAL LEFT TURN LANE

701701-10 URBAN LANE CLOSURE, MULTILANE INTERSECTION

701901-09 TRAFFIC CONTROL DEVICES

TEMPORARY CONCRETE BARRIER 704001-08

TYPICAL PAVEMENT MARKINGS 780001-05

GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS 782006-01

### **HOT-MIX ASPHALT MIXTURE TABLE**

MIXTURE TYPE	AIR VOIDS @ NDES	QUALITY MANAGEMENT PROGRAM (QMP)
PAVEMENT RESURFACING-BUTT JOINT		
HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N70: 1-3/4"	4% @ <b>7</b> 0 GYR	QC/QA
SHOULDER RESURFACING/PROPOSED SHOULDER		
HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N70: 1-3/4"	4% @ 70 GYR	QC/QA
HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70: 3", 10"	4% @ 70 GYR	QC/QA
QMP DESIGNATION; QUALITY CONTROL/QUALITY ASSURANCE (QC/QA) QUALITY CONTROL FOR PERFORMANCE (QCP); PAY FOR PERFORMAN		

### MIXTURE REQUIREMENT NOTES:

- 1. THE UNIT WEIGHT USED TO CALCULATE ALL HMA SURFACE MIXTURE QUANTITIES IS 112 LBS/SQ YD/IN
- THE "AC TYPE" FOR POLYMERIZED HMA MIXES SHALL BE "SBS/SBR PG 76 -22" AND FOR NON-POLYMERIZED HMA THE "AC TYPE" SHALL BE "PG 64 -22" UNLESS MODIFIED BY RECLAIMED MATERIALS SPECIFICATIONS.

### **GENERAL NOTES**

- THE EXACT LOCATION OF ALL UTILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR BEFORE ORDERING ANY MATERIALS AND STARTING ANY WORK, FOR LOCATIONS OF UTILITIES. LOCALLY OWNED EQUIPMENT, LEASED ENFORCEMENT CAMERA SYSTEM FACILITY AND IDOT UNDERGROUND FACILITIES, CONTACT THE LOCAL COUNTIES, MUNICIPALITIES AND IDOT FOR LOCATES.
- 2. MEADE ELECTRIC COMPANY, THE IDOT DISTRICT ONE ELECTRICAL MAINTENANCE CONTRACTOR, LOCATES IDOT ELECTRICAL EQUIPMENT AND UNDERGROUND CABLES, CALL 773-287-7672 FOR THE INITIAL LOCATE. REQUEST FOR LOCATES OF PREVIOUSLY MARKED FACILITIES MAY BE AT THE CONTRACTOR'S EXPENSE.
- 3. IN ADDITIONAL TO FIELD REVIEW AND AERIAL DATA, PLAN DIMENSIONS AND DETAILS RELATIVE TO THE EXISTING FACILITIES HAVE BEEN TAKEN FROM EXISTING PLANS AND AERIALS AND ARE SUBJECT TO CONSTRUCTION VARIATIONS. PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING PLANS ARE SUBJECT TO ROUTINE VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY EXISTING DIMENSIONS AND DETAILS AFFECTING NEW CONSTRUCTION AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN THE SCOPE OF WORK. HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE BID PRICE FOR THE WORK.
- THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.
- THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ACCESS TO ABUTTING PROPERTY AT ALL TIMES DURING THE CONSTRUCTION OF THIS PROJECT.
- THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS FOR THE PROTECTION OF EXISTING PLANT MATERIAL FOR WHICH THE CONTRACT DOES NOT PROVIDE REMOVAL. THE PROTECTION OF EXISTING PLANT MATERIAL AND THE REPAIR OR REPLACEMENT OF EXISTING PLANT MATERIAL DAMAGED BY THE CONTRACTOR SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 201 OF THE STANDARD SPECIFICATIONS.
- 7. THE DEPARTMENT HAS NOT OBTAINED ANY PERMITS FOR OFFSITE BORROW, WASTE, USE (BWU) AREAS. PRIOR TO WORKING IN BWU AREAS, IF THE CONTRACTOR CHOOSES TO USE ACTIVITIES REQUIRING PERMITS IT IS THE CONTRACTOR'S RESPONSIBILITY TO SECURE THE PROPER PERMITS. IN ADDITION TO THE BORROW REVIEW (BDE 2289) AND USE/WASTE REVIEW (BDE 2290) SUBMITTALS, THE CONTRACTOR SHALL SUBMIT AN EROSION AND SEDIMENT CONTROL (ESC) PLAN FOR EVERY BWU SITE TO THE DEPARTMENT FOR ACCEPTANCE. GUIDELINES FOR ACCEPTABLE BWU PRACTICES CAN BE FOUND IN SECTION 11/G/1/ THE COST OF ALL MATERIALS AND LABOR NECESSARY TO COMPLY WITH THE ABOVE PROVISIONS TO PREPARE AND IMPLEMENT ESC PLANS WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED AS INCLUDED IN THE CONTRACT UNIT PRICES AND NO ADDITIONAL COMPENSATION WILL
- 8. THE CONTRACTOR SHALL CONTACT KALPANA KANNAN-HOSADURGA, THE DISTRICT ONE TRAFFIC CONTROL SUPERVISOR AT KALPANA.KANNAN-HOSADURGA@LLLINOIS.GOV A MINIMUM OF 72 HOURS IN ADVANCE OF
- 9. THE RESIDENT ENGINEER SHALL CONTACT WALTER CZARNY, AREA TRAFFIC ENGINEER, AT WALTER.CZARNY@ILLINOIS.GOV A MINIMUM OF TWO (2) WEEKS PRIOR TO THE PLACEMENT OF PERMANENT
- 10. THE DEPARTMENT HAS DETERMINED THAT IN STREAM WORK IS NOT REQUIRED FOR THE WORK SPECIFIED IN THIS CONTRACT. THE DEPARTMENT HAS NOT OBTAINED A USACE PERMIT, IF THE CONTRACTOR CHOOSES TO USE ACTIVITIES REQUIRING AN USACE PERMIT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SECURE THE PROPOSE USACE PERMITS. THE COST OF ALL MATERIALS AND LABOR NECESSARY TO SECURE AND COMPLY WITH A USACE PERMIT FOR CONTRACTOR'S ACTIVITIES WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED AS INCLUDED IN THE UNIT BID PRICES OF THE CONTRACT AND NO ADDITIONAL COMPENSATION
- 11. THE CONTRACTOR SHALL USE CARE IN REMOVING OR EXCAVATING NEAR ALL EXISTING ITEMS WHICH WILL REMAIN. ANY DAMAGE DONE TO EXISTING ITEMS BY THE CONTRACTOR SHALL BE REPAIRED AT THE
- 12. SAW CUTTING PRIOR TO ANY REMOVAL ITEMS NOTED ON THE PLANS OR DIRECTED BY THE ENGINEER SHALL BE CONSIDERED INCLUDED IN THE COST OF THE ITEMS BEING REMOVED.
- 13. FOR WORK OUTSIDE LIMITS OF BRIDGE APPROACH PAVEMENT, ALL REFERENCES IN THE HIGHWAY STANDARDS AND STANDARD SPECIFICATIONS FOR REINFORCEMENT, DOWEL BARS AND TIE BARS IN PAVEMENT SHALL BE EPOXY COATED UNLESS NOTED ON THE PLANS.
- 14. RAISED REFLECTIVE PAVEMENT MARKERS ARE TO BE USED AS SHOWN ON THE DISTRICT ONE DETAIL "TYPICAL APPLICATIONS-RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)" SHOWN IN PLAN.
- 15. THE US 14 CENTERLINE IS RECREATED FROM AS-BUIL PLANS AND IS FOR INFORMATION ONLY.
- 16. STRUCTURAL CONCRETE REMOVED AS DIRECTED BY THE ENGINEER FOR THE ADJUSTMENT OF THE DRAINAGE STRUCTURES TO THE FINAL GRADE SHALL BE RECONSTRUCTED ACCORDING TO THE APPROACH SLAB REPAIR SPECIFICATION. COST OF THE CONCRETE REMOVAL, DISPOSAL AND RECONSTRUCTION IS INCLUDED WITH THE ASSOCIATED "FRAME AND LIDS TO BE ADJUSTED (SPECIAL)" PAY ITEM AS INCLUDED IN THE ROADWAY PLANS.

SCALE:

- 17. BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL RETAIN AND RECORD FOR FUTURE REFERENCE, ALL EXISTING PAVEMENT MARKING LINES (AND RAISED REFLECTIVE MARKERS) IN ORDER THAT THESE LOCATIONS CAN BE RE-ESTABLISHED FOR STRIPING. EXACT LOCATIONS OF ALL PAVEMENT MARKINGS SHALL BE AS DIRECTER BY THE ENGINEER.
- 18. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS AND CONDITIONS EXISTING IN THE FIELD PRIOR TO BEGINNING CONSTRUCTION AND
- 19. THE CITY OF HARVARD SHALL BE NOTIFIED 72 HOURS PRIOR TO THE START OF CONSTRUCTION.
- 20. ALL SHORT TERM PAVEMENT MARKINGS ON THE FINAL WEARING SURFACES SHALL BE TYPE IV TAPE.

USER NAME = nappelt	DESIGNED -	NJ	REVISED -
	DRAWN -	NJ	REVISED -
PLOT SCALE = 100.0000 / in.	CHECKED -	PK	REVISED -
PLOT DATE = 3/7/2024	DATE -	02/29/2024	REVISED -

	CONSTR. CODE			
	80% FED			
	20% STATE			
	BR I DGE			
-	0059			
ΤY	URBAN			

	1			20% STATE
				BR IDGE
CODE			TOTAL	0059
NO.	ITEM	UNIT	QUANTITY	URBAN
28000500	INLET AND PIPE PROTECTION	EACH	7	7
35101600	AGGREGATE BASE COURSE, TYPE B 4"	SQ YD	6	6
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	185	185
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	385	385
40603085	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70	TON	6.6	6.6
40604062	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N70	TON	40.2	40.2
44000157	HOT-MIX ASPHALT SURFACE REMOVAL, 2"	SQ YD	21	21
44004250	PAVED SHOULDER REMOVAL	SQ YD	6	6
50102400	CONCRETE REMOVAL	CU YD	5.7	5.7
50300255	CONCRETE SUPERSTRUCTURE	CU YD	6,5	6.5
50300300	PROTECTIVE COAT	SQ YD	740	740
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	930	930
50800515	BAR SPLICERS	EACH	16	16

			CONSTR. CODE
			80% FED
			20% STATE
			BR I DGE
		TOTAL	0059
ITEM	UNIT	QUANT I TY	URBAN

CODE			TOTAL	BRIDGE
CODE NO .	ITEM	UNIT	TOTAL QUANTITY	0059 URBAN
63300575	REMOVE AND REERECT RAIL ELEMENT OF EXISTING GUARDRAIL	FOOT	175	175
63302700	REMOVE AND REERECT TRAFFIC BARRIER TERMINALS, TYPE 6	EACH	2	2
67100100	MOBILIZATION	L SUM	1	1
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	56	56
70300150	SHORT TERM PAVEMENT MARKING REMOVAL	SQ FT	7,865	7,865
70307120	TEMPORARY PAVEMENT MARKING - LINE 4" - TYPE IV TAPE	FOOT	20,027	20,027
70307130	TEMPORARY PAVEMENT MARKING - LINE 6" - TYPE IV TAPE	FOOT	1,738	1,738
70307140	TEMPORARY PAVEMENT MARKING - LINE 8" - TYPE IV TAPE	FOOT	174	174
70307210	TEMPORARY PAVEMENT MARKING - LINE 24"- TYPE IV TAPE	FOOT	102	102
70400100	TEMPORARY CONCRETE BARRIER	FOOT	287.5	287.5
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	275	275
70600240	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE, NARROW), TEST LEVEL 2	EACH	2	2
70600341	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE, NARROW), TEST LEVEL 2	EACH	2	2
78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	219	219

\* = SPECIALTY ITEM

A E G ATLAS ENGINEERING GROUP, LTD.

USER NAME = njoseph	DESIGNED	÷	NA	REVISED	<u> </u>
	DRAWN	2	NA	REVISED	2
PLOT SCALE = 20.0000 ' / in.	CHECKED	*	PK	REVISED	+)
PLOT DATE = 1/26/2024	DATE		01/23/2024	REVISED	2

SUMMARY OF QUANTITIES					F.A.P. RTE.	SECTION	COUNTY	TOTAL	SHEE NO.		
							324	FAP 0324 22 BJ	MCHENRY	33	3
								W. W.	CONTRACT	NO. 62	2T00
	SCALE:	SHEET 1	OF 3	SHEETS	STA.	TO STA.		ILLINOIS   FED. A	ID PROJECT		

					80% FED
					20% STATE
					BR IDGE
	CODE			TOTAL	0059
	NO.	ITEM	UNIT	QUANTITY	URBAN
*	78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	5,900	5,900
*	78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	1,268	1,268
*	78000500	THERMOPLASTIC PAVEMENT MARKING - LINE 8"	FOOT	45	45
*	78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	88	88
*	78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	47	47
*	78009004	MODIFIED URETHANE PAVEMENT MARKING - LINE 4"	FOOT	740	740
				100	
*	78009006	MODIFIED URETHANE PAVEMENT MARKING - LINE 6"	FOOT	129	129
	70000012	MODULE ED LIDETHANE DAVEMENT MARKING LINE 134	FOOT	2.4	2.4
*	78009012	MODIFIED URETHANE PAVEMENT MARKING - LINE 12"	FOOT	24	24
<b>.</b>	78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	6	6
.,	,0100100	THAT SED REFERENCE FAVERIENT MARKEN	LACII	0	U
*	78200005	GUARDRAIL REFLECTORS, TYPE A	EACH	16	16
	78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	19	19
	78300202	PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	3,146	3,146
	85000200	MAINTENANCE OF EXISTING TRAFFIC SIGNAL INSTALLATION	EACH	1	1
	X0326394	FLOOR DRAINS TO BE CLEANED	EACH	6	6
	X8891009	VIDEO VEHICLE DETECTION SYSTEM, SINGLE APPROACH	EACH	1	1
	X5030250	BRIDGE DECK GROOVING (LONGITUDINAL)	SQ YD	512	512

				80% FED
		•		20% STATE
				BR I DGE
CODE			TOTAL	0059
NO.	ITEM	UNIT	QUANTITY	URBAN
89502200	MODIFY EXISTING CONTROLLER	EACH	1	1
X6030310	FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)	EACH	1	1
X6700407	ENGINEER'S FIELD OFFICE, TYPE A (D1)	CAL MO	6	6
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	1
X7830050	RAISED REFLECTIVE PAVEMENT MARKER, REFLECTOR REMOVAL	EACH	70	70
X7830052	RAISED REFLECTIVE PAVEMENT MARKER, REFLECTOR REPLACEMENT	EACH	70	70
Z0001700	APPROACH SLAB REPAIR (FULL DEPTH)	SQ YD	1	1
Z0006016	BRIDGE DECK LATEX CONCRETE OVERLAY, 2 ¾ INCHES	SQ YD	662	662
Z0012130	BRIDGE DECK SCARIFICATION ¾"	SQ YD	662	662
Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	20	20
Z0016002	DECK SLAB REPAIR (FULL DEPTH, TYPE II)	SQ YD	1	1
Z0018900	DRILL AND GROUT DOWEL BARS	EACH	13	13
Z0029090	DIAMOND GRINDING (BRIDGE SECTION)	SQ YD	662	662
Z0030850	TEMPORARY INFORMATION SIGNING	SQ FT	102.1	102.1
Z0052000	REPAIR STEEL PLATE BEAM GUARDRAIL, TYPE A	FOOT	250	250

\* = SPECIALTY ITEM

89000100

AEG ATLAS ENGINEERING GROUP, LTD.
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TEMPORARY TRAFFIC SIGNAL INSTALLATION

EACH

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE:

1

CONSTR. CODE

	SU	MMAR	Y OF QU	ANTITIES	3	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
						324	FAP 0324 22 BJ	MCHENRY	33	4
					<u>_</u>		90	CONTRACT	NO. 62	2T00
- 3	SHEET 2	OF 3	SHEETS	STA.	TO STA.		ILLINOIS   FED. AI	D PROJECT		

CONSTR. CODE 80% FED

				CONSTR. CODE
				80% FED
				20% STATE
				BR I DGE
CODE			TOTAL	0059
NO.	ITEM	UNIT	QUANTITY	URBAN
Z0052400	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 1	EACH	3	3
Z0053000	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 5	EACH	2	2
Z0053200	REPAIR TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	2	2
Z0073510	TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1	1

\* = SPECIALTY ITEM

A E G ATLAS ENGINEERING GROUP, LTD.

USER NAME = njoseph	DESIGNED	NA	REVISED =
	DRAWN	NA	REVISED =
PLOT SCALE = 20.0000 ' / in.	CHECKED	PK	REVISED -
PLOT DATE = 1/26/2024	DATE	01/23/2024	REVISED =

SUMMARY OF QUANTITIES	F.A.P RTE.			COUNTY	TOTAL SHEETS	SHEET NO.
	324	FAP 0324 22 BJ		MCHENRY	33	5
<u> </u>		220		CONTRACT	NO. 62	T00
SCALE: SHEET 3 OF 3 SHEETS STA. TO	STA.	ILLINOIS	FED. AID	PROJECT		

### MAINTENANCE OF TRAFFIC GENERAL NOTES

- 1. THE CONTRACTOR SHALL MAINTAIN A MINIMUM OF ONE 10' WIDE THROUGH LANE IN EACH DIRECTION DURING THE CONSTRUCTION.
- 2. THE CONTRACTOR SHALL TAKE ALL THE NECESSARY PRECAUTIONS TO PROTECT ADJACENT TRAFFIC LANES OPEN TO TRAFFIC FROM DEBRIS BEING BLOWN OR OTHERWISE REMOVED FROM THE CONSTRUCTION AREAS. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR KEEPING DEBRIS OFF THE ADJACENT TRAVELED LANE SURFACE.
- 3. THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE FACT THAT WHEN WORK COMMENCES, THE CONTRACTOR SHALL ASSUME THE MAINTENANCE OF ANY PAVEMENT, SHOULDERS, DRAINAGE FACILITIES, TRAFFIC CONTROL SIGNS, PAVEMENT MARKINGS AND OTHER APPURTENANCES ON ROADWAYS WITHIN THE LIMIT OF THE CONTRACT WHICH ARE TO BE USED BY THE PUBLIC DURING CONSTRUCTION AND RETAIN THIS MAINTENANCE RESPONSIBILITY UNTIL THE COUNTY ASSUMES THE MAINTENANCE. NEED FOR SNOW AND ICE CONTROL DURING THE CONSTRUCTION PERIOD SHALL BE ACCOMMODATED FOR BY OTHERS.
- 4. ALL CONTRACTOR'S SUPPLIED TRAFFIC CONTROL DEVICES AND SIGNS SHALL BE IN GOOD CONDITION, SHALL MEET THE DEPARTMENT'S QUALITY STANDARDS AS SHOWN IN IDOT "TRAFFIC CONTROL FIELD MANUAL", AND ARE SUBJECT TO APPROVAL BY THE ENGINEER.
- 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND SHALL REPLACE ANY SIGNS THAT ARE SUPPLIED BY OTHERS AND DAMAGED BY THE CONTRACTOR'S WORK FORCE OR SUBCONTRACTOR'S DURING RELOCATION OR CONSTRUCTION OPERATION.
- 6. THE ENGINEER SHALL BE INFORMED A MINIMUM OF 1 WEEK IN ADVANCE OF ANY CHANGE IN CONSTRUCTION STAGING.
- 7. ALL SIGNING MUST BE IN ACCORDANCE WITH THE APPLICABLE PROVISIONS OF THE STATE OF ILLINOIS "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION ADOPTED JANUARY 1, 2022", "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS ADOPTED JANUARY 1, 2024", THE DETAILS IN THESE PLANS, THE LATEST EDITION OF THE IDOT BUREAU OF DESIGN AND ENVIRONMENT HIGHWAY STANDARDS AND THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".
- 8. THE CONTRACTOR SHALL PROVIDE ALL SIGNS, VERTICAL PANELS, DRUMS, TYPE II BARRICADES, TYPE III BARRICADES, ALL TEMPORARY CONCRETE BARRIERS AND PROTECTION NECESSARY FOR WORK ZONE TRAFFIC CONTROL AND PROTECTION, OR AS DIRECTED BY THE ENGINEER.
- 9 .THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL BARRICADES, SIGNS, LIGHTS AND OTHER DEVICES INSTALLED ARE IN PLACE AND OPERATING 24 HOURS A DAY INCLUDING SUNDAYS AND HOLIDAYS DURING THE TIME THIS CONSTRUCTION IS IN

10.ALL CONSTRUCTION SIGN DIMENSIONS SHALL BE 48"X48", EXCEPT AS OTHERWISE NOTED IN THE PLANS.

- 11.THE CONTRACTOR SHALL INSTALL AND COVER ALL TEMPORARY SIGNING BEFORE EXISTING SIGNS ARE REMOVED. ALL EXISTING SIGNING THAT IS NOT APPLICABLE WHILE CONSTRUCTION IS IN EFFECT MUST BE COMPLETELY COVERED OR REMOVED BY THE CONTRACTOR. THE COST OF THIS WORK SHALL BE INCLUDED IN THE COST FOR SIGN PANEL, OF THE TYPE SPECIFIED.
- 12.ALL EXISTING GUIDE SIGNS (I.E. STREET NAME SIGNS, ADVANCE STREET NAME SIGNS, ROUTE MARKERS, ETC.) SHALL BE MAINTAINED AND VISIBLE TO TRAFFIC DURING CONSTRUCTION.
- 13.EXISTING, TEMPORARY, AND PROPOSED TRAFFIC/GUIDE SIGNS IN CONFLICT WITH STAGING SHALL BE COVERED AS INDICATED ON THE PLANS AND/OR AS DIRECTED BY THE ENGINEER.
- 14.THE CONTRACTOR SHALL MAINTAIN PRIVATE DRIVEWAY, COMMERCIAL DRIVEWAY, FIELD ENTRANCE, AND SIDE ROAD ACCESS AT ALL TIMES. THIS WORK SHALL BE INCLUDED IN THE COST OF AGGREGATE FOR TEMPORARY ACCESS. SEE IDOT DISTRICT 1 STANDARD TC-26 FOR TEMPORARY INFORMATION SIGNING REQUIREMENTS AT DRIVEWAYS.

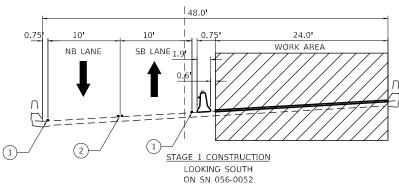
15.EMERGENCY VEHICLES MUST HAVE ACCESS TO THE AREA AT ALL TIMES.

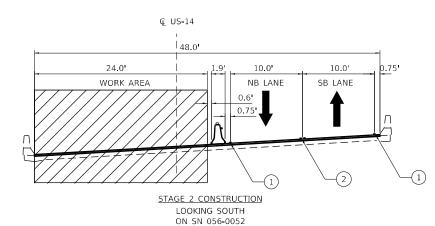
- 16.THE EXISTING PAVEMENT MARKINGS IN CONFLICT WITH TEMPORARY PAVEMENT MARKINGS OR PROPOSED PAVEMENT MARKINGS SHALL BE REMOVED.
- 17.FOR STAGING TYPICAL SECTIONS, REFER STRUCTURAL PLANS.
- 18.CHANGEABLE MESSAGE SIGNS SHALL BE INSTALLED TWO WEEKS PRIOR TO ALL TRAFFIC STAGE CHANGES ON EACH APPROACH OF THE AFFECTED ROADWAY TO WARN MOTORISTS OF THE UPCOMING EVENT. THE SIGNS SHALL BE REMOVED TWO WEEKS THEREAFTER UNLESS THE SIGNS ARE NEEDED AGAIN FOR A SUBSEQUENT FUTURE EVENT THAT WILL OCCUR WITHIN 2 WEEKS ON THE SAME APPROACH OF THE EFFECTED ROADWAY. THE SIGNS LOCATIONS SHALL BE DETERMINED BY THE ENGINEER.

## VARIES 11.0' VARIES SHLDR NB LANE SB LANE RIGHT TURN LANE SHLDR FXISTING TYPICAL SECTION

EXISTING TYPICAL SECTION LOOKING SOUTH ON SN 056-0052

ℚ US**-**14





### MOT TYPICAL LEGEND

- 1 TEMPORARY PAVEMENT MARKING TAPE, TYPE IV (WHITE)
- TEMPORARY PAVEMENT MARKING TAPE, TYPE IV (DOUBLE YELLOW @ 11" C-C)



WORK AREA



DIRECTION OF TRAVEL



TEMPORARY CONCRETE BARRIER WITH DOUBLE SIDED CRYSTAL TYPE C REFLECTORS PER STANDARDS 704001 & 782006.

### **SEQUENCE OF CONSTRUCTION**

### STAGE 1

### TRAFFIC

PLACE TEMPORARY PAVEMENT MARKINGS AND OTHER TEMPORARY CONTROL DEVICES AS SHOWN IN THE STAGE 1 PLAN. REMOVE EXSTING PAVEMENT MARKINGS AND RAISED REFLECTIVE PAVEMENT MARKERS IN CONFLICT WITH STAGE 1 TEMPORARY PAVEMENT MARKINGS. REMOVE REFLECTORS FROM THE EXISTING RAISED REFLECTIVE PAVEMENT MARKERS OUTSIDE THE PROJECT LIMITS IN CONFLICT WITH STAGE 1 TEMPORARY PAVEMENT MARKINGS. SHIFT TRAFFIC TO THE EAST SIDE (NB) OF THE EXISTING BRIDGE. ONE LANE OF TRAFFIC TO BE PROVIDED IN EACH DIRECTION.

### CONSTRUCTION

SCARIFY, REPAIR AND OVERLAY THE EXISTING BRIDGE AND BRIDGE APPROACH SLABS, AND OTHER STRUCTURAL IMPROVEMENTS AS SHOWN IN THE PLANS. RESURFACE THE EXISTING SHOULDERS, CONSTRUCT BUTT JOINTS AND OTHER IMPROVEMENTS AS SHOWN IN THE PLANS.

### STAGE 2

### **TRAFFIC**

PLACE TEMPORARY PAVEMENT MARKINGS AND OTHER TRAFFIC CONTROL DEVICES AS SHOWN IN THE STAGE 2 PLAN. REMOVE THE EXISTING PAVEMENT MARKINGS IN CONFLICT WITH STAGE 2 TEMPORARY PAVEMENT MARKINGS. REMOVE REFLECTORS FROM THE EXISTING RAISED REFLECTIVE PAVEMENT MARKERS IN CONFLICT WITH STAGE 2 TEMPORARY PAVEMENT MARKINGS. SHIFT TRAFFIC TO THE WEST SIDE (SB) ON THE NEWLY OVELAYED BRIDGE. ONE LANE OF TRAFFIC TO BE PROVIDED IN EACH DIRECTION.

### CONSTRUCTION

SCARIFY, REPAIR AND OVERLAY THE EXISTING BRIDGE AND BRIDGE APPROACH SLABS, AND OTHER STRUCTURAL IMPROVEMENTS AS SHOWN IN THE PLANS. RESURFACE THE EXISTING SHOULDER, REMOVE AND INSTALL THE PROPOSED SHOULDER, CONSTRUCT BUTT JOINTS AND OTHER IMPROVEMENTS AS SHOWN IN THE PLANS.

