

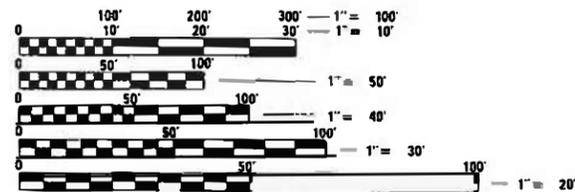
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION
**PROPOSED
 HIGHWAY PLANS**
 FAU ROUTE 1238: IL 176 (PARK AVE)
 OVER DES PLAINES RIVER
 SECTION 2020-184-BR
 PROJECT NUMBER STP - 2WJR(002)
 BRIDGE DECK OVERLAY AND JOINT REPAIR
 LAKE COUNTY
 C-91-353-20

FOR INDEX OF SHEETS, SEE SHEET NO. 2

DESIGN DESIGNATION:
 MINOR ARTERIAL
 FAU ROUTE 1238: IL 176
 2019 ADT = 13,100
 SPEED LIMIT 35 MPH

IMPROVEMENT LOCATED IN
 THE VILLAGE OF LIBERTYVILLE

IMPROVEMENT LOCATION
 IL 176 (PARK AVE)
 AT DES PLAINES RIVER
 STRUCTURE NO. 049-0068

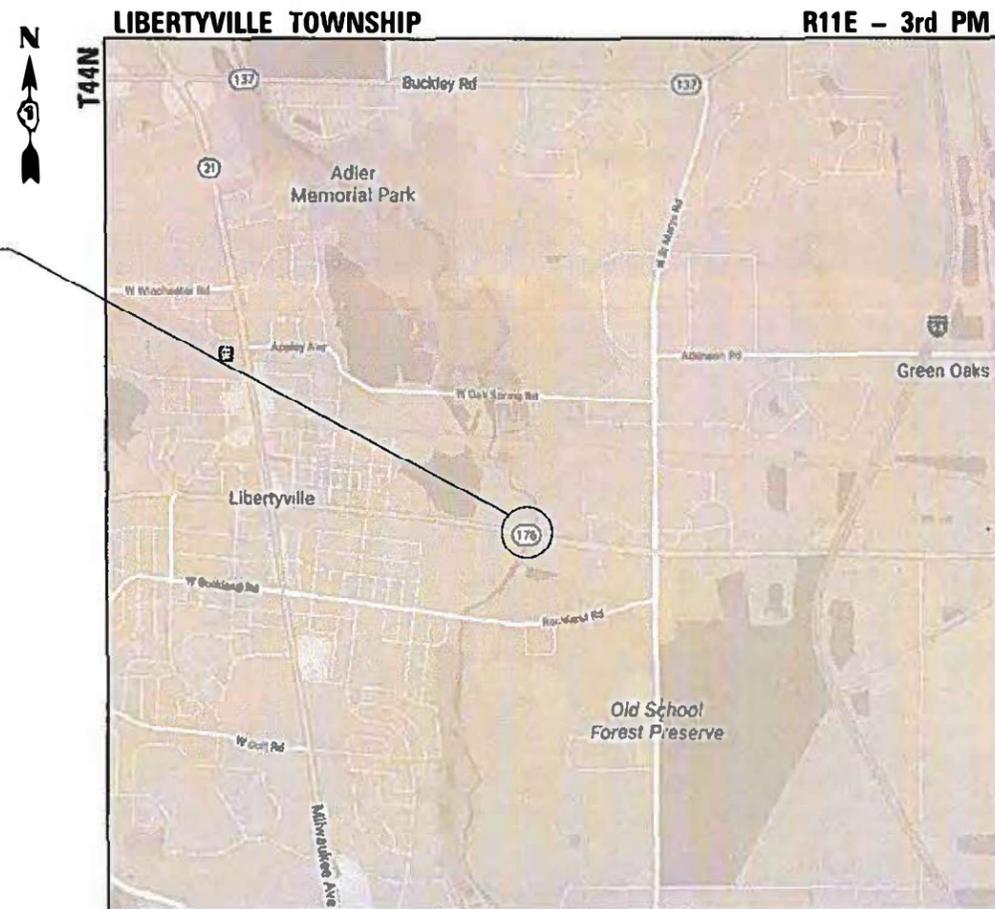


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD
 ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT
 CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS
 ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

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

PROJECT ENGINEER: MR. PRAVEEN KAINI, PE (847) 705-4237
 PROJECT MANAGER: MR. J. ALAIN MIDY, PE (847) 221-3056

CONTRACT NO. 62M39



LOCATION MAP (NOT TO SCALE)

GROSS LENGTH = 270 FT = 0.051 MILE
 NET LENGTH = 270 FT = 0.051 MILE

Accurate
 GROUP, INC.
 WWW.ACCGI.COM
 101 SCHELTER RD., SUITE B-200
 LINCOLNSHIRE, ILLINOIS 60069
 T (847) 613-1100 F (847) 613-1105
 ILLINOIS PROFESSIONAL DESIGN FIRM NO. 134022563

FAU ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	2020-184-BR	LAKE	49	1
CONTRACT			40	139

D-91-554-20



LOCATION OF SECTION INDICATED THUS: - [black rectangle]



Moussa A. Issa
 DATE SIGNED: 09-30-20
 EXP. DATE: 11-30-22
 SHEETS: 21-35



Frank P. Eppert
 DATE SIGNED: 09-30-20
 EXP. DATE: 11-30-21
 SHEETS: 1-12, 18-20



J. Alan Midy
 DATE SIGNED: 09-30-20
 EXP. DATE: 11-30-21
 SHEETS: 13-20

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SUBMITTED *December 4, 2020*

Andy J. Dwyer / CRB
 REGIONAL ENGINEER

December 4, 2020

Scott A. Elk
 ENGINEER OF DESIGN AND ENVIRONMENT

December 4, 2020

James J. Jan
 DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

**PRINTED BY THE AUTHORITY
 OF THE STATE OF ILLINOIS**

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STATE OF ILLINOIS HIGHWAY STANDARDS

STANDARD NO.	DESCRIPTION
000001-08	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
420001-09	PAVEMENT JOINTS
604086-05	FRAME AND GRATE TYPE 23
643001-02	SAND MODULE IMPACT ATTENUATORS
701001-02	OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15' (4.5 m) AWAY
701006-05	OFF-RD OPERATIONS, 2L, 2W, 15' (4.5 m) TO 24" (600 mm) FROM PAVEMENT EDGE
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701311-03	LANE CLOSURE, 2L, 2W MOVING OPERATIONS - DAY ONLY
701321-18	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701502-09	URBAN LANE CLOSURE, 2L, 2W, WITH BIDIRECTIONAL LEFT TURN LANE
701801-06	SIDEWALK, CORNER OR CROSSWALK CLOSURE
701901-08	TRAFFIC CONTROL DEVICES
704001-08	TEMPORARY CONCRETE BARRIER
780001-05	TYPICAL PAVEMENT MARKINGS
781001-04	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
782006-01	GUARDRAIL AND BARRIER WALL REFLECTOR MOUNTING DETAILS
862001-01	UNINTERRUPTABLE POWER SUPPLY (UPS)
880001-01	SPAN WIRE MOUNTED SIGNALS AND FLASHING BEACON INSTALLATION

GENERAL NOTES

- BEFORE STARTING ANY EXCAVATION, THE CONTRACTOR SHALL CALL "J.U.L.I.E." AT (800) 892-0123 OR 811 FOR FIELD LOCATIONS OF BURIED ELECTRIC, TELEPHONE, AND GAS FACILITIES. (48 HOURS NOTIFICATION REQUIRED)
- THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH UTILITY COMPANIES, THE VILLAGE OF LIBERTYVILLE, AND LAKE COUNTY FOREST PRESERVES.
- THESE PLANS HAVE BEEN PREPARED FROM NOTES RECEIVED FROM IDOT FIELD MAINTENANCE ENGINEERS.
- DO NOT SCALE PLANS FOR CONSTRUCTION DIMENSIONS.
- 10 FOOT TRANSITIONS SHALL BE USED TO MATCH PROPOSED ITEMS OF WORK TO EXISTING ITEMS IN THE FIELD, UNLESS OTHERWISE SHOWN. THE TRANSITIONS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PROPOSED ITEM OF WORK SPECIFIED.
- THE CONTRACTOR WILL NOT BE ALLOWED TO SET UP A YARD OR FIELD OFFICE ON STATE PROPERTY WITHOUT WRITTEN PERMISSION FROM THE DEPARTMENT.
- DOUBLE LANE MARKERS ARE TO BE USED AS SHOWN ON THE DISTRICT ONE DETAIL "TYPICAL APPLICATIONS - RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)" SHOWN IN THE PLANS. RAISED REFLECTIVE PAVEMENT MARKERS ARE NOT ALLOWED TO BE PLACED ON THE BRIDGE DECK.
- THE CONTRACTOR MUST CONTACT THE ARTERIAL TRAFFIC CONTROL SUPERVISOR AT KALPANA.KANNAN-HOSADURGA@ILLINOIS.GOV A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING WORK.
- THE RESIDENT ENGINEER SHALL CONTACT EMAD ALHUSSEINI, ARTERIAL TRAFFIC FIELD ENGINEER AT EMAD.ALHUSSEINI@ILLINOIS.GOV AT LEAST TWO (2) WEEKS PRIOR TO THE PLACEMENT OF PERMANENT PAVEMENT MARKINGS.
- THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ACCESS TO ABUTTING PROPERTY AT ALL TIMES DURING THE CONSTRUCTION OF THIS PROJECT.
- PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING PLANS ARE SUBJECT TO ROUTINE VARIATIONS. THE CONTRACTOR SHALL FIELD 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 SCOPE OF THE WORK. HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED BASED UPON THE UNIT PRICE BID FOR THE WORK.
- ANY SIGNAGE, PAVEMENT MARKINGS AND REFLECTORS DAMAGED DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.
- THE APPROACH SLABS SHALL HAVE THE GUTTER OVERLAID WITH HMA TO THE FACE OF THE CURB.
- THE DEPARTMENT HAS DETERMINED THAT IN STREAM WORK IS NOT REQUIRED FOR THE WORK SPECIFIED IN THIS CONTRACT. THE DEPARTMENT HAS NOT OBTAINED A 404 PERMIT. IF THE CONTRACTOR CHOOSES TO USE ACTIVITIES REQUIRING AN USACE 404 PERMIT IT IS THE CONTRACTOR'S RESPONSIBILITY TO SECURE THE PROPER USACE PERMITS.
- BEFORE BEGINNING ANY WORK, THE CONTRACTOR SHALL RETAIN AND RECORD FOR FUTURE REFERENCE, ALL EXISTING PAVEMENT MARKING LINES, LETTERS AND SYMBOLS AND RAISED REFLECTIVE MARKERS IN ORDER THAT THESE LOCATIONS CAN BE RE-ESTABLISHED FOR STRIPING. EXACT LOCATIONS OF ALL PAVEMENT MARKINGS AND RAISED REFLECTIVE PAVEMENT MARKERS SHALL BE AS DIRECTED BY THE ENGINEER.
- CONTRACTOR SHALL DETERMINE THE OVERALL CONDITION OF THE INLET PRIOR TO ADJUSTING. IF THE REPAIRS REQUIRE MORE THAN NEW ADJUSTING RINGS, THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER PRIOR TO ORDERING MATERIAL. THERE IS AN EXISTING RETAINING WALL ADJACENT TO THE DRAINAGE STRUCTURE. THE CONTRACTOR SHALL EXERCISE CAUTION WORKING AROUND THE WALL. ANY DAMAGE TO THE RETAINING WALL WILL BE REPAIRED BY THE CONTRACTOR AT NO EXPENSE TO THE DEPARTMENT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING A PERMIT FROM LAKE COUNTY FOREST PRESERVES FOR ERECTION OF THE TRAIL BLAZER SIGNS FOR THE NORTH SHORE BIKE PATH DETOUR. THIS PERMIT SHALL BE OBTAINED PRIOR TO INSTALLATION OF STAGE I TRAFFIC CONTROL MEASURES. CONTACT LAKE COUNTY FOREST PRESERVES DIRECTOR OF OPERATIONS & INFRASTRUCTURE, JOHN NELSON AT (847) 968-3407.
- THE CONTRACTOR SHALL ENSURE THAT ALL WORKERS FOLLOW CURRENT OSHA RULES AND OTHER APPLICABLE GUIDELINES REGARDING WORKING SAFELY AROUND EXISTING OVERHEAD DISTRIBUTION ELECTRICAL FACILITIES.

COMMITMENTS

NONE

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**INDEX OF SHEETS, STATE HIGHWAY STANDARDS, GENERAL NOTES
IL 176 OVER DES PLAINES RIVER**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	2020-184-BR	LAKE	49	2
CONTRACT NO.			62M39	
ILLINOIS FEED AID PROJECT				

REV-SEP

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE
				80% FED 20% STATE BRIDGE 0059 049-0068
			URBAN	
20101000	TEMPORARY FENCE	FOOT	150	150
35101500	AGGREGATE BASE COURSE, TYPE B	CU YD	2	2
40600290	BITUMINOUS MATERIALS (TACK COAT)	POUND	259	259
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	87	87
40602985	HOT-MIX ASPHALT BINDER COURSE, IL-9.5, N70	TON	35	35
40604062	HOT-MIX ASPHALT SURFACE COURSE, IL-9.5, MIX "D", N70	TON	58	58
44000156	HOT-MIX ASPHALT SURFACE REMOVAL, 1 3/4"	SQ YD	456	456
44201297	DOWEL BARS 1"	EACH	6	6
44213200	SAW CUTS	FOOT	30	30
50102400	CONCRETE REMOVAL	CU YD	18.2	18.2
50157300	PROTECTIVE SHIELD	SQ YD	97	97
50300255	CONCRETE SUPERSTRUCTURE	CU YD	19.2	19.2
50300260	BRIDGE DECK GROOVING	SQ YD	591	591
50300300	PROTECTIVE COAT	SQ YD	1129	1129

* SPECIALTY ITEMS

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE
				80% FED 20% STATE BRIDGE 0059 049-0068
			URBAN	
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	2600	2600
50800515	BAR SPLICERS	EACH	30	30
52000110	PREFORMED JOINT STRIP SEAL	FOOT	109	109
58700300	CONCRETE SEALER	SQ FT	225	225
60251730	CATCH BASINS TO BE ADJUSTED WITH NEW TYPE 23 FRAME AND GRATE	EACH	1	1
60261530	INLETS TO BE ADJUSTED WITH NEW TYPE 23 FRAME AND GRATE	EACH	2	2
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	12	12
67100100	MOBILIZATION	L SUM	1	1
70107025	CHANGEABLE MESSAGE SIGN	CAL DA	84	84
70300904	PAVEMENT MARKING TAPE, TYPE IV 4"	FOOT	2724	2724
70300924	PAVEMENT MARKING TAPE, TYPE IV 24"	FOOT	84	84
70400100	TEMPORARY CONCRETE BARRIER	FOOT	300	300
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	287.5	287.5
70600240	IMPACT ATTENUATORS, TEMPORARY (NON- REDIRECTIVE), TEST LEVEL 2	EACH	2	2

* SPECIALTY ITEMS

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES
IL 176 OVER DES PLAINES RIVER

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
123B	2020-184-BR	LAKE	49	3
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62M39	

REV-SEP

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CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE
				80% FED 20% STATE BRIDGE 0059 049-0068
70600340	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 2	EACH	2	2
* 78000200	THERMOPLASTIC PAVEMENT MARKING - LINE 4"	FOOT	2312	2312
* 78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	108	108
* 78008210	POLYUREA PAVEMENT MARKING TYPE I - LINE 4"	FOOT	592	592
* 78008250	POLYUREA PAVEMENT MARKING TYPE I - LINE 12"	FOOT	27	27
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	4	4
* 78100300	REPLACEMENT REFLECTOR	EACH	24	24
* 78200011	BARRIER WALL REFLECTORS, TYPE C	EACH	47	47
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	4	4
* 89000050	TEMPORARY BRIDGE TRAFFIC SIGNAL INSTALLATION	EACH	1	1
* X0326276	TEMPORARY LIGHTING FOR SINGLE LANE STAGING	L SUM	1	1
X0326766	CLEAN & RESEAL RELIEF JOINT	FOOT	80	80
X0327638	STREAM GAUGE	EACH	1	1
X0327980	PAVEMENT MARKING REMOVAL - WATER BLASTING	SQ FT	1005	1005

* SPECIALTY ITEMS

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE
				80% FED 20% STATE BRIDGE 0059 049-0068
X4400501	COMBINATION CURB AND GUTTER REMOVAL AND REPLACEMENT LESS THAN OR EQUAL TO 10 FEET	FOOT	30	30
X4420682	CLASS B PATCHES, TYPE II, 10 INCH (SPECIAL)	SQ YD	6	6
X6025600	MANHOLES TO BE ADJUSTED (SPECIAL)	EACH	2	2
X7010216	TRAFFIC CONTROL AND PROTECTION, (SPECIAL)	L SUM	1	1
X7030005	TEMPORARY PAVEMENT MARKING REMOVAL	SQ FT	992	992
X7830050	RAISED REFLECTIVE PAVEMENT MARKER, REFLECTOR REMOVAL	EACH	24	24
Z0006014	BRIDGE DECK LATEX CONCRETE OVERLAY, 2 1/2 INCHES	SQ YD	622	622
Z0012130	BRIDGE DECK SCARIFICATION 3/4"	SQ YD	622	622
Z0012754	STRUCTURAL REPAIR OF CONCRETE (DEPTH EQUAL TO OR LESS THAN 5 INCHES)	SQ FT	69	69
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1
Z0015550	DEBRIS REMOVAL	CU YD	20	20
Z0018051	DRAINAGE SCUPPERS TO BE ADJUSTED	EACH	6	6
Z0030850	TEMPORARY INFORMATION SIGNING	SQ FT	57.7	57.7
* Z0073510	TEMPORARY TRAFFIC SIGNAL TIMING	EACH	1	1
Z0076600	TRAINEES	HOOR	0	

* SPECIALTY ITEMS



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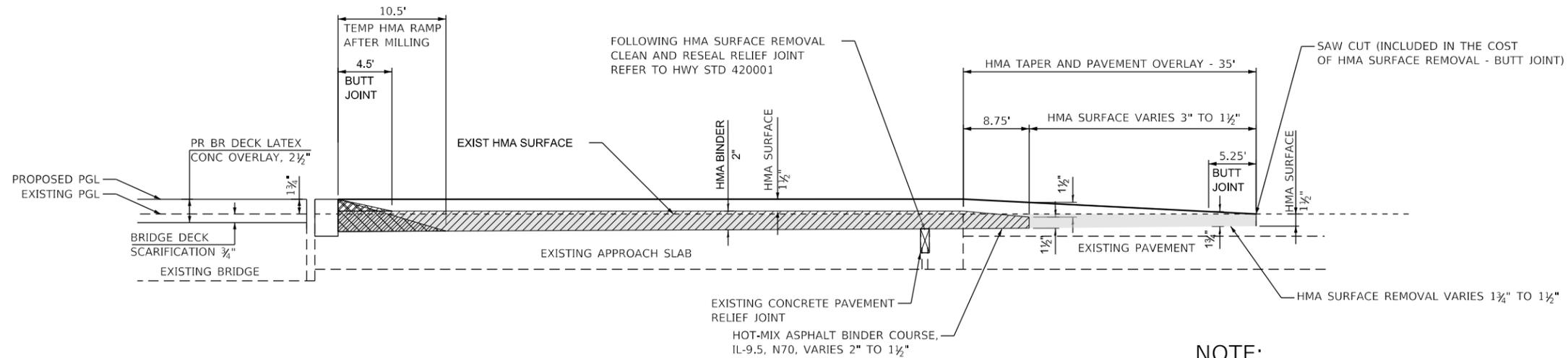
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**SUMMARY OF QUANTITIES
IL 176 OVER DES PLAINES RIVER**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	2020-184-BR	LAKE	49	4
			CONTRACT NO. 62M39	
ILLINOIS FED. AID PROJECT				

REV-SEP



APPROACH PAVEMENT HMA OVERLAY DETAIL

STA 38+65 TO STA 39+26
STA 40+74 TO STA 41+35

NOTE:

CONTRACTOR SHALL EXPOSE THE RELIEF JOINT TO CLEAN AND RESEAL. HMA REMOVAL DEPTH GREATER THAN 1 3/4", IF REQUIRED, TO EXPOSE THE RELIEF JOINT SHALL BE INCLUDED IN THE COST OF HMA SURFACE REMOVAL, 1 3/4".

LEGEND

HMA SURFACE REMOVAL, 1 3/4"

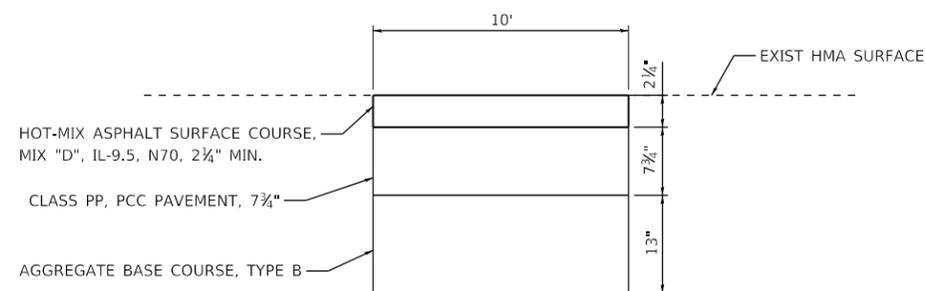
HOT-MIX ASPHALT MIXTURE REQUIREMENTS

OPERATION	MIXTURE TYPE	AIR VOIDS @ Ndes	QUALITY MANAGEMENT PROGRAM (QMP)
APPROACH PAVEMENT RESURFACING	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", IL-9.5, N70, 1 1/2" MIN. HOT-MIX ASPHALT BINDER COURSE, IL-9.5, N70, 1 1/2" MIN.	4% @ 70 GYR. 4% @ 70 GYR.	QC/QA QC/QA
TEMPORARY HMA RAMP	HOT-MIX ASPHALT BINDER COURSE, IL-9.5, N70	4% @ 70 GYR.	QC/QA
CLASS B PATCHES (SPECIAL)	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", IL-9.5, N70, 2 1/4"	4% @ 70 GYR.	QC/QA
QMP DESIGNATIONS: QUALITY CONTROL/QUALITY ASSURANCE (QC/QA); QUALITY CONTROL FOR PERFORMANCE (QFP); PAY FOR PERFORMANCE (PFP)			

NOTES:

- 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 MIXES THE "AC TYPE" SHALL BE "PG 64-22" UNLESS MODIFIED BY SPECIAL PROVISIONS.
- FOR USE OF RECYCLED MATERIALS, SEE SPECIAL PROVISIONS.
- QUALITY MANAGEMENT PROGRAM (QMP) IDENTIFIES THE PARTICULAR QUALITY CONTROL SPECIFICATION THAT APPLIES TO THE HMA MIXTURE.

CLASS B PATCH (SPECIAL) DETAIL



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PLOT DATE = 10/15/2020	DATE - 10/09/2020	REVISED -

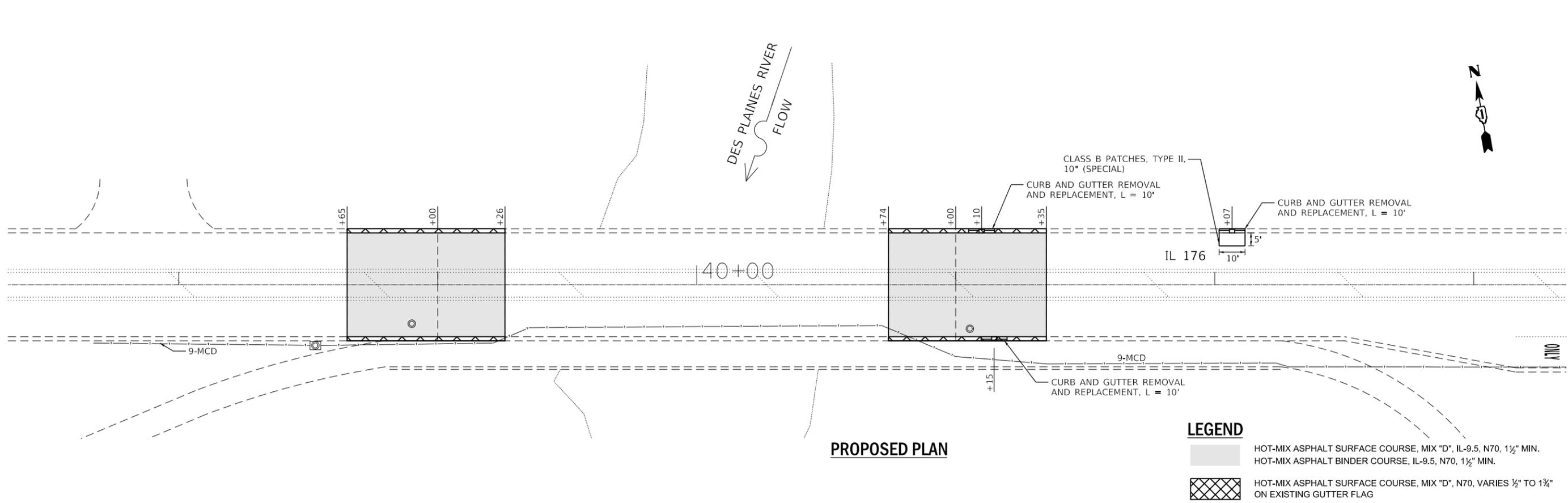
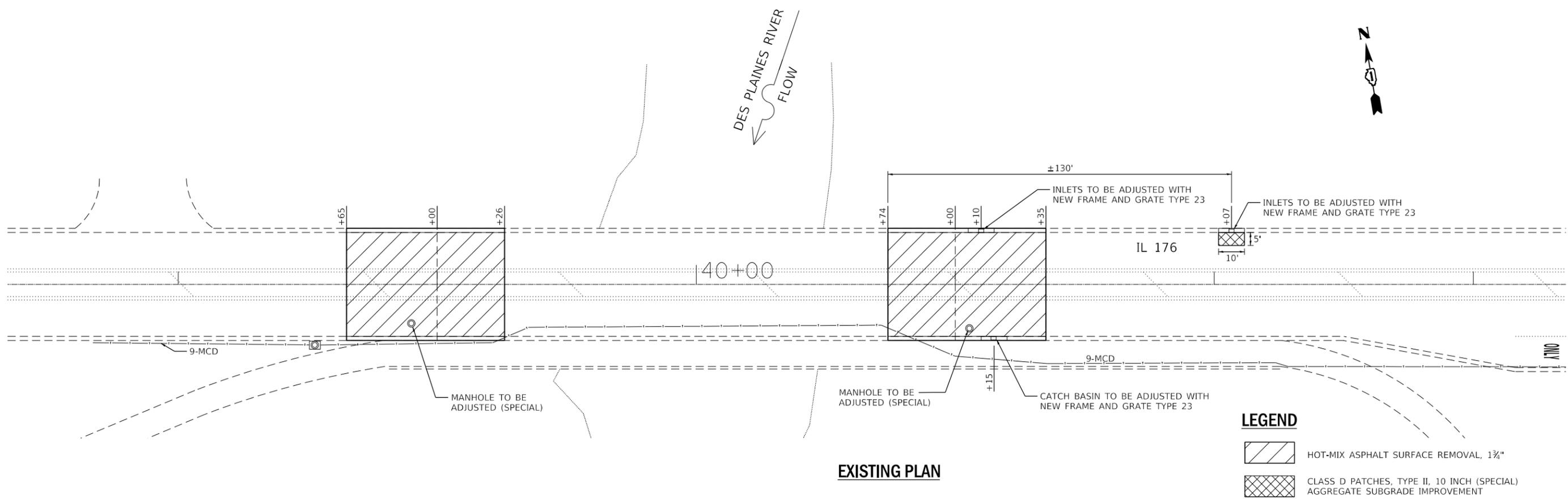
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TYPICAL SECTIONS AND DETAILS
IL 176 OVER DES PLAINES RIVER**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	2020-184-BR	LAKE	49	5
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62M39	

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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**EXISTING AND PROPOSED PLAN
IL 176 OVER DES PLAINES RIVER**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	2020-184-BR	LAKE	49	6
CONTRACT NO. 62M39			ILLINOIS FED. AID PROJECT	

TRAFFIC CONTROL GENERAL NOTES

- THE TRAFFIC CONTROL DEPICTED HEREIN IS THE MINIMUM REQUIREMENT. ADDITIONAL TRAFFIC CONTROL DEVICES AS SPECIFIED IN THE HIGHWAY STANDARDS AS SHOWN IN THE INDEX OF SHEETS AND THE SPECIAL PROVISIONS SHALL BE PLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER. ALL TRAFFIC CONTROL DEVICES SHALL BE CONSIDERED INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION (SPECIAL) UNLESS OTHERWISE INDICATED WITHIN THESE GENERAL NOTES, PLANS OR SPECIAL PROVISIONS.
- THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE ALL SIGNS AND SIGN SUPPORTS REQUIRED FOR TRAFFIC CONTROL AND PROTECTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING LABOR, SIGNS AND TRAFFIC CONTROL DEVICES NECESSARY FOR THE MAINTENANCE OF TRAFFIC UNLESS NOTED OTHERWISE IN THE SPECIAL PROVISIONS.
- THE CONTRACTOR SHALL CONTACT THE ARTERIAL TRAFFIC CONTROL SUPERVISOR AT KALPANA.KANNAN-HOSADURGA@ILLINOIS.GOV A MINIMUM OF 72 HOURS IN ADVANCE OF BEGINNING THE WORK.
- A MINIMUM OF FOURTEEN (14) DAYS IN ADVANCE OF THE BRIDGE CONSTRUCTION AND ALL SUBSEQUENT STAGE CHANGES ON IL ROUTE 176, THE CONTRACTOR SHALL PLACE ONE (1) PORTABLE CHANGEABLE MESSAGE SIGN AT EACH END OF THE PROJECT ALONG IL ROUTE 176 AS DIRECTED AND AT A LOCATION DESIGNATED BY THE ENGINEER TO INFORM MOTORISTS OF THE UPCOMING BRIDGE CONSTRUCTION / STAGE CHANGE. THE MESSAGE SHALL BE APPROVED BY THE ENGINEER. THIS WORK IS TO BE PAID FOR AT THE CONTRACT UNIT PRICE PER CALENDAR DAY FOR CHANGEABLE MESSAGE SIGN.
- WORK ZONE SPEED LIMIT SHALL BE 35 MPH ON IL ROUTE 176.
- DRUMS AND DIRECTIONAL BARRICADES SHALL BE PROVIDED AND SPACED AS SHOWN IN THE PLANS THRU THE FULL LENGTH OF THE CONSTRUCTION WORK ZONE. ALL DRUMS AND DIRECTIONAL BARRICADES SHALL BE EQUIPPED WITH MONO-DIRECTIONAL STEADY BURN LIGHTS IN MULTILANE SECTIONS, IN 1-LANE, 2-WAY SECTIONS THE LIGHTS SHALL BE BI-DIRECTIONAL.
- ALL ROAD CONSTRUCTION AHEAD SIGNS, ONE LANE ROAD AHEAD SIGNS, AND TYPE III BARRICADES SHALL BE EQUIPPED WITH MONO-DIRECTIONAL TYPE A AMBER FLASHING LIGHTS.
- ALL EXISTING SIGNS THAT CONFLICT WITH THE TRAFFIC CONTROL PLAN SHALL BE COVERED OR REMOVED IN ACCORDANCE WITH ARTICLE 107.25 OF THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL BE REQUIRED TO REMOVE ALL EXISTING PAVEMENT MARKINGS WHICH CONFLICT WITH THE DESIGNATED TRAFFIC CONTROL PLAN.
- THE CONTRACTOR SHALL BE REQUIRED TO MAINTAIN TRAFFIC IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS, SPECIAL PROVISIONS, APPLICABLE STATE STANDARDS, AND AS DIRECTED BY THE ENGINEER. ANY CHANGES TO THE TRAFFIC CONTROL SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO IMPLEMENTING ANY CHANGES.
- TRAFFIC CONDITIONS, ACCIDENTS, AND OTHER UNFORESEEN EMERGENCY CONDITIONS MAY REQUIRE THE ENGINEER TO RESTRICT, MODIFY OR REMOVE LANE CLOSURES OR CHANNELIZATION SHOWN IN THE PLANS. THE CONTRACTOR SHALL PROMPTLY RESPOND AT THE TIME OF NOTIFICATION BY THE ENGINEER FOR THE MAINTENANCE OF TRAFFIC CONTROL DEVICES.
- THE ENGINEER SHALL BE INFORMED A MINIMUM OF 48 HOURS IN ADVANCE OF ANY PROPOSED CHANGE TO THE SUGGESTED STAGES OF CONSTRUCTION AND TRAFFIC CONTROL PLAN.
- ALL TEMPORARY PAVEMENT MARKINGS SHOWING DETERIORATION AFTER SEVEN (7) DAYS OF SERVICE SHALL BE REPLACED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER. ALL MARKINGS THAT REQUIRE REPLACEMENT PRIOR TO SEVEN (7) DAYS OF SERVICE OR REPLACEMENT SHALL BE REPLACED BY THE CONTRACTOR AT HIS EXPENSE.
- ALL TRAFFIC CONTROL DEVICES SHALL BE REMOVED, COVERED OR TURNED AWAY FROM THE TRAFFIC IMMEDIATELY WHEN THEY ARE NO LONGER NECESSARY. WHEN A SIGN IS COVERED, ITS POST SHALL HAVE A REFLECTIVE 3" X 6" DELINEATOR INSTALLED. THE COST OF THE DELINEATOR IS INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION (SPECIAL).
- TEMPORARY CONCRETE BARRIERS AND TEMPORARY IMPACT ATTENUATORS SHALL BE PLACED AS SHOWN IN THE PLANS. FURNISHING, INSTALLING AND RELOCATING TEMPORARY CONCRETE BARRIER AND TEMPORARY IMPACT ATTENUATORS SHALL BE IN ACCORDANCE WITH IDOT SPECIAL PROVISIONS, IDOT HIGHWAY STANDARDS, STANDARD SPECIFICATIONS, AND AS DIRECTED BY THE ENGINEER.
- IMMEDIATELY AFTER THE COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL RESTORE ALL PERMANENT PAVEMENT MARKINGS, SIGNS, AND OTHER TRAFFIC CONTROL DEVICES THAT WERE COVERED, REMOVED, DAMAGED OR OTHERWISE AFFECTED BY CONSTRUCTION.
- THE CONTRACTOR SHALL PROVIDE ADEQUATE TEMPORARY DRAINAGE PROTECTION DURING ALL PHASES OF CONSTRUCTION.
- ALL TEMPORARY PAVEMENT MARKINGS SHALL BE PAVEMENT MARKING TAPE, TYPE IV, UNLESS OTHERWISE NOTED
- THE CONTRACTOR SHALL MAINTAIN SASTISFACTORY INGRESS AND EGRESS TO ADJACENT PROPERTIES THROUGHOUT CONSTRUCTION.
- THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND TRAFFIC CONTROL DEVICES MAY BE ADJUSTED TO FIT FIELD CONDITIONS BY THE ENGINEER.