REMOVE TEMPORARY PAVEMENT MARKINGS, OTHER TEMPORARY TRAFFIC CONTROL DEVICES AND INSTALL PERMANENT PAVEMENT MARKINGS AS SHOWN IN THE PLANS. INSTALL PREVIOSLY REMOVED REFLECTORS.

### US 14 WORK ZONE SPEED LIMIT

EXISTING PROPOSED
POSTED SPEED WORKZONE SPEED

STAGE 1: 45 MPH 35 MPH

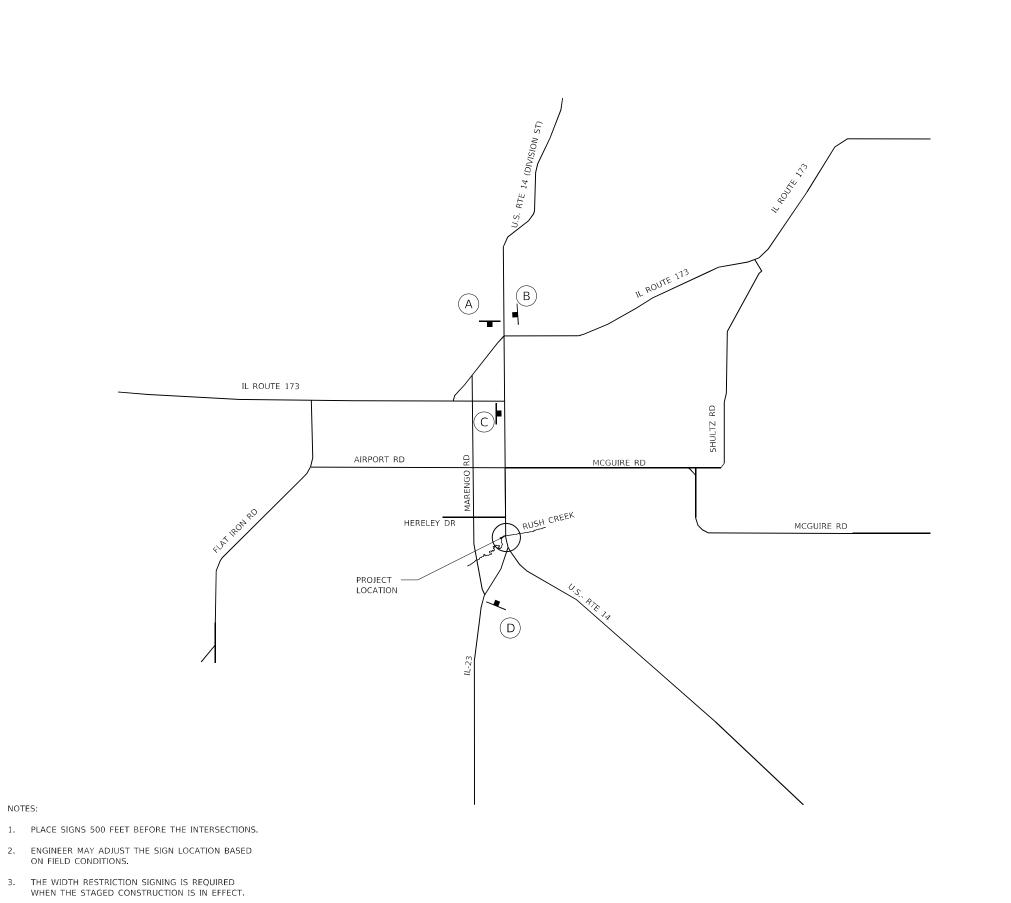
STAGE 2: 45 MPH 35 MPH



USER NAME = nappelt	DESIGNED	-	NJ	REVISED -
	DRAWN	-	NJ	REVISED -
PLOT SCALE = 100.0000 / in.	CHECKED	-	PK	REVISED -
PLOT DATE = 3/13/2024	DATE	-	02/29/2024	REVISED -

			· - · · · · · · · · · · · · · ·		TRAFFIC CONTROL
ALE:	SHEET 1	OF 4	SHEETS	STA.	TO STA.

F.A.P RTE	SECTION		COUNTY	TOTAL SHEETS	SHEET NO.
324	FAP 0324 22 BJ	FAP 0324 22 BJ			6
			CONTRACT	NO. 62	2T00
	ILLINOIS	FED. A	D PROJECT		



MAX WIDTH 9'-3" 1½ MILES AHEAD

 $\bigcirc$ 

W12-I103-4848

MAX WIDTH 9'-3" 1½ MILES

 $\bigcirc$ B

W12-I103-4848

SOUTH 14

M3-3(O)-2412

M1-4-2424

M6-1L(O)-2115

MAX WIDTH 9'-3" 1 MILE **AHEAD** 

 $\bigcirc$ 

W12-I103-4848

SOUTH 14

M3-3(O)-2412

M1-4-2424 M6-1R(O)-2115

D MAX WIDTH

> 9'-3" W12-I103-4848 1/2 **MILE**

14

AHEAD

M3-1(O)-2412

M1-4-2424

M6-1L(O)-2115

SCALE IN MILES

A E G ATLAS ENGINEERING

NOTES:

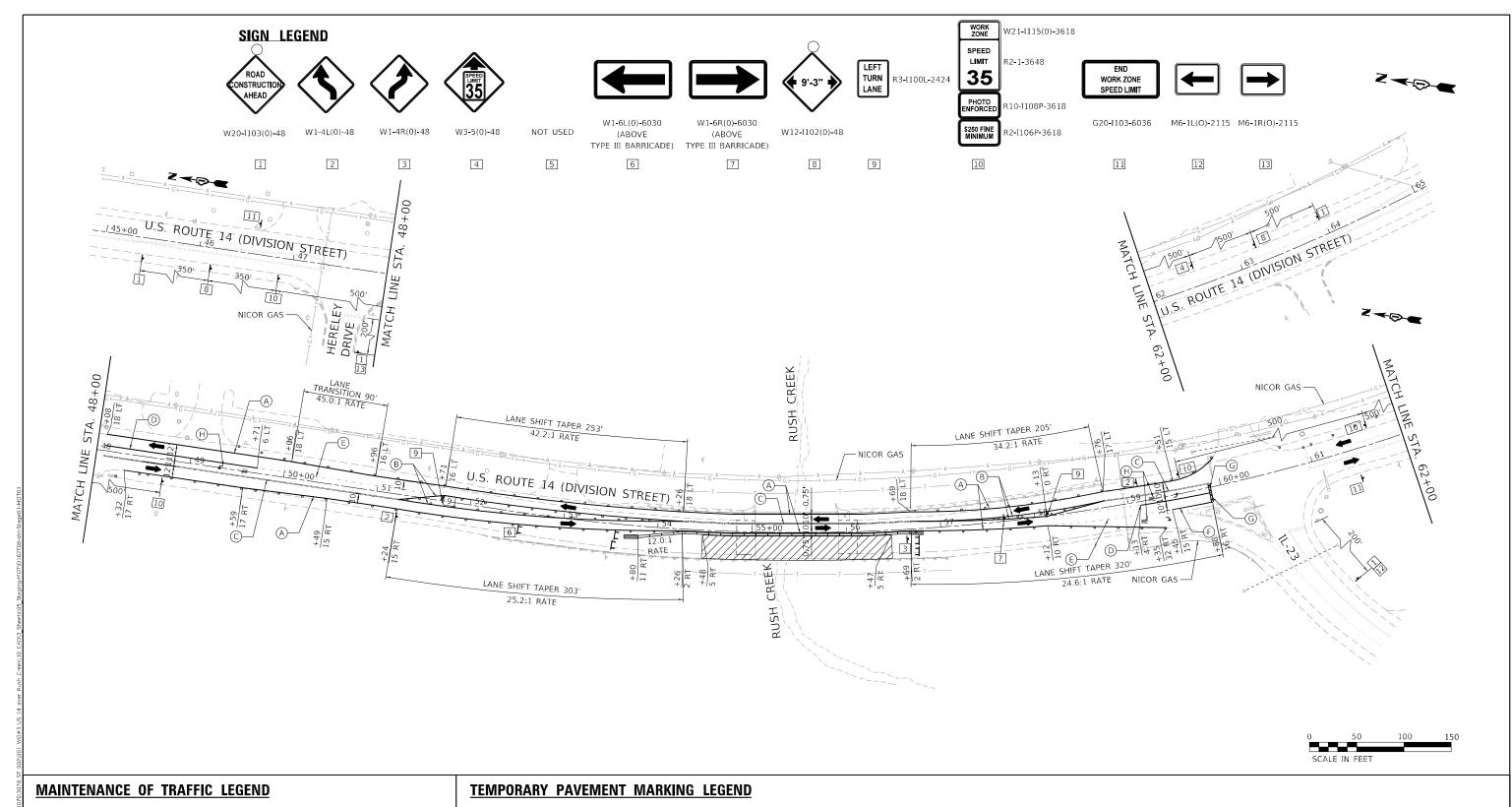
DESIGNED - NJ REVISED DRAWN -NJ REVISED CHECKED -REVISED PLOT DATE = 3/11/2024 02/29/2024 REVISED

STATE OF ILLINOIS

SUGGESTED STAGES OF CONSTRUCTION AND TRAFFIC CONTROL WIDTH RESTRICTION SIGNING DETAIL OF 4 SHEETS STA.

SECTION MCHENRY 33 7 324 FAP 0324 22 BJ CONTRACT NO. 62T00

**DEPARTMENT OF TRANSPORTATION** 



WORK ZONE

TEMPORARY CONCRETE BARRIER

IMPACT ATTENUATOR, TEMPORARY (FULL REDIRECTIVE, NARROW) TEST LEVEL 3

TYPE II BARRICADE OR DRUM

DIRECTION OF TRAFFIC

TYPE III BARRICADE

TEMPORARY TRAFFIC SIGN

A PAVT MARK LINE 4" SOLID WHITE - TYPE IV TAPE
B PAVT MARK LINE 4" SOLID YELLOW - TYPE IV TAPE
C PAVT MARK LINE 4" DOUBLE YELLOW, 11" C-C - TYPE IV TAPE
D PAVT MARK LINE 6" SOLID WHITE - TYPE IV TAPE

E PAVT MARK LINE 6" WHITE DOTTED - TYPE IV TAPE (2' DASH, 6' SKIP)

F) PAVT MARK LINE 8" SOLID WHITE - TYPE IV TAPE

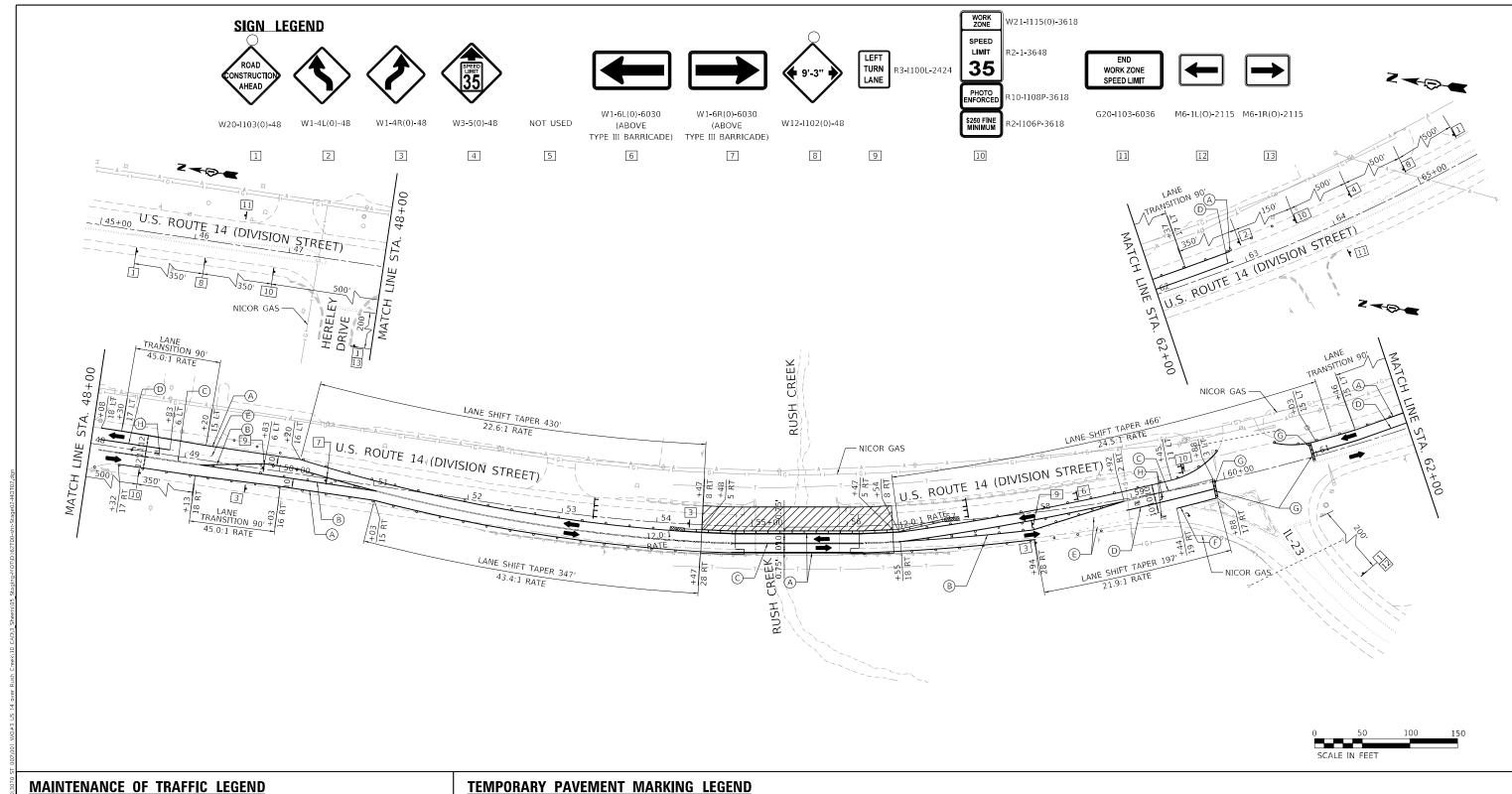
G PAVT MARK LINE 24" SOLID WHITE - TYPE IV TAPE

(H) PAVT MARK L&S - TYPE IV TAPE

E NAME:	AEG	ATLAS ENGINEERING GROUP, LTD.
= 1		

USER NAME = nappelt	DESIGNED - NJ	REVISED -
	DRAWN - NJ	REVISED -
PLOT SCALE = 100.0000 / in.	CHECKED - PK	REVISED -
PLOT DATE = 3/11/2024	DATE - 02/29/2024	REVISED -

SUGGESTED	STAGES (	OF CON	STRUCTI	ON AND	TRAFFIC C	CONTROL	F.A.P RTE	SECTIO	ON		COUNTY	TOTAL SHEETS	SHEET NO.
			STAGE 1				324	FAP 0324	22 BJ		MCHENRY	33	8
			JIAUL I								CONTRACT	NO. 62	2T00
SCALE: 1" = 50'	SHEET 3	OF 4	SHEETS	STA.	TO 9	STA.		I	LLINOIS	FED. AII	D PROJECT		





WORK ZONE

TEMPORARY CONCRETE BARRIER

TEMPORARY TRAFFIC SIGN

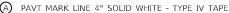
IMPACT ATTENUATOR, TEMPORARY (FULL REDIRECTIVE, NARROW) TEST LEVEL 3

TYPE II BARRICADE OR DRUM

TYPE III BARRICADE

DIRECTION OF TRAFFIC

### TEMPORARY PAVEMENT MARKING LEGEND



A PAVT MARK LINE 4" SOLID WHITE - TYPE IV TAPE
B PAVT MARK LINE 4" SOLID YELLOW - TYPE IV TAPE
C PAVT MARK LINE 4" DOUBLE YELLOW, 11" C-C - TYPE IV TAPE
D PAVT MARK LINE 6" SOLID WHITE - TYPE IV TAPE

PAVT MARK LINE 6" WHITE DOTTED - TYPE IV TAPE (2' DASH, 6' SKIP)

F) PAVT MARK LINE 8" SOLID WHITE - TYPE IV TAPE

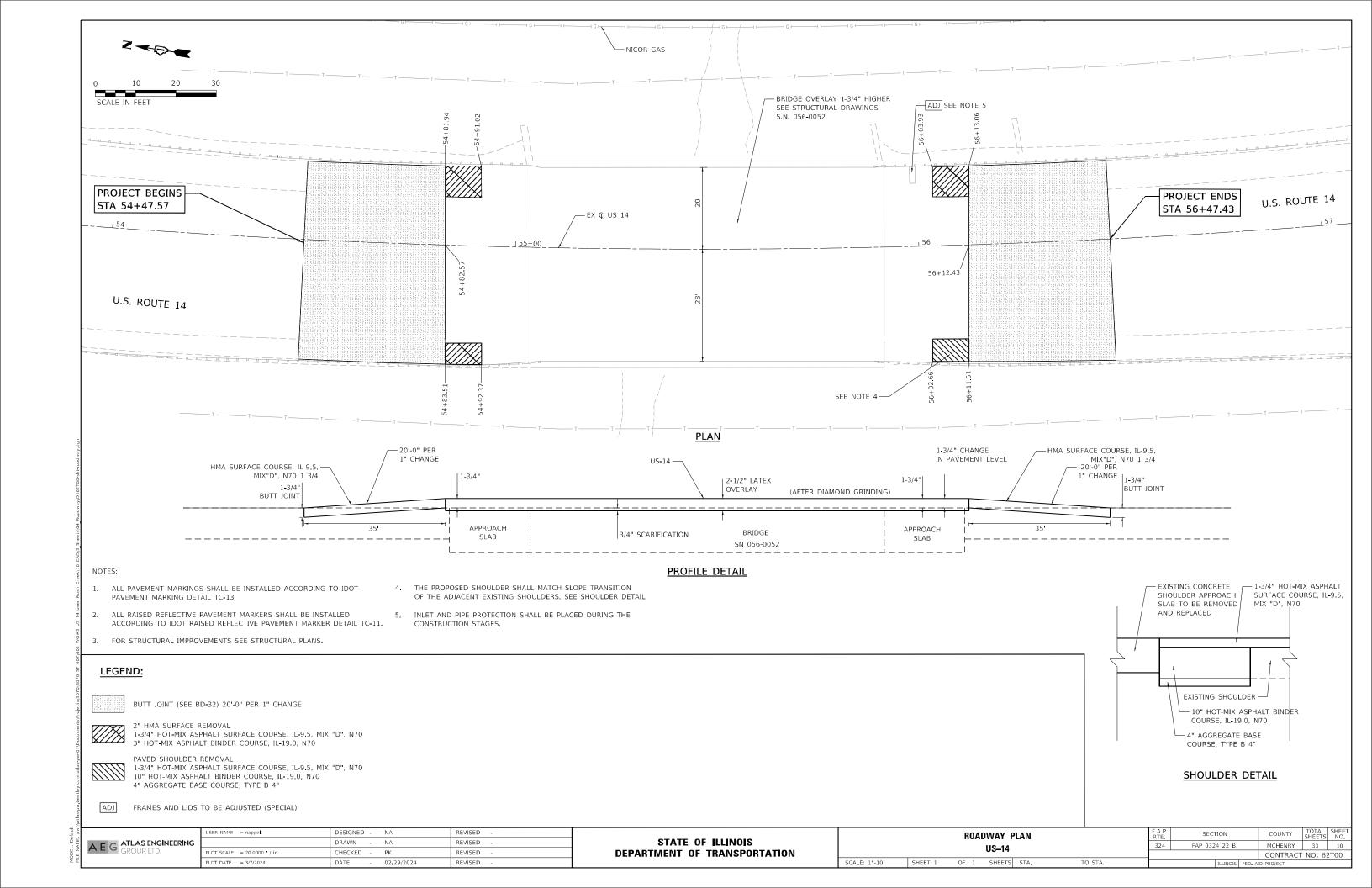
G PAVT MARK LINE 24" SOLID WHITE - TYPE IV TAPE

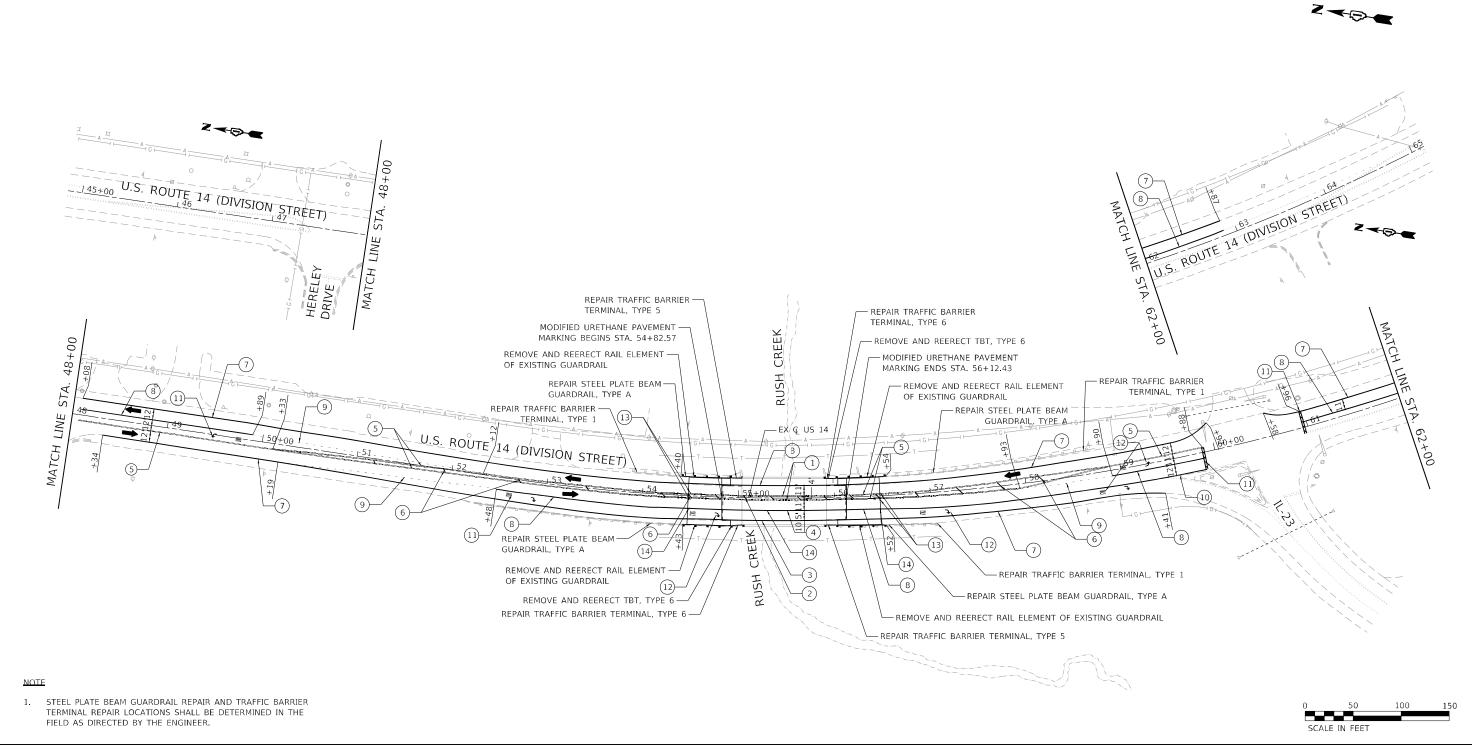
(H) PAVT MARK L&S - TYPE IV TAPE

E NAME:	A	E	G	<b>ATLAS ENGINEERING</b> GROUP, LTD.
~ 1				

USER NAME = nappelt	DESIGNED -	NJ	REVISED -
	DRAWN -	NJ	REVISED -
PLOT SCALE = 100.0000 / in.	CHECKED -	PK	REVISED -
DLOT DATE = 2/11/2024	DATE	02/29/2024	REVISED

SUGGESTED	STAGES	OF COI	NSTRUCTI	ON AND	TRAFFIC	CONTROL	F.A.P RTE	SEC <sup>-</sup>	TION		COUNTY	TOTAL SHEETS	SHEET NO.
			STAGE 2				324	FAP 032	4 22 BJ		MCHENRY	33	9
			STAUL 2								CONTRACT	NO. 62	2T00
SCALE: 1" = 50'	SHEET 4	OF 4	SHEETS	STA.	TO	STA.			ILLINOIS	FED. A	ID PROJECT		





### **PAVEMENT MARKING LEGEND**

### PAVEMENT MARKINGS ON BRIDGE DECK

- (1) MODIFIED URETHANE PAVEMENT MARKING LINE 4" (SOLID DOUBLE YELLOW, 11" C-C)
- (2) MODIFIED URETHANE PAVEMENT MARKING LINE 12" (SOLID YELLOW DIAGONAL)
- (3) MODIFIED URETHANE PAVEMENT MARKING LINE 4" (SOLID WHITE EDGE LINE)
- (4) MODIFIED URETHANE PAVEMENT MARKING LINE 6" (SOLID WHITE TURN LANE)

### PAVEMENT MARKINGS ON HMA

- (5) THERMOPLASTIC PAVEMENT MARKING LINE 4" (SOLID DOUBLE YELLOW, 11" C-C)
- (6) THERMOPLASTIC PAVEMENT MARKING LINE 12" (SOLID YELLOW DIAGONAL)

- (7) THERMOPLASTIC PAVEMENT MARKING LINE 4" (SOLID WHITE EDGE LINE)
- 8 THERMOPLASTIC PAVEMENT MARKING LINE 6" (SOLID WHITE TURN LANE)
- (9) THERMOPLASTIC PAVEMENT MARKING LINE 6" (2' DASH 6' SKIP WHITE TURN LANE)
- (10) THERMOPLASTIC PAVEMENT MARKING LINE 8" (SOLID WHITE)
- (11) THERMOPLASTIC PAVEMENT MARKING LINE 24" (SOLID WHITE STOP BAR)
- (12) THERMOPLASTIC PAVEMENT MARKING LETTERS AND SYMBOLS (WHITE)

### RAISED REFLECTIVE PAVEMENT MARKERS

- (13) RAISED REFLECTIVE PAVEMENT MARKER (TWO-WAY AMBER)
- (14) RAISED REFLECTIVE PAVEMENT MARKER (ONE-WAY CRYSTAL)

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ΑE	G	ATLAS ENGINEERING GROUP, LTD.

USER NAME = njoseph	DESIGNED	-	NJ	REVISED -
	DRAWN	-	NJ	REVISED -
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PAVEI	MENT MA	RKING A	AND GUA	RDRAIL F	REPAIR I	PLAN	F.A.P RTE.	SECT	ION		COUNTY	TOTAL SHEETS	SHEET NO.
			US-14				324	FAP 032	4 22 BJ		MCHENRY	33	11
			00-14								CONTRACT	NO. 62	2T00
= 50'	SHEET 1	OF 1	SHEETS	STA	Т	IO STA			TLUMOTE	EED AL	D DDOJECT		

### TRAFFIC SIGNAL LEGEND

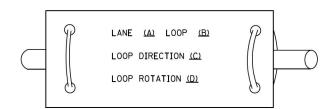
(NOT TO SCALE)

RALAGAD CROSSING GATE  FROMER FOUND MOUNTED HETERD  RALAGAD CROSSING ATE  RALAGAD CROSSI	SOURCE CONTINUES   1	ITEM	EXISTING	PROPOSED	<u>ITEM</u>	EXISTING	PROPOSED	ITEM	<b>EXISTING</b>	PROPOSED
MARTER CONTROLLER	STEE SMATTER CONTROLLER   STEE SMATTER CON	CONTROLLER CABINET			-SQUARE				RR	
MARTER CONTROLLER	STEE SMATTER CONTROLLER   STEE SMATTER CON	COMMUNICATION CABINET	ECC	cc						
UNITEDRIFFABLE FOWER SUPPLY  BE ADDRESS INTERLATION  FOUR MOUNTED  FINAL REFORMATION  FIN	March   Marc	MASTER CONTROLLER	EMC	мс	-SQUARE	$\blacksquare$	⊞ ⊕			
Designation   Design   Desig	MACTION DOX   10	MASTER MASTER CONTROLLER	EMMC	ммс	DOUBLE HANDHOLE			CICNAL HEAD WITH DACKDLATE	[2] [2] [3]	
BERNARD INTELLATION - CARD (ROUND MOUNTED HETERD - CARD (ROUND MOUNTED HET	## PROBLEM FOR ANY MORE NOTED TO THE PROPERTY AND FOLIA STATE OF THE PROBLEM FOR ANY MORE STATE OF THE PROBL	UNINTERRUPTABLE POWER SUPPLY	4	<b>4</b>	JUNCTION BOX		•	-(P) PROGRAMMABLE SIGNAL HEAD		
BENNER INTELLATION -ORD GROUND MOUNTED NETERED  BY BILL -ORD GROUND MOUNTED NETERED  BY BILL -ORD GROUND MOUNTED NETERED  BY BARAGOA CHOSSING GATE -ORD GROUND CONDUTT CITY -ORD GROUND	## PROBLEM FOR ANY MORE NOTED TO THE PROPERTY AND FOLIA STATE OF THE PROBLEM FOR ANY MORE STATE OF THE PROBL		- <u>-</u> -P	- <b>-</b> P	RAILROAD CANTILEVER MAST ARM	$X \cap \overline{X} = X \cap X$	X <del>OX X</del>			
TELEPHONE CONNECTION	SALAGON CONSISSUES   TE   SALAGON CONSISSUES   TE   SALAGON CONSISSUES   TE   SALAGON CONTROLLER CRIMET   THE COMMISSION AND FOLE   CONTROLLER CRIMET   CONTROLLER C	1000 To all statements to source-destinations			RAILROAD FLASHING SIGNAL		X <del>•X</del>		P RB	
FEEL RAST AM ASSERBLY AND POLE  ALUMINUM MAST ARM ASSERBLY AND POLE  CUMPRETORING COMBINATION MAST ARM ASSERBLY AND POLE  FEEL COMBINATION MAST ARM ASSERBLY AND POLE  CUMPRETORING COMBINATION MAST ARM ASSERBLY AND POLE  FEEL RAST ARM ASSERBLY AND POLE  CUMPRETORING COMBINATION MAST ARM ASSERBLY AND POLE  FEEL RAST ARM ASSERBLY AND POLE  CUMPRETORING COMBINATION MAST ARM ASSERBLY AND POLE  FEEL RAST ARM ASSERBLY AND POLE  CUMPRETORING COMBINATION MAST ARM ASSERBLY AND POLE WITH LUMRING COMBINED COMBINATION OF BERNOVED  FEASIBLE RESTALLATION  FEASIBLE REST	MAGRAD CONTROLLER CABRIET  MAGRAD CONTROLLER CAB		$\boxtimes^{G} \boxtimes^{GM}$	G  G  G  G  M  G  G  M  G  G  M  G  G					<b>©</b>	<b>V</b>
WITH COUNTROWN TIMER  ALUMINAM AND ARAM ASSEMBLY AND POLE  STEEL CONDINATION MAST AND  SEGMAL POST  FUND RATE AND ADDRESS THEM  SOUNDER SHOW THE SH	LILLINGHISTON AND RESIDENT AND FOLE  THE COMMANDO MAST AND  THE COMM	TELEPHONE CONNECTION	ET	T				AT RAILROAD INTERSECTIONS		<u>*</u>
ALMANIAN MAST ARM ASSEMBLY AND POLE  TERLE COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINARE  SEGNAL POST CAMP BARREL MOUNTED - TEMPORARY  WOOD POLE  WOOD POLE  REMOVE ITEM REMOVE ITE	LIMINIAN MAST AM ASSESSMENT AND POLE  THE COMMENTION MAST AMA SERVICE AND POLE WITH LUMBRANE	STEEL MAST ARM ASSEMBLY AND POLE	0	•——			▶ ∢	A PARTICIPATION OF THE PROPERTY OF THE PROPERT	C D	<b>♥</b> C
ASSEMBLY AND POLE WITH LUMINARE  SIGNAL POST - BM  SIGNAL POST - B	Secretary And Policy With Commission   Secretary And Po	ALUMINUM MAST ARM ASSEMBLY AND POLE	0							
- GMM BARREL MOUNTED - TEMPORARY  WOOD POLE  WOOD POLE  REMOVE ITEM  REMOVE ITEM  REMOVE ITEM  REMOVE ITEM  REMOVE ITEM  RELOCATE ITEM  RELOC	SMI BARRAL HOUNTED - TEMPORARY  O		<del>0</del>	•*						
WOOD POLE    SO   H   REMOVE ITEM   I   IP   REMOVE ITEM   REMOVE ITEM   REMOVE ITEM   RELOCATE ITEM   RELOCAT	NEESECTION TENM  NEESECTION TENM  REJORATE TIEM  RE		0	<ul> <li>◆ BM</li> </ul>	SYSTEM ITEM	S	SP	[10] [2] [2] [3] [4] [4] [4] [4] [4] [4] [4] [4] [4] [5] [6] [6] [6] [6] [6] [6] [6] [6] [6] [6		
REMOVE TEM  REMOVE	NO. 5 SOLID COPER (GREEN)  REMOVE TESM  REMO				INTERSECTION ITEM	I	IP			
RELOCATE TEEM  SIGNAL HEAD  SIGNAL HEAD  SIGNAL HEAD WITH BACKPLATE  THE HEAD REPORTED TO SIGNAL HEAD OPTICALLY PROGRAMMED  SIGNAL POST AND FOUNDATION TO BE REMOVED  FOUNDATION TO BE R	RELOCATE TEM  ABADON ITEM  ABADON ITEM  ABADON ITEM  ABADON ITEM  ABADON ITEM  ABADON ITEM  CONTROLLER CABINET AND FOUNDATION TO BE REMOVED  COPPER INTERCONNECT CABLE  COP				REMOVE ITEM		R		1#6	<del></del>
SIGNAL HEAD WITH BACKPLATE	CONTROLLER AND OPTICALLY PROGRAMMED  LOCATION TO BE REMOVED  CONTROLLER CABINET AND  CONTROLLER CABINET  COPPER INTERCONNECT CABLE  COPPER IN				RELOCATE ITEM		RL			(1)
SIGNAL HEAD OPTICALLY PROGRAMMED	IGNAL HEAD OPTICALLY PROGRAMMED  LASHER INSTALLATION 15'S SOLAR POWERED  LOS OF SOLAR PO			-			А			
FLASHER INSTALLATION -(FS) SOLAR POWERED  APF  BEFS  BIGNAL POST AND FOUNDATION TO BE REMOVED FO	ADAR DETECTION SENSOR  DEF DEF S  DEF DEF DEF S  DEF DE			- <b>P</b> + <b>P</b>			RCF	COAXIAL CABLE	,	
SIGNAL POST AND FOUNDATION TO BE REMOVED  PEDESTRIAN SIGNAL HEAD  PEDESTRIAN PUSH BUTTON -(APS) ACCESSIBLE PEDESIRIAN PUSH BUTTON SIGNAL POST AND PREFORMED DETECTOR LOOP, TYPE I  PREFORMED DETECTOR LOOP  P P P P P P P P P P P P P P P P P P	SIGNAL POST AND FOUNDATION TO BE REMOVED FOR THE POST AND FOUNDATION TO BE REMOVED FOUNDATION TO BE REMOVED FOR THE POST AND FOUNDATION TO BE REMOVED FOU						RMF	VENDOR CABLE		
PEDESTRIAN SIGNAL HEAD  PEDESTRIAN PUSH BUITON PREFORMED DETECTOR LOOP PPPP PPPP PPPP PPPP PPPP PPPP PPPP	DETECTOR LOOP, TYPE I	-(FS) SOLAR POWERED					RPF		<del>(6#18)</del>	<del>(6#18)</del>
PREFORMED DETECTION LOOP  PREFORMED DETECTOR LOOP  PP PP  PP PP  PP PP  RADAR DETECTION SENSOR  RIL RIL SAMPLING (SYSTEM) DETECTOR  S S S S S  VIDEO DETECTION ZONE  RADAR/VIDEO DETECTION ZONE  RADAR/VIDEO DETECTION ZONE  RADAR/VIDEO DETECTION ZONE  RADAR/VIDEO DETECTION ZONE  RETERMINE SAMPLING (SYSTEM) DETECTOR  QUEUE AND SAMPLING (SYSTEM) DETECTOR  S S S S S S S S S S S S S S S S S S S	PREFORMED DETECTION LODE PO	PEDESTRIAN SIGNAL HEAD	-0	-1		ПО	ПО			—(12F)—
RADAR DETECTION SENSOR  RADAR DETECTION SENSOR  RADAR/VIDEO DETECTION CAMERA  VIDEO DETECTION CAMERA  VIDEO DETECTION CAMERA  VIDEO DETECTION CAMERA  VIDEO DETECTION AND SAMPLING (SYSTEM) DETECTOR  (SYSTEM) DETECTOR  OS O	ADAR DETECTION SENSOR  RIJ  SAMPLING (SYSTEM) DETECTOR  S S S S S  SIDEO DETECTION CAMERA  VI  SAMPLING (SYSTEM) DETECTOR  S S S S S  S S S  S S S S  S S S S  S S S S S  S S S S S S  S S S S S S S S S S  ADAR/VIDEO DETECTION ZONE  ADAR/VIDEO DETECTION ZONE  ANA, TILT, ZOOM (PTZ) CAMERA  PTZI  WIRELESS DETECTOR SENSOR  WIRELESS ACCESS POINT  WIRELESS ACCESS POINT  WIRELESS INTERCONNECT  WIRELESS INTERCONNECT  S S S S S S S S S S S S S S S S S S S		⊚		PREFORMED DETECTOR LOOP	P P	P P	-NO. 62.5/125, MM12F SM12F		<u> 24F</u>
VIDEO DETECTION CAMERA  VIDEO DETECTION CAMERA  RADAR/VIDEO DETECTION ZONE  RADAR/VIDEO DETECTION ZONE  PAN, TILT, ZOOM (PTZ) CAMERA  PTZI  PTZI  PTZI  RINTERSECTION AND SAMPLING (SYSTEM) DETECTOR  QUEUE AND SAMPLING (SYSTEM) DETECTOR  WIRELESS DETECTOR SENSOR  IS IS  GROUND ROD  -(C) CONTROLLER  -(M) MAST ARM  -(P) POST  -(P) POST  -(P) POST  -(S) SERVICE	INTERSECTION AND SAMPLING (SYSTEM) DETECTOR  ADAR/VIDEO DETECTION ZONE  ADAR/VIDEO DETECTION ZONE  AN, TILT, ZOOM (PTZ) CAMERA  PTZI  WIRELESS DETECTOR SENSOR  WIRELESS ACCESS POINT  WIRELESS INTERCONNECT  WIRELESS INTERCONNECT  WINTERSECTION AND SAMPLING (SYSTEM) DETECTOR  GROUND ROD  -(C) CONTROLLER  GROUND ROD  -(C) CONTROLLER  -(M) MAST ARM  -(P) POST  -(S) SERVICE  GROUND ROD  -(C) CONTROLLER  -(M) MAST ARM  -(P) POST  -(S) SERVICE		R 1	R	SAMPLING (SYSTEM) DETECTOR					
RADAR/VIDEO DETECTION ZONE  RADAR/VIDEO DETECTION ZONE  PAN, TILT, ZOOM (PTZ) CAMERA  PTZI  PTZI	ADAR/VIDEO DETECTION ZONE  ADAR/VIDEO DETECTION ZONE  AN, TILT, ZOOM (PTZ) CAMERA  PTZI  WIRELESS DETECTOR SENSOR  WIRELESS ACCESS POINT  WIRELESS ACCESS POINT  WIRELESS INTERCONNECT  WIRELESS INTERCONNECT  GROUND ROD  -(C) CONTROLLER  -(M) MAST ARM -(P) POST -(S) SERVICE  GROUND ROD  -(C) CONTROLLER  -(M) MAST ARM -(P) POST -(S) SERVICE  GROUND ROD  -(C) CONTROLLER -(M) MAST ARM -(P) POST -(S) SERVICE	VIDEO DETECTION CAMERA	<u> </u>	<b>V</b> ■		<del></del>				
PAN, TILT, ZOOM (PTZ) CAMERA  PTZ  WIRELESS DETECTOR SENSOR  WIRELESS DETECTOR SENSOR  WIRELESS DETECTOR SENSOR	AN, TILT, ZOOM (PTZ) CAMERA  PTZI  WIRELESS DETECTOR SENSOR  WIRELESS ACCESS POINT  WIRELESS ACCESS POINT  WIRELESS INTERCONNECT  WIRELESS ACCESS POINT  WIRELES	RADAR/VIDEO DETECTION ZONE		<b>=</b>			_	-(C) CONTROLLER	± <sup>C</sup> ± <sup>M</sup> ± <sup>P</sup> ± <sup>S</sup>	± <sup>C</sup> ± <sup>M</sup> ± <sup>P</sup> ± <sup>S</sup>
EMPRESHEY VEHICLE LIGHT DETECTOR	WIRELESS INTERCONNECT  WIRELESS ACCESS POINT	PAN, TILT, ZOOM (PTZ) CAMERA	PTZ[1	PTZ¶	770.	200		-(P) POST		
	ONFIMATION BEACON	EMERGENCY VEHICLE LIGHT DETECTOR	$\boxtimes$	<b>~</b>			_	(o) SERVICE		
		CONFIMATION BEACON	<b>○</b> —(]	н	WINELESS ACCESS FOINT					
WIRELESS INTERCONNECT O++		WIRELESS INTERCONNECT	o <del>-1   </del>	•••						
	TIRELESS INTERCONNECT RADIO REPEATER									
		USER NAME = footemj	DESIGNED -	IP REVISED -				DISTRICT ONE	F.A. P. SECTIO	N COUNTY TOTAL ST
USER NAME = footen) DESIGNED - IP REVISED - DISTRICT ONF RAF	USER NAME = footem;  DESIGNED - IP  REVISED -  DISTRICT ONF  REF  SECTION  COUNTY SHEFTS N	PLOT SCALE = 50.0000 ' / in	13001000 1300000				STA		324 FAP 0324	22 BJ MCHENRY 33 1:
DRAWN - IP REVISED - STATE OF ILLINOIS STANDARD TRAFFIC SIGNAL DESIGN DETAILS 324	DRAWN - IP REVISED - STATE OF ILLINOIS  STANDARD TRAFFIC SIGNAL DESIGN DETAILS  STANDARD TRAFFIC SIGNAL DESIGN DETAILS	PLOT DATE = 3/4/2019	DATE -			I OI INANSFUNIATIUN		SHEET 1 OF 7 SHEETS STA. TO STA.	TS-05	CONTRACT NO.  INOIS FED. AID PROJECT

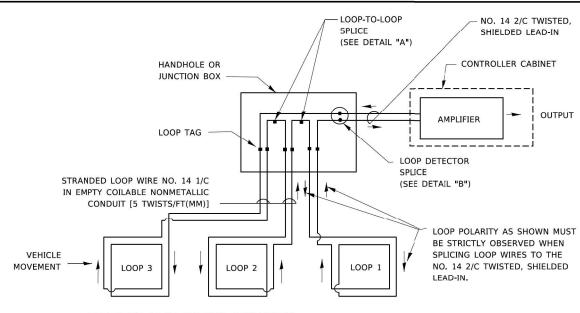
### **LOOP DETECTOR NOTES**

- EACH PAIR OF LOOP WIRES SHALL BE PLACED IN A SEPARATE EMPTY COILABLE NONMETALLIC CONDUIT FROM THE EDGE OF PAVEMENT TO THE HANDHOLE. SPACING BETWEEN THE HOLES DRILLED IN THE PAVEMENT SHALL NOT BE LESS THAN 6" (150 mm). EMPTY COILABLE NONMETALLIC CONDUIT SHALL BE INCLUDED IN THE COST OF THE LOOP WIRE.
- THE NUMBER OF LOOP TURNS SHALL BE AS RECOMMENDED BY THE AMPLIFIER MANUFACTURER. ALL ADJACENT SIDES OF THE LOOPS SHALL BE INSTALLED IN SUCH A WAY THAT THE CURRENT FLOW IS IN THE SAME DIRECTION TO REINFORCE ITS MAGNETIC FIELDS FOR SMALL VEHICLE DETECTION.
- 3. EACH LOOP LEAD-IN SHALL BE IDENTIFIED AND PERMANENTLY TAGGED IN THE HANDHOLE. EACH LEAD-IN CABLE TAG SHALL INDICATE THE LOCATION OF THE LOOP, LOOP ROTATION (CLOCKWISE/COUNTERCLOCKWISE), LOOP LEAD-IN DIRECTION (IN OR OUT), LOOP CABLE NUMBER AND LOCATION IN CABINET, AND NUMBER OF TURNS IN THE DETECTOR LOOPS IN WATER PROOF INK AS INDICATED ON THE DISTRICT 1 STANDARD TRAFFIC SIGNAL DESIGN DETAIL. THE CONTRACTOR SHALL MARK LOOP LOCATIONS ON RECORD DRAWINGS AND PRESENT TO THE ENGINEER AFTER FINAL INSPECTION. LOOPS SHALL BE MARKED BY LANE AND LOOP NUMBER. SEE DETAIL BELOW.
- 4. ALL LOOP CABLE SHALL BE FASTENED WITH PLASTIC TIE WRAP TO THE HANDHOLE HOOKS.
- 5. IN ASPHALT PAVEMENT, LOOPS SHOULD BE PLACED IN THE BINDER AND DIVEHOLES MARKED AT THE CURB WITH A SAW-CUT. THE SAW-CUT SHALL BE CUT IN ACCORDANCE WITH LOCAL AND E.P.A. DUST CONTROL REQUIREMENTS. DETECTOR LOOP(S) SHALL NOT BE INSTALLED IN WET CONDITIONS AND THE SAW-CUTS MUST BE FREE OF DEBRIS AND RESIDUE SUCH AS DUST AND WATER WHICH IS TO BE ACHIEVED BY THE USE OF COMPRESSED AIR, WIRE BRUSHING AND HEAT DRYING ACCORDING TO SEALANT MANUFACTURER REQUIREMENTS. THE DETECTOR WIRE SHALL BE HELD IN PLACE BY THE USE OF FORM WEDGES. WEDGES SHALL BE SPACED NO MORE THAN 18" (450 mm) APART.
- LOOP SPLICES SHALL BE SOLDERED USING A SOLDERING IRON. BLOW TORCHES OR OTHER DEVICES WHICH OXIDIZE COPPER CABLE SHALL NOT BE ALLOWED FOR SOLDERING OPERATIONS. SEE DETAIL BELOW RIGHT.
- 7. PREFORMED DETECTOR LOOPS SHALL BE USED, AS SHOWN ON THE PLANS, WHERE NEW CONCRETE PAVEMENT IS PROPOSED. THE INSTALLATION OF PREFORMED LOOPS SHALL BE IN ACCORDANCE WITH THE DISTRICT 1 SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.

### LOOP LEAD-IN CABLE TAG

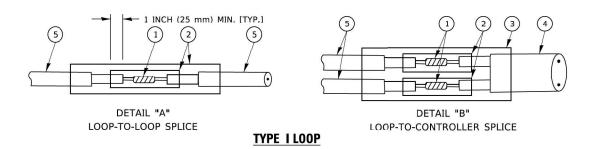


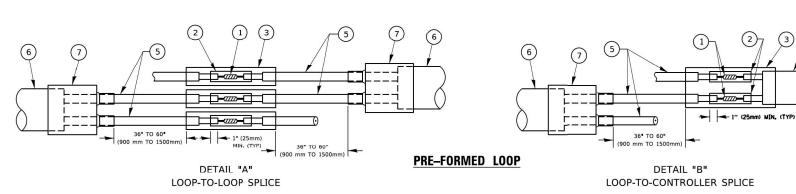
- A. LANE 1 IS THE LANE CLOSEST TO THE CENTERLINE OF THE ROADWAY
- B. LOOP #1 IS THE LOOP IN THE LANE CLOSEST TO THE INTERSECTION.
- C. LABEL LOOP CABLE "IN" OR LOOP CABLE "OUT".
- D. LABEL LOOP CABLE CLOCKWISE OR LOOP CABLE COUNTERCLOCKWISE.



### **DETECTOR LOOP WIRING SCHEMATIC**

- LOOPS SHALL BE SPLICED IN SERIES.
   SAW-CUTS SHALL BE A MINIMUM WIDTH OF 5/16" (8 mm).
- SAW-CUT DEPTHS SHALL BE 3" (75 mm). IF IN CONCRETE,
- THE SAW-CUT DEPTH SHALL BE TO THE TOP OF THE REINFORCEMENT.
- LOOP CORNERS SHALL BE DRILLED WITH A 2" (50 mm) DIAMETER CORE.





### LOOP DETECTOR SPLICE

- 1) WESTERN UNION SPLICE SOLDERED WITH ROSIN CORE FLUX. ALL EXPOSED SURFACES OF THE SOLDER SHALL BE SMOOTH. THE WESTERN UNION SPLICES SHALL BE STAGGERED.
- (2) WCSMW 30/100 HEAT SHRINK TUBE, MINIMUM LENGTH 3" (75 mm), UNDERWATER GRADE.
- (3) WCS 200/750 HEAT SHRINK TUBE, MINIMUM LENGHT 6" (150 mm), UNDERWATER GRADE.

SCALE: NONE

4 NO. 14 2/C TWISTED, SHIELDED CABLE.

- 5 LOOP CONDUCTOR WITH FLEXIBLE PLASTIC TUBE. PRE-FORMED LOOP
- (6) XL POLYOLEFIN 2 CONDUCTOR
- 7) BREAKOUT SEALS. TYCO CBR-2 OR APPROVED EQUAL

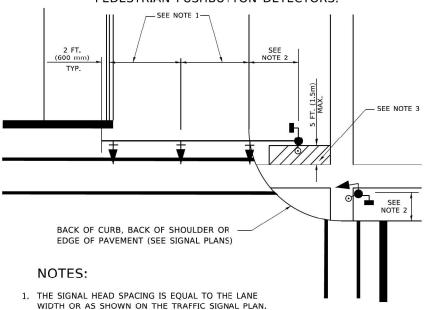
USER NAME = footemj	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 3/4/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

### TRAFFIC SIGNAL MAST ARM AND SIGNAL POST

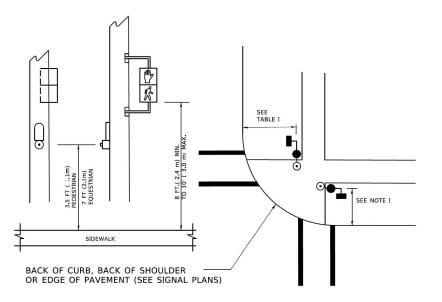
MAST ARM MOUNTED SIGNALS IN EXISTING, PROPOSED OR FUTURE SIDEWALK/BICYCLE PATH AREA. INTERSECTION SHOWN WITH PEDESTRIAN SIGNALS AND

PEDESTRIAN PUSHBUTTON DETECTORS.



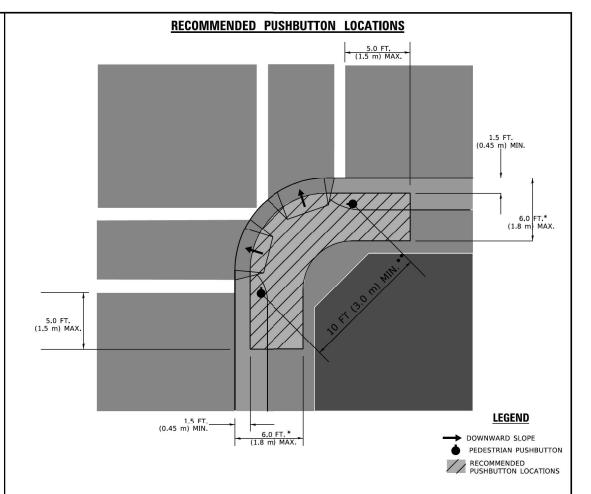
- 2. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
- PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE MAST ARM SHAFT OR THE SIGNAL POST.
- 4. THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
- 5. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."

### PEDESTRIAN SIGNAL POST AND PEDESTRIAN PUSH BUTTON POST



### NOTES:

- 1. REFER TO THE TRAFFIC SIGNAL EQUIPMENT OFFSET TABLE.
- 2. PROVIDE A LEVEL ALL-WEATHER SURFACE (CONCRETE SIDEWALK, ASPHALT BICYCLE PATH SURFACE OR MATCHING MATERIAL TO THE ADJACENT SURFACE) UP TO THE PEDESTRIAN SIGNAL POST OR THE PEDESTRIAN PUSH BUTTON POST.
- THE FACE OF THE PEDESTRIAN PUSHBUTTON SHALL BE PARALLEL TO THE CROSSWALK TO BE USED.
- 4. THE LOCATIONS AND INSTALLATION OF PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS SHALL MEET THE REQUIREMENTS OF THE MUTCD AND INFORMATION FOUND IN THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES FOR BUILDINGS AND FACILITIES."



- \* WHERE THERE ARE CONSTRAINTS THAT MAKE IT IMPRACTICAL TO PLACE THE PEDESTRIAN PUSHBUTTON BETWEEN 1.5 FT (0.45 m) AND 6 FT (1.8 m) FROM THE EDGE OF THE CURB, SHOULDER, OR PAVEMENT, IT SHOULD NOT BE FURTHER THAN 10 FT (3 m) FROM THE EDGE OF CURB, SHOULDER, OR PAVEMENT.
- \*\* WHERE THERE ARE CONSTRAINTS ON A PARTICULAR CORNER THAT MAKE IT IMPRACTICAL TO PROVIDE THE 10 FT (3 m) SEPERATION BETWEEN THE TWO PEDESTRIAN PUSHBUTTONS, THE PUSHBUTTONS MAY BE PLACED CLOSER TOGETHER OR ON THE SAME POLE.

### NOTES:

- PEDESTRIAN SIGNAL HEADS SHALL BE MOUNTED WITH THE BOTTOM OF THE SIGNAL HOUSING INCLUDING BRACKETS NOT LESS THAN 8 FT (2.4 m) OR MORE THAN 10 FT (3 m) ABOVE SIDEWALK LEVEL, AND SHALL BE POSITIONED AND ADJUSTED TO PROVIDE MAXIMUM VISIBILITY AT THE BEGINNING OF THE CONTROLLED CROSSWALK.
- THE BOTTOM OF THE SIGNAL HOUSING (INCLUDING BRACKETS) OF A VEHICULAR SIGNAL FACE THAT IS NOT LOCATED OVER A HIGHWAY SHALL BE AT LEAST 8 FT (2.4 m) BUT NOT MORE THAN 19 FT (5.8 m) ABOVE THE SIDEWALK OR, IF THERE IS NO SIDEWALK, ABOVE THE PAVEMENT GRADE AT THE CENTER OF THE ROADWAY.
- 3. THE BOTTOM OF THE SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARDS 877001, 877002, 877006, 877011 AND 877012 WITH A MINIMUM OF 16 FT (S.O m) AND A MAXIMUM OF 18 FT. (5.5 m) FROM THE HIGHEST POINT OF PAVEMENT.
- 4. THE BOTTOM OF THE TEMPORARY SPAN WIRE MOUNTED SIGNAL HOUSING AND ANY RELATED ATTACHMENTS TO A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL BE ACCORDING TO CURRENT STATE STANDARD 880001 WITH A MINIMUM OF 17 FT (5.18 m) FROM THE HIGHEST POINT OF PAVEMENT.
- THE TOP OF THE SIGNAL HOUSING OF A SIGNAL FACE LOCATED OVER ANY PORTION OF A HIGHWAY SHALL NOT BE MORE THAN 25.6 FT (7.8 m) ABOVE THE PAVEMENT.