SUGGESTED SEQUENCE OF CONSTRUCTION & MAINTENANCE OF TRAFFIC

THE FOLLOWING SEQUENCE OF CONSTRUCTION AND MAINTENANCE OF TRAFFIC IS SUGGESTED. VARIATIONS MAY BE MADE WITH THE APPROVAL OF THE ENGINEER.

FOR EACH STAGE OF CONSTRUCTION, PROVIDE TRAFFIC CONTROL AS SHOWN ON THE SUGGESTED MAINTENANCE OF TRAFFIC PLANS. COORDINATE INSTALLATION OF TEMPORARY PAVEMENT MARKINGS AND OTHER TRAFFIC CONTROL DEVICES WITH THE EXISTING TRAFFIC PATTERNS AT THE ENDS OF THE PROJECT.

PRE-STAGE (IL 176)

- INSTALL PORTABLE CHANGEABLE MESSAGE SIGNS AS DIRECTED BY ENGINEER.
- INSTALL TEMPORARY FENCE ALONG THE BIKE PATH UNDER THE BRIDGE AS SHOWN IN MOT PLANS.
- INSTALL PROTECTIVE SHIELD OVER THE BIKE PATH AS SHOWN IN THE STRUCTURAL PLANS.

STAGE 1 (IL 176)

- UTILIZE HIGHWAY STANDARD 701311 TO REMOVE CONFLICTING PERMANENT PAVEMENT MARKINGS AND RAISED REFLECTIVE PAVEMENT MARKER REFLECTORS, INSTALL TEMPORARY PAVEMENT MARKING AS DETAILED IN THE TRAFFIC CONTROL PLAN TO CLOSE THE EASTBOUND LANES ON THE BRIDGE DECK.
- INSTALL STAGE 1 TRAFFIC CONTROL ACCORDING TO HIGHWAY STANDARD 701321 AND THE DETAIL IN THE PLANS.
- CLOSE BIKE PATH AND SIDEWALK LOCATED SOUTH OF THE BRIDGE AND SET UP A DETOUR ROUTE FOR BIKE AND PEDESTRIAN TRAFFIC AS SHOWN IN PLANS.
- SHIFT TRAFFIC TO THE NORTH SIDE OF THE EXISTING PAVEMENT UTILIZING THE WESTBOUND LANE.
- REVIEW TRAFFIC CONDITIONS AND ADJUST SIGNAL TIMING AS NECESSARY.
- PERFORM BRIDGE DECK REPAIR, RECONSTRUCT BRIDGE DECK EXPANSION JOINTS, PARAPET REPAIRS, BRIDGE DECK CONCRETE OVERLAY, ADJUST DRAINAGE STRUCTURES ON THE EASTBOUND LANES AS SHOWN IN PLANS.

STAGE 2 (IL 176)

- REMOVE CONFLICTING PERMANENT PAVEMENT MARKINGS, RAISED REFLECTIVE PAVEMENT MARKER REFLECTORS AND TEMPORARY PAVEMENT STRIPING FROM STAGE 1. INSTALL TEMPORARY PAVEMENT MARKING AS DETAILED IN THE TRAFFIC CONTROL PLAN TO CLOSE THE WESTBOUND LANES ON THE BRIDGE DECK.
- INSTALL STAGE 2 TRAFFIC CONTROL ACCORDING TO HIGHWAY STANDARD 701321 AND THE DETAILS IN THE PLANS. REMOVE DETOUR SIGNS SETUP IN STAGE 1 AND OPEN THE SIDEWALK AND BIKE PATH FOR BIKES AND PEDESTRIAN TRAFFIC.
- SHIFT TRAFFIC TO THE NEWLY CONSTRUCTED EASTBOUND PAVEMENT.
- REVIEW TRAFFIC CONDITIONS AND ADJUST SIGNAL TIMING AS NECESSARY.
- PERFORM BRIDGE DECK REPAIR, RECONSTRUCT BRIDGE DECK EXPANSION JOINTS, PARAPET REPAIRS, BRIDGE DECK CONCRETE OVERLAY ON THE EASTBOUND LANES AS SHOWN IN PLANS.
- ADJUST DRAINAGE STRUCTURE, CONSTRUCT PAVEMENT PATCHES AND CURB AND GUTTER REMOVAL AND REPLACEMENT ON NORTH EAST SIDE OF THE BRIDGE ON IL176 AS SHOWN IN PLANS.
- REMOVE TEMPORARY CONCRETE BARRIERS, TEMPORARY PAVEMENT MARKINGS AND TEMPORARY TRAFFIC SIGNALS.

STAGE 3 (IL 176)

- UTILIZE HIGHWAY STANDARD 701502 TO PREFORM BUTT JOINT AND APPROACH SLAB PAVING OPERATIONS.
- ADJUST DRAINAGE STRUCTURES, PLACE HOT-MIX ASPHALT BINDER COURSE, IL-9.5, N70, 1½" MIN. HOT-MIX ASPHALT SURFACE COURSE, MIX "D", IL-9.5, N70, 1½" MIN. BETWEEN STA 38+65 TO STA 39+26 AND STA 40+74 TO STA 41+35.
- INSTALL PERMANENT PAVEMENT MARKINGS.
- REMOVE TEMPORARY TRAFFIC CONTROL DEVICES AND EROSION CONTROL DEVICES.

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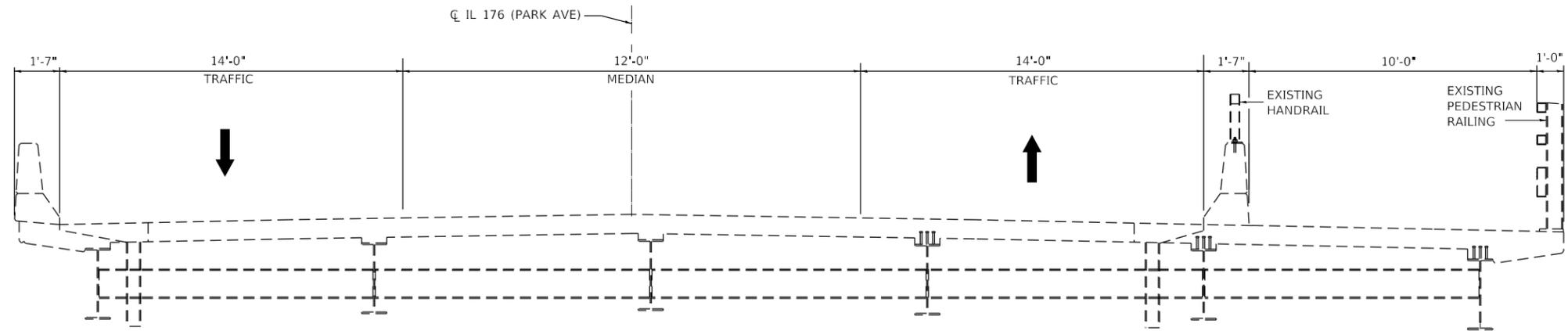
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**MAINTENANCE OF TRAFFIC GENERAL NOTES
IL 176 OVER DES PLAINES RIVER**

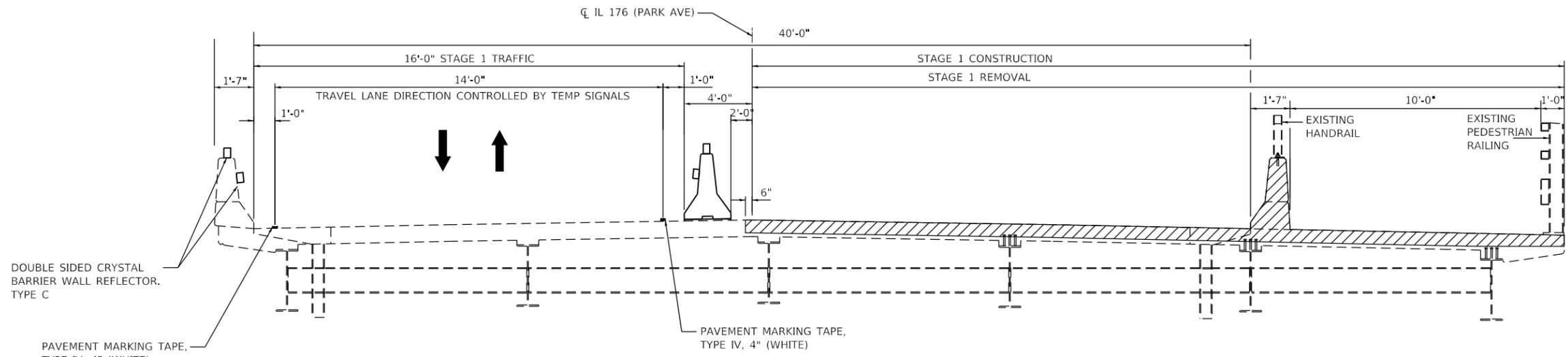
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			CONTRACT NO. 62M39	
ILLINOIS FED. AID PROJECT				



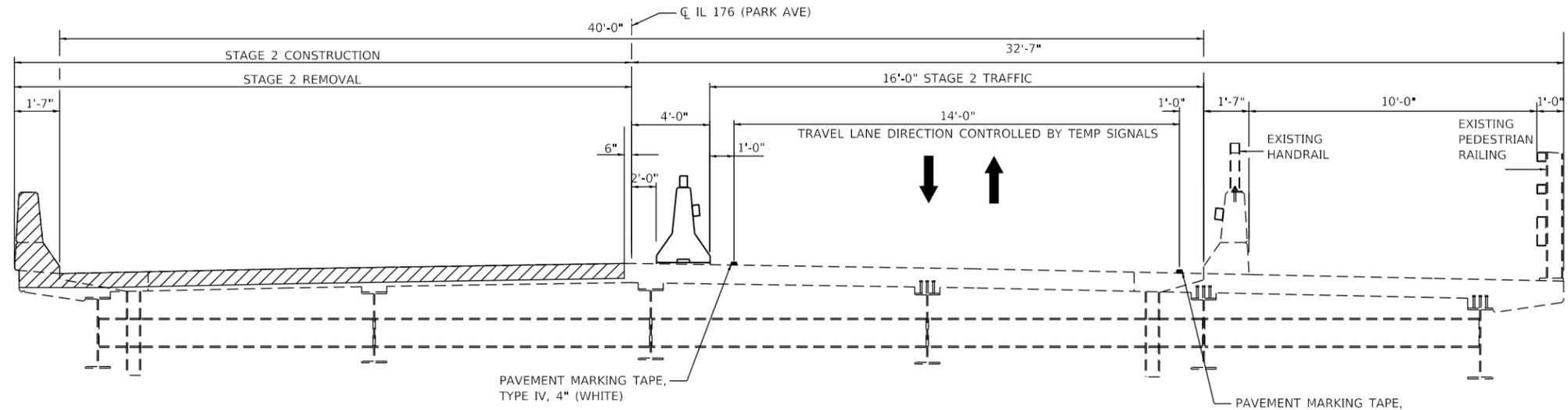
IL ROUTE 176 (PARK AVE) – EXISTING

STA 36+33 TO STA 43+59



IL ROUTE 176 (PARK AVE) – STAGE 1

STA 36+33 TO STA 43+59



IL ROUTE 176 (PARK AVE) – STAGE 2

STA 36+33 TO STA 43+59

LEGEND:

-  WORK ZONE
-  TEMPORARY CONCRETE BARRIER WITH DOUBLE SIDED CRYSTAL BARRIER WALL REFLECTOR, TYPE C
-  PAVEMENT MARKING TAPE
-  DIRECTION OF TRAFFIC

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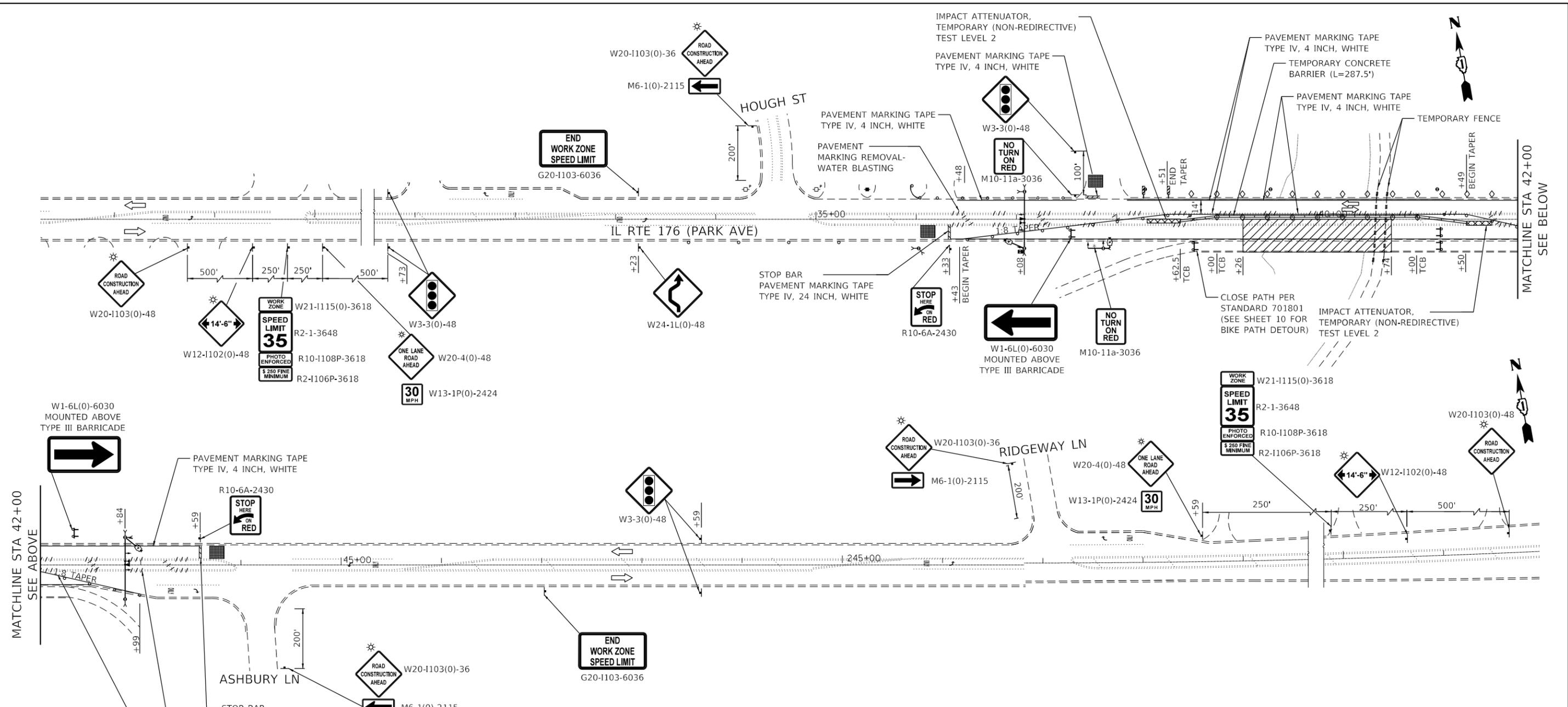
**STATE OF ILLINOIS
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**MAINTENANCE OF TRAFFIC TYPICAL SECTIONS
IL 176 OVER DES PLAINES RIVER**

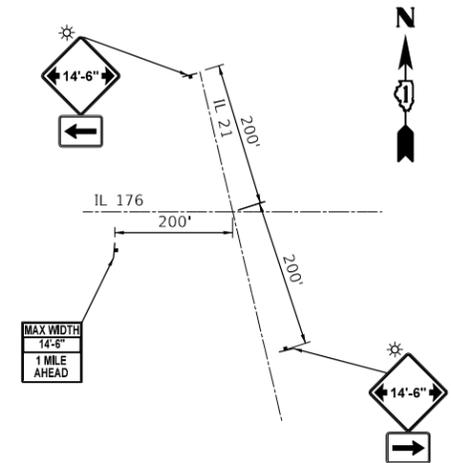
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F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 62M39			ILLINOIS FED. AID PROJECT	

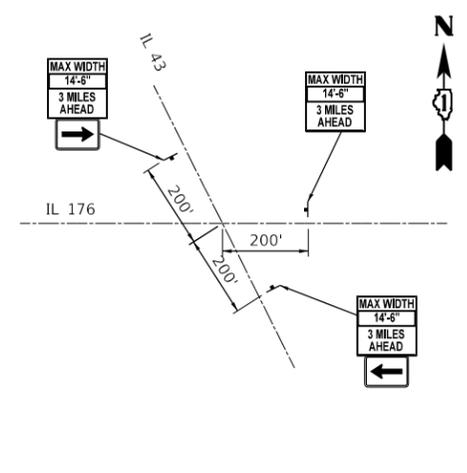
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WIDTH RESTRICTIONS SIGNING FOR EB TRAFFIC



WIDTH RESTRICTIONS SIGNING FOR WB TRAFFIC



LEGEND					
	WORK AREA		CONSTRUCTION SIGN POST		DRUMS AT 50' C-C IN TANGENTS, 25' C-C SPACING IN TAPERS, 10' C-C SPACING IN RADII
	TYPE III BARRICADE		PAVEMENT MARKING REMOVAL- WATER BLASTING, RAISED REFLECTIVE PAVEMENT MARKER REMOVAL, AND RAISED REFLECTIVE PAVEMENT MARKER REFLECTOR REMOVAL		DIRECTION OF TRAFFIC
	BARRIER WALL REFLECTORS		DETECTION ZONE		



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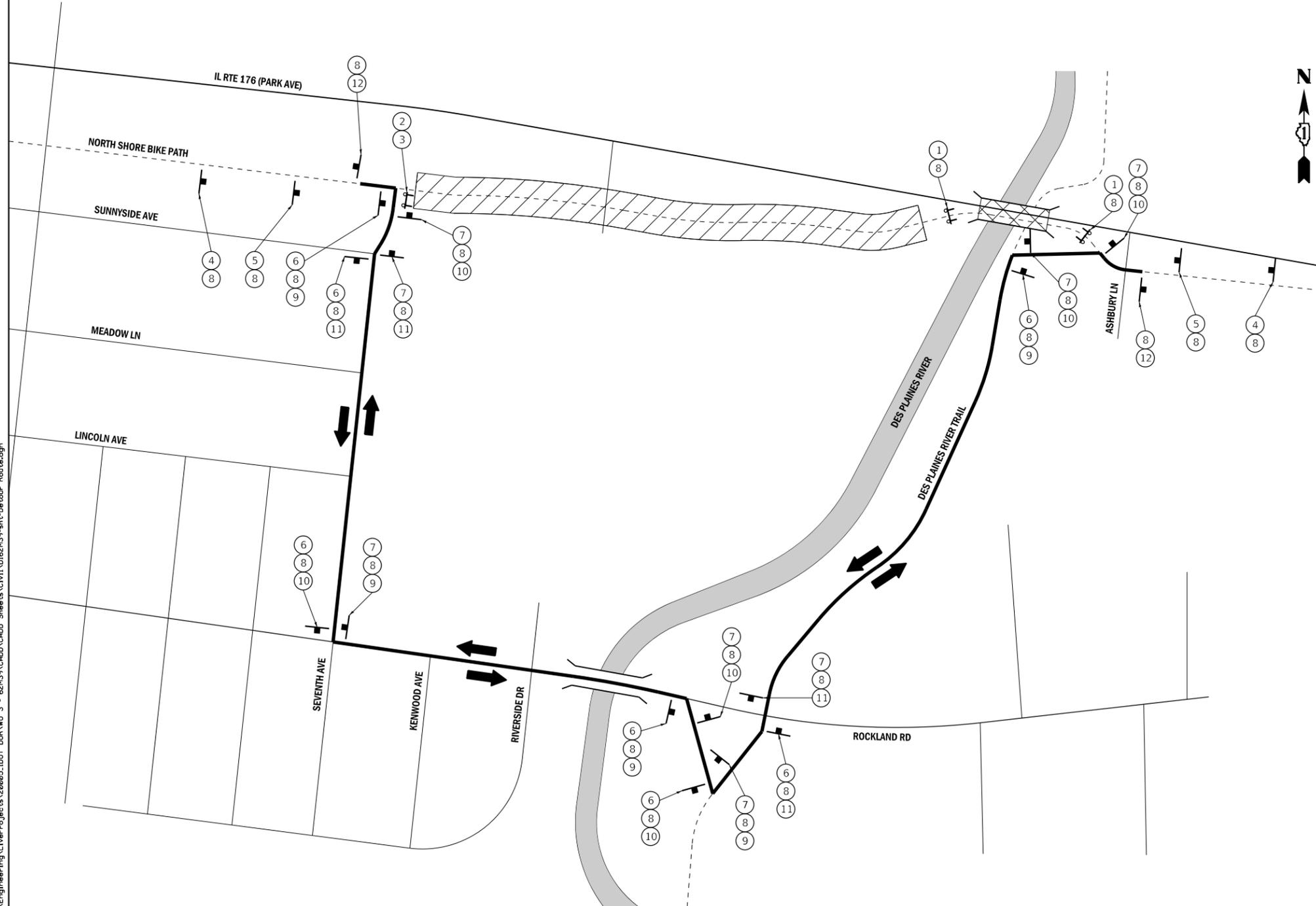
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MAINTENANCE OF TRAFFIC - STAGE 1
IL 176 OVER DES PLAINES RIVER

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	2020-184-BR	LAKE	49	9
CONTRACT NO. 62M39				
ILLINOIS FED. AID PROJECT				

① BIKE PATH CLOSED TO ALL TRAFFIC R-11-4-6030 (MOD)	② BIKE PATH CLOSED TO THRU TRAFFIC R-11-4-6030 (MOD)	③ DETOUR M4-10R-4818	④ BIKE PATH CLOSED AHEAD W20-3-36 (MOD)	⑤ DETOUR AHEAD W20-2-36	⑥ EAST M3-2-2412
⑦ WEST M3-4-2412	⑧ North Shore Bike Path D3-1(0)-3615	⑨ DETOUR M4-9a-3024	⑩ DETOUR M4-9a-3024	⑪ DETOUR M4-9a-3024	⑫ END DETOUR M4-8a-2412



NOTES

1. THE CONTRACTOR SHALL NOTIFY THE VILLAGE OF LIBERTYVILLE ONE MONTH PRIOR TO THE BIKE PATH CLOSURE. "BIKE PATH WILL BE CLOSED FROM MMM ## THRU MMM" SIGNAGE NEEDS TO BE IN PLACE TWO WEEKS PRIOR TO THE CLOSURE.
2. SHOULDER SPACE IS LIMITED. THE CONTRACTOR WILL ENSURE THESE SIGNS DO NOT BLOCK THE BIKE PATH OR EXTEND ONTO THE STREET.
3. SIGNS FOR THE DETOUR ARE INCLUDED IN THE CONTRACT LUMP SUM COST OF TRAFFIC CONTROL AND PROTECTION (SPECIAL).
4. ALL TRAFFIC SIGNS SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND SHALL MEET WITH THE APPROVAL OF THE ENGINEER REGARDING LOCATION, TYPE, SIZE, NUMBER, AND DURATION.
5. FOR TYPICAL SIGN INSTALLATION - SEE HIGHWAY STANDARD 701901.
6. APPROPRIATE IDOT TRAFFIC CONTROL STANDARDS SHALL BE USED TO INSTALL AND REMOVE TRAFFIC CONTROL AND PROTECTION DEVICES.

LEGEND

- PROJECT AREA FULLY CLOSED
- PROJECT AREA PARTIALLY CLOSED
- DETOUR ROUTE
- SIGN / SIGN ASSEMBLY ON POST
- TYPE III BARRICADE WITH TWO AMBER FLASHING LIGHTS
- DIRECTION OF TRAFFIC

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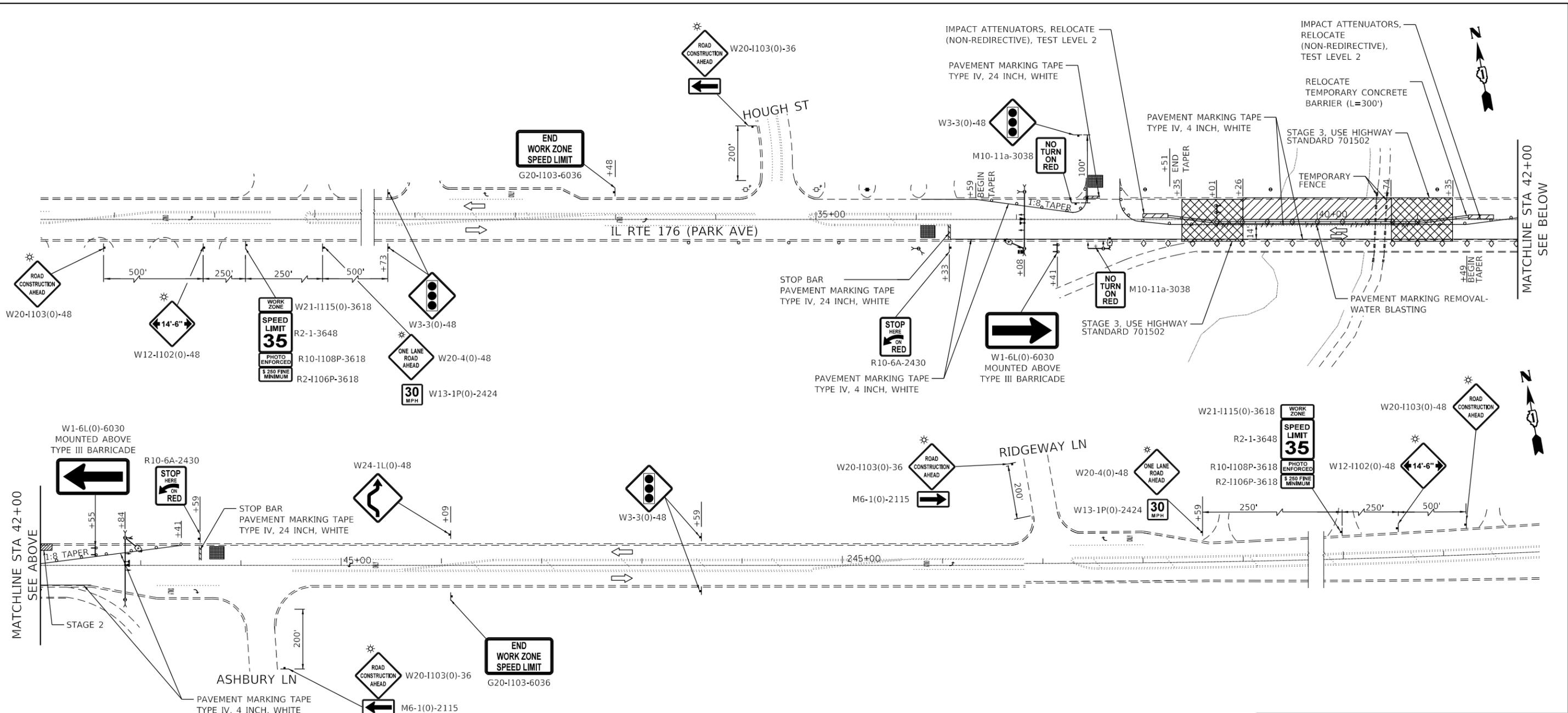
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**BIKE PATH DETOUR ROUTE - STAGE 1
IL 176 OVER DES PLAINES RIVER**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	2020-184-BR	LAKE	49	10
ILLINOIS FED. AID PROJECT			CONTRACT NO. 62M39	

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LEGEND	
	WORK AREA
	CONSTRUCTION SIGN POST
	DRUMS AT 50' C-C IN TANGENTS, 25' C-C SPACING IN TAPERS, 10' C-C SPACING IN RADII
	TYPE III BARRICADE
	PAVEMENT MARKING REMOVAL- WATER BLASTING, RAISED REFLECTIVE PAVEMENT MARKER REMOVAL, AND RAISED REFLECTIVE PAVEMENT MARKER REFLECTOR REMOVAL
	DIRECTION OF TRAFFIC
	CRYSTAL DOUBLE SIDED BARRIER WALL REFLECTORS, TYPE C
	DETECTION ZONE



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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

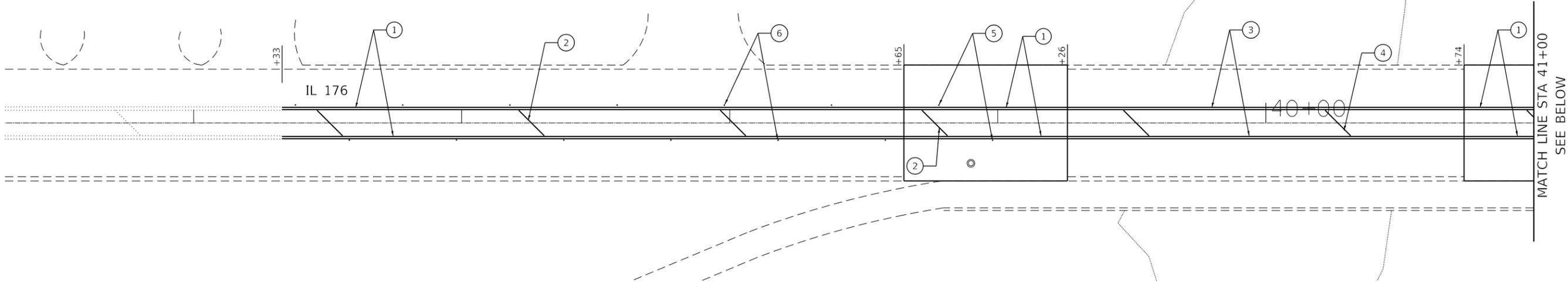
**MAINTENANCE OF TRAFFIC - STAGE 2
IL 176 OVER DES PLAINES RIVER**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	2020-184-BR	LAKE	49	11
CONTRACT NO.			62M39	
ILLINOIS FED. AID PROJECT				

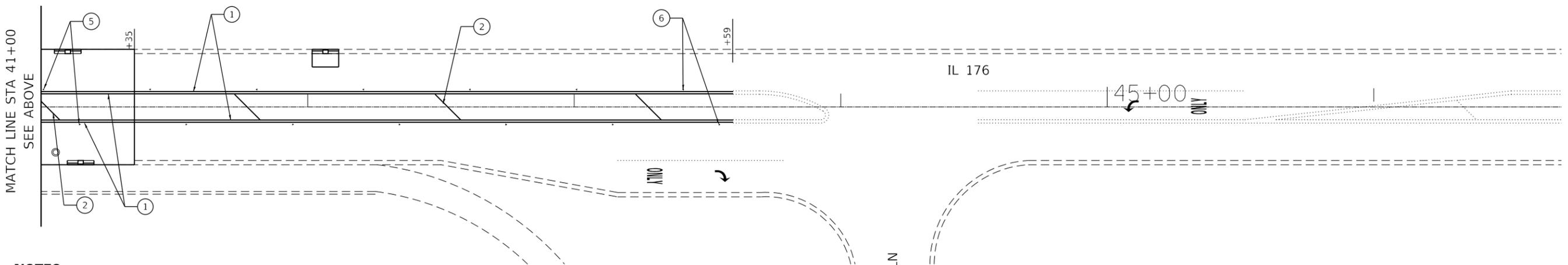


DES PLAINES RIVER
FLOW



PAVEMENT MARKING LEGEND

- ① THERMOPLASTIC PAVEMENT MARKING - LINE 4", (DOUBLE YELLOW, 11" CTR)
- ② THERMOPLASTIC PAVEMENT MARKING - LINE 12" (YELLOW DIAGONALS @ 45°, 75' SPACING)
- ③ POLYUREA PAVEMENT MARKING TYPE 1 - LINE 4", (DOUBLE YELLOW, 11" CTR)
- ④ POLYUREA PAVEMENT MARKING TYPE 1 - LINE 12" (YELLOW DIAGONALS @ 45°, 75' SPACING)
- ⑤ RAISED REFLECTIVE PAVEMENT MARKERS
- ⑥ REPLACEMENT REFLECTOR



NOTES:

1. INSTALL PAVEMENT MARKINGS IN ACCORDANCE WITH DISTRICT ONE STANDARD DETAIL TC-13 - TYPICAL PAVEMENT MARKINGS.
2. INSTALL RAISED REFLECTIVE PAVEMENT MARKERS IN ACCORDANCE WITH DISTRICT ONE STANDARD DETAIL TC-11 - RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT). OMIT OVER BRIDGE.

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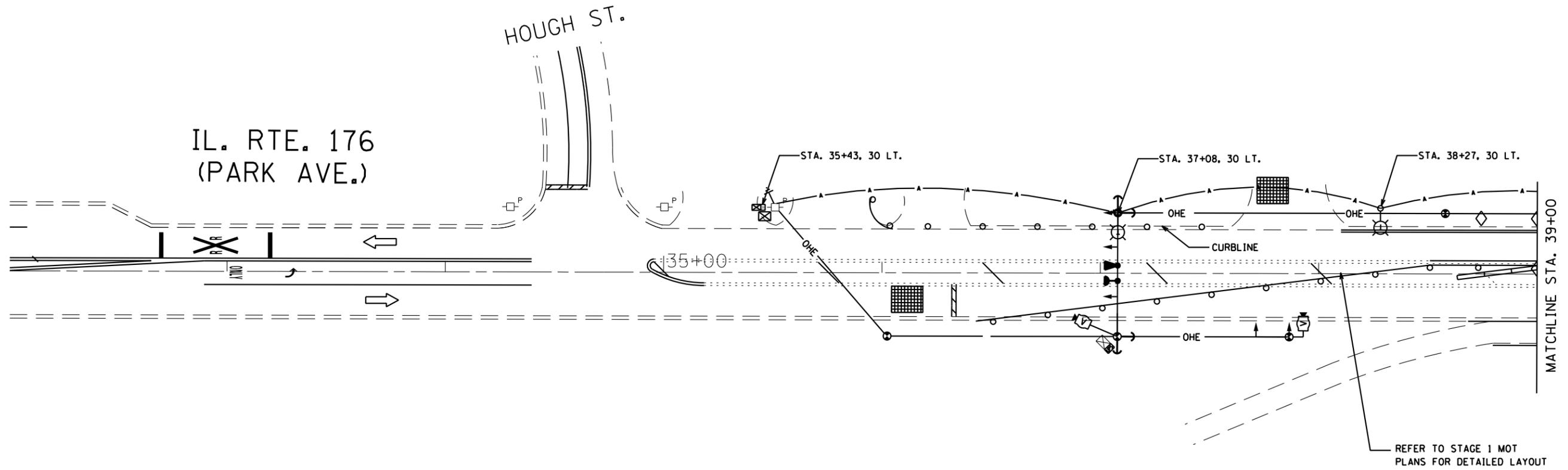
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PAVEMENT MARKING PLAN
IL 176 OVER DES PLAINES RIVER**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	2020-184-BR	LAKE	49	12
CONTRACT NO. 62M39			ILLINOIS FED. AID PROJECT	



LEGEND

SEE COVER SHEET

THE CONTRACTOR SHALL VERIFY THE ELECTRICAL SERVICE LOCATION WITH COMED PRIOR TO DOING ANY WORK.