### TRAFFIC SIGNAL EQUIPMENT OFFSET

TRAFFIC SIGNAL EQUIPMENT	COMBINATION CONCRETE CURB AND GUTTER (MINIMUM DISTANCE FROM BACK OF CURB TO CENTERLINE OF FOUNDATION)	SHOULDER/NON-CURBED AREA (MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO CENTERLINE OF FOUNDATION)
TRAFFIC SIGNAL MAST ARM POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.5m), MINIMUM 10 FT (3.0m)
TRAFFIC SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN SIGNAL POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
PEDESTRIAN PUSHBUTTON POST	4 FT (1.2m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
TEMPORARY WOOD POLE	6 FT (1.8m)	SHOULDER WIDTH + 2 FT (0.6m), MINIMUM 10 FT (3.0m)
CONTROLLER CABINET	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.
SERVICE INSTALLATION, GROUND MOUNT	6 FT (1.8m) MINIMUM DISTANCE SEE NOTE 2	SHOULDER WIDTH + 6 FT (1.8m), MINIMUM 16 FT (4.9m) SEE NOTE 3.

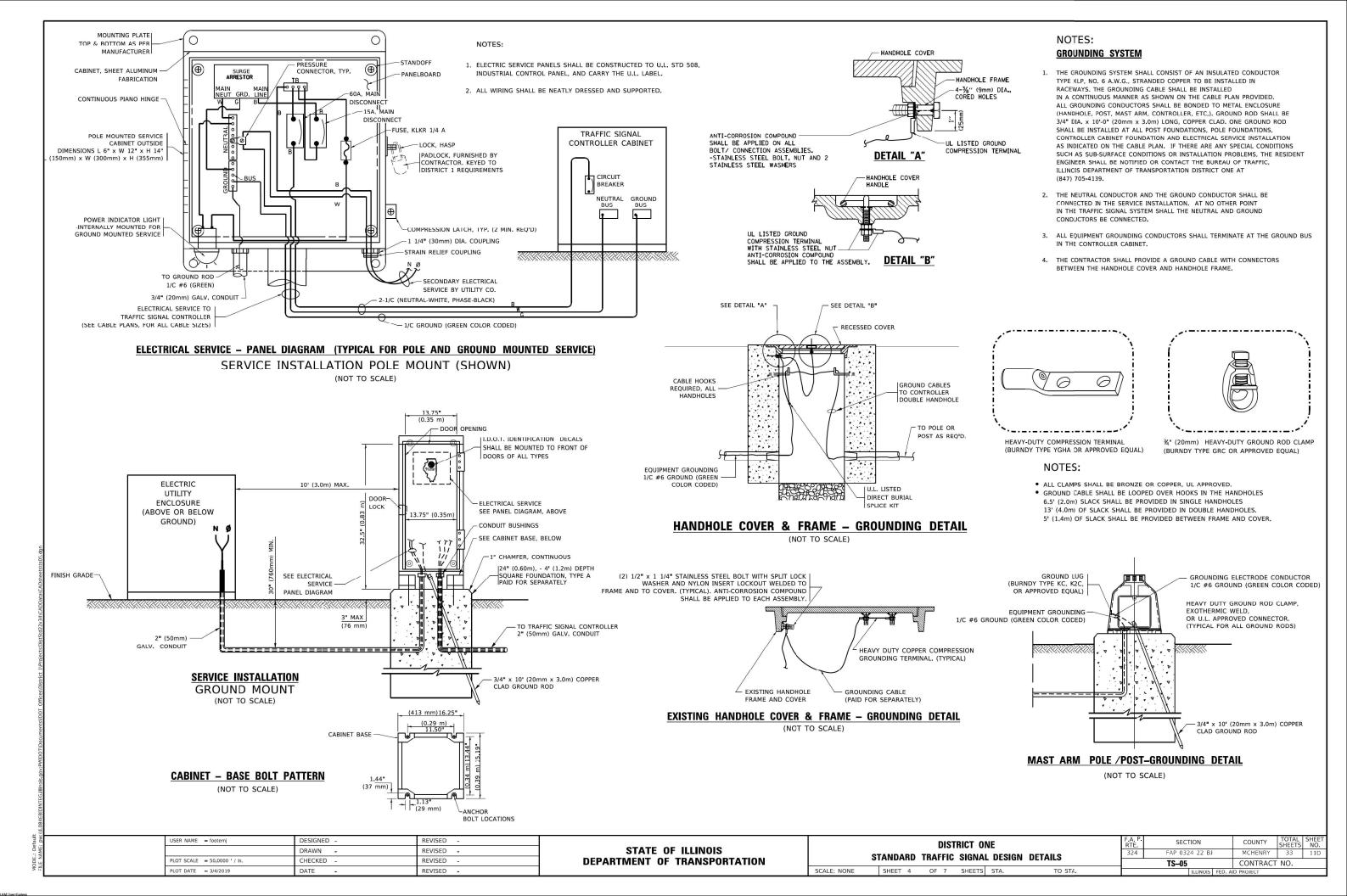
### NOTES:

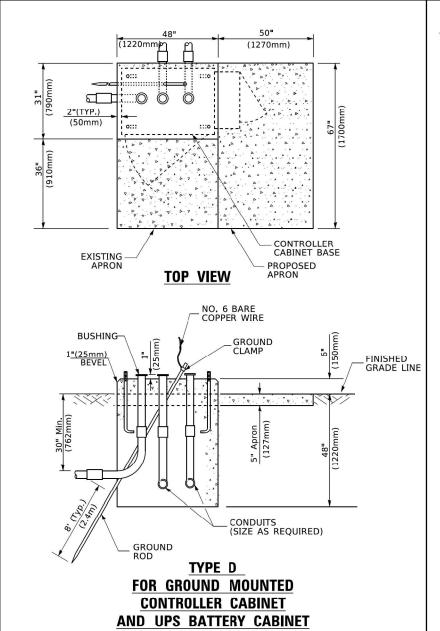
- 1. CONTACT THE "AREA TRAFFIC SIGNAL MAINTENANCE AND OPERATIONS ENGINEER" FOR ASSISTANCE IN LOCATING THE TRAFFIC SIGNAL EQUIPMENT WHEN THERE ARE CONFLICTS WITH DITCHES OR THE MINIMUM OFFSET DISTANCES CANNOT BE MET.
- 2. MINIMUM DISTANCE FROM THE BACK OF CURB TO THE ROADWAY SIDE OF THE FOUNDATION.
- 3. MINIMUM DISTANCE FROM THE EDGE OF PAVEMENT TOTHE ROADWAY SIDE OF THE FOUNDATION.
- 4. ANY CHANGES TO THE OFFSETS OF THE FOUNDATIONS, FROM THE MINIMUM DISTANCES LISTED IN THE "TRAFFIC SIGNAL EQUIPMENT OFFSET" CHART AND THE TRAFFIC SIGNAL INSTALLATION PLAN, COULD EFFECT THE PLACEMENT OF THE SIGNAL HEADS, PEDESTRIAN SIGNAL HEADS AND THE PEDESTRIAN PUSHBUTTONS. THE SIGNAL HEAD PLACEMENT ON THE MAST ARMS SHALL REMAIN AS PER THE TRAFFIC SIGNAL INSTALLATION PLAN AND THE "TRAFFIC SIGNAL MAST ARM AND SIGNAL POST" DETAIL ABOVE. THE PROPOSED MAST ARM LENGTHS MAY NEED TO BE REVISED TO MEET THE ABOVE REQUIREMENTS. THE PEDESTRIAN SIGNAL HEADS AND PEDESTRIAN PUSHBUTTONS MUST MEET THE REQUIREMENTS UNDER THE DETAILS ON THIS SHEET.

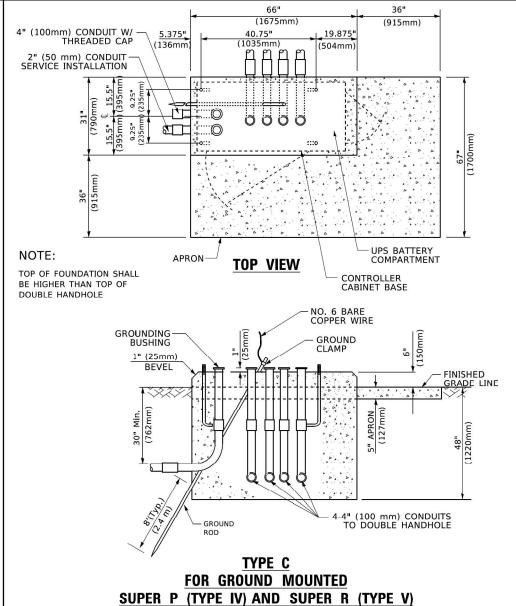
SCALE: NONE

USER NAME = footemj	DESIGNED -	REVISED -
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PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED -
PLOT DATE = 3/4/2019	DATE -	REVISED -

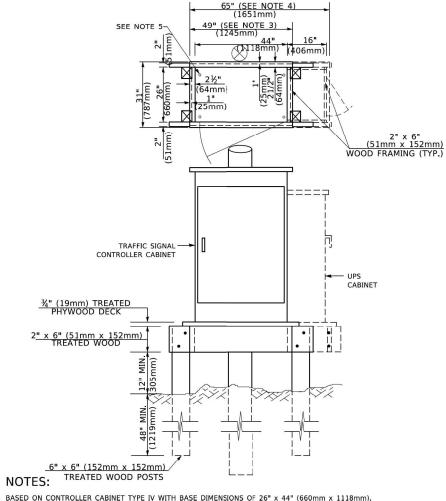
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION







**CONTROLLER CABINETS** 



- 1. BASED ON CONTROLLER CABINET TYPE IV WITH BASE DIMENSIONS OF 26" x 44" (660mm x 1118mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED
- 2. BASED ON UNINTERRUPTIBLE POWER SUPPLY CABINET WITH BASE DIMENSIONS OF 16" x 25" (406mm x 635mm). ADJUST PLATFORM SIZE TO FIT CABINET BASE DIMENSIONS BEING SUPPLIED.
- 3. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV.
- 4. PLATFORM SIZE FOR CONTROLLER CABINET TYPE IV AND UNINTERRUPTIBLE POWER SUPPLY CABINET.
- 5. DRILLED HOLES THROUGH THE PLATFORM BASE TO MATCH THE CONTROLLER CABINET BOLT TEMPLATE. FASTEN THE CONTROLLER CABINET TO THE PLATFORM WITH CARRIAGE BOLTS, WASHERS AND NUTS.
- $\mathbf{6}_{ullet}$  fasten all support wood framing to the wood posts with 2 Lag screws for each connection.

### TEMPORARY SIGNAL CONTROLLER WOOD SUPPORT PLATFORM

CABLE SLACK LENGTH	FEET	METER
HANDHOLE	6.5	2.0
DOUBLE HANDHOLE	13.0	4.0
SIGNAL POST	2.0	0.6
MAST ARM	2.0	0.6
CONTROLLER CABINET	1.5	0.5
FIBER OPTIC AT CABINET	13.0	4.0
ELECTRIC SERVICE AT (CABINET OR SERVICE LOCATION)	1.5	0.5
GROUND CABLE (SIGNAL POST, MAST ARM, CABINET)	1.5	0.5
GROUND CABLE (BETWEEN FRAME AND COVER)	5.0	1.6

VERTICAL CABLE LENGTH	FEET	METER
MAST ARM POLE ( MAST ARM MOUNTED SIGNAL HEAD)		
(L = MAST ARM LENGTH - DISTANCE TO SIGNAL HEAD FROM END OF ARM)	20.0+L	6.0+L
BRACKET MOUNTED (MAST ARM POLE OR SIGNAL POLE)	13.0	4.0
PEDESTRIAN PUSH BUTTON	6.0	2.0
SERVICE INSTALLATION POLE MOUNT TO SERVICE DROP	13.5	4.1
SERVICE INSTALLATION POLE MOUNT TO GROUND	13.5	4.1
SERVICE INSTALLATION GROUND MOUNT	6.0	2.0
FOUNDATION (SIGNAL POST, MAST ARM POLE, CONTROLLER CABINET, SERVICE-GROUND MOUNT)	3.0	1.0

### **VERTICAL CABLE LENGTH**

**CABLE SLACK** 

FOUNDATION	DEPTH
TYPE A - Signal Post	4'-0" (1.2m)
TYPE C - CONTROLLER W/ UPS	4'-0" (1.2m)
TYPE D - CONTROLLER	4'-0" (1.2m)
SERVICE INSTALLATION, GROUND MOUNT, TYPE A - SQUARE	4'-0" (1.2m)

### DEPTH OF FOUNDATION

Mast Arm Length	① Foundation Depth	Foundation Diameter	Spiral Diameter	Quantity of Rebars	Size of Rebars
Less than 30′ (9.1 m)	10'-0" (3.0 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to	13'-6" (4 <sub>4</sub> 1 m)	30" (750mm)	24" (600mm)	8	6(19)
30' (9.1 m) and less than 40' (12.2 m)	11'-0" (3 <sub>-</sub> 4 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)	13'-0" (4.0 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)	15'-0'' (4.6 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 56' (16.8 m) and less than 65' (19.8 m)	21'-0" (6.4 m)	42" (1060mm)	36" (900mm)	16	8(25)
Greater than or equal to 65' (19.8 m) and up to 75' (22.9 m)	25'-0" (7.6 m)	42" (1060mm)	36" (900mm)	16	8(25)

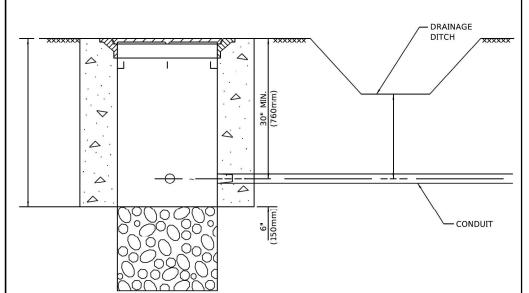
### NOTES:

- These foundation depths are for sites which have cohesive soils (clayey silt, sandy clay, etc.) along the length of the shaft, with an average Unconfined Compressive Strength (Qu) > 1.0 tsf (100 kpa). This strength shall be verified by boring data prior to construction or with testing by the Engineer during foundation drilling. The Bureau of Bridges & structures should be contacted for a revised design if other conditions are encountered.
- 2. Combination mast arm assemblies under 55 feet (16.8 m) shall use 36" (900 mm) diameter foundations.
- 3. Combination mast arm assemblies under 56 feet (16.8 m) through 75 feet (22.9 m) shall use 42" (1060 mm) diameter foundations
- 4. For most arm assemblies with dual arms refer to state standard 878001..

### DEPTH OF MAST ARM FOUNDATIONS, TYPE E

USER NAME = footemj	DESIGNED -	REVISED -				DI	STRICT C	INE		F.A. P.	SECTION	COUNTY	TOTAL	SHEET
	DRAWN -	REVISED -	STATE OF ILLINOIS		TANDADD				DETAILO	324	FAP 0324 22 BJ	MCHENRY	33	11E
PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED -	DEPARTMENT OF TRANSPORTATION	3	IANDARD	IKAFF	C SIGNA	AL DESIGN	DETAILS		TS-05	CONTRACT	NO.	
PLOT DATE = 3/4/2019	DATE -	REVISED -		SCALE: NONE	SHEET 5	OF 7	SHEETS	STA.	TO STA.		ILLINOIS FED.	ID PROJECT		

MODE · Default

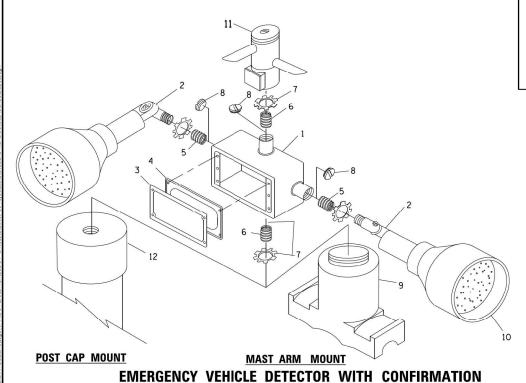


- 1. CONDUIT DEPTH SHALL BE A MINIMUM OF 30" (760mm) BELOW THE BOTTOM OF THE DRAINAGE DITCH OR ANY SLOPING GROUND
- 2. THE MINIMUM CONDUIT DEPTH APPLIES TO ALL CONDUIT PLACED UNDER ROADWAY PAVEMENT, MULTI-USE PATHS, SIDEWALKS AND SOIL SURFACES.
- 3. THE MINIMUM CONDUIT DEPTH APPLIES TO ALL HANDHOLES, HEAVY DUTY HANDHOLES AND DOUBLE HANDHOLES.

USER NAME = footemi

PLOT SCALE = 50.0000 ' / in.

### HANDHOLE WITH MINIMUM CONDUIT DEPTH (NOT TO SCALE)



**BEACON MOUNTING DETAIL** 

DESIGNED -

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DRAWN

REVISED .

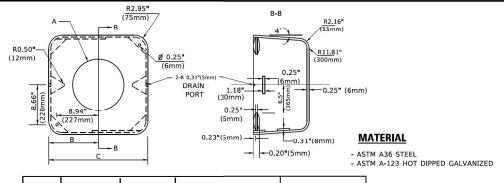
REVISED -

REVISED

(915mm) 40.75" 19.875" (1035mm) CONTROLLER CABINET BASE PROPOSED-**TOP VIEW** APRON NO. 6 BARE COPPER WIRE -NO. 3 DOWEL 18" (450mm LONG (8 REQ.) BUSHING-GROUND CLAMP EXISTING-ANCHOR BOLTS GRADE LINE BEVEL (300 mm)(225mm) -EXISTING CONDUITS EXISTING GROUND ROD MODIFY EXISTING TYPE "D" FOUNDATION TO TYPE "C" FOUNDATION (NOT TO SCALE)

ITEM	NO. IDENTIFICATION
1	OUTLET BOX- GALV. 21 CU.IN. (0.000344 CU-M)
2	LAMP HOLDER AND COVER
3	OUTLET BOX COVER
4	RUBBER COVER GASKET
5	REDUCING BUSHING
6	¾"(19 mm) CLOSE NIPPLE
7	¾"(19 mm) LOCKNUT
8	¾"(19 mm) HOLE PLUG
9	SADDLE BRACKET - GALV.
10	6 WATT PAR 38 LED FLOOD LAMP
11	DETECTOR UNIT
12	POST CAP [18 FT. (5.4 m) POST MIN.]

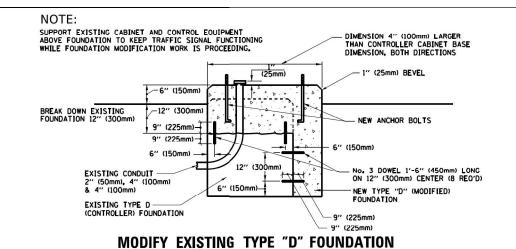
- 1. ALL ELECTRICAL ITEMS, EXCEPT ITEMS #2 AND #11 SHALL BE ALUMINUM OR
- 2. ITEM #1- OZ/GEDNEY FSX-1-50 OR EQUIVALENT ITEM #9- "BAND-IT" SADDLE BRACKET OR EQUIVALENT
- 3. WHEN POST MOUNTING IS SPECIFIED, ITEM #9 SHALL NOT BE REQUIRED. THE SCREWS SHALL BE REQUIRED ON EACH CAP.

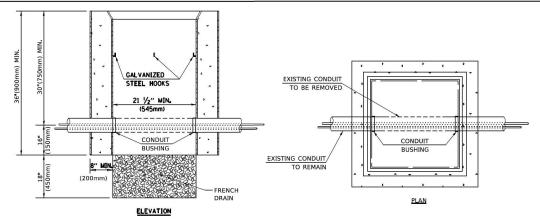


Α	В	С	HEIGHT	WEIGHT
VARIES	9.5"(241mm)	19"(483mm)	7" (178mm) - 12" (300mm)	53 lbs (24kg)
VARIES	10.75"(273mm)	21.5"(546mm)	7" (178mm) - 12" (300mm)	68 lbs (31 kg)
VARIES	13.0"(330mm)	26"(660mm)	7" (178mm) - 12" (300mm)	81 lbs (37 kg)
VARIES	18.5"(470mm)	37"(940mm)	7" (178mm) - 12" (300mm)	126 lbs (57 kg)

### **SHROUD**

- . DIMENSION "A" IS EQUAL TO THE DIAMETER OF THE MAST ARM POLE AT THE TOP OF THE SHROUD. THE SHROUD SHALL BE TIGHT TO THE MAST ARM POLE.
- 2. THE SUPPLIER SHALL VERIFIED THE ABOVE DIMENSIONS BASED ON MAST ARM REQUIREMENTS.
- 3. THE HEIGHT OF THE SHROUD SHALL COVER THE ANCHOR BOLTS, NUTS AND MAST ARM POLE BASE.





- 1. HANDHOLE CONSTRUCTED PER STATE STANDARD 814001.
- 2. REMOVAL OF THE EXISTING CONDUIT FROM THE HANDHOLE AND THE INSTALLATION OF THE CONDUIT BUSHINGS SHALL BE INCLUDED WITH THE COST OF THE HANDHOLE.

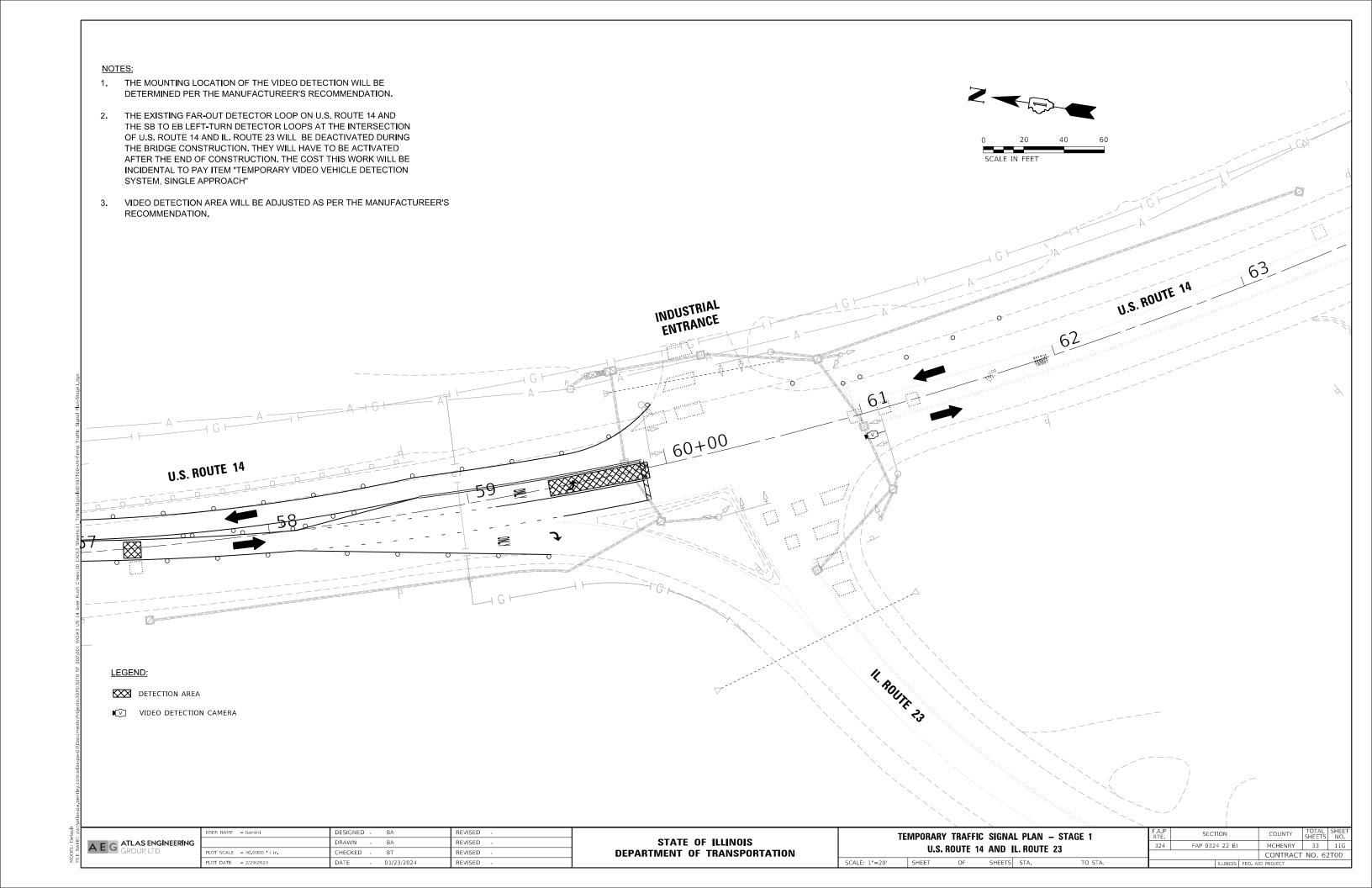
### HANDHOLE TO INTERCEPT EXISTING CONDUIT

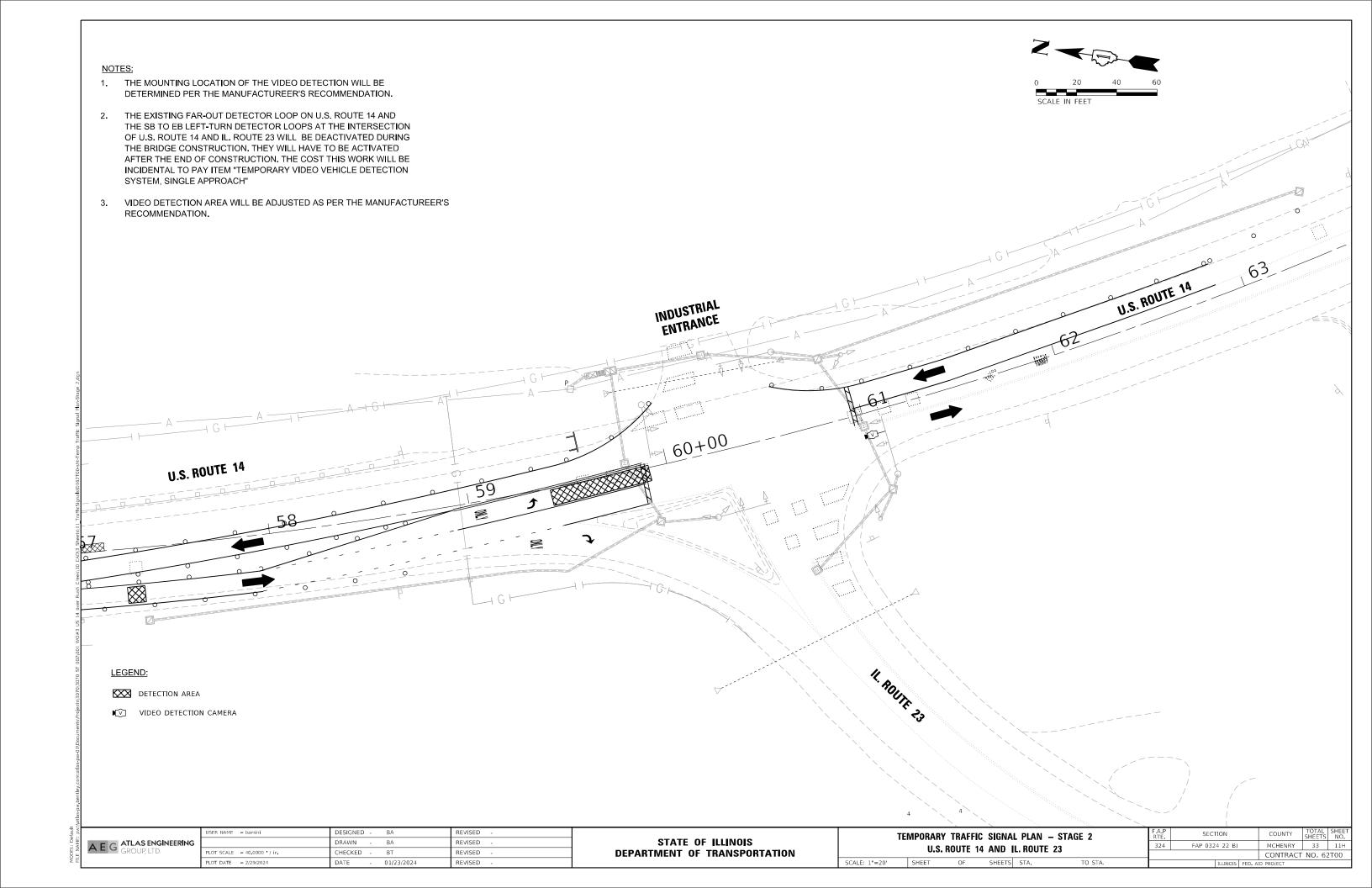
DISTRICT ONE STANDARD TRAFFIC SIGNAL DESIGN DETAILS TS-05 CONTRACT NO. SHEET 6 OF 7 SHEETS STA.

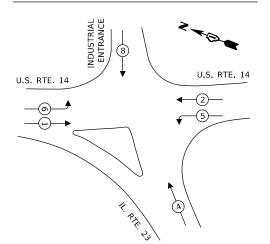
- ITEM #2- MULBERRY CON-O-SHADE LAMP SHIELD OR EQUIVALENT
- DETECTION UNIT SHALL BE MOUNTED DIRECTLY ON TOP OF THE CAP BY DRILLING AND TAPPING A 3/4 "(19 mm) HOLE WITH PIPE THREADS. THE POST CAP SHALL EITHER BE SCREWED TO THE TOP OF THE POST OR A MINIMUM OF 3 TIGHTENING

STATE OF ILLINOIS

**DEPARTMENT OF TRANSPORTATION** 







### **LEGEND**:

**◆ \* PROTECTED PHASE** 

← - \*\* - PROTECTED/PERMITTED PHASE

### TRAFFIC SIGNAL **ELECTRICAL SERVICE REQUIREMENTS** NO. OF LED WATTAGE % OPERATION SIGNAL 14 (RED) 17 119.0 (YELLOW) 14 25 25 87.5 (GREEN) 14 52.5 PERMISSIVE ARROW 12 10 9.6 PED. SIGNAL 20 CONTROLLER 100.0 100 100 25.0 VIDEO SYSTEM 150 100 150.0 BLANK-OUT SIGN 25

FLASHER - - 50 
STREET NAME SIGN - 120 50 
LUMINAIRE - - - 
ENERGY COSTS TO:

CITY OF HARVARD
201 WEST DIGGINS STREET
HARVARD, IL 60033

ENERGY SUPPLY: CONTACT: MIKE LENOX
PHONE: (8150) 490-2863

COMPANY: COMMONWEALTH EDISON

**INDUSTRIAL ENTRANCE** -(1#6) INTERSECTION -AND (SAMPLING) SYSTEM DETECTOR U.S. ROUTE 14 U.S. ROUTE 14 **CABLE PLAN** - INTERSECTION AND (SAMPLING) SYSTEM DETECTOR

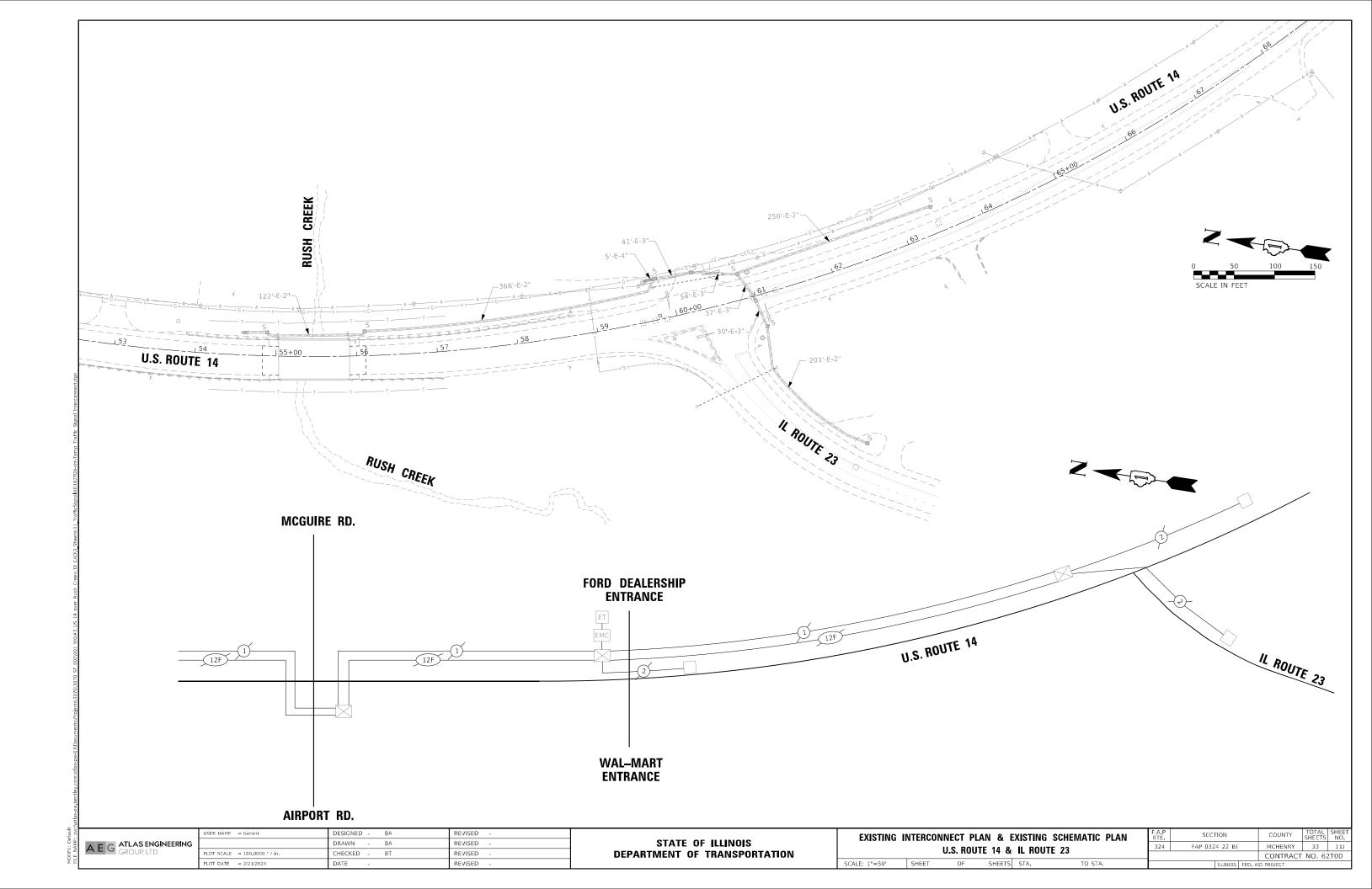
AEG ATLAS ENGINEERING GROUP, LTD.

ACCOUNT NUMBER:

JSER NAME = bamini	DESIGNED - BA	REVISED -
	DRAWN - BA	REVISED -
PLOT SCALE = 40.0000 / in.	CHECKED - BT	REVISED -
PLOT DATE = 2/29/2024	DATE - 01/23/2024	REVISED -

TEI	MPORARY	TRAFFIC	SIGNAL	CABLE PLAN	AND
	PHA	SE DESIG	NATION	DIAGRAM	
SCALE: 1"=20'	SHEET	OF	SHEETS	STA.	TO STA.

	RTE	SECTION			COUNTY	SHEETS	NO.
	324	24 FAP 0324 22 BJ			MCHENRY	33	11I
_				CONTRACT	NO. 62	2T00	
			ILLINOIS	ID PROJECT			



Bench Mark: Chiseled "a" in S.E. wingwall of bridge over Rush Creek. Elev. 924.05. All elevations are from the 1984 bridge plans.

1'-3"

20'-0"

Approach Slab,

Existing Structure: Previous SN 056-0008 constructed in 1944 and removed in 1984. The existing abutments were partially removed and abandoned below grade. SN 056-0052, constructed in 1984 is a single span with a total length of 88'-0" (back to back of abutments), an overall width of 51'-2" out to out with a 0 deg. skew to the local tangent. The superstructure consists of a 7½" thick concrete slab on 7 Precast Prestressed Concrete I-Beams, 54". The substructure consists of a reinforced concrete

& Brg. N. Abut.

H BK. N. Abut

Sta. 55+03.50

Elev. 925.57\*\*

11'-6"

Traffic to be maintained utilizing stage construction.

\* Measured at © of Structure.

HMA Taper With Butt Joint, Typ.

each end (See Roadway Plan)

\*\* Elevation after 1/4" Diamond Grinding.

€ US-14 & P.G.

Local Tangent ( \_\_\_

Joint Removal and -

Replacement, Typ.

Existing Traffic Barrier

Terminals to be removed

Existing

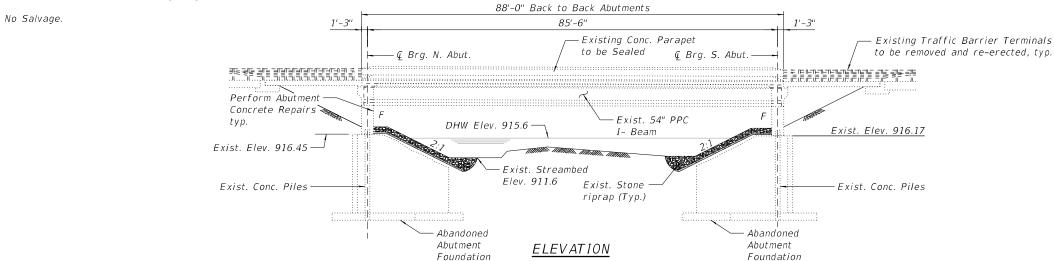
Underground

Telephone

To Remain

and re-erected, typ.

Sta. 55+47.50



88'-0" Back to Back of Abutments

85'-6"

5 - 6" ∅ Floor drain spaces @ 13'-0" = 65'-0"

Exist. Stone

Riprap (Typ.)

PLAN

Existing Deck

Protected, typ.

Stage

Line

Construction

- Ç Structure Bk. S. Abut.

Sta. 55+47.50 Sta. 55+91.50

Elev. 925.43 \*\* Elev. 925.29

Drain to be Cleaned and

### LOADING HS 20-44 (EXIST.)

Original Structure 25 psf future wearing surface. After overlay, no future wearing surface.

### DESIGN STRESSES

### FIELD UNITS (NEW. CONST.)

f'c = 3,500 psi (Substructure) f'c = 4,000 psi (Superstructure) fv = 60,000 psi (Reinforcing Steel)

### FIELD UNITS (EXIST. CONST.)

Cast in place reinforced concrete f'c = 3,500 psi (Concrete)fy = 60,000 psi (Reinforcing Steel) Pre-stressed concrete  $f'c = 6,000 \ psi$ f'ci = 4,800 psi $f's = 270,000 \text{ psi } (\frac{1}{2}" \text{ dia. strands})$  $f'si = 189,000 \text{ psi } (\frac{1}{2}" \text{ dia. strands})$ 

### DESIGN SPECIFICATIONS (NEW CONST.)

2002 AASHTO Standard Specification for Highway Bridges, 17th Edition.

### DESIGN SPECIFICATIONS (EXIST.)

1977 AASHTO and 1978 thru 1983 Interim Specifications.

### WATERWAY INFORMATION

Drainage area=5.26 sq.mi. Low Grade Elev.=924.00 Sta. 57+00									
Flood	Freq.	Q	Opening	Sq. Ft.	NAT	Неас	d-Ft	Headwa	iter El.
1 1000	Yr.	C.F.S.	Exist.	Prop.	H.W.E.	Exist.	Prop.	Exist.	Prop.
Design	50	705	166	196	915.6	0.15	0.07	915.75	915.67
Base	100	810	179	209	915.8	0.18	0.08	915.98	915.88
Overtopping									
Max. Cal	500	1050		230	916.1		0.12		916.22

Note: All hydraulic data is from 1984 bridge plans.

Existing Underground

Telephone

To Remain

-Existing Approach Inlet to be Adjusted, Typ. (See

Shoulder Slab, Typ.

- Existing Concrete Approach

To be scarified and overlaid

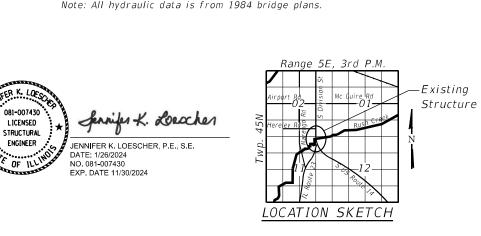
Existing Concrete Shoulder Approach Slab to

SHEET S-1 OF S-10 SHEETS

be removed and replaced (1 location)

Civil Plan)

(3 Locations)



GENERAL PLAN AND ELEVATION U.S. ROUTE 14 OVER RUSH CREEK F.A.P. ROUTE 324 SEC. FAP-0324-22-BJ MCHENRY COUNTY STATION 55+47.50 STRUCTURE NO. 056-0052

A E G ATLAS ENGINEER

	USER NAME =	DESIGNED - JJI	REVISED -	
ERING		CHECKED - JKL	REVISED -	
	PLOT SCALE =	DRAWN - KB	REVISED -	
	PLOT DATE =	CHECKED - 1/15/2024	REVISED -	

Exist. Name Plate

to remain

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

& Brg. S. Abut.

11'-6"

ltyp.

Bridge Deck

Scarification 3/4" &

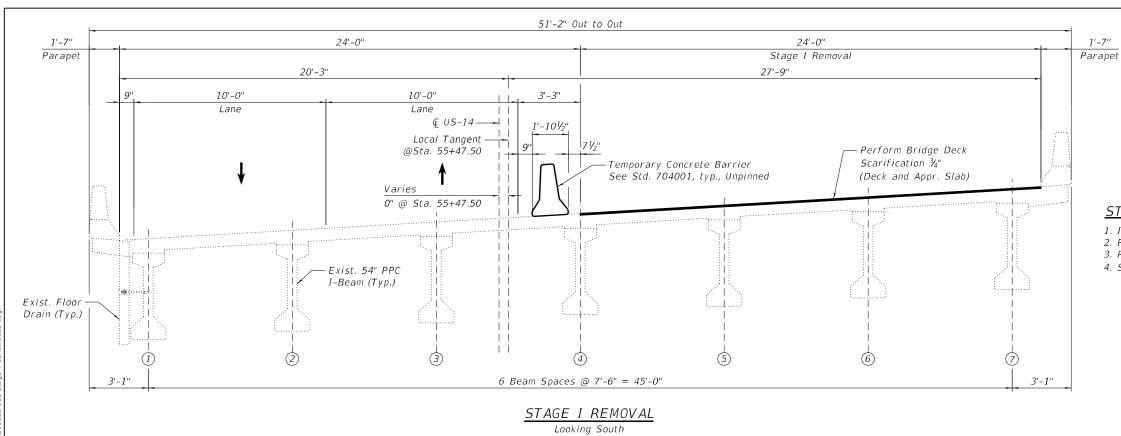
Overlay  $2\frac{3}{4}$ " with  $\frac{1}{4}$ "

Diamond Grinding, typ.

Bridge Deck Latex Concrete

SECTION FAP 0324 22 BJ MCHENRY 33 12 CONTRACT NO. 62T00

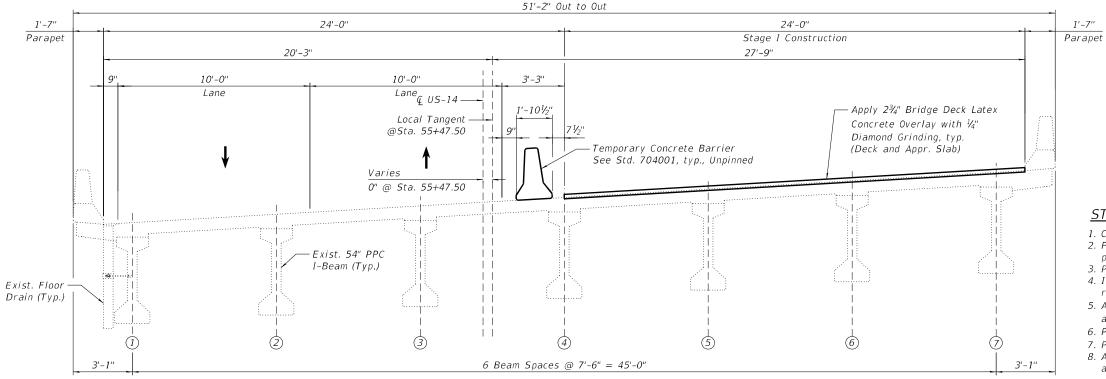
of



### STAGE I REMOVAL

- 1. Install temporary concrete barrier as shown.
- 2. Remove portions of the joint at end of the approach slab.
- 3. Remove the southwest concrete shoulder approach slab.
- 4. Scarify  $\frac{3}{4}$ " from bridge deck and approach slab as shown in the plans.

@ *Q* Structure Sta. 55+47.50



### STAGE I CONSTRUCTION

- 1. Construct the southwest concrete shoulder approach slab.
- 2. Perform partial-depth approach slab repairs at locations shown in the
- 3. Perform full-depth bridge deck repairs at locations shown in the plans.
  4. Install joint seal at each approach slab and replace associated reinforcement and concrete adjacent to the joint.
- 5. Apply  $2\frac{3}{4}$ " bridge deck latex concrete overlay to bridge deck and approach slab.
- 6. Perform  $\frac{1}{4}$ " diamond grinding (deck and approach slabs).
- 7. Perform bridge deck grooving for the latex overlay.
- 8. Apply protective coat to the top and inside faces of existing parapets and to the latex overlay.

### STAGE I CONSTRUCTION

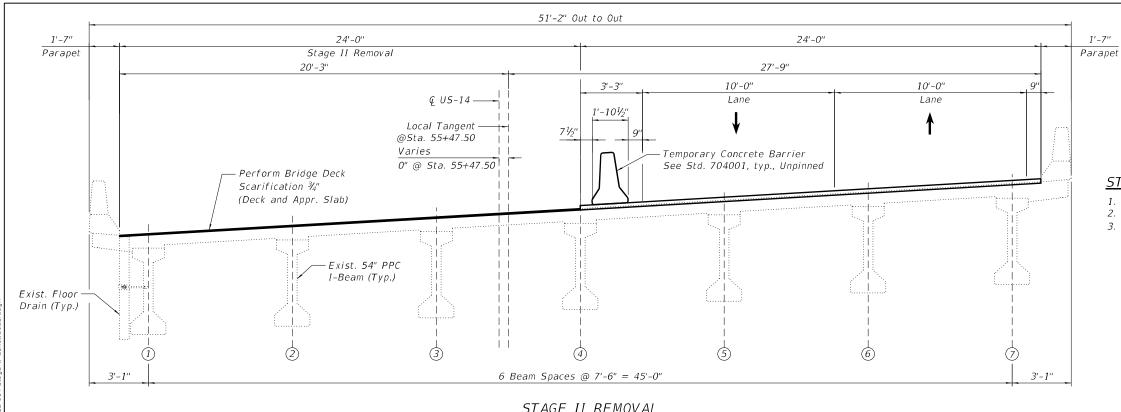
Looking South @ © Structure Sta. 55+47.50

	USER NAME =	DESIGNED - JJI	REVISED -
ATLAS ENGINEERING		CHECKED - JKL	REVISED -
GROUP, LTD.	PLOT SCALE =	DRAWN - KB	REVISED -
	PLOT DATE =	CHECKED - 1/15/2024	REVISED -

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION** 

SECTION STAGE CONSTRUCTION DETAILS FAP 0324 22 BJ MCHENRY STRUCTURE NO. 056-0052 CONTRACT NO. 62T00 SHEET S-3 OF S-10 SHEETS

1/26/2024 12:49:41 AM



### STAGE II REMOVAL

STAGE II CONSTRUCTION

and to the latex overlay.

plans.

- 1. Install temporary concrete barrier as shown.
- 2. Remove portions of the joint at end of the approach slab.
- 3. Scarify  $\frac{3}{4}$ " from bridge deck and approach slab as shown in the plans.

1. Perform partial-depth approach slab repairs at locations shown in the

2. Perform full-depth bridge deck repairs at locations shown in the plans.

7. Apply protective coat to the top and inside faces of existing parapets

3. Install joint seal at each approach slab and replace associated

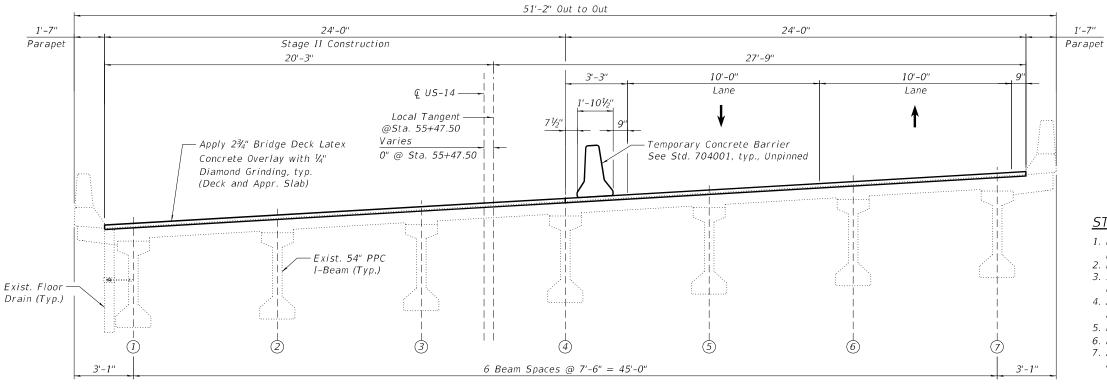
4. Apply  $2\frac{3}{4}$ " bridge deck latex concrete overlay to bridge deck and

reinforcement and concrete adjacent to the joint.

5. Perform  $\frac{1}{4}$ " diamond grinding (deck and approach slabs). 6. Perform bridge deck grooving for the latex overlay.

### STAGE II REMOVAL

Looking South @ @ Structure Sta. 55+47.50



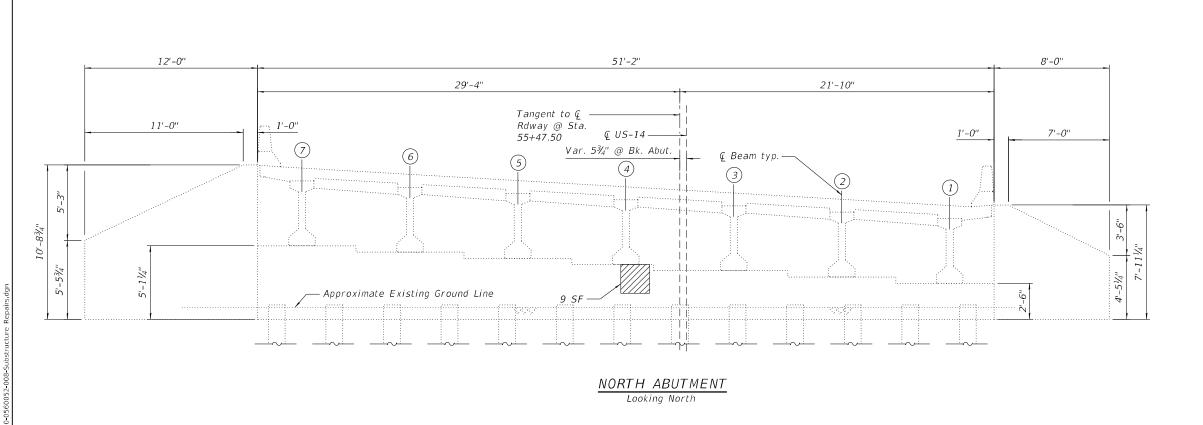
STAGE II CONSTRUCTION Looking South @ @ Structure Sta. 55+47.50

		USER NAME =	DESIGNED - JJI	REVISED -	
	A E C ATLAS ENGINEERING		CHECKED - JKL	REVISED -	ı
	GROUP, LTD.	PLOT SCALE =	DRAWN - KB	REVISED -	ı
:		PLOT DATE =	CHECKED - 1/15/2024	REVISED -	1

STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**  STAGE CONSTRUCTION DETAILS STRUCTURE NO. 056-0052 SHEET S-4 OF S-10 SHEETS

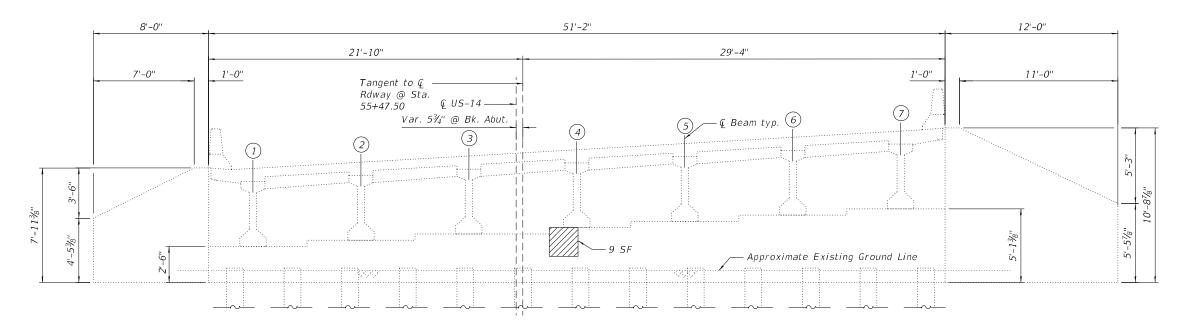
SECTION FAP 0324 22 BJ MCHENRY CONTRACT NO. 62T00

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### BILL OF MATERIAL

ITEM	UNIT	TOTAL
Structural Repair of Concrete (Depth Equal or Less than 5 inches)	Sq. Ft.	20



### NOTES:

1. Repair areas shown are intended as guide for bidding purposes. Actual repair areas shall be determined in the field by the Engineer. A nominal amount of additional repair quantitites have been provided to account for repairs not shown.

### LEGEND

Structural Repair of Concrete
(Depth Equal or Less than 5 inches)

### SOUTH ABUTMENT Looking South

	USER NAME =	DESIGNED - JJI	REVISED -
A E C ATLAS ENGINEERING		CHECKED - JKL	REVISED -
GROUP, LTD.	PLOT SCALE =	DRAWN - KB	REVISED -
	PLOT DATE -	CHECKED 1/15/2024	REVISED.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

 SUBSTRUCTURE REPAIRS
 F.A.P. RTE.
 S.