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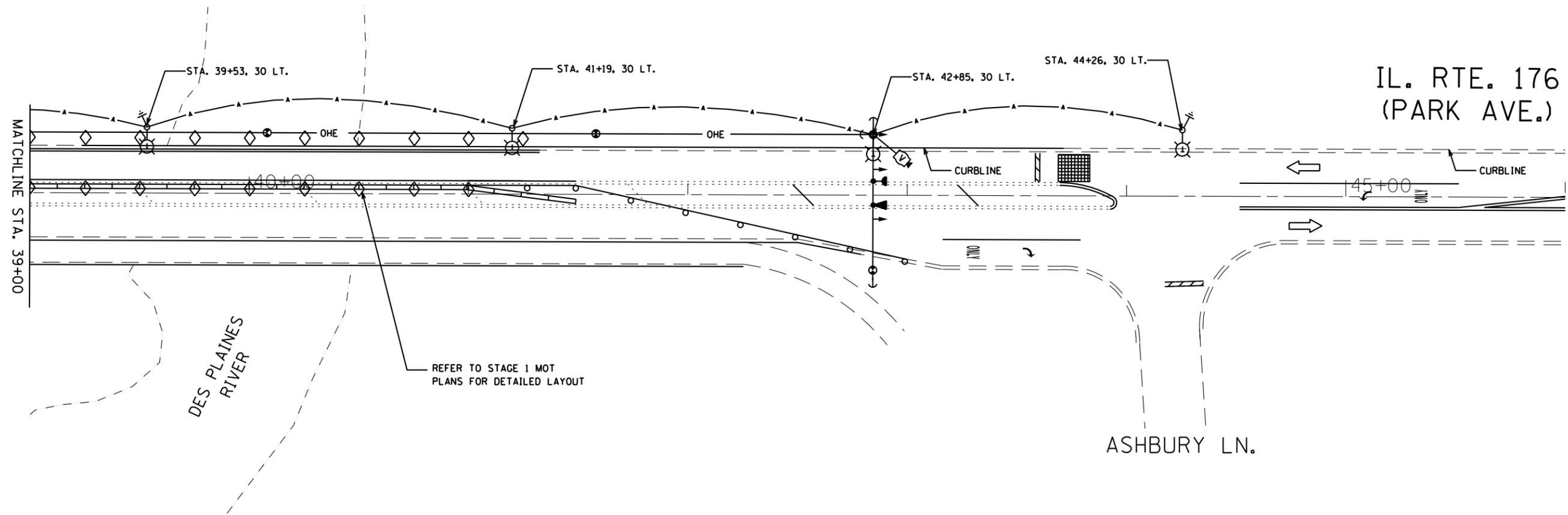
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PLOT DATE = 08/25/20	DATE - 09/28/2020	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**STAGE 1 TEMPORARY LIGHTING (SHEET 1 OF 2)
IL 176 (PARK AVE.) OVER DES PLAINES RIVER**

SCALE: 50 SHEET 2 OF 5 SHEETS STA. 32+00 TO STA. 39+00

F.A.U. RTE. 1238	SECTION P-2-1-1(12)	COUNTY LAKE	TOTAL SHEETS 49	SHEET NO. 14
				CONTRACT NO. 62M39
ILLINOIS FED. AID PROJECT				



LEGEND

SEE COVER SHEET

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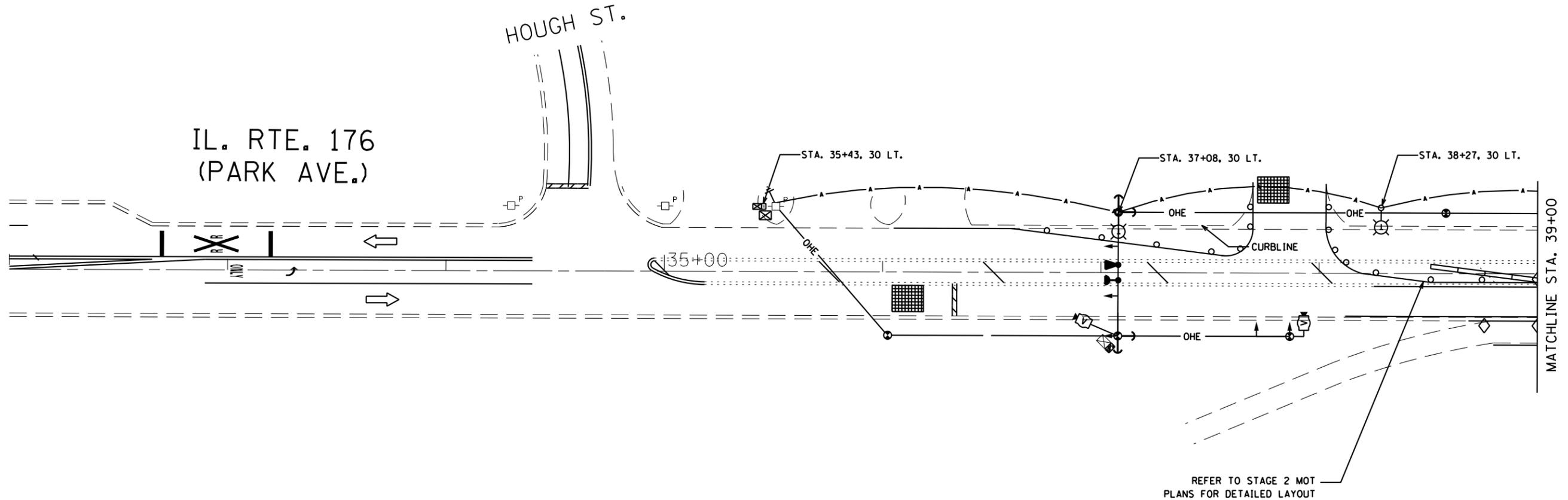
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PLOT DATE = 08/25/20	DATE - 09/28/2020	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**STAGE 1 TEMPORARY LIGHTING (SHEET 2 OF 2)
IL 176 (PARK AVE.) OVER DES PLAINES RIVER**

SCALE: 50 SHEET 3 OF 5 SHEETS STA. 39+00 TO STA. 46+00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	P-2-1-1(12)	LAKE	49	15
CONTRACT NO. 62M39				
ILLINOIS FED. AID PROJECT				



LEGEND

SEE COVER SHEET

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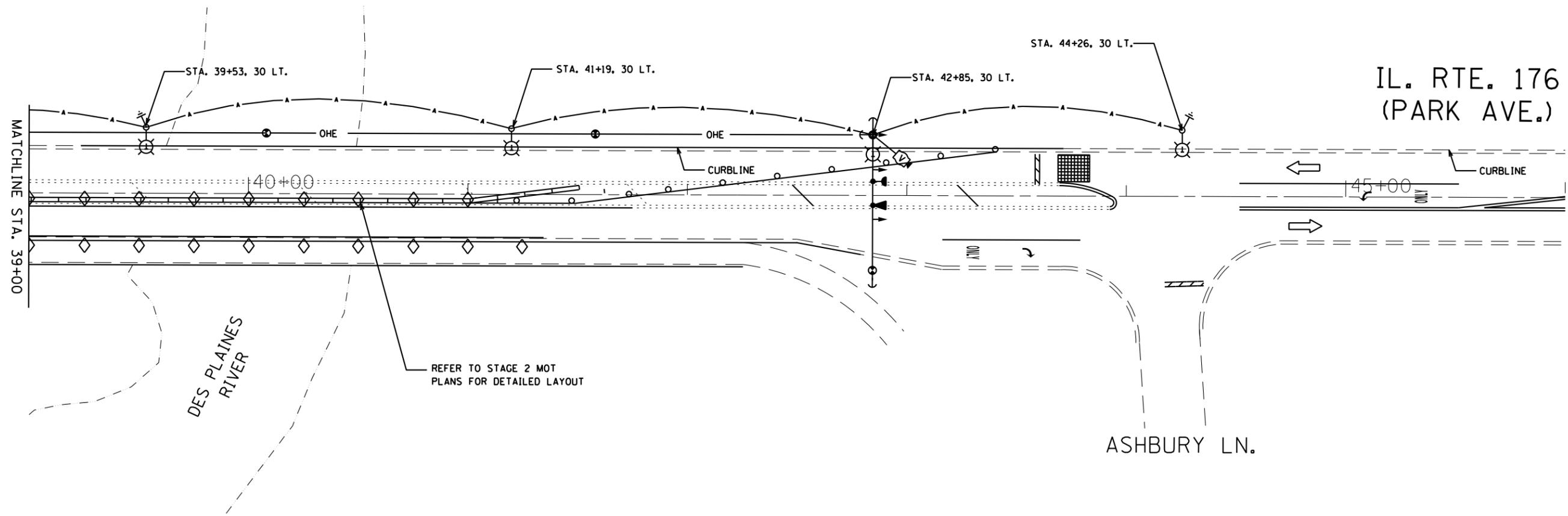
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**STAGE 2 TEMPORARY LIGHTING (SHEET 1 OF 2)
IL 176 (PARK AVE.) OVER DES PLAINES RIVER**

SCALE: 50 SHEET 4 OF 5 SHEETS STA. 32+00 TO STA. 39+00

F.A.U. RTE. 1238	SECTION P-2-1-1(12)	COUNTY LAKE	TOTAL SHEETS 49	SHEET NO. 16
			CONTRACT NO. 62M39	
ILLINOIS FED. AID PROJECT				



LEGEND

SEE COVER SHEET

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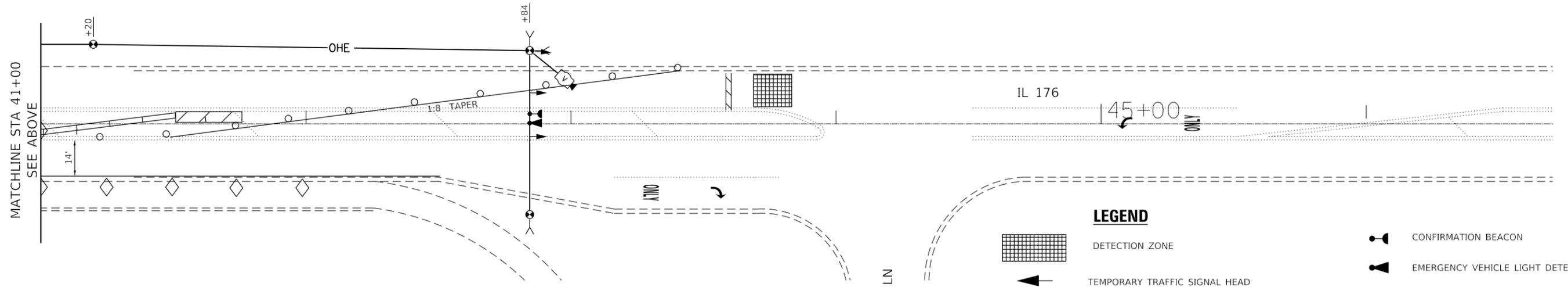
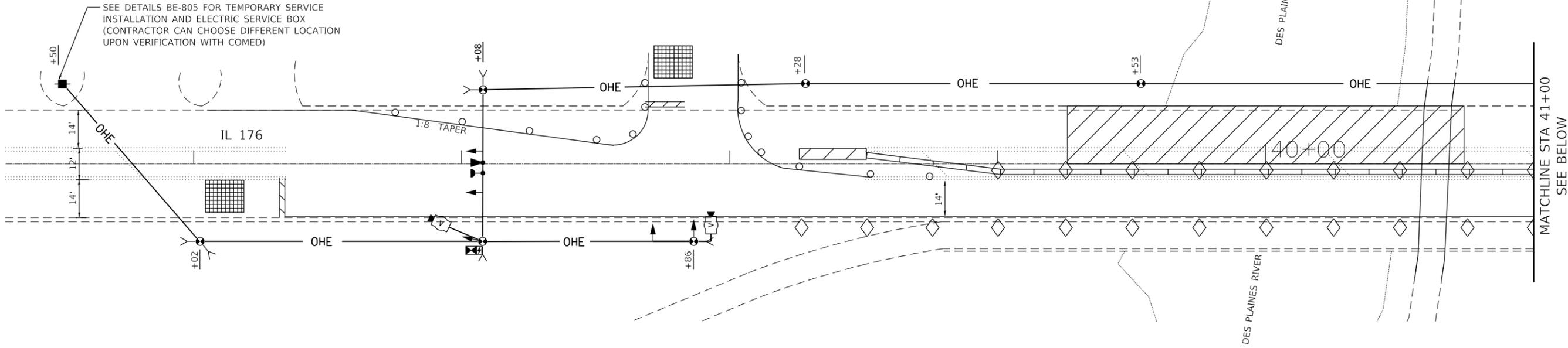
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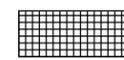
STAGE 2 TEMPORARY LIGHTING (SHEET 2 OF 2)
IL 176 (PARK AVE.) OVER DES PLAINES RIVER

SCALE: 50 SHEET 5 OF 5 SHEETS STA. 39+00 TO STA. 46+00

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	P-2-1-1(12)	LAKE	49	17
CONTRACT NO. 62M39				
ILLINOIS FED. AID PROJECT				



LEGEND

-  DETECTION ZONE
-  TEMPORARY TRAFFIC SIGNAL HEAD
-  TEMPORARY WOOD POLE
-  TEMPORARY VIDEO DETECTION CAMERA
-  TEMPORARY TRAFFIC SIGNAL CONTROLLER CABINET WITH UNINTERRUPTIBLE POWER SUPPLY
-  CONFIRMATION BEACON
-  EMERGENCY VEHICLE LIGHT DETECTOR

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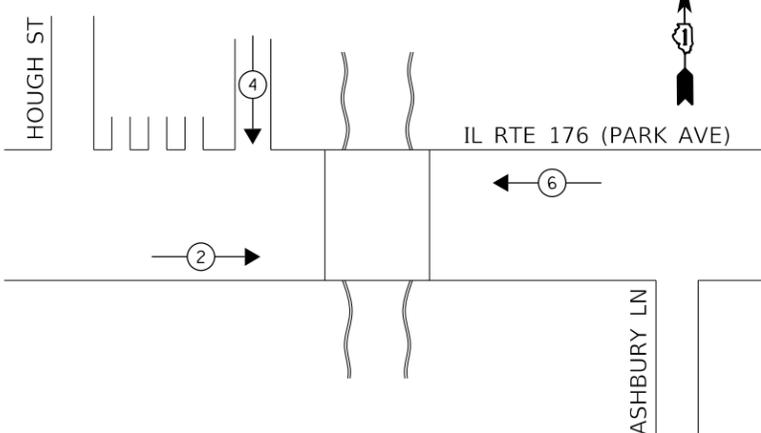
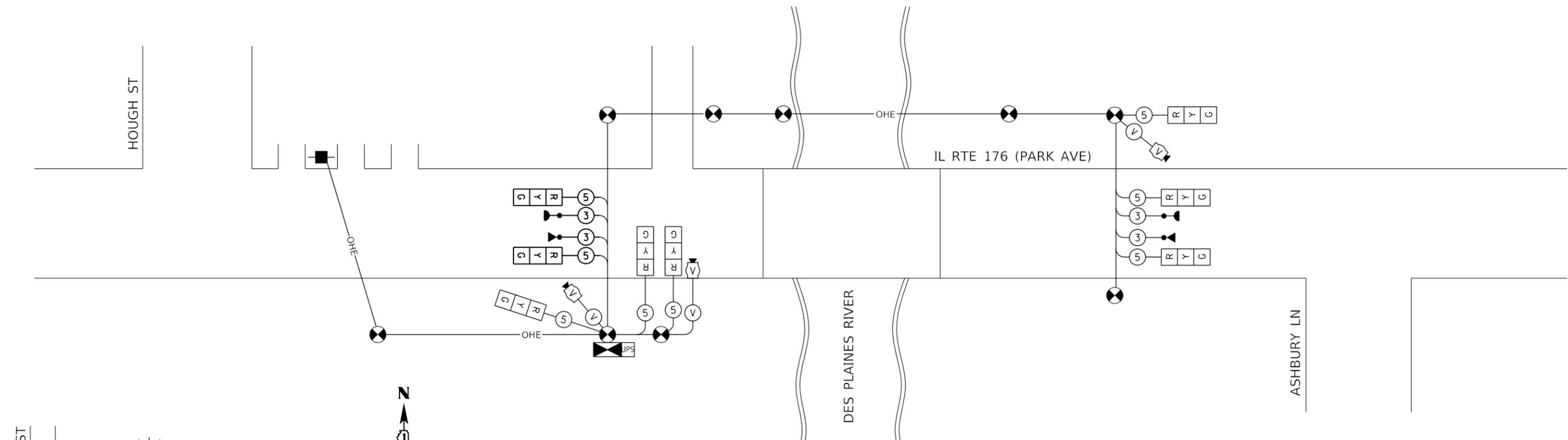
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TEMPORARY TRAFFIC SIGNALS - STAGE 2
IL 176 OVER DES PLAINES RIVER**

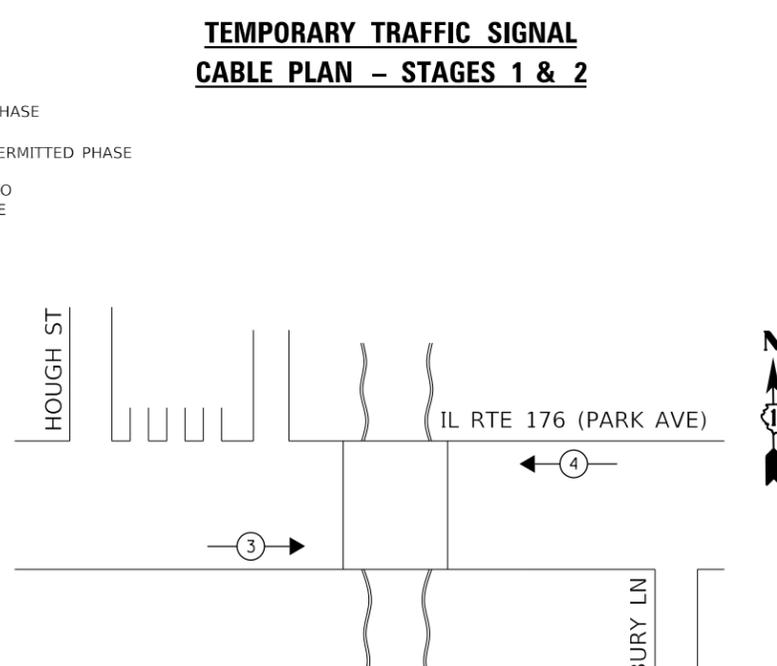
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F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	2020-184-BR	LAKE	49	19
CONTRACT NO. 62M39			ILLINOIS FED. AID PROJECT	

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CONTROLLER SEQUENCE - STAGE I & II



TEMPORARY EMERGENCY VEHICLE PREEMPTION SEQUENCE

TEMPORARY TRAFFIC SIGNAL CABLE PLAN - STAGES 1 & 2

LEGEND:
 ← (⊙) — PROTECTED PHASE
 ← - (⊙) - PROTECTED/PERMITTED PHASE
 * NUMBER REFERS TO ASSOCIATED PHASE

NOTES:

- CONTACT TO THE ELECTRIC UTILITY SHALL BE INITIATED BEFORE THE PRECONSTRUCTION MEETING, AND DOCUMENTATION OF CONTACT SHALL BE PRESENTED AT THAT MEETING. NO PLACEMENT OF POLES WILL BE ALLOWED WITHOUT EVIDENCE OF A SIGNED AGREEMENT WITH THE ELECTRIC UTILITY FURNISHED TO THE ENGINEER.
- UNLESS OTHERWISE INDICATED, AND EXCEPT AS OTHERWISE NOTED, THIS STANDARDIZED LAYOUT SHALL APPLY FOR BRIDGES NOT EXCEEDING A 250-FOOT SPAN. FOR BRIDGE SPANS IN EXCESS OF 250 FEET, THE POLES IMMEDIATELY ADJACENT TO THE BRIDGE SHALL BE 100-FOOT POLES (90-FOOT MOUNTING HEIGHT), WITH 750-WATT TYPE III HIGH PRESSURE SODIUM HIGH-MAST LUMINAIRES AS APPROVED BY THE ENGINEER.
- THE LAYOUT OF THE TEMPORARY EQUIPMENT WILL VARY BASED ON FIELD CONDITIONS, STAGING, UTILITY IMPACTS, AND THE ELECTRIC SERVICE LOCATION AS COORDINATED WITH THE ELECTRIC UTILITY. THE CONTRACTOR SHALL SUBMIT A PLAN INDICATING THE SETTING OF POLES, TRAFFIC SIGNALS, AND COMBINED SERVICE. THIS PLAN MUST BE APPROVED BY THE ENGINEER BEFORE ANY POLES ARE PLACED
- THE ELECTRIC SERVICE SHALL BE 240/120V. WHERE 240V SERVICE IS NOT AVAILABLE, THE CONTRACTOR MAY SUBMIT A PROPOSAL FOR 120V SERVICE. DROP CABLE, MAIN BREAKER, AND ALL OTHER SERVICE APPURTENANCES SHALL BE APPROPRIATELY RATED AND INCLUDED REGARDLESS OF THE SERVICE VOLTAGE APPLIED
- THE TEMPORARY LIGHTING AND TRAFFIC SIGNAL INSTALLATION SHALL SHARE ANY COMMON ELEMENTS SUCH AS WOOD POLES, ELECTRICAL SERVICE, ELECTRIC SERVICE BOX, CABLE, ETC. THE CONTRACTOR SHALL COORDINATE THE TEMPORARY LIGHTING AND TRAFFIC SIGNAL INSTALLATIONS.
- THE LIGHT POLE SETBACK FROM THE EDGE OF TRAVEL PAVEMENT SHALL BE 18 FT. UNLESS THE LIGHT POLE IS BEHIND GUARDRAIL. THE LIGHT POLES INSTALLED BEHIND THE GUARDRAIL OR BARRIER WALL SHOULD HAVE AT LEAST 8 FT. SETBACK FROM THE BACK OF THE SHOULDER AND OR AS DIRECTED BY THE ENGINEER.
- EACH LIGHTING UNIT SHALL BE CONTROLLED BY A PHOTO CELL MOUNTED ON EACH LUMINAIRE WITH THE LIGHTING CIRCUIT FED FROM THE TEMPORARY SERVICE DISCONNECT BOX. OTHER MEANS OF LUMINAIRE CONTROL CAN BE CONSIDERED IF APPROVED BY THE ENGINEER.
- THE CONTRACTOR SHALL SPLICE AERIAL CABLE AT THE LIGHT POLE USING HEAT SHRINKABLE CAPS WITH THE FACTORY APPLIED WATERPROOF SEALANT OR AN APPROVED UL LISTED AERIAL TAP DEVICE.
- ALL AREAS DISTURBED UNDER THIS CONTRACT SHALL BE RESTORED TO THE ORIGINAL CONDITION OR BETTER, TO THE SATISFACTION OF THE ENGINEER.
- ANY TREE TRIMMING NECESSARY TO SET UP THE TEMPORARY TRAFFIC LIGHTING WILL BE COVERED UNDER THE SPECIAL PROVISION "PRUNING FOR SAFETY AND EQUIPMENT CLEARANCE."

TRAFFIC SIGNAL ELECTRICAL SERVICE REQUIREMENTS

TYPE	NO LAMPS	WATTAGE LED	%OPERATION	TOTAL WATTAGE
SIGNAL (RED)	8	11	0.50	44
(YELLOW)	8	20	0.05	8
(GREEN)	8	12	0.45	43.2
CONTROLLER	1	100	1.00	100
VIDEO SYSTEM	1	150	1.00	150
UPS	1	25	1.00	25
ILLUM. SIGN			0.50	
FLASHER			0.50	

ENERGY COSTS TO: TOTAL = 370.2
ILLINOIS DEPARTMENT OF TRANSPORTATION
 201 WEST CENTER COURT
 SCHAMBURG, ILLINOIS 60196-1096
 ENERGY SUPPLY CONTACT: **JOE HURLEY**
 PHONE: (847) 816-5503
 COMPANY: COMED

CONTRACTOR SHALL COORDINATE WITH THE LIBERTYVILLE FIRE DEPARTMENT FOR EVP INSTALLATION

CONTRACTOR SHALL COORDINATE WITH ComEd FOR ELECTRIC SERVICE INSTALLATION



USER NAME = dwojck	DESIGNED - IH	REVISED -
PLOT SCALE = 48.0000' / in.	DRAWN - TGM	REVISED -
PLOT DATE = 10/9/2020	CHECKED - TGM	REVISED -
	DATE - 10/09/2020	REVISED -

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

TEMPORARY TRAFFIC SIGNALS CABLE DIAGRAM IL 176 OVER DES PLAINES RIVER

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	2020-184-BR	LAKE	49	20
CONTRACT NO. 62M39				
ILLINOIS FED. AID PROJECT				

GENERAL NOTES:

- Reinforcement bars designated (E) shall be epoxy coated.
- Prior to pouring the new concrete deck for expansion joint reconstruction and deck slab repairs, all heavy or loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. 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 included in the pay item covering removal of the existing concrete. As directed by the Engineer, existing construction accessories welded to the top flange of beams and girders shall be removed. The weld areas shall be ground flush and inspected for cracks using magnetic particle testing (MT) or dye penetrant testing (PT) by qualified personnel approved by the Engineer. Any cracks that cannot be removed by grinding 1/4" deep shall be identified and reported to the Bureau of Bridges and Structures for further dispositions. The cost of removing welded accessories, grinding and inspecting weld areas and grinding cracks will be paid for according to Article 109.04 of the Standard Specifications.
- Plan dimensions and details relative to existing plans 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 the work; however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work.
- The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.
- Joint openings shall be adjusted according to Article 520.04 of the Standard Specifications when the deck is poured at an ambient temperature other than 50°F.
- All exposed concrete edges shall have a 3/4"x45° chamfer except where shown otherwise.
- Bars noted thus, 3x2-#5, indicates 3 lines of #5 bars with 2 lengths of bars per line.
- The Contractor shall take the necessary precautions for the protection of passing bicycles and pedestrians from falling objects and/or materials until completion of work.
- It shall be the Contractor's responsibility to temporarily support the existing telephone conduits between Beams 4 and 5, as required. All existing telephone line/utility hangers suspended from, and/or embedded in the existing deck shall be re-installed as required. Cost included with Concrete Removal.
- The Contractor shall exercise extreme caution during removal and construction operations to avoid damaging the existing telephone conduits between Beams 4 and 5. Any damage to the existing telephone conduits caused by the Contractor in the performance of his/her work shall be repaired by the Contractor, at no cost to the Department.
- The pedestrian railing shall be protected and re-anchored to the new concrete, cost included in Concrete Removal.
- Concrete Sealer shall be applied to the existing bridge abutment seats.

SCOPE OF WORK:

- Provide protective shield within limits indicated on the plans.
- Perform 3/4" Bridge Deck Scarification, and remove 1 3/4" existing HMA from Approach Pavement.
- Perform Deck Slab Repairs as required.
- Reconstruct bridge deck expansion joints at the West and East Abutments and install new preformed joint strip seal.
- Perform parapet repairs, clean and reseal relief joints, clean all deck drains and adjust existing drainage scuppers.
- Apply a 2 1/2" Bridge Deck Latex Concrete Overlay on Bridge Deck and 3 1/2" Hot-Mix Asphalt (HMA) Overlay on Approach Slabs.
- Perform Bridge Deck Grooving.
- Apply Protective Coat to the top and inside faces of Parapets, the backside of the south parapet and top of sidewalks, and to the surface of the new overlay.
- Install Stream Gauge at the North end, west face of Pier 1.

INDEX OF SHEETS

- S-01 General Plan and Elevation
- S-02 General Notes, Index of Sheets and Total Bill of Material
- S-03 Stage Construction (Sheet 1 of 2)
- S-04 Stage Construction (Sheet 2 of 2)
- S-05 Temporary Concrete Barrier for Stage Construction
- S-06 Deck Repair Plan
- S-07 Drainage Scupper Adjustment Details
- S-08 Parapet and Railing Repairs
- S-09 W. Abut. Joint Removal & Reconstruction (Sheet 1 of 2)
- S-10 W. Abut. Joint Removal & Reconstruction (Sheet 2 of 2)
- S-11 E. Abut. Joint Removal & Reconstruction (Sheet 1 of 2)
- S-12 E. Abut. Joint Removal & Reconstruction (Sheet 2 of 2)
- S-13 Preformed Joint Strip Seal - Sidewalk (Sheet 1 of 2)
- S-14 Preformed Joint Strip Seal - Sidewalk (Sheet 2 of 2)
- S-15 Bar Splicer Assembly and Mechanical Splicer Details

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Concrete Removal	CU YD	18.2	0	18.2
Protective Shield	SQ YD	97	0	97
Concrete Superstructure	CU YD	19.2	0.0	19.2
Bridge Deck Grooving	SQ YD	591	0	591
Protective Coat	SQ YD	1119	0	1119
Reinforcement Bars, Epoxy Coated	POUND	2600	0	2600
Bar Splicers	EACH	30	0	30
Preformed Joint Strip Seal	FOOT	109	0	109
Concrete Sealer	SQ FT	0	225	225
Clean & Reseal Relief Joint	FOOT	80	0	80
Stream Gauge	EACH	0	1	1
Bridge Deck Latex Concrete Overlay, 2 1/2 Inches	SQ YD	622	0	622
Bridge Deck Scarification 3/4"	SQ YD	622	0	622
Structural Repair Of Concrete (Depth Equal To Or Less Than 5 Inches)	SQ FT	69	0	69
Debris Removal	CU YD	0	20	20
Drainage Scuppers To Be Adjusted	EACH	6	0	6

STREAM GAUGE NOTES:

All plates shall be fastened to the wingwall with 1/4"Øx1 1/4"-long masonry screws with a hex washer head at every hole on every plate.

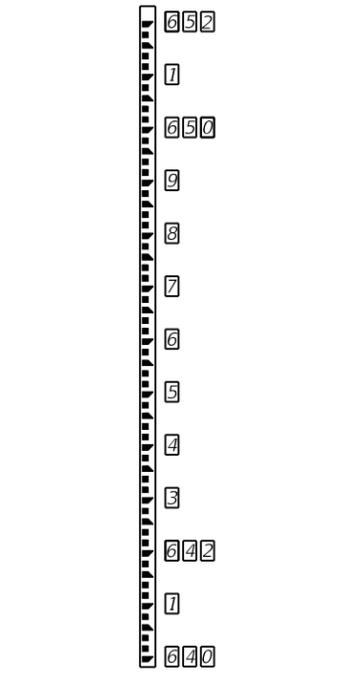
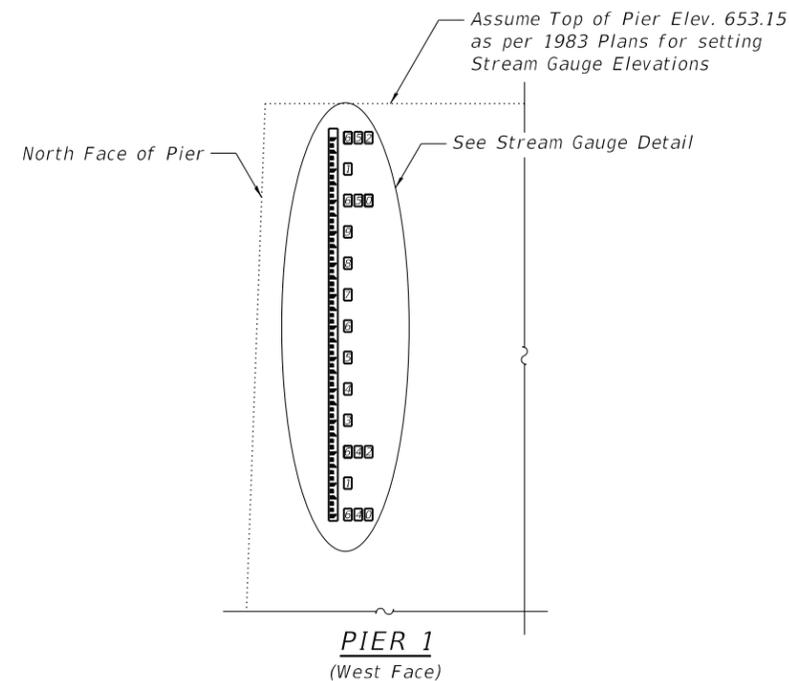
The Contractor must determine exact elevation of the Gauge Plates in the field, and install Gauge Plates within a tolerance of 1/4".

Gauge Plates shall be 3 1/2"-wide porcelain-enameled iron plates with black graduated markings in feet and tenths, unnumbered.

Number Plates shall be 2"x3" white porcelain-enameled iron plates with black numbers.

Gauge plates and Number plates shall be "WaterMark" Style "E" or approved equivalent.

Three digit elevations to be installed at the top of the gauge and at every elevation ending with 0. At all of the other whole elevations, place the last digit as shown in the example below.