 STRUCTURE NO. 056—0052
 324
 FAP C.

 SHEET S-8
 OF S-10
 SHEETS
 FAP C.

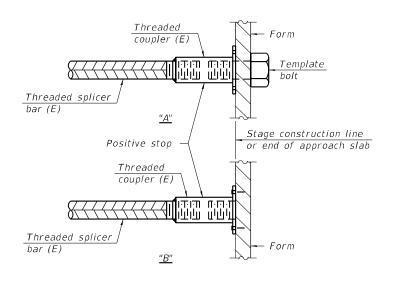
### STANDARD BAR SPLICER ASSEMBLY PLAN

Only bar splicer assemblies as presented on the approved QPL list may be used.

Threaded splicer bar length = min. lap length +  $1\frac{1}{2}$ " + thread length

\* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum Iap length
N Approach Slab	#4	4	2'-8"
N Approach Slab	#5	4	3'-6"
S Approach Slab	#4	4	2'-8"
S Approach Slab	#5	4	3'-6"

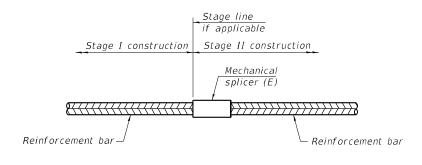


### INSTALLATION AND SETTING METHODS

"A": Set bar splicer assembly by means of a template bolt "B": Set bar splicer assembly by nailing to wood forms or

cementing to steel forms.

(E): Indicates epoxy coating.



### STANDARD MECHANICAL SPLICER

Location	Bar size	No. assemblies required

Notes:

Splicer bars shall be deformed with threaded ends and have a minimum 60 ksi yield strength.

All reinforcement shall be lapped and tied to the splicer bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars. See Section 508 of the Standard Specifications. See approved list of bar splicer assemblies and mechanical splicers for

alternatives.

BSD-1

2-1-2023



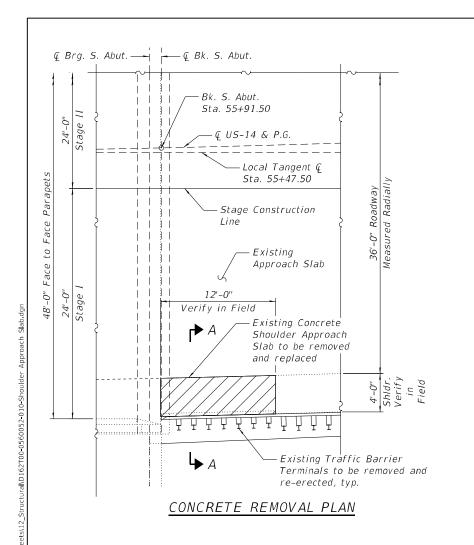
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	CHECKED	-	JKL	REVISED	-
PLOT SCALE =	DRAWN	-	KB	REVISED	-
PLOT DATE =	CHECKED	-	1/15/2024	REVISED	-

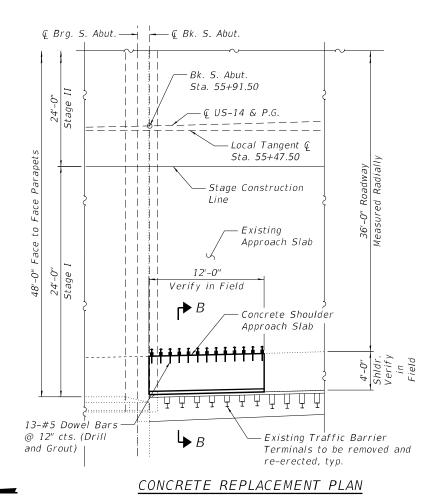
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY DETAILS
STRUCTURE NO. 056-0052

SHEET S-9 OF S-10 SHEETS

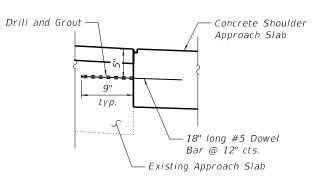
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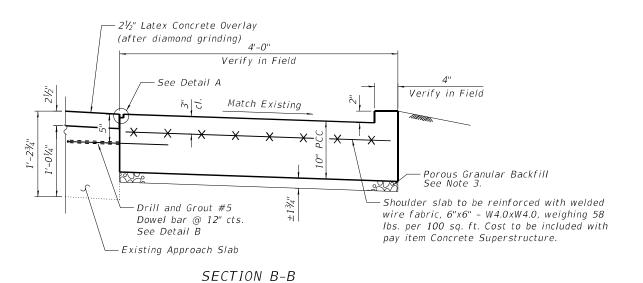
Joints shall be sealed with two component, non-staining, gray, sealing compound with polysulfide liquid polymers, gun grade with primers. Included as part of Concrete Superstructure.

### DETAIL A



DETAIL B

# Bridge Deck Scarification 4'-0" Verify in Field Note: The second of t



### <u>LEGEND</u>

Concrete Removal

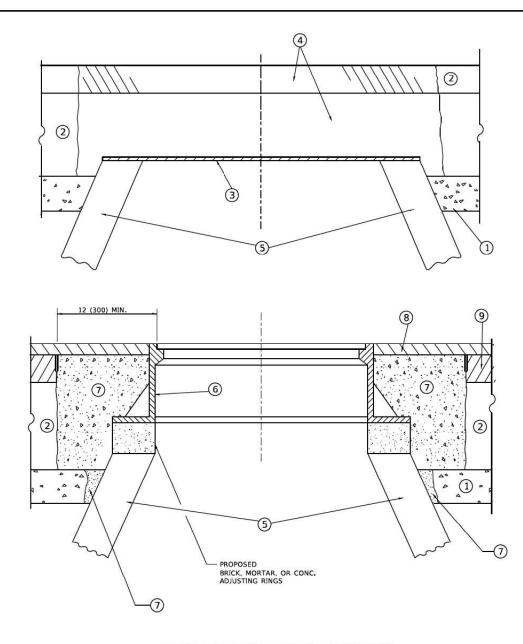
### <u>NOTES</u>

- 1. Saw cutting to be included in pay item Concrete Removal.
- 2. Epoxy coated dowel bar to be included in pay item Drill and Grout Dowel Bars.
- 3. Porous Granular Backfill to be included in pay item Concrete Superstructure. This work shall be in accordance with Article 209 of the Standard Specifications.

### BILL OF MATERIAL

ITEM	UNIT	TOTAL
Concrete Removal	Cu. Yd.	1.5
Concrete Superstructure	Cu. Yd.	1.5
Drill and Grout Dowel Bars	Each	13

DESIGNED -REVISED SECTION **CONCRETE SHOULDER APPROACH SLAB** A E G ATLAS ENGINEERING STATE OF ILLINOIS CHECKED -JKL REVISED FAP 0324 22 BJ MCHENRY 33 21 **STRUCTURE NO 056-0052** DRAWN REVISED **DEPARTMENT OF TRANSPORTATION** CONTRACT NO. 62T00 SHEET S-10 OF S-10 SHEETS PLOT DATE = REVISED CHECKED -1/15/2024



### DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING

### NOTES

- EXISTING BROKEN FRAMES AND LIDS SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR AND SHALL BE REPLACED AS DIRECTED BY THE ENGINEER. REPLACEMENT FRAMES AND LIDS WILL BE PAID FOR IN ACCORDANCE WITH ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS UNLESS A SEPARATE PAY ITEM HAS BEEN PROVIDED.
- IF THE EXISTING LIDS ARE OPEN, THE FRAME WILL BE ADJUSTED TO THE ELEVATION OF THE MILLED PAVEMENT SURFACE PRIOR TO THE MILLING OPERATION. THE FRAME WILL NOT BE REMOVED AND COVERED BY THE METAL PLATE.
- CITY OF CHICAGO CASTINGS ARE THE PROPERTY OF THE CITY AND THE CONTRACTOR SHALL NOTIFY THE CITY FOR REMOVAL AND DISPOSITION OF THE CASTINGS.
- THE METAL PLATE USED TO COVER THE STRUCTURE SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.
- THE CONTRACTOR SHALL REMOVE ALL TRAFFIC CONTROL DEVICES BY THE END OF EACH WORK SHIFT.

### CONSTRUCTION PROCEDURES

### STAGE 1 (BEFORE PAVEMENT MILLING)

- A) REMOVE A MINIMUM OF 12 (300) OF THE PAVEMENT FROM AROUND THE STRUCTURE.
- B) REMOVE THE EXISTING FRAME AND LID FROM THE STRUCTURE,
- C) COVER THE STRUCTURE OPENING WITH A 36 (900) DIAMETER METAL PLATE.
- D) BACKFILL WITH CRUSHED STONE AND HMA SURFACE MIX APPROVED BY THE ENGINEER. (MIN. 3 (80) HMA TO REMAIN AFTER MILLING).

### STAGE 2 (AFTER PAVEMENT MILLING)

- A) REMOVE THE HMA SURFACE MIX AND CRUSHED STONE.
- B) INSTALL THE FRAME AND LID; ADJUST THE FRAME TO ITS FINAL SURFACE ELEVATION.
- C) THE SURROUNDING SPACE SHALL BE FILLED WITH CLASS PP-2\* CONCRETE TO THE ELEVATION OF THE SURFACE OF THE EXISTING BASE COURSE OR THE BINDER COURSE.
- \*UNLESS OTHERWISE SPECIFIED IN THE PLANS.

THE PROCEDURE EXPLAINED ABOVE SHALL CONFORM TO THE APPLICABLE PORTIONS OF SECTIONS 353, 406, 602, AND 603 OF THE STANDARD SPECIFICATIONS EXCEPT THAT "THE CONTRACTOR SHALL ADJUST THE STRUCTURES TO THE FINISHED PAVEMENT ELEVATION NO MORE THAN 5 CALENDAR DAYS PRIOR TO PLACEMENT OF THE FINAL LIFT OF SURFACE UNLESS APPROVED BY THE ENGINEER."

### LEGEND

- 1 SUB-BASE GRANULAR MATERIAL
- (6) FRAME AND LID (SEE NOTES)
- 2 EXISTING PAVEMENT
- (7) CLASS PP-2\* CONCRETE
- 3 36 (900) DIAMETER METAL PLATE
- 8 PROPOSED HMA SURFACE COURSE
- 4 PROPOSED CRUSHED STONE AND HMA SURFACE MIX
  - AND
- (5) EXISTING STRUCTURE
- PROPOSED HMA BINDER COURSE

### **LOCATION OF STRUCTURES**

THE CONTRACTOR WILL BE REQUIRED TO KEEP A RECORD OF THE LOCATIONS OF THE BURIED STRUCTURES ACCORDING TO THE STATION AND DISTANCE LEFT OR RIGHT OF THE CENTERLINE OF PAVEMENT. UPON COMPLETION OF THE WORK, THE CONTRACTOR WILL DELIVER THE RECORD TO THE ENGINEER.

### **BASIS OF PAYMENT**

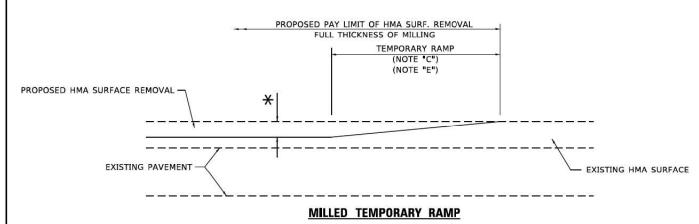
- REMOVING FRAMES AND LIDS ON DRAINAGE AND UTILITY STRUCTURES IN THE PAVEMENT PRIOR TO MILLING, AND ADJUSTING TO FINAL GRADE PRIOR TO PLACING THE SURFACE COURSE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR "FRAMES AND LIDS TO BE ADJUSTED (SPECIAL)."
- THIS WORK WILL NOT BE PAID FOR WHEN DRAINAGE AND UTILITY STRUCTURES ARE SPECIFIED FOR PAYMENT AS STRUCTURE RECONSTRUCTION.
- NEW FRAMES AND LIDS, WHEN SPECIFIED, WILL BE PAID FOR SEPARATELY.
- 4. WHEN STRUCTURES ARE TO BE ADJUSTED OR RECONSTRUCTED, THE LOWERING AND RAISING OF THE FRAMES AND LIDS WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN THE COST OF THE CORRESPONDING PAY ITEM.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

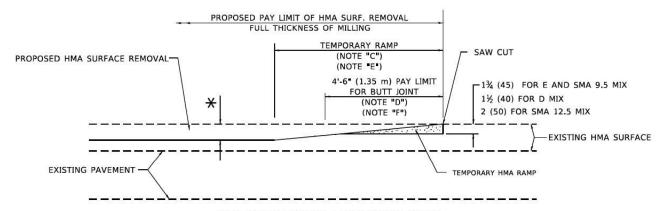
DETAILS FOR
FRAMES AND LIDS ADJUSTMENT WITH MILLING

SCALE: NONE SHEET 1 OF 1 SHEETS STA. TO STA.



(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

### OPTION 1

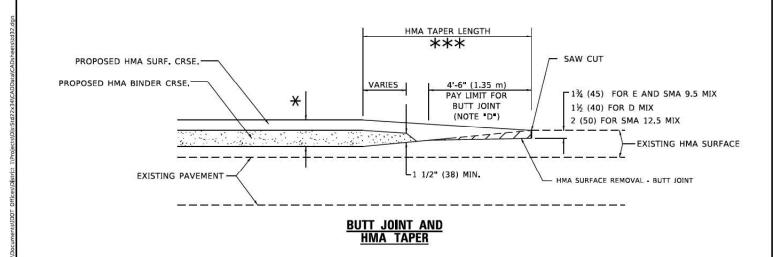


### HMA CONSTRUCTED TEMPORARY RAMP

(FOR BUTT JOINT AND HMA TAPER SEE DETAIL BELOW)

### OPTION 2

### TYPICAL TEMPORARY RAMP

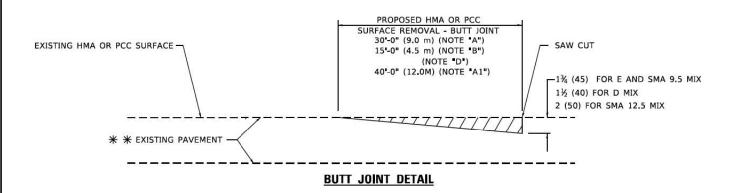


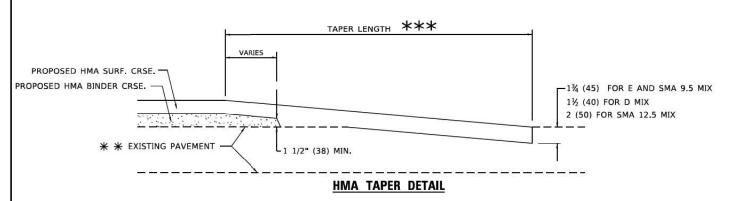
### TYPICAL BUTT JOINT AND HMA TAPER FOR MILLING AND RESURFACING

DESIGNED - M. DE YONG USER NAME = Lawrence, DeManche REVISED - A. ABBAS 03-21-97 DRAWN REVISED - M. GOMEZ 04-06-01 PLOT SCALE = 100.0000 ' / in. CHECKED -REVISED - R. BORO 01-01-07 PLOT DATE = 11/18/2022 DATE REVISED \_ K SMITH 11-18-22

### STATE OF ILLINOIS **DEPARTMENT OF TRANSPORTATION**

**BUTT JOINT AND** FAP 0324 22 BJ MCHENRY HMA TAPER DETAILS BD400-05 BD-32 CONTRACT NO. 62T00 OF 1 SHEETS STA. SHEET 1 TO STA





### TYPICAL BUTT JOINT AND HMA TAPER FOR RESURFACING ONLY

\*\* PC CONCRETE, HMA OR HMA RESURFACED PAVEMENT.

### **GENERAL NOTES**

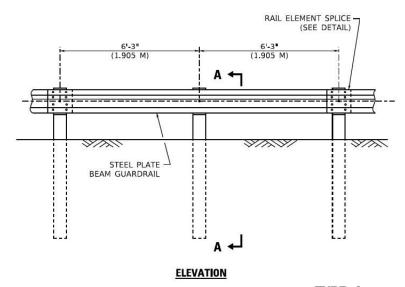
- A. MAINLINE ARTERIAL ROADWAYS AND MAJOR SIDE ROADS.
- A1. INTERSTATES
- B. MINOR SIDE ROADS.
- C. THE TEMP. RAMP SHALL BE CONSTRUCTED IMMEDIATELY UPON REMOVAL OF THE EXISTING HMA SURFACE.
- D. THE BUTT JOINT SHALL BE CONSTRUCTED IMMEDIATELY PRIOR TO PLACING THE PROPOSED HMA COURSES.
- E. TAPER THE TEMP. RAMP AT A RATE OF 3' 4" (1.02m) PER 1 INCH (25 mm) OF MILLING THICKNESS.
  - \* SEE TYPICAL SECTIONS FOR MILLING THICKNESS.
- F. SEE ARTICLE 406.08 AND 406.14 OF THE STANDARD SPECIFICATIONS FOR "HMA AND/OR PCC SURFACE REMOVAL, BUTT JOINT".
- \*\*\* 20'-0" (6.1 m) PER 1 (25) RESURFACING (NOTE "A") 10'-0" (3.0 m) PER 1 (25) RESURFACING (NOTE "B")

### **BASIS OF PAYMENT**

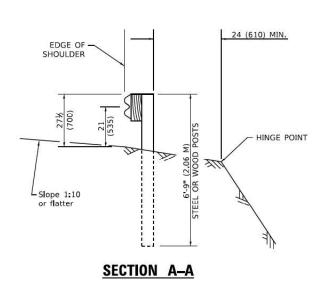
- THE BUTT JOINT WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD (SQUARE METER) FOR "HOT-MIX ASPHALT SURFACE REMOVAL BUTT JOINT" OR FOR "PORTLAND CEMENT CONCRETE SURFACE REMOVAL- BUTT JOINT".
- 2. THE TEMPORARY RAMP AND SAW CUT SHALL BE INCLUDED IN THE UNIT COST FOR HMA OR PCC SURFACE REMOVAL-BUTT JOINT

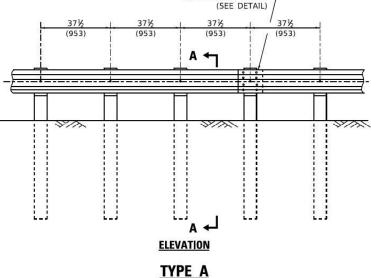
SCALE: NONE

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.



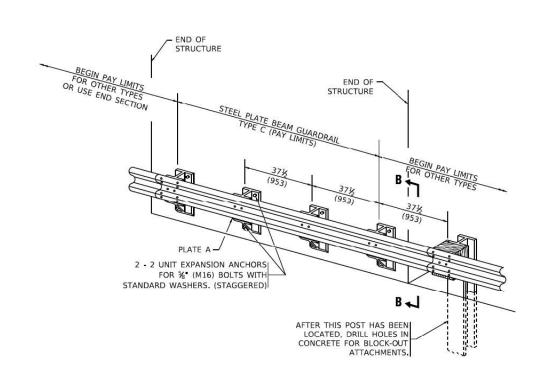
TYPE A
6'-3" (1.905 M) TYPICAL POST SPACING



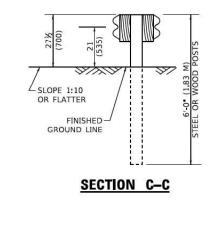


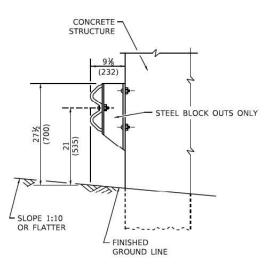
RAIL ELEMENT SPLICE -

37½ (953) CLOSED POST SPACING



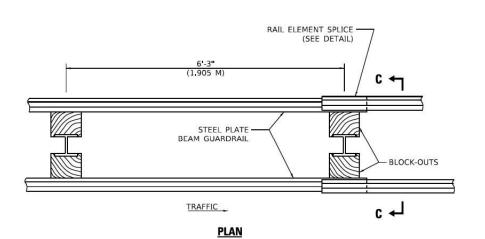
TYPE C
37½ (953) BLOCK-OUT SPACING





SECTION B-B

SCALE: NONE



### TYPE D

DOUBLE STEEL PLATE BEAM GUARDRAIL 6'-3" (1.905 M) TYPICAL POST SPACING

### **GENERAL NOTES**

ALL SLOPE RATIOS ARE EXPRESSED AS UNITS OF VERTICAL DISPLACEMENT TO UNITS OF HORIZONTAL DISPLACEMENT (V:H).

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

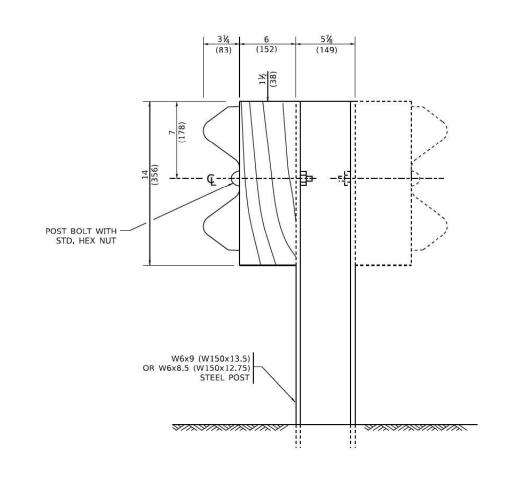
THE EXISTING STEEL POSTS MAY BE DRILLED TO MATCH THE BOLT PATTERN SHOWN HEREIN FOR THE WOOD BLOCK-OUT, OR A NEW STEEL POST SHALL BE PROVIDED.

THIS DETAIL IS APPLICABLE TO THE GUARDRAIL SYSTEM USED PRIOR TO JANUARY 1, 2007. FOR DETAILS ON THE MIDWEST GUARDRAIL SYSTEM, SEE STANDARD 630001.

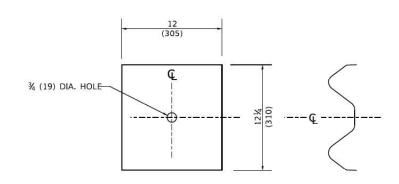
USER NAME = footemj	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 50,0000 ' / In.	CHECKED -	REVISED -
PLOT DATE = 2/11/2019	DATE	DEVICED

STATE 0	F ILLINOIS
DEPARTMENT OF	TRANSPORTATION

REMOVE AND REERECT					F.A.P RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
STEEL PLATE BEAM GUARDRAIL				324	FAP 0324 22 BJ	MCHENRY	33	24		
	LLL	. FLAIL	DLAW	GUANDNA	M.		BM-21	CONTRACT	NO. 62	2T00
SHEET	1	OF 4	SHEETS	STA.	TO STA.		ILLINOIS FED. A	AID PROJECT		



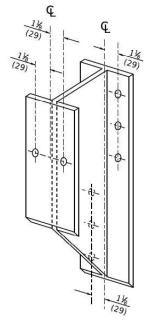
### STEEL POST CONSTRUCTION



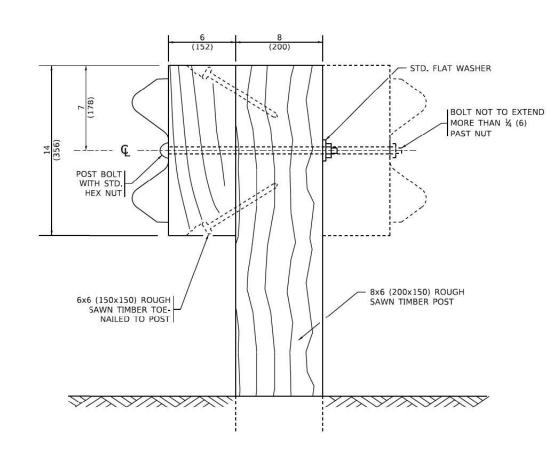
### NOTE:

PLATE A SHALL BE PLACED BETWEEN RAIL ELEMENT AND BLOCK-OUT AT NON-SPLICE MOUNTING POINTS ONLY WHEN STEEL BLOCK-OUTS ARE USED.

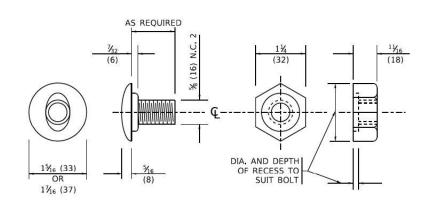
### PLATE A



STEEL BLOCK-OUT DETAIL



### WOOD POST CONSTRUCTION

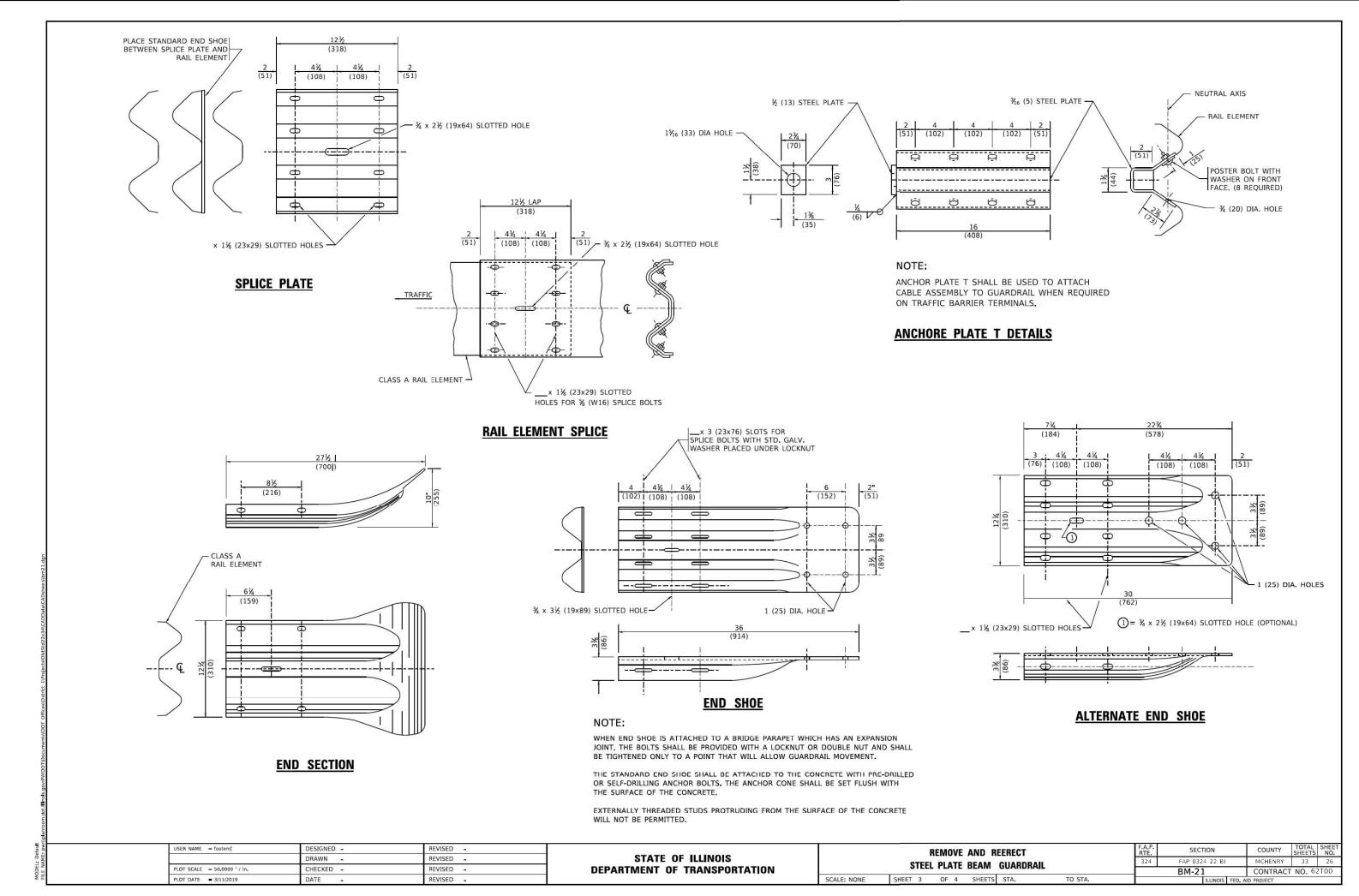


POST OR SPLICE BOLT & NUT

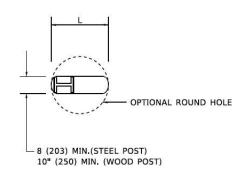
	USER NAME = footemj	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 50.0000 ' / In.	CHECKED -	REVISED -
15	PLOT DATE = 3/11/2019	DATE -	REVISED -

STATE	OF	ILLINOIS
DEPARTMENT O	)F 7	<b>TRANSPORTATION</b>

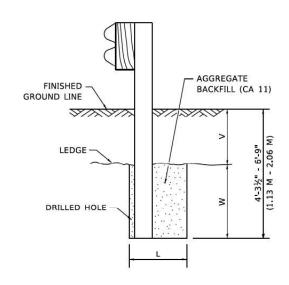
REMOVE AND REERECT					F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
	STEEL PLATE BEAM GUARDRAIL					324	FAP 0324 22 BJ	MCHENRY	33	25
	STELL FLATE DEAW GOARDRAIL						BM-21	CONTRACT	NO. 62	2T00
SCALE: NONE	SHEET 2	OF 4	SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT				



mr21.dm 3/11/2019 2:13:59 PM



### **PLAN**

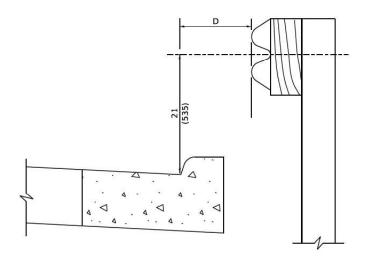


### NOTE:

LEDGE LINE IS TOP OF ROCK LEDGE OR HARD SLAG FILL.

### **ELEVATION**

### FOOTING FOR POST WHEN IMPERVIOUS MATERIAL IS ENCOUNTERED



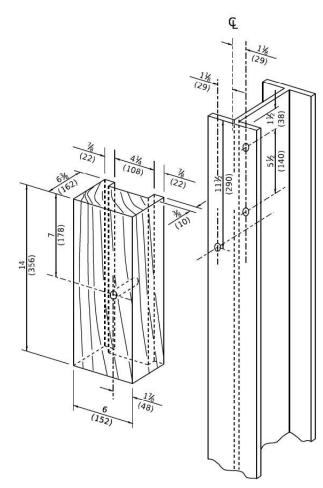
### NOTE:

IF IT IS NECESSARY FOR D TO BE MORE THAN 12 (300) AND LESS THAN 10'-0" (3.0 M) TYPE M-2 (M-5) CURB AND GUTTER (STD. 606001) SHALL BE USED IN FRONT OF AND IN ADVANCE OF THE GUARDRAIL.

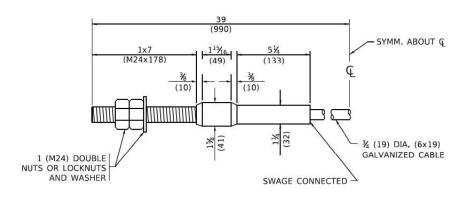
### **GUARDRAIL PLACED BEHIND CURB**

(D = O DESIRABLE TO 12 (300) MAXIMUM)

		L		
V	w	STEEL POST	WOOD POST	
0 - 18	24	21	23	
(0 - 460)	(610)	(530)	(580)	
>18 - 41.5	12	8	10	
(> 460 - 825)	(305)	(203)	(250)	
>41.5 - 53.5	12 - 0	8	10	
(> 825 - 1.13 M)	(350 - 0)	(203)	(250)	



### WOOD BLOCK - OUT AND STEEL POST DETAILS



### CABLE ASSEMBLY

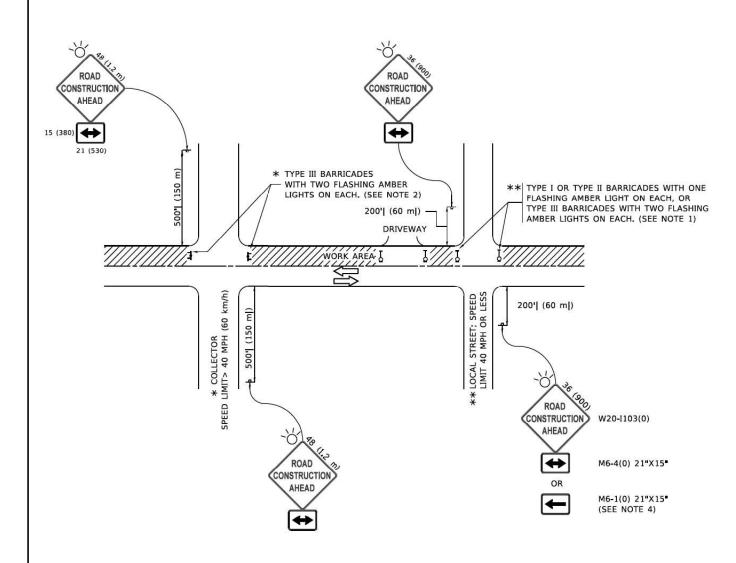
(40,000 LBS (18,100 KG) MIN. BREAKING STRENGTH) TIGHTEN TO TAUT TENSION

USER	NAME = footem]	DESIGNED -	REVISED -
		DRAWN -	REVISED -
PLOT S	SCALE = 50.0000 ' / In.	CHECKED -	REVISED -
PLOT I	DATE = 3/11/2019	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE: NONE

	REMOVE AND REERECT		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
REMOVE AND REERECT STEEL PLATE BEAM GUARDRAIL		324	FAP 0324 22 BJ	MCHENRY	33	27	
				BM-21	CONTRACT	NO. 62	2T00
E:	SHEET 4 OF 4 SHEETS STA.	TO STA		ILLINOIS EED	ID PROJECT		



### NOTES:

- SIDE ROAD WITH A SPEED LIMIT OF 40 MPH (60 km/h) OR LESS AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER;
- a) ONE "ROAD CONSTRUCTION AHEAD" SIGN 36 x 36 (900x900) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 200' (60 m) IN ADVANCE OF THE MAIN ROUTE.
- b) THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY BLOCKING WITH TYPE I, TYPE II OR TYPE III BARRICADES, 1/3 OF THE CROSS SECTION OF THE CLOSED PORTION.
- SIDE ROAD WITH A SPEED LIMIT GREATER THAN 40 MPH (60 km/h) AS SHOWN ON THE DRAWING AND AS DIRECTED BY THE ENGINEER:
- a) ONE "ROAD CONSTRUCTION AHEAD" SIGN 48 x 48 (1.2 m x 1.2 m) WITH A FLASHER MOUNTED ON IT APPROXIMATELY 500' (150 m) IN ADVANCE
- THE CLOSED PORTION OF THE MAIN ROUTE SHALL BE PROTECTED BY
  b) BLOCKING WITH TYPE III BARRICADES, 1/2 OF THE CROSS SECTION
  OF THE CLOSED PORTION.
- 3. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS AT HALF THE SPACING DURING DAY OPERATIONS. CONES SHALL BE A MINIMUM OF 28 (710)
- WHEN THE SIDE ROAD LIES BETWEEN THE BEGINNING OF THE MAINLINE
  4. SIGNING AND THE WORK ZONE, A SINGLE HEADED ARROW (M6-1) SHALL
  BE USED IN LIEU OF THE DOUBLE HEADED ARROW (M6-4).

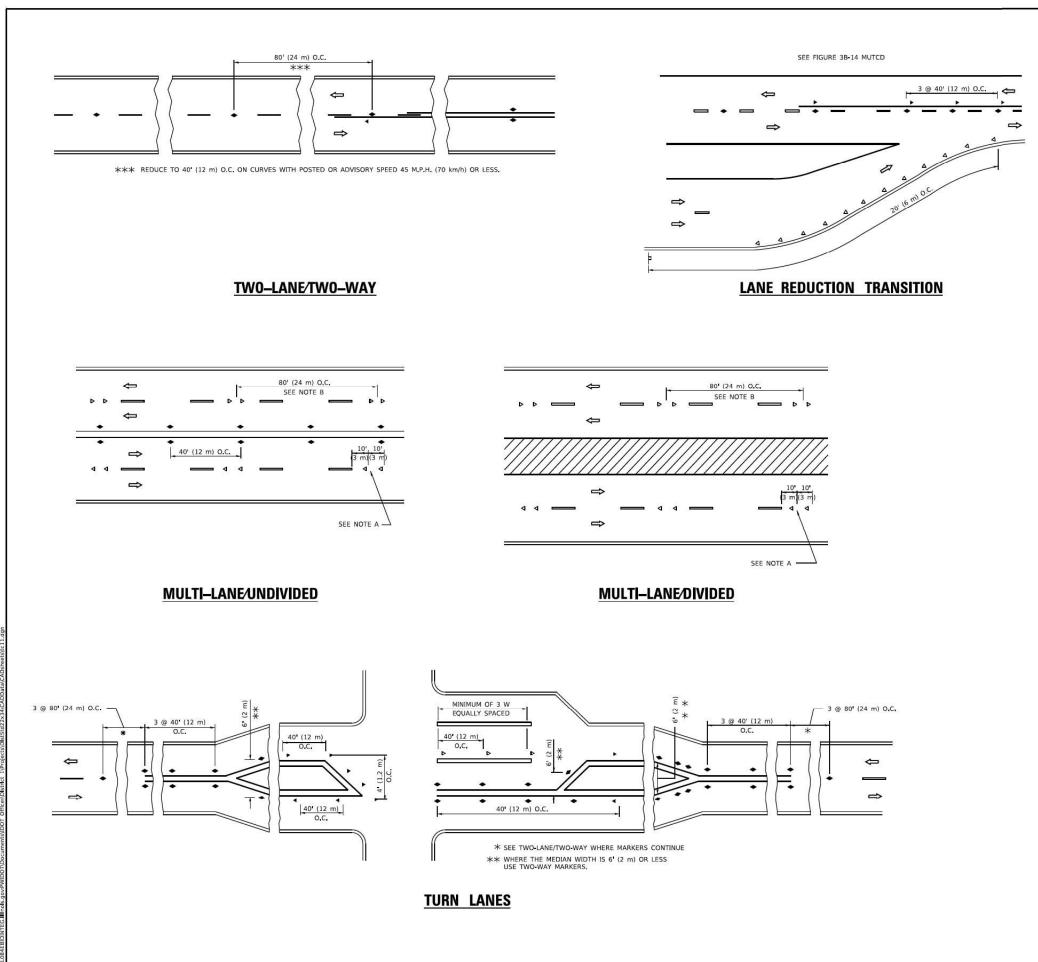
- 5. WHEN WORK IS BEING PERFORMED ON A SIDE ROAD OR DRIVEWAY, FOLLOW THE APPLICABLE STANDARD(S). THE DIRECTIONAL ARROW (M6-1 OR M6-4) SHALL BE COVERED OR REMOVED WHEN NO LONGER CONSISTENT WITH THE TRAFFIC CONTROL SET-UP.
- 6. ADVANCE WARNING SIGNS ARE TO BE OMITTED ON DRIVEWAYS UNLESS OTHERWISE SPECIFIED IN THE PLANS OR BY THE ENGINEER
- THE TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS SHALL BE INCLUDED IN THE COST OF SPECIFIED TRAFFIC CONTROL STANDARDS OR ITEMS.

All dimensions are in inches (millimeters) unless otherwise shown.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL AND PROTECTION FOR SIDE ROADS, INTERSECTIONS, AND DRIVEWAYS

| SHEET 1 OF 1 SHEETS STA. TO STAIN S



### TWO-WAY LEFT TURN

SEE NOTE A -

**SYMBOLS** 

ONE-WAY AMBER MARKER

TWO-WAY AMBER MARKER

■ ONE-WAY CRYSTAL MARKER (W/O)

YELLOW STRIPE

■ WHITE STRIPE

### **GENERAL NOTES**

- 1. MARKERS USED WITH DASHED LINES SHALL BE
- 2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 2 TO 3 (50 TO 75) TOWARD TRAFFIC AS SHOWN.
- MARKERS THROUGH TANGENTS LESS THAN 500' (150 m) IN LENGTH BETWEEN CURVES SHALL BE INSTALLED AT THE LESSER OF THE TWO CURVE SPACINGS.
- 4. MARKERS ARE TO BE USED ADJACENT TO BOTH SOLID WHITE LINES IN DUAL LEFT TURN LANES

### LANE MARKER NOTES

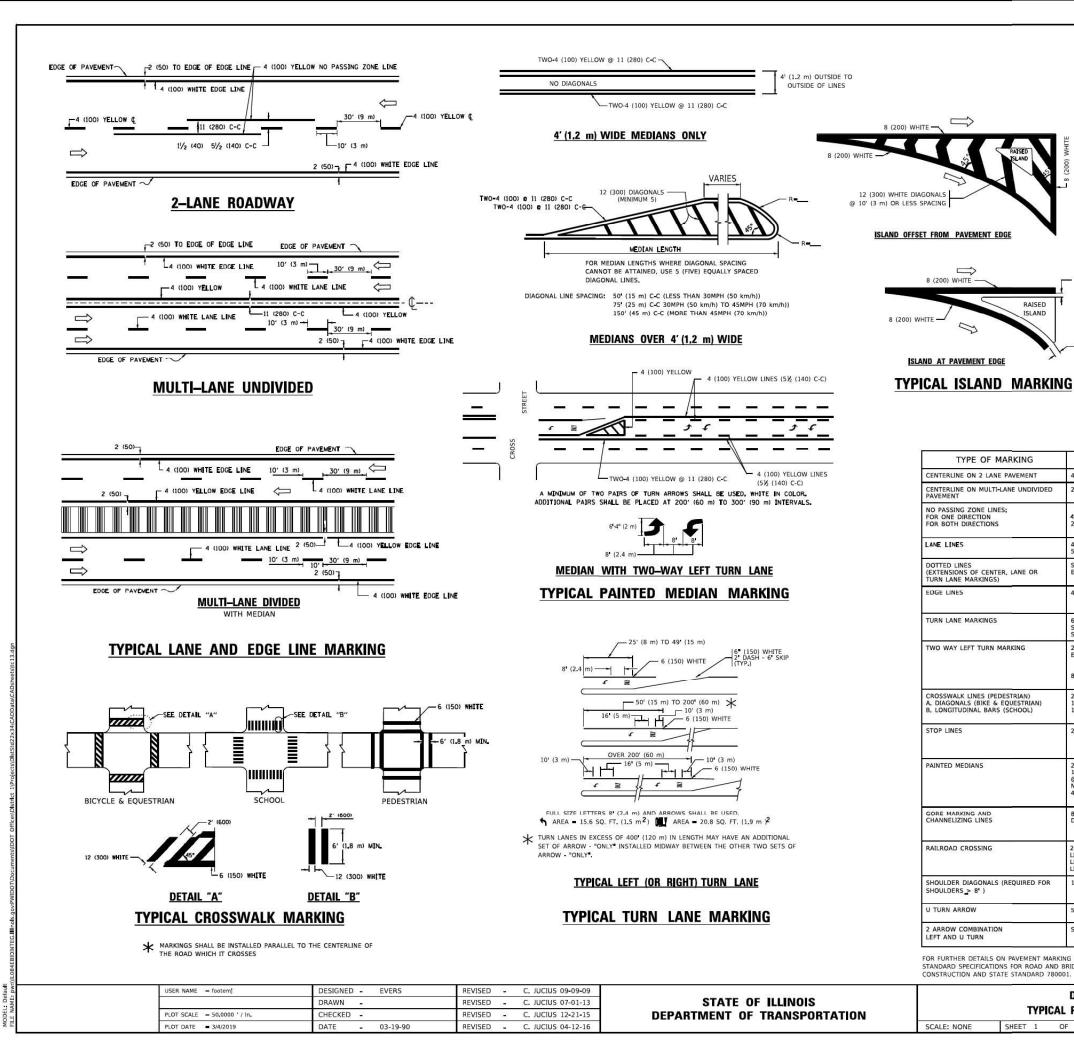
- A. USE DOUBLE LANE LINE MARKERS SPACED AS SHOWN.
- B. REDUCE TO 40' (12 m) O.C. ON CURVES WHERE ADVISORY SPEEDS ARE 10 M.P.H (20 km/h) LOWER THAN POSTED SPEEDS.

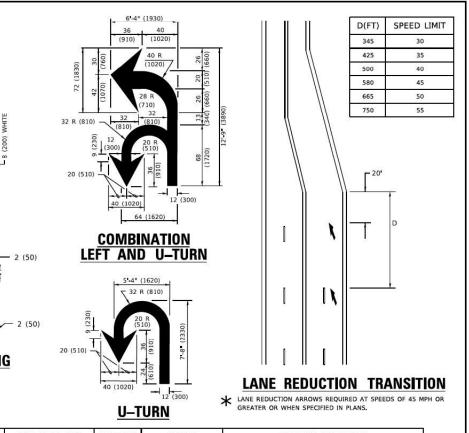
### **DESIGN NOTES**

- 1, DOUBLE LANE LINE MARKERS SHALL BE USED UNLESS SPECIFIED OTHERWISE.
- EXCEPT AS SHOWN ON THE LANE REDUCTION TRANSITION AND FREEWAY EXIT RAMP DETAIL, MARKERS ARE NOT TO BE SPECIFIED ON RIGHT EDGE LINES.
- THE EXACT MARKER LIMITS, SPACING, AND COLOR SHALL BE INCLUDED IN THE PLANS WHEN STANDARD SPECIFICATIONS ARE NOT BEING USED.
- MARKERS SHOULD NOT BE USED ALONGSIDE CURBS EXCEPT FOR EXTREMELY SHORT SECTIONS OF CURBS WHERE NOT MORE THAN TWO MARKERS WOULD BE INVOLVED.

All dimensions are in inches (millimeters) unless otherwise shown.

REVISED - T. RAMMACHER 03-12-99 USER NAME = footem! DESIGNED -SECTION TYPICAL APPLICATIONS STATE OF ILLINOIS DRAWN REVISED -T. RAMMACHER 01-06-00 MCHENRY 33 29 RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT) CHECKED -REVISED - C. JUCIUS 09-09-09 **DEPARTMENT OF TRANSPORTATION** PLOT SCALE = 50.0000 ' / In. TC-11 CONTRACT NO. 62T00 SHEET 1 OF 1 SHEETS STA. DATE REVISED -C JUCIUS 07-01-13





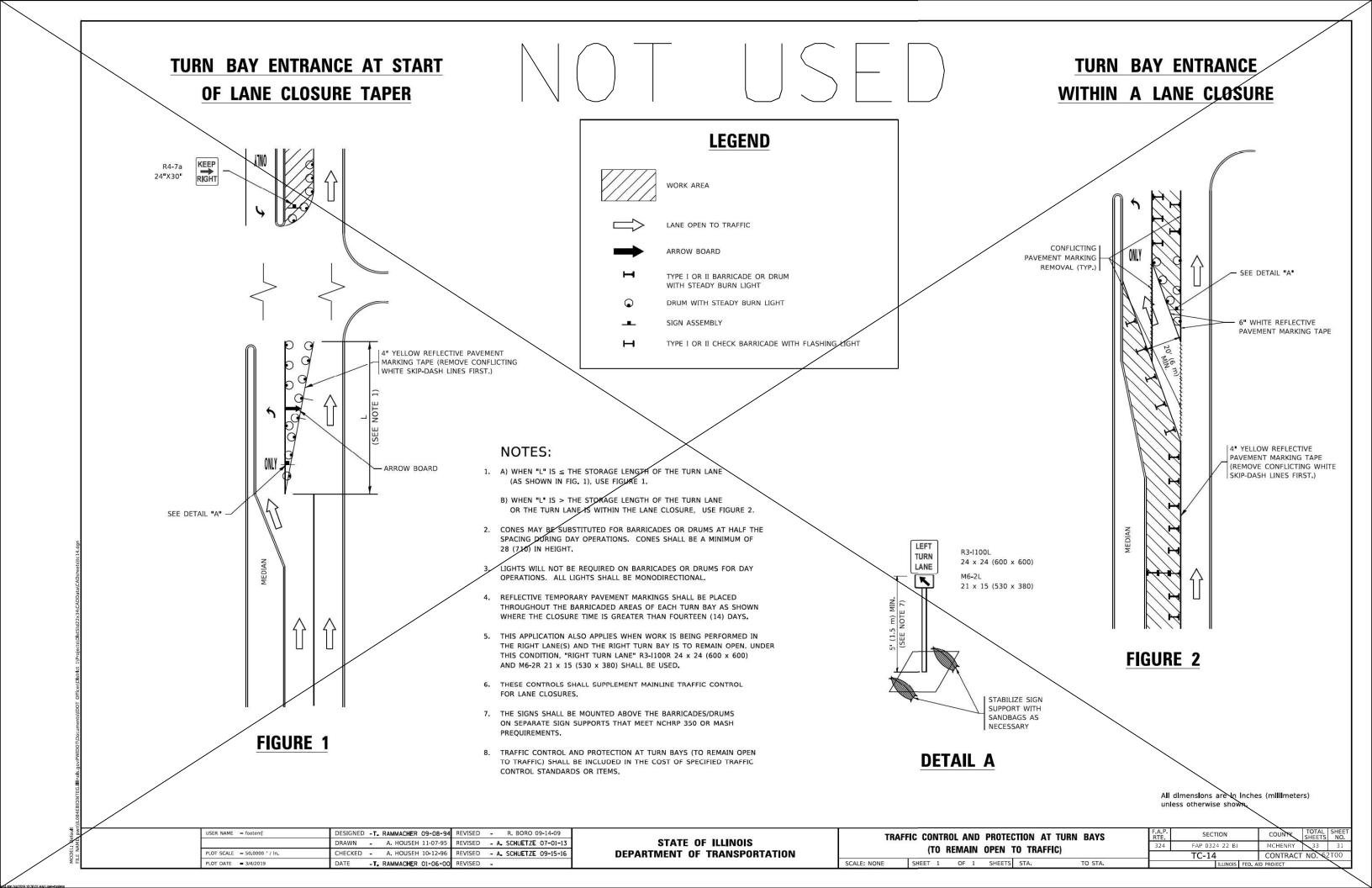
TYPE OF MARKING	WIDTH OF LINE	PATTERN	COLOR	SPACING / REMARKS
CENTERLINE ON 2 LANE PAVEMENT	4 (100)	SKIP-DASH	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE
CENTERLINE ON MULTI-LANE UNDIVIDED PAVEMENT	2 @ 4 (100)	SOLID	YELLOW	11 (280) C-C
NO PASSING ZONE LINES; FOR ONE DIRECTION FOR BOTH DIRECTIONS	4 (100) 2 @ 4 (100)	SOLID SOLID	YELLOW YELLOW	S¼ (140) C-C FROM SKIP-DASH CENTERLINE 11 (280) C-C OMIT SKIP-DASH CENTERLINE BETWEEN
LANE LINES	4 (100) 5 (125) ON FREEWAYS	SKIP-DASH SKIP-DASH	WHITE WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE
DOTTED LINES (EXTENSIONS OF CENTER, LANE OR TURN LANE MARKINGS)	SAME AS LINE BEING EXTENDED	SKIP-DASH	SAME AS LINE BEING EXTENDED	2' (600) LINE WITH 6' (1.8 m) SPACE
EDGE LINES	4 (100)	SOLID	YELLOW-LEFT WHITE-RIGHT	OUTLINE MEDIANS IN YELLOW
TURN LANE MARKINGS	6 (150) LINE; FULL SIZE LETTERS & SYMBOLS (8' (2.4m))	SOLID	WHITE	SEE TYPICAL TURN LANE MARKING DETAIL
TWO WAY LEFT TURN MARKING	2 @ 4 (100) EACH DIRECTION 8' (2.4m) LEFT ARROW	SKIP-DASH AND SOLID IN PAIRS	YELLOW	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5½ (140) C-C BETWEEN SOLID LINE AND SKIP-DASH LINE SEE TYPICAL TWO-WAY LEFT TURN MARKING DETAIL
CROSSWALK LINES (PEDESTRIAN) A. DIAGONALS (BIKE & EQUESTRIAN) B. LONGITUDINAL BARS (SCHOOL)	2 @ 6 (150) 12 (300) @ 45° 12 (300) @ 90°	SOLID SOLID SOLID	WHITE WHITE WHITE	NOT LESS THAN 6' (1.8 m) APART 2' (600) APART 2' (600) APART 5EE TYPICAL CROSSWALK MARKING DETAILS.
STOP LINES	24 (600)	SOLID	WHITE	PLACE 4 (1.2 m) IN ADVANCE OF AND PARALLEL TO CROSSWALK, IF PRESENT, OTHERWISE, PLACE AT DESIRED STOPPING POINT. PARALLEL TO CROSSROAD CENTERLINE, WHERE POSSIBLE
PAINTED MEDIANS	2 @ 4 (100) WITH 12 (300) DIAGONALS @ 45° NO DIAGONALS USED FOR 4' (1.2 m) WIDE MEDIANS	SOLID	YELLOW: TWO WAY TRAFFIC WHITE: ONE WAY TRAFFIC	11 (280) C-C FOR THE DOUBLE LINE SEE TYPICAL PAINTED MEDIAN MARKING.
GORE MARKING AND CHANNELIZING LINES	8 (200) WITH 12 (300) DIAGONALS @ 45°	SOLID	WHITE	DIAGONALS: 15' (4,5 m) C-C (LESS THAN 30MPH (50 km/h)) 20' (6 m) C-C 30MPH (50 km/h) TO 45MPH (70 km/h)) 30' (9 m) C-C (OVER 45MPH (70 km/h))
RAILROAD CROSSING	24 (600) TRANSVERSE LINES; "RR" IS 6' (1.8 m) LETTERS; 16 (400) LINE FOR "X"	SOLID	WHITE	SEE STATE STANDARD 780001 AREA OF: "R"=3.6 SQ. FT. (0.33 m PEACH "X"=54.0 SQ. FT. (5.0 m PE
SHOULDER DIAGONALS (REQUIRED FOR SHOULDERS > 8')	12 (300) @ 45°	SOLID	WHITE - RIGHT YELLOW - LEFT	50' (15 m) C-C (LESS THAN 30MPH (50 km/h)) 75' (25 m) C-C (30 MPH (50 km/h) TO 45MPH (70 km/h)) 150' (45 m) C-C (OVER 45MPH (70 km/h))
U TURN ARROW	SEE DETAIL	SOLID	WHITE	16.3 SF
2 ARROW COMBINATION LEFT AND U TURN	SEE DETAIL	SOLID	WHITE	30.4 SF

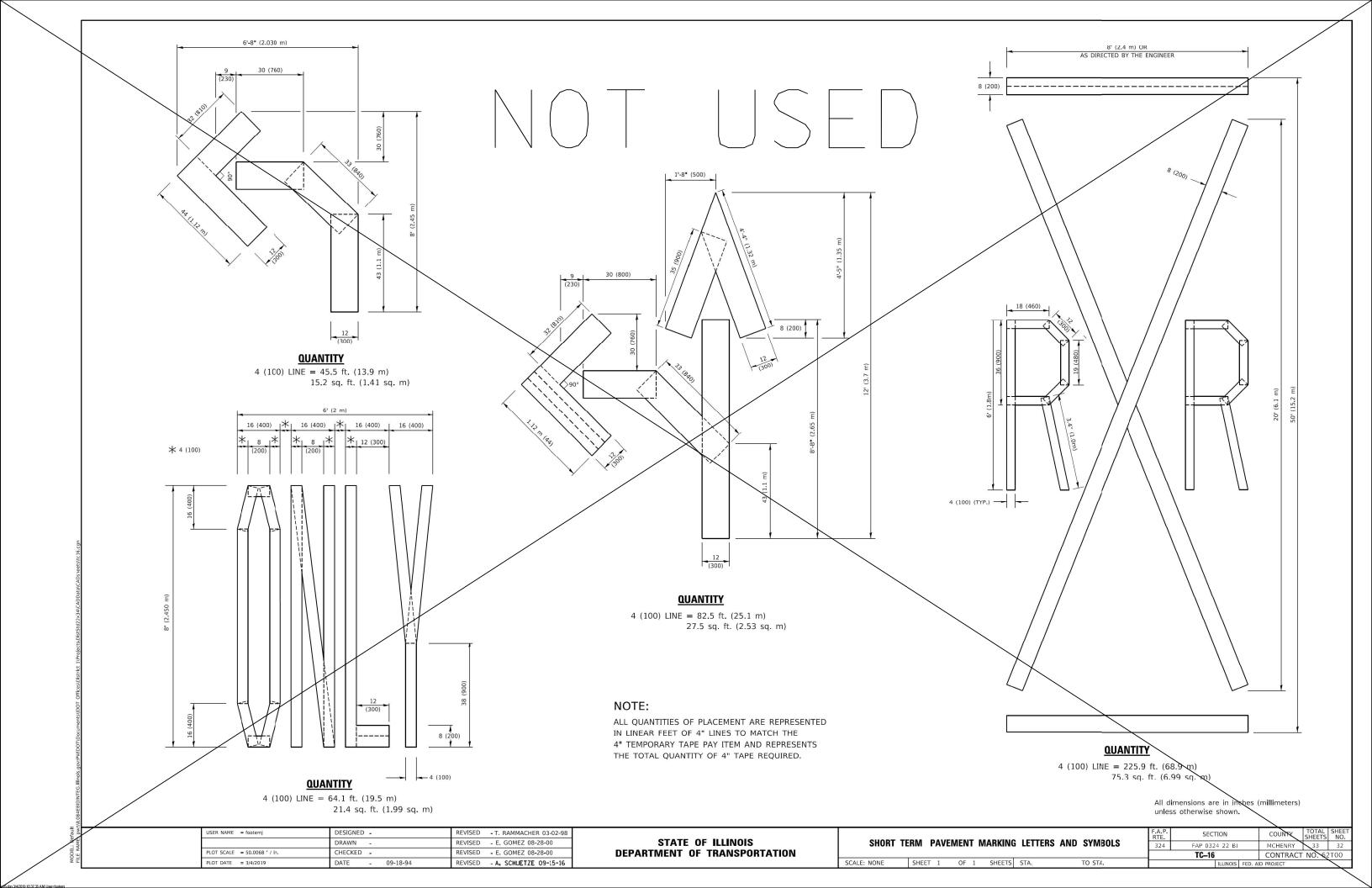
FOR FURTHER DETAILS ON PAVEMENT MARKING REFER TO STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND STATE STANDARD 780001.