STREAM GAUGE DETAIL

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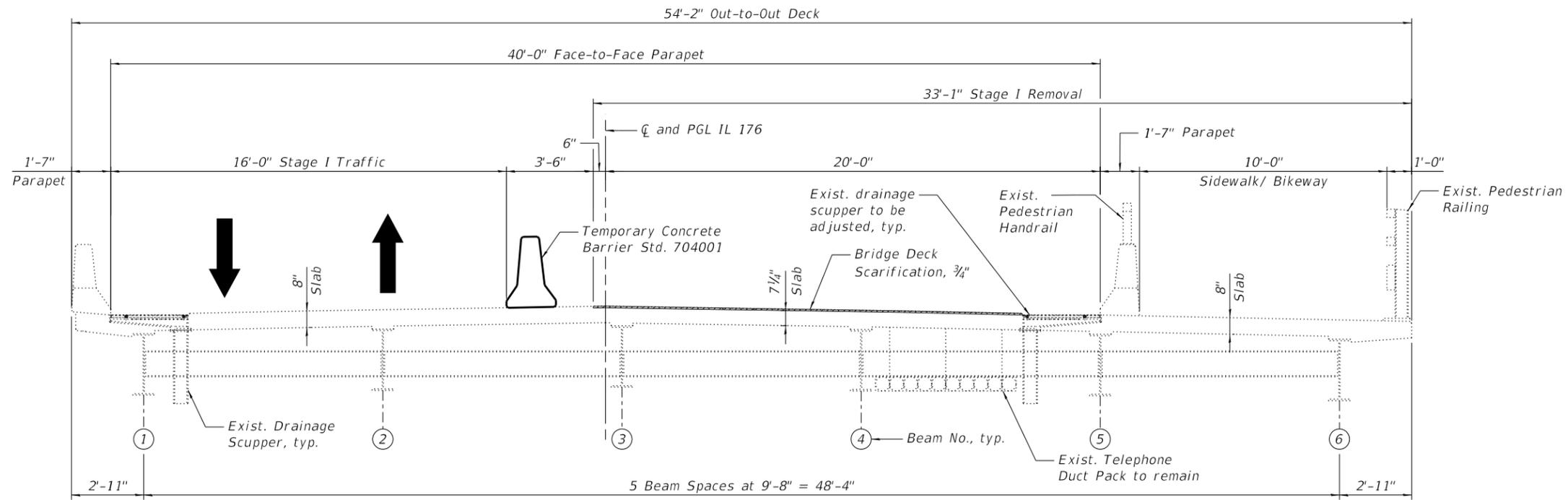


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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GENERAL NOTES, INDEX OF SHEETS AND TOTAL BILL OF MATERIAL
STRUCTURE NO. 049-0068**

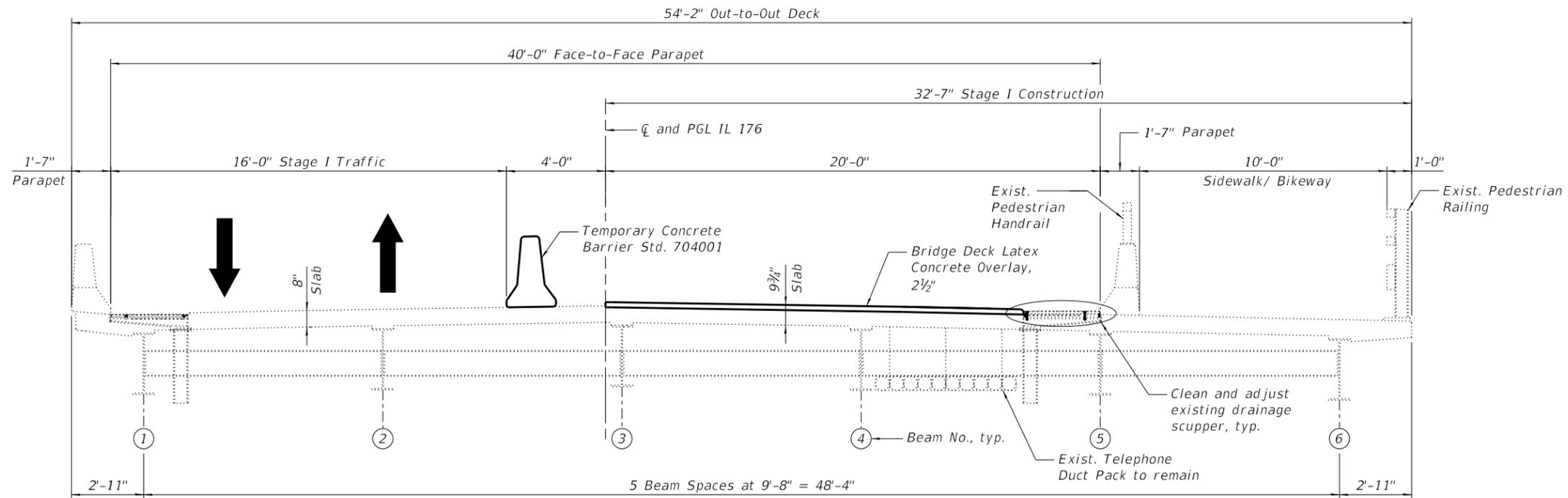
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	2020-184-BR	LAKE	49	22
CONTRACT NO. 62M39				
ILLINOIS		FED. AID PROJECT		



STAGE I REMOVAL
(Looking East)

STAGE I REMOVAL

1. Install temporary concrete barrier as shown to locate traffic on the north side of the existing structure.
2. Scarify $\frac{3}{4}$ " from the top of deck slab, scarify $1\frac{3}{4}$ " HMA from top of existing approach slab.
3. Remove portions of bridge deck/abutment adjacent to expansion joints, as shown in the plans.



STAGE I CONSTRUCTION
(Looking East)

STAGE I CONSTRUCTION

1. Perform deck slab repairs, at locations as shown in the plans.
2. Install preformed joint strip seal at west and east abutments and replace associated reinforcement and concrete adjacent to the joint.
3. Clean and reseal relief joints.
4. Clean all deck drains and adjust existing drainage scuppers as detailed in these plans.
5. Apply $2\frac{1}{2}$ " bridge deck latex concrete overlay to bridge deck slab.
6. Perform bridge deck grooving for the $2\frac{1}{2}$ " bridge deck latex concrete overlay.
7. Apply $3\frac{1}{2}$ " Hot Mix Asphalt (HMA) Overlay to approach slabs.
8. Apply protective coat to the top of reconstructed transverse joint areas and the top and inside faces of Parapets and top of Latex Overlay and back of south parapet and top of sidewalk.

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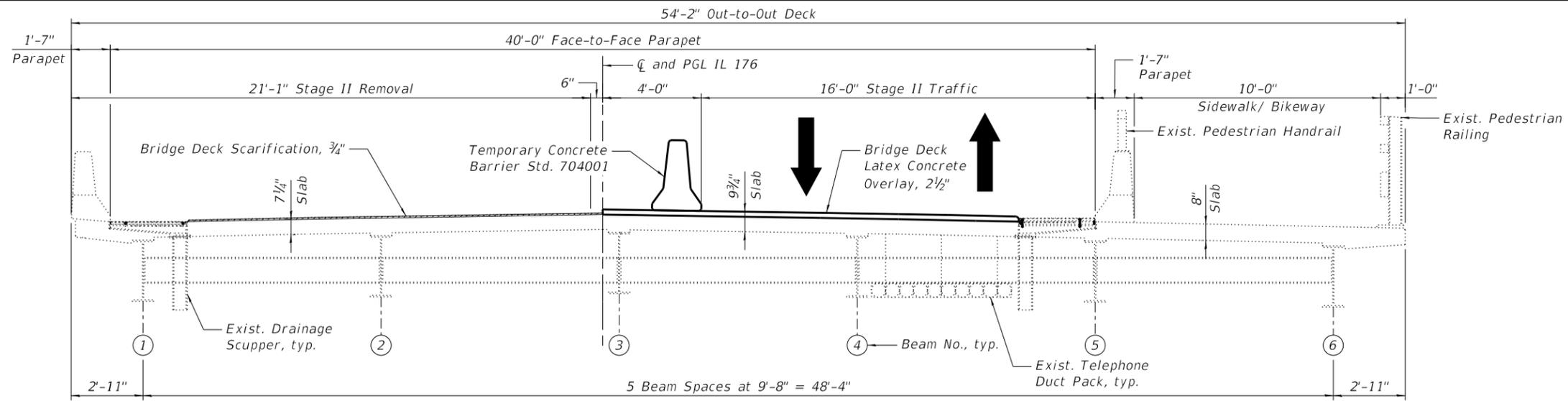
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PLOT DATE =	DATE - 10/2/2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE CONSTRUCTION (SHEET 1 OF 2)
STRUCTURE NO. 049-0068

SHEET S-03 OF S-15 SHEETS

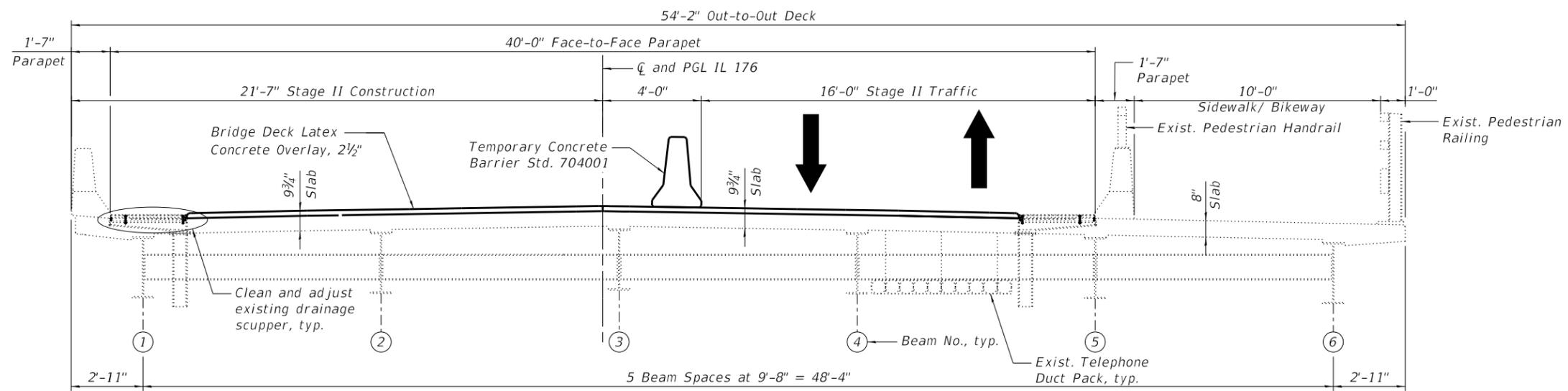
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1238	2020-184-BR	LAKE	49	23
CONTRACT NO. 62M39				
		ILLINOIS FED. AID PROJECT		



STAGE II REMOVAL
(Looking East)

STAGE II REMOVAL

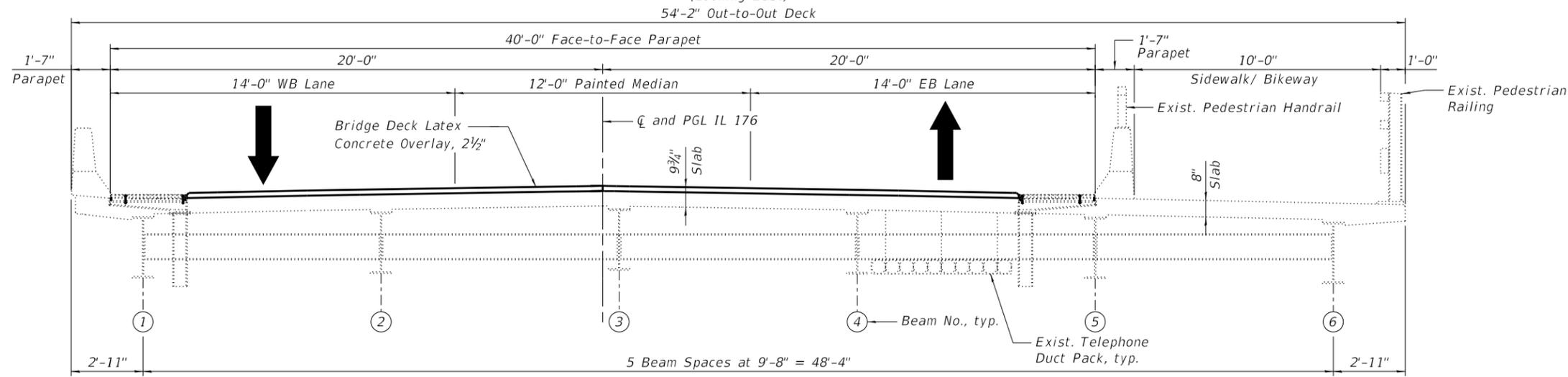
1. Install temporary concrete barrier as shown to locate traffic on the south side of the existing structure.
2. Scarify 3/4" from the top of deck slab, scarify 1 3/4" HMA from top of approach slab.
3. Remove portions of bridge deck/abutment adjacent to expansion joints, as shown in the plans.



STAGE II CONSTRUCTION
(Looking East)

STAGE II CONSTRUCTION

1. Perform deck slab repairs, at locations as shown in the plans.
2. Install preformed joint strip seal at west and east abutments and replace associated reinforcement and concrete adjacent to the joint.
3. Clean and reseal relief joints.
4. Clean all deck drains and adjust existing drainage scuppers as detailed in these plans.
5. Apply 2 1/2" bridge deck latex concrete overlay to bridge deck slab.
6. Perform bridge deck grooving for the 2 1/2" bridge deck latex concrete overlay.
7. Apply 3 1/2" Hot Mix Asphalt (HMA) Overlay to approach slabs.
8. Apply protective coat to the top of reconstructed transverse joint areas and the top and inside faces of Parapets and top of Latex Overlay.



FINAL CROSS SECTION
(Looking East)

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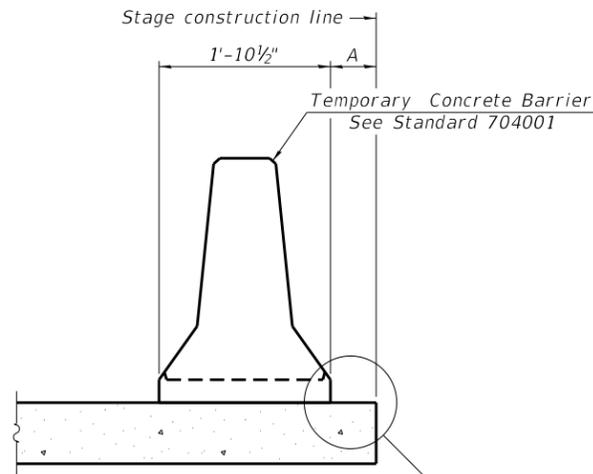
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**STAGE CONSTRUCTION (SHEET 2 OF 2)
STRUCTURE NO. 049-0068**

SHEET S-04 OF S-15 SHEETS

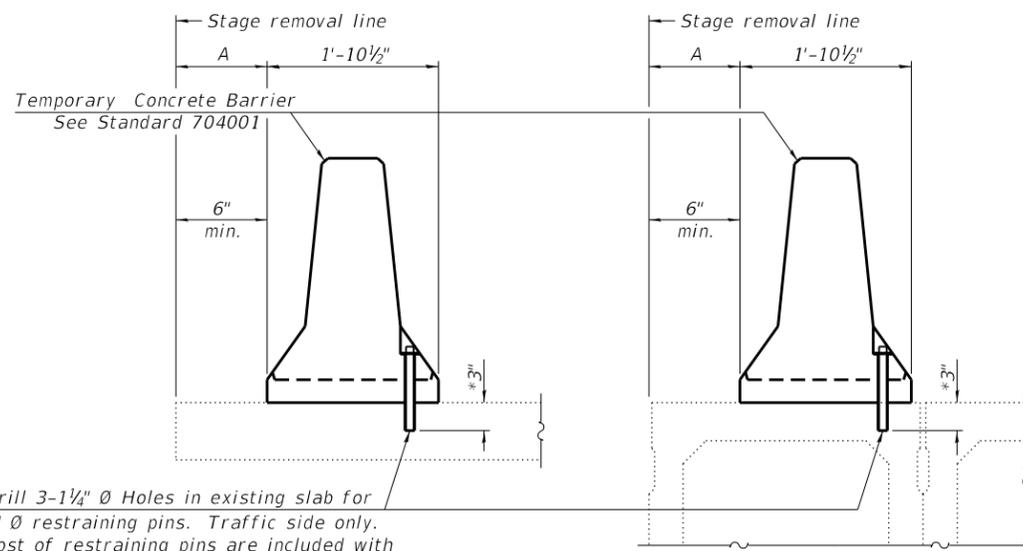
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	2020-184-BR	LAKE	49	24
CONTRACT NO. 62M39				

ILLINOIS FED. AID PROJECT



When "A" is 3'-1" or less, the temporary concrete barrier shall be restrained to the new slab according to Detail I, II or III. No restraint is required when "A" is greater than 3'-1".

NEW SLAB OR NEW DECK BEAM

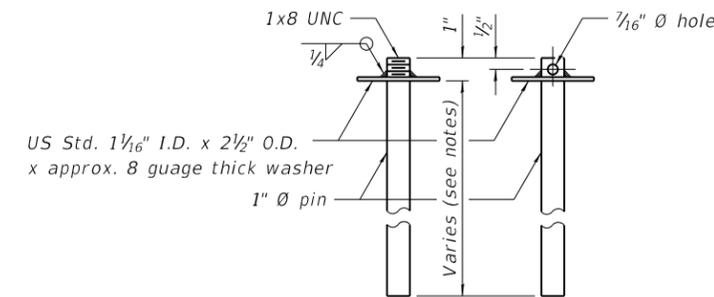


Drill 3-1/4" Ø Holes in existing slab for 1" Ø restraining pins. Traffic side only. Cost of restraining pins are included with Temporary Concrete Barrier. No restraint is required when "A" is greater than 3'-1".

EXISTING SLAB

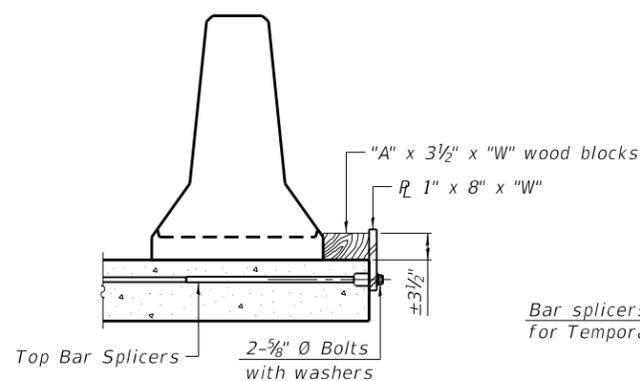
* When hot-mix asphalt wearing surface is present, embedment shall be 3" plus the wearing surface depth.

EXISTING DECK BEAM

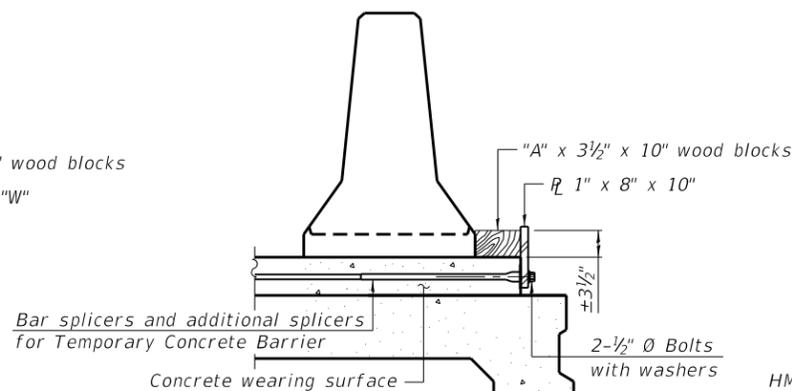


RESTRAINING PIN

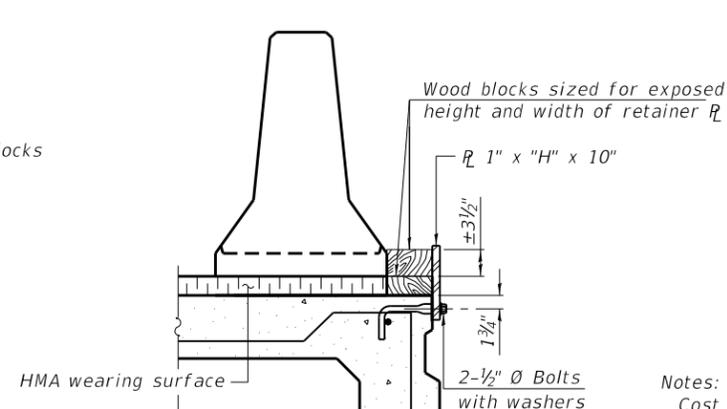
SECTIONS THRU SLAB OR DECK BEAM



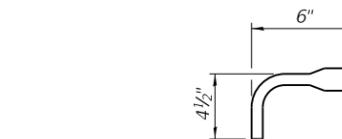
DETAIL I



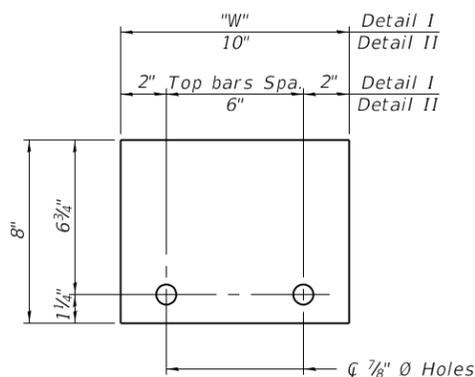
DETAIL II



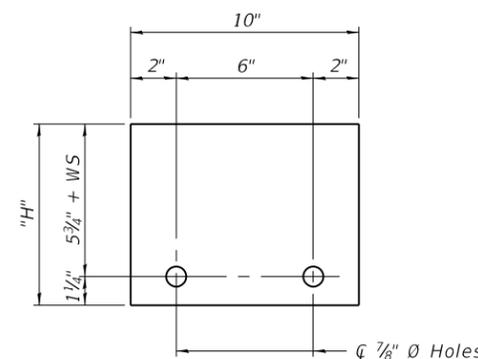
DETAIL III



BAR SPLICER FOR #4 BAR - DETAIL III



STEEL RETAINER R 1" x 8" x "W"
(Detail I and II)



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

Notes:
 Cost of retainer assembly is included with Temporary Concrete Barrier.
 A retainer assembly shall be located at the approximate \bar{C} of each temporary concrete barrier.
 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 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.
 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.

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STATE OF ILLINOIS
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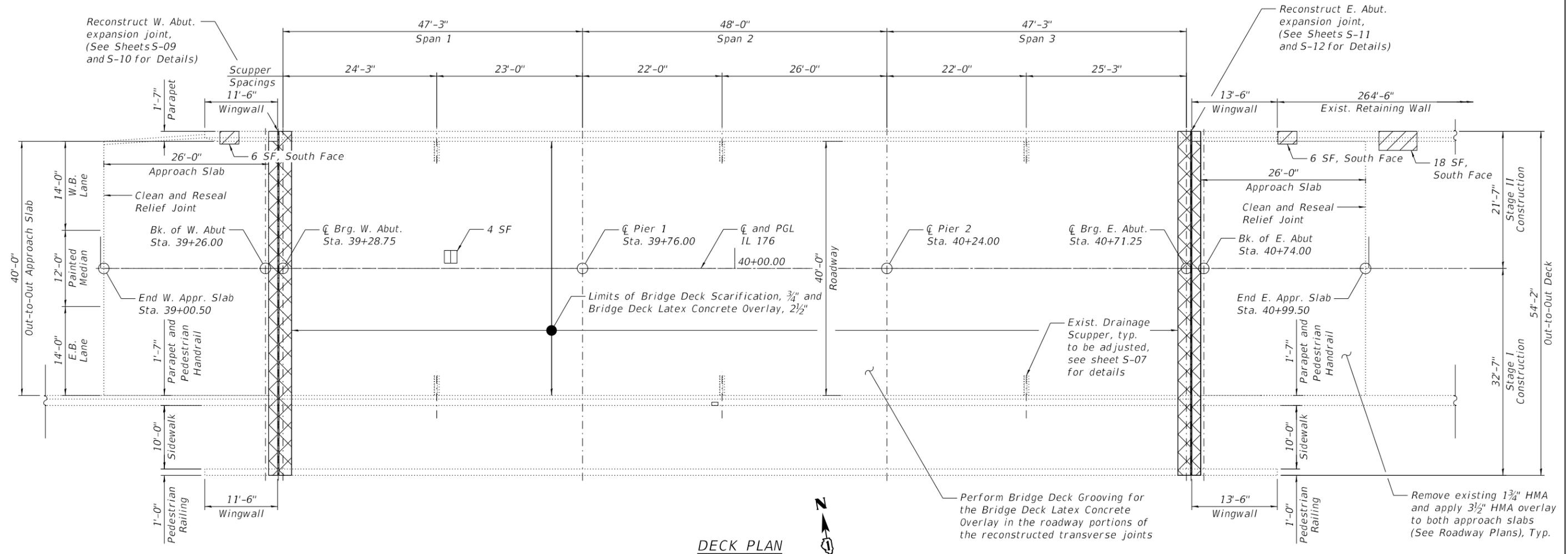
TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
 STRUCTURE NO. 049-0068

SHEET S-05 OF S-15 SHEETS

FAU. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	2020-184-BR	LAKE	49	25
CONTRACT NO. 62M39				
ILLINOIS FED. AID PROJECT				

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Bridge Deck Grooving	SQ YD	591
Protective Coat	SQ YD	1119
Clean & Reseal Relief Joint	FOOT	80
Bridge Deck Latex Concrete Overlay, 2 1/2 Inches	SQ YD	622
Bridge Deck Scarification 3/4"	SQ YD	622
Structural Repair Of Concrete (Depth Equal To Or Less Than 5 Inches)	SQ FT	30



DECK PLAN

NOTES:

1. Areas of deck repairs shown are estimated. The Engineer shall show actual locations of deck repairs on As-Built Plans.
2. For West and East Abutment Expansion Joint removal and reconstruction, see Sheets S-09 thru S-12.
3. For Parapet and Railing Repairs, see Sheet S-08.
4. Any reinforcement bars that are damaged during concrete removal operations shall be repaired or replaced using an approved bar splicer or anchorage system. Cost incidental to Concrete Removal.

LEGEND

- Concrete Removal
- Structural Repair of Concrete (Depth Equal to or Less than 5 Inches)
- * Deck Slab Repair (Partial)

*Areas of Deck Slab Repair (Partial) are provided for information only and shall be included in the cost of Bridge Deck Latex Concrete Overlay

MODEL: Default
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

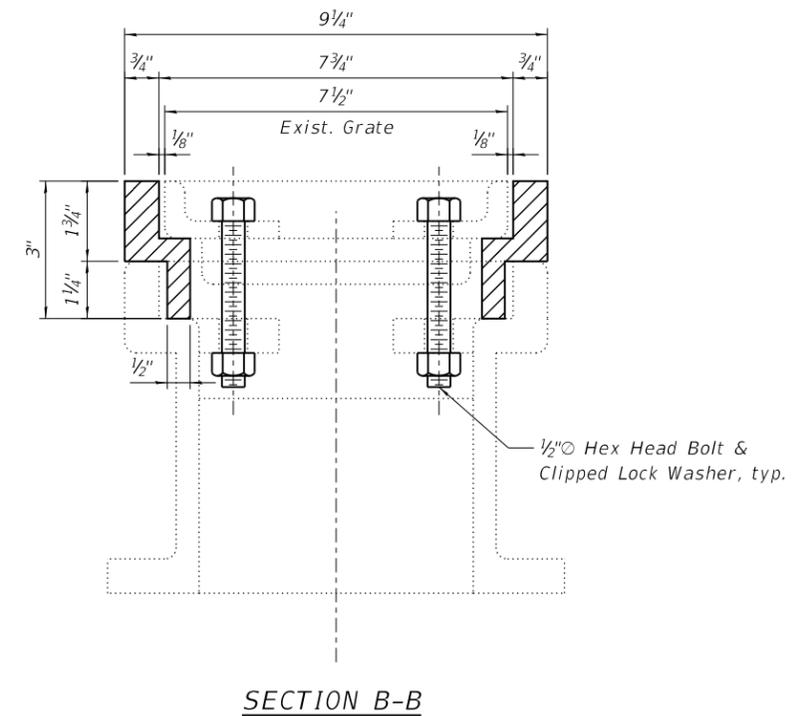
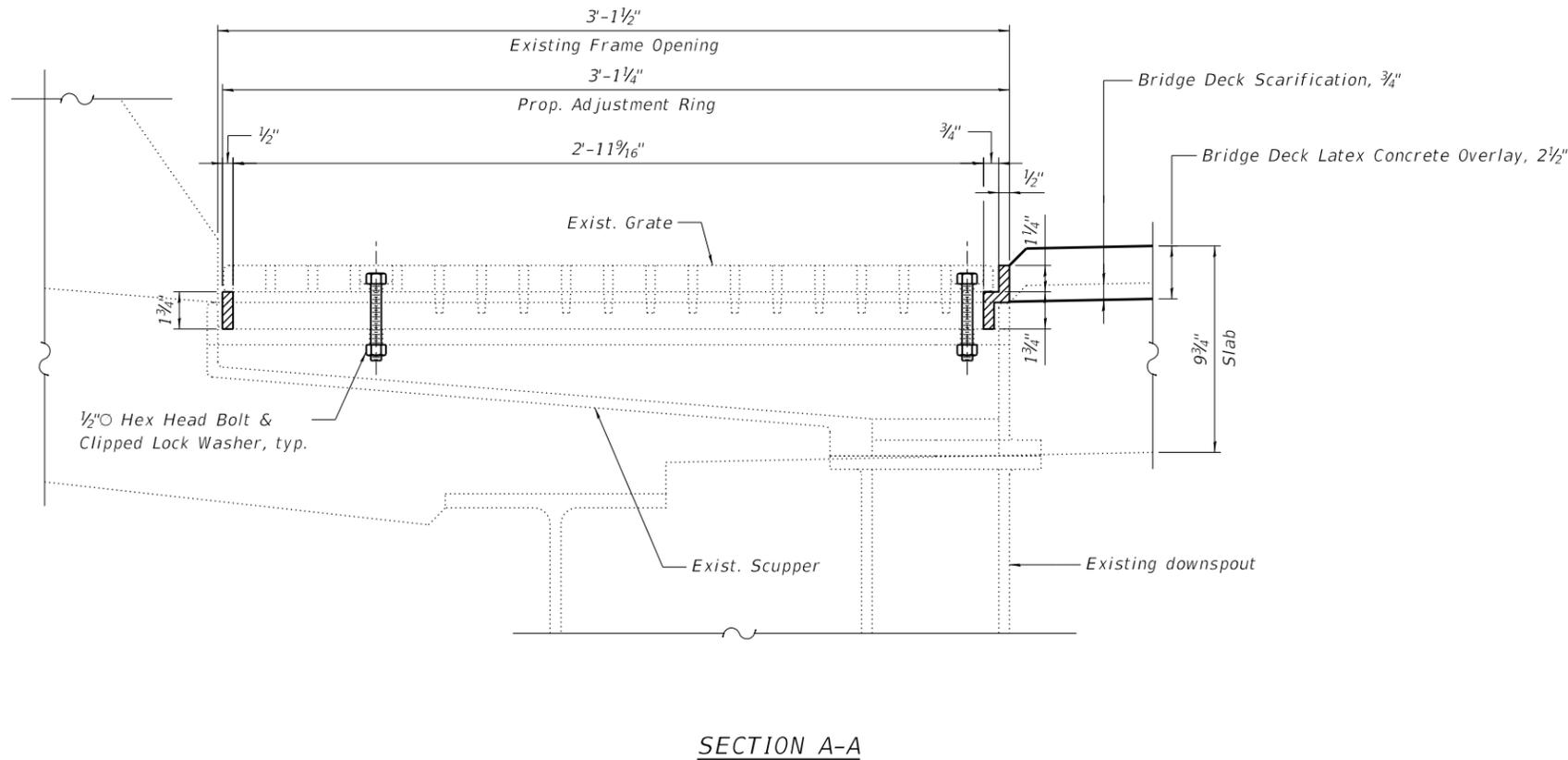
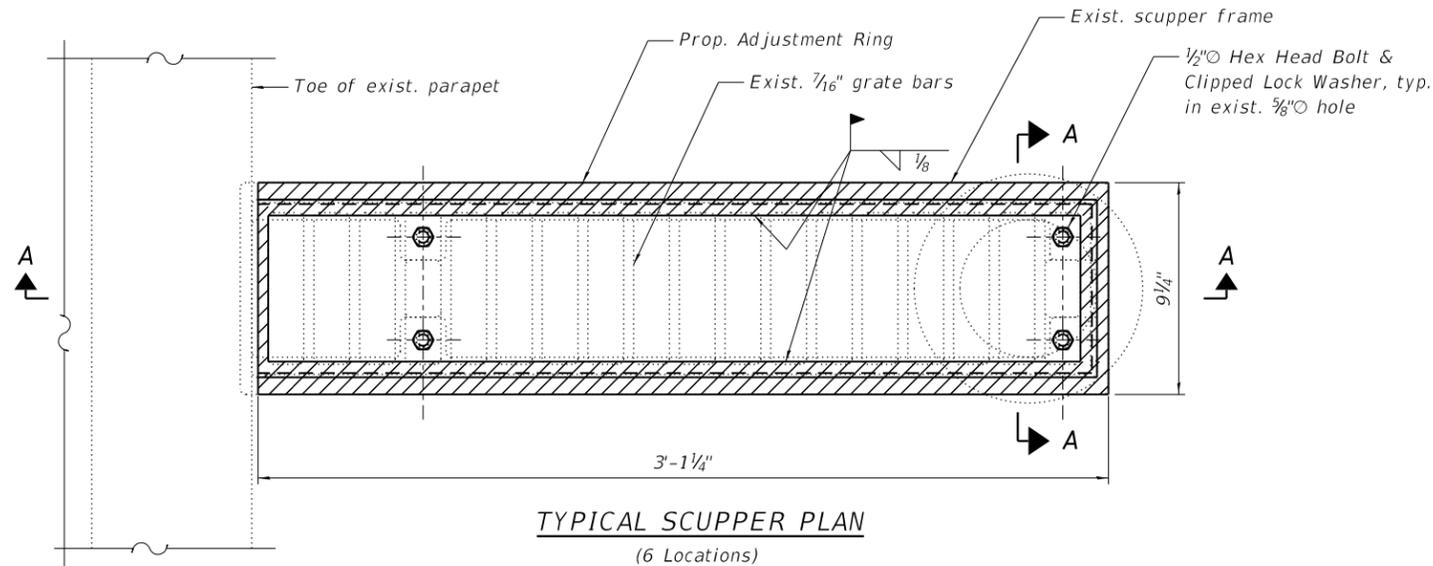
**DECK REPAIR PLAN
STRUCTURE NO. 049-0068**

SHEET S-06 OF S-15 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	2020-184-BR	LAKE	49	26
CONTRACT NO. 62M39				
ILLINOIS FED. AID PROJECT				

NOTES

1. The Contractor shall field verify Existing Dimensions and Details of the Existing Scuppers and make necessary adjustments prior to construction of New Adjusting Ring or ordering of material for Adjusting Drainage Scuppers.
2. All Cast Iron Parts shall be Grey Iron conforming to the requirements of AASHTO M 105, Class 35B.
3. Cast Iron Parts shall be unfinished.
4. The Contractor shall take appropriate measures to ensure that Protective Coat is not applied to the scuppers.
5. Adjusting Ring shall be from Neenah or approved equal. Structural steel weldments or equal section and of the same configuration may be submitted in place of Cast Iron. Fillet or full penetration welds may be used for weldments. Details shall be submitted to the Engineer for approval.
6. Bolts, Anchor Studs, Washers and Nuts shall conform to the requirements of ASTM A 307 and shall be Galvanized according to the requirements of AASHTO M 232.
7. Provide a $\frac{1}{8}$ " Fillet Weld around perimeter of new Adjusting Ring to secure to existing Scupper.
8. Cost of all labor and materials necessary to clean all existing floor drains and scuppers, install adjusting scupper rings, remove and reinstall grates is included in the cost for Drainage Scupper to be Adjusted.



BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scuppers to be Adjusted	Each	6

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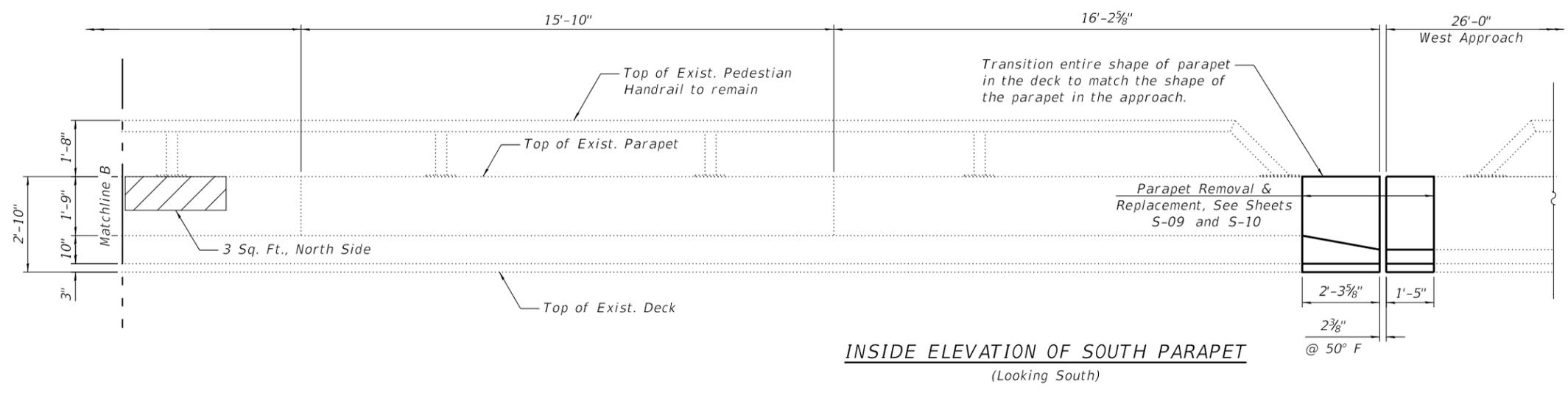
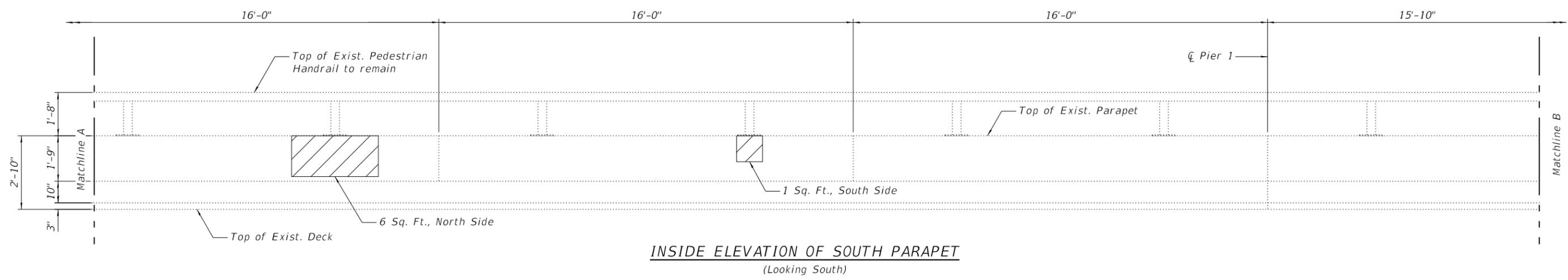
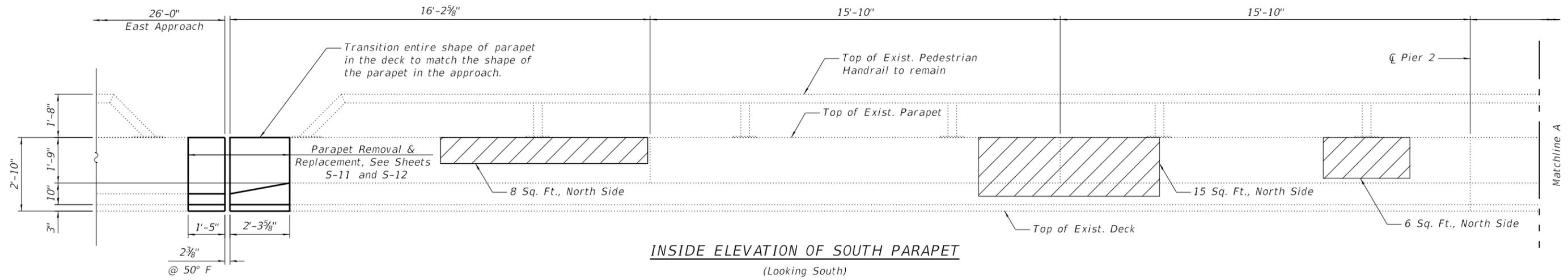
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DRAINAGE SCUPPER ADJUSTMENT DETAILS
STRUCTURE NO. 049-0068**

SHEET S-07 OF S-15 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	2020-184-BR	LAKE	49	27
CONTRACT NO. 62M39				
ILLINOIS FED. AID PROJECT				



BILL OF MATERIAL

ITEM	UNIT	TOTAL
Structural Repair Of Concrete (Depth Equal To Or Less Than 5 Inches)	SQ FT	39

LEGEND

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

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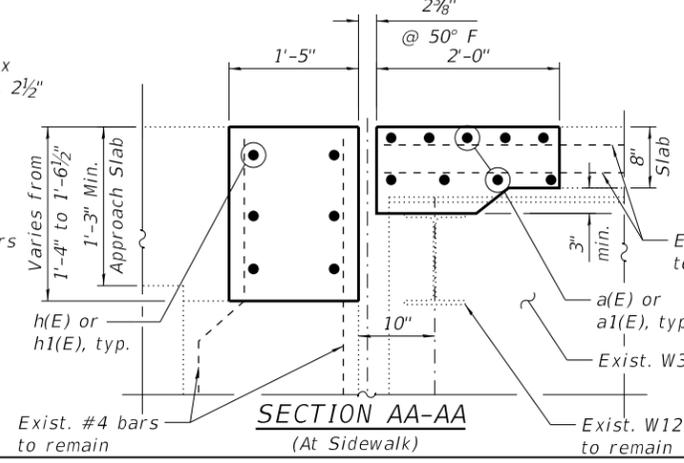
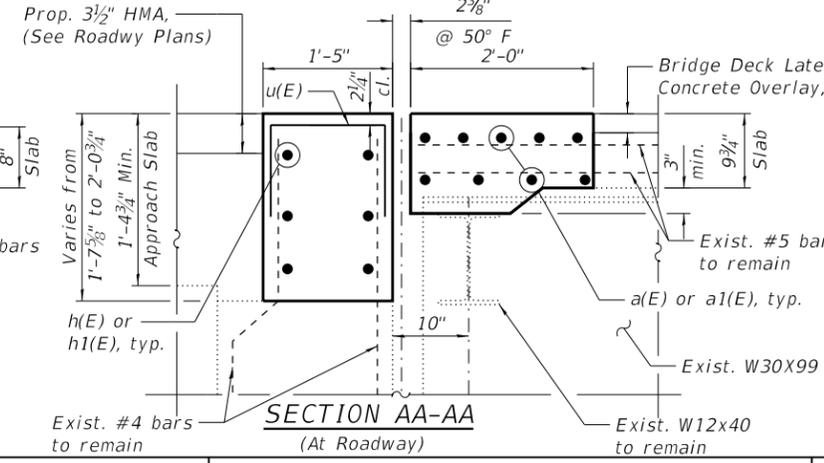
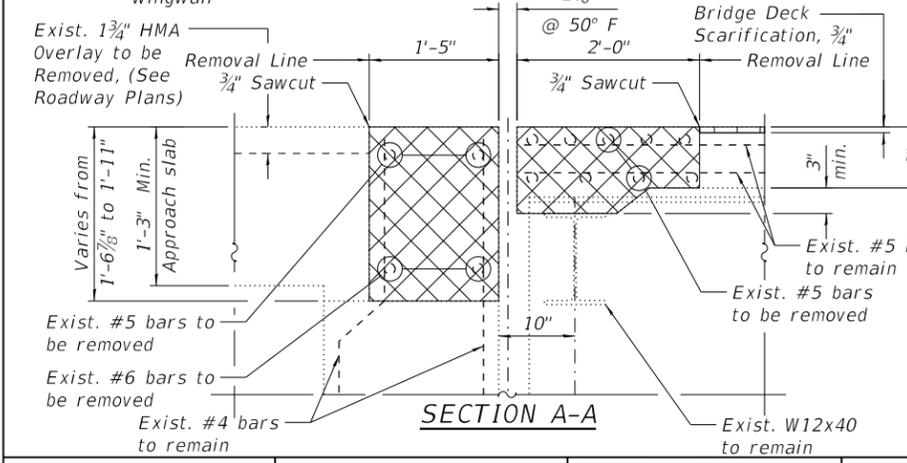
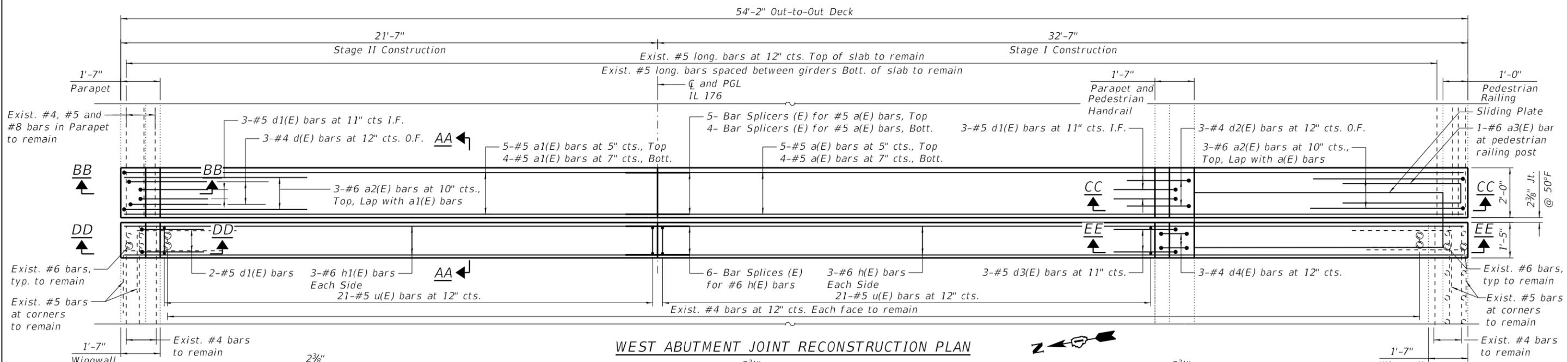
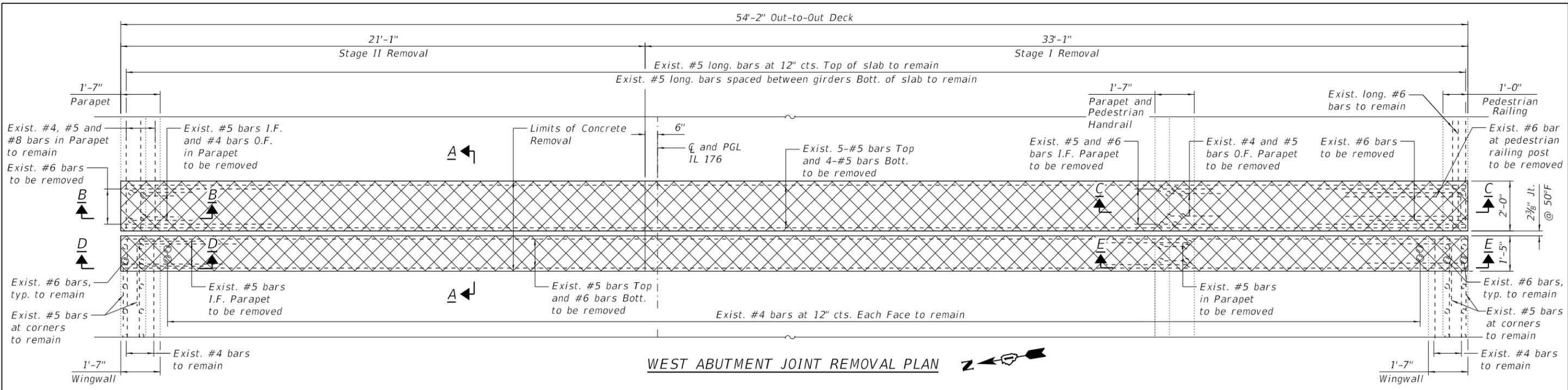
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**PARAPET AND RAILING REPAIRS
STRUCTURE NO. 049-0068**

SHEET S-08 OF S-15 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	2020-184-BR	LAKE	49	28
CONTRACT NO. 62M39				
ILLINOIS FED. AID PROJECT				



NOTES:

- For Notes, Sections, bar diagrams and Bill of Material, see Sheet S-10.
- For preformed joint strip seal details, see Sheets S-13 and S-14.
- For limits of Bridge Deck Scarification, see Sheet S-06.

LEGEND

- Concrete Removal
- Deck Scarification
- I.F. Inside Face
- O.F. Outside Face

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

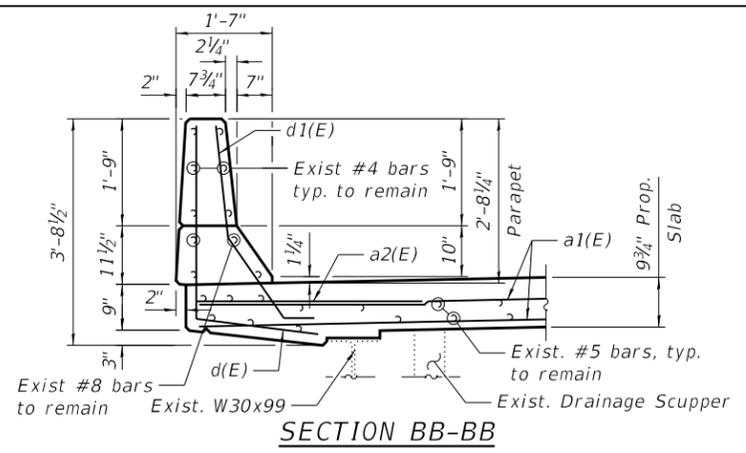
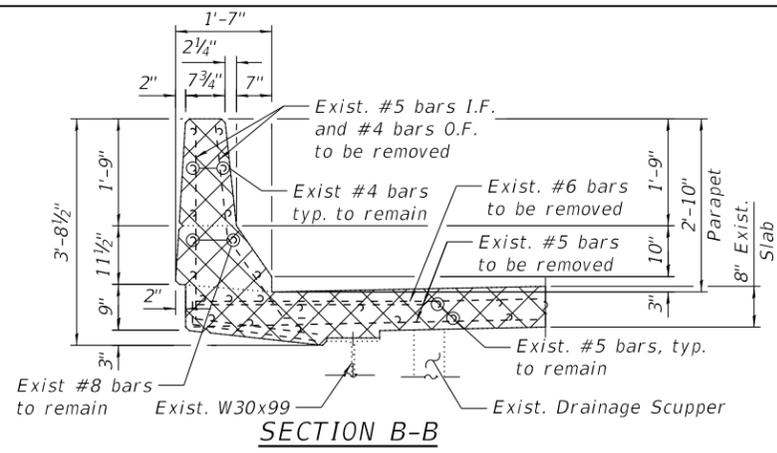
W. ABUT. JOINT REMOVAL & RECONSTRUCTION (SHEET 1 OF 2)
STRUCTURE NO. 049-0068

FAU. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	2020-184-BR	LAKE	49	29
CONTRACT NO. 62M39				

SHEET S-09 OF S-15 SHEETS

ILLINOIS FED. AID PROJECT

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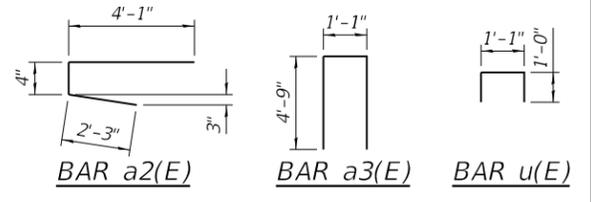
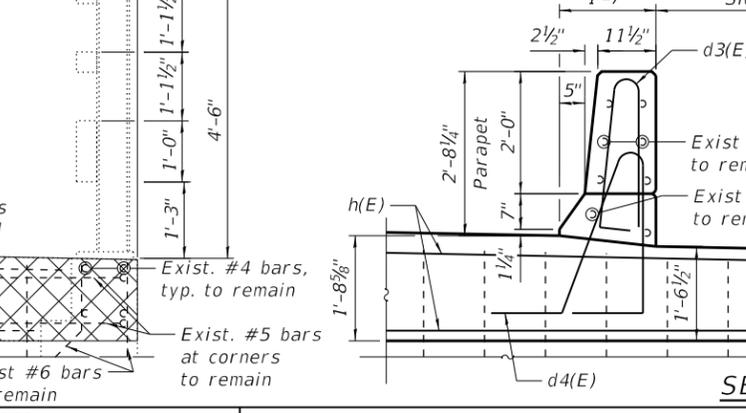
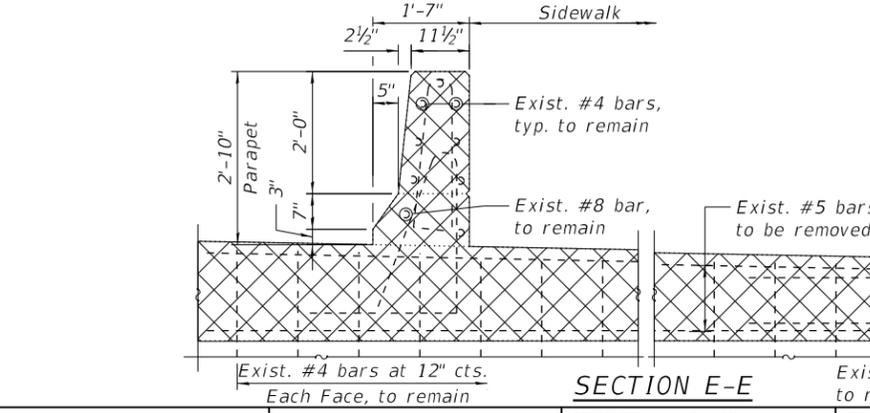
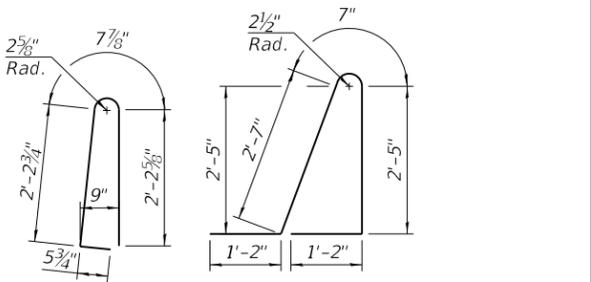
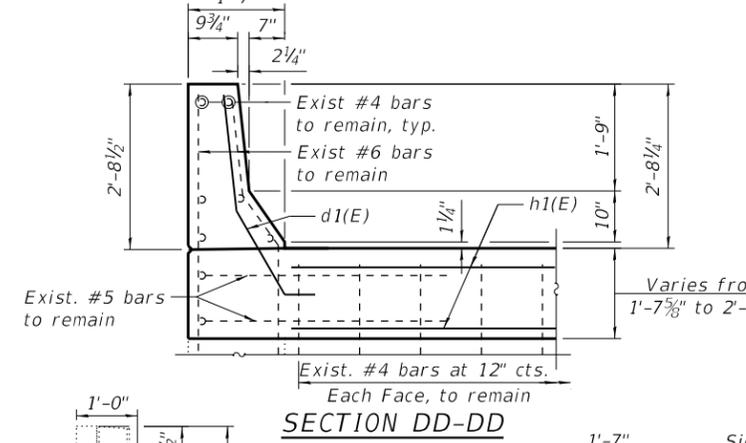
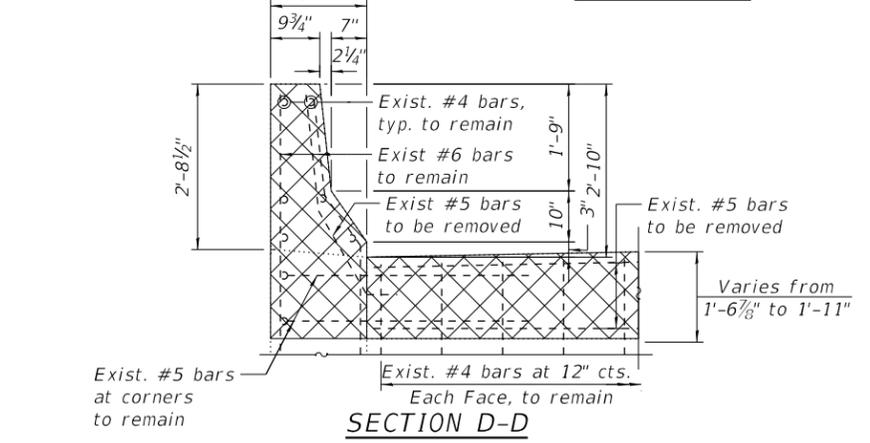
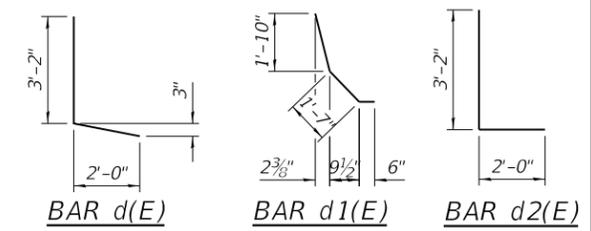
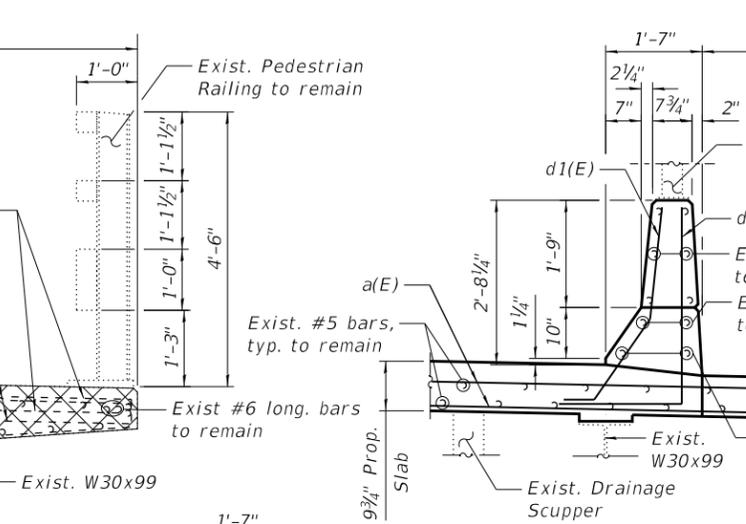
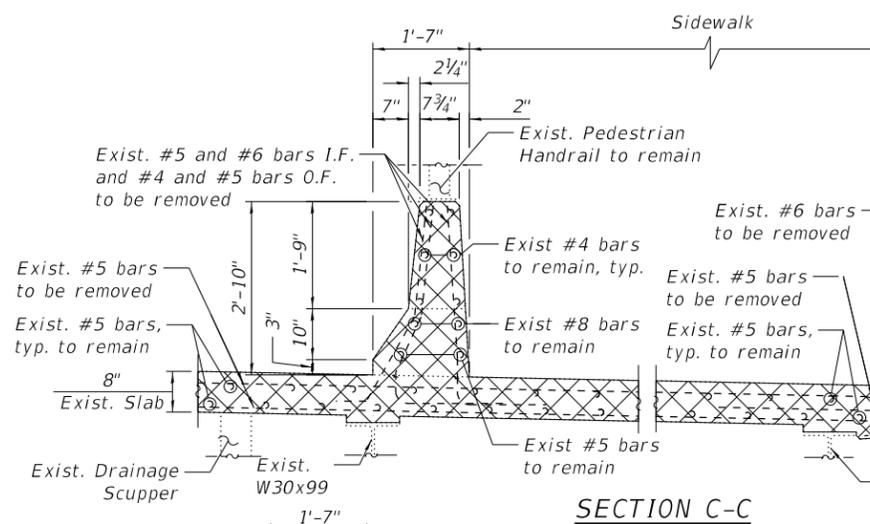


NOTES:

1. For bar splicer assembly and mechanical splicer details, see Sheet S-15.
2. 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.
3. Removal and disposal of the existing expansion joints is included with Concrete Removal.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	9	#5	32'-3"	
a1(E)	9	#5	21'-3"	
a2(E)	6	#6	6'-8"	
a3(E)	1	#6	10'-7"	
d(E)	3	#4	5'-2"	
d1(E)	8	#5	3'-11"	
d2(E)	3	#4	5'-2"	
d3(E)	3	#5	5'-7"	
d4(E)	3	#5	7'-11"	
h(E)	6	#6	32'-3"	
h1(E)	6	#6	21'-3"	
u(E)	42	#5	3'-1"	□
Concrete Removal			CU YD	9.1
Concrete Superstructure			CU YD	9.6
Protective Coat			SQ YD	23.0
Reinforcement Bars, Epoxy Coated			POUND	1,300



LEGEND

- Concrete Removal
- I.F. Inside Face
- O.F. Outside Face



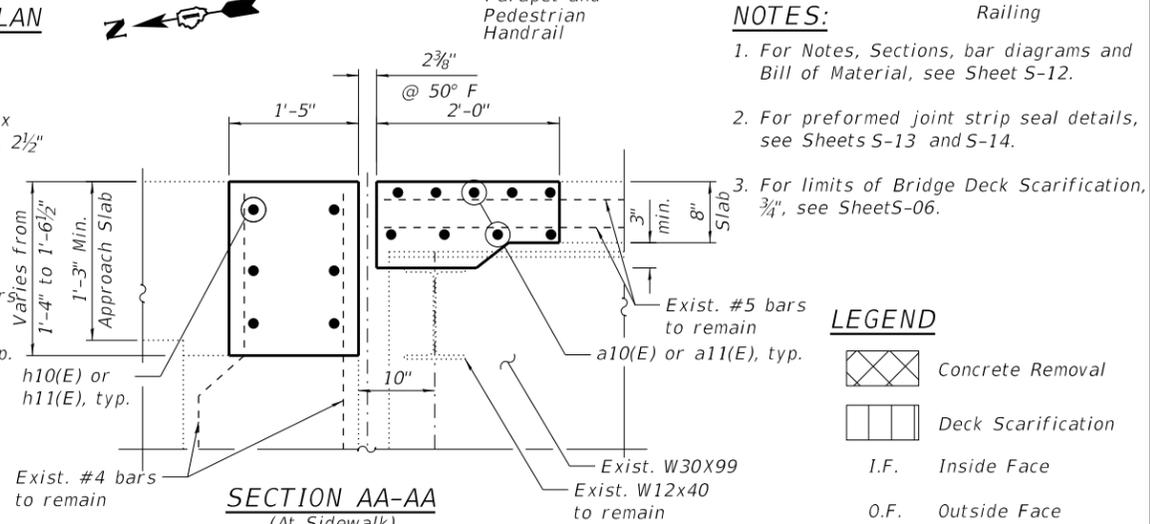
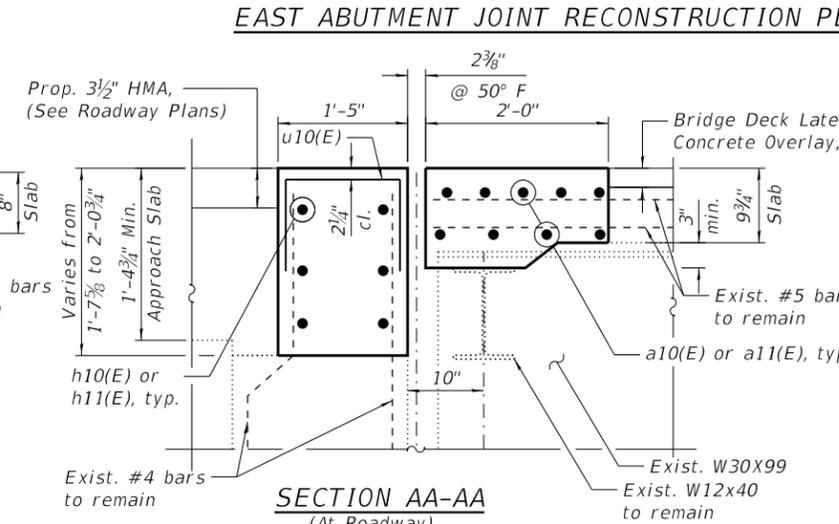
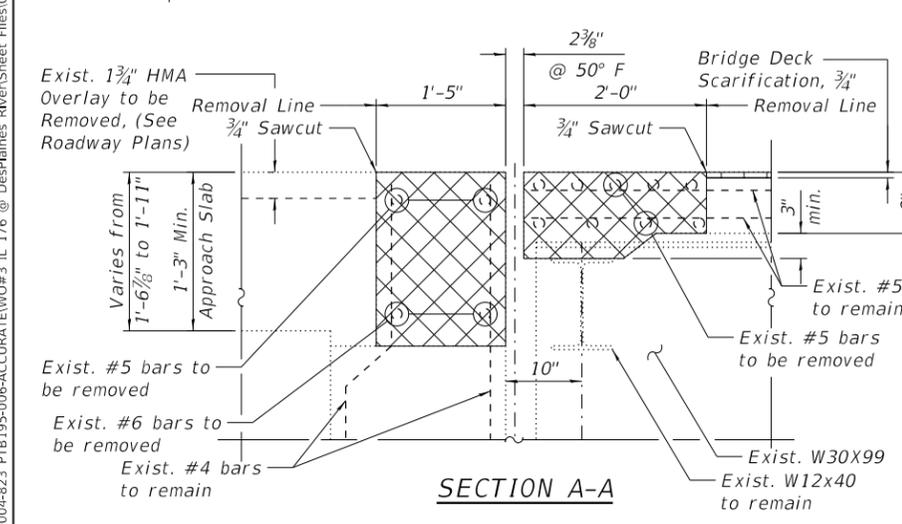
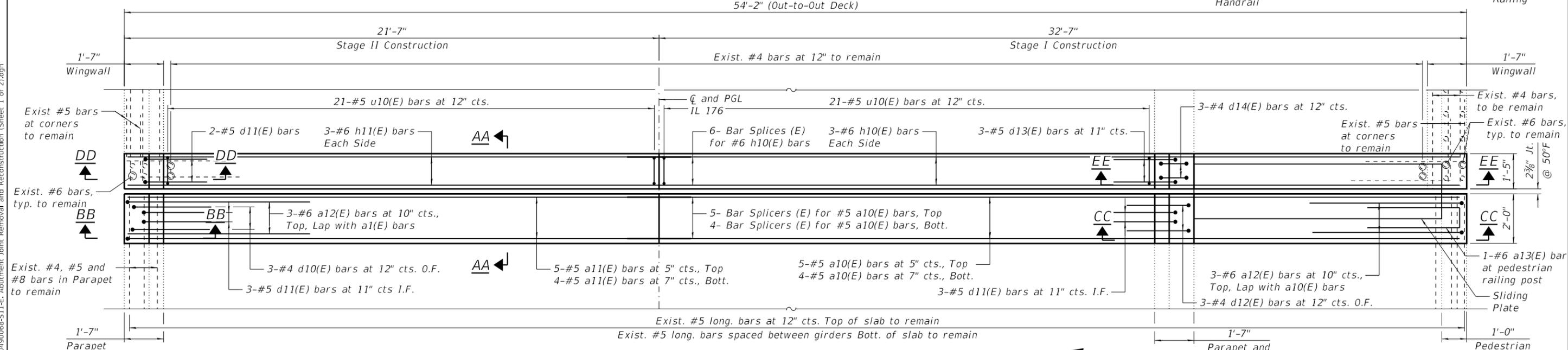
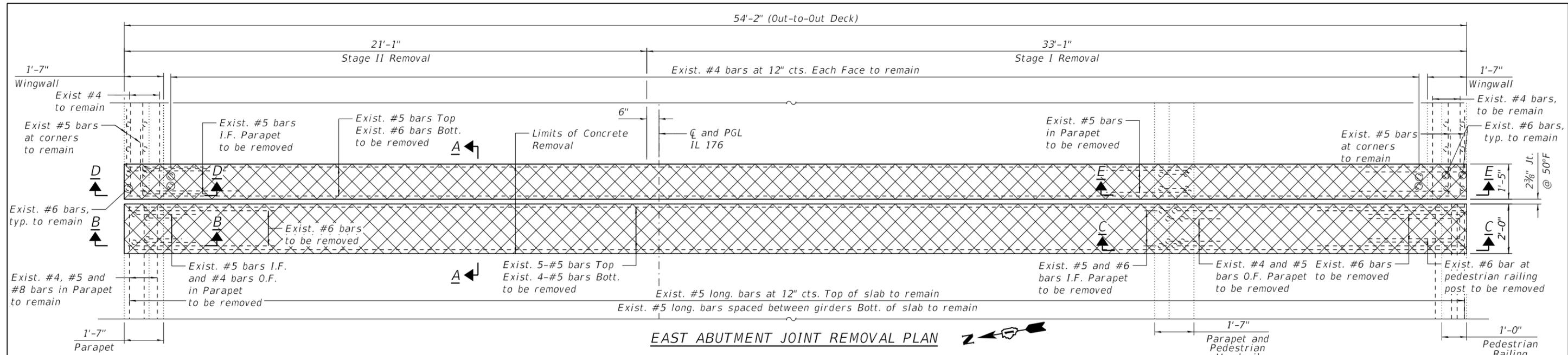
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

W. ABUT. JOINT REMOVAL & RECONSTRUCTION (SHEET 2 OF 2)
 STRUCTURE NO. 049-0068

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	2020-184-BR	LAKE	49	30
CONTRACT NO. 62M39				
ILLINOIS FED. AID PROJECT				

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- NOTES:**
- For Notes, Sections, bar diagrams and Bill of Material, see Sheet S-12.
 - For preformed joint strip seal details, see Sheets S-13 and S-14.
 - For limits of Bridge Deck Scarification, $\frac{3}{4}$ ", see Sheets S-06.