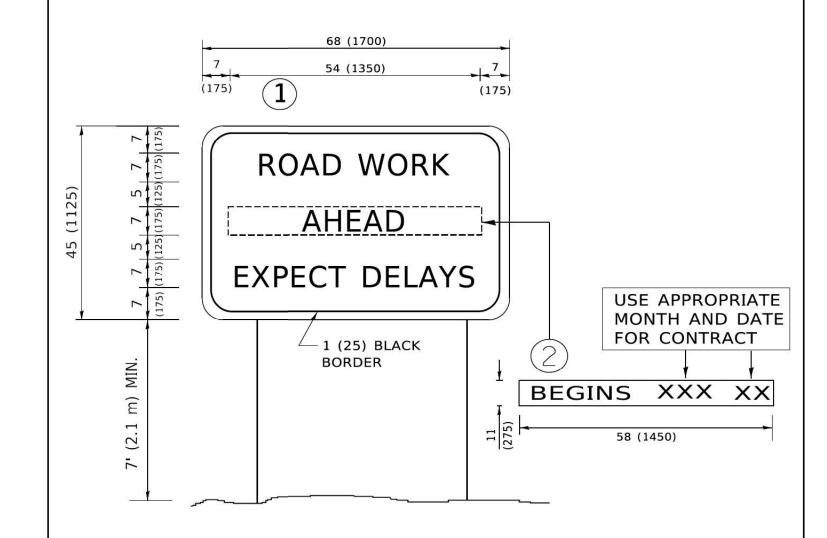
RAISED

All dimensions are in inches (millimeters) unless otherwise shown.

SECTION DISTRICT ONE FAP 0324 22 BJ MCHENRY TYPICAL PAVEMENT MARKINGS CONTRACT NO. 62T00 TC-13 SHEET 1 OF 2 SHEETS STA. SCALE: NONE





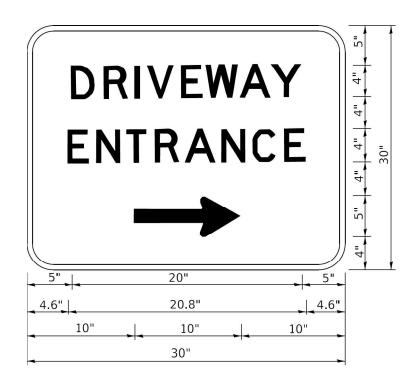


### NOTES:

- 1. USE BLACK LETTERING ON ORANGE BACKGROUND.
- 2. ERECT SIGNS IN ADVANCE OF THE LOCATION FOR THE "ROAD CONSTRUCTION AHEAD" SIGN AT LOCATIONS AS DIRECTED BY THE ENGINEER.
- 3. ERECT SIGN 1 WITH INSTALLED PANEL 2 ONE WEEK PRIOR TO THE START OF CONSTRUCTION.
- 4. REMOVE PANEL 2 SOON AFTER THE START OF CONSTRUCTION.
- 5. SEE SPECIAL PROVISION FOR "TEMPORARY INFORMATION SIGNING" FOR ADDITIONAL INFORMATION.
- 6. ONE SIGN ASSEMBLY EQUALS 25.70 SQ. FT. (2.3 SQ. M.)
- 7. SHALL BE PAID FOR AS TEMPORARY INFORMATION SIGNING.

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN.

7.	USER NAME = footemj	DESIGNED -	REVISED - R. MIRS 09-15-97		2		ΔΙ	RTERIAL	ROAD	,		F.A.P.	SECTION	COUNTY	TOTAL SH	HEET NO.
		DRAWN -	REVISED - R. MIRS 12-11-97	STATE OF ILLINOIS	INFORMATION SIGN					324	FAP 0324 22 BJ	MCHENRY	33	33		
	PLOT SCALE = 50.0000 / In.	CHECKED -	REVISED -T. RAMMACHER 02-02-99	DEPARTMENT OF TRANSPORTATION			INFO	KIVIATI	ON 210	GN			TC-22	CONTRAC	T NO. 62TO	0
	PLOT DATE = 3/4/2019	DATE -	REVISED - C. JUCIUS 01-31-07		SCALE: NONE	SHEET 1	OF	1 SHE	ETS ST	ΓA.	TO STA.		ILLINOIS FE	D. AID PROJECT		



3.0" RADIUS, 0.5" BORDER, WHITE ON GREEN; REFLECTORIZED "DRIVEWAY" D; "ENTRANCE" D; STANDARD ARROW CUSTOM 12.0" x 5.0"

### NOTES:

- 1. HALF OF THE SIGNS WILL REQUIRE A LEFT HAND FACING ARROW.
- 2. TWO SIGNS SHALL BE USED AT EACH COMMERCIAL ENTRANCE PLACED BACK-TO-BACK: ONE WITH A RIGHT HAND ARROW (SHOWN) SHALL BE PLACED ON THE NEAR RIGHT SIDE THE DRIVEWAY AND ONE WITH A LEFT HAND ARROW SHALL BE PLACED ON THE FAR LEFT SIDE OF THE DRIVEWAY.
- 3. SIGNS TO BE PAID FOR AS ITEM "TEMPORARY INFORMATION SIGNING".

 USER NAME
 = leysa
 DESIGNED
 REVISED
 C. JUCIUS 02-15-07

 DRAWN
 REVISED

 PLOT SCALE
 = 50.0000 ' / in.
 CHECKED
 REVISED

 PLOT DATE
 = 8/6/2021
 DATE
 REVISED

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

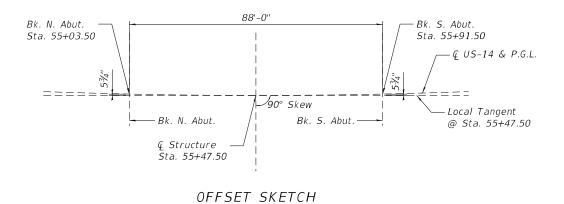
SCALE: NONE

### INDEX OF SHEETS

- S-1 General Plan and Elevation
- S-2 General Data
- S-3 Stage Construction Details
- S-4 Stage Construction Details
- S-5 Temporary Concrete Barrier for Stage Construction
- S-6 Deck Repair
- S-7 Approach Slab Repair
- S-8 Substructure Repair
- S-9 Bar Splicer Assembly Details
- 5-10 Concrete Shoulder Approach Slab

### SCOPE OF WORK

- 1. Perform  $\frac{3}{4}$ " bridge deck scarification (deck and approach slabs).
- 2. Perform partial and full depth deck repairs.
- 3. Clean deck drains and adjust approach inlet (see Civil Plans). Install inlet protection.
- 4. Perform approach slab repairs.
- 5. Replace preformed joint at the end of approach slabs.
- 6. Place 2¾" bridge deck latex concrete overlay (deck and approach slabs).
- 7. Place variable depth HMA overlay on approach roadway (See Civil Plans).
- 8. Perform 1/4" diamond grinding (deck and approach slabs).
- 9. Perform bridge deck grooving (longitudinal).
- 10. Apply protective coat to bridge deck, approach slabs, shoulder slabs and parapets.
- 11. Perform structural repair on substructure concrete.



### GENERAL NOTES

Plan dimensions and details relative to the existing structure have been taken from existing plans and are subject to nominal construction variations. The contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of work; however, the Contractor shall be paid for the quantity actually furnished at the unit price bid for the work.

Reinforcement bars designated (E) shall be epoxy coated.

Prior to pouring the new concrete overlay, all heavy or loose rust, loose mill scale, and other loose detrimental foreign material shall be removed from the surfaces in contact with concrete (SSPC- SP3 standards). Tightly adhered paint may remain unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel and the cost will be paid for according to Article 109.04 of the Standard Specifications.

Joint openings shall be adjusted according to Article 520.04 of the Standard Specifications when the joint concrete is poured at an ambient temperature other then  $50^{\circ}F$ .

Existing reinforcement bars extending into the removal area shall be cleaned, straightened, and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal shall be replaced with an approved bar splicer or anchorage system. Cost included with Concrete Removal

Contractor shall not scale dimensions from the contract plans for construction purposed. Scales shown for information only.

All exposed concrete edges shall have a  $\frac{3}{4}$ "x45° chamfer except where shown otherwise.

Structural concrete removed as directed by the Engineer for the adjustment of the Drainage Structures to the final grade shall be reconstructed according to the Approach Slab Repair specification. Cost of the concrete removal, disposal, and reconstruction is included with the associated "Frame and Lids to be Adjusted (Special)" pay item as included in the Roadway Plans.

The Temporary Concrete Barrier will not be pinned for this contract. An exception to Safety Engineering Policy 4–21 has been submitted to BSPE for approval.

EXISTING CURVE DATA

PI=Sta. 64+35.74

D=60°48'

 $D=2^{\circ}50'$ 

R = 2022.41

T = 1186.54

E=322.38' L=2145.88

S.E.=0.058%

### TOTAL BILL OF MATERIAL

	ITEM	UNIT	SUPER	SUB	TOTAL
	Inlet and Pipe Protection	Each	6	-	6
	Concrete Removal	Cu. Yd.	5.7	-	5.7
	Concrete Superstructure	Cu. Yd.	6.5	-	6.5
	Protective Coat	Sq. Yd.	740	-	740
	Reinforcement Bars, Epoxy Coated	Pound	930	-	930
**	Bar Splicers	Each	16	-	16
*	Floor Drains to be Cleaned	Each	6	-	6
**	Bridge Deck Grooving (Longitudinal)	Sq. Yd.	512	-	512
*	Approach Slab Repair (Full Depth)	Sq. Yd.	1	-	1
**	Bridge Deck Latex Concrete Overlay, 2¾ Inches	Sq. Yd.	662	-	662
**	Bridge Deck Scarification, ¾"	Sq. Yd.	662	-	662
**	Structural Repair of Concrete (Depth Equal to or Less than 5 inches)	Sq. Ft.	1	20	20
**	Deck Slab Repair (Full Depth, Type II)	Sq. Yd.	1	-	1
*	Drill and Grout Dowel Bars	Each	13	_	13
**	Diamond Grinding (Bridge Section)	Sq. Yd.	662	-	662

20'-0"

Appr

Slab

1'-01/2'

Sta. 56+12.43 Exist. Elev. 92 Prop. Elev. 92.

\* See Special Provisions

\*\* See GBSP

20'-0"

Appr

Slab

1'-01/2

### \*\* BK. of North Abu Sta. 55+03.50 Elev. 925.57 \*\*\* BK. of South Abu Sta. 55+91.50 Elev. 925.9 \*\*\*

PROFILE GRADE

Latex Concrete

Overlay Limits

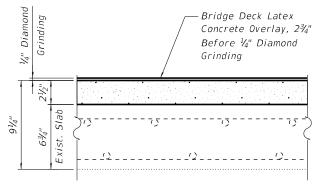
88'-0"

Limits of Bridge

\*\*\* Elevation after  $\frac{1}{2}$ " Diamond Grinding

# Bridge Deck Scarification, ¾" Scarification, ¾" Scarification, ¾"

EXISTING BRIDGE DECK
CROSS SECTION
DETAIL

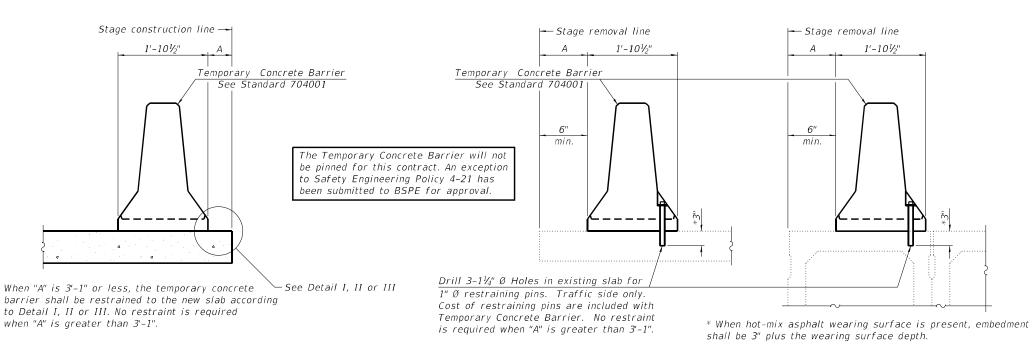


PROPOSED BRIDGE DECK
CROSS SECTION
DETAIL

A E G ATLAS ENGINEERING GROUP, LTD.

USER NAME =	DESIGNED - JJI	REVISED -
	CHECKED - JKL	REVISED -
PLOT SCALE =	DRAWN - KB	REVISED -
PLOT DATE =	CHECKED - 1/15/2024	REVISED -

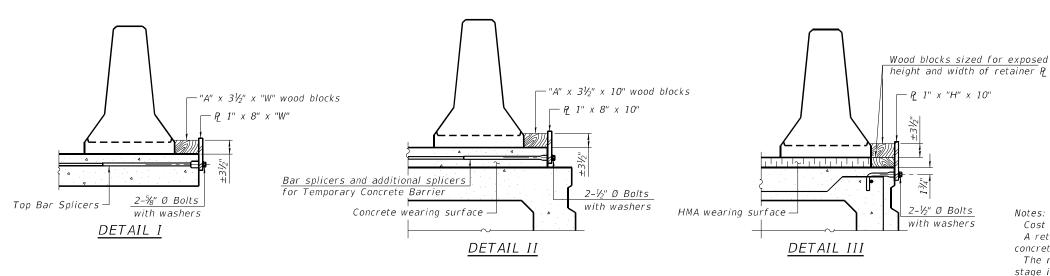
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

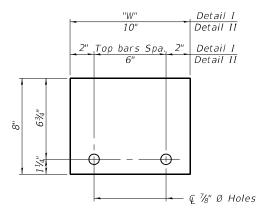


EXISTING DECK BEAM

### SECTIONS THRU SLAB OR DECK BEAM

EXISTING SLAB



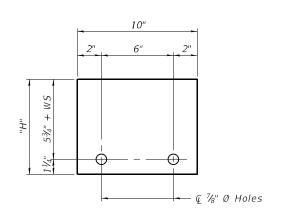


### RAILING CRITERIA NCHRP 350 Test Level Railing Weight (plf)

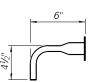
NEW SLAB OR NEW DECK BEAM

STEEL RETAINER P 1" x 8" x "W"

(Detail I and II)



STEEL RETAINER R 1" x "H" x 10" (Detail III)



RESTRAINING PIN

### BAR SPLICER FOR #4 BAR - DETAIL III

Cost of retainer assembly is included with Temporary Concrete Barrier. A retainer assembly shall be located at the approximate  $\c c$  of each temporary

The retainer plate shall not be removed until the concrete on the adjacent stage is ready to be poured. For Detail III applications the retainer plate shall not be removed until just prior to placing the adjacent beam.

When the 'A' dimension is less than  $1\frac{1}{2}$ ", the wood block shall be omitted and the barrier shall be placed in direct contact with the steel retainer plate. For deck beam applications the minimum required 'A' distance is 6" to accommodate the shear key clamping device.

Detail I - Installation for a new bridge deck or bridge slab.

US Std. 11/16" I.D. x 21/2" O.D.

x approx. 8 gauge thick washer

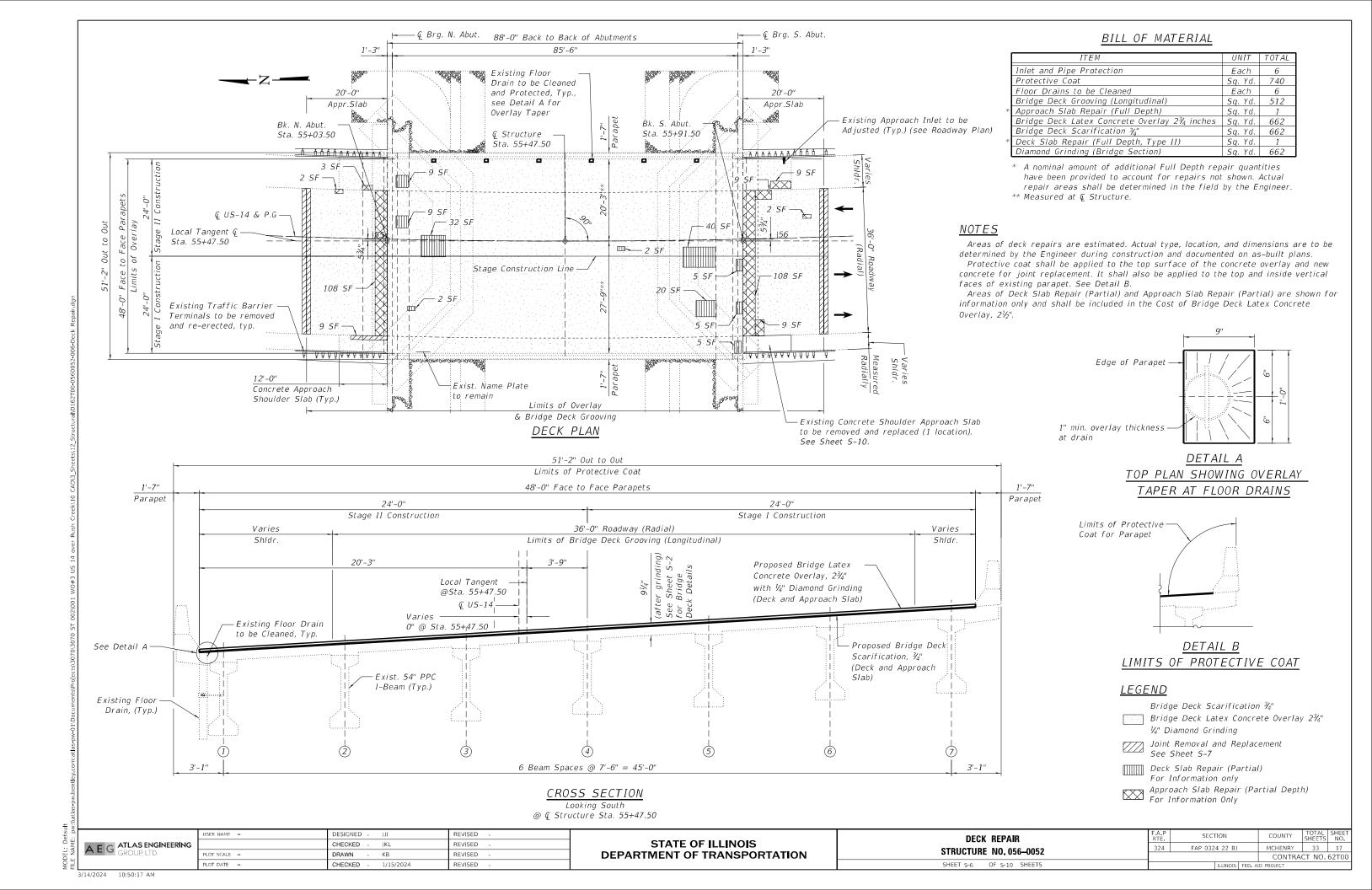
1" Ø pin

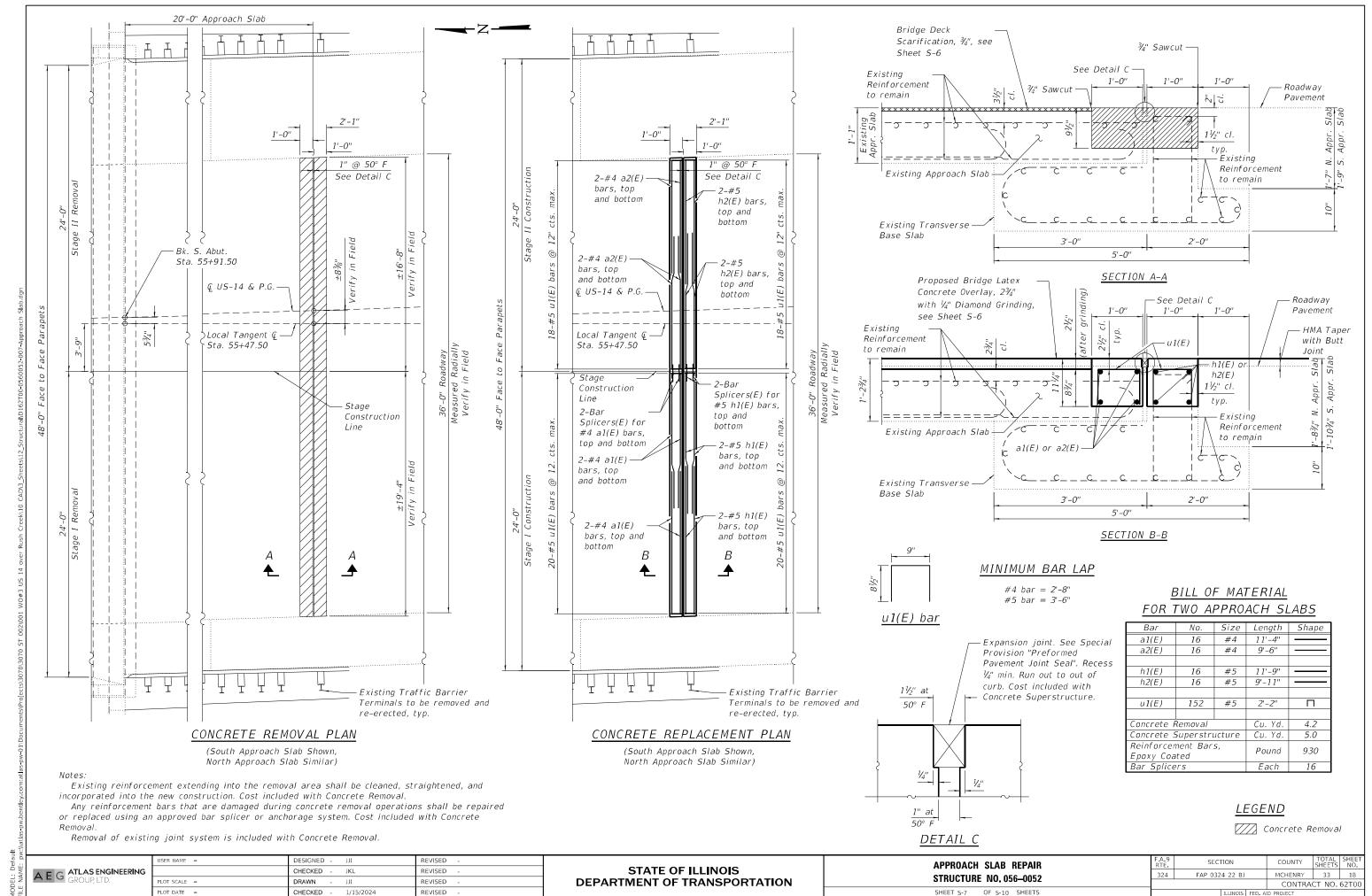
- Detail II Installation for a new deck beam with an initial concrete wearing surface. Additional bar splicers shall be provided at 6'-0" centers and paired with the bar splicers of the concrete wearing surface reinforcement to accommodate the installation of the retainer assemblies. The cost of the additional bar splicers is included with the concrete wearing surface.
- Detail III Installation for a new deck beam with no initial wearing surface or with an initial hot-mix asphalt (HMA) wearing surface present. The deck beam directly beneath the temporary concrete barrier shall be fabricated with bar splicer inserts in the side of the beam, as detailed, to accommodate the installation of the retainer assemblies. A pair of bar splicers, 6" apart, shall be placed at 6'-0" centers along the length of the beam. The cost of the bar splicers is included with the deck beam.

AEG	ATLAS ENGINEERIN GROUP, LTD.
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USER NAME =	DESIGNED - JJI	REVISED -
	CHECKED - JKL	REVISED -
PLOT SCALE =	DRAWN - KB	REVISED -
PLOT DATE =	CHECKED - 1/15/2024	REVISED -

TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION	F.A.P RTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
STRUCTURE NO. 056-0052		FAP 0324 22 BJ	MCHENRY	33	16
3111001011L 1401 030-0032	CONTRACT NO. 62				
SHEET S-5 OF S-10 SHEETS		ILLINOIS FED. A	ID PROJECT		





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