LEGEND

	Concrete Removal
	Deck Scarification
I.F.	Inside Face
O.F.	Outside Face



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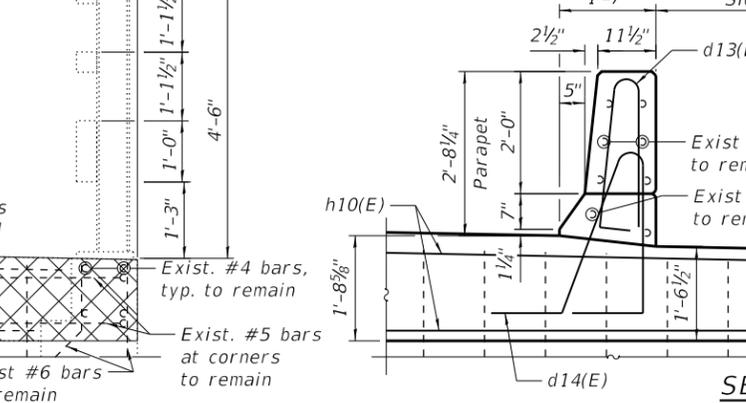
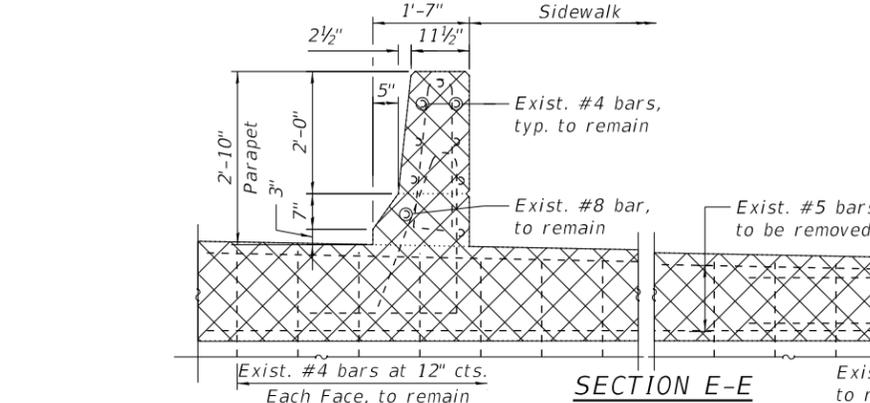
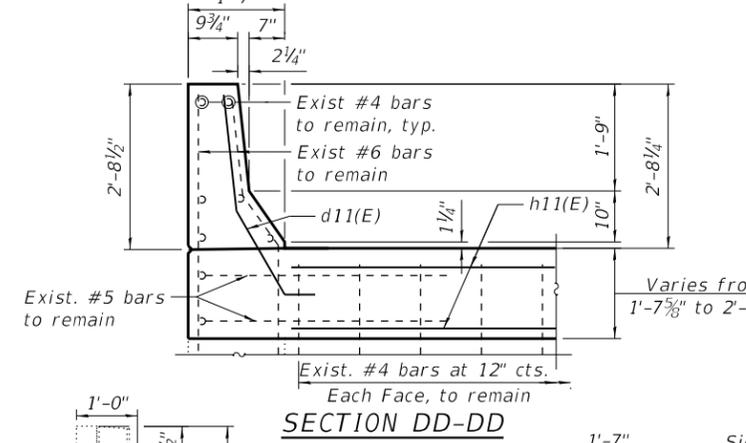
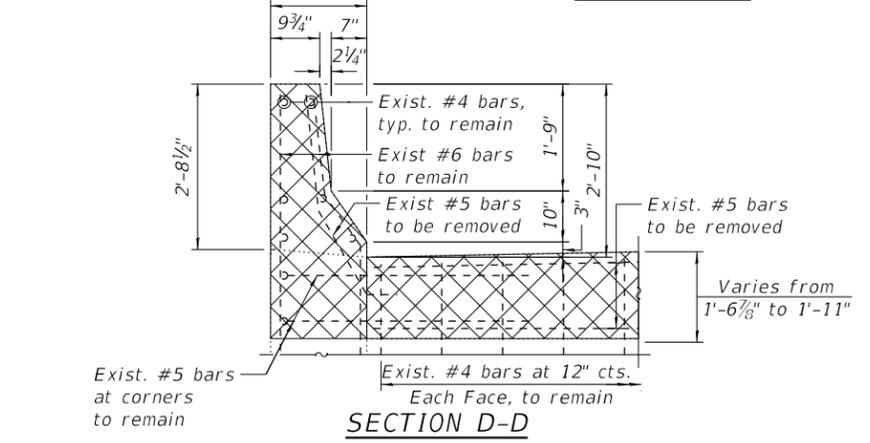
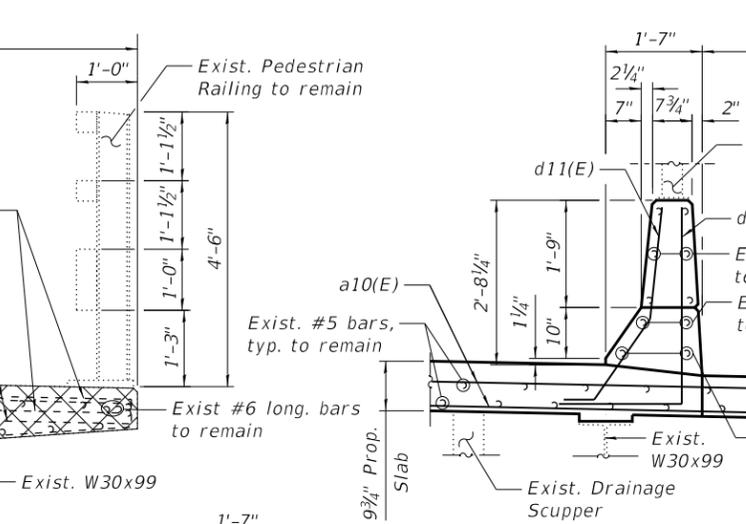
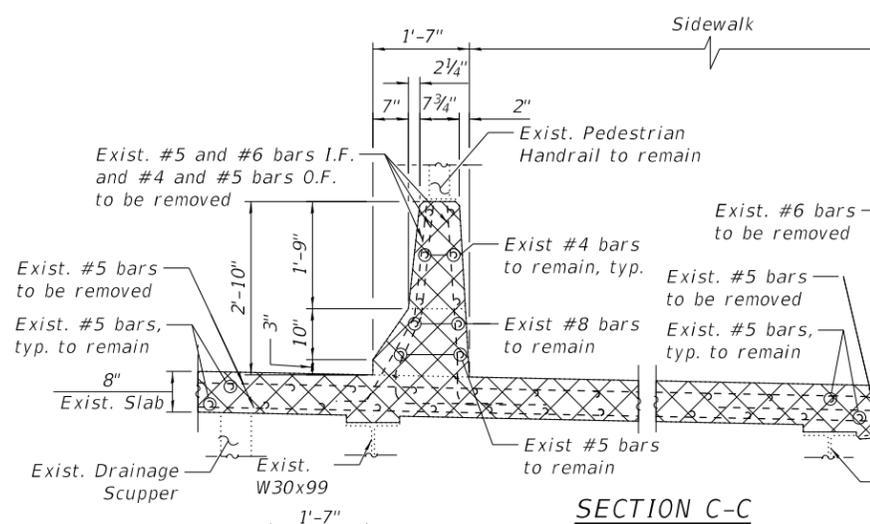
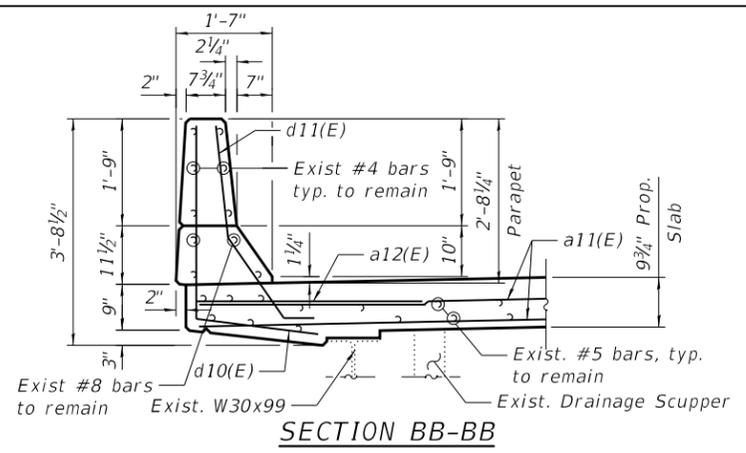
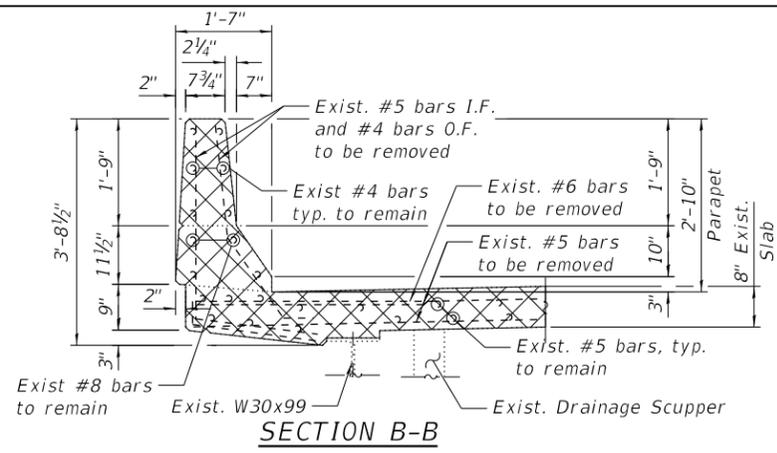
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

E. ABUT. JOINT REMOVAL & RECONSTRUCTION (SHEET 1 OF 2)
STRUCTURE NO. 049-0068

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	2020-184-BR	LAKE	49	31
CONTRACT NO. 62M39				
ILLINOIS FED. AID PROJECT				

SHEET S-11 OF S-15 SHEETS

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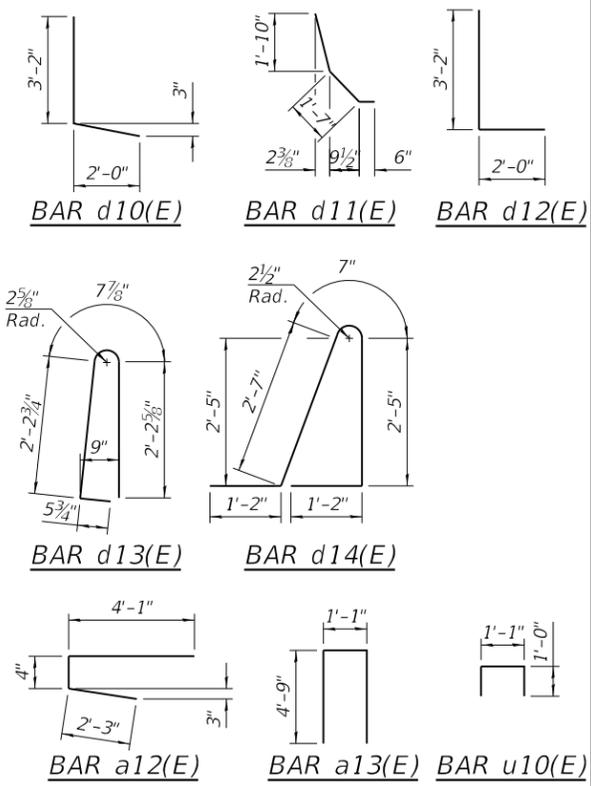


NOTES:

1. For bar splicer assembly and mechanical splicer details, see Sheet S-15.
2. 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.
3. Removal and disposal of the existing expansion joints is included with Concrete Removal.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a10(E)	9	#5	32'-3"	
a11(E)	9	#5	21'-3"	
a12(E)	6	#6	6'-8"	
a13(E)	1	#6	10'-7"	
d10(E)	3	#4	5'-2"	
d11(E)	8	#5	3'-11"	
d12(E)	3	#4	5'-2"	
d13(E)	3	#5	5'-7"	
d14(E)	3	#5	7'-11"	
h10(E)	6	#6	32'-3"	
h11(E)	6	#6	21'-3"	
u10(E)	42	#5	3'-1"	
Concrete Removal		CU YD	9.1	
Concrete Superstructure		CU YD	9.6	
Protective Coat		SQ YD	23.0	
Reinforcement Bars, Epoxy Coated		POUND	1,300	



LEGEND

- Concrete Removal
- I.F. Inside Face
- O.F. Outside Face

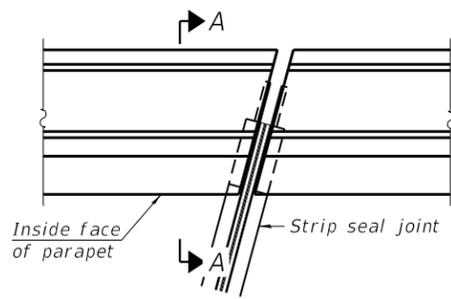


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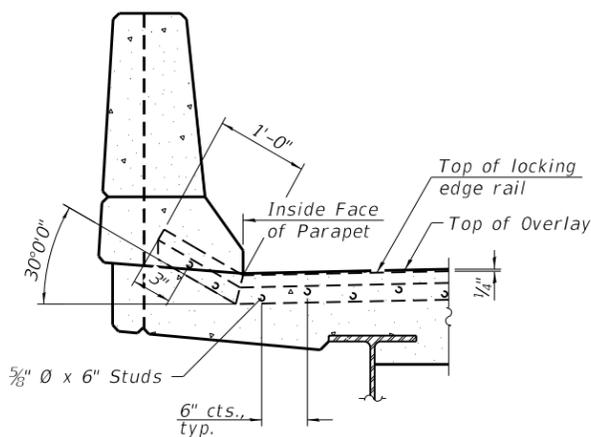
**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**E. ABUT. JOINT REMOVAL & RECONSTRUCTION (SHEET 2 OF 2)
 STRUCTURE NO. 049-0068**

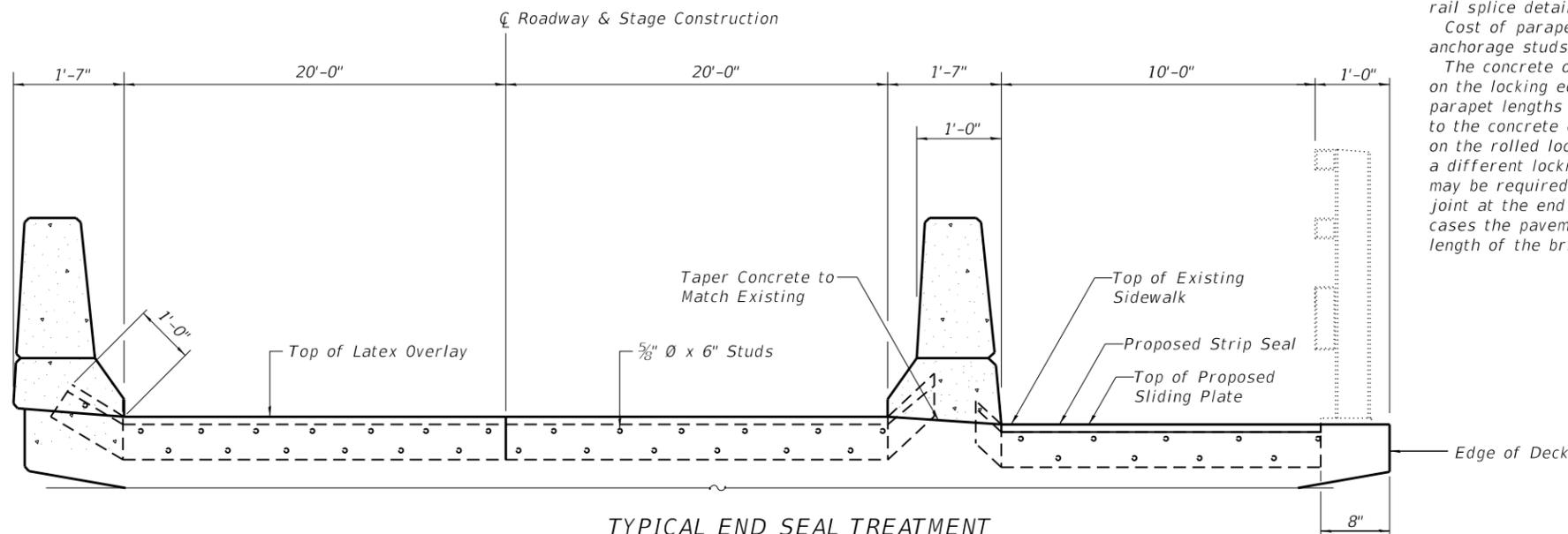
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1238	2020-184-BR	LAKE	49	32
CONTRACT NO. 62M39				
ILLINOIS FED. AID PROJECT				



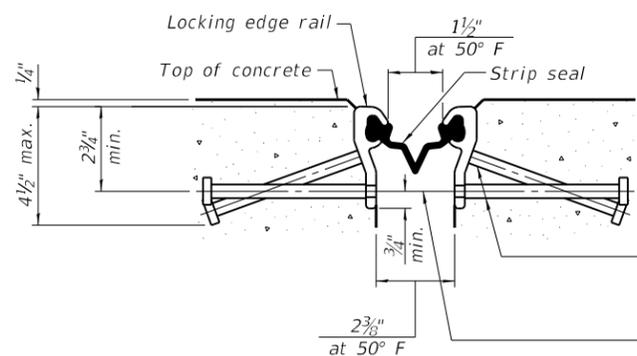
PLAN AT PARAPET
FOR SKEWS ≤ 30°



SECTION A-A

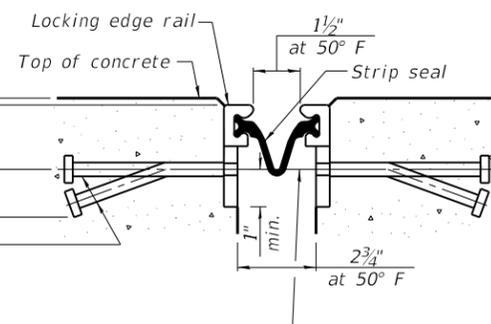


TYPICAL END SEAL TREATMENT

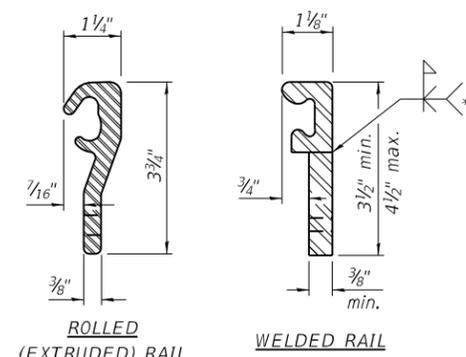


SHOWING ROLLED RAIL JOINT

* 5/8" Ø x 6" studs @ 6" cts. (alternate angled/bent studs with horizontal studs)
3/8" Ø threaded rods in 7/16" Ø holes at ±4"-0" cts. for holding the proper joint opening based on the temperature during the deck pour. Place to miss studs. All rods shall be burned, or sawed off flush with the plates after concrete is set.

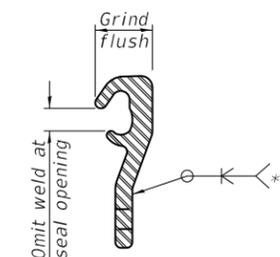


SHOWING WELDED RAIL JOINT



LOCKING EDGE RAILS

** Back gouge not required if complete joint penetration is verified by mock-up.



LOCKING EDGE RAIL SPLICE

The inside of the locking edge rail groove shall be free of weld residue.
Rolled rail shown, welded rail similar.

BILL OF MATERIAL

Item	Unit	Total
Preformed Joint Strip Seal	Foot	109

Notes:
The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the locking edge rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.
The locking edge rails depicted are configured for typical applications and are conceptual only. The actual configuration of the locking edge rails and matching strip seal may vary from manufacturer to manufacturer provided they fit the application and meet the minimum anchorage shown. Flanged edge rails, however, will not be allowed. Locking edge rails may exceed the 4 1/2" maximum depth provided the anchorage system is revised according to the manufacturer's recommendation.
The manufacturer's recommended installation methods shall be followed.
All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.
The Maximum space between locking edge rail segments shall be 3/16" and sealed with a suitable sealant; however, any rail joint within 10' measured perpendicular to the face of the curb or parapet shall be welded as shown in the locking edge rail splice detail.
Cost of parapet sliding plates, embedded plates, and anchorage studs included with Preformed Joint Strip Seal.
The concrete opening below the strip seal will vary based on the locking edge rail chosen by the Contractor. Deck and parapet lengths shown elsewhere in the plans are dimensioned to the concrete opening, not the joint opening, and are based on the rolled locking edge rail. If the Contractor elects to use a different locking edge rail, dimensional adjustments may be required. One exception to this would be the strip seal joint at the end of the precast bridge approach slab. For these cases the pavement connector length shall be adjusted, not the length of the bridge approach slab.

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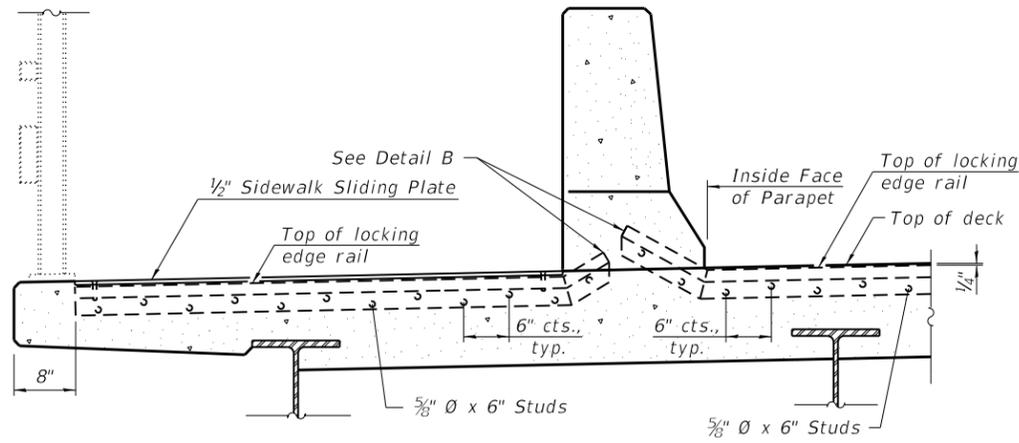
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL (SHEET 1 OF 2)
STRUCTURE NO. 049-0068

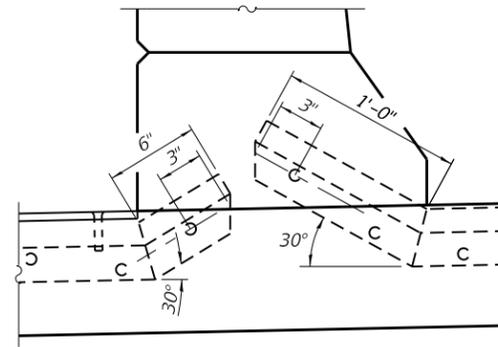
SHEET S-13 OF S-15 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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CONTRACT NO. 62M39				
ILLINOIS FED. AID PROJECT				

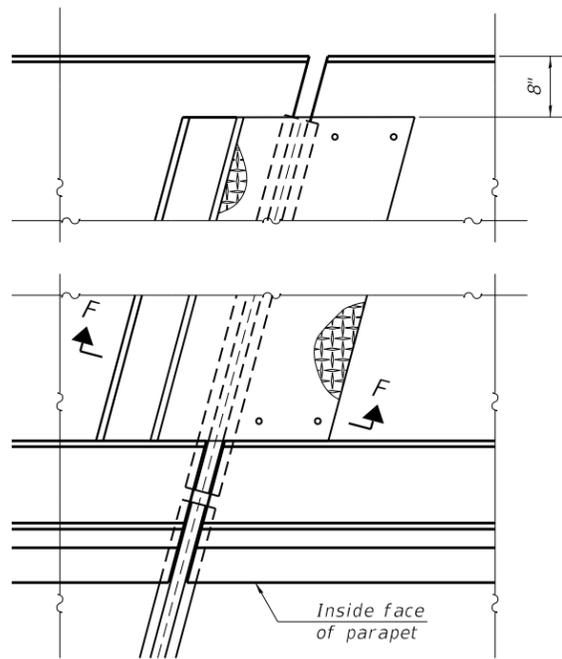


ELEVATION AT DECK LEVEL SIDEWALK

(Skews > 30° shown. Skews ≤ 30° similar except as shown in plan view.)

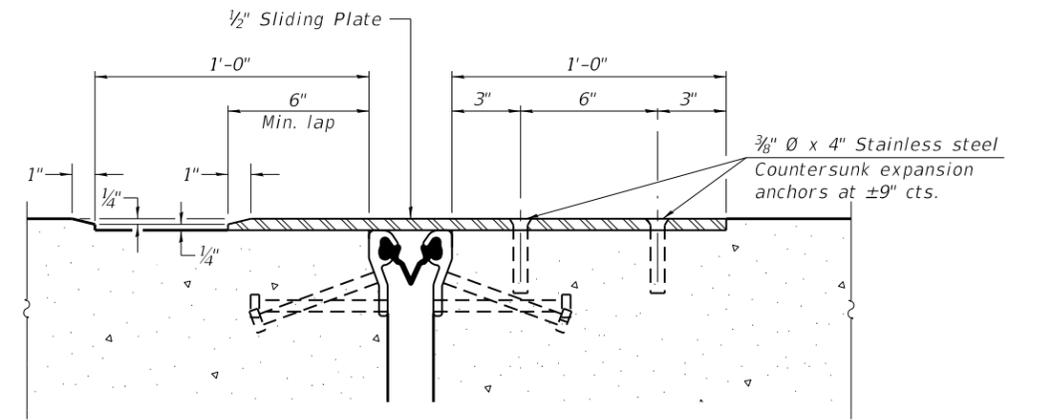


DETAIL B



(FOR SKEWS ≤ 30°)

PLAN AT DECK LEVEL SIDEWALK



SECTION F-F

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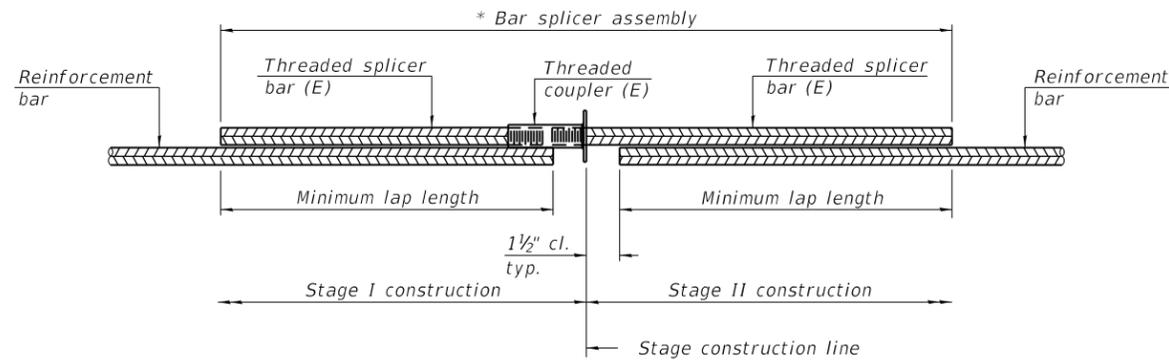
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

PREFORMED JOINT STRIP SEAL - SIDEWALK (SHEET 2 OF 2)
 STRUCTURE NO. 049-0068

SHEET S-14 OF S-15 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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			CONTRACT NO. 62M39	
		ILLINOIS	FED. AID PROJECT	

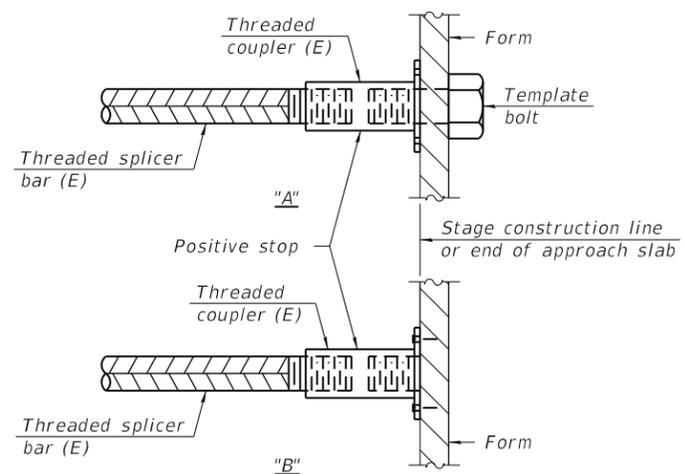


STANDARD BAR SPLICER ASSEMBLY PLAN
 (All components shall be provided from one supplier)

Threaded splicer bar length = min. lap length + 1 1/2" + thread length

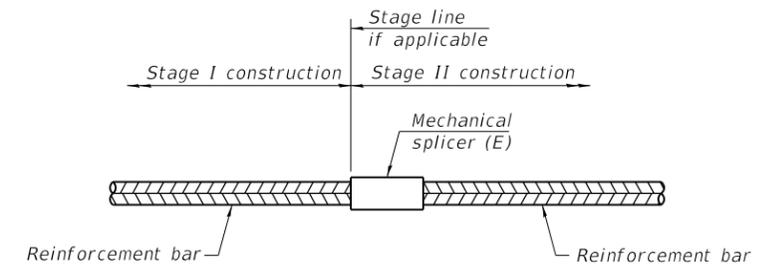
* Epoxy not required on Bar Splicer Assembly components used in conjunction with black bars.

Location	Bar size	No. assemblies required	Minimum lap length
West Abutment	#5	9	3'-6"
West Abutment	#6	6	3'-10"
East Abutment	#5	9	3'-6"
East Abutment	#6	6	3'-10"



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.

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BSD-1

1-1-2020



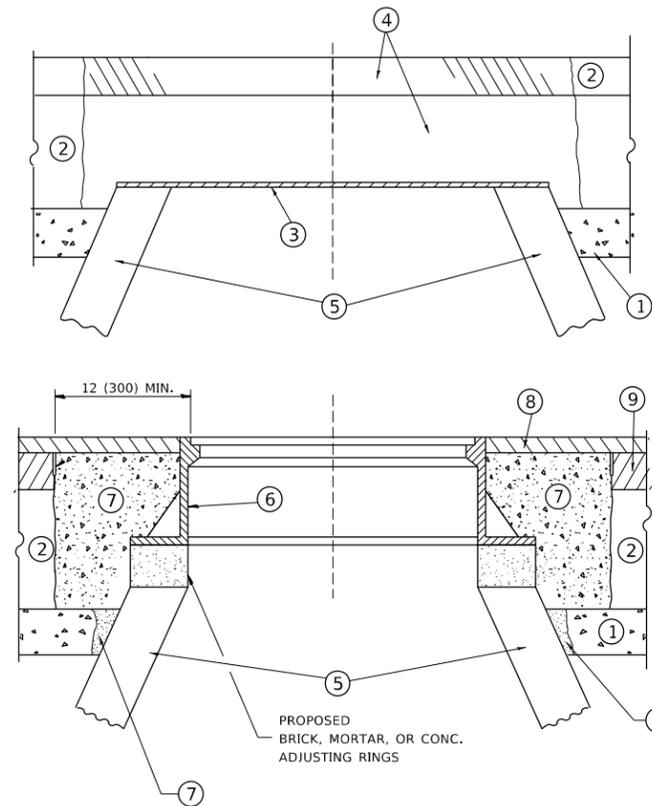
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STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

BAR SPLICER ASSEMBLY AND MECHANICAL SPLICER DETAILS
 STRUCTURE NO. 049-0068

SHEET S-15 OF S-15 SHEETS

FAU. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	2020-184-BR	LAKE	49	35
CONTRACT NO. 62M39				
ILLINOIS		FED. AID PROJECT		



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.

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.

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 A MINIMUM 1 1/2 (40) THICK HMA SURFACE MIX APPROVED BY THE ENGINEER.

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-1 * 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
- ② EXISTING PAVEMENT
- ③ 36 (900) DIAMETER METAL PLATE
- ④ PROPOSED CRUSHED STONE AND HMA SURFACE MIX
- ⑤ EXISTING STRUCTURE
- ⑥ FRAME AND LID (SEE NOTES)
- ⑦ CLASS PP-1 *CONCRETE
- ⑧ PROPOSED HMA SURFACE COURSE
- ⑨ 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.

DETAILS FOR FRAMES AND LIDS ADJUSTMENT WITH MILLING

ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) UNLESS OTHERWISE SHOWN

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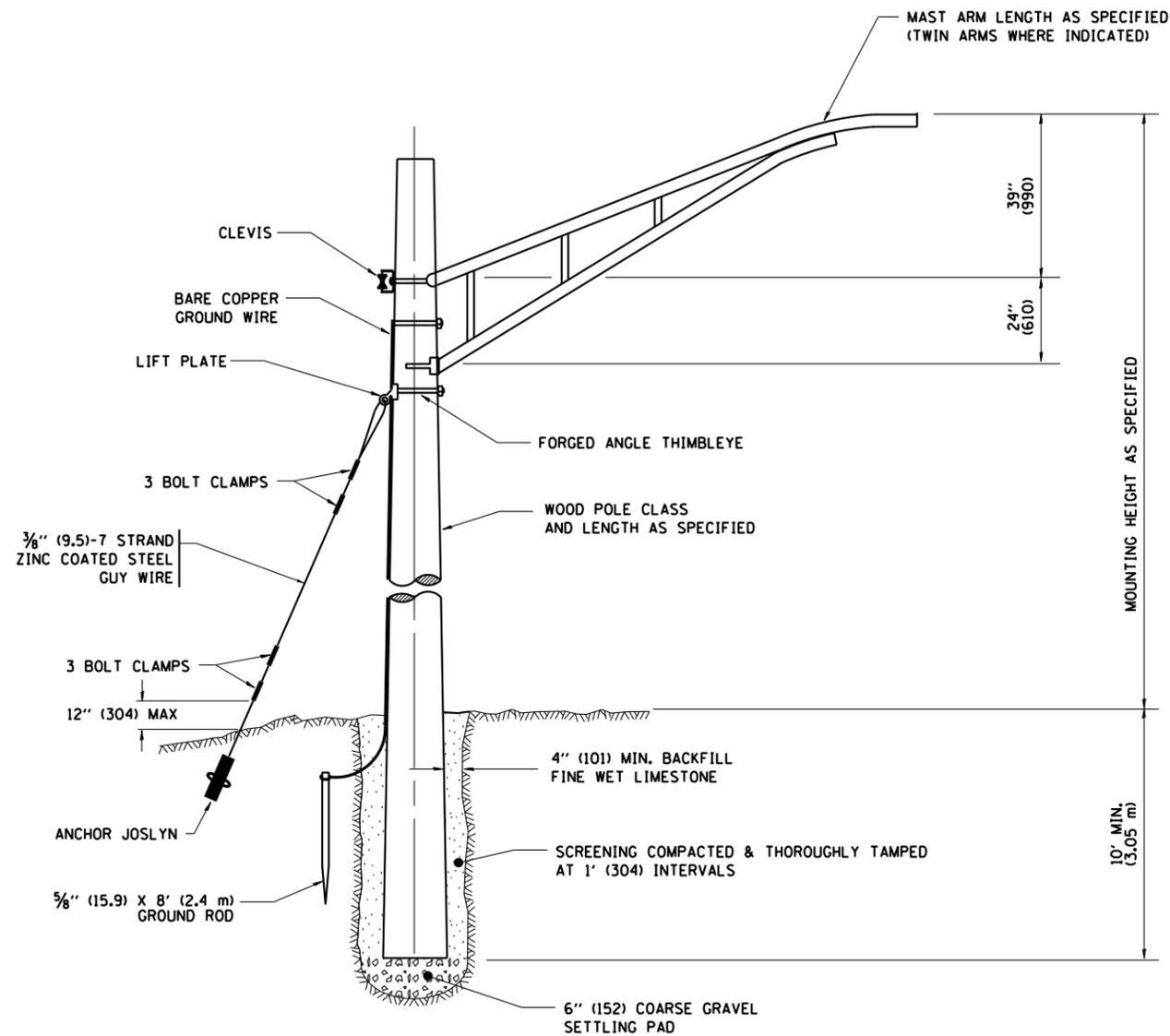
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

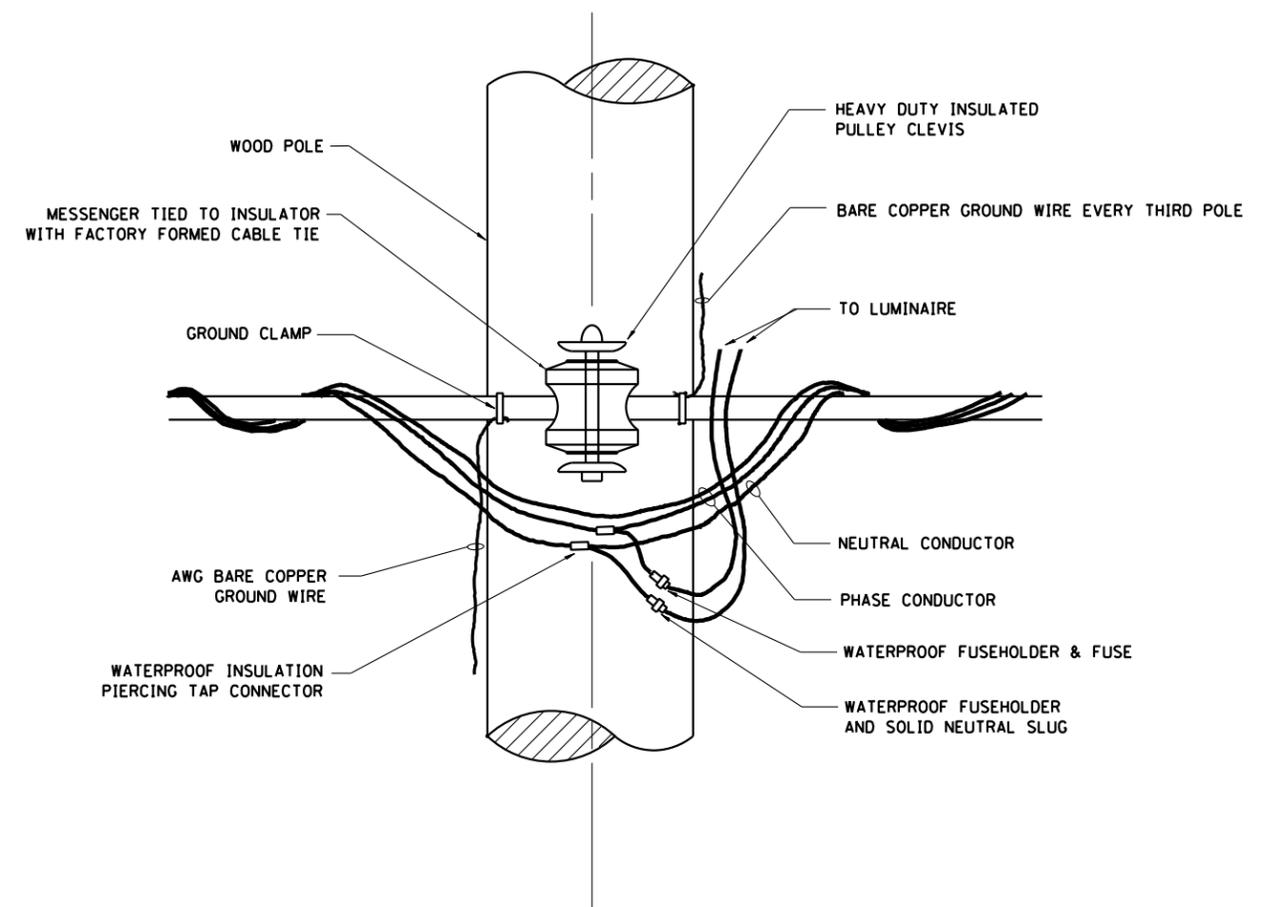
**DETAILS FOR
FRAMES AND LIDS ADJUSTMENT WITH MILLING**

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	2020-184-BR	LAKE	49	36
BD600-03 (BD-8)		CONTRACT NO. 62M39		
ILLINOIS		FED. AID PROJECT		



TEMPORARY LIGHT POLE DETAIL



TEMPORARY LIGHT POLE ATTACHMENT DETAIL

NOTES:
 1. ALL DIMENSIONS IN INCHES (MILLIMETERS) UNLESS OTHERWISE INDICATED

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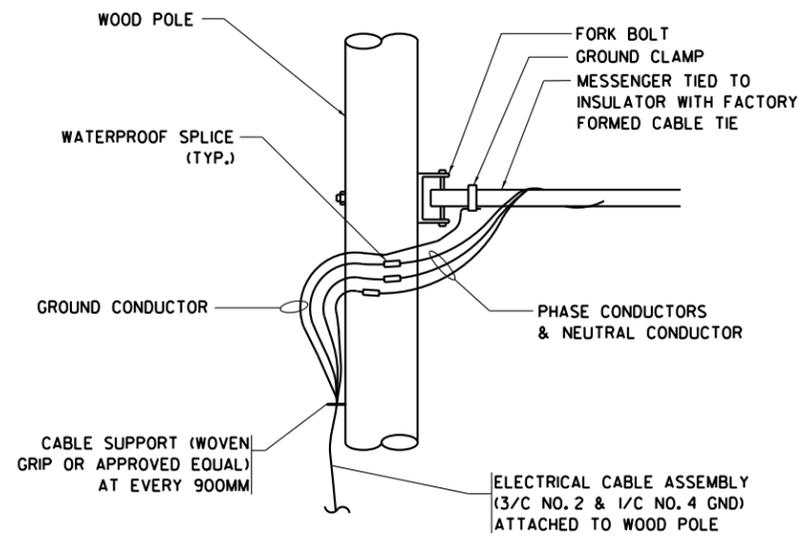


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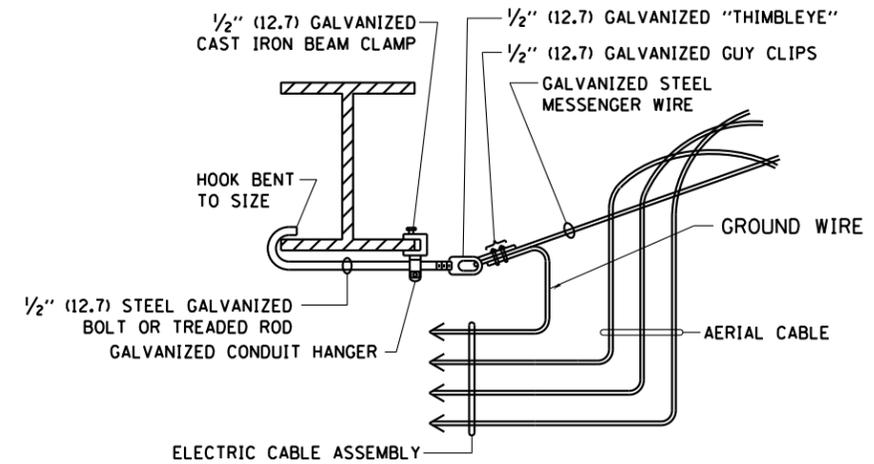
STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

TEMPORARY LIGHT POLE DETAILS (BE-800)			
SCALE: NTS	SHEET	OF SHEETS	STA. TO STA.

F.A.U. RTE. 1238	SECTION P-2-1-1(12)	COUNTY LAKE	TOTAL SHEETS 49	SHEET NO. 39
CONTRACT NO. 62M39				
ILLINOIS FED. AID PROJECT				



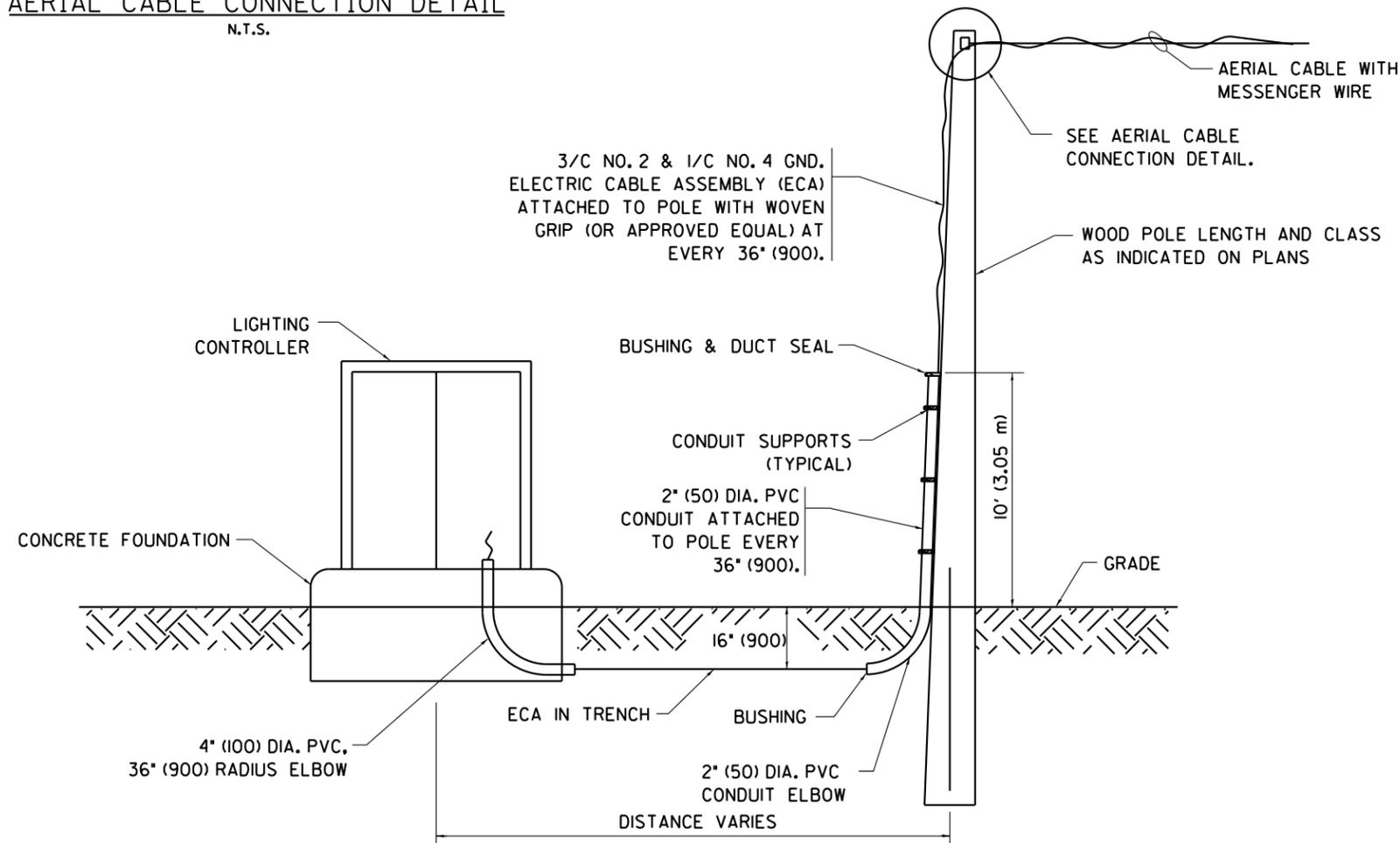
AERIAL CABLE CONNECTION DETAIL
N.T.S.



AERIAL CABLE ATTACHED TO STRUCTURE
NOT TO SCALE

NOTES:

1. ALL DIMENSIONS IN INCHES (MILLIMETERS) UNLESS OTHERWISE INDICATED.
2. SEE PROPOSED LIGHTING PLAN FOR CONDUIT, CABLE AND ROUTING.
3. THE CONTRACTOR SHALL PROVIDE INTERMEDIATE SUPPORTS TO MAINTAIN MINIMUM CLEARANCES. REFER TO AERIAL AERIAL CABLE ATTACHED TO STRUCTURE DETAIL.
4. COST OF SPLICES AND MOUNTING HARDWARE SHALL BE INCLUDED IN THE UNIT PRICE FOR AERIAL CABLE.



WOOD POLE TO LIGHTING CONTROLLER WIRING CONNECTION DETAIL
N.T.S.

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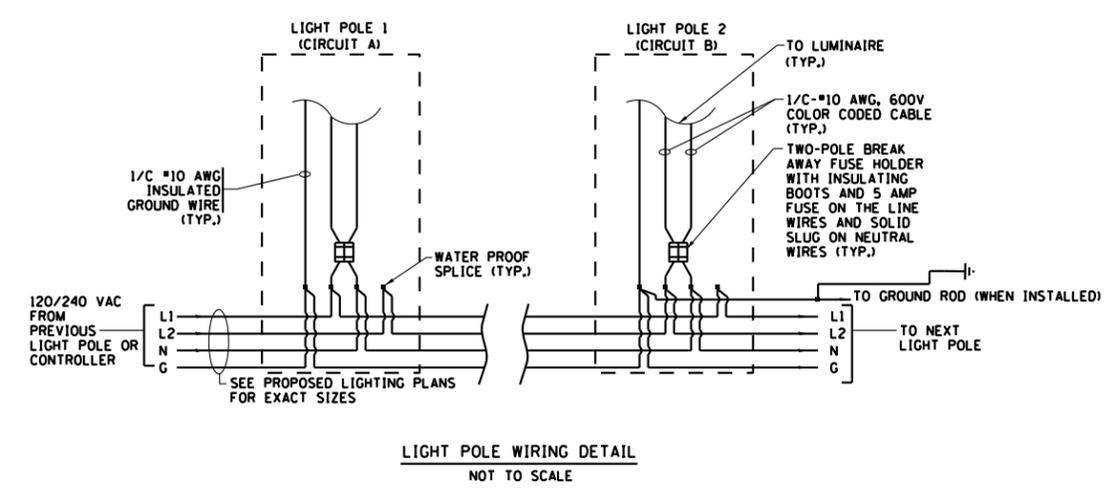
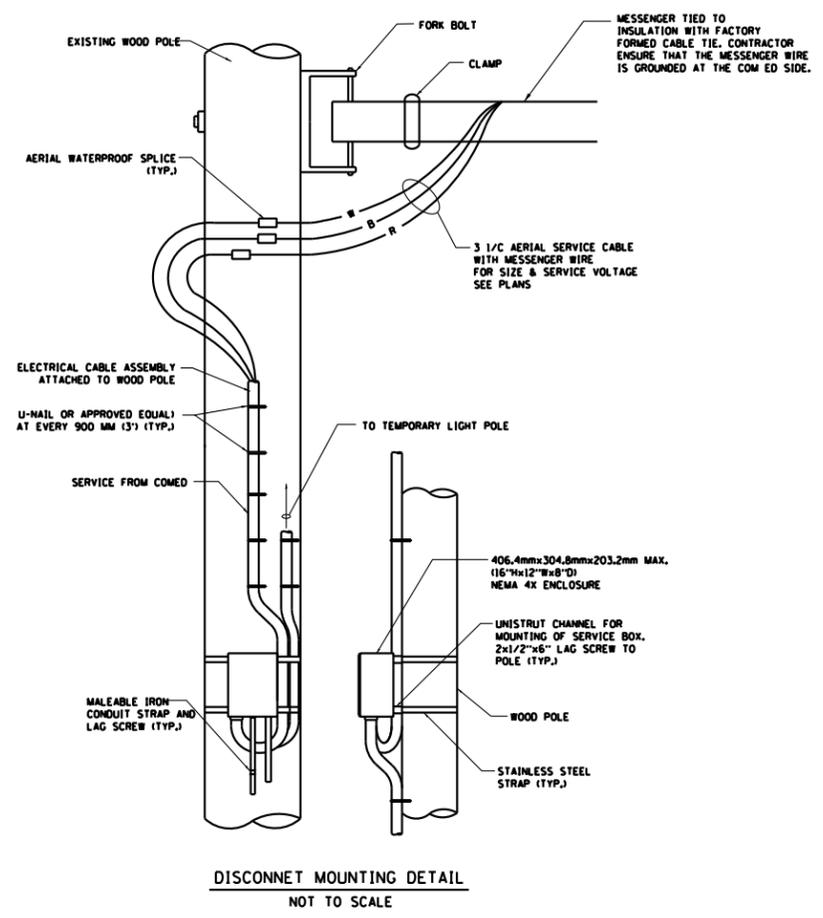
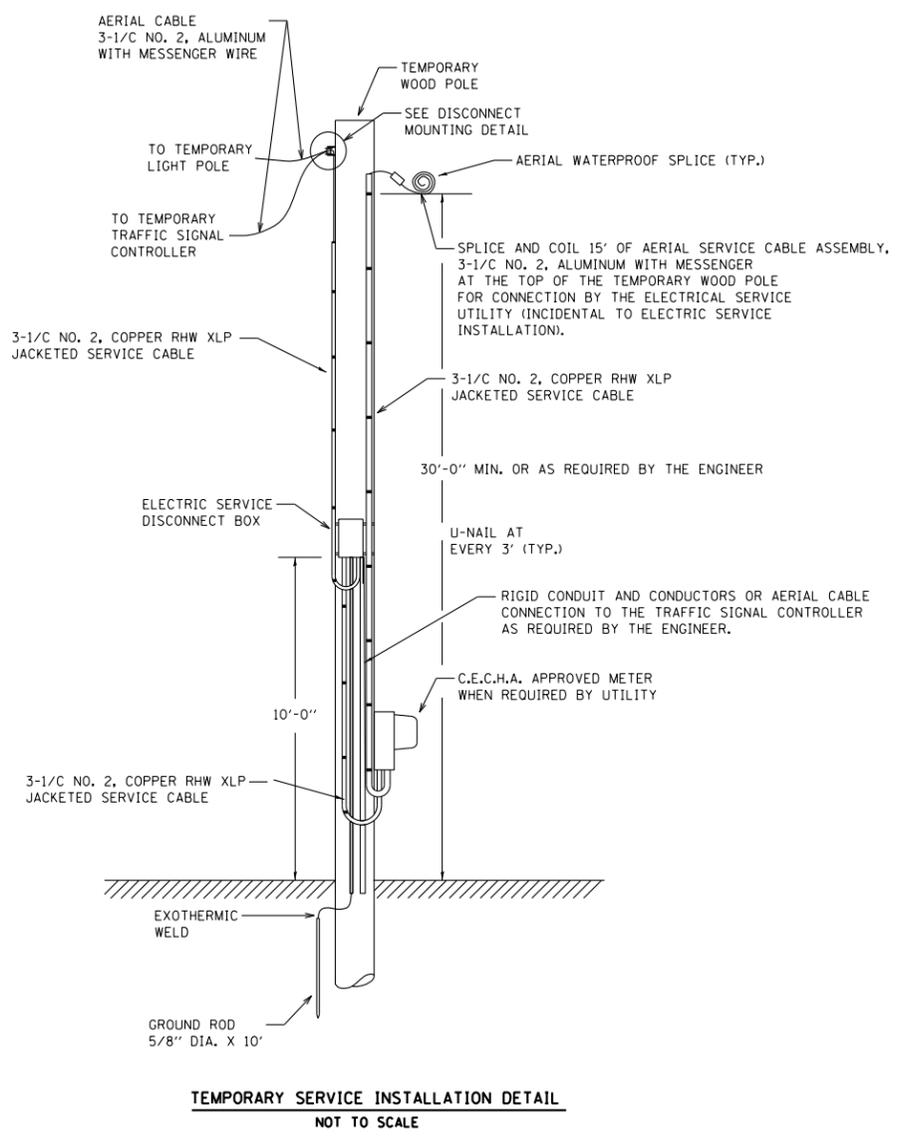
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**TEMPORARY AERIAL CABLE INSTALLATION
(BE-801)**

SCALE: NTS SHEET OF SHEETS STA. TO STA.

F.A.U. RTE. 1238	SECTION P-2-1-1(12)	COUNTY LAKE	TOTAL SHEETS 49	SHEET NO. 40
CONTRACT NO. 62M39			ILLINOIS FED. AID PROJECT	

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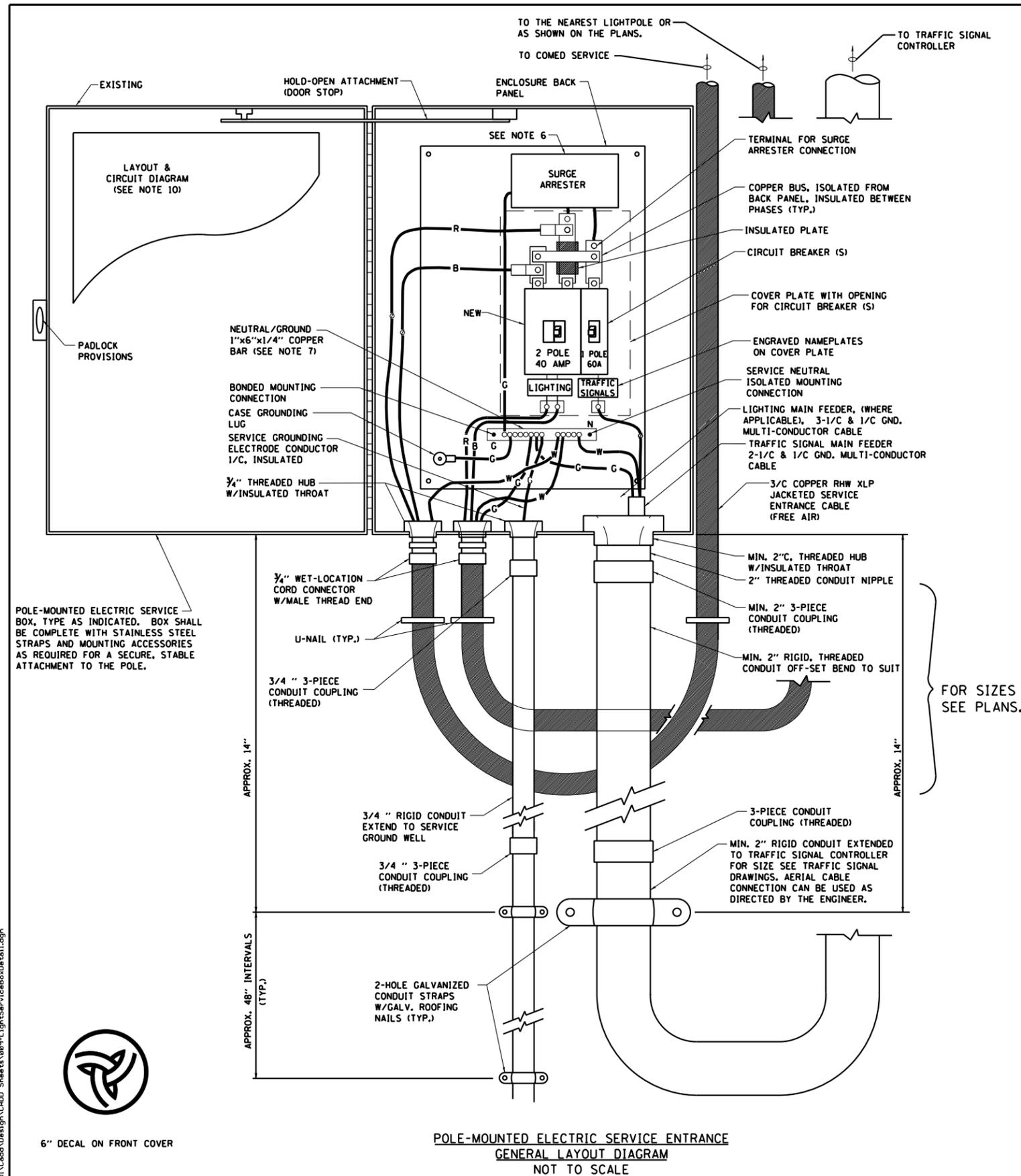


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PLOT DATE = 08/25/20	CHECKED - FEP	REVISED -
	DATE - 09/28/2020	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

TEMPORARY SERVICE INSTALLATION AND LIGHT POLE WIRING DETAIL			
SCALE: NTS	SHEET	OF SHEETS	STA. TO STA.

F.A.U. RTE. 1238	SECTION P-2-1-1(12)	COUNTY LAKE	TOTAL SHEETS 49	SHEET NO. 42
CONTRACT NO. 62M39				
ILLINOIS FED. AID PROJECT				



POLE-MOUNTED ELECTRIC SERVICE BOX, TYPE AS INDICATED. BOX SHALL BE COMPLETE WITH STAINLESS STEEL STRAPS AND MOUNTING ACCESSORIES AS REQUIRED FOR A SECURE, STABLE ATTACHMENT TO THE POLE.

FOR SIZES SEE PLANS.

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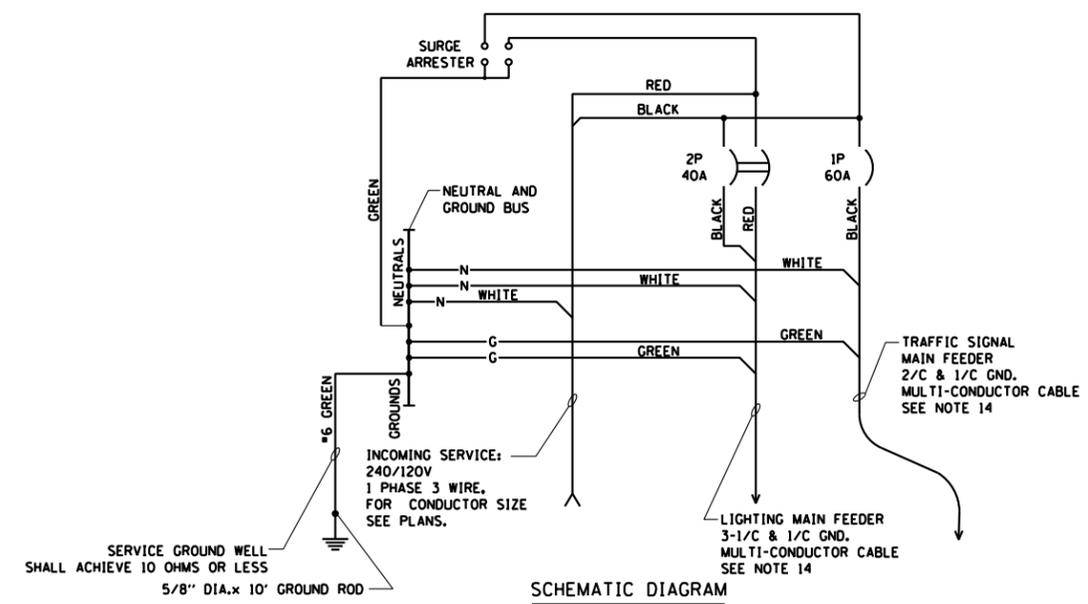


6" DECAL ON FRONT COVER

POLE-MOUNTED ELECTRIC SERVICE ENTRANCE
GENERAL LAYOUT DIAGRAM
NOT TO SCALE

NOTES:

- ELECTRIC SERVICE SHALL BE OF THE VOLTAGE INDICATED OR DESIGNATED BY THE ENGINEER, AND SERVICE DROP CABLE SHALL BE COMPATIBLE WITH THE SERVICE ACCORDINGLY. SOME INSTALLATIONS MAY CALL FOR SERVICE ENTRANCE EQUIPMENT SUITABLE FOR 3-WIRE SERVICE EVEN THOUGH INITIALLY WIRED FOR 2-WIRE SERVICE.
- THE POLE-MOUNTED ELECTRIC SERVICE BOX SHALL BE CONFIGURED AND FULLY EQUIPPED FOR 240/120V 3W SERVICE, COMPLETE WITH LIGHTING MAIN BREAKER AND TRAFFIC SIGNALS MAIN BREAKER AS REQUIRED.
- THE ELECTRIC SERVICE EQUIPMENT ASSEMBLY SHALL BE UL LISTED AS SUITABLE FOR USE AS SERVICE ENTRANCE EQUIPMENT.
- THE ELECTRIC SERVICE EQUIPMENT ENCLOSURE SHALL BE NEMA 4X STAINLESS STEEL, NOMINALLY 12"W X 16"H X 8"D, WITH A PIANO-HINGED DOOR, STEEL BACK PANEL, FAST-ACTING STAINLESS STEEL ENCLOSURE CLAMPS, PADLOCK PROVISIONS AND DOOR STOP, HOFFMAN CATALOG NO. A-16H1208556LP/A-16 P12/A-DSTOPK/C-PMK12, OR APPROVED EQUAL.
- CIRCUIT BREAKERS SHALL BE THERMAL MAGNETIC BOLT-ON TYPE WITH A MINIMUM INTERRUPTING CAPACITY OF 25,000 SYMMETRICAL AMPERES AT 240 VOLTS. THEY SHALL BE LOCKABLE IN THE "OFF" POSITION FOR COMPLIANCE WITH OSHA LOCK-OUT/TAG-OUT REQUIREMENTS. HANDLES SHALL BE TRIP FREE.
- THE SURGE PROTECTOR SHALL BE SUITABLE FOR THE SERVICE VOLTAGE SINGLE PHASE 60HZ AC, WITH A SURGE ENERGY CAPABILITY OF 2160 JOULES OR BETTER AT 8/20 MICRO-SECONDS, RATED -40 TO 60 DEGREES C., WITH LED OPERATING INDICATORS, AND SHALL BE UL LISTED PER UL 1449, CUTLER-HAMMER CM0V230L065XST OR APPROVED EQUAL.
- BUS BARS, CONNECTORS, AND LUGS SHALL BE COPPER, INSULATED AND ISOLATED, AND CONFIGURED TO PREVENT SHORTED CONDITIONS FROM TIGHTENING TERMINATIONS, ETC. THE OVERALL BUS SECTION SHALL BE CONFIGURED BEHIND AN INSULATING BARRIER SHIELD WHICH IS REMOVABLE FOR ACCESS TO CONNECTIONS, OR THE ASSEMBLY SHALL BE A MANUFACTURED SPECIALTY PANELBOARD, CUTLER-HAMMER PRL2A OR APPROVED EQUAL.
- THE COMBINATION GROUND AND NEUTRAL BAR SHALL BE CONFIGURED WITH SEPARATE GROUND AND NEUTRAL SECTIONS AND SPARE TERMINALS AS INDICATED. THE HEADS OF GROUND SCREWS SHALL BE PAINTED GREEN. THE HEADS OF NEUTRAL SCREWS SHALL BE PAINTED WHITE. THE SERVICE NEUTRAL AND SERVICE GROUNDING ELECTRODE CONDUCTOR SHALL BE TERMINATED ADJACENT TO EACH OTHER AT THE DIVIDE BETWEEN THE SECTIONS AND WIRING SHALL BE TERMINATED ONLY UPON THE APPROPRIATE SECTION.
- THE WIRING TERMINALS, INCLUDING THE GROUND/NEUTRAL BAR SHALL BE ARRANGED TO PROVIDE ADEQUATE ROOM FOR PERFORMING FIELD TERMINATIONS.
- A PLASTIC LAMINATED LAYOUT AND CIRCUIT DIAGRAM SHALL BE MECHANICALLY SECURED TO THE INTERIOR SIDE OF THE ENCLOSURE DOOR.
- A 2-COLOR ENGRAVED PLASTIC NAMEPLATE, ATTACHED WITH SCREWS, AND ENGRAVED AS INDICATED, SHALL BE PROVIDED FOR EACH MAIN BREAKER.
- LUGS AND CONNECTORS SHALL BE RATED FOR 75 C CONDUCTOR.
- THE EXACT MOUNTING HEIGHT OF THE BOX SHALL BE FIELD DETERMINED TO AVOID OBSTRUCTIONS AND PUBLIC ACCESS. TYPICAL HEIGHT SHALL BE APPROXIMATELY 10 FEET ABOVE GRADE.



SCHEMATIC DIAGRAM

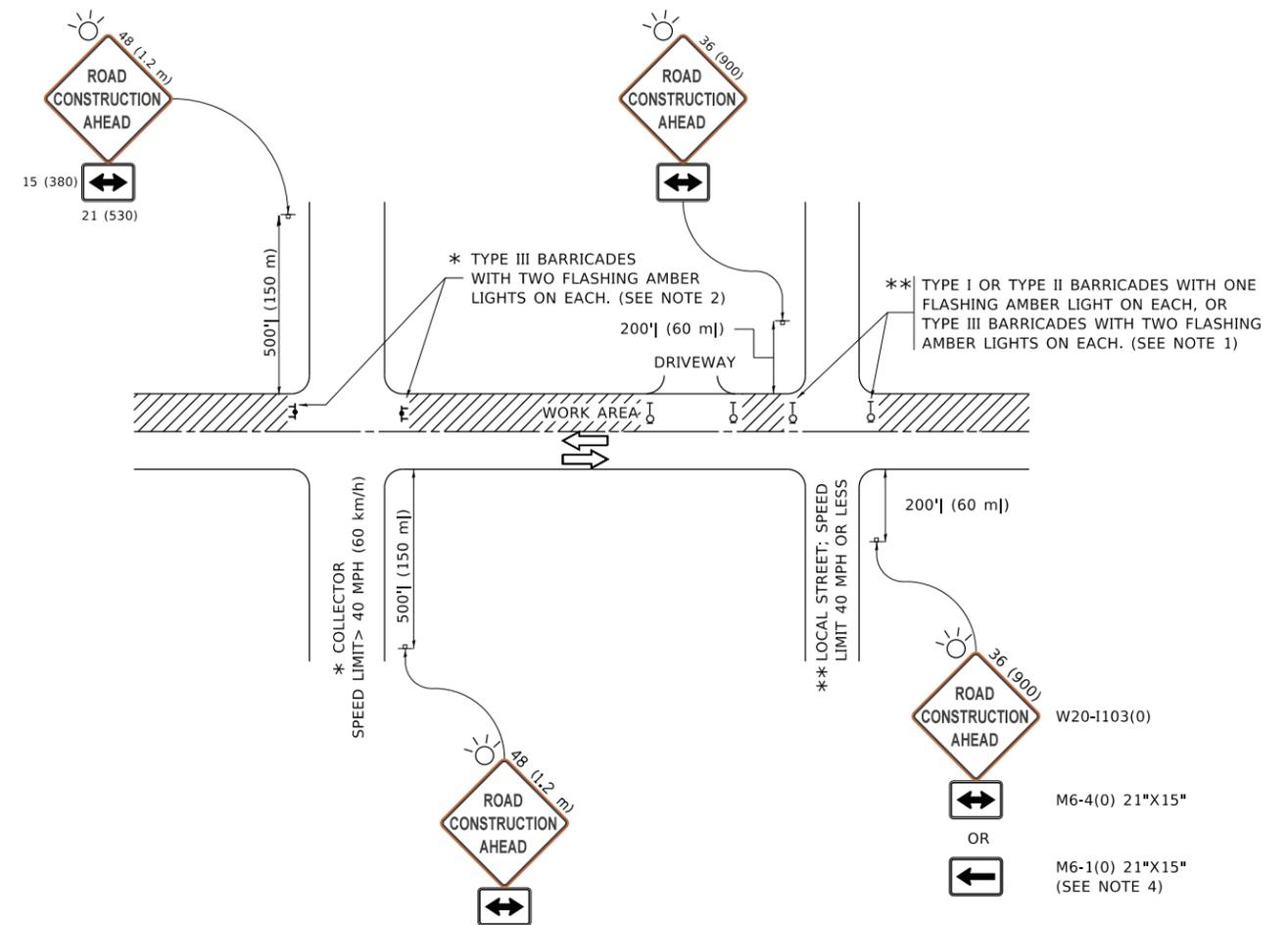


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	DATE - 09/28/2020	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

COMBINATION LIGHTING & TRAFFIC POLE MOUNTED ELECTRIC SERVICE BOX DETAIL			
SCALE: NTS	SHEET	OF SHEETS	STA. TO STA.

F.A.U. RTE. 1238	SECTION P-Z-1-1(12)	COUNTY LAKE	TOTAL SHEETS 49	SHEET NO. 43
CONTRACT NO. 62M39				
ILLINOIS FED. AID PROJECT				



NOTES:

1. 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.
2. 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 OF THE MAIN ROUTE.
 - 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) IN HEIGHT.
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.
7. 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.

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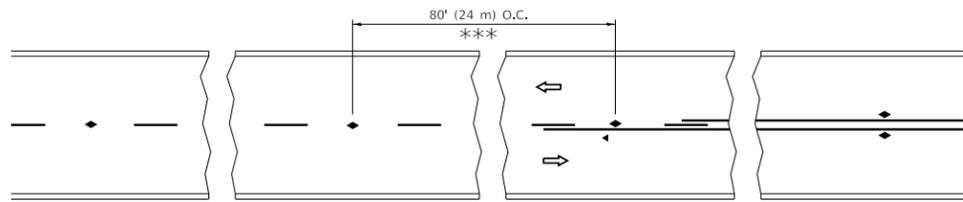
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		REVISED - A. SCHUETZE 09-15-16

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

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

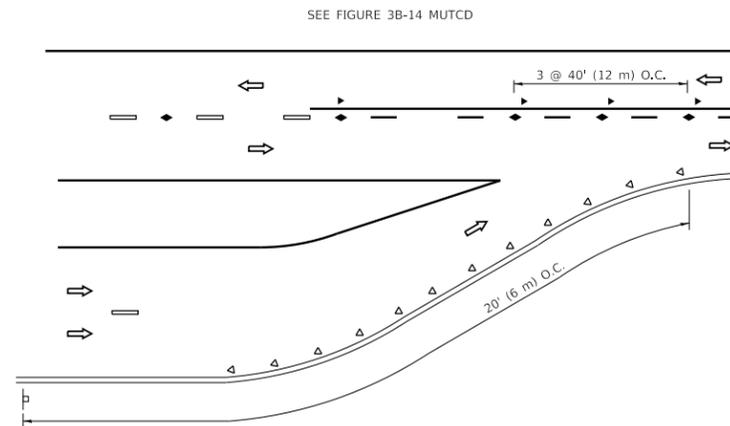
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ILLINOIS FED. AID PROJECT				

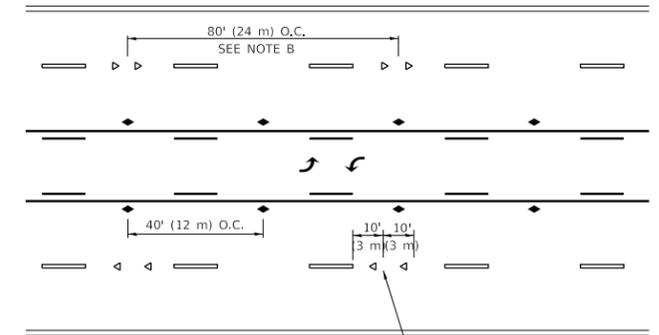


*** REDUCE TO 40' (12 m) O.C. ON CURVES WITH POSTED OR ADVISORY SPEED 45 M.P.H. (70 km/h) OR LESS.

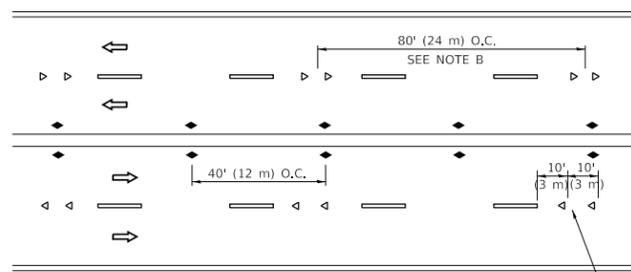
TWO-LANE/TWO-WAY



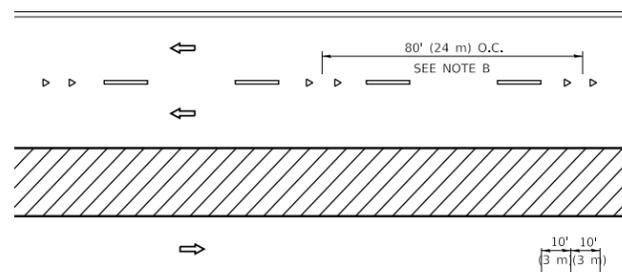
LANE REDUCTION TRANSITION



TWO-WAY LEFT TURN



MULTI-LANE/UNDIVIDED



MULTI-LANE/DIVIDED

GENERAL NOTES

1. MARKERS USED WITH DASHED LINES SHALL BE CENTERED IN THE GAP BETWEEN SEGMENTS.
2. MARKERS USED ADJACENT TO SOLID LINES SHALL BE OFFSET 2 TO 3 (50 TO 75) TOWARD TRAFFIC AS SHOWN.
3. 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

SYMBOLS

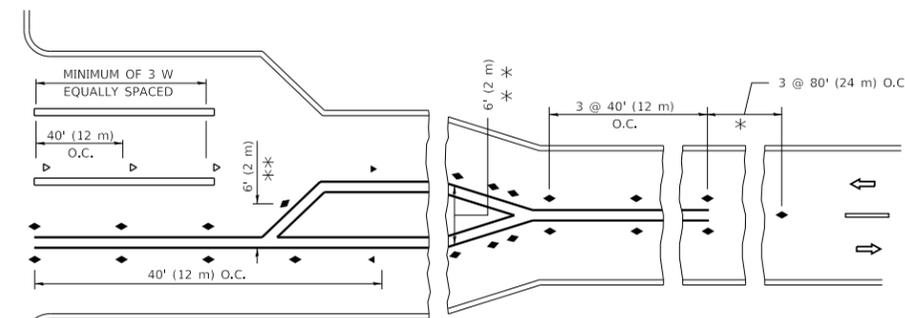
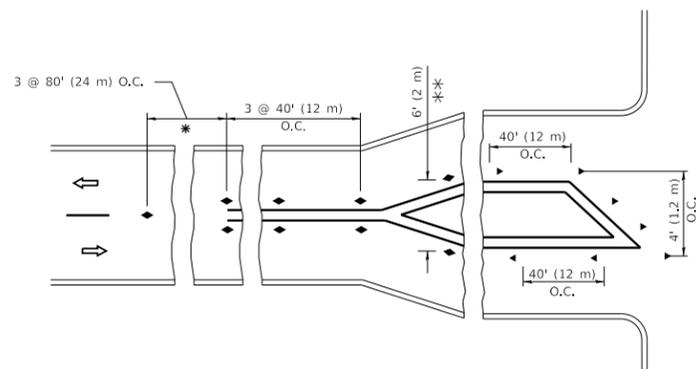
- YELLOW STRIPE
- WHITE STRIPE
- ◀ ONE-WAY AMBER MARKER
- ◀ ONE-WAY CRYSTAL MARKER (W/O)
- ◆ TWO-WAY AMBER MARKER

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



TURN LANES

* SEE TWO-LANE/TWO-WAY WHERE MARKERS CONTINUE
 *** WHERE THE MEDIAN WIDTH IS 6' (2 m) OR LESS USE TWO-WAY MARKERS.

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

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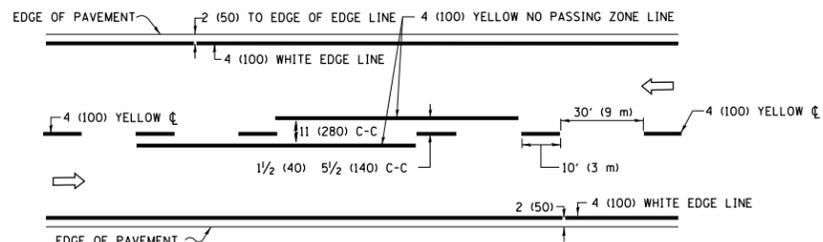
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

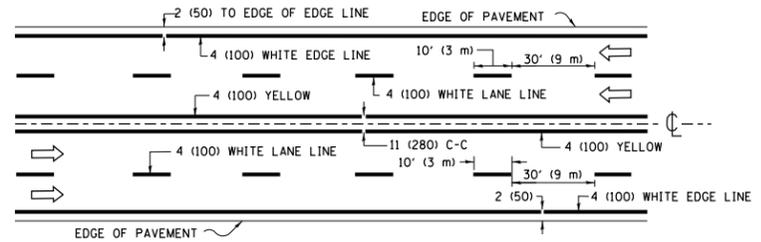
**TYPICAL APPLICATIONS
RAISED REFLECTIVE PAVEMENT MARKERS (SNOW-PLOW RESISTANT)**

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

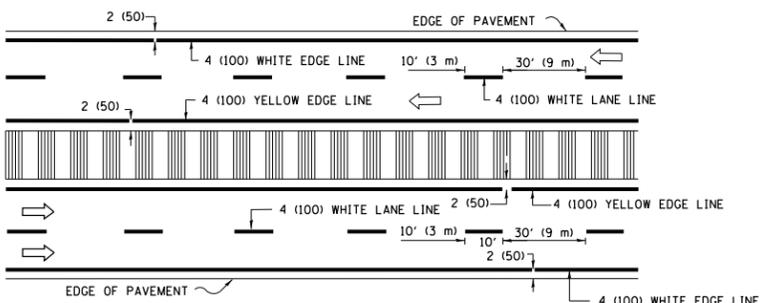
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1238	2020-184-BR	LAKE	49	45
TC-11		CONTRACT NO. 62M39		
ILLINOIS		FED. AID PROJECT		



2-LANE ROADWAY

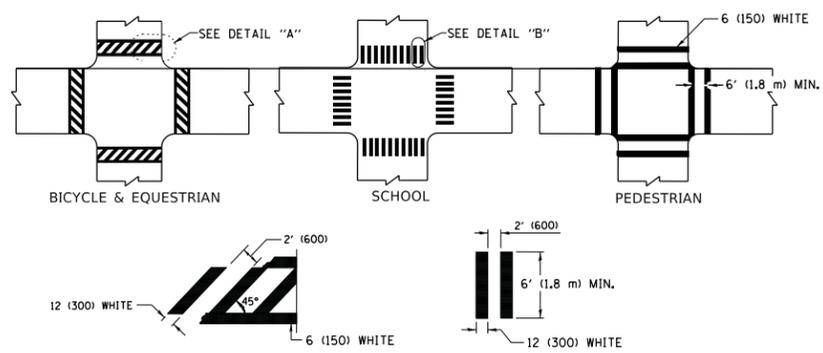


MULTI-LANE UNDIVIDED



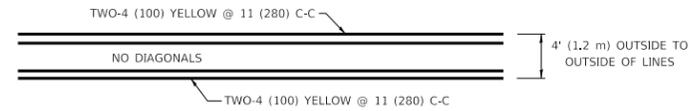
MULTI-LANE DIVIDED WITH MEDIAN

TYPICAL LANE AND EDGE LINE MARKING

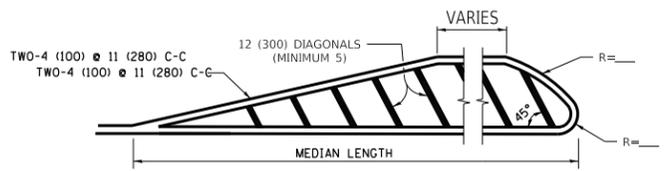


TYPICAL CROSSWALK MARKING

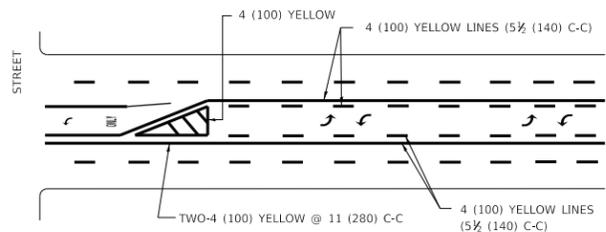
* MARKINGS SHALL BE INSTALLED PARALLEL TO THE CENTERLINE OF THE ROAD WHICH IT CROSSES



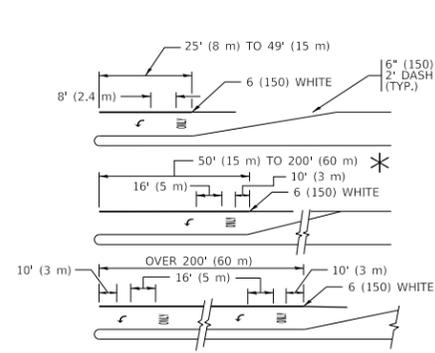
4' (1.2 m) WIDE MEDIANS ONLY



MEDIANS OVER 4' (1.2 m) WIDE



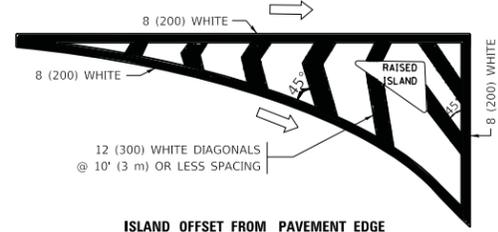
MEDIAN WITH TWO-WAY LEFT TURN LANE TYPICAL PAINTED MEDIAN MARKING



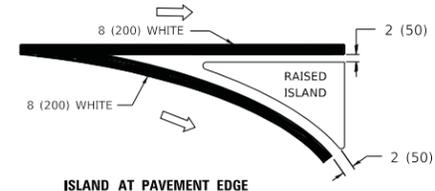
TYPICAL LEFT (OR RIGHT) TURN LANE TYPICAL TURN LANE MARKING

FULL SIZE LETTERS 8' (2.4 m) AND ARROWS SHALL BE USED. AREA = 15.6 SQ. FT. (1.5 m²) ONLY AREA = 20.8 SQ. FT. (1.9 m²)

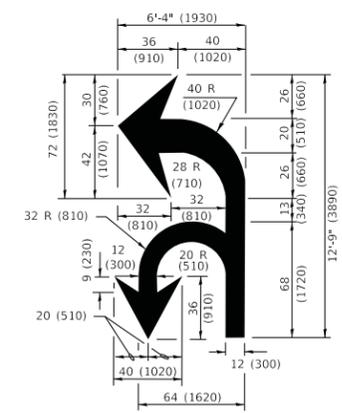
* TURN LANES IN EXCESS OF 400' (120 m) IN LENGTH MAY HAVE AN ADDITIONAL SET OF ARROW - "ONLY" INSTALLED MIDWAY BETWEEN THE OTHER TWO SETS OF ARROW - "ONLY".



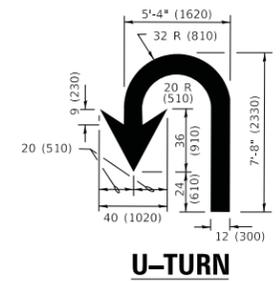
ISLAND OFFSET FROM PAVEMENT EDGE



ISLAND AT PAVEMENT EDGE TYPICAL ISLAND MARKING



COMBINATION LEFT AND U-TURN



U-TURN

LANE REDUCTION TRANSITION
* LANE REDUCTION ARROWS REQUIRED AT SPEEDS OF 45 MPH OR GREATER OR WHEN SPECIFIED IN PLANS.

D(FT)	SPEED LIMIT
345	30
425	35
500	40
580	45
665	50
750	55

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	5 1/2 (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 WHITE	10' (3 m) LINE WITH 30' (9 m) SPACE FOR SKIP-DASH; 5 1/2 (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 SEE 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 ²) EACH "X"=54.0 SQ. FT. (5.0 m ²)
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.

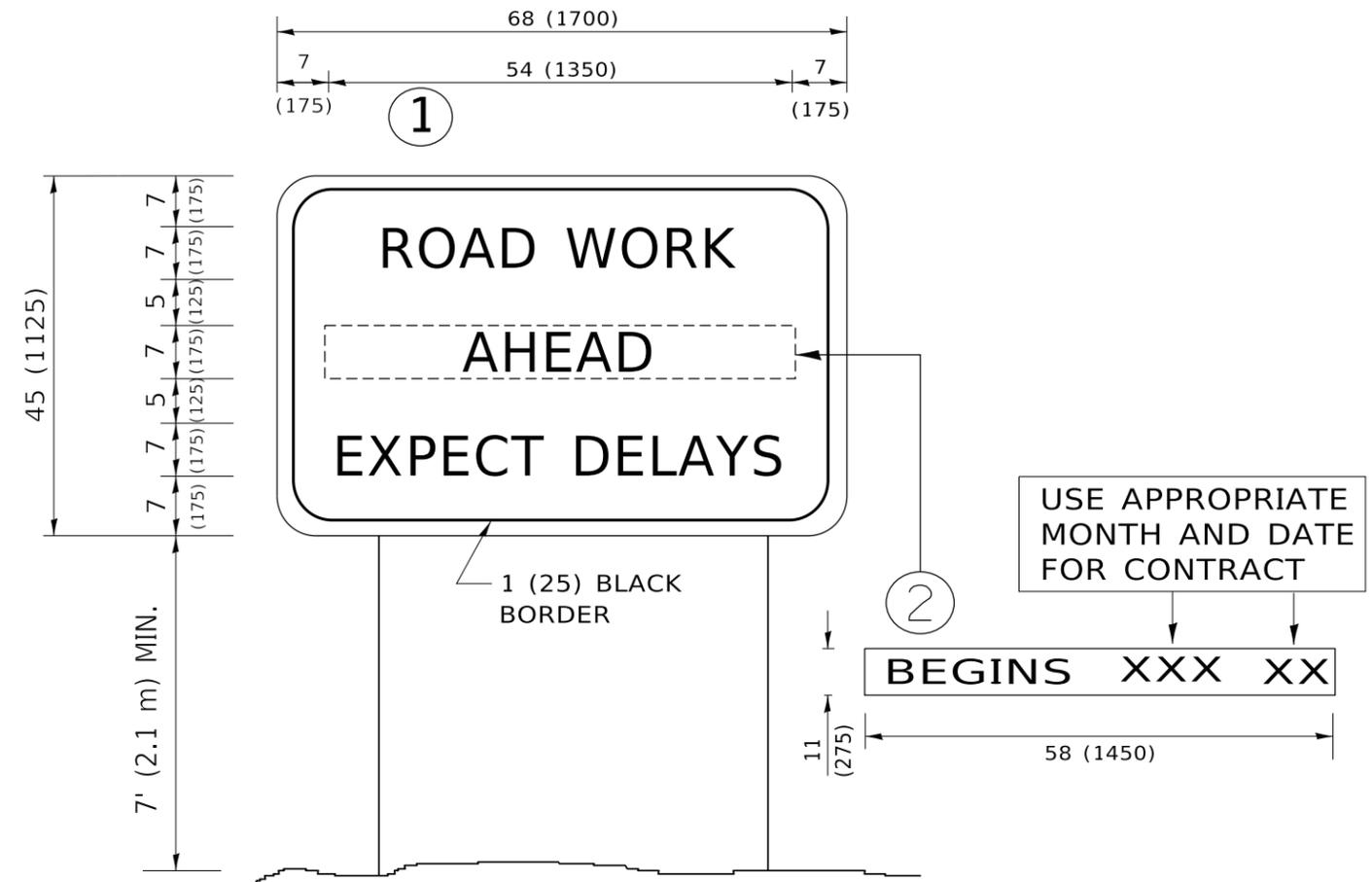
All dimensions are in inches (millimeters) unless otherwise shown.

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PLOT DATE = 3/4/2019	DATE - 03-19-90	REVISED - C. JUCIUS 12-21-15
		REVISED - C. JUCIUS 04-12-16

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT ONE		F.A.U. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TYPICAL PAVEMENT MARKINGS		1238	2020-184-BR	LAKE	49	46
SCALE: NONE		SHEET 1 OF 2 SHEETS		STA. TO STA.	CONTRACT NO. 62M39	
		ILLINOIS		FED. AID PROJECT		



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.

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PLOT DATE = 3/4/2019	DATE -	REVISED - C. JUCIUS 01-31-07

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**ARTERIAL ROAD
INFORMATION SIGN**

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

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	2020-184-BR	LAKE	49	47
TC-22		CONTRACT NO. 62M39		
ILLINOIS FED. AID PROJECT				

TRAFFIC SIGNAL LEGEND

(NOT TO SCALE)

ITEM	EXISTING	PROPOSED	ITEM	EXISTING	PROPOSED	ITEM	EXISTING	PROPOSED
CONTROLLER CABINET			HANDHOLE -SQUARE			SIGNAL HEAD		
COMMUNICATION CABINET			-ROUND			-(P) PROGRAMMABLE SIGNAL HEAD		
MASTER CONTROLLER			HEAVY DUTY HANDHOLE -SQUARE					
MASTER MASTER CONTROLLER			-ROUND			SIGNAL HEAD WITH BACKPLATE		
UNINTERRUPTABLE POWER SUPPLY			DOUBLE HANDHOLE			-(P) PROGRAMMABLE SIGNAL HEAD		
SERVICE INSTALLATION -(P) POLE MOUNTED			JUNCTION BOX			-(RB) RETROREFLECTIVE BACKPLATE		
SERVICE INSTALLATION -(G) GROUND MOUNTED			RAILROAD CANTILEVER MAST ARM					
-(GM) GROUND MOUNTED METERED			RAILROAD FLASHING SIGNAL			PEDESTRIAN SIGNAL HEAD AT RAILROAD INTERSECTIONS		
TELEPHONE CONNECTION			RAILROAD CROSSING GATE			PEDESTRIAN SIGNAL HEAD WITH COUNTDOWN TIMER		
STEEL MAST ARM ASSEMBLY AND POLE			RAILROAD CROSSBUCK			ILLUMINATED SIGN "NO LEFT TURN"/"NO RIGHT TURN"		
ALUMINUM MAST ARM ASSEMBLY AND POLE			RAILROAD CONTROLLER CABINET			NUMBER OF CONDUCTORS, ELECTRIC CABLE NO. 14, UNLESS NOTED OTHERWISE.		
STEEL COMBINATION MAST ARM ASSEMBLY AND POLE WITH LUMINAIRE			UNDERGROUND CONDUIT (UC), GALVANIZED STEEL			ALL DETECTOR LOOP CABLE TO BE SHIELDED		
SIGNAL POST -(BM) BARREL MOUNTED - TEMPORARY			TEMPORARY SPAN WIRE, TETHER WIRE, AND CABLE			GROUND CABLE IN CONDUIT, NO. 6 SOLID COPPER (GREEN)		
WOOD POLE			SYSTEM ITEM			ELECTRIC CABLE IN CONDUIT, TRACER NO. 14 1/C		
GUY WIRE			INTERSECTION ITEM			COAXIAL CABLE		
SIGNAL HEAD			REMOVE ITEM			VENDOR CABLE		
SIGNAL HEAD WITH BACKPLATE			RELOCATE ITEM			COPPER INTERCONNECT CABLE, NO. 18, 3 PAIR TWISTED, SHIELDED		
SIGNAL HEAD OPTICALLY PROGRAMMED			ABANDON ITEM			FIBER OPTIC CABLE -NO. 62.5/125, MM12F		
FLASHER INSTALLATION -(FS) SOLAR POWERED			CONTROLLER CABINET AND FOUNDATION TO BE REMOVED			-NO. 62.5/125, MM12F SM12F		
PEDESTRIAN SIGNAL HEAD			MAST ARM POLE AND FOUNDATION TO BE REMOVED			-NO. 62.5/125, MM12F SM24F		
PEDESTRIAN PUSH BUTTON -(APS) ACCESSIBLE PEDESTRIAN PUSH BUTTON			SIGNAL POST AND FOUNDATION TO BE REMOVED			DETECTOR LOOP, TYPE I		
RADAR DETECTION SENSOR			DETECTOR LOOP, TYPE I			PREFORMED DETECTOR LOOP		
VIDEO DETECTION CAMERA			PREFORMED DETECTOR LOOP			SAMPLING (SYSTEM) DETECTOR		
RADAR/VIDEO DETECTION ZONE			SAMPLING (SYSTEM) DETECTOR			INTERSECTION AND SAMPLING (SYSTEM) DETECTOR		
PAN, TILT, ZOOM (PTZ) CAMERA			INTERSECTION AND SAMPLING (SYSTEM) DETECTOR			QUEUE AND SAMPLING (SYSTEM) DETECTOR		
EMERGENCY VEHICLE LIGHT DETECTOR			QUEUE AND SAMPLING (SYSTEM) DETECTOR			WIRELESS DETECTOR SENSOR		
CONFIRMATION BEACON			WIRELESS DETECTOR SENSOR			WIRELESS ACCESS POINT		
WIRELESS INTERCONNECT			WIRELESS ACCESS POINT					
WIRELESS INTERCONNECT RADIO REPEATER								

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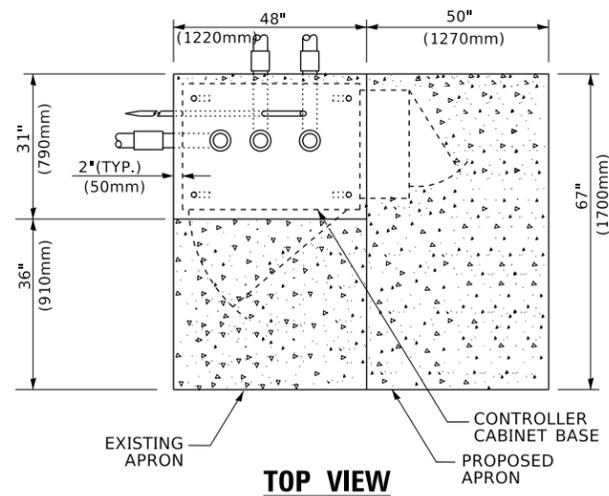
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**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

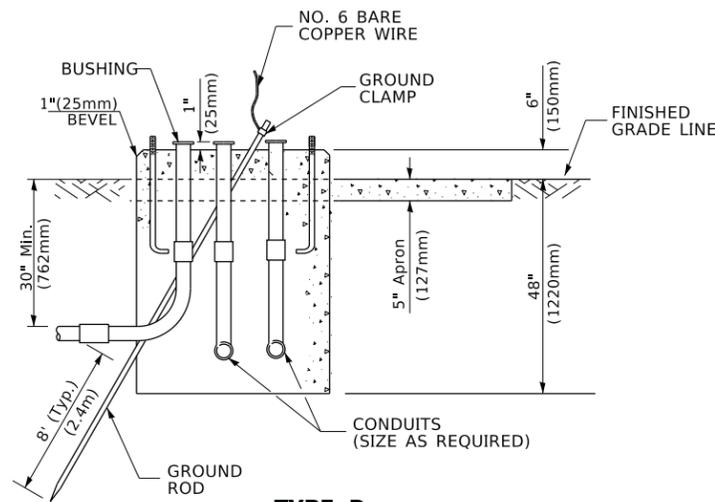
**DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

SCALE: NONE SHEET 1 OF 7 SHEETS STA. TO STA.

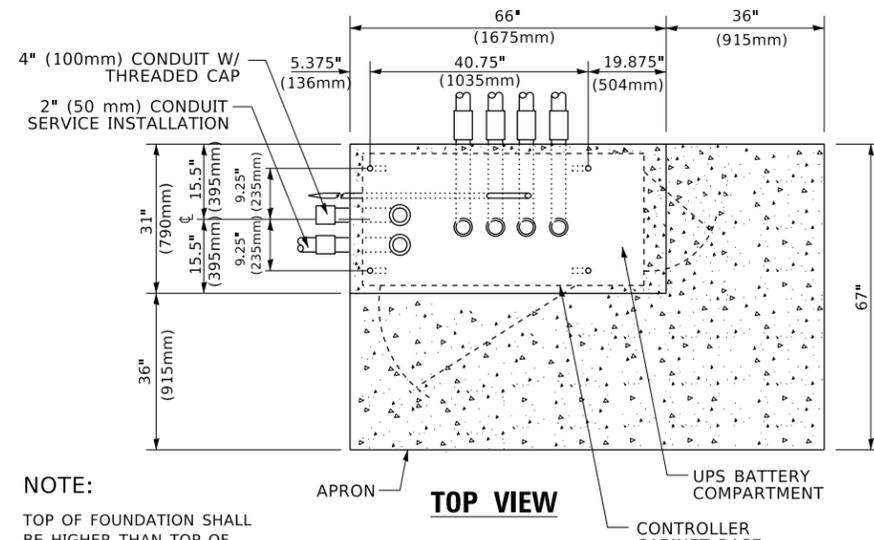
F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	2020-184-BR	LAKE	49	48
TS-05		CONTRACT NO. 62M39		
ILLINOIS FED. AID PROJECT				



TOP VIEW



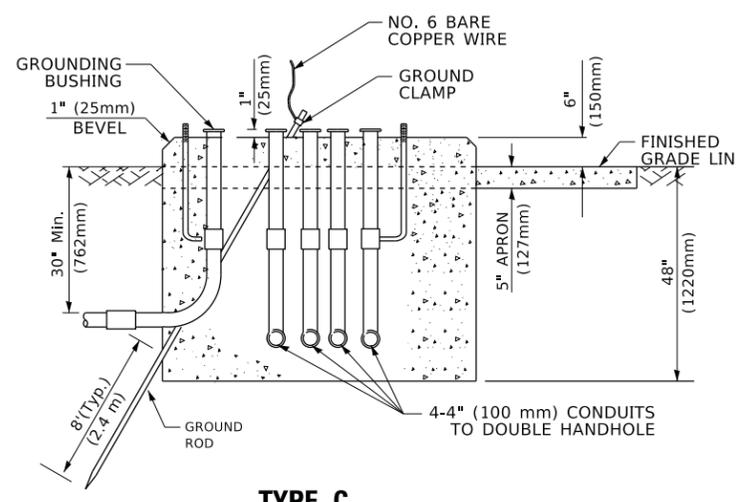
**TYPE D
FOR GROUND MOUNTED
CONTROLLER CABINET
AND UPS BATTERY CABINET**



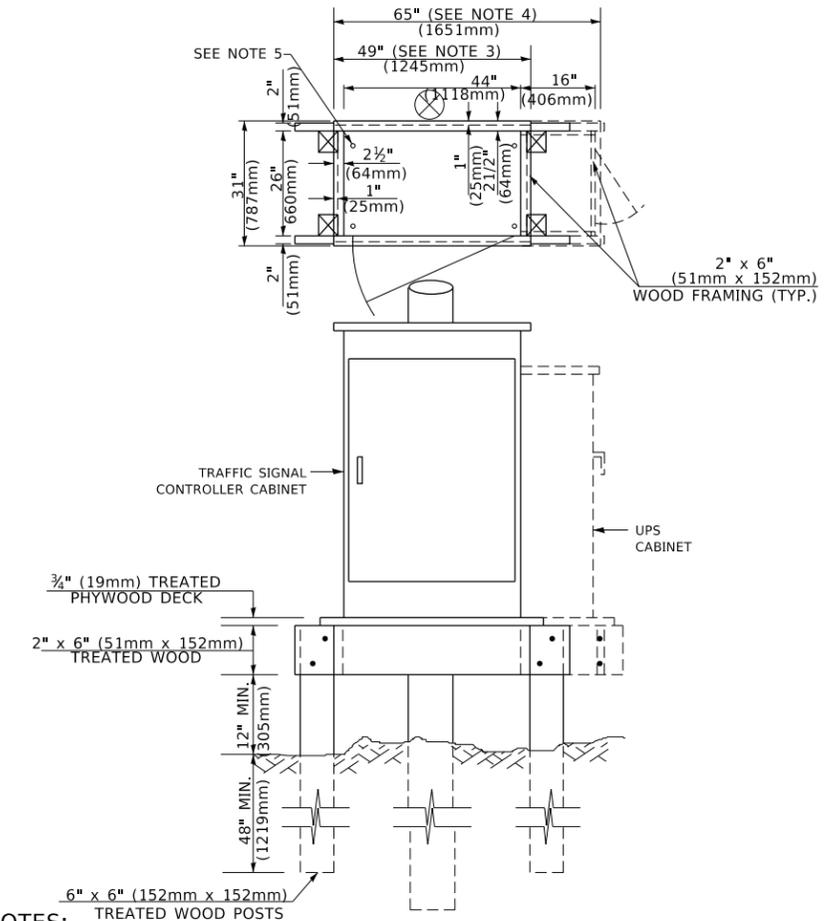
TOP VIEW

NOTE:

TOP OF FOUNDATION SHALL BE HIGHER THAN TOP OF DOUBLE HANDHOLE



**TYPE C
FOR GROUND MOUNTED
SUPER P (TYPE IV) AND SUPER R (TYPE V)
CONTROLLER CABINETS**



NOTES:

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.
6. 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

CABLE SLACK

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

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 30' (9.1 m) and less than 40' (12.2 m)	13'-6" (4.1 m)	30" (750mm)	24" (600mm)	8	6(19)
Greater than or equal to 40' (12.2 m) and less than 50' (15.2 m)	11'-0" (3.4 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 50' (15.2 m) and up to 55' (16.8 m)	13'-0" (4.0 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 55' (16.8 m) and less than 65' (19.8 m)	15'-0" (4.6 m)	36" (900mm)	30" (750mm)	12	7(22)
Greater than or equal to 65' (19.8 m) and less than 75' (22.9 m)	21'-0" (6.4 m)	42" (1060mm)	36" (900mm)	16	8(25)
Greater than or equal to 75' (22.9 m)	25'-0" (7.6 m)	42" (1060mm)	36" (900mm)	16	8(25)

NOTES:

1. 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 mast arm assemblies with dual arms refer to state standard 878001..

DEPTH OF MAST ARM FOUNDATIONS, TYPE E

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	DRAWN -	REVISED -
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PLOT DATE = 3/4/2019	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**DISTRICT ONE
STANDARD TRAFFIC SIGNAL DESIGN DETAILS**

SCALE: NONE SHEET 5 OF 7 SHEETS STA. TO STA.

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1238	2020-184-BR	LAKE	49	49
TS-05			CONTRACT NO. 62M39	
ILLINOIS		FED. AID PROJECT		